UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA,	)	
Plaintiff,	)	
COMMONWEALTH OF MASSACHUSETTS,	)	CIVIL ACTION NO.
Plaintiff-Intervenor,	)	
v.	)	
CITY OF FITCHBURG, MASSACHUSETTS,	)	
Defendant.	)	

CONSENT DECREE

WHEREAS, the City of Fitchburg, Massachusetts (the "City" or "Fitchburg") discharges pollutants into navigable waters of the United States from a publicly owned treatment works ("POTW") treatment plant that it owns and operates on Lanides Lane in Fitchburg, Massachusetts pursuant to National Pollutant Discharge Elimination System ("NPDES") Permit No. MA0100986, which was reissued on September 1, 2010 (the "Permit");

WHEREAS, Fitchburg also discharges pollutants into navigable waters of the United States from combined sewer overflow ("CSO") discharge points;

WHEREAS, the plaintiff, the United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), has filed a complaint simultaneously with this Consent Decree alleging that the City has violated the Permit and Section 301(a) of the Clean Water Act ("Act" or "CWA"), 33 U.S.C. § 1311(a);

WHEREAS, the Commonwealth of Massachusetts (the "Commonwealth"), on behalf of

the Massachusetts Department of Environmental Protection ("MassDEP"), has filed an assented-to motion to intervene as a plaintiff in the action brought by the United States and has filed a complaint that alleges that the City was, and is, in ongoing violation of Section 301 of the CWA, 33 U.S.C. § 1311, the Massachusetts Clean Waters Act, M.G.L. c. 21 § 26, *et seq*. ("Massachusetts Act"), and provisions of the Permit and State Permit No. MA0100986 issued by the MassDEP under the Massachusetts Act (said Federal and State permits having been jointly issued as a single permit);

WHEREAS, the City has implemented a number of projects and measures designed to reduce the frequency, volume and duration of discharges from its Combined Sewer System and bypasses of secondary treatment at the POTW Treatment Plant, but acknowledges that additional projects and measures must be implemented in order to achieve full compliance with the Permit;

WHEREAS, entry of this Consent Decree by the Court will resolve all claims in the complaint of the United States and the complaint of the Commonwealth, referred to herein collectively as the "Complaints";

WHEREAS, the United States, the Commonwealth, and the City (collectively, the "Parties"), agree, without admission of facts or law except as expressly stated herein, that settlement of this matter is in the public interest and that entry of this Consent Decree without further litigation is an appropriate resolution of the dispute, and the Parties consent to the entry of this Consent Decree; and

WHEREAS, settlement and entry of this Consent Decree does not constitute an admission of liability by the City.

NOW, THEREFORE, it is hereby ordered, adjudged, and decreed as follows:

I. STATEMENT OF CLAIM

1. The Complaints state claims upon which relief can be granted against the City pursuant to Section 309 of the CWA, 33 U.S.C. § 1319, and pursuant to Sections 43 and 46 of the Massachusetts Act, M.G.L. c. 21, §§ 43 and 46.

II. JURISDICTION AND VENUE

2. This Court has jurisdiction over the subject matter of this action pursuant to Section 309(b) of the CWA, 33 U.S.C. §1319(b), and 28 U.S.C. §§ 1331, 1345, and 1355, and under the doctrine of pendent jurisdiction. This Court has personal jurisdiction over the Parties to this Consent Decree. Venue properly lies in this district pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), 28 U.S.C. §§ 1391(b) and (c), and 28 U.S.C. § 1395. The City waives all objections it might have raised to such jurisdiction or venue.

III. APPLICABILITY

3. The provisions of this Consent Decree shall apply to and be binding upon the City and its officers, directors, agents, employees acting in their official capacities, its successors, and assigns.

4. No transfer of any ownership interest in or any interest in the operation of the City's Sewer System, whether in compliance with this Paragraph or otherwise, shall relieve the City of its obligation to ensure that the terms of this Consent Decree are implemented. Any transfer involving ownership or operation of the Sewer System, or any portion thereof, to any other person or entity must be conditioned upon the transferee's agreement to be added as a party to the Consent Decree and to be jointly and severally liable with the Defendants to undertake the obligations required by all provisions of the Consent Decree. At least thirty (30) Days prior to

such transfer, the City shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the above-referenced proposed written agreement, to EPA, the United States Attorney, the United States Department of Justice, MassDEP, and the Commonwealth in accordance with Section XV (Form of Notice). Any noncompliance with this Paragraph constitutes a violation of this Consent Decree.

5. The City shall provide a copy of this Consent Decree to all officers and agents whose duties might reasonably include compliance with any provisions of this Consent Decree. The City shall also provide a copy of this Consent Decree to all contractors and consultants retained to perform any obligation required by this Consent Decree on behalf of the City, and condition any such contract upon performance of the work in conformity with the terms of this Consent Decree. The City shall require that such contractors and consultants provide a copy of this Consent Decree to their subcontractors to the extent the subcontractors are performing work subject to this Consent Decree. Such contractors, consultants and subcontractors shall be deemed agents of the City for the purposes of this Consent Decree. In an action to enforce this Consent Decree, the City shall not assert as a defense against an action by EPA or the Commonwealth the failure by any of its officers, directors, employees, agents, servants, consultants, engineering firms, contractors, successors, and assigns to take actions necessary to comply with this Consent Decree.

IV. DEFINITIONS

6. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in the CWA, regulations promulgated under the CWA, EPA's 1994 CSO Control Policy,

or in the MassDEP guidance document referenced in Paragraph 8.c, shall have the meaning ascribed to them in the CWA, the regulations promulgated thereunder, the CSO Control Policy, or the above referenced MassDEP guidance document. Whenever the terms listed below are used in this Consent Decree, the following definitions shall apply:

a. "Act" or "CWA" shall mean the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act), as amended, 33 U.S.C. §§ 1251-1387.

b. "Approval by the EPA and the MassDEP," and "approved by the EPA and the MassDEP" shall mean the City's receipt of written approval from the EPA and/or MassDEP as required by this Consent Decree.

c. "Building/Private Property Backup" shall mean any release of wastewater into buildings or onto private property, except a release that is the result of blockages, flow conditions, or malfunctions of a building lateral or other piping/conveyance system that is not owned or operationally controlled by the City, or is the result of overland, surface flooding not emanating from the City's Sewer System.

d. "Combination Manholes" shall mean those manhole structures wherein are located a sanitary sewer and storm water sewer separated by a vertical masonry wall.

e. "Combined Sewer Overflow" or "CSO" shall mean any wet-weather overflow from a combined sewer in excess of the interceptor or regulator capacity that is discharged into a receiving water without going to the POTW Treatment Plant.

f. "Combined Sewer System" shall mean the pipelines in the City that are designed to convey wastewater and stormwater through a single pipe system to combined sewer overflow outfalls and/or the POTW Treatment Plant.

g. “Commonwealth” shall mean the Commonwealth of Massachusetts.

h. “Complaints” shall mean, collectively, the complaint filed by the United States and the complaint filed by the Commonwealth in this action.

i. “Consent Decree” shall mean this Consent Decree and all attachments hereto. In the event of conflict between this Consent Decree and any attachment, this Consent Decree shall control.

j. “Date of Entry” shall mean the date this Consent Decree is approved and signed by a United States District Court Judge for the District of Massachusetts.

k. “Date of Lodging” shall mean the Day this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the District of Massachusetts.

l. “Day” shall mean a calendar day. In computing any period of time under this Consent Decree, where the last Day would fall on a Saturday, Sunday, or Federal or Commonwealth holiday, the period shall run until the close of business of the next working Day.

m. “EPA” shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

n. “EPA’s 1994 CSO Control Policy” shall mean EPA’s April 19, 1994 CSO Control Policy, published at 59 Fed. Reg.18,688.

o. “Excessive Infiltration/Inflow” or “Excessive I/I” shall mean the Infiltration/Inflow (“I/I”) and Rainfall-Induced Infiltration that can be cost-effectively eliminated from the City’s Sewer System as determined by a cost effectiveness analysis that

compares the costs of eliminating the I/I with the total costs of transportation and treatment of the I/I (including capital costs of increasing sewage facilities capacity and treatment and the resulting operating costs).

p. “Infiltration” shall mean the water that enters the City=s Sewer System (including sewer service connections) from the ground through such means as defective pipes, pipe joints, connections or manholes. Infiltration does not include, and is distinguished from, Inflow.

q. “Infiltration/Inflow” shall mean, the total quantity of water present from both Infiltration and Inflow without distinguishing the source.

r. “Inflow” shall mean all water that enters the City’s Sewer System (including sewer service connections) from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, storm waters, surface runoff, street wash waters, sump pump discharges or drainage. Inflow does not include, and is distinguished from, Infiltration.

s. “MassDEP” shall mean the Massachusetts Department of Environmental Protection and any successor departments or agencies of the Commonwealth.

t. “Minisystem” shall mean a subsystem of the Sewer System in which a key manhole located at the outlet of the subsystem can be used to measure the Infiltration/Inflow that occurs within the subsystem.

u. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral or an upper or lower case letter.

v. “Parties” shall mean the United States, the Commonwealth of Massachusetts, and

the City of Fitchburg.

w. “Permit” shall mean National Pollutant Discharge Elimination System (“NPDES”) Permit No. MA0100986 as reissued to the City on September 1, 2010.

x. “POTW Treatment Plant” shall mean the publicly owned treatment works wastewater treatment plant that the City of Fitchburg owns and operates on Lanides Lane in Fitchburg, Massachusetts.

y. “Rainfall-Induced Infiltration” shall mean Infiltration that enters the City’s Sewer System and impacts the Sewer System flow rates similar to Inflow. Like Inflow, Rainfall-Induced Infiltration occurs as a result of rainfall. Rainfall-Induced Infiltration is the result of rainfall percolating through the soils into defects in sewer systems which generally lie near the surface.

z. “Sanitary Sewer Overflow” or “SSO” shall mean any overflow, spill, diversion, or release of wastewater from, or caused by, the City's Sewer System. This term shall include discharges to waters of the United States or the Commonwealth from the City's Sewer System, as well as any release of wastewater from the City's Sewer System to public or private property that does not reach waters of the United States or the Commonwealth, including Building/Private Property Backups.

aa. “Section” shall mean a portion of this Consent Decree identified by a Roman numeral.

bb. “Separate Storm Water Sewer System” shall mean the pipelines, conduits, pumping stations, force mains, and all other structures, devices, appurtenances, and facilities used for collecting and managing storm water that does not enter the Sewer System.

cc. "Sewer System" shall mean the pipelines, conduits, pumping stations, force mains, and all other structures, devices, appurtenances, and facilities used for collecting and conveying sanitary wastewaters (domestic, commercial and industrial wastewaters) and/or storm water through a single pipe system to CSO outfalls and/or the POTW Treatment Plant, but shall not include the Separate Storm Water Sewer System.

V. OBJECTIVES

7. It is the express intent of the Parties in executing this Consent Decree to require the City to perform all measures necessary to achieve and maintain compliance with the CWA, the Massachusetts Act, the Permit, and any applicable State and Federal regulations; to meet the objectives of the EPA's April 19, 1994 CSO Control Policy, 59 Fed. Reg. 18688 ("CSO Policy"); and to eliminate i) all SSOs from the Sewer System, ii) all prohibited bypasses at the POTW Treatment Plant, iii) all unauthorized discharges, and iv) all other violations of the Permit, the CWA and the Massachusetts Act.

8. Engineering designs and analyses required to be developed and performed pursuant to this Consent Decree shall be conducted using sound engineering practices, and, as applicable, consistent with:

a. EPA's Handbook: Sewer System Infrastructure Analysis and Rehabilitation, EPA/625/6-91/030, Oct. 1991;

b. EPA's Handbook for Sewer System Evaluation and Rehabilitation, EPA 430/9-75-021, Dec. 1975;

c. The MassDEP document entitled "Guidelines for Performing Infiltration/Inflow Analysis and Sewer System Evaluation Survey" revised January 1993; and

d. The currently effective edition of "TR 16: Guides for the Design of Wastewater Treatment Works."

VI. PENALTY FOR PAST VIOLATIONS

9. The City shall pay a civil penalty in the amount of one hundred forty-one thousand dollars ($141,000) ("Civil Penalty"), together with interest accruing from the Date of Entry, at the rate specified in 28 U.S.C. § 1961, one half to the United States and one half to the Commonwealth in satisfaction of the claims for civil penalties alleged in the Complaints through the Date of Lodging of the Consent Decree. Payment of the civil penalty shall be made within 30 Days after the Date of Entry of the Consent Decree.

10. The City shall make payment of seventy thousand five hundred dollars ($70,500) by FedWire Electronic Funds Transfer ("EFT") to the United States Department of Justice in accordance with written instructions to be provided to the City, following lodging of the Consent Decree by the United States Attorney's Office for the District of Massachusetts, Financial Litigation Unit, Boston, Massachusetts. The costs of such electronic funds transfer shall be the responsibility of the City. At the time of payment, the City shall send a copy of the EFT authorization form, the EFT transaction record, and a transmittal letter, which shall state that the payment is for the Civil Penalty owed pursuant to the Consent Decree in United States v. City of Fitchburg, Massachusetts, and shall reference the civil action number and DOJ case number 90-5-1-1-07874 to the EPA and the United States Department of Justice as specified in Section XV (Form of Notice) by email to acctsreceivable.CINWD@epa.gov, and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268.

If the City fails to tender payment within 30 Days after the Date of Entry of this Consent Decree, then interest shall accrue on the debt to the United States, from the Date of Entry of this Consent Decree, at the rate provided for in 28 U.S.C. § 1961.

11. Within 30 Days after receiving notice of entry of the Consent Decree, the City shall also pay a civil penalty to the Commonwealth in the form of a certified or cashier's check in the amount of seventy thousand five hundred dollars ($70,500), made payable to "Commonwealth of Massachusetts" and referencing this Consent Decree and the purpose of the payment (e.g., civil penalty, stipulated penalty), and mailed to: Commonwealth of Massachusetts, Office of the Attorney General, One Ashburton Place, Room 1813, Boston, Massachusetts, 02108, Attention: Louis Dundin, Assistant Attorney General, Environmental Protection Division. If the City fails to tender payment within 30 Days of entry of this Consent Decree, then interest shall accrue on the debt to the Commonwealth, from the date of entry of this Consent Decree, at the rate provided for in M.G.L. c. 231 § 6B and shall pay all expenses associated with collection by the Commonwealth of the unpaid amounts and interest for any period of nonpayment after the payment obligation becomes due, including reasonable attorneys' fees and costs of collection incurred by the Commonwealth.

VII. REMEDIAL MEASURES

A. SEWER SYSTEM

Sewer System Operation & Maintenance

12. EPA and the MassDEP have reviewed and conditionally approved the City's Sewer System Operation and Maintenance ("MOM") submittal (which is attached as Attachment 1) subject to the submission by October 31, 2012, of updated assessments of staffing levels,

equipment inventories, and preventative maintenance practices.

Long-Term Sewer System Preventive Maintenance Plan

13. EPA and the MassDEP have reviewed and approved the City's Long-Term Sewer System Preventative Maintenance Program Plan ("Preventative Maintenance Plan"), which is designed as a reference guide for the City's employees.

14. The approved Preventative Maintenance Plan (which is attached at Attachment 2) is incorporated and enforceable hereunder and shall be continuously implemented.

15. By October 31, 2012, the City shall submit to EPA and the MassDEP an assessment of the adequacy of the City's Sewer System maintenance staff, equipment and spare parts inventories.

MOM Corrective Action Plan

16. By October 31, 2012, the City shall submit to EPA and the MassDEP for review and approval a plan to correct any identified operation and maintenance-related deficiencies ("MOM Corrective Action Plan") that includes the following:

a. a list of any operation and maintenance-related deficiencies identified by the MOM Program Self Assessment;

b. a list of the operation and maintenance-related causes and contributing factors that led to the unauthorized discharges identified in the MOM Program Self-Assessment Checklist;

c. a description of the specific short- and long-term actions that the City is taking, or plans to take, in addition to those measures required by this Consent Decree, to address the deficiencies identified during the completion of the MOM Program Self-Assessment Checklist;

d. updated assessments of staffing levels, equipment inventories, and preventative

maintenance practices and

e. a schedule for the implementation of the MOM Corrective Action Plan.

17. The MOM Corrective Action Plan and schedules shall be incorporated and enforceable hereunder upon their approval or conditional approval by EPA and the MassDEP.

Priority Cleaning Plan

18. EPA and the MassDEP have reviewed and approved the City's Priority Cleaning Plan ("Priority Cleaning Plan").

19. The approved Priority Cleaning Plan and schedules (which are attached as Attachment 3) are incorporated and enforceable hereunder.

Routine Cleaning Plan

20. EPA and the MassDEP have reviewed and approved the City's Routine Cleaning Plan.

21. The approved Routine Cleaning Plan and schedules (which are attached as Attachment 4) are incorporated and enforceable hereunder.

Geographic Information System ("GIS") Map

22. EPA and the MassDEP have reviewed and approved the City's currently available geographic information system ("GIS") and other digital mapping of the City's Sewer System which will facilitate the City's operation and maintenance of its Sewer System and its compliance with the requirements of this Consent Decree. Annually, in February of each year, the City shall submit updated maps reflecting newly developed and/or discovered information, corrections, and modifications for review and approval by EPA and the MassDEP in conjunction with the Compliance Reports submitted pursuant to Paragraph 70 of this Consent Decree. Such mapping shall be designed to provide a comprehensive depiction of key infrastructure and

factors influencing the proper operation and maintenance of both systems and each update shall include progress toward achieving that design. Mapping themes shall include: sanitary and storm sewer infrastructure, prior investigation and study findings, cleaning and repair activities, capital projects, and water resource and topographic features. The scale and detail of the maps shall be appropriate to facilitate a clear understanding of the Sewer System by the City, EPA and the MassDEP. In addition, the mapping shall serve as a planning tool for the implementation of future Sewer System remedial measures; and shall delineate the extent of completed and planned investigations and corrections; and other related capital projects. To ensure legible mapping, information shall be grouped appropriately and represented thematically (e.g., by color coding) with legends or schedules where possible. Mapping shall be updated as necessary to reflect newly developed and discovered information, corrections or modifications. The following information and features, as updated and modified with approval, shall at a minimum be included in the mapping:

Base Map

- Municipal boundaries;
- Street names; and
- Private property delineations.

Infrastructure

- Municipal sanitary sewer system (including inter-municipal connections);
- Municipal combined sewer system;
- Municipal separate storm sewer system (including inter-municipal and private connections where available)
- Thematic representation of sewer material, size, and age;

- Sewer flow direction and flow type (e.g., pressure, vacuum, gravity);

- Select rim and invert elevations (for comparison with water table and vertical separation between systems);

- Aerial delineations of major separate storm sewer catchment areas, sanitary sewersheds, combined sewersheds, and areas served by on-site subsurface disposal systems;

- Common/twin-invert manholes or structures ("Combination Manholes") (i.e., structures serving or housing both separate storm and sanitary sewers);

- Sanitary and storm sewer alignments served by known or suspected underdrain systems;

- Sewer alignments with common trench construction and major crossings representing high potential for communication during high groundwater conditions;

- Pump stations (public and private), and other key sewer appurtenances;

- Sewersheds or sewer alignments experiencing inadequate level of service (with indication of reason(s));

- Location(s) of known sanitary sewer overflows ("SSOs") and combined sewer overflows ("CSOs") (with indication of cause(s); and

- Location of all catch basins, and their respective discharge locations (storm sewer, sanitary sewer, or combined sewer systems).

<u>Water Resources and Topographic Features</u>

- Water bodies and watercourses identified by name; and

- Topography

<u>Extraneous Flow Investigations, Remediation, and Capital Projects completed on or after 2009</u>

- Alignments, dates, and thematic representation of work completed (with legend) of past extraneous flow investigations (e.g. flow isolation, dye testing, CCTV, etc.);

- Locations of suspected, confirmed, and corrected illicit discharges (with dates and flow estimates) to the sanitary sewer system;

- Recent and planned sewer infrastructure cleaning and repair projects;

- Alignments and dates of past and planned Infiltration/Inflow ("I/I") investigations and sanitary sewer remediation work;
- Planned Sewer System and storm sewer system capital projects; and
- Proposed phasing of future extraneous flow reduction measures.

Combination Manholes

23. The City shall comply with Part E (Combination Manholes) of its September 1, 2010 NPDES permit and all subsequent re-issuances or modifications of that provision of the City's NPDES permit.

Extraneous Flow Projects and Investigations

Priority Extraneous Flow Reduction Projects

24. On June 29, 2011, the City submitted a Priority Extraneous Flow Reduction Projects Report, which included a list of cost-effective extraneous flow reduction projects, a general description of the projects and their locations, the estimated extraneous flow reductions that would be achieved by implementation of each of the projects, and the proposed implementation schedules. Attachment 5) includes specific descriptions and schematics of each of the projects. The projects and schedules are incorporated and enforceable hereunder.

25. By March 31, 2014, the City shall submit to EPA and the MassDEP for review and approval, a report that evaluates the feasibility of eliminating all remaining intermittent and continuous stream connections to the City's Sewer System that are not remedied by the projects identified in Paragraph 24 and that can be identified with equipment and materials available to the City and it contractors. The report shall delineate the conditions under which the streams discharge to the Sewer System, the estimated extraneous flow contributions to the Sewer System, and a recommendation for the removal of each stream discharge. The report shall include the

costs associated with each removal, and a schedule for each stream discharge that will be relocated. The report's recommendations including a full description of specific projects and schedules shall be incorporated and enforceable hereunder upon their approval or conditional approval by EPA and the MassDEP.

SSES Scope of Work

26. By December 31, 2015, the City shall submit to EPA and the MassDEP for review and approval, a Sewer System Evaluation Survey ("SSES") Scope of Work ("SOW") for the separate sanitary sewer system. For those mini-systems determined to contain excessive I/I, the SSES SOW shall include recommendations, and schedules for their implementation, for additional extraneous flow investigations necessary to identify and, where practicable, quantify both public and private sources of infiltration, Rainfall-Induced Infiltration, and Inflow. The SSES SOW shall be incorporated and enforceable hereunder upon its approval or conditional approval by EPA and the MassDEP.

SSES/SSES Report

27. The City shall conduct an SSES in accordance with the approved SSES SOW and shall submit to EPA and the MassDEP, for review and approval, an SSES Report that identifies all remaining sources of extraneous flow that are cost effective to remove and includes a comprehensive plan for their removal. It shall include, but need not be limited to, the following information for each mini-system investigated under the SSES.

<u>Infiltration/Inflow - Public Sources</u>

a. a listing of identified public sources of I/I;

b. a listing of the public sources that were deemed "Excessive";

c. a narrative description of the cost-effectiveness analyses that were used to determine which public sources of I/I are more cost-effective to remediate than to transport and treat, and the bases of the analyses;

d. proposals for rehabilitating or replacing components found to be structurally deficient or sources of Excessive I/I during the SSES and a schedule for implementing the recommended rehabilitation/replacement measures, including engineering design and construction; and

Infiltration/Inflow - Private Sources

e. Identification of each mini-system in which excessive Rainfall-Induced Infiltration or Inflow is determined to exist. For each mini-system in which excessive Rainfall-Induced Infiltration or Inflow is determined to exist, the SSES shall include, but need not be limited to, the following information:

i. a street map of the mini-system that delineates the location of properties discharging to Sewer System, the location of each property that was determined to be an actual, or potential source of extraneous flow to the Sewer System during any of the City's extraneous flow investigations. The map shall highlight those properties that have disconnected extraneous flows from the Sewer System as well as those properties the City has yet to inspect. The City shall supplement the map with:

ii. a description and address listing of all identified private sources of extraneous flow;

iii. an address listing of the sources that were remediated and the type of remedial measure that was implemented;

iv. the date the remedial measure was implemented;

v. the date that the property was re-inspected to verify that the extraneous flow remains redirected;

vi. the measures that the City plans to use in the future to verify the redirection of private sources of extraneous flow, and a schedule for their implementation;

vii. the measures that the City plans to implement to require other confirmed or potential private sources of extraneous flow to redirect the extraneous flow and a schedule for their implementation; and

viii. a determination of whether it is cost-effective to remediate or redirect identified private sources of extraneous Rainfall-Induced Infiltration and Inflow or to modify the Sewer System to convey the extraneous flow to the City's POTW Treatment Plant. The analysis shall include, but need not be limited to:

1) recommendations regarding the disposition of each identified source of private extraneous flow;

2) an assessment of whether conditions permit redirection of the identified sources to the ground and the range of costs associated with this type of remedial measure;

3) an assessment of the availability of storm sewers and storm sewer capacity and/or whether the Separate Storm Water Sewer System can be extended to receive the identified extraneous flow sources and the range of costs associated with this type of remedial measure;

4) an assessment of the cost of conveyance of extraneous flows to the

City’s POTW without exacerbating downstream overflows;

5) an assessment of cost apportionment, between the City and users, as well as potential incentives for the removal of private sources of extraneous flow;

6) the framework of a City-wide public education plan to promote the elimination of private sources of Rainfall-Induced Infiltration and Inflow and a schedule for the plan's implementation;

7) an evaluation of whether changes in the City's ordinances or by-laws are necessary to implement or facilitate the planned remedial measures. If the City determines that changes in the City's ordinances or by-laws, or in the ordinance(s) of other entities that contribute wastewater to the City's Sewer System are necessary to implement or facilitate the planned remedial measures, the City shall submit a proposed schedule for implementing said ordinances or by-laws and shall:

(a) notify the other entities that contribute wastewater to the City's Sewer System in writing of the changes requested to their ordinances; and

(b) make changes to inter-municipal agreements to require necessary ordinance changes; and

8) a schedule to implement the private extraneous source reduction recommendations of the SSES.

SSES Report Implementation Schedule

28. The SSES recommendations and implementation schedules shall be incorporated and enforceable hereunder upon their approval or conditional approval by EPA and the MassDEP.

Combined Sewer System

29. On April 19, 2011, the City modified CSO regulator 023 to restrict overflows from that location, and convey all flows from upstream of that point to the downstream section of the Sewer System, and convey those flows, to the Sewer System's maximum capacity to the POTW Treatment Plant.

30. By December 31, 2014, the City shall advise EPA whether it is able to permanently close Regulator 023.

31. On February 28, 2012, the City advised EPA and the MassDEP that it had installed continuous monitoring devices (level indicators and high level alarms) to quantify and record the discharges from those CSO locations that were not previously continuously monitored.

32. The City has certified to EPA and the MassDEP that it is inspecting its CSO outfalls in accordance with the Part I.D.2.b of NPDES Permit No. MA0100986. The City shall annually submit for review and approval the inspection certification required by its NPDES Permit to EPA and the MassDEP by February 28th of each year.

33. The City has certified to EPA and the MassDEP that it is quantifying and recording discharges from each of its CSO outfalls and recording hourly precipitation, and cumulative precipitation during CSO discharge events in accordance with the Part I.D.2.e of NPDES Permit No. MA0100986. The City shall submit to EPA and the MassDEP a spreadsheet, organized chronologically, listing the duration of each discharge, the calculated or estimated volume of each discharge, and the cumulative precipitation that occurred during each discharge Day for the preceding calendar year. If quantification of the discharges is not made through direct measurement, the City shall provide the basis of any estimates that are submitted. The City shall

annually submit the above certification and spreadsheet for the previous calendar year to EPA and the MassDEP by February 28th of each year.

34. By February 28th, 2013, and annually thereafter, the City shall provide an itemized list of weir adjustments or other regulator changes that the City has implemented during the prior calendar year. The list must include a description of the changes that were made, the location of the regulator and the date that the changes were made. The listing shall be organized chronologically, and sorted by CSO regulator, highlighting those regulators that are part of the CSO outfall structure.

35. On February 28, 2012, the City described to EPA and the MassDEP the measures that it has implemented to determine whether any of its CSO outfalls discharge during dry-weather. By February 28th of each year, the City shall certify whether, and to what extent, if any, dry-weather discharges from its CSO outfalls have occurred during the previous calendar year.

36. The City shall complete the sewer separation projects described in Attachment 6) (CSO Separation Projects 2B and 3C) in accordance with the following schedule:

a. Having awarded construction contracts by February 29, 2012, place the constructed facilities in operation by December 31, 2013.

b. By December 31, 2014, submit a report to EPA and the MassDEP assessing the effectiveness of the sewer separation projects implemented pursuant to this Paragraph that includes a listing of the public and private Inflow sources that were redirected to the Separate Storm Water Sewer System and a schedule for closure of the affected CSO regulators. If the City determines that the CSO regulator(s) cannot be permanently closed, the City shall submit a schedule for the conduct of additional rehabilitation/replacement measures necessary to close

the affected regulators including, but not limited, to the identification and redirection of the remaining public and private sources of Inflow.

37. The City shall complete the sewer separation projects described in Attachment 7) (CSO Separation Project 4D) in accordance with the following schedule:

a. Having by December 6, 2011, awarded a design contract, by June 30, 2013, award the construction contract.

b. By December 31, 2014, place the constructed facilities in operation.

c. By December 31, 2015, submit a report to EPA and the MassDEP assessing the effectiveness of the sewer separation projects implemented pursuant to this Paragraph that includes a listing of the public and private Inflow sources that were redirected to the Separate Storm Water Sewer System and a schedule for closure of the affected CSO regulators. If the City determines that the CSO regulator(s) cannot be permanently closed, the City shall submit a schedule for the conduct of additional rehabilitation/replacement measures necessary to close the affected regulators including, but not limited, to the identification and redirection of the remaining public and private sources of Inflow.

38. By December 31, 2012, the City shall submit to EPA and the MassDEP for review and approval a post-construction monitoring plan ("PCMP"). The PCMP shall include a monitoring protocol to assess how effective CSO controls constructed pursuant to this Consent Decree are in terms of capturing and treating storm water and protecting receiving waters from CSO impacts. The PCMP shall include a schedule for: a) assessing the impacts of varying precipitation amounts on the discharge characteristics and ambient water quality; and, b) submitting a post-construction monitoring report ("PCMR") to EPA and the MassDEP, which shall be submitted

no later than December 31, 2016. The PCMR shall: compare actual frequency of CSO discharges after completion of combined sewer separation projects 1A, 2B, 3C and 4D to the frequency of CSO discharges predicted by the Hydraulic Model updated pursuant to Paragraph 41, using actual rainfall records as model input; identify the expected frequency of CSOs remaining in a typical year after full implementation of sewer separation projects 1A, 2B, 3C and 4D; characterize the impacts of the expected remaining CSOs in a typical year; and, identify a full range of alternatives for eliminating the environmental impacts from any remaining CSOs.

Emergency Response Plan

39. EPA and the MassDEP have reviewed and approved the City's Emergency Response Plan.

40. The approved Emergency Response Plan (which is attached as Attachment 8) shall continuously be implemented.

Hydraulic Model

41. By December 31, 2016, the City shall update its hydraulic model ("Model") of its Sewer System to include all areas tributary to the POTW Treatment Plant and shall submit a report ("Modeling Report") of the City's Sewer System using a hydraulic modeling software package to EPA and the MassDEP for review and approval. This Model shall evaluate those portions of the Sewer System that surcharge or overflow, including contiguous interceptor sewers 12-inch and greater (unless modeling of smaller diameter sewers is necessary for adequate model calibration/verification). The physical characteristics of each CSO regulator shall be verified and documented.

42. The City shall use the Model to:

a. Assess the hydraulic capacity of each Minisystem that is tributary to, or that contributes to, a capacity-related surcharge, SSO or CSO;

b. Assist in the identification of the appropriate remedial measures to address all capacity limitations identified in the Sewer System;

c. Provide a detailed understanding of both the sanitary sewer system's and combined sewer system's response to seasonal groundwater conditions and wet-weather events; and

d. Evaluate the impacts and prioritize proposed sewer separation projects, remedial measures, and the planned removal of extraneous flows on the volume and frequency of Sewer System surcharges, SSOs and CSOs, and the peak flow delivered to the POTW Treatment Plant.

43. The City shall configure the Model to accurately represent, in accordance with currently accepted engineering practice, each of the City's mini-systems that are tributary to, or that contribute to a Sewer System surcharge, SSO or CSO. The City may model its Sewer System in different levels of detail and with different types of models, as necessary, to identify the causes of all known surcharges or overflows and to assess proposed remedial measures to eliminate those surcharges and overflows. The City shall also identify critical antecedent and seasonal Sewer System flow conditions that contribute to the capacity-related overflows.

44. The City shall configure the Model using adequate, accurate, and sufficiently current physical data (including, but not limited to invert and ground elevations, pipe diameters, slopes, pipe run lengths, Manning roughness factors, manhole sizes and configurations, and pumping station performance factors) for its Sewer System. In particular, the City shall sufficiently field

verify physical data to allow calibration and verification of the Model.

45. The City shall calibrate and verify the Model using appropriate rainfall data, actual hydrographs and Sewer System and CSO outfall monitoring flow data, including, but not limited to the data generated by the additional meters that will be installed pursuant to Paragraph 31 of this Consent Decree. The City shall use at least three separate data sets for calibration and verification. As part of the calibration process, the City shall either use existing sensitivity analyses for the selected Model, or carry out its own sensitivity analyses, to maximize calibration effectiveness.

46. The Modeling Report submitted pursuant to Paragraph 41 shall specifically include the following:

a. A description of the Model;

b. Specific attributes, characteristics, and limitations of the Model;

c. Identification of all input parameters, constants, assumed values, and expected outputs;

d. Digitized map(s) and schematics that identify and characterize the portions (including the specific gravity sewer lines) of the Sewer System that shall be included in the Model;

e. A schematic of each regulator;

f. Identification of input data to be used;

g. Configuration of the Model;

h. Procedures and protocols for performance of sensitivity analyses (such as how the Model responds to changes in input parameters and variables);

i. Procedures for calibrating the Model to account for values representative of the Sewer System's actual system data (e.g., flow data); and

j. procedures for verifying the Model's performance using additional, independent actual Sewer System and POTW Treatment Plant flow data.

Capacity Assessment

47. Within 180 Days of approval or conditional approval by EPA and the MassDEP of the updated Hydraulic Model, the City shall submit a professional engineering evaluation of the conveyance capacity of all Minisystems that are tributary to, or contribute to, any Sewer System surcharges, SSOs and CSOs ("Capacity Assessment") to EPA and the MassDEP for review and approval. The Capacity Assessment shall utilize the Model developed pursuant to Paragraph 41 and shall include an evaluation of all interceptor sewers, pumping stations, force mains and siphons, known areas of Sewer System surcharges, SSOs and CSOs. It shall also address any other portions of the Sewer System that must be assessed so as to allow for a technically-sound evaluation of the causes of all capacity-related surcharges, SSOs and CSOs. It shall also:

a. Identify the hydraulic capacities of the portions of the Sewer System upstream and downstream of all Sewer System surcharges, SSOs and CSOs, and compare those capacities to existing and future projected wet-weather flows. The Capacity Assessment shall identify, within the aforementioned portions of the City's Sewer System, i) those portions of the Sewer System that have caused, or are expected to cause or contribute to, capacity-related Sewer System surcharges, SSOs and CSOs under existing and future peak wet-weather flows, ii) the impacts of capacity-related surcharges, and iii) the frequency and volume of overflow, including Private Property/Building Backup;

b. Consider local rainfall data, critical antecedent in-system flow conditions, and the impact of an appropriate range of rainfall events, based on return frequency and duration, and an appropriate continuous period of rainfall records on peak wet-weather flows within those portions of the City's Sewer System that are tributary to, or contribute to, capacity-related surcharges and overflows;

c. Characterize Sewer System performance by identifying, for each condition considered, each pipe segment operating in surcharge and overflow condition, each manhole or structure at which an SSO or CSO might be expected to occur; and

d. Evaluate the City's ability to comply with its NPDES Permit, and eliminate its capacity-related surcharges, SSOs and CSOs based on the Sewer System work performed and POTW Treatment Plant and Sewer System rehabilitation and remedial measures planned for the future. Long-term model simulations are preferred for evaluating abatement alternatives. Unless otherwise approved by EPA and the MassDEP, a five-year period with historical hourly rainfall that represents a variety of weather conditions (average wet, dry) shall be used to characterize the level of CSO control (annual volume and number of annual activations).

B. POTW TREATMENT PLANT

Phosphorus Upgrades

48. By May 31, 2012, the City shall award the construction contract for the implementation of the WWTF measures outlined in Attachment 9.

49. By May 31, 2013, the City shall complete construction of the WWTF measures outlined in Attachment 9.

Long-Term Preventive Maintenance Plan

50. EPA and the MassDEP reviewed and approved the City’s Long-Term POTW Treatment

Plant Preventative Maintenance Program Plan ("Preventative Maintenance Plan") subject to conditions set forth in an approval letter dated April 26, 2012.

51. The conditionally approved Preventative Maintenance Plan (which is attached as Attachment 10) is incorporated and enforceable hereunder and shall continuously be implemented.

POTW Treatment Plant Optimization Evaluation Report

52. EPA and the MassDEP have reviewed and approved the City's POTW Optimization Evaluation Report submitted on January 31, 2012.

53. The approved POTW Optimization Evaluation Report's recommended capital improvement plan and implementation schedule, including power source upgrade milestones, (which are attached as Attachment 11) are incorporated and enforceable hereunder except as modified by Paragraph 55.a. of this Consent Decree.

Wet-Weather Operations

54. Pending the implementation of wet weather chemically-enhanced primary treatment in accordance with Paragraph 49 of this Consent Decree and the recommendations of the POTW Treatment Plant Optimization Evaluation Report (including the secondary system improvement project outlined therein) approved pursuant to Paragraph 52, or until the installation of septage storage capacity as approved by EPA and the MassDEP, the City shall not introduce septage or high-strength side streams not associated with plant operations into any portion of the process train that bypasses the secondary treatment system when secondary treatment is being bypassed or when a secondary treatment system bypass is likely to occur within two (2) hours.

C. WASTEWATER MANAGEMENT PLAN

55. By July 1, 2018, the City shall submit to EPA and the MassDEP for review and approval a Wastewater Management Plan ("WMP") that reflects all relevant information collected as a result of implementation of this Consent Decree. The WMP shall:

a. Include an itemized schedule for the construction of facilities necessary to meet the seasonal (April 1-October 31) total phosphorus concentration-based limit of 0.2 mg/l, found in Part I.A.1 of the Permit, at page 3; and the seasonal (April 1-October 31) total phosphorus mass-based limit of 20.7 lb/day, found in Part I.A.1 of the Permit, at page 3 (the "Total Phosphorus Permit Limits") as expeditiously as practicable within the City's financial capacity and consistent with sound engineering practice and normal construction practices..

b. Include an itemized schedule for commencement and completion of proposed additional investigations, remedial measures, and capital improvements to the City's wastewater collection and treatment infrastructure, necessary to meet the CSO conditions in the Permit by no later than December 31, 2030, including compliance with conditions based on water quality standards established and revised under 40 C.F.R. Part 131 in accordance with the guidance set forth in (i) Coordinating CSO Long-Term Planning with Water Quality Standards Reviews, EPA-833-R-01-002, July 31, 2001, and (ii) MassDEP Guidance for Abatement of Pollution from CSO Discharges (August 11, 1997), as one or both may be amended in the future.

c. In proposing its WMP schedule, the City shall consider: i) the extent to which each proposed project will decrease pollutant loading to the receiving water and the impact on the impairment of uses; ii) the cost and cost-effectiveness of each proposed project; and iii) the

schedules for completing the projects. The WMP and the schedules incorporated therein shall be enforceable hereunder upon the WMP's approval or conditional approval by EPA and the MassDEP.

d. The WMP shall include the results of any water quality standards review, including a use attainability analysis if such an analysis is conducted. If a standards review is in progress but has not been completed, the WMP shall describe the status of the standards review and include a schedule for completing the review, including any use attainability analysis.

e. In developing the WMP, the City is encouraged to consider evaluating potential Best Management Practices, including the use of all appropriate "green infrastructure" and "low impact development" techniques currently available to reduce Inflow.

f. The WMP shall be incorporated and enforceable hereunder upon its approval or conditional approval by EPA and the MassDEP

56. On or before December 31, 2020 and December 31, 2023, the City shall submit to EPA and MassDEP for review and approval an updated WMP report that shall include, at a minimum, a description of all infrastructure improvements and programs that have been implemented during the previous period to comply with the conditions of this Consent Decree and to meet the limits and other conditions of the Permit, the cost of such efforts to date, a description of efforts planned for the next 3-year period, and an assessment of the abatement anticipated to be achieved related to such efforts.

D. **ILLICIT CONNECTIONS**

57. By June 30, 2012, the City shall submit to EPA and the MassDEP for review and

approval an amendment to its February 17, 2011 letter report documenting the findings and the actions taken by the City in response to its dry-weather and wet-weather monitoring submitted to EPA on November 29, 2007, and December 31, 2008, respectively. The IDDE Report shall include, but shall not be limited to, the following information:

a. A list of illicit connections identified to date;

b. The estimated flow from each connection;

c. The specific actions taken by the City to remove each connection;

d. The date each connection was removed;

e. The cost of removing each connection;

f. A map or figure indicating the location of each illicit connection;

g. For those identified illicit connections that have yet to be redirected from the City's Separate Storm Water Sewer System, the City shall provide a schedule for their redirection; and

h. The measures taken to verify that each identified illicit connection is removed.

E. INTERIM PHOSPHORUS LIMITS

58. From the effective date of this Consent Decree until the date the WWTF improvements outlined in Attachment 9 are fully operational, or if EPA determines that the City has not complied with the POTW Treatment Plant schedule milestones set forth in Paragraphs 48 and 49 of this Consent Decree, the City shall comply with the interim effluent limitations and monitoring requirements contained in Attachment 9a of this Consent Decree. Upon both (i) the completion of the tasks required by Paragraphs 48 and 49 of this Consent Decree; and (ii) when the WWTF improvements outlined in Attachment 9 are fully operational, the City shall comply

with the interim effluent limitations and monitoring requirements contained in Attachment 9b of this Consent Decree.

VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECT

59. The City shall implement a Supplemental Environmental Project consisting of stream bank stabilization for Falulah Brook ("SEP") for a portion of the stream bank in Fitchburg's Coolidge Park. The SEP will result in the restoration of approximately 300 linear feet of the stream bank.

60. The City is responsible for the satisfactory completion of the SEP in accordance with the requirements of this Decree. "Satisfactory completion" means fulfilling the requirements described in Attachment 12. The City may use contractors or consultants in planning and implementing the SEP.

61. The City certifies the truth and accuracy of each of the following:

a. That all cost information provided to EPA in connection with EPA's approval of the SEP is complete and accurate and that the City in good faith estimates that the cost to implement the SEP is at least $100,000;

b. That, as of the date of executing this Consent Decree, the City is not required to perform or develop the SEP by any federal, state, or local law or regulation and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;

c. That the SEP is not a project that the City was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Consent Decree;

d. That the City has not received and will not receive credit for the SEP in any other

enforcement action; and

e. That the City will not receive any reimbursement for any portion of the SEP from any other person.

62. SEP Completion Report

a. Within 30 Days after the date set for completion of the SEP, the City shall submit a SEP Completion Report to the United States, EPA, and the MassDEP in accordance with Section XV of this Consent Decree (Form of Notice). The SEP Completion Report shall contain the following information:

i. a detailed description of the SEP as implemented;

ii. a description of any problems encountered in completing the SEP and the solutions thereto;

iii. an itemized list of all eligible SEP costs expended;

iv. certification that the SEP has been fully implemented pursuant to the provisions of this Consent Decree; and

v. a description of the environmental and public health benefits resulting from implementation of the SEP (with a quantification of the benefits and pollutant reductions, if feasible).

63. EPA may, in its sole discretion, require information in addition to that described in the preceding Paragraph in order to evaluate the SEP Completion Report.

64. After receiving the SEP Completion Report, the United States shall notify the City whether or not the City has satisfactorily completed the SEP. If the City has not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section

XI of this Consent Decree (Stipulated Penalties).

65. Disputes concerning the satisfactory performance of the SEP and the amount of eligible SEP costs may be resolved under Section XIII of this Consent Decree (Dispute Resolution). No other disputes arising under this Section shall be subject to Dispute Resolution.

66. Each submission required under this Section shall be signed by an official with knowledge of the SEP and shall bear the certification language set forth in Paragraph 104.

67. Any public statement, oral or written, in print, film, or other media, made by the City making reference to the SEP under this Decree shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action, United States v. the City of Fitchburg, Massachusetts, taken on behalf of the U.S. Environmental Protection Agency under the Clean Water Act."

68. The City certifies that it is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP. The City further certifies that, to the best of its knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity as the SEP, nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date of this settlement (unless the project was barred from funding as statutorily ineligible). For the purposes of this certification, the term "open federal financial assistance transaction" refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee or other mechanism for providing federal financial assistance whose performance period has not yet expired.

IX. REPORTING

69. As soon as practicable, but no later than twenty-four (24) hours after learning of any SSO, discharge of sanitary flows to a storm drain, discharge from a combined sewer during dry weather, or Building/Private Property Backup, the City shall provide an oral report to EPA by calling Michael Fedak at (617) 918-1766 and to MassDEP by calling Robert Kimball during regular business hours, at (508) 767-2722. If the City learns of such event at any time other than normal business hours, the City shall also notify EPA at the above phone number and MassDEP's Emergency Response Unit by calling (888) 304-1133. The oral report shall identify the location, estimated volume and receiving water(s), if any, of such event. The City, shall also, within five (5) Days of learning of such event, send a facsimile report to EPA, to the attention of Michael Fedak, at (617) 918-0766 and to MassDEP, to the attention of Robert Kimball at (508) 849-4035. The facsimile reports shall be submitted in the form attached as Attachment 13 and shall include the following information:

a. The date, time and location of the event, including a description of the Sewer System component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);

b. The circumstances that led to the event;

c. The estimated volume of the wastewater released;

d. Whether the released flows reached a wetland or surface water and, if so, the identity of the receiving waters and the estimated volume of the flows that reached those waters;

e. Steps taken (or the steps to be taken) to mitigate the impact(s) of the event,

including treatment of any of the discharge, and when those steps were (or will be) taken;

f. If any of the flow was treated, the volume of the flow treated and the volume of treated flow that reached receiving waters;

g. The steps taken (or the steps to be taken) to eliminate and prevent reoccurrence of the event and when those steps were (or will be) taken;

h. A description of the cleanup efforts taken or intended to be taken; and

i. The date of the last overflow event at the same location.

EPA and the MassDEP will advise the City in writing in the event of any change in personnel to whom oral and facsimile reports should be made.

70. By February 28, 2013, and every six months by each February 28th and August 31st thereafter until completion of all the Remedial Measures in Section VII, the City shall report to EPA and MassDEP on its compliance with Section VII during the preceding six-month period (February 1st through July 31st, and August 1st through January 31st). Each progress report submitted under this Paragraph shall:

a. Describe activities undertaken during the reporting period directed at achieving compliance with this Consent Decree;

b. Describe the expected activities to be taken during the next reporting period in order to achieve compliance with this Consent Decree; and

c. Identify any noncompliance with this Consent Decree=s requirements, including any schedules set forth or incorporated herein. If noncompliance is reported, notification should include the following information:

i. A description of the noncompliance;

ii. A description of any actions taken or proposed by the City to comply with any missed schedule milestones;

iii. A description of any factors that might explain or mitigate the noncompliance; and

iv. An approximate date by which the City will perform the required action.

d. A statement on the frequency and volume of CSOs that occurred during the reporting period.

71. By January 31, 2013, and annually thereafter, the City shall submit to EPA and the MassDEP a Compliance Report that shall include, at a minimum, the following items:

a. A list of SSO and dry-weather CSO events that occurred during the Reporting Period, including all releases with a reasonable potential to reach surfaces waters such as releases to streets or areas with storm drain catch basins; a list of Building/Private Property Backups during the Reporting Period; and a list of citizen reports of SSO and dry-weather CSO events or Building/Private Property Backups during the Reporting Period. The three separate tabular listings of all such events shall be organized chronologically and shall include the following:

i. The date and times each event was discovered/reported and was stopped;

ii. The location by address;

iii. The final disposition of the wastewater from each such event, including whether it discharged to the ground, the street, or surface water (Note: In all instances, the name of the water body, street, or intersecting streets nearest each event shall be provided, and if the release occurred to the ground or street, the name of the nearest downgradient stormwater catch

basin and the name of the receiving water of the separate stormwater sewer system shall be noted);

iv. The source of notification (e.g., property owner, general public, field crew, police);

v. The cause(s) of the event (including, but not limited to, vandalism, sediments, roots, grease, mechanical, electrical and structural failures, and capacity issues);

vi. A determination of whether the event was caused blockages or hydraulic limitations within the publicly-owned portion of the Sewer System;

vii. The measures taken to stop the event;

viii. The estimated gallons of wastewater released, the estimated gallons of wastewater that reached a surface water, and the bases for these estimates; and

ix. The date of the last release of wastewater that occurred at the event location.

x. A GIS map or figure, consistent with the requirements of Paragraph 22, indicating the location of each event.

b. A brief explanation of how the City expects to meet its water quality-based CSO compliance obligations.

72. The reporting requirements set forth in this Section do not relieve the City of its obligation to submit any other reports or information as required by State, Federal or local laws, regulations, or ordinances.

X. REVIEW AND APPROVAL

73. After review of any plan, schedule, report, or other item that is required to be submitted for approval by EPA and the MassDEP pursuant to this Consent Decree, EPA and the MassDEP shall in writing:

a. approve, in whole or in part, the submission;

b. approve, in whole or in part, the submission upon specified conditions; or

c. disapprove, in whole or in part, the submission.

74. In the event of approval pursuant to Paragraph 73.a, the City shall take all actions required to implement such plan, schedule, report, or other item, as approved. In the event of approval in part pursuant to Paragraph 73.a, or approval upon specified conditions pursuant to Paragraph 73.b, upon written direction of EPA and MassDEP, the City shall take all actions required by the approved plan or schedule, report or other item that EPA and MassDEP determine are technically severable from any disapproved portions, subject to the City's right to dispute only the specified conditions or non-approved portions pursuant to Section XIII (Dispute Resolution).

75. Upon receipt of a written notice of disapproval pursuant to Paragraph 73.c, the City shall, within thirty (30) Days or such other time as the City, the MassDEP and EPA agree in writing, correct the deficiencies and resubmit the plan, schedule, report, or other item, or portion thereof, for approval. Any stipulated penalties applicable to the original submission shall accrue during the thirty (30) Day period or other specified period, but shall not be payable unless the resubmission is untimely and/or disapproved as provided in Paragraph 73; provided that, if the original submission was disapproved by EPA and the MassDEP in whole, stipulated penalties

applicable to the original submission shall be due and payable upon demand notwithstanding any subsequent resubmission.

76. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by EPA and the MassDEP, the Plaintiffs may again require the City to correct the deficiencies in accordance with the preceding Paragraphs.

77. If upon resubmission, a plan, report, or item, or portion thereof, is disapproved by EPA and the MassDEP, the City shall be bound by the Plaintiffs' decision unless the City invokes the dispute resolution procedures set forth in Section XIII (Dispute Resolution) within ten (10) Days of receipt of EPA's and the MassDEP's last written position. If EPA's and the MassDEP's disapproval is upheld after dispute resolution, stipulated penalties shall accrue for the violation from the date of the disapproval of the original submission.

78. All plans, reports, and other items required to be submitted to EPA and the MassDEP under this Consent Decree shall, upon approval by EPA and the MassDEP, be enforceable under this Consent Decree. In the event EPA and the MassDEP approves a portion of a plan, report, or other item required to be submitted under this Consent Decree, the approved portion shall be enforceable under this Consent Decree.

79. In the event a dispute arises among the Parties regarding EPA's and the MassDEP's approval upon specified conditions or disapproval in part or in whole of any plans, reports, and other items required to be submitted to EPA and the MassDEP under this Consent Decree, the position of EPA and the MassDEP shall govern unless the City invokes the dispute resolution procedures set forth in Section XIII (Dispute Resolution) within 30 Days of receipt of EPA's and the MassDEP's written position.

XI. STIPULATED PENALTIES

80. The City shall pay stipulated penalties to the United States and the MassDEP for violations or noncompliance with the requirements of this Consent Decree, as set forth below, unless excused under Section XII (Force Majeure). A violation or noncompliance includes failing to perform an obligation required by the terms of this Consent Decree, including any work plan or schedule approved under this Consent Decree, according to all applicable requirements of this Consent Decree and within the specified time schedules or by the date(s) established by or approved under this Consent Decree:

a. Late Payment of Civil Penalty. If the City fails to pay the Civil Penalty required to be paid under Section VI (Civil Penalty) when due, the City shall pay a stipulated penalty as follows:

Penalty Per Violation Per Day	Period of Noncompliance
$ 750	1st through 10th Day
$ 1,000	11th through 20th Day
$ 2,500	21st Day and beyond.

b. Reporting Requirements. For every Day that the City fails to timely submit a report required by Paragraphs 69, 70 or 71 of this Consent Decree or fails to provide the certification required by Paragraph 104, the City shall pay a stipulated penalty as follows:

Penalty Per Violation Per Day	Period of Noncompliance
$ 500	1st through 14th Day
$ 750	15th through 30th Day
$ 1,000	31st Day and beyond.

c. Unpermitted Discharges. For each Day that an SSO or dry-weather CSO occurs, the City shall pay a stipulated penalty of $5,000. Notwithstanding the foregoing, the City shall

not be liable for such a stipulated penalty if all of the following conditions are met: (i) the City stopped the SSO or dry-weather CSO as soon as reasonably practicable; (ii) the City is in full compliance with the schedules and other requirements set forth pursuant to Section VII (Remedial Measures) of this Consent Decree related to the particular facility from which the overflow occurred; and (iii) the City has complied with all reporting requirements related to the SSO or dry-weather CSO discharges, including but not limited to those set forth in Paragraph 71 of this Consent Decree.

d. Remedial Measures. For every Day that the City fails timely to meet the requirements of Section VII (Remedial Measures) of this Consent Decree, including but not limited to, submitting an approvable plan, schedule, report, or other item, other than a report required by Paragraphs 69 thru 71, or fails to implement remedial requirements in a plan, schedule, report, or other item approved by EPA and the MassDEP, the City shall pay a stipulated penalty as follows:

Penalty Per Violation Per Day	Period of Noncompliance
$ 750	1st through 14th Day
$ 1,000	15th through 30th Day
$ 2,500	31st Day and beyond.

81. Stipulated penalties shall automatically begin to accrue on the Day after performance is due or on the Day a violation occurs and shall continue to accrue each Day until performance is satisfactorily completed or until the violation or noncompliance ceases. Stipulated penalties shall accrue simultaneously for separate violations of or instances of noncompliance with this Consent Decree.

82. Following the United States' or the MassDEP=s determination that the City has failed to comply with a requirement of this Consent Decree, the United States or the MassDEP may give the City written notification of the same and describe the noncompliance. The United States or the MassDEP may send the City a written demand for the payment of the stipulated penalties. However, the stipulated penalties shall accrue as provided in the preceding Paragraph regardless of whether the United States or the MassDEP has notified the City of a violation of or noncompliance with the requirements of this Consent Decree, or demanded payment of stipulated penalties.

83. The City shall pay stipulated penalties as specified in this Section by delivering the payments to the United States and the Commonwealth within thirty (30) Days of the date of a demand for payment of stipulated penalties, in accordance with the instructions set forth below:

a. The City shall pay stipulated penalties, fifty percent to the United States and fifty percent to the Commonwealth of Massachusetts in the manner set forth and with the confirmation notices required by Paragraphs 10 and 11, except that the transmittal letters shall state that the payment is for stipulated penalties and shall state for which violation(s) or noncompliance the penalties are being paid.

b. In the event the City fails to pay stipulated penalties according to the terms of this Consent Decree, such penalty (or portion thereof) shall be subject to interest at the statutory judgment rate set forth at 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the Commonwealth from seeking any remedy otherwise provided by law for failure of the City to pay any stipulated penalties.

84. Stipulated penalties shall continue to accrue as provided in Paragraph 81, during any dispute resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or a decision of the United States that is not appealed to the Court, the City shall pay accrued penalties determined to be owed, together with interest accruing at the rate specified in 28 U.S.C. § 1961, to the United States and the Commonwealth within thirty (30) Days of the effective date of the agreement or the receipt of the United States' decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, the City shall pay all accrued penalties, together with interest, within thirty (30) Days of receiving the Court's decision or order, except as provided in Subparagraph c below

c. If any Party appeals the District Court's decision, the City shall pay all accrued penalties determined to be owed, together with interest, within fifteen (15) Days of receiving the final appellate court decision.

85. The stipulated penalties set forth above shall be in addition to any other remedies, sanctions, or penalties which may be available by reason of the City's failure to comply with the requirements of this Consent Decree. The United States and the Commonwealth expressly reserve any and all legal and equitable remedies, including contempt sanctions, which may be available to enforce the provisions of this Consent Decree.

XII. FORCE MAJEURE

86. “Force Majeure,” for purposes of this Consent Decree, is defined as any event arising from causes entirely beyond the control of the City or of any entity controlled by the City, including its engineers, consultants, contractors and subcontractors, that delays or prevents the

timely performance of any obligation under this Consent Decree notwithstanding the City's best efforts to fulfill the obligation. The requirement that the City exercise "best efforts" includes using best efforts to anticipate any potential Force Majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include the City's financial inability to perform any obligation under this Consent Decree. Stipulated Penalties shall not be due for the number of Days of noncompliance caused by a Force Majeure event as defined in this Section, provided that the City complies with the terms of this Section.

87. If any event occurs that may delay or prevent the performance of any obligation under this Consent Decree, whether or not caused by a Force Majeure event, the City shall notify EPA and the MassDEP within seventy-two (72) hours after the City first knew or should have known that the event might cause a delay. Within ten (10) working Days thereafter, the City shall submit for review and approval by EPA, at the addresses specified in Section XV (Form of Notice), a written explanation of the cause(s) of any actual or expected delay or noncompliance, the anticipated duration of any delay, the measure(s) taken and to be taken by the City to prevent or minimize the delay, a proposed schedule for the implementation of such measures, and a statement as to whether, in the opinion of the City, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Notwithstanding the foregoing, the City shall notify EPA and MassDEP orally within twenty-four (24) hours of becoming aware of any event that presents an imminent threat to the public health or welfare or the environment and provide written notice to EPA and MassDEP within seventy-two (72) hours of discovery of such event. The City shall be deemed to know of any circumstances of which the City, any entity

controlled by the City, or the City's contractors knew or should have known. Failure to provide timely and complete notice in accordance with this Paragraph shall constitute a waiver of any claim of Force Majeure with respect to the event in question.

88. If EPA agrees that a delay or anticipated delay is attributable to Force Majeure, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event shall be extended by EPA, after a reasonable opportunity for review and comment by MassDEP, for a period of time as may be necessary to allow performance of such obligations. EPA will notify the City in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

89. If EPA does not agree the delay or anticipated delay is attributable to Force Majeure, or on the number of Days of noncompliance caused by such event, EPA will notify the City in writing of its decision. The City may then elect to initiate the dispute resolution process set forth in Section XIII (Dispute Resolution). In any dispute resolution proceeding, the City shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that “best efforts” were exercised to avoid and mitigate the effects of the delay, and that the City complied with the requirements of Paragraphs 86 and 87, above. If the City carries this burden, the delay at issue shall be deemed not to be a violation by the City of the affected obligation(s) of this Consent Decree identified to EPA and the Court.

90. Delay in performance of any obligation under this Consent Decree shall not automatically justify or excuse delay in complying with any subsequent obligation or requirement of this Consent Decree.

91. Failure of the City to obtain any Commonwealth or federal grants or loans shall not be considered a Force Majeure event under this Consent Decree.

XIII. DISPUTE RESOLUTION

92. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures set forth in this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. The City's failure to seek resolution of a dispute under this Section shall preclude the City from raising any such undisputed issue as a defense to an action by the United States or the Commonwealth to enforce any obligation of the City arising under this Consent Decree. The procedures set forth in this Section shall not apply to actions by the United States or the Commonwealth to enforce obligations that the City has not disputed in accordance with this Section.

93. Informal Dispute Resolution. Any dispute subject to dispute resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when the City sends the United States and the Commonwealth a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute, and shall be accompanied by a Statement of Position that shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the City. The period of informal negotiations shall not exceed thirty (30) Days from the date the dispute arises, unless that period is modified by written agreement between the

Parties. EPA shall maintain an administrative record of the dispute, which shall contain all statements of the Parties, including supporting documentation, submitted pursuant to this Section.

94. In the event that the City elects to invoke dispute resolution according to this Section, the City shall do so by giving the United States and the Commonwealth written notice of the existence of the dispute within ten (10) Days after receipt of a notice of disapproval, approval with conditions or modification, a Force Majeure determination by EPA, or a written demand for payment of stipulated penalties. If the City fails to give such notice, it shall be deemed to have waived any right to invoke dispute resolution regarding such dispute, and the position advanced by the United States and/or the Commonwealth as appropriate shall be considered binding.

95. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States or the United States and the Commonwealth as appropriate shall be considered binding unless, within thirty (30) Days after the conclusion of the informal negotiation period, the City seeks judicial review of the dispute by filing with the Court and serving on the United States and the Commonwealth, in accordance with Section XV (Form of Notice), a motion requesting judicial resolution of the dispute. Any such motion shall contain a written statement of the City's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

96. The United States and the Commonwealth shall respond to the City's motion within the time period allowed by the Federal Rules of Civil Procedure and the Local Rules of this Court.

The City may file a reply memorandum, to the extent permitted by the Federal Rules of Civil Procedure and the Local Rules.

97. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, any dispute brought under this Section pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules, or any other items requiring approval by EPA and MassDEP under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, the City shall have the burden of demonstrating, based upon the administrative record, that the United States' and the Commonwealth's positions are arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under this Section, the City shall bear the burden of demonstrating that its position complies with this Consent Decree, furthers the objectives of this Consent Decree more positively than the position advanced by the United States and the Commonwealth, and that the City is entitled to relief under applicable principles of law

98. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of the City under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 84. If the City does

not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XI (Stipulated Penalties).

XIV. RIGHT OF ENTRY AND DOCUMENT RETENTION

99. EPA and MassDEP and their contractors, consultants, and attorneys shall have authority to enter any property and/or facility owned or controlled by the City, at all reasonable times, upon proper identification, for the purposes of: (a) monitoring the progress of activity required by this Consent Decree; (b) verifying any data or information submitted to EPA or MassDEP under this Consent Decree; (c) assessing the City's compliance with this Consent Decree; (d) obtaining samples and, upon request, splits of any samples taken by the City or its representatives, contractors, or consultants; and (e) obtaining documentary evidence, including photographs and similar data. Upon request, EPA and MassDEP shall provide the City splits of any samples taken by EPA or MassDEP.

100. Until five years after the termination of this Consent Decree, the City shall retain all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) generated by the City, and all data collected and all reports generated by the City's contractors (including data and reports in electronic form), that relate in any manner to the City's performance of its obligations under this Consent Decree. This information retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the Commonwealth, the City shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

101. At the conclusion of the information-retention period provided in the preceding Paragraph, the City shall notify the United States and the Commonwealth at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the Commonwealth, the City shall deliver any such documents, records, or other information to EPA and the MassDEP. The City may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If the City asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by the City. However, no documents, records, data, reports or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

102. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the Commonwealth pursuant to applicable federal or Commonwealth laws, regulations, or permits, nor does it limit or affect any duty or obligation of the City to maintain documents, records, or other information imposed by applicable federal or Commonwealth laws, regulations, or permits.

XV. FORM OF NOTICE

103. Submissions required by this Consent Decree shall be made electronically, in writing by certified mail with return receipt, or by any reliable commercial delivery service that provides

written verification of delivery to the following respective addressees, unless written notice is given that another individual has been designated to receive the submissions. Any submission required by this Consent Decree must be received by EPA and/or the MassDEP, as appropriate, upon the due date stated in this Consent Decree.

As to the Department of Justice

Chief, Environment Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
(202) 514-5268

As to the United States Attorney

Anton P. Giedt
Assistant U.S. Attorney
John Joseph Moakley U.S. Courthouse
1 Courthouse Way, Suite 9200
Boston, MA 02210

As to the EPA

Reports and plans required to be submitted by the City to EPA shall be submitted to Michael Fedak, with a copy of the transmittal letter only to Michael Wagner. The City shall provide complete copies to both Michael Fedak and Michael Wagner of all other submissions required to be made by the City to EPA pursuant to this Consent Decree.

Michael Fedak
Environmental Engineer
U.S. EPA
Mail Code: OES04-3
5 Post Office Square
Boston, MA 02109-3912

Michael Wagner
Enforcement Counsel
U.S. EPA
Mail Code: OES04-3

5 Post Office Square
Boston, MA 02109-3912

As to the MassDEP

Robert Kimball
Massachusetts Department of
Environmental Protection
Central Regional Office
627 Main Street
Worcester, MA 01608

As to the Commonwealth

Louis Dundin
Assistant Attorney General
Massachusetts Office of the
Attorney General
One Ashburton Place
Boston, MA 02108

As to the City of Fitchburg, Massachusetts

Lenny Laakso
Commissioner
Department of Public Works
City of Fitchburg
718 Main Street
Fitchburg, MA 01420

Joseph Jordan
Deputy Commissioner
Fitchburg Wastewater Treatment Facilities
718 Main Street
Fitchburg, MA 01420

John B. Barrett
City Solicitor
City of Fitchburg
718 Main Street
Fitchburg, MA 01420

104. All written notices, reports and all other submissions required by this Consent Decree shall contain the following certification by a duly authorized representative of the City:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

XVI. EFFECT OF SETTLEMENT

105. This Consent Decree resolves the civil claims of the United States and the Commonwealth for the violations alleged in the Complaints filed in this action through the Date of Lodging.

106. This Consent Decree is neither a permit nor a modification of any existing permit under any federal, Commonwealth, or local law or regulation. The City is responsible for achieving and maintaining complete compliance with all applicable federal, Commonwealth, and local laws and regulations, and permits, and the City's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the Commonwealth do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that the City's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CWA or with any other provisions of federal, Commonwealth, or local laws, regulations or permits. This Consent Decree shall not be construed to constitute EPA and/or MassDEP approval of any equipment or technology installed by the City under the terms of this Consent Decree.

107. This Consent Decree does not limit any rights or remedies available to the United States or the Commonwealth for any violation by the City of the CWA, the Massachusetts Act, and associated regulations or permit conditions other than those claims alleged in the Complaints through the Date of Lodging. This Consent Decree does not limit any rights or remedies available to the United States or the Commonwealth for any criminal violations. The United States and the Commonwealth expressly reserve all rights and remedies, legal and equitable, available to each of them for all violations of the CWA, the Massachusetts Act, or other applicable law where such violations are not alleged in their respective Complaints, and reserve all rights and remedies, legal and equitable, available to enforce the provisions of this Consent Decree. Nothing herein shall be construed to limit the power of the United States or the Commonwealth, consistent with their respective authorities, to undertake any action against any person, in response to conditions which may present an imminent and substantial endangerment to the public's health or welfare, or the environment.

108. In any subsequent administrative or judicial proceeding initiated by the United States or the Commonwealth for injunctive relief, civil penalties, or other appropriate relief relating to the City's Sewer System, or the City's violations of federal or Commonwealth law, the City shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the Commonwealth in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 105 of this Section.

109. This Consent Decree does not resolve any claims for contingent liability under Section 309(e) of the Clean Water Act, 33 U.S.C. § 1319(e). The United States specifically reserves any such claims against the Commonwealth, and the Commonwealth specifically reserves all defenses to any such claims.

110. This Consent Decree does not limit or affect the rights of the City, the United States, or the Commonwealth against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against the City, except as otherwise provided by law.

111. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree

XVII. COSTS

112. Each Party shall bear its own expenses, costs and attorney's fees in this action. The City shall be responsible for all documented expenses, costs and attorney's fees incurred by the United States and the Commonwealth in collecting any penalties due and payable under Sections VI (Civil Penalty) and XI (Stipulated Penalties) of this Consent Decree. In no event shall the United States or the Commonwealth be responsible for any expenses, costs or attorney's fees incurred by the City.

XVIII. EFFECTIVE DATE

113. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that the City hereby agrees that it shall be bound to perform duties scheduled to occur prior to the Effective Date. In the

event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirement to perform duties scheduled to occur before the Effective Date shall terminate.

XIX. RETENTION OF JURISDICTION

114. The Court shall retain jurisdiction to modify and enforce the terms and conditions of this Consent Decree and to resolve disputes arising hereunder as may be necessary or appropriate for the construction or execution of this Consent Decree and to assess any stipulated penalties that may have accrued during the term of the Consent Decree.

XX. MODIFICATION

115. The terms of this Consent Decree, including any attachments, may be modified only by a subsequent written agreement signed by all the Parties, except that, without otherwise altering the obligations of the Consent Decree, (a) the Parties may by written agreement modify the schedules specified in this Consent Decree, and (b) EPA and the MassDEP may approve submissions upon specified conditions. Any other modification to the terms of this Consent Decree shall be effective only upon approval of the Court. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section XIII (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 97, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XXI. FUNDING

116. Performance of the terms of this Consent Decree by the City is not conditioned on the receipt of any Federal or State grant funds or loans. In addition, performance is not excused by the lack of any Federal or State grant funds or loans.

XXII. SEVERABILITY PROVISION

117. The provisions of this Consent Decree shall be severable, and should any provisions be declared by a court of competent jurisdiction to be unenforceable, the remaining provisions shall remain in full force and effect.

XXIII. TERMINATION

118. After the City has paid all outstanding penalties, and has completed all remedial measures and reports required under Sections VII and VIII of this Consent Decree, the City may serve upon the United States and the Commonwealth a Request for Termination, stating that the City has satisfied those requirements, together with all applicable supporting documentation.

119. Following receipt by the United States and the Commonwealth of the City's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether the City has satisfied the requirements for termination of this Consent Decree. If the United States and the Commonwealth agree that this Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

120. If the United States and the Commonwealth do not agree that the City has paid all outstanding penalties and completed all remedial measures required under Section VII, and therefore, that this Consent Decree may be terminated, the City may invoke dispute resolution

under Section XIII (Dispute Resolution). However, the City shall not seek dispute resolution of any dispute regarding termination until sixty (60) Days after service of its Request for Termination.

XXIV. FINAL JUDGMENT

121. Entry of this Consent Decree constitutes Final Judgment under Rule 54 of the Federal Rules of Civil Procedure.

XXV. WAIVER OF SERVICE OF SUMMONS AND COMPLAINT

122. The City hereby acknowledges receipt of the Complaints and waives service of the summonses pursuant to Rule 4 of the Federal Rules of Civil Procedure.

XXVI. PUBLIC COMMENT

123. The City consents to the entry of this Consent Decree without further notice. Final approval of this Consent Decree is subject to the public notice requirements of 28 C.F.R.§ 50.7. After reviewing the public comments, if any, the United States shall advise the Court by motion whether it supports entry of the Consent Decree.

Judgment is hereby entered in accordance with the foregoing Consent Decree this _____ day of _____ .

_____

UNITED STATES DISTRICT JUDGE

The following parties hereby consent to the entry of this Consent Decree:

For Plaintiff UNITED STATES OF AMERICA

_____ _____

Ignacia S. Moreno DATE
Assistant Attorney General
Environment & Natural Resources Division
United States Department of Justice

_____ _____

Brian Donohue DATE
Senior Attorney
Environmental Enforcement Section
Environment & Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
(202) 514-

Carmen M. Ortiz
United States Attorney
District of Massachusetts

_____ _____

Anton P. Giedt DATE
Assistant U.S. Attorney
John J. Moakley Courthouse
1 Courthouse Way, Suite 9200
Boston, MA 02210
(627) 748-3309 (Voice)
(627) 748-3967 (Fax)
anton.giedt@usdoj.gov

For the UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

_____ _____

Cynthia Giles Date
Assistant Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

_____ _____

Susan Studlien, Director Date
Office of Environmental Stewardship
United States Environmental Protection Agency,
Region I
One Congress Street
Boston, MA 02114

For the COMMONWEALTH OF MASSACHUSETTS

Martha Coakley
Attorney General
One Ashburton Place
Boston, MA 02108

_____ _____

Louis Dundin
Assistant Attorney General
Environmental Protection Division
Office of the Attorney General
One Ashburton Place
Boston, MA 02108
617-963-2433

For Defendant City of Fitchburg, MASSACHUSETTS

_____ _____

Date

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

INDEX OF ATTACHMENTS

ATTACHMENT NO.	DESCRIPTION
1	CMOM PROGRAM SELF-ASSESSMENT
2	LONG-TERM SEWER SYSTEM PREVENTATIVE MAINTENANCE PLAN
3	PRIORITY CLEANING PLAN
4	ROUTINE MAINTENANCE CLEANING PLAN
5	CITY LETTER CORRESPONDENCE FOR JUNE 30, 2011 SUBMITTALS
6	CSS 2B, 3C, AND CSO 038 MODIFICATIONS
7	CSS 4D
8	EMERGENCY RESPONSE PLAN
9	EAST WWTP IMPROVEMENTS TO MEET THE INTERIM TOTAL PO4 DISCHARGE LIMITS
10	EAST WWTP LONG-TERM PREVENTATIVE MAINTENANCE PLAN
11	EAST WWTP POTW OPTIMIZATION EVALUATION REPORT
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CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 1

USEPA WASTEWATER COLLECTION SYSTEM CMOM PROGRAM SELF-ASSESSMENT

CITY OF FITCHBURG, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

USEPA WASTEWATER COLLECTION SYSTEM CMOM PROGRAM SELF-ASSESSMENT

(September 2009 revision of CMOM Self-Assessment Checklist)

OCTOBER 31, 2011
REVISED: JANUARY 31, 2012

ATTACHMENT 1

United States Environmental Protection Agency, EPA New England
Wastewater Collection System CMOM Program Self-Assessment Checklist

September 2009

Attachment 1

United States Environmental Protection Agency, EPA New England

Wastewater Collection System CMOM Program Self-Assessment Checklist – September 2009

Name of your system: City of Fitchburg, Wastewater Treatment Facilities Commission Date: 30-Jan-2012

Put an "A" in the final column for an issue you intend to address with future action, or leave blank if you have evaluated your program as sufficient.

I. General Information – Collection System Description

I	Question	Response	*Act
1	Identify the number of people currently served by your wastewater collection system.	Approximately 43,000 population.	
2	Identify the number of service connections to your collection system. Specify the number of residential, commercial, and industrial connections. Provide a list of the commercial and industrial connections. Provide the number of manholes, pump stations, force mains, and siphons. Provide the length (in feet or miles) of gravity sewers and force mains? List by size and type.	(Approximate:) 11,503 Sewer System Connections 10,330 Residential Sewer System Connections 975 Commercial Sewer System Connections 198 Industrial Sewer System Connections (See Attachment 2 for summary of sewer lengths by size and pipe material type.)	
3	What is the age of your system (e.g., percentage over 100, 75, 50, 30, etc. years old)?	(See Attachment 2 for summary of sewer system age by percentage.)	
4	Type(s) and age of collection system maps that are available and what percent of the system is mapped by each method (e.g., paper only, paper scanned into electronic, digitized, interactive GIS, etc.)?	Collection system maps are comprised of paper and paper scanned to electronic As-Built plans. The City is updating sewer collection system data in the interactive GIS mapping system. The GIS mapping system will be interlinked with the new asset management (AM) software program. (See I.7 question response below.)	A
5	Indicate whether you have a systematic numbering and identification method/system to identify sewer system manholes, sewer lines, and other components (pump stations, etc.). Please describe.	The City has divided the sewer collection system into 24 subcatchment areas. Manholes, pipes and pump stations uniquely numbered within each of the 24 areas.	A
6	Are "as-built" plans (record drawings) or maps available and used by field crews in the office and in the field?	Currently, "As-Built" plans are printed out in the office from the scanned electronic file copies of the print "As-Built" plans, on an as-needed basis for field crew use.	
7	Describe the type of asset management (AM) system you use (e.g. card catalog, spreadsheets, AM software program, etc.)	The City is in progress of integration of an AM software (Cartegraph). The City anticipates the AM software program going online by April 2012.	A

* Put an "A" in the final column if this is an issue you intend to address with future action.

II. Continuing Sewer Assessment Plan

II	Question	Response	*Act
1	Describe under what conditions, if any, the collection system overflows. Does it overflow during both wet and dry weather? Characterize common causes of overflows: □ hydraulic capacity, □ debris, □ roots, □ Fats, Oils & Grease (FOG), □ vandalism, □ other (specify). Describe your system's history of structural collapses, and PS or force main failures.	Generally, when collection system overflows occur it is due to wet weather conditions. On rare occasions collection system overflows occur due to either structural or operation and maintenance related flow restriction conditions. The inaugural round of collection system investigations and inspections is currently underway. Common causes of overflows have included faulty construction methods (settled pipe sections, service taps projecting into sewers, etc.), debris (compounded from structural impedences), FOG (related to food preparation service connections), and hydraulic limitations (typically affected by wet weather flow).	A
2	Provide the number of sanitary sewer overflows (SSOs), including building and private property backups, that have occurred in each of the last three calendar years. In an attachment, provide the date, location, cause, volume and fate of the discharge for each SSO event.	(See appended SSO Reports)	
3	Describe how you responded to the building and private property backups listed in II.2, including how you document the response, result of the investigation into the cause, and the ultimate fate of the discharge.	(See appended SSO Reports)	
4	What is the ratio of peak wet-weather flow to average dry-weather flow at the wastewater treatment plant or municipal boundary for satellite collection systems?	The peak hourly wet-weather flow is 39 MGD. The average daily flow, based on a 12-month rolling average, is 10.1 MGD. The ratio of peak flow to average flow at the East Fitchburg WWTF is approximately 4:1.	
5	Describe short-term measures that have been implemented or planned to mitigate overflows at each location. If actions are planned, when will they be implemented for each location?	Short-term and long-term measures to mitigate overflows, and preventative maintenance programs are detailed in the City's ***Routine Maintenance Cleaning Plan***, ***Priority Cleaning Plan***, and ***Long-Term Sewer System Preventative Maintenance Plan***.	A
6	Describe long-term measures that have been implemented or planned to mitigate overflows at each location. If actions are planned, when will they be implemented for each location?	Short-term and long-term measures to mitigate overflows, and preventative maintenance programs are detailed in the City's ***Routine Maintenance Cleaning Plan***, ***Priority Cleaning Plan***, and ***Long-Term Sewer System Preventative Maintenance Plan***.	A
7	Describe preventive maintenance programs; how are they tracked (e.g., card files, electronic spreadsheets, specific software)? Do you have a system to prioritize investigations, repairs and rehabilitation?	Short-term and long-term measures to mitigate overflows, and preventative maintenance programs are detailed in the City's ***Routine Maintenance Cleaning Plan***, ***Priority Cleaning Plan***, and ***Long-Term Sewer System Preventative Maintenance Plan***. The inaugural round of collection system investigations and inspections is currently underway.	A

* Put an "A" in the final column if this is an issue you intend to address with future action.

8	Are chronic problem areas systematically identified and tracked? Is there an established schedule for more frequent maintenance for problem areas? How are these maintenance regimes tracked and evaluated? Is there an established program to identify and address underlying causes for problem areas?	Chronic problem areas are systematically cataloged and tracked as they are identified. Schedules for more frequent maintenance for problem areas are determined on a site specific basis, and is detailed in the City's ***Priority Cleaning Plan***, and ***Long-Term Sewer System Preventative Maintenance Plan***. The inaugural round of collection system investigations and inspections is currently underway.	A
9	If septage is accepted, are haulers required to declare the origin of their load? Are records of these declarations maintained? Are these declarations used to identify potential SSOs?	Septage is accepted, and haulers are required to declare their load origin. Records of declarations are maintained. Septage declarations are not used to identify potential SSOs.	

III.A. Collection System Management Organizational Structure

III A	Question	Response	*Act
1	Provide an organizational chart that shows the overall personnel structure for collection system operations, including operation and maintenance staff.	Collection system organization showing the overall personnel structure is provided in the City's ***Long-Term Sewer System Preventative Maintenance Plan***.	
2	Provide up-to-date job descriptions that delineate responsibilities and authority for each position.	Up-to-date job descriptions are provided in the City's ***Long-Term Sewer System Preventative Maintenance Plan***.	
3	How many staff members work on collection system maintenance? If these workers are also responsible for other duties, (e.g., road repair or maintenance, O&M of the storm water collection system), what percentage of their time is dedicated to the collection system?	The City's Wastewater Division has six (6) staff member positions that work on collection system maintenance. The six-person collection system crew is solely responsible for collection system maintenance duties, and does not perform other duties. 100% of the collection system crew is dedicated to the collection system.	
4	Are there any collection system maintenance position vacancies? How long have these positions been vacant?	Presently (as of 27-Jan.-2012), two of the six collection system maintenance crew positions are vacant. One position has been vacant since Nov.-2011, the second position has just become vacant in Jan. 2012.	
5	For which, if any, maintenance activities do you use an outside contractor?	Criteria and protocols used by the City to determine the necessity for calling in contract maintenance services are included in the City's ***Priority Cleaning Plan***.	
6	Describe any group purchase contracts you participate in.	(None)	

III.B. Collection System Management: Training

III B	Question	Response	*Act
1	What types of training are provided to staff?	Structured classroom & hands-on training, supervised instruction/guidance by management, and regular, informal topical discussions at wastewater collection crew staff meetings.	
2	Is training provided in any of the following areas: □ general	Training is provided in the areas of: general safety; routine maintenance; confined space entry; MSDSs; biological hazards;	

* Put an "A" in the final column if this is an issue you intend to address with future action.

	safety, □ routine line maintenance, □ confined space entry, □ MSDS □ lockout/tagout, □ biologic hazards, □ traffic control, □ record keeping, □ electrical and instrumentation, □ pipe repair, □ public relations, SSO/emergency response, □ pump station operations and maintenance, □ trenching and shoring, □ other (explain)?	traffic control; record keeping; public relations, SSO/emergency response; and pipeline and manhole infrastructure condition assessment (by NASSCO standards certification training).	
3	Which training requirements, if any, are mandatory for key employees?	Due to the wastewater collection crew size, and the newness of the group, training requirements are mandatory for all members of the wastewater collection crew.	
4	How many collection system employees are certified (e.g, NEWEA certification program) and at what grade are they certified?	NEWEA collection system operator certification training is scheduled for all members of the wastewater collection crew for the end of January 2012. At the referenced certification training, all Collections personnel will be pursuing Grade IV Collection System Operation certifications.	

III.C. Collection System Management: Communication and Customer Service

III C	Question	Response	*Act
1	Describe your public education/outreach programs (e.g., for user rates, FOG, extraneous flow, SSOs etc.)?	The City does not currently have an education/outreach program for customers. The City has previously used customer billing inserts to provide notification on important issues. An education/outreach program is under development.	A
2	What are the most common collection system complaints? How many complaints have you received in each of the past three calendar years?	The most common collection system customer complaints concern billing rates, followed by customer sewer service backups/interruption. Past customer complaint documentation is incomplete. Going forward, customer complaints will be tracked and documented using the new AM software (Cartegraph).	A
3	Are formal procedures in place to evaluate and respond to complaints?	The City presently documents complaints for evaluation and response with paper forms. Going forward, customer complaints will be tracked, documented, and forwarded to collection crew for evaluation and response using the new AM software (Cartegraph).	A
4	How are complaint records maintained (e.g, logs, spreadsheets)? How are complaints tied to emergency response and operations and maintenance programs?	The City presently documents complaints records with paper forms. Going forward, customer complaint records will be tracked, documented, and forwarded to collection crew for evaluation and response using the new AM software (Cartegraph). The AM software will be interlinked with the GIS mapping system, and will enable the City to tie emergency responses with operations and maintenance programs.	A

III.D. Collection System Management: Management Information Systems

III D	Question	Response	*Act
1	How do you manage collection system information? (Commercial software package, spreadsheets, data bases, SCADA, etc). What information and functions are managed electronically?	The collection system information will be managed with the integrated GIS system and AM software (Cartegraph). The implementation of the integrated management system is in development. The City anticipates the AM software program going online by April 2012.	A
2	What procedures are used to track and plan collection system maintenance activities?	The tracking and planning of collection system maintenance activities will be managed with the integrated GIS system and AM software (Cartegraph).	A
3	Who is responsible for establishing maintenance	The Wastewater Collection System Manager will be responsible for establishing collection system maintenance priorities. The	

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	priorities? What records are maintained for each piece of mechanical equipment within the collection system?	Maintenance Engineer will be responsible for establishing pumping system maintenance priorities.	
4	What is the backlog for various types of work orders?	There is no system in place for tracking backlog for various types of work orders. The new AM software will have this functionality.	A
5	How do you track emergencies and your response to emergencies? How do you link emergency responses to your maintenance activities?	The City presently documents emergencies and responses to emergencies with paper forms. Going forward, emergencies and responses to emergencies will be tracked and documented using the new AM software (Cartegraph). The AM software will have the functionality to link emergency responses with maintenance activities.	A
6	What written policies and protocols do you have for managing and tracking the following: scheduled and unscheduled work orders, including complaint response? Scheduled inspections and preventative maintenance? Safety incidents and emergency responses? Compliance and overflow tracking? Equipment and tools tracking? Spare parts inventory?	City written policies and protocols are under development for the managing and tracking of: scheduled and unscheduled work orders, including complaint responses; scheduled inspections and preventative maintenance; safety incidents and emergency responses; compliance and overflow tracking; equipment and tools tracking; and spare parts inventory. The new AM software (Cartegraph) will be central to work orders management, planned and scheduled activities, reporting forms for compliance and overflow tracking, and inventory management.	A

III.E. Collection System Management: SSO Notification Program

III E	Question	Response	*Act
1	What are your procedures, including time frames, for notifying state agencies, health agencies, regulatory authorities, and the drinking water authorities of overflow events?	Procedures and time frames for notifying state and health agencies, regulatory authorities and the drinking water authorities of overflow events shall follow strict accordance with the City's NPDES Permit for the East Wastewater Treatment Facility (Permit No.: MA0100986).	
2	Do you use a standard form to record and report overflow events? Provide a copy of the form that is used.	(See attached SSO/CSO Complaint Form and SSO Reporting Form.)	

III.F. Collection System Management: Legal Authority

III F	Question	Response	*Act
1	Are discharges to the sewer regulated by a sewer use ordinance (SUO)? Does the SUO contain procedures for controlling and enforcing the following: □ FOG; □ defects in service laterals located on private property; □ building structures over the sewer lines; □ storm water connections to sanitary lines; □ sump pumps, roof drains and other private sources of inflow; □ Infiltration and Inflow (I/I);?	Discharges to the sewer system is regulated by the sewer use ordinances within the City Code, Chapter 147 Sewers. The sewer use ordinance contains regulations governing the installation of building sewers (147-6, paragraphs A. thru E.), and general sewer discharge prohibitions (147-8, paragraphs A. thru S.).	
2	Who is responsible for	The Department of Public Works Deputy Commissioner of	

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	enforcing various aspects of the SUO? Does this party communicate with your department on a regular basis?	Wastewater is responsible for enforcing the sewer use ordinance. The Deputy Commissioner is in regular communication with the wastewater collection system manager and crew.	
3	Summarize any SUO enforcement actions/activities that have occurred in the last three calendar years.	There have been no enforcement action activities within the last three calendar years.	
4	Is there a program to control FOG entering the collection system? If so, does it include the following elements: □ permits, □ minimum performance criteria, □ inspection □ enforcement? Are commercial grease traps inspected regularly? Who is responsible for inspections and enforcement?	The City's FOG control program is currently in development. Commercial grease traps inspections, and enforcement actions for non-compliance, are the responsibility of the City Board of Health.	A
5	Is there an ordinance dealing with storm water connections or requirements to remove storm water connections?	Section 147-6, Paragraph C, of the City Code prohibits the connection of roof downspouts, exterior foundation drains, areaway drains or other sources of surface runoff or groundwater to a building sewer which is in turn connected to a public sewer.	
6	Does the collection system receive flow from satellite communities? If yes, which communities? How are flows from these satellite communities recorded and regulated? Are satellite flow capacity issues periodically reviewed?	The City receives flow from the Towns of Westminster and Lunenburg. The Westminster flow is metered at the City line. The Lunenburg flow is determined from the customer municipal water usage rates.	
7	Does the collection system receive flow from other collection systems (e.g. colleges and universities, military bases, or private collection systems)? If so, list these sources. How are flows from these collection systems recorded and regulated? Are there required inspection and maintenance programs? How are overflows addressed? How are overflows recorded and reported?	The City public sewer system receives sewage flow from private sewer collection systems including the Stoney Brook and Bridal Cross subdivisions. Sewage usage flows from these subsystems are regulated and invoiced from metered water usage. Subsystems are self-responsible for operation and maintenance of the private collection system. The City is developing a program for inspection and maintenance programs under the oversight and approval of the City. The program shall entail provisions for addressing and managing system overflows, and requirements for recording and reporting overflows.	A

IV.A. Collection System Operation: Financing

IV A	Question	Response	*Act
1	Has an enterprise (or other) fund been established? Does it include: wastewater collection and treatment operations; collection system maintenance; long-term infrastructure improvements; etc.? Are the funds sufficient	A wastewater enterprise fund has been established, and includes wastewater collection and treatment operations, collection system maintenance and long term infrastructure improvements. The funds are sufficient to properly fund future system needs.	

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	to properly fund future system needs?		
2	How are rates calculated (have you done a rate analysis)? What is the current sewer charge rate? When was the last increase? How much was the increase?	Sewer usage rates have been developed by the City Water and Wastewater Commission, in accordance with recommendations of the City's consulting engineers. The current sewer charge rate is $7.30/ccf. The rate was increased by $2.95/ccf at the last rate increase on July 1, 2011.	
3	What is your O&M budget?	The FY 2012 annual O&M budget for the collection system is $402,000. Additionally, major capital projects are funded through long term debt obligations, currently estimated at $17M between FY 2010 and FY 2015.	
4	If an enterprise fund has not been established, how are collection system maintenance operations funded?	(Not applicable.)	
5	Is there a Capital Improvement Plan (CIP) that provides for system repair/replacement on a prioritized basis exist? What is the collection system's average annual CIP budget?	The City does have a Capital Improvement Plan (CIP) to provide for system repair/replacement on a prioritized basis. The CIP is financed through long-term loan obligations, rather than annual budget line items. The City's projected budget for CIP over the next 5 years will average $4M/year.	
6	How do you account for the value of your system infrastructure for the Government Accounting Standards Board Standard 34 (GASB 34)?	In accordance with GASB 34, the City values the existing sewer collection system facilities using values deflated by a CPI and depreciation factors. New collection system capital infrastructure is valued from actual expenditures, or from determined values for donated projects.	

IV.B. Collection System Operation: Hydrogen Sulfide Monitoring and Control

IV B	Question	Response	*Act
1	Are odors a frequent source of complaints? How many have been received in the last calendar year? List location(s) of complaints.	Odors are not a frequent source of complaints. There have been no documented complaints received within the last calendar year.	
2	Do you have a hydrogen sulfide problem, and if so, do you have corrosion control programs? What are the major elements of the program?	The City operation and maintenance personnel have not observed evidence of a hydrogen sulfide problem in the collection system. The City does not have a collection system corrosion control program.	
3	Does your system contain air relief valves at the high points of the force main system? If so, how often are they inspected? How often are they exercised?	Force mains are installed with a continuous upward pitch to the force main discharge, without intermediate high points, and have not been installed with air relief valves.	

IV.C. Collection System Operation: Safety

IV C	Question	Response	*Act
1	Do you have a formal Safety Training Program? If so, how do you maintain safety training records?	The City does not have a formal Collection System Operation Safety Training Program. The City is developing a formal Collection System Operation Safety Training Program for the collection system operations personnel.	A
2	Are the following items are available and in adequate	The following equipment items are available to the collection system operations personnel: rubber/disposable gloves; confined	

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	supply: □ rubber/disposable gloves; □ confined space ventilation equipment; □ hard hats, □ safety glasses, □ rubber boots; □ antibacterial soap and first aid kit; □ tripods or non-entry rescue equipment; □ fire extinguishers; □ equipment to enter manholes; □ portable crane/hoist; □ atmospheric testing equipment and gas detectors; □ oxygen sensors; □ H2S monitors; □ full body harnesses; □ protective clothing; □ traffic/public access control equipment; □ 5-minute escape breathing devices; □ life preservers for lagoons; □ safety buoys at activated sludge plants; □ fiberglass or wooden ladders for electrical work; □ respirators and/or self-contained breathing apparatus; □ methane gas or OVA analyzer; □ LEL metering?	space ventilation equipment; hard hats; safety glasses; rubber boots; antibacterial soap and first aid kit; tripod, mechanical hoist and cable, and harness lifting confined space entry system, and equipment to enter manholes; fire extinguishers; atmospheric testing equipment and gas detectors; oxygen sensors; H_2S monitors; protective clothing; traffic/public access control equipment; 5-minute escape breathing devices; life preservers for activated sludge basins; fiberglass ladders; respirators; and a combined gas meter.	

IV.D. Collection System Operation: Emergency Preparedness and Response

IV D	Question	Response	*Act
1	Do you have a written collection system emergency response plan? If so, when was the plan last updated? What departments are included in your emergency planning?	The City has a written Emergency Response Plan for responding to Sanitary Sewer Overflows and Dry-Weather Combined Sewer Overflow Discharges (August 31, 2011). The Department of Public Works, Wastewater Division, Fire & Emergency Medical Services Department, and Police Department are included in the emergency plan response plan.	
2	Does the emergency response plan consider the following: □ vulnerable points in the system, □ severe natural events, □ a failure of critical system components, □ vandalism or other third party events (specify), □ other types of incidents (specify)?	The City's written Emergency Response Plan is specific to Sanitary Sewer Overflows and Dry-Weather Combined Sewer Overflow Discharges response.	
3	How do you train staff to respond to emergency situations? Where are responsibilities detailed for personnel who respond to emergencies?	Collection system operations staff is trained in response to emergency situations as specified in the ERP, Chapter 1, Section 1.6 SSOs and Dry-Weather CSO Outfall Discharge Event Response Team Training, Preparation and Evaluation.	
4	How many emergency calls have you had in the past calendar year? What was their nature?	(See attached SSO Reports and MassDEP Reports.)	

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IV.E. Collection System Operation: Engineering – Capacity

IV E	Question	Response	*Act
1	How do you evaluate the capacity of your system and what capacity issues have you identified, if any? What is your plan to remedy the identified capacity issues?	Going forward, collection system inspection efforts, including asset condition assessment work, will make note of probable or suspected system capacity issues (either structural related, operation & maintenance related, or construction related). City will remedy the issue in a manner appropriate to the nature of the capacity issue. Future capacity field investigations will be coordinated with the hydraulic model runs to evaluate observed suspected system capacity issues.	A
2	What procedures do you use to determine whether the capacity of existing gravity sewer system, pump stations and force mains are adequate for new connections? Who does this evaluation?	The City will conduct an existing sewer system capacity evaluation, on a case by case basis, depending on the scope of the proposed collection system connection, the estimated connection sewage flow, and the known system hydraulic performance at and downstream of the proposed connection.	
3	Do you charge hook up fees for new development and if so, how are they calculated?	Sewer system service connection fees are stipulated in the sewer use ordinance in Chapter 147 of the City Code, Section 147-5 Sewer Connections. Fees are based on projected sewer flow rates, or water usage rates for similar development.	
4	Do you have a hydraulic model of your collection system? Is it used to predict the effects of system remediation and new connections?	The City does have a hydraulic model of the collection system. The model will be updated following the completion of the next three combined sewer separation projects. The updated model will be utilized to analyze the impacts of the planned separation projects, and will also be used to predict the effects of system remediation and new connections.	A

IV.F. Collection System Operation: Pump Stations - Inspection

IV F	Question	Response	*Act
1	How many pump stations are in the system? How often are pump stations inspected? How many are privately owned, and how are they inspected? Do you use an inspection checklist?	There are three publicly owned sewage pumping stations: West WWTF Pump Station (inspected weekly); Cobbler Drive Pumping Station (inspected quarterly) and the Fitchburg High School Pumping Station (inspected semiannually). (See Attachment 2 for discussion of privately owned pumping stations.)	
2	Describe backup equipment at pump stations. Is there sufficient redundancy of equipment at all pump stations?	All public pumping stations, the West WWTF Pump Station, Cobbler Drive Pumping Station and Fitchburg High School Pumping Station have duplex (redundant) pumping equipment configurations.	
3	How are pump stations monitored? If a SCADA system is used, what parameters are monitored?	West WWTF Pump Station is monitored by SCADA. Cobbler Drive Pumping Station is equipped with an operating condition visual status alarm. Fitchburg High School Pumping Station is monitored via alarming system that activates in the custodial office of the High School. The High School is the only connection to this pumping station.	
4	How many pump station/force main failures have you had in each of the last three years? Who responds to pump station/force main failures and overflows? How are the responders notified?	Within the last three years, only the Cobbler Drive Pumping Station has failed. The City's on call maintenance contractor response to restore the Cobbler Drive Pumping Station to service. If there were a West WWTF Pump Station service issue, the East WWTF plant maintenance staff responds. There have been no force main failures within the last three years.	
5	How many pump stations have backup power? How many require portable generators? How many	The West WWTF Pumping Station has back up power. The Cobbler Drive Pumping Station does not have provisions for backup power, but was constructed with a 6,000-gallon emergency overflow vault to provide storage capacity during periods when the	

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	portable generators does your system own? Explain how portable generators will be deployed during a system-wide electrical outage.	pumping station is out of service. The Fitchburg High School Pumping Station is supplied emergency backup power from an emergency generator located at the school. The City does not have portable generators to provide backup power to operate pumping stations.	
6	Are operation logs maintained for all pump stations? Are the lead, lag, and backup pumps rotated regularly?	The West WWTF Pumping Station does not have manually noted operation logs maintained. The system operational status is monitored via SCADA. Operation logs are produced during quarterly service inspections for the Cobbler Drive Pumping Station. Cobbler station pumps (2) are operated in a lead-lag mode, with lead pump/lag pump alternating after each cycle. The High School Pumping Station inspection logs are produced during semi-annual inspections.	
7	Are pump station operations adjusted (manually or automatically) during wet weather to maximize in-line storage of wet weather flows?	West WWTF Pumping Station operates with equalization basin capability to manage the effects and impacts of wet weather flows. Neither the Cobbler Drive Pumping Station nor the High School Pumping Station have operational adjustments for wet-weather flow. The High School Pumping Station solely serves the Fitchburg High School facilities and is not impacted by wet weather.	

V.A. Equipment and Collection System Maintenance: Sewer Cleaning

V A	Question	Response	*Act
1	Do you have a schedule for cleaning sewer lines on a system-wide basis? At this rate, how long does it take to clean the entire system? How is sewer line cleaning recorded?	The City's goal is to conduct routine sewer cleaning on all sections of public sewer collection system within the next five years. The cleaning will be documented through the Cartegraph asset management software system.	A
2	How do you identify sewer lines that have chronic problems and should be cleaned more frequently? Is a list of these areas maintained and cleaning frequencies established?	Chronic problem areas have been identified from historical operational knowledge. A list of priority sites is maintained, and cleaning frequencies and cleaning activities vary by location.	
3	Approximately, how many collection system blockages have occurred during the last calendar year, and what were the causes? How many resulted in overflows?	When system blockages occur, the City collection system management is typically notified of the reported condition via phone call reporting a service related issue, or an observed overflow event. For details on system blockages during the last year, and related overflows, see the attached Service Call Forms, SSO/CSO Complaint Forms and SSO Reporting Forms.	
4	Has the number of blockages increased, decreased, or stayed the same over the past five years?	Historical documentation of system blockages has not been well maintained over the previous five years. Going forward, the organized efforts of the wastewater collection system management and collection system operations personnel will enable the City to monitor the system performance and identify system problem areas for further investigations.	A
5	What equipment is available to clean sewers? Is sewer line cleaning ever contracted to other parties? If so, under what circumstances?	The sewer collection operations personnel have a vactor/jetter truck, rodding equipment and root cutting equipment. Cleaning activities will be contracted out if the subject location is beyond the City sewer collection operations capabilities.	
6	Do you have a root control program? Describe its critical components.	The City is developing a root control program.	A

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V.B. Equipment and Collection System Maintenance: Maintenance Right-of-Way

V B	Question	Response	*Act
1	Is scheduled maintenance performed on Rights-of-Way and Easements? How often? How many manholes are located in easement areas? Are there problems locating and accessing these manholes. How many cannot be accessed or located? Are the manholes equipped with watertight and/or locking manhole covers?	Right of ways and easements are being reviewed and evaluated for the necessary maintenance tasks and frequencies for maintenance. The City does not currently have an inventory of manholes located within right of ways and easements, including buried structures. During the Winter/Spring of 2012, the City plans to purchase a transponder and locating sensor device to detect the below grade pipe cameras to facilitate the location of cross country buried, or vegetation obscured manholes.	A
2	Are road paving operations coordinated with collection system operators. Are there manholes that have been paved over? If so, how many manholes have been paved over? Describe systems in place to locate and raise manholes that have been paved over.	Road paving operations are coordinated through the Fitchburg DPW Engineering Division, and frames and covers are raised to grade, or replaced if necessary. The City does not currently have an inventory of paved over manholes. During the Winter/Spring of 2012, the City plans to purchase a transponder and locating sensor device to detect the below grade pipe cameras to facilitate the location of paved over manholes.	A

V.C. Equipment and Collection System Maintenance: Parts Inventory

V C	Question	Response	*Act
1	Do you have a central location for the storage of spare parts?	The Collection Operators store spare parts at the Highway Barn in their secured storage bay.	
2	How have critical spare parts been identified?	City Wastewater Collection System management will be contacting the City's equipment vendors and critical spare parts will be purchased based upon vendor recommendations.	A
3	How do you determine if adequate supplies are on hand? Has an inventory tracking system been implemented?	Evaluation of breakage risk, parts cost and lead time for replacement are all factors considered when ordering spare parts. We have not developed an inventory tracking system as the number of parts we need to supply for our equipment is not extensive.	

VI A. SSES: System Assessment

VI A	Question	Response	*Act
1	Do flow records, or prior I/I or Sewer System Evaluation Survey (SSES) programs indicate public or private sources of inflow? Please explain.	Prior investigations have revealed that most of the inflow is attributed to areas with combined sewers. However, it is reasonable to expect that there are private areas of inflow. At this time it is difficult to quantify inflow originating from private sources.	
2	If I/I studies or an SSES has been conducted? When were the studies conducted? What is the status of the recommendations? If no SSES or I/I have been conducted, is there a plan and schedule for conducting one?	A City-wide I/I analysis report was completed in 2011. It was determined that most of the inflow is attributed to areas with combined sewers, and it was recommended that the City continue with sewer separation projects. A SSES was conducted between 2000 and 2003, and was limited to combined sewer areas that were targeted for separation. Additional studies are anticipated after the next phase of sewer separation and extraneous flow removal projects are completed.	A
3	Do you have a program to identify and eliminate sources	The City does not currently have a program to identify and eliminate sources of I/I from the collection system. As the	A

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	of I/I into the system including private service laterals and illegal connections? If so, describe.	collection system condition assessment inspections proceed, if possible sources of I/I are observed, either in the public sewer or from service laterals, those conditions will be documented and the City will pursue actions for the removal of the suspected I/I. This City is developing a program to identify and eliminate sources of I/I into the system including private service laterals and illegal connections.	
4	Have private residences and businesses been inspected for sump pumps and roof leader connections? If so, how many have been inspected what percentages of the total residences and businesses does this represent?	Private residences and businesses have not been inspected for sump pumps and roof leader connections. As the collection system condition assessment inspections proceed, if suspected illicit sump pump or roof leader connections are observed, those conditions will be documented and the City will pursue actions for the removal of the suspected illicit connections. This City is developing a program to identify and eliminate illicit connections into the system.	A
5	Are inspections to identify illicit connections conducted during the property transfer process?	Inspections to identify illicit connections are not conducted during property transfer process.	
6	How many sump pumps and roof leaders have been identified? How many have been removed?	(Not available.)	
7	Have follow-up residential and business inspections been conducted?	(Not available.)	
8	Are there incentive programs to encourage residences and businesses to disconnect roof leaders & sump pumps (e.g. matching funds)?	The City does not have an incentive program to encourage residences and business to disconnect roof leaders & sump pumps.	
9	What disincentive programs exist to encourage residences and businesses to disconnect roof leaders & sump pumps (e.g. fines, surcharges)?	The City does not have a disincentive program to encourage residences and business to disconnect roof leaders & sump pumps.	

VI.B. SSES: Manhole Inspection

VI B	Question	Response	*Act
1	Do you have a manhole inspection and assessment program? If so, describe.	The City sewer collection crew have been certified in the NASSCO MACP condition assessment methodology.	A
2	Is a formal manhole inspection checklist used? If so, provide a copy.	The City sewer collection crew will utilize manhole inspection checklist forms consistent with the NASSCO MACP inspection forms. Attached is a copy of the NASSCO MACP inspection forms to be utilized.	A
3	How many manholes were inspected during the past calendar year? What percentage of the total number of manholes in system?	To date, no manholes have been inspected utilizing the NASSCO MACP condition assessment methodology. Going forward, both manhole inspections and pipeline inspections shall be integrated with the GIS and Cartegraph asset management software.	A

VII. Energy Use

VII	Question	Response	*Act
1	What is your annual energy cost for operating your	Annual energy costs for operating the City collection system, approximately $110,000, is associated with electrical costs for operating pumps and mixers for the West and Cobbler Street Pump	

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	system? For which pieces of equipment do you track energy use?	Stations.	
2	Have you upgraded any of your pumps and motors to more energy efficient models? If so, please describe.	The City has not upgraded any of the pumps or motors to more energy efficient models.	
3	Have you performed an energy audit in the past three years?	The City has not performed an energy audit within the past three years.	
4	Where do you use the most energy (fuel, electricity) in operating your collection system?	In the operation of the City's collection system, the City uses the most electricity powering the pump stations.	
5	If you have a treatment plant, would you be interested in participating in EnergyStar benchmarking of your treatment plant?	The City would be interested in participating in EnergyStar benchmarking for the City's East Wastewater Treatment Facility.	

VIII. Other Actions

VIII	Question	Response	*Act
1	Describe any other actions that you plan to take to improve your CMOM Program that are not discussed above.	(None.)	

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ATTACHMENT 2

CMOM SELF-ASSESSMENT CHECKLIST

QUESTIONS NARRATIVE RESPONSE

Attachment 2

City of Fitchburg, Massachusetts
Wastewater Collection System CMOM Program Self-Assessment Checklist
Checklist Narrative Responses
January 27, 2012

I. General Information – Collection System Information

Q.I.2 The gravity sewer system inventory, by diameter, is approximately:

55.1%	8-inch diameter, or less;
35.7%	9-inch diameter to 18-inch diameter;
5.2%	19-inch diameter to 36-inch diameter;
4.0%	greater than 36-inch diameter.

The force main sewers inventory, by diameter, is:

100.0%	8-inch diameter, or less;
0.0%	9-inch diameter to 18-inch diameter;
0.0%	19-inch diameter to 36-inch diameter;
0.0%	greater than 36-inch diameter.

The gravity sewer system inventory, by pipe material, is approximately:

0.0%	Prestressed concrete cylinder pipe (PCCP);
0.0%	High density polyethylene (HDPE) pipe;
9.3%	Reinforced concrete pipe (RCP);
8.1%	Polyvinyl chloride (PVC) pipe;
70.0%	Vitrified clay (VC) pipe;
0.04%	Ductile Iron (DI) pipe;
0.0%	Non-reinforced concrete pipe;
1.7%	Asbestos cement (AC) pipe;
1.5%	Cast Iron (CI) pipe;
2.0%	Brick;
0.0%	Fiberglass;
7.3%	Other (*pipe material type unknown*).

The force main sewers inventory, by pipe material, is:

0.0%	Prestressed concrete cylinder pipe (PCCP);
0.0%	High density polyethylene (HDPE) pipe;
0.0%	Reinforced concrete pipe (RCP);
37.1%	Polyvinyl chloride (PVC) pipe;
0.0%	Vitrified clay (VC) pipe;
0.0%	Ductile Iron (DI) pipe;
0.0%	Non-reinforced concrete pipe;
0.0%	Asbestos cement (AC) pipe;
0.0%	Cast Iron (CI) pipe;
0.0%	Brick;
0.0%	Fiberglass;
62.9%	Other (*pipe material type unknown*).

Attachment 2

City of Fitchburg, Massachusetts
Wastewater Collection System CMOM Program Self-Assessment Checklist
Checklist Narrative Responses
January 27, 2012

Q.I.3 The gravity sewer system inventory, by age, is approximately:

21.3%	between 0 – 25 years old;
28.1%	between 26 – 50 years old;
25.2%	between 51 – 75 years old; and
25.2%	76 years old, or older.

The force main sewers inventory, by age, is approximately:

2.0%	between 0 – 25 years old;
98.0%	between 26 – 50 years old;
0.0%	between 51 – 75 years old; and
0.0%	76 years old, or older.

The pump stations (3 pump stations) inventory, by age, are:

100.0%	between 0 – 25 years old;
0.0%	between 26 – 50 years old;
0.0%	between 51 – 75 years old; and
0.0%	76 years old, or older.

Q.I.5 The City is in the process of numbering each manhole in the City and the first step of subdividing the City into twenty-four (24) subcatchment areas has been completed. Currently we are numbering manholes in each subcatchment area and a sample area, Area 20, is appended to this document as Attachment 3. As can be seen in the attachment SMHs are numbered 20-1, 20-2, 20-3, etc. Once all the SMHs in the City have been numbered we will turn our attention to numbering all the pipes in the City. Similar to all the SMHs in Area 20, we will be numbering the pipes in Area 20 beginning with 20-1001, 20-1002, 20-1003, etc. We will not have 1,000 SMHs in any of the 24 subcatchment areas so beginning to number pipes in the 1,000 range is appropriate and clear to be a pipe and not a SMH.

Q.IV.F.1 In addition to the previously listed pumping stations, there are also low-pressure sanitary sewer force main systems (with Environment One, or similar type residential grinder pump systems) connected to the publicly owned sanitary sewer collection system. Common force main systems, with residential grinder pumps, are presently owned and operated by the collective of customers served by the systems, with individual properties solely responsible for the pump system serving the property. At this time the City does not have in place, but is in development of a program for certifying that the low-pressure sanitary sewer force main systems are inspected and maintained by those responsible for the ownership, operation and maintenance of said systems, in accordance with the recommendations of the system manufacturer.

ATTACHMENT 3

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF RESOURCE PROTECTION – WATERSHED PERMITTING PROGRAM

SANITARY SEWER OVERFLOW (SSO)/BYPASS NOTIFICATION FORMS

WASTEWATER TREATMENT FACILITIES COMMISSION

718 MAIN STREET, FITCHBURG, MA 01420
Office (979) 345-9622 Fax (978) 345-9623

April 7, 2010

Massachusetts Dept. of Environmental Protection
Bureau of Resource Protection
Central Regional Office
627 Main Street
Worcester, MA 01608

Re: Sawyer Passway SSO

Dear Sir or Madam:

Attached is an amended SSO report for an occurrence that occurred on April 1, 2010. The report sent previously was missing an estimated volume over overflow discharged.

If you have any questions please call the Treatment Plant Office at 978-345-9622.

Very Truly Yours,

Joseph A Jordan

Joseph A. Jordan
Deputy Commissioner Wastewater

Copy: U. S. Environmental Protection Agency
Paul Hogan, MADEP, Div. Watershed Management

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

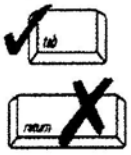
Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Information

MA0100986
a. Reporting Facility Permit Number

East Fitchburg WWTF
b. Name of Collection System/Treatment Works

2. Authorized Representative filing this notification form:

Joseph (a. First Name) | Jordan (b. Last Name) | 978-345-9622 (c. Telephone (10))

Deputy Commissioner (d. Title of Authorized Representative) | jjordan@ci.fitchburg.ma.us (e. E-mail Address of Authorized Representative)

3. Event Report Information

a. Are you reporting: ☒ 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

See DEP Regional Office telephone and fax numbers at the end of this form.

B. Phone Notifications Made, if any:

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)

Date/Time MassDEP contacted by phone: 04/01/2010 (c. Date (mm/dd/yyyy)) Time: 01:30 (d. hh:mm) ☐ e. am ☒ f. pm

2. **EPA person** contacted: (a. first name) (b. last name)

Date/Time EPA contacted by phone: (c. Date (mm/dd/yyyy)) Time: (d. hh:mm) ☐ e. am ☐ f. pm

3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: (h. Specify)

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 04/01/2010 (a. Date (mm/dd/yyyy)) Time: 11:45 (b. hh:mm) ☒ c. am ☐ d. pm

2. Location of event: 25 Sawyer Passway (a. Number and Street (or closest address)) (b. latitude) (c. longitude)

3. Estimated volume of overflow discharge at the time of this report (select one):

☒ a. > 1 million gallons (MG)
☐ b. > 100,000 gal. and < 1 MG
☐ c. > 10,000 gal. and < 100,000 gal.
☐ d. < 10,000 gal.

e. Method of estimating volume: Pump output

4. Where did the overflow discharge to? (e.g., surface water, ground) Surface water

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☒ a. rain ☐ b. snowmelt ☒ c. high groundwater

☐ d. insufficient capacity ☒ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: i. Specify

6. Have corrective actions been completed? ☐ a. Yes ☒ b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

☐ a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☒ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

☒ g. Other: Bypass pumping to downstream manhole, with ongoing effort to clear blockage
h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? a. Number and Street (or closest address) b. latitude c. longitude

3. Estimated volume of overflow discharge at the time of this report (select one):

☐ a. < 100,000 gallons (MG) ☐ b. > 100,000 gal. and < 1 MG ☐ c. > 1 million gallons (MG)

d. Method of estimating volume:

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to?

A 5-day follow-up report is required for the SSO.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

5. ☐ b. No

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ 1. Attachment ☐ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

Follow up report when blockage is cleared and repairs, if required, are complete.

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph A. Jordan

1. Signature of Authorized Representative

April 7, 2010

2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

1. Facility Information

MA0100986
a. Reporting Facility Permit Number

East Fitchburg WWTF
b. Name of Collection System/Treatment Works

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

2. Authorized Representative filing this notification form:

Joseph	Jordan	978-345-9622
a. First Name	b. Last Name	c. Telephone (10)

Deputy Commissioner WW	jjordan@fitchburgma.gov
d. Title of Authorized Representative	e. E-mail Address of Authorized Representative

3. Event Report Information

a. Are you reporting: X 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

B. Phone Notifications Made, if any:

See DEP Regional Office telephone and fax numbers at the end of this form.

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)

Date/Time MassDEP contacted by phone: 11/15/2010 (c. Date (mm/dd/yyyy)) Time: 09:40 (d. hh:mm) X e. am ☐ f. pm

2. **EPA person** contacted: Michael (a. first name) Fedak (b. last name)

Date/Time EPA contacted by phone: 11/15/2010 (c. Date (mm/dd/yyyy)) Time: 10:35 (d. hh:mm) X e. am ☐ f. pm

3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: (h. Specify)

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 11/12/2010 (a. Date (mm/dd/yyyy)) Time: 11:00 (b. hh:mm) X c. am ☐ d. pm

2. Location of event: Daniels Street at Allen Place (CSO 038) (a. Number and Street (or closest address)) (b. latitude) (c. longitude)

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated Volume: < 10,000 gallons (intermittent overflow)

b. Method of estimating volume: Flow observation after dye testing

4. Where did the overflow discharge to? (e.g., surface water, ground) Surface water

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity X e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: i. Specify

6. Have corrective actions been completed? ☐ a. Yes X b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

☐ a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

X g. Other: Repair base of structure and weir wall
h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? a. Number and Street (or closest address) b. latitude c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated volume:

b. Method of estimating volume:

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to?

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ 1. Attachment ☐ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

Overflow pipe downstream of structure collapsed causing erosion back into structure, affecting base of structure and bottom of weir wall. Temporary repair to include rebuilding structure base and weir wall to prevent DWO. Permanent repair to be completed early next year to include complete rebuild of structure and replacement of downstream pipe

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph A. Jordan
1. Signature of Authorized Representative

11/15/2010
2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

1. Facility Information

MA0100986
a. Reporting Facility Permit Number

East Fitchburg WWTF
b. Name of Collection System/Treatment Works

2. Authorized Representative filing this notification form:

Joseph — a. First Name
Jordan — b. Last Name
978-345-9622 — c. Telephone (10)
Deputy Commissioner WW — d. Title of Authorized Representative
jjordan@fitchburgma.gov — e. E-mail Address of Authorized Representative

3. Event Report Information

a. Are you reporting: [X] 1. Unanticipated SSO or Bypass [ ] 2. Anticipated SSO or Bypass

See DEP Regional Office telephone and fax numbers at the end of this form.

B. Phone Notifications Made, if any:

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)
Date/Time MassDEP contacted by phone: 12/09/2010 (c. Date (mm/dd/yyyy)) Time: 01:55 (d. hh:mm) [ ] e. am [X] f. pm

2. **EPA person** contacted: Michael (a. first name) Fedak (b. last name)
Date/Time EPA contacted by phone: 12/09/2010 (c. Date (mm/dd/yyyy)) Time: 01:50 (d. hh:mm) [ ] e. am [X] f. pm

3. Others notified (select all that apply): [ ] a. Conservation Commission [ ] b. Board of Health [ ] c. Harbormaster [ ] d. Downstream WS [ ] e. Watershed Association [ ] f. Shellfish Warden [ ] g. Other: h. Specify

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 12/08/2010 (a. Date (mm/dd/yyyy)) Time: 5:00 (b. hh:mm) [ ] c. am [X] d. pm

2. Location of event: Benson Street (CSO 041) (a. Number and Street (or closest address)) (b. latitude) (c. longitude)

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated Volume: < 10,000 gallons

b. Method of estimating volume: Flow observation

4. Where did the overflow discharge to? (e.g., surface water, ground) Surface water

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☒ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: i. Specify

6. Have corrective actions been completed? ☒ a. Yes b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

☒ a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

☐ g. Other: h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? a. Number and Street (or closest address) b. latitude c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated volume:

b. Method of estimating volume:

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to?

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ 1. Attachment ☒ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

Outfall was inspected on December 2, 2010 after 1.65" of rain. There was no overflow or problems observed at that time. During an inspection of a cross country water line, it was observed and reported that there was a foul odor being emitted from a small pool of water in close proximity to the water line. Upon further investigation it was determined that the water originated from CSO 041 as the result of a blockage in the line. The blockage was removed and the line is flowing freely. We will continue to monitor this site on a regular basis.

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph A. Sinden

1. Signature of Authorized Representative

12/09/2010

2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

1. Facility Information

MA0100986
a. Reporting Facility Permit Number

East Fitchburg WWTF
b. Name of Collection System/Treatment Works

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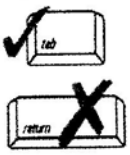


2. Authorized Representative filing this notification form:

Joseph — a. First Name
Jordan — b. Last Name
978-345-9622 — c. Telephone (10)
Deputy Commissioner WW — d. Title of Authorized Representative
jjordan@fitchburgma.gov — e. E-mail Address of Authorized Representative

3. Event Report Information

a. Are you reporting: X 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

B. Phone Notifications Made, if any:

See DEP Regional Office telephone and fax numbers at the end of this form.

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)
   Date/Time MassDEP contacted by phone: 03/17/2011 (c. Date (mm/dd/yyyy)) Time: 03:40 (d. hh:mm) ☐ e. am X f. pm
2. **EPA person** contacted: Michael (a. first name) Fedak (b. last name)
   Date/Time EPA contacted by phone: 03/15/2011 (c. Date (mm/dd/yyyy)) Time: 02:35 (d. hh:mm) ☐ e. am X f. pm
3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: (h. Specify)

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 03/14/2011 (a. Date (mm/dd/yyyy)) Time: 11:00 (b. hh:mm) X c. am ☐ d. pm
2. Location of event: 101 Green Street (a. Number and Street (or closest address)) (b. latitude) (c. longitude)
3. Estimated volume of overflow discharge at the time of this report:
   a. Estimated Volume: Unknown
   b. Method of estimating volume:
4. Where did the overflow discharge to? (e.g., surface water, ground) Storm drain

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity X e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: i. Specify

6. Have corrective actions been completed? X a. Yes b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

X a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

X g. Other: Repaired collapsed section and reconnect to sanitary sewer
h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? a. Number and Street (or closest address) b. latitude c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated volume:

b. Method of estimating volume:

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to?

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ 1. Attachment ☒ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

While investigating a sewer backup it was suspected that the line had collapsed. During the repair, it was discovered that a repair was previously made and that the sanitary line was connected to the storm line rather than the sanitary. Reason why this was done is not known. It is also not known when the previous repair was made. The collapsed section of line was repaired and a new line was installed and connected back into the sanitary system.

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph Jordan
1. Signature of Authorized Representative

March 18, 2011
2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

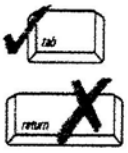
FOR DEP USE ONLY

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

Tax Identification Number

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Information

MA0100986
a. Reporting Facility Permit Number

East Fitchburg WWTF
b. Name of Collection System/Treatment Works

2. Authorized Representative filing this notification form:

Joseph
a. First Name

Jordan
b. Last Name

978-345-9622
c. Telephone (10)

Deputy Commissioner WW
d. Title of Authorized Representative

jjordan@fitchburgma.gov
e. E-mail Address of Authorized Representative

3. Event Report Information

a. Are you reporting: X 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

See DEP Regional Office telephone and fax numbers at the end of this form.

B. Phone Notifications Made, if any:

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)

Date/Time MassDEP contacted by phone: 04/12/2011 (c. Date (mm/dd/yyyy)) Time: 04:25 (d. hh:mm) e. am X f. pm

2. **EPA person** contacted: Michael (a. first name) Fedak (b. last name)

Date/Time EPA contacted by phone: 04/12/2011 (c. Date (mm/dd/yyyy)) Time: 04:20 (d. hh:mm) e. am X f. pm

3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: (h. Specify)

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 04/12/2011 (a. Date (mm/dd/yyyy)) Time: 09:30 (b. hh:mm) X c. am ☐ d. pm

2. Location of event: 254 Summer Street (a. Number and Street (or closest address)) (b. latitude) (c. longitude)

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated Volume: 550,000 gallons

b. Method of estimating volume: Calculated on visual estimation of pipe volume at upstream manhole

4. Where did the overflow discharge to? (e.g., surface water, ground) Nashua River via CSO 033

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity X e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: _____ i. Specify

6. Have corrective actions been completed? X a. Yes b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

X a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

X g. Other: See attachment A
h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? _____ a. Date (mm/dd/yyyy) Time: _____ b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? _____ a. Number and Street (or closest address) _____ b. latitude _____ c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated volume: _____

b. Method of estimating volume: _____

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: _____ i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to? _____

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

X 1. Attachment ☐ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph A. Jordan — 1. Signature of Authorized Representative

April 14, 2011 — 2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

ATTACHMENT A

E. Comments/Attachments/Follow-up

At approximately 9:30 a.m. on April 12, 2011, City personnel were inspecting regulator 023 to identify measures that will be needed to close off the outfall regulator per EPA direction. The initial plan was to bypass the flow at this location to the downstream manhole chamber at outfall regulator 033. When inspecting 033, it appeared that the sewer line was blocked and that the flow was topping the overflow weir wall and flowing into the outfall pipe. An unsuccessful attempt was made to clear the blockage. A review of the record drawing, attached, showed a new concrete swale was to be constructed to convey the flow from the structure inlet to the structure outlet, and a new weir wall to be built as part of a city wide effort to eliminate DWO's and reduce CSO's. The drawing shows that the new swale stops approximately three feet from the downstream wall. However, it appeared that the swale was touching the downstream wall and was perhaps partially obstructing the outlet pipe. It also appeared that the "swale" was PVC and not concrete. City personnel present suggested that the PVC may have been installed as a temporary measure when the structure was modified and that it may have been left in the structure. Upon further investigation, it was also thought that the PVC pipe may actually be obstructing base flow discharge line. This was not a concern until now, as there were no problems identified at this location. After additional attempts to locate and clear the outlet pipe failed, it was suggested that the PVC pipe be removed to aid in the location of the discharge line.

Crews were called in to remove a section of the PVC pipe, and it was confirmed that it was obstructing the outlet pipe. The PVC pipe was cut back approximately three feet allowing for the inlet to be cleared, and reducing the likelihood of future blockage to occur. Normal flow through the chamber resumed at approximately 8:00 p.m. on April 12, 2011. This location will be monitored and cleaned on a priority basis until such time it is determined that it is no longer problematic.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

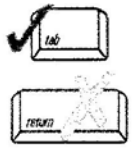
Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Information

   MA0100986
   a. Reporting Facility Permit Number

   East Fitchburg WWTF
   b. Name of Collection System/Treatment Works

2. Authorized Representative filing this notification form:

   Joseph (a. First Name) | Jordan (b. Last Name) | 978-345-9622 (c. Telephone (10))

   Deputy Commissioner WW (d. Title of Authorized Representative) | jjordan@fitchburgma.gov (e. E-mail Address of Authorized Representative)

3. Event Report Information

   a. Are you reporting: X 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

See DEP Regional Office telephone and fax numbers at the end of this form.

B. Phone Notifications Made, if any:

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)

   Date/Time MassDEP contacted by phone: 11/07/2011 (c. Date (mm/dd/yyyy)) Time: 03:10 (d. hh:mm) ☐ e. am X f. pm

2. **EPA person** contacted: Michael (a. first name) Fedak (b. last name)

   Date/Time EPA contacted by phone: 11/07/2011 (c. Date (mm/dd/yyyy)) Time: 03:10 (d. hh:mm) ☐ e. am X f. pm

3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: (h. Specify)

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 11/06/2011 (a. Date (mm/dd/yyyy)) Time: 10:00 (b. hh:mm) X c. am ☐ d. pm

2. Location of event: 100 Franklin Road, Fitchburg (a. Number and Street (or closest address)) (b. latitude) (c. longitude)

3. Estimated volume of overflow discharge at the time of this report:

   a. Estimated Volume: 14,400 gallons

   b. Method of estimating volume: Visually estimated running over the pavement

4. Where did the overflow discharge to? (e.g., surface water, ground): 50' overland flow to a catch basin; discharge to a tributary to the Nashua River.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity X e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: Nearby restaurants are suspected of discharging grease into the system.
i. Specify

6. Have corrective actions been completed? X a. Yes ☐ b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

X a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

X g. Other: h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? a. Number and Street (or closest address) b. latitude c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated volume:

b. Method of estimating volume:

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to?

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

X 1. Attachment ☐ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

1. Signature of Authorized Representative

November 11, 2011
2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

Massachusetts Department of Environmental Protection
Sanitary Sewer Overflow (SSO)/Bypass Notification Form

E. Comments/Attachments/Follow-up

Sanitary sewer located within Park Hill Plaza was blocked with grease from area restaurants. City jetted the line and freed the blockage. City TV'd the line to confirm the grease and its location. City will continue to observe the location for future issues.

Review of City records seems to indicate that the SSO occurred on private property. Although the line appears to be a privately owned lateral, which the property owner is responsible for maintaining, the City responded and cleared the blockage to stop the overflow. The owner has been identified as Aubuchon Realty Company, Inc., 95 Aubuchon Drive, Westminster, MA 01473. Contact person: Pamela Racette (978) 874-0521

City met with Mr. Moran to discuss the problem on 11/10. Mr. Moran understood the severity of the problem and has agreed to install a grease trap for the site's restaurants. City's Board of Health has been notified of the problem. Installation of a grease trap has been planned for later this month.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

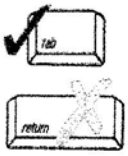
Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Information

   MA0100986
   a. Reporting Facility Permit Number

   East Fitchburg WWTF
   b. Name of Collection System/Treatment Works

2. Authorized Representative filing this notification form:

   Joseph (a. First Name) | Jordan (b. Last Name) | 978-345-9622 (c. Telephone (10))

   Deputy Commissioner WW (d. Title of Authorized Representative) | jjordan@fitchburgma.gov (e. E-mail Address of Authorized Representative)

3. Event Report Information

   a. Are you reporting: X 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

See DEP Regional Office telephone and fax numbers at the end of this form.

B. Phone Notifications Made, if any:

1. **MassDEP person** contacted: Robert (a. first name) Kimball (b. last name)

   Date/Time MassDEP contacted by phone: 1/17/2012 (c. Date (mm/dd/yyyy)) Time: 10:35 (d. hh:mm) X e. am ☐ f. pm

2. **EPA person** contacted: Michael (a. first name) Fedak (b. last name)

   Date/Time EPA contacted by phone: 1/17/2012 (c. Date (mm/dd/yyyy)) Time: 10:37 (d. hh:mm) X e. am ☐ f. pm

3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: (h. Specify)

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? 1/16/2012 (a. Date (mm/dd/yyyy)) Time: 10:15 (b. hh:mm) X c. am ☐ d. pm

2. Location of event: 25 Goodwin Street, Fitchburg (a. Number and Street (or closest address)) (b. latitude) (c. longitude)

3. Estimated volume of overflow discharge at the time of this report:

   a. Estimated Volume: 500 gallons

   b. Method of estimating volume: Visually estimated running over the pavement

4. Where did the overflow discharge to? (e.g., surface water, ground): 50' overland flow to edge of roadway; water remained in gutter and percolated into ground.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity X e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: Roots and debris getting caught on the roots. (i. Specify)

6. Have corrective actions been completed? X a. Yes ☐ b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

X a. repaired sewer/cleared blockage ☐ b. repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

☐ g. Other: (h. Specify)

D. General Information About Anticipated Bypass

1. When will the bypass occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? a. Number and Street (or closest address) b. latitude c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated volume:

b. Method of estimating volume:

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: (i. Specify)

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to?

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ 1. Attachment X 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

City plans to camera the line to learn the extent of the root problem. If necessary we will insert our root cutter to clear the roots and jet the line clear. Anticipated date of return is 1-19-2012. If we need to jet the line clear we need to wait for a moderately warm day so the jet truck does not freeze-up.

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph Jarden

1. Signature of Authorized Representative

January 20, 2011

2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	

SSO / CSO Complaint Form

Date: 1/16/12 Time: 1:30 (AM) PM

Complaint Taken By: Un Cnty Service

Name of Person Reporting SSO / CSO: [illegible]

Phone Number: 617 547 1534

Location of Overflow: Manhole to Street

(Nearest Street Address) 35 Lexington St.

Time Overflow Was First Observed: 2pm (AM) PM

To Be Completed by Responding Personnel:

Date and Time Overflow Was Stopped: 1/16/12 (Date) 1 (Time: AM (PM))

Cause of Overflow: Rag balls in manhole and
Issued in line N/S

Estimated Gallons Released: See Callous

Method Used For Estimated: Eyed

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

Discharge was observed on Street level
Approximately 500 gallons of Sanitary
Crime out manhole cover to Street.

Describe measures taken to stop overflow:

Ran Jetter upstream from Downstream manhole
called it up there - looked at surcharged
manhole found Roots in laterals video out
had Jetter Downstream broke through Roots
to relieve blockage

Describe measures taken to prevent future occurrences at this location:

Name of Responder(s): Robert Fazio
Ray Emond

Date Completed: 1/17/12

ATTACHMENT 4

CITY OF FITCHBURG, MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS – WASTEWATER DIVISION

SEWER COLLECTION SYSTEM SERVICE CALL FORMS – BLANK FORMS & SYSTEM BLOCKAGE/BACK-UP DOCUMENTATION

City of Fitchburg, Massachusetts
Fitchburg Wastewater Division

Service Call Inspection Report Form

Service Call

Received: _____ (Date) _____ (Time)

Caller: _____ Caller Contact No.: _____

Nature of Call: _____

Incident Location: _____

Service Call Response

Site Inspection: _____ (Date) _____ (Time)

Service Crew: _____

Findings: (Status) _____

Actions Taken: (Services) _____

Follow-Up Action: _____

Location Sketch & Notes

	Notes:

Signature: _____

City of Fitchburg, Massachusetts
Fitchburg Wastewater Division

SSO / CSO Complaint Form

Date: _____ Time: _____ AM / PM

Complaint Taken By: _____

Name of Person Reporting SSO / CSO : _____

Phone Number: _____

Location of Overflow: _____

(Nearest Street Address) _____

Time Overflow Was First Observed: _____ AM / PM

To Be Completed by Responding Personnel:

Date and Time Overflow Was Stopped: _____ _____
Date Time: AM / PM

Cause of Overflow: _____

_____

Estimated Gallons Released: _____

Method Used For Estimated: _____

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

_____

_____

_____

_____

Describe measures taken to stop overflow:

Described measures taken to prevent future occurrences at this location:

Name of Responder(s):

Date Completed:

SSO / CSO Complaint Form

Date: 6-20-11 Time: 7:15 (a.m.) / p.m.

Complaint taken by: Buan

Name of person reporting SSO / CSO: Dawn

Phone Number:

Location of Overflow: (nearest street address) Mack Rd House 215 Bowers Rd Fitchburg.

Time Overflow was first observed: 7:15 AM a.m. / p.m.

To Be Completed by Responding Personnel:

Date and time Overflow was stopped: 6/20/11 (Date) 7:35 (Time: a.m.) / p.m.

Cause of Overflow: RAGS, SURCHARGE, POOR CONDITION IN this section of line.

Estimated Gallons released: N/A

Method used for estimation: N/A

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

NO DISCHARGE OCCURRED

Describe measures taken to stop overflow: flushed line, then put cam in.

Described measures taken to prevent future occurrences at this location: Pipe is going to be dug up and repaired.

Name of Responder(s): John, Bob, Mike, Scottie

Date Completed: 6/20/11

Fitchburg Wastewater Department
City of Fitchburg, Massachusetts

Service Call Inspection Report Form

Service Call

Received: 9-19-2011 (Date) 1:00 pm (Time)

Caller: Scott Kieser Caller Contact No.: 978-343-8334

Nature of Call: back up

Incident Location: Townsend St.

Service Call Response

Site Inspection: — (Date) 2:00 pm (Time)

Service Crew: mike, bob,

Findings: (Status) blockage

Actions Taken: (Services) Jetter

Follow-Up Action: ck. on 9-20-2011

Location Sketch & Notes

	Notes:

Signature: _____

SSO / CSO Complaint Form

Date: 9-19-11 Time: 1:00 a.m. / p.m.

Complaint taken by: Daniel Keese

Name of person reporting SSO / CSO: Scott Kaiser

Phone Number: 978-343-8334

Location of Overflow: (nearest street address) John Fitch Hwy @ Townsend St.

Time Overflow was first observed: 1:00 a.m. / p.m.

To Be Completed by Responding Personnel:

Date and time Overflow was stopped: 9-19-11 (Date) 3:00 pm (Time: a.m. / p.m.)

Cause of Overflow: Sewer blockage

Estimated Gallons released: _____

Method used for estimation: _____

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

- discharge to storm drain at townsend and pearl st.
- discharge amount = 80% of townsend st. flow
- blockage location 165-167 townsend st.

Describe measures taken to stop overflow:

Described measures taken to prevent future occurrences at this location:

Name of Responder(s):

Date Completed:

City of Fitchburg, Massachusetts
Fitchburg Wastewater Division

SSO / CSO Complaint Form

Date: Thur. - Oct. 6, 2011 Time: 7:40 (AM) / PM

Complaint Taken By: Jeffrey A. Murawski (observed in field)

Name of Person Reporting SSO / CSO : Jeffrey A. Murawski

Phone Number: Fitchburg DPW, Engineering : 978-345-9613

Location of Overflow: SMH behind #61 Mount Vernon Street

(Nearest Street Address)

Time Overflow Was First Observed: ~ 7:35 AM (by JAM) AM / PM

* JAM called Sewer crew @ 8:08 AM (10/6/11) to Respond to SSO. *

To Be Completed by Responding Personnel:

Date and Time Overflow Was Stopped: 10/6/11 (Date) 8:40 Time: (AM) / PM

Cause of Overflow: Rags in pipe, possible defective pipe. Lg. trees, age.

Estimated Gallons Released:

Method Used For Estimated:

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

Describe measures taken to stop overflow:

Used Hand Rods, To open pipe & clear line.

Described measures taken to prevent future occurrences at this location:

Have used Roots, check this area frequently, Taking measures To remove trees.

Name of Responder(s): Mike, John

Date Completed: 10/6/11

City of Fitchburg, Massachusetts
Fitchburg Wastewater Division

SSO / CSO Complaint Form

Date: 10-31-2011 Time: 11:50 AM / PM

Complaint Taken By: Dispatch

Name of Person Reporting SSO / CSO : Less Lill

Phone Number: 978-868-0507

Location of Overflow: 113 Stony brook Rd.

(Nearest Street Address)

Time Overflow Was First Observed: 11:00 AM / PM

To Be Completed by Responding Personnel:

Date and Time Overflow Was Stopped: ~~12:30~~ 10-31-2011 (Date) 12:30 (Time: AM / PM)

Cause of Overflow: Pump Station Lost power

Estimated Gallons Released:

Method Used For Estimated:

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

No discharge to street

Owner received Sewer into basement

Describe measures taken to stop overflow:

temporary power and manual pump operation

Described measures taken to prevent future occurrences at this location:

Name of Responder(s): Mike Amico
marcus Scott

Date Completed: 10-31-2011

SSO / CSO Complaint Form

Date: 11-1-11 Time: 9:20 (a.m.) / p.m.

Complaint taken by: David Keese

Name of person reporting SSO / CSO: John Clement

Phone Number: 978-345-5863

Location of Overflow: (nearest street address) 39 Oakwood Ave.

Time Overflow was first observed: 9:00 (a.m.) / p.m.

To Be Completed by Responding Personnel:

Date and time Overflow was stopped: 11/1/11 (Date) 9:30 Time: (a.m.) / p.m.

Cause of Overflow: N/A

Estimated Gallons released: N/A

Method used for estimation: N/A

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

Cross country line, found sodded approx 120' dk. relieved blockage, M.H. in easement was partially surcharged.

Describe measures taken to stop overflow:

N/A

Described measures taken to prevent future occurrences at this location:

Remain this site once or twice a yr., bleach or sod, cross country line.

Name of Responder(s): Mike + John

Date Completed: 11/4/11

Fitchburg Wastewater Department
City of Fitchburg, Massachusetts

Service Call Inspection Report Form

Service Call

Received: 11/7/11 (Date) 10 AM (Time)

Caller: water dept Caller Contact No.: _____

Nature of Call: Sewer bubbling in street

Incident Location: 100 Franklin Rd

Service Call Response

Site Inspection: 11/7/11 (Date) 10 AM (Time)

Service Crew: Bob Fortin, John Bartlett, Mike Amico

Findings (Status): SEWAGE BUBBLING UP THREW BLACK TOP IN DRIVEWAY

Actions Taken (Services): Flushed Line 150 Ft ~~the~~ grease blockage @ 38 Ft sewer line was grease

Follow-Up Action: CHECK main and line in EASMENT going to camera line

Location Sketch & Notes

	Notes:

Signature: _____

Fitchburg Wastewater Department
City of Fitchburg, Massachusetts

Service Call Inspection Report Form

Service Call

Received: 12/10/11 (Date) 10:15 pm (Time)

Caller: Dispatcher Caller Contact No.: Fitchburg Fire Dept. 978 345 9660

Nature of Call: SEWAGE in Basement

Incident Location: 36 Birch St passway (Marcous Club)

Service Call Response

Site Inspection: 12/10/11 (Date) 11:10 pm (Time)

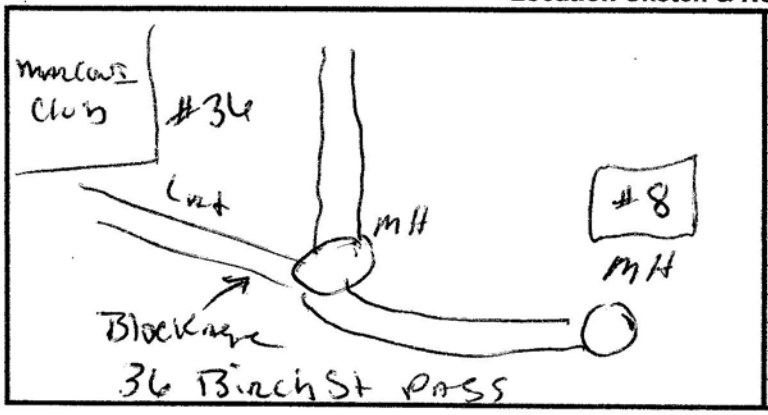
Service Crew: Bob Forth Ray Emond

Findings: (Status) Blockage in Lateral at MH

Actions Taken: (Services) Came back to Shop got hand Rods went back to site Hand Rodded Lateral to release Blockage.

Follow-Up Action: Reinspect on Monday 12/12/11

Location Sketch & Notes



Notes:

Unplugged Blockage "Hot pass Lateral" - Bag with Chicken Bones - Hand Rodded Line to relieve Flow moving after removed Still Slow though

Signature: Robert C Forth

(SSO)/ CSO Complaint Form

Date: 1/16/12 Time: 10:30 (AM) PM

Complaint Taken By: On call Service

Name of Person Reporting (SSO) / CSO : Tim DOLAN

Phone Number: (617) 590-1534

Location of Overflow: Man hole to Street

(Nearest Street Address) 25 Goodwin St.

Time Overflow Was First Observed: ?10:15 (AM) / PM

To Be Completed by Responding Personnel:

Date and Time Overflow Was Stopped: 1/16/12 (Date) 1 — Time: AM (PM)

Cause of Overflow: Root balls in man hole and Assumed in line ALSO

Estimated Gallons Released: 500 Gallons

Method Used For Estimated: EYED

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

Discharge was observed on Street level Approximately 500 gallons of Sanitary Came out man hole cover to Street.

Describe measures taken to stop overflow:

Ran Jetter upstream from Downstream manhole Couldn't go threw - VACED out Surcharged manhole found Roots in Laterals VACED out and Jetted Downstream broke through Roots to relieve blockage.

Described measures taken to prevent future occurrences at this location:

Name of Responder(s): Robert Fortin
Ray Emond

Date Completed: 1/17/12

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 2

LONG-TERM SEWER SYSTEM PREVENTATIVE MAINTENANCE PLAN

CITY OF FITCHBURG, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

LONG-TERM SEWER SYSTEM PREVENTATIVE MAINTENANCE PLAN

STANDARD OPERATING PROCEDURES AND SCHEDULE FOR CRITICAL CLEANING AREAS OF THE SEWER SYSTEM

OCTOBER 31, 2011
REVISED: JANUARY 31, 2012

Long-Term Sewer System Preventative Maintenance Plan
City of Fitchburg, MA

Introduction

This Long-Term Sewer System Preventative Maintenance Plan ("Preventative Maintenance Plan") is designed and intended as a reference guide for the City's sewer system personnel. This Preventative Maintenance Plan contains specific content pertaining to:

- Sewer System Inspection Procedures and Protocols;
- Priority and Routine Preventative Maintenance Procedures and Schedules;
- Sewer System Maintenance Tracking Software;
- Wastewater Division, Sewer System Maintenance Organizational Chart, and Job Descriptions;

Standard Operating Procedure for Cleaning Gravity Sewers

Purpose

The purpose of this Standard Operating Procedure is to ensure that sewer cleaning is performed in a manner that will produce a high quality work product. Quality is important because it ensures that the sanitary sewers will not experience problems prior to their next scheduled cleaning.

Goal

The goal of cleaning a gravity sewer is to restore the flow area to 95% of the original flow area of the pipe.

Required Equipment and Tools

1. Personal protective equipment (hardhat, steel toe boots, gloves, eye/face protection, hearing protection).
2. Calibrated gas detector.
3. Proper safety cones, barricades, flagging, signs or other traffic control devices.
4. Confined space equipment (tripod, harness, and ventilation blower).
5. Sanitary sewer system location map.
6. Combo sewer cleaner.
7. Cleaning nozzle.
8. Root saw.
9. Debris traps in the sizes that will be encountered during the day.
10. Manhole hook or pick-axe.
11. Measuring wheel.
12. Disinfectant required.

Forms

1. Cleaning Work Order.
2. Pre-Trip Inspection Form.
3. Injury/Damage Report Form.

Procedures for Sewer Cleaning Crew Prior to Leaving the Yard

1. Plan the work so that it starts in the upstream portion of the area and moves downstream.
2. Wherever possible, plan to clean sewers from the downstream manhole.
3. Inspect the sewer cleaning nozzles for wear. Replace nozzles that are excessively worn.
4. If this is the first day that this cleaning unit is being used this week, inspect the first 200 feet of hose and couplings for damage or wear.

At the Jobsite

5. Wear proper personnel protective equipment (PPE).
6. Fill the water tank at or near the first jobsite.
7. Determine and confirm location of upstream and downstream manholes (use street addresses, if possible).
8. Look for any overhead utilities that may come into contact with the vacuum boom during the cleaning operation.
9. Set up proper traffic control by placing traffic signs, flags, cones and other traffic control devices.
10. Move the cleaning unit into the traffic control so that the hose reel is positioned over the manhole.
11. Install the cleaning nozzle on the hose.

Cleaning Operation

12. Insert the debris trap.
13. Start the auxiliary engine.
14. Lower the hose, with a guide or roller to protect the hose, into the manhole and direct it into the sewer to be cleaned.
15. Start the high pressure pump and set the engine speed to provide adequate pressure for the sewer cleaning operation.
16. Open the water valve and allow the hose to proceed up the sewer. The hose speed should not exceed 3 feet per second.
17. Allow the hose to proceed 25% of the length of the sewer and pull the hose back.
18. Observe the nature and the quantity of debris pulled back to the manhole.
19. If there is little or no debris, allow the hose to proceed to the upstream manhole.
20. If there is moderate to heavy debris, clean the remaining portion of the sewer in steps not to exceed 25% of the length of the sewer.
21. Open the upstream manhole and verify that the nozzle is at or past the manhole.
22. The sewer has been adequately cleaned when successive passes with a cleaning nozzle do not produce any additional debris.
23. Determine the nature and quantity of the debris removed during the cleaning operation. Use the codes in Table 1 to report the nature and quantity of debris.

Table 1 – Criterion for Coding Debris Found During Cleaning

Type of Debris	Clear (no debris)	Light	Moderate	Heavy
Sand, grit, gravel	CLR	DL	DM	DH
Grease	CLR	GL	GM	GH
Roots	CLR	RL	RM	RH
Other (specify)	CLR	OL	OM	OH

24. Remove the debris from the manhole using the vacuum unit.
25. Rewind the hose on the reel.
26. Remove the debris trap.
27. Clean the mating surface and close the manhole. Ensure that the manhole is properly seated.
28. Enter the results on the Work Order.
29. Move the cleaning unit, break down and stow the traffic controls.
30. Proceed to the next cleaning jobsite.

At the End of the Day

31. Inspect the equipment and tools for problems.
32. Report any problems with equipment, tools, or sewers that were cleaned during the day to the Supervisor.
33. Turn in all completed Cleaning Work Orders to the Supervisor at end of shift.

Table 2 – Standard Measures of Observed Results

Next to cleaning the sewer line, effective observation of results is the most important work product of the crew. This information is the basis for defining future maintenance activities. Consistency of observation documentation is important. The standards for "results" for six- and eight-inch diameter sewers are:

	Clear	Moderate	Heavy
Grit	• No observable grit	• Less than 5 gallons • 15-20 minutes to clean • 1-2 passes required • Requires cleaning twice or less per year • Only fine grit	• More than 5 gallons • More than 30 minutes to clean • More than 4 passes required • Requires cleaning four times per year
Grease	• No observable grease	• Small chunks/no "logs" • 15-20 minutes to clean • Requires cleaning twice or less per year	• Big chunks/"logs" • Operator concern for downstream plugging • More than 30 minutes to clean • More than 4 passes required
Liquefied Grease		• Vacuuming not	• Vacuuming not required

		required	
Roots	• No observable roots	• Thin/stringy roots present • No large "clumps" • 15-20 minutes to clean • 1-2 passes required	• Thick roots present • Large "clumps" • More than 30 minutes to clean • More than 4 passes required
Other condition observations: • **Pipe material fragments** • **Soil/dirt** • **Stone (pipe bedding)** • **Lost nozzle**			

Standard Operating Procedure for CCTV Inspection Using the NASSCO PACP (excerpted from the NASSCO PACP, Version 6.0.1, November 2010 Manual)

The City has decided to implement CCTV inspection procedures and protocols in accordance with the National Association of Sewer Service Companies (NASSCO) to ensure standardization of sewer pipe inspection coding. The City recognizes the importance of consistency of condition assessment data and its utilization in collection system repairs and replacement planning. The consistency of the NASSCO condition assessment method is also critical for establishing condition benchmarks and to detect changes due to deterioration over time.

Visibility During CCTV Inspection

Where practical, the CCTV inspection will be conducted in a manner that provides an unobstructed view of the entire pipe. The pipe should be free of debris and obstructions that significantly impede visibility. Some pipe segments will naturally be free of debris or obstructions, and therefore will not require cleaning prior to inspection. However, if the pipe segment was not cleaned prior to CCTV inspection and significant debris/obstructions are encountered, the inspection should be rescheduled to after the line is properly cleaned. Lines that were cleaned, but still have debris or obstructions should be re-cleaned and televised.

When assessing the pipe conditions, the first objective is to fully document the structural deficiencies and the construction features, since those defects and features will have the most long-term influence on pipe integrity and pipe management. Operation and maintenance defect coding, while secondary to structural deficiencies and construction features, will assist the City in optimizing the operation and capacity of the pipe line.

Incomplete Inspections/Reversals

The inability to complete a CCTV inspection from access point to access point is a common problem. Obstructions or equipment limitations often result in the inspection from one access point to be ended. However, it is very important that as much of the pipe segment as reasonably possible is televised. The operator should be aware that the portion of the pipe segment that is not televised may well be the portion of the pipe segment that is most

problematic, or in greatest need of repair or replacement. All reasonable efforts should be made to fully inspect the entire pipe segment, including removal of obstructions if possible, location and exposure of access points, and use of more versatile equipment if required. The reasons for incomplete inspection are likely to still exist when the next inspection of the pipe is attempted, and conditions within the un-inspected portion of the line may eventually necessitate emergency repairs.

General Rules for Coding Observations/Defects

The Pipeline Assessment Certification Program (PACP) has detailed rules for identifying defects and coding of defects. All PACP defects should be correctly identified and coded regardless of how many defects are encountered in the segment. Condition assessment and all defect coding shall be entered into the City's work management and tracking software program (Cartegraph).

Movement of the Camera

The camera should be centered in the middle of the pipe, and moved through the pipe at a steady pace, not exceeding 30 feet per minute. The camera should be stopped while the operator views defects and features. The operator's objective in positioning the camera to view a defect or feature will be to provide a perspective view similar to those found in the NASSCO PACP reference manual.

The camera operator should avoid excessive use of the pan and tilt feature of the camera to prevent the camera lens from being too close to provide a suitable perspective view of the defect and surrounding pipe.

Image Distortion

The view inside of the pipe can be significantly distorted by improper positioning of the camera within the pipe. Centering of the camera is particularly important in smaller diameter pipes, which are the vast majority of pipes televised. For example, improper centering of the camera will exaggerate the amount of joint offset and inconsistent vertical positioning of the camera will cause incorrect estimates of water or debris levels in the pipe segment.

Lighting

Lighting during the inspection should be adequate to fully illuminate the entire pipe, but not overly illuminated. Low lighting is more likely to occur in large diameter pipes or in dark pipe materials such as polyethylene or ductile iron that do not reflect the light. Another problem is excessive lighting, or an overly adjusted camera iris, which can result in a flaring of the image and an exaggeration of pipe joint displacement or other pipe conditions.

Color

Correct color is very important for proper identification and documentation of defects. The operator should follow manufacturer's recommendations to insure the camera and video display correctly reflect the true colors within the pipe and on the video display.

Collection System Mapping

A comprehensive set of record drawing plans showing all the features of the City's sanitary sewer system is kept at the Department of Public Works main office. Within two years of EPA and the MassDEP approval, or conditional approval, of the Preventative Maintenance Plan, sanitary sewer collection system information contained in the record drawing plans will be integrated into the Geographic Information System (GIS) maps. The existing sanitary sewer collection system facilities data shall be verified and developed through systematic system GPS survey and integration into the City's GIS map. The City's GIS map shall be used for locating gravity lines, variable grade lines, force main lines, manholes, lift stations, and other features of the City's sanitary sewer system. These GIS maps will be integrated with the City's work management and tracking software program, Cartegraph, and used for system management, work prioritization, scheduling and documentation, and making sewer system management decisions. The GIS maps include data layers with jurisdictional boundaries, assessor parcel information, roadways, water bodies, rivers, streams, and all pertinent information associated with that data layer. The GIS data layers have information associated with them, (i.e., line number, size, type, material, slope, manhole number, line length, manhole depth, etc.), and other information related to the specific data layer. These maps shall be updated as needed for revisions, addition of new developments, and rehabilitated sewers. The Cartegraph management software will be utilized to assist management in the scheduling and reporting of sanitary sewer line cleaning and video inspections, as well as identifying problem areas.

The sewer record drawings plans have been scanned into TIF and PDF formats, and copied onto the City's computer server. The scanned as-built maps can be linked with the GIS maps at a later date.

Routine and Priority Preventative Maintenance

The City's Preventative Maintenance (PM) program consists of line cleaning, video and visual inspection of sewers and manholes.

The line cleaning activities include high pressure water cleaning, root cutting, root control, and fat, oil and grease control. A vacuum truck is utilized during these operations to collect debris generated during the cleaning process.

Inspections are conducted during the line cleaning, video and visual inspections by City personnel during routine operations and maintenance activities while visiting City sewer facilities. Inspection observations are reported through inspection logs, e-mail correspondences, and through verbal communications with the Managers, Supervisors, or City Engineer. The observations will be entered into the Cartegraph software database management system for scheduling for either short or long term rehabilitation activities.

Internal inspection of the collection system is being implemented with the use of closed circuit television inspection (CCTV). Following utilization of the City's Vactor truck for performance of light, medium or heavy sewer pipe cleaning, a CCTV is performed to inspect the condition of the pipe and a National Association of Sewer Service Companies (NASSCO) rating will be assigned. The City currently has two (2) staff collection operators that are certified under the NASSCO Pipe Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP). The City is scheduled to purchase software that is consistent

with the aforementioned certification programs in order that it can defect code all of the pipes and manholes in the City. The anticipated date of going on line with this coding software is April 2012. The City does not currently have a manhole inspection protocol in place but it is considering purchase of the IBAK Panoramo SI camera that will take a 360 degree view of a manhole so that defect coding may take place in the office setting, and expedite the manhole video capture process.

The City has four pump stations in the City: the West Plant Pump Station; the Cobbler Drive Pump Station; the Fitchburg High School Pump Station; and the Bridal Cross Housing Complex Pump Station. Each pump station is maintained at least annually, but the City will be teaming with Board of Health to develop a plan to require routine inspection of all privately owned pump stations.

In addition to the previously listed pumping stations, there are also low-pressure sanitary sewer force main systems (with Environment One, or similar type residential grinder pump systems) connected to the publicly owned sanitary sewer collection system. Common force main systems, with residential grinder pumps, are presently owned and operated by the collective of customers served by the systems, with individual properties solely responsible for the pump system serving the property. At this time the City does not have in place, but is in development of a program for certifying that the low-pressure sanitary sewer force main systems are inspected and maintained by those responsible for the ownership, operation and maintenance of said systems, in accordance with the recommendations of the system manufacturer.

The West Plant station is monitored constantly by DPW Wastewater Division personnel and maintained on a weekly basis. There is a dedicated computer in the West Plant's control room that continuously displays the status of the station. Maintenance procedures include checks on safety items, oil levels and physical and visual checks for signs of excessive noise, heat, vibration, or any other indicators that may exhibit signs of failure or malfunction. A backup pump at this location is regularly put into service to insure proper operation. Once a week the backup generator is fired-up for a brief period to ensure proper operation. The City does not have a standard checklist that it fills out each time the station is checked. The City sends an experienced technician to review the activity of the station. If the technician observes anything out of the ordinary on the weekly check he reports this to management for further action. The City feels comfortable with this type of check as an inexperienced employee would not be asked to perform a weekly check of the West Plant Pump Station.

The Cobbler Drive site is maintained by Scherbon Consolidated, a contract operator. Quarterly maintenance is performed and includes a complete inspection of all electrical and mechanical components. A visual inspection is also made of all equipment including pumps, motors, rail systems and wet well. The station has a visual alarm to alert customers to potential problems, with an emergency number to call. The City is currently negotiating with Scherbon for the installation of a remote monitoring and alarm system that will alert Scherbon personnel if any alarms are activated. The station does have an overflow storage tank to contain any flow that exceeds the capacity of the station, and emergency overflow storage if the station goes offline. There currently is no backup power to the station and the electrical panel does not contain a port for a portable generator hook-up. Attached to this report is the checklist that is filled out quarterly by Scherbon Consolidated.

The Fitchburg High School Pump Station was installed in 2002 and exclusively services the high school. The Fitchburg School Department has contracted with Pump Systems Incorporated, an outside vendor, to inspect and service its pump station. The pump station is serviced annually and the last two inspection reports are attached to this report. The pump station has standby power from a genset located at the High School.

The Bridal Cross Housing Complex Power Station is maintained by a property management company, Hodan Properties Management (HPM). HPM contracts with WhiteWater Inc. of Auburn, MA, to inspect their pump station quarterly. The pump station does have a gas fired generator to provide backup power. During inspections, WhiteWater tests the station backup power generator to assure its operation. Attached to this document is the latest WhiteWater inspection report provided to HPM.

Associated with the pump stations are two small sections of force main, which currently, to the best of our knowledge, does not have any routine inspection schedule. One from the West plant station has only been online since March of 2010. The Cobbler Drive station has not displayed any indication of failure to date, however an inspection of the line will need to be completed to verify the condition. The City plans to inspect this line by March 2012.

There are four inverted siphons in the City, all of which were inspected within the last five years and found to be very good condition. The City is committed to performing future siphon maintenance and inspection but the City has not determined an inspection schedule to date. Since the cost of dewatering and television inspecting the City's siphons can be as much as approximately $50,000, due to the difficult cross-country access in some locations, the City needs to work with its consultant to determine a set schedule for internal inspections that will work for the City and satisfy regulators. At this time the City will be performing visual inspections of the siphons head and tail chambers on a quarterly basis. Siphons will be inspected in upstream and downstream structures and wastewater elevation measurements will be taken in each. The City will evaluate head differential to establish current capacity constraints. When elevation differential exceeds our consultant's recommended elevations, the City will undergo a complete cleaning regimen and recheck wastewater elevations.

The City's PM scheduling will be conducted through the Cartegraph management and tracking software program. This PM software program will permit the City to document all activities including preventive, proactive, predictive, scheduled, and corrective maintenance; maintenance engineering; and quality controls. The software will also facilitate work orders generation, tracking, and observations and maintenance activities logging into the software system.

The Cartegraph management and tracking software program will assist managers and supervisors in the scheduling of regular maintenance and cleaning activities, monitor the frequency of sewer cleaning, inspections, and maintenance of associated equipment. Tasks and their frequency are determined based on operation and maintenance experience, and past performance. Scheduled and completed tasks are catalogued and tracked by work orders generated through the Cartegraph software program.

The City's sewer collection system staff has been certified by the National Association of Sewer Service Companies (NASSCO) for standardized pipe inspection coding and manhole inspection coding protocols established through the Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP), respectively. Closed Caption Television (CCTV) sewer lines and manhole inspections shall be conducted by collection system staff, and evaluated in accordance with NASSCO PACP and MACP standards. The Cartegraph software program shall be used by the operators in the recording, inspection rating, and reporting of the Wastewater Collection System, and will be used to update the GIS data layers and GIS maps.

The City's GIS data will be developed to define the wastewater collection network with vicinity, flow direction, and detailed maintenance maps identifying lift stations, chimneys, manholes, lines to be cleaned, other lines, force mains, and parcel boundaries. The Cartegraph management and tracking software program will allow operators to rate the wastewater collection system. Structural identification numbers, address/location, line length, size, and type will be identified along with pertinent information including the PM type, the last conducted PM, and the next due PM dates. Structural, debris, grease, roots, infiltration and inflow, vermin, and surcharge conditions shall be rated in accordance with NASSCO PACP and MACP standards.

Contributing conditions which classify certain locations of the system as Critical Cleaning Areas system "hot spots" include frequent and excessive accumulation of grease, structural defects, diameter and/or slope limitations, and frequent intrusion of root growth into the sewer lines. The critical cleaning areas shall be prioritized on the schedule of asset condition assessment, detailed investigations to confirm the condition limiting factors and to refine the cleaning activities and frequency, or to schedule rehabilitation or replacement of the line as required. Critical Cleaning Areas are inspected following a heavy rain storm or twice a month on Fridays in order that problems might be avoided over a weekend.

Table 3. Critical Cleaning "Hot Spot" Areas.

General Location	**Location of nearest SMH on Street**	**Critical Cleaning Condition Rating Qualification**
Green Street	#111	Suspected poor sewer line condition
Jackson Avenue	@ Intersection of Upham St.	Suspected poor sewer line condition
Lyman Avenue		Frequent grease accumulation and roots intrusion
Mack Road	#125	Roots Intrusion
Maine Avenue	#15	Frequent grease accumulation
Mt. Vernon Street	#61 behind house	Roots intrusion; suspected poor sewer line condition
Patton Street	@ Intersection of Abbott Ave	Frequent grease accumulation; suspected poor sewer line condition
Rodiman Avenue	#152	Frequent grease accumulation; slope/capacity
Townsend Street	#197	Roots intrusion; slope/capacity
Upham Street	#59	Frequent grease accumulation; slope/capacity
Wanoosnoc Road	#160 across from	Frequent grease accumulation; slope/capacity

	Meadow Village Brook	
Water Street	@ Intersection of Water and Walnut	Suspected poor sewer line condition
Willow Street	@ Morris St	Suspected poor sewer line condition

The City's CCTV inspection and collection system asset condition assessment program inventories the condition of the system, and develops and prioritizes system rehabilitation and replacement planning. As part of this program, structural deficiencies are identified and a necessary improvements list is developed and implemented systematically. The Rehabilitation and Replacement Plan implementation entails a variety of short- and long-term activities that ensure the sustainability of the sanitary sewer system infrastructure. The maintenance, and CCTV lines and manholes inspection, described above, have been developed to assist in the scheduling and reporting of required maintenance activities and ongoing video inspections.

Short Term

The City sewer collection operations staff currently performs CCTV inspections in support of operation and maintenance activities. Manhole inspections are conducted during line cleaning, TV inspections, and individually per NASSCO inspection specifications. An inspection log is filled out identifying any rehabilitation and replacement observations. The sewer pipe and manhole inspection logs will be entered into the Cartegraph management and tracking software program, corrective work orders will be generated, and reviewed by the supervisor, or engineering. Rehabilitation, replacement and/or repairs will then be scheduled and performed based on these reviews.

Follow-up CCTV inspections are conducted at overflow locations usually within 24 hours of overflow occurrence to identify any necessary repairs or any special maintenance needs.

Long Term

The life of the sanitary sewer infrastructure will be extended through the sewer mains and manholes inspection and rehabilitation program. This program is intended to accomplish several problematic issues associated with deteriorating infrastructures due to groundwater and rainwater infiltrations as well as chemical reactions in gravity and force main sewer systems.

In its PM program, the City will conduct comprehensive and systematic inspections and assessments of all components of its sewer system. Inspections shall be used to identify problems requiring repair and prioritize needed improvement projects.

The City will use state-of-the-art CCTV equipment to inspect and assess the condition of sanitary sewers. Sewer systems shall be cleaned and inspected based on the scheduling through the Cartegraph management and tracking software program. Currently, the preliminary line cleaning and CCTV inspection round of the entire City sewer system is scheduled to be completed within 5 years. Subsequent rounds of CCTV inspection frequency shall be determined Division management subsequent to the evaluation of the preliminary CCTV inspection data and condition assessments.

Sewer Collection System Maintenance Budget

The City has budgeted sum of $401,675 for Fiscal Year 2012 for sanitary sewer collection system operation and maintenance costs. The breakdown for the Fiscal Year 2012 sewer collection system maintenance budget is as follows:

Fiscal 2012 Breakdown of Collection System Budget

Collection System Staff	$351,675	
(Operators, GIS Engineer, Manager)		

Total Personnel - **$351,675**

General Expenses

Annual expenses (tools, equipment, general supplies)	$50,000	

Total Expense budget **$50,000**

Total Annual Maintenance Budget (FY 2012) **$401,675**

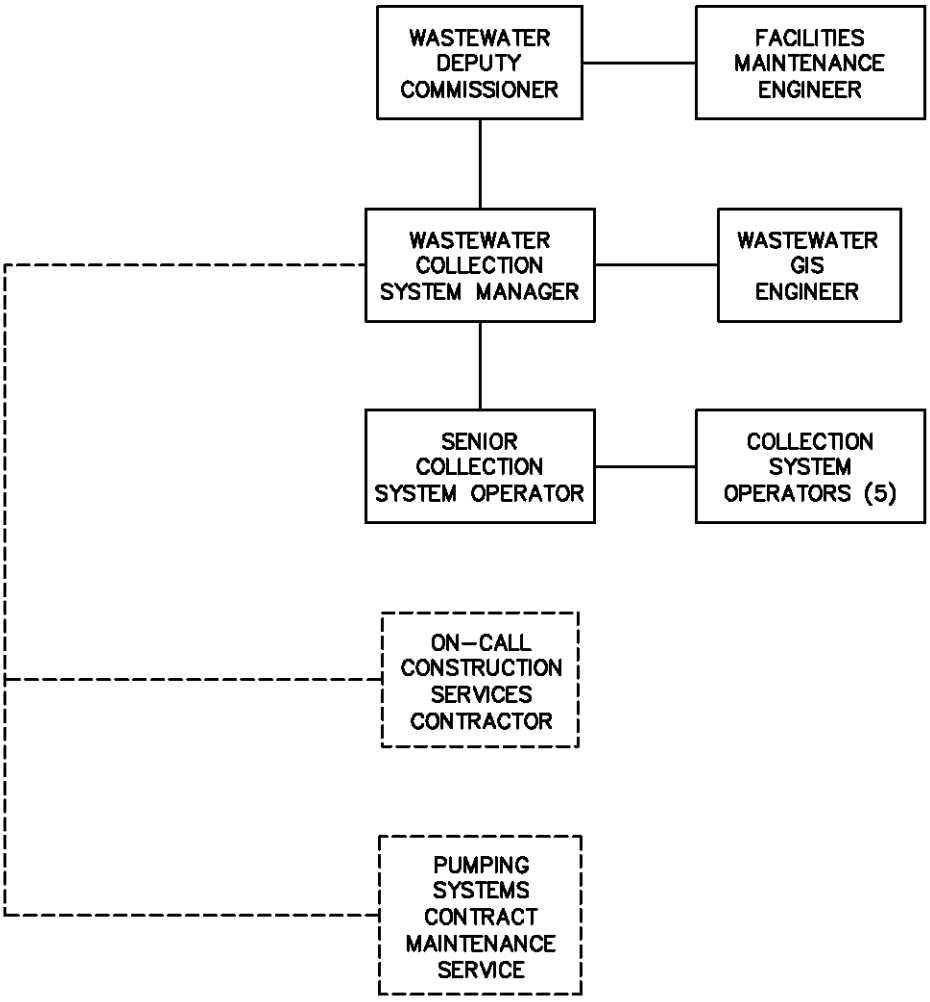
In addition to the above figures, additional funding of $10,000 is provided for training which is utilized by all wastewater employees. This figure is adjusted annually based on past years actual cost and anticipated future requirements. Additional support is provided by the treatment plant maintenance staff, who also maintains the West Plant pump station. Larger capital projects and expenditures, such as the purchase of the Cartegraph software, pipe inspection cameras, vehicles, separation projects and various sewer line repair and rehabilitation are funded by long term loan obligations. Between 2010 and 2015, the DPW Wastewater Division expects to allocate approximately $17,000,000 to these capital projects.

Maintenance Equipment and Spare Parts Inventory

As indicated above, the City is evaluating the equipment and inventory needs of the Wastewater Collection Division. Spare parts inventory shall be developed and stocked per manufacturer's recommendations. Key pieces of Division maintenance equipment include a Vactor® Jet Rodder vehicle (Model No. 2110 J4 Vactor), a camera van and tractor mounted IBAK Orpheus Pan & Tilt, Zoom Camera for pipeline CCTV inspections, and utility support truck. The City will contract additional maintenance support services as necessary. In addition, the City is investigating procurement of a more versatile camera inspections van platform, and the additions of both a manhole inspection camera, and a push-snake-type pipe camera to add greater flexibility and access capabilities to the Division's collection system maintenance equipment arsenal.

CITY OF FITCHBURG, MA
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

SEWER SYSTEM MAINTENANCE
ORGANIZATION CHART



THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: DEPARTMENT OF PUBLIC WORKS, DEPUTY COMMISSIONER OF WASTEWATER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

The Department of Public Works Deputy Commissioner of the Wastewater Division is responsible for the overall operation and maintenance of a 12.4 MGD advanced wastewater treatment facility, and over 130 miles of sewer collection system infrastructure, serving a population of approximately 40,000. In addition to serving the citizens of Fitchburg, the Wastewater Division generates a significant revenue stream utilizing an existing multiple-hearth incinerator to treat bio-solids generated by other communities in the region. The Deputy Commissioner supervises a staff of 34 salaried and hourly personnel. The Deputy Commissioner is responsible for developing and overseeing and enterprise-funded budget of approximately $10,500,000 annually, and is an integral part of the overall Department of Public Works.

QUALIFICATIONS:

- A Bachelor's Degree in environmental science, or engineering.
- Ten years experience in the wastewater field.
- A minimum of five years management experience.
- Massachusetts Grade 7 Wastewater Operator's license.
- Strong written and verbal communication skills.
- The ability to establish effective working relationships with personnel.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: WASTEWATER COLLECTION SYSTEM MANAGER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Responsible for the general operation of the collection system. Assist the Wastewater Department Deputy Commissioner with the preparation of the Capital Outlay for the annual budget. Monitors collection employees time cards and verifies all time worked. Enters all sewer calls into the Maintenance computer. Meets with the collection system senior operator daily/as needed to assign work schedules. Monitors collection operators to assure that assigned work is being performed correctly and in a timely manner. Supervises the upkeep of all collection vehicles, including all safety equipment and tools. Supervises the preventative maintenance of all designated collection systems. Schedules all collection employee vacation and personal time. Reviews subdivision plans to verify that the plans meet City standards. Conducts wastewater collection system analysis. Collects and evaluates flow data from meters at CSO outfalls, prepares regulatory reports as they pertain to the operation and maintenance of the sewer collection system. Insures City is in compliance with all EPA and MassDEP regulatory directives and requirements.

SUPERVISION RECEIVED:

Works under the direct supervision of the Wastewater Deputy Commissioner.

SUPERVISION EXERCISED:

1. Supervises and instructs trained collection system senior operator and operators in the performance of their duties.
2. Supervises GIS engineer in the performance of his/her duties.
3. Supervises all sewer installation projects under his or her budgetary control.

EXAMPLE OF DUTIES:

- Confers with collection system senior operator and operators daily and assigns duties.

- Monitors collection systems operators in the performance of their duties and exercises supervision where required.
- Institutes a zero tolerance safety program and updates safety programs now in use.
- Tracks down and documents collection system malfunctions and institutes proper corrective actions.
- Oversees the proper maintenance of collection system vehicles and tools.
- Responsible for the operation and maintenance of all lift stations.
- Responsible for updating of safety training and establishes semi-annual re-qualification procedures as required.
- Keeps track of weekly attendance for collection system employees.
- Enters all collection calls and PM's into computer database.
- Investigates claims for damage caused by the collection system.
- Directs effort to find illegal entry and dumping into the collection system.
- Works with Engineering and Water Department in locating utilities.
- Issues all confined space entry permits prior to employees entering confined spaces.
- Documents all sick leave, vacation and personal days.
- Maintains an on-call status 24 hours per day to keep abreast of arising problems and to coordinate efforts in solution of them.
- Performs other duties as assigned.

ENTRANCE REQUIREMENTS:

A Bachelor of Science or Bachelor of Engineering degree and 10 years of experience in the wastewater industry, or a Master of Science or Master of Engineering degree and 5 years of experience in the wastewater industry. A Professional Engineering license, in Civil Engineering or Environmental Engineering, in the Commonwealth of Massachusetts.

SPECIAL QUALIFICATIONS:

- Working knowledge of sanitary engineering principles and practices particularly as applied to large collection systems and activated sludge wastewater treatment plants.
- Thorough knowledge of Water Environmental Federation Manual of Practice No. 1 "Safety in wastewater Industry" and Sacramento Manual "Collection System Operation", and the TR-16 Guides for the Design of Wastewater Treatment Works, by NEIWPCC.
- Working knowledge of instrumentation and control equipment.
- Working knowledge of the U.S. EPA's Capacity, Management, Operations, and Maintenance (CMOM) regulations.
- Ability to establish and maintain an effective working relationship with associates, subordinates, and the public.
- Candidate should be experienced in the design and permitting of sanitary gravity sewers, force main sewers and inverted siphon sewers, and should be familiar with combined sewers and combined sewer separation.
- Candidate should also be experienced in federal, state and local/regional sources of grant and loan funding for capital improvements projects.

- Candidate should have 3 or more years of supervisory experience, including scheduling the work of subordinates and preparing budgets.
- Candidate should possess analytical skills for the evaluation of flow metering data, and preparation of technical engineering reports.
- Candidate should be experienced in planning and developing long-term capital improvement projects.
- Candidate should be experienced in reviewing and commenting on engineering reports, specifications and plans prepared by the City's consulting engineers.

PHYSICAL REQUIREMENTS:

- Required to move about construction sites and other light outdoor work.
- Required to perform office work for long periods.
- Rated: Light

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: FACILITIES MAINTENANCE ENGINEER

GENERAL STATEMENT OF DUTIES:

Performs professional engineering work of substantial difficulty and importance in connection with all mechanical and electrical equipment, systems and structures associated with an advanced wastewater treatment facility requiring the application of professional mechanical principles with considerable latitude for independent or un-reviewed action or decision; Executes full supervision over employees in the maintenance, instrumentation, electrical sections; Trains and assists subordinates as required; must have understanding of fluid control system to be able to trouble shoot unit processes; Must possess basic understanding of wastewater treatment to assist Plant Superintendent and Chief Engineer in trouble shooting.

DUTIES AND RESPONSIBILITIES:

- Supervises plant maintenance, instrumentation and electrical personnel.
- Observes, inspects and analyses the operation and operating conditions of all plant equipment and diagnoses faulty operations.
- Determines and specifies maintenance and repair requirements to insure safe and efficient operation.
- Provides guidance to technical and maintenance personnel.
- Directs the training and instruction to personnel.
- Enforces work rules and safety and health measures, orders and directives.
- Handles recommendations in personnel matters including promotions, transfers, disciplinary action and grievances at the intermediate level.
- Establishes technical regulations pertaining to operation of equipment such as temperature limits, pressure conditions, flow rates, operational sequences, service and shutdowns.
- Coordinates maintenance and general services operations with the Chief Engineer and Plant Superintendent or their authorized representative.
- Directs the testing of equipment and the preparation of computations and analysis of engineering performance and characteristics.

- Assist in administering plant fiscal matters and participates in the preparation of annual reports and budget.
- Reviews operational records and data and submits recommendations to Deputy Commissioner or his authorized representative.
- Prepares mechanical and electrical specifications for contracts.
- Checks manufacturers proposals, drawings and wiring diagrams for mechanical and electrical equipment.
- Supervises the installation and testing of equipment for compliance with manufacturers specifications.
- Confers with manufacturers and public utilities as required.
- Provides Deputy Commissioner and Chief Engineer with studies and reports in design engineering information regarding plant maintenance and operating problems.
- Investigates, estimates, and reports on the suitability of new equipment for use in the treatment plant.
- Supervises the operation of maintenance shop, garage, and storage areas.
- Supervises the purchase of materials and spare parts.
- Supervises the keeping of proper maintenance, lubrication, and replacement parts records.
- Advises the Chief Engineer or his authorized representative on all matters pertaining to plant maintenance and general services to insure efficient and economical functioning of all plant facilities.
- Assist Chief Engineer as required.

QUALIFICATIONS:

Eight years engineering experience, three of which must be responsible professional experience in a similar maintenance type supervisory position; A Bachelor of Engineering degree from an approved college or university may be substituted for four years of engineering experience; Registrations as a Professional engineer may be substituted for the eight years provided that at least three years have been in an electrical or mechanical engineer maintenance-type supervisory position.

SPECIAL QUALIFICATIONS, KNOWLEDGE AND ABILITIES:

Through knowledge of the practices, methods, materials, and tools used in the repair and preventative maintenance of mechanical and electrical equipment; The demonstrated ability to train, coordinate, and supervise a maintenance, electrical, instrumentation, and general services staff; Considerable knowledge of the occupational hazards and safety precautions pertaining to all phases of maintenance in a large advanced wastewater treatment plant utilizing mechanical and electrical equipment; Through knowledge of paints and other protective coatings for wastewater treatment plants; knowledge and experience in fluid and fluidized solids handling and control systems.

SUPERVISION RECEIVED:

Works under the direction supervision of the Deputy Commissioner, or in his absence, the Chief Engineer.

SUPERVISION EXERCISED:

All hourly maintenance personnel including the storekeeper and electrician and instrumentation personnel.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: GIS ENGINEER - WASTEWATER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

To develop, expand, and manage the Wastewater Department's sanitary and storm collection system infrastructure information system; With assistance from sewer crew, collect data pertaining to the location and elevations of all manholes; Collect data pertaining to the location, including elevations, of all storm sewer catch basins; Collect, verify, and document location of all sanitary and storm lines throughout the city including direction of flow, size, age, and material of all pipes, At the discretion of the Wastewater Deputy Commissioner assist in maintaining and expanding the Fitchburg Geographic Information System (GIS) data layers as they relate to other departments; Prepare cartographic output and analysis, digital data, and other GIS products; Maintain backup of the GIS system; Provide training and technical support to other department and city staff as necessary.

DUTIES:

GIS:

1. Creates, improves, and maintains GIS layers and other data pertaining to the city's wastewater infrastructure.

2. Enters data acquired from field surveys.

3. Produces GIS maps and detailed Auto Cad drawings as needed.

4. Installs new patches and versions of GIS software as required.

Field:

1. Conducts field surveys with the assistance of the collections crew to acquire horizontal and vertical location along with other data pertaining to the city's wastewater infrastructure, and imports data into the GIS.

2. Maintains field survey equipment as required.

3. Performs other duties as assigned.

Office:

1. Interpolates field survey data for GIS data entry.

2. Obtains supplies and conducts media maintenance as necessary to maintain the working operation of computer workstations and plotting devices.

3. Scans and archives existing and newly acquired hardcopy plans/documents pertaining to the wastewater infrastructure.

4. Performs other duties as assigned.

QUALIFICATIONS:

A 4-year degree from an accredited college and two years relevant GIS and/or MIS experience. Two additional years of relevant GIS or MIS experience may be substituted for the degree at the discretion of the city. Preference given for knowledge of, Cartegraph, ArcGIS, Arc/Info, Arcview, AutoCad, Microsoft Windows operating system, Unix Operating system, Macintosh operating systems, Microsoft Excel, Microsoft Word and PowerPoint, Adobe Acrobat, Adobe Photoshop, Topcon GTS 13 total station, Topcon level and general field survey procedure. Preference also given for knowledge of FTP, INFO, Samba, network analysis, tcp/ip Ethernet networking and HTML and web page design.

PHYSICAL COMPONENT:

Light to moderate. Involves lifting and manipulation of field survey equipment, opening and closing of manhole and catch basin covers, plotter paper for loading, storage and retrieval of maps and source documents stored in awkward positions, and standing for some plotter and scanning operations.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: SENIOR COLLECTION SYSTEMS OPERATOR

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Responsible for the operation and maintenance of the collection system, its' related pumping stations, inspection and documentation of Combined Sewer Overflows. Associated duties include repair of weir walls and other modifications to regulators, outfalls and manhole structures that may be required to insure proper operation; cleaning and inspecting all sewer lines and documenting the findings of the inspections, responding to sewer calls, identifying and correcting ongoing problems with blockages, monitoring activity in combined manholes to determine problem areas, monthly CSO inspections, Maintains a log of all inspections and corrective actions. Provide maintenance on various types of wastewater pump stations; Assist the Collection System Supervisor with the development and implementation of a preventative maintenance program to prevent overflows and plant bypasses, development and implementation of an I/I program to identify and remove sources of I/I, assist in compiling data for regulatory reporting. Any other duties associated with complying with NPDES permit. Enter sewer calls into a computer. Meet with Collection System supervisor for daily work schedules. Assures that all work assigned has been performed correctly and in a timely manner; Oversees the upkeep of all collection vehicles, including all safety equipment and tools and reports deficiencies to supervisor. Any other duties deemed necessary by Collection System Supervisor including assisting with treatment plant operations and maintenance.

SUPERVISION RECEIVED:

Works under the supervision of the Collection System Supervisor or Chief Engineer in his/her absence.

EXAMPLE OF DUTIES:

Clean sewer lines using a variety of methods and equipment such as a jet machine and a rodding machine, video camera equipment and a vacuum truck;; Assists in the repair of the collection

lines or stations; Use chemicals for cleaning and odor control; Dye test sewer services and lines to identify sewered connections; inspects and maintains inverted siphons to insure proper operation; Perform a variety of skilled and unskilled manual duties in the maintenance and care of the collection system; Maintain shift logs and record sewer calls; Maintain equipment and facilities under his/her care in a clean and orderly manner; Works with the Collection System Supervisor to institute a zero tolerance safety program and to update all existing safety and confine space entry programs including, but not limited to, explosion atmosphere, traffic management, general safety, etc. Tracks down and documents collection system malfunctions and institutes proper corrective actions. Investigates and documents any and all claims of damage caused by the collection system. Investigates claims for abatements. Directs effort to find illegal entry and dumping into the collection system; Issues all confined space entry permits before employees entering confined spaces; Perform other related unskilled duties such as cleaning debris, painting, shoveling snow, etc.

ENTRANCE REQUIREMENTS:

Must possess a Class B Commercial Driver's License with air brake and tank vehicle endorsement (Haz-Mat and tank (Endorsement X) desirable). Knowledge of traffic control safety procedures with a strong background in safety.

A New England Water Environmental Association Grade IV Wastewater Collection System Operator License, or ability to obtain within one year of appointment. A minimum of three (3) years in the wastewater collection system or three (3) years in the wastewater industry. A Grade 3 municipal wastewater license is desirable. Educational training in a recognized technical program will be substituted for the required experience on the basis of one (1) year for one (1) year; not more than two years substitution will be allowed.

SPECIAL QUALIFICATIONS:

Thorough knowledge of Water Environmental Federation Manual of Practice No. 1 "Safety in wastewater Industry" and Sacramento Manual "Collection System Operation". Ability to establish and maintain an effective working relationship with associates, subordinates, and the public.

PHYSICAL REQUIREMENTS:

Frequent physical efforts required; ability to lift and carry weights of 50 to 75 pounds; Required to bend, kneel, reach, and squat frequently throughout a work shift; Frequent movement in and out of equipment and vehicles.

Ability to use and wear personal protective equipment and clothing such as hearing protection, eye protection, foot and hand protection, and respiratory protection.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: COLLECTION SYSTEMS OPERATOR

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Provide corrective and preventive maintenance on the collection system. Perform a variety of skilled and unskilled manual duties in the maintenance and care of the collection system including repair of weir walls and other modifications to regulators, outfalls and manhole structures that may be required to insure proper operation; cleaning and inspecting all sewer lines, interpreting and documenting the results of inspections; Perform CSO inspection as required by NPDES permit; Clean sewer lines using a variety of methods and equipment such as a jet machine and a rodding machine, video camera equipment and a vacuum truck; Assists in the repair of the collection system lines or stations as directed; Use chemicals for cleaning and odor control; Run dye tests of services or sewer line to determine if the service is in the collection system; Tracks down and documents collection system malfunctions and institutes proper corrective actions. Investigates and documents any and all claims of damage caused by the collection system; Investigates claims for abatements; Assists in effort to find illegal entry and dumping into the collection system; Participates in safety training including but not limited to confine space entry, explosion atmosphere, traffic, general safety; Perform other general duties as directed by the Senior Collection System Operator and Collection System Supervisor, including assisting with treatment plant operations and maintenance.

QUALIFICATIONS:

Must possess a Class B Commercial Driver's License with air brake and tank vehicle endorsement (HazMat and tank (Endorsement X) desirable).

A New England Water Environmental Association Grade IV Wastewater Collection System Operator License, or ability to obtain within one year of appointment A minimum of three (3) years in the wastewater collection system or three (3) years in the wastewater industry. A Grade 3 municipal wastewater license is desirable.

Educational training in a recognized technical program will be substituted for the required

experience on the basis of one (1) year for one (1) year; not more than two years substitution will be allowed. Knowledge of traffic control safety procedures.

PHYSICAL REQUIREMENTS:

Frequent physical efforts required; ability to lift and carry weights of 50 to 75 pounds. Required to bend, kneel, reach, and squat frequently throughout a work shift. Frequent movement in and out of equipment and vehicle.

Ability to use and wear personal protective equipment and clothing such as hearing protection, eye protection, foot and hand protection, and respiratory protection.

City of Fitchburg, Massachusetts
DPW Wastewater Division

WORK ORDER FORM

START: **FINISH:**

Received: _____ (Date) _____ (Time) _____ (Time)

Work Task: _____

_____

_____

_____

LOCATION

Address/Street Intersection _____

_____

Supervisor: _____

Service Crew: _____

Materials: _____

Equipment: _____

Findings: _____
(Status) _____

Actions Taken: _____
(Services) _____

_____

Follow-Up _____
Action: _____

_____

_____

Location Sketch & Notes

	Notes:
	Weather:
	Temperature:

Signature: _____

SCHERBON CONSOLIDATED INC. D/B/A

PUMP MAINTENANCE SERVICE
P.O. BOX 420 AMESBURY, MA 01913
TEL: (978) 388-3132

NORTHEAST ENGINE & GENERATOR CO.
P.O. BOX 610 AMESBURY, MA 01913
FAX: (978) 388-4037

www. scherbon.com eMail: sci@ttlc.net

PUMP STATION PLANNED MAINTENANCE CHECKLIST

CUSTOMER -
LOCATION -
CONTACT -
STATION CLEANING COMPANY -

UNIT #
PHONE #
KEY #

STATION TYPE -
OF PUMPS -
OF FLOATS -
PANEL # -
VOLTAGE -
AMPS-
HERTZ -
F.L.A -
H.P -
RPM -
CAPACITORS-
RELAYS-
FUSES-

CHECK VALVES -
ALTENATOR RELAY-
AIR COMPRESSORS -
VENTALATION -
LEVEL CONTROLS -
SPARE PARTS -
MANUAL OPERATION -
AUTOMATIC OPERATION -

PUMP #1

HOURS -

VOLTS
L1- L2- L3-
L1-L2- L2-L3- L1-L3-

AMPS
L1- L2- L3-

PUMP #2

HOURS –

VOLTS
L1- L2- L3-
L1-L2- L2-L3- L1-L3-

AMPS
L1- L2- L3-

VISUAL INSPECTION OF WET WELL -

COMMENTS AND RECCOMENDATIONS -

TECHNICIAN DATE

Pump Systems INCORPORATED
Pump sales with experience and integrity

P.O. Box 6101, W. Franklin, NH 03235-6101 • 603.934.7100 • Fax 603.934.0317 • NH WATS 800.660.7249

INSPECTION REPORT

FOR: Fitchburg High School **DATE:** November 01, 2010

ITEM/AREA	CONDITION	
1) Check alarm light and/or horn for proper high water alarm function.	Okay	
2) Check float controls for correct operation and for grease build-up or other obstruction that might cause control problems.	Cleaned & working	
3) Check pump station for sludge build-up.	Small amount of sludge build up	
4) Check rail package for condition and clearance.	Okay	
5) Check Pumps:	***Pump 1***	***Pump 2***
Amperage	10.0	10.9
Ohms Resistance/Line to Line	See below	
Ohms to Ground	Open	Open
ETM's	01692.93	01833.82
Flow Rate Check	4½"/Min	5½"/Min
Excessive Wear or Vibration	Okay	
6) Check Control Panel:		
Contact Points	Okay	
Alternator Condition	Okay	
Indicator Lights	Okay	
Moisture Damage	None	
Blown Fuses	None	
Condition of Relays	Okay	
Condition of Capacitors	N/A	
7) Inspect check valves for proper closure.	Okay	
8) Check incoming voltage (from power company).	486 V, 3-Phase	

ADDITIONAL COMMENTS/RECOMMENDATIONS:

1T1 – 1T2 = 4.6 Ω	2T1 – 2T2 = 4.6 Ω
1T1 – 1T3 = 4.6 Ω	2T1 – 2T3 = 4.6 Ω
1T2 – 1T3 = 4.6 Ω	2T2 – 2T3 = 4.6 Ω

Pump Systems INCORPORATED
Pump sales with experience and integrity

P.O. Box 6101, W. Franklin, NH 03235-6101 • 603.934.7100 • Fax 603.934.0317 • NH WATS 800.660.7249

INSPECTION REPORT

MAY 4 '11 AM 8:25

FOR: Fitchburg High School
Mass.

DATE: April 26, 2011

ITEM/AREA	CONDITION	
1) Check alarm light and/or horn for proper high water alarm function.	Okay	
2) Check float controls for correct operation and for grease build-up or other obstruction that might cause control problems.	Okay ~ cleaned & working	
3) Check pump station for sludge build-up.	Okay - clean	
4) Check rail package for condition and clearance.	Okay	
5) Check Pumps:	***Pump 1***	***Pump 2***
Amperage	10.8	10.9
Ohms Resistance/Line to Line	See below	
Ohms to Ground	Open	Open
ETM's	01766.76	01893.87
Flow Rate Check	4"/Min	5"/Min
Excessive Wear or Vibration	Okay	
6) Check Control Panel:		
Contact Points	Okay	
Alternator Condition	Okay	
Indicator Lights	Okay	
Moisture Damage	None	
Blown Fuses	None - okay	
Condition of Relays	Okay	
Condition of Capacitors	N/A	
7) Inspect check valves for proper closure.	Okay	
8) Check incoming voltage (from power company).	488 V, 3-Phase	

ADDITIONAL COMMENTS/RECOMMENDATIONS:

1T1 – 1T2 = 4.4 Ω	2T1 – 2T2 = 4.4 Ω
1T1 – 1T3 = 4.5 Ω	2T1 – 2T3 = 4.3 Ω
1T2 – 1T3 = 4.4 Ω	2T2 – 2T3 = 4.4 Ω

Wastewater Pump Station Maintenance Report

Pump Station Site:	**Bridle Cross**	Job ID:	**643i**
Maintenance performed on:	**11/7/2011**	PMP Time:	
Operator/Technician:	**Brian Houston**	PMP Frequency:	**Quarterly**

Specific Tasks Performed:

1. Cleaned floats.

Pump Operation

	Pump #1	Pump #2
Amps (1):	**19.3**	**18.4**
Amps (2):	**20.4**	**19.4**
Amps (3):	**19.5**	**18.7**
Run Time:	**1498.00**	**1314.04**

Routine Task Results:

AutoDialer State:	**N/A**
Alarm State:	**All alarms operating as designed.**
Control Panel:	**No issues exist with control panel.**
Wetwell Condition:	**Wetwell will need to be pumped at next visit.**
Float Operation:	**All floats are working but were covered with debris.**
Security:	**Area is secure and safe.**

PMP Comments:

wet weel has a debris mat that will need to be pumped sooner than next visit

Bigelow Electrical Company, Inc

1 Pullman Street, P O Box 60268, Worcester, MA 01606-0268

Telephone 508-852-5000 Fax 508-853-2010

Bigelow is a Massachusetts's Vendor # VC6000158174 under the state's Tradespersons - Repair & Maintenance Contract - fac29.

SCHEDULED MAINTENANCE AGREEMENT

June 9, 2009

This agreement, effective at date of signing, is entered into between Bigelow Electrical Company, Inc. and

NAME: Randy Speare - 617-367-0900; Cell 508-878-9090
ADDRESS: Bridle Cross Estate - Hodan Property Mgmt, Ltd.
105 North Washington Street, PO Box 8397
Boston, MA 02114

for the purpose of servicing owners standby generator sets.

1. This agreement shall be for an initial term of (1) year commencing with effective date unless terminated earlier by either party on 30 days written notice, subject to written notice of price change as required.

2. Bigelow Electrical to furnish technicians, transportation, tools and special equipment required to inspect and test units as described on attached schedule.

3. The service calls shall consist of inspection, test and reporting on a (circle one) Monthly, Quarterly, **Semi-Annual** or Annual basis. A Service Checklist, completed and signed by a Bigelow Electrical Technician, shall be presented upon completion of service call(s).

   The first scheduled maintenance call will include, in addition to inspection, test, and reporting, a complete lube oil and lube oil filter change. The total annual cost will be **$ 300.00.** The initial call will be in **TBD** with subsequent calls following per agreed schedule.

   Thank-you for your interest in the Bigelow Electrical scheduled generator service agreement as outlined. Please take the time to look over for accuracy in the amount and type of standby generator sets shown that you desire to be maintained. If everything is in order, then please sign copy where indicated and return a signed copy to Bigelow Electrical via mail or fax.

The following equipment is to be covered under this agreement:

Make **Kohler** Model **30RZGB** Location **Saddlebred Road - Cul de Sac, Fitchburg**

BIGELOW ELECTRICAL COMPANY, INC.

By: *Thane* By:

Thane Youngsma
Generator Service Manager

Bridle Cross Estates

(continued on next page)

SCHEDULED MAINTENANCE AGREEMENT - 2

A: By prearranged appointment between Bigelow Electrical and the system user representatives, practical and timely access will be provided for the Service Technician, his tools and equipment.

The Scheduled Maintenance Inspections will include the following when applicable:

Minor Service
Check hour meter operation and record hour meter reading
Check air filter condition
Check condition of ignition system
Check and record anti-freeze protection, condition and coolant level (add up to 1 gallon)
Check low coolant level alarm
Check engine water jacket heater
Check and record engine lube oil level and condition
Check fuel and water separator if equipped on (Diesel units only)
Check entire unit for fuel, oil or water leakage
Check condition and tension of belts
Check condition of hoses
Inspect distributor, battery charging generator/alternator, starter & governor
Check and record battery condition and add distilled water if required
Check and clean battery terminals
Check and record complete charging system
Check and record exhaust system condition
Check condition of water pump
Check condition of hoses and connections
Check condition of fuel lines
Wipe generator clean
Conduct safety shutdown check.
Run generator to check and record voltage and frequency; Check instrumentation and adjust as required.
Automatic Transfer Switch – Visual Inspection ONLY – 600 VAC Maximum
Check exerciser clock
Check and record actual cold cranking amps @ 0 deg F
On diesel engines with cylinder liners – check coolant additive levels (DCA)

Major Service (includes Minor)
Change fuel filters (Diesel units only)
Change engine lube oil and filter annually. Waste oil & filters will be removed from the site included in cost
Inspect, clean spark plugs (if applicable)
Inspect and adjust ignition points and condenser (not applicable if diesel)

B: Any additional work needed will be brought to the attention of the Owner. Service quoted will be performed between the normal working hours of 7:30 AM and 4:00 PM, Monday through Friday, excluding holidays. Service required during other than normal hours will be invoiced at 1 1/2 times the normal hourly rate, except Sundays and holidays when twice the prevailing hourly rate will be invoiced.

C: This Scheduled Maintenance Proposal does not include provisions for rebuilding or overhaul repair work. The decision to make repairs will be the Owner's. Bigelow Electrical retains the option of not renewing this Scheduled Maintenance Proposal if in our opinion the machine (s) is (are) not in satisfactory mechanical or electrical condition for proper service and we are not authorized to accomplish needed repairs.

D: This Scheduled Maintenance Proposal is based on all services being accomplished by Bigelow Electrical. Any additional parts, labor or expense other than specified above are NOT included in this agreement.

E. Customer Options:
At customer request and/or approval, transfer load for testing and adjusting
Load bank testing
Check and record infrared temperatures of individual transfer switches
NEW generators and transfer switches and other accessories
Rental generators and cables available 24 x 7

National Association of Sewer Service Companies
NASSCO, Inc.

Certificate of Completion

This is to certify that

John Bartlett

Is certified to practice PACP, MACP and LACP.
Certification is valid for three years from the date of issuance.

CERTIFICATE NUMBER: U-711-13153

Signature Theodore J. DeBoda, P.E., Executive Director

9/9/11
Date of Issuance

Note: The User is not an employee, agent or partner of NASSCO. The User acknowledges and agrees that NASSCO does not supervise or control the User and that NASSCO shall not be responsible for any acts or omissions of the User.

National Association of Sewer Service Companies
NASSCO, Inc.

Certificate of Completion

This is to certify that

Robert C. Fortin

Is certified to practice PACP, MACP and LACP.
Certification is valid for three years from the date of issuance.

CERTIFICATE NUMBER: U-711-13157

Signature Theodore J. DeBoda, P.E., Executive Director

9/2/11
Date of Issuance

Note: The User is not an employee, agent or partner of NASSCO. The User acknowledges and agrees that NASSCO does not supervise or control the User and that NASSCO shall not be responsible for any acts or omissions of the User.

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 3

PRIORITY CLEANING PLAN

CITY OF FITCHBURG, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

PRIORITY CLEANING PLAN

STANDARD OPERATING PROCEDURES AND SCHEDULE FOR CRITICAL CLEANING AREAS OF THE SEWER SYSTEM

OCTOBER 31, 2011
REVISED: JANUARY 31, 2012

Sanitary Sewer System Priority Cleaning Plan – City of Fitchburg, MA

Introduction

The City's sewer system is composed of approximately 130 miles of sewers, with pipe/conduit sizes ranging from 5-inch to the 54-inch trunkline sewer, and a variety of pipe materials including vitrified clay, reinforced concrete, polyvinyl chloride, brick, asbestos cement and cast iron. Portions of the sewer system date back to the late 1800s. With the formation of the Wastewater Collection System Operations branch of the Department of Public Works Wastewater Division in 2010, the City has started several initiatives to investigate, characterize, map and condition assess the component elements of the sanitary sewer collection system. In addition, procedures have been developed to perform routine maintenance cleaning to maintain the sewer system's conveyance capacity and to prevent sewer system blockages and backups.

Due to the lack of detailed documentation of the past sewer collection system maintenance activities, system condition assessment investigations, and historical backups, blockages and overflows, the Wastewater Division Management has surveyed past operations personnel to identify priority cleaning "hot spot" areas, further detailed and discussed herein. In addition, the City is initiating drastic procedural changes for sewer collection operations personnel to develop a documented database of system conditions, customer service call response actions, and system operation characteristics and capacities. Priority cleaning "hot spot" areas, or "Critical Cleaning Areas", are those portions of the sewer system that must be regularly cleaned and maintained to prevent blockages, sanitary sewer overflows (SSOs) and dry-weather combined sewer overflow (CSO) outfall discharges.

The purpose of this Priority Cleaning Plan is to define the criteria that qualify areas of the sewer collection system as "Critical Cleaning Areas", to identify locations within the system that are designated as "Critical Cleaning Areas", establish standard sewer system cleaning procedures and frequencies for conduction sewer cleaning activities for "Critical Cleaning Areas". The City's Routine Cleaning Plan program will conduct sewer cleaning activities on all sections of the system within five (5) years. In the course of conducting routine sewer cleaning activities on the entire system, the Wastewater Division will assess the performance of the system, and together with sewer service call responses, will be building an institutional understanding of the City's sewer system. The Routine Cleaning Plan program, and service call response documentation, will also help identify "Critical Cleaning Areas", and better refine the necessary cleaning frequency and cleaning activities required for such locations.

By April 2012, the City will also be implementing a new management and tracking software program ("Cartegraph") which will assist managers and supervisors in the scheduling of critical cleaning activities, monitor the frequency of sewer system critical cleaning, inspections, and maintenance of associated equipment. The Cartegraph system is anticipated to help the City document sewer system maintenance activities, and schedule conducting the maintenance program in the most efficient manner.

Critical Cleaning Areas Criterion

As indicated above in the "Introduction", a detailed, documented database of sewer system problem areas which contribute to sewer system blockages, SSOs and dry-weather CSO outfall discharges does not exist. To initiate the Priority Cleaning Plan program, the Wastewater Division management surveyed operations personnel, both past and present, to identify areas in the collection system that have been historically problematic. In the identified Critical Cleaning Areas, there are suspected contributing factors that promote flow capacity constricting conditions which can lead to blockages, SSOs and dry-weather CSO outfall discharges.

Preliminarily identified Critical Cleaning Areas, listed in Table 1 with the suspected contributing factors which qualify the area as "Critical Cleaning Areas", have been listed due to observed deficiencies and operational common knowledge of the system. The locations of the problematic areas are provided with reference to a nearest sewer manhole (SMH) and its closest address or intersecting street. Although this is the current method of locating SMH's within the City, twenty-four (24) sub-catchment areas have been identified within the City and SMH's within each area are being numbered with unique identifiers to superseded the old method.

Conditions which are suspected to make the listed Critical Cleaning Areas system "hot spots" include frequent and excessive accumulation of grease, structural defects, diameter and/or slope limitations, and frequent intrusion of root growth into the sewer lines. The critical cleaning areas shall be prioritized on the schedule of asset condition assessment, detailed investigations to confirm the condition limiting factors and to refine the cleaning activities and frequency, or to schedule rehabilitation or replacement of the line as required. Critical Cleaning Areas are inspected following a heavy rain storm or twice a month on Fridays on so that problems might be avoided over a weekend.

Table 1. Critical Cleaning "Hot Spot" Areas.

General Location	Location of nearest SMH on Street	Critical Cleaning Condition Rating Qualification
Green Street	#111	Suspected poor sewer line condition
Jackson Avenue	@ Intersection of Upham St.	Suspected poor sewer line condition
Lyman Avenue		Frequent grease accumulation and roots intrusion
Mack Road	#125	Roots Intrusion
Maine Avenue	#15	Frequent grease accumulation
Mt. Vernon Street	#61 behind house	Roots intrusion; suspected poor sewer line condition
Patton Street	@ Intersection of Abbott Ave	Frequent grease accumulation; suspected poor sewer line condition
Rodiman Avenue	#152	Frequent grease accumulation; slope/capacity
Townsend Street	#197	Roots intrusion; slope/capacity
Upham Street	#59	Frequent grease accumulation; slope/capacity
Wanoosnoc Road	#160 across from Meadow Village Brook	Frequent grease accumulation; slope/capacity
Water Street	@ Intersection of Water and Walnut	Suspected poor sewer line condition
Willow Street	@ Morris St	Suspected poor sewer line condition

The City will be implementing a management and tracking software program, Cartegraph, to generate standard Work Order forms used to memorialize cleaning efforts of its collection operators. The system will track work orders from initial issuance through final completion and document through GIS mapping the exact location, dates, and outcome of all cleaning efforts. Until the time Cartegraph is installed and generating Work Orders, the City has constructed its own Work Order form that will be used in the interim. The Work Order form is appended to this document.

Criteria for Need of Outside Sevices

The City's Wastewater Collection Division was recently formed in 2010 and its collection operators come from wide varying backgrounds with experience in sewer system maintenance. Although they are becoming more adept at clearing blockages with the City's Vactor sewer cleaner, there will be a time when outside services will be necessary where, as an example, larger equipment is needed to handle blockages in large pipes. The City is capable with its staff and equipment for handling blockages in pipes up to and including 30-inches in diameter. For pipe sizes exceeding 30-inches in diameter it will be necessary to call-in an outside vendor for assistance. Companies specializing in sewer system maintenance, i.e., National Water Main Cleaning Company, have assisted this City in the past and we are prepared to contract their services if a task is beyond our capability.

Standard Operating Procedure for Cleaning Gravity Sewers

Purpose

Priority Critical Cleaning Areas' cleaning activities are fundamentally the same as the standard sewer cleaning procedures as performed during routine sewer cleaning operations, and the fundamental distinction of priority critical cleaning from routine cleaning operations is the frequency of maintenance attention the area receives to prevent accelerated degradation of flow capacity from producing flow capacity constricting conditions which can lead to sewer system blockages, SSOs and dry-weather CSO outfall discharges.

The purpose of this Standard Operating Procedure is to ensure that sewer cleaning is performed in a manner that will produce a high quality work product. Quality is important because it ensures that the sanitary sewers will not experience problems prior to their next scheduled cleaning.

Goal

The goal of cleaning a gravity sewer is to restore the flow area to 95% of the original flow area of the pipe.

Required Equipment and Tools

1. Personal protective equipment (hardhat, steel toe boots, gloves, eye/face protection, hearing protection).
2. Calibrated gas detector.
3. Proper safety cones, barricades, flagging, signs or other traffic control devices.
4. Confined space equipment (tripod, harness, and ventilation blower).
5. Sanitary sewer system location map.

6. Combo sewer cleaner.
7. Cleaning nozzle.
8. Root saw.
9. Debris traps in the sizes that will be encountered during the day.
10. Manhole hook or pick-axe.
11. Measuring wheel.
12. Disinfectant Required.

Forms

1. Cleaning Work Order.
2. Pre-Trip Check List.
3. Injury/Damage Report Form.

Procedures for Sewer Cleaning Crew Prior to Leaving the Yard

1. Plan the work so that it starts in the upstream portion of the area and moves downstream.
2. Wherever possible, plan to clean sewers from the downstream manhole.
3. Inspect the sewer cleaning nozzles for wear. Replace nozzles that are excessively worn.
4. If this is the first day that this cleaning unit is being used this week, inspect the first 200 feet of hose and couplings for damage or wear.

At the Jobsite

5. Wear proper personnel protective equipment (PPE).
6. Fill the water tank at or near the first jobsite.
7. Determine and confirm location of upstream and downstream manholes (use street addresses, if possible).
8. Look for any overhead utilities that may come into contact with the vacuum boom during the cleaning operation.
9. Set up proper traffic control by placing traffic signs, flags, cones and other traffic control devices.
10. Move the cleaning unit into the traffic control so that the hose reel is positioned over the manhole.
11. Install the cleaning nozzle on the hose.

Cleaning Operation

12. Insert the debris trap.
13. Start the auxiliary engine.
14. Lower the hose, with a guide or roller to protect the hose, into the manhole and direct it into the sewer to be cleaned.
15. Start the high pressure pump and set the engine speed to provide adequate pressure for the sewer cleaning operation.
16. Open the water valve and allow the hose to proceed up the sewer. The hose speed should not exceed 3 feet per second.
17. Allow the hose to proceed 25% of the length of the sewer and pull the hose back.
18. Observe the nature and the quantity of debris pulled back to the manhole.
19. If there is little or no debris, allow the hose to proceed to the upstream manhole.

20. If there is moderate to heavy debris, clean the remaining portion of the sewer in steps not to exceed 25% of the length of the sewer.
21. Open the upstream manhole and verify that the nozzle is at or past the manhole.
22. The sewer has been adequately cleaned when successive passes with a cleaning nozzle do not produce any additional debris.
23. Determine the nature and quantity of the debris removed during the cleaning operation. Use the codes in Table 2 to report the nature and quantity of debris.

Table 2 – Criterion for Coding Debris Found During Cleaning

Type of Debris	**Clear (no debris)**	**Light**	**Moderate**	**Heavy**
Sand, grit, gravel	CLR	DL	DM	DH
Grease	CLR	GL	GM	GH
Roots	CLR	RL	RM	RH
Other (specify)	CLR	OL	OM	OH

24. Remove the debris from the manhole using the vacuum unit.
25. Rewind the hose on the reel.
26. Remove the debris trap.
27. Clean the mating surface and close the manhole. Ensure that the manhole is properly seated.
28. Enter the results on the Work Order.
29. Move the cleaning unit, break down and stow the traffic controls.
30. Proceed to the next cleaning jobsite.

At the End of the Day

31. Inspect the equipment and tools for problems.
32. Report any problems with equipment, tools, or sewers that were cleaned during the day to the Supervisor.
33. Turn in all completed Work Orders to the Supervisor at end of shift.

Table 2 – Standard Measures of Observed Results

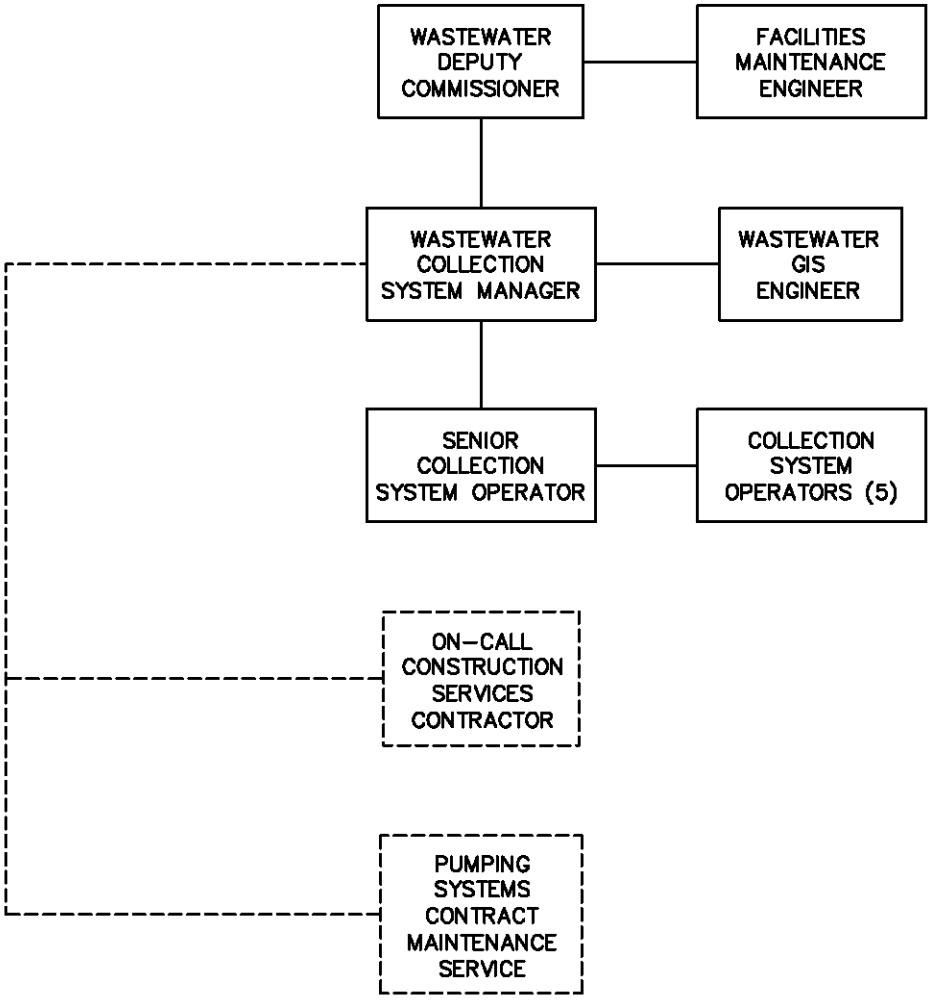
Next to cleaning the sewer line, effective observation of results is the most important work product of the crew. This information is the basis for defining future maintenance activities. Consistency of observation documentation is important. The standards for "results" for six- and eight-inch diameter sewers are:

	Clear	Moderate	Heavy
Grit	• No observable grit	• Less than 5 gallons • 15-20 minutes to clean • 1-2 passes required • Requires cleaning twice or less per year • Only fine grit	• More than 5 gallons • More than 30 minutes to clean • More than 4 passes required • Requires cleaning four times per year
Grease	• No observable grease	• Small chunks/no "logs" • 15-20 minutes to clean • Requires cleaning twice or less per year	• Big chunks/"logs" • Operator concern for downstream plugging • More than 30 minutes to clean • More than 4 passes required
Liquefied Grease		• Vacuuming not required	• Vacuuming not required
Roots	• No observable roots	• Thin/stringy roots present • No large "clumps" • 15-20 minutes to clean • 1-2 passes required	• Thick roots present • Large "clumps" • More than 30 minutes to clean • More than 4 passes required
Other condition observations: • **Pipe material fragments** • **Soil/dirt** • **Stone (pipe bedding)** • **Lost nozzle**			

The flowchart below details the Wastewater Division hierarchy for sewer collection system operation and maintenance activities. Operation and maintenance activities are primarily conducted by City Wastewater Operations personnel, under the supervision and direction of Wastewater Division Management staff (DPW Deputy Director, Wastewater Division; and Wastewater Collection System Manager).

CITY OF FITCHBURG, MA
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

SEWER SYSTEM MAINTENANCE
ORGANIZATION CHART



Job descriptions of wastewater management and operations personnel are presented on the following pages. As indicated in the flowchart above, the City does contract with outside contractors and consultants to complement the capabilities of the City staff as required.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: DEPARTMENT OF PUBLIC WORKS, DEPUTY COMMISSIONER OF WASTEWATER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

The Department of Public Works Deputy Commissioner of the Wastewater Division is responsible for the overall operation and maintenance of a 12.4 MGD advanced wastewater treatment facility, and over 130 miles of sewer collection system infrastructure, serving a population of approximately 40,000. In addition to serving the citizens of Fitchburg, the Wastewater Division generates a significant revenue stream utilizing an existing multiple-hearth incinerator to treat bio-solids generated by other communities in the region. The Deputy Commissioner supervises a staff of 34 salaried and hourly personnel. The Deputy Commissioner is responsible for developing and overseeing and enterprise-funded budget of approximately $10,500,000 annually, and is an integral part of the overall Department of Public Works.

QUALIFICATIONS:

- A Bachelor's Degree in environmental science, or engineering.
- Ten years experience in the wastewater field.
- A minimum of five years management experience.
- Massachusetts Grade 7 Wastewater Operator's license.
- Strong written and verbal communication skills.
- The ability to establish effective working relationships with personnel.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: WASTEWATER COLLECTION SYSTEM MANAGER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Responsible for the general operation of the collection system. Assist the Wastewater Department Deputy Commissioner with the preparation of the Capital Outlay for the annual budget. Monitors collection employees time cards and verifies all time worked. Enters all sewer calls into the Maintenance computer. Meets with the collection system senior operator daily/as needed to assign work schedules. Monitors collection operators to assure that assigned work is being performed correctly and in a timely manner. Supervises the upkeep of all collection vehicles, including all safety equipment and tools. Supervises the preventative maintenance of all designated collection systems. Schedules all collection employee vacation and personal time. Reviews subdivision plans to verify that the plans meet City standards. Conducts wastewater collection system analysis. Collects and evaluates flow data from meters at CSO outfalls, prepares regulatory reports as they pertain to the operation and maintenance of the sewer collection system. Insures City is in compliance with all EPA and MassDEP regulatory directives and requirements.

SUPERVISION RECEIVED:

Works under the direct supervision of the Wastewater Deputy Commissioner.

SUPERVISION EXERCISED:

1. Supervises and instructs trained collection system senior operator and operators in the performance of their duties.
2. Supervises GIS engineer in the performance of his/her duties.
3. Supervises all sewer installation projects under his or her budgetary control.

EXAMPLE OF DUTIES:

- Confers with collection system senior operator and operators daily and assigns duties.

- Monitors collection systems operators in the performance of their duties and exercises supervision where required.
- Institutes a zero tolerance safety program and updates safety programs now in use.
- Tracks down and documents collection system malfunctions and institutes proper corrective actions.
- Oversees the proper maintenance of collection system vehicles and tools.
- Responsible for the operation and maintenance of all lift stations.
- Responsible for updating of safety training and establishes semi-annual re-qualification procedures as required.
- Keeps track of weekly attendance for collection system employees.
- Enters all collection calls and PM's into computer database.
- Investigates claims for damage caused by the collection system.
- Directs effort to find illegal entry and dumping into the collection system.
- Works with Engineering and Water Department in locating utilities.
- Issues all confined space entry permits prior to employees entering confined spaces.
- Documents all sick leave, vacation and personal days.
- Maintains an on-call status 24 hours per day to keep abreast of arising problems and to coordinate efforts in solution of them.
- Performs other duties as assigned.

ENTRANCE REQUIREMENTS:

A Bachelor of Science or Bachelor of Engineering degree and 10 years of experience in the wastewater industry, or a Master of Science or Master of Engineering degree and 5 years of experience in the wastewater industry. A Professional Engineering license, in Civil Engineering or Environmental Engineering, in the Commonwealth of Massachusetts.

SPECIAL QUALIFICATIONS:

- Working knowledge of sanitary engineering principles and practices particularly as applied to large collection systems and activated sludge wastewater treatment plants.
- Thorough knowledge of Water Environmental Federation Manual of Practice No. 1 "Safety in wastewater Industry" and Sacramento Manual "Collection System Operation", and the TR-16 Guides for the Design of Wastewater Treatment Works, by NEIWPCC.
- Working knowledge of instrumentation and control equipment.
- Working knowledge of the U.S. EPA's Capacity, Management, Operations, and Maintenance (CMOM) regulations.
- Ability to establish and maintain an effective working relationship with associates, subordinates, and the public.
- Candidate should be experienced in the design and permitting of sanitary gravity sewers, force main sewers and inverted siphon sewers, and should be familiar with combined sewers and combined sewer separation.
- Candidate should also be experienced in federal, state and local/regional sources of grant and loan funding for capital improvements projects.

- Candidate should have 3 or more years of supervisory experience, including scheduling the work of subordinates and preparing budgets.
- Candidate should possess analytical skills for the evaluation of flow metering data, and preparation of technical engineering reports.
- Candidate should be experienced in planning and developing long-term capital improvement projects.
- Candidate should be experienced in reviewing and commenting on engineering reports, specifications and plans prepared by the City's consulting engineers.

PHYSICAL REQUIREMENTS:

- Required to move about construction sites and other light outdoor work.
- Required to perform office work for long periods.
- Rated: Light

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: FACILITIES MAINTENANCE ENGINEER

GENERAL STATEMENT OF DUTIES:

Performs professional engineering work of substantial difficulty and importance in connection with all mechanical and electrical equipment, systems and structures associated with an advanced wastewater treatment facility requiring the application of professional mechanical principles with considerable latitude for independent or un-reviewed action or decision; Executes full supervision over employees in the maintenance, instrumentation, electrical sections; Trains and assists subordinates as required; must have understanding of fluid control system to be able to trouble shoot unit processes; Must possess basic understanding of wastewater treatment to assist Plant Superintendent and Chief Engineer in trouble shooting.

DUTIES AND RESPONSIBILITIES:

- Supervises plant maintenance, instrumentation and electrical personnel.
- Observes, inspects and analyses the operation and operating conditions of all plant equipment and diagnoses faulty operations.
- Determines and specifies maintenance and repair requirements to insure safe and efficient operation.
- Provides guidance to technical and maintenance personnel.
- Directs the training and instruction to personnel.
- Enforces work rules and safety and health measures, orders and directives.
- Handles recommendations in personnel matters including promotions, transfers, disciplinary action and grievances at the intermediate level.
- Establishes technical regulations pertaining to operation of equipment such as temperature limits, pressure conditions, flow rates, operational sequences, service and shutdowns.
- Coordinates maintenance and general services operations with the Chief Engineer and Plant Superintendent or their authorized representative.
- Directs the testing of equipment and the preparation of computations and analysis of engineering performance and characteristics.

- Assist in administering plant fiscal matters and participates in the preparation of annual reports and budget.
- Reviews operational records and data and submits recommendations to Deputy Commissioner or his authorized representative.
- Prepares mechanical and electrical specifications for contracts.
- Checks manufacturers proposals, drawings and wiring diagrams for mechanical and electrical equipment.
- Supervises the installation and testing of equipment for compliance with manufacturers specifications.
- Confers with manufacturers and public utilities as required.
- Provides Deputy Commissioner and Chief Engineer with studies and reports in design engineering information regarding plant maintenance and operating problems.
- Investigates, estimates, and reports on the suitability of new equipment for use in the treatment plant.
- Supervises the operation of maintenance shop, garage, and storage areas.
- Supervises the purchase of materials and spare parts.
- Supervises the keeping of proper maintenance, lubrication, and replacement parts records.
- Advises the Chief Engineer or his authorized representative on all matters pertaining to plant maintenance and general services to insure efficient and economical functioning of all plant facilities.
- Assist Chief Engineer as required.

QUALIFICATIONS:

Eight years engineering experience, three of which must be responsible professional experience in a similar maintenance type supervisory position; A Bachelor of Engineering degree from an approved college or university may be substituted for four years of engineering experience; Registrations as a Professional engineer may be substituted for the eight years provided that at least three years have been in an electrical or mechanical engineer maintenance-type supervisory position.

SPECIAL QUALIFICATIONS, KNOWLEDGE AND ABILITIES:

Through knowledge of the practices, methods, materials, and tools used in the repair and preventative maintenance of mechanical and electrical equipment; The demonstrated ability to train, coordinate, and supervise a maintenance, electrical, instrumentation, and general services staff; Considerable knowledge of the occupational hazards and safety precautions pertaining to all phases of maintenance in a large advanced wastewater treatment plant utilizing mechanical and electrical equipment; Through knowledge of paints and other protective coatings for wastewater treatment plants; knowledge and experience in fluid and fluidized solids handling and control systems.

SUPERVISION RECEIVED:

Works under the direction supervision of the Deputy Commissioner, or in his absence, the Chief Engineer.

SUPERVISION EXERCISED:

All hourly maintenance personnel including the storekeeper and electrician and instrumentation personnel.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: GIS ENGINEER - WASTEWATER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

To develop, expand, and manage the Wastewater Department's sanitary and storm collection system infrastructure information system; With assistance from sewer crew, collect data pertaining to the location and elevations of all manholes; Collect data pertaining to the location, including elevations, of all storm sewer catch basins; Collect, verify, and document location of all sanitary and storm lines throughout the city including direction of flow, size, age, and material of all pipes, At the discretion of the Wastewater Deputy Commissioner assist in maintaining and expanding the Fitchburg Geographic Information System (GIS) data layers as they relate to other departments; Prepare cartographic output and analysis, digital data, and other GIS products; Maintain backup of the GIS system; Provide training and technical support to other department and city staff as necessary.

DUTIES:

GIS:

1. Creates, improves, and maintains GIS layers and other data pertaining to the city's wastewater infrastructure.

2. Enters data acquired from field surveys.

3. Produces GIS maps and detailed Auto Cad drawings as needed.

4. Installs new patches and versions of GIS software as required.

Field:

1. Conducts field surveys with the assistance of the collections crew to acquire horizontal and vertical location along with other data pertaining to the city's wastewater infrastructure, and imports data into the GIS.

2. Maintains field survey equipment as required.

3. Performs other duties as assigned.

Office:

1. Interpolates field survey data for GIS data entry.

2. Obtains supplies and conducts media maintenance as necessary to maintain the working operation of computer workstations and plotting devices.

3. Scans and archives existing and newly acquired hardcopy plans/documents pertaining to the wastewater infrastructure.

4. Performs other duties as assigned.

QUALIFICATIONS:

A 4-year degree from an accredited college and two years relevant GIS and/or MIS experience. Two additional years of relevant GIS or MIS experience may be substituted for the degree at the discretion of the city. Preference given for knowledge of, Cartegraph, ArcGIS, Arc/Info, Arcview, AutoCad, Microsoft Windows operating system, Unix Operating system, Macintosh operating systems, Microsoft Excel, Microsoft Word and PowerPoint, Adobe Acrobat, Adobe Photoshop, Topcon GTS 13 total station, Topcon level and general field survey procedure. Preference also given for knowledge of FTP, INFO, Samba, network analysis, tcp/ip Ethernet networking and HTML and web page design.

PHYSICAL COMPONENT:

Light to moderate. Involves lifting and manipulation of field survey equipment, opening and closing of manhole and catch basin covers, plotter paper for loading, storage and retrieval of maps and source documents stored in awkward positions, and standing for some plotter and scanning operations.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: SENIOR COLLECTION SYSTEMS OPERATOR

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Responsible for the operation and maintenance of the collection system, its' related pumping stations, inspection and documentation of Combined Sewer Overflows. Associated duties include repair of weir walls and other modifications to regulators, outfalls and manhole structures that may be required to insure proper operation; cleaning and inspecting all sewer lines and documenting the findings of the inspections, responding to sewer calls, identifying and correcting ongoing problems with blockages, monitoring activity in combined manholes to determine problem areas, monthly CSO inspections, Maintains a log of all inspections and corrective actions. Provide maintenance on various types of wastewater pump stations; Assist the Collection System Supervisor with the development and implementation of a preventative maintenance program to prevent overflows and plant bypasses, development and implementation of an I/I program to identify and remove sources of I/I, assist in compiling data for regulatory reporting. Any other duties associated with complying with NPDES permit. Enter sewer calls into a computer. Meet with Collection System supervisor for daily work schedules. Assures that all work assigned has been performed correctly and in a timely manner; Oversees the upkeep of all collection vehicles, including all safety equipment and tools and reports deficiencies to supervisor. Any other duties deemed necessary by Collection System Supervisor including assisting with treatment plant operations and maintenance.

SUPERVISION RECEIVED:

Works under the supervision of the Collection System Supervisor or Chief Engineer in his/her absence.

EXAMPLE OF DUTIES:

Clean sewer lines using a variety of methods and equipment such as a jet machine and a rodding machine, video camera equipment and a vacuum truck;; Assists in the repair of the collection

lines or stations; Use chemicals for cleaning and odor control; Dye test sewer services and lines to identify sewered connections; inspects and maintains inverted siphons to insure proper operation; Perform a variety of skilled and unskilled manual duties in the maintenance and care of the collection system; Maintain shift logs and record sewer calls; Maintain equipment and facilities under his/her care in a clean and orderly manner; Works with the Collection System Supervisor to institute a zero tolerance safety program and to update all existing safety and confine space entry programs including, but not limited to, explosion atmosphere, traffic management, general safety, etc. Tracks down and documents collection system malfunctions and institutes proper corrective actions. Investigates and documents any and all claims of damage caused by the collection system. Investigates claims for abatements. Directs effort to find illegal entry and dumping into the collection system; Issues all confined space entry permits before employees entering confined spaces; Perform other related unskilled duties such as cleaning debris, painting, shoveling snow, etc.

ENTRANCE REQUIREMENTS:

Must possess a Class B Commercial Driver's License with air brake and tank vehicle endorsement (Haz-Mat and tank (Endorsement X) desirable). Knowledge of traffic control safety procedures with a strong background in safety.

A New England Water Environmental Association Grade IV Wastewater Collection System Operator License, or ability to obtain within one year of appointment. A minimum of three (3) years in the wastewater collection system or three (3) years in the wastewater industry. A Grade 3 municipal wastewater license is desirable. Educational training in a recognized technical program will be substituted for the required experience on the basis of one (1) year for one (1) year; not more than two years substitution will be allowed.

SPECIAL QUALIFICATIONS:

Thorough knowledge of Water Environmental Federation Manual of Practice No. 1 "Safety in wastewater Industry" and Sacramento Manual "Collection System Operation". Ability to establish and maintain an effective working relationship with associates, subordinates, and the public.

PHYSICAL REQUIREMENTS:

Frequent physical efforts required; ability to lift and carry weights of 50 to 75 pounds; Required to bend, kneel, reach, and squat frequently throughout a work shift; Frequent movement in and out of equipment and vehicles.

Ability to use and wear personal protective equipment and clothing such as hearing protection, eye protection, foot and hand protection, and respiratory protection.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: COLLECTION SYSTEMS OPERATOR

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Provide corrective and preventive maintenance on the collection system. Perform a variety of skilled and unskilled manual duties in the maintenance and care of the collection system including repair of weir walls and other modifications to regulators, outfalls and manhole structures that may be required to insure proper operation; cleaning and inspecting all sewer lines, interpreting and documenting the results of inspections; Perform CSO inspection as required by NPDES permit; Clean sewer lines using a variety of methods and equipment such as a jet machine and a rodding machine, video camera equipment and a vacuum truck; Assists in the repair of the collection system lines or stations as directed; Use chemicals for cleaning and odor control; Run dye tests of services or sewer line to determine if the service is in the collection system; Tracks down and documents collection system malfunctions and institutes proper corrective actions. Investigates and documents any and all claims of damage caused by the collection system; Investigates claims for abatements; Assists in effort to find illegal entry and dumping into the collection system; Participates in safety training including but not limited to confine space entry, explosion atmosphere, traffic, general safety; Perform other general duties as directed by the Senior Collection System Operator and Collection System Supervisor, including assisting with treatment plant operations and maintenance.

QUALIFICATIONS:

Must possess a Class B Commercial Driver's License with air brake and tank vehicle endorsement (HazMat and tank (Endorsement X) desirable).

A New England Water Environmental Association Grade IV Wastewater Collection System Operator License, or ability to obtain within one year of appointment A minimum of three (3) years in the wastewater collection system or three (3) years in the wastewater industry. A Grade 3 municipal wastewater license is desirable.

Educational training in a recognized technical program will be substituted for the required

experience on the basis of one (1) year for one (1) year; not more than two years substitution will be allowed. Knowledge of traffic control safety procedures.

PHYSICAL REQUIREMENTS:

Frequent physical efforts required; ability to lift and carry weights of 50 to 75 pounds. Required to bend, kneel, reach, and squat frequently throughout a work shift. Frequent movement in and out of equipment and vehicle.

Ability to use and wear personal protective equipment and clothing such as hearing protection, eye protection, foot and hand protection, and respiratory protection.

City of Fitchburg, Massachusetts
DPW Wastewater Division

WORK ORDER FORM

START: **FINISH:**

Received: _____ (Date) _____ (Time) _____ (Time)

Work Task: _____

_____

_____

_____

LOCATION

Address/Street Intersection _____

_____

Supervisor: _____

Service Crew: _____

Materials: _____

Equipment: _____

Findings: _____
(Status) _____

Actions Taken: _____
(Services) _____

_____

Follow-Up _____
Action: _____

_____

_____

Location Sketch & Notes

	Notes:
	Weather:
	Temperature:

Signature: _____

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 4

ROUTINE MAINTENANCE CLEANING PLAN

CITY OF FITCHBURG, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

ROUTINE MAINTENANCE
CLEANING PLAN

STANDARD OPERATING PROCEDURES AND SCHEDULE FOR ROUTINE MAINETANCE CLEANING OF THE SEWER SYSTEM

OCTOBER 31, 2011
REVISED: JANUARY 31, 2012

Sanitary Sewer System Routine Cleaning Plan – City of Fitchburg, MA

Introduction

The City's sewer system is composed of approximately 130 miles of sewers, with pipe/conduit sizes ranging from 5-inch to the 54-inch trunkline sewer, and a variety of pipe materials including vitrified clay, reinforced concrete, polyvinyl chloride, brick, asbestos cement and cast iron. Portions of the sewer system date back to the late 1800s. With the formation of the Wastewater Collection System Operations branch of the Department of Public Works Wastewater Division in 2010, the City has started several initiatives to investigate, characterize, map and condition assess the component elements of the sanitary sewer collection system. In addition, procedures have been developed to perform routine maintenance cleaning to maintain the sewer system's conveyance capacity and to prevent sewer system blockages and backups.

Due to the lack of detailed documentation of the past sewer collection system maintenance activities, system condition assessment investigations, and historical backups, blockages and overflows, the Wastewater Division Management has surveyed past operations personnel to identify priority cleaning "hot spot" areas, further discussed in the "Priority Cleaning Plan". In addition, the City is initiating drastic procedural changes for sewer collection operations personnel to develop a documented database of system conditions, customer service call response actions, and system operation characteristics and capacities.

The purpose of this Routine Cleaning Plan is to establish standard sewer system cleaning procedures. The City's goal for the sanitary sewer collection system is to conduct routine sewer cleaning on all sections of the system within five (5) years. In the course of conducting routine sewer cleaning activities on the entire system, the Wastewater Division will assess the performance of the system, and together with sewer service call responses, will be building an institutional understanding of the City's sewer system. By April 2012, the City will also be implementing a new management and tracking software program ("Cartegraph") which will assist managers and supervisors in the scheduling of regular maintenance and cleaning activities, monitor the frequency of sewer cleaning, inspections, and maintenance of associated equipment. The Cartegraph system is anticipated to help the City document sewer system maintenance activities, and schedule conducting the maintenance program in the most efficient manner. In addition, Cartegraph will be used to generate standard Work Order forms to allocate assignments and document the completion of sewer cleaning efforts of the collection operators. The system will track work orders from initial issuance through final completion and document through GIS mapping the exact location, dates, and outcome of all cleaning efforts. Until the time Cartegraph is installed and generating Work Orders, the City has constructed its own Work Order form that will be used in the interim. The interim Work Order form is appended to this document.

Prioritization of Routine Cleaning

The City has taken control of its collection system by hiring collection operators in 2010 and a new manager in November 2011. Unfortunately, since the recent hires are new to the system and there exists little knowledge of areas that may need cleaning more frequently than others, the City does not have a full understanding of its system to develop a meaningful plan for routine cleaning. Therefore, the City has decided to begin its Routine Cleaning Plan by choosing low-traffic areas in residential neighborhoods in order for the operators to develop

their skills prior to moving on to more congested areas. As stated above, the City's goal is to complete sewer cleaning activities on all sections of the system within 5 years. The first year's goal will be to complete cleaning one-fifth (1/5th) of the system or 26 miles of pipe. The City recently subdivided its sanitary system into twenty-four (24) subcatchment areas and chose to begin routine cleaning in Area 20. As we continue routine cleaning work in Area 20, the service calls that randomly come in serve as opportunities for learning areas that require more frequent cleaning, developing the Wastewater Division's knowledge and understanding of the system. The City's operators respond to service calls immediately and might deal with an area that needs cleaning more frequently than the area where they were working. The City will make adjustments to their Routine Cleaning Plan upon learning of areas in need of heavy/more frequent cleaning. Otherwise the City will continue to choose subcatchment areas at random until we have a better understanding of the system.

As part of the City's Routing Maintenance Plan, internal inspection of the collection system is being implemented with the use of closed circuit television inspection (CCTV). Following utilization of the City's Vactor truck for performance of light, medium or heavy sewer pipe cleaning, a CCTV is performed to inspect the condition of the pipe and a National Association of Sewer Service Companies (NASSCO) rating will be assigned. The City currently has two (2) staff collection operators that are certified under the NASSCO Pipe Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP). The City is scheduled to purchase software that is consistent with the aforementioned certification programs in order that it can defect code all of the pipes and manholes in the City. The anticipated date of going on line with this coding software is April 2012. The City does not currently have a manhole inspection protocol in place but it is considering purchase of the IBAK Panoramo SI camera that will take a 360 degree view of a manhole so that defect coding may take place in the office setting, and expedite the manhole video capture process.

Criteria for Need of Outside Services

As discussed previously, the City's Wastewater Collection Division was recently formed in 2010. The collection operators came to the City with wide varying backgrounds with experience in sewer system maintenance. Although they are becoming more adept at clearing blockages with the City's Vactor sewer cleaner, there will be occasions when outside services will be necessary where, as an example, larger equipment is needed to handle blockages in large pipes. The City is capable with its staff and equipment for handling blockages in pipes up to and including 30-inches in diameter. For pipe sizes exceeding 30-inches in diameter it will be necessary to call-in an outside vendor for assistance. Companies specializing in sewer system maintenance, i.e., National Water Main Cleaning Company, have assisted this City in the past and we are prepared to contract their services if a task is beyond our capability.

Standard Operating Procedure for Cleaning Gravity Sewers

Purpose

The purpose of this Standard Operating Procedure is to ensure that sewer cleaning is performed in a manner that will produce a high quality work product. Quality is important because it ensures that the sanitary sewers will not experience problems prior to their next scheduled cleaning.

Goal

The goal of cleaning a gravity sewer is to restore the flow area to 95% of the original flow area of the pipe.

Required Equipment and Tools

1. Personal protective equipment (hardhat, steel toe boots, gloves, eye/face protection, hearing protection).
2. Calibrated gas detector.
3. Proper safety cones, barricades, flagging, signs or other traffic control devices.
4. Confined space equipment (tripod, harness, and ventilation blower).
5. Sanitary sewer system map book.
6. Combo sewer cleaner.
7. Cleaning nozzle.
8. Root saw.
9. Debris traps in the sizes that will be encountered during the day.
10. Manhole hook or pick-axe.
11. Measuring wheel.
12. Disinfectant required.

Forms

1. Cleaning Work Order.
2. Pre-Trip Check List.
3. Injury/Damage Report Form.

Procedures for Sewer Cleaning Crew Prior to Leaving the Yard

1. Plan the work so that it starts in the upstream portion of the area and moves downstream.
2. Wherever possible, plan to clean sewers from the downstream manhole.
3. Inspect the sewer cleaning nozzles for wear. Replace nozzles that are excessively worn.
4. If this is the first day that this cleaning unit is being used this week, inspect the first 200 feet of hose and couplings for damage or wear.

At the Jobsite

5. Wear proper personnel protective equipment (PPE).
6. Fill the water tank at or near the first jobsite.
7. Determine and confirm location of upstream and downstream manholes (use street addresses, if possible).

8. Look for any overhead utilities that may come into contact with the vacuum boom during the cleaning operation.
9. Set up proper traffic control by placing traffic signs, flags, cones and other traffic control devices.
10. Move the cleaning unit into the traffic control so that the hose reel is positioned over the manhole.
11. Install the cleaning nozzle on the hose.

Cleaning Operation

12. Insert the debris trap.
13. Start the auxiliary engine.
14. Lower the hose, with a guide or roller to protect the hose, into the manhole and direct it into the sewer to be cleaned.
15. Start the high pressure pump and set the engine speed to provide adequate pressure for the sewer cleaning operation.
16. Open the water valve and allow the hose to proceed up the sewer. The hose speed should not exceed 3 feet per second.
17. Allow the hose to proceed 25% of the length of the sewer and pull the hose back.
18. Observe the nature and the quantity of debris pulled back to the manhole.
19. If there is little or no debris, allow the hose to proceed to the upstream manhole.
20. If there is moderate to heavy debris, clean the remaining portion of the sewer in steps not to exceed 25% of the length of the sewer.
21. Open the upstream manhole and verify that the nozzle is at or past the manhole.
22. The sewer has been adequately cleaned when successive passes with a cleaning nozzle do not produce any additional debris.
23. Determine the nature and quantity of the debris removed during the cleaning operation. Use the codes in Table 1 to report the nature and quantity of debris.

Table 1 – Criterion for Coding Debris Found During Cleaning

Type of Debris	Clear (no debris)	Light	Moderate	Heavy
Sand, grit, gravel	CLR	DL	DM	DH
Grease	CLR	GL	GM	GH
Roots	CLR	RL	RM	RH
Other (specify)	CLR	OL	OM	OH

24. Remove the debris from the manhole using the vacuum unit.
25. Rewind the hose on the reel.
26. Remove the debris trap.
27. Clean the mating surface and close the manhole. Ensure that the manhole is properly seated.
28. Enter the results on the Work Order.
29. Move the cleaning unit, break down and stow the traffic controls.
30. Proceed to the next cleaning jobsite.

At the End of the Day

31. Inspect the equipment and tools for problems.
32. Report any problems with equipment, tools, or sewers that were cleaned during the day to the Supervisor.
33. Turn in all completed Work Orders to the Supervisor at end of shift.

Table 2 – Standard Measures of Observed Results

Next to cleaning the sewer line, effective observation of results is the most important work product of the crew. This information is the basis for defining future maintenance activities. Consistency of observation documentation is important. The standards for "results" for six- and eight-inch diameter sewers are:

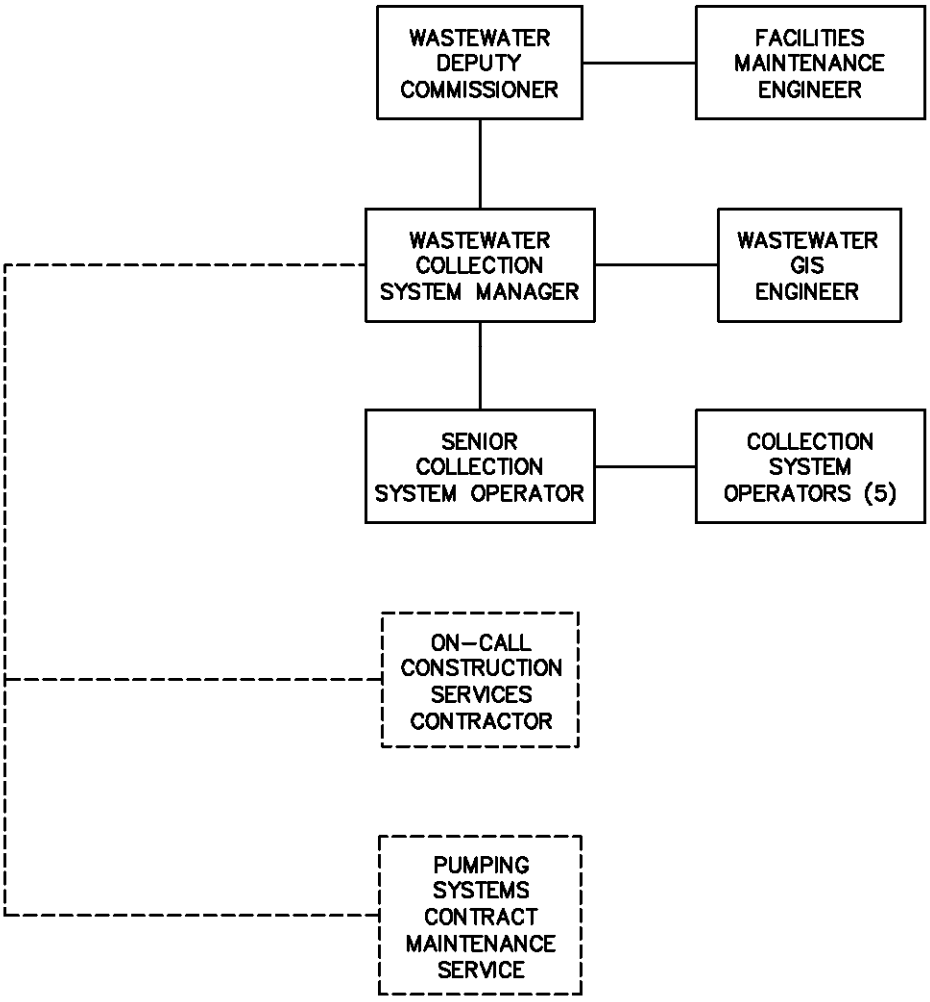
	Clear	Moderate	Heavy
Grit	• No observable grit	• Less than 5 gallons • 15-20 minutes to clean • 1-2 passes required • Requires cleaning twice or less per year • Only fine grit	• More than 5 gallons • More than 30 minutes to clean • More than 4 passes required • Requires cleaning four times per year
Grease	• No observable grease	• Small chunks/no "logs" • 15-20 minutes to clean • Requires cleaning twice or less per year	• Big chunks/"logs" • Operator concern for downstream plugging • More than 30 minutes to clean • More than 4 passes required
Liquefied Grease		• Vacuuming not required	• Vacuuming not required
Roots	• No observable roots	• Thin/stringy roots present • No large "clumps" • 15-20 minutes to clean • 1-2 passes required	• Thick roots present • Large "clumps" • More than 30 minutes to clean • More than 4 passes required
Other condition observations: • **Pipe material fragments** • **Soil/dirt** • **Stone (pipe bedding)** • **Lost nozzle**			

After completion of the initial system wide sewer collection system, the City shall reevaluate the frequency for routine sewer cleaning activities in sub-areas of the system, based on system performance observations, ongoing asset condition assessments, and frequency and nature of service calls received for the given sub-area of the system.

The flowchart below details the Wastewater Division hierarchy for sewer collection system operation and maintenance activities. Operation and maintenance activities are primarily conducted by City Wastewater Operations personnel, under the supervision and direction of Wastewater Division Management staff (DPW Deputy Commissioner, Wastewater Division; and Wastewater Collection System Manager).

CITY OF FITCHBURG, MA
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

SEWER SYSTEM MAINTENANCE
ORGANIZATION CHART



Job descriptions of wastewater management and operations personnel are presented on the following pages. As indicated in the flowchart above, the City does contract with outside contractors and consultants to complement the capabilities of the City staff as required.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: DEPARTMENT OF PUBLIC WORKS, DEPUTY COMMISSIONER OF WASTEWATER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

The Department of Public Works Deputy Commissioner of the Wastewater Division is responsible for the overall operation and maintenance of a 12.4 MGD advanced wastewater treatment facility, and over 130 miles of sewer collection system infrastructure, serving a population of approximately 40,000. In addition to serving the citizens of Fitchburg, the Wastewater Division generates a significant revenue stream utilizing an existing multiple-hearth incinerator to treat bio-solids generated by other communities in the region. The Deputy Commissioner supervises a staff of 34 salaried and hourly personnel. The Deputy Commissioner is responsible for developing and overseeing and enterprise-funded budget of approximately $10,500,000 annually, and is an integral part of the overall Department of Public Works.

QUALIFICATIONS:

- A Bachelor's Degree in environmental science, or engineering.
- Ten years experience in the wastewater field.
- A minimum of five years management experience.
- Massachusetts Grade 7 Wastewater Operator's license.
- Strong written and verbal communication skills.
- The ability to establish effective working relationships with personnel.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: WASTEWATER COLLECTION SYSTEM MANAGER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Responsible for the general operation of the collection system. Assist the Wastewater Department Deputy Commissioner with the preparation of the Capital Outlay for the annual budget. Monitors collection employees time cards and verifies all time worked. Enters all sewer calls into the Maintenance computer. Meets with the collection system senior operator daily/as needed to assign work schedules. Monitors collection operators to assure that assigned work is being performed correctly and in a timely manner. Supervises the upkeep of all collection vehicles, including all safety equipment and tools. Supervises the preventative maintenance of all designated collection systems. Schedules all collection employee vacation and personal time. Reviews subdivision plans to verify that the plans meet City standards. Conducts wastewater collection system analysis. Collects and evaluates flow data from meters at CSO outfalls, prepares regulatory reports as they pertain to the operation and maintenance of the sewer collection system. Insures City is in compliance with all EPA and MassDEP regulatory directives and requirements.

SUPERVISION RECEIVED:

Works under the direct supervision of the Wastewater Deputy Commissioner.

SUPERVISION EXERCISED:

1. Supervises and instructs trained collection system senior operator and operators in the performance of their duties.
2. Supervises GIS engineer in the performance of his/her duties.
3. Supervises all sewer installation projects under his or her budgetary control.

EXAMPLE OF DUTIES:

- Confers with collection system senior operator and operators daily and assigns duties.

- Monitors collection systems operators in the performance of their duties and exercises supervision where required.
- Institutes a zero tolerance safety program and updates safety programs now in use.
- Tracks down and documents collection system malfunctions and institutes proper corrective actions.
- Oversees the proper maintenance of collection system vehicles and tools.
- Responsible for the operation and maintenance of all lift stations.
- Responsible for updating of safety training and establishes semi-annual re-qualification procedures as required.
- Keeps track of weekly attendance for collection system employees.
- Enters all collection calls and PM's into computer database.
- Investigates claims for damage caused by the collection system.
- Directs effort to find illegal entry and dumping into the collection system.
- Works with Engineering and Water Department in locating utilities.
- Issues all confined space entry permits prior to employees entering confined spaces.
- Documents all sick leave, vacation and personal days.
- Maintains an on-call status 24 hours per day to keep abreast of arising problems and to coordinate efforts in solution of them.
- Performs other duties as assigned.

ENTRANCE REQUIREMENTS:

A Bachelor of Science or Bachelor of Engineering degree and 10 years of experience in the wastewater industry, or a Master of Science or Master of Engineering degree and 5 years of experience in the wastewater industry. A Professional Engineering license, in Civil Engineering or Environmental Engineering, in the Commonwealth of Massachusetts.

SPECIAL QUALIFICATIONS:

- Working knowledge of sanitary engineering principles and practices particularly as applied to large collection systems and activated sludge wastewater treatment plants.
- Thorough knowledge of Water Environmental Federation Manual of Practice No. 1 "Safety in wastewater Industry" and Sacramento Manual "Collection System Operation", and the TR-16 Guides for the Design of Wastewater Treatment Works, by NEIWPCC.
- Working knowledge of instrumentation and control equipment.
- Working knowledge of the U.S. EPA's Capacity, Management, Operations, and Maintenance (CMOM) regulations.
- Ability to establish and maintain an effective working relationship with associates, subordinates, and the public.
- Candidate should be experienced in the design and permitting of sanitary gravity sewers, force main sewers and inverted siphon sewers, and should be familiar with combined sewers and combined sewer separation.
- Candidate should also be experienced in federal, state and local/regional sources of grant and loan funding for capital improvements projects.

- Candidate should have 3 or more years of supervisory experience, including scheduling the work of subordinates and preparing budgets.
- Candidate should possess analytical skills for the evaluation of flow metering data, and preparation of technical engineering reports.
- Candidate should be experienced in planning and developing long-term capital improvement projects.
- Candidate should be experienced in reviewing and commenting on engineering reports, specifications and plans prepared by the City's consulting engineers.

PHYSICAL REQUIREMENTS:

- Required to move about construction sites and other light outdoor work.
- Required to perform office work for long periods.
- Rated: Light

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: FACILITIES MAINTENANCE ENGINEER

GENERAL STATEMENT OF DUTIES:

Performs professional engineering work of substantial difficulty and importance in connection with all mechanical and electrical equipment, systems and structures associated with an advanced wastewater treatment facility requiring the application of professional mechanical principles with considerable latitude for independent or un-reviewed action or decision; Executes full supervision over employees in the maintenance, instrumentation, electrical sections; Trains and assists subordinates as required; must have understanding of fluid control system to be able to trouble shoot unit processes; Must possess basic understanding of wastewater treatment to assist Plant Superintendent and Chief Engineer in trouble shooting.

DUTIES AND RESPONSIBILITIES:

- Supervises plant maintenance, instrumentation and electrical personnel.
- Observes, inspects and analyses the operation and operating conditions of all plant equipment and diagnoses faulty operations.
- Determines and specifies maintenance and repair requirements to insure safe and efficient operation.
- Provides guidance to technical and maintenance personnel.
- Directs the training and instruction to personnel.
- Enforces work rules and safety and health measures, orders and directives.
- Handles recommendations in personnel matters including promotions, transfers, disciplinary action and grievances at the intermediate level.
- Establishes technical regulations pertaining to operation of equipment such as temperature limits, pressure conditions, flow rates, operational sequences, service and shutdowns.
- Coordinates maintenance and general services operations with the Chief Engineer and Plant Superintendent or their authorized representative.
- Directs the testing of equipment and the preparation of computations and analysis of engineering performance and characteristics.

- Assist in administering plant fiscal matters and participates in the preparation of annual reports and budget.
- Reviews operational records and data and submits recommendations to Deputy Commissioner or his authorized representative.
- Prepares mechanical and electrical specifications for contracts.
- Checks manufacturers proposals, drawings and wiring diagrams for mechanical and electrical equipment.
- Supervises the installation and testing of equipment for compliance with manufacturers specifications.
- Confers with manufacturers and public utilities as required.
- Provides Deputy Commissioner and Chief Engineer with studies and reports in design engineering information regarding plant maintenance and operating problems.
- Investigates, estimates, and reports on the suitability of new equipment for use in the treatment plant.
- Supervises the operation of maintenance shop, garage, and storage areas.
- Supervises the purchase of materials and spare parts.
- Supervises the keeping of proper maintenance, lubrication, and replacement parts records.
- Advises the Chief Engineer or his authorized representative on all matters pertaining to plant maintenance and general services to insure efficient and economical functioning of all plant facilities.
- Assist Chief Engineer as required.

QUALIFICATIONS:

Eight years engineering experience, three of which must be responsible professional experience in a similar maintenance type supervisory position; A Bachelor of Engineering degree from an approved college or university may be substituted for four years of engineering experience; Registrations as a Professional engineer may be substituted for the eight years provided that at least three years have been in an electrical or mechanical engineer maintenance-type supervisory position.

SPECIAL QUALIFICATIONS, KNOWLEDGE AND ABILITIES:

Through knowledge of the practices, methods, materials, and tools used in the repair and preventative maintenance of mechanical and electrical equipment; The demonstrated ability to train, coordinate, and supervise a maintenance, electrical, instrumentation, and general services staff; Considerable knowledge of the occupational hazards and safety precautions pertaining to all phases of maintenance in a large advanced wastewater treatment plant utilizing mechanical and electrical equipment; Through knowledge of paints and other protective coatings for wastewater treatment plants; knowledge and experience in fluid and fluidized solids handling and control systems.

SUPERVISION RECEIVED:

Works under the direction supervision of the Deputy Commissioner, or in his absence, the Chief Engineer.

SUPERVISION EXERCISED:

All hourly maintenance personnel including the storekeeper and electrician and instrumentation personnel.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: GIS ENGINEER - WASTEWATER

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

To develop, expand, and manage the Wastewater Department's sanitary and storm collection system infrastructure information system; With assistance from sewer crew, collect data pertaining to the location and elevations of all manholes; Collect data pertaining to the location, including elevations, of all storm sewer catch basins; Collect, verify, and document location of all sanitary and storm lines throughout the city including direction of flow, size, age, and material of all pipes, At the discretion of the Wastewater Deputy Commissioner assist in maintaining and expanding the Fitchburg Geographic Information System (GIS) data layers as they relate to other departments; Prepare cartographic output and analysis, digital data, and other GIS products; Maintain backup of the GIS system; Provide training and technical support to other department and city staff as necessary.

DUTIES:

GIS:

1. Creates, improves, and maintains GIS layers and other data pertaining to the city's wastewater infrastructure.

2. Enters data acquired from field surveys.

3. Produces GIS maps and detailed Auto Cad drawings as needed.

4. Installs new patches and versions of GIS software as required.

Field:

1. Conducts field surveys with the assistance of the collections crew to acquire horizontal and vertical location along with other data pertaining to the city's wastewater infrastructure, and imports data into the GIS.

2. Maintains field survey equipment as required.

3. Performs other duties as assigned.

Office:

1. Interpolates field survey data for GIS data entry.

2. Obtains supplies and conducts media maintenance as necessary to maintain the working operation of computer workstations and plotting devices.

3. Scans and archives existing and newly acquired hardcopy plans/documents pertaining to the wastewater infrastructure.

4. Performs other duties as assigned.

QUALIFICATIONS:

A 4-year degree from an accredited college and two years relevant GIS and/or MIS experience. Two additional years of relevant GIS or MIS experience may be substituted for the degree at the discretion of the city. Preference given for knowledge of, Cartegraph, ArcGIS, Arc/Info, Arcview, AutoCad, Microsoft Windows operating system, Unix Operating system, Macintosh operating systems, Microsoft Excel, Microsoft Word and PowerPoint, Adobe Acrobat, Adobe Photoshop, Topcon GTS 13 total station, Topcon level and general field survey procedure. Preference also given for knowledge of FTP, INFO, Samba, network analysis, tcp/ip Ethernet networking and HTML and web page design.

PHYSICAL COMPONENT:

Light to moderate. Involves lifting and manipulation of field survey equipment, opening and closing of manhole and catch basin covers, plotter paper for loading, storage and retrieval of maps and source documents stored in awkward positions, and standing for some plotter and scanning operations.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: SENIOR COLLECTION SYSTEMS OPERATOR

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Responsible for the operation and maintenance of the collection system, its' related pumping stations, inspection and documentation of Combined Sewer Overflows. Associated duties include repair of weir walls and other modifications to regulators, outfalls and manhole structures that may be required to insure proper operation; cleaning and inspecting all sewer lines and documenting the findings of the inspections, responding to sewer calls, identifying and correcting ongoing problems with blockages, monitoring activity in combined manholes to determine problem areas, monthly CSO inspections, Maintains a log of all inspections and corrective actions. Provide maintenance on various types of wastewater pump stations; Assist the Collection System Supervisor with the development and implementation of a preventative maintenance program to prevent overflows and plant bypasses, development and implementation of an I/I program to identify and remove sources of I/I, assist in compiling data for regulatory reporting. Any other duties associated with complying with NPDES permit. Enter sewer calls into a computer. Meet with Collection System supervisor for daily work schedules. Assures that all work assigned has been performed correctly and in a timely manner; Oversees the upkeep of all collection vehicles, including all safety equipment and tools and reports deficiencies to supervisor. Any other duties deemed necessary by Collection System Supervisor including assisting with treatment plant operations and maintenance.

SUPERVISION RECEIVED:

Works under the supervision of the Collection System Supervisor or Chief Engineer in his/her absence.

EXAMPLE OF DUTIES:

Clean sewer lines using a variety of methods and equipment such as a jet machine and a rodding machine, video camera equipment and a vacuum truck;; Assists in the repair of the collection

lines or stations; Use chemicals for cleaning and odor control; Dye test sewer services and lines to identify sewered connections; inspects and maintains inverted siphons to insure proper operation; Perform a variety of skilled and unskilled manual duties in the maintenance and care of the collection system; Maintain shift logs and record sewer calls; Maintain equipment and facilities under his/her care in a clean and orderly manner; Works with the Collection System Supervisor to institute a zero tolerance safety program and to update all existing safety and confine space entry programs including, but not limited to, explosion atmosphere, traffic management, general safety, etc. Tracks down and documents collection system malfunctions and institutes proper corrective actions. Investigates and documents any and all claims of damage caused by the collection system. Investigates claims for abatements. Directs effort to find illegal entry and dumping into the collection system; Issues all confined space entry permits before employees entering confined spaces; Perform other related unskilled duties such as cleaning debris, painting, shoveling snow, etc.

ENTRANCE REQUIREMENTS:

Must possess a Class B Commercial Driver's License with air brake and tank vehicle endorsement (Haz-Mat and tank (Endorsement X) desirable). Knowledge of traffic control safety procedures with a strong background in safety.

A New England Water Environmental Association Grade IV Wastewater Collection System Operator License, or ability to obtain within one year of appointment. A minimum of three (3) years in the wastewater collection system or three (3) years in the wastewater industry. A Grade 3 municipal wastewater license is desirable. Educational training in a recognized technical program will be substituted for the required experience on the basis of one (1) year for one (1) year; not more than two years substitution will be allowed.

SPECIAL QUALIFICATIONS:

Thorough knowledge of Water Environmental Federation Manual of Practice No. 1 "Safety in wastewater Industry" and Sacramento Manual "Collection System Operation". Ability to establish and maintain an effective working relationship with associates, subordinates, and the public.

PHYSICAL REQUIREMENTS:

Frequent physical efforts required; ability to lift and carry weights of 50 to 75 pounds; Required to bend, kneel, reach, and squat frequently throughout a work shift; Frequent movement in and out of equipment and vehicles.

Ability to use and wear personal protective equipment and clothing such as hearing protection, eye protection, foot and hand protection, and respiratory protection.

THE CITY OF FITCHBURG
WASTEWATER TREATMENT SEWER DIVISION
POSITION DESCRIPTION

POSITION: COLLECTION SYSTEMS OPERATOR

GENERAL STATEMENT OF DUTIES AND RESPONSIBILITIES:

Provide corrective and preventive maintenance on the collection system. Perform a variety of skilled and unskilled manual duties in the maintenance and care of the collection system including repair of weir walls and other modifications to regulators, outfalls and manhole structures that may be required to insure proper operation; cleaning and inspecting all sewer lines, interpreting and documenting the results of inspections; Perform CSO inspection as required by NPDES permit; Clean sewer lines using a variety of methods and equipment such as a jet machine and a rodding machine, video camera equipment and a vacuum truck; Assists in the repair of the collection system lines or stations as directed; Use chemicals for cleaning and odor control; Run dye tests of services or sewer line to determine if the service is in the collection system; Tracks down and documents collection system malfunctions and institutes proper corrective actions. Investigates and documents any and all claims of damage caused by the collection system; Investigates claims for abatements; Assists in effort to find illegal entry and dumping into the collection system; Participates in safety training including but not limited to confine space entry, explosion atmosphere, traffic, general safety; Perform other general duties as directed by the Senior Collection System Operator and Collection System Supervisor, including assisting with treatment plant operations and maintenance.

QUALIFICATIONS:

Must possess a Class B Commercial Driver's License with air brake and tank vehicle endorsement (HazMat and tank (Endorsement X) desirable).

A New England Water Environmental Association Grade IV Wastewater Collection System Operator License, or ability to obtain within one year of appointment A minimum of three (3) years in the wastewater collection system or three (3) years in the wastewater industry. A Grade 3 municipal wastewater license is desirable.

Educational training in a recognized technical program will be substituted for the required

experience on the basis of one (1) year for one (1) year; not more than two years substitution will be allowed. Knowledge of traffic control safety procedures.

PHYSICAL REQUIREMENTS:

Frequent physical efforts required; ability to lift and carry weights of 50 to 75 pounds. Required to bend, kneel, reach, and squat frequently throughout a work shift. Frequent movement in and out of equipment and vehicle.

Ability to use and wear personal protective equipment and clothing such as hearing protection, eye protection, foot and hand protection, and respiratory protection.

City of Fitchburg, Massachusetts
DPW Wastewater Division

WORK ORDER FORM

START: **FINISH:**

Received: _____ (Date) _____ (Time) _____ (Time)

Work Task: _____

_____

_____

_____

LOCATION

Address/Street Intersection _____

_____

Supervisor: _____

Service Crew: _____

Materials: _____

Equipment: _____

Findings: _____
(Status) _____

Actions Taken: _____
(Services) _____

_____

Follow-Up _____
Action: _____

_____

_____

Location Sketch & Notes

	Notes:
	Weather:
	Temperature:

Signature: _____

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 5

CITY LETTER CORRESPONDENCE
JUNE 30, 2011 SUBMITTALS

REGARDING:

GEOGRAPHICAL INFORMATION SYSTEM (GIS) MAP
EXTRANEOUS FLOW REDUCTION REPORT
REGULATOR 023 MODIFICATION
EFFECTIVENESS OF CSS 1, 2, 3 PROJECT

WASTEWATER TREATMENT FACILITIES COMMISSION

718 MAIN STREET, FITCHBURG, MA 01420

Office (979) 345-9622 Fax (978) 345-9623

Lenny Laakso - Secretary

Richard H. Healey
Tom Shannon

Joseph A. Jordan
Deputy Commissioner
of Wastewater

June 29, 2011

U. S. Environmental Protection Agency
Region 1
5 Post Office Square
Mail code OES04-03
Boston, Massachusetts 02109-3912
Attn: Michael Fedak

Massachusetts D.E.P.
Central Region
627 Main Street
Worcester, MA 01608
Attn: Robert Kimball

RE: June 30, 2011 Submittals
Geographical Information System (GIS) Map
Extraneous Flow Reduction Report
Regulator 023 Modification
Effectiveness of CSS 1, 2, 3

Dear Mr. Fedak and Mr. Kimball,

In accordance with the latest DRAFT of Section VII, Remedial Measures, dated May 5, 2011 of the Draft Consent Decree (Decree) this submission provides EPA and the MassDEP with the following reports, as required:

1) The most currently available Geographical Information System (GIS) Maps as described by Paragraph 10,

2) A list of Priority Extraneous Flow Reduction projects as described in Paragraph 12,

3) A description of the modifications made to CSO regulator 023 as described in Paragraph 16, and

4) An assessment of the effectiveness of the City's Phase I separation and rehabilitation efforts tributary to CSO Outfall No. 001, 002, 003, and 042 as described in Paragraph 19.

The submission is arranged to address each item described above separately and will include any maps, drawings, or other pertinent attachments.

1) Geographical Information System (GIS) Map

The most currently available GIS mapping system is included in Attachment 1A. The maps include four separate prints that identify specific attributes of the collections system. All maps are in a 1 inch = 1,000 feet scale. All the information used to create the maps contain the most currently known data. Some information including pipe materials, manhole locations, etc., may not be known or identified at this time and therefore could not be represented in the maps.

Map 1 of 4, Base Map, details municipal boundaries, street names and private property delineations.

Map 2 of 4, Infrastructure 1, identifies the sanitary sewer system. Included on this map are those areas that are separated with both storm and sewer drains, areas that are separate but only have sewer drains, areas that are currently combined, and locations of any force mains. With the exception of the few force mains shown, the remaining sewer lines operate as a gravity system. All the sewer lines are depicted by a wide color coded highlighted line. Within these wide highlights are thinner color coded lines that identify piping materials and flow direction arrowheads. There are certain pipe segments where pipe materials are not currently known which are also depicted. Regulator and combination manhole locations are shown with larger and smaller diameter dots. The regulator manholes are depicted with a larger diameter dot and the combination manhole locations are depicted with the smaller diameter. The manhole locations are represented to the best of our knowledge, but may not be completely and fully identified. As new information is provided, these maps will be updated.

Map 3 of 4, Infrastructure 2, identifies the storm sewer system. Depicted on the map are the known locations of catch basins and storm lines however, there are no flow direction indicators at this time. As this information is collected and documented, it will be added to this map. Known water features, rivers, streams, brooks, etcetera are included and depicted.

Map 4 of 4 is a topographical map which included water features such as city reservoirs, ponds, rivers and streams. The contour lines are in ten foot (10') increments.

The City does not imply that these maps include all the information requested by paragraph 10. Rather this is the most currently available information known to the city at this time and incorporated into the GIS mapping. As new information is identified and collected, it will be incorporated into the GIS mapping and updates will be provided.

In July 2010, the City established a sewer collection staff whose primary responsibility is to clean and video the sanitary sewer lines, investigate problematic areas with respect to blockages and overflows, investigate and identify areas of high extraneous

flows whether it be inflow or infiltration, and begin documenting these findings. In the past year they have acted proactively in identifying potential problematic areas and have taken steps to prevent backups and overflows from occurring. Working with the city's consultant they have investigated and identified several areas where high extraneous flows are entering into the sanitary system. Those areas that have been identified as cost effective to remove will be discussed in the next section of this submittal. Going forward, the sewer crew will continue to seek out other areas of high extraneous flow, and the city will continue to remove those locations that are considered to be cost effective to remove. The city is also moving forward with three additional sewer separation projects, two of which are expected to begin in the next nine months. A map showing the general areas are included in Attachment 2A. I have also included smaller maps identifying specific streets that will be affected. In accordance with Massachusetts procurement laws, the city will need to solicit bids for a design firm for the third separation project. It is expected that a firm will be hired no later than December 31, 2011.

The City of Fitchburg, through this submittal, is providing the most currently available GIS Maps, a total of four included in attachment 1A for review and approval by EPA and MassDEP.

2) Extraneous Flow Projects and Investigations

In accordance with paragraph 12 of the May 2, 2011 DRAFT consent decree, the city is submitting the Priority Extraneous Flow Reduction Projects Report for review and approval by EPA and MassDEP.

The City has identified five areas that it considers to be cost effective in removing large volumes of extraneous flows. Some of these areas have been known to flow year round, while others are intermittent, flowing mostly during rain events or during the spring melt and the rainy season. All of the areas identified discharge directly into either a combined sewer, or into sanitary sewer in a separated area. Most of the areas can be corrected by relatively inexpensive means, however, one area will require rather extensive work, but will produce a very large removal of extraneous storm flow from the sanitary system. Two areas will be address during the next phase of sewer separation projects, one will be timed to coincide with a bridge reconstruction project by Mass Highway, and the two remaining are expected to be corrected by either city crews or a private contractor independent of the other projects. Table 1 is a summary of the project areas, expected amount of extraneous flow to be removed, a preliminary cost for removal and the schedule for project completion.

TABLE 1 – Extraneous Flow

Location	Estimated Flow (gpd)	Budgetary Cost (4)	Project Completion
Maple Street	259,000	$0	December 2013 (1)
Causeway Street	22,000	$25,000	December 2011
Beech Street	256,000	$750,000	December 2012 (2)
Daniels Street	98,000	$0	December 2013 (3)
Jeffrey Street	445,000	$200,000	~~June 2012~~ 8/31/2012
Totals	1,080,200	$975,000	

Notes: (1) This work will be included with CSS 2B (formerly CSS5)
(2) This work will be coordinated with a Mass Highway bridge replacement project expected to commence later this year. Actual completion date in not yet known
(3) This work will be included with the reconstruction of CSO regulator 038.
(4) Costs are rough estimates as design of these projects has not been completed.

Maple Street, although included in CSS 2B, is an area where an underground stream enters directly into the sanitary system. Flows from this area were included when designing CSS 2B as an area that had high infiltration during wet weather. However, further investigations over the last twelve months show that the stream runs on a year round basis. The 259,200 gallons removed is a model projection based on a one year storm event.

Causeway Street was identified to be in an area that, although separated, was introducing a large volume of extraneous flow. This is in an area suspected to have infiltration issues, but the source was not previously known. Although the volume is only 22,000 gallons per day, this was measured during a period where no rainfall had occurred for the previous 72 hours. It is suspected that the flow may be coming from a branch of an underground stream that runs adjacent to location and appears to flow year round.

Beech Street is another example of a location that is introducing very large volumes of extraneous flow. Investigations and discussions with DPW workers from the streets division revealed a 12-inch underdrain off the side of a hill that was discharging into the sanitary line. Additionally, although in a combined section, by installing a new storm drain on Beech Street between Kimball Street and Litchfield Street, all the storm flow tributary to this section will be removed. This is also the primary source of overflows at CSO outfall 060 via regulator 059. The flow at this location was estimated from flow measurements performed after a 0.5-inch, 24-hour rain event. Flow estimates were derived from observed times to fill a known volume (five gallon bucket). As indicated in Table 1, this work will be coordinated with the Kimball Street bridge replacement project by Mass Highway. To the best of our knowledge, the work is

scheduled to be completed in 2012. Any delays with the project would delay the work the City will be performing in this area.

The Daniels Street location was identified last year, when rehab of regulator 038 was undertaken. After flows were bypassed around this structure, it was observed that there was still an estimated 98,000 gallons of clean water flowing through the structure. Further investigation revealed a previous unknown storm drain was connected. Additionally, there are no storm drains in this area, and all catch basins are connected directly to the sanitary lines. Once identified, the decision was made to correct this situation and include this in the next phase of separation work.

The final area, Jeffrey Street, was targeted due to recurrent historical surcharges at the summit manhole during the spring time. The surcharges appear to be exclusively from groundwater, as there was no evidence of sanitary sewage. Upon receding of the flow, it was observed that the manhole and effluent line had severe root blockages adding to the surcharge volume. An estimate was made that 50% of the line may have been blocked at the outlet of the manhole. Inquiries made with DPW workers previously involved with the sewer system, and familiar with this location, indicate that this was an annual occurrence. It is a reasonable assumption that with no obstruction, the infiltration in this area would have introduced even greater extraneous flow into the sanitary line. This location would provide the greatest reduction during the spring months which is typically a rainy season in combination with snow melt, and less so during the summer and winter seasons.

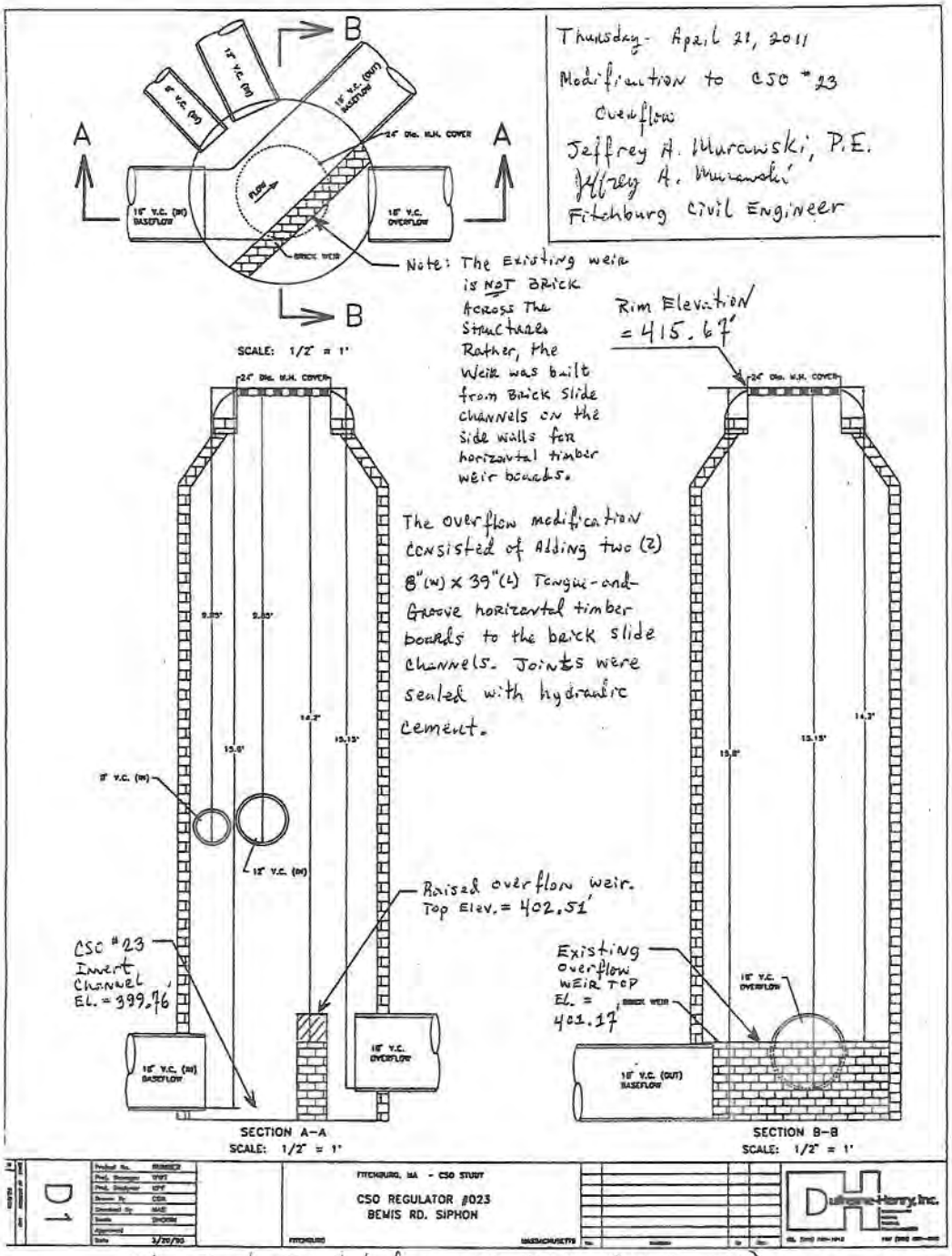
All of the locations listed above are known to introduce extraneous flow into the sanitary sewer collection system, and contribute to the occurrence of overflows and increased wet weather flows to the treatment plant. Some extraneous flow areas are worse during the spring months when snow melt is occurring and spring rains are prevalent. While some extraneous flow areas are active year round, at varying flow rates, other extraneous flow areas only activate following rain events. We would like to move forward with removing these extraneous flows from the system as soon as practical. We also believe that there are additional locations throughout the City which we will continue to identify and correct.

The City is submitting the extraneous flow project summarized in Table 1 for review and approval by EPA and MassDEP, as areas that the City should move forward with to remove excessive extraneous flow from the sanitary system.

3) CSO Regulator 023

CSO regulator 023 was modified on April 21, 2011. The purpose of the modification was to restrict overflow at this location and direct the full flow downstream to regulator outfall 033. The weir elevation at 023 was such that it was allowing sewage to enter outfall 033 sooner than necessary. After discussions with, and at the request of, EPA the City raised the weir elevation to a point higher than the overflow elevation at

outfall 033, thereby eliminating any overflow from regulator 023. Flow modeling indicated that these adjustments would reduce total overflow volume at outfall 033 through regulator 023 by an estimated 2.4 MG per year. Figure No. 1 is a detail of the weir adjustments completed. The location will be monitored for evidence up upstream backups and/or overflows. If no issues are documented, the City will permanently close regulator 023.



Note: Elevations shot from BM RM 30 (NGVD 1929), Panel #9 FIRM MAP (dated Sept. 18, 1991). BM RM 30 Elevation = 373.72'.

Figure No. 1: CSO Regulator 023, Overflow Weir Modification

4) Initial Sewer Separation Effectiveness Report

The City completed the first phase of separation projects in 2006. This phase included three separation projects that were designed to eliminate four CSO outfalls identified as CSO outfalls 001, 002, 003, and 042. This submittal is an assessment of the effectiveness of the City's Phase I separation and rehabilitation efforts tributary to CSO Outfall No. 001, 002, 003, and 042 as required by paragraph 19 of the May 2, 2011 Draft of the Remedial Measures.

Construction of the first phase of separation projects involved the installation of new storm drains to remove storm flow from the existing combined sewer lines. Existing catch basins were disconnected from the existing combined sewers and reconnected to the new storm drain. In the process any extraneous flow connections that were identified were also rerouted to the new storm drains. With the exception of one combination manhole structure associated with outfall 042, all combination manholes were removed either as part of the separation work or in subsequent work. All overflow regulators were bulkheaded off and all connections between the sanitary and storm sewer were eliminated in the areas tributary to CSO outfall 001, 002, 003, and 042. The CSO outfalls were left in place to serve as storm sewer outfalls but were physically separated from the sanitary sewer lines. Since the outfalls were permanently closed off at the time of construction, no additional monitoring or action was required. At outfall 042, there is still one combination manhole in place downstream of the original 042 regulator that was permanently separated. There is an approximately seven foot weir wall at this location and no overflows have been observed. No additional measures are planned or are deemed necessary at this time to prevent overflows. However, the city is evaluating requirements to make modifications to the structure to permanently separate the storm side from the sanitary side of this manhole.

The City is submitting the Initial Sewer Separation Effectiveness Report for review and approval by EPA and MassDEP.

If you should have any questions concerning this submittal, please contact me at 978-345-9622.

Very Truly Yours,

Joseph A. Jordan

Joseph A. Jordan
Deputy Comm. WW

Electronic copy: Chief, Environmental Enforcement Section, DOJ
Barbara Healy Smith, Assistant U.S. Attorney
Michael Wagner, U.S.E.P.A.
Louis Dundin, Assistant Attorney General, Massachusetts AG
David Evans, Council for City of Fitchburg
Lenny Laakso, Commissioner of Public Works

Jeffrey A. Murawski, P.E, Fitchburg Civil Engineer
File (paper copy)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Joseph A. Jordan

Joseph A. Jordan, Deputy Commissioner Wastewater

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 6

CSS 2B, 3C AND CSO 038 MODIFICATIONS

Attachment 6

CSS 2B and 3C

CSS 2B and 3C consist of separating combined sewers by installing new drainage pipe ranging from 12” to 36” in diameter and replacing existing catch basins with new catch basins installed with deep sumps and hoods. The work shall also include modifying regulators as needed when identified during the course of work. Repair and rehabilitation shall be performed on those sections of existing sanitary sewer lines as required and shall include, but not limited to structural liners, crack and joint sealing, and in extreme cases complete replacement. Rehabilitation of existing sewer manholes will include replacing frames and covers. Any newly identified illicit connection shall be redirected to the sanitary system. Any newly identified inflow connections and/or extraneous flows shall be removed from the sanitary system and redirected to the newly installed storm drain. Outfalls shall be permanently disconnected from the sanitary system and be reclassified as new storm drain outfalls. Any outfalls not permanently closed will be monitored following separation and subsequently bulk-headed.

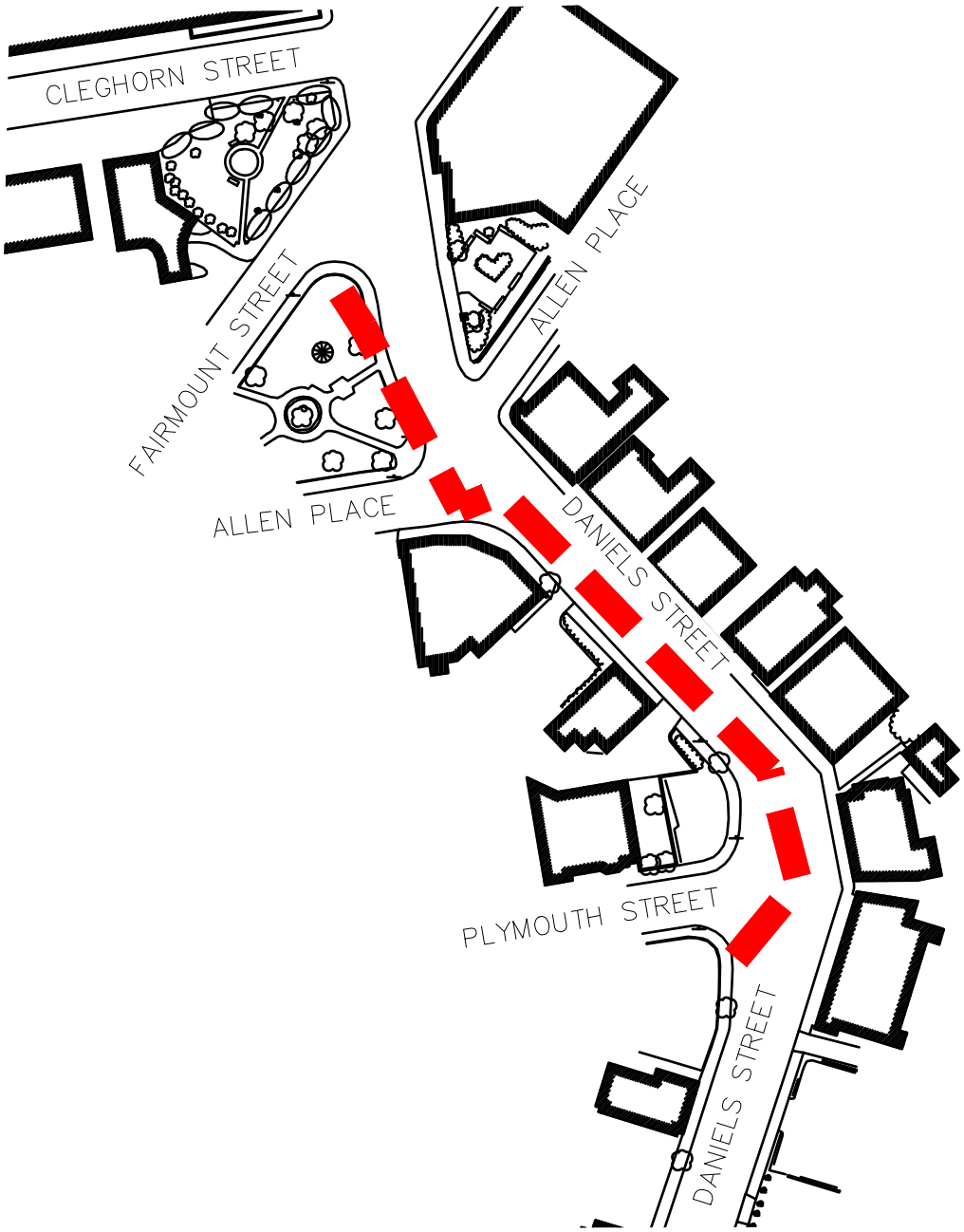
CSS 2B shall included areas tributary to CSO outfalls 007, 036, 019, and 044.

CSS 3C shall included areas tributary to CSO outfalls 016,017,018, and 051.

Work shall also be completed on CSO outfall 038 which has been identified as in dire need of repair and is located in CSS area 5.

The affected streets are shown in the attached schematics.

CSS5, CSS6 & CSO38
COMBINED SEWER SEPARATION
DEPARTMENT OF PUBLIC WORKS
FITCHBURG, MA



LEGEND

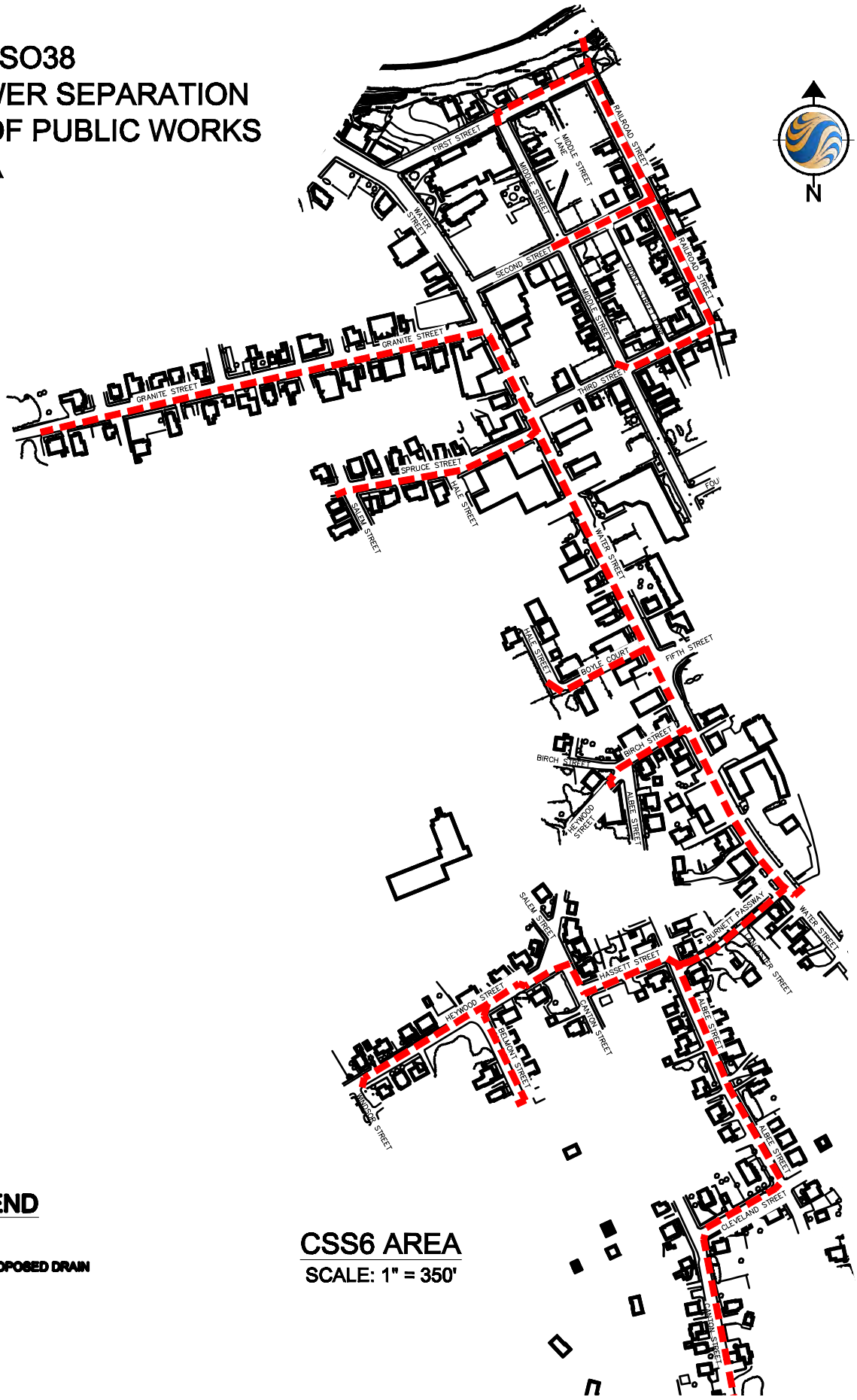
PROPOSED DRAIN

CSO38 AREA

SCALE: 1" = 100'

CSS5, CSS6 & CSO38
COMBINED SEWER SEPARATION
DEPARTMENT OF PUBLIC WORKS
FITCHBURG, MA

CSS5, CSS6 & CSO38
COMBINED SEWER SEPARATION
DEPARTMENT OF PUBLIC WORKS
FITCHBURG, MA



LEGEND

PROPOSED DRAIN

CSS6 AREA

SCALE: 1" = 350'

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 7

CSS 4D

Attachment 7

CSS 4D

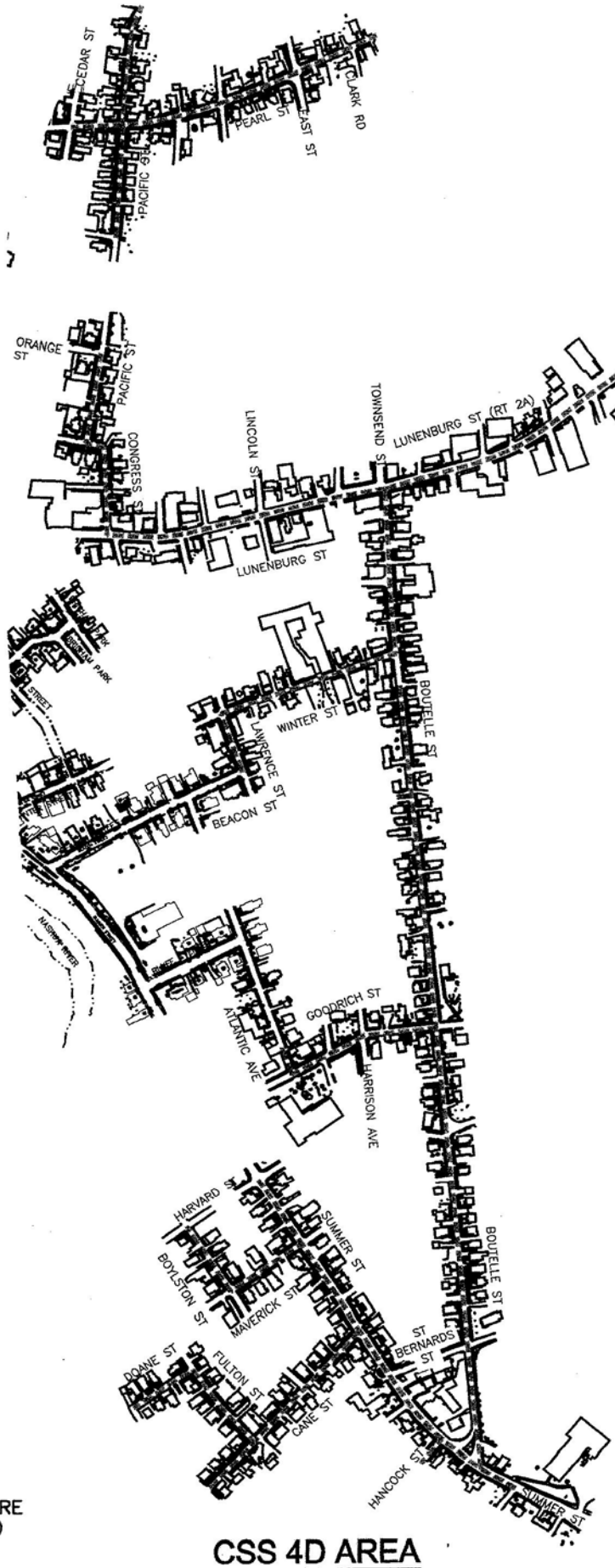
CSS 4D consist of separating combined sewers by installing new drainage pipe and replacing existing catch basins with new catch basins, installed with deep sumps and hoods. The work shall also include modifying regulators as needed when identified during the course of work. Repair and rehabilitation shall be performed on those sections of existing sanitary sewer lines as required and shall include, but not limited to structural liners, crack and joint sealing, and in extreme cases complete replacement. Rehabilitation of existing sewer manholes will include replacing frames and covers. Any newly identified illicit connection shall be redirected to the sanitary system. Any newly identified inflow connections and/or extraneous flows shall be removed from the sanitary system and redirected to the newly installed storm drain. Outfalls shall be permanently disconnected from the sanitary system and be reclassified as new storm drain outfalls.

CSS 4D shall included areas tributary to CSO outfalls 033, 024, and 072.

The affected streets are shown in the attached schematics.

CSS4D
COMBINED SEWER SEPARATION

DEPARTMENT OF PUBLIC WORKS
FITCHBURG, MA



LEGEND

PROPOSED DRAIN

NOTE: THIS IS A DRAFT LAYOUT. LIMITS OF WORK ARE SUBJECT TO REVISION BASED ON FINAL DESIGN.

CSS 4D AREA

SCALE: 1" = 600'

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 8

EMERGENCY RESPONSE PLAN

CITY OF FITCHBURG, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WASTEWATER DIVISION

EMERGENCY RESPONSE PLAN

PROCEDURES FOR RESPONDING TO SANITARY SEWER OVERFLOWS AND DRY-WEATHER COMBINED SEWER OVERFLOW DISCHARGES

AUGUST 31, 2011

Revision No.:	**Revision Date:**
1	January 30, 2012

Table of Contents

CHAPTER 1.0 – INTRODUCTION

1.1 Background

The City of Fitchburg's sewer collection system is comprised of approximately 130 miles of sewers, of which approximately 14 miles are combined sewers, dating back to the late 19th century. Combined sewers convey municipal sewage and stormwater through a single pipe system. In Fitchburg, as was the case in many urban municipalities, combined sewers were constructed with overflow interconnections (combined sewer overflow regulators), between the combined sewers and storm drainage infrastructure, which permitted high wet weather flows to overflow untreated combined sanitary and storm flow into drainage outfalls to the Nashua River, or its tributaries.

1.2 Purpose

The overall purpose of this ERP is to provide the Fitchburg Wastewater Division personnel with a standardized response and recovery protocol to prevent, minimize, and mitigate injury and damage resulting from sanitary sewer overflows (SSOs), including building and private property backups, and dry-weather combined sewer overflow (CSO) outfall discharges.

Definitions:

- **Combined sewer overflow (CSO):** The intentional or unintentional discharge of untreated sanitary wastewater mixed with stormwater runoff, or snowmelt, which occurs when the carrying capacity of the single combined conveyance system is exceeded by the instantaneous rate of flow within the single combined conveyance system.

- **Dry-weather combined sewer overflow (DWCSO):** A CSO that is not associated with a wet-weather event.

- **Sanitary sewer overflow (SSO):** The intentional or unintentional diversion of flow from, or caused by the City-owned portion of the separate sanitary sewer collection system that occurs before the headworks of the POTW treatment facility. SSOs include discharges to receiving waters and discharges to public and private properties that do not reach receiving waters.

1.3 Goals

The goals of this Emergency Response Plan (ERP) are to detail how Fitchburg Wastewater Division will accomplish the following:

- Respond to, clean up, and/or minimize the impacts of SSOs and dry-weather CSO outfall discharges;
- Document and report the location, volume, causes of and impacts of SSOs and dry-weather CSO outfall discharges;
- Provide notification to potentially impacted members of the public.

- Provide timely notification to state, local, and federal regulatory agencies.

1.4 Response Information Coordination, and Chain of Command

Collection systems operation personnel shall be aware that SSOs and dry-weather CSO outfall discharging events reporting shall follow the "chain-of-command" approach to ensure that condition information and awareness reaches the highest levels of the City's administration. As such, verbal (in-person communication, or via telephone contact) communications shall follow the following chain-of-command:

Senior Collection Systems Operator (Crew Foreman, John Bartlett)
Mobile Telephone: 1-978-602-0854

- Collection systems operation personnel shall notify the Senior Collection Systems Operator. The Senior Collection Systems Operator shall notify the Wastewater Collection Systems Manager.

Wastewater Collection Systems Manager (William F. O'Rourke, P.E.)
Mobile Telephone: 1-978-602-0428

- The Wastewater Collection Systems Manager shall notify the Department of Public Works (DPW) Deputy Commissioner, in charge of the Wastewater Division.

DPW Deputy Commissioner, in charge of the Wastewater Division (Joseph A. Jordan)
Mobile Telephone: 1-978-602-7030

- The DPW Deputy Commissioner shall notify the DPW Commissioner.

DPW Commissioner (Lenny Laakso, P.E.)
Mobile Telephone: 1-978-855-4803

1.5 City Government Response Units

Fitchburg Fire Department	* Call 9-1-1 * 1-978-343-4801 (Alternate Priority #)
Fitchburg Police Department	* Call 9-1-1 * 1-978-345-9647 (Officer-in-Charge)
Fitchburg Emergency Medical Service	* Call 9-1-1 * 1-978-343-4801 (Alternate Priority #)
Fitchburg HAZMAT Response	* Call 9-1-1 * 1-978-343-4801 (Alternate Priority #)
Fitchburg East Wastewater Treatment Plant Operations Desk	* Call 1-978-345-9625

On-Call Emergency Excavation Contractor

E.B. Rotondi & Sons, Inc. * Call 1-781-254-7534
21 Manison Street
Stoneham, MA 02180-3111

On-Call Emergency Pump Station Service Vendor
(Pump Stations other than the Fitchburg West Wastewater Treatment Plant)

Scherbon Consolidated, Inc. * Call (office) 1-978-388-3132
40 Haverhill Road * Call (mobile) 1-978-518-7949
Amesbury, MA 01913

Unitil Corporation (Electric) * Call 1-888-301-7700

Unitil Corporation (Gas) * Call 1-866-542-3547

Hospital (Emergency Unit) * Call 1-978-466-2000
HealthAlliance Hospital Leominster Campus
60 Hospital Road
Leominster, MA 01453

Massachusetts Emergency Management Agency (MEMA)
400 Worcester Road
Framingham, MA 01702-5399
Call 1-508-820-2000

1.6 SSOs and Dry-Weather CSO Outfall Discharge Event Response Team Training, Preparation and Evaluation

Collection sewer system operation personnel shall receive all appropriate safety training and personal protective equipment required to safely and effectively perform their jobs.

Each member of the collection sewer system operations team shall be provided a copy of this Emergency Response Plan, and shall be required to sign a statement certifying receipt of the ERP and that the ERP has been thoroughly reviewed. Collection systems response vehicles shall be provided with copy of this ERP for reference in personnel conductance of and dry-weather CSO outfall discharging events emergency responses.

On a quarterly basis, the wastewater collection division shall conduct readiness response activities, which may include (but are not limited to):

- Reviews of this ERP document;
- Spot checking of response vehicles for readiness suitability;
- Performing in-classroom mock response scenarios for evaluation of personnel response procedures; wastewater collection crew response personnel shall be provided with evaluation feedback, and follow-up discussion;
- Performing in-field mock response scenarios for evaluation of personnel response procedures; wastewater collection crew response personnel shall be provided with evaluation feedback, and follow-up discussion; and

- Follow-up review and evaluation of actual emergency response performance of wastewater collection crew response personnel.

The key point of emphasis in the conductance of readiness response activities shall be:

- The improvement of the effectiveness and efficiency of the wastewater collection crew response personnel for SSO and dry-weather CSO outfall discharge events;
- Evaluation of the procedures and protocols set forth in this ERP document; and
- To make improvements to the protocols set forth in this ERP document, with input from all levels of the Fitchburg Wastewater Collection System Personnel.

On an annual basis (scheduled to be completed by January 1st of each year), the Wastewater Collection System Management shall conduct a thorough review of this ERP to ensure the contact personnel and contact numbers are up-to-date, response procedures and protocols have been evaluated and updated base on lessons learned from quarterly reviews and actual emergency response follow-up evaluations. If modifications of this ERP are made as a result of annual reviews, updated versions of the ERP document shall be issued to Collection sewer system operation personnel and management. Updated issues of this ERP shall be clearly designated with revision number and revision date on the cover page of the revised ERP. Previous issues of the ERP document shall be archived electronically, and hard copies of previous issues of the ERP shall be destroyed.

1.7 SSOs and Dry-Weather CSO Outfall Discharge Event Reporting

The City's protocol for SSOs and dry-weather CSO outfall discharging events is to funnel all event reporting to the Fitchburg Wastewater Division collection system personnel through a single point of contact. The City has established that all reporting shall be directed to the Fitchburg Highway Dispatch desk (telephone no.: 1-978-345-9614). Calls received by Fitchburg Highway Dispatch during normal working hours (Monday through Friday, between the hours of 6:30 AM and 3:00 PM) get relayed to the Wastewater Collection System Manager, who then dispatches wastewater collection system personnel to respond to the SSO or dry-weather CSO outfall discharging event. Calls to the Fitchburg Highway Dispatch outside normal working hours are routed to a call answering service, and the answering service then contacts the on-call wastewater collection crew person to respond to the reported SSO or dry-weather CSO outfall discharging event.

The City will publicize the above stated procedure for public reporting of SSO or dry-weather CSO outfall discharging events, via the Fitchburg Highway Dispatch single point of contact, by the following method:

- Annually, a notification is to be inserted into the water and sewer bills during the month of January, notifying the public that if any SSOs, dry-weather CSO outfall discharges, or residential/private property sanitary sewage backups are observed, the overflow/backup should be immediately reported to Fitchburg Highway Dispatch desk (telephone no.: 1-978-345-9614).
- Once per year, in the month of February, a public notification shall be published in the local newpaper, Sentinel & Enterprise, informing the public of the point-

of-contact and procedures for reporting SSOs, dry-weather CSO outfall discharges, and residential/private property sanitary sewage backups.

- The City shall also publish the point-of-contact and procedures for reporting SSOs, dry-weather CSO outfall discharges, and residential/private property sanitary sewage backups on the City's web page.
- Callers reporting observed overflows shall provide the Fitchburg Highway Dispatch desk with:
    1. Caller's name and contact telephone number;
    2. Address (if sewer service backup), or location of the overflow (nearest address, or intersection); and
    3. Approximate time the sewer service backup or overflow was first observed.

1.8 Tracking System for SSO, Dry-Weather CSO Outfall Discharges, and Other Complaints and Related Sewer Collection System Repairs

A SSO/CSO Complaint Form or Service Call Inspection Report Form shall be completed for each occurrence, respectively. The forms shall be entered into a spreadsheet and tracked to identify problem areas in the City's sewer collection system. With the planned purchase and implementation of Cartegraph© software, the City will be able to:

- Integrate electronic copies of historical report forms, predating the implementation of the Cartegraph© software;
- Log SSOs, dry-weather CSO outfall discharges, or residential/private property sanitary sewage backups calls, and initiate call response forms;
- Integrate emergency response activities conducted into GIS wastewater collection system mapping;
- Produce reporting forms;
- Enhance collection system departmental knowledge with sortable, historical archiving;

1.9 Preventative Measures to Prevent Reoccurrences of SSOs and Dry Weather CSO Outfall Discharges

Collection system areas that have known history of overflows shall be monitored at regular intervals to ensure proper flow operation. Cleaning and inspections shall be conducted, and documented, as required to ensure overflows do not occur as a result of blockages, or other system malfunctions. Corrective measures shall be completed to restore flow operation as required.

CHAPTER 2.0 – STANDARD OPERATION PROCEDURES (SOPs) FOR SSO OR DRY-WEATHER CSO OUTFALL DISCHARGE RESPONSE PROCEDURES

2.1 STEP 1: EVENT CONFIRMATION AND PRELIMINARY ASSESSMENT

Upon receipt of notification of a reported SSO or dry-weather CSO outfall discharge, Collection Crew Personnel will be promptly dispatched to verify and substantiate the reported event. If Collection Crew Personnel confirm the validity of the reported SSO or dry-weather CSO outfall discharge, a preliminary condition assessment will be conducted immediately to characterize the scope and severity of the event, and to determine the necessary steps to expeditiously repair/remediate the causes for the SSO or dry-weather CSO outfall discharge, minimizing potential adverse impacts to human health and the environment, and restoring the collection system to proper operation.

During off hours (working weekdays, between the hours of 3:00 pm and 7:00 am; week end days; and legal holidays), there will be at least two (2) sewer collection system operators assigned mobile telephones, and on-call to respond to sewer system related emergencies. Upon receiving a sewer emergency call, on-call sewer personnel shall immediately report to work to retrieve emergency response vehicles (utility truck and vac truck) and then proceed to the location of the reported call. Vehicles shall be equipped and maintained by sewer collection personnel in a state of readiness, with all necessary tools and equipment to respond to sewer emergency calls.

Collection crew response personnel shall mobilize to investigate reported SSO or dry-weather CSO outfall discharge events properly equipped and supplied to:

- access facilities;
- cordon off and setup the control zone to facilitate the response activities and to restrict public access to the sewage overflow;
- conduct investigations to determine the cause of the overflow;
- clean and remove non-structural sewer line obstructions to facilitate pipe flow;
- to notify Wastewater Division management if preliminary assessment concludes that the cause for the SSO or dry-weather CSO outfall discharge is solely, or partially due to significant structural defects in the sewer lines, so that management can mobilize necessary on-call contract construction services to effectively address the situation in the most expeditious time frame.

2.2 STEP 2: NOTIFICATION

Immediately following call response confirmation of SSO or dry-weather CSO outfall discharge and preliminary event assessment, report the SSO or dry-weather CSO outfall discharge and preliminary event to your supervisor. Your supervisor will immediately report the event Wastewater Department Management. Notification chain-of-command shall be followed as specified in Chapter 1 of this ERP. **If your supervisor is unavailable,** you must immediately report the SSO or dry-weather CSO outfall discharge to the next highest authority on the notification chain-of-command.

For the purpose of this "***City of Fitchburg, Department of Public Works, Wastewater Division – Emergency Response Plan***" protocols and operations, a "major overflow event" is defined to be either:

- An event that can have a significant impact on the public in the immediate area (either downstream or upstream) of the overflow event; or
- An event that restricts access to the area (i.e.: road closure; vehicular access restriction, pedestrian access restriction, etc.).

Assessment determination for classifying a confirmed overflow event as a "major overflow event" shall be the responsibility of the Department of Public Works Deputy Director of the Wastewater Division, or his designated representative. "Major overflow event" condition assessment shall be determined at the time the event is occurring.

If an in-progress overflow event has been determined to be a major overflow event, Wastewater Department Management will take all necessary steps to notify the public. The methods for notifying the public of a major overflow event, shall be determined by the Department of Public Works Deputy Director of the Wastewater Division, or his designated representative, and shall be determined on a case by case basis. Methods for notifying the public of a major overflow event may include one or more of the following:

- Public service announcement via local radio station broadcast;
- Public service announcement via local cable television broadcast;
- Portable message board; and
- Locally installed barricades and signage at the site of the event.

Wastewater Department Management shall then be responsible for reporting the event, as appropriate, to the required federal and state regulatory authorities (U.S. EPA, Region 1, and the MassDEP, Central Region Office, respectively), and the local public health officials, and initiate the required sign posting, as required.

In accordance with the City's National Pollutant Discharge Elimination System (NPDES) Permit (NPDES Permit No.: MA0100986), the Department of Public Works (DPW) Deputy Director, in charge of the Wastewater Division, or designated representative, shall provide timely notification as described in the City's NPDES Permit, including verbal notification within 24-hours after the City became aware of the overflow, and written notification within 5-days after the City became aware of the overflow. Written notification shall be the "Sanitary Sewer Overflow (SSO) Bypass Notification Form", and shall be sent by U.S.P.S. certified mail (return receipt). Said notifications to regulatory agencies shall be provided to:

Mr. Michael Fedak * 1-617-918-1766
U.S. EPA, Region 1
Water Enforcement
OES4-SM
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

MassDEP, Central Region Office * 1-508-792-7650
Bureau of Resource Protection
627 Main Street
Worcester, MA 01608

If, in the judgment of the Wastewater Department Management, notification of a sanitary sewer emergency response, or condition, to the Fitchburg Board of Health (BOH) is necessary, the DPW Deputy Director, in charge of the Wastewater Division, or his designated representative, shall notify the Fitchburg BOH at:

Fitchburg Board of Health *1-978-345-9582

2.3 STEP 3: CLEAN-UP

A. General:

Dry Weather Clean-up

1. Contain and divert the flow to the nearest sanitary sewer, or into a vactor truck. Where necessary, flow diversion shall be accomplished by sewage bypass pumping to the nearest downstream sewer manhole.
2. After flow has been stopped, and necessary repairs made, rake or vacuum all residual sewage solids.
3. Flush affected area with clean water. Disinfect the contaminated area, unless site-specific conditions preclude the use of disinfectants due to the potential toxicity to fish and wildlife.

Wet Weather Clean-up

1. Follow the same procedure as above, except step 3 may be omitted if storm water flow is high.

B. For Incident Specific Emergency Response Standard Operating Procedures (SOPs), see Chapter 3.

2.4 STEP 4: REPORTING

Sewer collection crew responders to a reported overflow incident are responsible for making sure that the "SSO/CSO Complaint Form", or "Service Call Inspection Report Form", is completed and faxed to the Wastewater Collection System Manager. Both forms are appended to the ERP in the Appendices. The key information you will need to provide in the required forms is listed below:

KEY INFORMATION FOR YOUR SSO/DRY-WEATHER CSO OUTFALL DISCHARGE REPORT:

- List the day and date, time the call was received, arrival time on scene, names of responding personnel, and location of overflow/outfall discharge.
- Remedial actions taken, repairs conducted, and materials and equipment utilized.
- Describe how the overflow/outfall discharge occurred.
- How long did the overflow/outfall discharge occur?
- What is the size of the affected area?
- What steps have been taken or planned to reduce, eliminate and prevent reoccurrence?

Note: Sewer collection system emergency response personnel shall take photos of the damage/obstruction of the collection system and the area affected by the spill. Include any photos with the report that will help describe the event.

After sewer crew call responders have confirmed a reported overflow and completed preliminary assessment of the overflow, if the crew determines that the conditions of an overflow can be mitigated by City personnel and equipment, following the completion of the overflow cleanup outlined above in Section 2.3 the crew will **immediately** verbally notify Wastewater Department Management of the overflow event. The crew shall notify Wastewater Department Management following the notification chain-of-command found in Chapter 1, Section 1.4 of the ERP.

If after sewer crew call responders have confirmed a reported overflow and completed preliminary assessment of the overflow, the crew determines that the conditions of an overflow **cannot** be mitigated by City personnel and equipment, the crew will **immediately** verbally notify Wastewater Department Management, and Wastewater Department Management will in turn contact contracted sewer overflow responders.

Within 24-hours of verbally notifying Wastewater Department Management of the overflow event, the responding sewer crew will submit the required written inspection form(s), site sketch(es) and supporting photographs to the Wastewater Collection System Manager.

2.5 STEP 5: RECORD KEEPING

One copy of the "SSO/CSO Complaint Form", or "Service Call Inspection Report Form", and photos, will be kept in a SSO or dry-weather CSO outfall discharge report form file, or sewer call inspection report form file, respectively, at the Fitchburg Wastewater Division Office, and one copy shall be provided to the Wastewater Collection System Manager. It is important that your "SSO/CSO Complaint Form", or "Service Call Inspection Report Form", be as complete and descriptive as possible.

CHAPTER 3.0 – INCIDENT SPECIFIC EMERGENCY RESPONSE STANDARD OPERATING PROCEDURES

The following list of incident specific emergency response standard operating procedures (SOPs) are included herein:

3.1 Sewer Blockage or Back up into Basement
3.2 Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer (No backup into building)
3.3 Cavities and Depressions in Streets and Lawns
3.4 Partially or Totally Blocked Siphon
3.5 Sewer Main Break/Collapse
3.6 Force-Main Break
3.7 Waste Water Pump Station Alarms General Response Actions
3.8 Pumping Station Failure Caused by Primary Power Failure (if facility does not have back-up power) or Secondary Power Failure During Power Outage
3.9 Pumping Station Failure Inside Valve Pit, pump or valve failure (submersible type application)

Sewer collection system personnel shall be aware that the following SOPs list is not intended to be all-inclusive, but to represent the emergency sewer calls most likely to be received.

3.1 Sewer Blockage or Back up into Basement

a. Dispatch the crew immediately to the complainant address with details. Crew notifies complainant/property owner(s) when they are on site.
b. If the flow is questionable (not reasonable for the given service area) go to the upstream manhole to visually compare flows.
c. If the flow from both manholes is reasonable for the area, notify the property owners that the problem is in their service lateral and to contact a plumber or sewer service contractor to relieve the blockage.
d. If the downstream manhole is full and there is a potential for overflow, immediately begin the set up for pumping around the blockage (see "**Overflowing Sewer Manhole**" procedure):
    - Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.)
    - Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.
e. Continue checking manholes downstream until a dry manhole is found indicating a blockage upstream.
    - See "**Overflowing Sewer Manhole**" procedure for pumping around the blockage while the line is repaired
    - Note, if no blockage is found and the problem is attributable to a pump station problem refer to "**Pump Station**" responses.

f. If vactor and jetter are available, jet line and have vactor clear the obstruction, or blockage. If the City wastewater collection personnel and equipment are unable to remove the blockage, or obstruction, Wastewater Department Management shall be notified immediately. Wastewater Department Management shall then contact emergency pipeline cleaning service to assist the City to remove the blockage, or obstruction.

g. Remove the debris from the manhole and observe it to try to determine the cause of the blockage.

h. Use the necessary equipment to relieve the blockage, by jet flushing.

i. Notify supervisor and describe the blockage. The supervisor will notify the proper authorities and agencies.

j. Cordon off the area if ponding occurs on the street or easement (public or private).

k. Collect as much of the sewage as possible, disinfect the contaminated area, notify surrounding homes (Wastewater Department Management to notify appropriate officials, as needed).

l. Perform a pipeline television inspection, if appropriate to do so.

m. If the blockage is in a public line, relieve the blockage, direct the property owner to contract a cleaning service to clean up the property owner's basement, and to submit damages claim with the City.

n. If blockage is determined to be in property owner's lateral connection, direct property owner to clear the service lateral line.

o. Make out a report indicating the time of the call, a description of the problem, repair work done, personnel present and equipment used.

p. If sewage overflowed the collection system, or if a City sewer blockage has caused sewage to back up into the basements of buildings, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.2 Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer (No backup into building)

a. Go to the location of the overflowing manhole to assess the immediate danger to public health or the environment.

b. Determine the location of the blockage by inspecting the downstream manholes until a dry manhole is found. Immediately begin the set up for pumping around the blockage

- Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.) or to help with evaluating options for pumping around the blockage.
- Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.

c. If vactor and jetter are available, jet line and have vactor clear the obstruction, or blockage. If the City wastewater collection personnel and equipment are unable to remove the blockage, or obstruction,

Wastewater Department Management shall be notified immediately. Wastewater Department Management shall then contact emergency pipeline cleaning service to assist the City to remove the blockage, or obstruction.

d. Use the necessary equipment to relieve the blockage, by jet flushing.

e. If it is imminent that the waste water will be released into wetlands, receiving waters or a drinking water supply watershed, notify your supervisor, who will call in extra crew and coordinate emergency equipment. The supervisor will also notify the proper authorities and agencies including the fire department to set up flotation booms across streams, brooks, etc. if necessary.

f. Gather and remove sewage related debris and organic matter from the affected area.

g. If the wastewater is in the streets/roads (public or private), use sand bags to contain the waste water to minimize any impact to public health or the environment.

h. Install berms around nearby catch basin inlets or paved leak-offs to prevent the wastewater from entering the drainage system and causing potential contamination to the receiving waters. Sewer collection emergency response personnel shall coordinate with Fitchburg Highway Department to assist in placing gravel berms.

i. Cordon off the area if ponding occurs.

j. Collect as much of the sewage as possible, disinfect according to policy, notify surrounding homes (DPW Deputy Director, in charge of the Wastewater Division, or designated representative, notifies appropriate officials, as needed).

k. If the waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.

l. Complete a report indicating the time of the call, description of the problem, repair work done, personnel present and equipment used.

m. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.3 Cavities and Depressions in Streets and Lawns

a. If the caller indicates the problem is severe, extensive or obviously associated with the sewer system, investigate and barricade the condition if it appears appropriate to do so. Lights and barricades should be used if the situation is dangerous. Notify the Fitchburg Water Department (tel.: 978-345-9618) and Fitchburg Highway Department (tel.: 978-345-9614) immediately to aid in the cause investigation.

b. When checking a depression over a main sewer, it is important to check the main sewer at both the upstream and downstream

manholes adjacent to the depression to determine if there is a restriction of flow. If there is a blockage, it may indicate a possible main sewer break.

c. If the cavity is a result of a sewer failure, refer to procedures for "**Sewer Main Break/Collapse**", and repair as appropriate.

d. If it has been determined that it is a cavity or depression caused by other utilities (storm drain, water main, etc.), the crew should notify the Fitchburg Water Department and Fitchburg Highway Department (at telephone numbers listed above in 3.a.), and request that they take over the repair.

e. The sewer collection operator crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.

f. Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.

g. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.4 Partially or Totally Blocked Siphon

a. If sewage is discharging to the environment, follow instructions defined in "**Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer**" for containment and cleanup.

b. Bring a high-velocity jet-flushing vehicle immediately to the site if a blockage is discovered. If the City wastewater collection personnel and equipment are unable to remove the blockage, or obstruction, Wastewater Department Management shall be notified immediately. Wastewater Department Management shall then contact emergency pipeline cleaning service to assist the City to remove the blockage, or obstruction.

c. If the cause of a blockage is unknown, use a single port cutting nozzle attached to the jet-flushing machine.

d. Using the high velocity jet-flushing, start flushing the siphon between 1000 and 1500 psi against the flow. Work the nozzle back and forth until minimal debris is observed in the down stream manhole.

e. The sewer collection operator crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.

f. Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.

g. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.5 Sewer Main Break/Collapse

a. Dispatch a crew to location of break/collapse immediately.
b. If it is a main line break, immediately notify your supervisor. The DPW Deputy Commissioner shall notify the appropriate authorities and City officials immediately.
c. Sewer collection crew sets up signs, barricades, and/or barrels for traffic control and public safety (coordinated with Fitchburg Police Department), rerouting traffic as necessary and deploying traffic control measures such as police or flag person as needed.
d. Notify Wastewater Collection Management of need for additional manpower and equipment as needed based on initial damage assessment (e.g. excavating crew, equipment to pump around the break, etc.).
e. Notify Wastewater Collection Management if conditions require sewage bypass pumping to permit emergency excavation repair crew to perform repairs. Wastewater Collection Management will coordinate emergency repair scope requirements with on-call excavation contractor.
f. Notify Wastewater Collection Management if sewage overflow conditions, associated with the sewer pipe break/collapse, require protective barriers or devices to protect overflow from entering streams, storm drains or private properties. Wastewater Collection Management will coordinate emergency repair scope requirements with on-call excavation contractor to prevent sewer overflows from entering streams, storm drains or private properties.
g. Gather and remove sewage related debris and organic matter from the affected area.
h. Notify Wastewater Collection Management if the wastewater is overflowing in the streets/roads (public or private) from the sewer pipe break/collapse. Wastewater Collection Management will coordinate emergency repair scope requirements with on-call excavation contractor to provide equipment and materials (such as sand bags) to contain the wastewater to minimize any impact to public health or the environment.
i. Notify Wastewater Collection Management if the wastewater is overflowing to nearby catch basin inlets or paved leak-offs (public or private) from the sewer pipe break/collapse. Wastewater Collection Management will coordinate emergency repair scope requirements with on-call excavation contractor to provide equipment and materials (such as sand bags) to prevent the waste water from entering the drainage system and causing potential contamination to the receiving waters.
j. Cordon off the area if ponding occurs.

k. Collect as much of the sewage as possible, disinfect the contaminated area, notify surrounding homes (Wastewater Department Management to notify appropriate officials, as needed).

l. If the waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.

m. Determine the location of the break/collapse and provide direction to on-call emergency excavation contractor on the extents/limits of the necessary repairs. On-call emergency excavation contractor shall use repair procedures consistent wastewater construction industry standards. If the break is on the pipe length, then a repair can be made with a wrap-around sleeve. If the break is at the bell, then a bell-joint clamp may be used.

n. Upon confirmation of adequacy of the repair by the Wastewater Collection System Manager, on-call emergency excavation contractor shall be authorized to backfill the excavation (if necessary) and restore surface conditions to match existing conditions.

o. To restore the sewer line to full capacity, the crew should remove any debris that may have entered and accumulated in the sewer line downstream and upstream from the break/collapse. The crew should clean the sewer line as described below.

p. Using a high velocity jet-flushing vehicle, begin flushing from the downstream manhole against the flow to the upstream manhole.

q. Repeat this procedure for several upstream and downstream pipe reaches.

r. The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.

s. Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.

t. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.6 Force-Main Break

a. Contact your supervisor to determine the pump station associated and which critical facilities are in the area.

b. For force main breaks associated with the West Plant Pump Station the following steps shall be initiated:

   i. Management will notify paper mills listed in the appendix to cease pumping operations and a determination will be

made as to the necessity to isolate discharge valves at each mill based on the location of the break.

ii. Lock-out and tag-out all pumps in the pump station.

iii. Drain the force-main, if possible, based on the location of the break:

- Close down the gate valve on the upstream side of the discharge check valve in the pumping station.
- Open the check valve by hand and secure it in place.
- Slowly bleed the force-main back into the wetwell by slowly opening the gate valve on the discharge side of the pump, but only to the point where the force-main stops leaking and there is enough room to make the repair. Constant communication must take place between the crew located at the break and the crew located at the pump station.
- Close the gate valve and return the check valve to its normal operating position and then fully open the gate valve.

iv. Contact contractor to make repairs to force main, as per policy

v. After the repair is complete, remove lock-out and tag-out and return the pump(s) to normal operating position

vi. Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.

vii. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

c. For force main breaks at the Cobbler Road Pump Station:

i. Management will notify companies listed in the appendix that break occurred and pumping operation is temporarily out of service.

ii. Lock-out and tag-out all pumps in the pump station.

iii. Drain the force-main, if possible, based on the location of the break:

- Close down the gate valve on the upstream side of the discharge check valve in the pumping station.
- Open the check valve by hand and secure it in place.
- Slowly bleed the force-main back into the wetwell by slowly opening the gate valve on the discharge side of the pump, but only to the point where the force-main stops leaking and there is enough room to make the repair. Constant communication must

take place between the crew located at the break and the crew located at the pump station.

- Close the gate valve and return the check valve to its normal operating position and then fully open the gate valve.

iv. Contact contractor to make repairs to force main as per policy

v. After the repair is complete, remove lock-out and tag-out and return the pump(s) to normal operating position

vi. Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.

vii. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.7 Waste Water Pump Station Alarms General Response Actions

a. If responding to a waste water pump station alarm emergency call, sewer collection personnel receiving the emergency call shall immediately the supervisor to notify of the reported condition. Wastewater Department Management will notify either:

- the Fitchburg East Wastewater Treatment Plant Operations Desk (if the Fitchburg West Wastewater Treatment Plant pump station alarms annunciate), at telephone no. 978-345-9625; or
- the on-call pump station service vendor (Scherbon Consolidated, Inc., 40 Haverhill Road, Amesbury, MA 01913; telephone no. 978-388-3132).

b. If sewer collection personnel are unable to contact Wastewater Department Collection System supervisory staff, sewer collection personnel shall relay waste water pump station alarm emergency calls to the Fitchburg East Wastewater Treatment Plant Operations Desk, at telephone no. 978-345-9625.

c. If sewer collection crew are directed, at the discretion of Wastewater Department Collection System supervisory staff or on-duty Fitchburg East Wastewater Treatment Plant Operator, sewer collection crew shall provide support and on-site liaison contact for waste water pump station service/repair personnel, Wastewater Department Management, and other City emergency response departments.

d. Make out a report indicating the time of the call, description of the problem(s), repair work done, personnel present and equipment used.

e. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer

Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.8 Pumping Station Failure Caused by Primary Power Failure (if facility does not have back-up power) or Secondary Power Failure During Power Outage

a. If responding to a failure alarm at the West Plant Pump Station emergency call, caused by secondary power failure during a power outage, sewer collection personnel receiving the emergency call shall immediately the supervisor to notify of the reported condition. Wastewater Department Management will notify:
   - West Plant Pump Station: the Fitchburg East Wastewater Treatment Plant Operations Desk (if the Fitchburg West Wastewater Treatment Plant pump station alarms annunciate), at telephone no. 978-345-9625.

b. The Cobbler Drive Pump Station does not have a secondary back-up power source. If responding to a failure alarm at the Cobbler Drive Pump Station emergency call, caused by primary power failure during a power outage, sewer collection personnel receiving the emergency call shall immediately the supervisor to notify of the reported condition. Wastewater Department Management will notify:
   - Cobbler Drive Pump Station: the on-call pump station service vendor (Scherbon Consolidated, Inc., 40 Haverhill Road, Amesbury, MA 01913; telephone no. 978-388-3132).

c. If sewer collection crew are directed, at the discretion of Wastewater Department Collection System supervisory staff or on-duty Fitchburg East Wastewater Treatment Plant Operator, sewer collection crew shall provide support and on-site liaison contact for waste water pump station service/repair personnel, Wastewater Department Management, and other City emergency response departments.

d. Make out a report indicating the time of the call, description of the problem(s), repair work done, personnel present and equipment used.

e. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

3.9 Pumping Station Failure Inside Valve Pit, pump or valve failure (submersible type application)

a. If responding to a waste water pump station failure emergency call, caused by pump or valve failure inside the valve pit, sewer collection personnel receiving the emergency call shall immediately the supervisor to notify of the reported condition. Wastewater Department Management will notify:

- Cobbler Drive Pump Station: the on-call pump station service vendor (Scherbon Consolidated, Inc., 40 Haverhill Road, Amesbury, MA 01913; telephone no. 978-388-3132).

b. If sewer collection crew are directed, at the discretion of Wastewater Department Collection System supervisory staff, sewer collection crew shall provide support and on-site liaison contact for waste water pump station service/repair personnel, Wastewater Department Management, and other City emergency response departments.

c. Make out a report indicating the time of the call, description of the problem(s), repair work done, personnel present and equipment used.

d. If sewage overflowed the collection system, notify your supervisor, and your supervisor will complete a "Sanitary Sewer Overflow (SSO) Bypass Notification Form" to be filed with EPA and the MassDEP.

APPENDICES

SSO / CSO COMPLAINT FORM

City of Fitchburg, Massachusetts
Fitchburg Wastewater Division

SSO / CSO Complaint Form

Date: _____ Time: _____ AM / PM

Complaint Taken By: _____

Name of Person Reporting SSO / CSO : _____

Phone Number: _____

Location of Overflow: _____

(Nearest Street Address) _____

Time Overflow Was First Observed: _____ AM / PM

To Be Completed by Responding Personnel:

Date and Time Overflow Was Stopped: _____ _____
Date Time: AM / PM

Cause of Overflow: _____

_____

Estimated Gallons Released: _____

Method Used For Estimated: _____

Description of discharge including whether discharge occurred to ground, street, storm drain or surface water. If any discharge entered storm drain, describe location of storm drain and estimated volume of flow that entered storm drain, and method of estimation. If flow discharged to surface water, identify location, estimated volume and method of estimation.

_____

_____

_____

_____

Describe measures taken to stop overflow:

Described measures taken to prevent future occurrences at this location:

Name of Responder(s):

Date Completed:

SERVICE CALL INSPECTION REPORT FORM

Fitchburg Wastewater Department
City of Fitchburg, Massachusetts

Service Call Inspection Report Form

Service Call

Received: _____ (Date) _____ (Time)

Caller: _____ Caller Contact No.: _____

Nature of Call: _____

Incident Location: _____

Service Call Response

Site Inspection: _____ (Date) _____ (Time)

Service Crew: _____

Findings: (Status) _____

Actions Taken: (Services) _____

Follow-Up Action: _____

Location Sketch & Notes

	Notes:

Signature: _____

SEWER CUSTOMERS SERVED BY PUMPING STATIONS

West Plant Pump Station:

Crocker Technical Papers
431 Westminster Street
Fitchburg, MA 01420
Tel.: 1-978-345-7771

Newark America
100 Newark Avenue
Fitchburg, MA 01420
Tel.: 1-978-665-2608

Munksjo Paper
642 River Street
Fitchburg, MA 01420
Tel.: 1-978-342-1080

Cobbler Drive Pump Station:

Brideau Oil Corporation
49 Cobbler Drive
Fitchburg, MA 01420
Contact: Mr. Mark Brideau
Tel.: 1-978-342-9780

AKS Recycling, Inc.
15 Cobbler Drive
Fitchburg, MA 01420
Contact: (Operations Office)
Tel.: 1-978-345-9425
Contact: Mr. Michael Karras (Owner)
Tel.: 1-508-726-1501

Schwan's Home Service, Inc.
50 Cobbler Drive
Fitchburg, MA 01420
Contact: Mr. Scott Laney
Tel.: 1-978-340-8399
Contact: Mark Colcord
Tel.: 1-978-855-1214

245 Crawford Street
(Multi-tennant, business property)
Fitchburg, MA 01420
Contact: Mr. John Lastella
Tel.: 1-978-855-1557

High School Pumping Station:

Fitchburg High School
140 Arn-How Farm Road
Fitchburg, MA 01420
Contact: Mr. William Barletta
Tel.: 1-978-265-4214

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 9

EAST WASTEWATER TREATMENT PLANT IMPROVEMENTS TO MEET INTERIM TOTAL PHOSPHORUS DISCHARGE LIMITS

Attachment 9

The scope of the improvements required to meet an interim limit of total phosphorus of 0.5 ppm on a rolling annual average basis includes the following:

- New Chemical Building located on the west side of the Process Wing to house new chemical storage and feed facilities. The building will house the following chemical storage and feed facilities:
  - Ferric chloride storage and feed facilities that will provide the necessary year-round storage for meeting the cold weather phosphorus limit in the new NPDES permit, and will also be the primary coagulant for the wet weather chemically-enhanced primary treatment (CEPT) process. The existing outside ferrous chloride storage facilities will be removed. This will include pumps and piping for feeding ferric to both the influent (current capability) and to the aeration basin effluent of both the first and second stage secondary treatment trains (new capability).
  - The building will include provisions for storage and feed facilities of an anionic polymer that would be used to enhance CEPT during peak wet weather flows.
  - Sodium hypochlorite storage and feed facilities for the Process Wing odor control scrubber and Gravity Thickeners. The existing tank in the basement of the Process Wing will be removed.
  - Caustic storage and feed facilities to the existing APC Building tray scrubber and Process Wing odor control scrubber. The existing underground caustic storage tanks will be abandoned in place, and the tank in the Process Wing will be removed.
  - Magnesium hydroxide storage and feed facilities for addition to the raw influent for alkalinity addition for the nitrification process and neutralization during CEPT.
  - The facilities will include provisions for addition of cationic polymer to the aeration basin effluent to enhance total suspended solids removal and thereby assist in compliance with the interim phosphorus limit.

ATTACHMENT 9a

Interim Effluent Limits and Monitoring Requirements

From the effective date of this Consent Decree until the date the WWTF improvements outlined in Attachment 9 are fully operational, or until March 1, 2013, whichever is sooner, or if EPA determines that the City has not complied with the schedule milestones set forth in this Consent Decree, the City shall comply with the following interim effluent limitations and monitoring requirements:

	Mass		**Concentration**			
	Average Monthly (lbs/day)	Daily Maximum (lbs/day)	Average Monthly	Daily Maximum (mg/l)	Frequency	Type
Total Phosphorus April 1st through October 31st	Report	Report	1..0 mg/l	Report	3/Week	24-Hour Composite

ATTACHMENT 9b

Interim Effluent Limits and Monitoring Requirements

Once the WWTF improvements outlined in Attachment 9 are fully operational or by March 1, 2013, whichever is sooner, or if EPA determines that the City has not complied with the schedule milestones set forth in this Consent Decree, the City shall comply with the following interim effluent limitations and monitoring requirements:

	Mass			**Concentration**		
	Average Monthly (lbs/day)	Daily Maximum (lbs/day)	12-Month Rolling Average*	Daily Maximum (mg/l)	Frequency	Type
Total Phosphorus April 1st through October 31st	Report	Report	0.5 mg/l	Report	3/Week	24-Hour Composite

* Actual concentration to be determined as the simple arithmetic average of monitoring results for total phosphorus as required in the Permit. The Permit requires 24-hour composite sample with a minimum of one analysis for total phosphorus per week from November 1 through March 31 and minimum of three analyses per week from April 1 through October 31. The total phosphorus results shall be calculated at the end of each month based on the most recent 12 months of data beginning with the data for the month of March 2013.

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 10

EAST WASTEWATER TREATMENT PLANT
LONG-TERM PREVENTATIVE MAINTENANCE PLAN

CITY OF FITCHBURG, MASSACHUSETTS
DEPARTMENT OF POUBLIC WORKS
WASTEWATER DIVISION

Long-Term Preventative Maintenance Plan

January 30, 2012
(revised)

Table of Contents

Plan Summary

The Long-Term Preventative Maintenance Plan proposed is a comprehensive plan that addresses not only daily practices and procedures, but also incorporates long term preventative measures to insure maximum efficiency and operation and minimal downtime of plant equipment and processes. With newly instituted daily inspection routines and condition monitoring practices, we are able to identify equipment issues and schedule repairs before the point of failure. As new equipment and processes come on line, it may be necessary to adjust and change schedules, practices and protocols as needed to operate the plant efficiently.

The maintenance staff is a well rounded group of individuals who possess many skills and are capable of performing most of the necessary repairs and maintenance needed at the facility. The maintenance department includes eleven individuals consisting of a maintenance engineer, one working foreman, four mechanics, one helper, one electrician, two instrumentation technicians, and an inventory control clerk. Currently two of the positions are vacant due to a recent retirement and a medical leave. The city realizes the importance of these positions and is moving forward with staffing both of these positions in the near future. Staffing levels are sufficient to respond to all the maintenance needs at the plant. On occasions where repairs are beyond the capability of the in house staff, outside vendors and contractors are called in to assist.

The inventory of spare parts are believed to be adequate, however, inventories are being evaluated to insure the proper parts are kept in supply. As new equipment comes on line, in addition to the manufactures recommended list, additional parts may be stocked if required based on observed conditions. Parts requiring long lead times that are critical to the operation of the plant are kept in inventory and are immediately restocked when existing parts are used.

The City has recently hired a full time Maintenance Engineer to oversee the maintenance department. Prior to this, these duties were carried out by the Chief Engineer who also had many other responsibilities throughout the facility. In 2010, the plant superintendent passed away and those duties were also assigned to the Chief engineer on a temporary basis. The City has realized the need to rebuild the management staff and hiring a new maintenance engineer was the first step. We are also in the process of hiring a new Plant Superintendent to oversee all operational practices to insure the plant is operating as efficient and effectively as possible.

Since coming on board, the Maintenance Engineer has made significant improvements with developing and implementing new routines for the maintenance department. He is developing new protocols and procedures and implementing new practices to identify and correct problems before they develop into failures. The city is confident that by implementing and performing these newly established procedures that we will experience less and less breakdowns and failures both major and minor.

Detailed Description of Physical Inspections and Testing Procedures.

The wastewater maintenance department follows a regimented routine in performing daily preventative maintenance procedures on all plant equipment as required. Common to all maintenance rounds are inspections for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern to the mechanic. If any concerns are noted, they are brought to the attention of either the working foreman or the maintenance engineer, who will further evaluate the situation to determine if additional procedures are required. Below is a description of the specific areas and processes requiring routine maintenance, a summary of the maintenance procedures performed, and the frequency of the inspection. Although many of the routine are similar, there are specific procedures that may be unique to a given process, and mechanics are thoroughly trained on those procedures and pieces of equipment prior to being allowed to work on them alone. The City believes that the practices and procedures in place are sufficient to insure proper operation of equipment and prevent failures.

PRELIMINARY TREATMENT

Aeration Grit Chamber

- Operation and maintenance rounds performed daily of the grit chamber area and all related equipment. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Grit level checked periodically and after an extreme event
- Grit chamber clean as needed
- Aeration blowers maintained to mfg. specs
- Gate valves exercised when switching tanks
- Cable inspection of dredge bucket hoist before each use
- Annual inspection of Mack clam shell dredge bucket hoisting mechanism

Mechanical Bar Screen

- Operation and maintenance rounds performed daily of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would

indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.

- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Wash screens out manually periodically as needed
- Exercised gate valves periodically
- Bar screen/ grit dumpster changed as needed

PRIMARY TREATMENT

Primary Settling Basin & Primary Gallery

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Gate valves exercised periodically
- #1 Sampler cleaned and check weekly
- PH probe cleaned checked every week calibrated as needed
- Tank cleaning and inspection once a year. Check flights, chain, wear strips, etc.

SECONDARY TREATMENT

1st Stage Aeration Basin & Blower Building

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Gate valves exercised periodically
- D.O. sensors cleaned and calibrated once a week
- Diffuser head membrane change according to mfg. spec

- Tank cleaning and inspection once a year
- Air filter for blowers change as needed

1st Stage Clarifiers

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Clean and inspect yearly/ draft tubes, ground valves, scraper etc.
- Clean both clarifiers, including launderers and weirs, a minimum every two weeks in summer

2nd Stage Aeration Basin

- Operation and maintenance rounds performed daily, of equipment and area. Check for proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Gate valves exercised periodically
- D.O. sensors cleaned and calibrated once a week
- Diffuser head membrane change according to mfg. spec
- Tank cleaning and inspection once a year

2nd Stage Clarifiers

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- #3 sampler cleaned and check weekly

- Clean both clarifiers, including launderers and weirs, a minimum every two weeks in summer
- Clean and inspect yearly/ draft tubes, ground valves, scraper etc.

Chlorine Contact Chamber

- Operation and maintenance rounds performed daily, of equipment and area.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Dosing Chlorine analyzer cleaned and checked weekly
- PH probe clean and check weekly, calibrated as needed
- Clean both sides of contact chamber minimum every two weeks in summer
- Clean immediately after a wet weather event spring through summer

SAMPLING AND FLOW MEASUREMENT

Outfall Building

- Operation rounds performed daily, of equipment and area.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- #4 sampler cleaned and checked weekly
- Reporting Chlorine analyzer cleaned and checked weekly
- PH probe and equipment cleaned and checked weekly calibrated as needed

Partially Flume

- #2 Sampler cleaned and check weekly
- Influent flow meter checked against flume monthly
- If any concerns are noted, notify either the working foreman or the maintenance engineer.

SOLIDS PROCESSING

Thickened Waste Activated Sludge Tanks

- Operation and maintenance rounds performed daily, of equipment and area.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.

- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Tank cleaning and inspection spring and fall

Gravity Thickening Tanks

- Operation and maintenance rounds performed daily, of equipment and area.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Tank cleaning and inspection once a year

Gravity Belt Thickener

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Cleaned as needed

Sludge Transfer Gallery

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience

Fournier Dewatering Presses

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would

indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.

- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Operations channel wash each press every 24 hrs.
- Perform scheduled maintenance per mfg. recommendation
- Spare parts per mfg. recommendation
- Conveyer inspection performed as needed

Incinerator

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Removal of loose slag daily
- Scheduled maintenance performed every 4 months to de slag inspect etc.
- Ash dumpster changed every 2 days
- Supply of rabble teeth on hand

Air Pollution Control (APC) Building

- Operation and maintenance rounds performed daily, of equipment and area. Check for any obvious abnormalities including but not limited to, leaking fluids, excessive noise, excessive heat, or vibration that would indicate potential problems, a check for proper fluid levels, proper operation of safety devises and any other items that may be of concern.
- If any concerns are noted, notify either the working foreman or the maintenance engineer.
- Any issues or concerns are addressed immediately if needed or scheduled at the earliest convenience
- Copco compressor 6 month service schedule
- Scrubber checked and cleaned every 4 months
- Wesp cleaning every month
- RTO cleaning every 4 months

- RTO media replaced as needed
- Air pollution control system maintained and calibrated every 2 weeks. Every quarter systems audit performed

OTHER

Emergency Generators

- Serviced 6 month schedule
- Run for 30 minutes every week
- If any concerns are noted, notify the maintenance engineer.

SCADA System

- Monitored every shift by operators
- Monitored by Lead instrumentation daily on rounds
- If any concerns are noted, notify the maintenance engineer.
- Alarms are addressed by operators, supported by electrical, instrumentation, and maintenance departments
- System Maintenance and upgrades periodically as required
- Programming and major system issue supported from outside vendors.

West Plant Pump Station

- Tank levels and pumping rates monitored daily through East Plant SCADA system. Any abnormalities reported are investigated and treated as highest priority.
- Maintenance rounds performed weekly consisting of but not limited to, checking oil levels, belts, piping, draining air tanks of condensate, etc. Any abnormalities reported are investigated and treated as highest priority.
- Maintenance rounds performed weekly on tank agitators for proper operation and oil levels
- Electrical rounds performed weekly consisting of but not limited to, Emergency generator start test, inspection of boiler for proper operation, heating, lighting, etc. Any abnormalities reported are investigated and treated as highest priority.

Preventative Maintenance Procedures

Maintenance Rounds

Maintenance rounds are performed everyday using condition monitoring practices. The plant is divided in to five areas. On a rotating schedule, four equipment repair men and one assistant mechanic are assigned an area each month. After performing their rounds, they report any issues to the working Foreman. The working foreman records the issue and determines the priority level, assigns and schedule the work accordingly. The working Foreman keeps the Maintenance Engineer informed at all levels of work needed or work being performed.

One Electrician and two Instrumentation Repairmen performs rounds daily, reporting any issues to the Maintenance Engineer or Chief Engineer, depending on what the issue is related to. (SCADA system, controls, general electrical etc.)

Tracking System

The City currently has Allmac software to track maintenance activities; however the software has become somewhat outdated. As a result, we are using a combination of Excel spreadsheets, Microsoft office, and calendars to track, plan, and schedule maintenance procedures. We realize that this current practice is not adequate and are in the process of evaluating an updated version of the existing maintenance software to determine its effectiveness. We are also researching and evaluating other programs to find the best maintenance system for the facility. After the correct system is selected, we will implement it as soon as practical. Once installed, all maintenance activities and procedures will be tracked and recorded and a historical database will be developed and maintained. It is expected that a system will be selected by December 31, 2011, with the purchase and installation of the software occurring as soon as possible.

Planned Activities

Specific activities are planned according to the need as identified through the daily inspections previously described. Currently, there is one major area that has been identified as requiring maintenance which is the plant aeration basins. The work will involve a complete maintenance on three of the four basins. This will include draining, cleaning, inspecting, and replacing all the diffuser heads in each of the basins. Once complete these tanks will be inspected annually and any items identified as in need of repair will be corrected.

A planned upgrade to the primary settling basins is also schedule to take place as soon as practical and involves replacing the existing plastic drive chains, which are approaching the end of their useful life, with more durable and longer lasting metal chains. This upgrade is expected to reduce failure of the chains and all but eliminate unscheduled emergency repairs. Replacement of all the skimming troughs are also expected to be completed, which will result in all components associated with these basins being replaced.

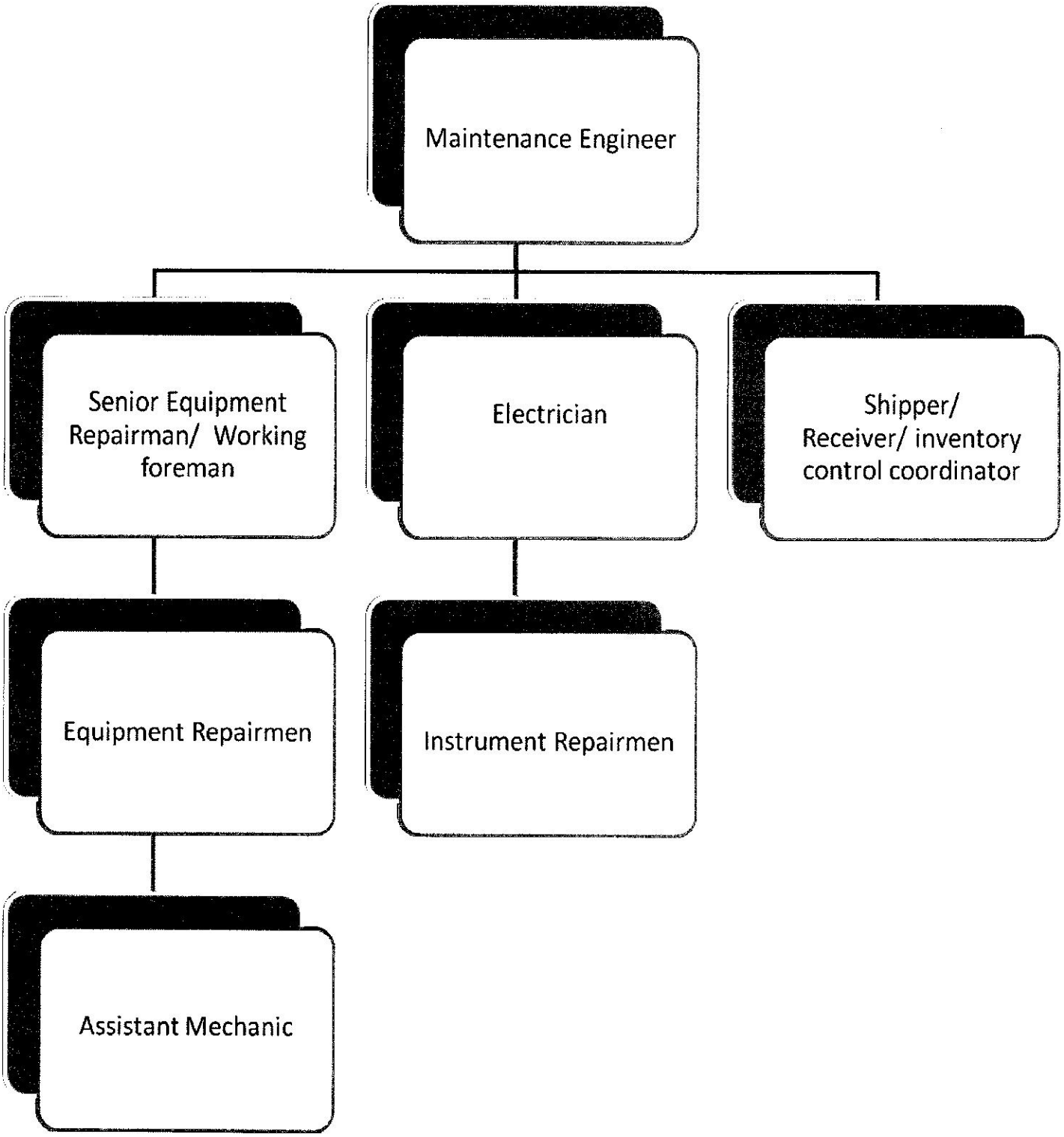
As other equipment is identified as requiring repair, planned schedules will be developed. Additionally, there are major upgrades planned for all chemical storage and delivery systems to be replaced, in addition to upgraded sludge thickening equipment, specifically a gravity belt thickener. A redundant belt thickener will also be included as a redundant unit to this process.

Maintenance Equipment

The maintenance staff has access to a variety of tools and equipment to complete repairs. This includes, but is not limited to mig welders, arc welders, plasma cutting system, oxy acetylene torches, band saws, table saw, drill press, battery & electric- drills, reciprocating saws, circular saws, impact wrenches. There are several vehicles at the facility including dump trucks, pick-up trucks, bucket truck, and a newly purchased tractor with bucket and fork attachments. Smaller tools include generators, hoists, ladders, jacks, porta-powers, 20 ton press, bearing heater, measuring devices, threading equipment, and a variety of hand tools required to perform all the necessary repairs and maintenance are stocked at the facility. If there are other specialized tools that are required to perform a job, they will either be rented or, if practical, purchased or in extreme cases, outside contractors will be utilized to insure work is completed in a timely fashion.

Spare Parts

The WWTF stocks a vast array of fasteners, pipe fittings, gasket materials, lubricants, mechanical seals, belts, hoses, valves, gear drives, motors, fuses, brick, and other general supplies to keep the plant operational. The department stocks long lead time items such as incinerator rabble teeth, incinerator arms, RTO flame tubes, RTO actuators, pump impellers, GBT hydraulic motor and belts. We stock critical spares and manufacturer recommended spare parts. An ongoing inventory of the spare parts is constantly reviewed and adjusted accordingly.


Maintenance Engineer
Senior Equipment Repairman/ Working foreman
Electrician
Shipper/ Receiver/ inventory control coordinator
Equipment Repairmen
Instrument Repairmen
Assistant Mechanic

JOB DESCRIPTIONS FOR MAINTENANCE PERSONNEL

Maintenance Engineer

- Supervises plant maintenance, instrumentation an electrical personnel
- Observes, inspects, and analyses the operation and operating conditions of all plant equipment and diagnose faulty operations
- Determines and specifies maintenance and repair requirements to insure safe and efficient operation
- Provides guidance to technical and maintenance personnel
- Directs the training and instruction to personnel
- Enforces work rules, safety, and health measures, orders and directives
- Supervises the operation of the maintenance shop, purchase of material, spare parts, and lubrication
- Investigate, estimate, and report on suitability of new equipment for use in the treatment plant
- Confers with manufacturers and public utility as required
- Work close with Chief Engineer, assisting and advising as required

Senior Equipment Repairman / Working Foreman

- Report to Maintenance Engineer
- Assign and coordinate all mechanical work orders and projects
- Assist and instruct mechanical maintenance employees as needed
- Estimating, ordering, and insuring all materials are on hand for all jobs prior to starting
- Insure that all work is done correctly and in a timely fashion
- Evaluate employees under his supervision
- Keep Maintenance Engineer informed of all work progress and problems
- Record all maintenance issues found on daily rounds, coordinate repair and report to the Maintenance Engineer

Equipment Repairmen

- Reports to Maintenance Engineer and Senior Equipment Repairman/ Working Foreman
- Perform daily rounds report any mechanical issues to Senior Equipment Repairman / Working foreman
- Proficient in all areas of the plant maintenance

Assistant Mechanic

- Reports to Maintenance Engineer and Senior Equipment Repairman / Working Foreman

- Perform daily rounds report any mechanical issues to Senior Equipment Repairman / Working foreman
- Handles lubrication of all plant equipment and filter changes
- Assists all above as needed and assigned

Shipper Receiver Control Coordinator

- Reports to Maintenance Engineer.
- Works with Computer maintenance software system
- Maintain recording and accounting system for all maintenance work orders.
- Maintain repair history for all jobs.
- Prepare purchase requisitions, place orders and purchase order tracking.
- Track purchase orders to insure delivery and coordination of delivery with scheduled maintenance projects.
- Compute maintenance dept. time cards, overtime, and overtime distribution.
- Assist Equipment Repairmen as needed.
- Maintain storeroom supplies for facility.
- Handle all shipping and receiving of supplies, parts and equipment.

Electrician

- Reports to Maintenance Engineer
- Licensed
- Maintains high and low voltage electrical distribution systems including transformers, motor control centers, breakers, relays and line distribution
- Maintains emergency generators
- Electrical and electronic systems for boilers, HVAC, incinerator, etc.
- Works close with instrument repairmen

Instrument Repairmen

- Reports to Maintenance Engineer
- Maintains all sampling equipment, chemical control, flow meters, etc.
- Maintains and monitors SCADA, Telemetry, RTO, electronic control equipment, etc.
- Maintain CEMs system
- Assists with mechanical maintenance
- Works close with Electrician

Budgetary Requirements

For fiscal year 2012, which began on July 1, 2011, an annual budget of $560,000 has been allocated for maintenance and repair of plant equipment and operational systems. This is separate from funds allocated for the sewer system related maintenance. There is an additional $178,000 allocated for larger capital projects during the year. These larger projects typically include those projects costing between $20,000 and $100,000.

The City is also upgrading, repairing, or adding new equipment through long term capital improvements which are financed either by the State Revolving Fund (SRF) program, or by the issuance of long term bonds. This work will include not only new construction at the plant, but replacement of larger equipment and process systems. The City has constructed a new grit removal facility, upgraded the plant headworks, replaced one of the secondary clarifiers, replaced all dewatering equipment and installed new odor control measures within the last five years. Going forward all chemical feed systems will be upgraded as well as significant improvement to the biological process and all ancillary equipment. It is the intension to have the plant completed refurbished within the next several years. These improvements will address all of the concerns with old and failing equipment throughout the facility.

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 11

EAST WASTEWATER TREATMENT PLANT
POTW OPTIMIZATION EVALUATION REPORT

POTW Optimization Evaluation of the Easterly Wastewater Treatment Facility for the City of Fitchburg, Massachusetts

January 2012

WRIGHT-PIERCE
Engineering a Better Environment

10.3 RECOMMENDED CAPITAL IMPROVEMENTS PLAN

As noted in Section 1, three capital improvement projects are proposed to carry out the improvements needed to bring the Easterly WWTF into consistent compliance with discharge permit requirements as follows:

- CEPT upgrade project
- Secondary System Improvements project
- Tertiary Phosphorus Removal project

The scope of the CEPT upgrade is essentially fixed, and the project is currently in the bidding phase. While the core components are of the two remaining projects are clear, there are a wide range of additional improvements and the overall plan is summarized below. In addition, the WWTF will be carrying out a number of important improvements, and these are summarized below as well.

10.3.1 Secondary System Improvements Project

The secondary system improvements project will include upgrades to existing secondary system equipment in need of replacement, process modifications to increase the peak flow capacity of the secondary system, and upgrades to raise the hydraulic grade in the second stage system to allow gravity flow through the future tertiary solids removal process. In addition, any recommended improvements in the First and Second Stage Pump Galleries are proposed to be carried out as part of this upgrade. The evaluation of emergency power needs is recommended to be carried out prior to the design of the secondary system improvements, and implementation of the improvements needed to extend emergency power to the secondary system should be

included as part of the improvements. The overall scope of the improvements includes the following:

- Add flow distribution baffles to the Main Distribution Structure;
- Replacement of the second stage aeration blowers with new high efficiency integrally-geared blowers rated for the higher backpressure.
- Replacement of two of the first stage aeration blowers with new high efficiency integrally-geared blowers.
- Modification of the outlet of the second stage aeration basins to raise the launder walls and install new fixed weirs.
- Replace the adjustable weirs at the outlet of the first stage aeration basins with new fixed weirs
- Installation of selector zones in the first and second stage aeration basins. The selector zones in the second stage would be designed for the increase in water depth. Each selector zone would have mechanical mixing installed to keep the mixed liquor in suspension.
- Replacement of remaining first-stage clarifier mechanism and rehabilitation of the concrete including coating of the existing inset launders.
- Replacement of the two second-stage clarifier mechanisms with new mechanisms designed for a 2-foot increase in hydraulic grade; demolition of the existing inset launders, and construction of new launders at the outside wall.
- Replacement of the first and second stage RAS pumps, VFDs, and flow meters. The second stage RAS pumps would be replaced with units with higher pumping capacity, which will allow higher secondary system capacity.
- Replace the WAS pumps and VFD in the First and Second Stage Pump Galleries. Additionally, the Second Stage Pump Gallery does not have a stand-by WAS pump, and the third pump should be included as part of the improvements.
- Replace the Skimmings pumps in the First and Second Stage Pump Galleries.
- Replace the Settled Effluent flow meter in the Second Stage Pump Gallery with a smart meter that can be tied into the SCADA system.

- Replace the hypochlorite feed pumps for the secondary bypass, and modify the piping within the Second Stage Pump Gallery to alleviate problems with off-gassing of the hypochlorite;
- Upgrade the controls for the Basin Drain Pump Station.
- Replace the submersible pumps and controls at all Underdrain Wetwells.
- Replace all flap style pressure relieve valves with new duckbill type.
- Replace City Process water piping to the First Stage Pump Gallery
- Evaluate back-up power alternatives to provide adequate back up power to serve the entire liquid train plus critical solids handling facilities. Carry out improvements to main electrical distribution equipment (switchboards, etc) as necessary to implement the recommended plan for upgrading the emergency power system.
- Upgrade the MCCs at the First and Second Stage Pump Galleries and the Blower Building.
- Upgrade the SCADA system and controls for the secondary system improvements.
- Upgrade the control system for bi-sulfite addition to improve ease of use and enhance performance;
- Carry out any necessary modifications to the heating and ventilation systems and roofing of the First and Second Stage Pump Galleries.
- Replace the city water flow meters in the Boiler Room and the APC Building with smart meters that can be tied into the SCADA system.

10.3.2 Tertiary Phosphorus Removal Project

The tertiary phosphorus removal project is proposed to include the additional upgrades needed to address any remaining equipment replacement needs. Thus, the overall scope includes the following components:

- New Ballasted Flocculation facility designed to treat the secondary effluent and bypass flow, and meet total phosphorus limit of 0.2 mg/l. The system will be designed with capacity to achieve a potential future limit of 0.1 mg/l. With the proposed secondary system improvements, it will be possible to design the ballasted flocculation facility for gravity flow.

- New chemical storage facilities adjacent to the Chlorination Building for storage of ferric chloride, polymer, and neutralization agent as needed for the ballasted flocculation process.
- Replace the existing disinfection hypochlorite storage tank with two new storage tanks for redundancy
- Replace the existing bi-sulfite storage tank with two new storage tanks for redundancy.
- Replace city process water piping to Chlorination Building.
- Install new settled effluent intake at outlet end of CCTs (before the overflow weirs).
- Provide new electrical service to Ballasted Flocculation facility, and relocate electrical power supply for the Chlorination Building to the new service.
- Upgrade SCADA system to incorporate new Ballasted Flocculation facility.
- Upgrade heating and ventilation system and roofing of Chlorination Building as necessary.
- Construct new inlet box to CCT for tertiary effluent, and replace the two existing sluice gates in the existing inlet box of the CCT;
- Replace the Primary Sludge Pumps and VFDs. This should include provision of a standby pump.
- Replace the primary skimmings pump.
- Replace the gravity thickener mechanisms.
- Replace teh thickened primary sludge pumps.
- Installation of a septage receiving type unit for the Merchant sludge for screening and flow measurement.

10.3.3 Additional Improvements

The WWTF staff will be carrying out a number of critical improvements as noted below:

- Replacement of the plastic chain and flight mechanisms in basins No. 1 and No. 3 with stainless steel mechanisms;
- Check, and correct as necessary, the levelness of the primary effluent weirs.

- Replacement of the fine bubble membranes in basin 2 of the first stage and both of the second stage aeration basins. As part of this effort, clean out any grit and rags accumulated in the basins.

In addition, a number of significant maintenance needs were identified that the WWTF staff will be addressing:

- The flow meters and samplers throughout the facility will be calibrated in accordance with manufacturer's recommendations. The calibration will be confirmed on an annual basis at a minimum.
- Pressure washing of the 48" line from the Influent Manhole to the Aerated Grit Tanks to flush accumulated grit, and minimize the headloss in the interceptor leading to the WWTF.
- Pressure washing of the screening channels and 48-inch pipes from the mechanical bar screens to the primary flow splitter structure, and of the 30-inch, 24-inch, and 16-inch lines from the primary flow splitter structure to the primary clarifiers.
- Take each aeration basin off-line once per year for cleaning of the diffuser to remove biological fouling and enhance the oxygen transfer efficiency.

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 12

SUPPLEMENTAL ENVIRONMENTAL PROJECT (SEP)

FALLULAH BROOK AT COOLIDGE PARK
STORMWATER QUALITY AND SLOPE STABILIZATION PROJECT

City of Fitchburg
Supplemental Environmental Project

Fallulah Brook at Coolidge Park
Stormwater Quality and Slope Stabilization Project

The Wallace Civic Center at Fitchburg State University is located on the north side of Coolidge Park. The civic center includes two buildings that mainly serve as ice skating arenas as well as a planetarium. The civic center's north parking lot is located immediately adjacent to Fallulah Brook, and stormwater runoff discharges directly into the brook via paved swales. The untreated runoff carries sand and salt into the brook as well as oil and grease from the paved surface. The City of Fitchburg proposes that bioretention areas or rain gardens be installed between the parking lot and brook to allow stormwater from the parking lot to filter through the treatment device prior to discharge to the brook. Collecting and treating stormwater with rain gardens will improve water quality by reducing the sand, salt, grease and oil that enters the brook. Plants and soils in the rain gardens will remove nutrients such as phosphorous and nitrogen from the runoff. The work would consist of the following, as shown on the attached plan (Figure No. 1) and cross-section (Figure No. 2):

- Clear and grub an approximate 20-foot width adjacent to Fallulah Brook, abutting the paved bituminous parking lot.
- Excavate the in-situ materials to replace with crushed stone, geotextile, sandy loam growing medium, and mulch ground cover. In-situ materials excavated shall be reutilized to the extent feasible for the rain garden down-gradient berm embankment.
- Rain garden shall utilize perforated polyvinyl collection underdrain to collect the filtered rain garden treated water, and an overflow inlet to bypass runoff flows exceeding the capacity of the rain gardens.
- Rain gardens shall be planted and vegetated with a mixture of New England native herbaceous perennials, shrubs and understory trees that can tolerate intermittent ponding and occasional saline conditions that result from road deicing treatments.
- Remove existing paved swales, replacing with riprap lined inlet swales to the rain gardens. Additional curb cuts shall be added in the existing abutting bituminous berm to facilitate inflow to the rain gardens.

We estimate that 440 linear feet of rain gardens will be installed to intercept runoff from the paved parking lot at a cost of $100,000.

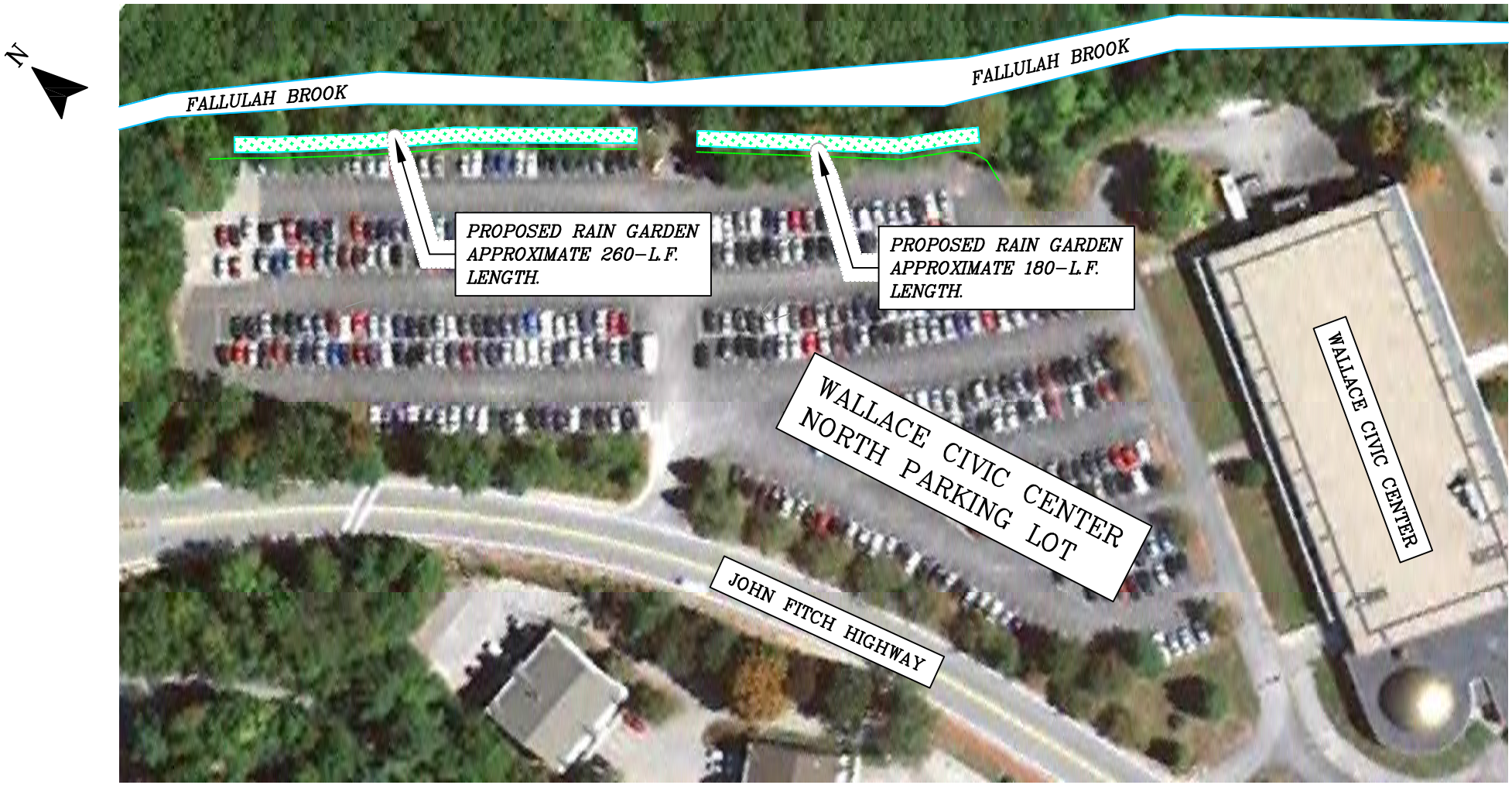
Coolidge Park is Fitchburg's largest park for active recreation, encompassing 79 acres off John Fitch Highway and including hiking trails, playing fields, basketball courts, deck hockey rinks, playground equipment and an outdoor swimming pool. Fallulah Brook traverses the east edge of the park, and its banks have been subject to significant erosion in recent years, degrading water quality in the brook which ultimately feeds into the Nashua River, and encroaching upon the popular walking path that encircles the park.

The City of Fitchburg has performed slope stabilization along parts of the brook in 2007 and 2010, but more work is required. The work would consist of the following, as shown on the attached plan (Figure No. 3) and cross-section (Figure No. 4):

- Cut back existing eroded bank to 3H:1V slope on west bank and 2H:1V slope on east bank.
- Slope that abuts Coolidge Park is to be cleared of organic soils until granular gravel is encountered.
- Install geotextile fabric on native gravel and place 1-1/2" to 3" layer of crushed stone bedding.
- Place rip-rap (12"-18" max) on slope and chink with smaller stones to provide a stable slope.
- Erosion control barrier (Granite curb or similar) shall be installed where runoff from walking path might enter the brook.
- Disturbed areas above the rip-rap slope are to be loamed and seeded.
- Place boulders in select areas of stream bed to reduce stream velocity.

We estimate that 300 linear feet of slope will be stabilized at a cost of $100,000.

The total cost for the proposed Stormwater Quality and Slope Stabilization Project is estimated at $200,000. The final completion date for the proposed Stormwater Quality and Slope Stabilization Project is October 31, 2013.

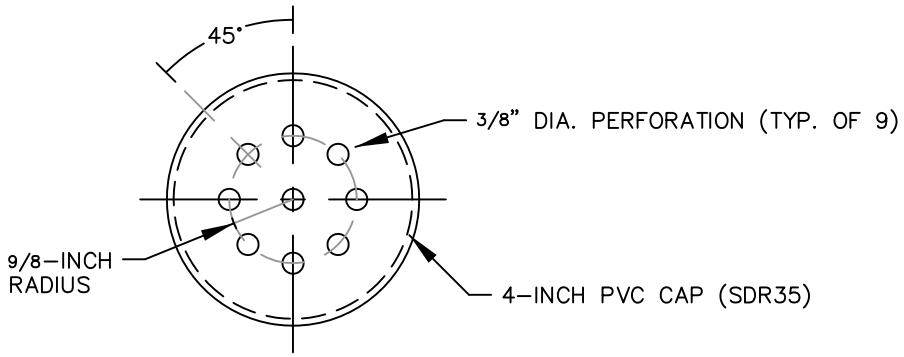


CITY OF FITCHBURG, MA
WASTEWATER DEPARTMENT

SEP PROJECT PLAN
COOLIDGE PARK – PARKING LOT RAIN GARDENS
APPROX. SCALE: 1" = 100')

Figure No.

1



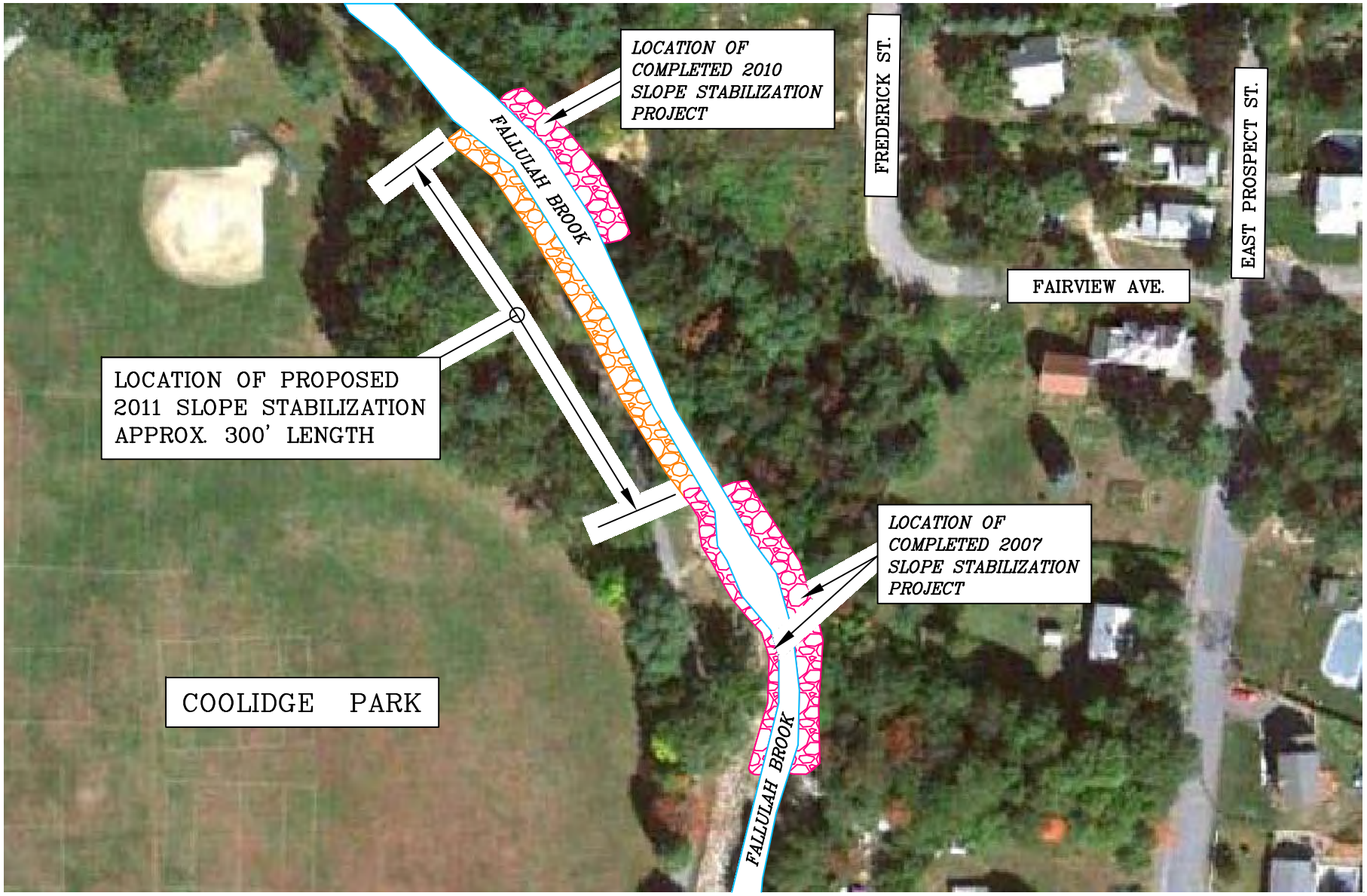
OVERFLOW CAP PENETRATIONS DETAIL

CITY OF FITCHBURG, MA
WASTEWATER DEPARTMENT

SEP PROJECT DETAIL
COOLIDGE PARK – PARKING LOT RAIN GARDENS
(NO SCALE)

Figure No.

2

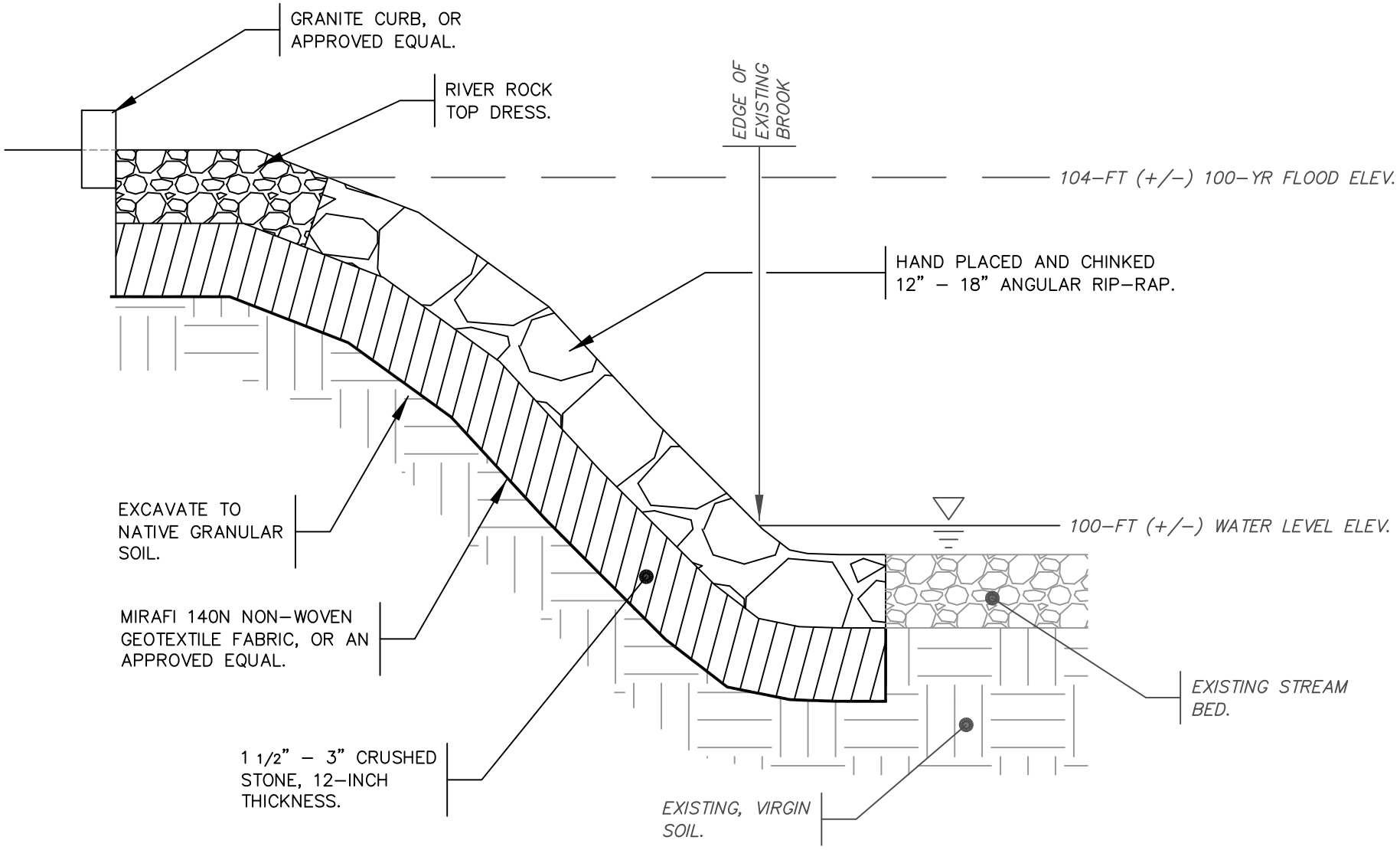


CITY OF FITCHBURG, MA
WASTEWATER DEPARTMENT

SEP PROJECT PLAN
FALLULAH BROOK BANK STABILIZATION
(APPROX. SCALE: 1" = 100')

Figure No.

3



CITY OF FITCHBURG, MA
WASTEWATER DEPARTMENT

SEP PROJECT DETAIL
HARD–ARMOR SLOPE STABILIZATION
(NO SCALE)

Figure No.

4

CITY OF FITCHBURG

FINAL CONSENT DECREE, ATTACHMENTS

ATTACHMENT NO. 13

MASSDEP BRP WASTEWATER MANAGEMENT PROGRAM

SANITARY SEWER OVERFLOW (SSO)/BYPASS NOTIFICATION FORM

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Management Program

Sanitary Sewer Overflow(SSO)/Bypass Notification Form

Instructions

Who must notify DEP about an overflow or bypass, and when?

Any owner or operator of the following facilities:

- Municipal, state, federal, regional, industrial or other private wastewater collection system;
- Wastewater utility;
- Wastewater treatment works;
- Facility with a groundwater discharge permit;
- Facility with a surface water discharge permit.

This requirement includes any owner or operator of a municipal collection system or other collection system that discharges into facilities not under the same ownership and control.

The following situations require notification to DEP:

- An un-permitted overflow or bypass;
- In a combined sewer system, an overflow or bypass at a location not covered by a NPDES permit, or from a portion of the system that has a separate sanitary sewer.

What are the procedures for reporting?

Step One:

Provide immediate telephone notification to the appropriate MA DEP Regional Office.

Northeast Region (Wilmington)	978-694-3215
Central Region (Worcester)	508-792-7650
Southeast Region (Lakeville)	508-946-2750
Western Region (Springfield)	413-784-1100

If you are not sure which Massachusetts DEP Regional Office oversees your facility, go to http://www.mass.gov/dep/about/region/findyour.htm.

Outside regular business hours or on weekends and holidays, contact the Emergency Response section at DEP: 617-556-1133 (Boston Area) or 1-888-304-1133 Toll-Free.

Check your discharge permit for other instructions on notifying DEP.

Hazardous Material Releases: If you believe an overflow, bypass, or any other discharge may have resulted in an oil or hazardous material release, report it to DEP at any time, 24 hours a day, at this toll free number: 1-888-304-1133.

Step Two:

Submit a written report to DEP within five (5) days of the time you become aware of the overflow, bypass or backup. DEP strongly encourages you to use the form below. You may fill out the form on the computer, or print it and fill it out by hand. See form or instructions for DEP fax numbers and mailing addresses.

The written report must contain:

Description of the overflow, or bypass, including exact dates and times, and if the situation has not been corrected, the amount of time it is expected to continue.

Sanitary Sewer Overflow(SSO)/Bypass Notification Form

Instructions

Steps taken or planned to reduce, eliminate, and prevent recurrence. You may include actions you took or you plan to take with this initial *Notification Form* or in a follow-up report.

If you have a discharge permit, check the Monitoring and Reporting Section of your permit to determine if your *Notification Form* should be sent to the attention of DEP's regional Bureau of Waste Prevention (industrial facilities) or the regional Bureau of Resource Protection (nonindustrial facilities). All municipal facilities submit their reports to the Bureau of Resource Protection.

Mail or fax the *Notification Form* to the attention of the Bureau of Waste Prevention or the Bureau of Resource Protection in your DEP regional office:

- Massachusetts Department of Environmental Protection, Northeast Regional Office, 205B Lowell Street, Wilmington, MA 01887. Fax: 978-694-3499.
- Massachusetts Department of Environmental Protection, Central Regional Office, 627 Main Street, Worcester, MA 01608. Fax: 508-792-7621.
- Massachusetts Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347. Fax**:** 508-947-6557.
- Massachusetts Department of Environmental Protection, Western Regional Office, 436 Dwight Street, Springfield, MA 01103. Fax: 413-784-1149.

What should I do if I'm not sure of the information I am providing?
For required items such as time of occurrence, causes of incident, volume of overflow, etc., PROVIDE YOUR BEST ESTIMATE OR ASSESSMENT AT THE TIME OF THIS REPORT. You can submit any additions or corrections later.

What is the best way to report the exact location of the overflow, or bypass?
Include with your *Notification Form* a copy of a map indicating its location. Please use 8 ½ " by 11" paper at an appropriate scale between 1:5000 to 1:25000. Specifying the geographic location will help DEP determine the public health and water quality impacts associated with overflows and bypasses.

Why do I need to report backups into buildings?
DEP wants to ensure that sewage backups into buildings as a result of problems in the sewer system are properly repaired and measures are put in place to reduce the likelihood of recurrence. Owner/operators of sewer systems that caused a backup may need to repair, rehabilitate, or upgrade the hydraulic capacity of their system, or change their operations and maintenance procedures.

Are there some overflows or Bypass that are not subject to these reporting requirements?
DO NOT use the *Sanitary Sewer Overflow(SSO)/Bypass Notification* Form in the following situations:

- The overflow is from a properly permitted Combined Sewer Overflow structure. Follow the reporting requirements in your NPDES Permit.
- You are reporting an overflow or bypass of sewage for a collection system or treatment works that is not under your ownership and control. However, please assist DEP by immediately reporting to the appropriate DEP Regional Office by phone or fax any overflows or bypass incidences for facilities other than your own.

Sanitary Sewer Overflow(SSO)/Bypass Notification Form

Instructions

What are the state regulations that apply to this notification? Where can I get copies?

These regulations include, but are not limited to:

- Surface Water Discharge Regulations, 314 CMR 3.00
- Groundwater Discharge Regulations, 314 CMR 5.00
- Sewer Connection Regulations, 314 CMR 7.00
- Operation and Maintenance Regulations, 314 CMR 12.00

Official copies of the regulations may be purchased at:

State Bookstore
State House, Room 116
Boston, MA 02133
617-727-2834

State Bookstore
436 Dwight Street
Springfield, MA 01103
413-784-1376

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

A. General Information

1. Facility Information

a. Reporting Facility Permit Number

b. Name of Collection System/Treatment Works

2. Authorized Representative filing this notification form:

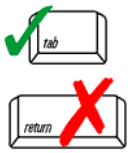
a. First Name | b. Last Name | c. Telephone (10)

d. Title of Authorized Representative | e. E-mail Address of Authorized Representative

3. Event Report Information

a. Are you reporting: ☐ 1. Unanticipated SSO or Bypass ☐ 2. Anticipated SSO or Bypass

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



See DEP Regional Office telephone and fax numbers at the end of this form.

B. Phone Notifications Made, if any:

1. **MassDEP person** contacted: a. first name | b. last name

Date/Time MassDEP contacted by phone: c. Date (mm/dd/yyyy) Time: d. hh:mm ☐ e. am ☐ f. pm

2. **EPA person** contacted: a. first name | b. last name

Date/Time EPA contacted by phone: c. Date (mm/dd/yyyy) Time: d. hh:mm ☐ e. am ☐ f. pm

3. Others notified (select all that apply): ☐ a. Conservation Commission ☐ b. Board of Health ☐ c. Harbormaster ☐ d. Downstream WS ☐ e. Watershed Association ☐ f. Shellfish Warden ☐ g. Other: h. Specify

C. General Information About SSO/Unanticipated Bypass

1. When did the event occur? a. Date (mm/dd/yyyy) Time: b. hh:mm ☐ c. am ☐ d. pm

2. Location of event: a. Number and Street (or closest address) | b. latitude | c. longitude

3. Estimated volume of overflow discharge at the time of this report:

a. Estimated Volume:

b. Method of estimating volume:

4. Where did the overflow discharge to? (e.g., surface water, ground)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

C. General Information About SSO/Unanticipated Bypass (cont.)

5. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ h. Other: _____ i. Specify

6. Have corrective actions been completed? ☐ a. Yes ☐ b. No ☐ c. No Action Required

7. Corrective measures taken (select all that apply, or use Section E to attach additional comments):

☐ a. repaired sewer/cleared blockage ☐ b . repaired pump/lift station ☐ c. repaired service connection

☐ d. drained or pumped sewage out of building ☐ e. disinfection treatment ☐ f. backflow prevention device installed

☐ g. Other: _____ h. Specify

D. General Information About Anticipated Bypass

1. When will the bypass occur? _____ a. Date (mm/dd/yyyy) Time: _____ b. hh:mm ☐ c. am ☐ d. pm

2. Where will the bypass occur? _____ a. Number and Street (or closest address) _____ b. latitude _____ c. longitude

3. Estimated volume of overflow discharge at the time of this report**:**

a. Estimated volume: _____

b. Method of estimating volume: _____

4. Identify causes of/reasons for the event: (select all that apply)

☐ a. rain ☐ b. snowmelt ☐ c. high groundwater

☐ d. insufficient capacity ☐ e. sewer system blockage or collapse

☐ f. pump/lift station failure ☐ g. treatment facility equipment failure

☐ g. Other: _____ i. Specify

5. Will an SSO occur during the bypass? ☐ a. Yes

a.1. Where will SSO discharge to? _____

A 5-day follow-up report is required for the SSO.

☐ b. No

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program

Sanitary Sewer Overflow (SSO)/Bypass Notification Form

FOR DEP USE ONLY

Tax Identification Number

D. General Information About Anticipated Bypass (cont.)

Please be advised that if the anticipated bypass detailed above results in an unanticipated bypass/SSO, MassDEP must be notified within 24 hours and a new form completed.

Please provide comments in Section E detailing the preventive measures to be taken during the event.

E. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

☐ 1. Attachment ☐ 2. Additional comments below: ☐ 3. No additional comments or attachments

2a. Additional comments and planned actions:

F. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

1. Signature of Authorized Representative

2. Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1766	
DEP 24-hour emergency	Phone: 888-304-1133	