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December 22, 2015

Via Federal Express

Director, Compliance Assurance and Enforcement Division U.S. Environmental Protection Agency Region VI 1445 Ross Avenue Mail Code (6EN) Dallas, Texas 75202

Deputy Regional Counsel, Enforcement U.S. Environmental Protection Agency Region VI 1445 Ross Avenue Dallas, Texas 75202

Director Arkansas Department of Environmental Quality 5301 Northshore Drive North Little Rock, Arkansas 72118-5317

Re: <u>United States of America and State of Arkansas v. City of Fort Smith, Arkansas,</u> United States District Court, Western District of Arkansas – Case No. 2:14-cv-2266-PKH

Greetings:

Regarding the Root Control Program component of CMOM (paragraph 39 of the Consent Decree), the City of Fort Smith hereby submits its Root Control Program Plan for EPA review and approval. As a deliverable under paragraph 89 of the Consent Decree, the Plan is also

is also submitted to ADEQ. The submission is made in hard copy as well as in electronic and searchable text format.

Thank you for your attention to this matter.

Very truly yours, reld L. Canfield Jer

Enclosures

 cc: Chief, Environmental Enforcement Section (Via Federal Express) Environment and Natural Resources Division
 U.S. Department of Justice
 Box 7611 Ben Franklin Station
 Washington, D.C. 20044-7611
 Re: DOJ No. 90-5-1-1-08677

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CAPACITY, MANAGEMENT, OPERATIONS, AND MAINTENANCE (CMOM) PROGRAM AND IMPLEMENTATION PLAN

Root Control Program Plan

December 2015

CITY OF FORT SMITH, ARKANSAS Capacity, Management, Operation, and **Maintenance Program**

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 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.



Steve Parke, Director of Utilities City of Fort Smith, AR **Utility Department**

12/22/2015 Date

Root Control Program Plan

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ADEQ	Arkansas Department of Environmental Quality
CCA	Continuing Capacity Assurance
CCTV	Closed Circuit Television
СМОМ	Capacity, Management, Operations, & Maintenance
CSSA	Continuing Sewer System Assessment
СТР	Comprehensive Training Plan
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oil and Grease
GIS	Geographic Information System
I&I	Infiltration and Inflow
IMS	Information Management System
MACP	NASSCO's Manhole Assessment and Certification Program
MGD or mgd	Million Gallons per Day
NASSCO	National Association of Sewer Service Companies
NPDES	National Pollutant Discharge Elimination System
OERP	Overflow Emergency Response Plan
PACP	NASSCO's Pipe Assessment and Certification Program
SOP	Standard Operation Procedure
SSA	Sewer System Assessment
SSO	Sanitary Sewer Overflow
U.S.	United States
WCTS	Wastewater Collection and Transmission System
WWTP	

Definitions

Unless otherwise defined herein, or expressly stated in the City of Fort Smith Sewer Use Ordinance, terms used in in the plans comprising the CMOM Program and Implementation Plan shall have the meanings given to those terms in the CWA and the EPA Consent Decree lodged for City of Fort Smith, Arkansas. The terms and acronyms are defined as follows:

ADEQ shall mean the Arkansas Department of Environmental Quality, and any successor departments or agencies of the State of Arkansas.

Annual Report shall mean the report to be submitted annually pursuant to Section X of the Consent Decree.

Article shall mean a portion of Section V ("Comprehensive Remedial Requirements" Section) of the Consent Decree.

Basin shall mean a section of a Sewershed that is a distinct wastewater collection area, and designated by Fort Smith as such.

Building/Private Property Backup shall mean a wastewater backup into a building and/or a wastewater overflow onto private property that is caused by blockages, flow conditions or other malfunctions in the WCTS. "Building/Private Property Backup" does not include a wastewater backup into a building and/or a wastewater overflow onto private property that is caused solely by a blockage or other malfunction of a Private Service Lateral or other piping or conveyance system that Fort Smith does not own or operate.

Calendar Year shall mean the twelve (12) month period starting on January 1 and ending on December 31 of a given year.

Capacity Constraint shall mean those discrete components, or groups of components of the WCTS that are determined by the City, consistent with Section V, Article Four ("Capacity Assessment and Hydraulic Modeling") of the Consent Decree to have capacity deficiency issues that have caused or significantly contributed to previous capacity-related SSOs; that are likely to cause or significantly contribute to future capacity-related SSOs; and/or that are identified as overflow locations for any storm event presented in Section V, Article Four, Paragraph 30.

City or Fort Smith shall mean the City of Fort Smith, Arkansas.

Clean Water Act or CWA shall mean the Federal Clean Water Act found at 33 U.S.C. §§ 1251-1387.

CMOM or **Capacity, Management, Operations, and Maintenance** shall mean a program of accepted industry practices to properly manage, operate and maintain sanitary sewer collection, transmission and treatment systems, investigate capacity constrained areas of these systems, and respond to SSO events, including as identified by the Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs (EPA, Jan. 2005).

Consent Decree or **Decree** shall mean the Decree (and all Appendices) lodged by the U.S. EPA against the City of Fort Smith.

Consultant shall mean a professional engineer licensed in the State of Arkansas or other recognized professional within a field of practice, with appropriate qualifications, experience and adequate staff and resources necessary to undertake any program plan, study, analysis, design or report required by the terms of the Consent Decree.

Contractor shall mean a person or entity who in pursuit of its business undertakes to perform a job or piece of work, retaining in himself control of means, method and manner of accomplishing the desired result.

Critical Response Time shall mean the time interval between activation of the high wet well level alarm at a Pump Station and the first SSO from the WCTS tributary to that Pump Station under peak dry-weather flow conditions or under peak wet-weather flow conditions (generated by the analysis rainfalls presented in Section V, Article Four ("Capacity Assessment and Hydraulic Modeling") of the Consent Decree), whichever weather conditions prevail at the time of the SSO.

Cross-Connection shall mean any constructed connection, whether by pipe or any other means, between any part of the WCTS and any part of a storm water drainage system that is capable of conveying flow between the two systems.

Date of Lodging shall mean the date the United States filed a copy of the Consent Decree signed by all Parties with the District Court, along with the Complaint, prior to submitting the Consent Decree for publication in the Federal Register to provide an opportunity for public review and comment thereon. The Date of Lodging for the City's Consent Decree is January 02, 2015 (1/2/2015).

Day or **Days** shall mean a calendar day or calendar days unless expressly stated to be a business day or business days. In computing any period of time under the Consent Decree, where the last Day would fall on a Saturday, Sunday, or a Federal or State holiday, the period shall run until the close of the next business day.

Deliverable shall mean any written document required to be prepared and/or submitted by or on behalf of Fort Smith pursuant to the Consent Decree.

Direct Discharge shall mean a sewer pipe installed to convey wastewater from a sanitary sewer for release into the environment.

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

Equalization Facilities or **EQ Facilities** shall mean those components of the WCTS designated, designed or intended for the temporary storage of wet-weather wastewater flows.

Fats, Oil and Grease or **FOG** shall mean fats, oil and grease, whether petroleum-based, mineral-oil-based, animal-based or vegetable-based.

FOG Control Device shall mean any grease interceptor, grease trap, or other mechanism, device, or process that attaches to or is applied to wastewater plumbing fixtures and/or Private Service Lines to collect, contain, or remove FOG from the wastewater stream of a FOG Generator prior to discharge into the WCTS.

FOG Control Program Plan or **Fats, Oil and Grease Control Program Plan** shall mean Fort Smith's program to control discharge of FOG into the WCTS as developed and approved under **Section V**, **Article Seven, Paragraph 37** of the Consent Decree.

FOG Generator shall mean any food service establishment or food-processing establishment that discharges FOG into the WCTS, provided, however, that those establishments covered by the City's industrial user program shall not be considered a FOG Generator for the purposes of the Consent Decree.

Force Main shall mean any pipe that receives and conveys, under pressure, wastewater from the discharge side of a pump. A Force Main is intended to convey wastewater under pressure.

Gravity Sewer Line shall mean a pipe that receives, contains and conveys wastewater not normally under pressure, but intended to flow unassisted under the influence of gravity.

Small-Diameter Gravity Sewer Lines shall mean Gravity Sewer Lines that are less than twenty-four (24) inches in diameter.

Large-Diameter Gravity Sewer Lines shall mean Gravity Sewer Lines that are twenty-four (24) inches or greater in diameter.

Infiltration as defined by 40 C.F.R. § 35.2005(b)(20) shall mean water other than wastewater that enters a WCTS (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes.

Inflow as defined by 40 C.F.R. § 35.2005(b) (21) shall mean water other than wastewater that enters a WCTS (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm water, surface runoff, street wash waters, or drainage.

Infiltration and Inflow or **I&I** shall mean the total quantity of water from Infiltration and Inflow without distinguishing the source.

Interest shall mean interest accruing on a sum calculated in the manner provided by 28 U.S.C. § 1961.

Manhole Assessment and Certification Program or MACP shall mean the National Association of Sewer Service Companies (NASSCO) Manhole Assessment and Certification Program.

Massard Permit shall mean NPDES Permit Number AR0021750 issued to City pursuant to Section 402 of the Clean Water Act, 33 U,S. § 1342, and the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-10, et seq., for the Massard POTW and any future extended, modified or reissued permit.

Massard WWTP shall mean the publicly owned treatment works that is owned and operated by the City and that is located in Fort Smith with an address of **1609 North 9th Terrace, Barling, Arkansas**.

Month shall mean one calendar month running from a numbered day to the same numbered day of the following calendar month, regardless of whether the particular month has 28, 29, 30, or 31 days. If a triggering event would occur on a day of the month that does not exist (for example, February 30), then the event shall be due on the first day of the following month (for example March 1).

NASSCO shall mean the National Association of Sewer Service Companies.

P Street Permit shall mean NPDES Permit Number AR0033278 issued to City pursuant to Section 402 of the Clean Water Act, 33 U.S.C. § 1342, and the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-10, et seq., for the P Street POTW and any future, extended, modified or reissued permit.

P Street WWTP shall mean the publicly owned treatment works that is owned and operated by City and that is located at **13 North P Street in Fort Smith, Arkansas**.

Pipe Assessment and Certification Program or **PACP** shall mean the NASSCO Pipe Assessment and Certification Program.

Pipe Segment shall mean the portion of a Gravity Sewer Line extending from manhole to manhole.

Private Service Line shall mean a sewer line which is not owned or operated by City, but which conveys wastewater from a building to a main line of the WCTS.

Private Service Line Release shall mean any spill, release, or diversion of sewage from a Private Service Line to any location other than the WCTS caused solely by a blockage or other malfunction in that Service Line, even if the release does not reach Waters of the State or waters of the United States.

Pump Station or **Pumping Station** shall mean facilities owned or operated by Fort Smith that contain pumps that lift wastewater from a lower to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of that Pump Station within the WCTS.

Recurring Private Service Line Release shall mean a Private Service Line Release that has occurred within three (3) years of a prior Private Service Line Release at the same location.

Recurring SSO, Recurring Dry-Weather SSO, and **Recurring Wet-Weather SSO.** A "Recurring SSO" shall mean any SSO that has occurred within three (3) years of a prior SSO that occurred at the same location under any weather conditions (wet or dry). A "Recurring Dry-Weather SSO" shall mean an SSO that has occurred during dry weather within three (3) Years of a prior SSO at the same location that also occurred during dry weather. A "Recurring Wet-Weather SSO" shall mean an SSO that has occurred during we weather within three (3) Years of a prior SSO at the same location that also occurred during we weather within three (3) Years of a prior SSO at the same location that also occurred during we weather within three (3) Years of a prior SSO at the same location that also occurred during we weather.

Remedial Measures shall mean spot repairs, trenchless sewer rehabilitation, sewer replacement, repair or reconstruction, and any other appropriate WCTS improvement technique for resolving condition deficiencies and/or capacity deficiencies in a particular system asset or group of assets within the WCTS, in accordance with **Appendix D** of the Consent Decree ("Remedial Determination Process"), that have caused or significantly contributed to previous SSOs, and/or, that are likely to cause or significantly contribute to future occurrence of SSOs.

Sanitary Sewer Overflow or **SSO** shall mean any spill, release, or diversion of sewage from the WCTS, including: (1) an overflow that results in a discharge to Waters of the State or waters of the United States, and (2) an overflow of wastewater, including a wastewater backup into a building or wastewater overflow onto private property, such as a Building/Private Property Backup (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building

lateral (i.e. a "Private Service Line")), even if that overflow does not reach Waters of the State or waters of the United States.

Sewershed shall mean a section of City's WCTS that is a distinct drainage or wastewater collection area and designated as such by City for the P Street WWTP and the Massard WWTP.

State of Arkansas or State shall mean the State of Arkansas acting on behalf of ADEQ.

Sub-basin shall mean a section of a Basin that is a distinct wastewater collection area and designated by Fort Smith as such.

Tabulation shall mean a document in a format containing text searchable cells or fields that is also sortable by data category.

United States or U.S. shall mean the United States of America, acting on behalf of EPA.

Wastewater Treatment Plant or WWTP shall mean the Massard or P Street wastewater treatment plants and components thereof.

Wastewater Collection and Transmission System or WCTS shall mean the sanitary sewer collection, retention and transmission systems for both the Massard WWTP Sewershed and the P Street WWTP Sewershed, including all pipes, Force Mains, Gravity Sewer Lines, Pump Stations, EQ Basins, manholes and appurtenances thereto, that are owned or operated by City at any time from the Date of Lodging of the Consent Decree until its termination under Section XXIV.

Waters of the State shall mean all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies of accumulations of water, surface and underground, natural and artificial, public or private, which are contained within, flow through, or border upon the State of Arkansas, or any portion of the State of Arkansas, as defined in Ark. Code Ann. §84-102(10).

Year shall mean a twelve month period regardless of the beginning date. In the event a triggered event shall be due on a year ending date that does not exist (for example, February 29 in some years), then the event shall be due on the first day of the following month (for example, March 1).

Capacity, Management, Operation, and Maintenance (CMOM) Program Summary and Intent

On January 2, 2015, the City of Fort Smith, Arkansas (City) entered into a Consent Decree with the United States Environmental Protection Agency (EPA) and the State of Arkansas to address deficiencies within the City's wastewater collection and transmission system (WCTS). Per Section V, Article Seven of the Consent Decree, the City will prepare an effective WCTS Capacity, Management, Operation, and Maintenance Program ("CMOM Program") consistent with EPA's 2005 Guidance entitled "Guide for Evaluating Capacity, Management Operation and Maintenance Programs at Sanitary Sewer Collection Systems." All components of the CMOM Program, as set forth in Paragraphs 37-56, shall be submitted in report form to EPA for review and approval at a date no later than two (2) years from the Date of Lodging, with shorter submission dates for certain components. The Date of Lodging for the Consent Decree has been established as January 2, 2015.

The aggregate CMOM Program is comprised of 13 separate components that were developed to address deficiencies within specific elements of the City of Fort Smith's WCTS. Upon approval by EPA, each of the respective CMOM components is intended to be used by the City of Fort Smith as guidelines for the implementation of a defined set of procedures to satisfy the long-term requirements of EPA and promote compliance with the Clean Water Act (CWA).

Section 1 Consent Decree Requirements of the Root Control Program Plan

The Root Control Program Plan described herein has been prepared to satisfy the requirements set forth in Article Seven, Paragraphs 39 and 40 of the Consent Decree and must be submitted to EPA for review no later than twelve (12) months from the Date of Lodging of the Consent Decree (i.e., by December 31, 2015). Following EPA's approval, the City will initiate the implementation of the Root Control Program. **Table 1-1** includes a list of the Consent Decree requirements for the Root Control Program and the corresponding section of this document that addresses each requirement.

Consent Decree Paragraph	Consent Decree Requirement	Root Control Program Plan Section
39.a.	Methods for identifying when roots are the primary or contributing cause of an Sanitary Sewer Overflow (SSO)	3.1
39.b.	Plan for the reactive removal of root intrusions when City determines that roots were the cause or a contributing cause to an SSO	3.2
39.c.	Plan for proactively preventing root intrusions from causing or contributing to SSOs, whether by use of chemicals or by physical means, particularly in those Pipe Segments where root intrusions have occurred in the past	3.2, 3.3
39.d.	Plan for repairing or replacing Pipe Segments that have been damaged by roots	3.4
39.e.	Plan for notifying private property owners whenever City obtains information that roots in Private Service Lines have apparently caused or contributed to the occurrence of a Private Service Line Release and a procedure for addressing defects in Private Service Lines in accordance with the Private Service Line Defect Remediation Program in Paragraph 54	3.5
40.	City shall report the Root Control Program activities performed in each Calendar Year in the Annual Report for that Calendar Year as described under Section X ("Reporting") of this Consent Decree	4.2

Table 1-1 Summary	v of Consent Decree Red	quirements for the Root Contr	ol Program
			0

Section 2 Purpose and Goals of the Root Control Program

The Root Control Program is a component of the City's comprehensive CMOM Program and is intended to reduce, mitigate, and prevent future SSOs caused by root intrusion blockages within the system's gravity sewer pipelines. Due to the moist and nutrient-rich environment inherent within gravity sewer lines, roots from adjacent trees can migrate towards, and ultimately into, sewer pipes when defects in the pipe are present. As the root growth into the pipe continues, it can result in adverse effects to the line segment such as reduction in hydraulic capacity, and increased potential for sewer blockages. In severe cases, the root intrusions can undermine the structural integrity of the pipe, thus, increasing the potential for a pipe collapse. By addressing the growth before obstruction of the flow (or structural damage to piping) occurs, more serious consequences may be averted.

The Root Control Program is comprised of the following elements:

- Identifying Root Intrusions Contributing to SSOs;
- Mechanical Abatement for Root Intrusions;
- Chemical Abatement for Preventing Root Intrusions;
- Repairing/Replacing Damaged Pipe Segments Allowing Root Entry; and
- Addressing Root Intrusions on Private Service Lines.

The goal of the Root Control Program is to eliminate the recurrence of preventable and chronic SSOs caused by root intrusion. Doing so helps protect public health, reduces adverse impacts to the environment, improves the efficiency of the collection system, and better ensures compliance with regulatory requirements.

Once implemented, the Root Control Program is intended to be a predominantly preventative maintenance component of the City's CMOM Program. The immediate response to root blockages contributing to SSOs is by mechanical root cutting, which is conducted through the Gravity Sewer Line Cleaning Program.

Section 3 Elements of the Comprehensive Root Control Program

3.1 Identifying Root Intrusions Contributing to SSOs

Implementation of the Root Control Program begins with the identification of locations prone to root intrusion, particularly those locations where root intrusions have caused or contributed to SSOs. Per the Sanitary Sewer Overflow Emergency Response Plan (OERP), following a blockage-related SSO, the City shall perform an investigation to determine the cause of the SSO event. The causes will be tracked by the Information Management System (IMS) as either contributory cause or primary cause.

In order to identify locations prone to roots, data, including SSOs caused by roots, closed circuit television (CCTV) inspection identifying the presence of roots, and historical root problem areas, will be collected and mapped for analysis. The mapping will be used to identify locations needing potential root control, prioritizing those areas, and determining the appropriate response. Where the results of this analysis identify the need for root control, one of the methods described within this Plan will be used, or the problem will be referred to the City's Condition Remedial Measures Program.

The City has sewer mapping software that is capable of simple mapping; however, a more functional sewer mapping system is planned as part of future enhancements once the IMS plan has been approved and implemented. The sewer condition assessment data will be incorporated into the City's mapping system as part of the IMS. A sewer condition database will be created for use in identifying areas with chronic or densely grouped root intrusion within the gravity sewer system. The database will utilize tools to aid in the interpretation of the data collected in the field over time. Following the implementation of root control measures in previously-identified problematic areas; or, as new areas of excessive root intrusion are identified within the system, the information will be updated accordingly in the sewer condition database. By maintaining accurate records, the City can more effectively identify scheduling needs for routine cleaning and maintenance or other root mitigation measures.

3.2 Mechanical Abatement for Root Intrusion

As part of the CMOM Program, the City's Utility Department will maintain "in-house" capabilities to provide reactive response operations, in the form of mechanical root abatement, in the event that an SSO due to root intrusion were to occur or a root blockage was encountered during routine maintenance. The mechanical root control equipment currently owned and operated by the Utility Department includes two hydraulic jetters and one hydraulic cutter. The Utility Department may also enlist a contractor to assist with mechanical root abatement.

When reactive maintenance is required to alleviate an acute/critical root blockage, particularly in instances where a root blockage is contributing to an SSO event, hydraulic cleaning and

mechanical root removal will be used. Upon completion of mechanical root abatement, the condition of the cleared segment of sewer will be updated accordingly in the IMS.

Maintaining current and historical records will aid in identifying problematic areas of root intrusion. Once these problematic areas are identified, they can be scheduled for proactive post-mitigation inspection, and if necessary, undergo additional mechanical and/or chemical root abatement.

3.3 Chemical Abatement for Preventing Root Intrusions

Chemical root control treatment will be used as a proactive approach to mitigating sewers that are prone to significant and/or multiple root intrusions where other condition remedial measures are not warranted, where other capacity remedial measures are not planned (in the near term), and where other targeted cleaning and monitoring are not an appropriate means of preventing SSOs.

Prior to the application of the chemical, the downstream wastewater treatment plant will be notified of the chemical treatment activities, along with information on the specific type and quantity of chemical being used. A contact time of around two (2) hours is required to effectively kill the roots within the pipeline, but it typically takes between two (2) and six (6) months for the treated roots to decay and drop off. Upon completion of a chemical root control application, the treated pipelines will be monitored to measure the effectiveness of the treatment. When chemicals are applied in specific lines for roots removal, the pipes receiving chemical treatment should not be cleaned within six months after that application. For this reason, the treated lines will be identified within the IMS to notify cleaning crews of recent chemical treatment application.

3.4 Repairing/Replacing Damaged Pipe Segments Allowing Root Entry

In certain locations, the City will be required to repair or replace segments of pipe damaged by root intrusion or where root intrusion was located near and within areas needing other condition-related remedial measures. These repairs will be performed on pipe segments where the structural integrity of the pipe is of concern (e.g., structural ratings of 4 or 5 based on the National Association of Sewer Service Companies rating system). Repair or replacement of pipe segments due to root damage may be executed in coordination with the City's Condition Remedial Measures Program.

3.5 Addressing Root Intrusions on Private Service Lines

If the City observes that roots originating from a Private Service Line have caused or contributed to an SSO or are likely to cause or contribute to an SSO in the WCTS, the City will proceed with root mitigation activities in order to restore capacity of the WCTS and prevent a future SSO. The City will not remove roots from the Private Service Line. If roots are identified by the City to be in a Private Service Line, regardless of whether a Private Service Line Release has occurred, the issue is referred to the Private Service Line Defect Remediation Program.

Section 4 Record Keeping and Reporting

4.1 Record Keeping

As required by the Consent Decree, records associated with the Root Control Program will be saved in the City's document management system and maintained as required under the records retention policy.

Root control records maintained by the City include:

- Unique asset identifier
- Date, time, and location of root control activity;
- Identity of root control crew; and
- Further actions necessary and/or initiated.

Work conducted under Sewer System Assessment (SSA) activities is currently recorded in a separate database but will be integrated with the City database in the future.

The City is currently updating its strategy for managing its field and office information. The City's plan for modifying its Information Management System (IMS), as described in Article Seven, Paragraph 50 of the Consent Decree, will be submitted to EPA for approval within twenty-four (24) months of the Date of Lodging (i.e., by December 31, 2016).

4.2 Reporting

Root control performance is measured by the number of sewers undergoing reactive and proactive root control activities and the occurrence of SSOs resulting from roots. Performance measures for routine cleaning activities include the following:

- Number of pipe segments receiving reactive root control;
- Number of pipe segments receiving proactive root control; and
- Annual SSO occurrence due to roots.

Per Article Seven, Paragraph 40 of the Consent Decree the City must report the Root Control Program activities performed in each Calendar Year in the Annual Report for that Calendar Year as described in Section X of the Consent Decree.

Section 5 Training and Standard Operating Procedures

5.1 Training

Per Article Seven, Paragraph 55 of the Consent Decree, the CMOM Program must include a Comprehensive Training Program (CTP) for technical and skills training for appropriate categories of the City's employees. The City's CTP plan will be submitted to EPA for approval within eighteen (18) months of the Date of Lodging (i.e., by July 1, 2016). The CTP will be directly related to the operation and maintenance of the WCTS for the purpose of responding to and preventing SSOs.

5.2 Standard Operating Procedures (SOPs)

The plan and schedule for developing Standard Operating Procedures (SOPs) for general operation and maintenance of all components of the WCTS will be detailed in a report submitted to EPA within eighteen (18) months of the Date of Lodging (i.e., by July 1, 2016) per the Consent Decree.