

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
SAN ANTONIO DIVISION**

UNITED STATES OF AMERICA,	§	
	§	
and	§	Civil Action No.
	§	
STATE OF TEXAS,	§	
	§	
Plaintiffs,	§	
	§	
v.	§	
	§	
SAN ANTONIO WATER SYSTEM,	§	
	§	
Defendant.	§	

CONSENT DECREE

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WHEREAS, Plaintiff, the United States of America (“United States”), acting at the request and on behalf of the United States Environmental Protection Agency (“EPA”), filed a Complaint in this action concurrently with this Consent Decree alleging that the San Antonio Water System (“SAWS”) has violated the Federal Water Pollution Control Act, also known as the Clean Water Act (“CWA”), 33 U.S.C. § 1251 et seq., and the regulations promulgated thereunder;

WHEREAS, Plaintiff, the State of Texas, acting at the request of and on behalf of the Texas Commission on Environmental Quality (“TCEQ”), has joined in the Complaint, seeking injunctive relief and Civil Penalties for SAWS alleged violations of the Texas Water Quality Control Act (“TWQCA”), Tex. Water Code § 26.001 et seq., and the regulations promulgated pursuant thereto;

WHEREAS, TCEQ has been authorized by EPA to administer the National Pollutant Discharge Elimination System (“NPDES”) program in Texas pursuant to Section 402(b) of the CWA, 33 U.S.C. § 1342(b);

WHEREAS, the State of Texas is a Plaintiff in this action pursuant to CWA § 309(e), 33 U.S.C. § 1319(e);

WHEREAS, SAWS is responsible for wastewater collection and treatment in a service area that includes the City of San Antonio and that covers approximately 421.3 square miles and serves a population of approximately 1.3 million people;

WHEREAS, the SAWS Wastewater Collection and Transmission System (“WCTS”) consists of approximately 5160 miles of Gravity Sewer Mains, approximately 670 miles of which are located over the Edwards Aquifer Recharge Zone (EARZ) and subject to specific management requirements pursuant to Texas state law;

WHEREAS, SAWS is the holder of NPDES permits authorizing the discharge of pollutants to waters of the United States and State water from its Medio Creek, Leon Creek, Salado Creek and Dos Rios Wastewater Treatment Plants (“WWTPs”) and from Mitchell Lake;

WHEREAS, SAWS has reported to TCEQ overflows from the WCTS that the United States and the State of Texas allege are violations of the CWA, the TWQCA, and SAWS NPDES Permits;

WHEREAS, SAWS has continued to report to TCEQ large volume overflows from the WCTS since the March 2011 EPA inspection, including at least the following in 2012:

Approximately 220,000 gallons on February 18, 2012,

Over 100,000 gallons on March 18, 2012,

Over 100,000 gallons on June 5, 2012,

Over 100,000 gallons on August 27 to 28, 2012,

Approximately 120,600 gallons on September 29–30 and October 1, 2012, and

Approximately 63,000 gallons on December 5, 2012;

WHEREAS, SAWS has been implementing SSO reduction programs consistent with the terms of this Consent Decree that SAWS contends have resulted in a decrease in the annual number of SSOs since the March 2011 EPA inspection as compared to the year preceding the EPA inspection;

WHEREAS, SAWS owns and operates the wastewater collection and treatment system and the wastewater treatment plants;

WHEREAS, SAWS represents that it has authority to fully implement its obligations under this Consent Decree, and that it has provided a copy of this Consent Decree to the City Attorney for the City of San Antonio prior to SAWS execution of this Decree;

WHEREAS, the Parties acknowledge that the SAWS Board of Trustees has been vested with “absolute and complete authority and power to control, manage and operate the [sewer] System” with the exception that the City Council must approve rates charged for services pursuant to San Antonio City Ordinance No. 75686;

WHEREAS, the Parties acknowledge the City of San Antonio’s obligations to set sewer rates and provide funding for SAWS pursuant to Texas Government Code Title 9, Subtitle J, Section 1502.057;

WHEREAS, the Parties acknowledge the City of San Antonio’s obligations related to private laterals pursuant to the City Code of Ordinances, Article V, §§ 34-442, 34-446, 34-447, 34-448, 34-449, and 34-450;

WHEREAS, SAWS has been implementing a number of programs to upgrade, operate and maintain its wastewater collection system to prevent and respond to overflows;

WHEREAS, SAWS does not admit any facts or liability to the United States, the State or any third party arising out of the transactions or occurrences alleged in the Complaint, but SAWS has agreed for purposes of settlement to add to these programs and expand or modify certain of these programs as part of its obligations under this Consent Decree;

WHEREAS, the Parties desire to avoid further litigation and to work cooperatively on issues relating to SAWS wastewater collection and transmission system;

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, IT IS HEREBY ADJUDGED, ORDERED AND DECREED as follows:

I. JURISDICTION & VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to Sections 309(b) and 504(a) of the CWA, 33 U.S.C. §§ 1319(b) and 1364(a), and 28 U.S.C. §§ 1331, 1345 and 1355, and over the Parties. Venue lies in this District, pursuant to Section 309(b) of the CWA, 33 U.S.C. §§ 1319(b) and 28 U.S.C. § 1391(b), because it is the judicial district where SAWS is located. For purposes of this Decree, or any action to enforce this Decree, SAWS does not dispute the Court's jurisdiction over SAWS, this Decree, and any such action, and further does not dispute venue in this judicial district. Notice of commencement of this action has been given to the State of Texas pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b).

II. APPLICABILITY

2. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon SAWS and any successors, assigns, or other entities or persons otherwise bound by law.

3. No transfer of ownership or operation of the WCTS or any portion thereof, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve SAWS of its obligation to ensure that the provisions of this Decree are implemented. At least thirty (30) days prior to any transfer of ownership or operation of its publicly owned treatment works and/or WCTS, SAWS 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 proposed written agreement to transfer ownership or operation, to the United States and the State, in accordance with Section XV (Notices).

4. SAWS shall provide a copy of this Consent Decree, or otherwise make it available to each engineering, consulting and contracting firm to be retained to perform any activities

required by this Consent Decree upon execution of any contract relating to such Work, and each engineering, consulting, and contracting firm already retained for such purpose.

5. In any action to enforce this Consent Decree, SAWS shall not raise as a defense the failure by any of its officers, directors, employees, agents or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. OBJECTIVES

6. All plans, measures, reports, construction, maintenance, operational requirements and other obligations required by this Consent Decree shall have the objective of causing SAWS to achieve and maintain compliance with the CWA, the TWQCA, and the regulations promulgated thereunder, including the elimination of SSOs.

IV. DEFINITIONS

7. Terms used in this Consent Decree that are defined in the CWA, or in regulations promulgated pursuant to the CWA, shall have the meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. “Building/Private Property Backup” shall mean, for purposes of this Consent Decree, a wastewater backup into a building that is caused by blockages, malfunctions or flow conditions in the WCTS. Building/Private Property Backup does not include wastewater backup into a building that is caused by a blockage or other malfunction of a Private Lateral or other piping or conveyance system that SAWS does not own or operate.
- b. “Calendar Year” shall mean the twelve (12)-month period starting on January 1 and ending on December 31.

- c. “Capacity Constraint” means those discrete components, or groups of components, of the WCTS that are determined by SAWS, consistent with the Capacity Program in Appendix D, to have verified capacity deficiency issues that have caused or significantly contributed to previous capacity-related SSOs due to wet weather events that are within design parameters; and/or, that are likely to cause or significantly contribute to future capacity-related SSOs due to wet weather events that are within design parameters. As described in Appendix D, potential Capacity Constraints include Priority 1 through 4 and may include Priority 5.
- d. “CCTV” shall mean closed circuit television.
- e. “City” shall mean the City of San Antonio, a Texas home rule city.
- f. “Clean Water Act” or “CWA” shall mean the Clean Water Act, formally entitled the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251-1387.
- g. “Consent Decree” or “Decree” shall mean this Consent Decree and all Appendices attached hereto (listed in Section XXIII (Integration/Appendices)).
- h. “Date of Entry” shall mean the date on which the United States District Court for the Western District of Texas signs and enters the Consent Decree on its docket.
- i. “Date of Lodging” or “Lodging” shall mean the date on which this Consent Decree is filed for lodging with the Clerk of the United States District Court for the Western District of Texas.
- j. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

- k. “Deliverable” shall mean any written document required to be submitted by or on behalf of SAWS to EPA and/or TCEQ pursuant to this Decree.
- l. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.
- m. “FOG” shall mean fats, oils and grease.
- n. “FOG Control Device” shall mean any grease interceptor, grease trap, or other mechanism, device, or process, which attaches to, or is applied to a FOG Generator’s wastewater plumbing fixtures and lines, the purpose of which is to collect, contain, or remove fats, oils and grease from the waste stream of a FOG Generator prior to discharge into the WCTS.
- o. “FOG Control Program” or “Fats, Oils, and Grease Control Program” shall mean SAWS program to control the discharge of FOG from Food Service Establishments consistent with the San Antonio City Council’s May 12, 2011 Ordinance.
- p. “FOG Generator” shall mean any Food Service Establishment or Food Processing Establishment, as defined in Section 34-525(c) of the San Antonio City Code, that is subject to regulation under Chapter 34, Division 5, Section 34-525 of the San Antonio City Code (the San Antonio Fats, Oil, and Grease Regulation).
- q. “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.
- r. “Gravity Sewer Main” or “Gravity Sewer” shall mean a pipe that receives, contains and conveys wastewater not normally under pressure, but intended to flow unassisted under the influence of gravity.

- s. “Infiltration” as defined by 40 C.F.R. § 35.2005(b)(20) shall mean water other than wastewater that enters the WCTS (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections or manholes. Infiltration does not include and is distinguished from Inflow.
- t. “Inflow” as defined by 40 C.F.R. § 35.2005(b)(21) shall mean water other than wastewater that enters the 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. Inflow does not include and is distinguished from Infiltration.
- u. “I/I” shall mean the total quantity of water from inflow, infiltration, and rainfall induced infiltration without distinguishing the source.
- v. “Interest” shall mean interest at the rate specified in 28 U.S.C. § 1961. Unless otherwise stated, the applicable rate of interest shall be the rate in effect at the time the interest accrues.
- w. “Large Diameter Gravity Sewer Mains” shall mean Gravity Sewer Mains that are twenty-four (24) inches or greater in diameter.
- x. “Lift Station” shall mean facilities in the WCTS (not at the WWTPs) comprised of pumps which lift wastewater to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of that Lift Station.

- y. “Paragraph” shall mean a portion of this Consent Decree identified by Arabic numerals.
- z. “Parties” shall mean the United States, the State and SAWS.
- aa. “Pipe Segment” shall mean the reach of Gravity Sewer Main extending from manhole to manhole.
- bb. “Private Lateral” shall mean that portion of the collection system or sanitary sewer system, not owned by SAWS, used to convey wastewater from a building or buildings to that portion of the WCTS owned by SAWS.
- cc. “Remedial Measures” shall mean spot repairs, trenchless sewer rehabilitation, sewer replacement, repair or reconstruction, and any other appropriate WCTS improvement techniques for resolving condition and/or capacity deficiencies in a particular system asset or group of assets within the WCTS that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs. Remedial Measures shall not include capital improvement projects implemented exclusively to provide sewer service for new development.
- dd. “SAWS” shall mean the San Antonio Water System, an agency of the City of San Antonio, Texas.
- ee. “Sanitary Sewer Overflow” or “SSO” shall mean, for purposes of this Consent Decree: 1) unpermitted discharges from SAWS WCTS to State water or waters of the United States; and 2) any release of wastewater from SAWS WCTS to public or private property that does not reach State water or waters of the United States, including Building/Private Property Backups.

- ff. “Section” shall mean a portion of this Consent Decree identified by a Roman numeral.
- gg. “Small Diameter Gravity Sewer Mains” shall mean Gravity Sewer Mains that are less than twenty-four (24) inches in diameter.
- hh. “State” shall mean the State of Texas.
- ii. “Subparagraph” shall mean a portion of a paragraph identified by lowercase letters.
- jj. “Subsection” shall mean a portion of this Consent Decree identified by capital letters.
- kk. “TCEQ” shall mean the Texas Commission on Environmental Quality and any of its successor departments or agencies.
- ll. “TPDES Permit” shall mean the four Texas Pollutant Discharge Elimination System permits issued to SAWS for the WWTPs to which the WCTS conveys wastewater, specified as the following: Salado Creek – TPDES Permit No. WQ0010137008; Medio Creek – TPDES Permit No. 0010137040; Leon Creek – TPDES Permit No. 0010137003; and Dos Rios – TPDES Permit No. 0010137033; and any future extended, modified or reissued permits thereto as defined herein.
- mm. “United States” shall mean the United States of America, acting on behalf of EPA.
- nn. “Wastewater Collection and Transmission System” or “WCTS” shall mean the wastewater collection, retention and transmission system, including all Force Mains, Gravity Sewer Mains, Lift Stations, manholes and other appurtenances thereto which are owned by SAWS, including any new assets constructed under this Decree to resolve condition and/or capacity issues identified that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or

significantly contribute to the future occurrence of SSOs.

- oo. “Wastewater Treatment Plant” or “WWTP” shall mean devices or systems used in the storage, treatment, recycling and reclamation of municipal wastewater. For purposes of this Consent Decree, this definition shall refer to following treatment facilities: the Leon Creek WWTP, the Medio Creek WWTP, the Salado Creek WWTP and the Dos Rios WWTP, and all components of such sewage treatment plants.
- pp. “Wet Weather-Related SSOs” shall mean historical SSOs identified by SAWS as capacity or I/I-related or that occurred during wet weather events.
- qq. “Work” shall mean the activities SAWS is required to perform under this Consent Decree.

V. COMPLIANCE REQUIREMENTS

8. Upon the Date of Lodging of this Consent Decree, SAWS shall initiate the Work pursuant to this Consent Decree on the schedules specified herein and consistent with Section III, Paragraph 6. All Work under this Consent Decree shall be performed based upon good engineering practices, SAWS best professional judgment and industry standards in compliance with the terms of this Decree and its Appendices. In conducting Work after May 31, 2013 under this Decree, SAWS shall consider as a factor the location of SSOs in low income census tract areas, as well as other appropriate factors specified in this Consent Decree and its Appendices. Section V (Compliance Requirements) contains the following Subsections: (A) WCTS Capacity, Management, Operation, and Maintenance (CMOM) Program, (B) Early Action Program, (C) Condition Assessment and Remedial Measures Program, (D) Capacity Assessment and Remedial Measures Program, (E) Lift Station Rehabilitation and Elimination Program, (F) Force Main

Assessment Program, (G) Portion of the WCTS Located in EARZ, (H) WWTP Effluent Violation Corrective Actions and (I) Water Quality Program.

A. WCTS CMOM PROGRAM

9. SAWS has been and is implementing a variety of sewer system CMOM-related programs. SAWS shall develop a written CMOM Program to address the requirements of this Subsection V(A) consistent with EPA’s 2005 Guidance titled “Guide for Evaluating Capacity, Management Operation and Maintenance Programs at Sanitary Sewer Collection Systems” and shall submit it to EPA for review and approval no later than one (1) year from the Date of Lodging of this Consent Decree. The CMOM Program shall include written descriptions of the following provisions:

10. Training Program. The Training Program shall include technical and skills training for appropriate categories of SAWS employees. The training shall be directly related to operation and maintenance of the sanitary sewer collection system for the purpose of responding to and preventing SSOs.

a. Technical and Skills Training. The technical and skills training program shall be designed to facilitate compliance with the Clean Water Act (CWA) regarding SSO prevention and response and shall include the following:

- i. A list and description of the categories of employees that will be provided training in specific topics related to SSO prevention and response measures that can be addressed through operation and maintenance of the collection system, with the specified training commensurate with the specific job responsibilities of each category of employee;
- ii. A list and description of the topics to be covered in the technical and skills

training for each relevant category of employee (including, where appropriate, training on sewer cleaning, FOG inspection, collection system inspection, collection system repair, replacement and rehabilitation techniques, data collection, information management, reporting and recordkeeping necessary to implement SAWS CMOM Program). The list of SAWS employee training categories and description of the technical and skills training to be covered for each relevant category of employee is attached as Appendix A;

- iii. A description of how the training relates to any applicable employee certification required by State or federal law; and,
- iv. Identification of the types of training records that SAWS maintains and of the information management system used to plan and document completed training.

11. Capacity Assurance Program. SAWS requirements under this Consent Decree with regard to Capacity Assurance are specified in the Capacity Assessment and Remedial Measures provisions under Subsection V(D). The written CMOM Program shall describe SAWS plans to periodically reassess existing and future capacity of the WCTS following completion of and in a manner consistent with the Capacity Assessment and Remedial Measures Program described in Appendix D, as modified from time to time based on adaptive management principles, subject to the provisions of Section XVIII regarding modifications of the terms of the Consent Decree.

SAWS shall give priority in this Capacity Assurance Program to prevention of SSOs.

12. Sewer Reporting and Documentation Procedures. As part of the CMOM Program, SAWS shall evaluate its SSO reporting and documentation procedures, and modify such

procedures as necessary to satisfy the requirements of Subparagraphs 12.a to 12.f below. SAWS modified procedures shall be described in the written CMOM Program to be submitted no later than one (1) year from the Date of Lodging. In addition to providing a written summary of SAWS sewer reporting and documentation procedures in the CMOM Program, SAWS shall begin providing the following reports to EPA (“EPA Reports”) within ninety (90) days of Lodging:

- a. SAWS shall provide EPA a copy of the monthly compliance report required by its TPDES permits at the same time it is submitted to TCEQ;
- b. SAWS shall provide EPA a copy of any five-day report submitted under its TPDES permit at the same time it is submitted to TCEQ; and
- c. SAWS shall provide EPA with an Annual Report, as described in Paragraph 52 of this Consent Decree, containing the following information for each SSO:
 - i. Location of the SSO by street address, asset identification number or any other appropriate method (i.e., by latitude and longitude);
 - ii. Name of the receiving water, if applicable;
 - iii. An estimate of the volume (in gallons) of sewage discharged and recovered;
 - iv. Description of the collection system component from which the SSO was released (e.g., manhole, gravity main, pump station wet well, etc.);
 - v. Description of the overflow's potential impact, if any, on public health and to water quality in the receiving water body;
 - vi. Cause or suspected cause of the SSO;
 - vii. Description of whether the SSO is a repeat SSO (defined as an SSO that

occurred at the same Pipe Segment within the past twenty- four (24) months), including the date of the last SSO that occurred at the same location;

- viii. Estimated date and time when the overflow began and stopped or the anticipated time the SSO is expected to discontinue;
 - ix. Steps taken to respond to the SSO;
 - x. Steps taken to reduce, eliminate and prevent reoccurrence of the SSO, including a summary of when such steps were taken or are planned; and
 - xi. Report of all notifications to the public and other agencies or departments, as required by law or regulation.
- d. The Annual Report shall also include any information that SAWS obtained or received (e.g., customer complaints) regarding discharges from Private Laterals, including any information received specifying the location of the discharge, a description of the circumstances of the discharge and a description of how the discharge was remediated.
- e. SAWS shall maintain records of the EPA SSO Reports described above for a period of five (5) years from the date of submittal of such Report to EPA. In addition to maintaining these records, SAWS shall also maintain records reflecting the actions SAWS has taken and will take to prevent the SSO from recurring and a timeframe for undertaking those steps, including any work orders or similar records associated with investigation and/or repair of problems related to SSOs.
- f. SAWS shall maintain a list and description of complaints from customers or others regarding SSOs that occur from the Date of Lodging through December 31 of the

Calendar Year of Lodging and thereafter for each Calendar Year during the term of this Decree.

- g. SAWS shall implement the procedures and requirements set forth above in Subparagraphs 12.a to 12.e within ninety (90) days of the Date of Lodging of the Consent Decree. Following the ninety (90)-day deadline, SAWS shall provide notice in accordance with Section XV (Notices) and certify in accordance with Section XIX (Certification) to EPA that the SSO reporting and documentation procedures are being implemented.

13. Sewer Overflow Response Plan ("SORP"). No later than 150 days from the Date of Lodging of the Consent Decree, SAWS shall develop, submit to EPA for review and comment, and implement a SORP that is designed to accomplish the following goals:

- a. Respond to and halt SSOs as rapidly as technically feasible consistent with safety and legal requirements;
- b. Employ SSO mitigation measures whenever appropriate;
- c. Implement appropriate measures to prevent SSO recurrence; and
- d. Incorporate in the SORP procedures for responding to SSOs and procedures to minimize the environmental impact and potential human health risk of SSOs. At a minimum, the SORP shall include the following:
 - i. A description of the actions SAWS will undertake to provide notice to the public (through the local news media or other means, including signs or barricades to restrict access) and to any applicable government authorities of the SSO from the WCTS when such notice is required by SAWS TPDES permits or applicable law;

- ii. A detailed description (including, as appropriate, the development of standard response procedures) to minimize the volume of untreated wastewater from the WCTS during an SSO event;
- iii. A detailed plan describing the standard operating procedures to be followed by SAWS personnel in responding to a Building/Private Property Backup, including:
 - 1. A description of SAWS response practices and methods for communicating with customers about:
 - A. How to report Building/Private Property Backups; and
 - B. How to obtain cleanup support from SAWS, as warranted;
 - 2. The typical timeframe objectives for both initial response and completion of cleanup activities; and
 - 3. The types of measures that may be taken by SAWS to cleanup Building/Private Property Backups found to be caused by conditions in SAWS WCTS, including, as warranted by specific circumstances, procedures necessary to disinfect and/or remove items potentially contaminated by Building/Private Property Backups, wet vacuuming or other removal of spillage, wiping floors and walls with cleaning solution and disinfectant, flushing out and disinfecting plumbing fixtures, carpet cleaning and/or replacement or other appropriate measures to disinfect and/or remove items potentially contaminated by Building/Private Property Backups.
- iv. A description of the process by which measures to correct or repair

conditions in the WCTS causing or contributing to Building/Private Property Backups are selected;

- v. An inspection of each sewer pipe that experiences an SSO using CCTV, Pole Camera or other appropriate inspection methods as soon as practicable, but not later than forty-eight (48) hours following the cessation of the SSO. In general, such inspection shall typically involve the first adjacent Pipe Segment upstream and downstream of the specific WCTS asset experiencing an SSO;
- vi. A description of how SAWS will complete cleanup activities of SSOs greater than 10,000 gallons, including:
 - 1. Time frame for completion of SSO cleanup activities;
 - 2. Photographic evidence that SSO cleanup is complete; and
 - 3. Supervisor approval to confirm that the SSO cleanup is complete.
- vii. A description of standard response procedures for SSOs that occur at Lift Stations or Force Mains. In the event that a repair at a Lift Station or Force Main may cause or lengthen the time of an SSO, the SORP shall provide a procedure for determining when a wastewater pump-around will be provided.

14. System-Wide Cleaning Program. Within ninety (90) days after the Date of Lodging of the Consent Decree, SAWS shall continue to implement its sewer collection system cleaning program as specifically set forth below and as described in Appendix B. For purposes of this Paragraph, cleaning is defined as removal from the gravity sewer system of FOG, debris, roots and/or any other obstructions that have caused or significantly contributed to previous SSOs;

and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs. All cleaning activities conducted by SAWS since January 1, 2009 shall be credited towards compliance with these requirements.

- a. Small Diameter Gravity Sewer Main Cleaning Program. For Small Diameter Gravity Sewer Mains, SAWS shall clean all such pipes on a 10-year cycle. SAWS shall clean a minimum of twelve (12) percent of Small Diameter Gravity Sewer Mains each Calendar Year (prorated for any partial Calendar Year after Lodging in which these requirements apply). SAWS may count Small Diameter Gravity Sewer Main Cleaning and Repeat Gravity Sewer Main Cleaning to comply with the twelve (12) percent annual requirement.
- b. Repeat (“Hot Spot”) Gravity Sewer Main Cleaning Program. SAWS shall implement its Repeat Cleaning Program at the areas and with the frequencies that are determined to be appropriate based on SSO information, CCTV findings and previous sewer cleaning findings. SAWS Repeat Cleaning Program shall be conducted consistent with Appendix B (Cleaning Program).
- c. Large Diameter Gravity Sewer Main Cleaning Program. For Large Diameter Gravity Sewer Mains, SAWS shall clean all such pipes on a ten (10)-year cycle as warranted. SAWS shall clean each Large Diameter Gravity Sewer Main Pipe Segment that SAWS determines based on inspection results and other analyses to have a depth of debris in any part of that Pipe Segment that exceeds twenty (20) percent of the pipe diameter unless the hydraulic modeling performed by SAWS confirms that the depth of debris present will not constitute a Capacity Constraint as defined in this Consent Decree. Those pipes determined to have a depth of

debris exceeding twenty (20) percent, but were not cleaned, shall be visually re-checked no less often than once every five (5) years to monitor ongoing grit/debris build-up and respective influences on hydraulic capacity; and shall be cleaned as frequently as warranted to prevent the development of Capacity Constraints that are likely to cause or significantly contribute to the future occurrence of SSOs.

15. Condition Assurance Program. SAWS requirements under this Consent Decree with regard to Condition Assessment and associated Remedial Measures are specified under Subsection V(C) of this Decree. The written CMOM Program shall describe SAWS plans to periodically reassess the condition of the WCTS following completion of and in a manner consistent with the Condition Assessment and Remedial Measures Program described in Appendix C as modified from time to time based on adaptive management principles, subject to the provisions of Section XVIII regarding modifications of the terms of this Consent Decree. SAWS shall give priority in this Condition Assurance Program to prevention of SSOs.

16. Lift Station Operation and Maintenance Program. SAWS is currently performing Lift Station operation and maintenance programs. SAWS shall continue to perform these programs as part of the CMOM Program. In order to minimize the risk of future SSOs at Lift Stations, SAWS shall review its current Lift Station operation and maintenance procedures and shall include an updated description of these procedures in the written CMOM Program as appropriate. The Lift Station Operation and Maintenance Program shall include procedures for reading and recording relevant information appropriate to proper operation and maintenance for Lift Stations, including where appropriate, pump run-time meter readings, pump control settings, SCADA operation, wetwell float levels, grease accumulations and other information that is necessary for the proper operation of SAWS Lift Stations.

17. Private Lateral Program. The Parties acknowledge the City of San Antonio’s authority pursuant to City Code § 34-447(a) that provides that “[t]he improper maintenance and repair of sewer laterals is found to constitute a public health hazard” and provides for service of written notification to owners of Private Laterals to abate the condition causing the health hazard within three (3) days of the notification (City Code § 34-448). If the owner of the Private Lateral does not repair or replace the faulty Private Lateral, the Parties further acknowledge that the City is authorized to institute a criminal prosecution to assess a fine as provided in City Code § 34-449 and that the City is authorized to seek an order to terminate water service to the premises where the Private Lateral is located (City Code § 34-450). To provide the City of San Antonio notice to address Private Laterals that have not been properly maintained or repaired by the owners of the Private Laterals pursuant to its ordinances regarding Private Laterals as specified in the City Code of Ordinances, Article V, §§ 34-442, 34-446, 34-447, 34-448, 34-449, and 34-450, SAWS shall do the following:.

- a. Inform the City of damaged/improperly maintained Private Laterals whenever SAWS obtains information regarding damaged/improperly maintained Private Laterals.
- b. To foster coordination between SAWS and the City regarding Private Laterals, SAWS shall request that the City provide to SAWS each month a report of:
 - i. Addresses receiving notifications issued by the City pursuant to City Code § 34-448;
 - ii. Addresses of each Private Lateral that has been repaired following a notification issued pursuant to City Code § 34-448 and the date of completion of any such repair; and

- iii. Addresses of each connection for which the City is seeking to assess a fine pursuant to City Code § 34-449 and the address of each such connection in which the City is seeking to terminate water service pursuant to a hearing as provided in City Code § 34-450.

18. Fats, Oils and Grease ("FOG") Control Program. SAWS has implemented and continues to conduct a FOG Control Program. As part of the CMOM Program, SAWS continuing FOG Control Program shall include the following:

- a. The legal authority within the jurisdiction of the City of San Antonio to control the discharge of FOG into the WCTS, including the ability to implement an enforcement program;
- b. Establishment of FOG Control Device management, operations and maintenance best management practices that address onsite recordkeeping requirements, cleaning frequency, cleaning standards, use of additives and ultimate disposal;
- c. Routine compliance inspection procedures, including scheduling, inspection report forms and inspection recordkeeping requirements to assure that FOG Control Devices are being managed, operated and maintained in accordance with the established management, operations and maintenance standards or best management practices;
- d. An enforcement program, including specific enforcement mechanisms, to ensure compliance with the FOG Control Program;
- e. A compliance assistance program to facilitate training of FOG Generators and their employees;
- f. A public education program directed at reducing the amount of FOG entering the

WCTS from private residences;

- g. Staffing (technical and legal) and equipment requirements to ensure effective implementation of the FOG Control Program;
- h. A tiered inspection frequency schedule that shall identify the number of regulated commercial establishment FOG Generators in each tier and the frequency of inspection for each tier, at the time the CMOM document is finalized, including an explanation of the tiered frequency of inspection schedule and SAWS plan for inspecting all FOG Generators at least once every two (2) years;
- i. Establishment of performance indicators to be used by SAWS to measure the effectiveness of the FOG Control Program and establish a periodic review in order to update the FOG Control Program as warranted; and,
- j. A description of City of San Antonio programs that complement the SAWS FOG Control Program, including the specification of accepted FOG control devices as written and enforced by the City, standards for the design and construction of FOG control devices developed and enforced by the City, and construction inspection protocols established and implemented by the City.

19. Inventory. SAWS shall provide a written description of its WCTS component and equipment inventory system, including information obtained during the Condition and Capacity Assessment Programs that is used to update Geographic Information System (“GIS”) attributes, and shall continue to implement this system as part of the CMOM Program.

20. Condition Work to be Performed Under the CMOM Program. All WCTS asset condition inspection and assessment Work performed by SAWS after the Date of Lodging pursuant to Paragraphs 23 through 27 within forty-eight (48) months from the Date of Lodging shall be

addressed in the Condition Assessment Report, if applicable, and to the extent applicable, such Work is subject to the requirements of the Remedial Measures Alternatives Analyses and Remedial Measures Plan requirements that are described in Paragraphs 29 and 30. All such asset condition inspection and assessment Work performed after forty-eight (48) months from the Date of Lodging and the Remedial Measures resulting from that inspection and assessment Work shall be addressed under the CMOM Program and a summary of such Work and Remedial Measures shall be included in the Annual Report for the Calendar Year in which these tasks were completed. Work that will be performed after submittal of the Condition Assessment Reports shall include Condition Assessment, Condition Remedial Measures Alternatives Analyses, and Condition Remedial Measures Plan development, in accordance with Subsection V(C), as applicable, for the following WCTS assets:

- a. Pipe Segments of Small Diameter Gravity Sewer Mains where visual inspections are completed after forty-eight (48) months from Date of Lodging; and
- b. Manholes where inspections are completed after forty-eight (48) months from Date of Lodging.

B. EARLY ACTION PROGRAM

21. SAWS is currently implementing Remedial Measures within the WCTS to address previously identified structural defects and Capacity Constraints that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs. The implementation of such Remedial Measures shall continue as specified in this Paragraph while SAWS conducts the system-wide Condition Assessment and Capacity Assessment Programs required under Subsections V(C) and V(D), and as reflected in Appendices C and D, respectively. All Remedial Measures that are to be implemented as set

forth below are referred to as the Early Action Program. SAWS shall implement the Early Action Program in accordance with the following requirements.

a. Phase I Early Action Program.

i. Appendix F presents a list of projects that were identified by SAWS prior to January 1, 2013 to address identified structural defects and Capacity Constraints. SAWS shall complete all identified projects in Appendix F as follows:

1. For Small Diameter Condition Remedial Measures, within a period of thirty-six (36) months from the Date of Lodging;
2. For Large Diameter Condition Remedial Measures, within a period of sixty (60) months from Date of Lodging; and
3. For Large Diameter Capacity Remedial Measures, within a period of seventy-two (72) months from Date of Lodging.

ii. As part of Appendix F, SAWS has provided to EPA a general description of the Remedial Measures to be performed in the Phase I Early Action Program.

b. Phase II Early Action Program.

i. As of January 1, 2013 and continuing through the first eighteen (18) months after the Date of Lodging as part of SAWS ongoing Condition and Capacity Assessment Programs, SAWS shall identify and maintain a list of all assets where structural defects and/or potential Capacity Constraints in those assets have caused or significantly contributed to previous SSOs; and/or, are likely to cause or significantly contribute to the future

occurrence of SSOs, consistent with Appendices C and D, respectively.

- ii. No later than twenty-four (24) months following Date of Lodging, SAWS shall submit in a format consistent with Appendix F a Phase II Early Action Program identifying those Remedial Measures prioritized and selected for Phase II and summarizing the categories of assets where structural defects and/or Capacity Constraints have caused or significantly contributed to previous SSOs; and/or, are likely to cause or significantly contribute to the future occurrence of SSOs and have been evaluated for Remedial Measures Alternatives Analyses consistent with Appendices C and D, respectively. Additionally, SAWS shall provide:

1. For each Pipe Segment where structural defects will be remediated: a summary of the investigation technique(s) employed to identify the Remediation Measures required; the NASSCO PACP Quick Rating of the existing Pipe Segment; and, the SAWS Condition Assessment Category of the existing Pipe Segment determined in accordance with Appendix C.
2. For each Pipe Segment where a Capacity Constraint will be remediated: the full-pipe hydraulic capacity of the existing Pipe Segment; the full-pipe hydraulic capacity of the remediated Pipe Segment; and the minimum hydraulic capacity required for the Pipe Segment to transport the SAWS assessment storm as predicted by SAWS hydraulic model in accordance with Appendix D;
3. An overview map of Phase II Early Action Program Work with

project locations.

iii. SAWS shall complete all identified projects in the Phase II Early Action Program as follows:

1. For Small Diameter Condition Remediation Measures, within a period of sixty (60) months from the Date of Lodging;
2. For Large Diameter Condition and/or Capacity Remedial Measures, within a period of sixty (60) months from the date that the Phase II Early Action Program is submitted pursuant to Subparagraph 21.b.ii.

c. Reporting and Modification.

- i. For both of the Phase I and Phase II Early Action Programs, SAWS shall report project status and completion date of this Work in its Annual Report and shall also report the date of SAWS notice to proceed to a contractor or work order to SAWS crews for any multi-year projects in accordance with Section VI (Reporting Requirements) of this Consent Decree.
- ii. Modifications to the planned Phase I and Phase II Remedial Measures and/or the implementation schedules for those Remedial Measures shall be in accordance with Section XVIII (Modification) of this Consent Decree.

C. CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM

22. SAWS shall conduct a system-wide inspection and assessment of the structural condition of its Gravity Sewer Mains and manholes within the WCTS by implementing the Condition Assessment requirements of this Section. The system-wide inspection and assessment activities are designed to identify structural defects in the WCTS that have caused or significantly

contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs. The Condition Assessment shall evaluate the condition of the WCTS through a series of investigative steps, including the following specific activities as set forth in Paragraphs 23-27 and Paragraph 29 herein and reflected in the process and guidelines in Appendix C:

- a. System-wide inspection of Small Diameter Gravity Sewer Mains, Large Diameter Gravity Sewer Mains, and manholes;
- b. Condition Assessment to determine those structural defects that warrant Remedial Measures Alternatives Analysis and possibly Remedial Measures versus those that can be addressed via monitoring or maintenance within the CMOM Program; and,
- c. Remedial Measures Alternatives Analyses for verified structural defects whereby SAWS shall identify, select, and prioritize Condition Remedial Measures for implementation during the term of the Consent Decree in accordance with the requirements of this Subsection, Appendix C (Condition Assessment), and Section VII (Review and Approval).

23. SAWS shall conduct the system-wide inspection, Condition Assessment, and Remedial Measures Alternatives Analysis activities consistent with Appendix C. Pertinent details and schedules for these activities are set forth below in Paragraphs 24-27 and Paragraph 29.

24. Large Diameter Gravity Sewer Inspection. SAWS shall assess all Large Diameter Gravity Sewer Mains over a period not exceeding four (4) years after the Date of Lodging. According to SAWS records, these assets include approximately 350 miles of Gravity Sewer Mains. Large Diameter Gravity Sewer Mains that have been inspected since inception of SAWS Large Diameter Sewer Program in 2005 shall be credited towards SAWS compliance obligations

for Large Diameter Gravity Sewer Mains inspection. SAWS may use CCTV, sonar, 360-degree video, laser imaging, other methods normally utilized by other sewer management agencies, physical inspection or appropriate new technologies to perform Large Diameter Gravity Sewer Main inspections.

25. Small Diameter Gravity Sewer Main Inspection. SAWS shall conduct a comprehensive inspection of its Small Diameter Gravity Sewer Mains. Inspection methods and timeframes shall be consistent with the requirements of Paragraph 26.

26. Sewer Inspection Methods and Requirements.

a. CCTV Inspection.

- i. Over a period not exceeding four (4) years after the Date of Lodging, SAWS shall use CCTV to inspect all Small Diameter Gravity Sewer Mains located within the EARZ, all Small Diameter Gravity Sewer Mains that are made of clay installed prior to 1973 that have not been slip lined, CIPP lined, replaced, or pipe-burst, and all Small Diameter Gravity Sewer Mains made of concrete that have not been slip lined, CIPP lined, replaced or pipe-burst. According to SAWS records, these assets include approximately 1870 miles of Small Diameter Gravity Sewer Mains.
- ii. Past CCTV inspections of Small Diameter Gravity Sewer Mains in the asset classes set forth in Subparagraph 26.a.i. performed by SAWS since January 1, 2009, shall be counted toward compliance with Subparagraph 26.a.i.
- iii. When prioritizing Small Diameter Gravity Sewer Mains to CCTV, SAWS shall select portions of the WCTS based upon factors including, but not

limited to: pipe age and materials, analysis of past SSO frequency and volumes, proximity of sewer pipes to surface waters, or other appropriate factors. CCTV inspections shall be performed consistent with NASSCO Pipeline Assessment and Certification Program standards as a general guideline to be utilized by SAWS consistent with Appendix C.

b. Pole Camera Inspections.

- i. Over a period not exceeding four (4) years after the Date of Lodging, SAWS shall use Pole Camera Inspections to assess all Small Diameter Gravity Sewer Mains that are clay pipe installed after 1972 and prior to 1983. According to SAWS records, these assets include approximately 435 miles of Small Diameter Gravity Sewer Mains.
- ii. Past Pole Camera and CCTV inspections of Small Diameter Gravity Sewer Mains in the asset classes set forth in Subparagraph 26.b.i. performed by SAWS since January 1, 2009, shall be counted toward compliance with Subparagraph 26.b.i.
- iii. When prioritizing Small Diameter Gravity Sewer Mains to inspect with Pole Cameras, SAWS shall select portions of the WCTS based upon factors including, but not limited to, pipe age and materials, analysis of past SSO frequency and volumes, proximity of sewer pipes to surface waters, or other factors. Where Pole Camera inspections reveal the possible presence of Gravity Sewer Main structural defects that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs,

SAWS shall perform CCTV inspections as appropriate to determine the nature and severity of the sewer defects. SAWS shall then conduct any necessary Condition Assessment and/or Remedial Measures Alternatives Analysis activities consistent with Subsection V(C) and Appendix C as applicable.

- c. Visual Inspections. Over a period not exceeding ten (10) years after the Date of Lodging, SAWS shall inspect the remainder of the Small Diameter Gravity Sewer Mains in the WCTS using Visual Inspection techniques. SAWS shall determine the appropriate inspection methodology using criteria such as pipe age and materials, past SSO history, proximity to surface waters, and other appropriate factors. Visual Inspections may be conducted using one or more of the following techniques:

1. Smoke Testing;
2. Mechanical Proofing;
3. Sewer Cleaning Findings; and
4. Dye testing.

Where the above techniques reveal the possible presence of Gravity Sewer Main structural defects that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs, SAWS shall perform Pole Camera inspections and/or CCTV inspections as appropriate to determine the nature and severity of the sewer defects. SAWS shall then conduct any necessary Condition Assessment and/or Remedial Measures

Alternatives Analysis activities consistent with Subsection V(C) and Appendix C as applicable.

27. Manhole Inspections. SAWS shall inspect all of its manholes over a period not exceeding ten (10) years after the Date of Lodging as part of its Cleaning Program consistent with the required schedule therein, using appropriate methods, including primarily visual inspection. Any manhole inspections conducted by SAWS since January 1, 2009, shall count towards SAWS compliance with this paragraph.

28. Condition Assessment Report. Within four (4) and a half (1/2) years of the Date of Lodging, SAWS shall submit to EPA for review and comment a Condition Assessment Report that describes the Condition Assessment activities for inspections completed pursuant to Paragraphs 23 through 27 as of four (4) years after the Date of Lodging to meet the requirements of this Subsection. Consistent with Appendix C, the Condition Assessment Report shall summarize the Condition Assessment activities completed within four (4) years of the Date of Lodging and shall summarize the pipe mileage and number of manholes that will be included in the Condition Remedial Measures Alternatives Analysis and those that will be included in ongoing monitoring or maintenance within the CMOM Program. Condition Assessment activities completed within four (4) years of the Date of Lodging shall be summarized in the Condition Assessment Report; and, Condition Assessment activities that occur after four (4) years after the Date of Lodging shall be summarized in the Annual Report for the year in which the Condition Assessment activities were completed. The Condition Assessment Report shall adhere to the format and content of the Condition Assessment Report Template provided in Appendix G. The Condition Assessment Report shall be submitted to EPA for review and comment in accordance with Section VII (Review and Approval).

29. Condition Remedial Measures Alternatives Analysis. Following submittal of the Condition Assessment Report, SAWS shall complete a Remedial Measures Alternatives Analysis for those assets that were identified in the Condition Assessment Report as warranted to move to Remedial Measures Alternatives Analysis. SAWS shall perform an alternatives analysis for Pipe Segments and/or manholes to select appropriate Remedial Measures or other action, consistent with Appendix C. SAWS shall determine the most practical solution and timeframe for resolving structural defects considering both the long-term performance of the Pipe Segment/manhole and the life-cycle cost for maintaining the Pipe Segment/manhole in permanent service. The range of solutions and techniques shall be consistent with Appendix C.

30. Condition Remedial Measures Plan. Within twelve (12) months of submitting the Condition Assessment Report, SAWS shall provide to EPA for review and approval a Condition Remedial Measures Plan that summarizes SAWS recommended Condition Remedial Measures that were prioritized and selected in accordance with Appendix C to address verified structural defects in the WCTS that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs. SAWS prioritization and selection of Condition Remedial Measures shall be based on appropriate factors such as the severity of defects identified, frequency and history of SSOs, pipe size, age and material, appropriate grouping of WCTS assets for bid packages, scheduling practicalities and other appropriate factors. The Condition Remedial Measures Plan shall describe SAWS plans to implement the selected Condition Remedial Measures on a balanced annual basis during the term of the Decree, taking into account practical planning considerations such as permitting requirements, easement acquisition, contractor capacity, preparation of public bidding documents, the bidding and awards process for public contracts and required decision making

procedures for public bid contracts. The Condition Remedial Measures Plan shall adhere to the format and content of the Condition Remedial Measures Plan Template provided in Appendix G. The Condition Remedial Measures Plan shall be provided to EPA for review and approval in accordance with Section VII (Review and Approval).

31. Condition Remedial Measures Implementation. In general, SAWS shall plan and implement the approved Condition Remedial Measures Plan in accordance with the guidelines and procedures identified in Appendix C. SAWS shall begin implementation of the Condition Remedial Measures Plan on a balanced annual basis following receipt of EPA's written approval. SAWS shall complete all approved Small Diameter and Large Diameter Gravity Sewer Main Condition Remedial Measures within four (4) and a half (1/2) years of receipt of EPA's written approval of the Condition Remedial Measures Plan. Should a specific Large Diameter Condition Remedial Measures project require SAWS to obtain new easements and/or acquire land for more than twenty-five (25) percent of the length of that project or more than 2,500 feet, whichever is less, SAWS may at its option elect to complete that Large Diameter Condition Remedial Measures project within up to six (6) and a half (1/2) years of receipt of EPA's written approval of the Condition Remedial Measures Plan. SAWS shall advise EPA in the Condition Remedial Measures Plan of any specific Large Diameter Condition Remedial Measures projects that SAWS wishes to complete in a maximum of six (6) and a half (1/2) years instead of four (4) and a half (1/2) years. For those projects that SAWS wishes to complete within six (6) and a half (1/2) years, SAWS shall explain in the Condition Remedial Measures Plan the reasons why the need for new easements or land acquisition could not be avoided. Any modifications to the approved Condition Assessment Remedial Measures Plan shall be made in accordance with Section XVIII (Modification).

32. SAWS may implement Condition Remedial Measures Work generated by the Condition Assessment or other condition assessment activities conducted consistent with Appendix C prior to submittal of the Condition Remedial Measures Plan. SAWS may also implement projects that include both Condition Remedial Measures and Capacity Remedial Measures prior to approval of the Condition Remedial Measures Plan. Condition Remedial Measures (other than Early Action Program Work) implemented prior to approval of the Condition Remedial Measures Plan shall be documented in the Annual Report for the year in which those Measures are completed; and for Large Diameter multi-year projects, the progress toward completing those Measures shall be documented in subsequent Annual Reports until the Measures are completed.

D. CAPACITY ASSESSMENT AND REMEDIAL MEASURES PROGRAM

33. SAWS shall conduct a system-wide Capacity Assessment, consistent with the Capacity Program in Appendix D, to identify Capacity Constraints within the WCTS that have caused or significantly contributed to previous SSO, and/or, are likely to cause or significantly contribute to the future occurrence of SSOs. This Capacity Assessment shall be completed within four (4) years of the Date of Lodging of this Consent Decree. The Capacity Assessment shall evaluate the capacity of the WCTS through a series of hydraulic modeling and investigative steps, including the following specific activities, each as more fully described in Paragraphs 34 through 38 and Paragraph 40 herein and reflected in the process and guidelines in Appendix D:

- a. System-wide and ongoing hydraulic modeling activities that account for all flows within the WCTS in order to identify discrete components, or groups of components, of the WCTS that are projected to have a substantial probability of experiencing a capacity-related SSO at existing population and peak wet weather modeled flows;

- b. Evaluation of discrete portions of the WCTS or discrete pipes within the WCTS that have experienced Wet Weather SSOs;
- c. Field Investigations, where appropriate; and,
- d. Remedial Measures Alternatives Analyses for verified Capacity Constraints.

34. SAWS shall conduct the Capacity Assessment consistent with the process and guidelines described in Appendix D (Capacity Program). Information sources for the Capacity Assessment may include, but are not limited to: information gathered from the development of other assessments, reports and plans, including the Condition Assessment activities conducted under Subsection V(C) of this Consent Decree; SAWS evaluation of its Lift Stations; data regarding Wet Weather SSOs; and other appropriate analyses performed by SAWS.

35. Wet Weather SSO Verification. SAWS has implemented and shall complete a Wet Weather SSO Verification process to verify whether SSOs that occurred during wet weather were wholly or partially caused by Capacity Constraints in the WCTS. SAWS shall evaluate each Wet Weather SSO in the SAWS database since January 1, 2003, through the calendar date that is four (4) years after the Date of Lodging. SAWS shall complete the evaluative activities appropriate to each Wet Weather SSO consistent with Appendix D, including, but not limited to, review of available records regarding the Wet Weather-Related SSO event; discussions with staff that performed the post-SSO investigation; and referrals to cleaning and repair crews to address maintenance issues or structural defects found at the SSO site. When the verification process confirms that maintenance issues and/or condition-related issues caused, or likely caused or significantly contributed to an SSO that occurred during wet weather, SAWS shall address such issues consistent with Appendices B and/or C, as appropriate; and, SAWS shall implement measures as warranted consistent with Appendix B and/or C, as appropriate, to prevent

recurrence of those SSOs. For each verified Wet Weather SSO, SAWS shall perform the appropriate Field Investigation activities as described in Paragraph 38, consistent with Appendix D.

36. Hydraulic Modeling Evaluation. SAWS shall use the ongoing Hydraulic Modeling Evaluation process to estimate the hydraulic capacities of the WCTS and compare these estimates to existing and projected average and peak dry weather and wet weather flow estimates. SAWS shall use the model to identify potential Capacity Constraints in discrete components or groups of components of the WCTS that are likely to cause or significantly contribute to the future occurrence of SSOs. Modeling procedures shall be in accordance with Appendix D. The hydraulic model shall use dynamic hydraulic modeling software package(s) and shall use current and updated WCTS information as inputs to the model. The model shall evaluate flows within the entire WCTS. SAWS shall also calibrate the hydraulic model from time to time as warranted with updated information, consistent with Appendix D.

37. The Wet Weather SSO Verification and Hydraulic Modeling Evaluation processes shall serve as screening tools to identify portions of the WCTS that have potential Capacity Constraints that may have caused or significantly contributed to previous SSOs; and/or, that may cause or significantly contribute to the future occurrence of SSOs. All such Capacity Constraint locations shall be prioritized and, as warranted, further evaluated with appropriate Field Investigations as described more fully in Paragraph 38 below and using criteria described in Appendix D.

38. Field Investigations. At all locations identified and verified by the Wet Weather SSO Verification Process and/or identified by the Hydraulic Modeling Evaluation process as having a potential Capacity Constraint that warrants analysis through Field Investigation, SAWS shall

conduct appropriate Field Investigations. Within four (4) years of the Date of Lodging, SAWS shall complete appropriate Field Investigations for each Priority 1-4 potential Capacity Constraint that has been identified by SAWS as of the Date of Lodging, unless removed as a Priority 1-4 potential Capacity Constraint based on updated modeling consistent with Appendix D. The specific investigation activities for each such location shall be determined based on the available information for each location, consistent with the process described in Appendix D. For each Field Investigation location, SAWS shall monitor the Capacity Constraint location until a significant wet weather event as defined in Appendix D occurs and, based on whether the location exhibits a significant wet weather response, shall verify whether a Capacity Constraint exists. If no such wet weather event occurs at a Field Investigation location within three (3) and a half (1/2) years from the Date of Lodging, SAWS shall continue to monitor that location under CMOM. SAWS shall conduct the Field Investigations consistent with Appendix D using investigative tools that may include, but are not limited to, one or more of the following:

- a. Collection of smart cover data during wet weather events;
- b. Collection of additional flow monitoring data during wet weather events;
- c. Visual inspections and chalking during wet weather events;
- d. Dye testing;
- e. Smoke testing;
- f. CCTV to determine high water mark and/or current flow level or sources of infiltration for future remedial measures planning (to be used if the capacity issue is verified, and it is determined that flow reduction may be an effective option to remediate the capacity issue);
- g. Manhole inspections; and

- h. Other appropriate capacity assessment tools, including new technologies or methods that may become available after the Date of Lodging of this Decree.

39. Capacity Assessment Report. Within four (4) and a half (1/2) years of the Date of Lodging, SAWS shall submit to EPA for review and comment a Capacity Assessment Report that summarizes the Capacity Assessment activities undertaken as of four (4) years after the Date of Lodging. Specifically, the Capacity Assessment Report shall summarize the Capacity Assessment activities undertaken pursuant to Paragraphs 33 through 38 within forty-eight (48) months of the Date of Lodging. The Capacity Assessment Report shall adhere to the format and content of the Capacity Assessment Report Template provided in Appendix G. The Capacity Assessment Report shall be provided to EPA for review and comment in accordance with Section VII (Review and Approval).

- a. If the Wet Weather SSO Verification Process confirmed that an SSO that occurred during wet weather was most likely caused by a maintenance issue or condition-related issue, the Capacity Assessment Report shall summarize how those SSO locations have been addressed consistent with Appendix B (Cleaning Program) and/or Appendix C (Condition Program), as appropriate.

40. Remedial Measures Alternatives Analysis. Following submittal of the Capacity Assessment Report, SAWS shall complete a Remedial Measures Alternatives Analysis consistent with the process and guidelines identified in Appendix D. Where Field Investigations indicate that a Capacity Constraint exists that has caused or significantly contributed to previous SSOs; and/or, that is likely to cause or significantly contribute to the future occurrence of SSOs, SAWS shall perform an alternatives analysis for each Capacity Constraint location to select an appropriate Capacity Remedial Measure or other action consistent with Appendix D. SAWS

shall determine the most practical solution and timeframe for resolving Capacity Constraints considering both the long-term performance of the Pipe Segment and the life-cycle cost for maintaining the Pipe Segment in permanent service. The range of solutions and techniques shall be consistent with Appendix D. The potential Remedial Measures that SAWS shall evaluate may include flow rate reduction, capacity upgrades, or other appropriate capacity remediation measures including, but not limited to, the following:

- a. Re-routing a portion of upstream wastewater flows;
- b. Reducing flows entering the WCTS;
- c. Reduction of Inflow;
- d. Reduction of Infiltration;
- e. Increasing conveyance capacity of the WCTS;
- f. Decreasing peak flows and/or increasing storage in the WCTS through construction of upstream flow detention facilities; or
- g. Continued monitoring, if appropriate.

These analyses shall include consideration of the then-current 20-year growth projection, as appropriate.

41. Capacity Remedial Measures Plan. Within twelve (12) months of submitting the Capacity Assessment Report, SAWS shall provide to EPA for review and approval a Capacity Remedial Measures Plan that summarizes SAWS recommended Capacity Remedial Measures that were prioritized and selected in accordance with Appendix D to address verified Capacity Constraints in the WCTS that were identified in the Capacity Assessment Report as having caused or significantly contributed to previous SSOs; and/or, as likely to cause or significantly contribute to the future occurrence of SSOs. SAWS prioritization and selection of Capacity

Remedial Measures shall be based on appropriate factors such as the severity of Capacity Constraints identified, frequency and history of SSOs, pipe size, age and material, appropriate grouping of WCTS assets for bid packages, scheduling practicalities and other appropriate factors. The Capacity Remedial Measures Plan shall describe SAWS plans to implement the selected Capacity Remedial Measures on a balanced annual basis during the term of the Decree, taking into account practical planning considerations such as permitting requirements, easement acquisition, contractor capacity, preparation of public bidding documents, the bidding and awards process for public contracts and required decision making procedures for public bid contracts. The Capacity Remedial Measures Plan shall adhere to the format and content of the Capacity Remedial Measures Plan Template provided in Appendix G. The Capacity Remedial Measures Plan shall be provided to EPA for review and approval in accordance with Section VII (Review and Approval).

42. Capacity Remedial Measures Implementation. In general, SAWS shall plan and implement the approved Capacity Remedial Measures in accordance with the process and guidelines identified in Appendix D. Following receipt of EPA's written approval, SAWS shall begin implementation of the Capacity Remedial Measures Plan on a balanced annual basis. SAWS shall complete all approved Small Diameter and Large Diameter Gravity Sewer Main Capacity Remedial Measures within four (4) and a half (1/2) years of receipt of EPA's written approval of the Capacity Remedial Measures Plan. Should a specific Large Diameter Capacity Remedial Measures project require SAWS to obtain new easements and/or acquire land for more than twenty-five (25) percent of the length of that project or more than 2,500 feet, whichever is less, SAWS may at its option elect to complete that Large Diameter Capacity Remedial Measures project within up to six (6) and a half (1/2) years of receipt of EPA's written approval

of the Condition Remedial Measures Plan. SAWS shall advise EPA in the Capacity Remedial Measures Plan of any specific Large Diameter Condition Remedial Measures projects that SAWS wishes to complete in a maximum of six (6) and a half (1/2) years instead of four (4) and a half (1/2) years. For those projects that SAWS wishes to complete within six (6) and a half (1/2) years, SAWS shall explain in the Capacity Remedial Measures Plan the reasons why the need for new easements or land acquisition could not be avoided. Any modifications to the approved Capacity Remedial Measures Plan shall be in accordance with Section XVIII (Modification).

43. SAWS may implement Capacity Remedial Measures Work generated by the Capacity Assessment or other capacity assessment activities conducted consistent with Appendix D prior to approval of the Capacity Remedial Measures Plan. SAWS may also implement projects that include both Capacity Remedial Measures and Condition Remedial Measures prior to approval of the Capacity Remedial Measures Plan. Capacity Remedial Measures (other than Early Action Program Work) implemented prior to submittal of the Capacity Remedial Measures Plan shall be documented in the Annual Report for the year in which those Measures are completed and for Large Diameter multi-year projects the progress toward completing those Measures shall be documented in subsequent Annual Reports until the Measures are completed.

E. LIFT STATION REHABILITATION AND ELIMINATION PROGRAM

44. Prior to the Date of Lodging of this Consent Decree, SAWS initiated a program to assess the condition of all of its Lift Stations and has made or will make determinations for each such Lift Station to improve or eliminate it based on these assessments. SAWS shall complete the assessment and the determination to improve or eliminate each of its Lift Stations over a period not exceeding four (4) years after the Date of Lodging of this Consent Decree. The results of

these Lift Station assessments have been and are being used to develop and implement SAWS Lift Station Rehabilitation and Elimination Program. SAWS has implemented portions of, and shall complete the remaining portions of, the Lift Station Rehabilitation and Elimination Program over a period not exceeding ten (10) years after the Date of Lodging of this Consent Decree. In completing this Program, SAWS shall give first priority to improving or eliminating, as applicable, those Lift Stations that have experienced an SSO prior to the Date of Lodging, as follows:

- a. SAWS shall give priority to rehabilitation for those Lift Stations that have experienced an SSO for those Lift Stations for which rehabilitation is not already complete or already under construction contract. The Lift Stations that SAWS shall prioritize for rehabilitation are Lift Stations 26, 105, 137, 166, 167, 187 and 201. If SAWS determines, consistent with Appendix E, to rehabilitate rather than eliminate certain Lift Stations that have experienced an SSO, then SAWS shall also prioritize Lift Stations 303-305, 307-313, 315-326 and 328-331.
- b. SAWS shall give priority to elimination of Lift Stations that have experienced an SSO if Gravity Sewer Mains are constructed near the Lift Station that allow elimination to occur.

45. A summary of the Lift Station Program is set forth in Appendix E. Lift Station assessment, repair, rehabilitation, replacement and elimination activities associated with the Lift Station Rehabilitation and Elimination Program conducted prior to the Date of Lodging as reflected in Appendix E shall be credited towards SAWS compliance with the requirements of this Subsection. Lift Station capacity assessment efforts and findings shall be presented in the Annual Report for the year in which the assessment efforts are performed. Updates to Appendix

E to reflect the completion of Lift Station Rehabilitation and Elimination activities will also be reported in the Annual Report.

F. FORCE MAIN ASSESSMENT PROGRAM

46. SAWS shall conduct an assessment of its Force Mains over a period not exceeding ten (10) years after the Date of Lodging, as specified herein. SAWS shall prepare an inventory listing each Force Main in the WCTS indicating the associated Force Main construction material, age or installation date, diameter, length, special corrosion protection measures, if any, such as sacrificial anodes or impressed current, and typical flow rates. The inventory shall include any redundant or standby Force Mains and indicate the carrying capacity of the redundant Force Main (as a percentage of the Lift Station discharge) and the typical operating mode (i.e., emergency standby, wet weather standby or other mode). SAWS shall assess each Force Main in the inventory by reviewing past maintenance records, physically examining the air release valves, and visually inspecting the ground surface over the entire length of the Force Main to the extent practicable. All Force Main Condition Assessment efforts completed within four (4) years of the Date of Lodging shall be presented in the Condition Assessment Report described in Paragraph 28. Remedial Measures planned or implemented for Force Mains identified in the Condition Assessment Report as having structural defects that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs shall be presented in the Condition Remedial Measures Plan. All other Force Main Condition Assessment and Remedial Measures Work regarding structural defects that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs that is conducted after four (4) years of the Date of Lodging shall be presented in the Annual Report for the Calendar Year in

which the assessment was performed and the Annual Report for the Calendar Year in which the Work was completed.

G. PORTION OF THE WCTS LOCATED IN THE EARZ

47. Nothing in the System-Wide Cleaning Program, Condition Assessment and Remedial Measures Program, the Capacity Assessment and Remedial Measures Program, Lift Station Rehabilitation and Elimination Program, or any other provision of this Consent Decree shall modify in any way applicable state law requirements pursuant to 30 Tex. Admin. Code Ch. 213 for any activities conducted under this Consent Decree for those portions of the WCTS that are located in the Edwards Aquifer Recharge Zone (EARZ). The State of Texas retains sole jurisdiction to determine SAWS compliance with these state law requirements. Applicable state law requirements shall not modify in any way the terms of this Consent Decree.

H. WWTP EFFLUENT VIOLATION CORRECTIVE ACTIONS

48. Appendix H contains a list of SAWS reported effluent limitation violations during the period between March 1, 2003 and December 31, 2012 at its Dos Rios, Salado Creek, Medio Creek and Leon Creek WWTPs and at Mitchell Lake. Within three (3) months from Date of Lodging, SAWS shall complete an analysis of the causes of effluent violations at its WWTPs, listed in Appendix H, and implement all corrective actions necessary to prevent future effluent violations. No later than three (3) months from Date of Lodging, SAWS shall submit a report to EPA that summarizes the findings of the analysis and the corrective actions implemented by SAWS to prevent future effluent violations.

I. WATER QUALITY PROGRAM

49. Water Quality Program Plan. Within six (6) months of the Date of Lodging of this

Consent Decree, SAWS shall submit to EPA a Water Quality Program Plan designed to detect and quantify the extent of bacterial concentrations in select receiving waters within its service area by performing the actions described in Paragraph 50 of this Decree. The Water Quality Program Plan shall include a map of the locations of the proposed outfalls to be sampled, rationale for selecting these outfalls, and all field collection, analytical, and quality assurance and quality control objectives proposed for sampling and analysis. SAWS shall consider the results of past water quality studies, a review of all known data for bacterial concentrations in the respective sub-watersheds, and WTCS system age and condition in selecting the outfalls to be sampled. The Water Quality Program Plan shall describe SAWS proposed efforts to detect and quantify the extent of bacterial concentrations using *Escherichia coli* (*E. coli*) and the human *Bacteroidales* marker using a quantifiable polymerase chain reaction (qPCR) method. The Water Quality Program Plan shall be submitted to EPA for review and comment in accordance with Section VII (Review and Approval).

50. Sampling Outfall Locations and Analysis. SAWS shall propose between twenty-five (25) and thirty (30) stormwater outfalls located in designated sub-watersheds to be sampled during dry and wet weather. The outfalls shall be distributed through the Upper San Antonio River Watershed, Salado Creek Watershed and Medio Creek Watershed based on the considerations evaluated during development of the Water Quality Program Plan. All sampling outfalls shall be within the SAWS service area. For each designated outfall, SAWS shall collect two (2) dry weather grab samples and analyze these samples to detect and quantify the concentrations of *E. coli* present and to detect the presence of the human *Bacteroidales* marker in the discharge. For dry weather sampling, SAWS shall perform a visual inspection of each outfall during dry weather. If a discharge is not detected at the time of the dry weather inspection, the inspection

shall count as a non-detect sampling event. When a discharge is observed at an outfall during a dry weather inspection, a grab sample shall be collected. The wet weather sample shall be collected during first flush of a wet weather event, if technically feasible consistent with safety and legal requirements. A wet weather event is defined as precipitation of greater than 0.25 inches that occurs during daylight hours. First flush is defined as runoff occurring within the first hour of precipitation. Each individual dry and wet weather sampling attempt for a given outfall shall be at least seven (7) days apart. All dry weather sampling shall be completed within two (2) years after the Date of Lodging of this Consent Decree. If two (2) wet weather qualifying events do not occur within two (2) years after the Date of Lodging, SAWS shall inform EPA in writing and the period of sampling shall be extended until qualifying wet weather events occur.

51. Water Quality Program Report. Within six (6) months following completion of all sampling, SAWS shall submit to EPA for review and comment a Water Quality Program Report that includes the results of the sampling and analysis. The Water Quality Program Report shall rank the outfall locations using sampling results for both *E. coli* and the human *Bacteroidales* marker, giving the highest ranking to outfalls that have both high *E. coli* concentrations and the presence of the human *Bacteroidales* marker. The Water Quality Program Report shall include the dates and documentation associated with the sample collection, chain-of-custody, laboratory analyses, and conformance with quality assurance and quality control objectives. The Water Quality Program Report shall describe any variances from the approved Water Quality Program Plan. The Water Quality Program Report shall be submitted to EPA for review and comment in accordance with Section VII (Review and Approval). The sampling results of analysis or other Work performed in connection with the Water Quality Program Plan and the Water Quality

Program Report shall not be used to require SAWS to perform any additional Work under the terms of this Consent Decree or to create any other obligations under the terms of this Consent Decree.

VI. REPORTING REQUIREMENTS

52. Annual Reports. On June 30 of each year during the term of this Consent Decree, until this Consent Decree is terminated, SAWS shall submit to EPA for review and comment an Annual Report that addresses all Work completed in the previous Calendar Year. For any Large Diameter multi-year projects, SAWS shall also report the progress for each project, including anticipated completion date if different than previously reported. The Annual Report shall contain a summary of the status and progress of all programs required by Section V (Compliance Requirements) of this Decree as follows:

- a. Early Action Program. The Annual Report shall provide the status of the Early Action Program Work completed in the previous Calendar Year, including progress on multi-year projects, and the anticipated completion date of those projects as listed in Appendix F.
- b. CMOM Program. The Annual Report shall include a summary of activities under the CMOM Program under Subsection V(A) completed during the preceding Calendar Year. SAWS shall include the following information in the CMOM Annual Report:
 - i. SSO Reporting. SAWS shall provide SSO documentation pursuant to Paragraphs 12.c and 12.d of the Consent Decree.
 - ii. Fats, Oils, and Grease (FOG) Control Program. SAWS shall summarize

the implementation and enforcement activities it carried out under the FOG Control Program during the previous Calendar Year, including the number of permitted Food Service Establishments inspected and a report on enforcement and compliance assistance actions undertaken to ensure compliance with the FOG Control Program.

iii. Sewer Cleaning. The Annual Report shall report the number of miles of Small Diameter Gravity Sewer Mains cleaned in the previous Calendar Year, the number of miles of Large Diameter Gravity Sewer Mains cleaned or inspected in the previous Calendar Year, and the number of miles of Small Diameter Gravity Sewer Mains that were repeat cleaned in the previous Calendar Year. Additionally, the Annual Report shall identify the percent of the Small Diameter and Large Diameter Gravity Sewer Mains cleaned in the previous calendar year and cumulatively since the Date of Lodging of the Consent Decree.

iv. Private Laterals. The Annual Report shall summarize SAWS activities and provide any information provided by the City to SAWS regarding remediated laterals, Notices of Abatement, fines or termination of service conducted by the City in the preceding Calendar Year.

c. Condition Assessment. The Annual Report shall include for the previous Calendar Year:

i. The number of miles of Small Diameter and Large Diameter Gravity Sewer Mains inspected by CCTV, Pole Camera Inspections and Visual Inspections, with a map depicting the relevant locations;

- ii. The number of manholes inspected; and,
 - iii. A summary of the Gravity Sewer Main mileage and number of manholes identified for Remedial Measures Alternatives Analysis, monitoring and maintenance consistent with the process and guidelines included in Appendix C. The summary shall identify the inspection method used to identify the asset (e.g., CCTV, Pole Camera Inspections and/or Visual Inspections) and shall summarize how SAWS applied the process and guidelines in Appendix C for those assets that do not require Remedial Measures Alternatives Analysis.
- d. Condition Remedial Measures. The Annual Report shall summarize Condition Remedial Measures completed within the previous Calendar Year to address assets requiring Remedial Measures, as defined in Appendix C (Condition Program), including the number of miles of Small Diameter and Large Diameter Gravity Sewer Mains and manholes SAWS has remediated in the previous Calendar Year under Subsection V(C). For each Small Diameter and Large Diameter Gravity Sewer Main and manhole Remedial Measure, SAWS shall provide the following information if available:
- i. The asset identification number and type of asset;
 - ii. Whether the asset was rehabilitated, repaired or replaced;
 - iii. The length of the sewer line at issue, if applicable;
 - iv. The pipe material, if applicable;
 - v. The diameter of the pipe, if applicable;
 - vi. The manhole type, if applicable;

- vii. The original installation date of the asset;
 - viii. An overview map depicting the location of each Condition Remedial Measure; and
 - ix. Description of any Condition Remedial Measures that were coordinated with Capacity Remedial Measures.
- e. Capacity Assessment. The Annual Report shall include for the previous Calendar Year the number of potential Capacity Constraints identified by SAWS through Wet Weather SSO verification, Hydraulic Modeling and Field Investigation activities under Subsection V(D) and the process and guidelines identified in Appendix D (Capacity Program). For each potential Capacity Constraint identified SAWS shall report the Priority (1-5) assigned and the Field Investigation technique that is used to verify the Capacity Constraint, per Appendix D, if determined within the reporting period.
- f. Capacity Remedial Measures. The Annual Report shall summarize Capacity Remedial Measures completed within the previous Calendar Year to address Capacity Constraints as defined in Appendix D, including the number of miles of Small Diameter and Large Diameter Gravity Sewer Mains SAWS has remediated in the previous Calendar Year under Subsection V(D). For each Small Diameter and Large Diameter Gravity Sewer Main Remedial Measure, SAWS shall provide the following information if available:
- i. The asset identification number and type of asset;
 - ii. Whether SAWS addressed the Capacity Constraint through pipe rehabilitation/replacement, increased conveyance capacity, increased

storage, amalgamation with Condition Remedial Measures or other Capacity Remedial Measures;

- iii. The length of the sewer line at issue, if applicable;
- iv. The pipe material, if applicable;
- v. The diameter of the pipe, if applicable;
- vi. The original installation date of the asset at issue;
- vii. An overview map depicting the locations of each Capacity Remedial Measure; and
- viii. For those locations where Capacity Constraints were suspected to be present but through Field Investigations were found not to exist, SAWS shall provide a summary of the specific Field Investigations performed, the findings of those Investigations and the efforts SAWS will undertake to maintain, repair, and/or monitor these locations in the future per Appendix D.

g. Lift Station Rehabilitation and Elimination Program. The Annual Report shall summarize the activities completed under the Lift Station Rehabilitation and Elimination Program under Subsection V(E) during the preceding Calendar Year. As part of this reporting, SAWS shall update the completion dates listed in the Lift Station Rehabilitation and Elimination Program table included in Appendix E, as applicable.

h. Force Main Assessment Program. The Annual Report shall summarize the activities completed under the Force Main Assessment Program under Subsection V(F) during the preceding Calendar Year.

- i. Water Quality Program. The Annual Report shall summarize the Water Quality Program activities conducted in the preceding Calendar Year.
- j. Work Completed in Low Income Census Tract Areas. The Annual Report shall summarize Work completed by SAWS in the preceding calendar year within census tracts in the City identified using 2010 U.S. Census data that contain more than 300 households with income estimated to be below 125 percent of the poverty level. The Report shall contain:
 - i. A narrative summary of the miles of pipe inspected, cleaned or remediated, as reported under subparagraphs 52.a, b.iii, c, d, e, f, g and h, located in these low income areas; and
 - ii. Indication on the corresponding maps for those activities required by the Annual Report Template in Appendix G of the location of these low income areas.

53. Provisions Applicable to All Reports:

- a. All reports shall be certified in accordance with Section XIX (Certification) of this Consent Decree.
- b. All reports except reports submitted under Paragraphs 12.a and 12.b shall be submitted electronically in a searchable format.
- c. All reports shall be submitted to the persons designated in Section XV (Notices) of this Consent Decree.
- d. The reporting requirements of this Consent Decree do not modify in any way or relieve SAWS of any reporting obligations required under the Clean Water Act or its implementing regulations or any other federal, State, or local law, regulation,

permit, or other requirement.

VII. REVIEW AND APPROVAL

54. Each Deliverable is subject to review by EPA. Select Deliverables are subject to review and approval, as detailed in Paragraph 55 below. All other Deliverables are subject to review and comment, as detailed in Paragraph 56 below. Select Deliverables are subject only to EPA review, as detailed in Paragraph 57 below. EPA agrees to use its best efforts to expeditiously review and either approve or comment on Deliverables that SAWS is required to submit to EPA for either approval or comment pursuant to the terms and provisions of this Consent Decree.

55. Deliverables Subject to Review and Approval. The Condition Remedial Measures Plan, the Capacity Remedial Measures Plan, and the Capacity, Management Operations, and Maintenance (CMOM Plan) shall be subject to the review and approval process described in Paragraph 58 below. The Phase II Early Action Program shall also be subject to the review and approval process described in Paragraph 58 below, or the review and comment process described in Paragraph 59, as appropriate.

56. Deliverables Subject to Review and Comment. The Condition Assessment Report, the Capacity Assessment Report, the Water Quality Program Plan, and the Sewer Overflow Response Plan (SORP) shall be subject to Review and Comment, as detailed in Paragraph 59.

57. Other Deliverables. All other Deliverables required under this Consent Decree, including the Monthly Compliance Reports (Paragraph 12.a), Five-Day Reports (Paragraph 12.b), WWTP effluent violation analysis (Paragraph 48) and Annual Reports (Paragraph 52) are subject to EPA review at its option.

58. EPA Action on Deliverables Subject to Review and Approval. After review of any Deliverable that is required to be submitted pursuant to Paragraph 55 and after consultation with

TCEQ, EPA shall in writing: (i) approve the Deliverable, in whole or in part; (ii) approve the Deliverable upon specified conditions; (iii) disapprove the Deliverable, in whole or in part, providing comments identifying deficiencies and directing SAWS to modify the Deliverable, in whole or in part; or (iv) any combination of the above.

- a. Approved Deliverables. If a whole Deliverable is approved by EPA pursuant to Paragraph 58, SAWS shall take all actions required by the Deliverable in accordance with the schedules and requirements of the Deliverable as approved. If the Deliverable is approved only in part pursuant to Paragraph 58, SAWS shall, upon written direction from EPA, after consultation with TCEQ, take all actions required by the approved Deliverable that EPA, after consultation with TCEQ, determines are technically severable from any disapproved portions, subject to SAWS right to dispute only the specified conditions or the disapproved portions, under Section XI (Dispute Resolution) of this Decree. Following EPA approval of any Deliverable or portion thereof, such Deliverable or portion thereof so approved shall be incorporated into, and become enforceable under, this Consent Decree.
- b. Disapproved Deliverables. If the Deliverable is disapproved in whole or in part pursuant to Paragraph 58, SAWS shall, within thirty (30) Days or such other time as EPA and SAWS agree to in writing, correct all deficiencies and resubmit to EPA the Deliverable, or disapproved portion thereof, for approval, in accordance with Paragraph 58, and subject to Subparagraph 58.d. If the resubmission is approved in whole or in part, SAWS shall proceed in accordance with Subparagraph 58.a. For any Deliverable that is disapproved in whole or in part, EPA shall provide a written explanation of how the Deliverable does not meet the requirements of the Consent

Decree.

- c. Stipulated Penalties Accruing. Any Stipulated Penalties applicable to the original Deliverable, as provided in Section IX (Stipulated Penalties) of this Decree, shall accrue during the thirty (30) Day period or other specified period, but shall not be payable unless the resubmitted Deliverable is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of SAWS obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.
- d. Resubmitted Deliverable. If a resubmitted Deliverable, or portion thereof, is disapproved in whole or in part, EPA, after consultation with TCEQ, may again require SAWS to correct any deficiencies, in accordance with Subparagraph 58.b. EPA and TCEQ retain the right to modify or develop any disapproved or conditioned portion of the resubmitted Deliverable. SAWS will implement any such Deliverable as modified or developed by EPA and TCEQ, subject only to SAWS right to invoke Dispute Resolution under Section XI of this Consent Decree. If, upon resubmission, a Deliverable is disapproved or modified in whole or in part by EPA and TCEQ due to a material defect previously identified and not corrected, SAWS shall be deemed to have failed to submit the Deliverable timely and adequately unless SAWS invokes the dispute resolution procedures set forth in Section XI (Dispute Resolution), and (i) EPA and TCEQ agree to modify their earlier position or (ii) the Court adopts SAWS position. If EPA's and TCEQ's disapproval or modification is upheld by the Court, Stipulated Penalties shall

accrue for such violation from the date on which the initial Deliverable was originally required. Upon either EPA's approval of SAWS resubmitted Deliverable or SAWS receipt of EPA's modified or new Deliverable, that Deliverable will be incorporated into and become enforceable under this Consent Decree and shall be implemented by SAWS according to the approved schedule subject to SAWS right to invoke Dispute Resolution.

59. Deliverables For Which EPA Provides Written Comments. EPA may choose to provide written comments on the Deliverables subject to Paragraph 56. If EPA provides comments that identify deficiencies in such a Deliverable, and EPA specifically requests a response from SAWS, then SAWS shall provide a written response to EPA within thirty (30) days of receipt of such request.

a. Stipulated Penalties Accruing. If SAWS fails to substantively address EPA comments for which EPA specifically requests a response from SAWS, such failure is subject to Stipulated Penalties as provided in Section IX.

60. Public Document Repository. SAWS shall post to its website all final EPA-reviewed and/or -approved plans, reports or other submissions required by Section V (Compliance Requirements) and Section VI (Reporting Requirements). Each submission shall remain on the website or by link or other accepted method for at least three (3) years.

VIII. CIVIL PENALTY

61. SAWS shall pay a total Civil Penalty of \$2.6 million, with one half, \$1.3 million, payable to the United States and one half, \$1.3 million, payable to the State of Texas as set forth in Paragraphs 62 and 64.

62. Within sixty (60) Days after the Effective Date of this Consent Decree, SAWS shall pay

to the United States \$1.3 million of the Civil Penalty due by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to SAWS, following Lodging of the Consent Decree, by the Financial Litigation Office of the U.S. Attorney’s Office for the Western District of Texas, San Antonio Division, 601 NW Loop 410, Suite 600, San Antonio, TX 78216; phone number (210) 384-7100. At the time of payment, SAWS shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the Civil Penalty owed pursuant to the Consent Decree in United States et al. v. San Antonio Water System, and shall reference the civil action number and DOJ case number [], to the United States in accordance with Section XV (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

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

63. In the event that full cash payment to the United States is not made within sixty (60) Days after the Effective Date of this Consent Decree, SAWS shall pay to the United States interest on the balance due from the original due date to the date of full payment, at the rate calculated pursuant to 28 U.S.C. § 1961.

64. SAWS shall make payment as directed by the State as follows:

SAWS shall pay the State \$1.3 million by wire transfer to the Texas Comptroller of Public Accounts – Federal Reserve Clearing Account for the Office of the Attorney General:

Financial Institution (short name):	TX COMP AUSTIN
Routing Number:	114900164
Account Name:	Comptroller of Public Accounts Treasury Operations
Account Number to Credit:	463600001
Reference:	[Remitter’s Name], AG Case # 082508284, Jon Niermann, Chief, Environmental Protection Division

Attention:

Office of the Attorney General, Kristy Lerma, Financial
Rptg

At the time of payment, SAWS shall send a copy of the wire transfer authorization form and the wire transaction record, together with a transmittal letter, which shall state that the payment is for the Civil Penalty owed pursuant to the Consent Decree in United States et al. v. San Antonio Water System, and shall reference the civil action number and Reference: AG # 082508284 to the State in accordance with Section XV (Notices).

IX. STIPULATED PENALTIES

65. Failure to Submit Timely and Complete Deliverables. SAWS shall be liable to pay Stipulated Penalties to the United States for each Day it fails to submit and/or complete the Deliverables required under Section V (Compliance Requirements), as set forth below, for each Day it fails to submit a Deliverable by the specified due dates or to make any required material changes to such Deliverables within the required time frames. The Stipulated Penalties for failure to meet each Deliverable submission date shall be as follows:

<u>Period of Noncompliance</u>	<u>Penalty Per Violation per Day</u>
1 st to 30 th Day	\$500.00
31 st to 60 th Day	\$1,500.00
More than 60 Days	\$2,500.00

66. Remedial Requirements. SAWS shall be liable to pay Stipulated Penalties to the United States as set forth below for each Day SAWS fails to satisfy any of the remedial requirements of Paragraphs 21.a, b, and c (Implementation of Phase I and Phase II Early Action Program), 31 (Condition Remedial Measures Implementation), and 42 (Capacity Remedial Measures Implementation) of this Consent Decree. The Stipulated Penalties for failure to meet each

remedial requirement shall be as follows:

<u>Period of Noncompliance</u>	<u>Penalty Per Violation per Day</u>
1 st to 30 th Day	\$750.00
31 st to 60 th Day	\$1,500.00
61 st to 180 th Days	\$2,500.00
More than 180 Days	\$4,000.00

67. SSOs that Reach Waters of the United States or State Water. For each overflow from the WCTS that reaches waters of the United States or State water, as defined in Section 11.021 of the Texas Water Code, SAWS shall be liable to pay a Stipulated Penalty to the United States and the State, as provided in Paragraph 73. The Stipulated Penalties for Paragraph 67 shall be as follows:

<u>If SSO occurs</u>	<u>Penalty Per Violation Per Day</u>
Within 4 years of Date of Lodging	\$500
Between 4 and 7 years of Date of Lodging	\$1,500.00
More Than 7 years from Date of Lodging	\$3,000.00

68. SSOs that Do Not Reach Waters of the United States or State Water. For each overflow from the WCTS that does not reach either waters of the United States or State water, as defined in Section 11.021 of the Texas Water Code, and falls within the definition of SSO for this Consent Decree, SAWS shall be liable to pay a Stipulated Penalty to the United States and the State, as provided in Paragraph 73. The Stipulated Penalties for Paragraph 68 shall be as follows:

<u>If SSO occurs</u>	<u>Penalty Per Violation Per Day</u>
Within 4 years of Date of Lodging	\$350.00

Between 4 and 7 years of Date of Lodging	\$750.00
More than 7 years from the Date of Lodging	\$1,500.00

69. Reporting Requirements. SAWS shall be liable to pay Stipulated Penalties to the United States for each Day for each violation of Section VI (Reporting Requirements) of this Consent Decree:

<u>Period of Noncompliance</u>	<u>Penalty Per Violation Per Day</u>
1 st through 14 th Day	\$350.00
15 th through 30 th Day	\$750.00
31 st Day and beyond	\$1,500.00

70. Delay in Payment of Penalty. SAWS shall be liable to pay the United States and the State \$2,000 for each Day that SAWS is late in paying the penalty required under Section VIII (Civil Penalty), payable \$1,000 to the United States and \$1,000 to the State.

71. Stipulated Penalties shall automatically begin to accrue on the first Day that an event occurs for which a Stipulated Penalty is payable as provided in Paragraphs 65, 66, 67, 68, 69 and 70 and shall continue to accrue through the final Day of correction of the noncompliance. Stipulated Penalties shall accrue simultaneously for separate violations of this Consent Decree.

72. SAWS shall pay Stipulated Penalties that accrue pursuant to Paragraphs 65, 66, and 69 to the United States within thirty (30) Days of receipt of a written demand by the United States. Payment of Stipulated Penalties as set forth above shall be in addition to any other rights or remedies which may be available to the United States or the State by reason of SAWS failure to comply with requirements of this Consent Decree, and any applicable Federal, State or local laws, regulations, NPDES Permit and all other applicable permits.

73. SAWS shall pay Stipulated Penalties that accrue pursuant to Paragraphs 67, 68 and 70 to

the United States and the State, within thirty (30) Days of receipt of a written demand by either Plaintiff. Only one (1) penalty amount per violation per day shall be payable. Prior to either Plaintiff making a written demand for Stipulated Penalties pursuant to Paragraphs 67, 68 and 70, the Plaintiffs shall consult. Where the Plaintiffs jointly pursue Stipulated Penalties pursuant to Paragraphs 67, 68 or 70, SAWS shall pay 50 percent of the total penalty owed to the United States and 50 percent of the total penalty owed to the State. Where only one Plaintiff, the United States or the State, pursues Stipulated Penalties, only that Plaintiff shall recover the full amount of the penalty described in Paragraphs 67 and 68 (or any reduced amount pursuant to Paragraph 76), and the Plaintiff not joining in the pursuit of Stipulated Penalties shall be deemed to have waived such penalties under Paragraph 76. The Plaintiff making a demand for payment of Stipulated Penalties shall simultaneously send a copy of the demand to the other Plaintiff.

74. Stipulated Penalties that accrue pursuant to Paragraphs 65, 66 and 69 and for Stipulated Penalties that accrue pursuant to Paragraphs 67, 68 and 70 that EPA has chosen to pursue, such penalties shall continue to accrue as provided in Paragraph 90 during any Dispute Resolution, but need not be paid until the following:

- a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, SAWS shall pay accrued penalties determined to be owing, together with interest, to the United States within thirty (30) Days of the effective date of the agreement or the receipt of EPA's decision.
- b. If the dispute is appealed to the Court and the United States prevails in whole or in part, SAWS shall pay all accrued penalties determined by the Court to be owing, together with interest, within sixty (60) Days of receiving the Court's decision or order, except as provided in Subparagraph 74.c, below.

c. If any Party appeals the District Court's decision, SAWS shall pay all accrued penalties determined to be owing, together with interest, within thirty (30) Days of receiving the final appellate court decision.

75. Stipulated Penalties that accrue pursuant to Paragraphs 67, 68 and 70 that the State has chosen to pursue and EPA has chosen not to pursue shall continue to accrue as provided in Paragraph 90 during any Dispute Resolution, but need not be paid until the following:

- a. If the dispute is resolved by agreement or by a decision of the State that is not appealed to the Court, SAWS shall pay accrued penalties determined to be owing, together with interest, to the State within thirty (30) Days of the effective date of the agreement or the receipt of the State's decision.
- b. If the dispute is appealed to the Court and the State prevails in whole or in part, SAWS shall pay all accrued penalties determined by the Court to be owing, together with interest, within sixty (60) Days of receiving the Court's decision or order, except as provided in Subparagraph 75.c, below.
- c. If any Party appeals the District Court's decision, SAWS shall pay all accrued penalties determined to be owing, together with interest, within thirty (30) Days of receiving the final appellate court decision.

76. The United States, the State, or both, may, in the unreviewable exercise of their discretion, reduce or waive Stipulated Penalties otherwise due under this Consent Decree.

77. SAWS shall be liable to pay Stipulated Penalties owing to the United States and/or the State in the manner set forth and with the confirmation notices required by Section VIII (Civil Penalty) except that the transmittal letters shall state that the payment is for Stipulated Penalties and shall state for which violation(s) the penalties are being paid.

78. If SAWS fails to pay Stipulated Penalties according to the terms of this Consent Decree, SAWS shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Section shall be construed to limit the United States and/or the State from seeking any remedy otherwise provided by law for SAWS failure to pay any Stipulated Penalties.

79. Subject to the provisions of Section XIII (Effect of Settlement/Reservation of Rights) of this Consent Decree, the Stipulated Penalties provided for in this Consent Decree shall be in addition to any other rights, remedies or sanctions available to the United States and/or the State for SAWS violation of this Consent Decree or applicable law.

X. FORCE MAJEURE

80. “Force Majeure,” for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of SAWS, any entity controlled by SAWS, or SAWS consultants and contractors, that delays or prevents the performance of any obligation under this Consent Decree despite SAWS best efforts to fulfill the obligation. The requirement that SAWS exercise “best efforts to fulfill the obligation” 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 extent technically feasible. “Force Majeure” does not include SAWS financial inability to perform any obligation under this Consent Decree.

81. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree whether or not caused by a Force Majeure event, SAWS shall provide notice orally or by electronic or facsimile transmission to EPA and TCEQ, within five (5) business days of when SAWS first knew that the event might cause a delay. Within fourteen

(14) days thereafter, SAWS shall provide in writing to EPA and TCEQ an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; SAWS rationale for attributing such delay to a Force Majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of SAWS, such event may cause or contribute to an endangerment to public health, welfare or the environment. SAWS shall include with any notice all available documentation supporting the claim that the delay was attributable to a Force Majeure event, and may supplement this documentation as additional information becomes available. Failure to comply with the above requirements shall preclude SAWS from asserting any claim of Force Majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. SAWS shall be deemed to know of any circumstance of which SAWS, any entity controlled by SAWS, or SAWS contractors knew or should have known.

82. If EPA, after a reasonable opportunity for review and comment by TCEQ, agrees that the delay or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event will be extended by EPA, after a reasonable opportunity for review and comment by TCEQ, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the Force Majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify SAWS in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

83. If EPA, after a reasonable opportunity for review and comment by TCEQ, does not agree

that the delay or anticipated delay has been or will be caused by a Force Majeure event, EPA will notify SAWS in writing of its decision.

84. If SAWS elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than fifteen (15) Days after receipt of EPA's notice. In any such proceeding, SAWS 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 SAWS complied with the requirements of Paragraphs 80 and 81 above. If SAWS carries this burden, the delay at issue shall be deemed not to be a violation by SAWS of the affected obligation of this Consent Decree identified to EPA and the Court.

XI. DISPUTE RESOLUTION

85. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. SAWS failure to seek resolution of a dispute under this Section shall preclude SAWS from raising any such issue as a defense to an action by the United States or the State to enforce any obligation of SAWS arising under this Consent Decree.

86. 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 SAWS sends the United States and the State a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed twenty (20) Days from the date the dispute arises, unless that period is modified by written agreement between the United States and SAWS. The United

States shall consult with the State during the period of informal negotiations. If the United States and SAWS cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within forty-five (45) Days after the conclusion of the informal negotiation period, SAWS invokes formal dispute resolution procedures as set forth below.

87. Formal Dispute Resolution. SAWS shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting SAWS position and any supporting documentation relied upon by SAWS. The United States shall serve its Statement of Position within sixty (60) Days of receipt of SAWS Statement of Position. The United States' Statement of Position 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 United States. The United States shall consult with the State during preparation of its Statement of Position. The United States' Statement of Position shall be binding, unless SAWS files a motion for judicial review of the dispute in accordance with the following Paragraph.

88. Judicial Dispute Resolution. SAWS may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section XV (Notices) of this Consent Decree, a motion requesting judicial resolution of the dispute. The motion must be filed within twenty (20) Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of SAWS 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. The United States shall respond to SAWS motion within the time period allowed by the Local Rules of this Court. The United States shall consult with the State during preparation of its response. SAWS may file a reply memorandum, to the extent permitted by the Local Rules.

89. Standard of Review. Except as otherwise provided in this Consent Decree, in any dispute brought under this Section, SAWS shall bear the burden of demonstrating that its position complies with this Decree. The Parties' positions are reviewable only on the administrative record. The Parties reserve the right to argue regarding the applicable standard of review in any judicial proceeding.

90. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone or affect in any way any obligation of SAWS 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 Paragraphs 74 and 75. If SAWS does not prevail on the disputed issue, Stipulated Penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties). The Dispute Resolution procedures described in Paragraphs 85, 86, 87, 88 and 89 shall also apply for any dispute solely between the State and SAWS.

XII. RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION

91. The EPA and its representatives and TCEQ and its representatives, including attorneys, contractors, and consultants, shall each have the right of entry into the premises of any SAWS property at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State;
- c. obtain samples and, upon request, splits of any samples taken by SAWS or its representatives, contractors or consultants;
- d. observe performance tests;
- e. obtain documentary evidence, including photographs and similar data; and
- f. assess SAWS compliance with this Consent Decree, its TPDES Permits, the CWA or applicable State law.

92. Until five (5) years after the date of submission of a Deliverable to EPA, SAWS shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, reports, data, records or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to the SAWS performance of its obligations under this Consent Decree, including any underlying research and analytical data. This information retention requirement shall apply regardless of any contrary SAWS corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United States, SAWS shall provide copies of any documents, reports, analytical data or other information required to be maintained under this Paragraph.

93. At the conclusion of the information retention period provided in the preceding Paragraph, SAWS shall notify the United States 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, SAWS shall deliver copies of any such

documents, records, or other information to the EPA.

94. This Consent Decree in no way limits or affects the EPA's or the State's right to enter or access the property of SAWS, to obtain information, to conduct inspections, to require monitoring, and to obtain information from SAWS, as authorized by law, nor does it limit or affect any duty or obligation of SAWS to maintain documents, records or other information imposed by applicable law.

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

95. This Consent Decree resolves the claims for injunctive relief and Civil Penalties for the violations alleged in the Complaint through the Date of Lodging.

96. The United States and the State reserve all rights against SAWS with respect to any violations by SAWS that occur after the Date of Lodging, and/or for any violations of the CWA not specifically alleged in the Complaint, whether they occurred before or after the Date of Lodging.

97. The United States and the State further reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated herein. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the CWA or applicable state law or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in this Consent Decree. The United States reserves all rights against SAWS with respect to criminal liability. The United States further reserves all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, SAWS publicly owned treatment works, whether related to

the violations addressed in this Consent Decree or otherwise.

98. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, Civil Penalties, or other appropriate relief relating to SAWS publicly owned treatment works or violations under the Complaint, SAWS 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 State 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 95.

99. This Consent Decree is not and shall not be construed as a permit or a modification of any permit, under any federal, State or local laws or regulations. SAWS is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations and permits; and SAWS compliance with this Consent Decree shall be no defense to any action commenced by the United States or the State pursuant to any such laws, regulations, or permits. The United States does not, by its consent to the Lodging of this Consent Decree, warrant or aver in any manner that SAWS compliance with any aspect of this Consent Decree shall result in compliance with provisions of the CWA or with any other provisions of federal, State or local laws, regulations, or permits. Notwithstanding EPA's review or approval of any plans, reports, policies or procedures developed pursuant to or as a result of this Consent Decree, SAWS shall remain solely responsible for any non-compliance with the terms of this Consent Decree, all applicable permits, as well as all federal and State laws and regulations promulgated under those laws.

100. SAWS duty to comply with the terms of this Consent Decree is not conditioned on the

receipt of any federal or State funds or SAWS financial capabilities. Failure to comply is not excused by lack of federal or State grant funds, or by the processing of any applications for the same, or by SAWS financial capabilities.

101. This Consent Decree does not limit or affect the rights of the Parties 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 SAWS, except as otherwise provided by law. 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.

102. Nothing in this Consent Decree limits the rights or defenses available under Section 309(e) of the Clean Water Act, 33 U.S.C. §1319(e), in the event that the laws of the State, as currently or hereafter enacted, may prevent SAWS from raising the revenue needed to comply with this Decree.

103. Nothing in this Consent Decree limits any rights the United States or the State may have against the City of San Antonio for violations of Texas Government Code Title 9, Subtitle J, Section 1502.057 or City Code of Ordinances, Article V, §§ 34-442, 34-446, 34-447, 34-448, 34-449, and 34-450 or to seek relief from the City of San Antonio in the event that SAWS fails to comply with its obligations under this Consent Decree.

XIV. COSTS

104. The United States, the State and SAWS each shall bear its own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the Civil Penalty or any Stipulated Penalties due but not paid by SAWS.

XV. NOTICES

105. Unless otherwise specified, all reports, notices or any other written communications required to be submitted under this Consent Decree shall be sent to the respective Parties at the following addresses:

As to the United States:

U.S. Department of Justice
Environmental Enforcement Section
Environment and Natural Resources Division
P.O. Box 7611
Washington, D.C. 20044-7611
Reference: DOJ Case No. []

U.S. Environmental Protection Agency, Region VI
Chief, Water Enforcement Branch (6EN-W)
Compliance Assurance and Enforcement Division
1445 Ross Avenue
Dallas, Texas 75202-2733

As to the State of Texas or TCEQ:

Mark Walters
Office of the Attorney General
State of Texas
Environmental Protection Division
P.O. Box 12548
Austin, TX 78711-2548

Reference: AG # 082508284

Order Compliance Team
Enforcement Division, MC 224
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 7811-3087

Water Section Manager
San Antonio Regional Office
Texas Commission on Environmental Quality
14250 Judson Road
San Antonio, TX 77233-4480

As to SAWS:

President and CEO

San Antonio Water System
2800 U.S. Highway 281 North
San Antonio, TX78212

General Counsel
San Antonio Water System
2800 U.S. Highway 281 North
San Antonio, TX 78212

106. Notices submitted in accordance with this Section shall be deemed submitted on the date they are postmarked and sent by certified mail, return receipt requested or, when sent by non-postal delivery, the date of pickup provided same is for next day delivery, or, if sent electronically, they shall be deemed submitted upon transmission, but a notice is not effective if the sending Party learns that it did not reach the Party to be notified. Notwithstanding the sender's receipt of a successful delivery notification, a recipient that fails to receive the submission may request delivery by other means. Such a request does not affect the timeliness of the original submission.

107. Any Party may, by written notice to the other Parties, change its designated notice recipient(s) or notice address(es) provided above. Any Party may designate electronic mail address(es) as an alternative means for receiving submittals provided for by Paragraph 105. If a Party has designated an electronic mail address for receipt of submittals, delivery to the designated address shall substitute for the means of transmitting submissions provided for by Paragraph 105; provided, however, if an electronic mail submission is not successfully delivered to a designated electronic mail address, the Party making the submission shall make the submission as provided for by Paragraph 105 unless an alternative means of transmission is agreed upon.

XVI. EFFECTIVE DATE

108. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court.

XVII. RETENTION OF JURISDICTION

109. The Court shall retain jurisdiction over this case until termination of this Consent Decree for the purpose of resolving disputes arising under this Consent Decree pursuant to Section XI (Dispute Resolution), entering orders modifying this Consent Decree pursuant to Section XVIII (Modification), or effectuating or enforcing compliance with the terms of this Consent Decree.

XVIII. MODIFICATION

110. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. When the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court. The Parties may by mutual agreement determine whether a modification is non-material. Non-material changes to this Consent Decree (including Appendices) shall be made by written agreement of the Parties without Court approval, except as described in Paragraph 111 below. Examples of non-material changes that require written agreement of the Parties include:

- a. Changes in planned Remedial Measures, which reduce overall Work scope or extend completion dates beyond the calendar year in which the Measures were originally scheduled for completion in the Early Action Program, Capacity Remedial Measures Plan or Condition Remedial Measures Plan, so long as those changes do not adversely affect conformance with Consent Decree performance objectives or final completion deadlines;
- b. Changes to Appendices, guidelines or processes based upon implementation

experience so long as the overall technical and schedule objectives are achieved;
and

- c. Changes in sewer system investigation and/or remediation techniques as a result of technology advancements or implementation experience, so long as the specific requirements for Condition Assessment CCTV and Pole Camera Work are met.

111. SAWS may make changes to Remedial Measures techniques as reported in the EPA approved Remedial Measures Plans (i.e., replace, rehabilitate and repair) that are made for technical reasons, so long as those changes do not adversely affect conformance with Consent Decree performance objectives or final completion deadlines. SAWS shall report in the Annual Report these variations from the EPA approved Remedial Measures Plan.

112. Any disputes, with the exception of disputes regarding the materiality of a modification, between the United States, the State, and SAWS concerning modification of this Consent Decree shall be resolved pursuant to Section XI (Dispute Resolution) of this Consent Decree, provided, however, that, instead of the burden of proof provided by Paragraph 89, 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).

113. Following the filing of any motion under Rule 60(b) seeking a material change to this Consent Decree, Stipulated Penalties shall accrue due to SAWS failure, if any, to continue performance of obligations under the Consent Decree that are necessarily the subject of the Rule 60(b) motion; provided, however, that such penalties need not be paid if the Court resolves the motion in SAWS favor. SAWS shall comply with the Consent Decree as modified.

XIX. CERTIFICATION

114. Certification. In all Deliverables, notices, documents or reports submitted to the United

States and State pursuant to this Consent Decree, SAWS shall, by a SAWS senior management official, sign and certify such notices, documents and reports as follows:

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 such 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.

The certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

115. SAWS shall not object to the admissibility into evidence of any report, plan, notice or any other document prepared in accordance with this Consent Decree or the information contained in said reports in any proceeding to enforce this Consent Decree.

XX. TERMINATION

116. SAWS may serve upon the United States and the State a Request for Termination, certifying that SAWS has completed performance of its compliance (Section V) required by this Decree, together with all necessary supporting documentation. This Consent Decree may be terminated when the United States in consultation with the State determines SAWS has completed performance of its compliance (Section V) required by this Decree, provided that SAWS has fulfilled all other obligations of this Decree, including payment of the Civil Penalty under Section VIII of this Decree and any accrued Stipulated Penalties as required by Section IX

of this Decree not waived or reduced by the United States.

117. Following receipt by the United States and the State of SAWS Request for Termination, the United States, the State and SAWS shall confer informally concerning the Request and any disagreement that they may have as to whether SAWS has complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the State, agrees that the Decree may be terminated, the United States and SAWS shall submit, for the Court's approval, a joint stipulation terminating the Decree.

118. If the United States, after consultation with the State, does not agree that the Decree may be terminated, SAWS may invoke Dispute Resolution under Section XI of this Decree. However, SAWS shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 87 of Section XI, until one hundred-twenty (120) Days after service of its Request for Termination.

XXI. PUBLIC PARTICIPATION

119. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper or inadequate. SAWS consents to Lodging of this Consent Decree without further notice.

XXII. SIGNATORIES/SERVICE

120. Each undersigned representative of SAWS, EPA, the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, on behalf of the United States, and TCEQ and the State certifies that he or she is fully authorized to enter into the

terms and conditions of this Consent Decree, to execute this document, and to legally bind the Party he or she represents to this document.

121. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

122. SAWS agrees not to oppose Lodging of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified SAWS in writing that it no longer supports Lodging of the Decree.

123. SAWS agrees to accept service of process by mail or courier service to the address set forth in Section XV (Notices) with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIII. INTEGRATION/APPENDICES

124. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than the Appendices, which are attached hereto and explicitly incorporated into this Decree, and Deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree. The Appendices for this Consent Decree are as follows:

Appendix A Training Program in CMOM

Appendix B	Cleaning Program
Appendix C	Condition Program
Appendix D	Capacity Program
Appendix E	Lift Station Rehabilitation and Elimination Program
Appendix F	Early Action Program
Appendix G	Report Templates
Appendix H	WWTP Effluent Violations Summary.

XXIV. FINAL JUDGMENT

125. Upon Lodging and approval of this Decree by the Court, this Decree shall constitute a final judgment of the Court as to the United States, the State, and SAWS.

SO ORDERED THIS ____ DAY OF _____, 20__.

United States District Judge

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States and State of Texas v. San Antonio Water System.

FOR PLAINTIFF UNITED STATES OF AMERICA:

Date: _____

ROBERT G. DREHER
Acting Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20530

Date: _____

NATHANIEL DOUGLAS
Deputy Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611

UNITED STATES ATTORNEY
WESTERN DISTRICT OF TEXAS

Date: _____

Assistant United States Attorney
Western District of Texas
601 N.W. Loop 410
Suite 600
San Antonio, Texas 78216

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States and State of Texas v. San Antonio Water System.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: _____

CYNTHIA GILES, Assistant Administrator
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Date: _____

SUSAN SHINKMAN, Director
Office of Civil Enforcement
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Date: _____

MARK POLLINS, Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Date: _____

JOANNA CITRON DAY, Attorney
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States and State of Texas v. San Antonio Water System.

FOR UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: _____

JOHN BLEVINS
Division Director
Compliance Assurance and Enforcement Division
U.S. EPA, Region 6
1445 Ross Ave., Suite 1200 (6EN-W)
Dallas, TX 75202
Phone: (214) 665-2266

Date: _____

EFREN ORDONEZ
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Ave., Suite 1200 (6RC-EW)
Dallas, TX 75202
Phone: (214) 665 2181

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States and State of Texas v. San Antonio Water System.

FOR PLAINTIFF STATE OF TEXAS:

Date: _____

MARK L. WALTERS
Assistant Attorney General
Office of the Attorney General
P.O. Box 12548
Austin, TX 78711-2548
Phone: (512) 463-2012

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States and State of Texas v. San Antonio Water System.

FOR DEFENDANT SAN ANTONIO WATER SYSTEM:

Date: _____

ROBERT R. PUENTE
President and Chief Executive Officer
San Antonio Water System
2800 U.S. Highway 281 North
San Antonio, TX 78212

APPENDIX A

APPENDIX A

TRAINING PROGRAM IN CMOM

SAWS Employee Training Categories

Following is a summary of the different types of employees and wastewater collection system crews that SAWS utilizes to perform operation and maintenance activities related to SSO reduction and mitigation in the SAWS wastewater collection system. Following each employee or crew type is a summary of the typical technical and skills training topics that SAWS may typically offer to each employee or crew type. The specific training received by each employee or crew will depend on the actual types of work assigned to each employee or crew.

1. Typical training topics that may be offered to specific types of wastewater collection system operations and maintenance employees or crews:
 - a. Sewer Cleaning Crews:
 - i. sewer cleaning
 - ii. mechanical proofing
 - iii. collection of manhole inspection data
 - iv. collection of sewer visual inspection data
 - b. Sanitary sewer overflow (SSO) response Crews:
 - i. sewer cleaning (for blockage removal)
 - ii. SSO containment
 - iii. SSO clean-up
 - c. Sewer construction and/or repair crews:
 - i. sewer repair methods
 - ii. sewer pipe patching
 - d. Sewer and manhole inspection crews:
 - i. NASSCO PACP defect code training (or other sewer defect coding system training) for sewer CCTV camera operators
 - ii. collection of manhole inspection data
 - iii. collection of visual sewer inspection data
 - e. FOG Inspectors
 - i. grease removal equipment inspection procedures
 - ii. inspection data collection
 - f. Lift station operations and maintenance crews
 - i. lift station equipment maintenance
 - g. Lift station emergency response crews
 - i. lift station alarm response procedures
 - ii. SSO containment
 - iii. SSO clean-up
 - h. Crew supervisors
 - i. when appropriate, attend training attended by crews they supervise
 - i. Crews or employees responsible for SSO documentation and reporting:
 - i. data collection for SSO events
 - ii. SSO volume estimation

APPENDIX B

Appendix B

SAWS System-Wide Cleaning Program Process and Guidelines

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Small Diameter (SD) Pipes – Less than 24-inch Diameter

Plan, Schedule, and Conduct System Wide SD Cleaning and Visual Inspection Program

Implement SD Gravity Sewer Main Cleaning and Visual Inspection Activities

- Clean all SD pipes on a 10 year cycle. Clean a minimum of 12% of the total SD pipe mileage annually. Repeat SD pipe cleaning mileage is counted towards the 12% annual minimum.

Implement Repeat (“Hot Spot”) Gravity Sewer Cleaning and Visual Inspection Activities

- Pipes will be selected for repeat cleaning and cleaning frequencies will be determined as warranted based on:
 - SAWS best professional judgment
 - Utilizing SSO information
 - CCTV findings
 - Previous sewer cleaning findings.

Assess Visual Inspection Data

- Evaluate whether pipe should be referred for a more detailed inspection

Refer for CCTV inspection if warranted

- Guidelines for referral include:
 - Cleaning Tools will not pass through pipe
 - Pieces of broken pipe or significant quantities of fresh soil observed at downstream manhole

Evaluate Cleaning Findings

Guidelines for evaluation of gravity sewer cleaning findings

Pipes Included in “Hot Spot” Program:

- Clear – Reduce Frequency
- Light – Keep at current frequency
- Medium/Heavy – Increase Frequency

Pipes Not in the “Hot Spot” Program:

- Medium/Heavy – Add Pipe to the Hot Spot Program

Note: These are computer generated recommendations based on business logic that a human reviews to accept/reject/revise.

Review and Implement Cleaning Frequency Changes

- Human will review computer generated recommendations:
 - Accept recommendation
 - Reject recommendation
 - Revise recommendation
- Update the Preventive Maintenance Cleaning module in CMMS with Accepted changes

Appendix B
SAWS System-Wide Cleaning Program Process and Guidelines

Page 2 of 2

Large Diameter (LD) Pipes – Greater than or Equal to 24-inch Diameter

Plan, Schedule, and Conduct LD Inspection Activities

- Inspect all LD pipes per requirements listed in Paragraph 14.c of the Consent Decree

Evaluate LD Pipe Inspection Data

Inspection Data Evaluation Guidelines to Determine Cleaning Needs

- SAWS inspection results must indicate that the average depth of debris exceeds twenty percent of that pipe's diameter. In addition, for any such pipe, SAWS will use its professional judgment to decide whether to clean the pipe if the model indicates that the pipe is able to convey peak flows with the observed debris.

Implement LD Cleaning Activities

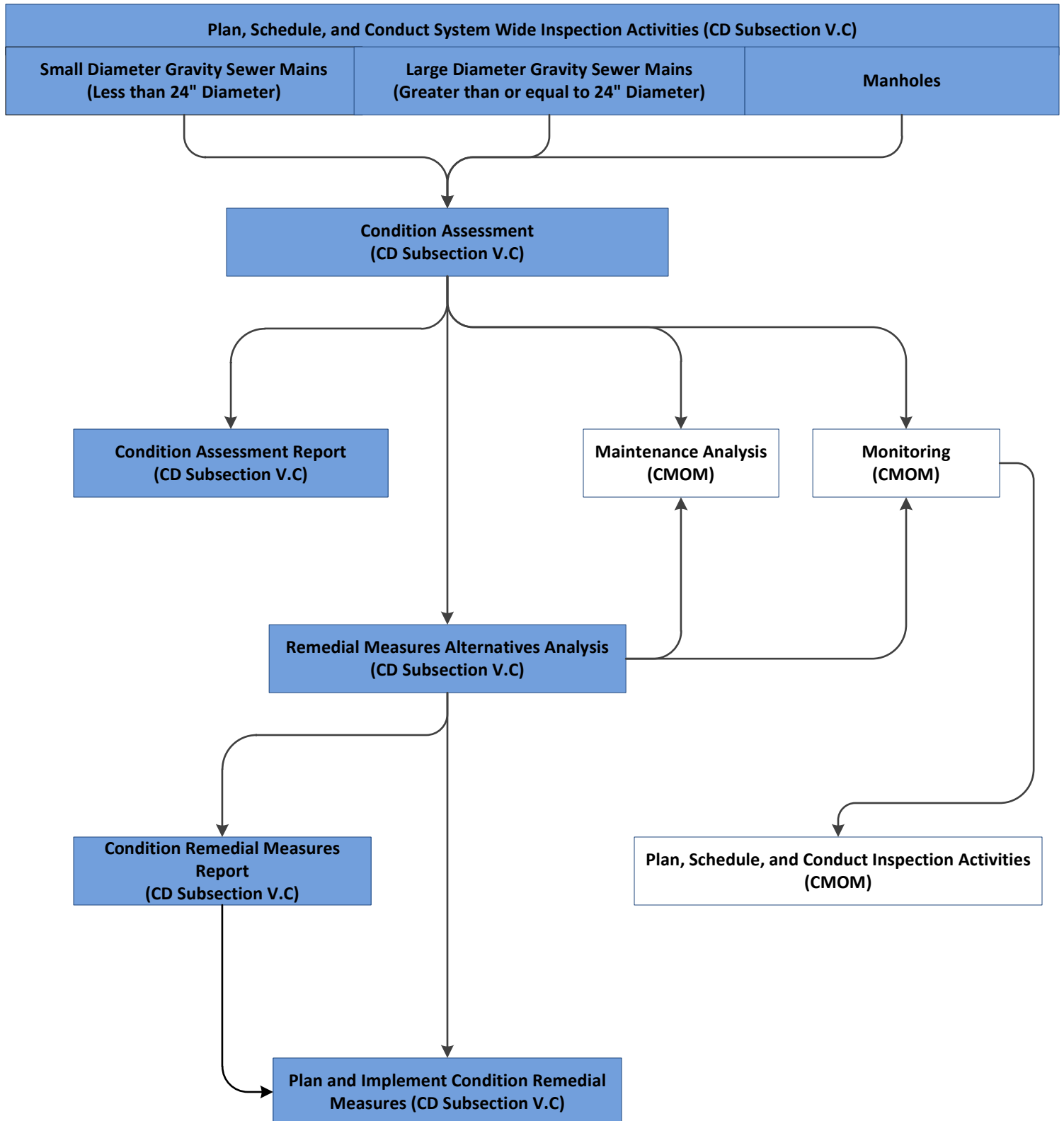
- Schedule and Implement LD Cleaning.

APPENDIX C

Appendix C

SAWS Condition Assessment and Remediation Program Process and Guidelines Overview

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Appendix C

SAWS Condition Assessment and Remediation Program Process and Guidelines

Plan, Schedule, and Conduct System Wide Inspection Activities (CD Subsection V.C)

Small Diameter Gravity Sewer Mains (Less than 24" Diameter)	Large Diameter Gravity Sewer Mains (Greater than or equal to 24" Diameter)	Manholes
<ul style="list-style-type: none"> - Select inspection methods <ul style="list-style-type: none"> - CCTV (Clay pipe installed prior to 1973, concrete pipe, and EARZ pipe) - Pole Camera (Clay pipe installed from 1973 through 1982) - Visual Inspection methods may include: <ul style="list-style-type: none"> • Smoke testing, • Mechanical proofing, • Sewer cleaning findings, or • Dye testing - Other techniques (such as new technologies or methods that become available) -Prioritize pipes for inspection <ul style="list-style-type: none"> - Generally, prioritize pipe selected for CCTV and pole camera by age, materials, analysis of past SSO frequency and volumes, proximity of sewer pipes to surface waters, and other appropriate factors - Group pipes for EARZ inspections - Additional inspections as needed for investigations - Schedule and conduct inspection activities <ul style="list-style-type: none"> - Generally, schedule visual inspection in conjunction with small diameter gravity sewer main cleaning 	<ul style="list-style-type: none"> - Inspection Methods <ul style="list-style-type: none"> - CCTV, Sonar, 360-degree video, Laser imaging, Physical entry - Other methods normally utilized by other sewer management agencies - Other techniques (such as new technologies or methods that become available) - Select and prioritize pipes for inspection <ul style="list-style-type: none"> - Generally, prioritize pipe by age, materials, analysis of past SSO frequency and volumes, proximity of sewer pipes to surface waters and other appropriate factors - Group pipes for EARZ inspections - Additional inspections as needed for investigations - Schedule and conduct inspection activities 	<ul style="list-style-type: none"> - Inspection Methods <ul style="list-style-type: none"> - Visual - Other techniques (such as new technologies or methods that become available) - Schedule and conduct inspection activities <ul style="list-style-type: none"> - Generally, schedule inspection in conjunction with small and large diameter gravity sewer main inspections

Condition Assessment (CD Subsection V.C)

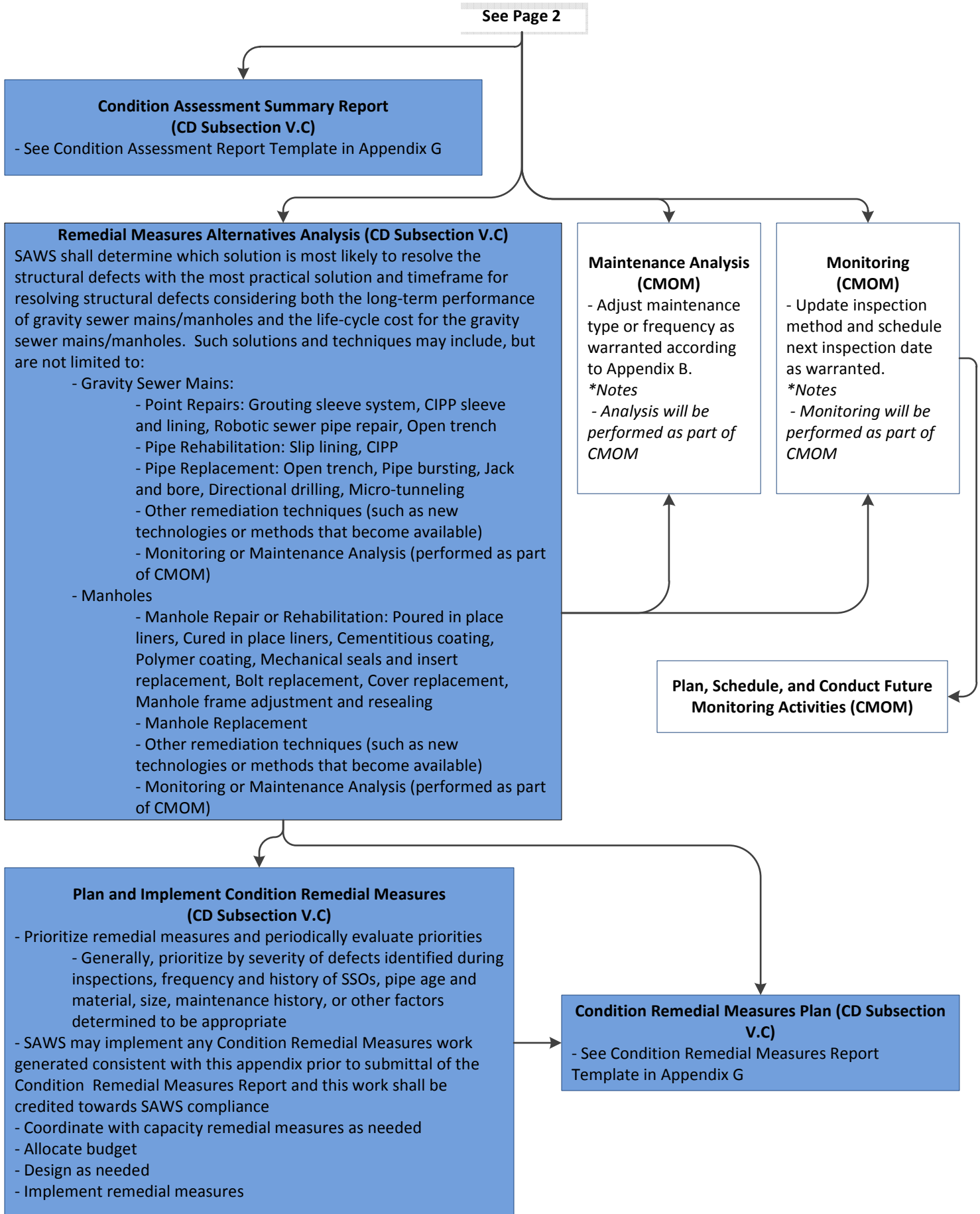
- Perform condition assessment based on these guidelines:
 - Prioritize the review of inspection data based on the severity of findings. Prioritize review of small diameter gravity sewer pipes using PACP Quick Ratings. In general, review pipes with grade 5 and 4 defects first, followed by pipes with grade 3, 2, or 1 defects.
 - Categorize assets based on the following table:

Category	Example Structural Conditions SAWS Anticipates for Each Category	Likely Outcome
E - Very Poor Condition	Structural collapse, which has or could likely cause SSO; or collapse imminent	Alternatives Analysis
D - Poor Condition	Significant missing material or broken material, severe corrosion with exposed pipe wall reinforcement, or pipe wall deformation greater than 25% from structural deterioration combined with hinge fractures.	Alternatives Analysis or Monitoring
C - Fair Condition	Pipe wall deformation less than 25% from structural deterioration combined with hinge cracks, displaced fractures, or moderate corrosion - but no pipe wall reinforcement visible.	Monitoring or Maintenance Analysis
B - Good Condition	Pipe wall deformation from construction impacts or less than 10% of diameter from structural deterioration, minor corrosion, slightly open non-displaced fractures, or other moderate material degradation.	Maintenance Analysis
A - Very Good Condition	Mild defects which may include tight non-displaced cracks or other mild material degradation.	Maintenance Analysis

- Perform condition assessment on inspection data and consider appropriate criteria which shall include factors such as the following:
 - Type and severity of structural defects
 - Historical operation and maintenance data: Overflows, inspections, cleaning findings, cleaning frequency, previous remediation, customer complaints, and other unique circumstances for each individual asset
 - Site conditions: Property rights, access for maintenance and construction, depth, soil type, environmental sensitivity, surface restoration requirements, and other unique circumstances for each individual asset
- Inspection data may also be used to analyze maintenance type and frequency per Appendix B (System-Wide Cleaning Program Process and Guidelines).

Appendix C

SAWS Condition Assessment and Remediation Program Process and Guidelines

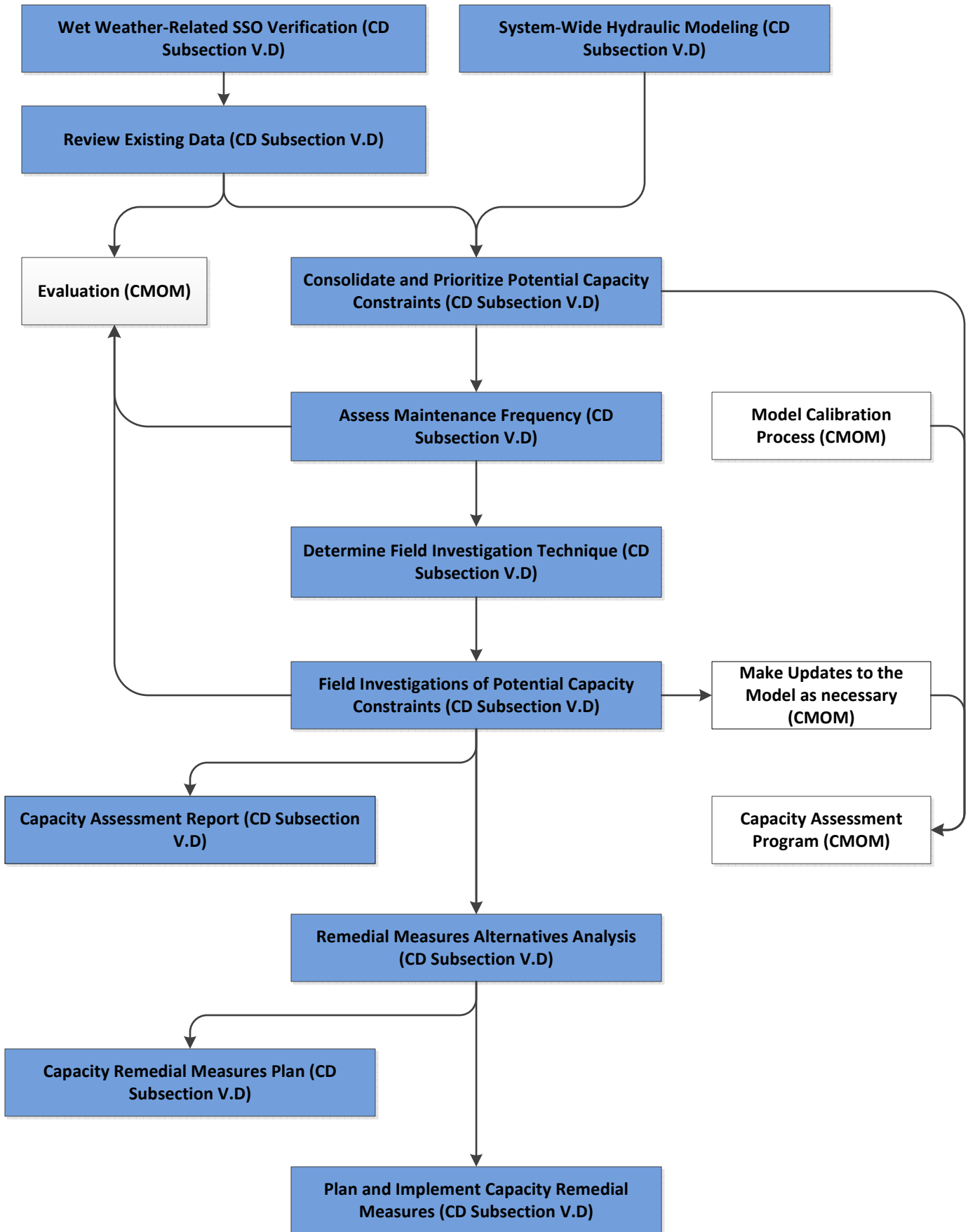


APPENDIX D

Appendix D

SAWS Capacity Assessment and Remediation Program Process and Guidelines Overview

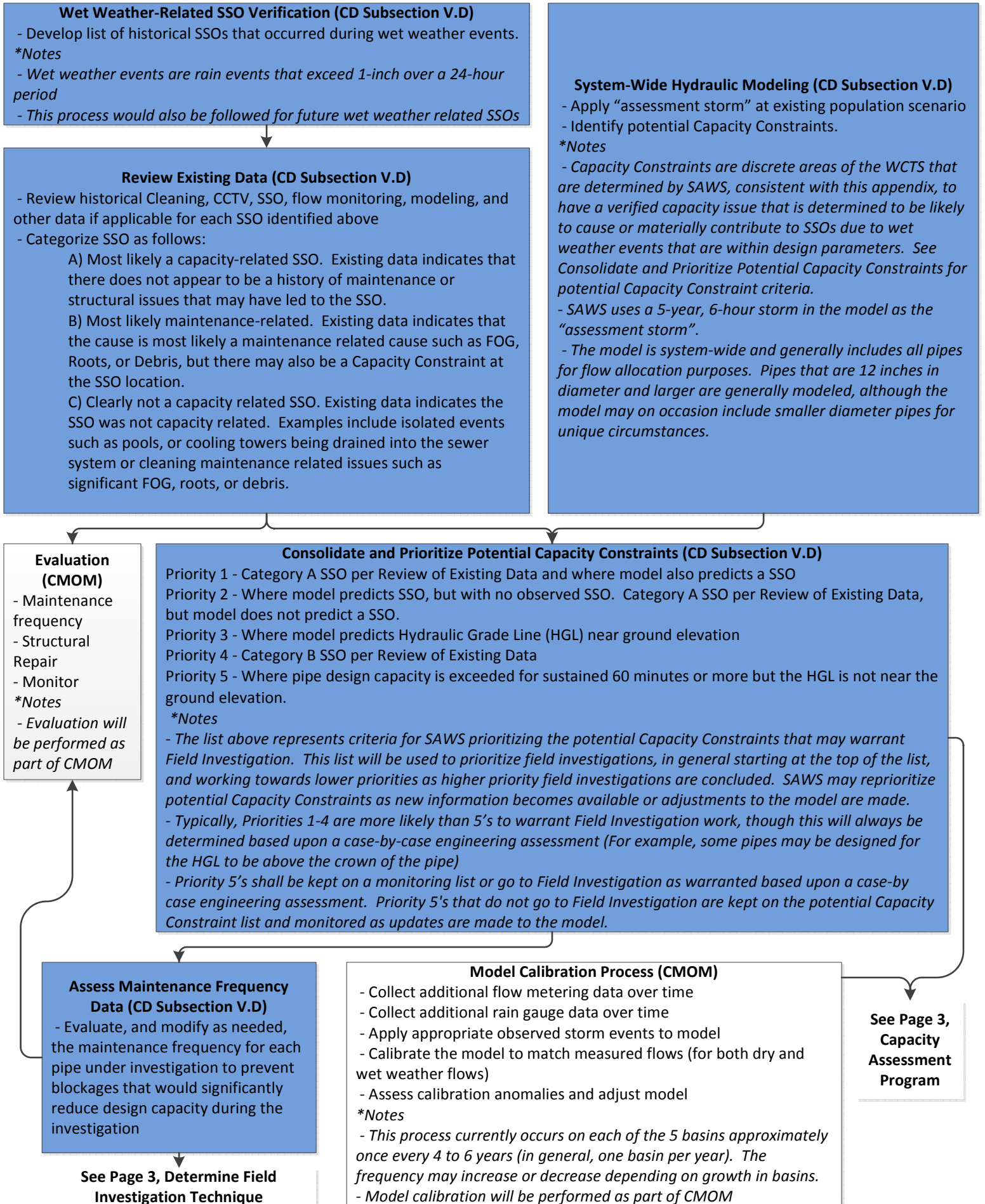
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Appendix D

SAWS Capacity Assessment and Remediation Program Process and Guidelines

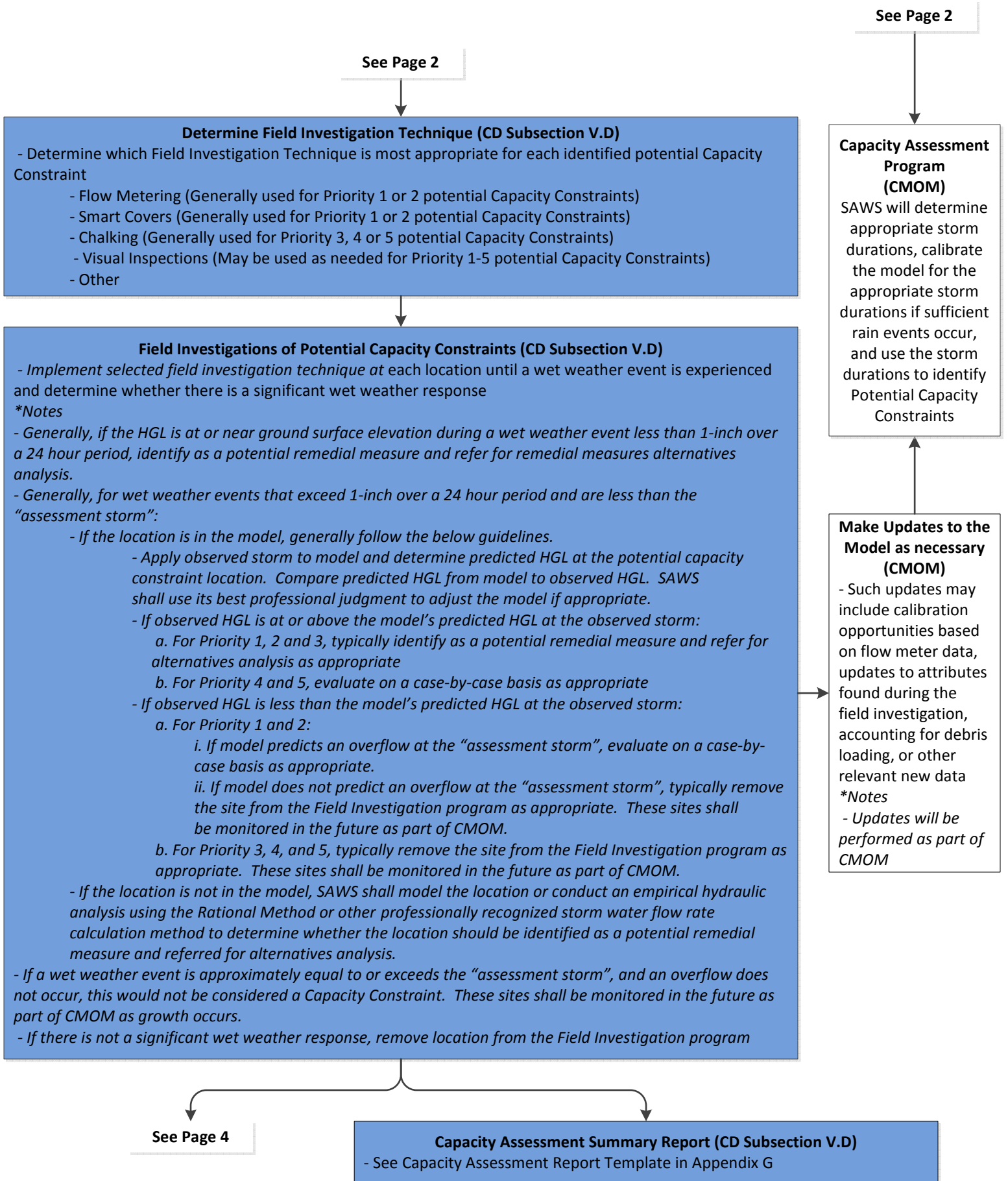
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Appendix D

SAWS Capacity Assessment and Remediation Program Process and Guidelines

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Appendix D

SAWS Capacity Assessment and Remediation Program Process and Guidelines

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See Page 3

Remedial Measures Alternatives Analysis (CD Subsection V.D)

- For each confirmed Capacity Constraint, perform an engineering analysis and collect any necessary additional field data such as:
 - Smoke testing
 - Dye testing
 - Flow metering
 - CCTV
 - Other data as needed

Use engineering analysis to determine which solution is most likely to resolve the constraint at the lowest possible cost. Alternative measures include: (1) Re-routing a portion of upstream wastewater flows, (2) Reducing flows entering the WCTS from customers, (3) Reduction of Inflow, (4) Reduction of Infiltration, (5) Increase conveyance capacity of WCTS, (6) Upstream flow detention facilities, (7) continued monitoring, if appropriate, (8) Other engineering solutions.

*Notes

- Apply "design storm" and 20-year growth projection to determine appropriate pipe sizing as needed

Plan and Implement Capacity Remedial Measures (CD Subsection V.D)

- Prioritize remedial measures and periodically evaluate priorities
 - Generally, review severity of Capacity Constraints identified during inspections, frequency and history of capacity-related SSOs, pipe size, age and material, maintenance history, relationship of Capacity Constraint areas of the WCTS to growth-related improvements and/or condition-related improvements, and other criteria determined to be appropriate by SAWS.
- Coordinate with condition remedial measures as needed
- Allocate budget
- Design as needed
 - Typically, SAWS will consider selection of next larger commercially available pipe size for pipe up-size projects if warranted under the specific circumstances for a remedial measure.
- Implement remedial measures

Capacity Remedial Measures Plan (CD Subsection V.D)

- See Capacity Remedial Measures Plan Template in Appendix G

APPENDIX E

APPENDIX E

LIFT STATION REHABILITATION AND ELIMINATION PROGRAM

SAWS has been implementing a phased lift station rehabilitation and elimination program since 2005. Under this program SAWS assesses each lift station in its collection system (totaling approximately 170 lift stations from 2005 through June 2012). Based on each lift station assessment, SAWS makes a determination regarding 1) which lift stations can be eliminated by the diversion of flow to gravity mains and 2) for the remaining lift stations, what if any measures are warranted to upgrade the lift station. While SAWS lift station assessments are conducted on a case-by-case basis, a number of typical evaluation factors are routinely considered. These factors are described below. In addition, decisions to eliminate or upgrade a lift station are made on a case-by-case basis, applying the types of considerations described below.

Generally, the primary consideration in determining whether a lift station will be eliminated is the feasibility and merits of diverting flow to Gravity Sewer Mains. For those lift stations that will not be eliminated, an assessment is conducted to determine what repairs or rehabilitation may be warranted. The assessment process develops information and considers a wide variety of factors to determine the condition, capacity and operating performance of a lift station and identifies potential measures to improve condition, capacity and/or operating performance. Not all considerations are applicable to each lift station, nor does each consideration apply to each lift station in the same way, since each lift station is unique. Thus, the improvements selected for each lift station will vary, although in each case SAWS 1) installs a SCADA system for each lift station that is to be upgraded and 2) compares the lift station attributes to the Texas regulations for the design and construction of new lift stations in 30 Tex.

Admin. Code, Chapter 217. These Texas regulations provide numerous design and construction requirements including, among many others, wet well capacity, pump capacity and velocities, provisions for power quick connect facilities for portable electric generators, pump cycle times and criteria for air release valves and vaults. The purpose of the comparison is to determine for each lift station whether upgrades to conform to these new lift station regulations are appropriate. SAWS is not required by law to retrofit its lift stations to new lift station design or construction standards.

Generally, the assessment process examines the condition, capacity and operating performance of the lift station including the following types of considerations:

1. Drawdown tests are performed to determine pump capacity.
2. The condition of the wet well is inspected for structural defects.
3. The condition of the wet well liner is inspected to determine if lining repair is necessary.
4. The condition of the pumps and motors is determined.
5. Determination of the need for secondary pumps is made.
6. The condition of all inlet piping is examined.
7. Upgrading the power supply to 480 volts is analyzed.
8. The addition of soft start motor starters is considered.
9. The addition of surge arrestors for power surge protection is considered.
10. The condition of pump suction pipes is determined.
11. An analysis of site security features is made.
12. Settings on any floats or switches that operate based on fluid level are inspected.
13. The condition of wet well suction piping is examined.
14. The pump priming system is examined.

Based upon the information developed in the assessment process, SAWS identifies recommendations for each lift station for potential upgrades. Such recommendations are unique to each lift station, based upon the results of the assessment. Improvements that SAWS determines to make are then planned, funded and implemented, typically through contracts subject to the public bidding process that SAWS is required by law to follow.

The current status of the lift station rehabilitation and elimination program is described in the attached table.

Station ID	Construction or Rehabilitation Date	Construction or Rehab Note	Date of Most Recent SSO	Assessment for LS Elimination or Rehab	Field Measured Peak Hydraulic Capacity	Model-Predicted Peak Hydraulic Flowrate (MGD)	Availability and Type of Backup Power	Equipped with SCADA	Overall Condition	Risk of Failure	Consequence of Failure	Date of Anticipated Upgrade or Decommission	Date of Upgrade Note	Comments
4	7/1/1956		N/A	3/27/2007	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014		
11	12/5/1983		6/21/2011	9/16/2004	4.878	3.195	QC	No	Adequate	Low	High	12/31/2016	D	
16	4/30/2012	R	9/24/2003	3/28/2007	1.21	0.878	Generator	Yes	Good	Low	High	Completed		
20	9/22/2009	R	N/A	9/14/2004	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
23	5/8/2012	R	9/7/2010	3/26/2007	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
26	1/1/1961		N/A	3/27/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018		
35	8/24/1970		N/A	3/28/2007	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014		
52	11/12/2009	R	N/A	9/14/2004	1.412	N/M	QC	Yes	Good	Low	Low	Completed		
57	5/24/1990		N/A	3/28/2007	N/M	1.237	QC	No	Adequate	Low	High	8/31/2013		
61	5/22/2012	R	N/A	3/26/2007	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
73	4/22/1977		N/A	3/29/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2017	D	
74	4/22/1977		5/14/2011	3/29/2007	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014		
80	7/29/1976		N/A	9/16/2004	N/M	N/M	QC	No	Good	Low	Low	12/31/2019		Lift station is not in operation
94	11/15/1979		N/A	4/5/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2017	D	
100	10/19/2009	R	6/20/2006	9/1/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
102	10/19/2009	R	N/A	9/1/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
103	8/29/1980		N/A	4/26/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2017	D	
105	2/23/1981		N/A	9/14/2004	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018		
111	12/29/1981		7/22/2010	3/26/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2016	D	
121	1/25/2012	R	5/27/2012	9/30/2004	3.386	1.481	Generator	Yes	Good	Low	High-EARZ	Completed		
126	10/22/2010		N/A	8/31/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
131	1/1/1985		4/7/2003	9/1/2004	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2015	D	
132	10/19/2009	R	N/A	9/1/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
134	1/22/2010	R	N/A	8/31/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
135	11/20/1985		N/A	8/21/2004	N/M	N/M	QC	No	Adequate	Low	High-EARZ	12/31/2017	D	
137	11/12/1985		N/A	3/27/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018		
144	2/1/2012	R	N/A	9/9/2004	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
145	1/31/1975		N/A	4/5/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2017	D	
147	11/29/2011	R	N/A	9/1/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
148	11/12/1986		10/10/2009	3/29/2007	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014		
150	3/14/2012	R	N/A	8/31/2004	0.796	0.294	Generator	Yes	Good	Low	High-EARZ	Completed		
151	10/27/2010	R	3/4/2008	8/31/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
156	12/10/2011	R	N/A	3/28/2007	0.956	0.374	QC	Yes	Good	Low	High	Completed		
162	1/13/1988		N/A	3/26/2007	1.789	1.359	QC	No	Adequate	Low	High	9/30/2014		
163	3/10/1988		12/23/2009	9/16/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014		
164	8/4/1988		N/A	3/26/2012	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014		
165	10/27/1987		4/19/2012	9/16/2004	1.051	1.051	QC	No	Adequate	Low	High-EARZ	9/30/2014		
166	6/15/1988		N/A	3/28/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018		
167	6/15/1988		N/A	3/28/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018		
169	10/27/2010	R	8/14/2010	9/1/2004	N/M	N/M	Generator	Yes	Good	Low	Low	Completed & 12/31/2020	D	
170	6/9/1989		6/6/2011	3/29/2007	N/M	N/M	QC	No	Adequate	Low	Low	8/31/2013		
171	5/2/2012	R	N/A	9/1/2004	N/M	N/M	QC	Yes	Good	Low	High-EARZ	Completed		
172	8/1/1988		10/26/2009	9/14/2004	23.342	10.315	Generator	No	Adequate	Low	High	9/30/2014		
175	10/18/1993		N/A	9/9/2004	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014		
176	11/13/1990		N/A	9/11/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014		

178	10/10/1991		N/A	3/29/2007	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2015			
179	10/10/1991		N/A	3/29/2007	NPD	NPD	QC	No	Adequate	Low	High	12/31/2013			
180	10/10/1991		N/A	3/29/2007		0.936	0.346	QC	No	Adequate	Low	High	8/31/2013		
182	5/8/1981		N/A	9/17/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018	D		
187	10/6/1986		7/18/2012	Not assessed	NPD	NPD	Generator	No	Adequate	Low	High	12/31/2018			
188	5/17/2001		8/19/2012	9/9/2008		2.463	2.49	QC	No	Adequate	Low	High	12/31/2014		
189	8/23/1968		7/26/2007	9/26/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
190	4/29/1992		N/A	3/27/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
191	3/14/2012	R	12/27/2010	8/31/2004		3.168	9.001	Generator	Yes	Good	Low	High-EARZ	Completed		
192	8/2/2012	R	3/27/2012	3/29/2007	N/M	N/M	QC	Yes	Good	Low	Low	Completed			
193	1/22/1993		N/A	10/1/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2016	D		
194	1/22/2012	R	N/A	9/9/2004	N/M	N/M	QC	Yes	Good	Low	Low	Completed			
197	6/7/1994		N/A	9/15/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2018	D		
198	2/16/2007		9/9/2010	Not assessed-to be eliminated	NPD	NPD	Generator	No	Adequate	Low	High	12/31/2019	D		
199	11/21/1994		9/16/2012	Not assessed-to be eliminated	NPD	NPD	Generator	No	Adequate	Low	High	12/31/2019	D		
200	11/21/1994		8/4/2012	Not assessed-to be eliminated	NPD	NPD	Generator	No	Adequate	Low	High	12/31/2019	D		
201	11/21/1994		9/14/2012	Not assessed	NPD	NPD	Generator	No	Adequate	Low	High	12/31/2018			
202	11/17/2011	R	N/A	9/1/2004	N/M	N/M	QC	Yes	Good	Low	Low	Completed			
203	7/19/2012	R	N/A	3/28/2007	N/M	N/M	QC	Yes	Good	Low	Low	8/31/2014			
205	11/9/1995		6/14/2010	9/16/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
206	3/5/1996		N/A	9/1/2004	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014			
207	5/6/1996		N/A	9/15/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
208	7/1/1996		N/A	9/1/2004	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014			
209	4/14/1997		7/27/2010	9/1/2004	N/M	N/M	QC	No	Adequate	Low	High-EARZ	9/30/2014			
210	2/14/1997		N/A	9/18/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
211	6/24/1997		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
213	12/1/1984		N/A	9/9/2004	N/M	N/M	QC	No	Adequate	Low	Low	8/31/2013			
215	10/8/2009	R	N/A	8/31/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed			
217	8/19/1998		N/A	3/29/2007	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2017	D		
218	5/2/2000		N/A	9/1/2004	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014			
219	10/13/1999		8/18/2012	9/22/2008		2.914	0.2665	Generator	No	Adequate	Low	High	12/31/2016	D	
220	6/24/1999		N/A	3/27/2007	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2014			
221	8/25/1999		N/A	3/27/2007		3.199	1.803	Generator	No	Adequate	Low	High	9/30/2013		
222	6/13/2012	R	1/23/2012	3/28/2012	N/M	N/M	QC	Yes	Good	Low	Low	Completed			
223	6/21/2012	R	N/A	3/28/2007	N/M	N/M	QC	Yes	Good	Low	Low	Completed			
224	8/18/2000		N/A	9/22/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2019	D		
225	8/10/2007		8/17/2007	9/14/2004	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2019	D		
226	1/23/2001		N/A	8/31/2004	N/M	N/M	QC	Yes	Adequate	Low	High-EARZ	9/30/2014			
228	9/28/2001		N/A	9/18/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014			
230	11/3/2000		N/A	9/9/2004	N/M	N/M	QC	No	Adequate	Low	High-EARZ	9/30/2014			
231	2/15/2002		N/A	8/31/2004	N/M	N/M	QC	No	Adequate	Low	High-EARZ	9/30/2014			
232	11/26/2002		10/3/2010	9/1/2004	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2020	D		
233	4/11/2003		5/29/2008	9/9/2004	N/M	N/M	Generator	No	Adequate	Low	Low	9/30/2014			
234	4/23/2003		N/A	3/27/2004	N/M	N/M	QC	No	Adequate	Low	Low	9/30/2013			
235	5/31/2012	R	10/31/2010	9/16/2004	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed			

236	8/20/2003		N/A	9/16/2004	N/M	N/M	QC	No	Adequate	Low	High-EARZ	9/30/2014		
237	5/26/2003		N/A	9/17/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014		
238	3/9/2004		2/18/2009	3/27/2007	4.076	2.193	Generator	No	Adequate	Low	High	9/30/2013		
239	8/25/1999		8/31/2007	9/23/2008	N/M	N/M	Generator	No	Adequate	Low	Low	12/31/2014		
240	6/7/2004		7/5/2006	9/1/2004	N/M	N/M	QC	No	Adequate	Low	High-EARZ	9/30/2014		
241	12/30/2010		12/21/2010	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
242	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
243	12/30/2010	R	N/A	NC	N/M	N/M	Generator	Yes	Good	Low	Low	Completed		
244	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
245	7/1/2005		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014		
246	10/6/2006		N/A	NC	NPD	NPD	Generator	Yes	Good	Low	High	NR		
247	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	High-EARZ	Completed		
248	8/23/2005		N/A	NC	N/M	N/M	Generator	No	Good	Low	Low	9/30/2014		
249	9/8/2005		N/A	NC	NPD	NPD	Generator	No	Good	Low	High-EARZ	9/30/2014		
250	12/30/2010	R	N/A	NC	NPD	NPD	Generator	Yes	Good	Low	High	Completed		
251	12/30/2010	R	N/A	NC	N/M	N/M	Generator	Yes	Good	Low	Low	Completed & 12/31/2019	D	
252	2/3/2006		N/A	NC	N/M	N/M	QC	No	Good	Low	High-EARZ	12/31/2014		
253	2/7/2006		N/A	9/26/2008	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2014		
254	12/30/2010	R	9/11/2007	NC	N/M	N/M	Generator	Yes	Good	Low	Low	Completed & 12/31/2016	D	
255	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
256	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
257	7/24/2006		N/A	NC	N/M	N/M	QC	No	Good	Low	Low	12/31/2014		
258	8/14/2006		N/A	NC	NPD	NPD	Generator	No	Good	Low	High	12/31/2014		
259	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
260	12/30/2010	R	N/A	NC	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	Completed		
261	12/30/2010	R	6/22/2011	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
262	12/30/2010	R	N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	Completed		
263	4/25/2007		N/A	NC	N/M	N/M	Generator	No	Good	Low	High-EARZ	12/31/2014		
264	10/9/2007		N/A	NC	N/M	N/M	Generator	No	Good	Low	Low	12/31/2014		
265	1/3/2008		N/A	NC	N/M	N/M	Generator	No	Good	Low	High-EARZ	12/31/2014		
266	7/3/2008		N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	NR		
267	7/9/2008		N/A	NC	N/M	N/M	QC	No	Adequate	Low	Low	12/31/2019	D	
268	9/23/2008		N/A	NC	N/M	N/M	Generator	Yes	Good	Low	High-EARZ	NR		
269	11/3/2008		6/16/2009	NC	NPD	NPD	Generator	Yes	Good	Low	High	NR		
270	10/7/2009		N/A	NC	N/M	N/M	Generator	No	Good	Low	Low	12/31/2014		
271	5/21/2009		N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	NR		
272	12/22/2009		N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	NR		
273	2/3/2009		N/A	NC	N/M	N/M	Generator	Yes	Good	Low	Low	NR		
274	3/22/2010		N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	NR		
276	12/13/2010		N/A	NC	N/M	N/M	Generator	Yes	Good	Low	Low	NR		
277	5/24/2011		N/A	NC	N/M	N/M	Generator	Yes	Good	Low	Low	NR		
278	9/15/2011		N/A	NC	N/M	N/M	QC	Yes	Good	Low	Low	NR		
300	6/1/1965		N/A	9/5/2008	N/M	N/M	Generator	No	Adequate	Low	Low	10 years after Date of Lodging		
303	8/9/1996		N/A	9/11/2008	N/M	N/M	Generator	No	Adequate	Low	Low	10 years after Date of Lodging		
304	6/1/1965		N/A	9/4/2008	N/M	N/M	Generator	No	Adequate	Low	Low	10 years after Date of Lodging		

305	6/1/1965		N/A	Not assessed	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
307	6/1/1965		N/A	9/4/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
308	6/1/1965		N/A	9/4/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
309	6/1/1965		N/A	9/4/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
310	6/1/1965		N/A	9/10/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
311	8/9/1996		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
312	8/9/1996		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
313	6/1/1965		N/A	9/5/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
315	6/1/1965		N/A	9/5/2008	N/M	N/M	QC	No	Adequate	low	Low	10 years after Date of Lodging		
316	6/1/1965		N/A	9/5/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
317	8/9/1996		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
318	8/9/1996		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
319	8/9/1996		N/A	9/23/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
320	6/1/1965		N/A	9/10/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
321	6/1/1965		N/A	9/24/2008	N/M	N/M	Generator	No	Adequate	Low	Low	10 years after Date of Lodging		
322	6/1/1965		N/A	9/10/2008	N/M	N/M	Generator	No	Adequate	Low	Low	10 years after Date of Lodging		
323	6/1/1965		1/23/2012	9/9/2008	N/M	N/M	Generator	No	Adequate	Low	Low	10 years after Date of Lodging		
324	6/1/1965		N/A	9/9/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
325	6/1/1965		N/A	9/9/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
326	6/1/1965		N/A	9/9/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
328	6/1/1965		N/A	9/9/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
329	6/1/1965		N/A	9/10/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
330	6/1/1965		N/A	9/24/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		
331	10/26/2004		N/A	9/18/2008	N/M	N/M	QC	No	Adequate	Low	Low	10 years after Date of Lodging		

- 1 "N/A" indicates that a lift station has not had an SSO.
- 2 "N/M" indicates that a lift station is not individually modeled in the hydraulic model and therefore no comparison of field measured and model predicted flow is available.
- 3 Flow from field measured pump drawdown tests was aggregated and converted from GPM to MGD.
- 4 "R" refers to the date that rehabilitation was completed
- 5 "Adequate" indicates that a lift station is fully performing, but that it will be rehabilitated/upgraded as described in this Appendix.
- 6 All lift stations have a low risk of failure. Any risks identified by SAWS lift station maintenance department are corrected.
- 7 Lift stations that do not have a generator either have, or will have on completion of rehabilitation, quick- connect facilities for portable power generation.
- 8 All lift stations will have SCADA on completion of rehabilitation. A Verbatim alert system is in operation pending SCADA installation.
- 9 A "High" consequence indicates a lift station that is located over the Edwards Aquifer Recharge Zone (EARZ) or that is a large volume flow (2MGD and greater) lift station.
- 10 "D" indicates the date of anticipated decommissioning.
- 11 "Completed" indicates that rehabilitation of a lift station has been completed.
- 12 "NPD" indicates that a field pump drawdown test for all pumps in a lift station is not available. A comparison with model predicted flow is, therefore, not possible.
- 13 Rehabilitation/upgrade has been completed, but the lift station will also be decommissioned.
- 14 "NC" indicates that a lift station was recently constructed and met TCEQ and SAWS guidelines at the time of SAWS acceptance, or required only SCADA installation that has now been completed. No further assessment was necessary.
- 15 "NR" indicates lift stations that have been recently constructed and that meet TCEQ and SAWS guidelines. No rehabilitation, upgrade, or assessment is necessary.
- 16 300 series lift stations were inherited from the U.S Air Force and are located on Lackland A.F.B. and the former Kelly A.F.B.
- 17 Determined to be a holding tank for aircraft waste.
- 18 SAWS intends to eliminate or rehabilitate the 300 series lift stations. A final determination on the appropriate action has not yet been made.
- 19 "QC" indicates a quick connect facility is installed for portable generation.

APPENDIX F

I. Overall Description of Remedial Measures

SAWS Early Action Program (EAP) Phase I consists of the following types of Remedial Measures:

- Large Diameter Condition Remedial Measures
- Large Diameter Capacity Remedial Measures
- Small Diameter Condition Remedial Measures
- Manhole Condition Remedial Measures

The projects associated with these Remedial Measures are summarized in the Table in Part II of this Appendix F. Following is a general description of the EAP Phase I Remedial Measures.

Large Diameter Condition Remedial Measures

Through SAWS CCTV program, SAWS has identified approximately 13.3 miles of large diameter mains for alternatives analysis. The 13.3 miles were identified due to structural defects that have caused, or may cause, structural SSOs in the future.

Prior to the establishment of Appendix C, this process was called issuing a “Design Request.” After the establishment of Appendix C, this step is called a request to conduct “remedial measures alternatives analysis,” which could either result in a remedial measure, monitoring, or maintenance.

Of the 13.3 miles, approximately 6.3 miles has been assessed and designed as of March 31, 2013, and approximately 7 miles awaits alternatives analysis. Of the 6.3 miles which has been designed, 4.4 miles is the San Antonio River Outfall Project Phase 1 and 2. For the remaining 1.9 miles SAWS is in the process of packaging the pipes into bid packages, or “projects,” as well as prioritizing the projects over the five years of the EAP Phase I. SAWS has identified two projects for the 1.9 miles of the pipe that have been assessed and designed. For the 7 miles awaiting alternatives analysis, those pipes which result in a remedial measure will be added to these two projects (which is why the total project mileage adds up to 13.3 miles of pipe for EAP Phase I). If certain pipes from the 7 miles do not result in remedial measures, a similar mileage of higher risk pipe that has yet to be identified will be added to the EAP Phase I mileage to make up the difference. Projects may be divided into smaller projects to further prioritize projects related to SSOs, address contractor bidding constraints, or to reduce construction inspector drive-time per project, but the cumulative mileage of the projects will not be reduced. If the projects are divided into smaller projects, this will be reported in the Annual Report.

The Summary of Remedial Measures for EAP Phase I Table in Part II of this Appendix F shows the status of SAWS alternatives analysis and design process. The Remediation Project List for EAP Phase I table in Appendix F shows the status of Large Diameter Condition Remedial Measures projects for the EAP Phase I.

Large Diameter Capacity Remedial Measures

Through SAWS capacity assessment activities, SAWS has identified approximately 25 miles of large diameter mains to be constructed as Capacity Remedial Measures as part of EAP Phase I.

All 25 miles have been grouped into 4 projects outlined in the table in Part II of this Appendix F to be completed under the large diameter capacity EAP Phase I schedule as set forth in the Consent Decree.

The Summary of Remedial Measures for EAP Phase I Table in Part II of this Appendix F shows the status of SAWS alternatives analysis and design process. The Remediation Project List for EAP Phase I Table in Part II of this Appendix F shows the status of Large Diameter Capacity Remedial Measures projects for the EAP Phase I.

Small Diameter Condition Remedial Measures

Through SAWS CCTV program, SAWS has identified approximately 62.5 miles of small diameter mains for alternatives analysis. The 62.5 miles were identified due to structural defects that have caused, or may cause, structural SSOs in the future, as well as less significant defects on pipes that were in close proximity to the structural defect SSO pipes. While these less significant defect pipes are not required to be remediated per Appendix C, SAWS is bundling these pipes with less significant defects with higher priority pipes in order to potentially reduce unit bid costs, and diminish future disruption to its customers.

Prior to the establishment of Appendix C, this process was called issuing a “Design Request.” After the establishment of Appendix C, this step is called a request to conduct “remedial measures alternatives analysis,” which could either result in a remedial measure, monitoring, or maintenance.

Of the 62.5 miles, approximately 39 miles has been assessed and designed as of March 31, 2013, and approximately 23.5 miles awaits alternatives analysis. Of the 39 miles which has been designed, SAWS is in the process of packaging the pipes into bid packages, or “projects,” as well as prioritizing those projects over the three year schedule for small diameter condition projects under EAP Phase I. SAWS has identified two small diameter projects (each involving several miles of pipe) per year for completion as part of Phase I. These 6 projects include the 39 miles of pipes that have been designed. For the 23.5 miles of pipe that is awaiting alternatives analysis, those pipes which result in a remedial measure will be added to these six projects (which is why the total project mileage adds up to 62.5 miles of pipe for EAP Phase I). If certain pipes from the 23.5 miles do not result in remedial measures, a similar mileage of higher risk pipe that has yet to be identified will be added to the EAP Phase I mileage to make up the difference. Projects may be divided into smaller projects to further prioritize projects related to SSOs, address contractor bidding constraints, or to reduce construction inspector drive-time per project, but the cumulative mileage of the projects will not be reduced. If the projects are divided into smaller projects, this will be reported in the Annual Report.

Appendix F
Phase I Early Action Program

The Summary of Remedial Measures for EAP Phase I Table in Part II of this Appendix F shows the status of SAWS alternatives analysis and design process. The Remediation Project List for EAP Phase I Table in Part II of this Appendix F shows the status of Small Diameter Condition Remedial Measures projects for the EAP Phase I.

Manhole Remedial Measures

The manhole project shown in the Table in Part II of this Appendix F consists of high priority manholes which have been identified through SAWS manhole condition assessment activities completed as of January 2, 2013. These are shown in the Remediation Project List for EAP Phase I Table in Part II of this Appendix F.

II. Tables Summarizing EAP Phase I Work

Summary of Remedial Measures for EAP Phase I

Remediation Type	Miles	Summary of Remedial Measures
1. Small Diameter (SD) Condition Remediation		
SD Remediation – Design Completed	39	Identified through SAWS CCTV program that have been assessed and designed. See Project List Below.
SD – Awaiting Remedial Measures Alternatives Analysis	23.5	Mileage that has been identified through SAWS CCTV program, but has not gone through the alternatives analysis process. This mileage will continue through alternatives analysis and has been incorporated into the EAP Phase I Project List below.
<i>Total</i>	<i>62.5</i>	
2. Large Diameter (LD) Condition Remediation		
LD Remediation – Design Completed	6.3	Identified through SAWS CCTV program that have been assessed and designed. See Project List Below.
LD – Awaiting Remedial Measures Alternatives Analysis	7	Mileage that has been identified through SAWS CCTV program, but has not gone through the alternatives analysis process. This mileage will continue through alternatives analysis and has been incorporated into the EAP Phase I Project List below.
<i>Total</i>	<i>13.3</i>	
3. LD Capacity Remediation		
LD Projects	25	See Project List Below.
4. MH Remediation		
	Manholes (Number)	
Manholes	25	Manholes identified through SAWS condition assessment activities that have been assessed and designed.

Appendix F
Phase I Early Action Program

Remediation Project List for EAP Phase I

Project Name	Miles	Target Project Completion Schedule
1. Small Diameter (SD) Condition Remediation		
EAP Phase I – Project 1 – 2013 SD Re-hab Program	12	1 Year from Date of Lodging
EAP Phase I – Project 2 – 2013 SD Re-hab Program	11	1 Year from Date of Lodging
EAP Phase I – Project 3 – 2014 SD Re-hab Program	12	2 Years from Date of Lodging
EAP Phase I – Project 4 – 2014 SD Re-hab Program	11	2 Years from Date of Lodging
EAP Phase I – Project 5 – 2015 SD Re-hab Program	8.5	3 Years from Date of Lodging
EAP Phase I – Project 6 – 2015 SD Re-hab Program	8	3 Years from Date of Lodging
<i>Total</i>	<i>62.5</i>	
2. Large Diameter (LD) Condition Remediation		
EAP Phase I – Project 7 – LD Re-hab Program	4.4	5 Years from Date of Lodging
EAP Phase I – Project 8 – LD Re-hab Program	4.5	5 Years from Date of Lodging
San Antonio River Outfall Project Phase 1 and 2	4.4	5 Years from Date of Lodging
<i>Total</i>	<i>13.3</i>	
3. LD Capacity Remediation		
Donaldson Terrace	4.6	6 years from Date of Lodging
Broadway Corridor – Josephine to South Alamo Street	4	6 years from Date of Lodging
Broadway Corridor – Carnahan to Mulberry Streets	10	6 years from Date of Lodging
Leon Creek – Highway 90 to New Laredo Highway	6.4	6 years from Date of Lodging
<i>Total</i>	<i>25</i>	
4. MH Remediation		Manholes (Number)
Manhole Project 1	25	3 years from Date of Lodging

APPENDIX G

Appendix G
Condition Assessment Report Template

I. Cover

II. Certification Declaration

[Required certification, with language specified by the Consent Decree, signed by a responsible official of SAWS]

III. Table of Contents

[List of sections, tables, figures and appendices included in this report]

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Report was prepared and submitted pursuant to Paragraph 28 of the Consent Decree.

B. Regulatory Requirements

This Report summarizes Condition Assessment inspections completed by SAWS as of four years after the Date of Lodging pursuant to Paragraphs 23 through 28 of the Consent Decree. These Condition Assessment requirements include Large Diameter Gravity Main Sewer Inspections, Small Diameter Gravity Sewer Main Inspections and Manhole Inspections.

VI. System-Wide Inspection Activities

A. Inspection Method Overview

[Provide a brief description of each inspection method utilized by SAWS; with a reference to the Condition Assessment and Remediation Process and

Appendix G
Condition Assessment Report Template

Guidelines Appendix. Add a discussion of any new inspection technologies utilized, if applicable]

B. Gravity Sewer Main Inspection Map

[Include a map showing the location of the inspections, small diameter and large diameter pipe, inspection method (CCTV, Pole Camera, Visual Inspection), and type of visual inspection (Smoke testing, mechanical proofing, cleaning, dye testing).]

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Condition Assessment Report Template

C. Gravity Sewer Main Inspection Status
Gravity Sewer Main Inspection Progress Summary

Asset Description	Inspection Method	Miles of Inspections Required Under Consent Decree ^{1,3}	Miles Completed Prior to Date of Lodging ^{2,3}	Miles Completed since Date of Lodging ³	Miles of Inspections Completed ₃	% Complete ₁
Small Diameter Gravity Sewer - Concrete Pipe and Clay Pipe Installed Prior to 1973	CCTV or other approved techniques	XX				
Small Diameter Gravity Sewer - Clay Pipe Installed from 1973 through 1982	Pole Camera, CCTV, or other approved techniques	XX				
Small Diameter Gravity Sewer - Other Pipe	Pole Camera, CCTV or other approved techniques	N/A				
	Visual Inspection – Smoke Testing	N/A				
	Visual Inspection – Mech. Proofing	N/A				
	Visual Inspection – Sewer Cleaning Findings	N/A				
	Visual Inspection – Dye Testing	N/A				
	Subtotal	N/A				
	Unique Subtotal ⁴	XX				
Large Diameter Gravity Sewer	CCTV/other approved method	XX				
<p>Note 1: Visual Inspection, and Large Diameter CCTV Inspection are not required under the Consent Decree to be completed prior to submittal of this report. These inspection types will be completed as part of CMOM after submittal of this report per CD Requirements.</p>						
<p>Note 2: Includes small diameter gravity sewer inspections since January 1, 2009 and large diameter gravity sewer inspections since inception of the large diameter program in 2005.</p>						
<p>Note 3: Full pipe length is included in mileages.</p>						
<p>Note 4: Since some gravity sewer mains may be inspected with multiple visual inspection techniques, this subtotal includes unique miles of small diameter gravity sewer main inspections in order demonstrate compliance for visual inspection.</p>						

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Condition Assessment Report Template

D. Manhole Inspection Map

[Include a map showing the location of the inspections.]

E. Manhole Inspection Status

Manhole Inspection Summary

Asset Description	Inspection Method	Number of Manhole in System ¹	Manholes Inspected Prior to Date of Lodging ²	Manholes Inspected Since Date of Lodging	Inspections Completed	% Complete ¹
Manholes	Visual Inspection	XX				
Note 1: Manhole Inspection is not required under the Consent Decree to be completed prior to submittal of this report. Manhole inspections will be completed as part of CMOM after submittal of this report per CD Requirements.						
Note 2: Includes manhole inspections since January 1, 2009.						

VII. Categorization of Sewer Main and Manhole Condition

A. Guidelines

[Provide a brief description of the guidelines used for categorizing condition; consistent with the Condition Assessment and Remediation Process and Guidelines Appendix]

B. Condition Categorization Summary

Condition Categorization Summary

Condition Category	Miles of Small Diameter Sewer Mains ₁	Miles of Large Diameter Sewer Mains ₁	Number of Manholes
Category A – Very Good	XX	XX	XX
Category B – Good	XX	XX	XX
Category C – Fair Condition	XX	XX	XX
Category D – Poor	XX	XX	XX
Category E – Very Poor	XX	XX	XX
Note 1: Full pipe length is included in mileages.			

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Condition Assessment Report Template

C. Maps of Condition Categories

[Include one map for small diameter pipe, one map for large diameter pipe, and one map for manholes showing the location of the assets and the Condition Category.]

VIII. Condition Assessment Results

A. Condition Assessment Guidelines

[Provide a brief description of the guidelines used for condition assessment activities; consistent with the Condition Assessment and Remediation Process and Guidelines Appendix. Provide a brief description of how SAWS applied the guidelines to develop the quantities of structural defects selected for Remedial Measures Alternative Analysis, Monitoring (CMOM) and Maintenance Analysis (CMOM).]

B. Condition Assessment Results

Condition Assessment Result	Miles of Small Diameter Sewer Mains ¹	Miles of Large Diameter Sewer Mains ¹	Number of Manholes
Remedial Measures Alternatives Analysis	XX	XX	XX
Monitoring (CMOM)	XX	XX	XX
Maintenance Analysis (CMOM)	XX	XX	XX
Note 1: Full pipe length is included in mileages.			

C. Maps of Condition Assessment Results

[Include one map for small diameter pipe, one map for large diameter pipe, and one map for manholes showing the location of the assets and the Condition Assessment Result.]

Appendix G
Condition Remedial Measures Plan Template

I. Cover

II. Certification Declaration

[Required certification, with language specified by the Consent Decree, signed by a responsible official of SAWS]

III. Table of Contents

[List of sections, tables, figures and appendices included in this report]

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Plan was prepared and submitted pursuant to Paragraph 30 of the Consent Decree.

B. Regulatory Requirements

This Plan summarizes SAWS recommended Condition Remedial Measures that have been prioritized and selected in accordance with Appendix C to address verified structural defects in the SAWS WCTS that cause or significantly contribute to Condition-related SSOs. This Plan describes SAWS plans to implement the selected Condition Remedial Measures on a balanced annual basis during the remaining term of this Decree. SAWS has prioritized and selected these Condition Remedial Measures based on appropriate factors reflected in Paragraph 30 and in Appendix C of the Consent Decree and in accordance with the requirements of Paragraph 8 of the Decree. The implementation time-frames in this Plan reflect practical planning requirements such as those stated in Paragraph 30 of the Consent Decree.

VI. Summary of Condition Assessment Summary Report

[Brief summary of the Condition Assessment Summary Report and how it relates to this Plan.]

VII. Remedial Measures Alternatives Analysis

A. Guidelines for Alternatives Analysis

The Plan for Condition Remedial Measures follows SAWS completion of the Condition Remedial Measures Alternatives Analysis as described in Paragraph 29 and in Appendix C of the Consent Decree.

B. Remedial Measures Alternatives Analyses Results

[Provide a brief description of the guidelines used for performing alternatives analysis; consistent with Condition Assessment and Remediation Process and Guidelines Appendix. Include a description of guidelines used to select monitoring or maintenance results.]

Results of Completed Remedial Measures Alternatives Analyses

Result	Miles of Gravity Main Sewer ¹	Number of Gravity Sewer Main Pipe Segments	Number of Manholes
Replace ²	X	X	X
Rehabilitate ^{2,3}	X	X	X
Repair ^{2,3}	X	X	X
Monitoring	X	X	X
Maintenance Analysis	X	X	X
Other (Specify)	X	X	X
Totals:	X	X	X

Note 1: Full pipe length is included in mileage

Note 2: Approach for actual implementation may be different than alternatives analysis result per Paragraph 31 of the Consent Decree and Appendix C (Condition Assessment and Remediation Process and Guidelines Appendix)

Note 3: Repairs include spot repairs or remediation of a short section of the pipe segment using trenchless or open-trench remediation. Rehabilitation includes trenchless sewer remediation from manhole to manhole such as CIPP lining or slip-lining.

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Condition Remedial Measures Plan Template

C. Maps of Alternatives Analyses Results

[Include one map for small diameter pipe and large diameter pipe and one map for manholes showing the location of the assets and the Remedial Measures Alternatives Analysis Results.]

VIII. Remediation Completed

A. Remedial Measures Progress

[Summarize the mileage and number of manholes for which Condition Remedial Measures have been completed prior to submittal of this report.]

	Remedial Measure Technique	Early Action Program - Phase I	Early Action Program - Phase II	Other	Total
Large Diameter Sewer Mains (miles) ^{1,2}	Replace				
	Rehabilitate				
	Repair				
Small Diameter Sewer Mains (miles) ^{1,2}	Replace				
	Rehabilitate				
	Repair				
Manholes (number)	Replace				
	Rehabilitate				
	Repair				

Note 1: Full pipe length is included in mileage

Note 2: Repairs include spot repairs or remediation of a short section of the pipe segment using trenchless or open-trench remediation. Rehabilitation includes trenchless sewer remediation from manhole to manhole such as CIPP lining or slip-lining.

B. Maps of Remedial Measures Completed

[Include a color coded map for Phase I, a map for Phase II, and another map for Other completed remediation by remediation method and asset type (small

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Condition Remedial Measures Plan Template

diameter pipe, large diameter pipe, and manholes that identifies and distinguishes between replaced and repaired manholes in Phase I and Phase II of the Early Action Program.]

IX. Remedial Measures Plan

A. Anticipated Remediation Timeframes

[Summarize target remediation quantities for completion each year.]

	Remedial Measure Technique	Calendar Year X	Calendar Year X	Calendar Year X	Calendar Year X	Calendar Year X	Total
Large Diameter Sewer Mains (miles) ¹	Replace						
	Rehabilitate						
	Repair						
Small Diameter Sewer Mains (miles) ¹	Replace						
	Rehabilitate						
	Repair						
Manholes (number)	Replace						
	Rehabilitate						
	Repair						
Note 1: Full pipe length is included in mileage							
Note 2: SAWS may make day-to-day operational changes to Remedial Measures consistent with the Consent Decree, including Appendices C and D of the Consent Decree.							

B. Maps of Anticipated Remediation Timeframe

[Include a color coded map for each year identifying the small diameter pipes, large diameter pipes, and manholes that will be Replaced, Rehabilitated, or Repaired.]

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Condition Remedial Measures Plan Template

C. Remediation Project List

Remediation Project List

Project Name	Project Miles	Completion Date	For large diameter pipes, schedule Justification for Completion Date After 4.5 years from EPA Approval of Remedial Measures Plan (Pursuant to Paragraph 31 of the Consent Decree)

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Capacity Assessment Report Template

I. Cover

II. Certification Declaration

[Required certification, with language specified by the Consent Decree, signed by a responsible official of SAWS]

III. Table of Contents

[List of sections, tables, figures and appendices included in this report]

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Report was prepared and submitted pursuant to Paragraph 39 of the Consent Decree.

B. Regulatory Requirements

This Report summarizes Capacity Assessment activities pursuant to Paragraph 33 through 38 of the Consent Decree. These Capacity Assessment requirements include Wet Weather SSO Verification, Hydraulic Modeling Evaluation and Field Investigation activities.

VI. Wet-Weather Related SSO Categorization

A. Guidelines

[Provide a brief description of the guidelines used; with a reference to the Capacity Assessment and Remediation Process and Guidelines Appendix. Include the range of dates for historical SSOs that this section covers. Include a summary of the activities performed to address Category C SSOs.]

B. Wet-Weather SSO Categorization Summary

Wet Weather SSO Categorization

Category	Number of SSOs
Category A – Most likely a capacity-related SSO	X
Category B – Most likely maintenance-related	X
Category C – Clearly not a capacity related SSO	X
Total	X

C. Map of Wet-Weather SSOs

[Include a map showing the location of Category A, B, and C Wet-Weather SSOs, a map showing the location of Category A Wet-Weather SSOs, a map showing the location of Category B Wet-Weather SSOs, and a map showing the location of Category C Wet-Weather SSOs.]

VII. System-wide Hydraulic Modeling Evaluation

A. Model Overview

[Provide a brief description of the model including software and existing population scenario, consistent with the Capacity Assessment and Remediation Process and Guidelines Appendix.]

B. Model Maps

[Include a map showing the location of pipes in the model.]

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Capacity Assessment Report Template

C. Model Calibration and Updates

[Provide a summary of any model updates and calibration performed after Date of Lodging of the Consent Decree (e.g. weather permitting) and prior to submittal of the Capacity Assessment Report consistent with the Capacity Assessment and Remediation Process and Guidelines Appendix.]

D. Prioritization of Potential Capacity Constraints

[Provide a brief description of the guidelines used to prioritize potential capacity constraints; consistent with the Capacity Assessment and Remediation Process and Guidelines Appendix].

Potential Capacity Constraints Summary

Category	Number of Potential Capacity Constraints
Priority 1 – Category A SSO per Wet-Weather SSO Categorization and where model also predicts a SSO	X
Priority 2 – Where model predicts SSO, but with no observed SSO. Or a Category A SSO per Wet-Weather SSO Categorization, but model does not predict a SSO.	X
Priority 3 – Where model predicts Hydraulic Grade Line (HGL) near ground elevation	X
Priority 4 – Category B SSO per Wet-Weather SSO Categorization	X
Priority 5 – Where pipe design capacity is exceeded for sustained 60 minutes or more but the HGL is not near the ground elevation	X
Total	X

E. Map of Potential Capacity Constraints

[Include a map showing potential Capacity Constraints for all Priority Categories. Include separate maps for each Priority Category showing the location of Potential Capacity Constraints.]

VIII. Field Investigations of Potential Capacity Constraints

A. Guidelines

[Provide a brief description of the guidelines used for selecting the type of field investigation technique for each potential capacity constraint; consistent with Capacity Assessment and Remediation Process and Guidelines Appendix.]

B. Field Investigation Status

Completed Field Investigations

Technique	Number of Potential Capacity Constraints				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Flow Metering	X	X	X	X	X
Smart Covers	X	X	X	X	X
Chalking	X	X	X	X	X
Visual Inspection – Smoke Testing	X	X	X	X	X
Visual Inspection – Mechanical Proofing	X	X	X	X	X
Visual Inspection – Sewer Cleaning Findings	X	X	X	X	X
Visual Inspection – Dye Testing	X	X	X	X	X
Other <i>(if applicable)</i>	X	X	X	X	X
Monitor in Future per Capacity Assessment and Remediation Process and Guidelines Appendix (CMOM)	X	X	X	X	X
Total	X	X	X	X	X

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Capacity Assessment Report Template

In-Progress Field Investigations

Technique	Number of Potential Capacity Constraints				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Flow Metering	X	X	X	X	X
Smart Covers	X	X	X	X	X
Chalking	X	X	X	X	X
Visual Inspection – Smoke Testing	X	X	X	X	X
Visual Inspection – Mechanical Proofing	X	X	X	X	X
Visual Inspection – Sewer Cleaning Findings	X	X	X	X	X
Visual Inspection – Dye Testing	X	X	X	X	X
Other <i>(if applicable)</i>	X	X	X	X	X
Total	X	X	X	X	X

C. Map of Completed Field Investigations

[Include a map for each Priority Category showing the location of each field investigation by technique.]

D. Map of In-Progress Field Investigations

[Include a map for each Priority Category showing the location of each field investigation by technique.]

IX. Capacity Assessment Results

A. Capacity Assessment Guidelines

[Provide a brief description of the guidelines used for assessing field investigation results; consistent with Capacity Assessment and Remediation Process and Guidelines Appendix.]

B. Capacity Assessment Results

Capacity Assessment Result	Number of Potential Capacity Constraints
Remedial Measures Alternatives Analysis	X
Monitor in the Future per Capacity Assessment and Remediation Process and Guidelines Appendix (CMOM)	X
Not a Capacity Constraint	X
Total	X

C. Map of Capacity Assessment Results

[Include a color coded map showing the location of the Capacity Assessment Results.]

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Capacity Remedial Measures Plan Template

I. Cover

II. Certification Declaration

[Required certification, with language specified by the Consent Decree, signed by a responsible official of SAWS]

III. Table of Contents

[List of sections, tables, figures and appendices included in this report]

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Plan was prepared and submitted pursuant to Paragraph 41 of the Consent Decree.

B. Regulatory Requirements

This Plan summarizes SAWS recommended Capacity Remedial Measures that have been prioritized and selected in accordance with Appendix D to address verified Capacity Constraints in the SAWS WCTS that cause or significantly contribute to Capacity-related SSOs. This Plan describes SAWS plans to implement the selected Capacity Remedial Measures on a balanced annual basis during the remaining term of this Decree. SAWS has prioritized and selected these Capacity Remedial Measures based on appropriate factors reflected in Paragraph 41 and in Appendix D of the Consent Decree and in accordance with the requirements of Paragraph 8 of the Decree. The implementation time-frames in this Plan reflect practical planning requirements such as those stated in Paragraph 41 of the Consent Decree.

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Capacity Remedial Measures Plan Template

VI. Summary of Capacity Assessment Summary Report

[Brief summary of the Capacity Assessment Summary Report and how it relates to this Plan.]

VII. Remedial Measures Alternatives Analysis

A. Guidelines for Alternative Analysis

The Plan for Capacity Remedial Measures follows SAWS completion of the Capacity Remedial Measures Alternatives Analysis as described in Paragraph 40 and in Appendix D of the Consent Decree

B. Remedial Measures Alternatives Analysis Results

[Provide a brief description of the guidelines used for performing alternatives analysis; consistent with Capacity Assessment and Remediation Process and Guidelines Appendix. Include a description of guidelines used to select continued monitoring results.]

Results of Remedial Measures Alternatives Analyses

Remedial Measures Alternatives Analysis Result *	Number of Potential Capacity Constraints
Re-route a portion of upstream wastewater flows	X
Reduce flows entering the WCTS	X
Reduce inflow	X
Reduce infiltration	X
Increase conveyance capacity	X
Upstream flow detention facilities	X
Continued monitoring	X
Other (Specify)	X
Totals:	X

* Note: Approach for actual implementation may be different than alternatives analyses result pursuant to Paragraph 42 and Appendix D of the Consent Decree. Some Capacity Constraints may require more than one remedial measure technique. The predominant remedial measure technique will prevail for reporting purposes.

C. Map of Alternatives Analysis Results

[Include a color coded map showing the location of each type of result.]

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Capacity Remedial Measures Plan Template

VIII. Remediation Completed

A. Remedial Measures Progress

[Summarize the mileage for which Capacity Remedial Measures have been completed prior to submittal of this report.]

Completed Remedial Measures

	Remedial Measure Technique	Phase I	Phase II	Other	Total
Large Diameter Sewer Mains (miles) ¹	Re-route a portion of upstream wastewater flows				
	Reduce flow entering WCTS				
	Reduce inflow				
	Reduce infiltration				
	Increase conveyance capacity				
	Upstream flow detention facilities				
	Other (specify)				
Small Diameter Sewer Mains (miles) ¹	Re-route a portion of upstream wastewater flows				
	Reduce flow entering WCTS				
	Reduce inflow				
	Reduce infiltration				
	Increase conveyance capacity				
	Upstream flow detention facilities				
	Other (specify)				
Manholes (number)	Replace				
	Rehabilitate				
	Repair				
Note 1: Full pipe length is included in mileage					
Note 2: Some Capacity Constraints may require more than one remedial measure technique. The predominant remedial measure technique will prevail for reporting purposes.					

B. Map of Remedial Measures Completed

[Include a color coded map for Phase I, a map for Phase II, and another map for Other completed remediation by remediation method and asset type (small diameter pipe, large diameter pipe, and manholes) that identifies and distinguishes between replaced and repaired manholes in Phase I and Phase II of the Early Action Program.]

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Capacity Remedial Measures Plan Template

IX. Remedial Measures Plan

A. Anticipated Remediation Timeframes

[Summarize target remediation quantities for completion each year. Include a list of Lift Stations that require capacity upgrades per the Remedial Measures Plan.]

Anticipated Remediation Timeframes

	Remedial Measure Technique	Calendar Year X	Calendar Year X	Calendar Year X	Calendar Year X	Total
Large Diameter Sewer Mains (Number of constraints addressed)	Re-route a portion of upstream wastewater flows					
	Reduce flow entering WCTS					
	Reduce inflow					
	Reduce infiltration					
	Increase conveyance capacity					
	Upstream flow detention facilities					
	Other (specify)					
Small Diameter Sewer Mains (Number of constraints addressed)	Re-route a portion of upstream wastewater flows					
	Reduce flow entering WCTS					
	Reduce inflow					
	Reduce infiltration					
	Increase conveyance capacity					
	Upstream flow detention facilities					
	Other (specify)					
Manholes (number)	Replace					
	Rehabilitate					
	Repair					
Note 1: SAWS may make day-to-day operational changes to Remedial Measures consistent with the Consent Decree, including Appendices C and D of the Consent Decree.						
Note 2: Some Capacity Constraints may require more than one remedial measure technique. The predominant remedial measure technique will prevail for reporting purposes.						

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Capacity Remedial Measures Plan Template

B. Maps of Anticipated Remediation Timeframe

[Include a color coded map for each year identifying the capacity constraints and the remedial measure method that will be utilized to address each capacity constraint.]

C. Remediation Project List

Remediation Project List

Project Name	Project Miles	Completion Date	For Large Diameter Pipes, Schedule Justification for Completion Date After 4.5 Years from EPA Approval of Remedial Measures Plan (Pursuant to Paragraph 42 of the Consent Decree)

I. Cover

II. Certification Declaration

[Required certification, with language specified by the Consent Decree, signed by a responsible official of SAWS]

III. Table of Contents

[List of sections, tables, figures and appendices included in this report]

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Report was prepared and submitted pursuant to Paragraph 52 of the Consent Decree.

B. Regulatory Requirements

This Report summarizes activities completed during the previous calendar year for the following requirements in Section V of the Consent Decree: Early Action Program, Condition Assessment, Condition Remedial Measures, Capacity Assessment, Capacity Remedial Measures, Lift Station Rehabilitation and Elimination Program, Force Main Assessment Program, CMOM Program (including Private Laterals) and Water Quality Program.

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VI. Early Action Program

Phase I Early Action Program Remediation

Asset Description	Completed in Calendar Year X	Cumulative Completed ²
Small Diameter Gravity Sewer (Miles) ¹	X	X
Large Diameter Gravity Sewer (Miles) ¹	X	X
Manholes (Number)	X	X
Note 1: Full pipe length is included in mileages.		
Note 2: Includes all work completed since xx/xx/xx.		

Status of Phase I Multi-Year Large Diameter Projects

Project Name	Description of Status

Phase II Early Action Program Remediation

Asset Description	Completed in Calendar Year X	Cumulative Completed ²
Small Diameter Gravity Sewer (Miles) ¹	X	X
Large Diameter Gravity Sewer (Miles) ¹	X	X
Manholes (Number)	X	X
Note 1: Full pipe length is included in mileages.		
Note 2: Includes all work completed since xx/xx/xx.		

Status of Phase II Multi-Year Large Diameter Projects

Project Name	Description of Status

VII. CMOM

A. SSO Reporting

[Reference attached SSO documentation pursuant to Paragraph 12.c and 12.d of the Consent Decree]

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B. Fats, Oils, and Grease Program

[Report pursuant to Paragraph 52.b.ii of the Consent Decree]

Inspections and Enforcements Actions in Calendar Year X

Number of Permitted Food Service Establishments	Number of Inspections	Number of Enforcement or Compliance Assistance Actions
XX	XX	XX

C. Sewer Cleaning

[Report pursuant to Paragraph 52.b.iii of the Consent Decree]

Small Diameter System-Wide Cleaning Program Status in Calendar Year X

[This mileage includes Repeat Cleaning Program pursuant to Paragraph 14.b of the Consent Decree.]

Total Small Diameter Miles	Miles Cleaned in Calendar Year X	% Cleaned in Calendar Year X	% Required per Calendar Year
XX	XX	XX	12%

Small Diameter System-Wide Cleaning Program Cumulative Status

**Unique Small Diameter Cleaning Completed –
Year X Through Year X**

	Unique Small Diameter Cumulative Percent Completed
January 1, 2009 through Date of Lodging	X
January 1, 2009 through Year 1	X
...	X
January 1, 2009 through Year 10	X

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Large Diameter Cleaning Program Status

Total Large Diameter Miles	Miles Cleaned in Calendar Year X	% Cleaned in Calendar Year X
XX	XX	XX

Large Diameter Cleaning Program Cumulative Status

**Unique Large Diameter Cleaning Completed –
Year X Through Year X**

	Unique Large Diameter Cumulative Percent Completed
January 1, 2009 through Date of Lodging	X
January 1, 2009 through Year 1	X
...	X
January 1, 2009 through Year 10	X

D. Private Laterals

[Report pursuant to Paragraphs 12.d,17, and 52 of the Consent Decree]

VIII. Condition Assessment

A. Gravity Sewer Main Inspection Map

[Include a map showing the location of the inspections. The map will differentiate between inspections completed during the calendar year reported in the annual report and inspections completed prior to the calendar year reported in the annual report. Inspections completed prior to the calendar year reported in the annual report will include inspections after January 1, 2009 for small diameter pipe and after inception of the large diameter inspection program in 2005 for large diameter pipe.]

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B. Gravity Sewer Main Inspection Status

Gravity Sewer Main Inspection Completed Through Calendar Year X

Asset Description	Method	Miles of Inspections Required Under Consent Decree²	Miles Completed Prior to Date of Lodging^{1,2}	Miles Completed in Calendar Year X¹	Miles Completed since Date of Lodging²	Cumulative Miles of Inspections Completed²	Cumulative % Complete
Small Diameter Gravity Sewer - Concrete Pipe and Clay Pipe Installed Prior to 1973	CCTV or other approved techniques	XX	XX	XX	XX	XX	XX
Small Diameter Gravity Sewer - Clay Pipe Installed from 1973 through 1982	Pole Camera, CCTV, or other approved techniques	XX	XX	XX	XX	XX	XX
Small Diameter Gravity Sewer - Other Pipe	Visual Inspection, Pole Camera, CCTV, or other approved techniques	XX	XX	XX	XX	XX	XX
Large Diameter Gravity Sewer	CCTV and other approved techniques	XX	XX	XX	XX	XX	XX
<p>Note 1: Includes small diameter gravity sewer inspections since January 1, 2009 and large diameter gravity sewer inspections since inception of the large diameter program in 2005.</p>							
<p>Note 2: Full pipe length is included in mileages.</p>							

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C. Manhole Inspection Map

[Include a map showing the location of the inspections. The map will differentiate between inspections completed during the calendar year reported in the annual report and inspections completed prior to the calendar year reported in the annual report. Inspections completed prior to the calendar year reported in the annual report will include inspections after January 1, 2009.]

D. Manhole Inspection Status

Manhole Inspection Summary

Inspection Method	Manhole Inspections to be Completed Under Consent Decree	Inspected Prior to Date of Lodging ¹	Inspected in Calendar Year X	Inspected Since Date of Lodging	Cumulative Inspections Completed ¹	Cumulative % Complete ¹
Visual Inspection	XX	XX	XX	XX	XX	XX

Note 1: Includes manhole inspections since January 1, 2009.

E. Condition Categorization Summary

Condition Categorization Summary

Condition Category	Miles of Small Diameter Sewer Mains ¹	Miles of Large Diameter Sewer Mains ¹	Number of Manholes
Category A – Very Good	XX	XX	XX
Category B – Good	XX	XX	XX
Category C – Fair Condition	XX	XX	XX
Category D – Poor	XX	XX	XX
Category E – Very Poor	XX	XX	XX

Note 1: Full pipe length is included in mileages.

F. Map of Condition Categories

[Include a map showing the location of the categorized assets for assets categorized during the calendar year reported in the annual report.]

G. Condition Assessment Guidelines

[Reference Consent Decree Appendix C, Condition Assessment and Remediation Process and Guidelines Appendix. Brief description of how SAWS applied these guidelines to develop the quantities of structural defects selected for Remedial Measures Alternative Analysis, Monitoring (CMOM) and Maintenance Analysis (CMOM).]

H. Condition Assessment Results During Calendar Year X

Condition Assessment Result	Miles of Small Diameter Sewer Mains ¹	Miles of Large Diameter Sewer Mains ¹	Number of Manholes
Remedial Measures Alternatives Analysis	XX	XX	XX
Monitoring (CMOM)	XX	XX	XX
Maintenance Analysis (CMOM)	XX	XX	XX
Note 1: Full pipe length is included in mileages.			

I. Map of Condition Assessment Results

[Include a map showing the location of the results for results determined during the calendar year reported in the annual report.]

IX. Condition Remedial Measures

A. Status of Multi-Year Large Diameter Condition Remediation

Project Name	Description of Status

B. Condition Remediation Completed

[Summarize the mileage of gravity sewer mains and number of manholes for which Condition Remedial Measures have been completed (Not including Early Action Program work)]

Remediation Completed			
	Miles of Small Diameter Gravity Sewer Main ¹	Miles of Large Diameter Gravity Sewer Main ¹	Number of Manholes
Completed in Calendar Year X	X	X	X
Note 1: Full pipe length is included in mileage			

[After EPA approval of the Condition Remedial Measures Plan, include a description of day-to-day operational changes to Remedial Measures consistent with of the Consent Decree and Appendices C and D of the Consent Decree.]

C. Map of Condition Remedial Measures Completed

[Include an overview map of remedial measures completed. The map will differentiate between remedial measures completed during the calendar year reported in the annual report and remedial measures completed pursuant to the consent decree prior to the calendar year reported in the annual report.]

D. Asset Information for Condition Remedial Measures Completed During Calendar Year X

[Attach the following information to this report:

- a. The asset identification number and type of asset;*
- b. Whether the asset was rehabilitated, repaired or replaced;*
- c. The length of the sewer line at issue, if applicable;*
- d. The pipe material, if applicable;*
- e. The diameter of the pipe, if applicable;*
- f. The manhole type, if applicable;*
- g. The original installation date of the asset;*
- h. Project name]*

X. Capacity Assessment

A. Wet-Weather Related SSO Categorization

1. Guidelines

[Reference Consent Decree Appendix D, Capacity Assessment and Remediation Process and Guidelines Appendix. Include the range of dates for historical SSOs that this section of the Annual Report covers. Include a summary of the activities performed to address Category C SSOs.]

2. Wet-Weather SSO Categorization Summary

Wet Weather SSO Categorization for Calendar Year X

Category	Number of SSOs
Category A – Most likely a capacity-related SSO	X
Category B – Most likely maintenance-related	X
Category C – Clearly not a capacity related SSO	X
Total	X

3. Wet-Weather SSO Categorization Summary Map

[Include a map showing the location of the wet-weather SSO categories for SSOs categorized during the calendar year reported in the annual report.]

B. System-wide Hydraulic Modeling Evaluation

1. Model Maps

[Include a map showing the location of pipes in the model.]

2. Model results identifying potential Capacity Constraints

[Provide a summary of any model results that identify potential Capacity Constraints, including any lift station results]

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C. Prioritization of Potential Capacity Constraints

[Provide a brief description of how SAWS used Consent Decree Appendix D to prioritize potential Capacity Constraints, consistent with the Capacity Assessment and Remediation Process and Guidelines Appendix].

Potential Capacity Constraints Summary

Category	Number of Potential Capacity Constraints Identified in Calendar Year X
Priority 1 – Category A SSO per Wet-Weather SSO Categorization and where model also predicts a SSO	X
Priority 2 – Where model predicts SSO, but with no observed SSO. Or a Category A SSO per Wet-Weather SSO Categorization, but model does not predict a SSO.	X
Priority 3 – Where model predicts Hydraulic Grade Line (HGL) near ground elevation	X
Priority 4 – Category B SSO per Wet-Weather SSO Categorization	X
Priority 5 – Where pipe design capacity is exceeded for sustained 60 minutes or more but the HGL is not near the ground elevation	X
Total	X

1. Map of Potential Capacity Constraints

[Include a map showing the location of potential capacity constraints identified during the calendar year reported in the annual report.]

XI. Field Investigations of Potential Capacity Constraints

A. Field Investigation Status

Completed Field Investigations

Technique	Number of Completed Field Investigations in Calendar Year X				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Flow Metering	X	X	X	X	X
Smart Covers	X	X	X	X	X
Chalking	X	X	X	X	X
Visual Inspection	X	X	X	X	X
Other <i>(if applicable)</i>	X	X	X	X	X
Monitor in Future per Capacity Assessment and Remediation Process and Guidelines Appendix (CMOM)	X	X	X	X	X
Total	X	X	X	X	X

B. Map of Completed Field Investigations

[Include a map showing the location of each field investigation.]

XII. Capacity Remediation

A. Status of Multi-Year Large Diameter Capacity Remediation

Project Name	Description of Status

B. Capacity Remediation Completed

[Summarize the mileage for which Capacity Remedial Measures have been completed (Not including Early Action Program work)]

	Miles of Small Diameter Gravity Sewer Main ¹	Miles of Large Diameter Gravity Sewer Main ¹
Completed in Calendar Year X	X	X

Note 1: Full pipe length is included in mileage

[After EPA approval of the Condition Remedial Measures Plan, include a description of day-to-day operational changes to Remedial Measures consistent with of the Consent Decree and Appendices C and D of the Consent Decree.]

C. Map of Capacity Remedial Measures Completed

[Include an overview map of remedial measures completed. The map will differentiate between remedial measures completed during the calendar year reported in the annual report and remedial measures completed pursuant to the consent decree prior to the calendar year reported in the annual report.]

D. Asset Information for Completed Capacity Remedial Measures

[Attach the following information to this report:

- a. The asset identification number and type of asset;*
- b. Whether SAWS addressed the Capacity Constraint through pipe rehabilitation/replacement, increased conveyance capacity, increased storage, or other Capacity Remedial Measures;*
- c. The length of the sewer line at issue, if applicable;*
- d. The pipe material, if applicable;*
- e. The diameter of the pipe, if applicable;*
- f. The original installation date of the asset at issue;*
- g. Project name]*

E. Potential Capacity Constraints Removed from Field Investigation Program

[Report pursuant to Consent Decree paragraph 52.f.viii.]

XIII. Remedial Measures Coordinated Between Capacity and Condition Remedial Measures

[Description of Remedial Measures that were coordinated between Condition and Capacity Remedial Measures]

XIV. Lift Station Rehabilitation and Elimination Program

[Report updates to Consent Decree Appendix E pursuant to paragraphs 44 and 52.g of the Consent Decree.]

XV. Force Main Assessment Program

[Report pursuant to requirements of paragraphs 46 and 52.h of the Consent Decree.]

Force Main Inspection Progress Summary

	Inspections to be Completed Under Consent Decree	Inspections Completed in Year X	Cumulative Inspections Completed	Cumulative % Complete
Number of Force Mains Visually Inspected	XX	XX	XX	XX

Force Main Condition Assessment Summary

Condition Assessment Result	Miles of Force Mains
Remedial Measures Alternatives Analysis	XX
Monitoring (CMOM)	XX
Maintenance Analysis (CMOM)	XX

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Force Main Remedial Measures Completed in Calendar Year X

Miles Completed in Calendar Year X
XX

XVI. Water Quality Program

[Report pursuant to Consent Decree paragraph 52.i]

XVII. Work Completed in Low Income Areas

[Report pursuant to Consent Decree paragraph 52.j. Include the following:

- a. Narrative summary of miles of gravity sewer main inspected, cleaned or remediated in low income areas per summaries in Sections VI, VII.C, VIII.B, IX.B, and XII.B herein;*
- b. All maps required by this Annual Report Template shall show the low income areas in which work was completed using a map consistent with Attachment 1 hereto for the work categories specified in Consent Decree paragraph 52.j.]*

XVIII. Modifications

[Include a summary of written agreements pursuant to Consent Decree paragraph 110 and other changes made pursuant to Consent Decree paragraph 111.]

Appendix G
Annual Report Template

Appendix for
SSO Documentation

Appendix G
Annual Report Template

Appendix for Updated

Lift Station Table (Consent Decree Appendix E)

Appendix G
Annual Report Template

Appendix for

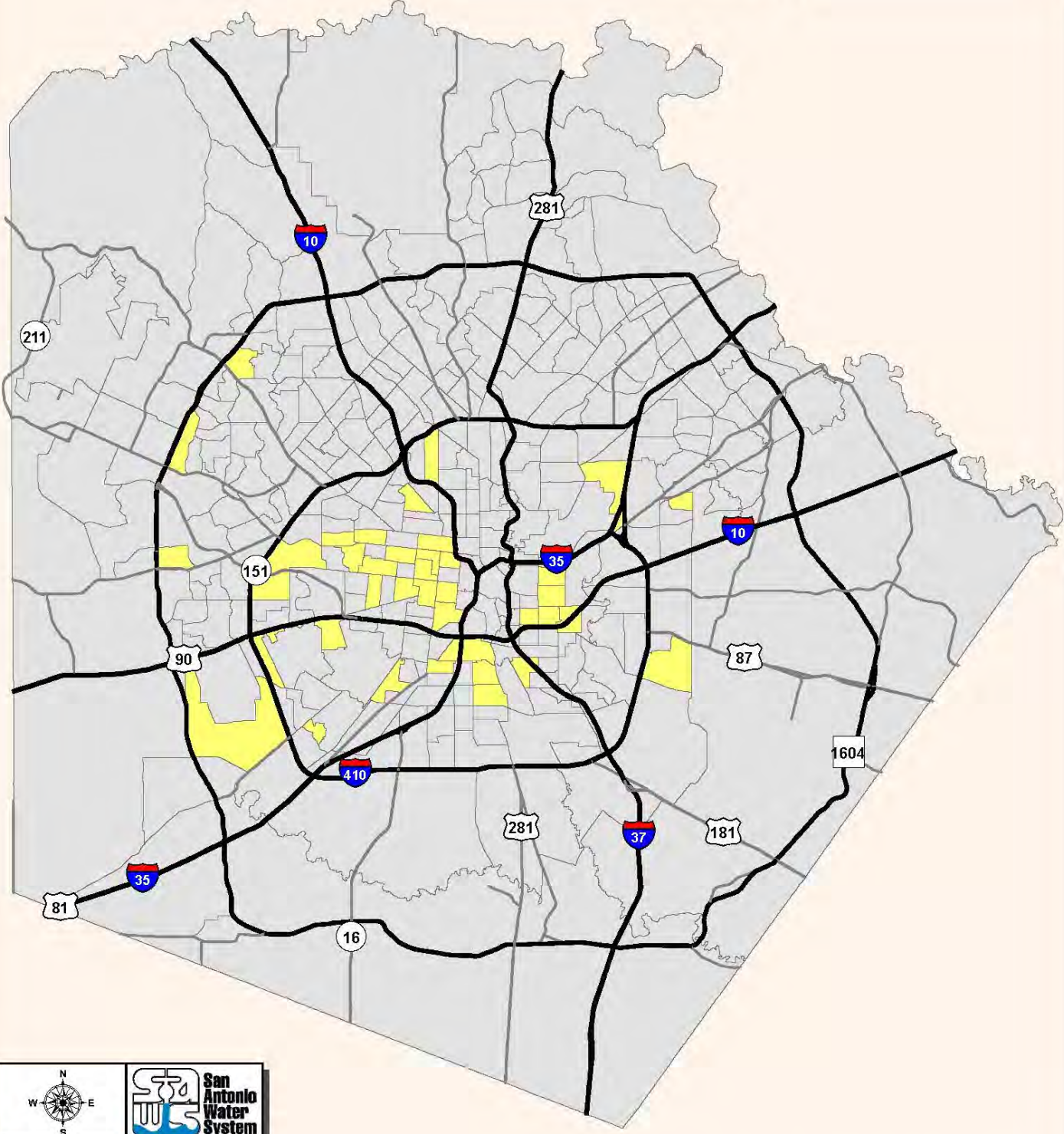
Asset Information for Completed Condition Remedial Measures

Appendix G
Annual Report Template

Appendix for
Asset Information for Completed Capacity Remedial Measures

SAWS Census Tracts Estimated Below Poverty Level

Annual Report
Template
Attachment 1



San Antonio Water System

Date: May 03, 2013 GIS Division

This utility map is for reference only. The information may not represent what actually has been constructed. S.A.W.S. explicitly disclaims any representation of the accuracy of the information and assumes no liability for any errors, omissions, or inaccuracies in the map regardless of how caused. Field verification should be done as necessary. S.A.W.S. prohibits the reproduction or sale of this document. This utility map may not under any circumstances, be copied, reproduced or published in any form or media, or transferred to another without written permission of the San Antonio Water System.

Source: 2010 ACS 5 year dataset C17002

SAWS Residential Accounts
Estimated at Below 125% Poverty

Qualifying Census Tracts

K:\Infrastructure Planning\Special Projects\Census\Map\BelowPoverty_Census_2010_664.mxd

APPENDIX H

APPENDIX H

WWTP AND MITCHELL LAKE EFFLUENT VIOLATIONS SUMMARY (2003-DECEMBER 31, 2012)

SAN ANTONIO WATER SYSTEM

EFFLUENT LIMIT VIOLATIONS

Leon Creek Waste Water Treatment Plant (TX0052639)-Major

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
10/03	001	DO, min.	4.1 mg/l	5.0 mg/l	1
10/03	001	NH3-N, max.	17.64 mg/l	7 mg/l	2
10/03	001	CBOD, max.	53.0 mg/l	17 mg/l	1
10/05	001	NH3-N, max.	7.42 mg/l	7 mg/l	1
12/05	001	NH3-N, avg.	2.03 mg/l	2 mg/l	31
12/05	001	NH3-N, max.	7.25 mg/l	7 mg/l	1
09/08	002	pH, min.	5.9 s.u.	6.0 mg/l	1
02/09	002	pH, min.	5.7 s.u.	6.0 mg/l	1
12/09	001	NH3-N, avg.	2.37 mg/l	2 mg/l	31
12/09	001	NH3-N, max.	9.39 mg/l	7 mg/l	1
06/11	001	NH3-N, max	8.18 mg/l	7 mg/l	1
06/11	002	NH3-N, max.	8.18 mg/l	7 mg/l	1
12/11	001	E.Coli, max	1160 CFU/100	394 CFU/100	1

Salado Creek Waste Water Treatment Plant (TX0052647)-Major

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
03/03	001	TRC, min.	0.95 mg/l	1.0 mg/l	1
03/03	004	TRC, min.	0.95 mg/l	1.0 mg/l	1
05/03	004	TRC, min.	0.60 mg/l	1.0 mg/l	1
07/06	001	NH3-N, avg.	3.24 mg/l	2 mg/l	31
07/06	001	NH3-N, max.	8.18 mg/l	7 mg/l	1
07/06	002	NH3-N, avg.	3.24 mg/l	2 mg/l	31
07/06	002	NH3-N, max.	8.18 mg/l	7 mg/l	1
07/06	002	TRC, max.	1.10 mg/l	.099 mg/l	31
07/06	004	NH3-N, avg.	3.24 mg/l	2 mg/l	31
07/06	004	NH3-N, max.	8.18 mg/l	7 mg/l	1

Medio Creek Waste Water Treatment Plant (TX0055689)

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
07/07	001	Flow, avg.	15,573 gpm	14,757 gpm	1
08/07	001	Flow, avg.	16,506 gpm	14,757 gpm	1
03/09	001	CBOD, max.	> 10 mg/l	25 mg/l	1
03/09	001	NH3-N, avg.	2.28 mg/l	2 mg/l	31
03/09	001	TSS, max.	119 mg/l	40 mg/l	1

Dos Rios Waste Water Treatment Plant (TX0077801)

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
12/06	004	DO, min.	4.9 mg/l	5.0 mg/l	1
12/06	005	pH, min.	5.9 s.u.	6.0 s.u.	1
01/07	002	pH, min.	5.9 s.u.	6.0 s.u.	1
01/07	005	pH, min.	5.9 s.u.	6.0 s.u.	1
08/07	001	Flow, avg.	202,431 gpm	173,611 gpm	31
12/07	004	TRC, max.	.79 mg/l	.099 mg/l	1
3/08	001	TRC, max.	1.4 mg/l	.099 mg/l	1
1/09	002	TRC, max.	.5 mg/l	.099 mg/l	1
1/09	006	TRC, max.	.8 mg/l	.099 mg/l	1
09/09	001	NH3-N, max.	11 mg/l	7 mg/l	1
09/09	002	TRC, max.	.099 mg/l	.16 mg/l	1
09/09	004	NH3--N, max.	11 mg/l	7 mg/l	1
09/09	005	NH3-N, max.	11 mg/l	7 mg/l	1
01/10	001	CBOD,max.	20 mg/l	9 mg/l	1
01/10	001	TSS, max.	93 mg/l	40mg/l	1
01/10	002	COB, max	25 mg/l	9 mg/l	1
01/10	002	TSS, max	93 mg/l	40 mg/l	1
01/10	004	CBOD, max	25 mg/l	9 mg/l	1
01/10	004	TSS, max	40 mg/l	93 mg/l	1
01/10	005	COB, max.	25 mg/l	9 mg/l	1
01/10	005	TSS, max.	93 mg/l	40 mg/l	1
01/11	001	CBOD, avg.	11988 lb/d	5213 lb/d	31
01/11	001	NH3-N, avg.	2.35 mg/l	2 mg/l	1
01/11	001	NH3-N, max.	7.62 mg/l	7 mg/l	1
01/11	002	NH3-N, max.	2.84 mg/l	2 mg/l	1

Dos Rios Waste Water Treatment Plant (TX0077801)

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
01/11	002	NH3-N, max.	7.62 mg/l	7 mg/l	1
01/11	004	NH3-N, avg.	2.35 mg/l	2 mg/l	31
01/11	004	NH3-N, max.	7.62 mg/L	7 mg/L	1
01/11	005	NH3-N, avg	3.06 mg/L	2 mg/L	31
01/11	005	NH3-N, max.	7.62 mg/L	7 mg/L	1
09/11	001	NH3-N, max.	7.41 mg/L	7 mg/L	1
09/11	002	NH3-N, max.	7.41 mg/L	7 mg/L	1
09/11	004	NH3-N, max.	7.41 mg/L	7 mg/L	1
09/11	005	NH3-N, max.	7.41 mg/L	7 mg/L	1
10/11	001	NH3-N, avg.	2.21 mg/L	2 mg/L	31
10/11	001	NH3-N, max.	7.35 mg/L	7 mg/L	1
10/11	002	NH3-N, max.	7.35 mg/L	7 mg/L	1
10/11	004	NH3-N, max.	7.35 mg/L	7 mg/L	1
10/11	005	NH3-N, max.	7.35 mg/L	7 mg/L	1
01/12	001	NH3-N, avg	2.31 mg/L	2 mg/L	31
01/12	001	NH-N, max.	13 mg/L	7 mg/L	1
01/12	005	NH-N, max.	13 mg/L	7 mg/L	1
03/12	001	E.Coli, max.	680CFU/100	394 CFU/100	1
05/12	001	TRC, max.	.12 mg/L	.1 mg/L	1
05/12	001	TRC, min.	.8 mg/L	1 mg/L	1
05/12	002	TRC, min.	.8 mg/L	1 mg/l	1
05/12	004	TRC, min.	.8 mg/L	1 mg/L	1
10/12	001	E.Coli, max.	770 CFU/100	394 CFU/100	1
10/12	002	E.Coli, max.	770 CFU/100	394 CFU/100	1
10/12	005	E.Coli., max.	770 CFU/100	394 CFU/100	1

Mitchell Lake (TX0065641)-Minor

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
01/05	001	ph, max.	9.6 s.u.	9.0 s.u.	1
02/05	001	ph, max.	9.6 s.u.	9.0 s.u.	1
03/05	001	ph, max.	9.5 s.u.	9.0 s.u.	1
01/07	001	ph, max.	9.1 s.u.	9.1 s.u.	1
01/07	001	tss, avg.	114 mg/l	90 mg/l	31
03/07	001	ph, max.	9.6 s.u.	9.0 s.u.	1
03/07	001	tss, avg.	97 mg/l	90 mg/l	31
04/07	001	DO, min.	3.8 mg/l	4.0 mg/l	1

Mitchell Lake (TX0065641)

DATE	OUTFALL	PARAMETER	VIOLATION	PERMIT LIMIT	NO. OF VIOLATIONS
04/07	001	ph, max.	9.8 s.u.	9.0 s.u.	1
04/07	001	tss, avg.	103 mg/l	90 mg/l	31
05/07	001	DO, min.	.2 mg/l	4 mg/l	1
05/07	001	ph, max.	9.7 s.u.	9.0 s.u.	1
05/07	001	tss, avg.	104.5 mg/l	90 mg/l	31
06/07	001	ph, max.	10.2 s.u.	9 s.u.	1
06/07	001	tss, avg.	109.6 mg/l	90 mg/l	31
07/07	001	DO, min.	2.2 mg/l	4 g/l	1
07/07	001	ph, max.	9.8 s.u.	9 s.u.	1
08/07	001	DO, min.	3.2 mg/l	4 mg/l	1
08/07	001	ph, max.	9.5 s.u.	9.0 mg/l	1
09/07	001	DO, min	1 mg/l	4 mg/l	1
09/07	001	ph, max.	9.9 s.u.	9.0 s.u.	1
10/07	001	DO, min.	.5 mg/l	4 mg/l	1
02/10	001	ph, max.	9.1 s.u.	9.0 mg/l	1
03/10	001	ph, max.	9.8 s.u.	9.0 s.u.	1
04/10	001	DO, min.	1.4 mg/l	4 mg/l	1
04/10	001	ph, max.	9.7 s.u.	9.0 s.u.	1
04/10	001	tss, avg.	92 mg/l	90 mg/l	31
04/10	001	DO.min.	1.91 mg/l	4 mg/l	1
05/10	001	ph, max.	9.2 s.u.	9.0 s.u.	1
09/10	001	ph, max.	10.8 s.u.	9.0 s.u.	1
10/10	001	ph, max.	10.84 s.u.	9.0 s.u.	1
10/10	001	tss, avg.	128.1 mg/l	90 mg/l	31
06/11	001	ph, max.	9.78 s.u.	9.0 s.u.	1
06/11	001	tss, avg.	127 mg/l	90 mg/l	31
07/11	001	BOD, avg.	33.25 mg/l	30 mg/l	31
07/11	001	DO, min.	2 mg/l	4 mg/l	1
07/11	001	ph, max.	9.46 s.u.	9.0 s.u.	1
07/11	001	tss, avg.	225 mg/l	90 mg/l	31