

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

_____)	
UNITED STATES OF AMERICA and,)	
THE STATE OF TEXAS)	
)	
Plaintiffs,)	Civil Action No. 6:17-cv-29
)	
v.)	
)	
THE CITY OF TYLER,)	
)	
Defendant.)	
_____)	

CONSENT DECREE

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WHEREAS, Plaintiff, the United States of America (“United States”), by the authority of the Attorney General of the United States and through its undersigned counsel, acting on behalf of the United States Environmental Protection Agency (“EPA”), and the State of Texas (“Texas”), on behalf of the Texas Commission on Environmental Quality (“TCEQ”), have filed concurrently with this Consent Decree a complaint in this action (the “Complaint”) against the City of Tyler, Texas (“Tyler”), pursuant to Section 309 of the Clean Water Act (“CWA”), 33 U.S.C. § 1319, and Chapter 7, Subchapter D, and § 26.121 of the Texas Water Code (“TWC”), and the regulations promulgated and permits issued pursuant to the CWA and TWC, respectively, seeking injunctive relief and civil penalties for Tyler’s alleged violations of the CWA and the TWC;

WHEREAS, through the Complaint, Texas also seeks recovery of its attorney’s fees, court costs, and/or reasonable investigative costs related to this proceeding if Texas prevails, pursuant to TWC § 7.108;

WHEREAS, the Complaint alleges that Defendant, Tyler, has violated and continues to violate Sections 301 and 402 of the CWA, 33 U.S.C. §§ 1311 and 1342, and TWC §§ 26.121(a)(1) and 7.101, the respective implementing regulations for the CWA, and permits issued under the CWA and the TWC, by: (1) discharging pollutants containing raw sewage from point sources within the City’s Wastewater Collection and Transmission System (“WCTS”) resulting in Sanitary Sewer Overflows (“SSOs”) as both of those terms are defined in this Consent Decree; and (2) failing to comply with the terms and conditions of the City’s Texas Pollutant Discharge Elimination System (“TPDES”) Permits as that term is defined in this Consent Decree;

WHEREAS, under Section 402 of the CWA, 33 U.S.C. § 1342, EPA may issue permits,

known as National Pollutant Discharge Elimination System (“NPDES”) permits, that allow for the discharge of pollutants under certain designated conditions and in accordance with all applicable requirements of the CWA and its implementing regulations, or EPA may delegate administration of the NPDES permit program to any requesting state;

WHEREAS, EPA authorized TCEQ to administer the NPDES pursuant to Section 402(b) of the CWA, 33 U.S.C. § 1342(b), and NPDES permits administered by TCEQ are known as TPDES permits;

WHEREAS, Tyler is a “municipality” pursuant to Section 502(4) of the CWA, 33 U.S.C. § 1362(4), and, therefore, a “person” pursuant to Section 502(5) of the CWA, 33 U.S.C. § 1362(5), and TWC § 26.001(25);

WHEREAS, Texas is also a Plaintiff in this action and joined as a Party under Section 309(e) of the CWA, 33 U.S.C. § 1319(e), which requires the state in which a municipality is located to be joined as a party whenever the municipality is a party to a civil action brought by the United States under Section 309 of the CWA;

WHEREAS, Tyler owns and operates a Publicly Owned Treatment Works (“POTW”) as defined by 40 C.F.R. § 403.3, that includes the WCTS and the two Wastewater Treatment Plants (“WWTPs”), as defined in this Consent Decree;

WHEREAS, the United States contends that Tyler has reported certain SSOs to TCEQ from the WCTS, but has also failed to report all known SSOs to TCEQ;

WHEREAS, the United States and Texas contend that these SSOs are violations of the CWA, TWC, and the City’s TPDES Permits;

WHEREAS, this Consent Decree requires Tyler to develop, submit, finalize, and implement plans for the continued improvement of its WCTS and the operation of this system, to

address SSOs;

WHEREAS, the United States contends that on and before March 1, 2013, Tyler's WCTS had several locations, referred to in this Consent Decree as "Constructed SSO Locations," where conduits or other facilities were constructed that allowed untreated sanitary wastewater flows to be diverted out of the WCTS to stormwater drainage facilities and then to the waters of the United States and/or into or adjacent to Waters in the State of Texas, and/or otherwise to be released to the environment without treatment during peak flow periods;

WHEREAS, shortly after March 1, 2013, EPA identified what it believed to be known or suspected historic Constructed SSO Locations in the WCTS, as listed in Appendix H ("Known or Suspected Historic Constructed SSO Locations and Inspection Results"), and, as of the Date of Lodging of the Consent Decree, Tyler inspected these alleged Constructed SSO Locations and took remedial measures to close such Constructed SSO Locations by, *inter alia*, permanently sealing all previously-constructed SSO pathways from the WCTS with concrete or other material to prevent future SSOs;

WHEREAS, the United States and Texas contend that Tyler previously had known or suspected historic Constructed SSO Locations as listed in Appendix H that are violations of the CWA, the TWC, and the City's TPDES Permits;

WHEREAS, the Parties have negotiated in good faith and have reached a settlement to resolve Plaintiffs' claims in the Complaint and avoid litigation;

WHEREAS, Tyler does not admit any liability to the United States or Texas arising out of the transactions or occurrences alleged in the Complaint;

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

between the Parties and that this Consent Decree is fair, reasonable, and in the public interest;

NOW THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law, except as provided in Section I of the Consent Decree, and with the consent of the Parties, it is hereby ORDERED, ADJUDGED, and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and over the Parties. This Court has supplemental jurisdiction over the state law claims asserted by Texas pursuant to 28 U.S.C. § 1367. Venue is proper in the Eastern District of Texas pursuant to Section 309(b) of the CWA, 33 U.S.C. §§ 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in this judicial district. For purposes of this Decree, or any action to enforce this Decree, Tyler consents to the Court's jurisdiction over this Decree and any such action and over Tyler and consents to venue in this judicial district.

II. APPLICABILITY

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

3. No transfer of ownership or operation of the WWTPs and WCTS, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Tyler of its obligation to ensure that the terms of the Decree are implemented. At least thirty (30) Days prior to such transfer, Tyler 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 EPA, the United States Department of Justice, TCEQ, and the Office of the Attorney General of Texas. Tyler shall require, as a condition of any sale or transfer, that the purchaser or transferee agrees in writing to be bound by this Consent Decree and submit to the jurisdiction of the Court for its enforcement. Any attempt to transfer ownership or operation of the WWTPs and WCTS without complying with this Paragraph constitutes a violation of this Decree.

4. Within thirty (30) Days after the Effective Date of the Consent Decree, Tyler shall provide a copy of this Consent Decree to the public by posting the Consent Decree on the City's website. The Consent Decree shall remain posted on the City's website for the entire duration of the Consent Decree and shall not be removed until after the Consent Decree is terminated pursuant to Section XXI ("TERMINATION"). Tyler shall also provide a copy of this Consent Decree, or otherwise make it available by providing notice of the location of its posting, to all officers, employees, and agents whose duties might reasonably include compliance with any substantive provision of this Consent Decree, as well as to any contractor retained to perform work expressly required under this Consent Decree. Tyler shall be responsible for ensuring that all employees involved in performing any work pursuant to this Consent Decree perform such work in a manner consistent with the requirements of this Consent Decree.

5. Public Document Repository: Tyler shall post to its website any report required by this Consent Decree and all final EPA approved Deliverables pursuant to Section VI ("REVIEW AND IMPLEMENTATION OF DELIVERABLES"). In the case of any report, Tyler shall post the report to the City's website within fourteen (14) Days of submitting the report to EPA and TCEQ. In the case of final approved Deliverables, Tyler shall post the approved version of the

Deliverable to the City's website within fourteen (14) Days after receiving notification of EPA's approval of the Deliverable. A consolidated listing of the Deliverables and reports required by this Consent Decree is provided in Appendix I ("Consolidated Listing of *United States et. al v. City of Tyler* Consent Decree Deliverables and Consent Decree Reports") for the convenience of the Parties. In the event of any discrepancy between the provisions of Sections V (Compliance Requirements) and IX (Reporting Requirements) and Appendix I, the provisions of Sections V and IX shall control.

6. In any action to enforce this Consent Decree, Tyler 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

7. The express purpose of the Parties entering into this Consent Decree is for Tyler to take all necessary measures, consistent with the objectives of the CWA, to achieve compliance with the CWA, the TWC, all applicable federal and state regulations, and the City's TPDES Permits, with the goal of eliminating all SSOs and Constructed SSO Locations, as those terms are defined in Subparagraphs 10.ee and 10.j of Section IV this Decree ("DEFINITIONS").

8. All plans, reports, construction, remedial maintenance, and other obligations in this Consent Decree, and under any amendment to this Consent Decree, shall have the objective of ensuring that the City complies with the CWA, the TWC, all applicable federal and state implementing regulations promulgated thereunder, and the terms and conditions of the City's TPDES Permits.

IV. DEFINITIONS

9. Unless otherwise defined herein, terms used in this Consent Decree shall have the

meaning given to those terms in the CWA, 33 U.S.C. §§ 1251 - 1387, and the regulations promulgated thereunder.

10. Whenever the terms set forth below are used in this Consent Decree, they shall be defined as follows:

a. “Building/Private Property Backup” shall mean a wastewater release or backup into a building or onto private property that is caused by blockages, flow conditions, or other malfunctions in the WCTS; however, a wastewater release or backup that is caused by blockages, flow conditions, or other malfunctions of a Private Lateral is not a Building/Private Property Backup for purposes of this Decree;

b. “Calendar Year” shall mean the twelve (12) Month period starting on January 1 and ending on December 31;

c. “CCTV” shall mean closed circuit television;

d. “City” or “Tyler” shall mean the Defendant City of Tyler, Texas, including all of its departments, agencies, and instrumentalities, and any successors thereto;

e. “City’s TPDES Permits” shall mean TPDES Permits Nos. 10653-002 (NPDES Permit No. TX0047988) and 10653-001 (NPDES Permit No. TX0047996) issued for the City’s two WWTPs and any future extended, modified, or reissued TPDES permits;

f. “Clean Water Act” or “CWA” shall mean the act formally entitled the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 - 1387;

g. “Complaint” shall mean the complaint filed by Plaintiffs in this civil action;

h. “Confirmed Capacity Constraint” shall mean any Potential Capacity Constraint, unless, before the issuance of the Capacity Assessment Report required by Paragraph 53 of this Consent Decree, that Potential Capacity Constraint has been confirmed by field investigation to

be unlikely to cause or materially contribute to SSOs;

i. “Consent Decree” or “Decree” shall mean this Consent Decree document, including all appendices attached hereto as listed in Section XXV (“APPENDICES”);

j. “Constructed SSO Location” shall mean a place in the WCTS where conduits or other facilities are or were constructed that divert[ed] or potentially divert[ed] sanitary wastewater flows from the WCTS to stormwater drainage facilities and to the waters of the United States, into or adjacent to Waters in the State of Texas, and/or that otherwise release[d] or potentially release[d] sanitary wastewater from the WCTS into the environment;

k. “Date of Lodging” shall mean the date on which this Decree is lodged with the United States District Court for the Eastern District of Texas prior to the commencement of the public comment period and pursuant to a notice of lodging filed by the United States;

l. “Day” or “Days” shall mean a calendar day or calendar days 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 or state holiday, the period shall run until the close of business of the next business day;

m. “Deliverable” shall mean any written document required to be submitted by or on behalf of Tyler to EPA and/or TCEQ, pursuant to this Consent Decree, that requires EPA’s review for comment or approval;

n. “Effective Date” shall mean the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court’s docket;

o. “FOG” shall mean fats, oils, and grease;

p. “FOG Control Device” shall mean any grease trap, FOG interceptor, or other mechanism or device, that 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 FOG from the waste stream of a FOG Generator prior to discharge into the WCTS;

q. “FOG Generator” shall mean any non-residential food service establishment or food preparation or processing establishment that discharges FOG into the WCTS;

r. “Force Main” shall mean any pipe in the WCTS that receives and intentionally conveys wastewater, under pressure, from the discharge side of a pump;

s. “Gravity Sewer Line” shall mean any pipe in the WCTS that receives, contains, and conveys wastewater not normally under pressure, but is intended to flow unassisted under the influence of gravity;

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

u. “Inflow” shall mean water other than wastewater that enters a sewer system (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, as defined by 40 C.F.R. § 35.2005(b)(21);

v. “I/T” shall mean the total quantity of water from Infiltration and Inflow without distinguishing the source;

- w. “Legible Map” shall mean a map in paper, pdf, or other software format that is mutually agreed to by the Parties;
- x. “Lift Station” shall mean facilities comprised of pumps that lift wastewater to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of that lift station;
- y. “Month” shall mean one calendar month running from the numbered day to the same numbered day of the following calendar month, regardless of whether the particular month has 28, 29, 30 or 31 days. In the case where a triggered event would occur on a day of the month which does not exist (for example, on February 30), then the event shall be due on the first (1st) day of the following month (for example, March 1);
- z. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral;
- aa. “Parties” shall mean the parties to this Consent Decree: Plaintiffs the United States and the State of Texas, and Defendant the City of Tyler, Texas;
- bb. “Potential Capacity Constraint” shall mean a discrete asset or group of assets in the Tyler WCTS that has, as predicted by the City’s updated hydraulic model using the Assessment Storm and existing population, a capacity limitation that is likely to cause or materially contribute to SSOs;
- cc. “Private Lateral” shall mean any sewer line connection not owned or operated by the City used to convey wastewater from a building or buildings to any portion of the WCTS;
- dd. “Repeat SSO” shall mean any SSO that occurs more than one time within a period of two (2) Calendar Years from the same asset in the WCTS, or, in the case of a Building/Private Property Backup, at the same address;

ee. “Sanitary Sewer Overflow” or “SSO” shall mean any overflow, spill, diversion, or release of wastewater from, or caused by, conditions in the WCTS and shall include:

i. discharges to waters of the United States or into or adjacent to Waters in the State of Texas from the City’s WCTS; and

ii. any release of wastewater from the City’s WCTS to public or private property that does not reach waters of the United States or Waters in the State of Texas, including Building/Private Property Backups;

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

gg. “Sewer Segment” shall mean the continuous run of Gravity Sewer Line pipe extending from one manhole to the next manhole;

hh. “Subparagraph” shall mean a portion of a Paragraph identified by lowercase letters;

ii. “Subsection” shall mean a portion of a Section identified by uppercase letters;

jj. “Subsection Component” shall mean a portion of a Subsection identified by an Arabic numeral followed by a single parenthesis;

kk. “TWC” shall mean the Texas Water Code;

ll. TPDES Permit No. 10653-002 (NPDES Permit No. TX0047988) shall mean the TPDES permit issued to the City by the State of Texas, pursuant to Section 402 of the CWA, 33 U.S.C. § 1342, for the City’s Southside Wastewater Treatment Facility and any future extended, modified, or reissued permit;

mm. TPDES Permit No. 10653-001 (NPDES Permit No. TX0047996) shall mean the TPDES permit issued to the City by the State of Texas, pursuant to Section 402 of the CWA,

33 U.S.C. § 1342, for the City's Westside Treatment Facility and any future extended, modified, or reissued permit;

nn. "Tyler" or "City" shall mean the City of Tyler, Texas, including all of its departments, agencies, and instrumentalities, and any successors thereto;

oo. "Wastewater Collection and Transmission System" or "WCTS" shall mean the municipal wastewater collection, retention and transmission system (including all Gravity Sewer Lines, manholes, Lift Stations, Force Mains, and appurtenances thereto) that is owned or operated by the City at any time from the Effective Date of this Consent Decree until its termination under Section XXI ("TERMINATION"), and that is designed to collect and convey municipal sewage (domestic, commercial, and industrial) to the WWTPs;

pp. "Wastewater Treatment Plants" or "WWTPs" shall mean the following two sewage treatment plants operated by the City and all components of such sewage treatment plants: the City's Westside Treatment Plant located at 14939 Country Road 46, in the City of Tyler, Texas, and the City's Southside Treatment Plant located near 110 West Cumberland Rd, in the City of Tyler, Texas;

qq. "Waters in the State of Texas" are "waters" as defined under Texas law, Tex. Water Code 26.001(5), including groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state;

rr. “Wet-Weather Related SSO” shall mean SSOs identified by Tyler as I/I-related that occurred during precipitation events; and

ss. “Year” shall mean a consecutive twelve (12) Month period.

V. COMPLIANCE REQUIREMENTS

11. The following compliance requirements are actions that the City shall undertake or continue to undertake to achieve the Objectives of this Consent Decree as stated in Section III of this Consent Decree (“OBJECTIVES”). Tyler shall perform the assessments and engineering analyses required by this Consent Decree in order to identify all measures necessary to bring its WCTS into compliance with the requirements of the CWA, the TWC, the respective implementing regulations promulgated thereunder, and the City’s TPDES Permits. Tyler shall implement all measures identified by the assessments and engineering analyses and required by this Consent Decree within ten (10) Years after the Effective Date with the goal of eliminating all SSOs from the WCTS.

12. Commencing upon the Effective Date of this Consent Decree, Tyler shall carry out all compliance requirements required by this Section in accordance with the schedules and terms of implementation provided herein. Whenever this Consent Decree provides Tyler with discretion to select the sequencing of WCTS inspections, cleaning, or remedial measures, Tyler shall prioritize the work to be performed upon structured consideration of the following factors: sound engineering practices, Tyler’s best professional judgment, industry standards where established and applicable, and the location of SSOs in low income or minority census tract communities as well as other appropriate factors specified in this Consent Decree.

A. CAPACITY MANAGEMENT, OPERATION AND MAINTENANCE (CMOM) PROGRAM

13. No later than the Effective Date, the City shall begin developing a written Capacity, Management, Operation, and Maintenance (“CMOM”) Program to enhance its existing programs related to management, operation, and maintenance of its WCTS. The CMOM Program shall establish, and describe in writing, how the City will implement the requirements of Subsection Components A.1) (“Training Program”) through A.11) (“Information Management System”) of this Subsection within the timeframes provided and shall be developed in accordance with EPA’s 2005 Guidance titled “Guide for Evaluating Capacity, Management, Operation, and Maintenance Programs at Sanitary Sewer Collection Systems.” The CMOM Program shall be sealed by a registered professional engineer licensed to practice in the State of Texas, demonstrating that the Program has been developed in accordance with EPA’s 2005 Guidance and sound engineering practices. The City shall submit its CMOM Program to EPA and TCEQ initially in only partial form as an “Interim CMOM Program” and then subsequently and completely as a “Final CMOM Program,” in accordance with the terms of Paragraphs 14 through 16.

14. No later than one-hundred and eighty (180) Days following the Effective Date, and prior to delivering a Final CMOM Program to EPA for review and approval, pursuant to Paragraph 16, Tyler shall develop and submit an Interim CMOM Program to EPA, with a copy to TCEQ, for EPA review and comment, in accordance with Paragraph 80. The Interim CMOM Program shall include the following CMOM Program components, the requirements of which are specifically set forth below in this Subsection: Subsection Component A.2) (“Sewer Overflow Response Plan”), Subsection Component A.3) (“SSO Reporting and Documentation Procedures”), and Subsection Component A.10) (“Root Control Program”).

15. Pursuant to the provisions of Paragraph 80, after receiving the Interim CMOM Program and prior to receiving the Final CMOM Program, EPA may, in its discretion, provide the City with comments on the Interim CMOM Program. Tyler shall begin implementing the Interim CMOM Program pursuant to Paragraph 80.b.

16. No later than one (1) Year after the Effective Date, the City shall submit its Final CMOM Program to EPA and TCEQ for EPA review and approval. The Final CMOM Program shall contain written descriptions of all CMOM Program components specified in Subsection Components A.1) (“Training Program”) through A.11) (“Information Management System”) of this Subsection, as well as a schedule including deadlines for implementation of each Final CMOM Program component. For Subsection Components previously included in and implemented through the City’s Interim CMOM Program, the Final CMOM Program shall contain changes to the Interim CMOM Program that reflect the City’s experience with its implementation of the Interim CMOM Program and modifications that the City, in its discretion, makes to the Interim CMOM Program during the period of its implementation. The Final CMOM Program shall also incorporate any revisions or clarifications to the Interim CMOM Program requested by EPA in any discretionary comments that may have been provided pursuant to Paragraph 15 subject to Tyler’s right to invoke the dispute resolution procedures provided in Section XIII (“DISPUTE RESOLUTION”). The City shall continue to implement the Interim CMOM Program while EPA is reviewing the Final CMOM Program for approval. The City shall implement the Final CMOM Program in accordance with the terms of Paragraph 79.

17. The City may modify its Final CMOM Program as needed to improve management of the City’s WCTS and meet the objectives of Section III (“OBJECTIVES”), provided that any such modification is made in accordance with Paragraph 139. The City shall incorporate any such

modifications to the Final CMOM program document by creating a Revised Final CMOM Program and adding that document to the public document repository required by Paragraph 5 (“Public Document Repository”) of this Consent Decree within fourteen (14) Days after:

a. the Parties’ mutual agreement of modification, for non-material modifications that are made pursuant to Paragraph 139; or

b. the Court’s order approving the modification, for material modifications that are requested and so ordered pursuant to Paragraph 139.

18. Tyler, as part of each Annual Report required to be submitted pursuant to Paragraph 88 (Annual Reports) of this Consent Decree, shall, for the applicable reporting period, describe Tyler’s progress in meeting CMOM Program goals by providing all details that Tyler is required to report as a part of its CMOM Program pursuant to Subsection Components A.1) (“Training Program”) through A.11) (“Information Management System”) of this Subsection.

1) Training Program

19. Tyler shall enhance its existing employee training program (“Training Program”). The Training Program shall include technical and skills training for appropriate categories of Tyler’s employees, set forth in Appendix A (“Categorical Employee Training Requirements”), and shall include training on sewer investigation, maintenance, and repair techniques and policies as well as SSO response policies and procedures. The Training Program shall focus on Tyler’s standard operating procedures and practices for the operation and maintenance of the WCTS and shall include specific instructions on responding to and preventing SSOs in accordance with the approved Sewer Overflow Response Plan (“SORP”), pursuant to Subsection Component A.2) (“Sewer Overflow Response Plan (SORP)”). For any training conducted pursuant to this Subsection Component, Tyler shall memorialize in writing, and retain pursuant to Paragraph

122, the following information: the date of the training; the topic(s) covered by the training; the names of the instructor(s) who conducted the training; and the names of the employees who received the training. As part of each Annual Report required to be submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall include a summary list of all documented training activities completed by each category of employee during the applicable reporting period in the approved format provided in Appendix A.

20. The technical and skills training and SSO response training required under the Training Program shall include:

a. Technical and Skills Training. The technical and skills training program shall be designed to facilitate prevention of and response to SSOs and shall include the following components:

i. the categories of employees (including a listing of job classifications within each category) that will be provided training in specific topics related to SSO prevention and response measures addressed through operation and maintenance of the WCTS, describing the specified training to be provided 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 to facilitate compliance with the CWA, the TWC, the implementing regulations promulgated thereunder, and Tyler's permits, through SSO prevention, response, and elimination measures (including, where appropriate, training on sewer cleaning, FOG inspection, sewer inspection, Constructed SSO Location identification sewer repair, replacement and rehabilitation techniques, data collection, information management, reporting and recordkeeping

necessary to implement Tyler's CMOM Program) before an employee can undertake specific work assignments or tasks; and

iii. identification of the types of training records that Tyler maintains and of the information management system used to plan and document completed training, including methods for addressing failure to complete minimum training requirements for each category of employee;

b. SSO Response Training. The City shall provide SSO response training that trains employees:

i. how to make a determination of whether an SSO has occurred;

ii. on the elements of and required implementation of the Sewer Overflow Response Plan, as set forth in Subsection Component A.2) ("Sewer Overflow Response Plan") of this Consent Decree;

iii. how to document and report SSOs pursuant to the SSO Reporting and Documentation Procedures, as set forth in Subsection Component A.3) ("SSO Reporting and Documentation Procedures"); and

iv. how to document and report noncompliance with Tyler's TPDES permits.

2) Sewer Overflow Response Plan (SORP)

21. The City shall develop a SORP that includes, at a minimum, the following components:

a. a listing of identified goals for the SORP, including that the City:

i. respond to SSOs as rapidly as possible with a response goal of less than four (4) hours after Tyler first discovers or is notified of a potential overflow;

ii. halt SSOs as rapidly as feasible;

iii. employ SSO mitigation measures whenever appropriate;

- iv. employ measures to prevent SSO recurrence; and
 - v. report SSOs timely and completely in accordance with the requirements of Subsection Component A.3) (“SSO Reporting and Documentation Procedures”);
- b. a description of the actions Tyler will undertake to provide notice to the public and to any applicable government authorities of the occurrence of an SSO from the WCTS as required by TWC §26.039 and 30 TAC §319.303, and any amendments thereto, the City’s TPDES Permits, or other applicable law;
- c. written Standard Operating Procedures (SOPs) for responding to SSOs that are designed to minimize SSO volumes and minimize the environmental impacts and potential human health risks of SSOs;
- d. an adequate methodology for estimating the volume of an SSO;
- e. additional written SOPs for specifically responding to Building/Private Property Backups, which shall include the following non-exclusive list of specific procedures:
- i. a description of Tyler’s response practices and methods for communicating with customers about:
 - A. how to report Building/Private Property Backups; and
 - B. how to contact Tyler in order to obtain support in responding to a Building/Private Property Backup;
 - ii. the typical timeframe objectives for both initial response and completion of cleanup activities;
 - iii. the types of measures that may be taken by Tyler to cleanup Building/Private Property Backups found to be caused by conditions in Tyler’s 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; and

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;

f. an inspection of each Sewer Segment that experiences an SSO using CCTV as soon as practicable, but in any event not later than five (5) business days following the cessation of the SSO. Such inspection shall at a minimum extend at least through the first adjacent Sewer Segment upstream and downstream of the specific WCTS asset experiencing an SSO;

g. identification of appropriate measures to prevent SSO recurrence, including, but not limited to, identifying the known or suspected cause of each SSO, if possible; eliminating material causing sewer blockages that result in SSOs; and/or identifying capacity limitations;

h. 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;

i. a plan to ensure the preparedness, including responsiveness training, of Tyler employees, contractors engaged for work on the City's WCTS, and, Northeast Texas Public Health District ("NET-Health") food service/processing establishment inspectors if appropriate due to responsibilities related to implementation of the FOG program, for effectively

implementing the SORP in the event of an SSO; and

j. a description of the follow-up process that the City of Tyler will use to evaluate the adequacy of its response to SSOs.

3) SSO Reporting and Documentation Procedures

22. The City shall report and document SSOs in accordance with all requirements of this Subsection, Appendix B (“Tyler Wastewater Collection Field Work Order Form”), and the Tyler Permits.

23. SSO Documentation.

a. The City shall utilize the field work order form attached as Appendix B (“Tyler Wastewater Collection Field Work Order Form”) to document the information required therein for each SSO that the City is notified of and/or responds to. Such documentation may include “information not available” where appropriate. In addition to utilizing the preset fields for information on the field work order form, the City shall document on that form any additional narrative information appropriate to fully document the nature of the SSO. The narrative field shall be used to document descriptive comments or summaries needed to elaborate on any preset field or otherwise account for information not captured by a preset field, *e.g.*, to provide a further description of an SSO categorized as “other.”

b. The City shall maintain an electronic SSO tracking database that records and makes readily accessible the information recorded on the field work order form for each SSO. The City shall incorporate all information gathered on the field work order forms into the electronic SSO tracking database as soon as feasible and in any event no less often than once a month. The underlying data from any field work order form shall be inputted into the electronic SSO tracking database no later than sixty (60) Days following the form’s creation.

24. SSO Reporting.

- a. The City shall report to TCEQ as required under the City's TPDES Permits.
- b. The City shall make available to EPA, upon request, a copy of any five-day reports or monthly compliance reports submitted to TCEQ under the City's TPDES permits. The City shall provide such reports to EPA no later than seven (7) Days after the date of receipt of EPA's request.
- c. On a Calendar Year basis, Tyler shall compile copies of the monthly compliance reports submitted to TCEQ under the City's TPDES permits and submit these compiled reports to EPA as part of its Annual Report, as set forth in Paragraph 88 of this Consent Decree.
- d. As part of the Quarterly Reports required to be submitted pursuant to Paragraph 87 of this Consent Decree, Tyler shall provide EPA and TCEQ, in either an electronic spreadsheet or other electronic compilation, the following information for each SSO:
 - i. the location of the SSO by street address, asset identification number or any other appropriate method (*e.g.*, by latitude and longitude);
 - ii. the name of the receiving water, if applicable (including via separate storm sewer);
 - iii. an estimate of the volume (in gallons) of sewage discharged and recovered;
 - iv. a description of the sewer system component from which the SSO was released (*e.g.*, manhole, Gravity Sewer Line, Lift Station wet well, Constructed SSO Location, etc.);
 - v. the cause(s) or suspected cause(s) of the SSO, if possible to identify;
 - vi. a description of the SSO's potential impact, if any, on public health and to

water quality in the receiving water body;

- vii. a listing of any Repeat SSOs, including the date(s) of the Repeat SSOs;
- viii. the estimated date and time when the SSO began and date and time when the SSO was stopped, or the anticipated time the SSO is expected to discontinue;
- ix. all steps taken to respond to the SSO;
- x. a corrective actions summary that describes 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. a summary of all notifications to the public or other agencies or departments as required by law or regulation.

25. As part of the Annual Report required to be submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall also provide to EPA and TCEQ any information contained in Tyler's records regarding releases or backups of wastewater from Private Laterals that Tyler created (*e.g.*, customer complaints) during the applicable reporting period (even though Tyler is not required to create such records under the CWA, TWC, or this Consent Decree), including, if available, information specifying the location of the release or backup, the cause of the release or backup, and a description of how the release or backup was remedied.

26. Tyler shall maintain records of the Private Lateral reports described under Paragraph 25 for a period of not less than five (5) Years. Tyler shall maintain records of all other reports described by this Subsection Component, and records reflecting the actions that Tyler has taken and will take to prevent SSOs from recurring, including a timeframe for undertaking those steps, and any work orders or similar records associated with the investigation and/or repair of problems related to SSOs, as required by Section XIV ("RIGHT OF ENTRY AND

INFORMATION COLLECTION AND RETENTION”).

27. On an annual basis, Tyler shall maintain an electronic list and description of complaints from customers or others regarding SSOs that occur within the Calendar Year. Tyler shall begin maintaining this list from the Effective Date through the end of that Calendar Year and thereafter shall maintain this list for each Calendar Year during the term of this Consent Decree and as required by Section XIV (“RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION”).

4) System-Wide Routine Cleaning Program

28. Tyler shall supplement and enhance its existing WCTS cleaning practices to develop a System-Wide Routine Cleaning Program to include all Gravity Sewer Lines in the WCTS for regularly scheduled cleaning to prevent future SSOs. For the purposes of this Section, “cleaning” shall be defined as the physical removal from the WCTS of FOG, debris, roots and/or any other obstructions from the Gravity Sewer Lines.

29. As part of Tyler’s System-Wide Routine Cleaning Program under this Section, Tyler shall:

- a. clean each unique Sewer Segment in its WCTS with sizes less than twenty-four (24) inches in diameter not less frequently than once every seven (7) Calendar Years;
- b. clean each unique Sewer Segment in its WCTS with sizes twenty-four (24) inches and larger in diameter not less frequently than once every ten (10) Calendar Years;
- c. clean a minimum of one hundred (100) miles of Gravity Sewer Lines each Calendar Year (prorated for any partial Calendar Year after the Effective Date in which these requirements apply). To comply with this minimum 100 miles annual requirement, Tyler may additionally count each cleaning of a Sewer Segment cleaned under the High Frequency

Cleaning Program, pursuant to Paragraph 31, during the same Calendar Year or cleaned as part of the field investigation to confirm Potential Capacity Constraints, pursuant to Paragraph 52, during the same Calendar Year; and

d. maintain information on the nature of material removed from each Sewer Segment (*e.g.*, FOG, roots, debris) and develop and maintain a system to classify the amount of such material removed (*e.g.*, heavy, moderate, or minimal).

30. As part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall provide:

a. the total miles of unique Gravity Sewer Lines cleaned during the reporting period and Legible Map(s) depicting the locations of Sewer Segments that were so cleaned;

b. the total miles of Gravity Sewer Lines cleaned during the reporting period, including all lengths of Gravity Sewer Lines cleaned in accordance with the Revised High Frequency Cleaning Program described in Subsection Component 5) (“Revised High Frequency Cleaning Program”), to demonstrate that Tyler has cleaned a minimum of one hundred (100) miles of the total Gravity Sewer Lines in the WTCS; and

c. an identification of whether particular Sewer Segments were added or removed from the Revised High Frequency Cleaning Program described in Subsection Component 5), based upon information that Tyler gathered on the nature and classified amount of materials removed during the System-Wide Routine Cleaning program, pursuant to Paragraph 29.d.

5) Revised High Frequency Cleaning Program

31. Tyler shall further develop a high frequency cleaning program designed to proactively prevent recurring blockages in the WCTS, commonly referred to as a “hot spot cleaning,” to the maximum extent feasible (the “Revised High Frequency Cleaning Program”). To develop this

Revised High Frequency Cleaning Program, Tyler shall utilize and refine its existing high frequency cleaning program, as set forth in Appendix C (“Existing High Frequency Cleaning Program”) to further establish proactive cleaning schedules for those Sewer Segments that have experienced Repeat SSOs, or that are otherwise known by the City to be susceptible to FOG, roots and/or debris build-up, by requiring Tyler to more frequently clean or flush those Sewer Segments than other Sewer Segments in the WCTS.

32. The Revised High Frequency Cleaning Program shall:

a. include all Sewer Segments that have experienced Repeat SSOs and identify criteria for determining when high frequency cleaning is appropriate for Sewer Segments that have not experienced Repeat SSOs, such as an analysis of SSO history and related information, the review of CCTV findings, the results of previous sewer cleaning findings, and the results of City and NET Health inspections of FOG Generator facilities;

b. establish tiered categories of “hot spot” areas within the WCTS based on significance of SSOs, the similarity of the cause of SSOs, or other prioritization criteria;

c. recommend appropriate cleaning frequencies and cleaning methods for Sewer Segments in each of the tiered categories identified in Paragraph 31.b;

d. maintain a list of Sewer Segments subject to Tyler’s Revised High Frequency Cleaning Program, identifying how often each Sewer Segment is cleaned; and

e. update the list of Sewer Segments subject to Tyler’s Revised High Frequency Cleaning Program as necessary to prevent SSOs based on the criteria identified in Paragraph 32.a.

33. As part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall provide:

a. a list of Sewer Segments subject to the Revised High Frequency Cleaning Program during the reporting period, identifying how often each Sewer Segment was cleaned during the reporting period; and

b. Legible Map(s) depicting the locations of Sewer Segments subject to the Revised High Frequency Cleaning Program during the reporting period.

6) Sewer System Internal Inspection Program

34. Tyler shall develop an ongoing Sewer System Internal Inspection Program and shall implement such program following completion of the Condition Assessment required under Paragraph 58 of this Consent Decree. Under the Sewer System Internal Inspection Program, Tyler shall internally inspect its entire WCTS on a seven (7) Year cycle for Gravity Sewer Lines less than twenty-four (24) inches in diameter and a ten (10) Year cycle for Gravity Sewer Lines twenty-four (24) inches in diameter and larger following completion of the Gravity Sewer Line Assessment required under Paragraph 57 of this Consent Decree.

35. As part of the Sewer System Internal Inspection Program, Tyler shall, at a minimum:

a. inspect each Sewer Segment in accordance with the inspection methods required by the relevant Paragraphs of Subsection V.D (“CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM”);

b. evaluate the condition of each Sewer Segment using the National Association of Sewer Service Companies (“NASSCO”) Pipeline Assessment and Certification Program (“PACP”) pipe condition rating system identified in Appendix D (“Gravity Sewer Line Condition Assessment and Remedial Measures Program”);

c. document any observed deterioration and/or need for remediation;

d. utilize the inspection results from previous WCTS inspections, including Tyler’s

performance of the Gravity Sewer Line Condition Assessment required by Paragraphs 57 and 58 of this Consent Decree, to identify and continue to monitor the condition of any assets previously rated A, B, or C to determine if additional deterioration has occurred. Assets found to have additional deterioration shall be re-rated using the rating system identified in Appendix D; and

e. retain all records of inspections conducted pursuant to this Paragraph for at least one inspection cycle.

7) Sewer System Manhole Inspection Program

36. Tyler shall develop an ongoing Sewer System Manhole Inspection program, and shall begin re-inspecting all manholes in the WCTS on the following continuous cycle after the completion of the Assessment of Manholes required under Paragraph 59: Tyler shall re-inspect all manholes on Gravity Sewer Lines less than twenty-four (24) inches in diameter on a seven (7) year cycle; and Tyler shall re-inspect all manholes on Gravity Sewer Lines twenty-four (24) inches in diameter or larger on a ten (10) year cycle. Such manhole inspections may be conducted concurrently with any Sewer Segment routine cleaning activity that occurs as part of Tyler's System-Wide Routine Cleaning Program, pursuant to Paragraph 28 of Subsection Component A.4) ("System-Wide Routine Cleaning Program").

37. As part of Tyler's Sewer System Manhole Inspection Program under this Section, Tyler shall:

a. inspect each manhole using appropriate methods, as identified in the relevant Paragraphs of Subsection V.D ("CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM");

b. evaluate the condition of and prioritize each manhole using the industry-accepted manhole condition rating system, identified in Appendix E ("Manhole Condition Assessment

and Remedial Measures Program”);

- c. document any observed deterioration and/or need for replacement;
- d. utilize the inspection results from previous WCTS inspections, including Tyler’s performance of the Manhole Condition Assessment required by Paragraphs 57 and 59 of this Consent Decree, to identify and continue to monitor the condition of any assets previously rated A, B, or C to determine if additional deterioration has occurred. Assets found to have additional deterioration shall be re-rated using the rating system identified in Appendix E; and
- e. retain all records of inspections conducted pursuant to this Paragraph for at least two (2) inspection cycles.

8) Lift Station Preventive Maintenance Plan

38. Tyler shall develop a Preventive Maintenance Plan describing the routine inspection, testing and maintenance tasks, together with respective task schedules, required at each Lift Station in the WCTS to assure reliable operation of that Lift Station and to prevent SSOs. The Preventive Maintenance Plan required by this Paragraph shall also include supporting written Standard Operating Procedures (“SOPs”) describing the inspection, testing and maintenance tasks to be performed. At a minimum, the Preventive Maintenance Plan and SOPs shall address the following topics:

- a. periodic Lift Station inspections and daily site visits;
- b. wet well cleaning;
- c. pumping equipment periodic inspection, testing, and routine maintenance;
- d. valve inspection, exercising, and routine maintenance;
- e. electrical equipment periodic inspection, testing, and routine maintenance;
- f. pump control equipment periodic inspection, testing, and routine maintenance,

including the inspection, cleaning and calibration of floats or other wet well level sensing equipment;

g. alarm/SCADA system functionality testing, and routine maintenance; and

h. alternate power system failure-response testing and routine maintenance,

including generator and/or switchover equipment exercising as applicable.

9) Fats, Oils, and Grease (FOG) Control Program

39. Tyler shall develop a FOG Control Program either independently or in conjunction with the existing FOG monitoring program of NET-Health to minimize the discharge of FOG from FOG Generators in order to prevent FOG accumulations in the WCTS that result in blockages causing SSOs.

40. Tyler shall document, in writing, all elements of its FOG Control Program, as further set forth in this Paragraph. As part of its FOG Control Program, Tyler shall, at a minimum:

a. develop a comprehensive FOG control ordinance to provide legal authority to regulate and control the discharge of FOG into the WCTS. The FOG ordinance shall provide the legal authority to implement a permit and enforcement program for FOG Generators;

b. describe other programs within the City of Tyler, such as building codes and the regulatory authority of NET Health, that have complementary existing authority to regulate FOG and how those authorities will be integrated into the FOG Control Program;

c. promulgate any rules, regulations, policies, forms, or procedures necessary to implement the FOG Control Program required by this Subsection Component;

d. analyze and monitor FOG-related SSO occurrences, including but not limited to mapping the locations of SSOs caused by FOG, identifying sources of FOG in the WCTS, if possible, and creating a protocol to address these locations and sources through increased FOG

control inspections, enforcement against FOG Generators, public education, increased cleaning frequencies, and/or other proactive mechanisms;

e. maintain a list of all FOG Generators that includes a description of the FOG generating process and grease trap size, updated no less often than annually;

f. establish standards for the design and construction of FOG Control Devices constructed after the adoption of the standards including standards for capacity and accessibility, discharge standards and limitations, site maps, design documents and as-built drawings;

g. establish 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;

h. continue to utilize the NET-Health FOG disposal manifest system and refine the existing FOG disposal manifest system to conform to the City's FOG ordinance and ensure that the City maintains records of FOG-control device cleaning and the ultimate disposal of FOG;

i. establish staffing (technical and legal) and equipment requirements to ensure effective implementation of the FOG Control Program;

j. establish a FOG enforcement program, including specific enforcement mechanisms for noncompliant facilities, to ensure compliance with the FOG Control Program.

As part of the Annual Report required in Paragraph 88 of this Consent Decree, Tyler shall report the number of enforcement actions initiated and/or concluded during the prior Calendar Year;

k. develop recordkeeping systems and procedures to track and identify, when possible, the source of all FOG-related SSOs, and FOG blockages;

l. coordinate information on FOG-related SSOs to FOG inspection staff to ensure effective implementation of the FOG Control Program;

m. establish construction inspection procedures, including scheduling, inspection report forms, and inspection recordkeeping requirements, to assure that FOG Control Devices constructed after the adoption of standards developed pursuant to this Paragraph are constructed in accordance with established design and construction standards;

n. establish 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;

o. develop a tiered compliance inspection frequency schedule that shall identify the number of regulated commercial FOG Generators in each tier and the frequency of inspection for each tier, including the rationale and explanation of the tier frequency schedule. All FOG Generators shall be inspected at least once annually. Certain FOG Generators shall be inspected more frequently if, due to non-compliance with City's Fog Control Program, more frequent inspections are necessary to prevent the occurrence of SSOs;

p. develop a compliance assistance program to help FOG Generators to comply with the FOG Control Program and to provide guidance and training for FOG Generators and their employees;

q. develop a written guide for both new and existing FOG Generators that identifies applicable City ordinances and regulations related to the installation, operation, and maintenance of FOG Control Devices;

r. continue a public education program concerning FOG for the purpose of reducing the amount of FOG entering the WCTS from private residences and refine such program to achieve a goal of increasing private residents' understanding of the measures they can take to

minimize the amount of FOG that enters the WCTS from their residences; and

s. establish performance indicators to be used to measure the effectiveness of the FOG Control Program and establish a periodic review in order to update the FOG Control Program as warranted.

10) Root Control Program

41. Tyler shall develop a Root Control Program to identify and control the intrusion of roots in the WCTS that contribute to SSOs.

42. Tyler shall document, in writing, all elements of its Root Control Program, as further set forth in this Paragraph. As part of its Root Control Program, Tyler shall, at a minimum:

a. describe how Tyler will proactively address Sewer Segments where roots have been identified to have caused or contributed to SSOs in the past and how Tyler will proactively address these areas through increased sewer main inspections, cleaning frequencies, cutting frequency, and/or other proactive mechanisms, such as chemical root control;

b. describe the staff, equipment, and procedures that will be used to identify Sewer Segments with significant root intrusion through sewer cleaning activities, CCTV inspection, and SSO response activities;

c. identify the staff, by job classification, and equipment (*i.e.*, chemicals used in chemical root control) that will be used to respond to root problems and prevent the reoccurrence of root growth;

d. describe root control activities performed in reaction to an SSO event; and

e. describe root control activities performed to prevent further recurrence of root blockages.

43. Reporting Root Control Activities. As part of each Annual Report submitted pursuant to

Paragraph 88 of this Consent Decree, Tyler shall report the total miles of Gravity Sewer Lines where both reactive and preventive root control activities were conducted during the applicable reporting period and particularly:

- a. identify the Sewer Segments addressed and whether or not those Sewer Segments were previously identified by the analysis conducted under Subparagraph 40.d;
- b. state whether chemical and/or mechanical means were used for root control; and
- c. identify the degree to which each of these methods were employed on a percentage basis (*i.e.*, the respective percent (%) of total miles reported).

11) Information Management System

44. Tyler shall develop an updated Information Management System (including an Information Management Program and a Spatial Data Management System (“SDMS”)), the requirements of which are set forth by this Subsection Component. Tyler shall describe its planned Information Management System in an Information Management System Development Plan that is included in the Final CMOM Program submitted to EPA and TCEQ for EPA review and approval pursuant to this Subsection V.A (“CMOM PROGRAM”).

45. The Information Management System Development Plan shall describe the steps Tyler will take to fully develop and implement the Information Management System required by this Section with a proposed schedule for carrying out all planned steps no later than five (5) Years after the Effective Date. Tyler shall begin implementing the Information Management System Development Plan, according to the schedule set forth therein, upon EPA’s approval of the Final CMOM Program.

46. Information Management Program. Tyler shall utilize its Information Management Program developed according to the schedule set forth under this Subsection Component to

maintain data on WCTS system assets and SSOs. The Information Management Program shall be capable of integrating specific asset and SSO data, including but not limited to:

- a. Condition Assessment data as required by Subsection V.D (“CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM”);
- b. maintenance Records for each asset, including maintenance history, repair history, and the status of maintenance work to be implemented and completed under the Consent Decree;
- c. SSO data as specified in Subsection Component A.3 (“SSO Reporting and Documentation Procedures”) to evaluate and modify sewer system cleaning and inspection programs focused on the elimination of SSOs; and
- d. spatial tracking tools, such as Geographic Information System (“GIS”) or the functional equivalent.

47. Spatial Data Management System (SDMS). As part of its Information Management System, Tyler shall utilize an SDMS developed according to the schedule set forth under this Subsection Component to map its WCTS (*i.e.*, Geographic Information System or a functionally equivalent software suite). The SDMS must allow for the electronic entry and management of all WCTS components, including the following associated spatial data:

- a. attribute data for Sewer Segments, including:
 - i. known or estimated date of installation;
 - ii. pipe length;
 - iii. inverts at manholes;
 - iv. slope;
 - v. diameter (or dimensions if not cylindrical);
 - vi. type (*e.g.*, gravity or pressure);

- vii. material (if available);
 - viii. nominal capacity (*i.e.*, manning) design; and
 - ix. geographic location.
- b. attribute data for structures including:
- i. structure type (*e.g.*, siphon, manhole, junction box, Force Main, air relief valve);
 - ii. invert elevation;
 - iii. geographic location; and
 - iv. known or estimated date of installation.

48. Tyler shall use its best efforts to locate sewer components that cannot be located in the field. These efforts shall include the use of a Spatial Data Management System, as-built drawings, surveying and/or Global Positioning Systems, and sewer condition assessment data.

49. Routine Updates to Assets Included in Information Management Program and Spatial Data Management System. Pursuant to Paragraph 45 after the implementation schedule in the Information Management System Development Plan becomes fully incorporated into the Final CMOM Program (*i.e.*, upon EPA approval of the Final CMOM Program), Tyler shall begin making routine updates to the attribute data contained in its Information Management System to keep such data current. Specifically, Tyler shall update the WCTS attribute data maintained in the Information Management Program and/or Spatial Data Management System within ninety (90) Days of when Tyler becomes aware of, or otherwise receives reliable information indicating, that the attribute data included in its Information Management Program and/or Spatial Data Management System is incorrect. For purposes of this Paragraph, whenever Tyler completes any inspection, testing, condition assessment, or rehabilitation activity on a WCTS

component, Tyler receives reliable information about the attribute data included in its Information Management System.

B. UPDATING HYDRAULIC MODEL

50. Hydraulic Model Update. Within sixty (60) Days after the Effective Date, Tyler shall commence implementation of the hydraulic model update requirements set forth in Appendix F (“Hydraulic Model Update”) and incorporated herein by reference, in order to update its existing SewerGEMS hydraulic model for the WCTS (SewerGems v.2.4.8). The updated hydraulic model shall be developed in accordance with the requirements of Appendices F and G (“Capacity Assessment and Remedial Measures Program”). The updated hydraulic model shall be completed within two (2) Years after the Effective Date. Within thirty (30) Days after completion of the updated hydraulic model, Tyler shall submit to EPA for review and comment, with a copy to TCEQ, pursuant to Section VI (“REVIEW AND IMPLEMENTATION OF DELIVERABLES”), a Hydraulic Model Update Summary that:

- a. describes the hydraulic model, including the brand of model software and its capabilities;
 - b. provides Legible Map(s) and schematics that identify and characterize the portions of the WCTS included in the model; or, if Tyler cannot provide Legible Map(s), provides a tabular summary of the information organized by Sewer Segment and indexed by the asset ID numbers;
 - c. identifies the model’s input parameters, constraints, assumed values and outputs;
- and
- d. includes a written summary of activities undertaken to configure, calibrate, and verify the model, providing, as part of the summary, graphs, numerical comparisons, and/or other

data depicting the variation between modeled and measured peak wet-weather flow rates.

C. HYDRAULIC CAPACITY ASSESSMENT AND REMEDIAL MEASURES PROGRAM

51. Hydraulic Model Assessment of Potential Capacity Constraints. Tyler shall utilize its updated hydraulic model, developed pursuant to Subsection V.B of this Consent Decree (“UPDATING HYDRAULIC MODEL”), to determine whether the analyzed portions of its WCTS are predicted by the model to be adequately sized to transport the current peak dry-weather flows and peak wet-weather I/I generated by the “Assessment Storm” defined in Appendix G (“Capacity Assessment and Remedial Measures Program”). Tyler shall run the hydraulic model to identify Potential Capacity Constraints as set forth in Appendix G.

52. Field Investigation to Confirm Potential Capacity Constraints. Within forty-two (42) Months after the Effective Date, the City shall complete appropriate field investigations, pursuant to Appendix G (“Capacity Assessment and Remedial Measures Program”). The City shall select the appropriate field investigation to be performed for each Potential Capacity Constraint based on the available information and in accordance with the process described in Appendix G and incorporated herein by reference.

53. Capacity Assessment Report. Within forty-two (42) Months after the Effective Date, Tyler shall develop and submit to EPA and TCEQ a Capacity Assessment Report, pursuant to Section IX (“REPORTING REQUIREMENTS”) of this Consent Decree, that documents and describes any refinement(s) to the following that have occurred since the submission of the Hydraulic Model Update Summary required by Paragraph 50: the model updating process, the flow metering and rainfall monitoring program, and/or model calibration/verification. The Capacity Assessment Report shall also document and describe field investigations of Potential

Capacity Constraints. This Capacity Assessment Report shall identify those elements of the WCTS predicted by the model to be Potential Capacity Constraints and determined by field investigation to be Confirmed Capacity Constraints. The Capacity Assessment Report shall include:

- a. Legible Map(s) and schematics depicting the locations of Potential Capacity Constraints during current peak dry-weather flows and the Assessment Storm defined in Paragraph 51;
- b. a list identifying model-predicted Potential Capacity Constraints by asset identification number; and
- c. a summary of the field investigation information for any Potential Capacity Constraint that was not a Confirmed Capacity Constraint.

54. Capacity Remedial Measures Plan. Tyler shall prepare a Capacity Remedial Measures Plan for Confirmed Capacity Constraints. The Capacity Remedial Measures Plan shall be submitted to EPA for review and approval, with a copy to TCEQ, within forty-two (42) Months after the Effective Date. The Capacity Remedial Measures Plan shall identify the capacity remedial measures projects designed to eliminate Confirmed Capacity Constraints. For each capacity remedial measures project identified in the Capacity Remedial Measures Plan, Tyler shall include: the project name; the existing Gravity Sewer Line or other facility that will be remediated by the remedial measures; and pertinent design information for that planned capacity improvement. For parallel Gravity Sewer Lines or replacement Gravity Sewer Lines, the Capacity Remedial Measures Plan shall also list the pipe size, pipe length, and the hydraulic design criteria utilized for sizing, including the maximum percentage-full allowed in each Pipe Segment during the Assessment Storm. In designing such Pipe Segments, the City of Tyler shall

comply with TCEQ Chapter 217 Design Criteria for Sewerage System. At a minimum, all improvements shall be sized to accommodate peak wet-weather I/I generated by the Assessment Storm (defined in Appendix G (“Capacity Assessment and Remediation Program”)) and peak dry-weather flows generated by projected population growth through 2035. Where the hydraulic model recommends a nominal pipe size that would be at or greater than ninety-five percent (95%) of capacity during the Assessment Storm event, the City shall upsize the pipe to the next larger nominal pipe size.

55. The Capacity Remedial Measures Plan shall include a schedule for completing the capacity remedial measures identified therein, such that all work is scheduled for completion within ten (10) Years after the Effective Date. Tyler shall prioritize the implementation of the identified remedial measures based upon the risk and consequences of SSOs that could occur from the asset or group of assets in the Tyler WCTS found to be deficient in capacity. All Capacity Remedial Measures identified in the plan shall be completed no later than ten (10) Years from the Effective Date.

56. Reporting Completion of Annual Capacity Remedial Measures. As part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall provide a tabular summary of all capacity remedial measures projects identified and scheduled in the Capacity Remedial Measures Plan, pursuant to Paragraphs 54 and 55, that were completed in the applicable reporting period. The summary shall identify each project by name, completion date, and shall provide the following remediation figures: miles of Gravity Sewer Lines addressed, number of Force Mains upgraded for capacity improvements, and number of Lift Stations upgraded for capacity improvements. The tabular summary required by this Paragraph shall also attach a Legible Map identifying the Force Mains, Lift Stations and Sewer Segments that were

remediated.

D. CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM

57. Condition Assessment. Tyler shall conduct a system-wide inspection and assessment of the structural condition of all Gravity Sewer Lines and manholes in its WCTS by implementing the Condition Assessment requirements of Paragraphs 58-60 and the associated remedial measures requirements of Paragraphs 61-63.

58. Assessment of Gravity Sewer Lines. According to Tyler, the WCTS includes a total of approximately six hundred (600) miles of Gravity Sewer Lines. Tyler shall perform a Condition Assessment on the entire length of the Gravity Sewer Lines in the WCTS within eight (8) Years after the Effective Date in accordance with the following requirements of this Paragraph:

a. Tyler shall assess Sewer Segments utilizing the NASSCO PACP pipe condition rating system identified in Appendix D (“Gravity Sewer Line Condition Assessment and Remedial Measures Program”);

b. Tyler shall annually conduct internal visual assessments of no less than seventy-five (75) miles of the Gravity Sewer Lines in the WCTS, of which a minimum of fifty (50) miles must be assessed using CCTV, until all 600 miles of the Gravity Sewer Lines are assessed. The remaining miles may be assessed using other internal assessment methods such as smoke-testing, pole-camera and dyed-water testing. All non-plastic Gravity Sewer Lines shall be assessed using CCTV. For the period between the Effective Date and the last Day of the first Calendar Year following the Effective Date, Tyler may prorate these mileage requirements at a rate of 0.205 miles per Day. After all 600 miles of the Gravity Sewer Lines are assessed pursuant to this Section, Tyler shall commence implementation of the Sewer System Internal Inspection in the City’s Final CMOM Program pursuant to Subsection Component V.A.6) (“Sewer System

Internal Inspection Program”) of this Consent Decree;

c. for Sewer Segments previously inspected by CCTV on or after January 1, 2011, and for which Tyler has retained the CCTV video footage of such inspection(s), Tyler may review CCTV video footage of the Sewer Segments and assess the condition of those Sewer Segments by utilizing the pipe condition rating system identified in Subparagraph 58.a;

d. when prioritizing Sewer Segments for assessment and more specifically for CCTV, Tyler shall select those Sewer Segments 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. Tyler shall not use the inspection of any Sewer Segments installed after the Effective Date to fulfill the minimum annual inspection requirement of seventy-five (75) miles, nor shall Sewer Segments installed after the Effective Date be included in the requirement of Paragraph 58 that Tyler perform a Condition Assessment of the entire length of its Gravity Sewer Lines in the WCTS within eight (8) Years after the Effective Date.

59. Assessment of Manholes. Tyler shall conduct a system-wide assessment of all manholes in the WCTS within five (5) Years of the Effective Date. Tyler shall evaluate the condition of the manholes utilizing the rating system identified in Appendix E (“Manhole Condition Assessment and Remedial Measures Program”).

60. Reporting and SDMS Integration.

a. Reporting Completion of Condition Assessment Activities. As part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall provide the following information about the Condition Assessment activities completed pursuant to Paragraphs 57-59 in the applicable reporting period:

- i. the total miles of Gravity Sewer Lines assessed;
 - ii. the total miles of Gravity Sewer Lines inspected by CCTV and the total miles of Gravity Sewer Lines inspected by other internal inspection methods;
 - iii. the total number of manholes assessed;
 - iv. the NASSCO PACP and manhole rating scores for all Sewer Segments and all manholes assessed, pursuant to Appendices D (“Gravity Sewer Line Condition Assessment and Remedial Measures Program”) and E (“Manhole Condition Assessment and Remedial Measures Program”), respectively, in the applicable reporting period;
 - v. Legible Map(s) of the condition assessment results, depicting the location of each asset and the condition assessment result; and
 - vi. the number of Sewer Segments and/or manholes condition-rated as Category E or D by the NASSCO PACP and manhole rating systems set forth in Appendices D and E, respectively, or otherwise found to have defects that warrant remedial measures, which are designated for remediation as part of the associated Annual Condition Remedial Measures Plan (pursuant to Paragraph 61) for the reporting period;
- b. Integration into Spatial Data Management System. Tyler shall import the results of its annual Condition Assessment activities into Tyler’s SDMS, described more fully in Subsection Component V.A.11) (“Information Management System”), to, at a minimum, record for each associated asset the objective numeric rating given to the asset and the date it was assessed.
61. Annual Condition Remedial Measures Plans. For each Year that Tyler completes

Condition Assessment activities pursuant to Paragraphs 57-59, Tyler shall subsequently submit to EPA for review and approval, with a copy to TCEQ, an Annual Condition Remedial Measures Plan no later than July 1st of each Year following the completion of the previous Year's Condition Assessment. Each Annual Condition Remedial Measures Plan shall be based upon the results of the associated Condition Assessment activities conducted for the previous Year. Each Annual Condition Remedial Measures Plan shall specifically identify how Tyler shall remediate all Sewer Segments and/or manholes condition-rated as Category E or D by the NASSCO PACP and manhole rating systems set forth in Appendices D ("Gravity Sewer Line Condition Assessment and Remedial Measures Program") and E ("Manhole Condition Assessment and Remedial Measures Program"), respectively, and other defects that warrant remedial measures.

62. Completion of Work in Remedial Measures Plans. Subject to the overall limitation set forth in this Paragraph, the work in each Annual Condition Remedial Measures Plan shall be completed no later than three (3) Years from the date that Tyler submits to EPA and TCEQ the Annual Report that identifies the defect(s) designated for remediation, pursuant to Paragraph 60.a.vi. Provided however, in any Year during the first three (3) Years after the Effective Date in which Tyler's Remedial Measures Plan for manholes is based on an assessment of more than thirty percent (30%) of the 8,241 manholes in Tyler's WCTS (as of the Date of Lodging), Tyler shall be allowed an extension of up to four (4) Years to complete the work in its associated Condition Remedial Measures plan for such manholes. Notwithstanding these individual completion timeframes, Tyler shall complete all Condition Remedial Measures required under this Consent Decree no later than ten (10) years from the Effective Date. Thus, if Tyler utilizes the entire eight (8) Years to complete the Condition Assessment of the Gravity Sewer Lines, pursuant to Paragraph 58, Tyler shall complete all associated remedial measures included in its

final Annual Condition Remedial Measures Plan no later than two (2) Years from the completion of the Condition Assessment.

63. Reporting Completion of Annual Remedial Measures. As part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall provide a tabular summary of all condition remedial measures work identified and scheduled in the Remedial Measures Plan, pursuant to Paragraphs 61 and 62, that were completed in the applicable reporting period. The summary shall identify each completed remedial measure by name, completion date and shall provide the following remediation figures: miles of Gravity Sewer Lines and number of manholes remediated. The tabular summary required by this Paragraph shall also attach a Legible Map identifying the manholes and Sewer Segments that were remediated.

E. LIFT STATION CONDITION/CAPACITY EVALUATION AND IMPROVEMENT PROGRAM

64. No later than the Effective Date, all Lift Stations in the WCTS shall have backup power sources on site or have access to a portable standby generator, portable pumps or vactor trucks (collectively “Lift Station Alternate Power Systems”). Tyler shall at all times maintain these backup power sources for the Lift Stations.

65. Within one (1) Year of the Effective Date, Tyler shall assess the physical and operational condition of each of the Lift Stations in its WCTS to identify deficiencies that caused or contributed to the occurrence of past SSOs or that may cause or contribute to future SSOs. At a minimum, this assessment shall include for each Lift Station:

a. a visual inspection and written documentation of the condition of the Lift Station structure, including the wet well;

b. a visual inspection and written documentation of the condition of the Lift Station equipment, including pumps, motors, valves, electrical system, pump control system, and Lift Station alarm/SCADA system;

c. operational testing and written documentation of results of pumps, motors, valves, pump controls and alarm/SCADA system;

d. a determination of the actual maximum discharge capacity of the Lift Station with the largest pump out of service (firm pumping capacity) utilizing field measurement such as flow metering, wet well drawdown testing, or other sound engineering practice; and

e. determination of whether adequate backup power is available to prevent an SSO, including power failure response testing and written documentation of results of the Lift Station Alternate Power System.

66. Lift Station Assessment Report. Within eighteen (18) Months of the Effective Date, Tyler shall submit to EPA and TCEQ a Lift Station Assessment Report, pursuant to Section IX (“REPORTING REQUIREMENTS”) of this Consent Decree, sealed by a registered professional engineer licensed to practice in Texas that presents the findings of Tyler’s Lift Station assessments pursuant to Paragraph 65. This Lift Station Assessment Report shall be submitted concurrently with the Lift Station Improvement Plan required under Paragraph 67. At a minimum, this Report shall include a narrative describing the physical and operational condition of each Lift Station, supported by the logs, inspection reports, photographs, data, calculations, and other pertinent documentation collected by Tyler.

67. Lift Station Improvement Plan. Tyler shall prepare a Lift Station Improvement Plan based on the findings of Tyler’s Lift Station assessments conducted pursuant to Paragraph 65, and shall, at a minimum, list the improvements required at each Lift Station to prevent future

SSOs, such as, but not limited to: structural repairs, pumping equipment reconditioning/replacement, valve/piping reconditioning/replacement, electrical system reconditioning/replacement, alarm/SCADA system enhancements, backup power system installation or enhancements, and related improvements; and the schedule for completing those improvements. The Lift Station Improvement Plan shall also set forth a proposed time frame for the completion of all listed improvements. Tyler shall submit its Lift Station Improvement Plan to EPA, with a copy to TCEQ, for review and approval by EPA concurrently with the Lift Station Assessment Report required by Paragraph 66.

68. All Lift Station improvements pursuant to the Lift Station Improvement Plan required under Paragraph 67 shall be completed as rapidly as feasible and not later than five (5) Years after the Effective Date. The completion of improvements shall be prioritized based upon the risk of failure and the consequence of failure of the Lift Station.

69. Reporting Completion of Annual Lift Station Remedial Measures. As part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, Tyler shall provide a list that identifies by name and completion date all Lift Station improvements scheduled in the Lift Station Improvement Plan, pursuant to Paragraphs 67 and 68, that were completed in the applicable reporting period.

F. FORCE MAIN ASSESSMENT AND REMEDIAL MEASURES PROGRAM

70. Tyler shall conduct an assessment of its Force Mains over a period not exceeding one (1) Year after the Effective Date of this Consent Decree.

71. During the assessment, Tyler shall prepare an inventory listing each Force Main in the WCTS indicating the associated Force Main construction material, known or estimated installation date, diameter, length, special corrosion protection measures, if any, such as

sacrificial anodes or impressed current, average daily dry-weather flow rate and peak flow rate at a maximum Lift Station discharge capacity. 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). Additionally, during the assessment, Tyler shall identify Force Main defects, including Force Mains in need of repair or other remedial measures.

72. Tyler 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.

73. Force Main Remedial Measures. If any defects are found during the assessment of Force Mains required under this Section, Tyler shall repair the defects to prevent the occurrence of SSOs as soon as feasible, and in any event no later than three (3) years from the date Tyler submits the Force Main Assessment Program Report required under Paragraph 74.

74. Force Main Assessment Program Report. Within eighteen (18) Months after the Effective Date, Tyler shall submit to EPA and TCEQ a Force Main Assessment Program Report, pursuant to Section IX (“REPORTING REQUIREMENTS”) of this Consent Decree, that summarizes Force Main assessment and inventory activities performed pursuant to this Section and identifies and describes any Force Main defects found during the assessment. Additionally, as part of the Annual Report submitted pursuant to Paragraph 88, Tyler shall provide a tabular summary of all Force Main Remedial Measures identified and scheduled pursuant to Paragraph 73, that were completed in the applicable reporting period or that were completed in response to any Force Main failure during the applicable reporting period. The summary shall identify each remedial measure by name, provide the completion date, and shall indicate whether it was

scheduled for in the Force Main Assessment Program Report or completed in response to a Force Main failure during the applicable reporting period.

G. ELIMINATION OF CONSTRUCTED SSO LOCATIONS

75. Identification of Additional Constructed SSO Locations. As part of Tyler's performance of the WCTS assessment or cleaning activities required under this Consent Decree, Tyler shall inspect all WCTS assets for the presence of additional Constructed SSO Locations beyond those listed in Appendix H ("Historic Constructed SSO Locations and Inspection Results"). If Tyler discovers or is notified of additional Constructed SSO Location(s) not included in Appendix H at any time before Tyler satisfies the requirements of Subsection D ("CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM"), of Section V ("COMPLIANCE REQUIREMENTS") of this Consent Decree, Tyler shall report such location(s) in writing to the United States and Texas by submitting an Additional Constructed SSO Locations Report, pursuant to Section IX ("REPORTING REQUIREMENTS") of this Consent Decree, no later than two (2) business days after Tyler discovers or is notified of the additional Constructed SSO Location(s). In any such Additional Constructed SSO Locations Report, Tyler shall provide:

- a. the geographic location of each Constructed SSO Location;
- b. a description of the nature of each Constructed SSO Location;
- c. the date of discovery of each Constructed SSO Location; and
- d. accompanying photographic documentation of the each Constructed SSO

Location.

76. Removal of Identified Additional Constructed SSO Locations. Within thirty (30) Days after submitting an Additional Constructed SSO Locations Report to the United States and Texas, pursuant to Paragraph 75, Tyler shall take all necessary measures to permanently remove

the identified additional Constructed SSO Locations from service. Within seven (7) Days after completing removal of the Constructed SSO Location, Tyler shall submit a Removal of Additional Constructed SSO Locations Report to the United States and Texas pursuant to Section IX (“REPORTING REQUIREMENTS”) of this Consent Decree. Each Removal of Additional Constructed SSO Locations Report shall cross-reference the related Additional Constructed SSO Locations Report previously submitted to the United States and Texas, pursuant to Paragraph 75, and shall provide:

- a. a listing of the remedial measures taken by Tyler to remove the Constructed SSO Locations;
- b. the date that the Constructed SSO Location was permanently removed; and
- c. photographic documentation of all remedial measures taken on the Constructed SSO Location.

77. Annual Report. Tyler shall provide, as part of the Annual Report submitted pursuant to Paragraph 88 of this Consent Decree, a summary listing of all identified Constructed SSO Locations discovered during the applicable reporting period.

VI. REVIEW AND IMPLEMENTATION OF DELIVERABLES

78. For all Deliverables required under this Consent Decree, Tyler shall submit the Deliverable to the attention of the designated recipient(s) in compliance with the certification requirements of Section X (“CERTIFICATION”) of this Consent Decree. For any Deliverables due to EPA under this Consent Decree, Tyler shall concurrently provide a copy of the Deliverable to TCEQ at the time that such Deliverable is submitted to EPA. EPA shall use its best efforts to expeditiously review and approve or review and comment, as appropriate, on each Deliverable.

79. Deliverables Submitted for EPA Approval. The terms of this Paragraph apply to all Deliverables that are required to be submitted to EPA for review and approval (as opposed to EPA review and/or comment) under this Consent Decree.

a. EPA Action on Deliverables Submitted for Approval. EPA shall review any Deliverable submitted to EPA for review and approval and shall, after providing TCEQ with a reasonable opportunity for consultation, take one of the following actions, in writing with notice to Tyler:

- i. wholly approve the submittal;
- ii. wholly disapprove the submittal, explaining the reason(s) for disapproval by describing how the Deliverable does not meet the requirements of the Consent Decree;
- iii. approve the submittal in part and disapprove the remainder, explaining the reason(s) for the partial disapproval by describing how any disapproved portion does not meet the requirements of the Consent Decree; or,
- iv. conditionally approve the submittal, in whole or in part, setting forth specified conditions that direct how the submittal must be modified, in whole or in part, to comport with the conditional approval; in the event that EPA grants a conditional approval only in part, it shall explain the reason(s) for the partial disapproval by describing how any disapproved portion does not meet the requirements of the Consent Decree.

b. Implementation of Approved Deliverables. If a Deliverable is approved by EPA pursuant to Subparagraph 79.a.i, Tyler shall immediately take all actions to implement the Deliverable in accordance with the schedules and requirements of the Deliverable, as approved,

and this Consent Decree. If the Deliverable is approved only in part, pursuant to Subparagraph 79.a.iii, or conditionally approved, pursuant to Subparagraph 79.a.iv, Tyler shall, upon receipt of written direction from EPA pursuant to Subparagraph 79.a, take all actions required by the approved Deliverable that EPA determines are technically severable from any disapproved portions, subject to Tyler's right to dispute only the specified conditions or the disapproved portions under Section XIII ("DISPUTE RESOLUTION") of this Consent Decree or the determination that the portions are technically severable. Following EPA approval of any Deliverable or portion thereof, such Deliverable or portion thereof as approved shall be incorporated into and become enforceable under this Consent Decree. Implementation of any non-deficient portion of a submittal shall not relieve Tyler of any liability for stipulated penalties for any deficient portion of the submittal.

c. Disapproved Deliverables. If a Deliverable is disapproved by EPA in whole or in part pursuant to Subparagraph 79.a.ii or a.iii, respectively, Tyler shall, subject to Tyler's right to invoke Dispute Resolution under Section XIII ("DISPUTE RESOLUTION") of this Consent Decree, correct all deficiencies indicated by EPA or otherwise revealed and resubmit the Deliverable, or disapproved portion thereof, for EPA approval no later than thirty three (33) Days after the date of EPA's notice of EPA's disapproval, pursuant to this Paragraph, or such other time as EPA, after providing TCEQ with a reasonable opportunity for consultation, and Tyler agree to in writing. If the resubmission is approved in whole or in part, Tyler shall proceed in accordance with Subparagraph 79.b.

d. Resubmitted Deliverables. If a Deliverable, or portion thereof, is resubmitted to EPA pursuant to Subparagraph 79.c, and the resubmitted Deliverable is further disapproved in whole or in part due to a defect previously identified and not corrected, Tyler shall be deemed to

have failed to submit such resubmittal timely and adequately unless Tyler invokes Dispute Resolution under Section XI (“DISPUTE RESOLUTION”) of this Consent Decree and EPA either agrees to modify its earlier position or the Court fails to adopt EPA’s position. Further, for any Deliverable, or portion thereof, that Tyler resubmits to EPA pursuant to Subparagraph 79.c, EPA may take the following actions on any resubmitted Deliverable in writing with notice to Tyler, after providing TCEQ with a reasonable opportunity for consultation:

- i. wholly approve the submittal;
- ii. again require Tyler to correct any deficiencies with the Deliverable, in accordance with Subparagraph 79.c, subject to Tyler’s right to invoke Dispute Resolution under Section XI of this Consent Decree and the right of EPA and/or TCEQ to seek stipulated penalties as set forth in Paragraph 81; or,
- iii. itself correct any deficiencies with the resubmitted Deliverable by modifying or developing any disapproved or conditioned portion, explaining how the correction meets the requirements of the Consent Decree. Upon EPA’s correction of any such deficiencies, the resubmitted Deliverable, or portion thereof, shall be incorporated into and become enforceable under this Consent Decree, and Tyler shall take all actions to immediately implement the EPA-corrected Deliverable in accordance with the schedules and/or terms of the Deliverable as approved, subject to Tyler’s right to invoke Dispute Resolution under Section XI of this Consent Decree and the right of EPA and/or TCEQ to seek stipulated penalties as set forth in Paragraph 81.

80. Deliverables Submitted for EPA Review and Comment. The terms of this Paragraph apply to all Deliverables that are required to be submitted to EPA for review and comment (as

opposed to EPA review and approval) under this Consent Decree.

a. EPA Action on Deliverables Submitted for Review and Comment. EPA shall review any Deliverable submitted to EPA for review and comment under this Consent Decree, and EPA may elect to provide written comments on the Deliverable. Tyler is required to consider any comments so provided by EPA. If EPA provides written comments identifying deficiencies in the submitted Deliverable and explaining how the Deliverable does not meet the requirements of the Consent Decree, and requests that Tyler respond to those comments, Tyler shall provide a written response to EPA within thirty three (33) Days after the date of notice of EPA's written comments and, if so requested by EPA, shall resubmit the Deliverable at the same time Tyler provides its written response in a manner that addresses EPA's comments, subject to Tyler's right to invoke Dispute Resolution under Section XIII ("DISPUTE RESOLUTION") of the Consent Decree. If Tyler fails substantively to address EPA's comments or resubmit the Deliverable when resubmission is requested by EPA, such failure is subject to the accrual of Stipulated Penalties as set forth in Paragraph 81. If Tyler invokes Dispute Resolution as provided in this Paragraph, stipulated penalties become due only as set forth in Section XIII.

b. Implementation. Immediately upon submitting any Deliverable to EPA pursuant to this Paragraph, Tyler shall take all actions to implement the Deliverable in accordance with the schedules and requirements of the Deliverable, as submitted to EPA, and this Consent Decree.

81. Accrual of Stipulated Penalties Applicable to Untimely Submissions of Deliverables. Any stipulated penalties applicable to the original Deliverable, as provided in Section XI ("STIPULATED PENALTIES") of this Consent Decree, shall begin to accrue on the date the original Deliverable is due, but shall not be payable unless the resubmitted Deliverable is

untimely or is disapproved in whole or in part; provided that, if EPA notifies Tyler in EPA's response to the original submission that it was so deficient as to constitute a material breach of Tyler's obligations under this Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any further resubmission(s) subject to Tyler's right to invoke Dispute Resolution under Section XIII ("DISPUTE RESOLUTION") of the Consent Decree.

VII. CIVIL PENALTY

82. Tyler shall pay a total civil penalty of \$563,000.00 with fifty percent (50%) of such penalty, \$281,500.00, payable to the United States and the remaining 50%, \$281,500.00, payable to Texas as set forth in Paragraphs 83 and 84.

83. Within sixty (60) Days after the Effective Date of this Consent Decree, Tyler shall pay to the United States \$281,500.00 of the civil penalty due by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions that shall be provided by notice to Tyler following lodging of the Consent Decree by the Financial Litigation Office of the U.S. Attorney's Office for the Eastern District of Texas. At the time of payment, Tyler 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. City of Tyler*, and shall reference the civil action number and DOJ case number 90-5-1-1-09767, by notice to the United States and by email to acctreceivable.CINWD@epa.gov; and by mail to:

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

In the event that full cash payment to the United States is not made within 60 Days after

the Effective Date of this Consent Decree, Tyler 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.

84. Within sixty (60) Days after the Effective Date of this Consent Decree, Tyler shall make payments directed to Texas by Paragraphs 82 and 85 of this Consent Decree as follows: Tyler shall pay Texas 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 # CX9629116377, Priscilla M. Hubenak, Chief, Environmental Protection Division
Attention	Office of the Attorney General, Kristy Lerma, Financial: Rptg

At the time of payment, Tyler shall send by notice to Texas 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 and Attorney's Fees owed pursuant to the Consent Decree in the *United States et. al v. City of Tyler*, and shall reference the civil action number and Reference: AG # CX9629116377.

VIII. ATTORNEY'S FEES

85. Tyler shall pay Texas \$30,000 in attorney's fees. Tyler shall make full payment of this amount in accordance with Paragraph 84 of this Consent Decree.

IX. REPORTING REQUIREMENTS

86. Tyler shall submit any report required by this Consent Decree, including but not limited to the Quarterly Reports required by Paragraph 87 and the Annual Reports required by Paragraph 88, concurrently to EPA and TCEQ on the date such report is due.

87. Quarterly Reports.

a. For each Calendar Year after the Effective Date and until termination of this Consent Decree, Tyler shall submit to EPA and TCEQ four (4) distinct Quarterly Reports containing the information required by Subparagraph 87.b for each of the following three (3) Month quarterly reporting periods within any Calendar Year: January 1st through March 31st (Quarter 1); April 1st through June 30th (Quarter 2); July 1st through September 30th (Quarter 3); and October 1st through December 31st (Quarter 4). Each Quarterly Report shall be due no later than one (1) Month after the expiration of the applicable quarter period and shall provide information for the entire reporting period. For the first Quarterly Report after the Effective Date only, the applicable reporting period shall be that portion of the applicable quarter between the Effective Date and the end of that quarter. For the first Calendar Year after the Effective Date only, Tyler shall only submit Quarterly Reports for the quarters that occur between the Effective Date and the end of the Calendar Year.

b. In each Quarterly Report, Tyler shall report all SSOs occurring during the applicable quarter period and provide for each SSO all information required by Subparagraph 24.d of this Consent Decree.

88. Annual Reports. For each Calendar Year after the Effective Date and until termination of this Consent Decree, Tyler shall submit to EPA and TCEQ Annual Reports. Each Annual Report shall be due no later than March 1st of each Calendar Year after the Effective Date and

shall provide information for the entire applicable reporting period. For the first Annual Report, the applicable reporting period shall be that portion of the Calendar Year between the Effective Date and the end of the Calendar Year. For each subsequent Annual Report, the applicable reporting period shall be the full preceding Calendar Year. At a minimum, and in addition to the reporting requirements set forth in Section V (“COMPLIANCE REQUIREMENTS”) and any other reporting requirement set forth elsewhere in this Consent Decree for inclusion in an Annual Report, each Annual Report shall include:

- a. a summary of the CMOM Program elements implemented or modified pursuant to this Consent Decree, including a comparison of actual performance with any performance measures that have been established;
- b. a trends analysis of the number, volume, duration, and cause of Tyler’s SSOs for a twenty-four (24) Month period updated to reflect the SSOs that occurred during the previous twelve (12) Month period. For reporting trends and other SSO data, Tyler shall provide the information in such format as it deems appropriate;
- c. a compilation of all Quarterly Reports submitted pursuant to Paragraph 87 during the applicable reporting period;

89. All reports shall be submitted to the persons designated in Section XVII of this Consent Decree (“NOTICES”) for EPA and TCEQ and shall be certified pursuant to Section X of this Consent Decree (“CERTIFICATION”). The certification requirement in Section X does not apply to emergency or similar notifications where compliance would be impractical.

90. Compliance with this Section does not relieve Tyler of any other reporting obligations required by the CWA, the TWC, or any implementing regulations promulgated thereunder, or by any other federal, state, or local law, regulation, permit, or other requirement, including the

City's TPDES Permits.

91. Notification to EPA or TCEQ pursuant to this Section of an anticipated delay shall not by itself excuse the delay or otherwise satisfy the notification requirements set forth in Section XII ("FORCE MAJEURE").

92. Any information provided pursuant to this Consent Decree may be used by the United States and/or Texas in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

X. CERTIFICATION

93. In all Deliverables, notices, documents, reports, or self-certifications submitted to the United States and Texas pursuant to this Consent Decree, Tyler shall, by a Tyler 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.

XI. STIPULATED PENALTIES

94. Tyler shall be liable for stipulated penalties to the United States and Texas for violations of this Consent Decree as specified in this Section. A violation includes failing to perform any obligation required by the terms of this Consent Decree, including any work plan or schedule approved under this Consent Decree, according to all applicable requirements of this Consent Decree and within the specified time schedules established by or approved under this Consent Decree. Stipulated penalties for which a demand has been made under this Section shall be paid

unless excused under Section XII (“FORCE MAJEURE”), or otherwise determined not to be due and owing under the terms of this Section.

95. Delay in Payment of Civil Penalty. If Tyler fails to pay the civil penalty required under Section VII of this Consent Decree (“CIVIL PENALTY”) when due, Tyler shall be liable to pay the United States and Texas a Stipulated Penalty of \$2,000 for each day that Tyler is late in paying the penalty.

96. SSOs that Reach Waters of the United States or Waters in the State of Texas. Tyler shall be liable to pay the United States and Texas a Stipulated Penalty for each SSO that reaches waters of the United States or Waters in the State of Texas. The Stipulated Penalties required under this Paragraph shall be as follows:

<u>Period of Noncompliance:</u>	<u>Penalty Per Deliverable Per Day:</u>
Within four (4) Years of Effective Date	\$500
Between 4 and seven (7) Years of Effective Date	\$1,500
More than 7 Years from Effective Date	\$3,000

97. SSOs that Do Not Reach Waters of the United States or Waters in the State of Texas. Tyler shall be liable to pay the United States and Texas a Stipulated Penalty for each SSO that does not reach waters of the United States or Waters in the State of Texas. The Stipulated Penalties required under this Paragraph shall be as follows :

<u>Period of Noncompliance:</u>	<u>Penalty Per Deliverable Per Day:</u>
Within four (4) Years of Effective Date	\$350
Between 4 and seven (7) Years of Effective Date	\$750
More than 7 Years from Effective Date	\$1,500

98. Failure to Timely Remove Additional Constructed SSO Locations. Tyler shall be liable

to pay the United States and Texas a Stipulated Penalty for each Day Tyler fails to permanently remove the identified Constructed SSO Locations from service in accordance with the schedule contained in Paragraph 76. The Stipulated Penalties required under this Paragraph shall be as follows:

<u>Period of Noncompliance:</u>	<u>Penalty Per Deliverable Per Day:</u>
One (1) to thirty (30) Days	\$1,500
Thirty-one (31) to sixty (60) Days	\$2,500
Sixty-one (61) to one hundred-eighty (180) Days	\$3,500
More than 180 Days	\$4,500

99. Failure to Submit Timely and/or Adequate Deliverables. Tyler shall be liable to pay the United States and Texas a Stipulated Penalty for each Day Tyler fails to submit a timely and/or adequate Deliverable, including but not limited to any plan, the Interim CMOM Program, or the Final CMOM Program. Tyler shall likewise be liable to pay the United States and Texas a Stipulated Penalty for each Day it fails to make any required material changes to such Deliverables within the required time frames. The Stipulated Penalties required under this Paragraph shall be as follows:

<u>Period of Noncompliance:</u>	<u>Penalty Per Deliverable Per Day:</u>
One (1) to thirty (30) Days	\$500
Thirty-one (31) to sixty (60) Days	\$1,500
More than 60 Days	\$2,500

100. Failure to Implement Remedial Measures in Section V. Subsections B, C, D, E, and/or F. Tyler shall be liable to pay the United States and Texas a Stipulated Penalty for each Day Tyler fails to complete the remedial measures set forth in Section V, Subsections B (“UPDATING

HYDRAULIC MODEL”), C (“CAPACITY ASSESSMENT AND REMEDIAL MEASURES PROGRAM”) D (“CONDITION ASSESSMENT AND REMEDIAL MEASURES PROGRAM”), E (“LIFT STATION CONDITION/CAPACITY EVALUATION AND IMPROVEMENT PROGRAM”), and/or F (“FORCE MAIN ASSESSMENT PROGRAM”) in accordance with the final deadlines required thereunder. The Stipulated Penalties required under this Paragraph shall be as follows:

<u>Period of Noncompliance:</u>	<u>Penalty Per Violation Per Day:</u>
One (1) to thirty (30) Days	\$750
Thirty-one (31) to sixty (60) Days	\$1,500
Sixty-one (61) to one hundred-eighty (180) Days	\$2,500
More than 180 Days	\$4,000

101. Failure to Comply with Reporting Requirements. Tyler shall be liable to pay the United States and Texas Stipulated Penalties for each violation of Section XIV (“REPORTING REQUIREMENTS”) of this Consent Decree. The Stipulated Penalties required under this Paragraph shall be as follows:

<u>Period of Noncompliance:</u>	<u>Penalty Per Deliverable Per Day:</u>
One (1) to thirty (30) Days	\$350
Thirty-one (31) to sixty (60) Days	\$750
More than 60 days	\$1,500

102. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

103. Subject to Paragraph 104, Tyler shall pay stipulated penalties that accrue pursuant to this Section to the United States and Texas, as applicable, within thirty (30) Days after receipt of a written demand by either Plaintiff, unless Tyler invokes the dispute resolution procedures under Section (“DISPUTE RESOLUTION”) of this Consent Decree within the 30-day period. Prior to either Plaintiff making a written demand for Stipulated Penalties pursuant to this Paragraph, the Plaintiffs shall consult. Where the Plaintiffs jointly pursue Stipulated Penalties that accrue pursuant to any Paragraph(s) in this Section, Tyler shall pay fifty percent (50%) of the total penalty owed to the United States and the remaining fifty percent (50%) of the total penalty owed to Texas. Where only one Plaintiff, the United States or Texas, pursues Stipulated Penalties, only that Plaintiff shall recover the full amount of the penalty accrued pursuant to the Paragraph(s) invoked, and the Plaintiff not joining in the pursuit of Stipulated Penalties shall be deemed to have waived such penalties. The Plaintiff independently making a demand for payment of Stipulated Penalties shall concurrently send a copy of the written demand to the other Plaintiff.

104. Either the United States or Texas, or both, may in the unreviewable exercise of each Plaintiff’s own discretion, reduce or waive stipulated penalties whether accrued or otherwise due to them, respectively, under this Consent Decree. Any such reduction or waiver shall only apply to Stipulated Penalties owed to the Plaintiff exercising the discretion allowed under this Paragraph and shall not affect the right of the other Plaintiff to enforce the stipulated penalties provisions of this Section.

105. Stipulated penalties shall continue to accrue as provided in Paragraph 102 during any Dispute Resolution as authorized under Section XII (“FORCE MAJEURE”), but need not be paid until the following:

a. if the dispute is resolved by agreement or by a decision of the United States and/or Texas that is not submitted for judicial review, Tyler shall pay accrued penalties agreed on or determined to be owing, together with interest, to the United States and/or Texas within thirty (30) Days after the effective date of the agreement or the receipt of the United States' or Texas's decision or order;

b. if the dispute is submitted for judicial review and the United States and/or Texas prevails in whole or in part, Tyler shall pay all accrued penalties that are determined due by the Court, together with interest, within sixty (60) Days after receiving the Court's decision or order, except as provided in Subparagraph 105.c; and

c. if the District Court's decision is appealed, Tyler shall pay all accrued penalties determined to be owing, together with interest, within fifteen (15) Days after receiving the final appellate court decision.

106. Tyler shall pay stipulated penalties owing to the United States and/or Texas, in the manner set forth and with the confirmation notices required by Section VII ("CIVIL PENALTY"), except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

107. If Tyler fails to pay stipulated penalties according to the terms of this Consent Decree, Tyler 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 Paragraph shall be construed to limit the United States or Texas from seeking any remedy otherwise provided by law for Tyler's failure to pay any stipulated penalties.

108. Subject to the provisions of Section XV of this Consent Decree ("EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS"), 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 Texas for Tyler's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of the CWA and/or the TWC, Tyler shall be allowed a credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

XII. FORCE MAJEURE

109. "Force Majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Tyler, of any entity controlled by Tyler, or of Tyler's consultants and contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Tyler's best efforts to fulfill the obligation. The requirement that Tyler 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 both as it is occurring and after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include Tyler's financial inability to perform any obligation under this Consent Decree.

110. 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, Tyler shall provide notice orally or by electronic or facsimile transmission to the United States and Texas, within five (5) business Days of when Tyler first knew that the event might cause a delay. Within fourteen (14) Days following oral, electronic, or facsimile transmission notice, Tyler shall provide in writing to the United States and Texas, to the extent known after reasonable investigation: 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; Tyler's 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 Tyler, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Tyler shall include with any notice all available documentation supporting the claim that the delay was attributable to a Force Majeure event. Failure to comply with the above requirements shall preclude Tyler 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. Tyler shall be deemed to know of any circumstance of which Tyler, any entity controlled by Tyler, or Tyler's contractors knew or should have known.

111. If Plaintiffs agree 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 Plaintiffs 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. Plaintiffs will issue a notice, in writing, to Tyler of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

112. If Plaintiffs do not agree that the delay or anticipated delay has been or will be caused by a Force Majeure event, then Plaintiffs will issue a notice, in writing, to Tyler of Plaintiffs' position that the delay or anticipated delay was not caused by a force majeure event and provide an explanation for this position.

113. If Tyler elects to invoke the dispute resolution procedures set forth in Section XIII ("DISPUTE RESOLUTION"), it shall do so no later than fifteen (15) Days after receipt of

Plaintiffs' notice. In any such proceeding, Tyler 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 Tyler complied with the requirements of Paragraphs 109 and 110. If Tyler carries this burden, the delay at issue shall be deemed not to be a violation by Tyler of the affected obligation of this Consent Decree identified to Plaintiffs and the Court.

XIII. DISPUTE RESOLUTION

114. This Section applies to disputes for which Tyler has invoked its right to Dispute Resolution under this Consent Decree. 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. Tyler's failure to seek resolution of a dispute under this Section shall preclude Tyler from raising any such issue as a defense to an action by the United States and/or Texas to enforce any obligation of Tyler arising under this Decree.

115. 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 Tyler sends the United States and Texas 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) business Days from the date the dispute arises, unless that period is modified by written agreement between Plaintiffs and Tyler. During the period of informal negotiations:

- a. with respect to disputes regarding force majeure under Section XII ("FORCE

MAJEURE”) and termination under Section XXI (“TERMINATION”), Plaintiffs shall consult about their position. The position that Plaintiffs take in their written notification to Tyler as set forth in Section XII (“FORCE MAJEURE”) or Section XXI (“TERMINATION”) will be the position of Plaintiffs in informal dispute resolution pursuant to this Paragraph, unless Plaintiffs mutually agree to modify that position and inform Tyler of their modified position on the dispute in writing. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the Plaintiffs shall be considered binding unless, within thirty (30) business Days after the conclusion of the informal negotiation period, Tyler invokes formal dispute resolution procedures as set forth in Paragraph 116; and

b. with respect to all other disputes under this Consent Decree, the United States shall, after providing Texas a reasonable opportunity for consultation, inform Tyler of the United States’ position. If the United States and Tyler cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within thirty (30) business Days after the conclusion of the informal negotiation period, Tyler invokes formal dispute resolution procedures as set forth in Paragraph 116.

116. Formal Dispute Resolution. Tyler shall invoke formal dispute resolution procedures by serving on Plaintiffs a written Statement of Position regarding the matter in dispute within thirty (30) business Days after the conclusion of the informal negotiation period, as provided in Subparagraphs 115.a and 115.b. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Tyler’s position and any supporting documentation relied upon by Tyler. During the period of formal negotiations:

a. with respect to disputes regarding force majeure under Section XII (“FORCE MAJEURE”) and termination under Section XXI (“TERMINATION”), the position Plaintiffs

provided to Tyler pursuant to Subparagraph 115.a shall be the position of Plaintiffs under this Paragraph, unless Plaintiffs mutually agree to modify their position. Plaintiffs shall consult and serve on Tyler Plaintiffs' Statement of Position within forty-five (45) business Days after receipt of Tyler's Statement of Position. Plaintiffs' 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 Plaintiffs. Plaintiffs' Statement of Position shall be binding on Tyler, unless Tyler files a motion for judicial review of the dispute in accordance with Paragraph 117; and

b. with respect to all other disputes under this Consent Decree, the United States shall provide Texas a reasonable opportunity for consultation during the preparation of the United States' Statement of Position. The United States shall serve on Tyler the United States' Statement of Position within forty-five (45) business Days after receipt of Tyler's Statement of Position. The Statement of Position served by the United States 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' Statement of Position shall be binding on Tyler, unless Tyler files a motion for judicial review within ten (10) business Days of receiving the United States' Statement of position, in accordance with Paragraph 117.

117. Judicial Review. Tyler may seek judicial review of the dispute by filing with the Court and also serving on the United States and Texas a motion requesting judicial resolution of the dispute. The motion must be filed within twenty (20) Days after Tyler is served with the Plaintiffs' Statement of Position, pursuant to Subparagraph 116.a, or the United States' Statement of Position, pursuant to Subparagraph 116.b. The motion shall contain a written statement of Tyler's position on the matter in dispute, including any supporting factual data,

analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

The United States and/or Texas shall respond to Tyler's motion as follows:

a. with respect to disputes regarding force majeure under Section XII ("FORCE MAJEURE") and termination under Section XXI ("TERMINATION"), Plaintiffs shall file their response to Tyler's motion within the time period allowed by the Local Rules of this Court. Plaintiffs shall consult about their response. Unless Plaintiffs mutually agree to modify their position, the position provided to Tyler in their Statement of Position pursuant to Subparagraph 116.a shall be the position of the Plaintiffs under this Paragraph. Tyler may file a reply memorandum, to the extent permitted by the Local Rules or order of the Court; and

b. with respect to all other disputes under this Consent Decree, the United States shall provide Texas a reasonable opportunity for consultation during the preparation of the United States' response. The United States shall file its response to Tyler's motion within the time period allowed by the Local Rules of this Court. Tyler may file a reply memorandum, to the extent permitted by the Local Rules or order of the Court.

118. Standard of Review. Except as otherwise provided in this Consent Decree, in any dispute brought under this Section, Tyler shall bear the burden of demonstrating that its position complies with this Consent Decree. The Parties' positions are reviewable only on the record of the dispute, including the statements of position submitted by the Parties pursuant to Paragraph 115. In any judicial proceeding pursuant to Paragraph 116, the Parties reserve the right to argue regarding the applicable standard of review.

119. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Tyler under this Consent Decree, unless

and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 105. If Tyler does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XI (“STIPULATED PENALTIES”).

XIV. RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION

120. The United States, Texas, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, 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 Texas in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Tyler or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Tyler’s compliance with this Consent Decree.

121. Upon request, Tyler shall provide EPA and TCEQ, or their authorized representatives, splits of any samples taken by Tyler. Upon request, EPA and TCEQ shall provide Tyler splits of any samples taken by EPA or TCEQ.

122. Except for the more limited timeframe provided in Paragraph 26 for records of the Private Lateral reports described under Paragraph 25, until five (5) Years after the termination of this Consent Decree, pursuant to Section XXI (“TERMINATION”), Tyler shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, 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 Tyler's performance of its obligations under this Consent Decree. Drafts of final documents or plans, and non-substantive correspondence and emails do not need to be retained. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or Texas, Tyler shall provide copies of any non-privileged documents, records, or other information required to be maintained under this Paragraph.

123. At the conclusion of the information-retention period provided in the preceding Paragraph, Tyler shall notify the United States and Texas at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or Texas, Tyler shall deliver any such documents, records, or other information to EPA or TCEQ. Tyler may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Tyler asserts such a privilege, it shall provide the following:

- a. the title of the document, record, or information;
- b. the date of the document, record, or information;
- c. the name and title of each author of the document, record, or information;
- d. the name and title of each addressee and recipient;
- e. a description of the subject of the document, record, or information; and
- f. the privilege asserted by Tyler.

However, no documents, records, or other information required to be created or generated by this Consent Decree shall be withheld on grounds of privilege.

124. Tyler and/or its contractors may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Tyler seeks to protect as CBI, Tyler shall follow the procedures set forth in 40 C.F.R. Part 2.

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

XV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

126. This Consent Decree resolves the civil claims of the United States and Texas for the violations alleged in the Complaint filed in this action through the Date of Lodging of this Consent Decree.

127. The United States and Texas reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 126. This Consent Decree shall not be construed to limit the rights of the United States or Texas to obtain penalties or injunctive relief under the CWA, the TWC, or their implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph

126. The United States and Texas further reserve 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, Tyler’s WWTPs and WCTS, whether related to the violations addressed

in this Consent Decree or otherwise.

128. In any subsequent administrative or judicial proceeding initiated by the United States or Texas for injunctive relief, civil penalties, or other appropriate relief relating to Tyler's WWTPs and WCTS, or Tyler's alleged violations of the CWA or TWC, Tyler 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 Texas 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 126 of this Section.

129. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Tyler is responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations, and permits; and Tyler's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and Texas do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Tyler's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CWA, the implementing regulations promulgated thereunder, the TWC, or with any other provisions of federal, state, or local laws, regulations, or permits.

130. This Consent Decree does not limit or affect the rights of Tyler or of the United States or Texas 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 Tyler, except as otherwise provided by law.

131. 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.

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

XVI. COSTS

133. The Parties shall bear their own costs of this action, including attorneys' fees, except that Texas may collect its attorney's fees as set forth in Paragraph VIII ("ATTORNEY'S FEES") in this Consent Decree, and the United States and Texas 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 Tyler.

XVII. NOTICES

134. Unless otherwise specified herein, whenever notifications, submissions, reports, Deliverables, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09767

-AND-

Associate Director, Water Enforcement Branch
Compliance Assurance and Enforcement Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
(214) 665-6470

To EPA:

Associate Director, Water Enforcement Branch
Compliance Assurance and Enforcement Division
U.S Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
(214) 665-6470

To Texas:

Mary E. Smith
Environmental Protection Division, MC-066
Office of the Attorney General
P.O. Box 12548
Austin, Texas 78711-2548

Reference: AG # CX9629116377

-AND-

James Sallans
Litigation Division, MC-175
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

To TCEQ:

James Sallans
Litigation Division, MC-175
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

To Tyler:

Director of Utilities and Public Works
City of Tyler
P.O. Box 2039
Tyler, Texas 75710-2039

AND

Lisa Crossman
Utility Engineer
City of Tyler
511 W. Locust St.
Tyler, Texas 75702

-AND-

Jim Mathews
Mathews & Freeland, LLP
8140 N. MoPac
Building 2, Suite 260
Austin, Texas 78759

135. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided in Paragraph 134.

136. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVIII. EFFECTIVE DATE

137. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XIX. RETENTION OF JURISDICTION

138. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XX ("MODIFICATION") and XXI ("TERMINATION"), or effectuating or enforcing compliance with the terms of this Decree.

XX. MODIFICATION

139. The Parties may modify the terms of this Consent Decree, including any attached

appendices, by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it is effective only upon approval by the Court.

Non-material changes to this Consent Decree may be made by written agreement of the Parties without court approval, provided that the Parties also mutually agree in writing that a modification is in fact a non-material change to this Decree.

140. If any Party or Parties seek a modification to this Consent Decree, the Party(ies) seeking a modification shall send a written notice to the other Party(ies) setting forth the requested changes and the reasons therefor. Disputes concerning modification under this Section are not subject to Section XIII (“DISPUTE RESOLUTION”) of this Consent Decree. Instead, the Parties shall negotiate informally concerning the modification for a period of up to thirty (30) Days from the date of receipt of the notice, unless that period is modified by written agreement. If at the end of the period of informal negotiations the Parties are not in agreement, the Party or Parties seeking the modification retain(s) any rights it/they may have to seek modification from the Court pursuant to Federal Rule of Civil Procedure 60(b).

XXI. TERMINATION

141. After Defendant has complied with all of the compliance requirements under Section V this Decree, and has paid the civil penalty contained in Section VII (“CIVIL PENALTY”), has paid the attorney’s fees contained in Section VIII (“ATTORNEY’S FEES”), and has demonstrated satisfactory compliance with the requirements of this Decree and the City’s TPDES Permits for a period of one (1) Year after completing the requirements of this Decree, Defendant may serve upon the Plaintiffs a “Request for Termination of Consent Decree,” with supporting documentation demonstrating that the conditions for termination set forth in this Section have been met.

142. Following the Plaintiffs' receipt of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Decree.

143. If the Plaintiffs agree that Defendant has satisfactorily complied with the requirements for termination of this Consent Decree, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

144. If the Plaintiffs do not agree that Defendant has satisfactorily complied with the requirements for termination of this Consent Decree, they will notify Defendant in writing, and provide an explanation for this position, and Defendant may invoke Dispute Resolution under Section XIII ("DISPUTE RESOLUTION") of this Consent Decree. However, Defendant shall not seek Dispute Resolution under Section XIII of any dispute regarding termination until sixty (60) Days after service of its Request for Termination. Defendant shall have the burden of proof that the conditions for termination of the Decree have been satisfied. This Decree shall remain in effect pending resolution of the dispute by the Parties or the Court in accordance with Section XIII ("DISPUTE RESOLUTION").

XXII. PUBLIC PARTICIPATION

145. 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 and TWC § 7.110. The United States and Texas each reserve the right to withdraw or withhold their consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Tyler consents to entry of this Consent Decree without further notice and agrees not to withdraw from, or oppose entry of, this

Consent Decree by the Court or to challenge any provision of the Decree, unless the United States and/or Texas has notified the Parties in writing that either one or both no longer support entry of the Decree.

XXIII. SIGNATORIES/SERVICE

146. Each undersigned representative of Tyler, EPA, the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, and Texas certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

147. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Tyler agrees to accept service of process by mail to the addresses set forth in Section XVII (“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.

XXIV. INTEGRATION

148. This Consent Decree, inclusive of all Appendices, constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than 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.

XXV. APPENDICES

149. The following is a list of Appendices to this Consent Decree:

- a. “Appendix A” is the “Categorical Employee Training Requirements” List;
- b. “Appendix B” is the “Tyler Water Utilities Wastewater Collection Field Work Order Form”;
- c. “Appendix C” is the “Existing High Frequency Cleaning Program”;
- d. “Appendix D” is the “Gravity Sewer Line Condition Assessment and Remedial Measures Program”;
- e. “Appendix E” is the “Manhole Condition Assessment and Remedial Measures Program”;
- f. “Appendix F” is the “Hydraulic Model Update”;
- g. “Appendix G” is the “Capacity Assessment and Remedial Measures Program”;
- h. “Appendix H” is the “Historic Constructed SSO Locations and Inspection Results”; and
- i. “Appendix I” is the “Consolidated Listing of *United States et. al v. City of Tyler* Consent Decree Deliverables and Consent Decree Reports”.

XXVI. FINAL JUDGMENT

150. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, Texas, and Tyler.

Dated and entered this ____ day of _____, _____.

UNITED STATES DISTRICT JUDGE
Eastern District of Texas

Consent Decree in United States and the State of Texas v. City of Tyler, Texas

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA:


JOHN C. CRUDEN
Assistant Attorney General
U.S. Department of Justice
Environment and Natural Resources Division


ROBYN E. HANSON
Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Enforcement Section
999 18th Street, South Terrace, Suite 370
Denver, CO 80202
Telephone: 303-844-1558
Facsimile: 303-844-1350

Consent Decree in United States and the State of Texas v. City of Tyler, Texas

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



BRITT FEATHERSTON
Acting United States Attorney
Eastern District of Texas

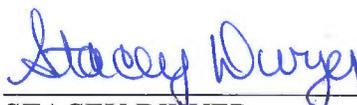


JAMES GILLINGHAM
Assistant U.S. Attorney
Eastern District of Texas
110 N. College Avenue; Suite 700
Tyler, Texas 75702
E-mail: James.Gillingham@usdoj.gov
(903) 590-1400
(903) 590-1436 (fax)
Texas State Bar # 24065295

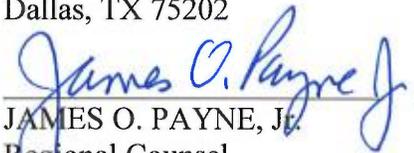
Consent Decree in United States and the State of Texas v. City of Tyler, Texas

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

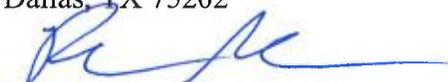
FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



STACEY DWYER
Acting Division Director
Compliance Assurance and Enforcement Division
United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200 (6EN-W)
Dallas, TX 75202



JAMES O. PAYNE, JR.
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RUSSELL W. MURDOCK
Assistant Regional Counsel
United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
Telephone: 214-665-3189

Consent Decree in United States and the State of Texas v. City of Tyler, Texas

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



SUSAN SHINKMAN

Director

Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency



MARK POLLINS

Division Director

Water Enforcement Division

Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency



JAMES VINCH

Water Enforcement Division

Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

1200 Pennsylvania Ave., NW (2243A)

Washington, DC 20460

Telephone: 202-564-1256

Facsimile: 202-564-0024

Consent Decree in United States and the State of Texas v. City of Tyler, Texas

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of TWC § 7.110:

FOR PLAINTIFF STATE OF TEXAS:

KEN PAXTON
Attorney General of Texas

JEFFREY C. MATEER
First Assistant Attorney General

BRANTLEY STARR
Deputy First Assistant Attorney General

JAMES E. DAVIS
Deputy Attorney General for Civil Litigation

PRISCILLA M. HUBENAK
Chief, Environmental Protection Division



MARY E. SMITH
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Mary.Smith@texasattorneygeneral.gov

EMILY PETRICK
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Emily.Petrick@texasattorneygeneral.gov

Office of the Attorney General of Texas
Environmental Protection Division
P. O. Box 12548, Capitol Station
Austin, Texas 78711-2548
Telephone: (512) 463-2012
Facsimile: (512) 320-0911
ATTORNEYS FOR THE STATE OF TEXAS

Consent Decree in United States and the State of Texas v. City of Tyler, Texas

WE HEREBY CONSENT to the entry of this Consent Decree:

FOR CITY OF TYLER:



MARTIN HEINES
Mayor, City of Tyler



EDWARD BROUSSARD
City Manager
212 N. Bonner Ave.
Tyler, Texas 75702



DEBORAH PULLUM
City Attorney
212 N. Bonner Ave.
Tyler, Texas 75702
Telephone: 903-531-1161
Facsimile: 903-531-1281



JIM MATHEWS
Mathews & Freeland, L.L.P.
8140 N. MoPac Expressway
Building 2, Suite 260
Austin, Texas 78759

Appendix A

Appendix A
Categorical Employee Training Requirements

Tyler Water Utilities Wastewater Collection

			Repair/Construction					Admin/Office/Supervisor					Preventative Maintenance				
			Crew Leader	Semi-Skilled Laborer	Laborer	Truck Driver	Equipment Operator	Operations Manager	Superintendent - PM	Superintendent - Construction	Senior Clerk	Senior Secretary	GIS Data Analyst	Utilities Maintenance Repair	Laborer	Utilities Maintenance Repair - CCTV	Semi-Skilled Laborer
OUTSIDE VENDOR TRAINING *			Hours														
1	Basic Wastewater Operations	20	R	R	R	R	R	R	R	R	E	E	E	R	R	R	R
2	Wastewater Collection	20	R	R	R	R	R	R	R	R	E	E	E	R	R	R	R
3	Water Utilities Safety	20	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4	Water Utilities Calculations	20	E	E	E	E	E	E	E	NA	NA	NA	E	E	E	E	E
5	Pumps & Motor Maintenance	20	R	E	E	E	R	R	R	NA	NA	NA	R	E	R	E	E
6	Wastewater Treatment	20	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
7	Wastewater Laboratory	20	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
8	Wastewater Technology	40	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
9	CCTV - PACP Training	20	NA	NA	NA	NA	NA	E	R	R	NA	NA	R	NA	NA	R	NA
10	Applied Confined Space Safety	8	E	E	E	E	E	E	E	E	E	E	NA	E	E	E	E
CITY OF TYLER IN-HOUSE TRAINING																	
Sewer Overflows																	
11	SSO Reporting Procedures		R	NA	NA	NA	E	R	R	R	R	R	NA	R	E	R	E
Work Orders/Asset Collection																	
12	Initial OneSolution		R	E	E	E	R	R	R	R	R	R	R	R	E	R	E
13	OneSolution Asset Management		R	E	E	E	R	R	R	R	E	E	R	R	E	R	E
14	GIS/GPS Data Collection		R	E	E	E	R	R	R	R	E	E	R	R	E	R	E
Vactor																	
15	Setup/Initial Operations		R	E	E	E	E	R	R	R	NA	NA	NA	R	R	R	R
16	Preventive Maintenance		NA	E	E	E	E	R	R	R	NA	NA	NA	R	R	R	R
17	Operator - Cleaning/Nozzle Setup		NA	E	E	E	E	E	R	R	NA	NA	NA	R	R	R	E
18	Decan/Cleaning Procedures		NA	E	E	E	E	E	R	R	NA	NA	NA	R	R	R	E
Sewer Rodder																	
19	Rodder - Setup/Initial Operations		R	E	E	E	E	R	R	R	NA	NA	NA	R	R	R	R
20	Rodder - Preventive Maintenance		NA	E	E	E	E	R	R	R	NA	NA	NA	R	R	R	R
21	Operator - Setup/Operations		NA	E	E	E	E	E	R	R	NA	NA	NA	R	R	R	R
Water Jet Rig																	
22	Jetter - Initial Setup/Operations		R	E	E	E	E	R	R	R	NA	NA	NA	R	R	R	R
23	Jetter - Preventive Maintenance		NA	E	E	E	E	R	R	R	NA	NA	NA	R	R	R	R
24	Operator - Setup/Operations		NA	E	E	E	E	E	R	R	NA	NA	NA	R	R	R	R
CCTV																	
25	CCTV - CUE's Rover & Wincam		E	E	E	E	E	R	R	R	NA	NA	NA	E	E	R	R
26	Camera Preventive Maintenance		NA	E	E	E	E	R	R	R	NA	NA	NA	E	E	R	R
27	PACP Recertification - 3 years		NA	E	E	E	E	R	E	E	NA	NA	NA	NA	NA	R	NA

Notes:

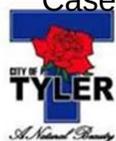
* Outside Vendor Training provided by Texas Engineering Extension (TEEX) and other outside vendors

Legend:

- R = Required training by CMOM
- E = Elective training, conducted at City of Tyler's discretion
- NA = Not Applicable

Rev Date: 09/11/15

Appendix B



Appendix B
Tyler Water Utilities Wastewater Collection
Field Reporting Form
 903-531-1285

Work Order No.: _____

1. Notification of possible wastewater blockage/release received by: Phone Call Email In Person

2. Notification received: Date: _____
 Time: _____ AM / PM

3. Name of person making report: _____
 Phone # or email: _____

4. Location:
 Address, intersection or other location information: _____

a. Crew dispatched at:
 Date: _____ Time: _____ AM / PM

b. Arrived onsite:
 Date: _____ Time: _____ AM / PM

5. Did release of wastewater occur? Yes No

6. Is release a result of issue with public sewer system?
 Yes - Asset ID: _____ No = Private

a. Pipe c. Lift Station
 b. Manhole d. WWTP
 e. Cleanout Other _____

7. Date/Time release cleared:
 Date: _____ Time: _____ AM / PM

Estimated duration of release: _____ hr. _____ min.
 Estimated flow rate: _____ GPM
 Estimated volume of release: _____ gallons
 Estimation Method: TCEQ
 Other: _____

8. Was any amount of the release contained/ recovered?
 Yes _____ gallons No

Method of recovery: a. Pumped back into collection system
 b. Cleaned with vacuum truck
 c. Other _____

Cleanup actions taken: Area disinfected Area flushed

9. Corrective Action Taken: _____

10. Potential field cause(s) of release (check all that apply):

a. <input type="checkbox"/> Fats, Oils, Grease	g. <input type="checkbox"/> Flooding
b. <input type="checkbox"/> Roots	h. <input type="checkbox"/> Excess Infiltration/Inflow
c. <input type="checkbox"/> Debris	i. <input type="checkbox"/> Contractor Damage
d. <input type="checkbox"/> Breaks Due to Erosion	j. <input type="checkbox"/> Vandalism
e. <input type="checkbox"/> Breaks, Other Causes	k. <input type="checkbox"/> Undetermined
f. <input type="checkbox"/> Equipment malfunction	l. <input type="checkbox"/> Other: _____

11. Follow-up actions recommended:
 cable wash wash and treat root removal
 replace sewer tap
 other: _____

12. Route for wastewater released :
 Building Backup
 contained before storm drain
 entered storm-drain
 entered dry streambed
 entered flowing or standing water in creek

Name of receiving waters: _____

13. Was fish kill observed? No
 Yes - Report to Operations Manager Est. No. Killed: _____
 TWU Employee Name: _____ Date: _____

To Be Completed by Supervisor

A. A Classification of Wastewater Release:

- TPDES non-compliance due to:
 - unauthorized discharge
 - failure to properly operate and maintain system
 Specify: _____
- Spill requiring report under TWC 26.039.
 24 hour report Monthly report
- SSO as defined by Consent Decree

B. Was upstream/downstream sampling conducted?
 No Yes - See Sampling Results

C. Potential danger to human health and safety or the environment:
 No Yes - Describe: _____

D. Discharge route: _____
 Watershed for:
 Wastewater Treatment Plant - South Side
 TPDES Permit 10653-02/TX004798
 Wastewater Treatment Plant - West Side
 TPDES Permit 10653-002/TX0047988

E. Date scheduled for CCTV: _____ (within 5 days)
 Date completed: _____ Video #: _____ Score: _____

F. Action taken to prevent reoccurrence :
 repair manhole/ invert
 repair sewer main
 schedule line to replaced or slip lined
 place on High Frequency Cleaning list: No
 Yes - 12 mo. 6 mo. 3 mo.
 schedule follow-up CCTV inspection: No
 Yes - 1 year 2 years 3 years
 call lift station technician
 other _____

G. Supervisor review:
 Name: _____ Date: _____

City Point of Contact:
Kevin R. Olson/Operations Manager
 TCEQ Region 5: Lisa Fisher 903-535-5137 FAX 903-525-0384
 EPA Region 6: Phone 214-665-6595; FAX 214-665-2168

Appendix C

Appendix C
Tyler Water Utilities
Wastewater Collection
Existing High Frequency Cleaning Program

Tyler Water Utilities has an existing high frequency cleaning program, by which sewer segments may be placed on a 12-month, 6-month or 3-month cleaning cycle, following review by the Wastewater Collection System Superintendent. This existing program is subject to change as Tyler develops its Revised High Frequency Cleaning Program, pursuant to the terms of Section V.A.5 (CMOM Program - Revised High Frequency Cleaning Program) of the Consent Decree. Under the existing program, if a sewer segment experiences more than one SSO within a 12-month period, it is placed on a 12-month cleaning frequency cycle. The method of cleaning is based on the nature of the primary problem: 1) “cabling” the line to remove roots, 2) “washing and treating” the line to remove grease, or 3) “cabling and washing” the line to remove both roots and grease. Also under the existing program, if the segment continues to experience SSOs, it may be moved to the 6-month cleaning cycle. If SSOs persist in the pipe segment, it may then be moved to the 3-month cleaning cycle.

After each SSO, a CCTV inspection is scheduled for the Sewer Segment in question to determine if any other follow-up actions are required or a change of cleaning frequency is warranted. Sewer Segments may be moved to a lower frequency cleaning cycle or removed from the existing high frequency cleaning program following rehabilitation, repair or replacement of the pipe segment.

A list of pipe segments included in the 3-month, 6-month and 12-month cleaning cycles of the existing high frequency cleaning program, current as of the Date of Lodging of the Consent Decree, is attached.

3 Month Schedule

#	Date added to Schedule	Location	Problem	Footage	Task
1	9/8/2012	2719 Ada	grease	1500	cable, wash & treat
2	1/3/2013	S. Broadway & Loop 323	Grease	800	Wash & Treat
3	8/22/2013	1015 W. Gentry	Grease	500	Wash & Treat

2800 Feet
0.5 Miles

4 times a year 2.1 Miles

6 Month Schedule

#	Date added to Schedule	Location	Problem	Footage	Task
1	1/15/2011	121 E. Front	grease & debris	100	PM wash
2	2/15/2011	4427 & 4431 Dundee	grease	450	PM Wash
3	4/13/2011	2025 WSW Loop 323	grease	2275	wash & Treat
4	4/29/2011	6805 South Place	roots & grease	500	cable & wash
5	2/15/2012	1101 S. Fleishel	grease	1700	wash & treat
6	2/20/2012	1300 S. Beckham	grease	2700	wash & treat
7	3/11/2012	Plume & Troup	grease	8000	PM wash & Treat
8	3/13/2012	3314 Troup Hwy	grease	3000	Pm wash & treat
9	3/13/2012	3333 Troup Hwy	grease	2400	PM wash & Treat
10	4/5/2012	5502 S. Broadway	grease	2900	wash & Treat
11	4/25/2012	Bois D Arc & Wilson	grease	1600	PM wash & Treat
12	4/26/2012	425 E. Cedar	grease	400	PM wash & Treat
13	6/14/2012	Cain & Old Noonday	grease	1000	PM wash
14	6/20/2012	1725 Loop 323 WSW	grease	225	wash & treat
15	6/21/2012	Anthony & DC Drive	grease	1200	wash & treat
16	7/12/2012	2613 E. 5th	grease	200	wash & treat
17	7/15/2012	502 W. Houston	grease	200	wash & treat
18	7/19/2012	1500 WSW Loop 323	grease	1750	wash & treat
19	7/21/2012	105 Tournament	grease	300	wash & treat
20	8/4/2012	6724 S. Broadway	grease	800	wash & treat
21	8/7/2012	2805 Garden Valley	grease	525	wash & treat
22	8/13/2012	S.E. corner of Palace & Gentry	grease	975	wash & Treat
23	9/4/2012	427 S. Oakland	grease	375	wash & treat
24	9/4/2012	Ada & Manilee	grease	900	wash & treat
25	9/4/2012	3320 S. Broadway	grease	900	wash & treat
26	9/8/2012	2719 Ada	grease	0	moved to 3 Month
27	9/19/2012	5315 S. Broadway	grease	2250	wash & Treat
28	9/27/2012	D.E. of Depreist	roots	900	cable
29	10/11/2012	behind 2221 McMurrey	grease	1200	wash & treat
30	10/15/2012	800 Neches	grease	525	wash & treat
31	10/22/2012	100 S. Peach	grease	375	wash & treat
32	11/9/2012	5th * S. Broadway	grease	450	wash & treat
33	11/30/2012	D.E. of Pabst south of Bow	roots	800	cable & wash
34	12/21/2012	3214 Hardwood	roots	325	cable
35	12/21/2012	Elm & Glenwood	roots & grease	100	cable, wash & treat
36	12/22/2013	2611 W. Gentry	grease	1250	cable, wash & treat
37	12/30/2012	4622 Leisure Lane	grease	800	wash & treat
38	1/3/2013	S. Broadway & Loop 323	grease	0	Moved to 3 Month
39	1/3/2013	Donnybrook & Loop 323	grease	1850	wash & treat
40	1/23/2013	100 Rice Rd	grease	500	wash & treat

Hot Spot Cleaning List

41	3/6/2013	1105 E. Gentry	grease	200	wash & Treat
42	5/16/2013	804 W. 26th	grease & roots	1100	cable & wash
43	4/9/2013	1820 N. Gaston	roots & debris	625	cable & wash
44	6/24/2014	719 Baxter	grease	2400	wash & Treat
45	9/15/2014	Locust & Townsend	grease & roots	600	cable & wash
46	12/1/2014	6435 Old Jacksonville	grease	750	wash & Treat
47	1/16/2015	2214 W.S.W. Loop323	grease	1700	wash & treat
48	2/28/2013	Magnolia & Lake	grease & debris	800	cable & wash
49	1/15/16	845 Crosby	grease	1075	cable & wash

55150 Feet

10.4 Miles

2 Times a year 20.9 Miles

12 Month Schedule

#	Date added to Schedule	Location	Problem	Footage	Task
1	2/14/2011	601 Harvard	Grease	450	wash
2	3/1/2011	1204 S. Wall	Roots	500	cable
3	1/6/2012	2022 N. Wolford	grease	150	wash
4	1/7/2012	520 & 614 Elmridge	Grease	900	wash
5	1/29/2012	4812 Downing	Grease & debris	1800	wash
6	2/21/2012	Caldwell Zoo	Root/debris	1650	cable/wash
7	3/1/2012	1538 N. Hill	Roots/grease	500	cable/wash
8	3/1/2012	Specialty & Old Troup	Debris	1350	pm wash
9	3/3/2012	305 E. Fourth	roots	300	cable
10	3/5/2012	3205 Tulsa	grease	700	Pm wash & treat
11	3/5/2012	1703 N. Broadway	grease	75	Pm wash & treat
12	3/6/2012	1100 Blk Magnolia	roots & debris	1000	cable & wash
13	3/6/2012	4222 Southpark Dr	Roots	1250	cable
14	3/8/2012	725 Pam	Debris	1500	cable
15	3/8/2012	2011 Sterling	Roots	1000	cable
16	3/8/2012	Independence & Broadway	grease	1950	PM wash & treat
17	3/15/2012	3916 Jan	grease	2375	wash
18	3/18/2012	218 E. Locust	Debris	400	pm wash
19	3/18/2012	713 Jeffery	roots	1400	cable
20	3/21/2012	2222 SSE Loop 323	grease	400	wash
21	3/22/2012	319 S. Beckham	roots & grease	225	cable & treat
22	3/22/2012	Fifth & Fleishel	Grease/debris	550	pm wash
23	3/22/2012	800 w. 27TH	grease & debris	300	pm wash
24	3/26/2012	300 Blk of Oakland	Debris	800	pm wash
25	3/26/2012	1733 Richards	roots	400	cable
26	3/26/2012	Pam & Joy	Roots/grease	1225	cable/wash
27	3/28/2012	3110 Towne Park	grease	1350	PM wash
28	3/30/2012	916 Academy	grease	425	PM wash & treat
29	3/31/2012	1306 Hawthorne	roots	1050	cable & wash
30	4/1/2012	Oliver & Rosevelt	roots	1900	PM cable
31	4/2/2012	1725 S. Sneed	Grease/debris	375	wash/cable
32	4/2/2012	2027 Lee St	Grease	800	wash
33	4/3/2012	1417 Santa Rosa	roots	1800	PM cable
34	4/4/2012	1126 Buena Vista	roots	1950	PM cable
35	4/9/2012	601 Golden rd	grease	150	Pm wash
36	4/9/2012	1729 Arnold	grease	400	PM wash
37	4/10/2012	710 S. Porter	roots & grease	2200	PM wash & cable
38	4/10/2012	D.E. of Ferdell	roots	350	cable
39	4/11/2012	5314 Athens	Grease	1200	wash & treat

Hot Spot Cleaning List

12 Month Schedule

#	Date added to Schedule	Location	Problem	Footage	Task
40	4/13/2012	Angeline & Alice	roots	950	cable
41	4/15/2012	behind 1100 W. Claude	Roots	550	cable
42	4/15/2012	1800 Blk of Bradshaw	roots	750	cable & wash
43	4/17/2012	3904 W. Gentry	grease	500	wash & treat
44	4/22/2012	D.E. of Pabst-sout of Bow	roots & debris	0	Moved to 6 Month
45	4/22/2012	719 Pabst	grease	1500	PM wash
46	4/23/2012	3001 Buddie	grease	2250	PM wash
47	4/24/2012	819 N. Spring	grease	950	PM wash
48	4/30/2012	CR 427- Lake Park Dr	roots	3000	cable
49	5/1/2012	D.E. of Hayes	roots & grease	1200	cable & wash
50	5/4/2012	3409 Brookside	roots	1750	cable
51	5/7/2012	2402 Bellwood	grease	1600	PM wash
52	5/8/2012	2nd MH east of Palace & North of Gentry	Roots/grease	525	cable & wash
53	5/9/2012	4013 Appletree	grease	4000	wash & treat
54	5/14/2012	401 Sunnyside	grease	1000	PM wash
55	5/20/2012	504 S. Beckham	Grease/debris	250	pm wash
56	5/20/2012	1107 Wilmington	grease	1400	Pm wash
57	5/22/2012	518 S. Parkdale	roots	800	cable
58	5/22/2012	624 David	grease	1225	PM wash
59	5/24/2012	310 N. Beverly	grease	350	Pm wash
60	5/24/2012	Beverly south of Locust	grease	400	PM wash
61	5/25/2012	610 S. College	grease	700	PM wash
62	5/30/2012	Elm & Palmer	grease	300	PM wash
63	5/30/2012	Wildwood & Front	grease	1350	PM wash
64	5/31/2012	400 Old Grande	Roots/grease	700	pm wash/cable
65	6/8/2012	1705 N. Broadway	grease	900	PM wash
66	6/11/2012	1808 E. Lawrence	roots & grease	750	PM cable & wash
67	6/26/2012	625 S. Augusta	roots & grease	1200	cable & wash
68	6/29/2012	3009 Meadowlark	roots & grease	800	cable
69	7/3/2012	3324 NNE Loop 323	grease	800	PM wash
70	7/4/2012	8414 Cambridge	grease	800	wash & treat
71	7/10/2012	409 N. Border	grease	450	PM wash
72	7/10/2012	2310 E. Erwin	grease	3000	wash & treat
73	7/10/2012	2604 E. Erwin	grease	750	wash & treat
74	7/20/2012	804 W. 26th St	grease	1000	PM wash
75	7/25/2012	Highland & 5th St well #9	roots	800	Cable
76	7/28/2012	1211 S. College	roots & grease	300	PM cable
77	8/3/2012	4702 Troup Hwy	grease	600	PM wash
78	8/7/2012	Behind 2700 N. Grand	grease	900	wash & treat
79	8/10/2012	2401 Mimosa	roots	1125	cable
80	8/10/2012	Queen & Spring	grease	600	PM wash
81	8/13/2012	SE corner of Palace & Gentry	GREASE	0	Moved to 6 Month
82	8/16/2012	3323 Garden Valley	Grease/roots	350	cable & Wash
83	8/23/2012	2519 N. Confederate	grease	1225	wash & treat
84	8/30/2012	3220 Walton rd	Roots	1750	cable
85	9/4/2012	2900 Baldwin	roots	1225	cable
86	9/4/2012	D.E. of Neches	grease	375	wash & treat
87	9/8/2012	302 Dayton	roots	900	cable & wash
88	9/11/2012	4598 Old Troup	grease	1200	wash & treat
89	9/11/2012	Shaw & Broadway	Grease	1575	wash
90	9/15/2012	1540 S. Academy	grease	1250	wash & treat

Hot Spot Cleaning List

12 Month Schedule

#	Date added to Schedule	Location	Problem	Footage	Task
91	9/19/2012	Behind 2301 Debby	Roots	2700	cable
92	9/19/2012	Old Omen & 5th	Roots	500	cable
93	9/20/2012	Lyons S. of Front	roots	600	cable & wash
94	9/24/2012	3885 Brighton Creek	roots	750	cable
95	9/27/2012	3720 Mineola Hwy	grease	1500	wash
96	9/28/2012	Glenwood & Grove	roots	2000	cable & wash
97	10/4/2012	727 S. Englewood	grease	900	PM wash
98	10/8/2012	3621 McDonald Rd	grease	100	wash & treat
99	10/9/2012	3214 Old Jacksonville	grease	100	wash & treat
100	10/18/2012	4400 Paluxy	grease	1225	wash & treat
101	10/18/2012	5750 Eaglesnest	roots	1225	cable
102	10/18/2012	Cecil & County Rd	roots	600	cable
103	10/20/2012	Hill & park	grease	300	PM wash
104	10/22/2012	3800 Lexington	roots	375	cable & wash
105	10/27/2012	3200 Garden Valley & charlotte	roots	950	cable & wash
106	10/28/2012	6101 Wilderness	roots	1500	cable
107	10/29/2012	2406 Pinkerton	roots	250	cable & wash
108	10/30/2012	5908 Plantation	debris	675	cable & wash
109	11/1/2012	Belmead & Shelley	grease	300	PM wash
110	11/3/2012	306 & 311 Rosedale	roots	300	cable & wash
111	11/5/2012	Ford & fannin	grease	700	Pm wash
112	11/7/2012	106 E. 2nd	grease	350	wash & treat
113	11/7/2012	1021 W. Shaw	roots	1125	cable & wash
114	11/14/2012	114 Tournament	roots	625	cable & wash
115	11/17/2012	716 N. Confederate	roots	875	cable & wash
116	11/18/2012	519 Victory	roots	800	PM cable
117	11/21/2012	3129 Vineyard	roots	1000	cable
118	11/23/2012	2314 & 2316 Aberdeen	roots & grease	300	cable & wash
119	11/26/2012	Tenneha & Barrett	grease	250	wash & treat
120	11/29/2012	439 S. Hill	roots	450	cable & wash
121	11/29/2012	D. E. of Clublake	roots	1500	cable & wash
122	11/30/2012	2100 Bandera	roots	600	cable & wash
123	11/30/2012	Camp & Caryle	roots	225	cable & wash treat
124	11/30/2012	D.E. of Pabst south of Bow	roots	800	cable & wash
125	12/2/2012	408 N. Parkdale	grease/roots	700	cable/wash
126	12/4/2012	2707 Willard	grease	600	PM wash
127	12/9/2012	5315 S. Broadway	Grease	0	wash & treat
128	12/10/2012	820 NNW Loop 323	roots	300	cable & wash
129	12/10/2012	1538 N. Hill	roots	800	cable & wash
130	12/11/2012	Sybil & Southpark	roots	1300	cable & wash
131	12/11/2012	Whiteoak & Holyoak	roots	750	cable
132	12/17/2012	329 Brookwood	roots	150	cable & wash
133	12/21/2012	3214 Harwood	roots	325	cable & wash
134	12/21/2012	4021 New Copeland Rd	roots	600	cable & wash
135	12/24/2012	601 N. Broadway	grease & debris	1000	cable & (wash & treat)
136	12/29/2012	818 Dobbs	roots	200	cable
137	12/31/2012	1402 S. Sneed	roots	525	cable & wash
138	12/31/2012	1700 Sampson	Grease & roots	600	cable & wash
139	1/5/2013	217 Heritage Circle	roots	250	Cable
140	1/7/2013	704 S. Fleishel	grease	800	wash & treat
141	1/7/2013	2016 Crestwood	roots	450	Cable

Hot Spot Cleaning List

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#	Date added to Schedule	Location	Problem	Footage	Task
142	1/9/2013	1614 S. College	grease	1100	cable & wash
143	1/10/2013	7302 Princedale	grease & debris	600	pm wash
144	1/12/2013	3600 Bain	roots & grease	600	cable & wash
145	1/14/2013	106 E. Elm	grease	300	wash & treat
146	1/14/2013	1527 Haynie	roots	450	cable
147	1/17/2013	10th & Sunnybrook	grease	200	PM wash
148	1/17/2013	1005 S. Tipton	roots & grease	1400	cable & wash
149	1/21/2013	815 Sheperd	roots & grease	750	cable & treat
150	1/21/2013	1016 Amherst	roots & grease	800	cable & treat
151	1/21/2013	2703 Old Bullard	roots & grease	600	cable & wash
152	1/21/2013	810 S. Porter	roots & grease	1600	PM wash & cable
153	1/22/2013	D.E. of Nancy	roots & grease	1000	cable & wash
154	1/23/2013	801 & 817 Pam	roots & grease	550	cable & wash
155	1/24/2013	2503 New Copeland	roots & grease	625	cable & wash
156	1/25/2013	400 W. Cochran	grease	300	PM wash
157	1/25/2013	3105 Carter	roots & grease	625	cable & wash
158	1/26/2013	2447 Sunnybrook	roots & grease	100	cable & wash
159	1/28/2013	1420 N. Fannin	roots & grease	400	cable & wash
160	1/30/2013	2419 N. Englewood	roots & grease	900	cable & wash
161	1/31/2013	3424 Cope St	grease	800	wash
162	2/1/2013	442 Morgan	roots & grease	1200	cable & wash
163	2/4/2013	519 Hunters Court	dirt	150	PM wash
164	2/4/2013	5427 Quailcreek	roots & grease	950	cable & wash
165	2/10/2013	Hollystar & Morning Star	roots & grease	400	cable, wash & treat
166	2/13/2013	8393 Garrett	grease	300	cable, wash & treat
167	2/13/2013	3623 Wynnwood	roots & debris	550	cable, wash
168	2/13/2013	114 Amherst	roots & grease	525	cable & wash
169	2/14/2013	2523 Fleetwood	grease & debris	400	pm wash
170	2/14/2013	133 N. Forest	roots & grease	525	cable & wash
171	2/15/2013	Lake Placid & Old J Ville	grease	325	pm wash
172	2/15/2013	305 W. Charnwood	roots & grease	300	cable & wash
173	2/15/2013	517 Harpole	grease & debris	450	pm wash
174	2/20/2013	2419 E. 5th	roots & grease	450	cable & wash
175	2/20/2013	5050 Shiloh	debris	825	pm wash
176	2/21/2013	643 S. Baxter	root	350	cable & wash
177	2/23/2013	1007 W. Bow	roots & debris	400	cable & wash
178	2/23/2013	2812 N. Glass	roots & debris	1000	cable & wash
179	2/27/2013	2111 Glenbrook	roots & debris	250	cable & wash
180	2/27/2013	1208 Neches	grease & debris	500	pm wash
181	2/28/2013	Magnolia & Lake	debris	800	cable & Wash
182	3/3/2013	1823 Old Omen	roots & grease	400	cable & wash
183	3/5/2013	1018 E. Elm	roots	300	cable & wash
184	3/5/2013	711 W. 3rd	roots & grease	325	cable & wash
185	3/7/2013	Locust & Beverly	Debris	100	pm wash
186	3/7/2013	1007 W.N.W.Loop323	roots & debris	300	cable
187	3/9/2013	1705 Gish Ln	roots	450	cable
188	3/15/2013	Edwards & Locust	roots & debris	250	cable & wash
189	3/18/2013	711 Spring Creek	roots	450	cable & wash
190	3/19/2013	3721 Arlington	roots	250	cable & wash
191	3/20/2013	Joel & Robert E. Lee	Debris	300	pm wash
192	3/21/2013	2515 W. Shaw	grease	850	cable & wash

Hot Spot Cleaning List

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#	Date added to Schedule	Location	Problem	Footage	Task
193	3/24/2013	226 E. Dodge	grease & debris	200	cable & wash
194	3/25/2013	2022 Belvedere	roots	850	pm cable
195	3/26/2013	3300 Curtis	roots	400	cable & wash
196	3/27/2013	1400 Hawthorne	grease & roots	800	cable & wash
197	3/30/2013	2809 Bellwood	grease & debris	1050	cable & wash
198	4/1/2013	1415 Hawthorne	roots	250	pm cable
199	4/4/2013	Spring & Locust	Debris	350	pm wash
200	4/5/2013	1121 S. Baxter	grease	800	wash & treat
201	4/7/2013	Stratford & Hubbard	roots	500	cable & wash
202	4/8/2013	800 W. Queen	grease & roots	350	cable & wash
203	4/9/2013	Clinic & Dawson	Debris	650	pm wash
204	4/9/2013	1820 N. Gaston	roots & debris	650	cable & wash
205	4/11/2013	Stanford & Crestview	roots & debris	350	cable & wash
206	4/12/2013	2937 Keenan	roots & debris	400	cable & wash
207	4/15/2013	1222 Buena Vista	roots	500	cable & wash
208	4/15/2013	34th & Grand	grease & debris	500	pm wash
209	4/17/2013	Locust & Frank	grease	150	wash & treat
210	4/22/2013	3217 Rolling Hill	grease & roots	1400	cable & wash
211	4/26/2013	830 S. Fannin	roots	325	pm cable
212	4/29/2013	3424 Cope St	grease & roots	950	cable & wash
213	5/4/2013	7132 Gatewood	grease & roots	800	cable & wash
214	5/7/2013	Broadway & Alpine	grease & roots	1150	cable & wash
215	5/8/2013	900 blk Boyd	grease & roots	250	cable & wash
216	5/10/2013	Shelley & Broadway	grease & debris	750	wash & treat
217	5/4/2013	6600 S. Broadway	grease	1750	wash & treat
218	5/15/2013	1820 Don	grease & other	450	pm wash
219	5/16/2013	1219 Kenilworth	grease & roots	400	cable & wash
220	5/16/2013	804 W. 26th St	grease & roots	1100	cable & wash
221	5/28/2013	922 W. 5th	roots & grease	1000	cable & wash
222	3/18/2013	13443 CR 206 behind Goodyear plant	roots & debris	3000	cable & wash
223	4/26/2013	Rose Stadium south to north side	debris	600	pm wash
224	6/15/2013	1718 Sampson	debris	650	pm wash
225	6/19/2013	Bellaire & Garden Valley	roots	1000	pm cable
226	5/30/2013	Pinkerton & Danica	grease	300	pm wash
227	5/29/2013	420 N. Bois d' arc	roots	525	pm cable
228	7/2/2013	Willow Brook Country Club	roots & debris	250	pm cable
229	6/2/2013	3520 New Copeland	roots	750	pm cable
230	6/11/2013	1600 Rice rd	roots & debris	500	pm cable
231	6/20/2013	Donnybrook & Rieck	grease & rags	250	pm wash
232	6/26/2013	1125 Pinedale Pl	debris	1200	cable & wash
233	7/15/2013	1st & Chilton	roots	200	pm cable
234	7/20/2013	2010 Sybil Ln	debris & gravel	650	pm wash
235	7/17/2013	Bow & Bois d' arc	grease	550	pm wash
236	7/22/2013	2314 Robertson Ave	roots	450	pm cable
237	7/23/2013	2400 N. Confederate	roots	600	cable & wash
238	7/24/2013	D.E. of Shenandoah	roots	250	cable & wash
239	7/26/2013	701 W.S.W. Loop 323	grease	950	wash & treat
240	7/28/2013	3200 Cameron	roots & debris	300	cable & wash
241	8/2/2013	801 Trinity	grease & debris	900	pm wash
242	8/5/2013	5916 Rhones Quarter	roots	850	pm cable
243	8/8/2013	Paul & Grand	roots	350	pm cable

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#	Date added to Schedule	Location	Problem	Footage	Task
244	8/23/2013	709 Duckenfield	roots	650	pm cable
245	8/27/2013	3215 Old Jacksonville	roots & grease	100	cable & wash
246	8/26/2013	719 Oakland	roots	100	pm cable
247	8/26/2013	1505 E. Erwin	grease	375	pm wash
248	9/5/2013	700 Olympic Plaza	roots	1000	pm cable
249	9/17/2013	Dawson & Beckham	Debris	450	cable
250	9/20/2013	2714 Tenneha	roots & grease	350	cable & wash
251	9/21/2013	1204 S. Wall	roots & debris	500	cable & wash
252	10/2/2013	3963 Chapel Woods	debris	300	cable
253	10/2/2013	310 Carriage	roots & debris	500	cable & wash
254	10/5/2013	2204 Airline	rags	400	cable & wash
255	10/6/2013	400 blk Chimney Rock	rags & debris	300	pm wash
256	10/9/2013	5th & Sneed	debris	150	pm wash
257	10/15/2013	3408 Shady Trail	roots & debris	400	cable & wash
258	10/16/2013	802 E. Locust	debris	450	cable & wash
259	10/17/2013	1300 blk Summitt	roots & grease	500	cable & wash
260	10/18/2013	615 E. 3rd	roots & debris	200	cable & wash
261	10/24/2013	800 Woodhall Ct	grease & debris	600	cable & wash
262	10/31/2013	1939 Devine	grease	450	pm wash
263	10/31/2013	3230 Berryhill	roots	450	pm cable
264	11/12/2013	8145 Kevin	roots	1200	cable & wash
265	11/21/2013	2347 Alta Mira	roots & debris	400	cable & wash
266	11/27/2013	3005 N. Whitten	grease	700	cable & wash
267	12/16/2013	2802 Greenwood	roots & grease	950	cable & wash
268	12/15/2013	2928 Dinah	roots	300	cable & wash
269	12/21/2013	515 Hampton Hills	roots	550	pm cable
270	12/21/2013	1634 S. Vine	mud	250	pm cable
271	12/29/2013	2602 Shenandoah	grease	325	cable & wash
272	12/31/2013	508 Bandera	roots	500	pm cable
273	12/31/2013	Sunnybrook & 10th	roots	200	pm cable
274	1/3/2014	Peach & Mockingbird	roots & grease	400	cable & wash
275	1/14/2014	3415 Keaton	roots	900	cable & wash
276	2/1/2014	1502 Woodlands	roots	450	cable & wash
277	2/2/2014	907 S. Lyons	grease & roots	450	cable & wash
278	1/27/2014	215 E. Line	grease & debris	150	cable & wash
279	2/7/2014	3400 Varsity	grease & debris	400	cable & wash
280	1/31/2014	1200 Blk E. Front	roots	450	pm cable
281	2/16/2014	1733 E. Richards	roots	400	pm cable
282	2/2/2014	1820 Hankerson	roots & grease	500	cable & wash
283	2/14/2014	2810 W. Erwin	roots	600	pm cable
284	1/25/2014	2504 W. Oakwood	roots	200	pm cable
285	1/27/2014	4430 Hwy 31 W	grease & debris	650	cable & wash
286	2/15/2014	400 Thigpen	roots & grease	600	cable & wash
287	2/17/2014	Bellwood & Lyons	roots & grease	300	cable & wash
288	2/17/2014	8219 Purdue	roots	600	cable & wash
289	2/20/2014	Hurt & Connally	roots & debris	1500	cable & wash
290	2/24/2014	2875 Shiloh	grease & debris	1150	Pm Wash
291	2/25/2014	1208 S. Sneed	roots & debris	550	cable & wash
292	3/3/2014	1924 Clubview	roots & grease	750	cable & wash
293	3/5/2014	Lake Placid & Vine	grease & debris	250	cable & wash
294	2/27/2014	1600 Manorway	grease & debris	850	cable & wash

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#	Date added to Schedule	Location	Problem	Footage	Task
295	3/7/2014	420 Top Hill	grease & roots	250	cable & wash
296	3/16/2014	Harvard & Oxford	grease	1550	cable & wash
297	3/18/2014	Barrett & Grand	grease & debris	150	pm wash
298	3/19/2014	621 Beth	roots	1100	cable & wash
299	3/19/2014	205 Chimney Rock	grease & roots	150	cable & wash
300	3/24/2014	628 N. Bois d arc	grease & roots	800	cable & wash
301	3/25/2014	Sunnybrook & Ellis	roots	150	pm cable
302	3/26/2014	6213 Huntington	roots & debris	500	cable & wash
303	3/18/2014	D.E. Pabst	roots & debris	300	cable & wash
304	4/3/2014	3326 Brookside	roots	750	cable & wash
305	4/4/2014	202 N. Parkdale	roots & debris	1000	cable & debris
306	4/7/2014	2324 S. Vine	roots	500	cable & wash
307	4/8/2014	5310 Indian Springs	grease & debris	300	cable & wash
308	4/8/2014	Fenton & Northridge	grease	300	cable & wash
309	4/9/2014	Courtney & Miller	grease & debris	125	wash & treat
310	4/9/2014	Winona & Gentry	roots	200	cable & wash
311	4/16/2014	2001 Montrose	grease	800	cable & wash
312	4/16/2014	1437 N. Fannin	grease, debris	300	cable & wash
313	4/21/2014	1412 W. Queen	roots	1000	cable & wash
314	4/23/2014	509 W. Douglas	grease & roots	150	cable & wash
315	4/24/2014	2032 Neeley	roots	500	cable & wash
316	4/24/2014	2430 Boldt	grease & roots	550	cable & wash
317	4/30/2014	3015 Cameron	roots	550	cable & wash
318	5/16/2014	2119 Clubview	roots & debris	400	cable & wash
319	5/19/2014	640 Beechwood	roots & debris	500	cable & wash
320	5/23/2014	Donnybrook & Dobbs	roots & debris	200	cable & wash
321	5/29/2014	3705 McMillian	roots & debris	1100	cable & wash
322	5/31/2014	2207 Jackie	roots & grease	350	cable & wash
323	6/2/2014	2200 blk of Golden rd	roots & debris	700	cable & wash
324	6/3/2014	2415 E. Erwin	roots & debris	2500	cable & wash
325	6/17/2014	2300 Buck	roots & debris	450	cable & wash
326	6/18/2014	846 Donnybrook	grease & debris	450	cable & wash
327	3/11/2014	Cain & Old Noonday	grease	1000	pm wash
328	6/27/2014	2505 Kensington	roots	300	cable
329	7/2/2014	319 Harpole	roots	350	cable & wash
330	7/11/2014	1601 Everglades	grease	300	wash
331	7/17/2014	3416 Old Noonday	roots	1200	cable & wash
332	8/25/2014	Lollar & Grand	roots & debris	350	cable & wash
333	9/8/2014	3114 Oak Bend	debris	300	cable & wash
334	9/9/2014	922 S. College	roots	550	cable & wash
335	9/11/2014	Parkdale S. of Front	roots	350	cable & wash
336	9/12/2014	1617 Milam	roots	600	cable & wash
337	9/16/2014	1212 Clinic	grease & debris	400	cable & wash
338	9/16/2014	3004 Tanglewood	roots	450	cable & wash
339	9/20/2014	2700 Pollard	roots	250	cable & wash
340	8/28/2014	4562 Van Hwy	roots	1150	cable & wash
341	9/23/2014	Paluxy & Loop 323	grease	300	wash & treat
342	10/2/2014	530 S.S.W. Loop 323	grease	1150	wash & treat
343	10/6/2014	2331 Devine	debris	100	cable & wash
344	10/21/2014	8310 Crooked Trail	debris	1000	cable & wash
345	10/31/2014	1037 Lyons	grease & debris	425	cable & wash

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#	Date added to Schedule	Location	Problem	Footage	Task
346	11/1/2014	3509 Woods Blvd	grease & debris	650	cable & wash
347	11/2/2014	100 Ridgecrest	roots & debris	900	cable & wash
348	11/6/2014	601 Valentine	roots & debris	300	cable & wash
349	11/7/2014	912 Grove	roots & debris	500	cable & wash
350	11/17/2014	802 Trinity	grease & debris	500	cable & wash
351	11/25/2014	Danica & Golden	grease & debris	350	wash
352	11/28/2014	409 Hollyoak	grease & debris	650	cable & wash
353	11/26/2014	4112 Birdwell	grease & roots	1000	cable & wash
354	12/1/2014	Crockett & Robertson	grease & debris	550	cable & wash
355	12/3/2014	Shelley & Silverwood	grease & roots	525	cable & wash
356	12/1/2014	Shaw & Bennett	grease & debris	475	cable & wash
357	12/6/2014	Timbercreek & Avenham	grease & debris	250	cable & wash
358	12/9/2014	2447 Sunnybrook	grease	325	cable & wash
359	12/15/2014	Bellemere & Wakefield	roots	925	cable & wash
360	12/15/2014	1206 Clyde	roots	550	cable & wash
361	12/16/2014	Parkdale & MLK	grease & roots	400	cable & wash
362	12/17/2014	1325 Graham	roots & debris	300	cable & wash
363	12/17/2014	217 Rix	roots & debris	300	cable & wash
364	12/22/2014	Libbie & Troup	grease	1200	wash & treat
365	12/26/2014	1501 Drexel	roots	900	cable & wash
364	12/29/2014	3529 Cameron	roots & debris	800	cable & wash
365	1/3/2015	1705 N. Glenwood	grease & debris	600	cable & wash
366	1/4/2015	2015 Rosewood	roots & debris	375	cable & wash
367	1/6/2015	2223 Rosemont	roots & debris	750	cable & wash
368	1/7/2015	Fleishel & Fifth	grease & debris	850	cable & wash
369	1/8/2015	Kensington & Kidd	grease	345	cable & wash
370	1/8/2015	1904 Lamplight	debris	100	cable & wash
371	1/11/2015	133 Donna	grease & debris	275	cable & wash
372	1/12/2015	7750 Morning Star	grease & debris	450	cable & wash
373	1/12/2015	6005 Wilshire	grease, debris, roots	375	cable & wash
374	1/20/2015	3019 Club Lake	grease & debris	650	cable & wash
375	1/20/2015	521 Princeton	grease, debris, roots	625	cable & wash
376	1/24/2015	905 S. Chilton	grease & debris	275	cable & wash
377	1/25/2015	2829 Old Henderson	grease	500	cable, wash, treat
378	1/27/2015	2137 Woodhaven	grease & roots	350	cable & wash
379	2/3/2015	649 S. Broadway	grease & debris	475	cable & wash
380	2/3/2015	1419 Marian	grease	160	cable & wash
381	2/2/2015	Robert E. Lee & Broadway	grease	500	cable & wash
382	2/5/2015	1206 N. Whitten	debris	250	cable & wash
383	2/12/2015	829 David	grease	850	cable & wash
384	2/13/2015	Erwin & Hill	grease & debris	425	cable & wash
385	2/14/2015	2213 Vernon	roots & debris	825	cable & wash
386	2/17/2015	1st & Vine	debris	400	cable & wash
387	2/26/2015	1222 Augusta	roots & grease	285	cable & wash
388	2/26/2015	De Charles & Dinah	grease & debris	745	cable & wash
389	2/26/2015	3205 Fry	grease, roots, debris	475	cable & wash
390	3/4/2015	3148 Rosemary	roots & debris	350	cable & wash
391	3/4/2015	918 Camellia	debris	375	cable & wash
392	3/6/2015	4500 Blk New Copeland	grease, roots, debris	165	cable & wash
393	3/7/2015	4007 Old Chandler	grease & roots	775	cable & wash
394	3/7/2015	2913 Shaffer Ln	roots & grease	440	cable & wash

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#	Date added to Schedule	Location	Task	Footage	Problem
395	3/8/2015	1823 E.S.E. Loop 323	grease	375	wash & treat
396	3/8/2015	712 Leon	debris & grease	275	cable & wash
397	3/9/2015	604 Maxwell	grease, roots, debris	775	cable & wash
398	3/10/2015	2612 Eileen	grease, roots, debris	375	cable & wash
399	3/10/2015	Victory & Turtle Creek	grease, roots, debris	525	cable & wash
400	3/13/2015	2nd & Talley	debris	425	cable & wash
401	3/14/2015	1538 & 1600 N. Hill	grease & debris	500	cable & wash
402	3/19/2015	3006 Silver Creek	roots & debris	250	cable & wash
403	3/19/2015	Horace & Commerce	grease, roots, debris	650	cable & wash
404	3/20/2015	100 blk of Thigpen	grease	400	(wash & treat)
405	3/21/2015	1800 N. Glenwood	roots	400	cable & wash
406	3/27/2015	6101 Huntington	roots	450	cable & wash
407	4/1/2015	217 Heritage Circle	roots & debris	900	cable & wash
408	4/2/2015	1000 E.S.E Loop 323	debris	150	cable & wash
409	4/3/2015	1519 Austin	roots	400	cable & wash
410	4/7/2015	1900 Waunell	roots	300	cable & wash
411	4/9/2015	Clinic & Dawson	Debris	650	pm wash
412	4/9/2015	Wellington Place	grease, roots, debris	300	cable & wash
413	4/10/2015	516 Fair Ln	grease, roots, debris	550	cable & wash
414	4/11/2015	Adams & Erwin	debris	700	cable & wash
415	4/12/2015	4800 Gretna Green	sand & debris	350	cable & wash
416	4/27/2015	2015 Rose Rd.	grease, roots, debris	600	cable & wash
417	4/29/2015	8238 Baylor	roots	750	cable & wash
418	4/29/2015	1400 W. Gentry	grease	675	cable & wash
419	5/3/2015	2909 Medina	roots	550	cable & wash
420	5/4/2015	2328 Alta Mira	grease,roots,debris	300	cable & wash
421	5/7/2015	807 W. 24th	grease,roots,debris	150	cable & wash
422	5/7/2015	530 S.S.W. Loop 323	grease,roots,debris	400	cable & wash
423	5/12/2015	318 W. Dobbs	debris	300	cable & wash
424	5/20/2015	1725 Haynie	grease,roots,debris	600	cable & wash
425	5/21/2015	3223 Martha	roots	400	cable & wash
426	5/24/2015	921 E. 8th	sand	350	wash
427	5/24/2015	1121 N. Bois D Arc	root & debris	250	cable & wash
428	5/25/2015	1319 S. Donnybrook	roots	275	cable & wash
429	6/1/2015	124 Ronnette	grease & debris	500	cable & wash
430	7/2/2015	DE Wilder Trail	debris	500'	cable
431	8/2/2015	2820 Staley	grease & debris	1150'	cable & wash
432	8/5/2015	28th & Tenneha	grease & debris	300'	cable & wash
433	8/8/2015	200 E. Fuller	debris	450'	cable & wash
434	8/13/2015	29th & Confederate	grease,roots,debris	550'	cable & wash
435	8/19/2015	Behind 2701 W. Erwin	roots & debris	1100'	cable & wash
436	9/2/2015	2401 Devine	roots & debris	1050'	cable & wash
437	9/25/2015	1923 Woodlawn	grease & debris	650'	cable & wash
438	9/27/2015	410 Muller Garden	Debris	250'	cable & wash
439	10/7/2015	Earle E. of Patricia	grease,roots,debris	575'	cable & wash
440	10/16/2015	2609 S. Chilton	debris	200'	cable & wash
441	10/16/2015	2615 S. Chilton	roots & grease	575'	cable & wash
442	10/23/2015	3363 Cascade Blvd	Debris	450'	wash
443	10/24/2015	614 Richardson	Grease	500'	Cable & Wash
444	10/24/2015	5417 Briarcove	Grease	225'	cable & wash
445	10/25/2015	1200 Doctors Dr	Grease	375'	cable & wash
446	10/26/2015	415 Thigpen	Grease	150'	wash & treat

12 Month Schedule

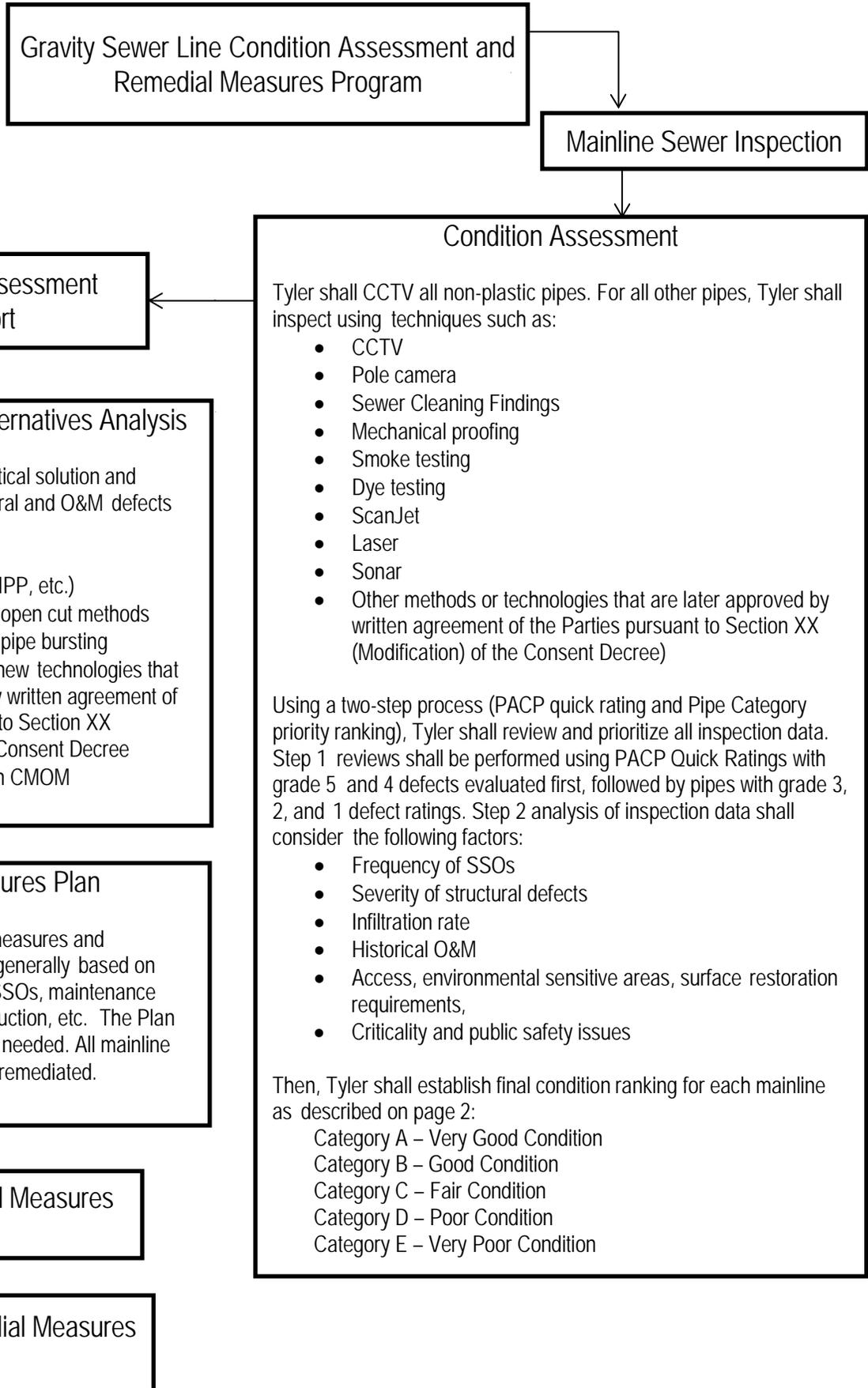
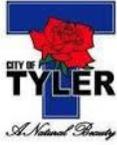
#	Date added to Schedule	Location	Task	Footage	Problem
447	10/30/2015	1700 W. Claude	grease,roots,debris	1225'	cable & wash
448	11/4/2015	5412 Patton	grease & debris	900'	cable & wash
449	11/18/2015	Plaza & Northridge	grease & debris	325'	cable & wash
450	11/20/2015	740 Blackwell	grease	500'	cable & wash
451	11/20/2015	2211 W.S.W. Loop 323	grease	575'	cable & wash
452	12/3/2015	3023 Benbrook	grease,roots,debris	525'	cable & wash
453	12/28/2015	124 Ronnette	grease & debris	125'	cable & wash
454	12/28/2015	1709 Ronnette	roots & debris	200'	cable & wash
455	12/30/2016	904 W. Nutbush	debris	200'	cable & wash
456	1/4/2016	303 Oakland	roots & debris	375'	cable & wash
457	1/5/2016	Alpha & Mc Donald	debris	150'	cable & wash
458	1/5/2016	200 Barbee	Debris	550'	cable & wash
459	1/15/2016	522 S. Broadway	roots & debris	900'	cable & wash
460	1/20/2016	2632 New Copeland	roots & debris	125'	cable & wash
461	1/22/2016	3510 Woodhue	Grease & Roots	225'	cable & wash
462	1/25/2016	3327 Gail	debris	375'	cable & wash
463	1/27/2016	1228 Kennedy rd.	Grease & Roots	600'	cable & wash
464	1/29/2016	235 S. Saunders	Debris	150'	Cable
465	2/11/2016	515 E. Front	grease & debris	100'	cable & wash
466	2/15/2016	2716 Brentwood	Debris	850'	cable & wash

284,615 Feet
53.9 Miles

Appendix D

Appendix D

Gravity Sewer Line Condition Assessment and Remedial Measures Program



Mainline Inspection Condition Rating Category

A = Very Good

Minor defects are mostly cosmetic in nature and do not impact system hydraulics nor contribute to significant infiltration/inflow. Non-displaced cracks or minor material degradation. No active infiltration. Likely outcome in remedial measures plan: Maintenance Analysis as part of CMOM Activities.

B = Good

No significant structural defects. Minor defects do not impact system hydraulics nor contribute to significant infiltration/inflow. No active infiltration. Minor defects may include less than 10% deformation, minor corrosion, slightly open non-displaced cracks. Likely outcome in remedial measures plan: Maintenance Analysis as part of CMOM Activities.

C = Fair

No significant structural defects although minor defects were noted during inspection. System hydraulics are good and no significant infiltration/inflow sources noted. Nominal defects may include less than 25% deformation from structural deterioration combined with displaced fractures, moderate corrosion with no reinforcement visible. Likely outcome in remedial measures plan: Ongoing Monitoring or Maintenance Analysis as Part of CMOM Activities.

D = Poor

Moderate structural defects that may include missing pipe material, broken pipe, severe corrosion with exposed wall reinforcement, pipe deformation exceeding 25% from structural deterioration, voids, hinge cracks/fractures, etc. Likely outcome in remedial measures plan: Alternatives Analysis and Remediation.

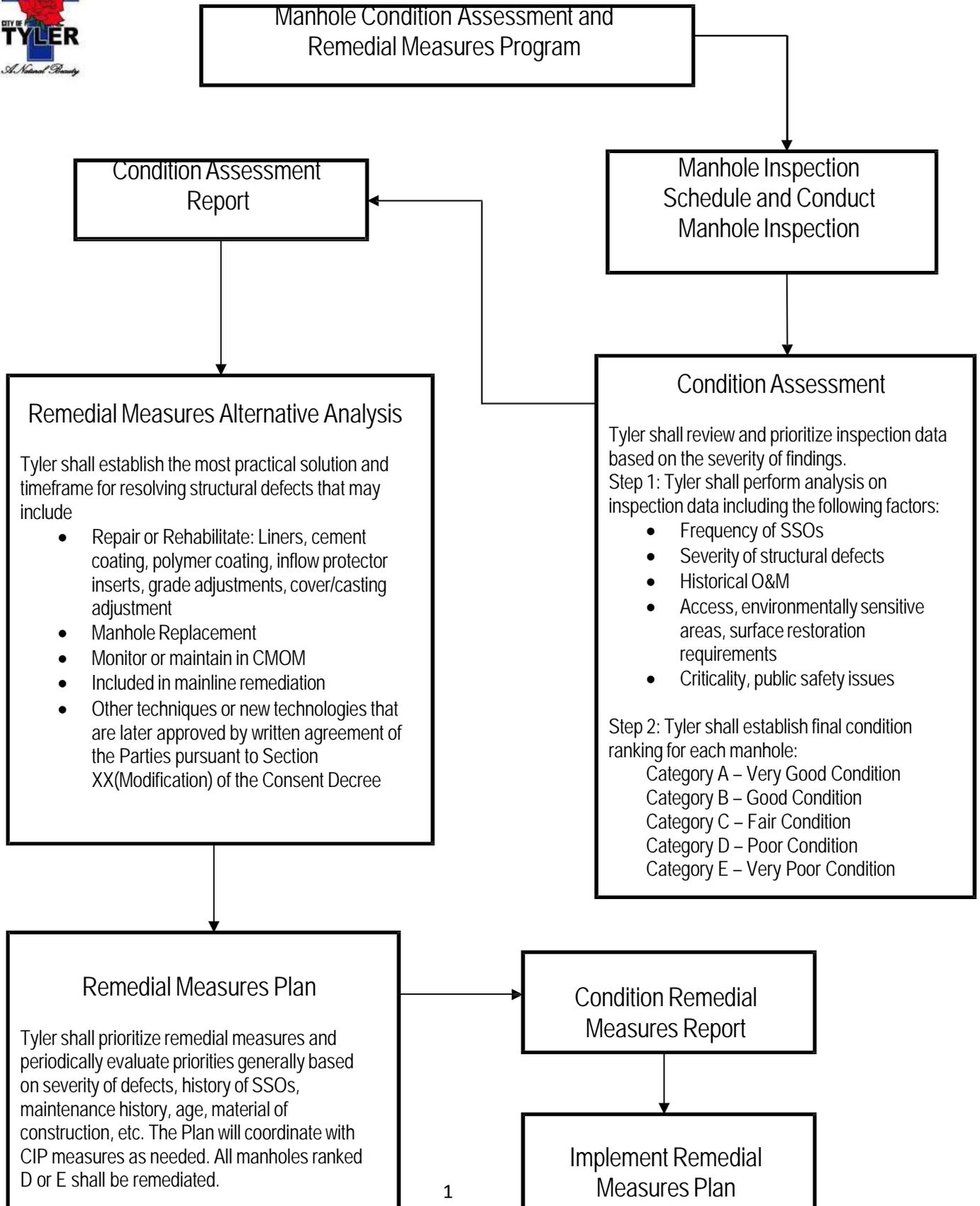
E = Very Poor

Severe structural defects that may include potential for structural failure, severe root intrusion, broken/missing pipe material, and other defects that may impact system hydraulics or contribute to significant infiltration/inflow. Structural collapse or defects likely to cause SSO is imminent. Likely outcome in remedial measures plan: Alternatives Analysis and Remediation.

Appendix E

Appendix E

Manhole Condition Assessment and Remedial Measures Program



Manhole Inspection Condition Rating Category

A = Very Good

Minor defects are mostly cosmetic in nature and do not impact system hydraulics nor contribute to significant infiltration/inflow. No active infiltration.

B = Good

Manhole has no significant structural defects. Minor defects do not impact system hydraulics nor contribute to significant infiltration/inflow. No active infiltration. Minor defects may include slightly loose casting, minor corrosion of metal surfaces, minor deterioration of concrete mortar between bricks, minor cracks, etc.

C = Fair

Manhole has no significant structural defects although minor defects were noted during inspection. System hydraulics are good and no significant infiltration/inflow sources noted. Light infiltration/inflow may be present. Nominal defects may include loose casting, nominal corrosion of metal surfaces, deterioration of concrete mortar between bricks or concrete walls, minor evidence of infiltration/inflow at precast joint sections, etc.

D = Poor

Manhole has moderate structural defects that may include cracks, loose bricks, separated casting, moderate root intrusion, broken cover and defects that may impact system hydraulics due to structural issues or contribute to significant infiltration/inflow. Some visible staining due to infiltration/inflow may be present. Active infiltration may have been observed. Moderate to severe defects may include loose casting, moderate to severe corrosion of metal surfaces, deterioration of concrete mortar between bricks, moderate to severe deterioration of precast wall sections and precast joint defects, etc. Manhole inspection was completed and the manhole will be addressed in the remediation plan.

E = Very Poor

Manhole may have severe structural defects that may include potential for structural failure, missing bricks, separated/broken casting, severe root intrusion, broken/missing cover and defects that may impact system hydraulics or contribute to significant infiltration/inflow. Visible staining due to infiltration/inflow may be present. Active infiltration may have been observed. Severe defects may include separated/broken casting/cover, severe corrosion of metal surfaces, missing mortar between bricks, etc. Manhole inspection was completed and the manhole will be addressed in the remediation plan or immediate repair may be warranted based on condition.

X = Additional Investigation Needed

Manhole inspection was not performed and additional follow-up is required. Manholes in this category will require additional efforts to facilitate inspection. This category of manholes includes those where access was denied by homeowner, no access due to locked gate, no access due to dog, homeowner would not return calls to gain access, obstacles over manhole preventing inspection, where property owner refused digging in yard, surcharged manholes that will require mainline cleaning, etc.



Manhole Form

Date: _____ Project: _____ Basin: _____ Map No. _____ Crew: _____

MH No.: _____ Address: _____

DS Length: _____ Asset Type: M CO EOL PS T Status: Y CNL CNO B LG D N S H

Lid Type: S V B O _____ No. Vent Holes: _____ Asset Mat'l.: B C F SB SC O _____

Grade: X A B Inch: _____ Inflow Dish: Y N Condition: ___ Good ___ Defective Inflow Potential: N L M S

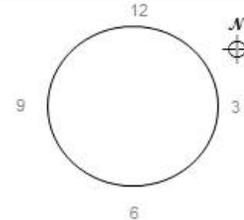
Area Photo: _____ Internal Photo: _____ Surface Cover: _____ Surf. Mat'l.: P ^{Asphalt} _{Concrete} U _____ Debris: _____ in.

GPS: _____ MH Diameter: _____ Std.=48 inch
C.O. Diameter: _____ inch

Defects:

Def#	Photo	Loc	Type	Rate	Roots	I/I

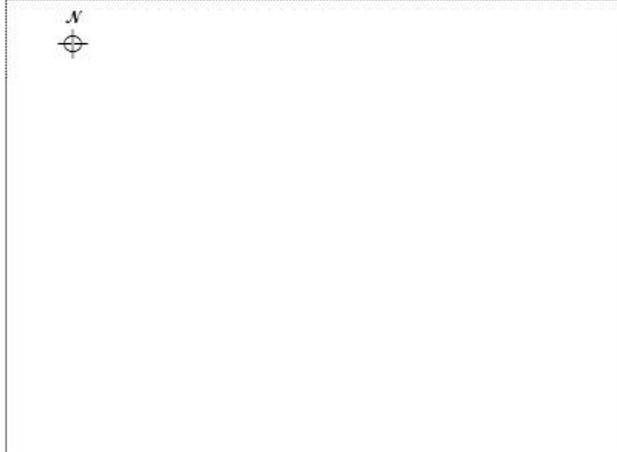
General Comments:



Pipes:

Photo	In/Out	Size	Material	Clock	Depth	Drop	Surface Cov	Surface Mat'l	Debris	Connecting ID

Map Update



Definitions:
Asset Type: M=Manhole; CO=Cleanout; EOL= End of Line; PS=Pump Station; T=Tee Connection
Status: Y=Yes; CNL=Could Not Locate; CNO=Can Not Open; B=Buried; S=Surcharged; N=No Access; D=Dog; LG=Looked Gate; H=Homeowner
Lid Type: S=Solid; V=Vented; B=Boiled; OT=Other (specify/comment)
Asset Mat'l.: B=Brick; C=Concrete; F=Fiberglass; SB=Sealed Brick; SC=Sealed Concrete; O=Other (specify/comment)
Grade: X=At grade; A=Above; B=Below
Defect Rate: Light, Moderate, Severe
Roots: Light, Moderate, Severe
I/I Potential: N=None; L=Light; M=Moderate; S=Severe
Surface Cover: ST=Street; GU=Gutter; AI=Alley; DW=Driveway; SW=Sidewalk; FD=Field; TW=Trees/Woods; PL=Parking Lot; SH=Road Shoulder; DD=Drainage Ditch; CR=Creek; WB=Within Building; YD=Yard; OT=Other
Surface Mat'l: P=Paved (designate Asphalt or Concrete); U=Unpaved
Defect Location: LD=Lid; FR=Frame; FS=Frame Seal; CH=Chimney; CO=Cone; WA=Wall; ST=Steps; BN=Bench; PS=Pipe Seal; IN=Invert; CAP=Cleanout Cap; COP=Cleanout Pipe
Defect Type: BPS=Bad Pipe Seal; BRK=Broken; CRK=Cracked; CCL=Collapsed; DET=Deteriorated; HOL=Hole; JNT=Joint; LOO=Loose; MBR=Missing Brick or Mortar; MIS=Missing

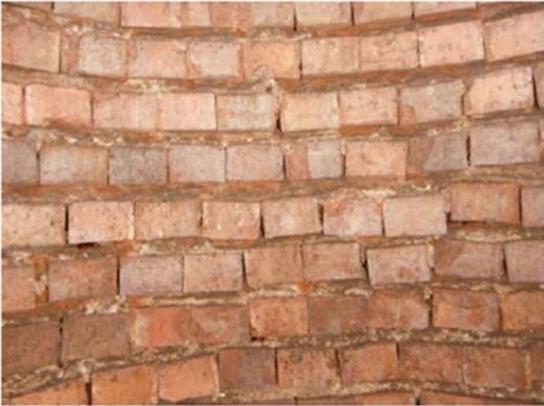
Category A



Category B



Category C



Category D



Category E



Category X



Digital Photographs

Digital photographs were taken during the inspection phases of the project. Figure 1 presents a summary of the types of photographs taken and the nomenclature used when naming the digital files. Information that can be gathered from the photographs includes right of way condition, surface cover, manhole grade, etc.

Figure 1
Project Photographs

1. Area Photo = Manhole ID, A, Photo No.
Example: 060150190A0029.jpg
Manhole: 060150190
A=Area Photo
Photo No.0029
(Note: Photo taken in direction outgoing pipe showing mainline pipe easement)
2. Internal Photo = Manhole ID, I, Photo No.
Example: 080030580I0021.jpg
Manhole: 080030580
I=Internal Photo
Photo No. 0021 (Note: North to top of photo.)
3. Manhole Defect Photo = Manhole ID, M, Photo No.
Example: 8539M027.jpg
Manhole 8539
M= Manhole Defect
Photo No. 027
4. Smoke Photo = Manhole ID, S, Photo No.
Example: 8539S0014.jpg
Manhole 8539
S=Smoke Defect
Photo No. 0014
5. Pipe Photo = Manhole ID, S, Photo No.
Example: 9301P0054.jpg
Manhole 9301
P=Pipe Photo
Photo No. 0054



Appendix F

APPENDIX F

HYDRAULIC MODEL UPDATE

This Appendix details the hydraulic model update required under this Consent Decree. Terms appearing in this Appendix retain the definitions assigned under the Consent Decree.

BACKGROUND

Tyler shall update its existing hydraulic wastewater system model in order to analyze WCTS conveyance capacities and identify Potential Capacity Constraints. Tyler shall use the updated hydraulic model to assess and predict Potential Capacity Constraints for the purpose of eliminating SSOs. Using the updated hydraulic model, Tyler shall:

1. Develop a current, ten and twenty year field calibrated hydraulic model (*i.e.* developed using ten and twenty year planning horizons) that will be used to determine wastewater infrastructure modifications/improvements to ensure adequate collection system conveyance capacity;
2. Develop a management tool to improve decision making ability;
3. Generate a prioritized list of potential capacity constraint projects; and,
4. Integrate the model with the wastewater GIS database.

The City shall use the most current version of SewerGEMS SanitaryV8i developed by Bentley Software, as of the Effective Date, for analysis of the City of Tyler's WCTS. SewerGEMS is a fully dynamic sanitary sewer modeling program. The City of Tyler shall analyze the WCTS using built-in hydraulic and hydrology tools.

The model update shall include the requirements below.

1. Data Collection and Review

The City shall collect and review data associated with the WCTS including but not limited to the data shown below, and shall incorporate such data, as appropriate, into the updated hydraulic model:

- WFA model database, maps and output files;
- Existing wastewater system base maps;
- GIS files – collection lines, manholes, lift stations, supporting attribute database, service area boundaries, Light Detection and Radar (LIDAR), street centerlines, parcels, land use, overflow reports, if available;
- City GIS asset numbering system description;
- Most recent available aerial photos;
- Record drawings for lift stations;
- Lift station pump curves & control elevations (including variable speed information if applicable);

- Record drawings of force mains and ARV locations;
- Lift station meter and/or run time data– 12 months;
- SCADA recorded data;
- Wastewater treatment plant flow records – daily, average and peak wet weather – 12 months;
- Records of historical work orders – 5 years;
- Monthly water billing and consumption data by service area – 12 months;
- Location of large water users, wastewater % return and point(s) of entry – 12 months;
- Past comprehensive master plans and reports; and,
- Other boundary conditions – location of inverted siphons, control gates, weirs, and flow equalization structures, if applicable.

1.1. Existing Data Evaluation & Validation

The City shall compile, evaluate and review all available data collected in the previous task, and identify gaps, deficiencies and/or abnormal data that may require further investigation.

The City shall evaluate the GIS data in order to:

- Verify that each pipe and manhole has a meaningful, unique identifier that will be used to relate the model and the GIS databases;
- Review and determine if the GIS data is broken into pipe segments appropriate for modeling and the type/level of GIS identifier data to be preserved in the model's pipe segments;
- Verify that each pipe has an appropriate and associated asset I.D. at each end;
- Verify the hydraulic model connectivity (map pipe connections with manholes and ensure flow directions are correctly depicted in the model); and,
- Identify large volume water users who do not contribute to the wastewater system.

1.2. Wastewater Flows

The City shall develop wastewater flow estimates in the model for existing and future design years, as defined in Section 1.2.5 of this Appendix. The City shall develop water consumption data and GIS shapefiles for the entire City consisting of the average daily water demands for each customer over the previous 12 months.

1.2.1. Existing Average Daily Flows Estimate

The City shall review and confirm service area boundaries, compare the water consumption data with the dry weather plant flows, and calculate the wastewater loading factor within each service area in order to identify the theoretical average percentage of water use transferred to the wastewater system for each customer. The City shall then calculate average wastewater flows for each customer and confirm this

average using the flow monitoring data collected in other tasks required under this Appendix.

In conducting this analysis, the City shall utilize latest available Texas State Data Center census and GIS parcel data to establish population within each service area. The City shall review planning reports to determine representative rates for population per household, estimate current population and density, and calculate the average wastewater flows per person within each service area.

1.2.2. Flow Patterns

The City shall create diurnal flow patterns in order to ensure an accurate wastewater model. The City shall create standard patterns for residential and commercial customers based on the flow monitoring results. Customer specific patterns may be created for large wastewater customers depending on their water use. In general, these patterns will have 1-hour time steps. This model shall distribute the daily loads based on these curves and route the corresponding flows through the WCTS. This provides a more accurate representation of the peak flows throughout the system, taking into account the time lag of peaks originating at the furthestmost sections of the system and the natural attenuation that occurs.

1.2.3. Existing Wet Weather Peak Flows

The City shall analyze the peak treatment plant flows and determine the relationship with the results from the flow monitoring and rain gauge data collected over the monitoring period. After calculating the percentage of rainfall entering the collection system, the City shall calculate the wet weather flows for a 5 year – 24 hour storm event. The results of this calculation shall define the Assessment Storm (defined in Appendix G (Capacity Assessment and Remedial Measures Program)) event projected flows.

1.2.4. Aerial Investigation

The City shall review digital aerial photography to identify and confirm the areas of new development. The City shall identify any additional areas of new development not included in the aerial photo.

1.2.5. Wastewater Flow Projections

The City shall apply prorated population growth projections (from Texas State Data Center) based on anticipated regions of future development for respective design years.

The City shall combine the industrial/commercial and population growth projections to develop wastewater production projections for each basin for the ten and twenty year planning horizons.

1.3. Wastewater Flow and Rainfall Monitoring

The City shall use dry and wet weather wastewater flows to calibrate the hydraulic model, establish Assessment Storm (defined in Appendix G (Capacity Assessment and Remedial Measures Program)) projected flows for system analysis, and establish priority ranking of monitored areas with regards to infiltration/inflow. To obtain dry and wet weather wastewater flow data, the City shall install a minimum of twenty (20) continuous recording wastewater flow meters and eight (8) continuously recording rainfall gauges within the City of Tyler WCTS. The City shall develop a wastewater flow

monitoring program to collect data that the City shall use for hydraulic model calibration, establish magnitude of wet weather inflow and prioritize sub-basins for future testing and rehabilitation. The City shall perform meter pre-calibration, prepare mounting rings for various pipe sizes, set-up meter database and project information.

1.3.1. Conduct Field Inspections

The City shall field inspect proposed flow meter sites in order to verify wastewater flows, line sizes, debris levels, flow hydraulics, and access. The City shall prepare site inspection reports based on these field observations. Based on the results of the flow meter site inspections, the City shall finalize flow meter sites or establish new alternative sites. Where the proposed site has poor hydraulic characteristics, the City shall inspect the manholes upstream and/or downstream to determine if, by relocating the meter site, better flow hydraulics (that will result in a higher quality of collected data) can be achieved. Upon completion of the field inspections, the City shall install the flow meters. The City shall prepare tabular listings of meter site locations and a corresponding map displaying the final installed locations of wastewater flow meter and rainfall gauges.

1.3.2. Conduct Flow and Rainfall Monitoring for a Minimum of 60 Days

The City shall utilize the installed flow meters to establish wastewater flows during dry and wet weather conditions. Flow metering equipment shall be capable of recording flow under surcharged conditions and shall be synchronized to the same clock used for rain gauges. The duration of monitoring shall be a minimum of 60 days.

The City shall field calibrate each flow meter as part of installation. Calibration of each meter shall consist of an independent verification of the flow depth and velocity. The City shall log flow data at uniform time intervals not exceeding 15 minutes.

The City shall install continuously recording rainfall gauges in order to obtain each storm event intensity and duration across the study area. Each rainfall gauge shall be installed and calibrated to ensure proper operation and recording. Rainfall gauges shall be of the tipping bucket type and accurately record rainfall to 0.01 inches. Using the collection system maps in association with GIS, the City shall conduct a rainfall distribution analysis for each major storm event. For each metered sub-area, the volume of rainfall that fell over the surface shall be determined using GIS spatial analysis and compared to the discrete wet weather infiltration/inflow recorded by the flow meter. The volume of rainfall dependent infiltration/inflow shall be analyzed for selected storm events recorded during the monitoring period.

1.3.3. Data Collection from Flow Meters

The City shall undertake routine maintenance and service to confirm normal meter operation. The City shall generate peak, minimum and average flow depths and rates to assist in data analysis.

1.3.4. Confirmation of Adequate Wet Weather Data

The City shall undertake flow monitoring to obtain adequate hydraulic information for dry

and wet weather conditions. At least three (3) storm events of varying rainfall intensities but not less than 0.5" in 6 hours nor more than the Assessment Storm (defined in Appendix G (Capacity Assessment and Remedial Measures Program)) are required to evaluate wet weather flows for hydraulic model calibration. The City shall review the dry and wet weather data, identify the number of storm events recorded and determine if adequate data has been obtained or if the metering period needs to be extended. Should adequate rainfall not occur within the 60 day minimum monitoring period, the City shall obtain the data required by Section 3 (Model Calibration) of this Appendix as expeditiously as possible. The City shall use wet weather flow data information to establish rainfall dependent infiltration/inflow (RDII). The City shall evaluate both cumulative and discrete flows.

1.3.5. Flow Data Analysis

The City shall analyze and develop tabular and graphical summaries of the gathered flow metering and rainfall data. Comparisons with any historical flow meter data from previous I/I Analyses and Sewer System Evaluation Surveys shall be summarized and evaluated. The City shall evaluate the impacts of silt, debris, backwater conditions, and other hydraulic constraints. The City shall use the data and information obtained during the monitoring period to determine the following for each meter site:

- A. Dry weather average daily flow: A typical dry weather week shall be established that is not impacted by rainfall. Velocity data shall be compared to debris levels to analyze the scouring velocity necessary to prevent deposition in the lines. Discrete flows from each metered sub-basin shall be calculated.
- B. Dry weather peak flow: Peak flows during dry weather shall be determined from the recorded meter site data.
- C. Wet weather average daily flow: Wet weather flows for each rainfall event shall be analyzed to determine the percentage of rainfall that enters the WCTS (also known as the leakiness factor). The City shall establish the RDII by comparing the storm event flow with the dry weather flows. This value will vary for each storm duration and intensity. The City shall determine the RDII for each sub-basin. The City shall prioritize each sub-basin based on the severity of RDII for that basin.
- D. Wet weather peak flow: Peak flow rates during wet weather are critical to the capacity analysis. Peaking ratios (Peak flow rate to average dry weather flow) shall be compared for dry and wet weather.
- E. Peak inflow rates: Peak inflow rates shall be calculated by observing peak flow during wet weather events.
- F. Total I/I volume: The area under each storm event curve shall be evaluated to establish the volume of rainfall induced infiltration/inflow. These values can then be normalized to establish the volume of RDII per inch of rainfall. Projections can then be made to accurately determine the impact of RDII during a normal year.

2. Model Development & Data Conversion

2.1. Existing Model Development

2.1.1. Infrastructure

The City shall integrate all existing Gravity Sewer Line, manhole, Force Main, I/I, and Lift Station GIS data to develop the dynamic hydraulic model of each of the City's WCTS service areas within the hydraulic model. At a minimum, the following database information shall be incorporated into the model:

- Manholes: rim elevation, rim to invert depths, flow lines, type, and elevation source;
- Gravity Sewer Lines & Force Mains: diameter, material, roughness; and
- Lift Stations: flow lines, diameter, depth, slab elevation, water level elevations for pumps "on" and pumps "off."

The updated model shall be an "all pipes model". All Gravity Sewer Lines 10-inch in diameter and greater shall be modeled with survey elevation data collected during other tasks. The City shall field survey critical locations on pipes less than 10-inch, including but not limited to locations of Wet-Weather Related SSOs, and Lift Station discharge points downstream to pipelines of 10 inch or larger.

As much as possible, all Gravity Sewer lines smaller than 10-inch shall be included in the model using assumed slopes, flow lines and rim elevations where available. The City shall use LIDAR data or topographic data for non-surveyed rim elevations. The hydraulic model shall incorporate a unique identifier for each asset, which the City shall link with the City's existing GIS mapping and data storage.

The updated model shall be used to analyze: all Gravity Sewer Lines 10-inches in diameter and larger; all additional Gravity Sewer Lines acting as collector sewers; all Gravity Sewer Lines for distances of at least 1000 feet upstream of manholes and Lift Stations that have experienced a Wet-Weather Related SSO within three (3) years preceding the start date of the field survey of such pipes as required above; all Lift Stations; all Force Mains; and all active and passive flow control devices.

2.1.2. Manhole Depth Surveys

The City shall undertake manhole depth surveys during the hydraulic model update. Manholes surveyed as part of the manhole depth survey shall include at a minimum those manholes on: all Gravity Sewer Lines 10-inches in diameter and larger; all additional Gravity Sewer Lines acting as collector sewers; all Gravity Sewer Lines for distances of at least 1000 feet upstream of manholes and Lift Stations that have experienced Wet-Weather Related SSO(s), and all active and passive flow control devices.) Depth survey data shall be used to both verify the rim to invert distance, pipe size, drop manholes, connectivity, and map update for these manhole assets. The condition assessment report shall be used by the City to update the existing GIS maps for all manholes inspected, generate the rim to invert distance for the hydraulic model and prepare a remedial measures plan to address those manholes in need of rehabilitation. Modeling of smaller diameter sewers (<10 inches) may require elevation data based on known capacity concerns or Wet Weather Related SSO(s). The City estimates that approximately 1,600 of the nearly 8,241 manholes may be on 10 inch or larger pipes and/or other critical sewers.

The City shall use digital cameras on all manholes subject to depth surveys. All photographs that the City takes shall be included in the field inspection computer database so that a permanent electronic record can be maintained. During the manhole depth surveys, each of the following types of information shall be obtained:

- Basin Designation
- Manhole/Cleanout ID
- Inspection Status
- Address
- Surface cover, grade, type of cover (paved, yard, etc.)
- Material of construction – brick, concrete, etc.
- Area and Internal photo of manhole
- All incoming and outgoing pipe depths from rim to invert
- Pipe size
- All incoming and outgoing pipe digital photographs
- All incoming and outgoing pipe diameters and material of construction
- Outgoing pipe length
- Debris depth
- I/I Defects: Active, Evidence or No I/I, with digital photographs
- Field corrections to collection system map

The City shall attempt to locate all manholes to obtain the information for use in the modeling effort. Where manholes are buried under asphalt or concrete and require grade adjustments, the City shall expose and raise those critical manholes.

2.1.3. Manhole Elevation Survey

Following manhole inspection, and during model construction, the City shall perform the necessary rim elevation survey on all manholes to be inspected for the model update. Pipe slopes shall be calculated using the rim elevation data and rim to invert distance from the manhole inspection phase of work. The City shall coordinate the survey datum with City staff and tie the datum into the City control monument system. Using GPS equipment, where possible, the City shall tie the horizontal location and vertical elevation of the Gravity Sewer Line (to 0.1 feet) and pump station control elevations. The hydraulic model shall utilize the manhole rim to invert depth measured during manhole inspection. The City must conduct an elevation survey on the following manhole rims and Lift Stations:

1. Manhole rim elevation survey: Approximately 1,600 each
2. Lift Station control elevations: 22 lift stations

The City shall initiate the elevation survey following the manhole depth survey in order for survey crews to have updated maps and locations of assets. Performing the

manhole inspections prior to the field surveying will optimize the field survey by identifying those manholes that are buried (and will need to be raised) and those assets that could not be located by metal detector. The rim elevations from the survey along with the rim-to-invert distance from the manhole inspections shall be used to establish invert (flow line) elevations and pipe slopes. The data obtained during the Manhole Depth Survey and the Manhole Elevation Survey may be used to meet the requirements of V.B Condition Assessment and Remedial Measures Program.

2.1.4. Operational Parameters

The City shall incorporate into the model the information collected in previous tasks, all pump curves, and lift station control elevations, for each of the Lift Stations incorporated into the model. The City shall field verify the firm capacities of at least the largest four largest Lift Stations. The float/control elevations shall be based on record drawings or survey. VFD curves shall also be created where applicable.

2.1.5. Flow Patterns

The City shall input into the model diurnal flow patterns determined from the city-wide flow monitoring.

2.2. Allocate Existing Wastewater Flows

The City shall allocate and distribute residential and commercial wastewater flows within the service area and assign to the appropriate manholes using the water billing data and point shapefile linked to the parcel base maps.

2.3. Infiltration and Inflow

The City shall develop an I/I modeling strategy best suited to the available data based on the modeler's engineering analysis and in accordance with the practices recommended by the developer of the modeling software selected by the City. The modeling strategy shall be described in the Hydraulic Model Update Report which shall be sealed by a registered professional engineer licensed to practice in the State of Texas. The City shall compare the dry weather flows and wet weather flows with the gauged rain data to establish the relationship between rainfall and I/I and to determine the best method for estimating these flows in the model.

The City shall simulate I/I in the model through the actual flow monitoring data based on service area and diurnal contributions. The effects of precipitation on wastewater flow rates via rapid inflow or gradual infiltration shall also be modeled. The actual level of detail used in the simulations will be dependent upon the quality of data obtained in the flow-monitoring program. Infiltration shall be defined on a service area basis with set rates used for dry and wet flow conditions for all sections of a given line.

2.4. Large Wastewater Customers

The City shall evaluate major water users identified in the model database and update model based on water usage records provided by the City. The City shall directly connect large volume wastewater customers to the model where appropriate. The City shall develop a GIS point database detailing the approximate Water Meter Account

service locations with the associated billing data for a 12 month period.

3. Model Calibration

Model calibration and validation shall use the dry and wet weather criteria presented in the Water Environment Federation Manual of Practice No. FD-17, Third Edition, 2011, Table 5.2.

3.1. Calibration

The City shall perform calibration runs to match the flow monitoring data to the simulation results for average and peak flows at flow meter locations in each service area. The calibration runs shall also include matching the initial response time to known rainfall until the computer calculated flows and travel times (hydrographs) are in agreement with monitored data. The City shall make adjustments to the input data (flow rates, diurnal flow patterns, I/I values, pipe roughness, pump curves, pipe deficiencies, rainfall response characteristics, etc.) to calibrate the results to the flow data. The City shall use in the hydraulic model defined diurnal curves for each flow metering sub-basins and, if necessary, land use, for effective calibration. The City's model shall calculate the resulting hydrographs at points in the system that can then be compared with the monitoring data.

3.2. Sensitivity Analysis

As part of the calibration process, the City shall investigate the sensitivity of the modeling results to changes in various parameters. These parameters shall be varied for a range of typical values and the City shall analyze the effects this variation has on the modeling results. The City shall use the results of this analysis to guide the calibration process.

4. Existing System Analysis

The City shall use the calibrated model to determine the existing system flow capacities and identify Potential Capacity Constraints during the Assessment Storm (defined in Appendix G (Capacity Assessment and Remedial Measures Program)). The City shall compare Wet-Weather SSO's with model predictions and verify capacity related SSOs.

The City shall prioritize Potential Capacity Constraints based on analysis of modeling results and historical records. The City shall prepare a field verification plan that will field investigate by priority Potential Capacity Constraints to better define the site specific hydraulics and/or provide additional localized model calibration points.

The City shall use field investigation techniques that are most appropriate for each identified Potential Capacity Constraint, pursuant to Appendix G (Capacity Assessment and Remedial Measures Program). At a minimum, the City shall conduct rainfall monitoring at the original rain gauge locations. The City shall perform the selected field investigation technique to gather system response during wet weather. The City shall compare data recorded to model predictions to verify model results. The City shall consider those Potential Capacity Constraints that are field verified to be confirmed Capacity Constraints that shall undergo a remedial measures alternative analysis followed by inclusion in the Capacity Remedial Measures Plan, in accordance with the requirements set forth in Paragraphs 52-55 of the Consent Decree and Appendix G

(Capacity Assessment and Remedial Measures Program).

5. Future System Analysis

The updated hydraulic model may serve as the basis for development of the future system scenario analyses and, if developed, shall account for land use loadings and diurnal response. The City shall make appropriate assumptions for the hydraulic model with respect to future I/I. For any future system scenarios analyzed, the City shall extend service to the anticipated land uses and service area boundaries identified previously, and integrate options for future alternatives.

5.1. Proposed Future Developments

The City shall incorporate other future system improvements into model. The City shall conduct model validation following the addition of proposed new development. Scenario modeling shall include the infrastructure proposed in identified future new developments. Prior to starting this task, the City shall review the future model database for accuracy.

5.2. Allocate Future Flows and Create Scenarios

The City shall properly distribute and allocate to the updated hydraulic model the proposed wastewater flows previously developed for the ten and twenty year planning horizons. The City shall create the dry and wet weather flow scenarios for each of these planning years.

5.3. Future System Analysis

The City shall analyze design year models to the twenty year planning horizon. Identify potential capacity deficient segments/regions within the existing collection system for each design year model.

5.4. Develop System Improvement Alternatives

The City shall develop various system improvement alternatives, in accordance with the requirements of Paragraph 54 of the Consent Decree, to remediate Confirmed Capacity Constraints. Such alternatives shall include but not be limited to direct removal and replacement of capacity deficient Gravity Sewer Lines, I/I reduction, upsizing, pipe slope adjustment, paralleling deficient lines, addition of Lift Stations, service area transfers, and in-line and/or off-line storage options.

All Confirmed Capacity Constraints and the recommended system improvements shall be documented by the City.

Appendix G

Appendix G Capacity Assessment and Remediation Program

This appendix details the process the City will follow to implement the Capacity Assessment and Remedial Measures Program required under this Consent Decree. Terms appearing in this appendix retain the definitions assigned under the Consent Decree. The below process tree visually depicts the steps that the City shall follow when utilizing the updated hydraulic model to assess Potential Capacity Constraints and a field verification process to determine if Potential Capacity Constraints are Confirmed Capacity Constraints and, if so, to develop and implement appropriate remedial measures. The following is a detailed narrative process tree that sets forth the requirements and procedures that the City shall follow for each process level that is summarily depicted in Figure 1.

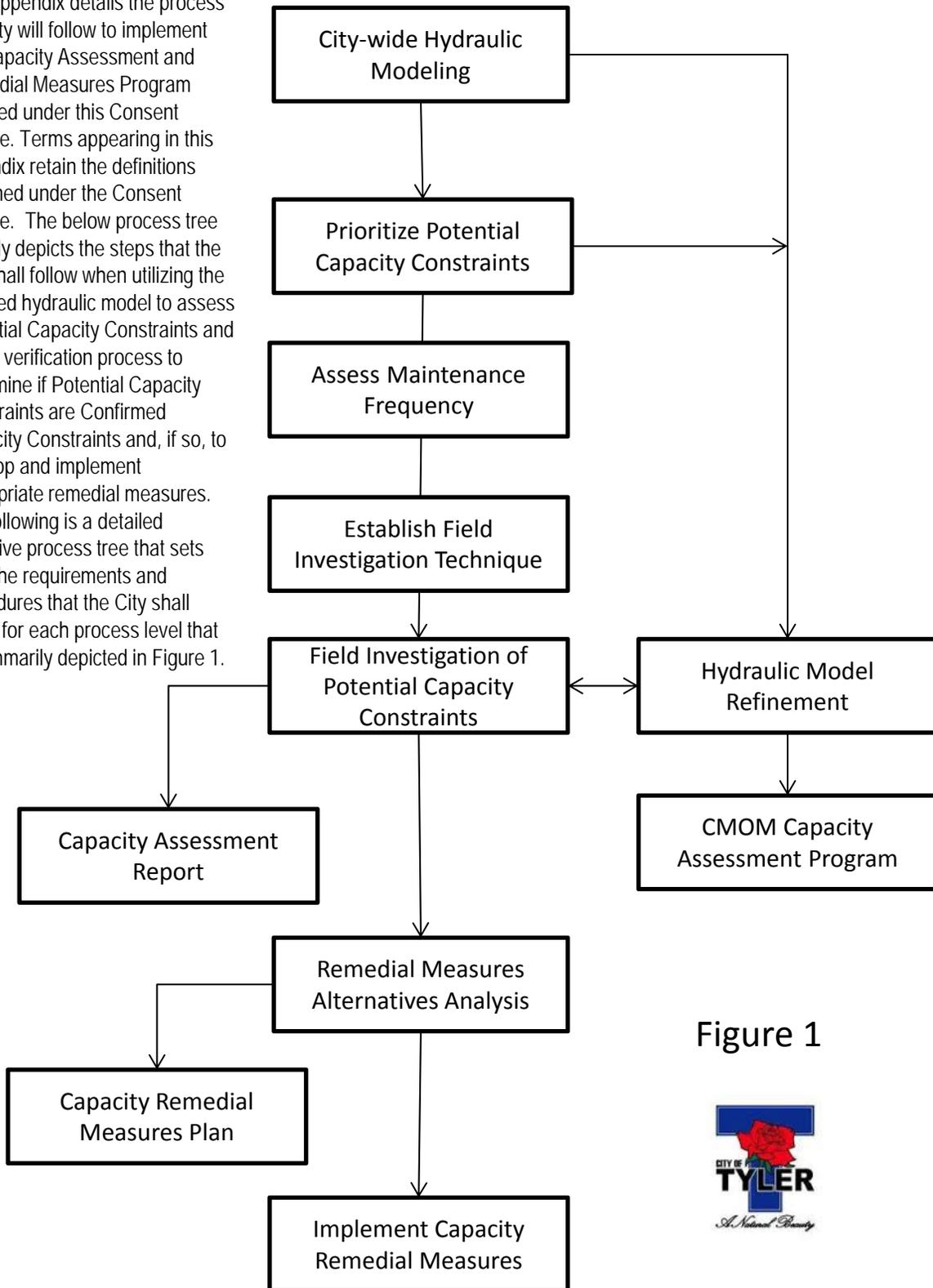
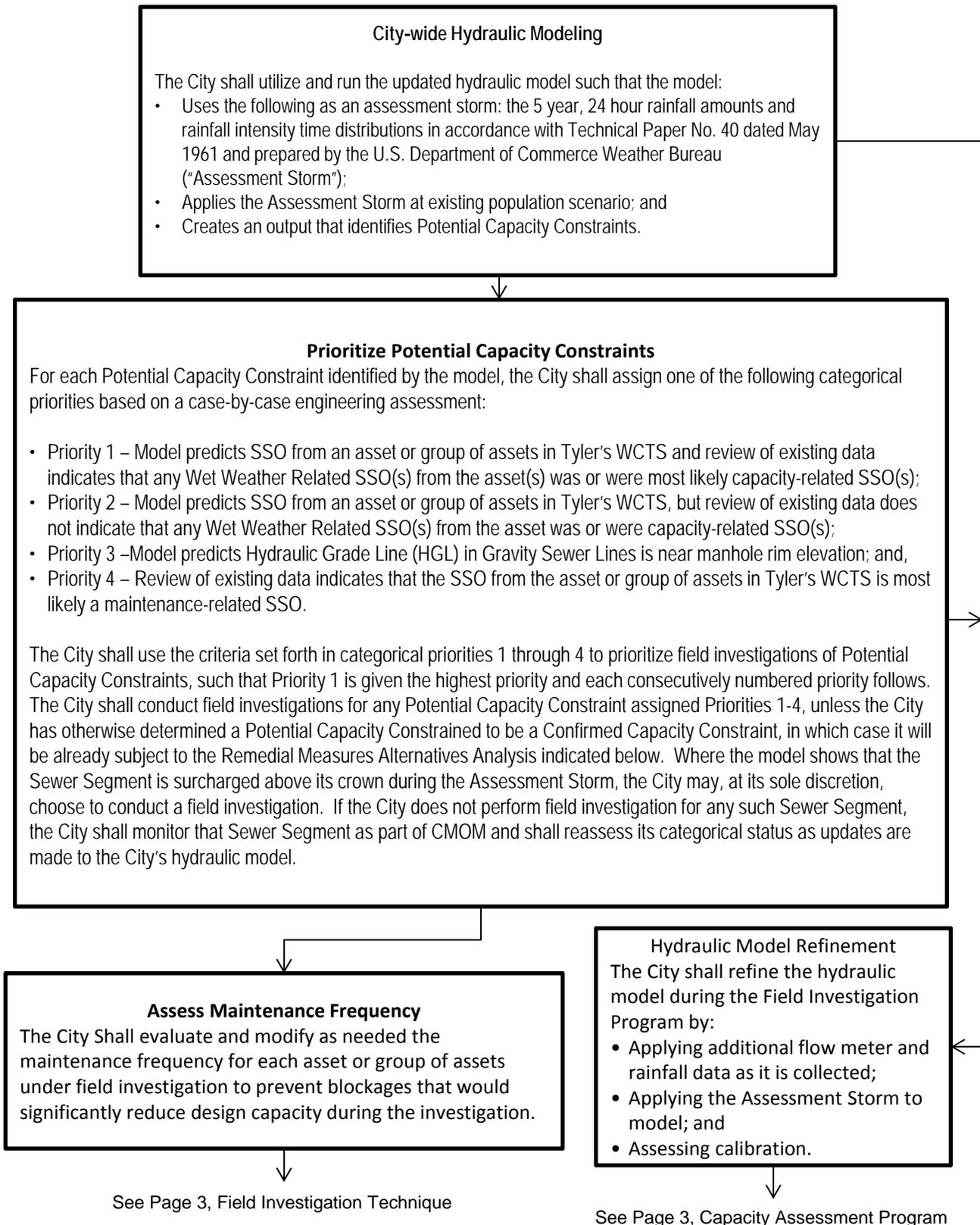


Figure 1



Appendix G

Capacity Assessment and Remediation Program



Appendix G

Capacity Assessment and Remediation Program

From Page 2

Determine Field Investigation Technique

For each field investigation that the City conducts pursuant to this Appendix, the City shall determine the field investigation technique(s) most appropriate for each Potential Capacity Constraint. The City shall use one or more of the following field investigation techniques for each investigation:

- Flow Metering (Generally for Priority 1 or 2 constraints);
- Smart Covers (Generally for Priority 1 or 2 constraints);
- Chalking (Generally for Priorities 3 or 4 constraints);
- Visual Inspection (As needed for Priorities 1-4 constraints);
- Rainfall monitoring (Generally for Priority 1, 2, and 3 constraints);
- Other techniques as determined by the City to be necessary

From Page 2

Hydraulic Model Refinement

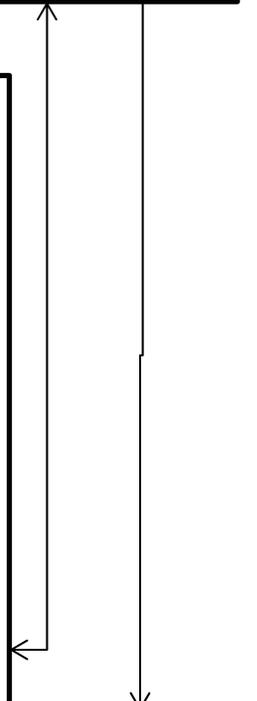
See Consent Decree Section V. C. 54 - Capacity Remedial Measures Plan

Field Investigation of Potential Capacity Constraints

For each field investigation that the City conducts pursuant to this Appendix, the City shall implement selected field investigation technique(s) at each location until a "significant wet weather event" is experienced. A significant wet weather event shall be a storm event of not less than 0.5 inches in 6 hours or more than the Assessment Storm that causes a noticeable system response.

The City shall evaluate Potential Capacity Constraints during field investigation using the following criteria:

- For wet weather events less than 1 inch over 24 hours, where the HGL in the Gravity Sewer Lines is near manhole rim elevation, the City shall identify the Potential Capacity Constraint as a Confirmed Capacity Constraint.
- For wet weather events that exceed 1 inch over 24 hours and are less than the Assessment Storm, the City shall apply the observed storm to the model, determine the predicted HGL at the Potential Capacity Constraint location, and compare the predicted HGL in the Gravity Sewer Lines from the model to observed HGL at the observed storm. If the observed HGL is:
 - at or above the model predicted HGL in the Gravity Sewer Lines at the observed storm, then:
 - for any priority 1, 2 or 3 Potential Capacity Constraint, the City shall identify as a Confirmed Capacity Constraint; and
 - for any priority 4 Potential Capacity Constraint, the City shall evaluate on a case-by-case basis to determine if there is a Confirmed Capacity Constraint.
 - less than the model predicted HGL in the Gravity Sewer Lines and is not near manhole rim elevation at the observed storm, then:
 - for any priority 1, 2, or 3 Potential Capacity Constraint, the City shall:
 - i. evaluate the Potential Capacity Constraint on a case-by-case case basis to determine if there is a Confirmed Capacity Constraint, if the model predicts an SSO at the Assessment Storm; or
 - ii. remove the Potential Capacity Constraint location from the field investigation program and monitor it as part of CMOM, if model does not predict an SSO at the Assessment Storm;
 - for any priority 4 Potential Capacity Constraint, the City shall remove the Potential Capacity Constraint from the field investigation program and monitor it in the future under CMOM.
- For a wet weather event that is approximately equal to or exceeds the Assessment Storm:
 - if an SSO does not occur, the City shall evaluate the intensity of the actual storm event to determine if a Confirmed Capacity Constraint exists;
 - If there is not a significant wet weather response, the City shall remove the Potential Capacity Constraint from the field investigation program.



CMOM Capacity Assessment Program

See Consent Decree Section V. A. CMOM Program

See Page 4, Remedial Measures Alternative Analysis

Capacity Assessment Report

See Consent Decree Section V. C. 53 - Capacity Assessment Report

Appendix G

Capacity Assessment and Remediation Program

From Page 3



Remedial Measures Alternatives Analysis

The City shall conduct a remedial measures alternatives analysis pursuant to this Appendix for each Confirmed Capacity Constraint, to select a remedial measures plan for the location. As part of this alternatives analysis the City shall collect necessary additional field data, such as:

- Smoke Testing;
- Dye Testing;
- Flow Metering;
- CCTV;
- Utility conflicts; and/or
- Other data as needed.

The City shall use engineering analyses to determine which remedial measures solution is most likely to resolve the Confirmed Capacity Constraint. Alternative remedial measures solutions to be considered include but are not limited to:

- Re-routing a portion of upstream wastewater flows;
- reducing flows entering the WCTS from customers;
- reducing inflow and/or infiltration;
- increasing conveyance capacity of WCTS;
- installing upstream flow detention facilities;
- continued monitoring of the location if appropriate; and/or,
- implementing other engineering solutions.

The City shall apply the Assessment Storm and twenty year population growth projection to determine appropriate asset sizing as needed for Confirmed Capacity Constraints.

Capacity Remedial Measures Plan
See Consent Decree Section V. C. 54. Capacity Remedial Measures Plan

Plan and Implement Capacity Remedial Measures

For each remedial measures solution selected by the remedial measures alternatives analysis, the City shall create a plan for implementing the remedial measure. The City shall prioritize remedial measures and periodically evaluate these priorities by reviewing:

- the severity of Confirmed Capacity Constraints identified during inspections;
- the frequency and history of capacity-related SSOs;
- the pipe size, age, material, and maintenance history;
- the relationship of Capacity Constraint areas of the WCTS to growth-related improvements and/or condition related improvements; and,
- other criteria the City determines appropriate.

For each remedial measures solution selected, the City shall also:

- Coordinate the implementation of the capacity-related remedial measures solution with any condition remedial measures, as needed;
- Allocate its budget to account for the planned remedial measures;
- Prepare design documents for bidding and construction, as needed;
- Implement the planned remedial measures; and,
- Monitor growth and development:
 - Where the model predicts a capacity constraint caused by projected twenty year population growth, Tyler shall monitor actual population growth compared with growth projected in the hydraulic model and shall construct capacity projects as needed to accommodate actual rate of growth.

Appendix H

APPENDIX H

Historic Constructed SSO Locations and Inspection Results				
	Manhole Name	Manhole Address	Action Taken as Reported by City	Date Inspected by City
1	MH-M16C32	429 W. Mockingbird	Plugged inlet with concrete and outlet with concrete and plastic stopper.	3/13/2013
2	MH-O16A13	1000 Blackwell Ave	EPA present during inspection. Confirmed no bypass exists. Subject pipe remnant did not connect to sewer system. Plugged anyway.	3/1/2013
3	MH-N22D20	520 Princeton Dr	Plugged inlet and outlet with concrete.	3/13/2013
4	MH-N13E16	1503 N. Winona Ave	Confirmed no bypass exists. Subject line is a 6" service line to a house.	3/12/2013
5	MH-N18H08	3715 Fry Ave	Plugged both inlet and outlet with concrete	3/13/2013
6	MH-M14I60	600 Ferguson Ave	Confirmed no bypass exists. Ductile iron pipe passing through manhole without bypass is sanitary sewer line. Other opening on manhole is from storm drain.	3/14/2013
7	MH-N15G17	823 Donnybrook Ave	Confirmed no bypass exists. Subject pipe connects to another manhole.	3/14/2013
8	MH-M14E06	500 N. Palace Ave	Confirmed no bypass. Subject pipe is a sewer main extension stub-out that was already plugged on the outlet side. Plugged pipe inside MH as a precaution.	3/14/2013
9	MH-N15E18	509 W. Douglas	EPA present during inspection. Subject pipe appeared to have been plugged on outlet side previously but pipe had broken beyond manhole, probably due to erosion along creek bank. Plugged both pipe opening in manhole and remnant of pipe that exits the manhole with concrete.	3/1/2013
10	MH-N17C06	Beckham/Troup Hwy	Actual location is behind 2109 Redbud. Confirmed no bypass exists. See photo.	3/14/2013

Appendix I

Appendix I
**Consolidated Listing of *United States et. al v. City of Tyler* Consent Decree Deliverables
and Consent Decree Reports¹**

Table 1. Consent Decree Deliverables

Name of Deliverable	Main Ref. in Consent Decree	Due Date for Deliverable (and for Any Associated Work)	Deliverable Subject to EPA Review and Approval or Review and Comment	Agencies to Receive Copies
Interim CMOM Program	V.A.	Interim CMOM Program must be submitted no later than 180 Days following the CD Effective Date.	EPA Review and Comment	EPA and TCEQ
Final CMOM Program ²	V.A.	The Final CMOM Program must be submitted no later than 1 Year after the CD Effective Date.	EPA Review and Approval	EPA and TCEQ
Hydraulic Model Update Summary	V.B.	Within 30 Days after completion of the Updated Hydraulic Model. ³	EPA Review and Comment	EPA and TCEQ
Capacity Remedial Measures Plan	V.C.	Within 42 months after the CD Effective Date.	EPA Review and Approval	EPA and TCEQ
Annual Condition Remedial Measures Plan	V.D.	July 1 st of each Year following the completion of the previous Year's Condition Assessment.	EPA Review and Approval	EPA and TCEQ
Lift Station Improvement Plan	V.E.	Within 18 Months of the CD Effective Date; to be submitted concurrently with the Lift Station Assessment Report	EPA Review and Approval	EPA and TCEQ

¹ This Appendix I is provided for the convenience of the Parties and is intended by the Parties for use as a reference document. In the event of any discrepancy between the provisions of Sections V (Compliance Requirements) and IX (Reporting Requirements) and this Appendix I, the provisions of Sections V (Compliance Requirements) and IX (Reporting Requirements) shall control. Capitalized terms shall maintain the definitions provided for in Section IV (Definitions) of the Consent Decree.

² The Final CMOM Program shall contain written descriptions of all CMOM Program components specified in Subsections A.1) (Training Program) through A.11) (Information Management System) of Section V as well as a schedule including deadlines for implementation of each Final CMOM Program component.

³ The Updated Hydraulic Model must be completed within 2 years of the CD Effective Date as required by Paragraph 50.

Table 2. Consent Decree Reports

Name of Report	Main Ref. in Consent Decree	Due Date for Report (and Reference for Associated Content)	Report Submitted To	Agencies to Receive Copies
Quarterly Reports	IX Para. 87.	<p>Quarterly Reports are due no later than 1 Month after the expiration of the applicable quarterly reporting period.⁴</p> <p>The Quarterly Reports shall include information required by Paragraph 87 of the Consent Decree.</p>	EPA and TCEQ for Review	EPA and TCEQ
Annual Reports	IX. Para. 88	<p>Annual Reports are due no later than March 1st of each Calendar Year after the CD Effective Date.</p> <p>The Annual Reports shall include information required by Paragraph 88 of the Consent Decree.</p> <p>Additionally, the Annual Reports shall include reported information as required in the following CMOM Program components:</p> <ol style="list-style-type: none"> 1) Reports on the Employee Training Program as required by Paragraph 19 2) Reports on the SSO Reporting and Documentation Procedures as required by Paragraphs 24.c and 25 	EPA and TCEQ for Review	EPA and TCEQ

⁴ Quarterly reporting periods within any Calendar Year are: January 1st through March 31st (Quarter 1); April 1st through June 30th (Quarter 2); July 1st through September 30th (Quarter 3); and October 1st through December 31st (Quarter 4). For the first Quarterly Report after the Effective Date only, the applicable reporting period shall be that portion of the applicable quarter between the Effective Date and the end of that quarter. For the first Calendar Year after the Effective Date only, Tyler shall only submit Quarterly Reports for the quarters that occur between the Effective Date and the end of the Calendar Year.

Name of Report	Main Ref. in Consent Decree	Due Date for Report (and Reference for Associated Content)	Report Submitted To	Agencies to Receive Copies
		<p>3) Reports on the System-Wide Routine Cleaning Program as required by Paragraph 30</p> <p>4) Reports on the Revised High Frequency Cleaning Program as required by Paragraph 33</p> <p>5) Reports on the Root Control Activities as required by Paragraph 43</p> <p>Additionally, the Annual Reports shall include:</p> <p>1) Reports on the Completion of Condition Assessment Activities as required by Paragraph 60</p> <p>2) Reports on the FOG Enforcement Program as required by Paragraph 40.j</p> <p>3) Reports on the completion of Capacity Remedial Measures as required by Paragraph 56</p> <p>4) Reports on the completion of Condition Remedial Measures work as required by Paragraph 63</p> <p>5) Reports on the completion of Lift Station Remedial Measures as required by Paragraph 69</p> <p>6) Reports on the completion of Force Main Remedial Measures work as required by Paragraph 74</p>		

Name of Report	Main Ref. in Consent Decree	Due Date for Report (and Reference for Associated Content)	Report Submitted To	Agencies to Receive Copies
		7) Reports on Additional Constructed SSO Locations discovered as required by Paragraph 77		
Capacity Assessment Report	V.C.	Within 42 months after the CD Effective Date as required by Paragraph 53	EPA and TCEQ for Review	EPA and TCEQ
Lift Station Assessment Report	V.E.	Within 18 months of the CD Effective Date as required by Paragraph 66 to be submitted concurrently with the Lift Station Improvement Plan	EPA and TCEQ for Review	EPA and TCEQ
Force Main Assessment Program Report	V.F.	Within 18 Months after the CD Effective Date as required by Paragraph 74	EPA and TCEQ for Review	EPA and TCEQ
Additional Constructed SSO Locations Report	V.G.	If Tyler discovers or is notified of additional Constructed SSO locations, no later than 2 business days after discovery or notification of these locations as required by Paragraph 75	United States and Texas for Review	United States and Texas
Removal of Additional Constructed SSO Locations Report	V.G.	Within 7 Days after completing the removal of the Additional Constructed SSO Location(s) as required by Paragraph 76	United States and Texas for Review	United States and Texas