

UNITED STATES OF AMERICA and)	
STATE OF TEXAS,)	
)	
Plaintiffs,)	Civil Action No. _____
)	
)	
v.)	
)	<u>CONSENT DECREE</u>
CITY OF CORPUS CHRISTI,)	
)	
Defendant.)	
_____)	

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WHEREAS, Plaintiffs the United States of America (“United States”), on behalf of the United States Environmental Protection Agency (“EPA”), and the State of Texas (“State”), acting at the request of and on behalf of the Texas Commission on Environmental Quality (“TCEQ”), have filed a Complaint in this action concurrently with this Consent Decree, alleging that the Defendant, the City of Corpus Christi, Texas (“City”), violated the federal Clean Water Act (“Act” or “CWA”), 33 U.S.C. § 1251 *et seq.*, Chapter 26 of the Texas Water Code (“TWC”), and the regulations promulgated under both the CWA and the TWC;

WHEREAS, the Complaint alleges that the City violated, and will continue to violate, the Act and the TWC by: (1) exceeding effluent limitations and other conditions established in National Pollutant Discharge Elimination System (“NPDES”) permits issued by the State to the City pursuant to Section 402 of the CWA, 33 U.S.C. § 1342 (“TPDES Permits”), for its six municipal Waste Water Treatment Plants (“WWTPs”) located in and around the City of Corpus Christi, Texas; and (2) discharging pollutants, including sewage;

WHEREAS, the City has developed, calibrated, and verified a hydraulic model of its Sewer Collection System, and EPA has determined that, as of the Date of Lodging, the model adequately represents the system;

WHEREAS, the City has been implementing a number of programs to upgrade, operate and maintain its Sewer Collection System and WWTPs and these programs are targeted at preventing and responding to Sanitary Sewer Overflows and exceedances of effluent limits found in its TPDES Permits;

WHEREAS, the City does not admit any facts or liability to the United States, the State or any third party arising out of the transactions or occurrences alleged in the Complaint;

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

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

WHEREAS, the Parties desire to avoid litigation and to work cooperatively on CWA compliance issues relating to the City's Sewer Collection System and the City's WWTPs;

WHEREAS, the Parties recognize this Consent Decree is in the interests of justice, a transparent resolution, and consistent with the impartial rule of law and fundamental constitutional principles, including federalism and control of state governments by their democratically elected leaders. While the City has proposed and agreed to make significant improvements to its infrastructure, this Consent Decree is narrowly tailored to achieve the improvements necessary to remedy alleged violations of federal and state law; it is not being used to accomplish other policy goals or obtain relief that is unrelated to the alleged violations;

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, with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action pursuant to Sections 309(b) and 504(a) of the CWA, 33 U.S.C. §§ 1319(b) and 1364(a), and 28 U.S.C. §§ 1331, 1345 and 1355, and over the Parties. Venue lies in this District, pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because it is the judicial district where the City is located and where the alleged violations occurred. For

purposes of this Consent Decree, or any action to enforce this Consent Decree, the City consents to the Court's jurisdiction over the City, this Consent Decree, and any action to enforce this Consent Decree. The City further consents to venue in this judicial district.

2. For purposes of this Consent Decree, the City agrees not to contest that the Complaint states claims upon which relief may be granted under the CWA and the TWC.

II. APPLICABILITY

3. The provisions of this Consent Decree shall apply to, and are binding upon, the United States and the State, and upon the City and its successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of any portion of the City's Wastewater Collection and Treatment System ("WCTS"), whether in compliance with the procedures of this Paragraph or otherwise, shall relieve the City of its obligation to ensure that the terms of this Consent Decree are implemented unless: (a) the transferee agrees to undertake the obligations of the Consent Decree and to be substituted for the City as a Party under the Consent Decree and thus be bound by the terms thereof, and (b) the United States and the State consent to the transfer and to relieve the City of its obligations under the Consent Decree. Any dispute concerning a decision by the United States or the State to refuse to approve the substitution of the transferee for the City shall be considered a dispute concerning modification and shall be resolved pursuant to Paragraph 110.

5. Within sixty (60) Days after the Effective Date of the Consent Decree, the City shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as to any contractor or consultant retained to perform Work required under this Consent Decree. The City may satisfy this requirement by providing an electronic copy of this Consent Decree to the

required officers, employees, agents, contractors, and/or consultants, or by providing an electronic link to a website where the Consent Decree is posted. The City shall condition any contract to perform Work required under this Consent Decree upon performance of the Work in conformity with the terms of this Consent Decree.

6. Any action taken by any contractor or consultant retained to implement the City's obligations under this Consent Decree shall be considered an action of the City solely for purposes of determining compliance with this Consent Decree. In an action to enforce this Consent Decree, the City shall not assert as a defense against the United States and/or the State the failure of any of its officers, directors, employees, agents, contractors, consultants, successors, or assigns, to take any action necessary to comply with the provisions of this Consent Decree. However, this Consent Decree shall not limit the City's right to take all appropriate action against any such person or entity that causes or contributes to the City's act or failure to act.

III. PURPOSE

7. The express purpose of the Parties entering into this Consent Decree is for the City to take all necessary measures to achieve full compliance with the CWA, the TWC, and regulations promulgated thereunder, as well as full compliance with the City's TPDES Permits. All plans, reports, construction, remedial maintenance, operational requirements, and other obligations in this Consent Decree, and in any amendment to this Consent Decree, shall have the objective of ensuring that the City complies with the CWA and TWC, all applicable federal and state regulations, and the terms and conditions of the City's TPDES Permits.

IV. DEFINITIONS

8. Terms used in this Consent Decree that are defined in the CWA or the regulations promulgated under the CWA shall have the meanings assigned to them in the CWA or such

regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, including the attached appendices, the following definitions shall apply:

- 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. A wastewater release or backup into a building or onto private property 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. “Capacity Constraint” shall mean those discrete components, or groups of components, of the City’s Sewer Collection System that are determined by the City, consistent with Section V and Appendix D (Capacity Assessment and Remedial Measures Approach), to have verified deficiencies that have: i) caused or significantly contributed to previous capacity-related SSOs due to wet weather events or ii) that are likely to cause or significantly contribute to future capacity-related SSOs due to wet weather events, as defined in Appendix D (Capacity Assessment and Remedial Measures Approach).
- c. “CCTV” shall mean closed circuit television.
- d. “City” shall mean the Defendant, the City of Corpus Christi, Texas.
- e. “CWA” shall mean the Clean Water Act, formally titled the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 *et seq.*
- f. “CMOM Plan” shall mean the City’s Capacity, Management, Operation and Maintenance Plan that was approved by EPA prior to the Date of Lodging.

- g. “Complaint” shall mean the complaint filed by the Plaintiffs in this case.
- h. “Consent Decree” or “Decree” shall mean this Consent Decree and all appendices attached hereto, as listed in Section XXIII (Integration/Appendices).
- i. “Consolidation Impacted Sub-basins” shall mean WCTS Sub-basins that will be impacted by any WWTP consolidation or construction projects.
- j. “Date of Lodging” shall mean the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Southern District of Texas.
- k. “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.
- l. “Deliverable” shall mean any written document required to be submitted by or on behalf of the City to EPA and/or TCEQ pursuant to this Consent Decree.
- m. “Effective Date” shall have the meaning provided in Section XVII (Effective Date).
- n. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.
- o. “EPA Denial” shall mean EPA final action disapproving the 2018 TCEQ-adopted Texas Surface Water Quality Standards relating to Segments 2485 – Oso Bay and 2486 – Blind Oso Bay, pursuant to 40 C.F.R. § 131.21(a).
- p. “FOG” shall mean fats, oils, and grease.

q. “Force Main” shall mean any City-owned or operated pipe that receives and conveys, under pressure, wastewater from the discharge side of a pump. A Force Main is intended to convey wastewater under pressure.

r. “Gravity Sewer Main” shall mean a City-owned or operated pipe that receives, contains and conveys wastewater not normally under pressure and that is intended to flow unassisted under the influence of gravity. For purposes of this Consent Decree, a Private Lateral is not a Gravity Sewer Main.

s. “Gravity Sewer Main Segment” shall mean the full length of a Gravity Sewer Main between two manholes.

t. “Hydraulic Model” shall mean the hydraulic model of the City’s Sewer Collection System that the City developed, calibrated and verified, and that EPA determined adequately represents, as of the Date of Lodging, the City’s Sewer Collection System.

u. “Integrated Plan” shall mean an Integrated Plan developed by the City in accordance with the EPA guidance titled “Integrated Municipal Stormwater and Wastewater Planning Approach Framework” dated June 5, 2012 (the “EPA Framework”).

v. “Large Diameter Gravity Sewer Main” shall mean a Gravity Sewer Main within the Sewer Collection System that is twenty-four (24) inches or greater in diameter.

w. “Oso WWTP Alternative” shall mean the rerouting of flows of wastewater from the existing Oso WWTP as a result of an EPA Denial and in accordance with the procedures set forth in Paragraph 32 of this Consent Decree.

x. “Oso Alternative Impacted Sub-basins” shall mean Sub-basins that will be impacted by any Oso WWTP Alternative projects.

y. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral.

z. “Parties” shall mean the United States, the State of Texas, and the City.

aa. “Prioritization Approach” shall mean the methodology for prioritizing Subdivisions for cleaning and inspection set forth in Appendix C (Prioritization Approach).

bb. “Priority Projects” shall mean Condition Remedial Measures for Small Diameter Gravity Sewer Mains, Force Mains, manholes, air relief valves, and lift stations that require implementation of Condition Remedial Measures to avoid the occurrence of an SSO anticipated to occur before the submission of the Condition Remedial Measures Plan

cc. “Private Lateral” shall mean a sanitary sewer or wastewater collection line not owned by the City that conveys sewage or wastewater from a building or buildings to the Sewer Collection System.

dd. “Remedial Measures” shall mean Sewer Collection System improvements identified by the City for implementation, pursuant to Section V of this Consent Decree, to address condition- and/or capacity-related deficiencies within the Sewer Collection System. Remedial Measures include, but are not limited to, spot repairs, trenchless sewer rehabilitation, sewer replacement, and repair or reconstruction. Remedial Measures meant to address condition-related deficiencies will be referred

to as “Condition Remedial Measures.” Remedial Measures meant to address capacity-related deficiencies will be referred to as “Capacity Remedial Measures.”

ee. “SSO” shall mean any overflow, spill, or release of wastewater from, or caused by conditions in, the Sewer Collection System. SSOs 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 Sewer Collection System; and
- ii. any release of wastewater from the City’s Sewer Collection System 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 Collection System” shall mean the municipal wastewater collection, retention, and transmission systems, including all pipes, interceptors, Force Mains, Gravity Sewer Mains, lift stations, pumping stations, manholes and appurtenances thereto, that are owned or operated by the City. For purposes of this Consent Decree, the Sewer Collection System does not include Private Laterals.

hh. “Sewershed” shall mean a section of the City’s Sewer Collection System that is a distinct drainage or wastewater collection area and has been designated as such by the City. For purposes of this Consent Decree, the City has the following six Sewersheds:

- i. the Allison Sewershed;
- ii. the Broadway Sewershed;

- iii. the Greenwood Sewershed;
 - iv. the Laguna Madre Sewershed;
 - v. the Oso Sewershed; and
 - vi. the Whitecap Sewershed.
- ii. “Small Diameter Gravity Sewer Main” shall mean a Gravity Sewer Main within the Sewer Collection System that is less than twenty-four (24) inches in diameter.
- jj. “State” shall mean the State of Texas.
- kk. “Sub-basin” shall mean a portion of the City’s Sewer Collection System served by a single lift station or a designated portion of the City’s Sewer Collection System, as identified by the City.
- ll. “Subdivisions” are the approximately 1,700 distinct areas that together make up the Sewer Collection System. Each of these areas was constructed during a relatively short period such that the asset materials, methods of construction, design, soil conditions, and asset ages are similar and there is generally a single defined downstream terminus per Subdivision.
- mm. “TCEQ” shall mean the Texas Commission on Environmental Quality and any of its successor departments or agencies.
- nn. “TPDES Permits” shall mean Texas Pollutant Discharge Elimination System permits issued to the City for the WWTPs.
- oo. “United States” shall mean the United States of America, acting on behalf of EPA.

pp. “WCTS” shall mean the combined total of all WWTPs and the Sewer Collection System.

qq. “WWTP(s)” shall mean one or more of the following wastewater treatment plants operated by the City:

- i. The Allison Wastewater Treatment Facility (“Allison WWTP”), located at 4101 Allison Drive in the northwest portion of the City of Corpus Christi, Texas, approximately 1 mile north of Interstate Highway 37 in Nueces County, Texas;
- ii. The Broadway Wastewater Treatment Facility (“Broadway WWTP”), located at 1402 West Broadway, approximately 3,000 feet east of the intersection of Broadway and North Port Avenue in the City of Corpus Christi in Nueces County, Texas;
- iii. The Greenwood Wastewater Treatment Facility (“Greenwood WWTP”), located at 6541 Greenwood Drive, at the intersection of State Highway 357 (a/k/a Saratoga Blvd.) and Greenwood Drive, about 1.5 miles south of South Padre Island Drive, in the City of Corpus Christi in Nueces County, Texas;
- iv. The Laguna Madre Wastewater Treatment Facility (“Laguna Madre WWTP”), located at 201 Jester Street, approximately 0.5 miles east of the intersection of Jester Street and N.A.S. Drive in the City of Corpus Christi in Nueces County, Texas;

- v. The Oso Wastewater Treatment Facility (“Oso WWTP”), located at 501 Nile Drive, at the intersection of Nile Drive and Ennis Joslin Road, in the City of Corpus Christi in Nueces County, Texas; and
- vi. The Whitecap Wastewater Treatment Facility (“Whitecap WWTP”), located at 13409 Whitecap Boulevard at the west end of Whitecap Boulevard on Padre Island within the City of Corpus Christi in Nueces County, Texas.

rr. “Work” shall mean the activities the City is required to perform under this Consent Decree until the termination of this Consent Decree.

V. REMEDIAL MEASURES, PRIORITIZATION, AND SCHEDULES

9. No later than the Effective Date of this Consent Decree, the City shall initiate the Work required by this Consent Decree. Unless otherwise specified in this Consent Decree, the City shall complete all Work no later than fifteen (15) years from the Effective Date.

Additionally, the City shall meet the following interim deadlines:

- a. By no later than two (2) years after the Effective Date, the City will inspect and assess, in accordance with Paragraph 19 (Inspection Assessment Criteria), all Force Mains and Force Main air relief valves in the WCTS;
- b. By no later than four (4) years after the Effective Date, the City will complete the following activities in accordance with Paragraphs 15 (Small Diameter Gravity Sewer Main Cleaning) and 19 (Inspection Assessment Criteria):
 - i. Cleaning and inspection of all Small Diameter Gravity Sewer Mains in the Subdivisions prioritized using the Prioritization Approach, which includes all Subdivisions where one (1) or more structural or blockage-related SSO from a Gravity Sewer Main has occurred since

January 1, 2012, provided that the City shall clean and inspect no less than 450 miles of Small Diameter Gravity Sewer Mains pursuant to this requirement;

- ii. Inspection of all manholes associated with Large Diameter Gravity Sewer Mains in the WCTS; and
 - iii. Inspection of all lift stations in the WCTS.
- c. By not later than six and a half (6.5) years after the Effective Date, the City shall complete all Priority Projects;
 - d. By no later than ten (10) years after the Effective Date, the City shall complete all Gravity Sewer Main cleaning.
 - e. By no later than ten (10) years after the Effective Date, the City shall complete all inspections of all Gravity Sewer Mains.

10. Assets that fall into the categories identified in Paragraphs 9.a-e but are installed after the Effective Date may be inspected, assessed, cleaned, and maintained on schedules determined pursuant to the CMOM Plan required by Section V.F, rather than on the schedules set forth in Paragraph 9.

11. All Work shall be performed in accordance with the Design Criteria for Wastewater Systems under Title 30 Chapter 217 of the Texas Administrative Code, 30 Tex. Admin. Code ch. 217, and using sound engineering practices to ensure that construction, management, operation and maintenance of the Sewer Collection System complies with the CWA.

A. Capital Improvement Projects

12. Completion of Existing Sewer Collection System Capital Improvement Projects.

The City shall complete the existing capital projects listed at Appendix A (Capital Improvements Plan Projects) by the dates specified in Appendix A (Capital Improvements Plan Projects). The

City shall provide notice and certification to EPA, in accordance with the requirements of Section XV (Notices), when all projects identified in Appendix A have been completed.

13. In each Annual Report required by Section VII (Reporting Requirements), the City shall include a progress update for each capital improvement project contained in Appendix A (Capital Improvements Plan Projects).

B. Cleaning of Gravity Sewer Mains

14. System-Wide Sewer Collection System Cleaning. The City shall implement a program of cleaning that results in the cleaning or inspection of every Gravity Sewer Main within the Sewer Collection System, including the Small Diameter Gravity Sewer Mains cleaned and inspected pursuant to Paragraph 9, within ten (10) years of the Effective Date (“System-Wide Cleaning Program”), except that the City is not required to clean Large Diameter Gravity Sewer Mains it otherwise inspects and assesses pursuant to Paragraph 16. For purposes of this Section, cleaning shall mean the removal of FOG, debris, roots, and/or any other deposits from the interior of any Gravity Sewer Main. “Cleaning Findings” are data and information gathered during initial and repeat inspections and cleanings of Gravity Sewer Mains, including, but not limited to, CCTV findings and SSO root-cause findings. For Gravity Sewer Main cleaning requirements, the city-owned portions of sewer laterals are not subject to the cleaning requirements within Paragraphs 14 through Paragraph 16, except as required by the City’s SSO Response Plan referenced in Paragraph 38. The System-Wide Cleaning Program shall be conducted in accordance with the provisions of this subsection V.B. and Appendix B (Corpus Christi System-Wide Cleaning Program Process and Guidelines).

15. Small Diameter Gravity Sewer Main Cleaning. The City shall clean all Small Diameter Gravity Sewer Mains as follows:

- a. All cleaning and inspection activities performed by the City since July 1, 2016 that conform to the requirements of Paragraphs 14 and 15 shall be credited towards the City's compliance requirements under this Paragraph.
- b. The City shall clean Small Diameter Gravity Sewer Mains in Subdivisions prioritized using the Prioritization Approach on a schedule consistent with Paragraph 9.b.i and this Paragraph 15.
- c. Annual Minimum Cleaning Requirement. Each calendar year (prorated for any partial year after the Effective Date), the City shall clean, at a minimum, an amount of Small Diameter Gravity Sewer Mains (measured in pipe miles) equaling twelve (12) percent of the total number of pipe miles of all Small Gravity Sewer Mains.
- d. Repeat Cleanings and Evaluation of Cleaning Findings. The City shall continue to implement a repeat cleaning program (the "Hot Spot Program") to re-clean specific Small Diameter Gravity Sewer Mains after initial cleaning of the Small Diameter Gravity Sewer Mains. Notwithstanding any existing requirements for determining the frequency of re-cleaning, after the Effective Date the frequency of re-cleaning as part of the Hot Spot Program shall be updated based on Cleaning Findings. Cleaning Findings shall also be used to evaluate the routine repeat cleaning frequency for each Small Diameter Gravity Sewer Main on an ongoing basis as part of the City's CMOM Plan.
- e. The City may credit both the pipe miles of any initial cleaning and the pipe miles of any Hot Spot Program cleaning completed during a given calendar year toward the annual twelve (12) percent requirement of this subsection V.B.,

without regard to whether the location of the initial cleaning and the location of the Hot Spot Program cleaning are physically overlapping and even if the same pipe segment or portion of a pipe is cleaned as part of the initial cleaning requirement and Hot Spot Program cleaning in the same calendar year.

16. Large Diameter Gravity Sewer Main Cleaning. The City shall clean or inspect all Large Diameter Gravity Sewer Mains as follows:

- a. Initial Inspections. The City shall inspect all manholes providing access to Large Diameter Gravity Sewer Mains within four (4) years after the Effective Date. As part of each inspection, the City shall measure the depth of debris in the associated Large Diameter Gravity Sewer Main at the upstream and downstream manholes.
- b. Cleaning. The City shall clean each Large Diameter Gravity Sewer Main segment for which the depth of debris, measured at either the upstream or downstream manhole, exceeds twenty (20) percent of the pipe diameter. No less than thirty (30) percent of all Large Diameter Gravity Sewer Main segments for which the depth of debris exceeds twenty (20) percent shall be cleaned within six (6) years of the effective date and no less than sixty (60) percent of such sewer segments shall be cleaned within eight (8) years of the effective date. All such cleaning shall be completed within ten (10) years of the Effective Date.
- c. Re-inspection Frequency. Any Large Diameter Gravity Sewer Main segment found to have a depth of debris, measured at either the upstream or the downstream manhole, that exceeds twenty (20) percent of the pipe diameter shall be re-inspected within five (5) years of the date that Large Diameter

Gravity Sewer Main is inspected unless such main is cleaned within that five (5) year period, in which case it will be re-inspected within five (5) years of the date that main is cleaned. Re-cleaning and re-inspection frequencies for all other Large Diameter Gravity Mains will be determined as part of the CMOM Plan.

- d. All cleaning and inspection activities performed by the City since January 1, 2012 that conform to the requirements of this Paragraph shall be credited toward the City's compliance requirements.

17. Referral of Gravity Sewer Mains for CCTV Inspection. When Cleaning Findings indicate that any Gravity Sewer Main may have a significant structural defect, each such Gravity Sewer Main shall be inspected using CCTV and assessed in accordance with Appendix E (Condition Assessment and Remedial Measures Approach). A Gravity Sewer Main "may have significant structural defect" for purposes of this Paragraph if, inter alia:

- a. a cleaning tool cannot be passed through the pipe;
- b. pieces of broken pipe are observed at the downstream manhole; or
- c. a significant quantity of recently infiltrated soil is observed at the downstream manhole.

C. Condition Assessment and Remedial Measures Approach

18. The City shall conduct a system-wide inspection, assessment and Remedial Measures program that evaluates the structural condition of its Gravity Sewer Mains, manholes, Force Mains, and lift stations within the Sewer Collection System by implementing the inspection, assessment and Remedial Measures requirements of Paragraphs 19-27 . For Gravity Sewer Main inspection requirements, the full length of the city-owned portions of sewer laterals are not required to be inspected beyond what is typically visible during an inspection of a lateral

connection point to the Gravity Sewer Main. Condition defects identified within the city-owned portions of sewer laterals causing or significantly contributing to SSOs shall be addressed in a manner consistent with the SSO Response Plan and CMOM Plan. Based on the criteria included in the applicable following paragraphs, all such facilities inspected pursuant to Paragraph 19 shall be subject to: (a) the requirements of Paragraph 20 (Priority Projects), (b) the Condition Remedial Measures Alternatives Analyses, pursuant to Paragraph 23, or (c) the Performing Assets Program, pursuant to Paragraph 27.

19. Inspection Assessment Criteria.

- a. Gravity Sewer Mains. The City shall inspect and assess, in accordance with the rating criteria set forth in Appendix E (Condition Assessment and Remedial Measures Approach) and the deadlines set forth in Paragraph 9, all Gravity Sewer Mains not installed, rehabilitated, or replaced more recently than ten (10) years prior to the Effective Date. Any Gravity Sewer Main that has been inspected after January 1, 2010, in a manner consistent with the requirements of Paragraphs 19.a.i and 19.a.ii and for which the City has retained video inspection records sufficient to allow identification of the applicable structural condition category listed in Appendix E (Condition Assessment and Remedial Measures Approach) shall be credited toward the City's compliance with this subsection V.C., provided that the City has also completed an assessment for each such Gravity Main in accordance with Appendix E (Condition Assessment and Remedial Measures Approach) and has included the results of any such assessment in the Condition Assessment Report.

- i. Large Diameter Gravity Sewer Main Inspection. For Large Diameter Sewer Main inspections, the City may use CCTV, sonar, 360-degree video, laser imaging, visual inspection, physical entry, or other techniques commonly used by other sewer management agencies.
- ii. Small Diameter Gravity Sewer Main Inspection.
 1. CCTV Inspection of Gravity Sewer Mains. The City shall use CCTV to inspect the following Small Diameter Gravity Sewer Mains:
 - a. All Small Diameter Gravity Sewer Mains inspected pursuant to Paragraph 9.b made of any material other than polyvinyl chloride (“PVC”). However, this paragraph does not apply to those Gravity Sewer Mains that have been slip-lined, CIPP lined, replaced, or pipe-burst, which are to be inspected pursuant to the requirements of Paragraphs 27 (Performing Assets Program) or 19.a.ii.3;
 - b. Any Small Diameter Gravity Sewer Main referred in accordance with Paragraph 17 (Referral of Gravity Sewer Mains for CCTV Inspection);
 - c. In Subdivisions addressed as part of the Performing Asset Program, all Small Diameter Gravity Sewer Mains that were installed before 1974 and are made of any material other than PVC. However, this paragraph does not apply to those Small Diameter Gravity Sewer Mains that have been slip-lined,

CIPP lined, replaced, or pipe-burst, which are to be inspected pursuant to the requirements of Paragraphs 27 (Performing Assets Program) and 19.a.ii.3;

2. In Subdivisions addressed as part of the Performing Asset Program, the City must use CCTV or pole camera(s) to inspect all Small Diameter Gravity Sewer Mains made of any material other than PVC that were installed between 1974 and 1982, inclusive.
3. All Other Small Diameter Gravity Sewer Mains. The City shall inspect all other Small Diameter Gravity Sewer Mains (*i.e.*, PVC Small Diameter Gravity Sewer Mains, Performing Assets Small Diameter Gravity Sewer Mains installed between 1983 and the date ten (10) years prior to the Effective Date, inclusive, and Gravity Sewer Mains that have been slip-lined, CIPP lined, replaced, or pipe-burst) using one or more of the following techniques:
 - a. CCTV,
 - b. pole camera,
 - c. smoke testing,
 - d. review of information from sewer cleaning,
 - e. dye testing,
 - f. mechanical proofing, and
 - g. other techniques commonly used by other sewer management agencies.

When inspections conducted using any of the non-CCTV techniques listed above indicate that structural defects may be present, the City shall inspect the affected Gravity Sewer Main Segment using CCTV.

- b. Manholes. The City shall visually inspect all manholes except those for which it has documentation of a visual inspection conducted after January 1, 2010, sufficient to assess the physical condition of the manhole. All inspections of manholes associated with Small Diameter Gravity Sewer Mains shall be conducted during the same time frame used for the inspection of the associated Small Diameter Gravity Sewer Main, or sooner. The City shall assess the condition of each inspected manhole in accordance with Appendix E (Condition Assessment and Remedial Measures Approach).
- c. Force Mains and Air Relief Valves. The City shall inspect and assess each Force Main in the Sewer Collection System, together with its air relief valves in accordance with the criteria below:
 - i. Force Mains. All Force Mains shall be inspected by visually examining any exposed area of a Force Main and the ground surface over the entire length of buried Force Mains. When an examination of the exposed area of a Force Main or the ground surface over any Force Main reveals evidence of Force Main failure, the relevant section of Force Main shall be excavated and physically examined. Force Mains that have been inspected since 2015 in a manner consistent with the requirements of this Paragraph 19.c. and for which the City has retained inspection records suitable to identify the condition shall be credited toward the City's

compliance with this subsection V.C., so long as any defects identified that are likely to cause or significantly contribute to the future occurrence of an SSO or SSOs are addressed pursuant to Paragraph 20 (Priority Projects) or subject to Condition Remedial Measures Alternatives Analysis.

- ii. Force Main Air Relief Valves. All air relief valves shall be inspected to identify defects that may cause or contribute to SSOs. Force Main air relief valves that have been inspected since 2015 and prior to the Effective Date in a manner consistent with this paragraph 19.c. and for which the City has retained inspection records suitable to identify the condition shall be credited toward the City's compliance with this subsection V.C., so long as the City demonstrates that it has completed all repairs of defects that may cause or contribute to an SSO or SSOs identified in such inspections or completes such repairs within 180 Days after the Effective Date.
- d. Lift Stations. All lift station inspections shall be conducted using the lift station checklist included as Appendix E (Condition Assessment and Remedial Measures Approach) to this Consent Decree. Lift stations that have been inspected since 2015 for which the City has retained inspection records suitable to identify the condition category in accordance with Appendix E (Condition Assessment and Remedial Measures Approach) shall be credited toward the City's compliance with this subsection V.C.

20. Priority Projects. Beginning on the Effective Date and continuing on an ongoing basis until four (4) years from the Effective Date, the City shall identify the Priority Projects using the results of all inspections performed pursuant to Paragraph 19 (Inspection Assessment Criteria), and any other source(s) of information reasonably available, including customer complaints, service calls, information discovered during the Wet Weather SSO Verification Process, Cleaning Findings, and conditions discovered during maintenance activities.

a. Priority Projects shall include projects necessary to remediate:

- i. any defect that is: (1) causing any Small Diameter Gravity Sewer Main to be rated D or E, according to the applicable table in Appendix E (Condition Assessment and Remedial Measures Approach), and (2) likely to cause or significantly contribute to an SSO before the submission of the Condition Remedial Measures Plan;
- ii. any defect that is: (1) causing any manhole to be rated D or E, according to the applicable table in Appendix E (Condition Assessment and Remedial Measures Approach), and (2) likely to cause or significantly contribute to an SSO before the submission of the Condition Remedial Measures Plan;
- iii. any defect in any component of any lift station that: (1) receives a rating of “poor,” according to the applicable table in Appendix E, and (2) is likely to cause or significantly contribute to an SSO before the submission of the Condition Remedial Measures Plan;
- iv. any Force Main found to have a defect likely to cause or significantly contribute to an SSO before the submission of the Condition Remedial Measures Plan;

- v. any air relief valve found to have a defect that may cause or contribute to an SSO shall be repaired as soon as practicable, but not longer than 180 Days after discovery or 180 Days after the Effective Date, whichever is later; and
 - vi. any other defect the City identifies as having caused or significantly contributed to, or being likely to cause or significantly contribute to an SSO before the submission of the Condition Remedial Measures Plan.
- b. All Priority Projects shall be implemented as soon as practicable, and they must be completed not later than six and a half (6.5) years after the Effective Date, except as provided in Paragraph 20.c. Defects identified pursuant to this Paragraph that require remediation but have not caused and are not likely to cause or significantly contribute to an SSO before the submission of the Condition Remedial Measures Plan shall be identified and addressed in the Condition Remedial Measures Plan.
- c. Priority Projects that require permitting or coordination with Capacity Remedial Measures may be monitored and completed as part of the Capacity Remedial Measures Plan. Any Priority Project that meets the criteria of this Paragraph and which the City decides to monitor and complete as part of the Capacity Remedial Measures Plan shall be identified in writing to EPA in the Annual Report for the year in which the Priority Project is identified as needing such permitting or coordination. Priority Projects that meet the criteria of this Paragraph 20.c. and which are identified in writing to EPA are not required to be completed within six and a half (6.5) years after the Effective Date.

- d. The range of solutions and techniques used to complete Priority Projects shall be consistent with Appendix E (Condition Assessment and Remedial Measures Approach), where applicable, and long term compliance with the CWA.

21. Condition Assessment Report. Within four and a half (4.5) years of the Effective Date, the City shall submit to EPA for review and comment, in accordance with Section VI (Review of Deliverables), a report describing the results of the Condition Assessment and Remedial Program (“Condition Assessment Report”). The Condition Assessment Report shall list all assessments and Condition Remedial Measures completed during the first four (4) years after the Effective Date, and describe all Priority Projects. The Condition Assessment Report shall address the following Sewer Collection System assets:

- a. all Gravity Sewer Mains assessed in the first four (4) years after the Effective Date;
- b. all manholes associated with Small Diameter Gravity Sewer Mains inspected in the first four (4) years after the Effective Date;
- c. all manholes associated with Large Diameter Gravity Sewer Mains;
- d. all lift stations;
- e. all air relief valves; and
- f. all Force Mains.

22. The Condition Assessment Report shall conform to the template included as Appendix F (Condition Assessment Report Template) to this Consent Decree.

23. Condition Remedial Measures Alternatives Analysis. Following the submittal of the Condition Assessment Report, the City shall continue to analyze and assess the techniques available to address condition-related defects identified in the Sewer Collection System that were

not remediated pursuant to Paragraph 20 (Priority Projects). The City shall select Condition Remedial Measures for all assets identified as requiring remedial action based upon criteria such as the long-term performance of the asset; the consequences of failure of the asset; the cost of maintaining the asset; the type and severity of the defect(s); the past performance of similar assets; and the historical operation and maintenance of the asset (e.g. overflows, inspections, Cleaning Findings, cleaning frequency, previous remediation, customer complaints, and other unique circumstances for each individual asset). The range of techniques shall be consistent with Appendix E (Condition Assessment and Remedial Measures Approach) and long term compliance with the CWA. Unless remediated pursuant to Paragraph 20 (Priority Projects), the following assets shall be included in the Condition Remedial Measures Alternative Analysis:

- a. all Gravity Sewer Mains rated D or E;
- b. all manholes rated D or E;
- c. any component of any lift station affecting the conveyance of waste water, as provided in the lift station checklist included as Appendix E (Condition Assessment and Remedial Measures Approach) to this Consent Decree, that receives a rating of “poor;”
- d. any air relief valve found to have a defect likely to cause or contribute to an SSO; and
- e. any Force Main found to have a defect likely to cause or contribute to an SSO.

24. Condition Remedial Measures Plan. Within five and a half (5.5) years of the Effective Date, the City shall submit to EPA for review and approval, in accordance with Section VI (Review of Deliverables), a plan that identifies specific Condition Remedial Measures, monitoring mileage/count, and compliance schedules for completing Condition Remedial Measures for all assets subject to the Condition Remedial Measures Alternatives Analysis

(“Condition Remedial Measures Plan”) in accordance with Appendix E (Condition Assessment and Remedial Measures Approach). The schedule and prioritization for implementation of Condition Remedial Measures shall be based on: the severity of defects identified; frequency and history of SSOs; pipe size, age and material; maintenance history; appropriate grouping of Sewer Collection System assets for bid packages; scheduling practicalities; coordination with Capacity Remedial Measures; and other appropriate factors. Taking into account the factors listed in the preceding sentence, the City shall schedule Priority Projects as early as practicable in the schedule for Condition Remedial Measures. The Condition Remedial Measures Plan shall adhere to the format and content of the Condition Remedial Measures Plan Template provided in Appendix G (Condition Remedial Measures Plan Report Template). The Condition Remedial Measures Plan shall describe the City’s plans to implement all Condition Remedial Measures on a balanced annual basis and shall include a specific completion year for each project. All Condition Remedial Measures must be completed within fifteen (15) years of the Effective Date, except as set forth in Paragraphs 31 and 32.

25. Condition Remedial Measures Implementation. The City shall implement the Condition Remedial Measures Plan following receipt of EPA’s written approval. The City shall complete all approved Condition Remedial Measures by the completion deadlines in the approved Condition Remedial Measures Plan. Any modifications to any approved Condition Remedial Measures Plan shall be made in accordance with Section XIX (Modification).

26. Early Implementation of Condition Remedial Measures. The City may implement Condition Remedial Measures generated by and consistent with the process in Appendix E (Condition Assessment and Remedial Measures Approach) before receiving approval of the Condition Remedial Measures Plan or before the scheduled date of completion in an approved

Condition Remedial Measures Plan. EPA reserves the right to review and approve, in accordance with Section VI (Review of Deliverables), all Remedial Measures, including those completed before the submission of the Condition Remedial Measures Plan. All Remedial Measures shall be documented in the Annual Report for the year in which the Remedial Measures are completed.

27. Performing Assets Program. Beginning on or before four (4) years after the Effective Date and continuing until all Condition Remedial Measures are completed, the City shall implement a program (“Performing Assets Program”) of inspection, assessment and remediation of all Gravity Sewer Mains and manholes associated with Small Diameter Gravity Sewer Mains that are in Subdivisions not prioritized using the Prioritization Approach and which were not inspected on a schedule consistent with Paragraph 9.b.i. A detailed description of the Performing Assets Program is included in the CMOM Plan. As part of the Performing Assets Program, the City shall:

- a. inspect and assess, in accordance with Paragraph 19.a and the rating criteria set forth in Appendix E (Condition Assessment and Remedial Measures Approach), all Gravity Sewer Mains in Subdivisions not prioritized using the Prioritization Approach and which were not inspected on a schedule consistent with Paragraph 9.b.i;
- b. inspect and assess, in accordance with Paragraph 19.b and the rating criteria set forth in Appendix E (Condition Assessment and Remedial Measures Approach), the condition of each manhole associated with a Small Diameter Gravity Sewer Main in Subdivisions not prioritized using the Prioritization Approach and which were not inspected on a schedule consistent with Paragraph 9.b.i;

- c. analyze and assess the techniques available to address condition related defects identified pursuant to Paragraphs 27.a-b, and then select Condition Remedial Measures. Condition Remedial Measure selection shall be based upon criteria such as the long-term performance of the asset; the consequences of failure of the asset; the life-cycle cost of maintaining the asset; the type and severity of the defect(s); the past performance of similar assets; and the historical operation and maintenance of the asset (e.g. overflows, inspections, Cleaning Findings, cleaning frequency, previous remediation, customer complaints, and other unique circumstances for each individual asset). The range of techniques selected shall be consistent with Appendix E (Condition Assessment and Remedial Measures Approach), as applicable, and long-term compliance with the CWA; and
- d. schedule and complete Condition Remedial Measures for all assets identified as requiring remedial action as part of the Performing Assets Program such that all Condition Remedial Measures are completed within fifteen (15) years of the Effective Date, except as set forth in Paragraphs 31 and 32.

D. Capacity Assessment and Remedial Measures Approach

28. System-Wide Sewer Collection System Capacity Assessment. The City shall conduct a system-wide capacity assessment of the Sewer Collection System (“Capacity Assessment”) in accordance with Paragraphs 28 through 29 and the Capacity Assessment and Remediation Program Process Guidelines in Appendix D (Capacity Assessment and Remedial Measures Approach). The purpose of the Capacity Assessment is to identify Capacity Constraints within the Sewer Collection System that have caused or significantly contributed to a

previous SSO or SSOs, or are likely to cause or significantly contribute to the future occurrence of SSOs. The Capacity Assessment shall evaluate the capacity of the Sewer Collection System using the following series of hydraulic modeling and investigative steps and in accordance with the requirements set forth in Appendix D (Capacity Assessment and Remedial Measures Approach):

- a. Wet Weather SSO Characterization. The City shall complete a process to determine whether prior wet weather SSOs that occurred during or immediately following rain events that exceed one (1) inch over a 24-hour period may have been wholly or partially caused by potential Capacity Constraints in the Sewer Collection System (“Wet Weather SSO Characterization Process”). As part of the Wet Weather SSO Characterization Process, the City shall evaluate each wet weather SSO that occurred during or immediately following a rain event that exceed one (1) inch over a 24-hour period in the four (4) years preceding the Effective Date through the date three (3) years after the Effective Date. The City shall complete its evaluation of each wet weather SSO in accordance with Appendix D (Capacity Assessment and Remedial Measures Approach), which may include, but is not limited to, the following actions:
 - i. reviewing available records regarding the wet weather SSO;
 - ii. discussions with staff that performed the post-wet weather SSO investigation; and
 - iii. consulting with cleaning and repair crews to obtain information about maintenance issues and/or structural defects found at the wet weather SSO site.

- b. The City shall categorize each SSO evaluated as part of the Wet Weather SSO Characterization Process as either category “A,” “B,” or “C” in accordance with Appendix D (Capacity Assessment and Remedial Measures Approach).
- c. If the Wet Weather SSO Characterization Process determines that a potential Capacity Constraint may have caused or significantly contributed to a wet weather SSO (Category A or B), the City shall perform field investigations in accordance with Paragraph 28.g.
- d. If the Wet Weather SSO Characterization Process determines that maintenance issues and/or condition-related issues caused, likely caused, or significantly contributed to a wet weather SSO (likely Category B or C), the City shall address such issues in accordance with the provisions contained in subsection V.B (Cleaning of Gravity Sewer Mains), subsection V.C (Condition Assessment and Remedial Measures Approach), or subsection V.F (CMOM) of this Consent Decree, as appropriate.
- e. Hydraulic Modeling Evaluation. The City shall use the Hydraulic Model to estimate the hydraulic capacities of the Sewer Collection System and compare these capacity estimates to flow estimates at existing and projected average and peak dry weather and wet weather flow levels (“Hydraulic Modeling Evaluation Process”). The City shall use the Hydraulic Modeling Evaluation Process to identify potential Capacity Constraints in discrete components or groups of components of the Sewer Collection System that are likely to cause or significantly contribute to the future occurrence of SSOs within the assessment parameters of the Hydraulic Model.

- f. Consolidate and Prioritize Capacity Constraints. The City shall use the Wet Weather SSO Characterization Process and Hydraulic Modeling Evaluation Process as screening tools to identify all portions of the Sewer Collection System that have potential Capacity Constraints that may have caused or significantly contributed to previous SSOs and/or that may cause or significantly contribute to the future occurrence of SSOs. The City shall prioritize potential Capacity Constraint locations in accordance with the five-level scale set forth in Appendix D (Capacity Assessment and Remedial Measures Approach) and the City shall further evaluate each identified as a priority 1 through 4 potential Capacity Constraint location by conducting field investigations, as set forth in Paragraph 28.g and in accordance with the criteria described in Appendix D (Capacity Assessment and Remedial Measures Approach).
- g. Field Investigations. At each location having a priority 1 through 4 potential Capacity Constraint, based on the prioritization conducted pursuant to Paragraph 28.f, the City shall perform field investigation activities in accordance with the requirements of Appendix D (Capacity Assessment and Remedial Measures Approach), unless removed as a priority 1 through 4 potential Capacity Constraint based upon updated modeling consistent with such Appendix D or the City determines without field investigation that a Capacity Constraint actually exists. Other than potential Capacity Constraints removed as priority 1 through 4 potential Capacity Constraints based upon updated modeling, potential Capacity Constraints for which the City decides not

to perform field investigations shall be treated as Verified Capacity Constraints, as that term is defined below. Such field investigations shall be conducted in order of priority, pursuant to Paragraph 28.f. No later than four (4) years from the Effective Date, the City shall complete field investigations for each potential Capacity Constraint using appropriate field investigation techniques. The specific investigation activities to be performed for each such location shall be determined based on the available information for each location, in accordance with the process described in Appendix D (Capacity Assessment and Remedial Measures Approach). For each field investigation location, the City shall: i) monitor the Capacity Constraint location until at least one (1) rain event that exceeds one (1) inch over a 24-hour period occurs and, ii) based on whether the location exhibits a significant wet weather response, verify whether a Capacity Constraint within the hydraulic model's assessment parameters exists ("Verified Capacity Constraints"). If no such wet weather event occurs at a field investigation location by four (4) years from the Effective Date, the City shall continue to monitor that location under the CMOM Plan required by subsection V.F (CMOM).

- h. Capacity Assessment Summary Report. By no later than four and a half (4.5) years from the Effective Date, the City shall submit to EPA for review and comment, in accordance with Section VI (Review of Deliverables), a report that summarizes the activities undertaken, a list of potential Capacity Constraints from the Hydraulic Model and Wet Weather SSO Characterization Process, and a list and map of Verified Capacity Constraints that were identified

as part of the Capacity Assessment (“Capacity Assessment Summary Report”) as of four (4) years from the Effective Date. The Capacity Assessment Summary Report shall conform to the format and provide the content required by the Capacity Assessment Report Template set forth in Appendix H (Capacity Assessment Report Template). If the Wet Weather SSO Characterization Process and Field Investigation Process (as identified in Appendix D (Capacity Assessment and Remedial Measures Approach)) determines that a wet weather SSO was most likely caused by a maintenance issue or condition-related issue (category B or C), the Capacity Assessment Summary Report shall summarize how those SSO locations have been addressed in accordance with subsection V.B (Cleaning of Gravity Sewer Mains), subsection V.C (Condition Assessment and Remedial Measures Approach), or subsection V.F (CMOM), as appropriate.

i. Capacity Remedial Measures Alternatives Analysis.

- i. Following the submission of the Capacity Assessment Summary Report, the City shall complete an analysis of the available Remedial Measures to address Verified Capacity Constraints in accordance with the process and guidelines identified in Appendix D (Capacity Assessment and Remedial Measures Approach) (“Capacity Remedial Measures Alternatives Analysis”). The City shall perform an alternatives analysis for each Verified Capacity Constraint location where a Capacity Constraint exists that has caused, likely caused, or significantly contributed to a previous SSO or SSOs and/or that is

likely to cause or contribute to the future occurrence of an SSO or SSOs.

- ii. Based upon the results of the Capacity Remedial Measures Alternatives Analysis of Verified Capacity Constraints, the City shall select an appropriate Capacity Remedial Measure or other action consistent with Appendix D (Capacity Assessment and Remedial Measures Approach) for each Verified Capacity Constraint location. The City's prioritization and selection of Capacity Remedial Measures shall be based on appropriate factors such as, but not limited to: the severity of Verified Capacity Constraints; frequency and history of SSOs; pipe characteristics, including size, age, and material; appropriate grouping of Sewer Collection System assets for bid packages; and scheduling practicalities. The City shall determine the most practical solution for resolving all Verified Capacity Constraints considering both the long-term performance of each asset and the life-cycle cost for maintaining each asset in permanent service. The range of solutions and techniques considered shall be consistent with Appendix D (Capacity Assessment and Remedial Measures Approach). The Capacity Remedial Measures Alternatives Analyses shall consider the TCEQ-required growth projection that is current as of the date of the analysis being performed.

29. Capacity Remedial Measures Plan. By no later than five and a half (5.5) years after the Effective Date, the City shall submit to EPA for review and approval, in accordance with

Section VI (Review of Deliverables), a plan that maps, lists, and describes the City's recommended Capacity Remedial Measures, including monitoring mileage/count, that were prioritized and selected from the Remedial Measures Alternatives Analysis, in accordance with Appendix D (Capacity Assessment and Remedial Measures Approach), to address Verified Capacity Constraints identified in the Capacity Assessment Summary Report ("Capacity Remedial Measures Plan") as having caused or significantly contributed to a previous SSO or SSOs and/or likely to cause or significantly contribute to the future occurrence of an SSO or SSOs. The Capacity Remedial Measures Plan shall describe the City's plans to implement all Capacity Remedial Measures on a balanced annual basis during the term of the Consent Decree, taking into account: the likelihood of future SSOs; coordination with Condition Remedial Measures; permitting requirements; the timeline for easement acquisitions; the appropriate grouping of Sewer Collection System assets for bid packages; contractor capacity; and scheduling practicalities. The Capacity Remedial Measures Plan shall include the specific completion year for each project. The Capacity Remedial Measures Plan shall adhere to the format and content of the Capacity Remedial Measures Plan Template provided in Appendix I (Capacity Remedial Measures Plan Report Template).

30. Capacity Remedial Measures Implementation. The City shall implement the Capacity Remedial Measures Plan following receipt of EPA's written approval. Any modifications to any approved Capacity Remedial Measures Plan shall be made in accordance with Section XIX (Modification). All Capacity Remedial Measures must be completed within fifteen (15) years of the Effective Date except as set forth in Paragraphs 31 and 32.

E. WWTP Consolidation and Oso WWTP Alternative

31. WWTP Consolidation. Within four and a half (4.5) years of the Effective Date, the City may submit to EPA for review and approval a written notice of the City's intent to

consolidate two (2) or more of its existing WWTPs or to construct one or more new WWTP(s) (“Consolidation Notice”). The Consolidation Notice must include a list of any WCTS Sub-basins that will be impacted by any WWTP consolidation or construction projects (“Consolidation Impacted Sub-basins”). The Consolidation Notice shall also include a map depicting each Consolidation Impacted Sub-basin and an explanation of what the expected impacts will be. EPA shall act upon the Consolidation Notice within ninety (90) Days of the City’s submission of the Consolidation Notice. If EPA disagrees with the inclusion of any Sub-basin on the list of Consolidation Impacted Sub-basins, EPA may so notify the City within ninety (90) Days of the date the Consolidation Notice is received by EPA and that Sub-basin shall not be considered a Consolidation Impacted Sub-basin. Disagreements concerning the designation of Consolidation Impacted Sub-basins shall be resolved using the dispute resolution provisions of Section XII (Dispute Resolution). Except as provided in Paragraph 32, all Remedial Measures in all Consolidation Impacted Sub-basins shall be completed, in accordance with the requirements of subsections V.C (Condition Assessment and Remedial Measures Approach) and V.D. (Capacity Assessment and Remedial Measures Approach), no later than sixteen (16) years from the Effective Date.

32. Oso WWTP Alternative. In the event of an EPA Denial or if no final action is taken with respect to the 2018 TCEQ-adopted Texas Surface Water Quality Standards relating to Segments 2485 – Oso Bay and 2486 – Blind Oso Bay, pursuant to 40 C.F.R. § 131.21(a) after eight (8) years of the Effective Date, the City may elect to follow the procedures set forth in this Paragraph 32.

- a. Within one year of the date of the EPA Denial, or if no final action is taken after eight (8) years of the Effective Date, and no later than nine (9) years after the

Effective Date, the City may submit to EPA for review and approval, in accordance with Section VI (Review of Deliverables), a written notice of the City's intent to pursue an Oso WWTP Alternative (the "Oso Notice"). The Oso Notice must include a list of any WCTS Sub-basins that will be impacted by any Oso WWTP Alternative project ("Oso Alternative Impacted Sub-basins"). The Oso Notice shall also include a map depicting each Oso Alternative Impacted Sub-Basin and an explanation of what the expected impacts will be. EPA shall act upon the Oso Notice within ninety (90) Days of the City's submission of the Oso Notice. If EPA disagrees with the inclusion of any Sub-basin on the list of Oso Alternative Impacted Sub-basins, EPA may so notify the City within ninety (90) Days of the date the Oso Notice is received by EPA and that Sub-basin shall not be considered an Oso Alternative Impacted Sub-basin. If EPA does not act upon the Oso Notice within ninety (90) Days of the City's submission of the Oso Notice, the City may treat such non-action as a complete denial of the list of Oso Alternative Impacted Sub-Basins and may immediately invoke the formal dispute Resolution Process provided in Paragraph 88 (Formal Dispute Resolution). If EPA does act upon the Oso Notice within ninety (90) Days of the City's submission of the Oso Notice, disagreements concerning the designation of Oso Alternative Impacted Sub-basins shall be resolved using the dispute resolution provisions of Section XII (Dispute Resolution).

- b. Upon EPA approval of an Oso Notice, any deadlines in an approved Condition Remedial Measures Plan or Capacity Remedial Measures Plan for Oso Alternative Impacted Sub-basins shall be suspended, except as provided in

Paragraph 32.e. Deadlines for all other Remedial Measures associated with assets outside of the Oso Alternative Impacted Sub-basin(s) shall remain in effect. If the Condition Remedial Measures Plan or Capacity Remedial Measures Plan have not yet been submitted, all timelines and requirements for the submission of those plans shall remain in effect for all assets outside Oso Alternative Impacted Sub-basins.

- c. Oso Alternative Remedial Measures Plan. Following EPA approval of an Oso Notice and no later than five and a half (5.5) years after the EPA Denial, the City shall submit to EPA for review and approval, in accordance with Section VI (Review of Deliverables), a plan that identifies specific Condition Remedial Measures, Capacity Remedial Measures, monitoring mileage/count, and compliance schedules for completing Condition and Capacity Remedial Measures for all assets in Oso Alternative Impacted Sub-Basins. The plan will be developed in accordance with the procedures set out in Paragraphs 23 (Condition Remedial Measures Alternatives Analysis), 24 (Condition Remedial Measures Plan), 28 (System-Wide Collection System Capacity Assessment), 29 (Capacity Remedial Measures Plan), and 30 (Capacity Remedial Measures Implementation) and shall adhere to the format and content of the Condition Remedial Measures Plan Template provided at Appendix G and the Capacity Remedial Measures Plan Template provided at Appendix I.
- d. Oso Alternative Remedial Measures Plan Extension. In the event that the City requires additional time beyond the time provided in Paragraph 32.c. above to identify specific Condition Remedial Measures, Capacity Remedial Measures,

monitoring mileage/count, and compliance schedules for completing condition or capacity remedial measures for certain assets in Oso Alternative Impacted Sub-basins, the City may include in its Oso Alternative Remedial Measures Plan a request for up to an additional one and a half (1.5) years to submit such information (“Extension Request”). The Extension Request shall specifically identify each asset in the WCTS for which (i) a condition-related defect or Verified Capacity Constraint exists and (ii) no Remedial Measure can be identified or scheduled at the time of submittal of the Oso Alternative Remedial Measures Plan. The request shall further explain the reason why no Remedial Measure can be identified or scheduled at the time of submittal of the Oso Alternative Remedial Measures Plan. If EPA approves the Extension Request, the City shall submit an update to the Oso Alternative Remedial Measures Plan as soon as practicable, but no later than seven (7) years from the EPA Denial, that identifies specific Condition Remedial Measures, Capacity Remedial Measures, monitoring mileage/count, and compliance schedules for completing Condition and Capacity Remedial Measures for all assets covered by the Extension Request.

- e. EPA approval of an Oso Notice shall not affect the requirements of Paragraph 14-17 (Cleaning of Gravity Sewer Mains), Paragraph 20 (Priority Projects) or Paragraph 27 (Performing Assets Program) except that for assets in Oso Alternative Impacted Subbasins, the final completion deadline for Priority Projects that require permitting or coordination with Capacity Remedial Measures as described in Paragraph 20.c., and Remedial Measures for assets

identified as requiring remedial action as part of the Performing Assets Program shall be as set forth in Paragraph 32.f.

- f. Final Deadlines. All Remedial Measures in all Oso Alternative Impacted Sub-basins shall be completed, in accordance with the requirements of subsections V.C. (Condition Assessment and Remedial Measures Approach) and V.D. (Capacity Assessment and Remedial Measures Approach), no later than eighteen (18) years from the Effective Date. All other Work shall be completed no later than fifteen (15) years from the Effective Date, except as provided in Paragraph 31.

F. Capacity, Management, Operations and Maintenance (“CMOM”)

33. CMOM Plan. Prior to the Date of Lodging, the City developed and is implementing a written plan in accordance with EPA’s 2005 guidance entitled “Guide for Evaluating Capacity, Management, Operation and Maintenance Programs at Sanitary Sewer Collection Systems” (“CMOM Plan”). The City shall continue to implement the CMOM Plan.

34. On or after the Date of Lodging, the City may, as appropriate, make updates or revisions to the CMOM Plan that are consistent with industry standards. Such updates or revisions shall not eliminate any CMOM requirement contained in the plan in effect as of the Date of Lodging or result in a program that is less effective at preventing SSOs. The City shall provide a summary of any updates or revisions to EPA and TCEQ in its Annual Report for the year in which the update or revision occurred, and shall provide a complete copy of the updated CMOM Plan upon a request from EPA or the State. Provided that such updates or revisions meet the requirements of this Paragraph 34, they shall not be considered modifications to the Consent Decree for purposes of Section XIX (Modification). If EPA, after consultation with

TCEQ, disapproves of any update or revision made to the CMOM Plan, EPA shall notify the City in writing and describe any disapproval. If EPA so notifies the City, the version of the CMOM Plan in force prior to the disapproved update or revision shall remain in effect.

Disagreements arising from either Plaintiff's disapproval concerning updates or revisions to the CMOM Plan shall be resolved using the dispute resolution provisions of Section XII (Dispute Resolution).

35. Fats, Oils, and Grease Control Program. The City has developed and is implementing a Fats, Oils and Grease ("FOG") control program as described in the City's FOG Program Manual ("FOG Control Program"). The City shall continue to implement the FOG Control Program as described in the FOG Program Manual.

36. The City may make updates or revisions to the FOG Program Manual that are consistent with industry standards. Such updates or revisions will not be considered modifications of the Consent Decree for purposes of Section XIX (Modification). Within thirty (30) Days of making any change to the FOG Program Manual, the City shall provide written notification to EPA. If EPA, after consultation with TCEQ, disagrees with any update or revision made to the FOG Program Manual, EPA shall notify the City in writing and describe any disagreement. If EPA so notifies the City, the version of the FOG Plan in force prior to the disapproved update or revision shall remain in effect. Disagreements concerning updates or revisions to the FOG Program Manual shall be resolved using the dispute resolution provisions of Section XII (Dispute Resolution).

37. In no event shall any change or revision of the FOG Control Program result in a less effective program for eliminating SSOs or result in the elimination of any of the following program elements:

- a. the legal authority within the jurisdiction of the City to control the discharge of FOG into the WCTS, including the ability to implement an enforcement program;
- b. best practice requirements for generators of FOG for the management, operation, and maintenance of FOG control devices, including but not limited to requirements for onsite recordkeeping, cleaning frequency, cleaning standards, use of additives and ultimate disposal;
- c. routine compliance inspection procedures, including scheduling, inspection report forms and inspection recordkeeping requirements to assure that FOG control devices are being managed, operated, and maintained in accordance with the established management, operations, and maintenance standards or best management practices;
- d. an enforcement program, including specific enforcement mechanisms, to ensure compliance with the FOG Control Program;
- e. a compliance assistance program to facilitate training of FOG generators and their employees;
- f. a public education program directed at reducing the amount of FOG entering the WCTS from private residences; and
- g. performance indicators to be used by the City to conduct a periodic review to measure the effectiveness of the FOG Control Program.

38. SSO Response Plan. The City has developed and is implementing a Sanitary Sewer Overflow Response Plan (the “SSO Response Plan”). The City shall continue to implement the SSO Response Plan.

39. The City may make updates or revisions to the SSO Response Plan that are consistent with industry standards. The City shall provide a summary of any updates or revisions to EPA and TCEQ in its Annual Report for the year in which the update or revision occurred. Provided that such updates or revisions meet the requirements of this Paragraph 39, they will not be considered modifications of the Consent Decree for purposes of Section XIX (Modification). If EPA, after consultation with TCEQ, disapproves of any update or revision made to the SSO Response Plan, EPA shall notify the City in writing and describe any disapproval. If EPA so notifies the City, the version of the SSO Response Plan in force prior to the disapproved update or revision shall remain in effect. Disagreements arising from either Plaintiff's disapproval concerning updates or revisions to the SSO Response Plan shall be resolved using the dispute resolution provisions of Section XII (Dispute Resolution).

40. Lift Station Response Plan. The City has developed and is implementing a written plan designed to guide and ensure the City's timely response to power failures at its lift stations ("Lift Station Response Plan"). The City shall continue to implement the Lift Station Response Plan.

41. The City may make updates or revisions to the Power Failure Response Plan that are consistent with industry standards. The City shall provide a summary of any updates or revisions to EPA and TCEQ in its Annual Report for the year in which the updates or revisions occurred. Provided that such updates or revisions meet the requirements of this Paragraph, they will not be considered modifications of the Consent Decree for purposes of Section XIX (Modification). If EPA, after consultation with TCEQ, disapproves of any update or revision made to the Power Failure Response Plan, EPA shall notify the City in writing and describe any disapproval. If either EPA or the State so notify the City, the version of the Power Failure

Response Plan in force prior to the disapproved update or revision shall remain in effect.

Disagreements arising from either Plaintiff's disapproval concerning updates or revisions to the Power Failure Response Plan shall be resolved using the dispute resolution provisions of Section XII (Dispute Resolution).

VI. REVIEW OF DELIVERABLES

42. Except as provided in Paragraphs 33 (CMOM Plan), 35 (FOG Plan), 38 (SSO Response Plan), and 40 (Lift Station Response Plan), each Deliverable is subject to review by EPA, in consultation with TCEQ, as further provided in Paragraphs 43 and 44. EPA agrees to use its best efforts to expeditiously review and take action on Deliverables that the City provides.

43. Deliverables Subject to EPA Review and Approval. The Capacity Remedial Measures Plan, the Condition Remedial Measures Plan, and the Consolidation Notice shall be subject to the review and approval process as follows:

- a. EPA Action on Deliverables Subject to Review and Approval. After reviewing any Deliverable that the City is required to submit for review and approval to EPA pursuant to this Consent Decree, EPA shall, after consultation with TCEQ, notify the City in writing that EPA: (i) approves the Deliverable, in whole or in part; (ii) approves the Deliverable, in whole or in part, upon specified conditions; or (iii) disapproves the Deliverable, in whole or in part, providing comments identifying deficiencies and/or directing the City to modify the Deliverable.
- b. Approved Deliverables. If a Deliverable is approved, the City shall perform all actions required by the Deliverable, in accordance with the schedules and requirements of the Deliverable, as approved. If the Deliverable is conditionally approved or approved only in part, the City shall, upon written direction from

EPA, take all actions required by the Deliverable that EPA determines, after consultation with TCEQ, are technically severable from any disapproved portions, subject to the City's right to dispute only the specified conditions or the disapproved portions under Section XII of this Decree (Dispute Resolution).

- c. Disapproved Deliverables. For any Deliverable that is disapproved in whole or in part, EPA shall provide a written explanation of how the Deliverable does not meet the requirements of the Consent Decree. If a Deliverable is disapproved in whole or in part, the City shall, within sixty (60) Days or such other time as EPA and the City agree to in writing, address all deficiencies and resubmit the Deliverable, or disapproved portion thereof, for EPA approval, in accordance with Paragraph 43.d (Resubmitted Deliverables). If the resubmission is approved in whole or in part, the City shall proceed in accordance with Paragraph 43.b. (Approved Deliverables).
- d. Resubmitted Deliverables. If a resubmitted Deliverable, or portion thereof, is disapproved in whole or in part, EPA, after consultation with TCEQ, may again require the City to address any deficiencies, in accordance with Paragraph 43.c (Disapproved Deliverables). EPA, after consultation with TCEQ, shall have the right to modify any disapproved or conditioned portion of the resubmitted Deliverable, subject to the City's right to invoke Dispute Resolution pursuant to Section XII (Dispute Resolution) and the rights of the United States and the State to seek stipulated penalties as provided in Section IX (Stipulated Penalties). Upon either EPA's approval of a resubmitted Deliverable or the City's receipt of EPA's modified Deliverable, the City shall perform all actions

required by the Deliverable, in accordance with the schedules and requirements of that Deliverable.

44. Deliverables Subject to EPA Review and Comment. EPA may choose to provide written comments on Deliverables not identified as subject to the review and approval process in Paragraph 43 (Deliverables Subject to EPA Review and Approval), including the Capacity Assessment Report and the Condition Assessment Report. If EPA provides comments and EPA specifically requests a response from the City, then the City shall provide a written response to EPA within forty-five (45) days of receipt of such request.

45. Accrual of Stipulated Penalties for all Deliverables. Any stipulated penalties applicable to an originally submitted Deliverable, as provided in Section IX (Stipulated Penalties), shall accrue during the 45-Day or other specified period for addressing and resubmitting a Deliverable or for providing any requested response to comment, but shall not be payable unless the resubmission or response is untimely, or the resubmitted Deliverable is disapproved in whole or in part. However, if the original Deliverable is found to be so deficient as to constitute a material breach of the City's obligations under this Consent Decree, the stipulated penalties applicable to the original Deliverable shall be due and payable notwithstanding any subsequent resubmission or response to comment. In the event that a resubmitted Deliverable is disapproved, in whole or in part, or EPA issues a modified Deliverable to the City, stipulated penalties shall accrue from the Day that the original Deliverable was due until the Day that a subsequent resubmission is

approved by EPA or the Day the City receives the modified Deliverable from EPA, whichever is applicable.

46. Public Document Repository. The City shall post to its public website the final EPA-approved versions of the Capacity Remedial Measures Plan and the Condition Remedial Measures Plan; and the City shall post to and maintain on its public website the most current version of the CMOM Plan, the FOG Control Program, the Lift Station Response Plan, and the SSO Response Plan (“Public Document(s)”). Each Public Document shall be posted within ninety (90) Days of the Effective Date or EPA approval, whichever is applicable, and shall remain on the website at least until this Consent Decree is terminated.

VII. REPORTING REQUIREMENTS

47. Quarterly Reporting of SSOs. Beginning no later than thirty (30) Days after the end of the first calendar quarter following the Effective Date, the City shall begin submitting to EPA a quarterly report that lists and contains information concerning all SSOs that occurred in the quarter before the report is submitted (“SSO Quarterly Report”). Each SSO Quarterly Report shall describe, for each SSO that occurred during the preceding calendar quarter, the date, time, location, source (i.e., information that identifies the component involved in the SSO), estimated duration, estimated volume, receiving water, suspected cause, and any response actions taken, and is due within thirty (30) Days after the end of the calendar quarter on which the City will report. If the City’s submittals to TCEQ required by its current TPDES permits and applicable Texas law include the information listed above, the City may satisfy this requirement by providing a copy to EPA and TCEQ of the written reports submitted to TCEQ.

48. Annual Reports. On June 30 of each year during the term of this Consent Decree, the City shall submit to EPA and TCEQ for review and comment a report that contains a summary of the status and progress of all programs required by Section V (Remedial Measures,

Prioritization, and Schedules) and all Work completed in the previous calendar year (“Annual Report”). The Annual Report shall conform to the form and contain the content specified in the template provided in Appendix J (Annual Report Template). 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 if that period is at least six (6) months. If the period between the Effective Date and the end of the calendar year is less than six (6) months, then the first Annual Report shall be due on the second June 30 following the Effective Date and shall include the period from the Effective Date until the end of the second calendar year.

49. Provisions Applicable to All Reports:

- a. all reports shall be certified in accordance with Section XVI (Certification);
- b. all reports shall be submitted electronically in a searchable format as to text included in such reports; and
- c. all reports shall be submitted to the persons designated in Section XV (Notices).

50. The reporting requirements of this Consent Decree do not modify in any way or relieve the City of any reporting obligations under the CWA or its implementing regulations or any other federal, State, or local law, regulation, permit, or other requirement.

VIII. CIVIL PENALTY

51. The City shall pay a total civil penalty of \$1,136,000 with one half (\$568,000) payable to the United States and one half (\$568,000) payable to the State. The civil penalty shall be paid in full within sixty (60) days of the Effective Date of this Consent Decree.

52. In the event that full payment is not made within sixty (60) Days of the Effective Date of this Consent Decree, the City shall pay to the United States and the State interest on the balance due from the original due date to the date of full payment at the rate calculated pursuant

to 38 U.S.C. § 1961. The City will also be liable for stipulated penalties pursuant to Section IX (Stipulated Penalties).

53. The City shall pay the civil penalty due to the United States by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice account, in accordance with written instructions to be provided to the City, following entry of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney’s Office for the Southern District of Texas (“FLU”). The payment instructions provided by the FLU will include a Consolidated Debt Collection System (“CDCS”) number, which the City shall use to identify all payments required to be made in accordance with this Consent Decree. The FLU will provide the payment instructions to: Assistant Director of Financial Services: Financial Services Department, 1201 Leopard Street, 4th Floor, Corpus Christi, Texas 78401; (361)826-3610; almac@cctexas.com. The City may change the individual to receive payment instructions on its behalf by providing written notice of such change to the United States and EPA in accordance with Section XV (Notices). Any payments received after 4 p.m. Eastern Time will be credited on the next business Day. At the time of payment, the City shall send notice that payment has been made: (1) to EPA via email at acctsreceivable.cinwd@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 Martin Luther King Drive, Cincinnati, Ohio 45268; (ii) to the United States via email or regular mail in accordance with Section XV (Notices); and (iii) to EPA in accordance with Section XV (Notices). Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States of America and State of Texas v. City of Corpus Christi, and shall reference the civil action number and DOJ case number 90-5-1-1-10396.

54. The City shall pay the civil penalty due to the State 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 # 123380743, Priscilla M. Hubenak, Chief, Environmental Protection Division
Attention:	Office of the Attorney General, Kristy Lerma, Financial: Rptg

55. At the time of payment, the City shall send a copy of the wire transfer authorization form and the wire transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States of America and State of Texas v. City of Corpus Christi, and shall reference the civil action number and AG No. 123380743, to the State in accordance with Section XV (Notices).

56. The City shall not deduct any penalties paid under this Decree pursuant to this Section VIII (Civil Penalty) or Section IX (Stipulated Penalties) in calculating its federal or state income tax.

IX. STIPULATED PENALTIES

A. Stipulated Penalties

57. The City shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section XI (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any Work plan or schedule approved under this Decree, according to all

applicable requirements of this Decree, and within the specified time schedules established by or approved under this Decree.

58. Failure to Submit Timely and Complete Deliverables. The City shall pay stipulated penalties, as set forth in the table below, to the United States and the State for each Day the City fails to (a) submit or complete, as applicable, by the due date(s) specified under this Consent Decree, any of the following Deliverables: (i) the Condition Assessment Report, (ii) the Condition Remedial Measures Plan, (iii) the Capacity Assessment Report, (iv) the Capacity Remedial Measures Plan, (v) the Oso Alternative Remedial Measures Plan, or (vi) any of the Deliverables specifically listed in this Paragraph 58 that is resubmitted to EPA; or (b) make a material change required by EPA to a Deliverable listed in this Paragraph 58, within the timeframe(s) specified by EPA for making such a change:

<u>Period of Noncompliance</u>	<u>Penalties per Violation per Day</u>
1st to 30th Day	\$500.00
31st to 60th Day	\$1,500.00
61st Day and Each Day Thereafter	\$3,000.00

59. Remedial Requirements. The City shall pay the following stipulated penalties to the United States and the State for each Day the City fails to complete any of the remedial requirements or meet any of the required deadlines of Section V (Remedial Measures, Prioritization, and Schedules) of this Consent Decree, including requirements and deadlines set forth in the Appendices:

<u>Period of Noncompliance</u>	<u>Penalties per Violation per Day</u>
1st to 30th Day	\$750.00
31st to 60th Day	\$1,500.00

61st Day to 180th Day	\$2,500.00
181st Day and Each Day Thereafter	\$4,000.00

60. SSOs that Reach Waters of the United States or Water in the State. The City shall pay the following stipulated penalties to the United States and the State for each SSO that reaches waters of the United States or water in the State, as defined in Section 26.001(5) of the Texas Water Code, and occurs after the Effective Date:

<u>If SSO occurs</u>	<u>Penalties Per Violation Per Day</u>
Within 2 years of Date of Lodging	\$500.00
Between 2 and 5 years from Date of Lodging	\$1,500.00
More than 5 years from Date of Lodging	\$3,000.00

61. SSOs that Do Not Reach Waters of the United States or Water in the State. The City shall pay the following stipulated penalties to the United States and the State for each SSO that occurs after the Effective Date and does not reach either waters of the United States or water in the State, as defined in Section 26.001(5) of the Texas Water Code:

<u>If SSO occurs</u>	<u>Penalties Per Violation Per Day</u>
Within 2 years of Date of Lodging	\$250.00
Between 2 and 5 years from Date of Lodging	\$500.00
More than 5 years from Date of Lodging	\$1,000.00

62. Effluent Limits. The City shall pay the following stipulated penalties to the United States and the State for each violation of any requirement of the City's TPDES Permits effluent limits for the Oso WWTP, Allison WWTP or Greenwood WWTP:

<u>Effluent Noncompliance</u>	<u>Penalties Per Exceedance</u>
Minimum exceedance	\$500.00

Maximum exceedance	\$1,500.00
Daily Average exceedance	\$3,000.00

63. Each effluent limit for each parameter is counted as a separate violation.

64. Reporting Requirements. The City shall pay the following stipulated penalties to the United States and the State for each Day for each violation of the reporting requirements of Section VII (Reporting Requirements):

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

65. Delay in Payment of Civil Penalties and Attorneys' Fees. The City shall pay to the United States and the State stipulated penalties of \$2,000.00 for each Day that the City is late in paying the civil penalties required under Section VIII (Civil Penalty) and shall pay to the State stipulated penalties of \$2,000.00 for each Day that the City is late in paying the attorneys' fees amount required and specifically identified under Section XIV (Costs and Attorneys' Fees), Paragraph 98.

66. Stipulated penalties shall automatically begin to accrue on the first Day that an event occurs for which a stipulated penalty is due, or 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. As provided in Paragraph 67 (Payment of Penalties to the United States and the State), stipulated penalties will not be due until the City receives a written demand from either Plaintiff.

67. Payment of Penalties to the United States and the State. The City shall pay stipulated penalties to the United States or the State, or both, as applicable, within thirty (30) Days of receipt of a written demand by either Plaintiff, unless the City invokes the dispute resolution, pursuant to Section XII (Dispute Resolution). With respect to those stipulated penalties that may be jointly pursued by both Plaintiffs, before either Plaintiff makes a written demand for such stipulated penalties, Plaintiffs shall consult each other and notify the City within the demand for payment whether Plaintiffs are jointly pursuing the stipulated penalties. Only one (1) stipulated penalty amount per violation per Day shall be payable. Where the Plaintiffs jointly pursue stipulated penalties, the City shall pay fifty (50) percent of the total penalty owed to the State, and pay fifty (50) percent of the total penalty owed to the United States.

68. The United States and the State may each, in the unreviewable exercise of discretion, reduce or waive stipulated penalties otherwise due to it under this Consent Decree. Where only one Plaintiff pursues stipulated penalties, only that Plaintiff shall recover the full amount of the penalty, and the Plaintiff not joining in the pursuit of stipulated penalties shall be deemed to have waived such penalties. The Plaintiff making a demand for payment of stipulated penalties shall simultaneously send a copy of the demand to the other Plaintiff.

69. Stipulated penalties shall continue to accrue as provided in this Section IX (Stipulated Penalties) during any Dispute Resolution, but need not be paid until the following:

- a. if the dispute is resolved by agreement or by a decision of the Plaintiff(s) that is not appealed to the Court, the City shall pay accrued stipulated penalties determined to be owing, together with interest, to the Plaintiffs within thirty

(30) Days of the effective date of the agreement or the receipt of the Plaintiff's or Plaintiffs' decision;

- b. if the dispute is appealed to the Court and the Plaintiff(s) prevail(s) in whole or in part, the City shall pay all accrued penalties determined by the Court to be owing, together with interest, if applicable, to the Plaintiff(s) within sixty (60) Days of receiving the Court's decision or order, except as provided in Paragraph 69.c; and
- c. if any Party appeals the District Court's decision, the City shall pay all accrued penalties determined to be owing as of the date of the final appellate court decision, together with interest, if applicable, within fifteen (15) Days of receiving the final appellate court decision.

70. The City shall pay stipulated penalties owing to the Plaintiff(s) in the manner set forth and with the confirmation notices required by Section VIII (Civil Penalty), except that the transmittal letters shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

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

72. Non-Exclusivity of Remedy. Stipulated penalties are not the United States' or the State's exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section X (Effect of Settlement/Reservation of Rights), the United States and the State expressly

reserve the right to seek any other relief either Plaintiff deems appropriate for the City's violation of this Decree or applicable law, including but not limited to an action against the City for statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount equal to the amount of any stipulated penalties assessed and paid pursuant to this Consent Decree.

X. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

73. This Consent Decree resolves the civil claims of the United States and the State for injunctive relief and civil penalties for the violations alleged in the Complaint through the Date of Lodging.

74. The United States and the State reserve all rights and remedies, legal and equitable, available against the City with respect to any violations of the CWA or other law where such violations are not specifically alleged in the Complaint, whether they occurred before, on, or after the Date of Lodging.

75. The United States and the State further reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the CWA or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 73. The United States and the State reserve all rights against the City with respect to criminal liability. The United States and the State 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, the City's WCTS, whether related to the violations addressed in this Consent Decree or otherwise.

76. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil or administrative penalties, or other appropriate relief relating to the City's WCTS or the City's violations, the City shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 73 of this Consent Decree.

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

78. The City's duty to comply with the terms of this Consent Decree is not conditioned on the receipt of any federal or state funds or the City's financial capabilities. Failure to comply

is not excused by lack of federal or state grant funds, or by the processing of any applications for the same, or by the City's financial capabilities.

79. 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 laws of the State, as currently or hereafter enacted, may prevent the City from raising the revenues needed to comply with this Consent Decree.

80. This Consent Decree does not limit or affect the rights of the Parties against any third parties not party to this Consent Decree, nor does it limit the rights of third parties not party to this Consent Decree, against the City, except as otherwise provided by law. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XI. FORCE MAJEURE

81. "Force Majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of the City, or of any entity controlled by the City, that delays or prevents the performance of any obligation under this Consent Decree despite the City's best efforts to fulfill the obligation. The requirement that the City exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential Force Majeure event and best efforts to address the effects of any such event: (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. Force Majeure does not include unanticipated or increased expenses or costs associated with implementation of this Consent Decree, changed financial circumstances, or other financial or budgetary issues.

82. Permits. Failure to apply for a required permit or approval, or to provide in a timely manner all information required to obtain a permit or approval necessary to meet the

requirements of this Consent Decree, are not Force Majeure events. However, failure of a permitting authority to issue a necessary permit in a timely fashion may serve as a basis for an extension under this Section where the failure of the permitting authority to act is beyond the control of the City, and the City demonstrates that it has taken all timely steps available to it to obtain the necessary permit or approval.

83. 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, the City shall provide written notice to the United States and the State in accordance with Section XV (Notices), within twenty-one (21) Days of when the City first knew that the event might cause a delay. Such written notice shall include 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; the City'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 the City, such event may cause or contribute to an endangerment to public health, welfare or the environment. The City 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 the City 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. The City shall be deemed to know of any circumstance of which the City, any entity controlled by the City knew or should have known.

84. If Plaintiffs agree that a Force Majeure event has occurred, Plaintiffs will agree to extend the time for the City to perform the obligation(s) under this Consent Decree that are

affected by the Force Majeure event for the time necessary to complete those obligations. An extension of the time for performance of the obligations affected by the Force Majeure event shall not, by itself, extend the time for performance of any other obligation. Plaintiffs will notify the City in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

85. If Plaintiffs do not agree that a Force Majeure event has occurred, or do not agree to the extension of time sought by the City, Plaintiffs will so notify the City in writing, and Plaintiffs' position shall be binding, unless the City invokes Dispute Resolution under Section XII (Dispute Resolution). If the City elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than thirty (30) Days after receipt of Plaintiffs' notice. In any such proceeding, the City shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that the City complied with the requirements of Paragraphs 81 and 83, above. If the City carries this burden, the delay at issue shall be deemed not to be a violation by the City of the affected obligation of this Consent Decree identified to Plaintiffs and the Court.

XII. DISPUTE RESOLUTION

86. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section XII (Dispute Resolution) shall be the City's exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. This Section XII (Dispute Resolution) does not apply to disputes between the City and the State (or its agencies and subdivisions) regarding the issuance, renewal, or denial of TPDES permits or the assessment of civil penalties in a State judicial proceeding or administrative penalties by TCEQ.

87. Informal Dispute Resolution. Except as provided in Paragraph 32 (Oso WWTP Alternative), any dispute subject to dispute resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when the City sends the Plaintiffs a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed thirty (30) Days from the date the written Notice of Dispute is received by the other party, unless that period is modified by written agreement. During the informal negotiation period:

- a. With respect to disputes regarding force majeure under Section XI (Force Majeure) and termination under Section XX (Termination), Plaintiffs shall consult and put forward a joint position. The position that Plaintiffs take in their written notification to the City as set forth in Section XI (Force Majeure) or Section XX (Termination) will be the position of Plaintiffs in informal dispute resolution pursuant to this Paragraph 87, unless Plaintiffs mutually agree to modify the position and inform the City 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, the City invokes formal dispute resolution procedures as set forth in Paragraph 88 (Formal Dispute Resolution); and
- b. With respect to all other disputes under this Consent Decree, the United States shall, after providing the State a reasonable opportunity for consultation, inform the City of the United States' position. If the United States and the City 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, the City invokes formal dispute resolution procedures as set forth in Paragraph 88 (Formal Dispute Resolution).

88. Formal Dispute Resolution. The City shall invoke formal dispute resolution procedures, within the time periods provided in Paragraphs 87 (Informal Dispute Resolution) and 32 (Oso WWTP Alternative), by serving on Plaintiffs, a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting the City's position and any supporting documentation relied upon by the City. After receiving the City's Statement of Position:

- a. With respect to disputes regarding force majeure under Section XI (Force Majeure) and termination under Section XX (Termination), the position Plaintiffs provided to the City pursuant to Paragraph 87.a shall be the position of Plaintiffs under this Paragraph, unless Plaintiffs mutually agree to modify their position. Plaintiffs shall consult and serve on the City, within forty-five (45) Days after receipt of the City's Statement of Position, Plaintiffs' Statement of Position, which shall include, as applicable, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by Plaintiff(s). Plaintiffs' Statement of Position shall be binding on the City, unless the City files a motion for judicial review of the dispute in accordance with Paragraph 89; and
- b. With respect to all other disputes under this Consent Decree, the United States, after providing the State a reasonable opportunity for consultation, shall serve

on the City the United States' Statement of Position within forty-five (45) Days after receipt of the City's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting the position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on the City, unless the City files a motion for judicial review, in accordance with Paragraph 89.

89. The City may seek judicial review of the dispute by filing with the Court and serving on the Plaintiffs, in accordance with Section XV (Notices) of this Consent Decree, a motion requesting judicial resolution of the dispute. The motion must be filed within thirty (30) Days of receipt of the Plaintiffs' or the United States' Statement of Position pursuant to Paragraph 88. The motion shall contain a written statement of the City's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

90. The Plaintiff(s) shall respond to the City's motion within the time period allowed by the Local Rules of this Court. The United States shall consult with the State before filing any response. The City may file a reply memorandum, to the extent permitted by the Local Rules.

91. Standard of Review. Except as otherwise provided in this Consent Decree, in any dispute brought under this Section XII (Dispute Resolution), the City shall bear the burden of demonstrating that its position complies with this Consent Decree and that it is entitled to relief under applicable principles of law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and

capricious or otherwise not in accordance with law and the City reserves the right to oppose this position.

92. The invocation of dispute resolution procedures under this Section XII (Dispute Resolution) shall not, by itself, extend, postpone, or affect in any way any obligation of the City under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 69. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties).

XIII. RIGHT OF ENTRY AND RECORD RETENTION

93. The United States and the State, and their representatives, including attorneys, contractors, and consultants, shall each have the right of entry into the premises of any City property at all reasonable times, upon presentation of credentials, to:

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

94. Until five (5) years after the termination of this Consent Decree, the City shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, reports, data, records, or other information (including documents, records, or other

information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to the City's performance of its obligations under this Consent Decree. Drafts of final documents or plans and non-substantive correspondence and email do not need to be retained. This information-retention requirement shall apply regardless of any contrary City, corporate, or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, the City shall provide copies of any documents, reports, analytical data, or other information required to be maintained under this Paragraph 94.

95. At the conclusion of the information-retention period provided in Paragraph 94, the City shall notify the United States and the State at least ninety (90) Days prior to the destruction of any documents, records, or other information in the possession, custody or control of the City and subject to the requirements of Paragraph 94 and, upon request by the United States or the State, the City shall deliver any such documents, records, or other information in the possession, custody or control of the City to the United States or the State.

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

XIV. COSTS AND ATTORNEYS' FEES

97. The Parties shall bear their own costs of this action, and the United States shall bear its own attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by the City.

98. City shall pay the State \$18,000 in attorneys' fees. The City shall make full payment of this amount in accordance with Paragraphs 52, 54 and 55 of this Consent Decree.

XV. NOTICES

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

As to the United States:

By email: eescdcopy.enrd@usdoj.gov
Re: DJ No. 90-5-1-1-10396

and

Edelbrock.Judy@epa.gov

By mail: EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-10396

and

Chief, Water Enforcement Branch
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

and

Rusty Herbert
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

As to the State of Texas:

Mark Steinbach
Office of the Attorney General
State of Texas
Environmental Protection Division
P.O. Box 12548
Austin, Texas 78711-2548
Reference: AG No. 123380743

and

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

As to TCEQ:

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

As to the City of Corpus Christi:

City of Corpus Christi Legal Department
P.O. Box 9277
Corpus Christi, Texas 78469

and

City of Corpus Christi City Manager
Attn: Wastewater Operations
P. O. Box 9277
Corpus Christi, Texas 78469

100. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

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

XVI. CERTIFICATION

102. Any Deliverable or any other document submitted by the City to the United States and the State pursuant to this Consent Decree shall be signed by an official of the City and include the following certification:

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 directions and my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

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

103. The City shall not object to the admissibility into evidence of any Deliverable or any other document prepared to comply with this Consent Decree or the information contained in such documents in any proceeding to enforce this Consent Decree.

XVII. EFFECTIVE DATE

104. 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.

XVIII. RETENTION OF JURISDICTION

105. The Court shall retain jurisdiction over this case until termination of this Consent Decree for the purpose of: (a) resolving disputes arising under this Decree, (b) entering orders

modifying this Decree, pursuant to Section XIX (Modification), and (c) effectuating or enforcing compliance with the terms of this Decree.

XIX. MODIFICATION

106. Except as provided in Paragraphs 33 (CMOM Plan), 35 (Fats, Oils, and Grease Control Program), 38 (SSO Response Plan), and 40 (Lift Station Response Plan), this Consent Decree may be modified only by a subsequent written agreement signed by all Parties or a modification otherwise approved by the Court. Where the modification constitutes a material change to this Consent Decree, it shall be effective only upon approval by the Court. The Parties may by mutual agreement determine whether a proposed modification is a non-material change to the Consent Decree.

107. Non-material Modifications: Non-material modifications to the Consent Decree (including Appendices) shall be made by written agreement of the Parties without approval by the Court and shall be effective when signed by all parties. The City must request a non-material change at least ninety (90) Days before the deadline for the specific Work at issue. Examples of non-material modifications are provided below:

- a. Changes to Appendices, guidelines or processes based upon implementation experience so long as the overall technical and schedule objectives are achieved.
- b. Changes in inspection and/or remediation techniques as a result of technology advancements or implementation experience so long as the specific requirements set forth in subsection V.C (Condition Assessment and Remedial Measures Approach) and subsection V.D. (Capacity Assessment and Remedial Measures Approach) are met.
- c. Reprioritization and rescheduling of Remedial Measures under an EPA-approved Remedial Measures Plan pursuant to Section V (Remedial Measures,

Prioritization, and Schedules), provided the reprioritization or rescheduling results in substantially the same or better CWA compliance benefits as would have been realized by implementation of the Remedial Measures Plan as approved. The City may seek to reprioritize or reschedule Remedial Measures under EPA-approved Remedial Measures Plans where the City determines technical, health, safety or other reasons justify priority completion of an existing, particular project or a new project ahead of another task, provided such determination is provided to EPA in writing and submitted to EPA for review and approval at the time any change under this Paragraph is requested, in accordance with Section VI (Review of Deliverables).

108. The City may request modification based upon, among other things, an Integrated Plan developed in accordance with EPA's Integrated Municipal Stormwater and Wastewater Planning Approach Framework, issued on June 5, 2012 ("EPA Framework") and a current Financial Capability Assessment conducted in accordance with EPA's "Combined Sewer Overflows Guidance for Financial Capability Assessment and Schedule Development," EPA 8320B-97-004, February 1997, and EPA's Memorandum "Financial Capability Assessment Framework for Municipal Clean Water Act Requirements" issued on November 24, 2014 ("FCA Framework"). Should either the EPA Framework or the FCA Framework be modified after the Effective Date of this Consent Decree, the City's request for modification shall be based on the version of the EPA Framework and FCA Framework in effect on the day the request is submitted to the United States;

109. As part of any modification request by the City, the City shall provide information concerning the scope, impact, timing, and cost of the modification, and shall provide any

additional information requested by the United States or the State to assist in evaluating the modification request.

110. 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) in accordance with Section XV (Notices) setting forth the requested changes and the reasons therefor. Disputes concerning modification under this Section XIX (Modification) are not subject to Section XII (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). A request for modification or a motion filed by the City under Federal Rule of Civil Procedure 60(b) shall not relieve the City of its obligations pursuant to Section V (Remedial Measures, Prioritization, and Schedules) or its liability for stipulated penalties under Section IX (Stipulated Penalties), and the City shall continue with timely implementation of the Consent Decree until the requested modification becomes effective in accordance with the provisions of this Section XIX (Modification).

XX. TERMINATION

111. Final Termination. The City may serve upon the United States and the State a request for final termination (“Final Termination Request”), together with all necessary supporting documentation, certifying that the City has satisfied all of its obligations under the Consent Decree, including:

- a. completion of all requirements of Section V (Remedial Measures, Prioritization and Schedules) of this Consent Decree;

- b. compliance with all other requirements of this Consent Decree;
- c. payment in full of all civil penalties required under Section VIII (Civil Penalty), and any accrued stipulated penalties as required under Section IX (Stipulated Penalties) of this Consent Decree not waived or reduced by the applicable Plaintiff; and
- d. payment in full of the attorneys' fees amount required and specifically identified by Section XIV (Costs and Attorneys' Fees), Paragraph 98.

112. Partial Termination. Any time after the approval of the Condition Remedial Measures Plan, the City may serve upon the United States and the State a request for partial termination ("Partial Termination Request") covering one or more of the six Sewersheds. No Sewershed containing an Oso Alternative Impacted Sub-basin designated pursuant to Paragraph 32 (Oso WWTP Alternative) is eligible for partial termination, however; and no Sub-basin in a Sewershed where this Consent Decree has been partially terminated may thereafter be identified as an Oso Alternative Impacted Sub-basin. The Partial Termination Request shall identify the Sewershed(s) for which partial termination is sought, include all necessary supporting documentation, and include the City's certification that: (1) the City has submitted the Condition Remedial Measures Plan pursuant to Paragraph 24 and the Capacity Remedial Measures Plan pursuant to Paragraph 29; (2) the City has made all of the payments described in Paragraph 111.c-d of this Consent Decree and complied with all requirements of this Consent Decree relating to the Sewershed(s) included in the Partial Termination Request; and (3) the City is in continuous satisfactory compliance with its TDPES Permits for the one year following completion of its obligations under the Consent Decree in the relevant Sewershed(s).

Notwithstanding termination with respect to any Sewershed, and until Final Termination of this Consent Decree:

- a. If an SSO occurs in a Sewershed for which this Consent Decree has been terminated that is caused by a defect, blockage, or other condition in a City owned WCTS asset in a Sewershed for which this Consent Decree has not been terminated, then the City shall remain subject to stipulated penalties under Section IX (Stipulated Penalties) for such SSO to the same extent as if the Consent Decree had not been terminated as to that Sewershed; and
- b. Any Remedial Measure in an approved Oso Alternative Remedial Measures Plan shall be an enforceable obligation of this Consent Decree, notwithstanding any partial termination.

113. After the City submits a Final Termination Request or Partial Termination Request, if Plaintiffs determine that the Consent Decree may be terminated or partially terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating or partially terminating the Consent Decree.

114. If Plaintiffs determine that the Consent Decree cannot be terminated or partially terminated, they will notify the City in writing, and the City may invoke dispute resolution under Section XII (Dispute Resolution) of this Consent Decree. However, notwithstanding the provisions of Section XII (Dispute Resolution), the City shall not seek formal dispute resolution under Section XII (Dispute Resolution) of any dispute regarding termination until at least one hundred twenty (120) Days after serving its Request for Final Termination or ninety (90) Days after serving its Request for Partial Termination. This Consent Decree shall remain in effect

pending resolution of the dispute by the Parties or the Court in accordance with the dispute resolution provisions of Section XII (Dispute Resolution) of this Consent Decree.

XXI. PUBLIC PARTICIPATION

115. This Consent Decree shall be lodged with the Court for at least thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Additionally, the State shall give public notice of the settlement, and allow for public comment, by publishing a notice of the settlement and opportunity to comment in the Texas Register as required by Texas Water Code § 7.110. The State reserves the right to withdraw from or withhold consent from the Consent Decree for the reasons set forth in Texas Water Code § 7.110. The City 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 Consent Decree, unless the United States or the State has notified the City in writing or in open court that it no longer supports entry of the Consent Decree.

XXII. SIGNATORIES/SERVICE

116. Each undersigned representative of the City, State, EPA, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice on behalf of the United States 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 to this document the Party he or she represents.

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

118. The City agrees to accept service of process by mail or courier service to the address set forth in Paragraph 99 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 relating to service of process including, but not limited to, service of a summons.

XXIII. INTEGRATION/APPENDICES

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

- Appendix A Capital Improvements Plan Projects
- Appendix B Corpus Christi System-Wide Cleaning Program Process and Guidelines
- Appendix C Prioritization Approach City of Corpus Christi Risk-Based Prioritization
- Appendix D Capacity Assessment and Remedial Measures Approach
- Appendix E Condition Assessment and Remedial Measures Approach
- Appendix F Condition Assessment Report Template
- Appendix G Condition Remedial Measures Plan Report Template
- Appendix H Capacity Assessment Report Template
- Appendix I Capacity Remedial Measures Plan Report Template
- Appendix J Annual Report Template

XXIV. FINAL JUDGMENT

120. 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, the State, and the City.

Dated and entered this _____ day of _____, 2020.

UNITED STATES DISTRICT JUDGE

Subject to the notice and comment provisions of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this Consent Decree entered in the matter of *United States of America and State of Texas v. City of Corpus Christi* (S.D. TX):

FOR THE UNITED STATES OF AMERICA

Date

JEFFREY BOSSERT CLARK
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20530

Date

THOMAS P. CARROLL
Assistant Section Chief
BRANDON ROBERS
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20004
Phone: (202) 514-5292
Fax: (202) 616-6584
Brandon.robers@usdoj.gov

Subject to the notice and comment provisions of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this Consent Decree entered in the matter of *United States of America and State of Texas v. City of Corpus Christi* (S.D. TX):

FOR THE UNITED STATES OF AMERICA

RYAN K. PATRICK
United States Attorney

Date

By:

JOHN SMITH III
Deputy Civil Chief
U.S. Attorney's Office
Southern District of Texas
800 N. Shoreline, Suite 500
Corpus Christi, TX 78401
(361) 888-3111

Subject to the notice and comment provisions of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this Consent Decree entered in the matter of *United States of America and State of Texas v. City of Corpus Christi* (S.D. TX):

Date

CHERYL SEAGER
Division Director
U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Date

RUSTY HERBERT
Senior Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Subject to the notice and comment provisions of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this Consent Decree entered in the matter of *United States of America and State of Texas v. City of Corpus Christi* (S.D. TX):

Date

SUSAN PARKER BODINE
Assistant Administrator
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Date

ROSEMARIE KELLEY
Director
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Date

MARK POLLINS
Division Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Date

MORGAN E. ROG
Attorney-Advisor
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Subject to the notice and comment provisions of Texas Water Code § 7.110, THE UNDERSIGNED PARTIES enter into this Consent Decree entered in the matter of *United States of America and State of Texas v. City of Corpus Christi* (S.D. TX):

FOR THE STATE OF TEXAS

KEN PAXTON
Attorney General of Texas

JEFFREY C. MATEER
First Assistant Attorney General

DARREN L. MCCARTY
Deputy Attorney General for Civil Litigation

PRISCILLA M. HUBENAK
Division Chief, Environmental Protection
Division

Date

MARK A. STEINBACH
State Bar No. 24056653
Assistant Attorney General
Office of the Attorney General
P.O. Box 12548, MC-066
Austin, Texas 78711-2548
Phone: (512) 463-2012
Fax: (512) 320-0911
mark.steinbach@texasattorneygeneral.gov

COUNSEL FOR THE STATE OF TEXAS

THE UNDERSIGNED PARTIES enter into this Consent Decree entered in the matter of *United States of America and State of Texas v. City of Corpus Christi* (S.D. TX):

Date

PETER ZANONI
City Manager
1201 Leopard St.
Corpus Christi, TX 78401
(361) 826-3220

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Date

MILES RISLEY
City Attorney
1201 Leopard St.
Corpus Christi, TX 78401
(361) 826-3360

JOSE E. DE LA FUENTE
Principal
NATHAN E. VASSAR
Principal
Lloyd Gosselink Rochelle & Townsend, P.C.,
816 Congress Avenue, Suite 1900
Austin, Texas 78701
(512) 322-5800

Appendix A

Capital Improvements Plan Projects

Appendix A: Capital Improvements Plan Projects

CIP Item	Notes from CIP	Total Cost	Completion Date
Laguna Shores Road Force Main Replacement	“This project will increase operational efficiencies and protect against overflows, preventing enforcement action from the Texas Commission on Environmental Quality.”	\$5,800,000.00	Dec. 1, 2020
McBride Lift Station and Force Main Improvements	“The project is essential to reduce long-term operational cost and to alleviate potential Texas Commission on Environmental Quality violations with lift station failures and resulting overflows.”	\$4,600,000.00	Dec. 1, 2022

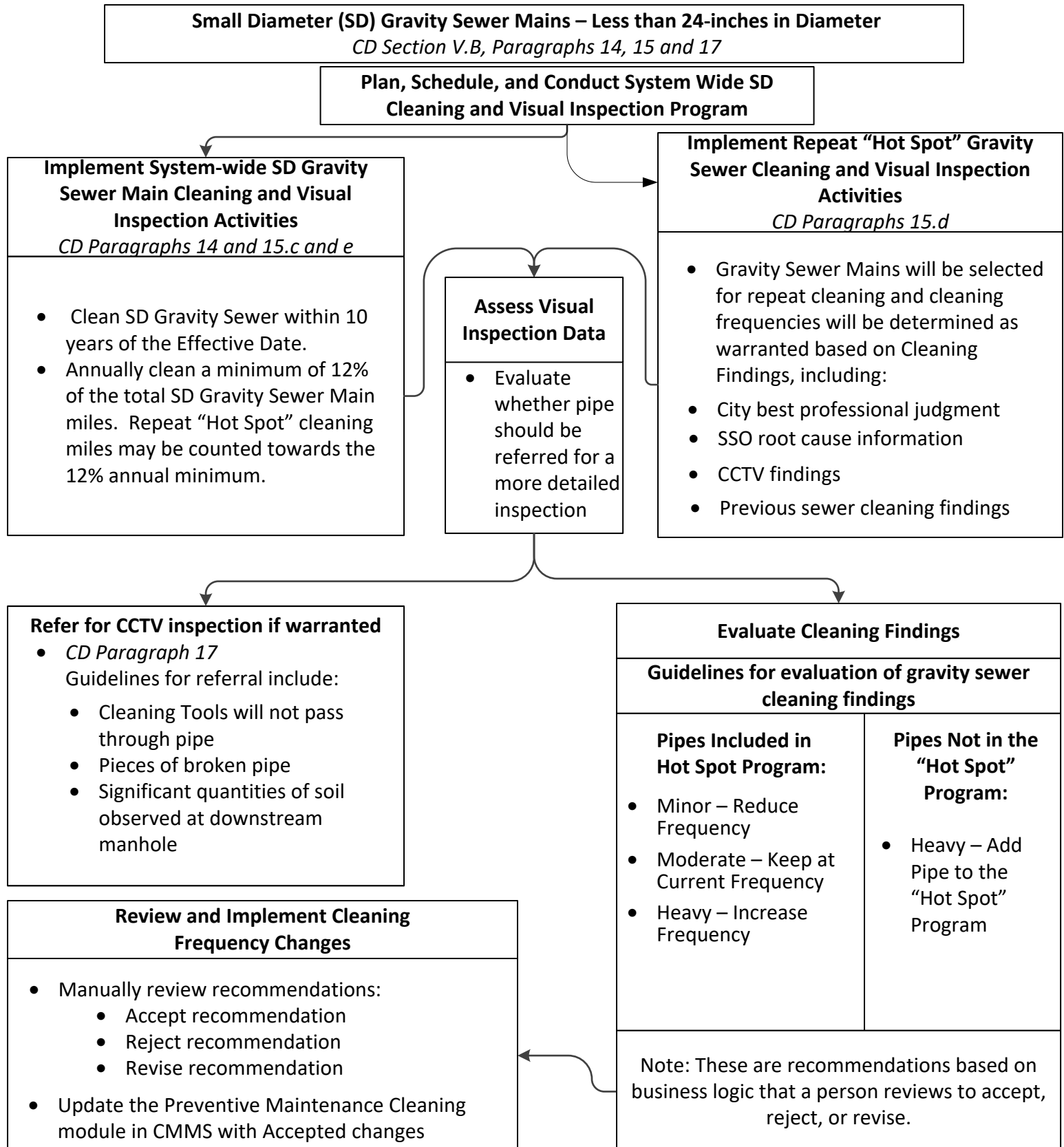
Appendix B

Corpus Christi System-Wide Cleaning Program Process and Guidelines

Appendix B

Corpus Christi System-Wide Cleaning Program Process and Guidelines

This appendix is meant to illustrate the requirements of Section V.C of the Consent Decree ("CD"). Significant detail exists in the CD that is not in this Appendix. To the extent that this Appendix and the CD are inconsistent, the CD controls.



Appendix B
Corpus Christi System-Wide Cleaning Program Process and Guidelines

Page 2 of 2

Large Diameter (LD) Gravity Sewer Mains – Greater than or Equal to 24-inch Diameter
CD Section V.B, Paragraphs 14, 16 and 17

Plan, Schedule, and Conduct Initial LD Inspection Activities
Paragraph 16.a

Inspect manholes associated with LD Gravity Sewer Mains within 4 years of the Effective Date. Measure the depth of debris in the associated LD Gravity Sewer Main via the upstream and the downstream manholes.

Clean LD Gravity Mains
Paragraph 16.b

Inspection Data Evaluation Guidelines to Determine Cleaning Needs

The City shall clean each LD Gravity Sewer Main segment where the depth of debris in the LD Gravity Sewer Main, as measured in such LD Gravity Sewer Main at either the upstream or downstream manhole, exceeds twenty (20) percent of the pipe's diameter. The following LD cleaning milestones shall be reached from the Effective Date: at least 30% will occur within 6 years; at least 60% will occur within 8 years; 100% will occur within 10 years.

Re-inspection Frequency
Paragraph 16.c

Any LD Gravity Sewer Main found to have a depth of debris, as measured in the pipe at either the upstream or downstream manhole, that exceeds twenty (20) percent of the pipe diameter shall be re-inspected within five (5) years of the date that main is inspected, unless main is cleaned within that five (5) year period, in which case it will be re-inspected within five (5) years of the date that the main is cleaned. Re-cleaning and re-inspection frequencies for all other Large Diameter Gravity Mains will be determined as part of the CMOM program.

Refer for CCTV inspection if warranted
CD Paragraph 17

- Guidelines for referral include:
 - Cleaning Tools will not pass through pipe
 - Pieces of broken pipe
 - Significant quantities of recently infiltrated soil observed at downstream manhole

Appendix C

Prioritization Approach City of Corpus Christi Risk-Based Prioritization

Appendix C: Prioritization Approach
City of Corpus Christi Risk-Based
Prioritization:

Risk-based prioritization approach

As provided in Paragraph 9(b)(i), the City of Corpus Christi shall implement a risk-based approach to its system-wide cleaning and condition assessment programs that will prioritize work in neighborhoods with historically high rates of Sanitary Sewer Overflows (“SSOs”). The City will address these areas of the City most at risk of having SSOs within the first four years after the Effective Date.

Risk-based prioritization approach for Small Diameter Gravity Sewer Mains

The risk-based method prioritizes neighborhoods based on SSO risk. The prioritized neighborhoods will be used to prioritize both the system-wide sewer cleaning program as well as the condition assessment field inspection program. The following summarizes the process developed by the City of Corpus Christi for implementation in accordance with Consent Decree requirements:

Using the City’s GIS mapping system, historical data and asset databases, staff identified approximately 1,700 individual subdivisions that make up the entire wastewater collection system. In general, each subdivision represents a unique asset class with similar characteristics, having been constructed during a relatively short time period. Thus, there is relative uniformity in each subdivision concerning the following: (1) asset materials, (2) method(s) of construction, (3) design, (4) soil conditions, (5) and asset age. Additionally, sewer assets within each of these areas generally have a defined downstream terminus.

1. The SSO historical data was evaluated to focus on SSOs that were likely caused by publicly owned gravity sewer mains. As such, the City filtered out SSOs that: (1) were not caused by the City’s gravity sewer mains; (2) occurred due to actions of a contractors (e.g., directional drilling, or excavating) that breached existing City sewers; (3) resulted from non-structural or non-operations and maintenance causes (e.g., vandalism or minor leakage during a repair).
2. The City determined and assigned for each subdivision an SSO Relative Risk Score, based on SSO location history data (since 2012) and GIS mapping, as follows:
 - Determined number of SSOs in each subdivision from 2012 through the Effective Date.
 - Calculated “SSO Relative Risk” score for each subdivision. The SSO Relative Risk score means the percentage of total SSOs that occurred in a given neighborhood divided by the percentage of total length of sewer mains that are in a given neighborhood. For instance, if 4% of SSOs since 2012 occurred in Neighborhood A, and 2% of total system pipes are in Neighborhood A, then the

relative risk of Neighborhood A is 2.0. This means that this neighborhood has twice the risk as the average risk neighborhood.

- Prioritized subdivisions based on SSO Relative Risk.
- Level loaded mileage in order to achieve a constant rate of progress in conducting system wide sewer cleaning and field inspections.

3. Under this approach:

- The City will perform subdivision prioritized cleaning and condition assessment within 4 years from the Effective Date. The entire collection system (including performing neighborhoods) shall be cleaned and its condition assessed within ten years after the Effective Date, as specifically provided in Section 5.C (Condition Assessment and Remedial Program) of the Consent Decree. 100% of each subdivision will be cleaned, with cleaning completed in an upstream to downstream direction, ending at the downstream termination manhole defined within GIS.
- The City will address all neighborhoods with a relative risk greater than 0 in within the first 4 years of the program.
- The City will perform cleaning and condition assessment field inspection activities by subdivision work orders in a systematic process across the entire collection system.

The proposed comprehensive sewer cleaning and condition assessment plan prioritizes those areas associated with SSOs in the first 4 years after the Effective Date.

Risk-based prioritization approach for Large Diameter Gravity Sewer Mains

Large Diameter Gravity Sewer Main Sewershed prioritization will be based on factors including:

- SSO history
- Condition history
- Coordination with potential WWTP consolidation projects
- Coordination with other infrastructure improvements such as water or street projects

Within 4 years of the Effective Date, per Consent Decree Paragraphs 16 and 18-19, the City will perform an initial inspection of Manholes associated with Large Diameter Gravity Sewer Mains. Due to the need to group Large Diameter Gravity Sewer Mains into linear work packages, the City will group and prioritize Large Diameter Gravity Sewer Main inspection and cleaning by Sewershed instead of the neighborhood-based approach described above for Small Diameter Gravity Sewer Mains, as follows:

1. Oso
2. Broadway
3. Greenwood
4. Laguna Madre
5. Allison

6. Whitecap

Inspections and cleaning will generally be completed in an upstream to downstream direction. The City may update the Sewershed inspection order or the order of inspection of individual Large Diameter Gravity Sewer Mains as new information becomes available to suggest reordering of priorities is warranted.

Appendix D

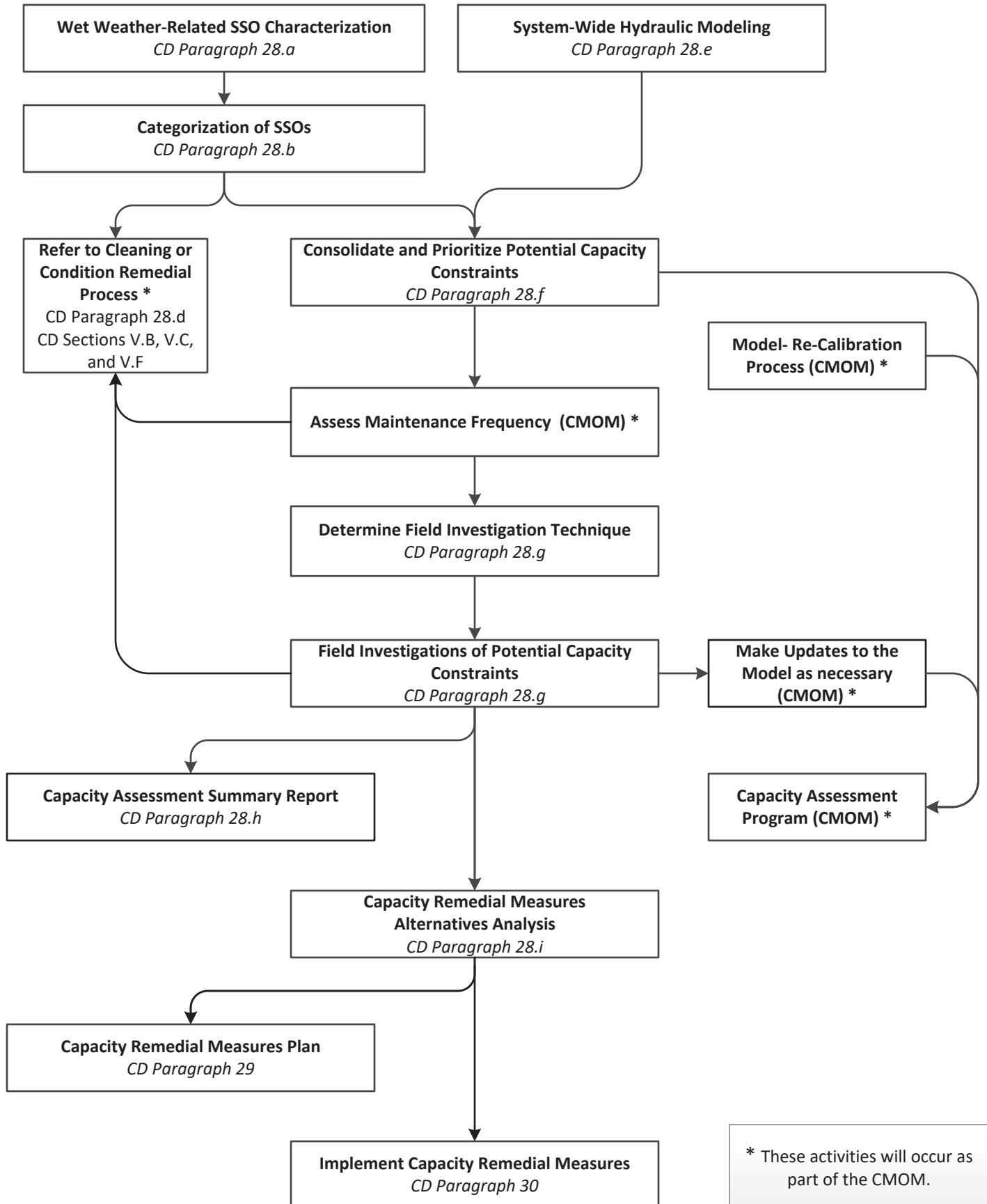
Capacity Assessment and Remedial Measures Approach

Appendix D

Capacity Assessment and Remedial Measures Approach

Page 1 of 4

This appendix is meant to illustrate the requirements of Section V.D of the Consent Decree ("CD"). Significant detail exists in the CD that is not in this Appendix. To the extent that this Appendix and the CD are inconsistent, the CD controls.



Appendix D

Capacity Assessment and Remedial Measures Approach

Page 2 of 4

Wet Weather-Related SSO Characterization CD Paragraph 28.a

- Evaluate SSOs during wet weather events 4 years before and 3 years after Effective Date
- Activities may include as appropriate, but are not limited to:
 - Review available records
 - Talk to staff that performed the post-SSO investigation
 - Consult with cleaning and repair crews
- *Wet weather events are rain events that exceed 1-inch over a 24-hour period*

System-Wide Hydraulic Modeling

CD Paragraph 28.e

- Corpus Christi will use a 5-year, 24-hour assessment storm at existing population scenario in the model as the assessment parameters to identify discrete system components that result in a Priority 1 through 5 categorization as described in the “Consolidate and Prioritize Potential Capacity Constraints” box below.
- Identify Priority 1 through 5 potential Capacity Constraints.

Categorization of SSOs CD Paragraphs 28.b

A) Most likely a capacity-related SSO. Existing data indicate that there does not appear to be a history of maintenance or structural issues that may have led to the SSO.

B) Most likely maintenance related or condition related. Existing data indicate that the cause is most likely a maintenance-related cause such as FOG, roots, or debris, or a condition-related cause, such as a protruding lateral or an offset joint, but there may also be a Capacity Constraint at the SSO location.

C) Not a capacity-related SSO. Existing data indicate that the SSO was not capacity related. Examples include isolated events such as pool or colling towers being drained into the sewer system or cleaning maintenance related issues such as significant FOG, roots, or debris.

Consolidate and Prioritize Potential Capacity Constraints CD Paragraph 28.f

Priority 1 - Category A SSO and the Hydraulic Model also predicts SSO within the assessment parameters.

Priority 2 - Where Hydraulic Model predicts SSO within the assessment parameters, but with no observed SSO. Category A SSO, but the Hydraulic Model does not predict SSO within the assessment parameters.

Priority 3 - The Hydraulic Model predicts hydraulic grade line (HGL) near ground elevation within the assessment parameters.

Priority 4 - Category B SSO.

Priority 5 - The Hydraulic Model predicts that pipe design capacity is exceeded for sustained 60 minutes or more but the HGL is not near the ground elevation within the assessment parameters.

Notes

- *The list above represents criteria for use by City in prioritizing the potential Capacity Constraints that may warrant Field Investigation. The City will prioritize field investigations by, in general, starting at the top of the list, with Priority 1 taking the highest priority and Priority 5 taking the lowest priority. In general, the City shall start with Priority 1 and work towards lower priorities as higher priority field investigations are concluded. Corpus Christi may reprioritize potential Capacity Constraints as new information becomes available or adjustments to the model are made.*
- *Priorities 1-4 are more likely than 5's to warrant field investigation, though this shall be determined based upon a case-by-case engineering assessment (for example, such as inverted siphons which are intentionally operated submerged with HGL above pipe crown).*
- *Priority 5's shall be kept on a monitoring list or go to field investigation as warranted based upon a case-by case engineering assessment. Priority 5's that do not go to field investigation shall be kept on the potential Capacity Constraint list and monitored as updates are made to the model.*

Refer to Cleaning or Condition Remedial Process *

CD Paragraph 28.d
CD Section V.B
CD Section V.C
CD Section V.F

* These activities will occur as part of the CMOM.

Assess Maintenance Frequency Data (CMOM) *

Evaluate, and modify as needed, the maintenance frequency for each pipe under investigation to prevent blockages that would significantly reduce design capacity during the investigation

See Page 3, Determine Field Investigation Technique

Model Re-calibration Process (CMOM) *

- Collect additional flow metering data over time
- Collect additional rain gauge data over time
- Apply appropriate observed storm events to model
- Calibrate the model to match measured flows (for both dry and wet weather flows)
- Assess calibration anomalies and adjust model

Notes

- *This process is currently planned to occur as needed in the future depending on system growth/change rate or other factors.*
- *If needed, model re-calibration will be performed as part of CMOM*

See Page 3, Make Model Updates as Necessary

Appendix D

Capacity Assessment and Remedial Measures Approach

Page 3 of 4

See Page 2

Determine Field Investigation Technique

CD Paragraph 28.g

Determine which Field Investigation Technique is most appropriate for each identified potential Capacity Constraint

- Flow measurement
- Level measurement
- Visual inspection
- Other (specify)

See Page 2

Field Investigations of Potential Capacity Constraints *CD Paragraph 28.g*

City shall implement selected field investigation technique at each location with a priority 1-4 potential Capacity Constraint until a significant wet weather event occurs in order to determine whether there is a significant wet weather response. In performing field investigations, the City shall adhere to the following guidelines:

- Significant wet weather events are rain events that exceed 1-inch over a 24-hour period.
- The assessment storm is a 5-year, 24-hour storm at existing population scenario.
- If the HGL is at or near ground surface elevation during a wet weather event less than 1-inch over a 24 hour period, identify as a Verified Capacity Constraint and refer for remedial measures alternatives analysis.
- For significant wet weather events that are less than the assessment storm, the following guidelines apply:
 - Apply observed storm to Hydraulic Model and determine predicted HGL at the potential capacity constraint location. Compare predicted HGL from Hydraulic Model to observed HGL. Corpus Christi will use its best professional judgment to adjust the Hydraulic Model if appropriate.
 - If observed HGL is at or above the Hydraulic Model's predicted HGL at the observed storm:
 - a. For Priority 1, 2 and 3: identify as a Verified Capacity Constraint and refer for alternatives analysis, as appropriate
 - b. For Priority 4 and 5: evaluate on a case-by-case basis and refer to alternatives analysis, as appropriate
 - If observed HGL is less than the Hydraulic Model's predicted HGL at the observed storm:
 - a. For Priority 1 and 2:
 - i. If Hydraulic Model predicts an overflow at the assessment storm, evaluate on a case-by-case basis and refer for remedial measures alternatives analysis, as appropriate.
 - ii. If Hydraulic Model does not predict an overflow at the assessment storm, remove these sites from the field investigation program as appropriate. The City will continue to monitor these sites as part of CMOM.
 - b. For Priority 3, 4, and 5: remove the site from the field investigation program as appropriate. The City will continue to monitor these sites as part of CMOM.
- *The City will determine that no capacity constraint exists at a site when a wet weather event occurs that is approximately equal to or exceeds the assessment storm, and no overflow takes place. Any such sites will be removed from the field investigation program and monitored in the future as part of CMOM*
- *Where no significant wet weather response occurs, the City will remove a location from the field investigation program*

Make Updates to the Model as Necessary (CMOM) *

- Such updates may include calibration opportunities based on flow meter data, updates to attributes found during the field investigation, accounting for debris loading, or other relevant new data

Notes

- *Updates will be performed as part of CMOM*

See Page 4

Capacity Assessment Summary Report

(CD Paragraph 28.h)

See Capacity Assessment Report Template in Appendix I. Report to be reviewed and commented upon by EPA.

* These activities will occur as part of the CMOM.

Appendix D

Capacity Assessment and Remedial Measures Approach

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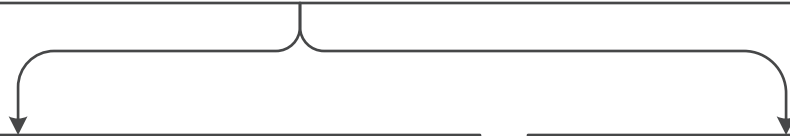
See Page 3



Capacity Remedial Measures Alternatives Analysis

As required by Paragraph 28.i, the City shall complete an analysis of the available remedial measures to address Verified Capacity Constraints. As part of this process, the City shall:

- Utilize existing data and collect any necessary additional field data such as:
 - Smoke testing
 - Dye testing
 - Flow metering
 - CCTV
 - Survey information
 - Manhole inspection data
 - Other data as needed
- Use engineering analysis to determine which solution is most likely to resolve the constraint at the lowest possible cost considering both long-term performance and life-cycle cost. Possible measures include: (1) re-routing a portion of upstream wastewater flows, (2) Reducing flows entering the WCTS from customers, (3) reducing inflow, (4) reducing infiltration, (5) Increase conveyance capacity of WCTS, (6) building upstream flow detention facilities, (7) continued monitoring, or (8) other engineering solutions.
- Apply the design parameters and TCEQ required growth projection to determine appropriate pipe sizing, as needed.
- For convey and treat projects, the City shall evaluate potential downstream impacts including the ability of the WWTP to handle the flow.



Implement Capacity Remedial Measures (CD Paragraph 30)

- Prioritize remedial measures and periodically evaluate priorities
- Generally, review severity of Capacity Constraints identified during inspections, frequency and history of capacity-related SSOs, pipe size, age and material, maintenance history, relationship of Capacity Constraint areas of the WCTS to growth-related improvements and/or condition-related improvements, practical planning considerations and other criteria determined to be appropriate by Corpus Christi.
- Coordinate with condition remedial measures as needed
- Allocate budget
- Design as needed
- Implement remedial measures

Capacity Remedial Measures Plan (CD Paragraph 29)

- See Capacity Remedial Measures Plan Template in Appendix J
- Plan reviewed and approved by EPA.

Appendix E

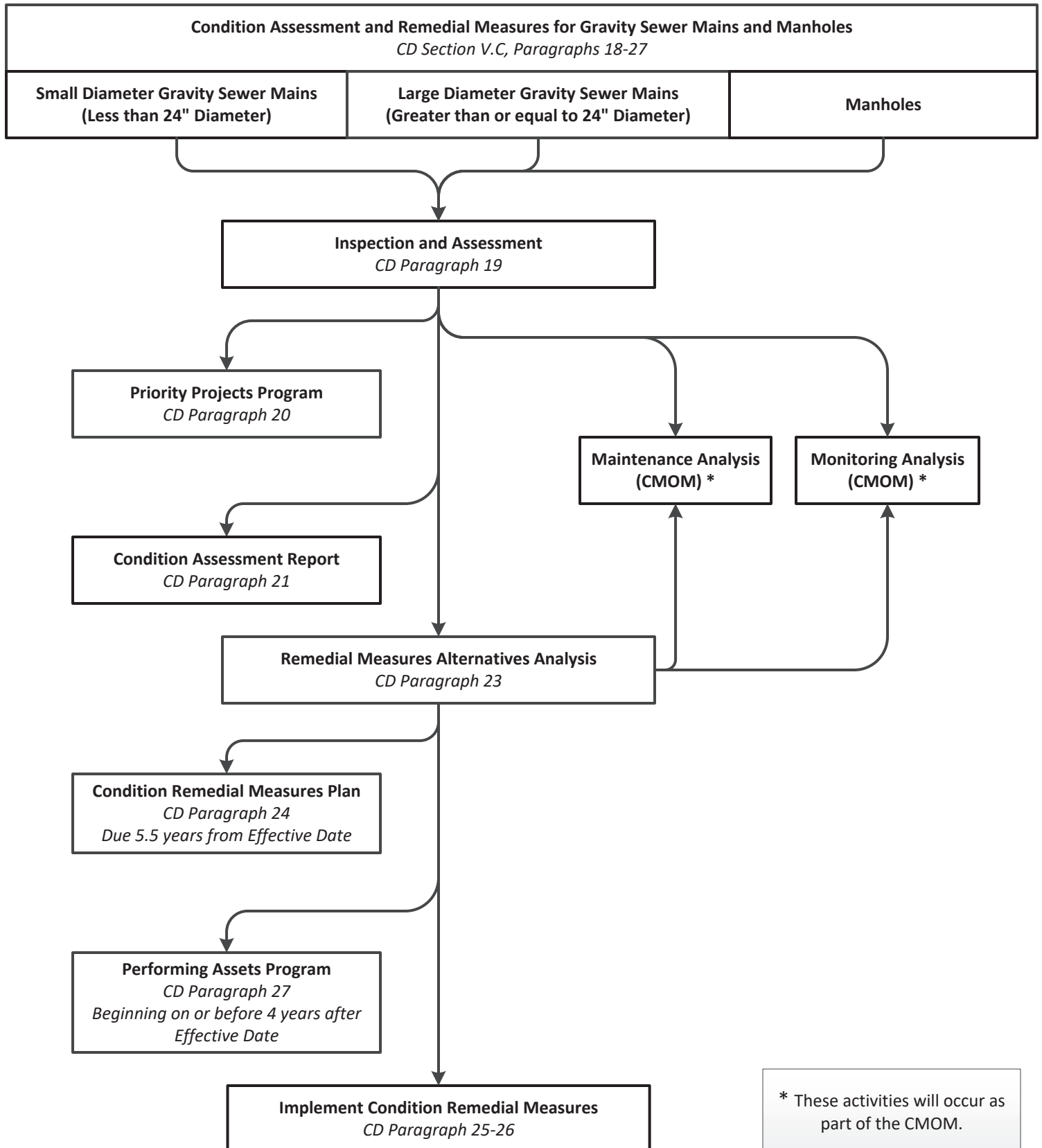
Condition Assessment and Remedial Measures Approach

Appendix E

Condition Assessment and Remedial Measures Approach

Page 1 of 4

This appendix is meant to illustrate the requirements of Section V.C of the Consent Decree ("CD"). Significant Detail exists in the CD that is not in this Appendix. To the extent that this Appendix and the CD are inconsistent, the CD controls.



Appendix E

Condition Assessment and Remedial Measures Approach

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Plan, Schedule, and Conduct System Wide Inspection Activities

Small Diameter Gravity Sewer Mains (Less than 24" Diameter) CD Paragraphs 19.a and 19.a.ii	Large Diameter Gravity Sewer Mains (Greater than or equal to 24" Diameter) CD Paragraphs 17, 19.a and 19.a.i	Manholes CD Paragraph 19.b
<u>Inspection methods</u> <ul style="list-style-type: none"> For non-PVC pipes as described in Paragraph 19.a.ii.1. and non-PVC pipes in the Performing Assets Program Subdivisions installed before 1974 as described in Paragraph 19.a.ii.2: <ul style="list-style-type: none"> CCTV For performing Assets Program pipe installed between 1974 and 1982): <ul style="list-style-type: none"> CCTV or pole camera For remaining pipes, including PVC and Performing Assets Program pipes installed between 1983 and the date ten years prior to the Effective Date: <ul style="list-style-type: none"> CCTV, or sewer cleaning findings; or pole camera inspections; or mechanical proofing; or smoke testing; or dye testing; or other techniques as they become available commonly utilized by other sewer management agencies. <u>Prioritize pipes for inspection</u> <ul style="list-style-type: none"> Prioritize pipes per the Prioritization Approach Appendix C Additional inspections as needed for investigations <u>Schedule and conduct inspection activities</u> <ul style="list-style-type: none"> Generally, schedule inspection activities in conjunction with small diameter gravity sewer main cleaning 	<u>Inspection method</u> <ul style="list-style-type: none"> For all pipes referred in accordance with Paragraph 17: <ul style="list-style-type: none"> CCTV; or other full length internal visual inspection. For all other pipes (CD Paragraph 19): <ul style="list-style-type: none"> CCTV; or Sonar; or 360-degree video; or laser imaging; or visual inspection; or physical entry; or other techniques as they become available commonly utilized by other sewer management agencies. <u>Prioritize pipes for inspection</u> <ul style="list-style-type: none"> Prioritize pipes per the Prioritization Approach Appendix C. Additional inspections as needed for investigations. <u>Schedule and conduct inspection activities</u>	<u>Inspection Methods</u> <ul style="list-style-type: none"> Visual <u>Schedule and conduct inspection activities</u> <ul style="list-style-type: none"> Inspections of manholes associated with Small Diameter Gravity Lines Mains shall generally be conducted on the same schedule used for the inspection of the associated Gravity Sewer Main, or sooner. Inspections of manholes associated with Large Diameter Gravity Sewer Mains shall generally be completed within four (4) years of the Effective Date.

Gravity Sewer Main Condition Assessment

The City shall perform assessments of Gravity Sewer Mains in accordance with the requirements of Section V.C of this Decree, and using the following guidelines:

- Prioritize the review of inspection data based on the severity of findings. For Example, prioritize review of Gravity Sewer Mains using PACP Quick Ratings. In general, review pipes with grade 5 and 4 defects first, followed by pipes with grade 3, 2, or 1 defects.
- Categorize all inspected Gravity Sewer Mains using the following table:

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

- Perform analysis on inspection data and consider appropriate criteria which may include factors such as the following:
 - Type and severity of structural defects, long-term performance of asset, the life-cycle cost, and consequence of failure
 - Historical operation and maintenance data: overflows, inspections, cleaning findings, cleaning frequency, previous remediation, customer complaints, and other unique circumstances for each individual asset
 - Site conditions: Property rights, access for maintenance and construction, depth, soil type, environmental sensitivity, surface restoration requirements, and other unique circumstances for each individual asset

See Page 3

Appendix E

Condition Assessment and Remedial Measures Approach

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See Page 2



Manhole Condition Assessment

The City shall perform assessments of manholes in accordance with the requirements of Section V.C of this Decree, and using the following guidelines:

- Prioritize the review of inspection data based on the severity of findings. For example, prioritize review of manhole inspections using the worst defect(s) and its location. Those manholes with defects which would result in a categorization of D or E would be reviewed first, followed by those manholes with defects which would result in manhole categorizations of A, B or C.
- Manhole I/I observations will be considered in the Capacity Remedial Measures Alternatives Analysis process identified in Paragraph 28.i of the Consent Decree and the Capacity Remedial Measures Alternatives Analysis box in Appendix D (see page 4 of 4) for confirmed capacity constraints that may be candidates for an inflow and/or infiltration reduction remedial measure project.
- Categorize all inspected Gravity Sewer Manholes using the following table:

Category	Example Structural Conditions	Likely Outcome
E - Very Poor Condition	Manhole collapse or collapse imminent, or other significant defect that has caused or could likely cause an SSO. -Such structural defects indicating potential structural failure may include: missing bricks, casting failure, severe corrosion in the wall and/or base and broken/missing cover and frame.	Alternatives Analysis
D - Poor Condition	Severe corrosion, large open cracks, and significant missing bricks or broken walls, castings, covers, frames, or other significant defect that has caused or could likely cause an SSO –Such structural defects may include: one or more large, open cracks, separated casting, adjustment failure significant damaged cover and frame, significant corrosion of metal surfaces, significant deterioration of concrete mortar between bricks, and significant deterioration of precast wall sections and precast joint defects.	Alternatives Analysis
C - Fair Condition	Moderate structural defects including moderate cracks, corrosion, and deterioration of walls, castings, covers, and frames. Such defects may include two or more closed cracks, loose casting, loose bricks, moderate corrosion of metal surfaces, and moderate deterioration of concrete mortar between bricks.	Monitoring Analysis under CMOM
B - Good Condition	Minor structural defects including small cracks, minor deterioration of walls, castings, covers, and frames. No moderate or severe structural defects. Single closed crack, minor frame/cover defects, minor manhole corrosion.	Maintenance Analysis under CMOM
A - Very Good Condition	No defects or cosmetic defects such as non-displaced cracks. A manhole with no minor, moderate or severe structural defects, only cosmetic defects observed, if any.	Maintenance Analysis under CMOM

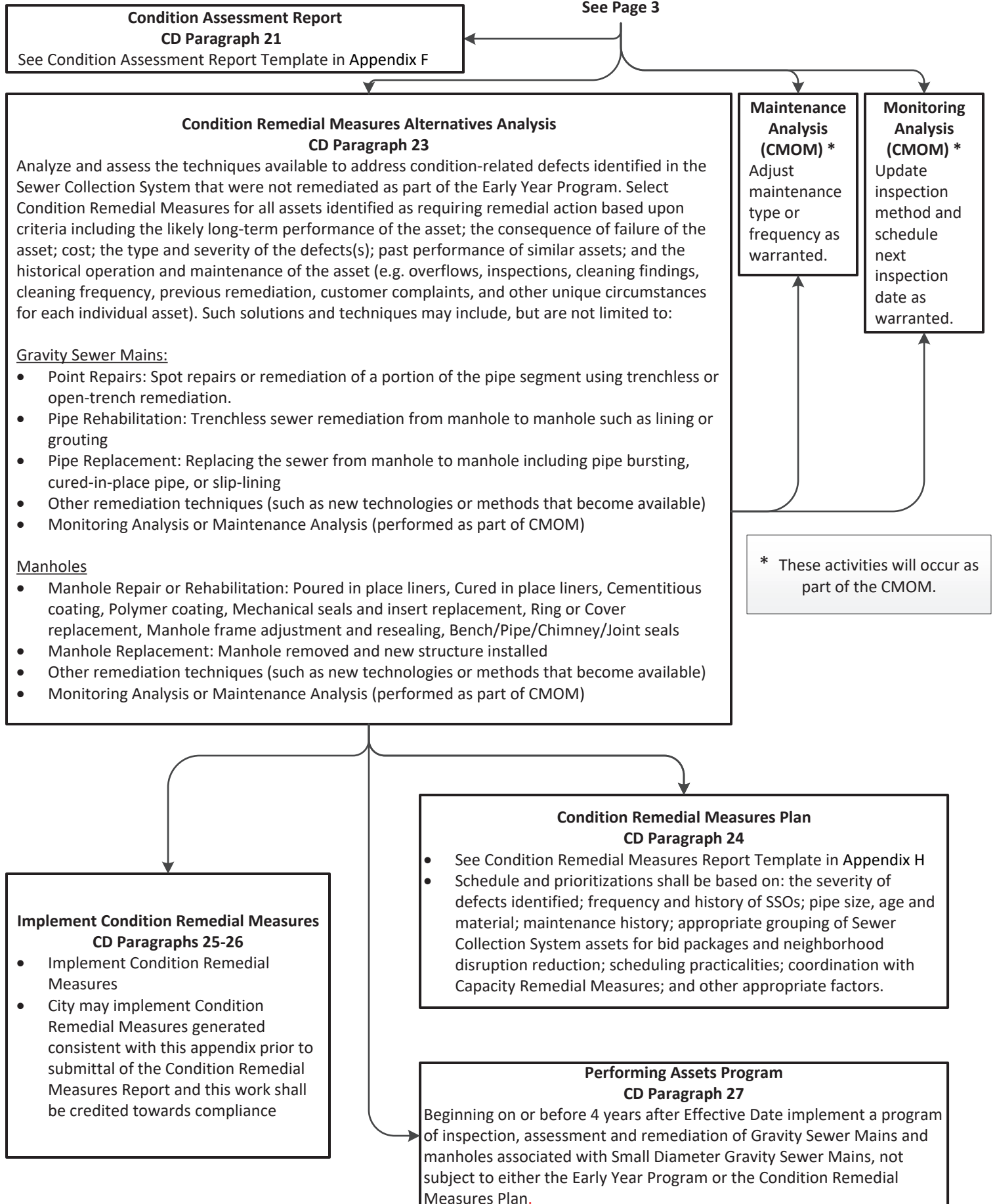


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Appendix E

Condition Assessment and Remedial Measures Approach

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City of Corpus Christi - Lift Station Assessment Form

Lift Station Name _____	Type _____
Location/Address _____	
Lift Station Asset ID _____	Number of Pumps _____
Firm Capacity in GPM (all pumps operating) _____	
Firm Capacity in GPM (largest pump out of service) _____	
Inspector _____	Date _____

* For purposes of this Lift Station Assessment Form, unless marked with an asterisk (*), all "Poor" ratings signify defects likely to cause or contribute to an SSO. Where an asterisk (*) is provided next to a category, a "poor" rating in that category shall not result in evaluation under the Condition Remedial Measures Alternative Analysis of the Corpus Christi Consent Decree with the U.S. Environmental Protection Agency and Texas Commission on Environmental Quality.

** Refer to CMOM Plan

Building and Grounds

		Good	Fair	Poor	N/A
*Building Structure	Type: _____				
*Building Roof/Ceiling		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Building Finishes		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Building Doors and Windows		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Building HVAC	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Fencing	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Gates	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Site/Grounds	Size: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Lighting		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Pavement (Driving)	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Drainage	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Odor	Comment: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Odor Control System	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Odor Control Mechanical		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Odor Control Media	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Noise		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Overall Site Appearance		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments _____

Structural

			Good	Fair	Poor	N/A
Wet Well	Size:					
**Debris			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
**Fats, oils, and grease			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Ventilation			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walls	Material:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Coatings	Type:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Access Hatches	Number:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Slab			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dry Well/Valve Vault						
Walls	Material:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Coatings	Type:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Grating/Hatching	Number:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Stairway/Ladder	Material:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sump/Pump	Number:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Ventilation	Type:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

Mechanical

			Good	Fair	Poor	N/A
Quick Connect	(Circle)	YES / NO				
Piping and Valves						
Suction Valve	Number:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check Valve	Number:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discharge Valve	Number:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Attachment A

			Good	Fair	Poor	N/A
	Riser Piping	Material: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Discharge Piping	Material: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Fittings	Material: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments _____

Pumps

Pump 1	Asset ID _____	Make _____	Model _____
	Capacity _____	GPM _____	
	Impeller Dia./Code _____	Horsepower _____	

	Good	Fair	Poor	N/A
Pump	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shaft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electrical Cable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Noise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Vibration/Heat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pump 1	<i>The following components are to be inspected during pump disassembly</i>
*Oil	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Impeller	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Packing Rings	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Internal Seals	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Pump 2	Asset ID _____	Make _____	Model _____
	Capacity _____	GPM _____	
	Impeller Dia./Code _____	Horsepower _____	
			Good Fair Poor N/A
	Pump		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Seals		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Motor		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Shaft		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Electrical Cable		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Noise		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Vibration/Heat		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Pump 2	<i>The following components are to be inspected during pump disassembly</i>		
	*Oil		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Impeller		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Packing Rings		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Internal Seals		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Pump 3	Asset ID _____	Make _____	Model _____
	Capacity _____	GPM _____	
	Impeller Dia./Code _____	Horsepower _____	
			Good Fair Poor N/A
	Pump		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Seals		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Motor		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Shaft		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Electrical Cable		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Noise		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Vibration/Heat		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Pump 3*The following components are to be inspected during pump disassembly*

		Good	Fair	Poor	N/A
	*Oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Impeller	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Packing Rings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Internal Seals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pump 4

Asset ID _____

Make _____

Model _____

Capacity _____

GPM _____

Impeller Dia./Code _____

Horsepower _____

		Good	Fair	Poor	N/A
	Pump	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Seals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Shaft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Electrical Cable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	*Noise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	*Vibration/Heat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pump 4*The following components are to be inspected during pump disassembly*

	*Oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Impeller	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Packing Rings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Internal Seals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pump 5	Asset ID _____	Make _____	Model _____
	Capacity _____	GPM _____	
	Impeller Dia./Code _____	Horsepower _____	
			Good Fair Poor N/A
	Pump		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Seals		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Motor		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Shaft		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Electrical Cable		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Noise		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Vibration/Heat		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Pump 5	<i>The following components are to be inspected during pump disassembly</i>		
	*Oil		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Impeller		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Packing Rings		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Internal Seals		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Pump 6	Asset ID _____	Make _____	Model _____
	Capacity _____	GPM _____	
	Impeller Dia./Code _____	Horsepower _____	
			Good Fair Poor N/A
	Pump		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Seals		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Motor		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Shaft		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	Electrical Cable		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Noise		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	*Vibration/Heat		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Pump 6*The following components are to be inspected during pump disassembly*

		Good	Fair	Poor	N/A
*Oil		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impeller		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Packing Rings		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal Seals		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Electrical System

					Good	Fair	Poor	N/A
Electrical System Power		Volt/Phase:						
Panel/Enclosures	NEMA4X	YES	NO		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transformers (AEP)					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disconnect	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generator	KW				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transfer Switch					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electrical System Control								
Breakers	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speed control/VFD	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starters	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Control Relays	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

Instrumentation/SCADA

					Good	Fair	Poor	N/A
Panel	NEMA4X	YES	NO		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instrumentation								
Level	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flow	Type:				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Instrumentation/SCADA (continued)

Good Fair Poor N/A

PLC	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SCADA		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RTU	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radio/Antenna	Type: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments _____

Appendix F

Condition Assessment Report Template

Appendix F
Condition Assessment Report Template

I. Cover

II. Certification Declaration

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

III. Table of Contents

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

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Report was prepared and submitted pursuant to Paragraphs 18-22 of the Consent Decree. This report describes the results of the Condition Assessment and Remedial Program, including assessments and Condition Remedial Measures completed during the first four (4) years after the Effective Date, and all activities conducted as part of the Priority Projects during the first four (4) years after the Effective Date. This report addresses the following Sewer Collection System assets:

- a) *all Gravity Sewer Mains inspected or assessed in the first four (4) years after the Effective Date;*
- b) *all manholes associated with Small Diameter Gravity Sewer Mains inspected in the first four (4) years after the Effective Date;*
- c) *all manholes associated with Large Diameter Gravity Sewer Mains;*
- d) *all lift stations; and*
- e) *all Force Mains in the first two (2) years after the Effective Date.*

VI. System-Wide Inspection Activities

A. Inspection Method Overview

[Provide a brief description of each inspection method utilized by the City; with a reference to the Condition Assessment and Remediation Process and Guidelines Appendix.]

B. Gravity Sewer Main Inspection Map

[Include a map showing the location of the gravity sewer main inspections, and inspection method(s). Inspections completed since 2010 for gravity sewer mains are included.]

Appendix F
Condition Assessment Report Template

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

Program ⁴	Asset Description	Inspection Method	Miles of Inspections Required Under Consent Decree ^{1,2,3,4}	Miles Completed Prior to Effective Date ^{1,2}	Miles Completed since Effective Date ¹	Miles of Inspections Completed ^{1,2}	Cumulative Percent (%) Complete ¹
Priority Projects/ Condition Assessment	Small Diameter Gravity Sewer – Non-PVC (See Paragraph 19.a.ii.2)	CCTV or EPA approved proxy	XX				
	Small Diameter Gravity Sewer – PVC (Non-Performing Program Assets per Paragraph 19.a.ii.4)	CCTV, Pole Camera, Visual Inspection (Smoke Testing, Review of Sewer Cleaning Findings, Dye Testing Mechanical Proofing), or EPA approved proxy	XX				
	Large Diameter Gravity Sewer	CCTV, sonar, 360-degree video, laser imaging, visual inspection, physical entry, other techniques used by other sewer agencies, or EPA approved proxy	XX				

Note 1: Gravity Sewer Main Segment length is included in miles.

Note 2: Includes gravity sewer main inspections meeting the criteria of CD paragraph 19 since 2010.

Note 3: Number is fixed from the Effective Date.

Note 4: Performing Assets Program work is reported in Annual Reports

D. Manhole Inspection Map

[Include a map showing the location of the inspections. Inspections completed since 2010 for manholes are included]

Appendix F
Condition Assessment Report Template

E. Manhole Inspection Status

Manhole Inspection Summary

Program	Inspection Method	Manhole Inspections Required Under Consent Decree ^{1,2}	Manholes Inspected Prior to Effective Date ²	Manholes Inspected Since Effective Date	Total Manhole Inspections Completed ²	Cumulative Percent (%) Complete
Condition Assessment	Visual Inspection – Manholes on Small Diameter Gravity Sewer (Priority Projects Subdivisions)	XX	XX	XX	XX	XX
	Visual Inspection – Manholes on Large Diameter Gravity Sewer (System-wide)	XX	XX	XX	XX	XX
Note 1: Number is fixed from the Effective Date.						
Note 2: Includes manhole inspections since 2010 meeting the criteria of CD paragraph 19.b.						

F. Lift Station Inspection Map

[Include a map showing the location of the inspections. Inspections completed since 2015 for lift stations are included.]

Appendix F
Condition Assessment Report Template

G. Lift Station Inspection Status

Lift Station Inspection Summary

Program	Inspection Method	Inspections Required Under Consent Decree ^{1,2}	Inspected Prior to Effective Date ²	Inspected Since the Effective Date	Cumulative Inspections Completed ²	Cumulative Percent (%) Complete
System-wide Condition Assessment	Visual (approved check list)	XX	XX	XX	XX	XX
Note 1: Number is fixed from the Effective Date.						
Note 2: Includes lift station inspections since 2015.						

H. Force Main Inspection Map

[Include a map showing the location of the inspections. Inspections completed since 2015 for force mains are included]

I. Force Main Inspection Status

Force Main Inspection Summary

Program	Asset Description	Inspection Method	Inspections Required Under Consent Decree (number) ^{1,2}	Inspections Prior to Effective Date ²	Inspections Completed Since Effective Date	Cumulative Inspections Completed ²	Cumulative Percent (%) Complete
System-wide / Condition Assessment	Force Main	Visual	XX	XX	XX	XX	XX
	Air Release Valves	Visual	XX	XX	XX	XX	XX
Note 1: Number is fixed from the Effective Date.							
Note 2: Includes force main inspections since 2015.							

Appendix F
Condition Assessment Report Template

VII. Categorization of Sewer Main, Manhole, Force Main, Lift Station and Air Release Valve Condition

A. Guidelines

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

B. Condition Categorization Summary

Pipeline and Manhole Condition Categorization Summary

Condition Category	Small Diameter Gravity Sewer Mains (Miles) ¹	Large Diameter Gravity Sewer Mains (Miles) ¹	Number of Manholes
Category A – Very Good	XX	XX	XX
Category B – Good	XX	XX	XX
Category C – Fair Condition	XX	XX	XX
Category D – Poor	XX	XX	XX
Category E – Very Poor	XX	XX	XX
Note 1: Gravity Sewer Main Segment length is included in miles.			

Lift Station, Force Main and Air Release Valve Condition Categorization Summary

Condition Category	Number of lift Stations	Number of Force Mains	Number of Air Release Valves
Good	XX	XX	XX
Moderate	XX	XX	XX
Poor	XX	XX	XX

C. Maps of Condition Categories

[Include one map for gravity sewer mains, one map for manholes, one map for Lift Stations and one map for force mains showing the location of the assets and the Condition Category. Maps may be combined or expanded to simplify presentation of results.]

Appendix F
Condition Assessment Report Template

VIII. Condition Assessment Results

A. Condition Assessment Guidelines

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

B. Condition Assessment Results

Condition Assessment Result	Small Diameter Gravity Sewer Mains (miles) ¹	Large Diameter Gravity Sewer Mains (miles) ¹	Number of Manholes	Number of Lift Stations	Number of Force Mains	Number of Air Release Valves
Remedial Measures Alternatives Analysis	XX	XX	XX	XX	XX	XX
Monitoring Analysis (CMOM)	XX	XX	XX	XX	XX	XX
Maintenance Analysis (CMOM)	XX	XX	XX	XX	XX	XX
Note 1: Gravity Sewer Main Segment length is included in miles.						

C. Maps of Condition Assessment Results

[Include one map for gravity sewer mains, one map for manholes, one map for Lift Stations and one map for force mains showing the location of the assets and the Condition Assessment Results. Maps may be combined or expanded to simplify presentation of results.]

IX. Priority Project Condition Remedial Measures (Through 4 Years from the Effective Date)

Priority Small Diameter Gravity Sewer Main Condition Remediation

Asset Description	Completed ²
Gravity Sewer Main (Miles) ¹	X
Note 1: Gravity Sewer Main Segment length is included in miles.	
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.	

Appendix F
Condition Assessment Report Template

Priority Manhole Condition Remediation

Asset Description	Completed²
Manholes (number) ¹	X
Note 1: Manhole remediation is reported in number of manholes completed.	
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.	

Priority Force Main Condition Remediation

Asset Description	Completed ²
Force Main (number)	X
Air release valves (number)	X
Note 1: Force Main and air release valve remediation is reported in number of completed Force Main projects and number of air release valves.	
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.	

Priority Lift Station Condition Remediation

Asset Description	Completed ²
Lift Station (number) ¹	X
Note 1: Lift Station remediation is reported in number of completed Lift Station projects.	
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.	

Appendix G

Condition Remedial Measures Plan Report Template

Appendix G
Condition Remedial Measures Plan Report Template

I. Cover

II. Certification Declaration

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

III. Table of Contents

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

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Plan was prepared and submitted pursuant to Paragraph 24 of the Consent Decree.

B. Regulatory Requirements

This Plan summarizes the Condition Remedial Measures. The City will perform these measures, which have been prioritized and selected in accordance with Appendix E, in order to address verified structural defects in the City WCTS that cause or significantly contribute to Condition-related SSOs. This Plan describes the City's strategy to implement the selected Condition Remedial Measures on a balanced annual basis during the remaining term of this Consent Decree. The City has prioritized and selected these Condition Remedial Measures based on appropriate factors reflected in Paragraph 23 and in Appendix E of the Consent Decree and in accordance with the requirements of Paragraph 24 of the Decree. The implementation timeframes in this Plan reflect practical planning requirements such as those stated in Paragraph 24 of the Consent Decree.

Appendix G
Condition Remedial Measures Plan Report Template

VI. Summary of Condition Assessment Summary Report

[Provide a brief summary of the Condition Assessment Summary Report; and how it relates to this Plan.]

VII. Remedial Measures Alternatives Analysis

A. Guidelines for Alternatives Analysis

Planning for implementation of Condition Remedial Measures follows the City's completion of the Condition Remedial Measures Alternatives Analysis as described in Paragraph 23 of the Consent Decree.

B. Remedial Measures Alternatives Analyses Results

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

Results of Completed Remedial Measures Alternatives Analyses

Result	Miles of Gravity Sewer Main ¹	Number of Manholes	Number of Lift Stations	Number of Force Mains	Number of Air Release Valves
Replace ²	X	X	X	X	X
Rehabilitate ²	X	X	X	X	N/A
Repair ²	X	X	X	X	N/A
Monitoring Analysis (CMOM)	X	X	X	X	X
Maintenance Analysis (CMOM)	X	X	X	X	X
Other (Specify)	X	X	X	X	X
Totals:	X	X	X	X	X
Note 1: Gravity Sewer Main Segment length is included in miles.					
Note 2: See below Remediation Project List for Definitions of Replace, Rehabilitate, and Repair.					

C. Maps of Alternatives Analyses Results

[Include one map for gravity sewer mains, one map for manholes, one map for lift stations, and one map for force mains showing the location of the assets and the Remedial Measures Alternatives Analysis Results. Maps may be combined or expanded to simplify presentation of results.]

Appendix G
Condition Remedial Measures Plan Report Template

VIII. Remediation Completed To Date

A. Remedial Measures Progress

[Summarize the Condition Remedial Measures that have been completed prior to submittal of this report.]

Results of Completed Remedial Measures

Asset Description	Remedial Measure Technique ²	Priority Projects	Other	Total
Gravity Sewer Mains (miles) ¹	Replace			
	Rehabilitate			
	Repair			
Manholes (number)	Replace			
	Rehabilitate			
	Repair			
Lift Stations (number)	Replace			
	Rehabilitate			
	Repair			
Force Mains (number)	Replace			
	Rehabilitate			
	Repair			
Air Release Valves (number)	Replace			
	Rehabilitate			
	Repair			

Note 1: Gravity Sewer Main Segment length is included in miles.

Note 2: See below Remediation Project List for Definitions of Replace, Rehabilitate, and Repair.

B. Maps of Remedial Measures Completed

[Include a color coded map(s) for completed remediation by remediation technique and asset type (gravity sewer mains, manholes, lift stations and force mains).]

IX. Remedial Measures Plan

A. Anticipated Remediation Timeframes

[Summarize target remediation quantities for completion each year.]

Asset Description	Estimated ² Remedial Measure Technique	Calendar Year X	Calendar Year X	Calendar Year X	...	Calendar Year 15	Total
Gravity Sewer Mains (miles) ¹	Replace						
	Rehabilitate						
	Repair						
Manholes (number)	Replace						
	Rehabilitate						
	Repair						
Lift Stations (number)	Replace						
	Rehabilitate						
	Repair						
Force Mains (number)	Replace						
	Rehabilitate						
	Repair						
Air Release Valves (number)	Replace						
	Rehabilitate						
	Repair						
Note 1: Gravity Sewer Main Segment length is included in miles.							
Note 2: For purposes of this table, the Remedial Measure Technique is estimated at the time of Plan's submittal but not required to be implemented as shown. The sum of the 3 techniques (total miles or number) is required to be implemented.							
Note 3: See below Remediation Project List for Definitions of Replace, Rehabilitate, and Repair.							

B. Remediation Project List

[Include a brief introductory paragraph explaining that this section identifies the prioritized projects with quantities and the anticipated completion dates for tracking during the annual report. The City may group assets, quantities or contracts together into projects for remedial measures plan purposes such as defining a quantity for indefinite delivery, indefinite quantity (IDIQ) Gravity Sewer Main remedial measures projects.]

Appendix G
Condition Remedial Measures Plan Report Template

Priority Projects for Completion Under Condition Remediation Project List

Project Name	Project Quantities (miles or number)	Completion Date

Condition Remediation Project List

Project Name	Project Quantities (miles or number)	Completion Date

Definitions for Repair, Rehabilitation, Replacement

Gravity Sewers:

Repair includes, but is not limited to, spot repairs or remediation of a portion of the pipe segment using trenchless or open-trench remediation.

Rehabilitation includes, but is not limited to, trenchless sewer remediation from manhole to manhole such as lining or grouting.

Replacement is replacing the sewer from manhole to manhole including pipe bursting, cured-in-place pipe, or slip-lining.

Manholes:

Repair or Rehabilitation includes poured in place liners, cured in place liners, cementitious coating, polymer coating, mechanical seals and insert replacement, bolt replacement, ring or cover replacement, manhole frame adjustment and resealing, bench/pipe/chimney/joint seals

Replacement is entire manhole removed and new structure installed.

Force Mains:

Repair includes, but is not limited to, repairs or replacement of a portion of the force main.

Rehabilitation includes, but is not limited to, lining the force main.

Replacement is replacing the force main.

Air Release Valves

Replacement includes replacement of air release valves.

Repair/Rehabilitation include, but are not limited to, repair/rehabilitation of individual components of air release valves.

Lift Stations:

Repair includes, but is not limited to, repairs to existing equipment or appurtenances.

Rehabilitation includes, but is not limited to, partial replacement of equipment or appurtenances, or rehabilitation of the structure.

Replacement includes replacement of major lift station components or the entire lift station.

Appendix H

Capacity Assessment Report Template

I. Cover

II. Certification Declaration

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

III. Table of Contents

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

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

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

B. Regulatory Requirements

This Report summarizes Capacity Assessment activities pursuant to Paragraph 28.a through 28.h of the Consent Decree. These Capacity Assessment requirements include Wet Weather SSO Characterization, Hydraulic Modeling evaluation and field investigation activities.

VI. Wet-Weather Related SSO Characterization

A. Guidelines

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

B. Wet-Weather SSO Categorization Summary

Wet Weather SSO Categorization

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

C. Map of Wet-Weather SSOs

[Include four (4) maps showing the location of the following:

- Categories A, B, and C Wet-Weather SSOs;*
- Category A Wet-Weather SSOs only;*
- Category B Wet-Weather SSOs only; and*
- Category C Wet-Weather SSOs only.]*

VII. System-wide Hydraulic Modeling Evaluation

A. Model Overview

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

B. Model Maps

[Include a map(s) showing the location of pipes in the model; scale and number of maps to be determined to adequately show model information.]

C. Model Calibration and Updates

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

D. Prioritization of Potential Capacity Constraints

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

Potential Capacity Constraints Summary

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

E. Map and List of Potential Capacity Constraints

[Include a map showing potential Capacity Constraints for all Priority Categories. Include separate maps for each Priority Category 1 through 5 showing the location of Potential Capacity Constraints. Include a list of Potential Capacity Constraints.]

VIII. Field Investigations of Potential Capacity Constraints

A. Guidelines

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

B. Field Investigation Status

Completed Field Investigations

Technique ¹	Number of Potential Capacity Constraints				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Flow Measurement	X	X	X	X	X
Level Measurement	X	X	X	X	X
Chalking	X	X	X	X	X
Visual Inspection	X	X	X	X	X
Other <i>(if applicable)</i>	X	X	X	X	X
Monitor in future per Capacity Assessment and Remediation Process and Guidelines Appendix (CMOM)	X	X	X	X	X
Total	X	X	X	X	X
Note 1: Potential capacity constraints may be inspected with one or multiple techniques. The primary technique is reported.					

Appendix H
Capacity Assessment Report Template

In-Progress Field Investigations

Technique ¹	Number of Potential Capacity Constraints				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Flow Measurement	X	X	X	X	X
Level Measurement	X	X	X	X	X
Chalking	X	X	X	X	X
Visual Inspection	X	X	X	X	X
Other <i>(if applicable)</i>	X	X	X	X	X
Total	X	X	X	X	X
Note 1: Potential capacity constraints may be inspected with one or multiple techniques. The primary technique is reported.					

C. Map of Completed Field Investigations

[Include one (1) map for each Priority Category 1 through 5 showing the location of each field investigation by technique.]

D. Map of In-Progress Field Investigations

[Include one (1) map for each Priority Category 1 through 5 showing the location of each field investigation by technique.]

IX. Capacity Assessment Results

A. Capacity Assessment Guidelines

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

B. Capacity Assessment Results

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

C. Map and List of Capacity Assessment Results

[Include a color coded map showing the location of the Capacity Assessment Results. Provide a list of Verified Capacity Constraint Remedial Measures Alternatives Analysis.]

Appendix I

Capacity Remedial Measures Plan Report Template

I. Cover

II. Certification Declaration

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

III. Table of Contents

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

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Plan was prepared and submitted pursuant to Paragraph 29 of the Consent Decree.

B. Regulatory Requirements

This Plan summarizes City recommended Capacity Remedial Measures that have been prioritized and selected in accordance with Appendix D to address verified Capacity Constraints in the City's Sewer Collection System that cause or significantly contribute to Capacity-related SSOs. This Plan describes City plans to implement the selected Capacity Remedial Measures on a balanced annual basis during the remaining term of this Decree. The City has prioritized and selected these Capacity Remedial Measures based on appropriate factors reflected in Paragraph 28.i and in Appendix D of the Consent Decree and in accordance with the requirements of Paragraph 29 of the Decree. The implementation time-frames in this Plan reflect practical planning requirements such as those stated in Paragraph 30 of the Consent Decree.

VI. Summary of Capacity Assessment Summary Report

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

VII. Remedial Measures Alternatives Analysis

A. Guidelines for Alternative Analysis

The Plan for Capacity Remedial Measures follows the City's completion of the Capacity Remedial Measures Alternatives Analysis as described in Paragraph 28.i and in Appendix D of the Consent Decree.

B. Remedial Measures Alternatives Analysis Results

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

Results of Remedial Measures Alternatives Analyses

Remedial Measures Alternatives Analysis Result *	Number of Verified Capacity Constraints for Remedial Measures Alternatives Analysis
Re-route a portion of upstream wastewater flows	X
Reduce flows entering the WCTS	X
Reduce inflow	X
Reduce infiltration	X
Increase conveyance capacity	X
Upstream flow detention facilities	X
Continued monitoring	X
Other (Specify)	X
Totals:	X
* Note: Approach for actual implementation may be different than Alternatives Analyses result pursuant to Paragraph 30 and Appendix D of the Consent Decree. Some Capacity Constraints may require more than one remedial measure technique. The predominant remedial measure technique will prevail for reporting purposes.	

C. Map of Alternatives Analysis Results

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

VIII. Remediation Completed

A. Remedial Measures Progress

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

Completed Remedial Measures

	Remedial Measure Technique ²	Total
Gravity Sewer Mains (miles) ¹	Re-route a portion of upstream wastewater flows	
	Reduce flow entering WCTS	
	Reduce inflow	
	Reduce infiltration	
	Increase conveyance capacity	
	Upstream flow detention facilities	
	Other (specify)	
Force Mains (number)	Increase conveyance capacity	
Lift Stations (number)	Increase conveyance capacity	
Note 1: Gravity Sewer Main Segment length is included in miles.		
Note 2: Some Capacity Constraints may require more than one remedial measure technique. The predominant remedial measure technique will be the one reported in the Capacity Remedial Measures Plan.		

B. Map of Remedial Measures Completed

[Include one (1) color coded map for completed remedial measures]

IX. Remedial Measures Plan

A. Anticipated Remediation Timeframes

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

Appendix I
Capacity Remedial Measures Plan Report Template

Anticipated Remediation Timeframes

	Remedial Measure Technique ¹	Calendar Year X	Calendar Year X	...	Calendar Year X	Total
Gravity Sewer Mains (Number of constraints addressed)	Re-route a portion of upstream wastewater flows					
	Reduce flow entering WCTS					
	Reduce inflow					
	Reduce infiltration					
	Increase conveyance capacity					
	Upstream flow detention facilities					
	Other (specify)					
Force Mains (number)	Increase conveyance capacity					
Lift Stations (number)	Increase conveyance capacity					
Note 1: Some Capacity Constraints may require more than one remedial measure technique. The predominant remedial measure technique will be the one reported in the Capacity Remedial Measures Plan.						

B. Maps of Anticipated Remediation Timeframe

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

C. Remediation Project List

Remediation Project List

Project Name	Project Quantities (Miles or number)	Completion Date

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I. Cover

II. Certification Declaration

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

III. Table of Contents

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

IV. Acronyms and Abbreviations

[Definitions of abbreviations and acronyms included in this report]

V. Introduction

A. Purpose

This Report was prepared and submitted to EPA and TCEQ pursuant to Paragraph 48 of the Consent Decree.

B. Regulatory Requirements

This Report summarizes activities completed during the previous Calendar year for the following requirements in Sections V of the Consent Decree: Condition Assessment and Condition Remedial Measures including Priority Projects work, Capacity Assessment and Capacity Remedial Measures, CMOM, and WWTP Consolidation.

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VI. Priority Projects Condition Remedial Measures

Priority Projects Gravity Sewer Main Condition Remediation

Asset Description	Completed in Calendar Year X	Cumulative Completed ²
Gravity Sewer Main (Miles) ¹	X	X
Note 1: Gravity Sewer Main Segment length is included in miles.		
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.		

Priority Projects Manhole Condition Remediation

Asset Description	Completed in Calendar Year X	Cumulative Completed ²
Manholes (number) ¹	X	X
Note 1: Manhole remediation is reported in number of manholes completed.		
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.		

Priority Projects Force Main Condition Remediation

Asset Description	Completed in Calendar Year X	Cumulative Completed ²
Force Main (number) ¹	X	X
Air Release Valves ¹	X	X
Note 1: Force Main and air release valve remediation is reported in number of completed Force Main projects and number of air release valves.		
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.		

Priority Projects Lift Station Condition Remediation

Asset Description	Completed in Calendar Year X	Cumulative Completed ²
Lift Station (number) ¹	X	X
Note 1: Lift Station remediation is reported in number of completed Lift Station projects.		
Note 2: Includes all repair, rehabilitation and replacement work completed since the Effective Date.		

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Existing Capital Improvement Projects (Consent Decree Appendix A)

Project Name	Project Status
Laguna Shores Road Force Main Replacement	
McBride Lift Station and Force Main Improvements	

VII. CMOM

A. SSO Reporting

Summary of Total Annual SSOs Occurring After the Effective Date (up to 15 years)

Year	# of SSOs caused by grease	# of SSOs caused by I/I or Capacity	# of SSOs caused by roots and debris	# of SSOs caused by lift station failure	# of SSOs caused by structural failure	# of SSOs caused by other factors
XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX

Summary of Information Regarding SSOs Occurring After the Effective Date (up to 15 years)

Year	Total # of SSOs	Total SSO Discharge Volume	# of Media Reports Issued
XX	XX	XX	XX
XX	XX	XX	XX

B. Fats, Oils, and Grease Control Program

Inspections and Enforcements Actions in Calendar Year X

Number of Permitted Food Service Establishments	Number of Inspections	Number of Enforcement Actions
XX	XX	XX

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Annual Report Template

C. Sewer Cleaning

Small Diameter System-Wide Cleaning Program Summary

Total Small Diameter Miles³	Miles Cleaned in Calendar Year X^{1,3}	% Cleaned in Calendar Year X	% Required per Calendar Year²
XX	XX	XX	12%
Note 1: Miles cleaned includes hot spot cleaning.			
Note 2: Percentage may be prorated for any partial Calendar Year.			
Note 3: Gravity Sewer Main Segment length is included in miles.			

Small Diameter System-Wide Cleaning Program Cumulative Status

Miles of Cleaning Required Under Consent Decree = X¹	Unique Small Diameter Cumulative Percent Completed²
Completed Prior to CD Effective Date	X
Year 1	X
Year 2	X
...	X
Year X	X
Note 1: Mileage is fixed from Effective Date	
Note 2: This does not include repeat cleaning for hot spot areas.	

Large Diameter Cleaning Program Status

Total Large Diameter Miles^{1,2}	Miles Cleaned in Calendar Year X²	% Cleaned in Calendar Year X
XX	XX	XX
Note 1: Mileage is fixed from the Effective Date.		
Note 2: Gravity Sewer Main Segment length is included in miles.		

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Large Diameter Cleaning Program Cumulative Status

	Unique Large Diameter Cumulative Percent Completed ¹
Completed Prior to CD Effective Date	X
Year 1	X
Year 2	X
...	X
Year X	X
Note 1: This does not include repeat cleaning for hot spot areas.	

VIII. Condition Assessment

A. Gravity Sewer Main Condition Inspection Efforts

Gravity Sewer Main Inspection Summary

[Reference Paragraph 18 for condition assessment]

Program	Asset Description	Inspection Method	Miles of Inspections Required Under Consent Decree ^{1,2,3,4}	Miles Completed Prior to Effective Date ^{2,3}	Miles Completed since Effective Date ²	Miles of Inspections Completed ^{2,3}	Cumulative Percent (%) Complete ¹
Priority Project / Condition Assessment	Small Diameter Gravity Sewer Mains – Non-PVC (See Paragraph 19.a.ii.1.a)	CCTV, or EPA approved proxy	XX				
	Small Diameter Gravity Sewer Mains – PVC (Non-Performing Program Assets per Paragraph 19.a.ii.3)	CCTV, pole camera, smoke testing, review of sewer cleaning findings, dye testing, mechanical proofing, or EPA approved proxy	XX				

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Program	Asset Description	Inspection Method	Miles of Inspections Required Under Consent Decree ^{1,2,3,4}	Miles Completed Prior to Effective Date ^{2,3}	Miles Completed since Effective Date ²	Miles of Inspections Completed ^{2,3}	Cumulative Percent (%) Complete ¹
	Large Diameter Gravity Sewer Mains	CCTV, sonar, 360-degree video, laser imaging, visual inspection, physical entry, other common techniques or EPA approved proxy	XX				

Note 1: The Consent Decree does not require inspection of all facilities to be completed prior to submittal of the Annual Report.

Note 2: Gravity Sewer Main Segment length is included in miles.

Note 3: Includes Gravity Sewer Main inspections since 2010.

Note 4: Number is fixed from the Effective Date.

Program	Asset Description	Inspection Method	Miles of Inspections Required Under Consent Decree ^{1,2,3,-}	Miles Completed Prior to Effective Date ^{2,3}	Miles Completed since Effective Date ²	Miles of Inspections Completed ^{2,3}	Cumulative Percent (%) Complete ¹
Performing Assets	Small Diameter Gravity Sewer Mains – Installed Prior to 1974 (See Paragraph 19.a.ii.1.c)	CCTV, or EPA approved proxy	XX				
	Small Diameter Gravity Sewer – Installed Between 1974 and 1982 (See Paragraph 19.a.ii.2)	CCTV, pole camera, or EPA approved proxy	XX				
	Small Diameter Gravity Sewer Mains – Installed between 1983 through 2007 (See Paragraph 19.a.ii.3)	CCTV, Pole Camera, smoke testing, review of sewer cleaning findings, dye testing, mechanical proofing, or EPA approved proxy	XX				

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Note 1: The Consent Decree does not require inspection of all facilities to be completed prior to submittal of the Annual Report.

Note 2: Gravity Sewer Main Segment length is included in miles.

Note 3: Includes Gravity Sewer Main inspections since 2010.

B. Gravity Sewer Main Inspection Map

[Include a map showing the location of the inspections. The map will differentiate between inspections completed during the calendar year reported in the annual report and inspections completed prior to the calendar year reported in the annual report. Inspections completed prior to the calendar year reported in the annual report will include inspections from 2010.]

C. Manhole Inspection

Manhole Inspection Summary

Program	Inspection Method	Manhole Inspections Required Under Consent Decree ^{1,2}	Manholes Inspected Prior to Effective Date ²	Manholes Inspected Since Effective Date ²	Total Manhole Inspections Completed	Cumulative Percent (%) Complete ²
Priority Projects / Condition Assessment	Visual Inspection – Manholes on Small Diameter Gravity Sewer	XX	XX	XX	XX	XX
	Visual Inspection – Manholes on Large Diameter Gravity Sewer	XX	XX	XX	XX	XX
Performing Assets	Visual Inspection – Manholes on Small Diameter Gravity Sewer	XX	XX	XX	XX	XX

Note 1: Number is fixed from Effective Date.

Note 2: Includes manhole inspections since 2010.

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D. Manhole Inspection Map

[Include a map showing the location of the inspections. The map will differentiate between inspections completed during the calendar year reported in the annual report and inspections completed prior to the calendar year reported in the annual report. Inspections completed prior to the calendar year reported in the annual report will include inspections from 2010.]

E. Force Main Condition Assessment Program

Force Main Inspection Summary

Program	Asset Description	Inspection Method	Inspections to be Completed Under Consent Decree (number) ^{1,2}	Inspections Completed in Calendar Year X	Cumulative Inspections Completed ²	Cumulative Percent (%) Complete
System-wide / Condition Assessment	Force Main	Visual	XX	XX	XX	XX
	Air Release Valves	Visual	XX	XX	XX	XX
Note 1: Number is fixed from the Effective Date.						
Note 2: Includes force main inspections since 2015.						

F. Lift Station Condition Assessment Program

Lift Station Inspection Summary

Program	Inspection Method	Inspections to be Completed Under Consent Decree ^{1,2}	Inspections Completed in Calendar Year X	Cumulative Inspections Completed ²	Cumulative Percent (%) Complete
System-wide / Condition Assessment	Visual (approved check list)	XX	XX	XX	XX
Note 1: Number is fixed from the Effective Date.					
Note 2: Includes lift station inspections since 2015.					

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Condition Categorization Summary

Condition Categorization Summary in Calendar Year X

Condition Category	Miles of Gravity Sewer Mains ¹	Number of Manholes
Category A – Very Good	XX	XX
Category B – Good	XX	XX
Category C – Fair	XX	XX
Category D – Poor	XX	XX
Category E – Very Poor	XX	XX
Note 1: Gravity Sewer Main Segment length is included in miles.		

Condition Category	Number of Lift Stations	Number of Force Mains	Number of Air Release Valves
Good	XX	XX	XX
Moderate	XX	XX	XX
Poor	XX	XX	XX

G. Map of Condition Categories

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

H. Condition Assessment Results

Condition Assessment Results in Calendar Year X

Condition Assessment Result	Miles of Gravity Sewer Mains ¹	Number of Manholes	Number of Force Mains	Number of Air Release Valves	Number of Lift Stations
Remedial Measures Alternatives Analysis	XX	XX	XX	XX	XX
Monitoring	XX	XX	XX	XX	XX
Maintenance Analysis	XX	XX	XX	XX	XX
Note 1: Gravity Sewer Main Segment length is included in miles.					

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I. Map of Condition Assessment Results

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

IX. Capacity Assessment

A. Wet-Weather Related SSO Categorization

Wet Weather SSO Categorization for Calendar Year X

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

B. Wet-Weather SSO Categorization Summary Map

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

C. Prioritization of Potential Capacity Constraints

Potential Capacity Constraints Summary

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

X. Map of Potential Capacity Constraints

XI. Field Investigations of Potential Capacity Constraints

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

A. Field Investigation Status

Completed Field Investigations

Technique ¹	Number of Potential Capacity Constraints				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Flow Metering	X	X	X	X	X
Manhole Level Monitor	X	X	X	X	X
Chalking	X	X	X	X	X
Visual Inspection	X	X	X	X	X
Other <i>(if applicable)</i>	X	X	X	X	X
Monitor in Future per Capacity Assessment and Remediation Process and Guidelines Appendix (CMOM)	X	X	X	X	X
Total	X	X	X	X	X
Note 1: Potential capacity constraints may be inspected with one or multiple techniques. The primary technique is reported.					

B. Map of Completed Field Investigations

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

XII. Completed Remedial Measures

A. Remediation Completed in Calendar Year X

Remediation Completed Summary

	Miles of Gravity Sewer Main ¹	Number of Manholes	Number of Force Mains	Number of Air Release Valves	Number of Lift Stations
Completed in Calendar Year X	X	X	X	X	X
Note 1: Gravity Sewer Main Segment length is included in miles.					

Remedial Measure Plan Project List (After Submittal of the Remedial Measures Plans)

Capital Project Name	Project Status	Project Completion Year

Remedial Measure Projects in Performing Neighborhoods

Capital Project Name	Project Status

B. Map of Remedial Measures Completed

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

XIII. Documentation of Updates

[Include a summary of written agreements pursuant to Consent Decree Paragraphs 107 (Non-material Modification) and other changes made pursuant to Consent Decree Section XIX (Modification).]

Summary of CMOM Plan updates pursuant to CD Paragraph 33: