EPA United States Environmental Protection Agency

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	12-11-2018		
Media:	Water		
Regulatory Program(s)	CWA		
Company Name:	**City of Crowley**		
Facility Name:	**City of Crowley**		
Facility Physical Location:	105 E. Hampton Rd.		
(City, state, zip code)	Crowley, TX		
Mailing address:	105 E. Hampton Rd.		
(City, state, zip code)	Crowley, TX 76036		
County/Parish:	Tarrant County		
Facility Contact:	Joe Sloan	Water and Wastewater Manager	
	jsloan@ci.crowley.tx.us		
FRS Number:	110010935685		
Identification/Permit Number:	TXU000070		
NAICS:	22132		
SIC:	4952		
Personnel participating in inspection:			
Rachel Matthews	EPA Region 6	Life Scientist	214-665-8589
Carol Moulton	TCEQ	Environmental Investigator	817-588-5894
Joe Sloan	City of Crowley	W/WW Manager	817-729-1306
Kathy Moore	City of Crowley	PW Sr. Admin Assistant	817-297-2201 Ext. 3200
EPA Lead Inspector Signature/Date			1-29-19
	Rachel Matthews		Date
Supervisor Signature/Date			1/29/19
	Carol Peters-Wagnon		Date

Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector Rachel Matthews arrived at the City of Crowley Public Works office at 9:00 am on December 11, 2018 for an announced inspection. I met with Mr. Joe Sloan and Ms. Kathy Moore of the city and was joined by Carol Moulton from the Texas Commission on Environmental Quality (TCEQ). We presented our credentials, informing them this was an EPA inspection to determine compliance with the Clean Water Act regarding sanitary sewer overflows from the sanitary sewer collection system. The scope of the inspection is a full compliance evaluation.

FACILITY DESCRIPTION

The City of Crowley serves approximately 18,000 + residents, with 5,649 residential connections, 210 commercial connections, 6 industrial connections, as well as has 54 septic systems with agricultural zones. New subdivisions are already planned. It is projected there will be approximately 25,000 residents at build-out.

All areas that have sewer lines are connected and routed through the sanitary sewer collection system to the Village Creek Wastewater Reclamation Facility (VCWRF) that is owned and operated by the City of Fort Worth. The City's sanitary sewer collection system consists of approximately 59 miles of pipe with no lift stations. The sanitary sewer pipe is about 30% PVC, 25% ductile iron, 25% vitrified clay, and the last 20% other (such as cement). The oldest neighborhoods were built in the 50's and 60's.

The City currently has five (5) full-time employees dedicated to both water and wastewater operations. The staff is enough to handle the base general operations, although based on the interview, 2-3 more full-time employees would be ideal due to the needs. A total of 12 employees would be necessary at full build-out of the city.

Section II - OBSERVATIONS

Prior to the meeting, the City sent some electronic information of SSO reports and questionnaire, with more detailed information requested ahead of time for review during the inspection. The city also prepared several documents for EPA in advance and presented it at the meeting.

During the opening meeting, Crowley staff explained there is no Capacity, Management, Operations, & Maintenance (CMOM) program. However, there are components of a program.

While there no formal Asset Management system, in 2014 the city started using "Incode" software for work order generation and tracking and just recently added Ggeographic information system (GIS) mapping. However, the work order system is not connected to the GIS mapping at this time. The plans are to interface the two software programs next year. "Laserfiche" will be used for record keeping as old work orders are scanned into the system.

A flow monitoring study, with some Inflow/Infiltration evaluations, was completed in 2012. The Flow Monitoring Report showed significant increases in flow during wet weather at the 18 locations that were monitored. The report also included recommendations, including implementing an I/I reduction program, preparing specifications for rehabilitating areas with I/I, a suggested priority, among other recommendations. See excerpts of report in Appendix 1.

The City reported a total of two (2) overflows in the last five (5) years, one (1) causing a fish kill.

The city has instituted a cleaning and inspection program, with a cleaning goal for the entire city at 50% per year and is done in sections based on pipe length and connections. The cleaning and inspection program for hot spots, which are primarily in the older neighborhoods, is completed more often. Creek crossings and flood-plain manholes are inspection quarterly and after rain events.

The City has an older camera system which is difficult and tedious to use according to staff and does not allow for information downloading.

Areas that are found to need repair or rehabilitation are requested to be added to the city's 5-year Capital Improvement Program.

Section III – FOLLOW-UP

After the onsite evaluation, and further review of documents prepared for EPA, a follow-up email was sent regarding the 2012 Flow Monitoring Report. It was noted that several recommendations in the report have not been achieved. The following summary was sent after the inspection:

1. The Fort Worth meter has been replaced with one sized for full build-out and construction plans for the Fort Worth trunk mains downstream of the city are nearing completion.
2. It was unknown if anything has been completed for the second recommendation.
3. The first part of the hydraulic model for the city's system has been completed -- approximately 20% complete.
4. The fourth recommendation has not been completed.
5. The Fort Worth/Crowley trunk main that runs across the north central part of town, through basins 1 and 6, is about to be under construction. Basin 6 is a priority 1 for I/I elimination and basin 1 is a priority 2.
6. It was unknown if anything has been completed for the sixth recommendation.
7. Nothing has been completed.

Section IV – AREAS OF CONCERN

There were no major areas of concern at the time of the closing meeting. But, there were two suggestions to help the City for future issues and trend analysis:

1. Ensure the GIS and work order system interface is completed as planned for next year.
2. Begin including more details in all work orders on what kind of problems and/or blockages are called in and/or found, as well as how they were corrected. This will allow trend

analyses to be run more easily, find specific problems, as well as to distinguish them on the GIS mapping system once the interface is complete. For example: what kind of debris (rags, grease, wipes...etc.). It was discussed that the current program can handle additional categories to separate types of complaints and work orders for better analyses.

However, after the meeting, and a follow-up email regarding the 2012 Flow Monitoring Report, the EPA has concerns that some recommendations were not acted upon to control the ongoing I/I problems.

A review of the work orders submitted showed that in the last five (5) years there were a total of 16 SSOs reported to the city as a complaint or action needed:

- 11 were due to problems in the city-owned pipe,
- Five (5) were due to private lateral problems, and
- One (1) of the overflows from a private lateral discharged to the street

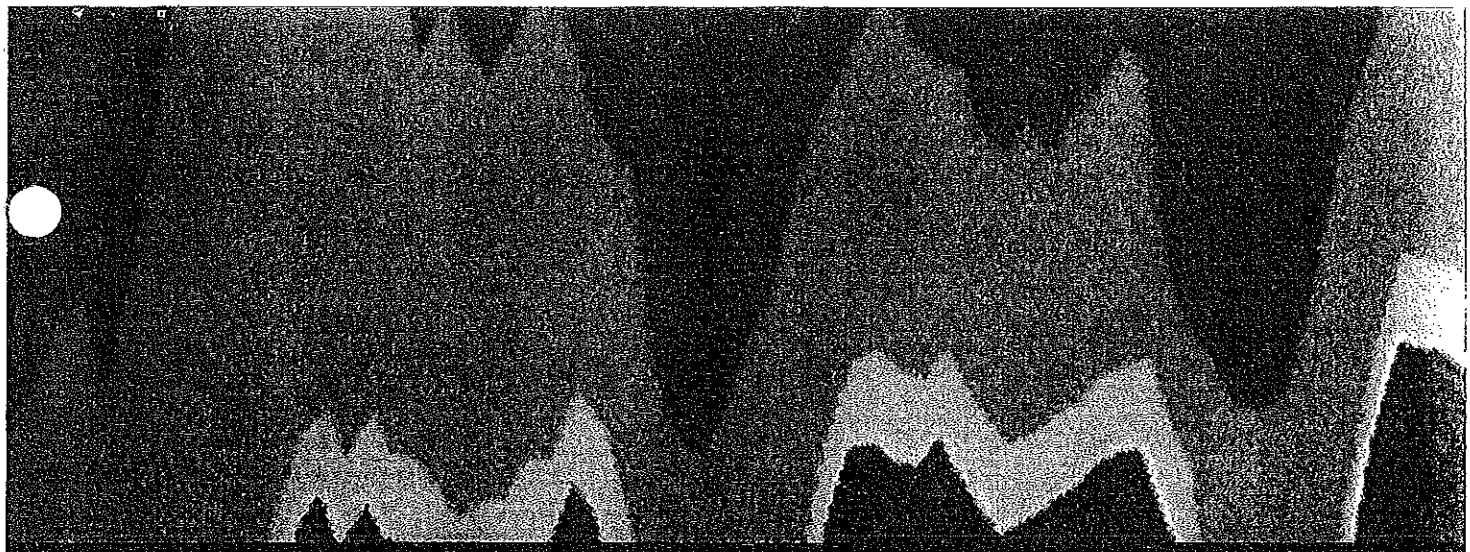
In addition, the review showed that 2 (two) reports were submitted to TCEQ, but there was no work order for one (1) of those, indicating a total of 17 SSOs during the 5 year period.

The review of the work orders also showed that many complaints were due to back-ups into bath tubs and sinks, or very slow toilets. Many of the complaints reference these back-ups, as well as some of the above-mentioned overflows, primarily when it rains.

These are concerns primarily due to the considerable human health hazards, not just the environmental hazards should an SSO discharge to a waterbody.

Section V – LIST OF APPENDICES

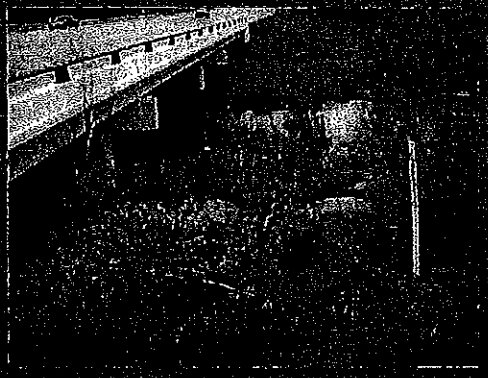
Appendix 1 – Excerpts from Flow Monitoring Report from 2012



Flow Monitoring Report

City of Crowley, Texas
Wastewater Collection System

September 2012



Prepared By:
Stream Water Group, Inc.
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SW Group

In Association with:
ADS Environmental Services &
TEAGUE NALL AND PERKINS

Prepared For:
City of Crowley, Texas

SW Group

September 30, 2012

Mr. Greg D. Saunders, P.E.
Principal
Teague Nall and Perkins, Inc.
1100 Macon Street
Fort Worth, Texas 76102
Phone: 817.665.7144
Fax: 817.336.2813

Subject: Flow Monitoring Study, City of Crowley, TX

Dear Mr. Saunders:

In accordance with the Engineering Agreement we are pleased to present this draft report for the flow monitoring of the City of Crowley, Texas wastewater collection system.

Flow monitoring was performed for the City of Crowley from March 07, 2012 through May 10, 2012 for a period of 63 days at eighteen (18) key locations. The average daily dry-weather flow for the City of Crowley was 1.27 MGD, which includes 0.425 MGD of permanent infiltration during the monitoring period. The peak monitored infiltration rate for the City of Crowley was 3.053 MGD during the monitoring period.

Flow rates increase significantly during wet weather periods. The total projected 2-Year/60-Minute inflow for the City of Crowley was 6.872 MGD and the total projected 10-Year/60-Minute inflow was 10.759 MGD.

No dry-weather surcharging was observed during the monitoring period; however, wet weather surcharging occurred in several monitored sites.

We would like to express our appreciation for the excellent cooperation of the City of Crowley staff and Teague Nall and Perkins, Inc. throughout this project. If you have questions or concerns, please do not hesitate to contact me at (817) 446-4171 or my cell (972) 898-5685.

Sincerely,

Shamsul Arefin, P.E., CFM
Principal-in-Charge/Project Manager
Stream Water Group, Inc.

4.2 Recommendations

Based on the analysis discussed above, Stream Water Group, Inc. recommends the following.

1. Evaluate the City of Fort Worth wastewater billing meter station to remove the bottleneck condition and to avoid manholes surcharges and possible overflows.
2. Implement an I/I reduction program. The I/I reduction program would consists of a sanitary sewer defect identification program to identify specific sources of I/I. This program should include the following:
    - Manhole Inspection
    - Smoke Testing of all sewer lines
    - Internal television inspection with, concurrent dyed water flooding of selected sewers to determine defect locations, magnitude of defects and the repair method required
3. Develop a hydraulic model of the City's wastewater collection system to determine the capacity of the existing collection system and evaluate system deficiencies.
4. Perform a cost effective analysis to determine the optimum level of I/I reduction and relief sewer requirements.
5. Prepare construction drawings and specifications for the rehabilitation of identified I/I sources and capacity improvements.
6. Review and analyze the City of Fort Worth wastewater billing meter data on a periodic basis.
7. Plan post-rehabilitation flow monitoring to confirm the projected level of I/I reduction

A prioritized implementation plan is given in Table 4-A on the next page and the basin map shown in Figure 4.1 on page 28. A sewer defect identification and rehabilitation program should be completed for each basin in sequential order according to the assigned ranking. A basin ranking "1" would be completed first and a basin ranking "18" would be completed last. The ranking was determined based on the 10-year/60-minute peak inflow rates/1000 LF of sewer for each basin.