EPA United States Environmental Protection Agency

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	March 22, 2017		
Media:	Water		
Regulatory Program(s)	CWA 308[A][B]		
Company Name:	City of Irving		
Facility Name:	City of Irving		
Facility Physical Location:	333 Valley View Lane		
(city, state, zip code)	Irving, Texas 75061		
Mailing address:	333 Valley View Lane		
(city, state, zip code)	Irving, Texas 75061		
County/Parish:	Dallas County		
Facility Contact:	Steve Pettit		
	spettit@cityofIrving.org		
FRS Number:	110010934463		
Identification/Permit Number:	TXU000153		
Media Number:	NA		
NAICS:	221320		
SIC:	4952		
Facility Representatives:	Todd Reck	Director – Water Utilities	972.721.2103
	Steve Pettit	Assistant Director – Water Utilities	972.721.3538
	See Attached Attendee List		
EPA Inspectors:	David Long	6EN-WM	214.665.7323
	Damon McElroy	6EN-WM	214.665.7159
	See Attached Attendee List		
State Inspector(s):	None		
Other Inspector(s):	None		
Metadata – Title:	City of Irving SSO/CMOM Program Review, Irving, Texas, Dallas County		
Metadata – Author:	US EPA Region 6 Compliance Assurance and Enforcement Division Dallas TX		
Metadata – Subject:	City of Irving SSO/CMOM Program Review		
Metadata – Keywords:	Targeted CMOM/SSO Program Review, Irving, Texas		
EPA Lead Inspector Signature/Date	David Long {Inspector name}		06/28/2017 Date
Supervisor Signature/Date	Tony Letton for Carol Peters {Supervisor name}		06/29/2017 Date

Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

A U.S. Environmental Protection Agency (USEPA) program review inspection was conducted in the City of Irving Water Utility offices located at 333 Valley View Road, Irving, Texas 75061. The inspection was conducted under the guidelines established by the USEPA under the National Pollutant Discharge Elimination System (NPDES) for wastewater collection systems. The purpose of this inspection was to inspect and review the City of Irving's current Sanitary Sewer Overflow (SSO) response protocols and their application of a Capacity, Management, Operations and Maintenance (CMOM) program and how the program is used to insure proper operation and maintenance of their collection system. An entry briefing was conducted by EPA-Region 6 inspectors David Long, Damon McElroy, et.al, (See Attendee Sheet in Appendix 1) at 9:00 a.m. on March 22, 2017 at the City of Irving Wastewater Utilities offices. The inspectors met with Todd Reck, Water Utilities Director, and Steve Pettit, Water Utilities Assistant Director. Additional City of Irving were also present and are listed in Appendix 1. During the entry briefing, the EPA inspectors provided credentials and explained the purpose of the inspection, as well as set the timeline for the day and verified the availability of documents that had been requested the week before.

At the conclusion of the inspection, an exit briefing was conducted that explained the suggestions and areas of concerns noted during the inspection that are detailed in this report. This report is based on information supplied by the City representatives, observations made by the U.S. EPA inspectors, records and reports maintained by the City, the State of Texas and the USEPA.

PROGRAM DESCRIPTION

The City of Irving is approximately 67 square miles in size and includes a population of 232,406 residents which are provided wastewater services through approximately 658 miles of sewer lines. The wastewater collection system includes 11 lift stations and sewer pipes ranging in size from four to 54 inches in diameter. Over 50 percent of the collection system is comprised of PVC pipe. The remaining system includes approximately 46 percent vitrified clay and smaller percentages each of cast and ductile iron, polyethylene, fiberglass reinforced pipe, and reinforced concrete pipe. A Supervisor Control and Data Acquisition (SCADA) system is housed at the Water Utilities offices and continuously monitors the City's 11 lift stations, otherwise, all 11 lift stations are physically visited once a week. While all lift stations are monitored, only two stations have dedicated emergency generators in the event of an electric grid failure. However, the remaining lift stations are all equipped with quick connect lines for either electric power supplied by portable generators or sewage lines to lift sewage from the lift station's wet well to the connecting sewer lines via gas operated portable water pumps.

The City of Irving collection system has 12 points of entry to the Trinity River Authority's Central Wastewater Treatment Plant and has experienced approximately 16 SSOs per year since 2014. Problem areas of the collection system, where SSOs occur more frequently, are placed on either a 30, 60, or 90-day preventative maintenance schedule and cleaned to reduce overflows. In addition, Irving has developed and regularly updates a Wastewater Master Plan to ensure capacity and condition of the collection system is maintained and annually exceeds the cleaning and maintenance of their collection system (CMOM

requires 350,000 linear feet per year, but Irving cleaned over 1.9 million linear feet in 2016). Finally, Irving expends approximately $15 million dollars per year on their Capital Improvement Plan (CIP) to cover capital improvements, manhole rehabilitation projects, and emergency and planned collection system line maintenance and replacement.

As a contributor to a permitted wastewater treatment facility, the City of Irving is a subscriber to the TCEQ Sanitary Sewer Overflow Initiative and has developed various written protocols to meet the program's needs. These protocols include their CMOM, FOG (Fats, Oil, Grease) Ordinance to address grease waste from restaurants and private properties, and a Sewer Overflow Response Plan (SORP). In addition, Irving has developed protocols and completed two Sanitary Sewer Evaluation Surveys which included smoke and dye testing, and video examination of over 53,000 feet of sewer main line.

Section II – OBSERVATIONS

Following the review of their SSO Program, the EPA inspectors requested site tours of Irving's SCADA (supervisory control and data acquisition) office, call center, lift stations, and CCTV mobile unit used to video record the status of their wastewater collection system. A review of each of those sites revealed the following observations:

1. SCADA office: Irving operators are present 24 hours per day and seven days a week at the SCADA office control desk. The operators are responsible for the monitoring of the operational status of each lift station and are also responsible for addressing after hour calls that would normally be routed to the Call Center during the day. For collection system and lift station related issues, the SCADA desk operator has 15 different crews available to respond to emergency repairs, jet washing and vacuuming, as well as two additional crews dedicated to CCTV and one crew for lift station maintenance. The crews' trainings and activities are outlined in various written SOPs (i.e., SORP, and SESS), however, no written SOPs have been developed to dispatch and document work performed in response to after hour phone calls regarding sanitary sewer overflows.

2. Call Center: Call Center personnel are on duty only 8:00 a.m to 5:00 p.m. Monday through Friday. When phone calls regarding sanitary sewer overflows are received, the operator will dispatch a wastewater worker to respond to the call and will log the call into their computer database. However, there is no formal SOP regarding this process and specific records regarding overflows from private laterals are not directly maintained.

3. Lift Stations: Lift stations are physically visited each Monday and are monitored 24/7 via the city's SCADA system. While only two of the city's 11 lift stations have their own backup power source, the City of Irving demonstrated sufficient ability prevent overflows via quick connection points and portable pumps.

4. CCTV Mobile Units: The City of Irving maintains two CCTV Mobile Units and have cleaned and recorded video of approximately 213,000 linear feet of sanitary sewer pipe. In addition to the mobile units, Irving also has a NASSCO (National Association of Sewer Service Companies)

certified engineer to review all video as part of their Pipeline Assessment Certification Program (PACP) to manage and insure the integrity of the sanitary sewer pipes in their collection system.

Section III – AREAS OF CONCERN

At the conclusion of the inspection, the EPA inspectors met with the representatives from the City of Irving for an exit interview at 2:30 p.m. on March 22, 2017. At that time, the inspectors provided details of the inspection and reviewed issues noted in the inspection that might require additional follow-up or correction. These issues included:

1. While the City of Irving does respond to all SSOs, formal reports are only kept on overflows which occur within city owned lines. SSO responses which require private citizen response (repair and/or cleanup) are not reported to the TCEQ and no formal record of the overflow is kept by the City of Irving. It was suggested by the EPA inspectors that while reporting the overflows from private lines is not required by the TCEQ, they may want to develop a formal method to track the number of overflows originating from private lines as well as the response and/or actual amounts of discharge to the waters of the U.S.
2. The City of Irving has not developed SOPs for the Call Center or SCADA desk to address SSO response. It was recommended by EPA staff that the development of such documents would benefit their program

The inspectors exited the site at 3:15 p.m.

Section IV – FOLLOW UP

None required. A copy of the inspection report will be sent to the City of Irving contact, Todd Reck, Irving Water Utilities Director.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log

Appendix 2 – City of Irving SSO Inspection Checklist

Appendix 3 - Meeting/Inspection Attendee List

Appendix 4 – City of Irving Supplied Documents

A. Sewer Overflow Response Plan (SORP)

B. TCEQ SSOi Agreement

C. City of Irving SSOi May 2016 Progress Report

Appendix 1 – Photo Log

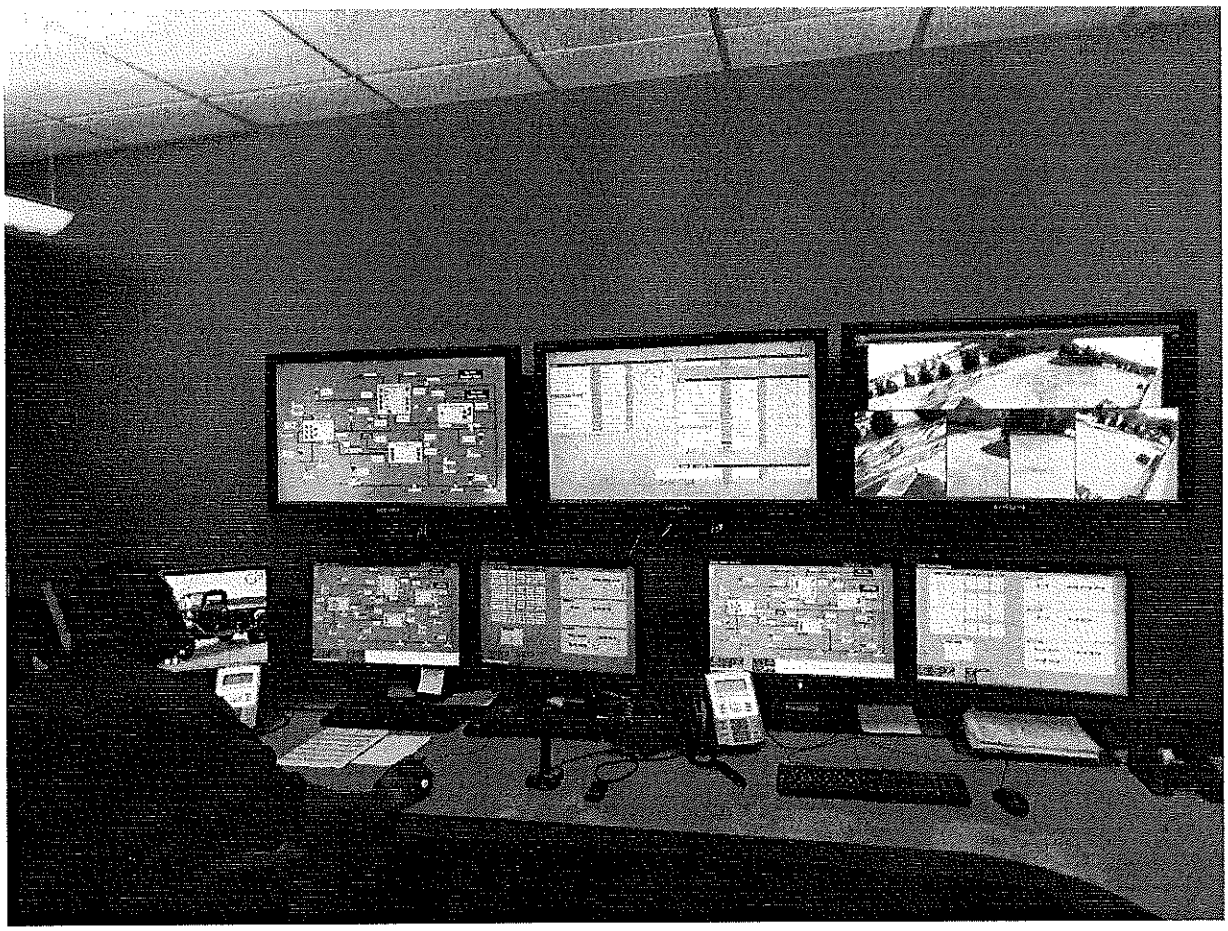


Photo File Name: DSCN2207.JPG

Date of Photo: March 22, 2017

Time of Photo: 10:30 a.m.

Photographer: Damon McElroy

Description: City of Irving Texas SCADA control desk

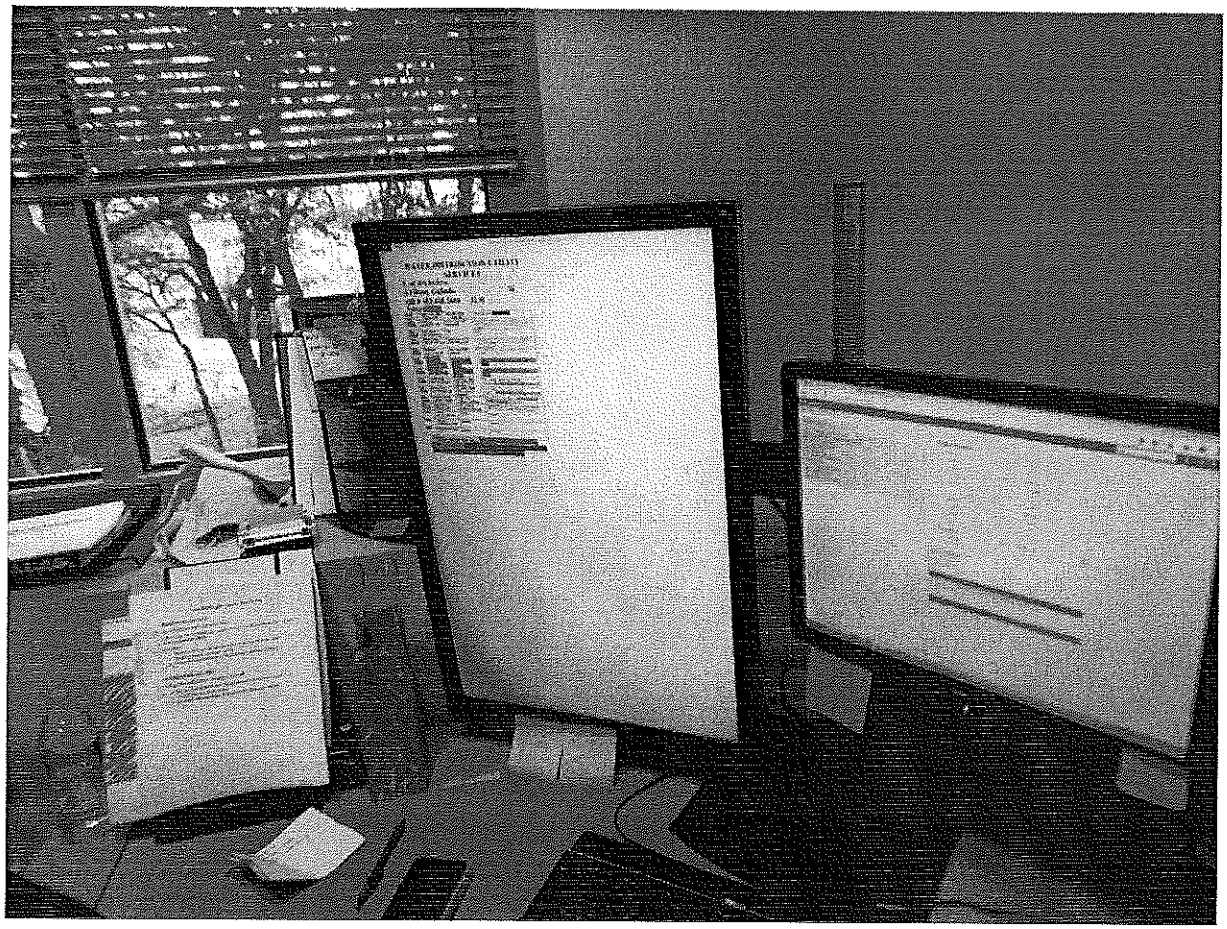


Photo File Name: DSCN2212.JPG

Date of Photo: March 22, 2017

Time of Photo: 10:40 a.m.

Photographer: Damon McElroy

Description: City of Irving Call Center Desk – All calls are logged into the computer's database on right

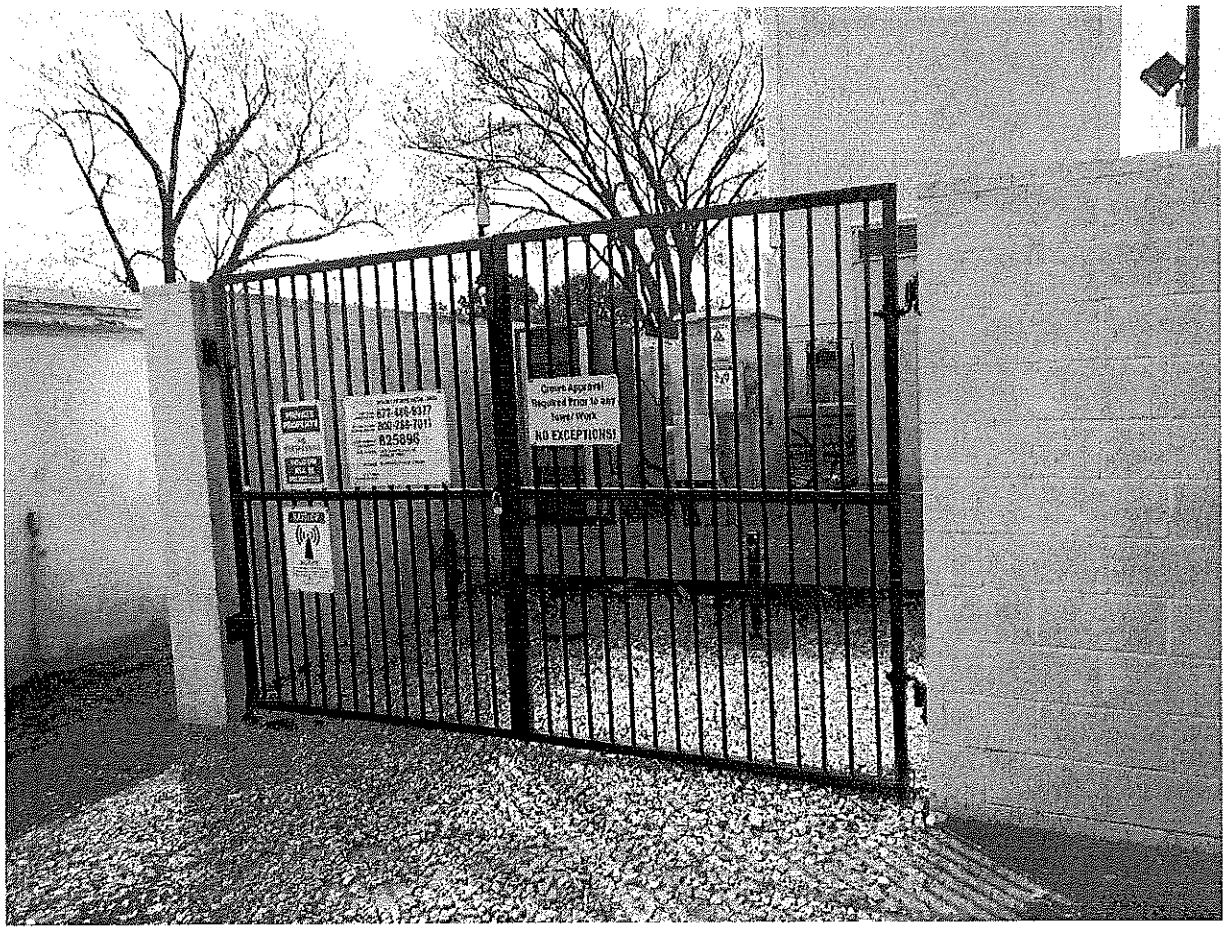


Photo File Name: DSCN2216.JPG

Date of Photo: March 22, 2017

Time of Photo: 11:20 a.m.

Photographer: Damon McElroy

Description: Storey Road Lift Station enclosure

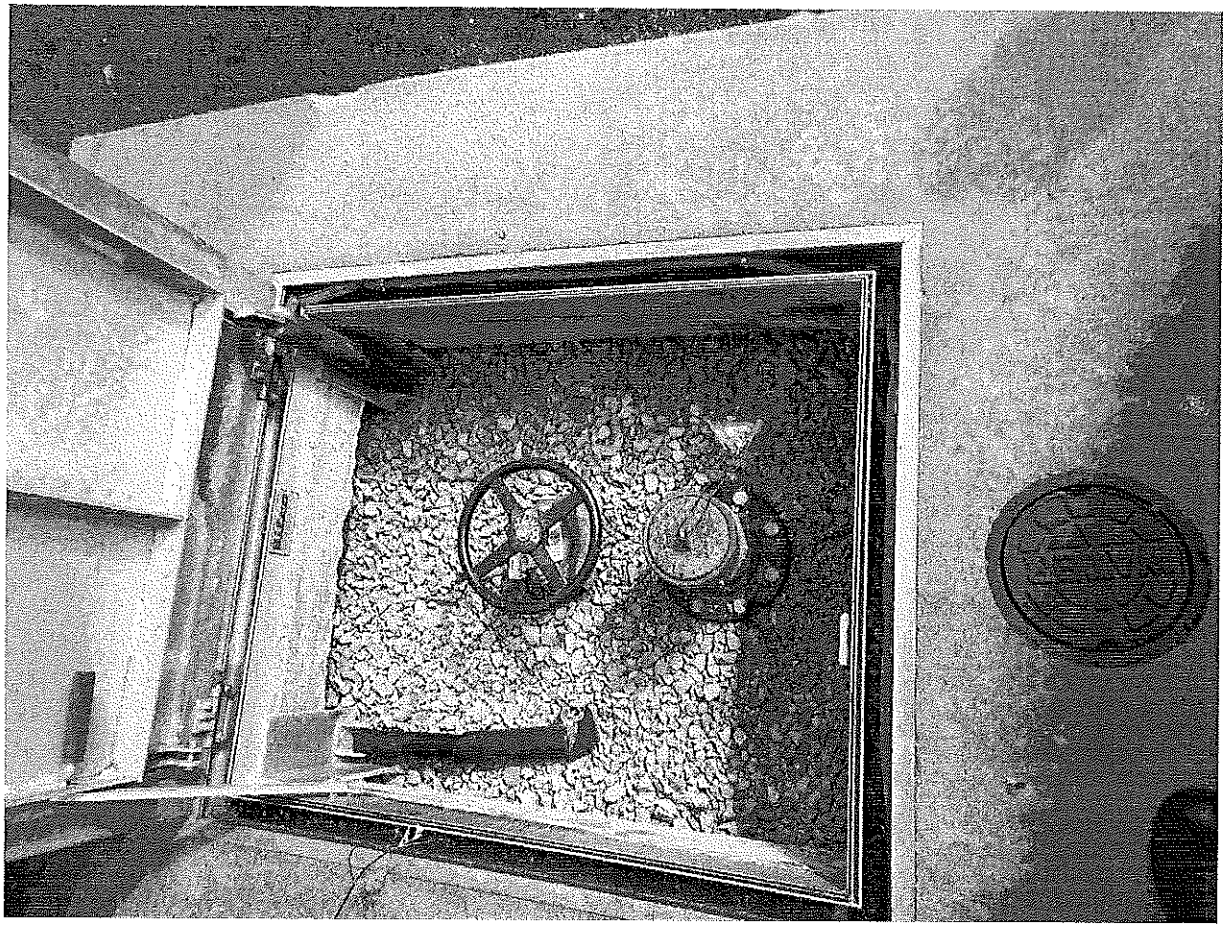


Photo File Name: DSCN2218.JPG

Date of Photo: March 22, 2017

Time of Photo: 11:25 a.m.

Photographer: Damon McElroy

Description: Transfer valve for Storey Road Lift Station – Used in event of power loss and portable pump is attached from the lift station's wet well to the transfer valve

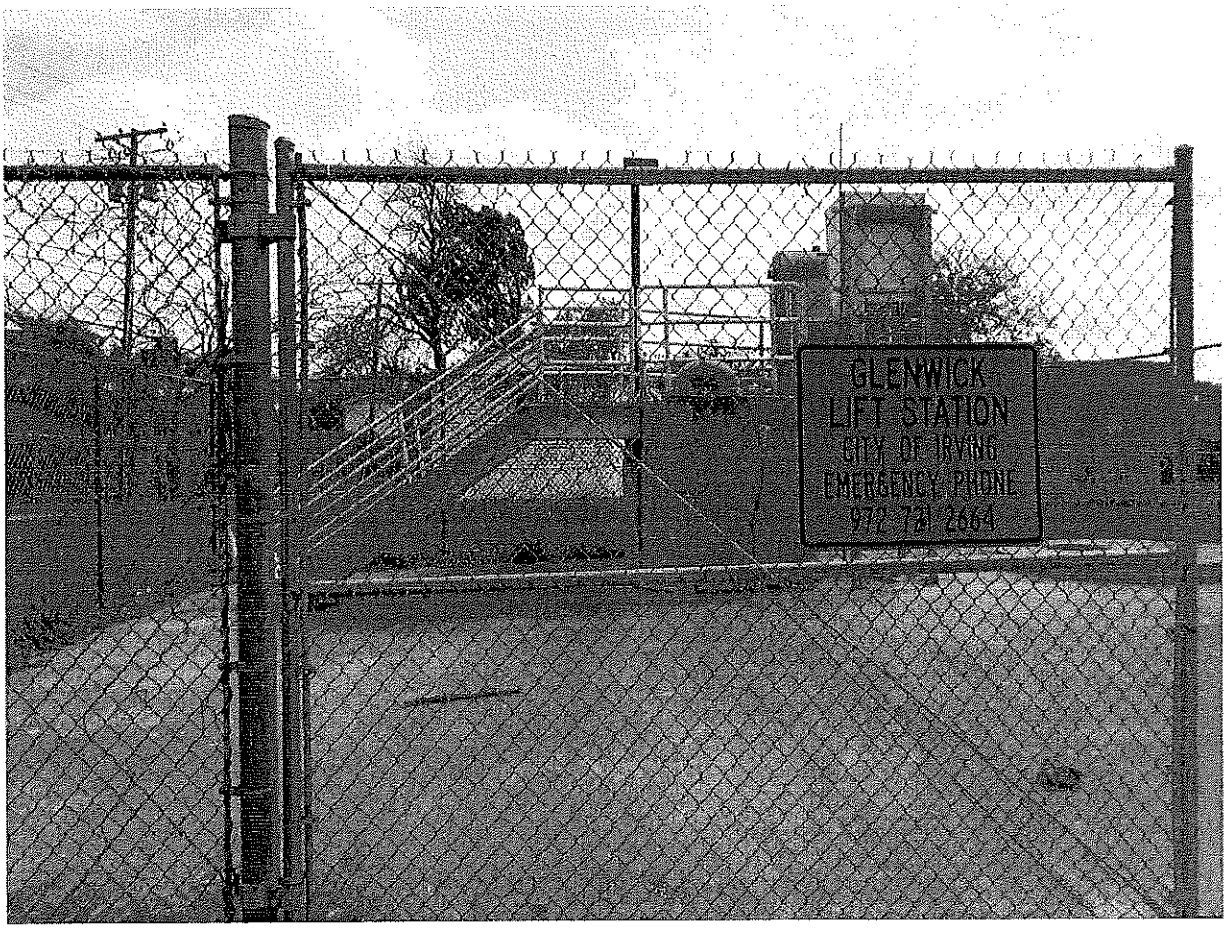


Photo File Name: DSCN2222.JPG

Date of Photo: March 22, 2017

Time of Photo: 11:40 a.m.

Photographer: Damon McElroy

Description: Glenwick Lift Station enclosure

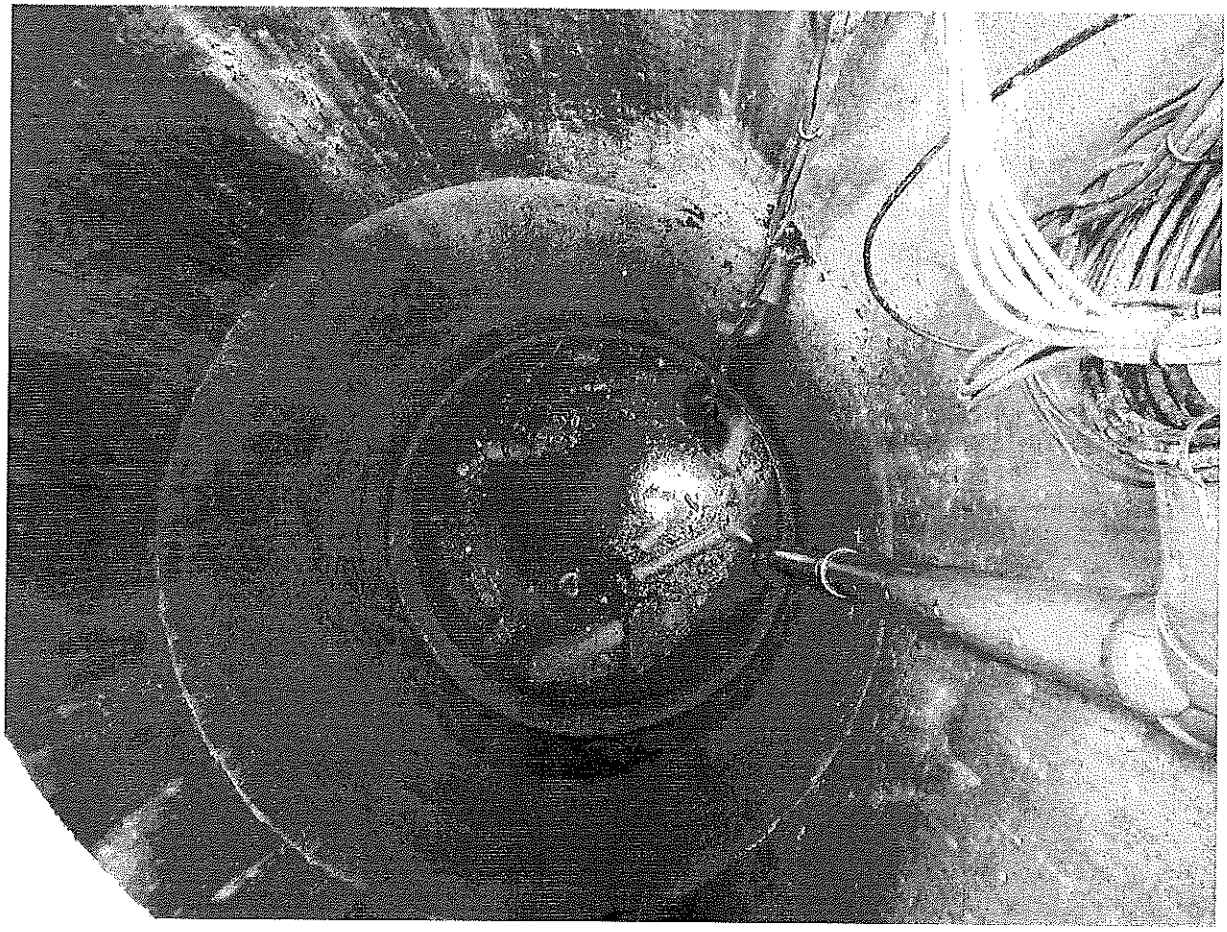


Photo File Name: DSCN2223.JPG

Date of Photo: March 22, 2017

Time of Photo: 11:43 a.m.

Photographer: Damon McElroy

Description: Glenwick Lift Station wet well – note float alarms on upper part of picture

Photo File Name: DSCN2228.JPG

Date of Photo: March 22, 2017

Time of Photo: 11:52 a.m.

Photographer: Damon McElroy

Description: Oakdale Lift Station – Lift station sits on private property with a fenced and gated entry

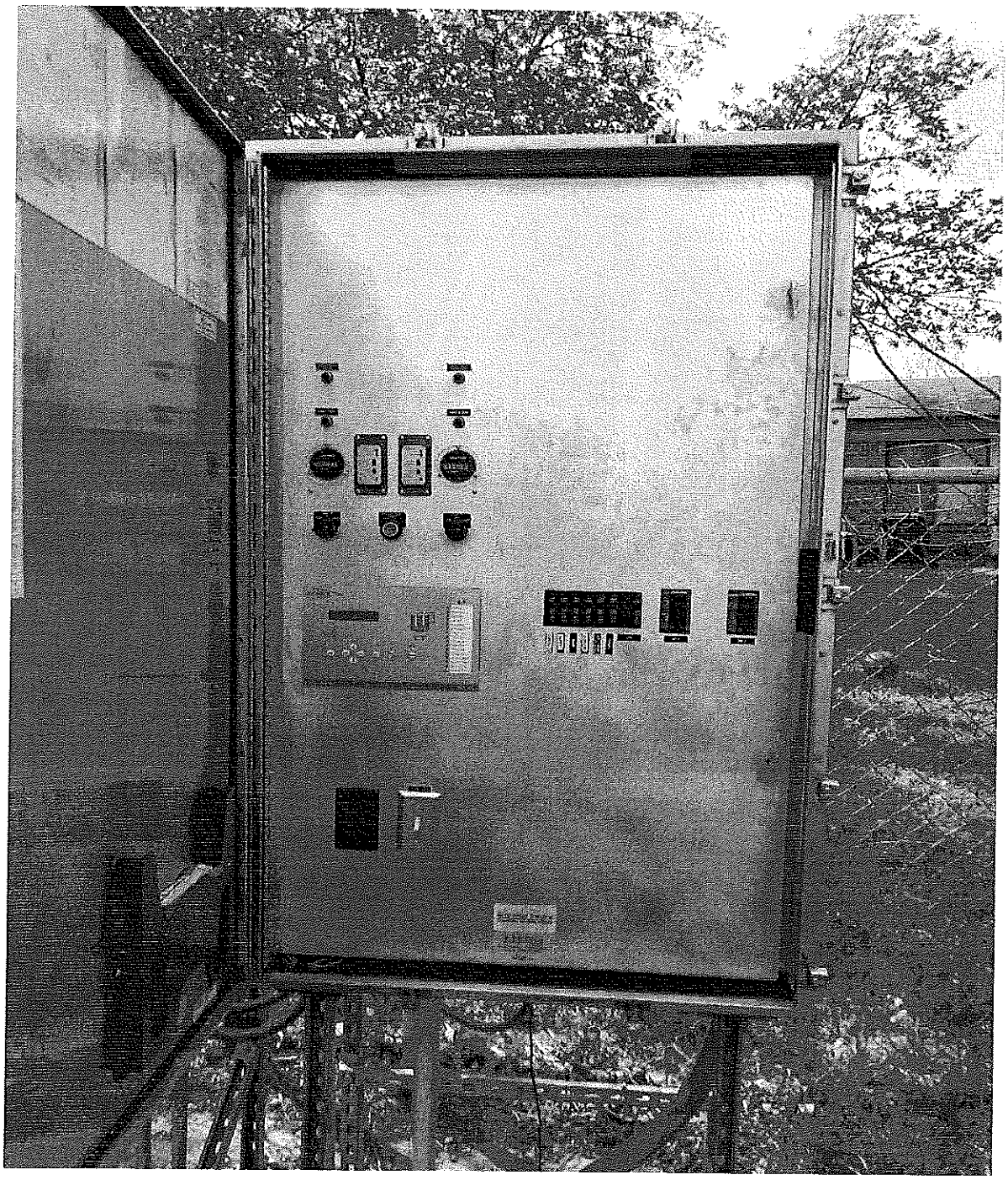


Photo File Name: DSCN2233.JPG

Date of Photo: March 22, 2017

Time of Photo: 11:55 a.m.

Photographer: Damon McElroy

Description: Oakdale Lift Station Electric Control Panel – Note SCADA system in middle left panel

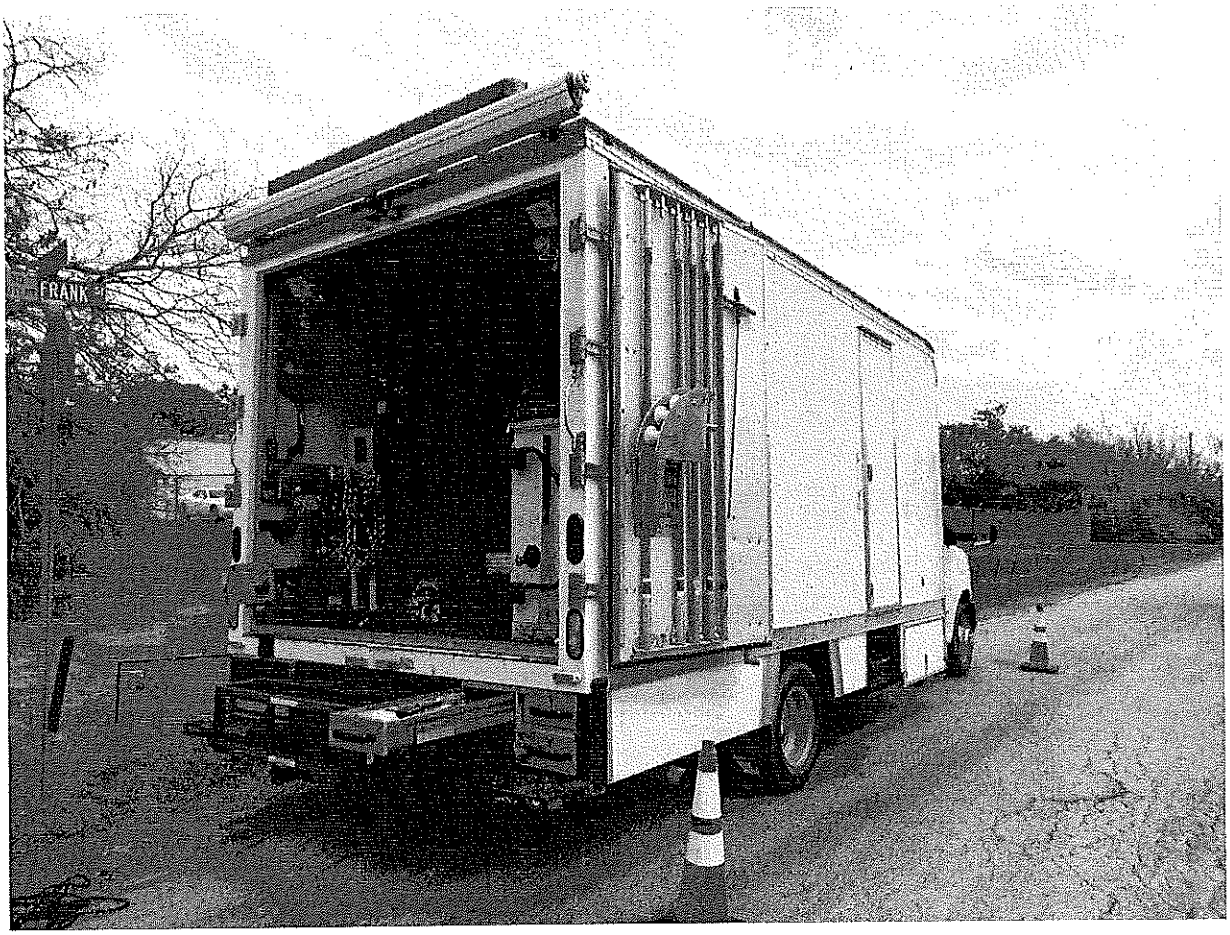


Photo File Name: DSCN2236.JPG

Date of Photo: March 22, 2017

Time of Photo: 1:15 p.m.

Photographer: Damon McElroy

Description: City of Irving CCTV truck

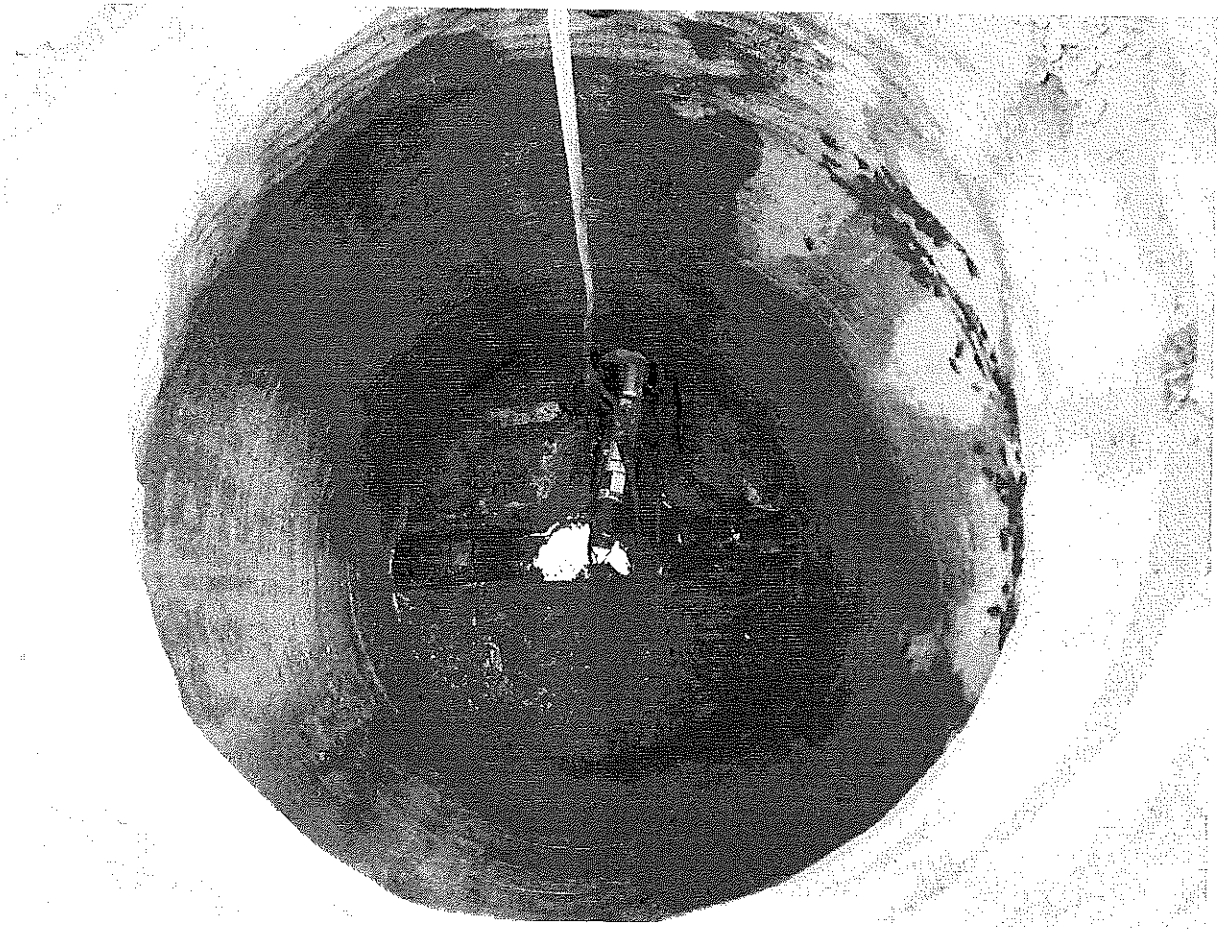


Photo File Name: DSCN2242.JPG

Date of Photo: March 22, 2017

Time of Photo: 1:25 p.m.

Photographer: Damon McElroy

Description: CCTV camera entering into sanitary sewer to video record condition of system

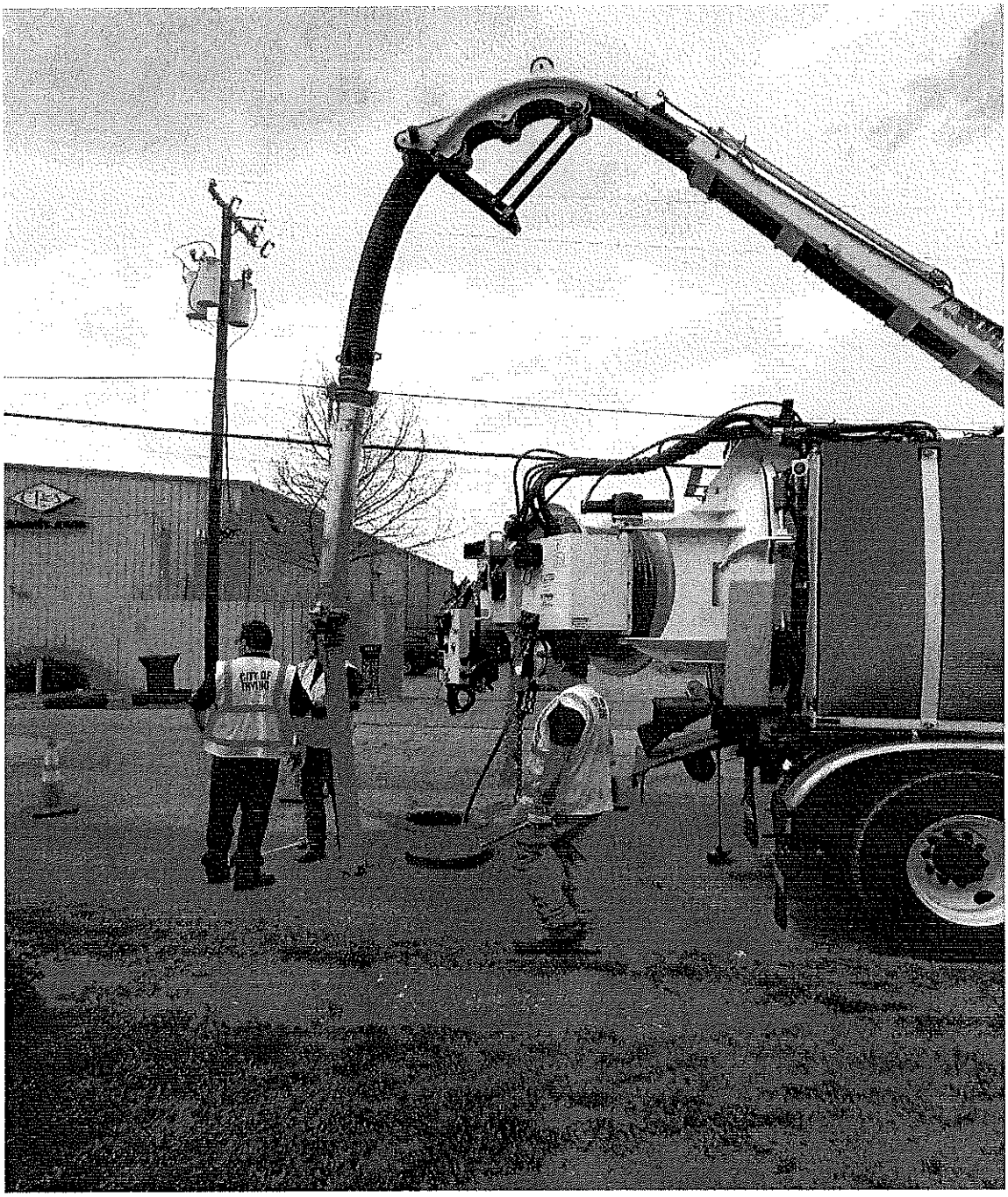


Photo File Name: DSCN2246.JPG

Date of Photo: March 22, 2017

Time of Photo: 1:50 p.m.

Photographer: Damon McElroy

Description: Jet/Vactor Truck preparing sanitary sewer lines for CCTV video camera

Appendix 2 – City of Irving SSO Inspection Checklist

EPA
SSO Inspection Checklist

Name of Municipality City of Irving, Texas

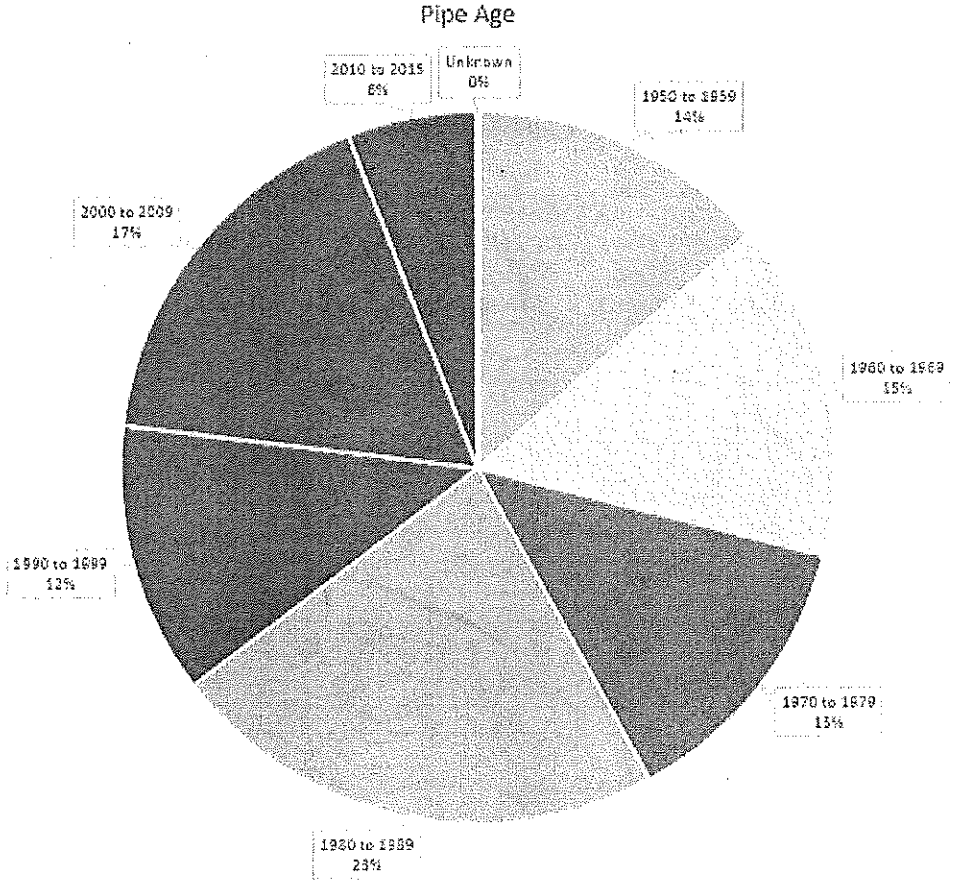
Collection System Description

1. Describe the collection system. Irving collects and transports wastewater from 12 drainage basins to 12 points-of-entry into TRA's Central Regional Wastewater System where it is treated at the TRA Central Wastewater Treatment Plant. The collection system includes approximately 660 miles of sanitary sewers ranging in size from 4-inch to 54-inch in diameter as well as 11 sanitary sewer lift stations with an additional lift station currently under design.

2. What is the population of the service area:
   - Number of residents 232,406
   - Commercial connections 4,789
   - Any septic systems? Yes If yes, how many? 1

3. How many miles of sanitary sewer mains are in the collection system? 658.35

4. What is the age of collection system? See pie chart below.



Pipe Material

%CI ≈	0.08%
%DI ≈	0.09%
%FRP ≈	0.49%
%PE ≈	0.37%
%PVC ≈	50.09%
%RCP ≈	2.22%
%VC ≈	45.80%
%Unknown ≈	0.86%

5. Does the collection system experience problems during dry weather? Dry weather SSOs are generally small (less than 1,000 gallons) and infrequent. To date for calendar year 2016, 14 dry weather SSOs have occurred with the largest one being 500 gallons.

   After an SSO does occur, the sewer main that the SSO occurred on is videoed to determine the cause. Based on the video, it is determined whether the line needs to be repaired, replaced or added to a preventative maintenance cycle. When the City first entered into the SSOi with the TCEQ, a large percentage of the dry weather SSOs occurred due to fats-oils-grease. The City has seen a significant reduction in the number of SSOs due to grease in our system since entering into the SSOi with the TCEQ.

   Describe or provide documentation: The table below is from Irving's last SSOi progress report submitted to the TCEQ on June 27, 2016. The number of SSOs due to grease have been reduced over 55% since the City entered the SSOi.

TABLE 7-2
SANITARY SEWER OVERFLOWS ATTRIBUTED TO GREASE BLOCKAGES

Month	SSOs 2007-2008	SSOs 2008-2009	SSOs 2009-2010	SSOs 2010-2011	SSOs 2011-2012	SSOs 2012-2013	SSOs 2013-2014	SSOs 2014-2015	SSOs 2015-2016
June	3	1	4	0	1	1	0	2	2
July	4	0	2	1	2	2	1	0	3
August	2	1	2	1	1	2	0	0	4
September	2	1	1	1	1	0	1	0	1
October	4	0	1	1	1	1	4	3	1
November	2	1	4	1	2	4	0	1	1
December	4	4	1	1	2	1	3	1	1
January	2	1	5	2	1	4	4	3	0
February	4	3	3	6	2	2	1	2	1
March	5	4	4	3	3	0	2	0	0
April	1	3	1	4	2	0	0	2	2
May	3	1	3	1	1	1	2	2	0
TOTAL	**36**	**20**	**31**	**22**	**19**	**18**	**18**	**16**	**16**

6. Does the collection system experience problems during wet weather? Yes

   Describe or provide documentation: Irving's point-of-entries into the Elm Fork portion of TRA's Central Regional Wastewater System are the closest point-of-entries to the TRA Central Regional Wastewater Treatment Plant and are the first to be impacted by surcharging within the Elm Fork system. The largest wet weather SSOs occur when the Elm Fork system surcharges and backs up into Irving's collection system. Irving and TRA are working together to resolve this issue. TRA has interceptor EF-2 Phase I under construction and has plans to construct EF-7 which will include the second phase of EF-2. These projects will increase the capacity of the Elm

Fork system and reduce surcharging. Irving also has a new lift station under design that will prevent the Elm Fork system from backing up into most of Irving's system when it is surcharged.

Also, as part of the SSOi, the City has completed multiple sanitary sewer evaluation surveys (SSES) to determine where inflow and infiltration is occurring within the collection system and identifying projects to reduce it.

7. What is your sanitary sewer overflow (SSO) notification procedure? The City's Sanitary Sewer Overflow Response Plan (SORP) is attached in Appendix A for reference. Page 9 of the SORP details the procedures for reporting sanitary sewer overflows. All SSOs are reported via fax to the TCEQ within 24 hours and originals are sent via certified mail within 5 days.

   What is reported? Appendix D of the SORP is the form submitted to the TCEQ after an SSO occurs. It includes a Noncompliance Summary of the unauthorized discharge that includes location, discharge route, estimated volume, and cause of noncompliance. It also includes a description of data collected to monitor the effects of the SSO as well as actions taken to mitigate the adverse effects of the SSO and the actions taken to correct the problem and prevent recurrence.

8. Are all SSOs reported, regardless of size? Yes. If no, why not? n/a

Lift/Pump Stations

1. How many lift stations are in the system? 11

   - How many have backup power sources? 2
   - Describe: The Colorado Lift Station and the Las Colinas Urban Center (DART) Lift Station have emergency generators that can power them in the event of a power failure.

2. Describe how pump/lift stations are inspected and monitored? The City's lift stations are checked and monitored through the SCADA system on a daily basis. They are also visited once a week.

3. Is a SCADA system used? Yes If so, what parameters are monitored? Wet well level and pump status are monitored through SCADA for each lift station. Voltage and amperage at each lift station is also monitored.

4. What provisions have been made for emergencies? There is a 24-hour on-call rotation for the lift station crew to respond to emergencies. By-passes have been installed on the force mains at all but one of the lift stations, so that they can be pumped around with portable pumps in the event of a failure.

   - Emergency Power? Two of the lift stations have backup emergency generators. For the lift stations that don't have backup generators, portable gas powered pumps are brought on-site in the event of a power failure.
   - Critical Processes? The City has an electrical contractor under contract to deal with emergency electrical issues at the facilities.
   - SCADA? City staff has the capability to program and trouble shoot field communication devices.
   - Other? City staff simulates emergencies periodically to evaluate staff on how they respond to the exercise and what they need to improve on.

5. Describe any automated emergency notification/response process. SCADA alarms are triggered based on wet well level and pump status.

Satellite Systems

1. Does the collection system receive flow from satellite systems? Yes, from City of Grand Prairie
   If yes, continue with questions 2-4

2. Is flow from satellite systems monitored? Yes
   If yes, how? It is monitored downstream where it comingles with Irving's flow.

3. Describe any known problems with the satellite collection system (hydraulic flow, wastewater concentration, ordinances, etc.)? no

4. Who is responsible for satellite systems, enforcement, and response? City of Grand Prairie
   - Enforcement? Grand Prairie
   - Response? Grand Prairie

Performance Indicators

1. Summarize the Capacity, Management, Operations, and Maintenance (CMOM) components utilized by the facility and satellite systems, if applicable: The City incorporates many CMOM components in operations of the collection system. The City's staff is well trained and has the appropriate TCEQ licenses.

   The collection system is mapped in the City's GIS and field staff have the ability to see the maps in the field on lap-tops or tablets. All work completed is documented in the City's work order system, Cityworks, which is compatible with the GIS.

   All SSOs are responded to quickly and reported to the TCEQ as required. Each SSO is reviewed to determine cause and appropriate response. 30-day, 60-day and 90-day preventative maintenance occurs to prevent recurring issues in the system. Aggressive sewer cleaning and videoing goals to manage the system are set. As part of Irving's continual training efforts, a consultant was recently hired to evaluate current sewer cleaning practices and train staff to more efficiently clean sewers. Special training was provided on cleaning large diameter sewers. New equipment was also purchased to clean these sewers. Staff effort and resources are expended on public education to reduce the amount of grease entering the system. Staff participates in numerous City events to educate the public on reducing the amount of grease introduced to the system and tv and radio ads are purchased during the holidays to remind citizens not to put grease down the drain.

   Updates to the Wastewater Master Plan are completed to make sure all collection system capacity and condition issues are identified and planned for. The City is investing $10 - $15 million per year in the annual CIP.

2. Does the utility participate in the TCEQ Sanitary Sewer Overflow Initiative (SSOi)? Yes

   - If yes, please provide the latest SSOi Annual Report. See Appendix B – June 27, 2016 SSOi Annual Report
   - If no, why not? n/a

EPA
SSO Inspection Checklist

3. What Standard Operational Procedures (SOP) are developed and used?
   - _x_ SCADA
   - _x_ Routine Inspections/Maintenance
   - _x_ Root Control
   - _x_ Lift/Pump Stations
   - _x_ Valve maintenance
   - ___ Fleet Management
   - _x_ Clean-up
   - _x_ Other: See Appendix A - Sewer Overflow Response Plan (SORP)

4. Has an infiltration & inflow (I/I) analyses or sanitary system evaluation survey been performed? As part of the SSOi with the TCEQ, the City has completed two sanitary sewer evaluation surveys (SSES) for different parts of the collection system to reduce inflow and infiltration. As part of the on-going update to the Wastewater Master Plan, an SSES will be completed on a portion of the collection system.

   - If yes, describe (and provide a copy of any associated reports) See page 7 of the most recent SSOi progress report submitted to the TCEQ on June 27, 2016 (Appendix B).

   - _x_ Smoke Testing: Approximately 326,000 linear feet of sewer main was smoke tested in the last two SSESs completed.

   - _x_ Dye Testing: Approximately 70 dye tests were done in the last two SSESs completed to estimate the amount of I/I.

   - _x_ CCTV: Approximately 53,000 linear feet of sewer main was video inspected in the last two SSESs completed.

   - _x_ Peaking Factors: The areas chosen for SSESs are prioritized based on flow monitoring completed in updates to the Wastewater Master Plan. The areas with the highest peaking factors are targeted for SSESs.

   - If not, why not: n/a

5. Describe the sewer cleaning and inspection goals. Provision 2 of the City's SSOi agreement with the TCEQ requires the City to clean at least 350,000 linear feet of the system per year. Provision 3 of the City's SSOi agreement with the TCEQ requires the City to video at least 75,000 linear feet of the system per year. Below are tables from the most recent SSOi progress report submitted to the TCEQ on June 27, 2016.

EPA
SSO Inspection Checklist

TABLE 2-1 MONTHLY SUMMARY OF SYSTEM CLEANED JUNE 2015 – MAY 2016				
Month	**Rod**	**Vacuum**	**Wash**	**Total Cleaned**
	(linear ft)	(linear ft)	(linear ft)	(linear ft)
June '15	10,035	56,396	147,656	214,087
July '15	8,100	64,723	65,091	137,914
August '15	12,180	54,711	119,069	185,960
September '15	8,990	53,804	69,715	132,509
October '15	13,715	50,189	129,520	193,424
November '15	7,390	35,092	50,160	92,642
December '15	16,000	36,155	112,907	165,062
January '16	15,075	28,934	94,181	138,190
February '16	16,150	30,356	131,160	177,666
March '16	10,565	66,579	106,756	183,900
April '16	14,780	50,411	168,937	234,128
May '16	11,335	38,488	78,666	128,489
			TOTAL	**1,983,971**

TABLE 2-2 MONTHLY SUMMARY OF SYSTEM TELEVISED JUNE 2015 – MAY 2016	
Month	**Televised**
	(linear ft)
June '15	33,218
July '15	26,481
August '15	32,315
September '15	22,259
October '15	12,568
November '15	2,295
December '15	7,242
January '16	10,311
February '16	12,928
March '16	29,404
April '16	14,238
May '16	10,400
TOTAL	**213,659**

- x Hot Spots: Provision 1 of the City's SSOi with TCEQ requires the City to clean problem areas within the system on 30-day, 60-day, and 90-day preventative maintenance cycles. Below is a table from the most recent SSOi progress report submitted to the TCEQ on June 27, 2016.

TABLE 1-1
PREVENTATIVE MAINTENANCE SUMMARY
JUNE 2015 – MAY 2016

	30-Day PM			60-Day PM	90-Day PM		
Month	**Vacuum** (linear ft)	**Wash** (linear ft)	**Rod** (linear ft)	**Vacuum** (linear ft)	**Vacuum** (linear ft)	**Wash** (linear ft)	**Rod** (linear ft)
June '15	9,653	37,821	6,950	4,881	3,331	13,465	3,085
July '15	8,030	32,426	2,975	2,335	5,440	15,635	5,125
August '15	2,945	35,025	5,595	9,935	850	10,545	4,265
September '15	8,959	39,165	7,345	4,353	8,340	13,725	3,000
October '15	6,074	37,150	6,960	6,917	2,100	15,025	5,605
November '15	7,020	32,460	3,100	7,623	15,274	11,685	3,195
December '15	5,595	32,815	7,030	2,258	840	13,055	3,750
January '16	8,310	39,675	6,350	10,177	6,037	14,570	4,320
February '16	8,122	38,435	6,645	2,459	25,341	9,800	3,620
March '16	6,339	34,310	6,390	9,683	6,771	18,295	2,125
April '16	3,813	40,085	7,425	7,707	39,456	9,690	3,455
May '16	6,304	36,705	7,055	5,822	7,606	10,970	3,680
TOTAL	**81,164**	**436,072**	**73,820**	**74,150**	**121,386**	**156,460**	**45,225**

- _x_ Annual Goals: The City has aggressive internal goals to wash 1,200,000 linear feet of sanitary sewer annually and to video 384,000 linear feet of sanitary sewer annually.

6. Describe any training for receiving, documenting, and responding to sewer calls.

   - Discharge Estimates: All staff that work on the collection system are required to have a TCEQ Collection I license. TCEQ training classes on collection system operations is required for these licenses. Staff also receives on-the-job training to estimate the volume of SSOs.
   - Safety/Confined Space: All employees attend a weekly department safety meeting. The City has a TCEQ certified trainer on staff and confined space classes are offered at least once per year.
   - Lockout/Tagout? The City's lift station crew is trained in-house and utilizes lockout/tagout procedures to perform maintenance at lift stations.
   - Reporting? In addition to training required to receive TCEQ licenses, staff also receives on-the-job training on specific reporting requirements to the TCEQ and documenting the work in Cityworks.
   - Treatment/Clean-up? In addition to training required to receive TCEQ licenses, staff also receives on-the-job training for treatment/clean-up requirements.
   - Other? n/a

EPA
SSO Inspection Checklist

7. Describe any Asset Management process in place for the collection system. The City is working to assign a PACP rating to every sewer main in the collection system which will assist in CIP preparation. The City purchased two new CCTV trucks in 2013 that are compatible with both the ArcView GIS software and the Cityworks work order system that the City utilizes.

   The City has GIS technicians that update the sewer system mapping data as new plan sets are received, corrections from field inspections are provided, and as video inspection data is collected. One technician is also PACP certified to review the video, identify defects, and assign an overall condition to the sewer segment. Approximately 20% of the collection system has been videoed and 10% of the collection system has received a PACP rating to date.

8. Describe the funding status. The City has a Sewer System Capital Improvement Program (CIP) of approximately $16 million for FY16-17. The CIP includes a new lift station, I/I projects, projects identified in the most recent update to the Wastewater Master Plan, and annual wastewater main replacements.

   - Emergency Repairs: The City has six, three man crews dedicated to emergency repairs.
   - Operation & Maintenance: The City has three wash crews, five wash/vac crews, one rod crew, two CCTV crews, and one lift station crew.
   - Rehabilitation: Sewer main and manhole rehabilitation is included as required in the annual CIP.
   - Rates: Rates are periodically adjusted to meet the needs of the system. The City Council approved a 5-year rate plan last year.
   - Other: Since the City entered into the SSOi with the TCEQ in March of 2007, the City has installed over 48 miles of sanitary sewer lines at a cost of $54.8 million.

9. Describe any formal approach to target areas for Capital Improvement Projects. Maintenance history, customer feedback, and PACP ratings are used to determine annual wastewater main replacements. An update to the Wastewater Master Plan is currently underway. The primary deliverable will be a Capital Improvement Plan based on capacity issues and condition issues.

10. Please provide any other relevant information.
    The City is committed to improving operations and reinvesting in infrastructure to reduce the number of SSOs from the collection system. With the update to the Wastewater Master Plan and the construction of the new lift station to protect the system from surcharging within TRA's Elm Fork system, the City is demonstrating its commitment to improving the system.

EPA
SSO Inspection Checklist

CERTIFICATION

I certify under penalty of law that I have examined and am familiar with the information provided and in any enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true, accurate, and complete.

9/15/16
Date

Signature

STEVE PETTIT - ASSISTANT WATER UTILITIES DIRECTOR
Print name and Title

EPA

SSO Inspection Checklist

APPENDIX A

SEWER OVERFLOW RESPONSE PLAN

Appendix 3 - Meeting/Inspection Attendee List

Opening Meeting

City of Irving
Name of Facility

Irving Complex
Location

Commenced meeting Date: 3-22-17 Time: 0900

Name	Title	Representing	Telephone No.	Email
Rachel Matthews	Life Scientist	EPA	214-665-8589	matthews.rachel@epa.gov
Alan Vaughn	ENV. ENG.	EPA	214 665 7487	VAUGHN.ALAN@EPA.GOV
Brad Simpson	Technology Mgr	Water Utilities	972-721-2788	bsimpson@cityofirving.org
Steve Pettit	ASST. WATER DIRECTOR	WATER	972-721-3538	spettit@cityofirving.org
Ronald Billey	Water Maint Supervisor	COI	972721-2246	rbilley@cityofirving.org
Patrick Forrest	GIS Coordinator	COI Water Utilities	972-721-2781	pforrest@cityofirving.org
Todd Reck	WATER UTILITIES DIRECTOR	IRVING	972 721.2281	treck@cityofirving.org
David Canady	Operations Manager	Irving	972-721-2781	dcanady@cityofirving.org
Tom Moore	ENVIRONMENTAL COMPLIANCE	IRVING	972 721 2294	tmoore@cityofIRVING.ORG
Mike Tillman	ENV. Scientist	EPA R6	214-665-7531	tillman.michael@epa.gov
Damon McElroy	[illegible]	"	" -7159	MCELROS.DAMON@EPA.GOV
David Long	ENV. Scientist	"	214.665.7323	Long.david@epa.gov
Hugh Card	UTILITY Supervisor	COI	469-446-2688	hcard@cityofirving.org
Robert Hurtado	Pump And Motor Specialist	COI	469-446-2681	Rhurtado@cityofirving.org

Conclude meeting 3:15 pm Time: 10:15

Initials / Date: _____/_____

Appendix 4 – City of Irving Supplied Documents

Appendix 4 – City of Irving Supplied Documents

A. Sewer Overflow Response Plan (SORP)

City of Irving, Texas
Sewer Overflow Response Plan
(SORP)

Prepared By:

GSWW, Inc.
for
City of Irving
Water Utilities
333 Valley View Lane
Irving, Texas 75061

Prepared: October 2006
Revised: June 2015

SEWER OVERFLOW RESPONSE PLAN (SORP)

Approved On: October 2006

Approved By: Todd Reck

Amended On:

November 2008
May 2010
March 2011
May 2012
May 2013
October 2014
June 2015

Sewer System Management:
City of Irving
Water Utilities
333 Valley View Lane
Phone: (972) 721-2281
Fax: (972) 721-2280

Contact Persons:

Todd W. Reck, P.E.
Water Utilities Director
Phone: (972) 721-2281

Steve Pettit, P.E
Water Utilities Asst Director
Phone: (972) 721-2281

David Canady (Primary Contact Person)
Operations Manager - Water Utilities
Phone: (972) 721-2281

Tom Moore (Secondary Contact Person)
Environmental Compliance Supervisor – Water Utilities
Phone: (972) 721-2281

Regulatory Agency to Report Sewer Overflow:

TCEQ Regional Office
Attn: Eric Agnew
2309 Gravel Dr.
Fort Worth, Texas 76118-6951
Phone: (817) 588-5800
Fax: (817) 588-5701

Texas Commission On Environmental Quality
WQCMT (MC224) Enforcement Division
P.O. Box 13087
Austin, Texas 78711-3087
Hotline: 1-800-832-8224

TABLE OF CONTENTS

Acronyms:

ECG – Environmental Compliance Group

ECS – Environmental Compliance Supervisor

OM – Operations Manager

SORP – Sewer Overflow Response Plan

SSO – Sanitary Sewer Overflow

TCEQ – Texas Commission on Environmental Quality

TRA – Trinity River Authority

UMS – Utility Maintenance Supervisor

UMC – Utility Maintenance Crew

WQNN – Water Quality Nonconformance Notification

WU - Water Utilities

I. GENERAL

The Sewer Overflow Response Plan (SORP) is designed to ensure that every report of a sewage overflow incident is immediately dispatched to the appropriate Water Utilities (WU) personnel for confirmation and quick response. Quick response by WU personnel will minimize the effects on public health and customer disruption, and preserve the beneficial uses and water quality of surface waters. The objective of the SORP is to direct WU personnel on how to respond to any type of sewage spill through identification of personnel responsibilities, notification procedures, field activities, spill monitoring, record keeping, and training. For purposes of this SORP, "confirmed sewage spill" is also sometimes referred to as "sewer overflow," "overflow," or "SSO." The effective date of this plan is October 2006.

A. Goals

The primary goal of the SORP is to protect public health, protect the environment and minimize the risk of enforcement actions against the City of Irving, Texas.

Additional goals of the SORP are as follows:

- Protect the sewer collection system maintenance personnel;
- Protect the sewer collection system and all associated utilities;
- Protect the Trinity River Authority (TRA) wastewater treatment facilities;
- Protect private and public property beyond the collection and treatment facilities;
- Comply with the State of Texas regulations described in the Texas Administrative Code, Title 30, Part 1, Chapter 319, Subchapter C entitled "Public Notice of Spills or Accidental Discharges from Wastewater Facilities Owned or Operated by Local Governments" and in the Texas Commission on Environmental Quality's Regulatory Guidance RG-395 entitled "Unauthorized Discharges and Sanitary Sewer Overflows".

B. Organizational Elements of SORP

The key elements of the SORP are addressed individually as follows:

Section II - Response Team
Section III - Overflow Response Procedure
Section IV - Maintenance of SORP
Appendices

II. RESPONSE TEAM

The responders to a sewage spill must have a clear understanding of their individual responsibilities in order to maximize their efforts. Many WU personnel are involved in responding to a sewage spill and following are descriptions of key team member responsibilities.

A. Personnel

Utility Maintenance Supervisor

The Utility Maintenance Supervisor (UMS) has the immediate responsibility to protect people, property, and the environment from the effects of a sewage overflow. To meet these objectives in a rapid, efficient, and organized manner, WU personnel will consider the recommendations from the Environmental Compliance Group (ECG) and will respond to the directions given to them by the UMS. The duties of the UMS are as follows:

- Assume primary management and coordination of all emergency actions on overflow service requests.
- Make initial assessment of a reported overflow site.
- Perform initial assessment of the extent of on-site and off-site spill migration.
- Estimate the volume spilled and what may be eventually spilled prior to containment.
- If an overflow site is confirmed, immediately report the overflow with detailed information to the ECG.
- Direct crew(s) in performance of the overflow containment and clean-up activities.
- If necessary to adequately contain and cleanup the overflow in a timely manner, solicit assistance from the Operations Manager (OM) for dedication of other WU crews and/or a contractor.
- Consider any directions received from the ECG regarding overflow containment and clean-up activities.

Operations Manager

The Operations Manager (OM) is responsible for all wastewater and water operations and maintenance. This position reports directly to the Water Utilities Director. With respect to overflow response, the OM is responsible for field and the Environmental Compliance Supervisor (ECS) is responsible for administrative oversight and may become directly involved on-site depending upon the severity of the overflow. The OM will direct the commitment of adequate resources for containment of the overflow and cleanup of the site in a timely manner.

Environmental Compliance Supervisor

The Environmental Compliance Supervisor (ECS) is responsible for directing the assessment of an overflow site, reporting the overflow to appropriate regulatory agencies, monitoring water quality affected by the overflow and assuring that the site cleanup is satisfactory. The ECS or his ECG representative and the UMS will work together to determine a plan for containment and overflow site cleanup. ECG will be kept informed of any subsequent cleanup and will reserve the right to remain on site if warranted. After an overflow is confirmed, the ECS will insure that the overflow is reported to TCEQ Regional Office by fax within 24 hours or the next working day from the time the overflow was reported. A written report shall be received by the TCEQ Regional and Austin office within five days

from the overflow confirmation date. The ECS or UMS will notify and update the Water Utilities Director and the Operations Manager of overflows that the ECS feels warrant special attention. If TCEQ determines that public notification is necessary, the Water Utilities Director will be immediately notified for determination of implementation procedures. The ECS is responsible for implementing general public notification as directed by the TCEQ.

The responsibilities of these above described personnel may vary depending upon the magnitude of an overflow and the availability of individuals when an overflow occurs. The Water Utilities Director, Operations Manager and Environmental Compliance Supervisor will dictate and direct any variations of responsibilities from that described above.

Appendix A is the WU Response Team Organizational Chart showing personnel positions and crews that may participate in the response to a reported overflow.

B. Equipment

WU owns and operates a fleet of equipment utilized for operation and maintenance of the sewer collection system. This equipment and the personnel assigned to the equipment are dedicated as needed for response to overflows. Equipment available includes three (3) combination high velocity and vacuum sewer-cleaning units, four (4) high velocity sewer-cleaning units, two (2) rodding machines and eleven (11) excavation backhoes. This equipment is stocked with the supplemental tools needed to effectively accomplish work assignments. A UMS has access to the equipment 24 hours per day, every day of the year. The following special equipment is necessary for containment and clean-up of overflows and is always available to an UMS:

Handheld communication devices
Special protective clothing
Containment barriers and mats
Notification door hangers and signs
Barricades, stakes and warning tape
Disinfecting chemicals

III. OVERFLOW RESPONSE PROCEDURE

The Overflow Response Procedure presents a strategy for the mobilization of labor, materials, tools and equipment to correct or repair any condition that may cause or contribute to a sanitary sewer overflow (SSO). The plan considers a wide range of potential system failures that could create an overflow to surface waters, land or buildings.

The Sewage Overflow Response Plan Flow Chart is shown in **Appendix B**.

A. Receipt of Information Regarding an Overflow

When a suspected sewer overflow is reported, the WU should respond to the incident immediately by investigating and correcting the reported overflow.

The WU dispatcher receives telephone calls during normal business hours from Monday through Friday between the hours of 8:00 A.M. to 5:00 P.M. from the public reporting a suspected sewer overflows. Telephone calls may also be received at Other Public Offices identified in **Appendix C**. The person receiving the call from the Other Public Offices should immediately notify the dispatcher at WU telephone number (972) 721-2281 during normal business hours.

1. Upon receipt of a suspected sewer overflow, the following information should be made available to responders:

    1. Time and date call was received
    2. Specific location
    3. Description of problem
    4. Time possible overflow was noticed by the caller
    5. Caller's name and phone number
    6. Observations of the caller
    7. Other relevant information that will enable the WU to quickly locate, assess and stop the overflow.

    WU should record the information on an Activity Sheet and a service request should be produced from the information gathered from the person reporting the overflow.

2. The sewer overflow will be forwarded to a UMC or UMS to investigate the reported overflow, or UMS will assign a UMC the task of investigating the overflow. At least one UMS or UMC are working from 7:00 A.M. to 11:00 P.M. on Monday through Friday. After normal working hours, the WU dispatch will have the sewer overflow investigated by WU stand-by personnel.

3. Until verified, the report of a possible spill will not be referred to as a "sewer overflow."

4. Once a SSO has been identified, the ECG must be notified. ECG will immediately document all reported SSO's. When it is warranted, ECG will investigate to determine if there was any impact to the Waters of the State as a result of the confirmed overflow. After the reported public sewer overflow is confirmed, the ECG will complete a Water Quality Noncompliance Notification (WQNN) form Appendix D within 24 hours of the sewer overflow confirmation. The form will be transmitted by fax to the TCEQ Regional Office at (871) 588-5701. The original form will then be mailed via certified mail to the TCEQ state office at: TCEQ/WQCMT (MC224), Enforcement Division, P.O. Box 13087, Austin, Texas 78711-3087. The TCEQ State Office must receive the original form within 5 days.

5. The ECG verbally notifies the TCEQ Emergency Response Hotline (1-800-832-8224) after becoming aware that a sewer overflow may adversely affect the public drinking water intakes or may cause a fish kill or Hazardous Materials may be involved in the sewer overflow.

6. If it is determined that the SSO is within the confines of private property, then ECG will contact Code Enforcement. ECG and Code Enforcement will work together to determine and direct the appropriate enforcement actions.

From 5:00 P.M. to 8:00 A.M. on Monday through Friday and for all 24 hours on Saturday, Sunday and holidays, calls received at the WU telephone number (972) 721-2281 are rolled over to the pump station operations/dispatcher.

B. Dispatch of Sewer Maintenance Personnel to Site of Sewer Overflow

Failure of any element within the wastewater disposal system that threatens to cause or causes a SSO must trigger an immediate response to isolate and correct the problem. Personnel and equipment must be available to respond to any SSO locations. Additional maintenance personnel shall be "on call" in the event extra manpower is needed.

1. Dispatching Maintenance Personnel

- When WU receives notification of a potential sewer overflow, a City Works SSO work order is created and a crew or crews are dispatched. Once a City Works SSO work order is generated for an SSO, ECG personal is notified with an email generated by City Works. ECG personal will monitor the City Works work order for any and all updates.
- The UMS or the on-call supervisor assigns personnel, materials, supplies and equipment as needed to contain the overflow and for cleanup of the site. Immediately after confirming that an SSO exists, the UMC leader must inform the ECG of the confirmed SSO. In most cases, direction of the maintenance personnel activities will be made by the UMS at the on-site location of the SSO.
- All personnel being dispatched to the site of an SSO will proceed immediately to the site of the overflow. The UMC leader immediately reports to the UMS any delays, conflicts or complications encountered in accomplishment of the assignments. The UMS has the responsibility of resolving any problems encountered.
- If a representative of ECG is not on-site, the UMS and UMC leader will keep the ECG informed regarding the overflow containment and cleanup as it progresses in the City Works SSO work order that was created at the time the SSO notification was received. The UMS and UMC leader will follow directions from the OM and consider recommendations from the ECG representative regarding overflow containment and cleanup procedures to be used.
- The UMC will determine if there was a public SSO, and if determined to be a SSO they will complete the City Works SSO work order (Appendix R). This will include pertinent data concerning the SSO, whether contained or not contained, private or public. Once all data has been entered into the City Work SSO work order, ECG will enter this data into the SSO report to TCEQ. If the SSO occurred after 3:00 P.M or during a weekend or City holiday, the report will be due the next day of business no later than 9:00 A.M.

2. Additional Resources

The UMS receives and conveys to the OM requests for additional personnel, material, supplies, and equipment needed that are not under the control of the responsible UMS.

3. Assessment of Damage to Private Property

The WU maintenance personnel shall use discretion in their actions as reasonably as they can. They must be aware that the City of Irving could face increased liability for any further damages inflicted to private property during such assistance. The IWU maintenance personnel shall not enter private property for purposes of assessing or cleanup of damage unless authorized by either the OM or the UMS. The UMS has the responsibility for assessing damage to private property. WU shall take appropriate still photographs and/or video footage of the sewer overflow impacted area in order to thoroughly document the nature and extent of impacts.

4. Inspection and Report

- The ECG representative is responsible for visiting the site of the sewer overflow to ensure that provisions of this Sewer Overflow Response Plan and other directives are met.
- The ECG representative is responsible for notifying TCEQ and other appropriate health or regulatory agencies within the specified time and submitting documentation identified by this Sewer Overflow Response Plan.

5. Hazardous Material Response Coordination

- Upon arrival at the scene of a sewer overflow, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the UMS shall immediately contact the Irving Fire Department and/or ECG for guidance before taking further action.
- Should the ECG recruit the Irving Fire Department Hazardous Material Response Team for response to the possible hazardous material, the WU maintenance personnel will await the Irving Fire Department's response and directives before taking any overflow containment or cleanup action. Risk Management and the Water Utilities Director should be notified if hazardous material was found. If the hazardous material was detected within the sewer system, TRA should be contacted also.
- The ECG will verify that the responsible party has informed the TCEQ 24-hour Emergency Response Hotline at 1-800-832-8224 and has properly controlled/disposed of any hazardous material.
- Upon arrival of the Irving Fire Department, the ECG/sewer maintenance personnel will take direction from the IC (incident command) individual with the lead authority. SORP containment and cleanup activities shall proceed only after the IC individual determines it is safe.

C. Overflow Correction, Containment, and Clean-Up

This section describes specific actions to be performed by the WU sewer maintenance personnel during a SSO containment and clean-up process.

The objectives of these actions are:

- To protect public health, environment and property from sewer overflows and restore the surrounding area back to normal as soon as possible;
- To establish perimeters and control zones with appropriate traffic cones and barricades, vehicles or use of natural topography (e.g., hills, retaining walls, etc.);
- To promptly notify the regulatory agency with preliminary overflow information and potential impacts as determined appropriate;
- To contain the sewer overflow to the maximum extent possible including preventing the discharge of sewage into surface waters;
- To cleanup the sewer overflow site in a manner that is appropriate and is satisfactory to the ECG and any involved regulatory agency representatives; and
- To minimize the City of Irving's exposure to any regulatory agency penalties and fines.

Under most circumstances, WU can handle all response actions with its own maintenance forces. They have the skills and experience to respond rapidly and in the most appropriate manner. An important issue with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and repair the problem do not produce a problem elsewhere in the system.

Circumstances may arise when WU could benefit from the support of private-sector construction assistance. WU may choose to use private contractors for open excavation operations that might exceed one day to complete or the cleaning of large diameter pipe containing considerable debris and causing backup of sewage.

1. Responsibilities of WU Personnel Upon Arrival

   It is the responsibility of the first ECG/sewer maintenance personnel who arrive at the site of a public sewer overflow to protect the health and safety of the public by mitigating the impact of the overflow to the maximum extent possible.

   Upon arrival at a SSO, the WU sewer maintenance personnel perform the following:

   - Determine the cause of the overflow, e.g. sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.;
   - Identifies and requests assistance or additional resources to correct the overflow or to assist in determination of its cause;
   - Takes immediate steps to stop the overflow, e.g. relieves pipeline blockage, manually operates pump station controls, repairs pipe, etc. Extraordinary steps may be considered where overflows

from private property threaten public health and safety (e.g., an overflow running off of private property into the public right-of-way); and
- Requests additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the overflow.

2. Initial Measures for Containment

Initiate measures to contain the overflowing sewage and recover where possible the sewage that has already been discharged, minimizing impact to public health or the environment.

- Determine the immediate destination of the overflow, e.g. storm drain, street curb gutter, body of water, stream bed, etc.;
- Identify and request the necessary materials and equipment to contain or isolate the overflow, if not readily available; and
- Take immediate steps to contain the overflow, e.g., block or bag storm pipes and/or inlets, recover through vacuum truck, divert into downstream manhole, etc.

3. Additional Measures Under Potentially Prolonged Overflow Conditions

In the event of a prolonged sewer line blockage or a sewer line collapse, set up a portable by-pass pumping operation around the obstruction.

- Take appropriate measures to determine the proper size and number of pumps required to effectively handle the sewage flow;
- Implement continuous or periodic monitoring of the by-pass pumping operation as required; and
- Address regulatory agency issues in conjunction with emergency repairs.

4. Cleanup

Clean sewer overflow sites thoroughly after an overflow.

- Readily identified residue (e.g., sewage solids, papers, rags, plastics, and rubber products) should be returned to the sewer collection system or removed from the site and properly disposed of.
- Where appropriate, thoroughly flush the area and remove any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal.
- Secure the overflow area to prevent contact by members of the public until the site has been thoroughly cleaned. Setup barricades and tape if necessary to keep the public from entering the effected overflow area.
- Where appropriate, disinfect and deodorize the overflow site with lime.
- Enzymes may be used to neutralize the ammonia in standing water.
- Where sewage is impounded, appropriate measures will be taken to eliminate any hazard.
- If sewage can reach a body of water that may contain fish or other aquatic life, do not use lime. Contact the ECG representative for specific instructions.

D. Sewer Overflow Report

The ECG immediately documents and when warranted investigates all confirmed overflows. After a reported public sewer overflow is confirmed, the ECG completes the WQNN form (Appendix D) within 24 hours of the sewer overflow confirmation and transmits the form by fax to the TCEQ Regional Office at (817) 588-5701. The original must be mailed by certified mail to the TCEQ State Office at: TCEQ/WQCMT (MC224), Enforcement Division, P.O. Box 13087, Austin, Texas 78711-3087. The TCEQ State Office must receive the original form within 5 days.

The ECG verbally notifies the TCEQ Emergency Response Hotline (1-800-832-8224) after becoming aware that a sewer overflow may adversely affect the public drinking water intakes or may cause a fish kill or Hazardous Materials may be involved in the sewer overflow.

E. Public Notification

(a) The City of Irving Water Utilities must designate a responsible individual to comply with this subchapter.
(b) In addition to the standard noncompliance notification to the commission required by §305.125 of this title (relating to Standard Trinity River Authority (TRA) Permit Conditions) and any notification required under TCEQ Chapter 327 of this title (relating to Spill (SSO) Prevention and Control), the City of Irving Water Utilities, Public Works and Director of Corporate Communications, must notify appropriate local government officials and the local media whenever one of the following types of spills (SSO) occurs from the City of Irving sanitary sewer system:

(1) a spill (SSO), regardless of volume, that the City of Irving Water Utilities knows or has reason to know, will adversely affect a public or private source of drinking water;
(2) a spill (SSO) with a volume of 50,000 gallons or more where one or more of the following conditions also exists:

(A) the spill (SSO) occurs within 1/2-mile of a public or private source of drinking water;
(B) the spill (SSO) occurs within 1/2-mile of a private drinking water well which is located within 1/2-mile of a public water supply well;
(C) the spill (SSO) occurs within 1/2-mile up-gradient of a surface water intake of a public or private source of drinking water;
(D) the spill (SSO) occurs in an active groundwater recharge area;
(E) the spill (SSO) occurs up-gradient and within 1/2-mile of a karst terrain or shallow alluvial well that is a source of drinking water;

(3) a spill (SSO) of 100,000 gallons or more.

(c) The City of Irving responsible individual must issue the notice as quickly as possible, but not later than 24 hours after the facility becomes aware of the spill (SSO). The notice may be hand-delivered, sent by facsimile, e-mail, or by phone with follow-up written notice. The contents of the notice must comply with §319.303 of this title (relating to Notice to Local Officials and Local Media.)

(d) Within 48 hours of providing notice to appropriate local government officials and local media, the responsible individual must provide to the commission regional office in whose region the spill (SSO) occurred a copy of the notice, the date notice was provided to local officials and local media, and a list of notice recipients.

'319.303. Notice to Local Officials and Local Media.

(a) City of Irving Water Utilities must ensure notice complies with subsections (b) and (c) of this section. The City of Irving Water Utilities may contact the commission to obtain a template which may be used in the event of a wastewater spill (see Appendix E).
(b) For all wastewater spills (SSO) as referenced in §319.302(b) of this title (relating to Notification Requirements) the notice must contain the following:

(1) one of the following statements:

(A) a spill (SSO) from City of Irving collection system occurred due to Trinity River Authority (TRA) collection system failure;
(B) a spill (SSO) from City of Irving collection system has occurred;

(2) the facility name;
(3) person to contact for further information;
(4) the location of the spill (SSO);
(5) the estimated date and time of the spill (SSO);
(6) the estimated volume of the spill (SSO), (number of gallons);
(7) the type of the spill (SSO), (domestic, industrial, etc.);
(8) a description of the area potentially affected, including a down-gradient and lateral distance from the spill (SSO) site;
(9) the suspected cause of the spill (SSO); and
(10) a list of actions that have been taken including, but not limited to:

(A) notification of:

(i) appropriate City of Irving officials; and
(ii) the TCEQ regional and state offices;

(B) containment of the spill (SSO);
(C) increased monitoring of water supply systems; and
(D) initiation or completion of clean up activities.

(c) If the wastewater spill (SSO) meets the conditions of §319.302(b)(2) and/or (b)(3) of this title then the notice must also contain the following precautionary statements:

(1) Persons using private wells located within 1/2-mile of the spill (SSO) site or within the potentially affected area should use only well water that has been distilled or boiled at a rolling boil for at least one minute for all personal uses including drinking, cooking, bathing, and tooth brushing. Individuals with private water wells should have their well water tested and disinfected, if necessary, prior to discontinuing distillation or boiling.
(2) Persons who are connected to the City of Irving water supply may contact City of Irving Water Utilities to determine if the water is safe for personal use.
(3) The public should avoid contact with waste material, soil, or water in the area potentially affected by the spill (SSO).

(4) If the public comes into contact with waste material, soil, or water potentially affected by the spill (SSO), they should bathe and wash clothes thoroughly as soon as possible.

TCEQ Adopted March 9, 2011 Effective March 31, 2011

IV. MAINTENANCE OF SORP

The SORP will be reviewed on an annual basis. Possible amendments can include:

- Change in procedures
- Change in contact personnel
- Changes due to regulatory requirements

Training will be conducted at least annually for all SORP involved WU employees.

Appendix D
Water Quality Noncompliance Notification
Fax to the Regional Office within 24 hours
State Certified Mail #:

(X) Unauthorized Discharge ( ) Reportable Effluent Violation ( ) Other

General Information

Entity Name: City of Irving (Trinity River Authority) **Telephone No:** (972) 721-2283.
( ) Permittee (X) Subscriber

TCEQ Region: 4 **County:** Dallas **Permit Number*:** TX0022802/WQ10303-01

Noncompliance Summary

Description of Noncompliance (include location, discharge route, and estimated volume if an unauthorized discharge):

Cause of Noncompliance:

Duration: Start Date and Time:
End Date and Time:
Or Date Expected to be Corrected:

Potential Danger to Human Health and Safety or the Environment:

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.
( ) Yes (X) No Field Measurements,
( ) Yes (X) No Laboratory Samples
( ) Yes (X) No Fish Kill If yes, estimated number killed:

Actions Taken to Mitigate Adverse Effects:

Actions Taken to Correct the Problem and Prevent Recurrence:

Verification Information

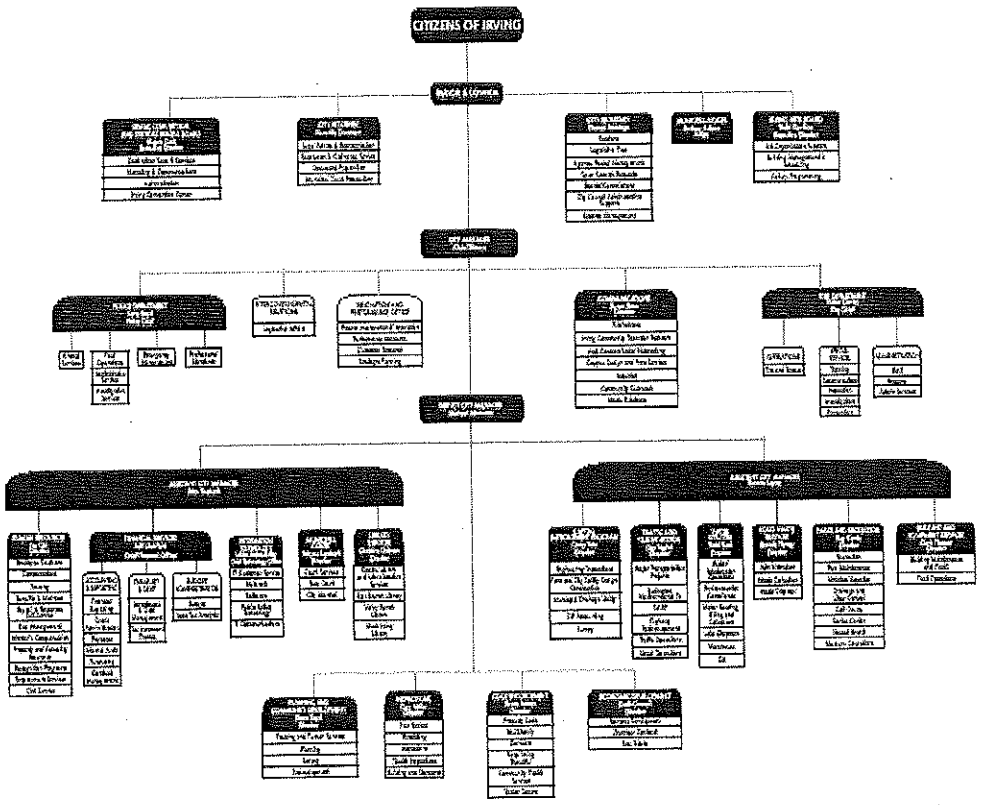
Information Reported By (Name/Title):
Date Reported: _____ **Signature:** _____

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Regional Office, and the original to the State office.

TCEQ Regional Office
Attn: Eric Agnew
2309 Gravel Dr.
Ft. Worth, TX 76118- 6951
Ph: 817.588.5837
Fx: 817.588.5701

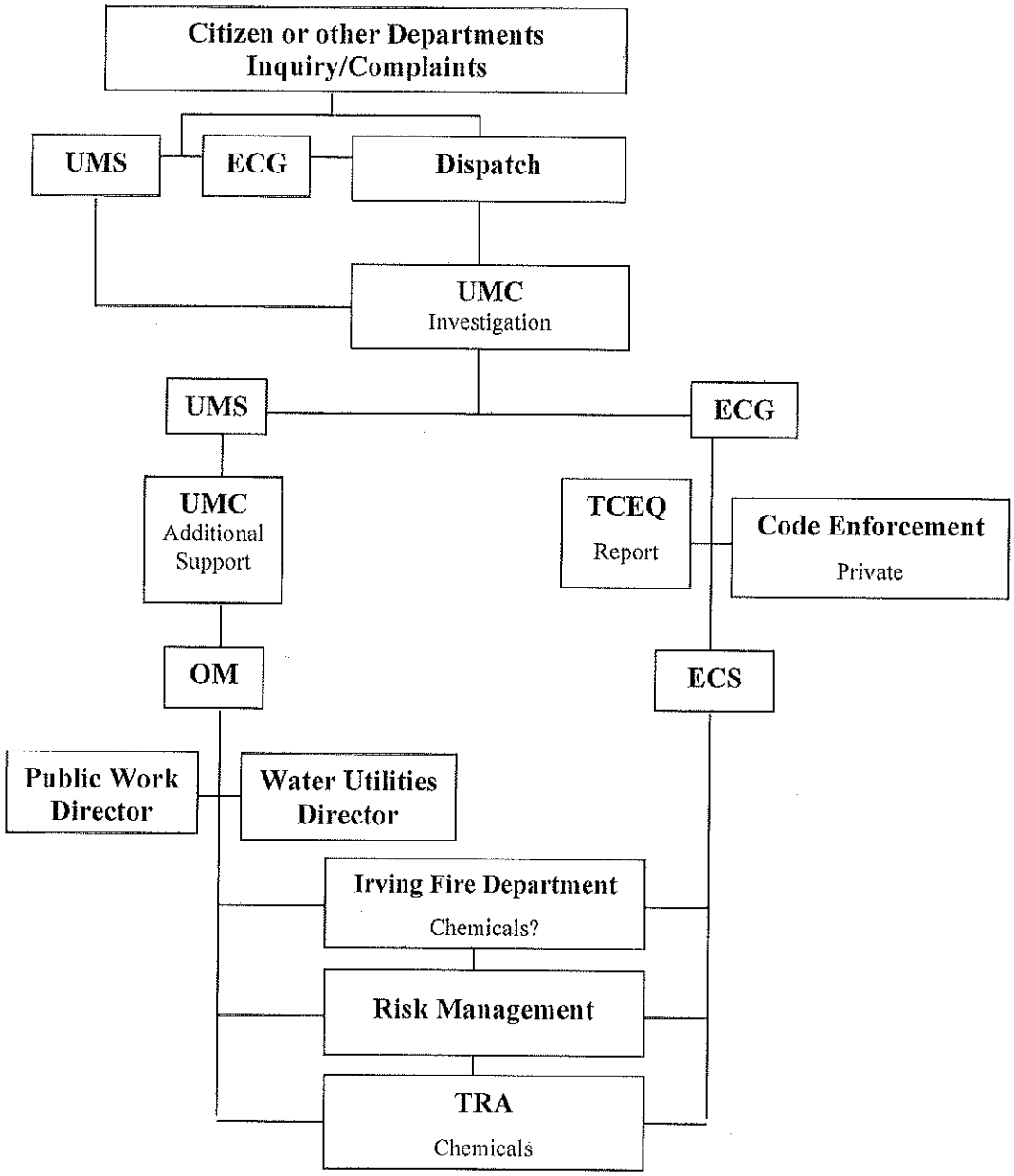
TCEQ/WQCMT (MC 224)
Enforcement Division
P.O. Box 13087
Austin, TX 78711-3087

Organizational Chart



Prepared: October 2006
Revised: June 2015

Appendix B



TCEQ – Texas Commission on Environmental Quality
TRA – Trinity River Authority
UMS – Utility Maintenance Supervisor
UMC – Utility Maintenance Crew
WQNN – Water Quality Nonconformance Notification
WU - Water Utilities
ECG – Environmental Compliance Group
ECS – Environmental Compliance Supervisor
OM – Operations Manager
SORP – Sewer Overflow Response Plan

SSO – Sanitary Sewer Overflow

Operations and Maintenance Sanitary Sewer Overflow Report Form in City Works

Work Order ID	#
Work Order Print Date	Date (copy print date)
Work Order Status	WORK ORDER INTITATED
Work Order Description	OPERATIONS SSO REPORT
Work Order Priority	EMERGENCY SERVICE
Supervisor	
Projected Start Date / Finish Date	Date and Time
Actual Start Date / Finish Date	Date and Time
Associated Project Name	
Work Order XY Coordinate	[WO XY Coordinate]
Work Order Requested By	Supervisor - CREW - Dispatch
Work Order Initiated By	CREW – Date and Time
Submit To	NOTIFICATION, SSO
Source Work Order ID #	Related WO#
Work Order Address	**SSO Address**
Work Order Instructions	
Employee Name That Closed Work Order	
Work Completed By	
Date Work Order Closed	
Work Order Map Page	Map ID#
Update Map Flag Value	
Work Order Comments: (Responding Crew detail Comments)	

Custom Field Names	**Custom Field Value**
PUBLIC OVERFLOWED FROM:	Manhole – Cleanout – Infrastructure – Flooding – etc…
PRIVATE CAUSED BY PUBLIC?	Yes or No
PRIVATE OVERFLOWED FROM:	?
PRIVATE CLASSIFICATION:	Residential – Apartment - Business - Other
APARTMENT COMPLEX NAME:	?

Prepared: October 2006
Revised: June 2015

BUSINESS NAME:	?
WAS EC NOTIFIED?	YES or No
DATE/TIME EC NOTIFIED:	Date and Time
WAS CODE NOTIFIED?	Yes or NO
TOTAL GALLONS SEWAGE OBSERVED:	Estimated Gallons
DATE/TIME REPORTED TO CITY:	Date and Time
DOOR HANGERS DISTRIBUTED?	(Responding Operation Crew) Yes or No
QUANTITY OF DOOR HANGERS:	#
DATE/TIME PROBLEM CORRECTED:	Date and Time
SCHEDULED DATE/TIME TO CORRECT	Date or Time if it is needed to be schedule
WAS THE SSO CONTAINED?	Yes or NO
WAS THE SSO UNCONTAINED?	Yes or NO
PRIMARY OVERFLOW CAUSE?	Cause
SECONDARY OVERFLOW CAUSE?	Cause
PIPE SIZE?	Size in inches
PIPE MATERIAL?	Material
WAS LIME SPREAD?	Disinfection
SEWAGE RETURNED TO SYSTEM?	Yes or NO
WAS SEWER MAIN WASHED?	Yes or NO
WAS THE AFFECTED AREA WASHED?	Yes or NO
WAS AREA VACUUMED?	Yes or NO
WAS AREA PUMPED?	Yes or NO
WAS DEGREASER APPLIED?	Yes or NO
WAS SERVICE LINE HYDROJETTED?	Yes or NO
WAS LINE ROOT SAWED?	Yes or NO
WAS SERVICE LINE ROTO-ROOTED?	Yes or NO
WAS SERVICE LINE TV'D?	Yes or NO
FURTHER EVALUATE THIS LINE?	Yes or NO
COMMENTS:	Comments for item in red, why, why not and detailed

Prepared: October 2006
Revised: June 2015

Appendix R

Private/Public Overflow or Grease Blockage Assessment

Please be prepared to provide the following information to Environmental Compliance.

- Have you checked the city main to verify that is private?
- Is the sewage currently overflowing?
- What is the estimated amount of sewage you visually saw overflow?
- What is the estimated amount of sewage that appears to be from the public sewer system and is presently on the ground, regardless if you visually saw it overflow (remote area, in a field or undeveloped area)?
- Is the sewage contained or uncontained?
- What was the Primary cause for the blockage (roots – paper – grease – contractor – Structure Failure etc…)?

Door Hangers –

- Flyers need to be disbursed within 48hrs after the initial SSO event or the immediate next business day. Disburse flyers in an even radius up stream of the location of the SSO, and disburse a minimum quantity of 10 (ten).
    - Exception to the minimum quantity;
        - when it's a blockage due to grease in a customer service line, only 1 (one) door hanger is needed for that address.
        - or when there are less than 10 (ten) connections up stream.
- If you encounter a situation where it is not necessary, or feasible to disburse door hangers for an SSO event, please indicate this in your Note column, for any SSO event, it must be indicated as to whether or not flyers were disbursed.
- Please indicate on this form the number of door hangers handed out.

When to Hand-Out:

- For any blockage. (overflowing or not)
- At an apartment complex overflows: private, private caused by city, or any public overflow caused by private.
- At an overflow in a residential area: private, public, private caused by city, or any public overflow caused by private.
- Any call to a private resident when grease is one of the causes.
- The same day or next business day during regular business hours.

- The next day with decent weather conditions.

Appendix E

INFORMATION ABOUT SPILL (SSO)

Facility: The City of Irving

Contact for additional Information: _____

_____

Location of spill (SSO):

_____

_____

Estimated time and date of spill (SSO): _____

Estimated volume of the spill (SSO) (in gallons): _____

Type of spill (SSO): (domestic) (industrial) (other) Explain Other: _____

_____

_____

Area affected or potentially affected: _____

_____

Suspected or Known cause of spill (SSO): _____

_____

_____

Today Date: _____ Report by: _____

Prepared: October 2006
Revised: June 2015

THE FOLLOWING ACTIONS UNDER WAY OR HAVE BEEN TAKEN

Appropriate City of Irving personnel been notified: (Yes) (NO) _____

_____

TCEQ regional office been notified: (YES) (NO) _____

Is the spill (SSO) Contained: (Yes) (No) _____

Increase monitoring of water supply systems has been initiated: (Yes) (No)

Downstream storm water drainage system needed to be tested: (Yes) (No)

Has the cause of the spill (SSO) been corrected: (Yes) (No) _____

Clean-up activities are underway or completed: (Yes) (No) _____

Is documentation of all action being recorded: (Yes) (No)

Comments: _____

_____

_____

_____

Today Date: _____ Report by: _____

Prepared: October 2006
Revised: June 2015

Appendix 4 – City of Irving Supplied Documents

B. 2016 TCEQ SSOi Agreement

EPA

SSO Inspection Checklist

APPENDIX B

2016 TCEQ SSOi ~~PROGRESS REPORT~~

ATTACHMENT

IRVING
TEXAS

June 27, 2016

Mr. John Shelton
Order Compliance Team
Enforcement Division, MC 149A
Texas Commission of Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Sanitary Sewer Overflow ("SSO") Agreement
City of Irving, Dallas County
Enforcement Case No. 28414
2016 Annual Progress Report

Dear Mr. Shelton:

The Irving City Council approved the Sanitary Sewer Overflow Agreement with the Texas Commission of Environmental Quality at the March 22, 2007 council meeting. As stipulated in Provision 8 of the Agreement, a progress report was submitted after the initial 90 days of the effective date of the Agreement and would be submitted annually thereafter. Attached is the 2016 Annual Progress Report that details Provision 1 through 7 of the Agreement and the progress the City has made towards them. Please contact the City of Irving if any additional information is needed or if further discussion of the report is necessary.

Sincerely,

Steven M. Pettit, P.E.
Assistant Water Utilities Director

Enclosure

Pc: Todd W. Reck, P.E., Water Utilities Director
Manager, Water Section of TCEQ Dallas/Fort Worth Regional Office

IRVING

March 28, 2007

Ms. Lynley Doyen
Enforcement Coordinator
Enforcement Division, MC 169
Texas Commission on Environmental Quality
PO Box 13087
Austin, Texas 78711-3087

Re: Revised Sanitary Sewer Overflow ("SSO") Agreement
City of Irving, Dallas County
Enforcement Case No. 28414

Dear Ms. Doyen:

The Irving City Council approved the Sanitary Sewer Overflow Agreement with the Texas Commission on Environmental Quality at the March 22, 2007 meeting. I have enclosed the executed agreement for your records and look forward to working with you and your staff throughout the terms of the agreement. I appreciate your help to finalize this agreement over the last few months.

We will plan to send our first progress report in 90 days. Please call me if there is anything else we need to discuss.

Sincerely,

Todd W. Reck

Todd W. Reck, P.E.
Assistant PW Director/Water Utilities

Enclosure

pc: Jim Cline, Public Works Director

- Monitor all sewer lift stations on the City's SCADA system.
  - Work completed Currently monitoring all lift stations on SCADA.
- The effectiveness of the program will be evaluated on:
  - Trending on the number of SSOs each year and the causes

Funding for this work will come primarily from Irving's Water System Fund although it could be supplemented with Revenue Bond Funds if necessary.

In addition, we have obtained estimated construction schedules from the Trinity River Authority (TRA) for sewer interceptor improvements that should help Irving. There have been times in the past when the TRA interceptors have surcharged and caused backups into Irving's collection system. In 2006, TRA began constructing a new larger line beginning at its wastewater treatment plant just south of Irving. The new Elm Fork Relief Interceptor will be built in several phases and should provide the required capacity to eliminate or severely reduce any future surcharging events.

I look forward to receiving your response to the City of Irving's plan. I can be reached at 972-721-2281 if you would like to discuss our proposed plan.

Sincerely,

Todd W. Reek

Todd W. Reek, P.E.
Assistant PW Director/Water Utilities

Attachment - Annual Schedule

pc: Jim Cline, Public Works Director

TWR:db

2/14/2007

City of Irving/TCEQ Sanitary Sewer Agreement
Annual Schedule

Year One (2006-07)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
SSES Study	$350,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Condition Assessment of Concrete Pipes	
Begin Update of the Wastewater Collection Master Plan	
Year Two (2007-08)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Three (2008-09)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Four (2009-10)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
SSES Study	$350,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Five (2010-11)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Six (2011-12)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Seven (2012-13)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
SSES Study	$350,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	

Year Eight (2013-14)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Nine (2014-15)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	
Year Ten (2015-16)	
Annual Sanitary Sewer Replacement/Rehab Program	$2,500,000
SSES Study	$350,000
Clean 350,000 ft of the Sanitary Sewer System	
Video 75,000 ft of the Sanitary Sewer System	

CITY OF IRVING

COUNCIL RESOLUTION NO. 3-22-07- 127

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION I. THAT the City Council hereby approves the attached agreement between the City of Irving and the Texas Commission on Environmental Quality for a sanitary sewer overflow initative program, and the Mayor is authorized to execute said agreement.

SECTION II. THAT this resolution shall take effect from and after its final date of passage, and it is accordingly so ordered.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, this 22nd day of March, A.D. 2007.

HERBERT A. GEARS
MAYOR

ATTEST:

Janice Carroll, TRMC
City Secretary

CITY OF IRVING SEAL STATE OF TEXAS

APPROVED AS TO FORM:

Charles Anderson
Acting City Attorney

REVIEWED BY:

Todd W.Reck, P.E.
Assistant Public Works Director/Water Utilities

Texas Commission on Environmental Quality

AGREEMENT

CITY OF IRVING
RN101383933
Enforcement Case No. 28414
Dallas County, Texas

The Texas Commission on Environmental Quality ("Commission" or "TCEQ") is the state agency charged with enforcing TEX. WATER CODE ch. 26 (the "Code") and the regulations promulgated pursuant to the Code.

The City of Irving (the "City") owns and operates a wastewater collection system located in Dallas County, Texas (the "System").

The City has reported 138 unauthorized discharges totaling approximately 294,000 gallons during the period between December 2003 and June 2005. The majority of these sanitary sewer overflow ("SSO") discharges were due to grease blockages. The City will be required to rehabilitate the System to insure a reduction of risk to the public health and the environment, and to comply with Commission requirements.

PROVISIONS

In response to these deficiencies and in an effort to eliminate the potential threat to public health, the City and the Commission have entered into an Agreement. This Agreement formalizes the commitments made by the City in its February 14, 2007 letter (see Attachment A). The provisions of this Agreement are as follows:

1. Immediately upon the effective date of this Agreement, the City shall continually:

   a. Analyze grease build-up and blockage information and maintain a record-keeping system that identifies problem areas and required cleaning cycles. The City shall utilize this information to develop a maintenance schedule for problem areas based on a 30-day, 60-day, or 90-day cycle;

   b. Utilize Root-X or similar root removal system on known problem areas;

   c. Assess chemical and enzyme treatments in the System to determine their effectiveness in preventing oil and grease build-up and in reducing blockages;

   d. Utilize the new Cityworks computer work order and asset management system (the "Program"). The Program shall employ geographic information system ("GIS") capabilities to track key parameters affecting the System, including but not limited to overflows, blockage calls, cleaned pipes, and videoed pipes;

   e. Utilize the Sewer Overflow Response Plan (the "Plan"), which is designed to ensure that every reported SSO is immediately dispatched to appropriate personnel for confirmation and quick response. The Plan shall provide guidance for personnel on the procedures for

responding to all types of sewage spills, including the identification of personnel responsibilities, notification procedures, field activities, spill monitoring, record-keeping, and training;

f. Monitor all System lift stations on the City's Supervisory Control and Data Acquisition system; and

g. Provide detailed information to the TCEQ that demonstrates progress is being made towards completion of Ordering Provision Nos. 1.a. through 1.f., in accordance with Ordering Provision No. 8 below.

2 Immediately upon the effective date of this Agreement and on an annual basis thereafter, the City shall:

a. Clean at least 350,000 feet of the System per year; and

b. Video at least 75,000 feet of the System per year.

3. By March 31, 2007, the City shall begin a series of Sanitary Sewer Evaluation Surveys ("SSES"), as described in the schedule provided in Attachment A (bullet item 9). Upon completion of each SSES, the City shall provide the findings and recommended corrective actions for each section of the System that was evaluated, in accordance with Ordering Provision No. 8 below.

4. The City shall improve its fats, oils, and grease ("FOG") program by implementing the following actions:

a. By July 31, 2007, revise the Liquid Waste Transporter Ordinance;

b. By October 31, 2007, implement a grease tracking program utilizing computer software that monitors the actions of restaurants and waste haulers; and

c. Increase public education and awareness of FOG prevention by implementing the following actions:

i. Once per year, present information in the *City Spectrum*, which will be delivered to all residents;

ii. Twice per year, present information in customer water bills;

iii. During the November/December holiday season, present information through television and/or radio advertisements; and

iv. Following SSO events, deliver door hangers to residents and businesses in the area to communicate measures for preventing future SSOs.

5. By October 31, 2007, the City shall perform a condition assessment study of large concrete pipes in the System. The condition assessment shall include corrective action recommendations and a schedule to correct any problems discovered, in accordance with Ordering Provision No. 8 below.

6. By April 30, 2009, and every five years thereafter, the City shall update the Wastewater Master Plan.

7. The City shall evaluate the effectiveness of the completed improvement projects by documenting and reviewing all sewer-related calls on a monthly basis to monitor the trend in number of SSOs caused by blockages that occur within the System.

8. Within 90 days of the effective date of this Agreement, and on an annual basis thereafter, the City shall submit a progress report to the Commission. These reports shall include information regarding actions taken by the City towards completion of the provisions of this Agreement.

9. By December 31, 2017, the City shall submit in writing certification of compliance with Provision Nos. 1 through 8 above.

10. The Executive Director may grant an extension to any provisions of this Agreement upon a written and substantiated showing of good cause. All requests for extensions by the City shall be made in writing to the TCEQ. Extensions are not effective until the City receives written approval from the TCEQ. The determination of what constitutes good cause rests solely with the TCEQ.

11. The City shall submit copies of all correspondence, reports, and documentation required by Provision Nos. 1 through 10 above to:

Order Compliance Team
Enforcement Division, MC 149A
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

with a copy to:

Manager, Water Section
Dallas/Fort Worth Regional Office
Texas Commission on Environmental Quality
2309 Gravel Drive
Fort Worth, Texas 76118-6951

In return for the City's agreement and adherence to these terms, the Commission will withhold further enforcement actions related to the noted deficiencies. Should unforeseen circumstances indicate a need to alter the above mentioned schedule, the utility must immediately notify the Commission so that an amendment can be discussed.

The effective date of this Agreement is the signature date of the City's authorized representative. Acceptance of the terms of this Agreement is indicated by the signatures below.

Herbert A. Gears — 3-22-07

Authorized representative of the City of Irving — Date

Herbert A Gears — Mayor

Printed Name of authorized representative for the City of Irving — Title

Bryan Sinclair — 2/16/2007

Bryan Sinclair, Manager
Enforcement Section I, Enforcement Division — Date

Instructions: Send this signed, original Agreement to Lynley Doyen, Enforcement Team 1, Enforcement Section I, Enforcement Division, MC 169, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087.

Approved 3 22 07
Resolution # 3-22-07-127

ATTACHMENT A

CITY OF IRVING
AGREEMENT

CONTENTS

IRVING

February 14, 2007

Ms. Lynley Doyen
Enforcement Coordinator
Enforcement Division, MC 169
Texas Commission on Environmental Quality
PO Box 13087
Austin, Texas 78711-3087

Re: Sanitary Sewer Overflow (SSO) Outreach Initiative
City of Irving, 333 Valley View Lane (formerly 3000 Rock Island), Texas
TCEQ Regulated Entity No. 101386035

Dear Ms. Doyen:

This letter includes an update on the City of Irving's submission of its final plan for the Sanitary Sewer Overflow (SSO) Outreach Initiative. This proposed plan is very similar to the plan submitted January 26, 2006 although the plan's action dates have been updated.

The plan focuses primarily on improved operation and maintenance measures as well as the implementation of a fats, oils and grease program. The focus of the proposed plan is intended to address the primary causes of overflows in Irving. The SSO data included in the TCEQ Investigation Report shows that over 80 percent of the SSOs were caused by blockages and a majority of the blockages are related to grease build up.

The proposed 10-year plan includes the following components:

- Clean the entire collection system on a 10-year cycle (350,000 ft/yr).
  - March 2007 through March 2017
- Clean problem areas in the collection system on required cycles (30-day, 60-day and 90-day). Continually analyze grease buildup and blockage information to revise list of problem areas and required cleaning cycles.
  - March 2007 through March 2017
- Video at least 75,000 feet of the collection system on an annual basis.
  - March 2007 through March 2017
- Continue use of Root-X or similar root removal system on known problem areas.
  - March 2007 through March 2017
- Continue to assess chemical and enzyme treatments in the collection system to determine if they can help prevent oil and grease buildup and blockages.
  - March 2007 through March 2009

Water Utilities Department
P.O. Box 152288 • Irving, Texas 75015-2288 • 972.721.2281 • 972.721.2280 fax • www.ci.irving.tx.us

- Continue implementation of the new Cityworks computer work order and asset management system. Begin using this system's GIS capabilities to track key parameters affecting the sewer collection system including overflows, blockage calls, pipes cleaned, pipes videoed, etc.
  - Track key parameters - March 2007 through March 2017
- Implement a Sewer Overflow Response Plan – Plan is designed to ensure every report of an SSO is immediately dispatched to appropriate personnel for confirmation and quick response. The plan directs personnel on how to respond to any type of sewage spill through identification of personnel responsibilities, notification procedures, field activities, spill monitoring, record keeping, and training.
  - Develop program – Has been developed
  - Implement program – March 2007 through March 2017
- Improve Fats, Oils and Grease (FOG) program.
  - Increase public education and awareness through the use of bill stuffers, City website, and information distributed at apartments, schools and restaurants
    - March 2007 through March 2017
    - Present information once a year in City Spectrum delivered to all residents
    - Present information twice a year in water bills
    - Present information through TV and/or radio ads during the November/December holiday season
    - Deliver door hangers to residents and businesses near an SSO event to communicate measures that customers can take to prevent overflows
  - Revise City's Liquid Waste Transporter Ordinance (includes FOG requirements) – July 2007.
  - Implement a grease trap tracking program to monitor the actions of restaurants and waste haulers
    - Select and purchase software – Oct 2007
    - Monitor actions of wasted haulers using software – Oct 2007 through March 2017
- Perform Sanitary Sewer Evaluation Survey (SSES) in the collection system every 3 years.
  - Begin next study in upper Delaware Creek Sewer Basin– March 2007.
  - Future study 2010 (location to be determined in Master Plan update)
  - Future study 2013 (location to be determined in Master Plan update)
- Perform condition assessment study of large concrete pipes in the collection system.
  - Complete study – June 2007
  - Begin improvements – October 2007
- Begin updating the Wastewater Master Plan in 2007.
  - Begin study – November 2007
  - Complete study – April 2009

Appendix 4 – City of Irving Supplied Documents

C. City of Irving SSOi May 2016 Progress Report

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

Prepared by City of Irving

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

Water Utilities

TABLE OF CONTENTS

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

PROVISION 1

Immediately upon the effective date of this Agreement, the City shall continually:

a) **Analyze grease build-up and blockage information and maintain a record-keeping system that identifies problem areas and required cleaning cycles. The City shall utilize this information to develop a maintenance schedule for problem areas based on a 30-day, 60-day, or 90-day cycle;**

The City has maintained and is currently committed to a 30, 60, and 90-day maintenance schedule based on analysis of build-up and blockage information. This information is compiled and kept up to date in our computer maintenance management system, Cityworks, and then transferred into an excel database as a report. Table 1-1 below summarizes the preventative maintenance (the linear footage of sewer cleaned) on the 30-day, 60-day, and 90-day cleaning cycles from June 1, 2015 to May 31, 2016.

TABLE 1-1
PREVENTATIVE MAINTENANCE SUMMARY
JUNE 2015 – MAY 2016

	30-Day PM			60-Day PM	90-Day PM		
Month	**Vacuum** (linear ft)	**Wash** (linear ft)	**Rod** (linear ft)	**Vacuum** (linear ft)	**Vacuum** (linear ft)	**Wash** (linear ft)	**Rod** (linear ft)
June '15	9,653	37,821	6,950	4,881	3,331	13,465	3,085
July '15	8,030	32,426	2,975	2,335	5,440	15,635	5,125
August '15	2,945	35,025	5,595	9,935	850	10,545	4,265
September '15	8,959	39,165	7,345	4,353	8,340	13,725	3,000
October '15	6,074	37,150	6,960	6,917	2,100	15,025	5,605
November '15	7,020	32,460	3,100	7,623	15,274	11,685	3,195
December '15	5,595	32,815	7,030	2,258	840	13,055	3,750
January '16	8,310	39,675	6,350	10,177	6,037	14,570	4,320
February '16	8,122	38,435	6,645	2,459	25,341	9,800	3,620
March '16	6,339	34,310	6,390	9,683	6,771	18,295	2,125
April '16	3,813	40,085	7,425	7,707	39,456	9,690	3,455
May '16	6,304	36,705	7,055	5,822	7,606	10,970	3,680
TOTAL	**81,164**	**436,072**	**73,820**	**74,150**	**121,386**	**156,460**	**45,225**

b) **Utilize Root-X or similar root removal system on known problem areas;**

The City has seen a decline in the necessary usage of Root-X over the last several years. The City does apply Root-X to problem areas as they are identified. In addition, the City is proactively committed to replacing these lines when feasible.

c) Assess chemical and enzyme treatments in the System to determine their effectiveness in preventing oil and grease build-up and in reducing blockages;

The City is committed to evaluating new chemicals and enzymes available for use in treatment of the System. The City has used enzymes in the past with very little success. The City continues to analyze the effectiveness of new treatments for reducing grease build-up and eliminating blockages. Between June 2015 and May 2016, the City utilized D'limonene to reduce grease build-up.

d) Utilize the new Cityworks computer work order and asset management system (the "Program"). The Program shall employ geographic information system ("GIS") capabilities to track key parameters affecting the System, including but not limited to overflows, blockage calls, cleaned pipes, and videoed pipes;

The City currently utilizes Cityworks to record work order information and it has been customized to improve data collection and reporting. Water Utilities has GIS staff members specifically dedicated to improvement of the City's Asset Management Program. The City has the capability to generate maps showing the location of SSO's, preventative maintenance locations, and facilities with grease traps.

In 2014, all City sewer crews were issued wireless field tablets that provide instant access to the most up to date GIS maps of the sanitary sewer system while they are out in the field. These tablets have also given them the ability to complete Cityworks work orders out in the field and report this information real time.

e) Utilize the Sewer Overflow Response Plan (the "Plan"), which is designed to ensure that every reported SSO is immediately dispatched to appropriate personnel for confirmation and quick response. The Plan shall provide guidance for personnel on the procedures for responding to all types of sewage spills, including the identification of personnel responsibilities, notification procedures, field activities, spill monitoring, record-keeping, and training;

The Sewer Overflow Response Plan is being utilized. It was revised extensively in November 2008 and is updated annually. In June 2015, the Plan was revised to reflect the use of Cityworks for gathering SSO data in real time, eliminating paper notification. The Plan provides immediate response to all overflows by appropriate personnel. It also outlines follow-up procedures to analyze each individual SSO and determine if future maintenance, line repair, or line replacement is necessary.

f) Monitor all System lift stations on the City's Supervisory Control and Data Acquisition system; and

All Lift Stations are monitored with the City's Supervisory Control and Data Acquisition (SCADA) System. The City continually monitors the lift stations so that potential problems can be identified and corrected before a failure occurs. An upgrade of the SCADA system was completed in 2012 that improved the system function and reliability.

g) Provide detailed information to the TCEQ that demonstrated progress is being made towards completion of Ordering Provision Nos. 1.a. through 1.f., in accordance with Ordering Provision No. 8 below.

Additional detailed information can be provided if the TCEQ desires to see it.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

PROVISION 2

Immediately upon the effective date of this Agreement and on an annual basis thereafter, the City shall:

a) Clean at least 350,000 feet of the System per year; and

From June 2015 to May 2016, the City has cleaned **1,983,971** *feet of the System. Table 2-1 provides a monthly summary of the linear footage of the System cleaned.*

TABLE 2-1
MONTHLY SUMMARY OF SYSTEM CLEANED
JUNE 2015 – MAY 2016

Month	Rod (linear ft)	Vacuum (linear ft)	Wash (linear ft)	Total Cleaned (linear ft)
June '15	10,035	56,396	147,656	214,087
July '15	8,100	64,723	65,091	137,914
August '15	12,180	54,711	119,069	185,960
September '15	8,990	53,804	69,715	132,509
October '15	13,715	50,189	129,520	193,424
November '15	7,390	35,092	50,160	92,642
December '15	16,000	36,155	112,907	165,062
January '16	15,075	28,934	94,181	138,190
February '16	16,150	30,356	131,160	177,666
March '16	10,565	66,579	106,756	183,900
April '16	14,780	50,411	168,937	234,128
May '16	11,335	38,488	78,666	128,489
			TOTAL	**1,983,971**

b) Video at least 75,000 feet of the System per year

From June 2015 to May 2016, the City televised **213,659** *feet of the System. The City purchased two new camera trucks in 2014. All of the video is reviewed by a PACP certified staff member and an overall condition score for each pipe is assigned. The condition information is then used to help prioritize repair, rehabilitation and replacement needs. Table 2-2 provides a monthly summary of the linear footage of the System televised.*

TABLE 2-2
MONTHLY SUMMARY OF SYSTEM TELEVISED
JUNE 2015 – MAY 2016

Month	Televised (linear ft)
June '15	33,218
July '15	26,481
August '15	32,315
September '15	22,259
October '15	12,568
November '15	2,295
December '15	7,242
January '16	10,311
February '16	12,928
March '16	29,404
April '16	14,238
May '16	10,400
TOTAL	**213,659**

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

PROVISION 3

By March 31, 2007, the City shall begin a series of Sanitary Sewer Evaluation Surveys ("SSES"), as described in the schedule provided in Attachment A (bullet item 9). Upon completion of each SSES, the City shall provide the findings and recommended corrective actions for each section of the System that was evaluated, in accordance with Ordering Provision No. 8 below.

GSWW, Inc. completed an SSES report for the Upper Delaware Creek Basin and submitted it to the City in February of 2009. The purpose of this SSES was to investigate and evaluate the Upper Delaware Creek wastewater collection system. The Upper Delaware Creek wastewater collection system contains approximately 191,000 linear feet of sanitary sewer mains. Flow monitoring was conducted both during dry and wet weather conditions. 98% of the sanitary sewer mains were smoke tested and 13% of the sanitary sewer mains were televised to locate defects. Prioritized rehabilitation schedules were provided to eliminate the defects and I/I potential.

The 2009 Update to the Wastewater Master Plan recommended that the next SSES be completed for the Southwest Irving Interceptor Basin followed by an SSES for the Lower Delaware Creek Basin.

The RJN Group Inc. completed an SSES report for the Southwest Irving Interceptor Basin and submitted it to the City in August of 2012. The purpose of this SSES was to investigate and evaluate the wastewater collection system within a portion of the Southwest Irving Interceptor Basin. Flow monitoring was conducted both during dry and wet weather conditions. The wastewater collection system within this basin contains approximately 186,000 linear feet of sanitary sewer mains. 73% of the sanitary sewer mains were smoke tested and 8% of the sewer mains were televised to locate defects. Prioritized rehabilitation schedules were provided to eliminate the defects and I/I potential.

The City currently has Freese and Nichols, Inc. under contract to update the Wastewater Master Plan. As part of that project, Freese and Nichols will identify the sub-basin in most need of an SSES and will evaluate the wastewater collection system within that sub-basin. A prioritized rehabilitation schedule will be provided to eliminate defects and I/I potential.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

PROVISION 4

The City shall improve its fats, oils, and grease (FOG) program by implementing the following actions:

a) **By July 31, 2007, revise the Liquid Waste Transporter Ordinance;**

The Liquid Waste Transporter Ordinance was revised and approved by the City Council on July 19, 2007.

b) **By October 31, 2007, implement a grease tracking program utilizing computer software that monitors the actions of restaurants and waste haulers; and**

The City achieved full implementation of the LINKO software on October 26, 2007 allowing the actions of restaurants and waste haulers to be monitored. The LINKO software was upgraded in January of 2009, again in 2013, and most recently in 2015 to improve performance.

c) **Increase public education and awareness of FOG prevention by implementing the following actions:**

i) **Once per year, present information in the City Spectrum, which will be delivered to all residents;**

The City presented information in the December 2015 City Spectrum and April 2016, a City produced newsletter that is delivered to all Irving residences. A copy of the December 2015 and April 2016 City Spectrum is included at the end of this section.

ii) **Twice per year, present information in customer water bills;**

FOG awareness information was included in the November 2015 and May 2016 customer water bills. These inserts are printed in English on one side and Spanish on the other. Copies of the inserts from the November 2015 and May 2016 customer water bills are included at the end of this section.

In addition to the outreach via the City Spectrum and inserts in water bills, the City has presented information at numerous City and non-City events to increase public education and awareness of FOG prevention. The City is a member of the North Texas Grease Abatement Council (NTGAC) to further the outreach efforts of the FOG program. When SSOs occur due to grease issues at apartments or restaurants, the City provides door hangers created by the City of Irving and grease abatement videos created by NTGAC.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

December 2015 - City Spectrum

CitySpectrum

Christmas Tree Roundup Provides Eco-Solution for Trees

After the flurry of gift giving and turkey stuffing, residents will have an opportunity to properly dispose of fresh-cut Christmas trees for recycling during Irving's annual Christmas Tree Roundup.

Imagine Irving Updates: Vision Survey, Site Plans

By participating in the Vision Survey, residents took an active role in shaping the city's future.

Holiday Closings

Derrick Thompson / Editor
Heather Taylor / Design Supervisor
Tammy Hanson / Editorial Coordinator

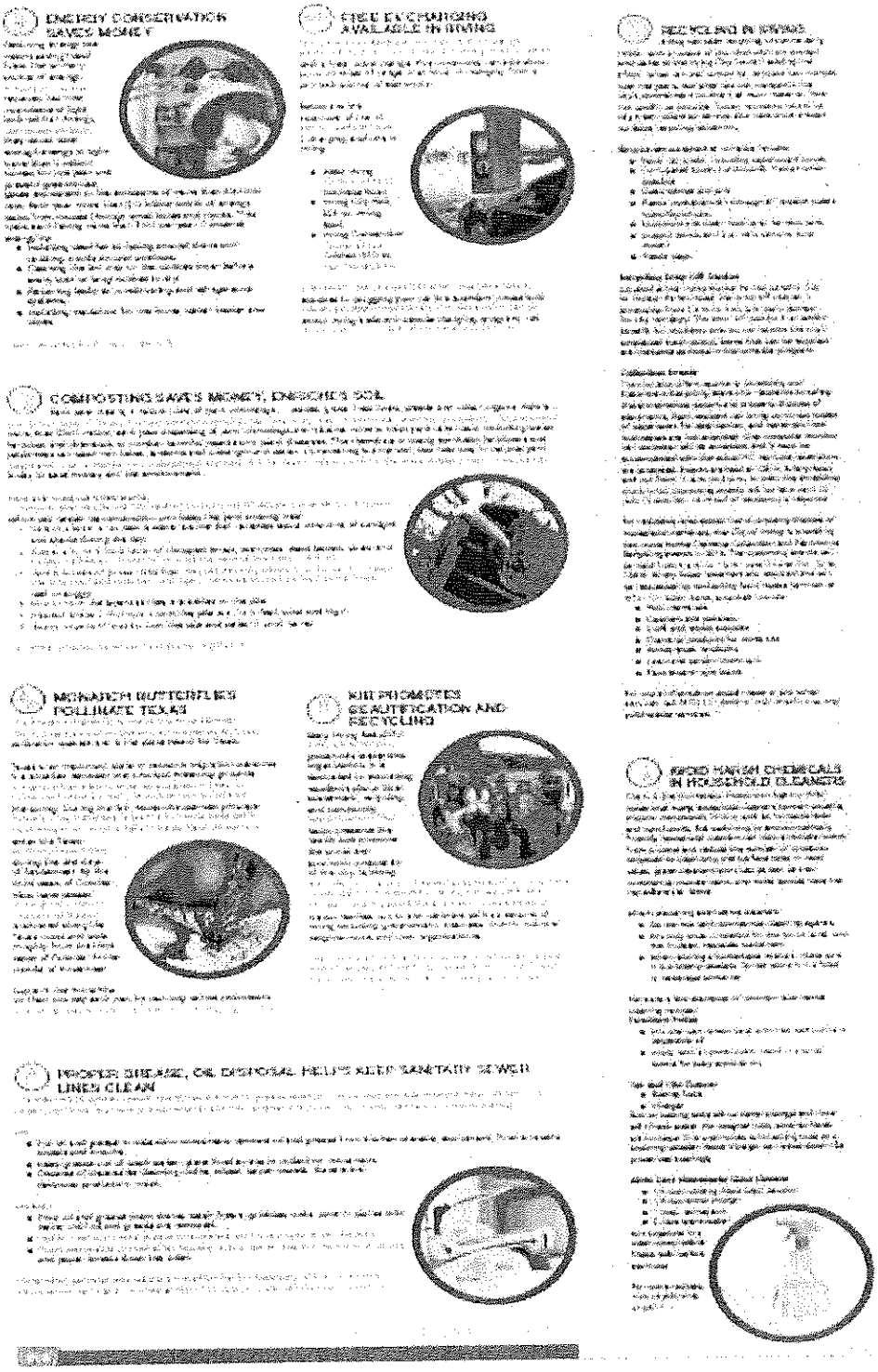
Interact with Irving Online

THINK GREEN ... BE GREEN

PROPER GREASE DISPOSAL

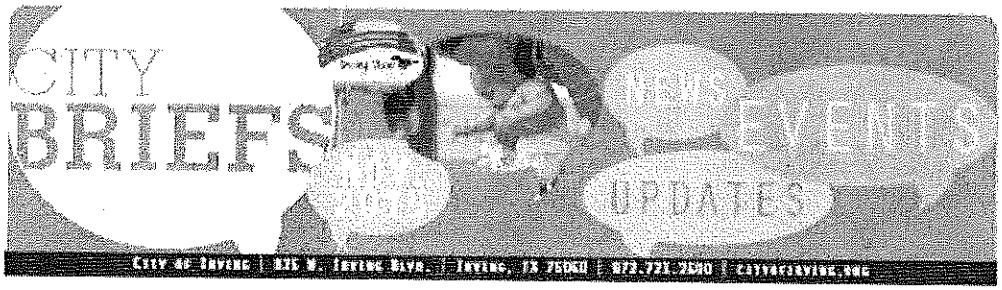
CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

April 2016 - City Spectrum



CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

November 2015 Water Bill insert



CITY HOLIDAY/NO TRASH COLLECTION

In observance of Thanksgiving, Monday will close at 5 p.m. Nov. 25, recreation centers will close at 5 p.m. Nov. 25, Irving Arts Center will be closed Nov. 26 and only administrative offices closed Nov. 27, and there will be no residential trash, curbside recycling or brush collection Nov. 26–27. All city offices, including those listed below, will be closed on the dates Nov. 26–27:

- City Hall
- Heritage, North Lake and Valley Ranch centers
- Senior Activity Center
- Irving Arts Center
- Libraries
- Recreation centers

The Irving Arts Center box office and galleries will be open from noon to 5 p.m. Nov. 25 and will resume normal business hours Nov. 27. North Lake Aquatic Center will remain closed Nov. 26–29. Libraries, as well as recreation centers will resume normal business hours on Nov. 28, while all other offices and services will resume normal business hours Nov. 30.

Interact with Irving Online

PROPER GREASE AND OIL DISPOSAL

Thanksgiving cooking can create stubborn grease and oil. The majority of sanitary sewer overflows are due to grease buildup from homes and apartments. This holiday season, help prevent costly sewer overflows by following a few simple steps.

Do:

- Put cool used grease in collection containers.
- Remove all cool grease from kitchen utensils, equipment, food scrapers, towels and bakeware.
- Keep grease out of wash water.
- Place food scraps in collection containers.
- Dispose of disposable cleaning cloths, wipes, paper towels, diapers and feminine products in trash.
- Recycle used turkey fryer oil through the city's Special Waste collection program. For more information, call (972) 721-2626.

Do not:

- Pour oil and grease down drains.
- Wash fryers, griddles, pots, pans or plates with water until all grease has been removed.
- Use hot water to rinse grease on surfaces.
- Put food scraps down the drain.
- Flush disposable or flushable cleaning cloths, wipes, diapers, feminine products and paper towels down the toilet.

Grease collection bags can be purchased at the Customer Service counter on the first floor of City Hall, 825 W. Irving Blvd. for 50 cents each plus sales tax. Also available is a free kitchen utensil to collect cooking oil or milk or pick containers at the Guest Services Desk on the first floor of City Hall while supplies last. Only one bundle per proof of Irving residency. For more information, call Water Utilities at (972) 721-2681.

SAVE THE DATE

Celebrate the holiday season at the city's annual Holiday Extravaganza from 4 to 6:00 p.m. Dec. 3 at City Hall, 825 W. Irving Blvd. It will begin with a parade winding through downtown Irving and then onto City Hall for the Tree Lighting.

For more information and parade applications, visit irvingevents.org.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

May 2016 Water Bill insert

IRVING CITY Spectrum briefs

MAY 2016

City Holiday/No Trash Collection

In observance of Memorial Day, there will be no residential trash, curbside recycling or brush collection May 30. In addition, the following facilities will be closed:

- City Hall
- Heritage and North Lake aquatic centers
- Hunter Ferrell Landfill
- Irving Arts Center
- Libraries
- Recreation centers

The seasonal swimming pools, as well as the West Irving and Cimarron Family aquatic centers, will be open from noon to 8 p.m. on Memorial Day, May 30. All offices and services will resume normal business hours on May 31.

Building Permits

The City of Irving Inspections Department would like to remind residents to verify that contractors have obtained proper permits for any work being done. Permits and inspections are required whether the work is done by a contractor or a homeowner.

Examples of work that require permits include: fence replacements and water heater change-outs. For a complete list of required permits, visit cityofirving.org/inspections or call (972) 721-2371.

cityofirving.org

Proper Grease and Oil Disposal

Help prevent costly sewer overflows by following a few simple steps.

Do

- Put oil and grease in collection containers; remove oil and grease from kitchen utensils, equipment, food scrapers, towels and brooms.
- Keep grease out of wash water; place food scraps in collection containers.
- Dispose of disposable cleaning cloths, wipes, paper towels, diapers and feminine products in trash.

Do not

- Pour oil and grease down drains; wash fryers, griddles, pots, pans or plates with water until oil and grease are removed.
- Use hot water to rinse grease on surfaces; put food scraps down the drain.
- Flush disposable or flushable cleaning cloths, wipes, diapers, feminine products and paper towels down the toilet.

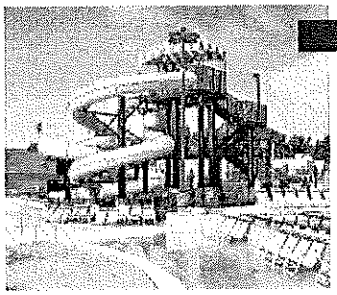
For more information, call Water Utilities at (972) 721-2281.

Residents Reminded of Disability Parking Regulations

The Irving Police Department wants to remind motorists of parking regulations regarding marked disability parking spaces. Violations can result in fines of up to $522. It is illegal to park vehicles in a disability parking space:

- Without displaying the appropriate plate or placard, even if a driver or passenger of the vehicle has a disability.
- While displaying an expired plate or placard, even if a driver or passenger of the vehicle has a disability.
- When neither the driver nor any passenger has a disability, even if the vehicle displays the appropriate plate or placard.

For more information, call the Irving Police Department at (972) 273-1010 or visit cityofirving.org/323/Municipal-Court.



Irving Aquatics Programs

Whether it's lap swimming, water aerobics or just plain fun in the sun, residents can participate in a variety of events offered through the Parks and Recreation's Aquatics Programs.

For more information, visit cityofirving.org/2105/Aquatics-Programs.

CITY OF IRVING | 825 W. IRVING BLVD. | IRVING, TX 75060 | (972) 721-2000

iii) During the November/December holiday season, present information through television and /or radio advertisements;

The following fifteen second radio PSAs were aired during the 2015 November/December holiday season on WBAP News and KLIF Talk. ***"Are you aware that the majority of sewage overflows in our homes, apartments and your city are preventable with simple changes to behavior? That is why you should never allow any grease to enter the drain, instead pour it into a container and place in trash. Never flush diapers, disposable wipes, rags or feminine products, even if these items are labeled flushable. Following these simple steps will minimize costly plumbing problems and help keep your home and City of Irving sewer system flowing normal."*** *Table 4-1 summarizes the schedule that the PSA was aired.*

TABLE 4-1
15 and 30 SECOND RADIO PSAs AIRED DURING
2015 NOVEMBER/DECEMBER HOLIDAY SEASON

	Thanksgiving 2015			Christmas 2015		
Air Time	**Nov 23**	**Nov 24**	**Nov 25**	**Dec 21**	**Dec 22**	**Dec 23**
WBAP News Live AM Drive Traffic 15 Sec (5:00 am to 9:00 am)	1	1	1		1	1
WBAP News Live PM Drive Traffic 15 Sec (4:00 pm to 6:00 pm)	1	1			1	2
KLIF Talk Radio 30 Sec (6:00 am to 10:00 am)	3	3	2	2	2	2
KLIF Talk Radio 30 Sec (3:00 pm to 6:00 pm)	3	3	3	3	3	3

The City also aired thirty second FOG videos during the 2015 November/December holiday season on Time Warner Cable television channels in Irving. Irving Cable Television Network (ICTN) also aired the FOG videos daily between November 1, 2015 and January 1, 2016. Table 4-2 summarizes the schedule that the PSAs were aired.

TABLE 4-2
FOG TV PSAs AIRED DURING
2015 NOVEMBER/DECEMBER HOLIDAY SEASON

Channel	Number of Showings
DISC-TV	55
FXNC-TV	55
FOOD-TV	55
HGTV-TV	55
BRVO-TV	60
ESPN-TV	45
ESP2-TV	45
ICTN	366
TOTAL SHOWING	736

In 2015, the City had a Fats-Rags-Oil-Grease (F-R-O-G) video produced for viewing at local cinemas during the 2015 November/December holiday season. Table 4-3 summarizes the theaters where the PSAs were shown.

TABLE 4-3
F-R-O-G CINEMA PSAs AIRED DURING
2015 NOVEMBER/DECEMBER HOLIDAY SEASON

Theater	Number of Showings
Irving Cinemas 10	36,034
Irving Mall 14	46,323
MacArthur Marketplace Stadium 16	27,717
TOTAL SHOWING	110,074

The City also expanded their outreach to include airing fifteen and thirty second radio advertisements in September 2015. Table 4-4 summarizes the schedule that the PSAs were aired.

TABLE 4-4

15 and 30 SECOND RADIO PSAs AIRED SEPTEMBER 2015

WBAP NEWS Air Time 15 Sec	Sep 7	Sep 8	Sep 9	Sep 10	Sep 11
Live AM Drive Traffic 15 Sec (5:00 am to 9:00 am)	1	1	1		1
KLIF TALK Air Time 30 Sec	**Sep 14**	**Sep 15**	**Sep 16**	**Sep 17**	**Sep 18**
Morning News (6:00 am to 10:00 am)	2	2	2	2	2
Glenn Beck/Brandmeir (10 am to 3 pm)	2	2	2	2	2
Grant Stinchfield (3 pm to 7 pm)	2	2	2	2	2
Matt Stoker/John Batchelor (7 pm to 12 pm)	2	2	2	2	2

iv) Following SSO events, deliver door hangers to residents and businesses in the area to communicate measures for preventing future SSO's.

Following SSO events, the City distributes door hangers in compliance with this agreement. The City has distributed hangers to homeowners, apartment complexes, and commercial businesses each time that a SSO has occurred. The City has also created and distributed a door hanger that is proactive that addresses preventable measures. A copy of each door hanger is included at the end of this section.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

Door Hanger

These door hangers are used when grease is the main cause for a blockage in the sanitary sewer system.

MENSAJE IMPORTANTE

de su Empresa Municipal de Agua

Durante los pasados 24 a 48 horas hemos tenido un desbordamiento de aguas negras desde una alcantarilla localizada en su vecindario. El desbordamiento fue causado por el acumulo de grasas y aceites en la tubería.

Los desbordamientos de aguas negras pueden dañar el medio ambiente y crear riesgos a la salud pública. Las alcantarillas obstruidas podrían además causar que se desborden las aguas negras dentro de sus casas, y son muy costosas de limpiar y corregir.

Por favor, ayúdenos a prevenir el desbordamiento de aguas negras reduciendo la cantidad de grasas y aceites que descartan por las tuberías de desagüe.

HACER

- Poner la grasa en contenedores apropiados.
- Remover el aceite y la grasa de los utensilios y equipos de cocina, espátulas, toallas, y escobas.
- Mantenga la grasa fuera del agua para lavar.
- Poner los desperdicios de comida en contenedores adecuados.

NO HACER

- No tire aceite o grasa en los drenajes.
- No lave las freidoras, planchas, ollas, cacerolas, y platos hasta que el aceite y la grasa hayan sido removidos.
- No use agua cliente para limpiar la grasa de las superficies.
- No tire desperdicios de comida en los drenajes.

Para más información llame Water Utilities al 972.721.2281.

IRVING TEXAS

IMPORTANT MESSAGE

From Your Water Utility

In the past 24-48 hours sewage overflowed from a sewer line in your neighborhood. The overflow was caused by a build up of fats, oil and grease in the sewer line.

Sewer overflows have the potential to harm the environment and create a public health risk. Blocked sewer lines may also cause sewage to back up into your home and are very expensive to clean up and correct.

Please help prevent sewer overflows by reducing the amount of fats, oil, and grease you put down your drain.

DO

- Put oil and grease in collection containers.
- Remove oil and grease from kitchen utensils, equipment, food scrapers, towels and brooms.
- Keep grease out of wash water.
- Place food scraps in collection containers.

DO NOT

- Pour oil and grease down drains.
- Wash fryers, griddles, pots, pans or plates with water until oil and grease are removed.
- Use hot water to rinse grease on surfaces.
- Put food scraps down drain.

For more information, contact Water Utilities at 972.721.2281.

IRVING TEXAS

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

Proactive Door Hanger

Help Reduce Sewer Clogs and Sewer Overflows

Do your part by properly disposing of fats, cooking oils, grease and products labeled as disposable or flushable.

You can help prevent future blockages by following these simple steps:

DO NOT allow fats, cooking oils and grease to go down the sink or disposal.

DO NOT flush disposable or flushable cleaning cloths, wipes, diapers, feminine products and paper towels down the toilet.

DO pour fats, oils and grease, after allowing to cool, into a sturdy container, such as a glass jar or coffee can. Once the container is full, secure with a lid and place it in the trash.

DO dispose of disposable cleaning cloths, wipes, paper towels, diapers and feminine products in the trash.

DO, before washing your dishes, scrape and wipe pots, pans and dishes with paper towels and place the used paper towels in the trash.

DO use sink strainers to catch food items and empty the strainer in the trash.

The build-up of fats, oils and grease, which includes cooking oils, sandwich spreads, salad dressings, meat fat and other similar products, will eventually cause sewer lines to clog. These blockages can cause the sewer to overflow into the apartment complex, playground, parking lot, streets, and streams and even into your apartment unit. Sewer overflows are unhealthy for your children, yourself, friends and the environment. Everyone plays an important role in preventing sewer blockage and sewer overflows.

For additional information, call
City of Irving Water Utilities
Environmental Compliance at (972) 721-2285

IRVING
TEXAS

Ayude a reducir obstrucciones y derrames en las alcantarillas

Haga su parte y deseche adecuadamente las grasas, aceites de cocina y productos etiquetados como desechables o que se pueden tirar al inodoro.

Usted puede ayudar a prevenir obstrucciones futuras siguiendo estos sencillos pasos:

NO permita que las grasas y los aceites de cocina se vayan por el fregadero o lava manos.

NO se deshaga de los paños de limpieza desechables, toallitas, pañales, productos de higiene femenina y toallas en el inodoro.

Si vierte grasas y aceites, después de dejar enfriar, en un recipiente robusto, tal como un frasco de vidrio o lata de café. Una vez que el contenedor está lleno, asegure con una tapa y colóquelo en la basura.

Si coloca los artículos de limpieza desechables como paños, toallas de papel y productos de higiene femenina en la basura.

Si, antes de lavar los platos, raspe y limpie las ollas, sartenes y platos con toallas de papel y colocar las toallas de papel usadas en la basura

Si use coladores en el fregadero para detener los alimentos y vacíe el colador en la basura.

La acumulación de grasas y aceites, que incluye los aceites de cocina, cremas para untar, aderezos de ensaladas, grasa de las carnes y otros productos similares, con el tiempo pueden causar que las líneas de drenaje se tapen y dichos bloqueos pueden causar que la alcantarilla eventualmente cause un desborde en el complejo de apartamentos, patio de juegos, estacionamiento, calles y arroyos, incluso en su unidad de vivienda. Los derrames de aguas negras no son saludables para sus hijos, usted mismo o el medio ambiente. Todos tienen un papel importante en la prevención de obstrucciones y derrames en las alcantarillas.

Para obtener información adicional, llame al
Ciudad de Irving Water Utilities
Cumplimiento Ambiental al (972) 721-2285.

IRVING
TEXAS

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

PROVISION 5

By October 31, 2007, the City shall perform a condition assessment study of large concrete pipes in the System. The condition assessment shall include corrective action recommendations and a schedule to correct any problems discovered, in accordance with Ordering Provision No. 8 below.

In October 2007, the City received a report from GSWW, Inc. that assessed the large concrete sewers in the system. GSWW, Inc. inspected the concrete sewers utilizing a variety of techniques. Approximately 43,000 linear feet of concrete sewer was investigated through the course of this study. Analysis of the data gathered stimulated the prioritization of concrete sewers and specific recommendations for replacement, rehabilitation, maintenance and monitoring activities.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

PROVISION 6

By April 30, 2009, and every five years thereafter, the City shall update the Wastewater Master Plan.

Freese and Nichols, Inc. completed an update to the Wastewater Master Plan in 2009. As part of the project, the wastewater model was updated, capacity improvements were identified, and a risk based assessment of existing facilities was completed. All of these focus areas went into the development of a comprehensive Capital Improvement Plan (CIP) which prioritizes improvements based on their condition and capacity.

The City delayed the update to the Wastewater Master Plan originally scheduled to be completed by April 30, 2014 per our October 8, 2013 letter to the TCEQ. A copy of the letter is included at the end of this section.

The City currently has Freese and Nichols, Inc. under contract to update the Wastewater Master Plan. The update is on-going and the primary deliverable will be a comprehensive Capital Improvement Plan (CIP) that prioritizes improvements based on their condition and capacity.

CITY OF IRVING
SANITARY SEWER OVERFLOW INITIATIVE
2016 ANNUAL PROGRESS REPORT
JUNE 2015 – MAY 2016

IRVING
TEXAS

Malcolm Baldrige National Quality Award
2012 Award Recipient

October 8, 2013

Mr. John Shelton
Order Compliance Team
Enforcement Division, MC 149A
Texas Commission of Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Sanitary Sewer Overflow ("SSO") Agreement
City of Irving, Dallas County
Enforcement Case No. 28414
Wastewater Master Plan Update

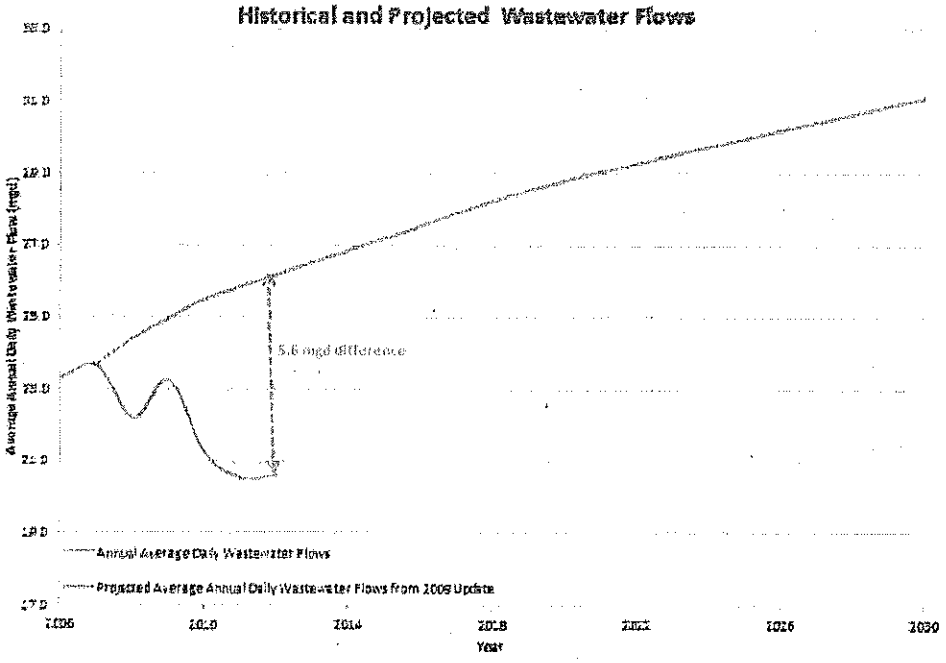
Dear Mr. Shelton:

The Irving City Council approved the Sanitary Sewer Overflow Agreement with the Texas Commission of Environmental Quality at the March 22, 2007 council meeting. As stipulated in Provision 6 of the Agreement, the City was required to update the Wastewater Master Plan by April 30, 2009 and update it every five years thereafter. A copy of the agreement is attached for reference.

The City updated the Wastewater Master Plan in 2009 as required, and per the existing agreement, the City would be required to update the Wastewater Master Plan again by April 30, 2014. The City respectfully requests to delay this required update to the Wastewater Master Plan to April 30, 2016 for the following reasons.

The first reason the City is requesting to delay the update to the Wastewater Master Plan is that the City's wastewater flows have not grown as fast as expected in the 2009 Update. In fact, the wastewater flows have been trending downward since the approval of the SSO Agreement even though the population has continued to grow. Figure 1 shows how the actual wastewater flows have compared to the projected wastewater flows.

Figure 1
Historical and Projected Wastewater Flows

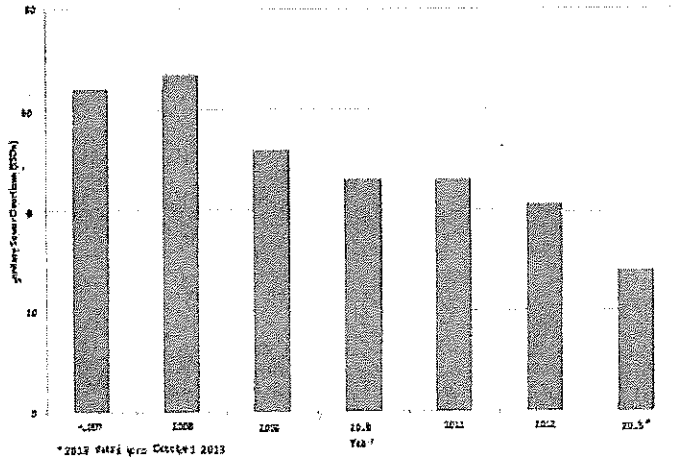


The next reason the City is requesting to delay the update to the Wastewater Master Plan is that the City is diligently replacing infrastructure due to condition and capacity issues and the City is still in the process of implementing improvements from the 2009 Update.

As highlighted in our 2013 Annual Progress Report, the City has installed over 30 miles of sanitary sewer mains at a cost of over $35 million since the City entered into the SSO Agreement to address condition and capacity issues. There is an additional 8 miles of sanitary sewer mains currently under construction at a cost of $9.7 million as well as another 8.5 miles of sanitary sewer mains under design at a projected cost of $9.7 million.

The final reason the City is requesting to delay the update to the Wastewater Master Plan is that the City has seen a dramatic downward trend in the number of SSOs. Figure 2 illustrates the success of the City's efforts to reduce the number of SSOs in the system.

Figure 2
Sanitary Sewer Overflows



In summary, the City is committed to reducing the number of SSOs in the system. For the reasons presented, the City requests delay of the next update of the Wastewater Master Plan to April 30, 2016. Please contact the City of Irving if any additional information is needed or if further discussion of this request is necessary.

Sincerely,

Steven M. Pettit, P.E.
Assistant Water Utilities Director

Enclosure

pc: Todd W. Reck, P.E., Water Utilities Director
Manager, Water Section of TCEQ Dallas/Fort Worth Regional Office

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JUNE 2015 – MAY 2016

PROVISION 7

The City shall evaluate the effectiveness of the completed improvement projects by documenting and reviewing all sewer-related calls on a monthly basis to monitor the trend in numbers of SSO's caused by blockages that occur within the System.

The City is evaluating the effectiveness of the completed improvement projects by documenting and reviewing all sewer-related calls on a monthly basis. The City installed approximately 5.6 miles of sanitary sewers lines between June 2015 and May 2016. Table 7-1 details the Sanitary Sewer Projects completed during this time period. Over the last 9 years, the City has installed just over 48 miles of sanitary sewer lines at a cost of $54.8 million.

TABLE 7-1
SANITARY SEWER IMPROVEMENT PROJECTS
COMPLETED
JUNE 2015 – MAY 2016

Project Name	Description		
	Length	Size/Material	Cost
Garden Oaks, Daywood, Harrison & Robin Water and Wastewater Improvements	1,952 LF	8" PVC	$695,671.24
Pioneer Drive, Sunnybrook Drive & Jody Lane Water and Wastewater Improvements	70 LF 350 LF 2,672 LF 2,453 LF	4" PVC 6" PVC 8" PVC 10" PVC	$1,457,857.49
Altman, Cochran, Cunningham, Douglas, Manion, McClure, Muret & Stafford Water and Wastewater Main Improvements	135 LF 9,383 LF	6" PVC 8" PVC	$1,971,015.26
West Irving Creek Wastewater and Water Improvements	2,079 LF 30 LF 33 LF 1,169 LF 20 LF 493 LF 1,847 LF	8" PVC 10" PVC 12" PVC 18" PVC 21" PVC 24" PVC 27" PVC	$2,414,202.43
Scotland, Highland, Holland & Newton Circle Alley Water and Wastewater Improvements	1,980 LF 951 LF	8" PVC 10" PVC	$713,916.45
Logan/Astoria Alley Wastewater Improvements	758 LF	6" PVC	$301,899.75
MacArthur Boulevard Utility and Paving Reconstruction	381 LF 340 LF 2,239 LF	8" PVC 10" PVC 18" PVC	$473,440.00
TOTALS	**29,335 LF → 5.56 Miles**		**$8,028,002.62**

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The City monitored the number of SSO's caused by blockages that occurred within the System between June 2015 and May 2016 and compared this number to the same period for the previous years. Table 7-2 lists the number of SSO's determined to be caused by grease blockages over the last nine years.

TABLE 7-2
SANITARY SEWER OVERFLOWS ATTRIBUTED TO GREASE BLOCKAGES

Month	SSOs 2007-2008	SSOs 2008-2009	SSOs 2009-2010	SSOs 2010-2011	SSOs 2011-2012	SSOs 2012-2013	SSOs 2013-2014	SSOs 2014-2015	SSOs 2015-2016
June	3	1	4	0	1	1	0	2	2
July	4	0	2	1	2	2	1	0	3
August	2	1	2	1	1	2	0	0	4
September	2	1	1	1	1	0	1	0	1
October	4	0	1	1	1	1	4	3	1
November	2	1	4	1	2	4	0	1	1
December	4	4	1	1	2	1	3	1	1
January	2	1	5	2	1	4	4	3	0
February	4	3	3	6	2	2	1	2	1
March	5	4	4	3	3	0	2	0	0
April	1	3	1	4	2	0	0	2	2
May	3	1	3	1	1	1	2	2	0
TOTAL	**36**	**20**	**31**	**22**	**19**	**18**	**18**	**16**	**16**

The number of SSO's attributed to grease blockages is significantly less than what it was when the City entered into the SSOI agreement. The City is committed to sanitary sewer capital maintenance improvements in the upcoming years to improve the System and reduce the number of SSO's caused by grease blockages.

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APPENDIX A

SANITARY SEWER OVERFLOW AGREEMENT