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Lancaster Sanitary Sewer Collections System
2010-2011 Annual Performance Report

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Lancaster Sanitary Sewer Collections System
2010-2011 Annual Performance Report

Purpose: This report is intended to provide pertinent information on the operations and maintenance of the City of Lancaster Sanitary Sewer Collections System from July 1, 2010, through June 30, 2011. It includes the continued growth of the sewer system, accomplishments, and performance of the Utility Services Division staff that are responsible for the operation and maintenance (O&M) of the sewer system to protect the health and safety of the residents of the City of Lancaster.

Background: The City assumed responsibility for the O&M of its sanitary sewer system from the County of Los Angeles Consolidated Sewer Maintenance District on July 1, 2008, believing that local control of the system was in the best interest of its residents.

System Growth and Characteristics: Prior to the City assuming O&M responsibility of the system, significant growth in housing development and associated population necessitated the sewer system's expansion to serve the City's increased population.

Table I: Sewer System Statistics below compares the makeup of the sewer system from July 1, 2008, to July 1, 2011.

Table I: Sewer System Statistics

System Characteristics	July 1, 2008	July 1, 2009	July 1, 2010	July 1, 2011	% Change
Pipe Length (Miles)	325	390	397	425	24%
No. of Manholes	7450	8312	8494	8879	17%
No. of Lift Stations	1	1	1	1	0%

As shown above, on July 1, 2008, the system consisted of approximately 325 miles of various sized sewer mains, 7450 manholes and a single lift station. On July 1, 2009, the system had grown to approximately 390 miles, 8312 manholes and a single lift station. Between July 1, 2009 and July 1, 2010, the system had grown slightly to 397 miles of pipe, 8494 manholes and one lift station. By July 1, 2011, the system had increased to 425 miles, 8879 manholes and one lift station. This indicates an overall 24% increase in the length of pipes and a 17% increase in the number of manholes in the system from 2008 to 2011.

The system's pipe sizes range in diameter from 6" to 24" and include cast or ductile iron, and vitrified clay pipe (VCP). The majority of the sewer pipe in the system is 8" diameter VCP.

The age of the sewer system is between 1 and 50+ years with an average age of 30 years.

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Accomplishments: In its third year of operating and maintaining the sewer system for the City of Lancaster, the Utility Services Division purchased its first closed circuit television (CCTV) inspection truck. CCTV inspection allows the crews to verify the quality of the cleaning (flushing and root cutting) that is performed; to establish the most cost effective maintenance schedules; provide immediate condition assessment, aiding in the development of the Sewer Capital Improvement Program; and assures that those Food Service Establishments (FSEs) that are discharging excessive fats, oils, and grease (FOG) to the sewer system are held accountable.

As the majority of the staff hired to maintain the system are still relatively new to the industry, there was considerable time devoted to on-going training and maintaining the various job classification certifications required.

In 2008, the Division consisted of a manager, a Public Works Supervisor, one Lead Utility Maintenance Worker (LUMW), two Utility Maintenance Workers II (UMW II) and five Utility Maintenance Workers I (UMW I). The Division nearly doubled in size the following fiscal year (2009/2010), but staffing levels remained static during this fiscal year.

Purchased Equipment and tools to include:

- Closed Circuit Television (CCTV) Inspection Van
- Various small tools such as confined space entry equipment, nozzles, bars, hand tools, etc
- FOG sampling equipment

Training: Staff received training in various areas of responsibility including:

- Sewer cleaning methods and tools
- National Sewer Service Companies (NASSCO) Pipe Assessment Certification Program (PACP)
- Safety
- Emergency response to sewer spills
- Confined space entry and rescue
- Atmospheric detector operation
- Pump station maintenance
- First Aid/CPR
- Job site safety
- California Water Environment Association (CWEA) specific training for maintaining Grades I, II and III certification
- California Hazardous Waste Management
- Department of Transportation (DOT) Hazardous Materials
- Cal-EPA Basic Inspector Academy
- Fundamental Inspector

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Performance: Table II illustrates the maintenance performed on the sewer system from July 1, 2008 to June 30, 2011:

Table II: Sewer System Performance

Sewer System Performance	7/1/08 to 6/30/09	7/1/09 to 6/30/10	7/1/10 to 6/30/11
Pipe Cleaning			
Total Flushed	407,124 LF or 77 Miles	438,231 LF or 83 Miles	411,037 LF or 78 Miles
Planned Flushed Maintenance	402,924 LF or 76 Miles	419,331 LF or 79 Miles	368,151 LF or 70 Miles
Unplanned Flushed Maintenance	4,200 LF or .79 Miles	18,900 LF or 3.5 Miles	42,886 LF or 8 Miles
Total Mechanical & Chemical Root Removal	350,080 LF or 66 Miles	76,459 LF or 14.5 Miles	26,081 or 5 Miles
Planned Root Removal	348,688 LF or 66 Miles	74,803 LF or 14 Miles	18,792 LF or 3.5 Miles
Unplanned Root Removal	1,400 LF or .26 Miles	1,656 LF or .31 Miles	7,289 LF or 1.5 Miles
Percentage of Planned to Unplanned Maintenance	99%	96%	**87%
CCTV Inspection	17,500 LF or 3Miles	248,959 LF or 47Miles	59,244 LF or 11 Miles
Manholes			
Inspected	3771 Ea	2,453 Ea	369
Repaired	36 Ea	40 Ea	18
*Number of Public Sanitary Sewer Overflow Events (SSOs)	5	4	10
*SSO Rate SSO/100 Mi/Yr	1.28	0.99	2.3
*Portion of SSO Runoff Contained	95%	100%	98%
*Portion of SSO Runoff to Surface Waters	0%	0%	0%
*Main SSO Causes			
*Grease	80%	100%	90%
*Vandalism	20%	0%	0%
*Roots	0%	0%	10%

*Performance measures required by the City of Lancaster's Sewer System Management Plan (SSMP) dated March 2009. Staff also responded to 3 private SSO. SSO were reported as required by law.

**This figure represents the ratio of planned pipe cleaning versus unplanned pipe cleaning and is not a reflection of the performance measures that state crews will perform routine maintenance work as scheduled 95% of the time.

The above chart indicates that the USD cleaned 36% of the entire sewer system by July 2009. In FY 2009/2010, crews cleaned 24% of the entire system and in FY 2010/2011, crews cleaned 19% of the entire system. By combining the total cleaning for the three years, it would appear that the USD has cleaned 71% of the system, however, due to system growth and required periodic maintenance, the staff has actually only been through about 65% of the system. At this rate, it will take another 1.7 years before every length of pipe in the entire sewer system has been cleaned. The number of manholes inspected dropped off significantly this year due to Division crews taking on the additional tasks of drainage structures maintenance and the marking of sewer and storm systems located in the City for Underground Service Alerts (USA/Dig Alert).

This fiscal year saw an increase in the number of Public SSO events. The majority of the events were caused by residential discharges of FOG, which is currently not regulated by City Ordinance. The State Water Resources Control Board (SWRCB), in its annual report summarizing statewide statistics on SSO reporting, noted that the average rate for municipalities the size of the City of Lancaster is a little over 4 events per 100 miles of sewer mains. With 10 SSO events this year, Lancaster stands at 2.3 per 100 miles, however, the three-year average is 1.5 per 100 miles.

Conclusion: The Utility Services Division staff met and/or exceeded the performance objectives established with respect to the operations and maintenance of the Lancaster Sanitary Sewer System for Fiscal Year 2010-2011.

It is anticipated that the sewer system will continue to grow and that as the system ages Capital Improvement projects will be required to repair or replace pipes and manholes. The City has established financial reserves to provide for the repair and future replacement of the sewer system.

Utility Services Division Performance Objectives

The following performance objectives were established for the Utility Services Division for the Sewer Collections System for FY 2010-2011.

Complete monthly, quarterly, semi-annual, and annual routine maintenance work as scheduled 95% of the time.

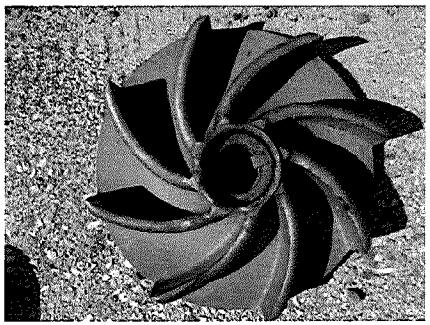
Provide for the health and safety of the citizens of Lancaster through proper maintenance of the sewer collection system.

Respond to and report all public Sanitary Sewer Overflows (SSO) in accordance with WDR.

Respond to citizen concerns within 24 hours of receiving notification for general issues and within 2 hours for emergency issues.

Train staff to CWEA Sewer Collection System Technician Certification Requirement.

Provide an Annual Sewer Collection System Report to City Council.



Goal:
The City's goal is to provide the residents of Lancaster the best possible service at the most economical cost. By reporting vandalism , Sanitary Sewer Overflows (SSO) and by properly disposing of fats, oils and grease (FOG), citizens can assist in keeping service up and costs down.

Sanitary Sewer Overflows
SSO pose a health risk to the public and must be immediately addressed. Such overflows can be costly to the City, as they may result in state and federal fines as well as additional man-hours. Blockages impede scheduled maintenance efforts and require maintenance crews to take strenuous steps in order to clear, clean, and disinfect the area to protect public health.

FOG
FOG is a combination of fats, oils and grease used in food processing and in preparation of meals. FOG bearing materials, among others, include: cooking oil, fat, lard, grease, butter, tallow, shortening and margarine. During food preparation, meats such as beef, pork, lamb, poultry, and seafood also generate FOG. Kitchen waste containing these materials, as well as water that has been used to wash kitchen equipment and floors, contains waste FOG. FOG does not belong in the sewer system as it is a major contributor to SSO.

No Drugs Down the Drain
Please do not dispose of medications, other drugs, syringes, or lancets in the sewer system. They can be dropped off at the:
Lancaster Sheriff's Station
501 Lancaster Blvd
(Lancaster Blvd & Sierra Hiway)
Lancaster, CA 93534
(661) 948-8466

You Can Help
Please report vandalism, FOG violations, suspicious activity around manholes, spills or strong sewage odors to the City at **(661) 723-5985** during regular business hours or **(661) 810-7000** after hours.

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2010-2011 Sanitary Sewer System Third Annual Performance Report

November 2011

2010-2011 Sanitary Sewer System Annual Performance Report

Purpose: This is the third annual sanitary sewer system performance report relating to the operations and maintenance (O&M) of the Lancaster Sewer Collections System. This report is intended to provide pertinent information on the O&M of the system during the previous fiscal year.

Background: The City assumed responsibility for the O&M of its sanitary sewer system from the County of Los Angeles Consolidated Sewer Maintenance District on July 1, 2008, believing that local control of the system was in the best interest of its residents.

The Public Works Department Utility Services Division is responsible for O&M of the system.

On July 1, 2008, the system consisted of approximately 325 miles of various sized sewer mains, 7450 manholes and a single lift station. On June 30, 2011, the system consists of approximately 425 miles of various sized sewer mains, 8879 manholes and a single lift station.

This indicates a 20% increase in the size of the system over three years.

The sewer mains range in age from 1 to 50+ years old with an average age of 30.

Accomplishments: During the reporting period the Utility Services Division was able to purchase its first Closed Circuit Television (CCTV) Inspection van, which is considered the foundation of any sewer maintenance function. This acquisition allows the City to conduct pro-active maintenance on its sewer system. It will also allow City crews to verify the quality of their work, to establish cost-effective maintenance schedules, provides immediate condition assessment and assures that those Food Service Establishments (FSEs) that are discharging excessive fats, oils and grease (FOG) are held accountable.

Purchased Equipment including: Along with the CCTV Van, various small tools such as confined space entry equipment, nozzles, bars, and other hand tools.

Training: Staff received training in various areas of responsibility including: pipe assessment, confined space entry and rescue, atmospheric monitoring, sewer cleaning methods and tools, emergency response to sewer spills, pump station maintenance, First Aid/CPR, job site safety and defensive driving, recycled water site supervision, hazardous waste management, transporting hazardous materials , basic and fundamental inspection, California Water Environment Association (CWEA) training for Grades I, II and III and other training provided through the City.

Certification: Five staff were certified by the National Association of Sewer Service Companies in the Pipe Assessment Certification Program. In addition, all staff maintained their certifications for their positions: 5 CWEA Grade I, 6 CWEA Grade II, 1 CWEA Grade III; 3 California Department of Public Safety Administration PC 832 POST, 2 Cal EPA Basic Environmental Inspector and 1 Cal EPA Fundamental Inspector.

Performance: Staff provided the following O&M services to the citizens of Lancaster. Note 87% of the work accomplished by the Utility Maintenance Crews was Preventative Maintenance (PM) work.

Sewer System Performance	**7/1/10 to 6/30/11**
Pipe Cleaning	
Flushing	
Planned Maintenance	70 Miles
Unplanned Maintenance	8 Miles
Root Cut	
Planned Maintenance	3.5 Miles
Unplanned Maintenance	1.5 Miles
Percent of Planned to Unplanned Maintenance	*87%
CCTV Inspection	11 Miles
Manholes	
Inspected	369
Repaired/Raised to Grade	18
Number of Public SSO Events	10
SSO Rate, SSOs/100 Mi/Yr	2.3
Portion of SSO Contained	98%
Portion of SSO to Surface Waters	0%
SSO Causes	
Grease	90%
Roots	10%

*See Lancaster Sanitary Sewer Collections System 2010-1011 Annual Performance Report