



SSO Reduction Program: Program Manager Services

November 15, 2012

Phil Campos: Director-Contracting

Jeff Haby: Director-Sewer System Improvements

Jeff Brown: Director-Construction & Maintenance

Annette Duron: Manager-Maintenance Planning

Kat Price: Manager- Master Planning

Frances Plocek: Director- Engineering Collection & Distribution

Robert Pina: Director- Systems Support

Scott Oliver: Corporate Counsel

Introduction

Purpose:

Provide information pertaining to SAWS existing SSO Reduction Program and Program needs, ensuring respondents are equally informed of the needs and objectives to ensure Program success.

Agenda:

Briefing is divided into two sessions:

1. Technical
2. Administrative with a Wrap Up

Technical Session

1. System Overview & SSO Reduction Program
2. Program Manager Objectives
3. Cleaning/CCTV
4. Condition Assessment
5. Capacity
6. Information Systems

A short Questions and Answers Period will be conducted after each section

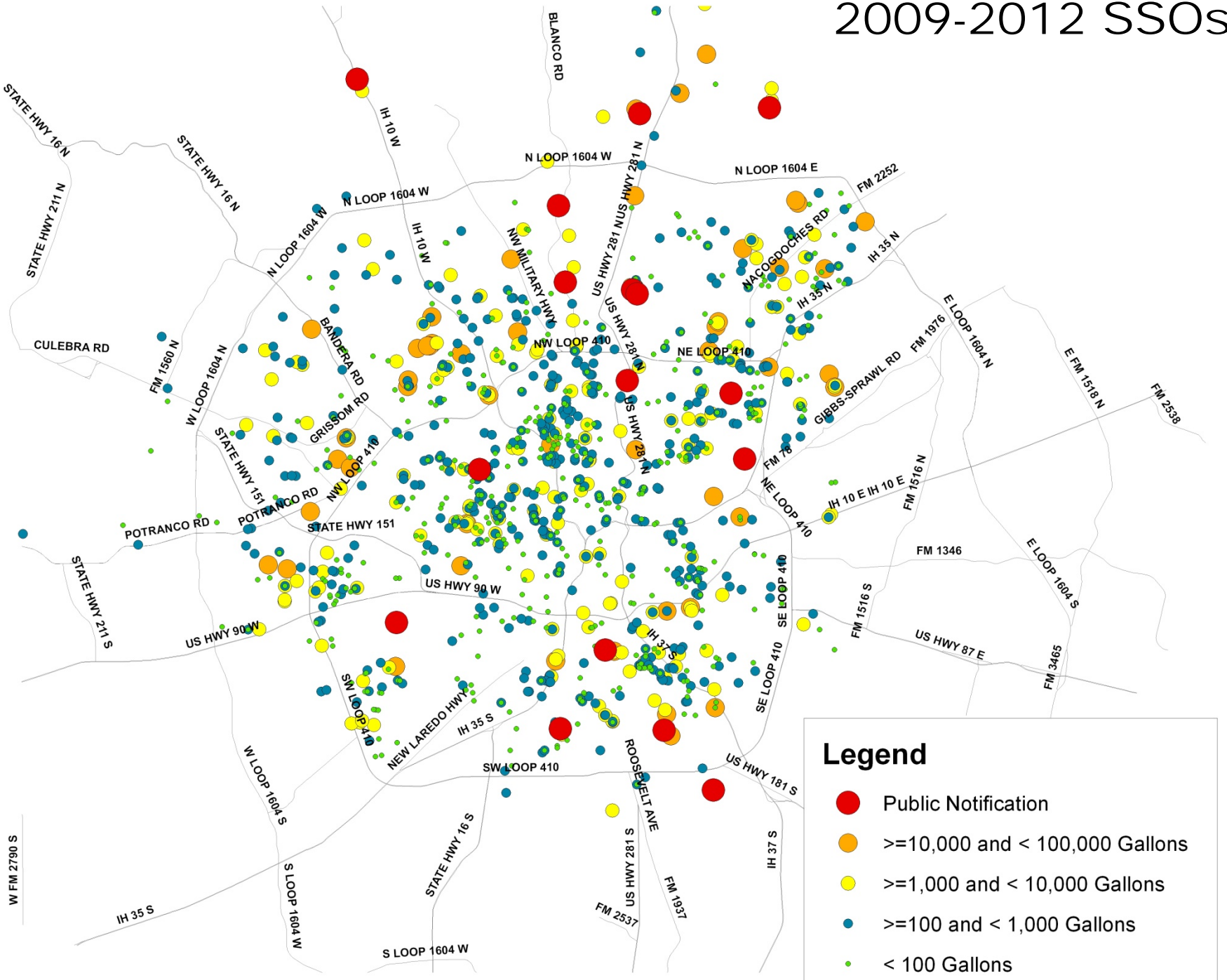
Administrative Session

1. RFQ Key Elements
2. Evaluation/Selection Process
3. SMWB
4. Draft Contract
5. Wrap Up/Summary

Questions and Answers Period

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2009-2012 SSOs

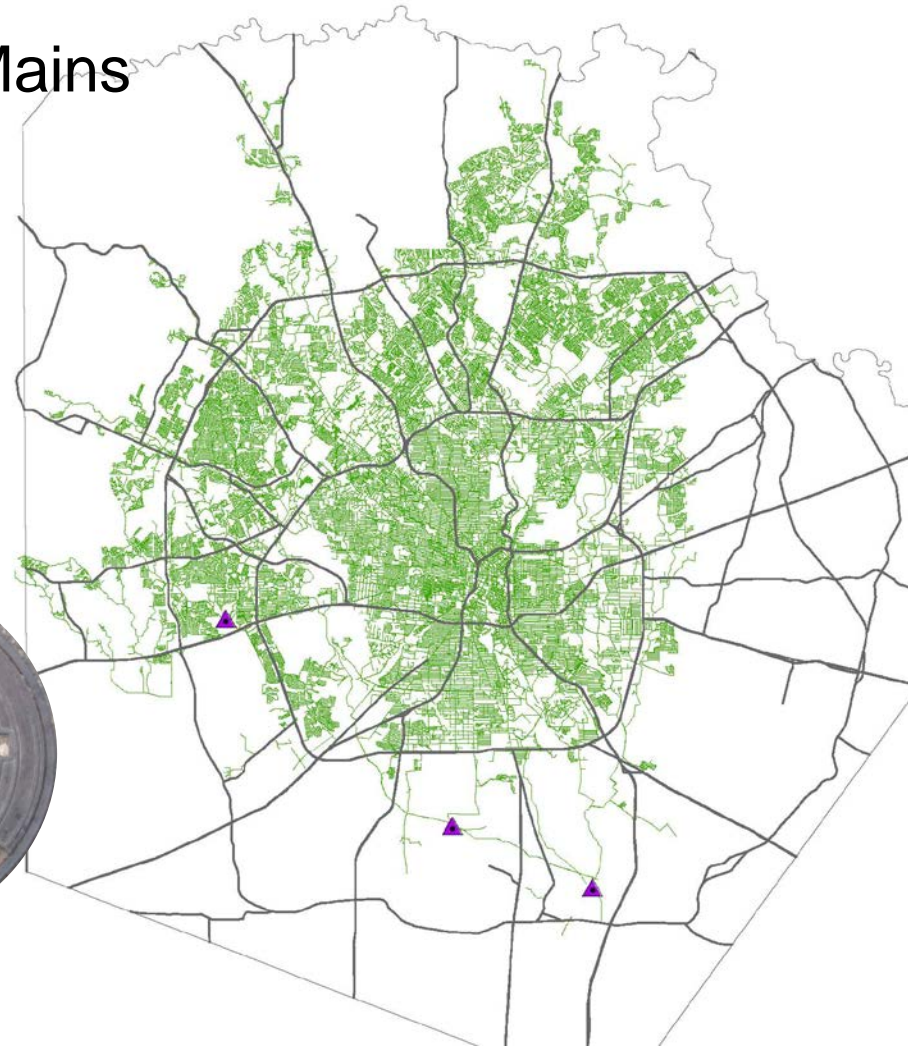




System Overview & SSO Reduction Program

Sanitary Sewer Infrastructure

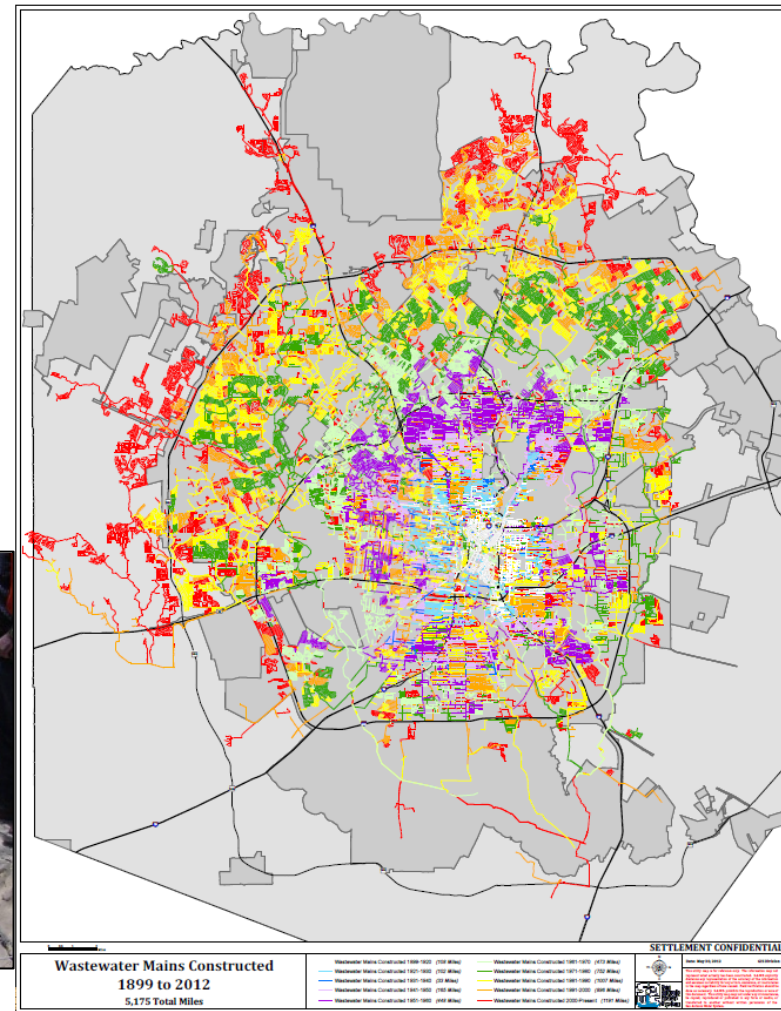
- 5,200 miles of Wastewater Mains
- 159 Lift Stations
- 97,000 Manholes
- 2 to 108-inch in diameter
- 3 Water Recycling Centers



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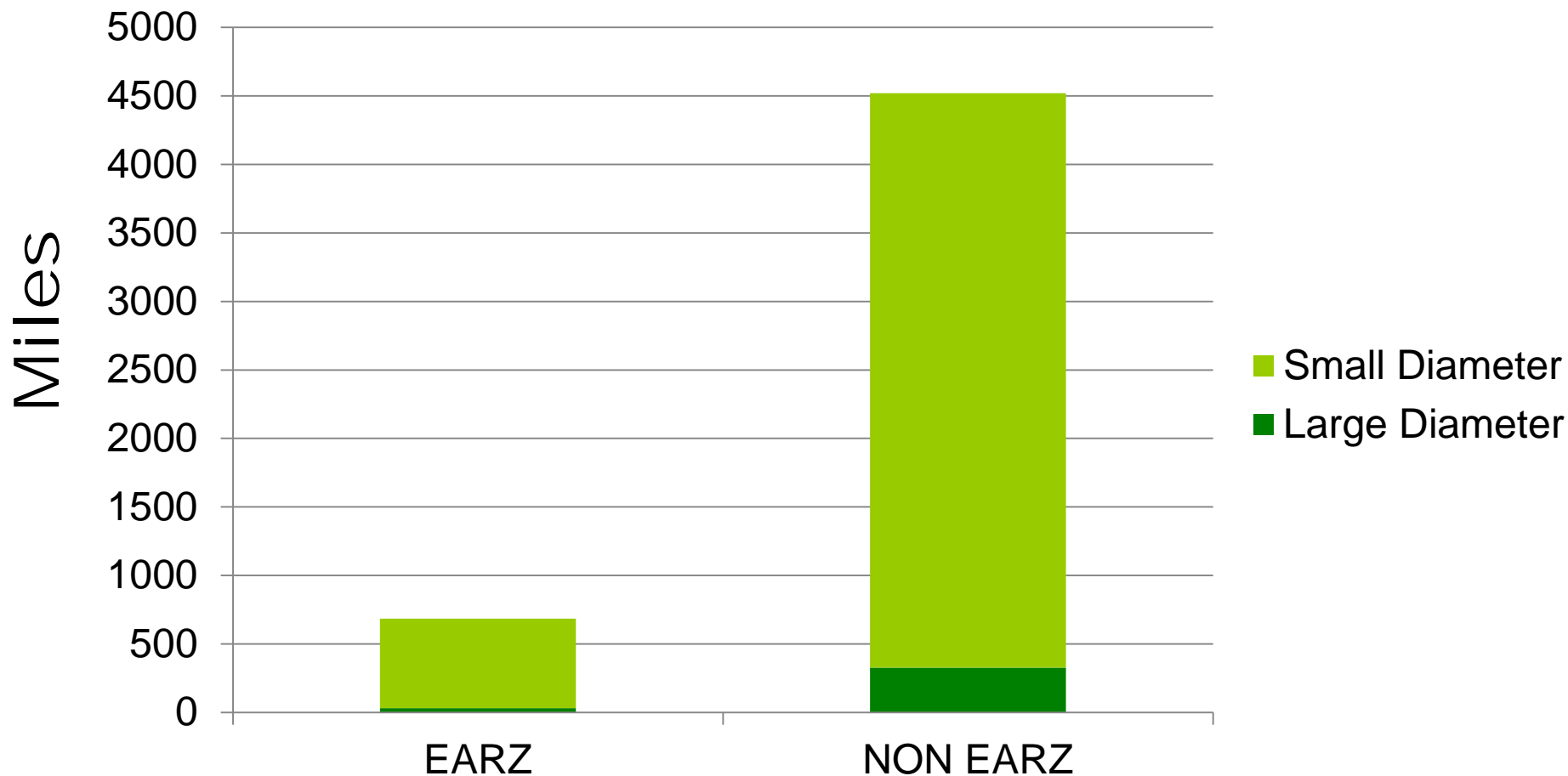
Age of Infrastructure

- Average age of pipe < 30 years
- 83% < 50 years old
- ~93% small diameter pipe



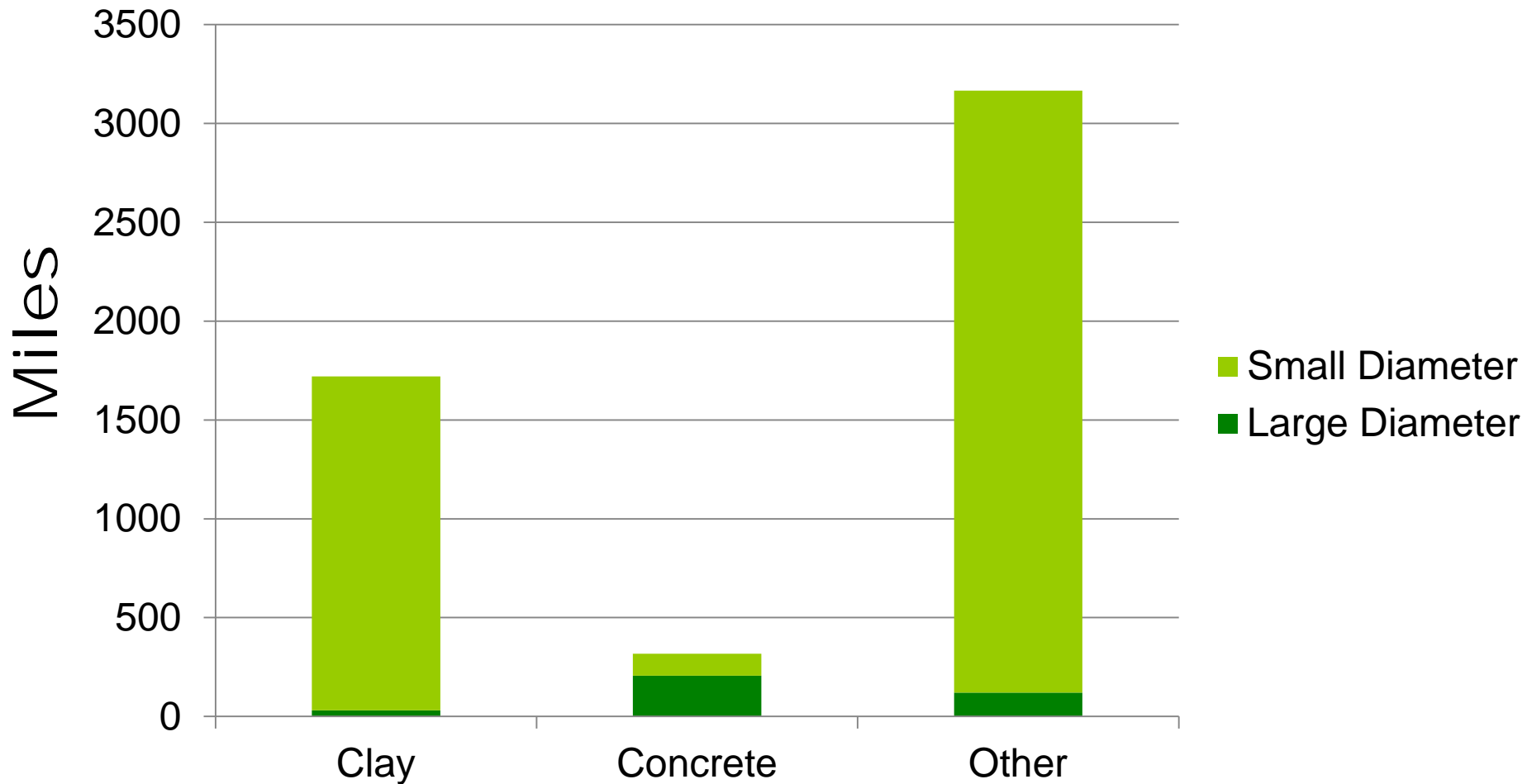
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Large vs. Small Diameter



EARZ: Edward Aquifer Recharge Zone

Type of Pipe

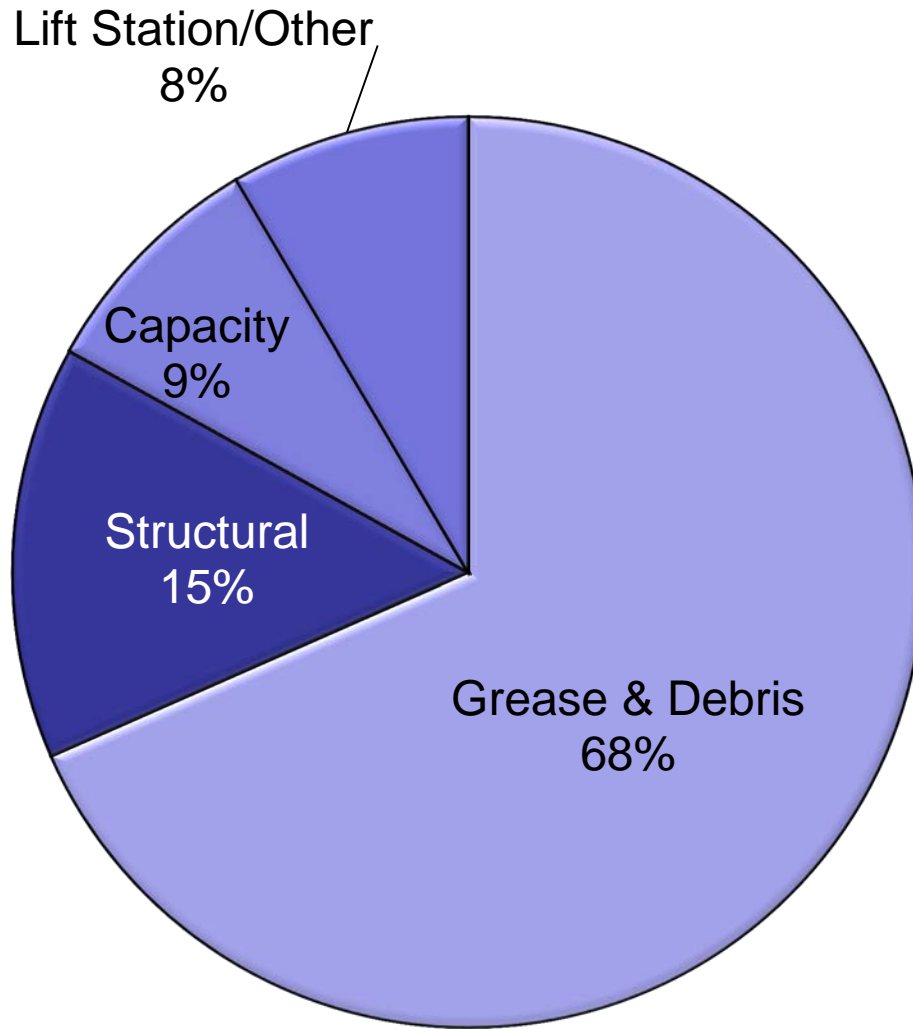


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Lift Stations & Force Main

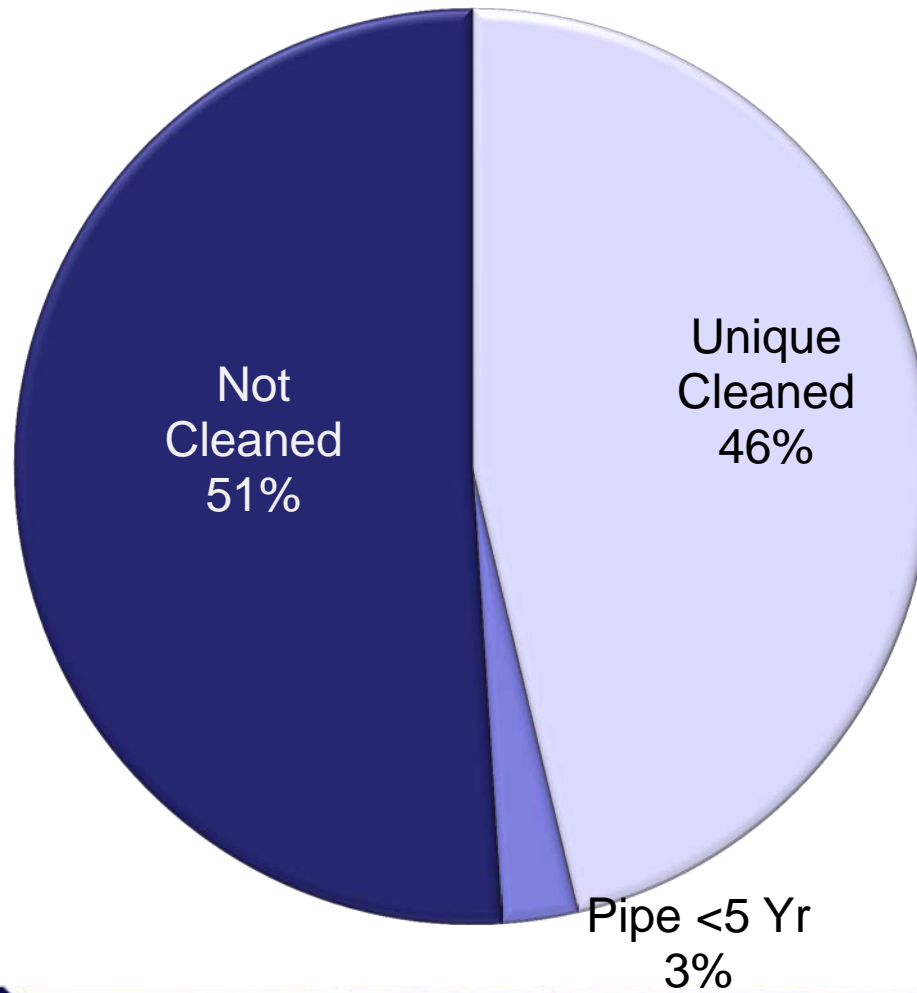
- Lift Stations
 - 159 Lift Stations
 - 94 Lift Stations have been or in the process of being upgraded
 - Up to 20 Lift Stations may be eliminated in the future
 - Remainder are new or will be upgraded in the future
- Force Mains
 - Approximately 80 miles
 - Materials include PVC, HDPE, FRP, and Cast/Ductile Iron

SAWS 2012 YTD SSO Causes



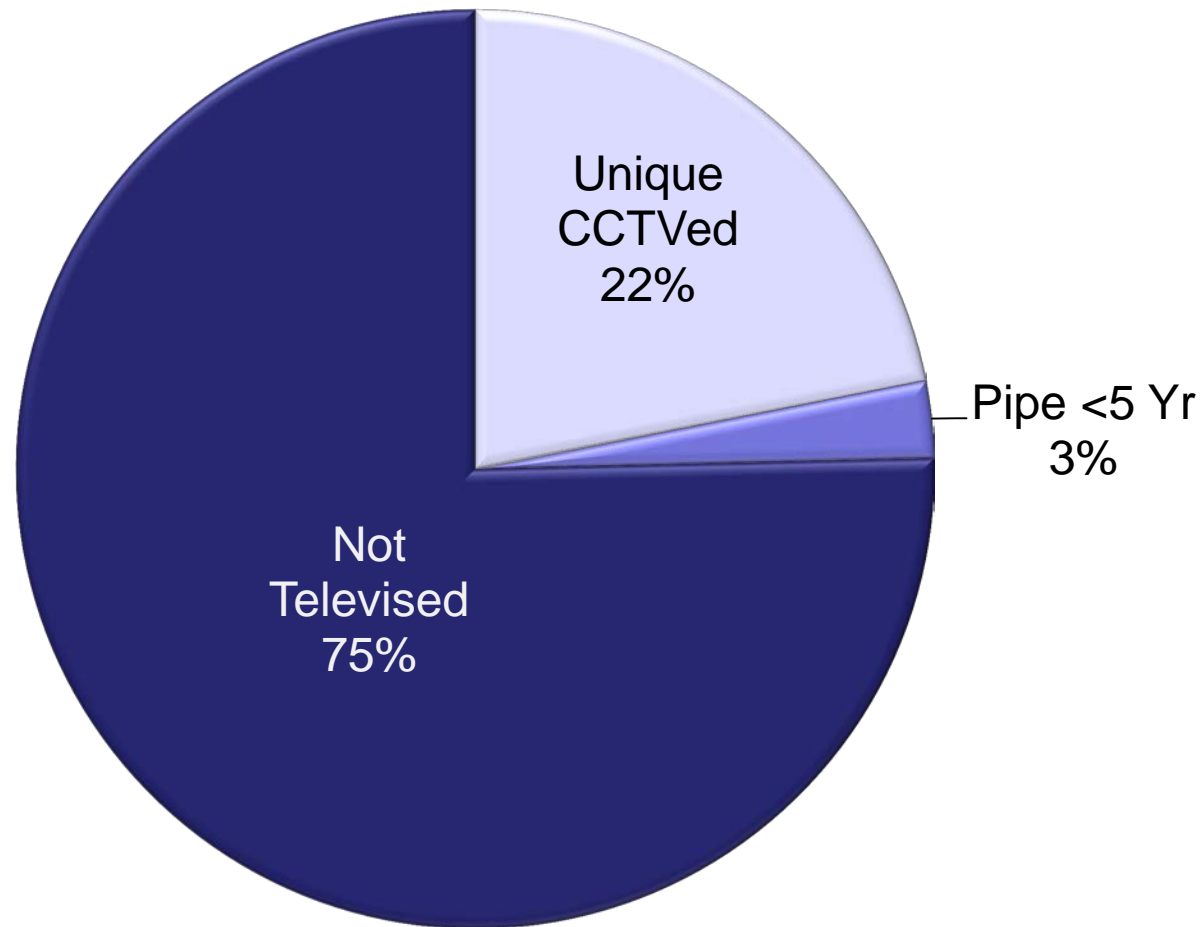
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SAWS 2009-2012 System Cleaned



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SAWS 2009-2012 System CCTVed



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System Overview & SSO Reduction Program

Are there any Questions?



Program Manager Services

Program Manager Services

- SAWS anticipates needing program manager services in the following generally described areas:
 - Program Management
 - Information Systems Integration
 - Capacity Management, Operation and Maintenance (CMOM)
 - Condition Assessment
 - Capacity Assessment
 - Remedial Measures

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Program Manager – Key Elements

- Information Systems Integration/Data Management
- Possible Consent Decree compliance requirements
- Audit and recommendation for improvement on all existing SSO Programs
- Continuous improvement at the lowest possible cost
- Identification and implementation of Projects/Programs that can have greatest early impact
- Implementation of best practices

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Program Management

- Program Direction
 - Program Manager
 - Program Advisors

- Program /Project Structure & Control
 - Program Management Office
 - Program Management Plan
 - Schedule & Budget Control
 - Performance Monitoring and Reporting

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Program Management

- Regulatory Coordination & Compliance Monitoring and Reporting
- Assessment, Development and Implementation of Program Standards
- Cost Estimating
- Permits and Environmental Review
- Rates & Funding Analysis and Support
- Program Management & Technical Skills Training & Knowledge Transfer

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Program Management

- Ensure projects meet established scope, schedule, cost, and quality to ensure compliance pertaining to the following:
 - CMOM
 - Condition Assessment & Remedial Measures Program
 - Capacity Assessment and Remedial Measures Program
 - Lift Station Rehabilitation and Elimination Program
 - Force Main Assessment Program
- Prepare Reports pertaining to the above Programs and prepare briefings to regulatory agencies and key stakeholders such as the SAWS Board and COSA

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CMOM Program

- CMOM Plan to be completed within 8 months after NTP
- CMOM Plan to include:
 - Training Program for Technical & Skills Training
 - Capacity Assurance Program
 - SSO Reporting & Document Procedures
 - System-Wide Cleaning Program
 - Condition Assurance Program
 - Lift Station Operation and Maintenance
 - Lateral Program
 - Fats, Oil, and Grease (FOG) Control Program
 - Asset Information Management Program

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Program Manager Services

Are there any Questions?



Cleaning/CCTV Operations

Cleaning Capabilities

- 23 Line Cleaning Crews
- Clean 900 miles per year:
 - 4 single purpose flushing machines
 - 17 multi-purpose flushing/vacuum machines (combo)



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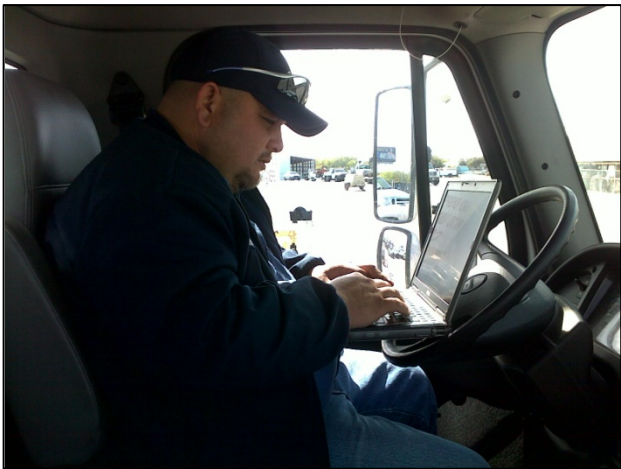
Cleaning Schedules

- Asset-based
- “Clean the right pipe at the right time”
- Pipes are cleaned within their “maintenance window”
- 1, 3, 6, 12, 24 and 60 Month Schedules
- Use Cleaning Optimization Program (COTools) to manage scheduling



Cleaning Data

- Hansen asset management system
- Inspection Forms are populated with GIS information
- Operators use the “Cleaning Criteria Guide” notating the amount of debris, grease and roots ranging from 0 to 3, with three being the highest score



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From the Program Manager SAWS is looking for the following Assistance:

Line Cleaning

- Scheduling and coordinating outside contractors to perform ~ 600 miles of additional small diameter cleaning annually.
- Implementing a Siphon Cleaning Program; scheduling and coordinating outside contractors.
- Expanding Large Line Cleaning Program; scheduling and coordinating outside contractors.

CCTV Capabilities

- 7 Foreman-led crews
- CCTV 220 miles per year
- 9 Vans equipped with main camera
 - 5 equipped with lateral camera
 - 2 equipped with sonar
- Pipe Assessment Software



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CCTV & Data

- NASSCO Pipeline Assessment & Certification Program (PACP) standards
- Pipeline assessment software (Peninsular Pipe Tech)
- Digitally record video footage & inspection of the pipe condition
- Data is collected on an external hard drive and loaded daily into a central “pending sync” file
- Automatic program runs nightly to sync all videos to the central video file.
- The central video file links to the SMMR Db and to a layer in the GIS Sewer Main Analysis Arcview application

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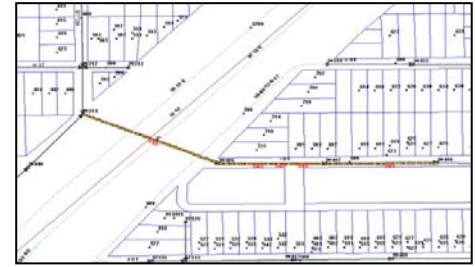
From the Program Manager SAWS is looking for the following Assistance:

CCTV

- Managing the scheduling and coordination of outside contractors to perform an additional 300 miles of CCTV annually.
- Prioritizing which assets to CCTV based on pipe age, pipe type, historical SSO information, proximity to surface waters and sensitive features, best professional judgment and etc.
- Developing a QA/QC Program for CCTV Operations

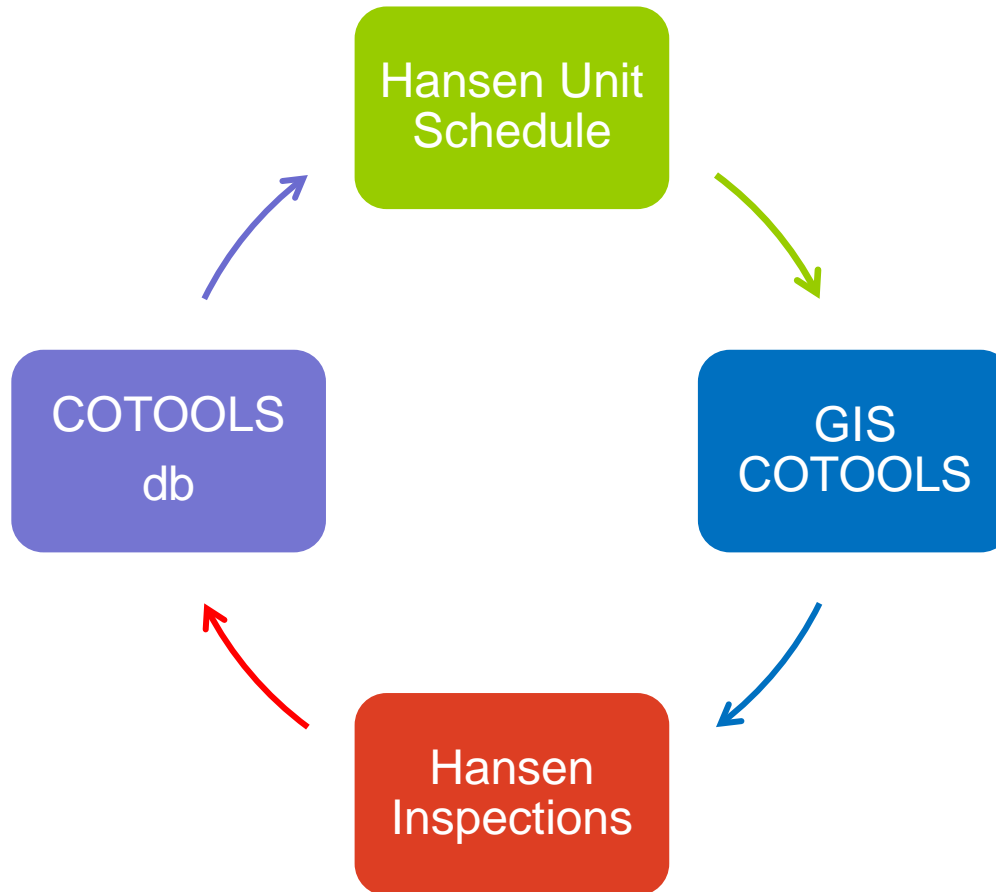
Root Cause Analysis

- After each SSOs, a Case is generated for Investigation
- Weekly meetings with CCTV Foremen, Planning Team & D&C
- Collaborate on the best SSO Prevention Strategy
 1. Construction/Rehabilitation
 - Point Repair (Dig or CIPP)
 - Rehabilitation/Replacement
 2. Preventative Maintenance
 - Clean and maintain
 - FOG Control
 - Smart Cover



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Maintenance Planning Process



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Hansen Unit Schedule

Inspection Schedule - Windows Internet Explorer

PREVIOUS NEXT EDIT

ASSET INFORMATION

Asset Sewer Main From Sewer Manhole 60076 To Sewer Manhole 60077

Inspection Type PM CLNG

Location

Street #	Pre Dir	Street Name	Suffix	Post Dir	Subdesignation
03714		ELECTRA	DR		
		CASCADE PLACE			
		GRANTHAM			
City, State, ZIP SAN ANTONIO			TX	78218	

ADDITIONAL INFORMATION

Reschedule By Completion Date Cycle From //

Assigned To 10000264 Cycle To //

Responsibility DCCOLL Expire Date //

SCHEDULE INFORMATION

Schedule Type Months

Interval 6

Next Scheduled 3/31/2013 00:00

Last Completed 10/2/2012 00:00

Calculate Next Scheduled Based on Workday Options Below

Weekdays Holidays

Weekends End of Month

USAGE SCHEDULING

Reschedule Every 0.00

COMMENTS



SCHEDULE INFORMATION

Schedule Type Months

Interval 6

Next Scheduled 3/31/2013 00:00

Last Completed 10/2/2012 00:00

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GIS/COTools

Table - Inspection_Package

Not Scheduled Inspections

INSKEY	REASSIG	REASSI	INSPTYPE	HOLD	FREQ	HAN ASSIGNED	HAN SCHEDD	DUE DATE	EST
174886	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
174885	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
171014	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
170083	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
169117	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
168937	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
171405	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
169458	<Null>	PM CLNG	II	24	JAHIE C RUIZ	8/12/2012	11/4/2012		
179644	<Null>	PM CLNG	Y	1	JAHIE C RUIZ	11/5/2012	10/10/2012		
177469	<Null>	PM CLNG	II	24	JAHIE C RUIZ	9/26/2012	2/9/2013		
177223	<Null>	PM CLNG	II	24	JAHIE C RUIZ	9/26/2012	2/10/2013		
177589	<Null>	PM CLNG	II	24	JAHIE C RUIZ	10/24/2012	2/14/2013		
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177982	<Null>	PM CLNG	II	24	JAHIE C RUIZ	9/26/2012	2/20/2013		
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178303	<Null>	PM CLNG	II	24	JAHIE C RUIZ	12/2/2012	2/24/2013		
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177404	<Null>	PM CLNG	II	12	JAHIE C RUIZ	9/26/2012	2/8/2013		

Inspection_Package

PACKAGE_ID	EMPLOYEE_NAME	REASSIGN_SCHED_D	SUM_ESTIM	DAYS	SHIFT
13	ALBERT O HERNANDEZ JR	11/20/2012	15.27	Mon-Sun	All
45	ALBERT O HERNANDEZ JR	11/15/2012	14.12	Mon-Sun	All
62	ALBERT O HERNANDEZ JR	11/16/2012	17.43	Mon-Sun	All
80	ALBERT O HERNANDEZ JR	11/14/2012	10.74	Mon-Sun	All
93	BRETT T HARMON	11/21/2012	11.31	Tues-Fri	Day
65	BRETT T HARMON	11/22/2012	18.58	Tues-Fri	Day
73	BRETT T HARMON	11/16/2012	14.43	Tues-Fri	Day
5	BRETT T HARMON	11/20/2012	16.53	Tues-Fri	Day
22	BRETT T HARMON	11/15/2012	14	Tues-Fri	Day
31	BRETT T HARMON	11/14/2012	34.63	Tues-Fri	Day
3	CHARLES H GUZMAN	11/18/2012	14.12	Sat-Mon	Night
57	CHARLES H GUZMAN	11/17/2012	17.44	Sat-Mon	Night
47	CHARLES H GUZMAN	11/12/2012	9.02	Sat-Mon	Night
50	CHARLES H GUZMAN	11/14/2012	22.16	Sat-Mon	Night
77	CHARLES H GUZMAN	11/14/2012	12.3	Sat-Mon	Night
85	CHARLES H GUZMAN	11/19/2012	7.81	Sat-Mon	Night
64	DAVID SILVA	11/19/2012	9.1	Mon-Thur	Day
52	DAVID SILVA	11/18/2012	17.08	Mon-Thur	Day
37	DAVID SILVA	11/25/2012	12.79	Mon-Thur	Day
7	DAVID SILVA	11/20/2012	16.65	Mon-Thur	Day

Inspection_Package

PACKAGE_ID	INSKEY	INSPTYPE	GROUPID	COMMERCIAL	REASSIGN_TO_BADGE
77	176265	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169787	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	171434	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169917	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169728	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169786	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169693	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	170065	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169741	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169791	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169983	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	171475	PM CLNG	HESM-08-16	Y	CHARLES H GUZMAN
77	169812	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169900	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN
77	169595	PM CLNG	HESM-08-16	<Null>	CHARLES H GUZMAN

Not Scheduled Inspections

Cleaning Priority

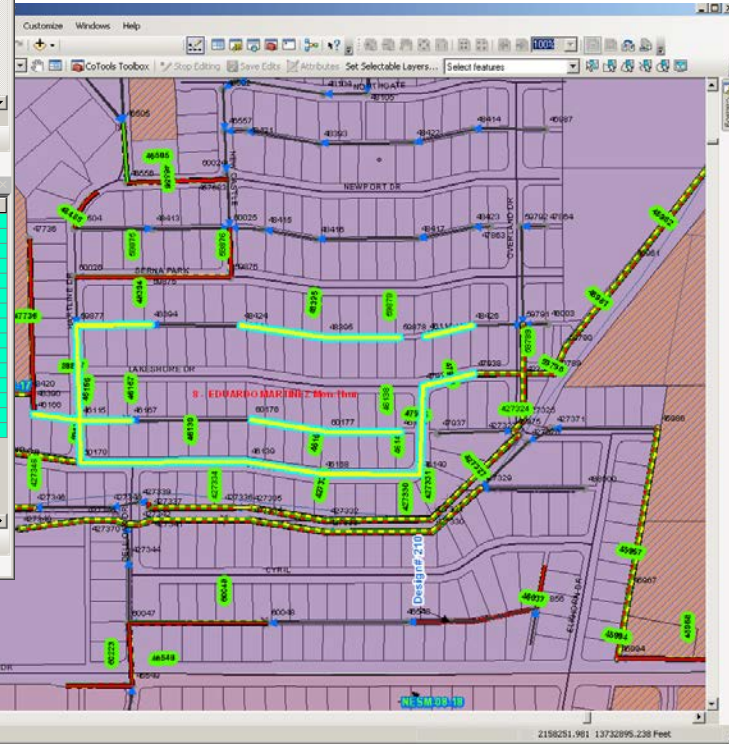
Not Scheduled Inspections

Cleaning Priority

Scheduled Inspections

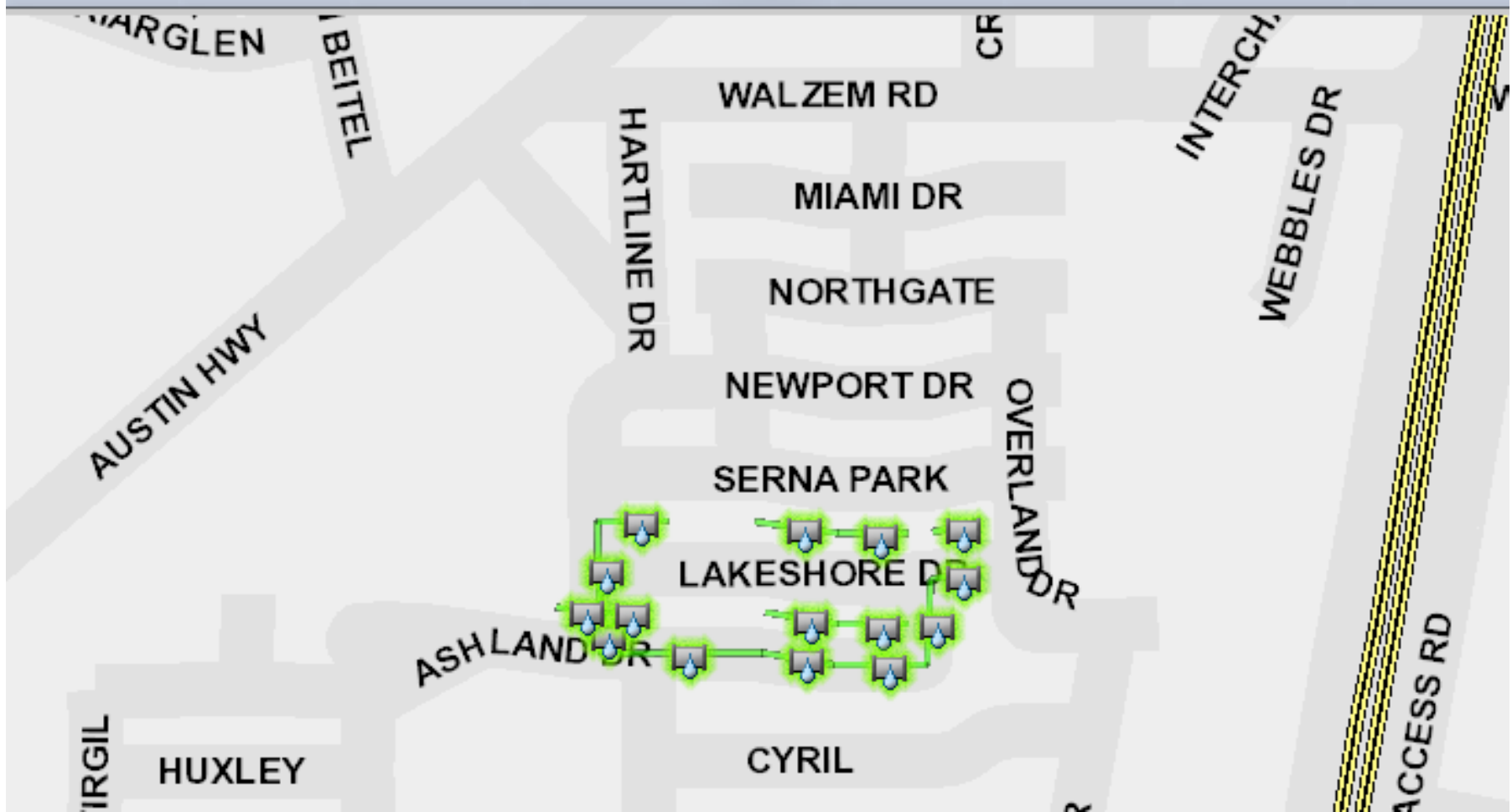
15 out of *2000 Selected

Create Inspections Scheduled Inspections SubAreas_Assignments Past Due Freq Labels All Inspections



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Hansen Inspections



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CO Tools Database

COTools - Microsoft Access

Home

Clipboard Font Rich Text Records Sort & Filter Window Find

Run Import Admin Exception Log

Pending Decision Filter On Off

COMPKEY	UNITID	UNITID2	Decision Type	Old Value	Proposed Valu	Status	Inspectio	PMNUM	Activity	Dian
963756	9205	10206	Cleaning Frequency Change	60	24	Pending	165512	3614	PM CLNG	
963842	8763	6628	Cleaning Frequency Change	24	12	Pending	176682	3698	PM CLNG	
963970	21731	9205	Cleaning Frequency Change	60	24	Pending	165538	3823	PM CLNG	
964114	7104	6855	Cleaning Frequency Change	12	24	Pending	162943	3964	PM CLNG	
964297	17144	6920	Cleaning Frequency Change	60	24	Pending	179416	4147	PM CLNG	
964565	9464	10535	Cleaning Frequency Change	60	24	Pending	177895	4413	CR CLNG	
964709	7179	5159	Cleaning Frequency Change	60	24	Pending	165480	4555	PM CLNG	
964956	6928	6803	Cleaning Frequency Change	60	24	Pending	179415	4802	PM CLNG	
964973	8347	21089	Cleaning Frequency Change	60	24	Pending	182834	4819	INV CLNG	
965010	17032	4637	Cleaning Frequency Change	12	24	Pending	157723	4856	PM CLNG	
965056	20638	20639	Cleaning Frequency Change	60	24	Pending	181410	4902	INV CLNG	
965533	4885	6928	Cleaning Frequency Change	60	24	Pending	165418	5378	PM CLNG	
965631	6242	8352	Cleaning Frequency Change	60	24	Pending	182963	5475	INV CLNG	
965689	21089	6242	Cleaning Frequency Change	60	24	Pending	182958	5533	INV CLNG	
965860	2635	2636	Cleaning Frequency Change	12	24	Pending	166447	5704	PM CLNG	

Record: 14 of 758 Filtered Search

Import All Data Run Algorithm Hide History Hide Recommendations Export Decision Log Add Recommendation Exit

PipeHistory

COMPKEY	Inspection	Activity	Performed Da	Action	Findings	Comments	Insp Statu
964114	162943	PM CLNG	10/4/2012	Cleaning			Work Cor
964114	124716	PM CLNG	9/18/2011	Cleaning		NWSM-04-21-0HS12 / AARON QUINTANILLA / HOT SPOT / PM SEWER MAIN	Work Cor
964114	30086	INV CLNG	10/23/2009	Cleaning	D1		Work Cor
964114	29855	CR CLNG	10/10/2009	Cleaning	D2		Work Cor
964114		Backup	10/10/2009	SSO	Debris/Rock	APPLIED HTH	Work Cor

Form View Num Lock Filtered

Old Value	Proposed Valu	Status
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24	12	Pending
60	24	Pending
12	24	Pending
60	24	Pending
60	24	Pending
60	24	Pending
60	24	Pending
60	24	Pending
60	24	Pending
60	24	Pending
12	24	Pending
60	24	Pending
60	24	Pending
60	24	Pending
12	24	Pending

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GIS Sewer Main Analysis



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CCTV Link



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Cleaning/CCTV Operations

Are there any Questions?



Condition Assessment

Examples of Pipe Condition

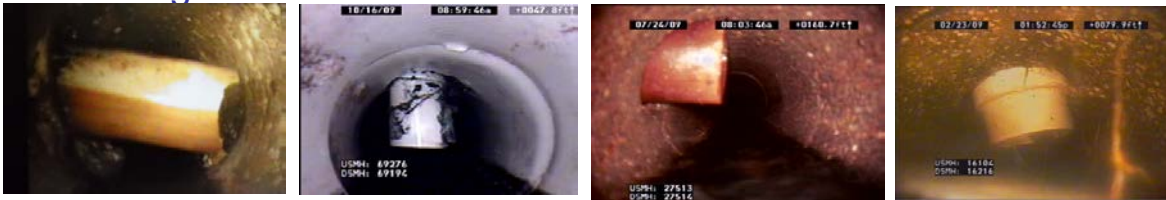
Collapsed Pipe



Missing Pipe/Hole in Pipe



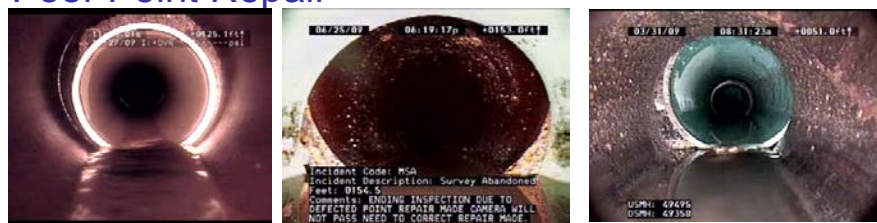
Protruding Lateral



Protruding Gasket



Poor Point Repair



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Examples of Emergencies



Repair as soon as possible

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Normal Design Requests

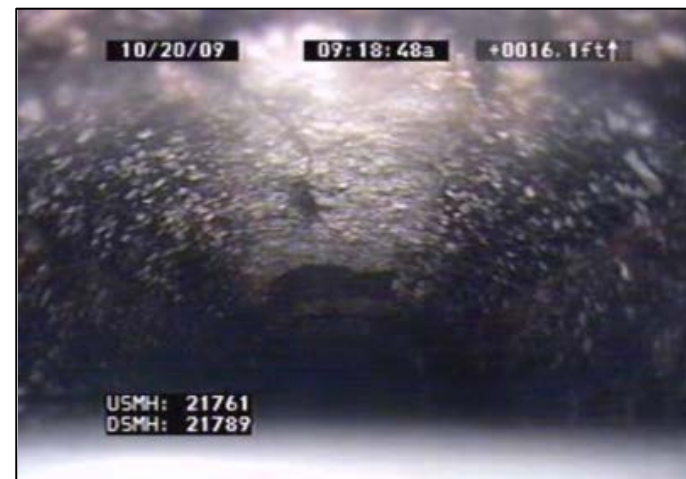
Overview

- Assets with significant defects identified by
 - Review of CCTV video
 - Other forms of inspection
- Prioritized by
 - Assets severity score
 - Risk factors
- Updated bi-monthly by Planning Team and Engineering

Prioritizing Normal Design Request


Factors Considered

- NASSCO Scoring
- Health & Safety Concerns
- Environmental Setting
- Results of Failure



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Example of Design Request Form

 **SAN ANTONIO WATER SYSTEM**
COLLECTION & DISTRIBUTION ENGINEERING
DESIGN REQUEST FORM

DATE: 1/04/2011

LEVEL OF SERVICE ISSUE FAILURE/COLLAPSE/BREAK

EARZ FOCUS AREA _____ FIND IT FIX IT

PROJECT NAME: Summer Sun Lane – Sun Shadow Street

PROJECT LOCATION: North and south easements of 4300 Summer Sun Lane and 4200 Sun Shadow Street

BLOCK MAP NO.: 188-614 and 186-614 Northeast service area

REQUESTED BY: James R. Shipley DEPARTMENT: Proactive Planning
Name

PHONE NUMBER: 233-3963

PROJECT TIMELINE: None
(FOLLOW-UP/RESPONSE DEADLINE DUE TO ENFORCEMENT AUTHORITY)

SCOPE OF WORK: Rehab four sections of 8" VCP sewer main (approximately 1,516) laterals, and related manholes installed in 1965. See asset numbers in the video links below.

JUSTIFICATION: Broken pipe, fractures and cracks, roots, protruding laterals, offsets, and stoppages and spills.

PROJECT TYPE: WATER WASTEWATER BOTH

RECOMMENDED REPLACEMENT METHOD (OPTIONAL, MARK ONE OR MORE):

OPEN CUT PIPEBURSTING CIPP OTHER _____

PRIORITY LEVEL: Four (4) - High

SAFETY HEALTH HAZARD OTHER Stoppages and spills

WILL SERVICE CENTER PERFORM CONSTRUCTION ONCE DESIGNED: YES NO

IF YES, WHAT TIME FRAME ARE THEY AVAILABLE TO START:

IS PROJECT FUNDED: YES NO FROM WHAT SOURCE:

AUTHORIZED BY: _____

C:\Documents and Settings\jshipley\Local Settings\Temporary Internet Files\OLK18E3\4-27-09 Design Request-122008 rev.doc

(DEPARTMENT MANAGER)

ATTACHMENTS:

BLOCK MAP(S) WITH PROJECT AREA HIGHLIGHTED, REQUIRED.

VIDEO, REQUIRED FOR POTENTIAL PIPE BURSTING OR CIPP PROJECTS
FILE NAME IF ON THE CUES SYSTEM AND VIDEO DATE

SITE PHOTOS (TO BE PROVIDED IN ELECTRONIC FORMAT IF POSSIBLE)
(PHOTOS TO BE IDENTIFIABLE, I.E. LOCATION, DIRECTION, ETC.)

OTHER: _____

ROUTE TO KERRY AVERYT, P.E., MANAGER OF REPLACEMENT & IMPROVEMENTS

Map	UpStream	Total Length	Summary	Video Path
188614	48063	400	AGAINST THE FLOW - NUMEROUS PROTRUDING LATERALS - CRACKS - FRACTURES - ROOTS - NEEDS REHAB - JRS 12/18/09	\\Hq-video-01\cues_data\AriesTelevising Central Database\Central_Video\Year_2009\188614-4331 SUMMER SUN LN-48063-48062.dvx
188614	48063		FOLLOW UP TELEVISIONING WITH THE FLOW - NUMEROUS PROTRUDING LATERALS - CRACKS - FRACTURES - ROOTS - NEEDS REHAB - JRS 12/18/09	\\Hq-video-01\cues_data\AriesTelevising Central Database\Central_Video\Year_2009\188614-4331 SUMMER SUN LN-48063-48062_1.dvx
188614	48062	400	AGAINST THE FLOW - BROKEN PIPE - FRACTURES AND CRACKS - ROOTS - PROTRUDING LATERALS - NEEDS PB REHAB /12/09/09 ASM	\\Hq-video-01\cues_data\AriesTelevising Central Database\Central_Video\Year_2009\188614-4307 SUMMER SUN LN-48062-46405.dvx

C:\Documents and Settings\jshipley\Local Settings\Temporary Internet Files\OLK18E3\4-27-09 Design Request-122008 rev.doc

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Rehabilitation Technologies

- **SAWS D&C Team Work Orders**

- Point Repairs
- Open Cut
- Pipe Bursting

- **Contracted Work Orders**

- Point Repairs
- Open Cut
- Pipe Bursting
- Cured In Place Pipe (CIPP)
- Slip-lining



Condition Assessment Services

• Overview of Required Services

- Identify requirements to implement an integrated Team of SAWS staff and Consultants including
 - Resources
 - Processes
 - Best Practices

- Based upon the Condition Assessment, recommend the placement of CCTV's and other inspection methods findings for the appropriate action including
 - Remedial measures
 - Maintenance analysis
 - Monitoring

Condition Assessment Services

- **Inspection Program**

- Condition Inspection Techniques

- Review, modify and develop SOP's for inspection techniques
 - CCTV
 - Pole camera
 - Smoke testing
 - Sonar
 - Dye testing
 - Visual observation
 - Other techniques as appropriate

- Condition Inspection Services

- Develop bid documents for Condition Inspection Services
- Assist in the management of services
- Assist in the management of data

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Condition Assessment Services

- **Assessment and Remedial Measures**

- Condition Assessment

- Assess information obtained from Inspection Program
- Make recommendations
- Develop Standard Operating Procedures (SOP's)
- Develop Quality Assurance/ Quality Control (QA/QC) Program

- Reporting and Remedial Measures Implementation

- Prepare Condition Assessment Reports with findings from the Inspection Program
- Prepare Remedial Measures Reports
 - Identify assets requiring remedial measures
 - Identify most cost effective remedial measures
 - Prioritize and plan implementations of measures
 - Assist SAWS with Plan updates
- Collaborate with SAWS to implement remedial measures

Remedial Measures Services

- **Overview of Services**

- Assist in implementation of Projects identified in both the Capacity and the Condition Remedial Measures Report(s), but not provide design services associated with a specific project
- Develop approach that identifies resources, processes and best practices to implement remedial measures

- **Design Professional Scope of Work**

- Assist in developing Scope of Work for Design Services associated with the Remedial Measures Projects

Remedial Measures Services

- **Design and Specifications**
 - Develop standard construction specifications for the program
- **Design, Bid, and Construction Phase Services**
 - Assist in developing scopes of work for each phase of service which include:
 - Schedule with milestones and deliverables
 - Specific tasks to aid in estimating contract costs for planning
- **Design Review**
 - Assist in the review of design documents
 - Assist with bid phase services

Remedial Measures Services

- Construction Phase Services
 - Assist with selection of Construction Manager related to Remedial Measures, but not eligible for Construction Manager
 - Assist with construction inspection services in early years of Program
- Post Monitoring and Construction
 - Assist in the development of SOP's for post-construction monitoring and condition assessment
- Project Document Management
 - Collaborate with SAWS Information Services and GIS teams in development and training of an all-digital as-built procedure to capture all documents associated with the projects

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Condition Assessment

Are there any Questions?



Capacity Program

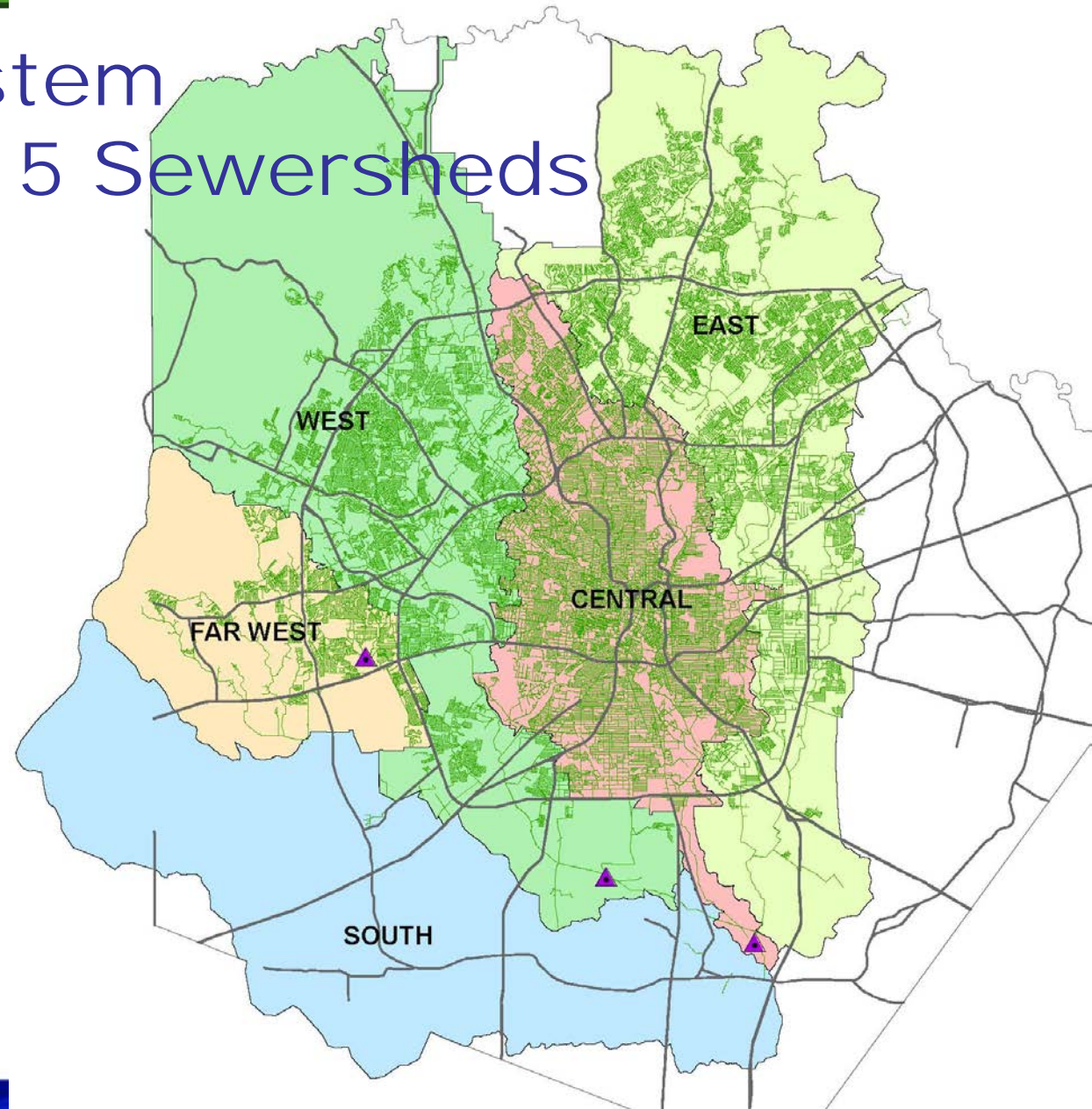
SAWS Wastewater Master Planning

- **4 Modelers**
 - 1 to 4 years experience using Infoworks CS
 - Responsible for model maintenance and wastewater system hydraulic analysis
- **Planner**
 - 11 years experience in GIS
 - Responsible for maintaining wastewater geodatabase and data analysis
- **Demographer**
 - 12 years experience in GIS
 - Responsible for developing population projections, wastewater loading and water demands

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Existing System Divided into 5 Sewersheds

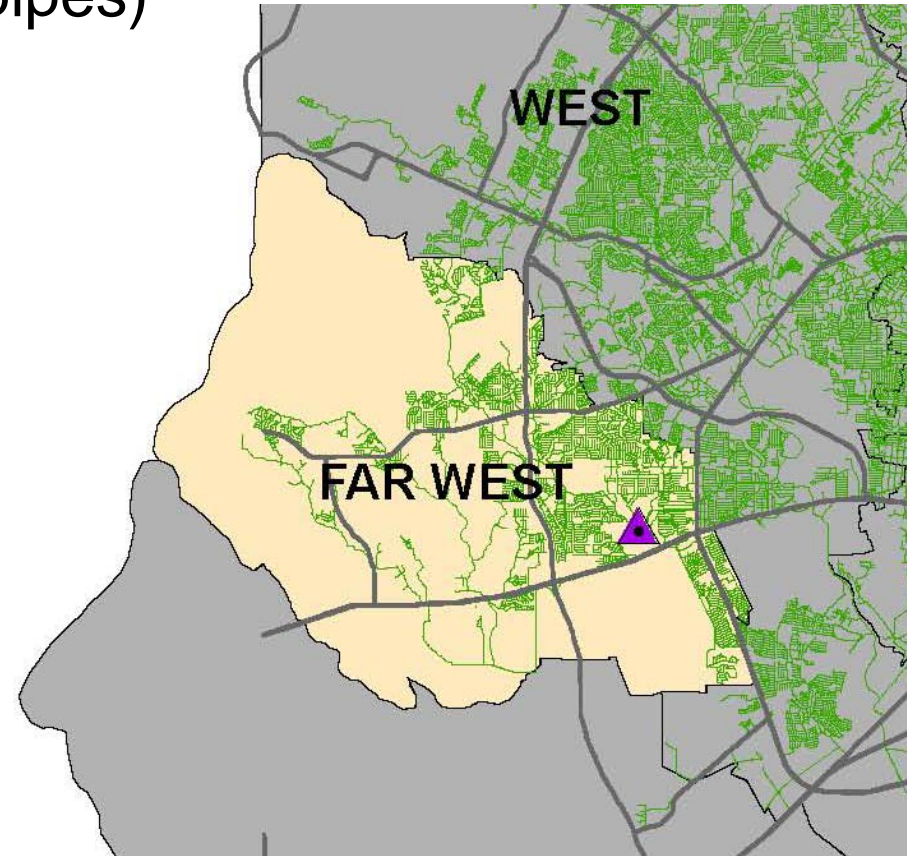
1. Far West
2. West
3. Central
4. East
5. South



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Far West Sewershed

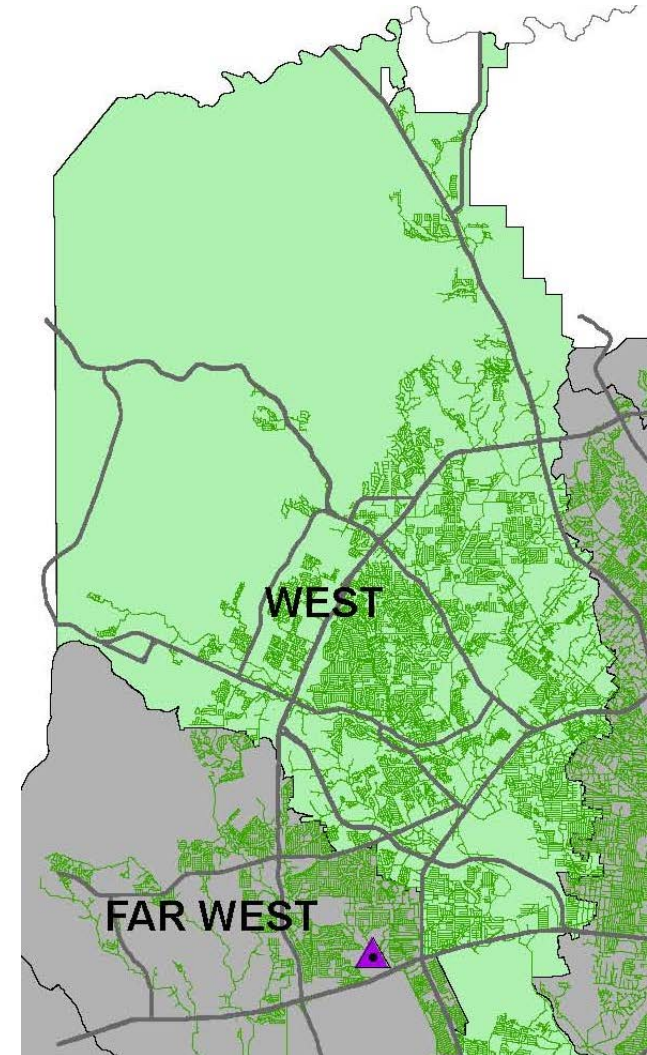
- 8 % of system (by length of pipes)
- 89 square miles
- Main diameters up to 42"
- Medio Creek WRC
- 7 MGD average daily flow
- Hydraulic Model
 - All pipes, 368 miles
 - Calibrated in 2007



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West Sewershed

- 27 % of system (by length of pipes)
- 298 square miles
- Main diameters up to 78"
- Served by Leon Creek WRC
- 37 MGD average daily flow
- Hydraulic Model
 - 12-inch and larger pipes, 346 miles
 - Calibrated in 2007

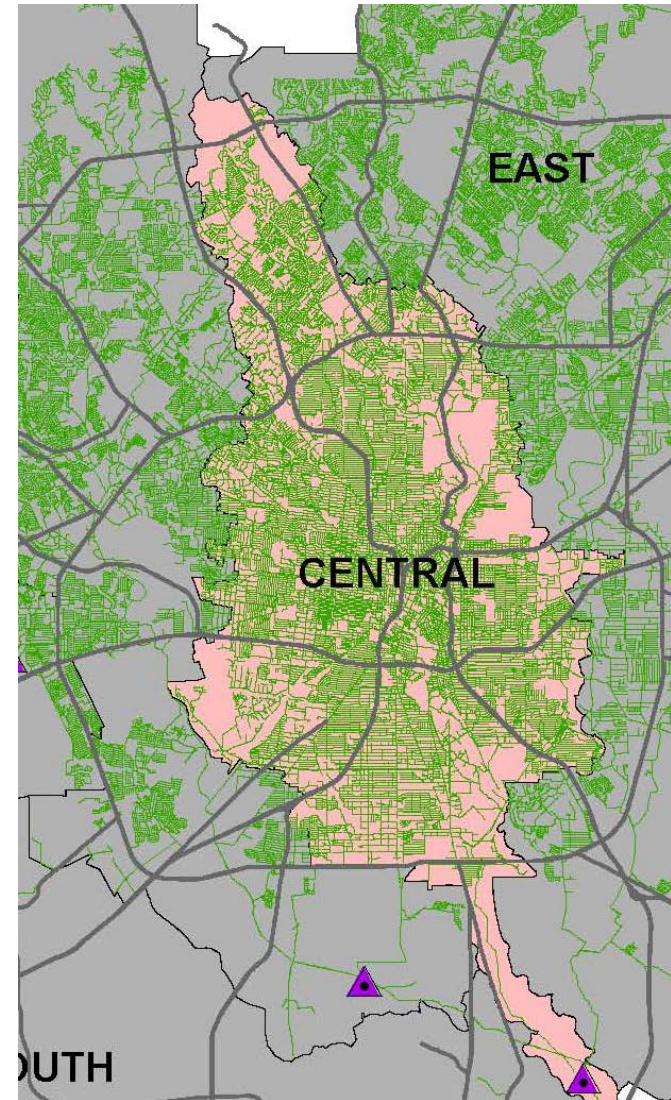


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Central Sewershed

- 34 % of system (by length of pipes)
- 141 square miles
- Main diameters up to 90"
- Served by Dos Rios WRC
- 80* MGD average daily flow
- Hydraulic Model
 - 12-inch and larger, 410 miles
 - Calibrated in 2009

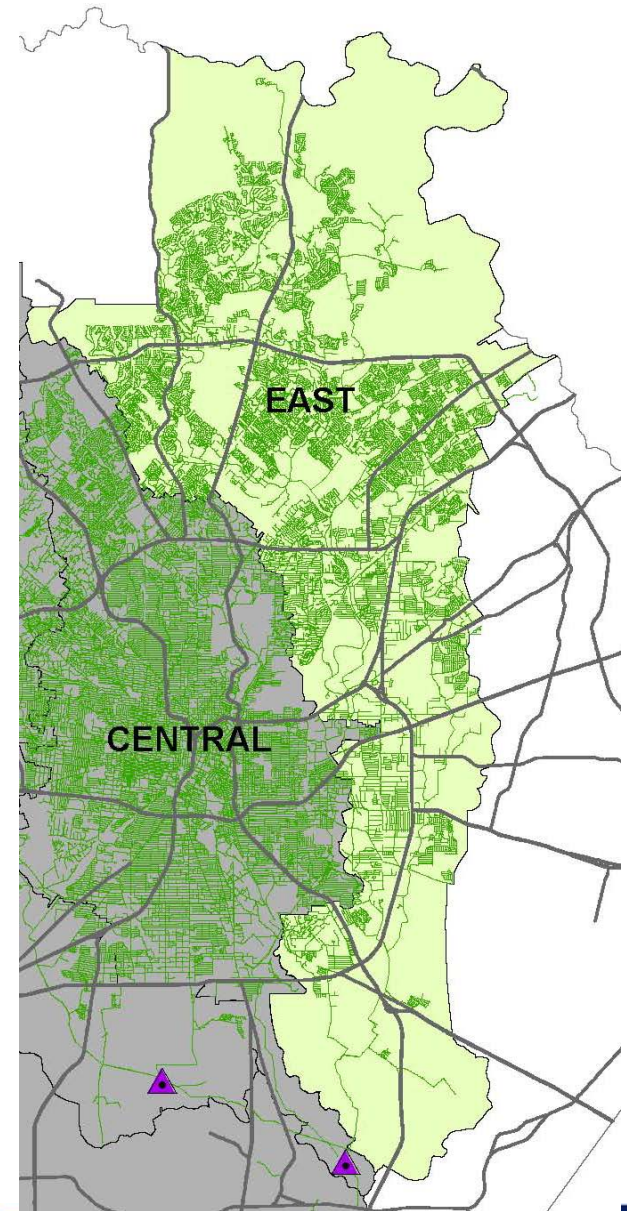
*Flows combined with Eastern Sewershed



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East Sewershed

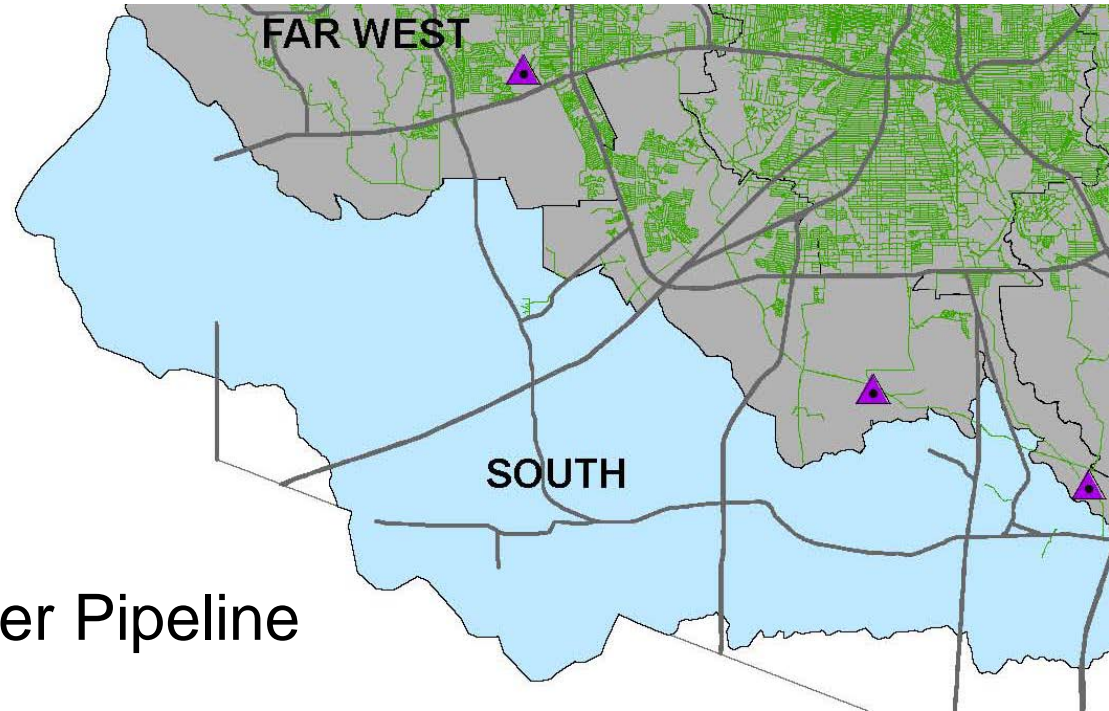
- 31 % of system (by length of pipes)
- 248 square miles
- Main diameters up to 90"
- Served by Dos Rios WRC
- 80* MGD average daily flow
- Hydraulic Model
 - 12-inch and larger, 234 miles
 - Calibrated in 2006
 - Currently being updated



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South Sewershed

- New Sewershed
- 207 square miles
- Southwest Bexar Sewer Pipeline
 - approximately 30 miles of pipe under construction
- Future flows to be treated at Dos Rios WRC
- Model represents the Southwest Bexar Sewer Pipeline



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Status & Uses of the Hydraulic Models

- Status of the model
 - Limited flow metering data for model calibration
 - 5 year 6 hr design storm
 - Not all models have a one to one relationship with GIS
- Uses of the model
 - Predict wet weather SSO's
 - Identify capacity constraints and model potential improvements
 - Bypass pumping during construction
 - Estimate volume of flow for a wet weather SSO
 - Assess available excess capacity for Impact Fees

Current Flow Monitoring & Modeling Program

- SAWS Manages 2 Flow Monitoring Contracts
 - Model calibration
 - I&I studies
 - Capacity Validation
- Modeling and Flow Metering Software
 - Infoworks CS 12
 - Intelliserve
 - Slicer

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Current Efforts for Validating Field Observed SSO's

- Review historical wet weather SSO's
 - TCEQ reports, TV data, cleaning schedule, work orders and design requests
- Categorize SSO's
 - Capacity, Maintenance, Structural
- Determine appropriate monitoring method
 - Flow monitoring, smart cover, chalk etc.
- Analyze Monitoring Data
 - Compare flow response to rain event
 - Compare flow response to model flow

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Overall Capacity Program Services

- Integrated staff approach
 - Provide experienced modelers embedded with SAWS staff
 - Provide technical training
- Review Current Capacity Processes
 - Flow Monitoring
 - Hydraulic Modeling
 - Field Observed SSO Assessment
- Make Recommendations for Process Improvements

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Flow Monitoring & Hydraulic Modeling Services

- Flow Meter/Rain Gauge Monitoring
 - Location, Quantity and Duration
- Field Collected Data
 - Incorporate data into hydraulic model
- Model Calibration
 - Develop best practices
 - Create dry and wet weather scenarios
- Alternative Remediation Analysis
 - Identify least cost improvements to eliminate SSO's

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Field Observed SSO Assessment Services

- Assess Field Conditions
 - Monitoring type/location
- Validate the Monitoring Data
 - Ensure that the data makes sense
- Data Management and Assessment
 - Document and manage
 - Modeled vs. observed
 - Capacity constraints (Root Cause)
 - Model Adjustments

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Capacity Program

Are there any Questions?



Information Systems

Information Systems Overview

Philosophy

- Enterprise Approach
 - High Performing
 - Sustainable
 - Scalable
 - Secure
- Convergence
 - Synergy
- Industry Accepted Standards and Technology

Information Systems Overview

- **Current Enterprise Portfolio**
 - Infor Hansen 8 – Work Order, Inspection, Asset and Permitting Management
 - Infor Lawson 9 – Budget, Financial and Human Resource Management
 - ESRI ArcServer 10 – Geographic Information Systems (GIS)
 - Kronos Workforce Central – Time Management Software
- **Existing Program/Project Management Tools**
 - Meridian Systems Prolog Converge
 - CIPPlanner CIPAce
 - MS Project
- **Technology Standards**
 - Operating Systems: MS Windows 7, MS Server 2012
 - Database: MS SQL 2012, Oracle 11g
 - Development Platform: MS .Net Framework

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Information Systems Overview

- Standalone SSO Tools

- Peninsular PipeTech – CCTV Inspection Data and Video Management
- COTools – Cleaning Frequency
 - MS Access
- GIS COTools – Cleaning Inspection Scheduler
 - ArcGIS for Desktop
 - ArcGIS Data Interoperability Extension
- Sewer Maintenance History and Research Analysis Application
 - MS Access
- Central Televising Tool – CCTV Warehouse
 - MS Access
- Engineering Design Request Form
 - MS Access
 - Excel
- InfoWorks CS version 12.0 – Hydraulic Modeling
- Tracker – As-Built Management
 - MS Access

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Information Systems Overview

I.S. Program Management Office

- Manages the enterprise-wide program/project management practices, governance standards, processes, and metrics as it relates to Information Systems

Defines the single, standard process for implementing and delivering information systems at SAWS



What SAWS is looking for in the System Integrator Role

- Applications and Technology in Scope
 - Video Televising System Enterprise Upgrade
 - SSO Automation Enterprise Upgrade
 - Capital Project Management System
 - Document Management
 - Data Warehouse/Management
 - GIS, Modeling, Reporting and Dashboards
 - Any Information Systems Required to Support the SSO Program

- Planning Horizons
 - Evaluate Current and Planned Information Systems
 - Define Short, Medium and Long Term Plans

What SAWS is looking for in the System Integrator Role

- Information Systems and System Integrators Relationship
 - I.S. Program Management Office
 - Defines the standards and process for delivering information systems in support of the SSO
 - System Integrator
 - Executes this process to deliver information systems in support of the SSO Program
- SAWS Stakeholders and System Integrators Relationship
 - SAWS Stakeholders
 - Defines the information system functional requirements in support of the SSO Program
 - System Integrator
 - Translates these functional requirements into technology recommendations and system delivery

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What SAWS is looking for in the System Integrator Role

- Project Management Expectations
 - Partners with I.S. PMO to Initiate, Plan, Execute, Monitor, Control, and Close projects using and complying with the PMO process
 - Satisfying Program expectations by ensuring that projects meet established scope, schedule, cost, and quality
 - Manages change using the established Change Control Process
 - Manages project issues, risk and jeopardizes utilizing established Risk Management Process
 - Acts as the Information Systems point of contact for the project stakeholders

What SAWS is looking for in the System Integrator Role

- Project Deliverables
 - Project deliverables can include but are not limited to:
 - Project Plan
 - Business Requirements
 - Technical Requirements
 - Work Flows
 - Users Functionality
 - Reporting
 - Server Specifications
 - Performance Needs
 - Service Level Requirements
 - Interface Design
 - High-Level Design
 - Detail Design
 - Common Off the Shelf or Custom Developed Software Products
 - Unit, System and User Acceptance Test Plans and Scripts
 - Technical Supporting Documents
 - User Guides
 - Administration Guides
 - Service Level Agreements



Information Systems

Are there any Questions?



Evaluation/Selection Process

SSO PM Services RFQ Key Dates

- RFQ release date November 5, 2012
- Pre-submittal Meeting November 15, 2012
- Written Questions Due November 20, 2012
- Answers to Questions November 28, 2012

Submittals Due – December 19, 2012 @ 2 pm

November 15, 2012

SSO PM Services

RFQ Key Elements

- Submit all questions in writing
 - No later than November 20th @ 4 pm CT
- Submittals Due: December 19th, 2012 @ 2 pm CT
 - Contracting Department: Customer Svc Bldg Room 171;
 - Allow time to check-in with Guards;
- Page Limit requirement is 50 pages; 12 copies
- Subscribe to the SSO PM Services Solicitation
 - Vendor Registration System;
 - Notification of future changes

November 15, 2012

SSO PM Services Evaluation

Criteria	Max Points
Team Quals. & Prime, Sub & Integrator's Relevant Exp.	30
Project Approach & Team Integration	30
Information Systems Integration	20
Risk Identification & Management	5
SMWB Participation	15
Total	100

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SMWB Scoring

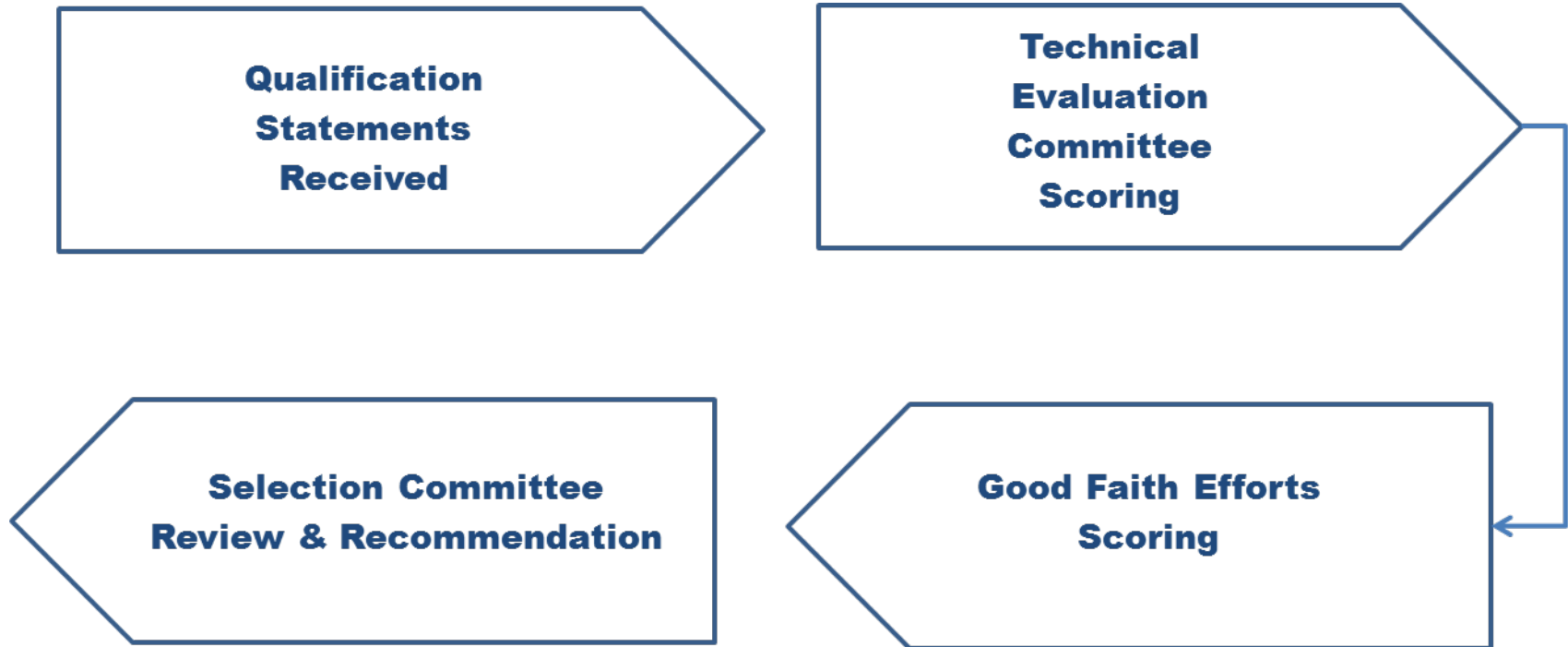
- Maximum of 15 Points
 - SMWB Participation Percentage (up to 10 points)
 - The scoring of the SMWB participation percentage will be based on the documented commitments to identified SMWB on the Good Faith Effort Plan (GFEP) and points awarded as follows:
 - SMWB Participation Percentage between 1% and 3%: 1 Point
 - SMWB Participation Percentage between 4% and 6%: 2 Points
 - SMWB Participation Percentage between 7% and 9%: 3 Points
 - SMWB Participation Percentage between 10% and 12%: 4 Points
 - SMWB Participation Percentage between 13% and 15%: 5 Points
 - SMWB Participation Percentage between 16% and 18%: 6 Points
 - SMWB Participation Percentage between 19% and 21%: 7 Points
 - SMWB Participation Percentage between 22% and 25%: 8 Points
 - SMWB Participation Percentage between 26% and 28%: 9 Points
 - SMWB Participation Percentage between 29% or more: 10 Points

SMWB Scoring, cont'd

Mentor-Protégé Program with an SMWB entity (up to 5 points)

1. Identification of an SMWB business entity targeted for this mentor-protégé partnership
2. Description of plan to implement and maintain this partnership for duration of project
3. Description of plan to help the SMWB protégé to grow, i.e., management strategies, program experience, specialized software training, etc.
4. Description of measurable benchmarks for the growth that will be tracked and reported to the SAWS SMWB Program Manager
5. Description of communication plan to report Protégé progress to the SMWB Program Manager

SAWS Evaluation Process





Evaluation/Selection Process

Are there any Questions?

Draft Contract



Draft Contract

- “Place Holder” Provision in the Contract for sharing of penalties:
 - Further discussed during the negotiations after the award
 - Anticipate CD will be Lodged, which will allow for this to be better defined
- Request that any exceptions to the Contract are noted in the response to the RFQ

Draft Contract



Are there any Questions?



Wrap Up/Overview

Questions and Answers