SAWS SSO Reduction Program: Lessons Learned

Presented to HGAC
Presented by: Eric Wessels, Program Manager
CMOM Programs vs. Asset Management

- CMOM – Capacity, Management, Operations and Maintenance
- Asset Management
  - Inspection and Condition Assessment
  - Decision Making: Maintain, Repair, Rehab or Replace
  - Optimized O&M

- Key Lessons Learned:
  - CMOM is Asset Management w/ a Recommended Framework
  - Tailor Programs for Your Specific Issues
  - Keep Programs Practical and Solution-Oriented
Typical Consent Decree Process

Section 308 letter → Draft CD → Negotiations → Final CD → Implement → Monitor
Comprehensive Program Overview
Workload Analysis/Staffing Strategies

Lessons Learned:
- Forecast Long-Term Workload for Your Program
- Develop and Implement a Staffing Strategy
Lessons Learned:

Develop Contracts for Peak Field Services Workload
Have an Outreach Strategy
Reporting Requirements
Lessons Learned:

**Importance of Data Management and Document Control**

-Critical for Demonstrating Compliance
Pipes that are too small for the flow may be upsized to manage identified capacity constraint(s).
Key Lesson Learned:

Verify Capacity Constraints Prior to Selecting Projects
Key Elements: FOG Program

- FOG
- Cleaning
- Education
- Enforcement
“Hot Spot” and System-wide Cleaning Programs
Lesson Learned: **Clean the Right Pipe at the Right Time**
Lesson Learned: Cleaning Schedules

- Asset-based
- Pipes cleaned within a “maintenance window”
- 1, 3, 6, 12, 24 and 60-month schedules
- Use Cleaning Optimization Program (COTools) to manage scheduling
Condition Assessment: A-E Condition Rating
Lesson Learned: Develop Decision Guidelines for Maintenance, Monitoring and Alternative Analysis
Key Lessons Learned:
Maintain a Program Master Schedule
Forecast and Understand Program Cash Flow
Lesson Learned:
Aggressively Eliminate/Manage “Hot Spots”
Lesson Learned:
Monitor High Risk Assets Until Construction
Performance Measurement – Lessons Learned

- Set targets
- Include interim milestones
- Monitor progress
- Create a “Watch List”
Example Program Performance Charts

- SSOs – 12 Month Moving Average
Example Program Performance Charts

- Small Diameter Pipe Inspection
- Large Diameter Pipe Inspection

**EXECUTIVE SUMMARY**

**SEWER INSPECTION**

- **SD Inspection Pre 1973 Clay, All Concrete, and All EARZ -- CCTV**
  - Pole camera inspection will be back on schedule as contractors start work under a new contract in 2015.

- **SD Inspection Post 1972 thru 1982 -- CCTV and Pole Camera**
  - Large diameter sewer inspection is ahead of the trend needed to reach the CD requirement.

- **Large Diameter Sewer Inspection**
  - CD Deadline/Requirement

As of December 31, 2014
Investing in Our Sewer System

- Fix or Remove Lift Stations
- Repair or Replace
- Clean Pipes
- Measure Capacity
- Visual Inspection
## Projected Sewer System Investments

<table>
<thead>
<tr>
<th></th>
<th>Operating</th>
<th>Capital</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projected Over 10 Yrs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Investment After the Consent Decree</td>
<td>$251.7 M</td>
<td>$840.4 M</td>
<td>$1.092 B</td>
</tr>
<tr>
<td>Historical Average Spending Level</td>
<td>$148.0 M</td>
<td>$452.0 M</td>
<td>$600.0 M</td>
</tr>
<tr>
<td>Additional Investment as a Result of the Consent Decree</td>
<td>$103.7 M</td>
<td>$388.4 M</td>
<td>$492.1 M</td>
</tr>
</tbody>
</table>
Outcomes: Repeat and Public Notice SSOs

- Repeat SSOs:
  - 2012: 81
  - 2013: 6
  - 2014: 20

- Public Notice SSOs:
  - 2012: 9
  - 2013: 56
  - 2014: 4
SSOs Summary 2009-2014

Sewer Investments are Working

SSO by Month High/Low 2009-2013 vs 2014
Questions and Discussion

Presented to HGAC
Presented by: Eric Wessels, Program Manager