NBU Comprehensive Sewer Maintenance Programs
Outline

- Sanitary Sewer Maintenance Regulatory Requirements
  - Federal (EPA – CMOM)
  - State (TCEQ – SSOI)
- NBU’s Performance
- CMOM Programs at NBU
Sanitary Sewer Maintenance Regulatory Requirements

- **Purpose**: Prevent Sanitary Sewer Overflows (SSOs)
Sanitary Sewer Maintenance Regulatory Requirements

- **Federal: EPA**
  - Capacity, Management, Operations & Maintenance (CMOM)
- **State: TCEQ**
  - Sanitary Sewer Overflow Outreach Initiative (SSOI)
What is CMOM?

• A collection of EPA recommended programs designed to prevent SSOs
• Programs cover all aspects of the utility
• Almost became law in 2000
• Selective implementation since that time
• 1st implementation step is an audit
• Where is the TCEQ in all of this?
TCEQ’s SSOI

- Encourages comprehensive planning to prevent SSOs
- Participation is voluntary
- Offers protection from enforcement action by TCEQ for SSOs
- No penalties for participating
- Requires a formal agreement (“SSO Agreement”) between utility and TCEQ
CMOM & SSO Plan
How are they Related?

CMOM programs are implemented to achieve the aims of an SSO Plan, which is…

To Prevent SSOs
CMOM & SSOI at NBU

- CMOM Self-Audit Completed June 2007
- Interviews with NBU staff to collect data
- Gap Analysis: *Where We Are, Where We Need to Be, How Do We Get There*
- Executed SSO Agreement May 2010
NBU’s Performance

• NBU averages 20 SSOs/yr or 6/100 miles of pipe
• **EPA** threshold for poor performance is 8 SSOs/100 miles of pipe (26/yr for NBU)
• **TCEQ** wants no repeat SSOs and a reduction in total # of SSOs
SSO Root Cause Analysis Summary for Fiscal Year 2009

<table>
<thead>
<tr>
<th>SSO Root Cause</th>
<th>Number of SSOs</th>
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<tbody>
<tr>
<td>Structural Failure</td>
<td>8</td>
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<tr>
<td>Foreign Object Damage</td>
<td>2</td>
</tr>
<tr>
<td>Contractor Damage</td>
<td>2</td>
</tr>
<tr>
<td>Vandalism</td>
<td>2</td>
</tr>
<tr>
<td>FOG</td>
<td>2</td>
</tr>
<tr>
<td>FOG and Structural</td>
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</tr>
<tr>
<td>Roots</td>
<td>1</td>
</tr>
<tr>
<td>Sediment</td>
<td>1</td>
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</table>
New Braunfels, Texas
Caddell Ln

MH 1372 → MH 1371
8
Clay / VCT

roots heavy

02:49p
01.10.2008
168’11”
New Braunfels, Texas
Roseparks

debris grease medium from 04 to 08 o'clock

02:43p  10.24.2007  141°06'
NBU CMOM Programs

- Assigned CMOM responsibilities to an operations supervisor
- Root cause analysis on all blockages including video inspection
- Purchased lateral camera to supplement CCTV van
- SSO database
- Implemented CMMS
NBU CMOM Programs

- Revised SSO reporting form
- FOG program
- Sewer inspection & cleaning routes
- Lift station preventive & predictive maintenance
- Map sewer trouble calls
- SSO Emergency Response Procedure
NBU CMOM Programs

- Performance measures
- GIS (Asset survey, record drawings)
- System maps (field use includes paper as well as laptops)
- Monthly Engineering/Operations Coordination Meeting
- Preventive sewer cleaning
- TCEQ licensing incentive
NBU CMOM Programs

• Analyzing downstream capacity when new developments are reviewed
• Lift Station Emergency Response Procedure
• Sanitary Sewer Evaluation Survey (SSES)
Questions?