Sanitary Sewer Overflow Reduction Program – Status Report

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San Francisco Bay Water Board
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Overview

- Describe problem
- Board's sewage spill reduction efforts
- State of Bay Area sewage spills
- Collection system problems and fixes
- Board's future efforts to reduce sewage spills

What are Sewage Spills?

- Sewage spills occur from treatment plants and sanitary sewer collection systems
- Focus on sewage spills (sanitary sewer overflows) from collection systems
- Sanitary Sewer Overflow is “any overflow, spill, release, or discharge of sewage from a sanitary sewer collection system”

Examples of Sewage Spills

Sewage Spill Impacts

- Environmental damage
- Public health risks
- Impairment of Beneficial Uses

Regulatory Efforts to Reduce Sewage Spills

2003: Sewage Spill Resolution
- reduce sewage spills
- BACWA collaboration

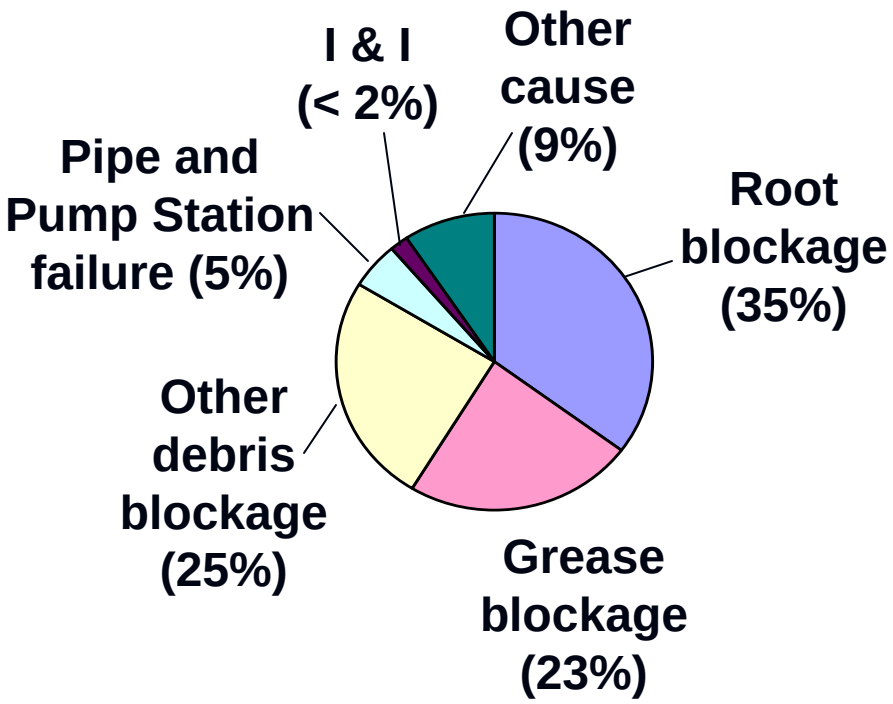
2004: Improve Regional Sewage Spill Reporting
- consistent reporting requirements
- web-based reporting system

2005: Sewer System Management Plans and Private Lateral Resolution

2006: General Waste Discharge Requirements

State of Sewage Spills (cont'd)

Causes of 2006 Sewage Spills

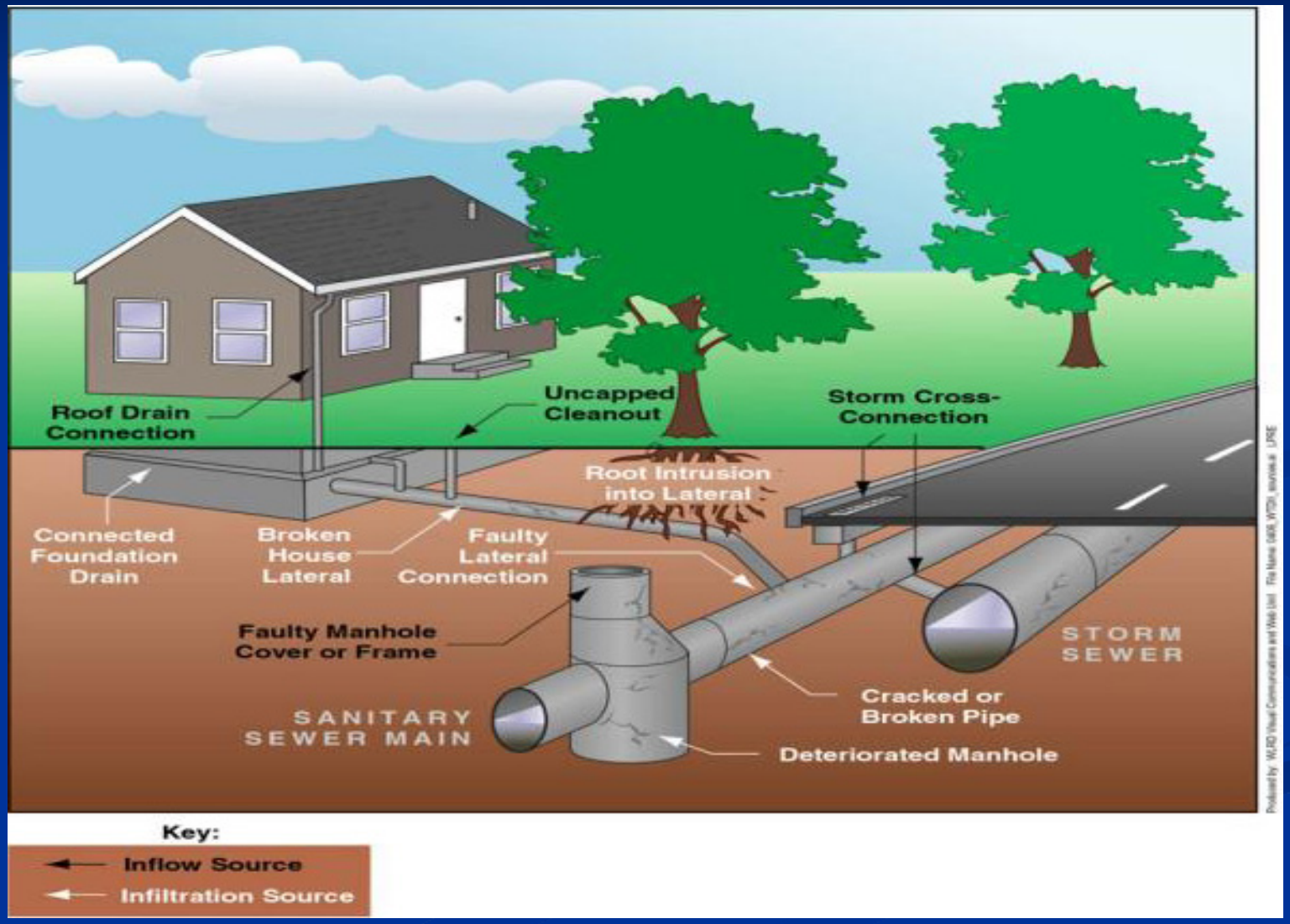


State of Sewage Spills (cont'd)

Insufficient Capacity-Related Sewage Spills

- Number of Sewage spills is small (< 2%)
- Volume of sewage spilled is large (contributed 36% of total volume in 2006, 76% in 2007)
- Cannot be contained
- Discharged to storm drains, creeks, and SF Bay

Where Does I/I Occur?



System Problems & Fixes

- Strategic operation and maintenance

- Infrastructure rehabilitation

System Problems & Fixes (cont'd)

Follow Sewer System Management Plans

- number and volume of sewer spills should reduce
- success depends on level of commitment and hurdles faced

System Problems & Fixes (cont'd)

Hurdle # 1:

- Expertise needed for strategic operation and maintenance "asset management" program
  - Execution of efficient preventative maintenance program
  - Most sewage spills result of chronic repetitive conditions
  - Need to identify/manage conditions to extend life of collection system and prevent spills

System Problems & Fixes (cont'd)

Key to Hurdle # 1

- Geographically based tracking systems
- Need adequate fee base
- Small collection systems might need to consolidate

System Problems & Fixes (cont'd)

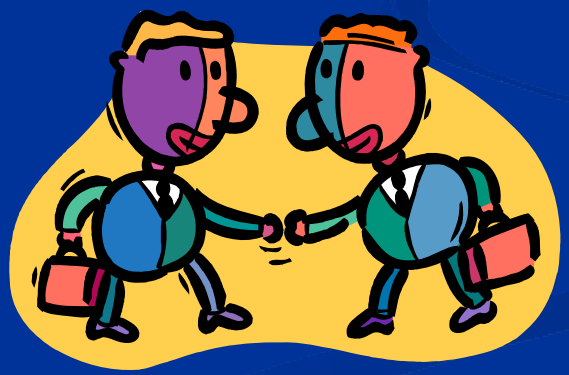
Hurdle # 2

- Lack of incentive for infrastructure rehab by interconnected collection systems
  - infrastructure rehabilitation costs millions of dollars
  - connected systems often do not have peak flow caps
  - sewer fees/treatment plant capacities allocated based on dry weather sewage flows

System Problems & Fixes (cont'd)

Key to Hurdle # 2

- Need regulatory structure to require interconnected systems to coordinate



System Problems & Fixes (cont'd)

Hurdle # 3

- Need rehabilitation of private infrastructure
  - nearly half of sewer pipe infrastructure is privately owned ("private laterals")
  - private laterals connect homes to sewer main lines
  - most private laterals are old and leaky (main source of infiltration) and replacement cost is in $1000s
  - ordinances requiring inspection/repair is rare

System Problems & Fixes (cont'd)

Key to Hurdle # 3

- Need local ordinances
- In 2005, Board recognized need by adopting resolution supporting sewer lateral management programs
- Board approved four supplemental environmental projects totaling $800,000 supplementing homeowner replacement costs

Future Efforts

- Opportunities for third party certification program of Sewer System Management Plans
- Develop reliable comparative performance rating system

Future Efforts

- Focus enforcement efforts against agencies with
  - Capacity-related sewage spills (wet weather)
  - Large dry weather spills
  - Under-reporting sewage spills
  - High spill rates
- Continue to coordinate with U.S. EPA and non-government organizations


SEWAGE
SPILLS

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