CITY OF COLUMBIA
PROPOSED
SEWER BALLOT
2013
PROBLEMS

- Aging Infrastructure
- Private Common Collector Sewers
- Inflow and Infiltration
PROBLEM - AGING INFRASTRUCTURE and PRIVATE COMMON COLLECTOR SEWERS

- Sanitary Sewer Collection System has:
  - 675 miles of gravity sewer lines
  - 17,717 manholes and cleanouts
  - 25 pump stations
  - 22 miles of force main

- Approximately 30% of the system exceeds 50 years of age with portions exceeding 100 years.

- Over 175 miles of the system has exceeded its expected life.

- Approximately 8 miles of private common collector sewers
Devine Court
Broken main at lateral connection
Manhole in Need of Rehabilitation
Distance: 110.9

Heavy Roots In Comm.
Clock from: 10
Clock to:
Rating:
Comments: Heavy roots in main line -- blocking the main line -- should be 5000

Wyatt Lane
Roots in main line protruding from lateral connection
Wyatt Lane

Roots in lateral connection after main has been cleaned.
Solution to Aging Infrastructure

- Continue sewer main and manhole rehabilitation and/or replacement program
  - Bond issue would fund a 5 year program to rehabilitate sewer mains and manholes that are in structurally poor condition.
AGING INFRASTRUCTURE

Before

After
Solution to Private Common Collector Sewers

- Bonds will finance a 5 year continuation of the Private Common Collector Elimination program to replace PCC with new public sewers.

Stewart & Medavista
Thilly & Lathrop
Wilson & High
Maplewood
Wilson & Ross
Calvert Drive

Cliff Drive
Spring Valley Road
Bingham & West Ridgely
Ridgemont
Westwood
Also known as I&I, this is term that describes the entry of ground water and storm water into the sanitary sewer collection system.
WHY IS THIS A PROBLEM

• WWTP does not have the capacity to treat the volume of wastewater being conveyed to it.

• Results in Sanitary Sewer Overflows and Backups into Buildings
  • 308 SSOs since October 1, 2008
  • 71 reported backups since October 1, 2008

• Violates Federal and State Clean Water Laws

• Public Health Issue

• Provides poor service to the sewer customers and the community as a whole.
Dry Flow vs. Wet Flow

Total Rain 1.38 (in) / Intensity 1.37 (in/hr)

- Inflow
- Infiltration

Flow (mgd) vs. Time (hr)

- Wet-Day Flow
- Dry-Day Flow
- Rain Fall
SSO = Sanitary Sewer Overflow

308 SSOs due to wet weather from October 1, 2008 to May 15, 2013
SSO = Sanitary Sewer Overflow

308 SSOs due to wet weather from October 1, 2008 to May 15, 2013
Spring Valley Road
Sewer backup in basement Spring 2013.

71 reported sewer backups into buildings due to wet weather events from October 1, 2008 to May 15, 2013.
Solution to Inflow and Infiltration

• Bonds will finance a 5 year program to reduce inflow and infiltration into the sanitary sewer collection.
• Achieved by performing work in individual sewer basins. Work includes
  • Identification of I&I sources, both public and private.
  • Elimination of illegal connections, downspouts, sump pumps, area drains, etc.
  • Rehabilitation of sewer lines and manholes in each basin.
  • Monitoring to determine effectiveness of the program
Goals of Inflow and Infiltration Reduction

- Reduce the peak flow in each individual sewer basin to a level that eliminates all sanitary sewer overflows and backups into buildings in the individual basins.

- Reduce peak flow to the WWTP to eliminate overflows near the WWTP

- Worth noting that it may be necessary for the City to reevaluate service lateral responsibilities to achieve these goals. To be determined as monitoring is completed.
2013 Proposed Bond Issue

- Inflow and Infiltration Reduction: $16.0 Million
- Sewer Main & Manhole Rehab: $3.5 Million
- Private Common Collector Elimination: $3.9 Million
- WWTP Digester Improvements: $4.1 Million
- Bond Financing Cost: $0.5 Million
- Total: $28 Million
## Columbia User Rate Increases

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QUESTIONS?