



Consideration of  
Wastewater Lateral Repair and  
Replacement Program  
City Council Work Session  
October 29, 2015  
*City of Fairfax*  
*Department of Public Works*

# City Council Legislative Goal



“Build strong, safe, and secure neighborhoods, and improve residential quality of life through active community participation, improved connectivity through enhanced and inclusive communication, provide a safety net for those in need, well-funded renovation programs, a culture of shared accountability, and robust city services.”

**adopted by the City Council on July 22, 2014**

# AGENDA

- A. Purpose of Work Session Item
- B. Summary Review of Previous Work Session Presentations and Findings
- C. Lateral Repair Program Phases
- D. Developing the Business Case for Phase I

# A. Purpose of Work Session Item

- I. Decide whether or not to consider Phase I of a Wastewater Lateral Repair and Replacement Program and move to a community outreach and Public Hearing effort

## B. Summary Review of Previous Work Sessions

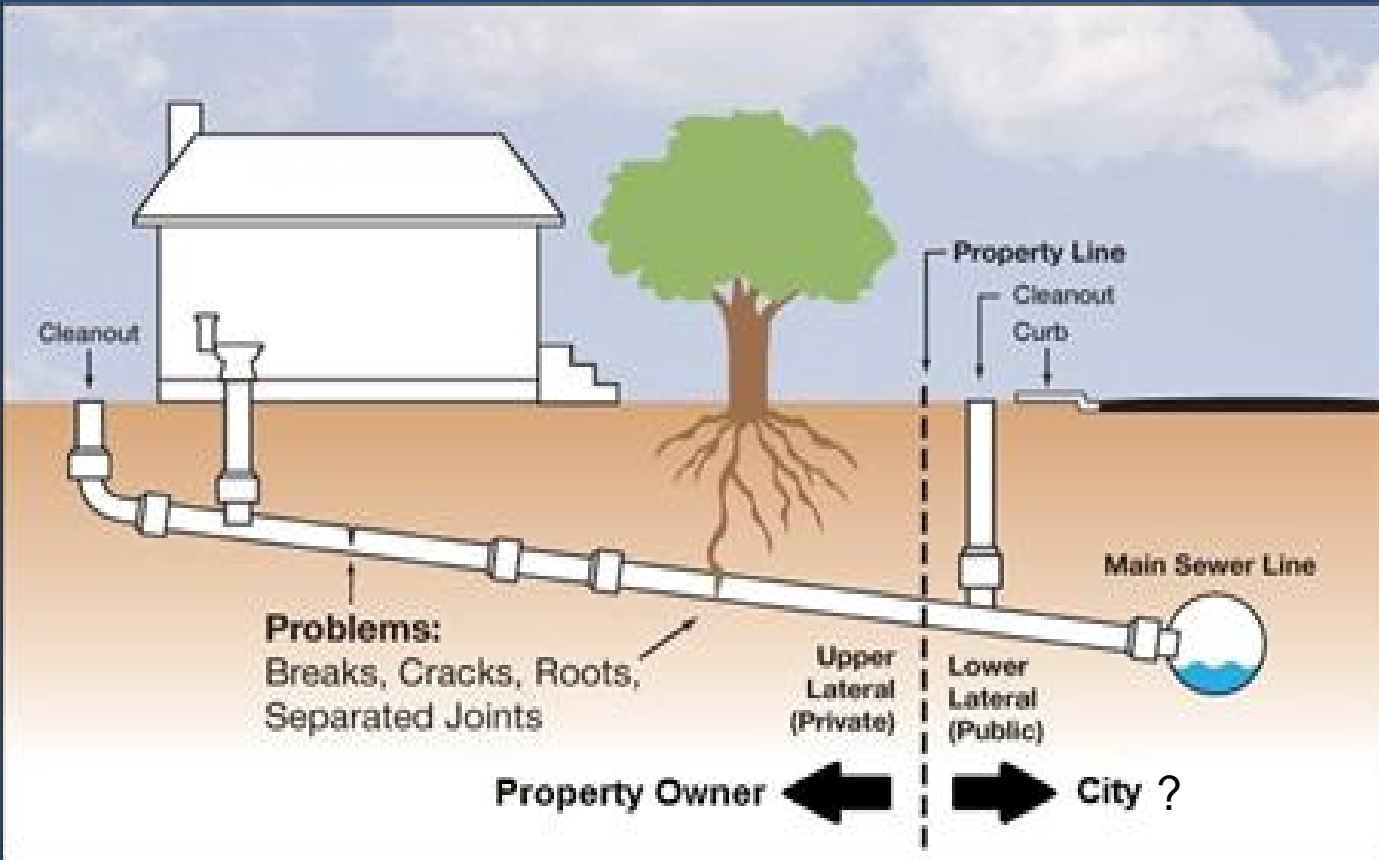
1. Laterals - the “Final Frontier” for Wastewater Infrastructure.
2. Modern trenchless technologies suitable for wastewater lateral repair and replacement – a proactive opportunity.

## B. I. The “Final Frontier”

1. Over 76 million wastewater laterals in U.S.A.  
(Census Bureau)
2. Laterals given least attention of Wastewater System
3. Lateral failures result in expensive solutions for customers
4. Lateral conditions can result in excessive inflow and infiltration of rainwater; hence higher treatment volume and cost
5. Much greater attention given today by many Utilities

# Why Wastewater Laterals are given less attention

- BY THE HOMEOWNER:
  - Out of sight out of mind
  - Expensive to Inspect
  - Easy to procrastinate
- BY THE UTILITY:
  - Expensive to inspect
  - Too many to manage
  - Complex issue of Responsible Management Entity



## Laterals - the issue of the “Responsible Management Entity”



Utility Responsibility from the Property Line to the Main =  
43% in USA\*

\*Ref: WERF Study

Regionally, the following take responsibility within the ROW

1. Town of Herndon
2. DC Water
3. WSSC (Montgomery and Prince George's Co)
4. Prince William Service Authority
5. Hamptons Roads
6. Virginia Beach

Very Few preventive programs regionally

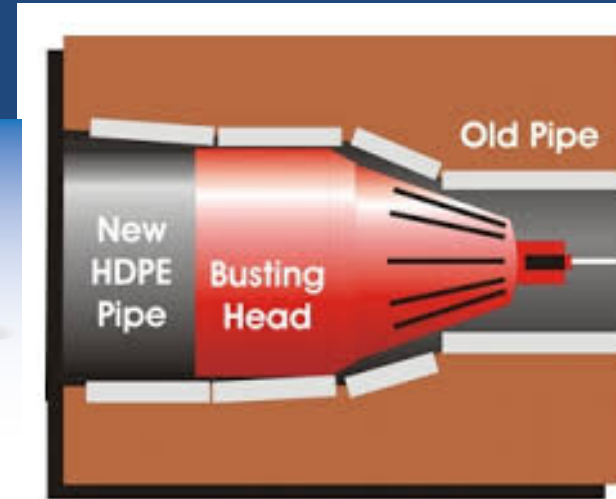
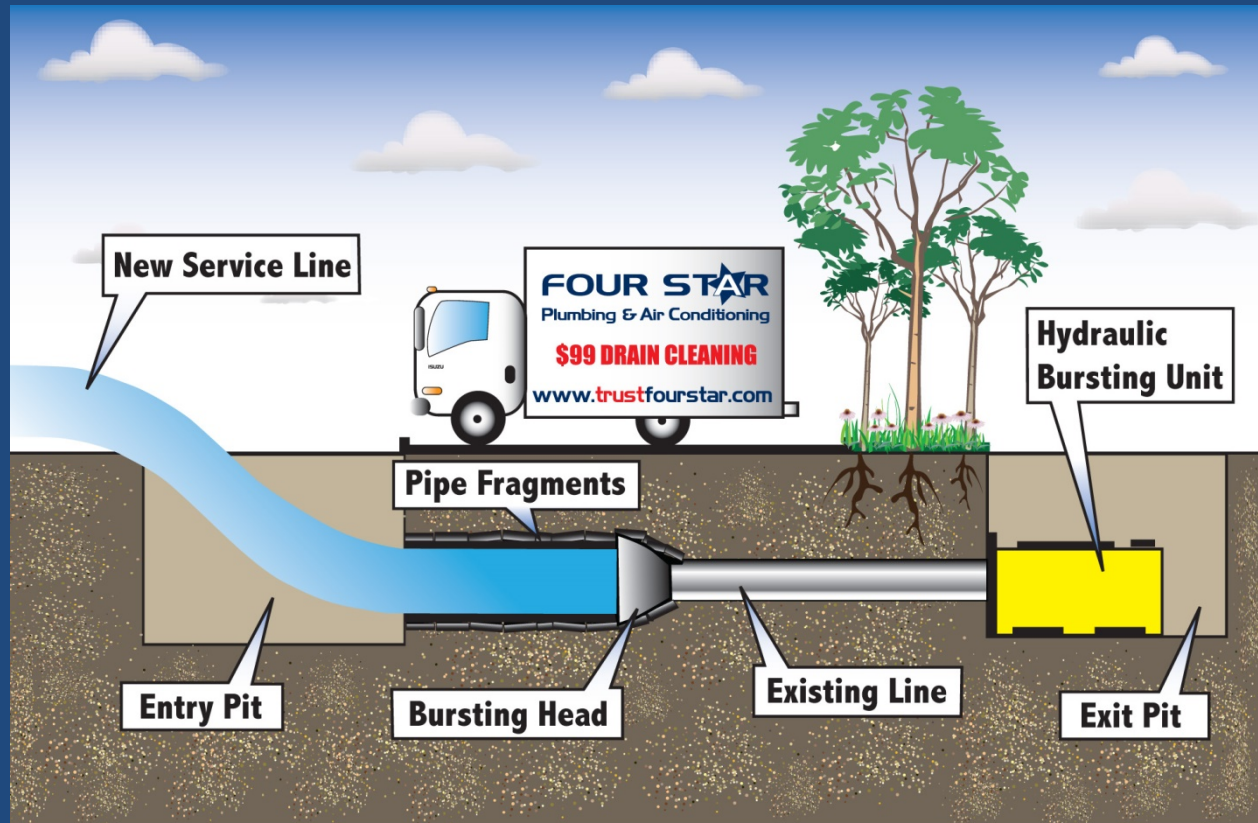
# Emergency Repairs are Expensive



There are Alternatives to  
Conventional Repairs

# B.2. Current trenchless technologies for wastewater laterals.

- Pipe Bursting:



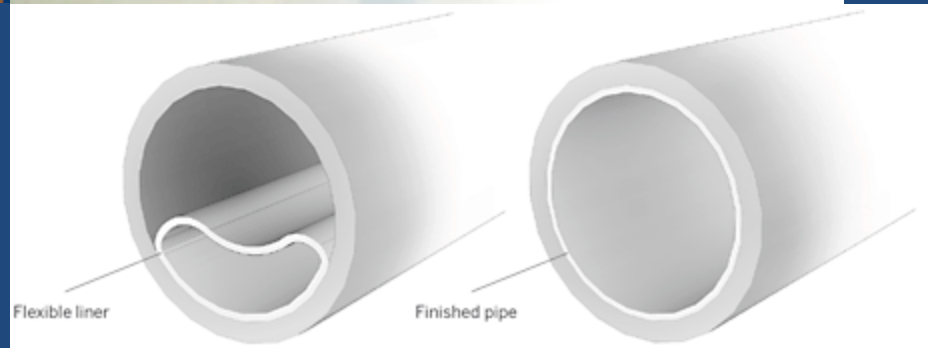
Can be  
Expensive

# Cured-in-Place Pipe:

**Before**



**After**



Can be accomplished  
from the main or building

# Private Responsibility to the Main:

## Many Utilities are Enforcement Oriented

- Point of Sale Inspection
- Notices of Violation
- Surcharges/Higher Commodity Charges
- Civil Penalties
- Property Liens



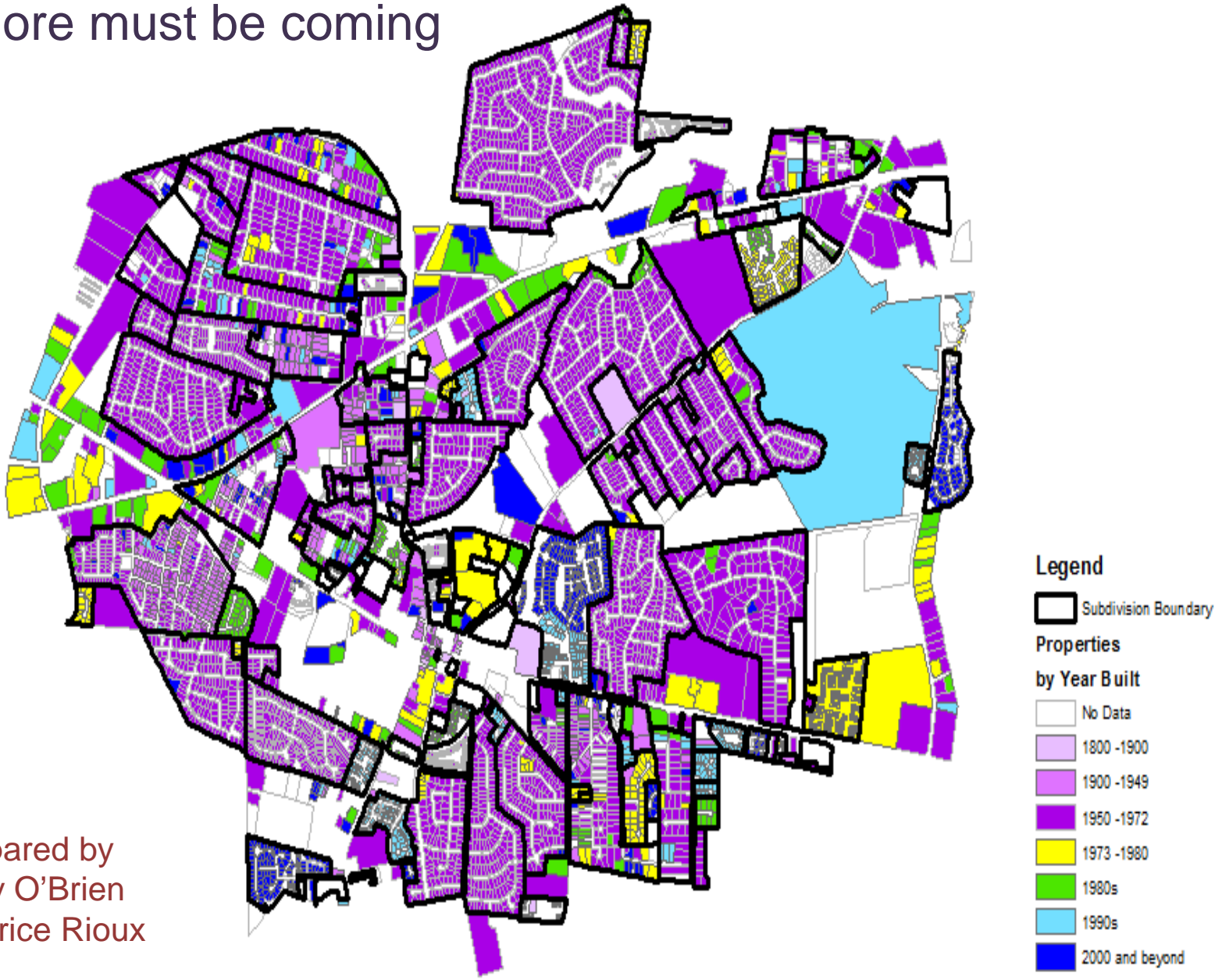
# In last 5 Years 183 Lateral Repair and Replacements in the City

At Least 19 were in the ROW

Year	# Permits	Contractors
2010	1	My Plumber
2011	3	Hicks Plumbing Services
2012	9	Emerald Plumbing Co.
2013	4	Roto Rooter
2014	2	Carlos Lopez Kerry Vornadore Sean Huynh & Tam T Duong

Observation: Almost all used conventional technology

And more must be coming



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# C. Lateral Repair Program Phases

1. Corrective Phase

2. Preventive Phase



# Phase 1 -Corrective Program

1. Property Owner pays for all repairs and replacement
  - Landscaping, root infestation and grease blockage not eligible
  - Failure due to Property Owner abuse of lateral not eligible
2. Utility provides a reimbursement portion subject to Program Requirements
3. City is not the responsible party, the Property Owner is
4. City provides Program Description to contractors and applicants
5. GIS information collected by City at a later date

# Phase 1 -Corrective Program

## Program Requirements

1. Property Owner must show condition & need
2. Two or more Proposals submitted
3. City Permits
4. Contractor agreement with Private Owner  
must include warranty
5. Work must be verified

# Phase 1 -Corrective Program

## Reimbursement Allowances

Location of Failure	R&R	%City/%Owner	Maximum Reimbursement
In the ROW	Entire Length	75%/25% Full Length	\$5,000
In the ROW	ROW Only	25%/75% ROW Only	\$2,500
On Private Property	Entire Length	25%/75% Full Length	\$5,000

# Lateral R&R Program

## Corrective Program

Encourage Replacement of the Entire Length of Lateral

Reimbursement subject to Program Requirements

## Preventive Program

Cured-in-Place From the Main

Invite Customer Participation with Utility Contribution

# D. Developing the Business Case

- Repair Laterals within ROW
  - Not an Easy Business Case
    - 8,000 laterals
    - 50 year cycle
    - 160 per year average
- Dominion Power Insurance – A Start but not the solution
  - Restricted Repairs

# Developing the Business Case

- Lateral R&R Program Fee:
  - Reduces some Financial Risk for Customer
  - Reduces Infiltration and related treatment cost at Noman Cole
- Customer Action Possible
  - Starting with older systems
  - i.e., Orangeburg Pipe

# Developing the Business Case

- Authorize Lateral R&R Program Fee
  - With Opt Outs (if repair in last 5 years)
- Encourage Dominion Power Insurance
- Additional Human Resources for Program
- Phase 2

# Estimated Annual Income

Category	No. Customers	Fee per Year	Annual Income
Residential	7,100	\$ 18	\$ 127,800
Commercial	900	\$ 36	\$ 32,400
<b>TOTAL</b>	<b>8,000</b>		<b>\$ 160,000</b>

NOTE: Commercial customers have 6-inch laterals or larger  
8-inch laterals would be \$50 per year



# Estimated Financial Performance

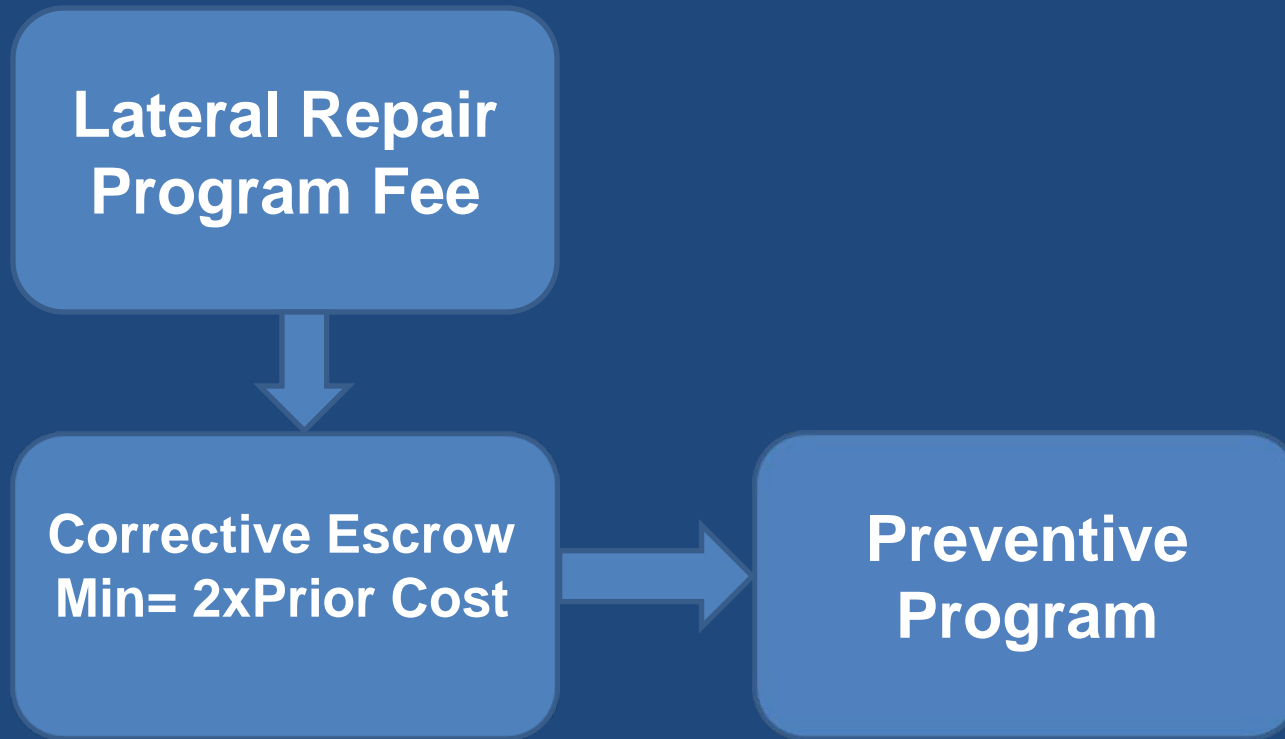
Year	ROW Only (\$2,500)	Full Length (\$5,000)	Reimbursement Total	Undesignated
2016-17	5	2	\$ 22,500	\$ 137,500
2017-18	5	6	\$ 42,500	\$ 117,500
2018-19	5	10	\$ 62,500	\$ 97,500
2019-20	5	14	\$ 82,500	\$ 77,500
2020-21	5	18	\$102,500	\$ 57,500
				<b>\$ 487,500</b>

# Estimated Financial Performance (doubled)

Year	ROW Only (\$2,500)	Full Length (\$5,000)	Reimbursement Total	Undesignated
2016-17	10	4	\$ 45,000	\$ 115,000
2017-18	10	12	\$ 85,000	\$ 75,000
2018-19	10	20	\$ 125,000	\$ 35,000
2019-20	10	28	\$ 165,000	\$ (5,000)
2020-21	10	36	\$ 205,000	\$ (45,000)
				<b>\$ 175,000</b>

Note: Depending upon level of activity, The Wastewater Utility will need an additional human resource (less than an FTE)

# Program Progression



# Questions ? Course of Action ?

