

# Annual Sewer Inspection Update

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# Sewer Asset Management Program

## Gravity Main Condition Assessment

- 312 Miles of sewer main line total = 1.65M linear feet (LF)
- 330 Pipes on Enhanced Cleaning List (EC)
- Goal = Inspect 10% of system per year
- Current equipment: Large CCTV Truck and newer portable camera for easements
- Follow industry standard for defect coding (PACP)



# CCTV Inspection Program Overview

- Recent Inspection Progress

	Actual Inspections (LF)		Goal (10% of system = 165k LF)
2018 Total	320,310 LF		165,000 LF
2019 Total	129,931 LF		165,000 LF
2020 Total	81,170 LF		165,000 LF
2021 Total	97,513 LF		165,000 LF
2022 Total	169,516 LF		165,000 LF
<b>Total Inspected</b>	<b>798,440 LF</b>	<b>2018 – 2022 Total Goal</b>	<b>660,000 LF</b>

Our goal for 2023 is to complete at least 165,000 LF of inspections



# Corrective Action Based on Defect Type

Defect Type	Commonly Seen Defects	Repair Method
Point Defect	Holes, Fractures, Surface damage	Spot Repair
Root Defect	Roots in laterals / joints	RootX Herbicide / Spot Repair
Continuous Defect	Multiple fractures, extended surface damage	Full CIPP Lining
Sag Defects	High water levels, Change in water level	Open Trench Replacement



# Corrective Action Based on Defect Type

Defect Type	Expected Prevalence	Repair Method
Point Defect	22% of Pipes 3600 Defects	Spot Repair
Root Defect	12% of Pipes 825 Pipes	RootX Herbicide / Spot Repair
Continuous Defect	0.6% of Pipes; 40 Pipes; 13,080 LF	Full CIPP Lining
Sags & Other Defects	2.2% of Pipes; 39,151 LF	Open Trench Replacement

2023 estimates for Total Project Costs per linear foot:

- \$630 / LF for Open Trench Construction
- \$180 / LF for Cast-in-Place Pipe (CIPP)



# Comparison to Previous Analysis

## System-wide Projections

	2018-2019	2020	2021	2022
	963 Pipes Inspected (27% of System)	1,653 Pipes Inspected (32% of System)	2,104 Pipes Inspected (38% of system)	2,811 Pipes Inspected (48% of system)
% of Pipes with Point Defects	22%	23%	23%	20%
% of Pipes with Continuous Defects	1.2%	0.8%	0.8%	0.6%
% of Pipes with Sags & Other Defects	3%	2.5%	2.5%	2.2%

- Projections will continue to be refined as more of the system is inspected



# Next Steps

- Inspect Remaining EC Pipes
- Develop Data-driven Capital Projects
  - Continue using inspection data to identify geographical project areas based on condition
- Continue Refining Future Inspection Priorities
  - Continue working with local partners to inspect ahead of their construction projects
  - Focus inspections in areas with known I&I problems
- Force Main Asset Management Program
  - Inspection of the C Export line (October 2023)
- Baseform



# Questions?

