



CLEARWATER
PUBLIC UTILITIES

2023 Sewer Point Repairs and Improvements

City Project #22-0006-UT

Council Item No. 14.4

Presented by Richard Gardner, P.E.

September 2025

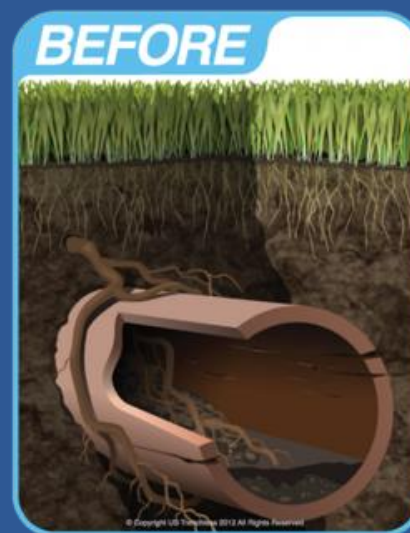
General Overview



- Sewer Point Repairs & Improvements Contracts Sections (As-Needed)
 - Group A – Sanitary Sewer Trenchless Reconstruction
 - Group B – Sewer Cleaning and Televising Inspections
 - Group C – Emergency/Non-Emergency Wastewater Point Repair
 - Group D – Sanitary Cleanouts and Laterals
 - Group E – Manhole Surfacing
 - Group F – Smoke and Dye Testing
- Managed by EOR Hazen & Sawyer under the 19-0011-UT WWCS Program



- Kapok Park Example:
 - Emergency Point Repair
 - 14 feet of 36" pipe = \$13,962.53 per ft
 - CIPP Lining of the Same Pipe Segment
 - 114 feet of 36" pipe = \$1,420.92 per ft



Group A – Sanitary Sewer Trenchless Reconstruction



- Year 3 Budget: \$3,000,000
 - Utilized: \$3,000,000 (est.)
 - 27,043 feet of CIPP liner installed
 - Lining costs 20%-25% of full replacement
 - 9.6 million gallons I&I reduction in Year 3*
 - Year 4 Recommendation: \$6,000,000

**As of July 2025 most recent PayApps*

Group B – Sewer Cleaning & Televising Inspections

- Year 3 Budget: \$2,000,000
 - Utilized: \$2,000,000 (est.)
 - 83,800 feet of sanitary sewer inspected
- Year 4 Recommendation: \$4,000,000



Group C – Emergency/Non-Emergency Repairs & Improvements

- Year 3 Budget: \$11,000,000
 - Utilized: \$7,400,000 (est.)
 - 118 point repairs completed or in progress
- Year 4 Recommendation: \$11,500,000



Group D – Cleanouts & Sewer Laterals

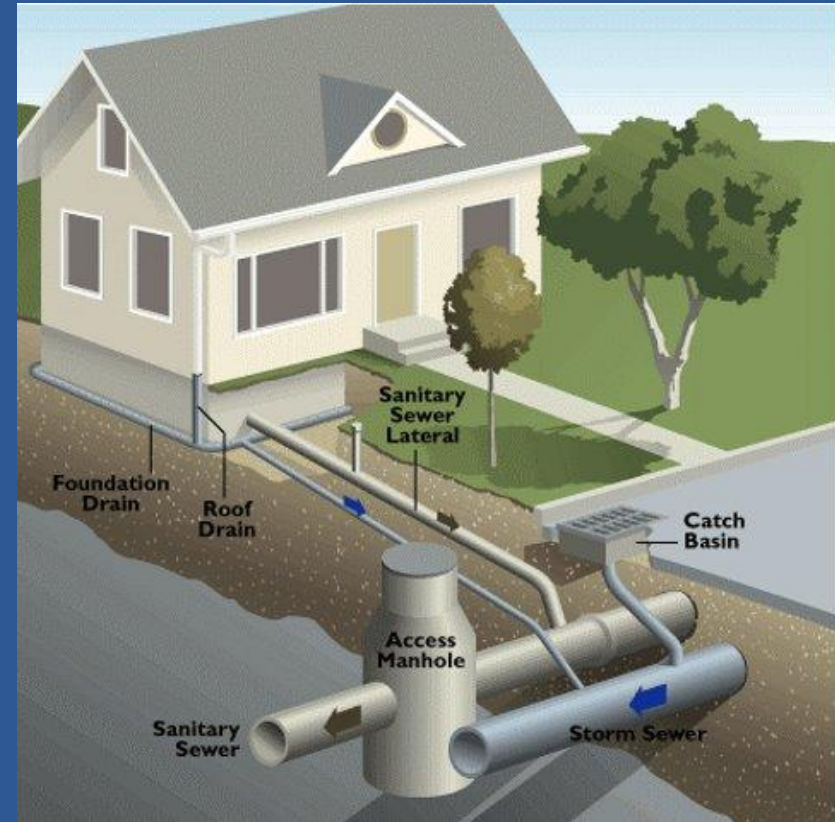


- More cost efficient than full replacement
 - Typical Lateral Replacement: \$20,000 - \$40,000 each
 - Typical Lateral Lining: \$1,100 – \$13,000 each
- Greater potential inflow (I&I) reduction per dollar
 - 23.3 gallons per dollar for lining
 - 5.4-10.8 gallons per dollar for replacement
- Estimated annual volume saved per lateral: 23,000 gallons

Group D – Cleanouts & Sewer Laterals

- Year 3 Budget: \$2,000,000
 - Utilized: \$2,000,000 (est.)
 - 385 laterals lined
 - 8.7 million gallons I&I reduction in Year 3*
- Year 4 Recommendation: \$4,000,000

**As of July 2025 most recent PayApps*



Group E – Manhole Resurfacing

MH 295B5050



Before
Rehab



After
Rehab

MH 286B8050



Before
Rehab



After
Rehab

Group E – Manhole Resurfacing



- Year 3 Budget: \$3,000,000
 - Utilized: \$3,000,000 (est.)
 - 494 manholes coated
 - 2,570 total vertical feet of polyurethane coating applied
 - 486 frame/corbel connections resealed
 - 954 gal of injection grouting installed to prevent I&I
 - 15.1 million gallons I&I reduction in Year 3*
- Year 4 Recommendation: \$6,000,000

**As of July 2025 most recent PayApps*

Group F – Smoke & Dye Testing



Dye Testing



Smoke Testing

Group F – Smoke & Dye Testing



- Year 3 Budget: \$500,000
 - Utilized: \$275,000
 - 572,000 feet of pipe smoke tested
 - 523 defects found and corrected
 - Including replacement of 124 missing cleanout caps which reduced 1.5 million gallons of I&I
- Year 3 Recommendation: \$500,000

Summary By Year

Section	Year 1	Year 2	Year 3*	Total to Date	
	Qty	Qty	Qty	Qty	Percent of System
A (CIPP)	53,300 ft	24,125 ft	27,043 ft	104,468	5
B (CCTV)	78,000 ft	72,457 ft	83,902 ft	234,359	11
C (Repairs)	130 repairs	74 repairs	118 repairs	322 repairs	N/A
D (Laterals)	18	183	385	586	7.1
E (MH Spray Coating)	245 MHs	452 MHs	494 MHs	1,191	14
F (Smoke & Dye Testing)	71 miles	231 miles	108 miles	420**	100

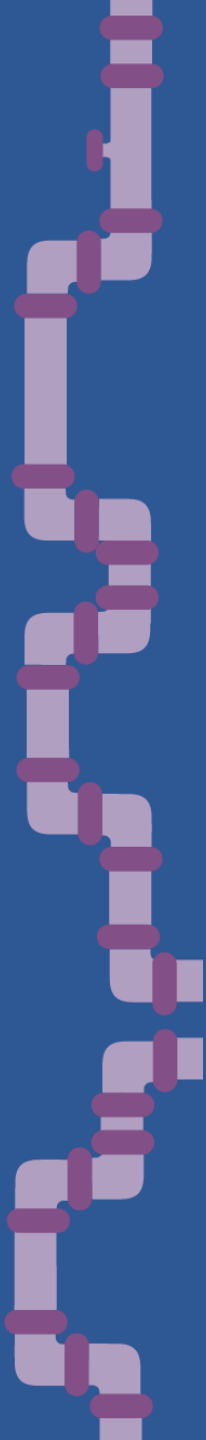
* As of July 2025 most recent pay applications

** Includes follow-up testing

I&I Reduction By Year

Section	Year 1	Year 2	Year 3*	Total to Date
	Gallons	Gallons	Gallons	Gallons
A (CIPP)	60,900,000	27,600,000	9,600,000	98,100,000
D (Laterals)	900,000	9,300,000	8,700,000	18,900,000
E (MH Spray Coating)	31,000,000	57,100,000	15,100,000	103,200,000

**As of July 2025 most recent PayApps*



Summary

WWCS On-Call Contractors

- Total for 6 Contracts: \$32,000,000*
- Covers emergency and preventive maintenance
- Final renewal; To be rebid next year
- Each year approved by Council
- Capital projects still require City Council approval

*Total annual not to exceed. Unused funds revert to Public Utilities



Summary

Benefits to Clearwater of WWCS Program

- Reduces expensive emergency work
- Reduces I&I by fixing cracks, roots, and other defects
- Reduces overflow risks by removing causes of backups
- Identifies system and funding priorities
- Allows in-house crews to focus on customer service and regulatory requirements
- Protects public health and safety



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