

DWSD Capital Improvement Program Update 2024



Water & Sewerage
Department



Building Neighborhood Resiliency

Purpose of the DWSD CIP

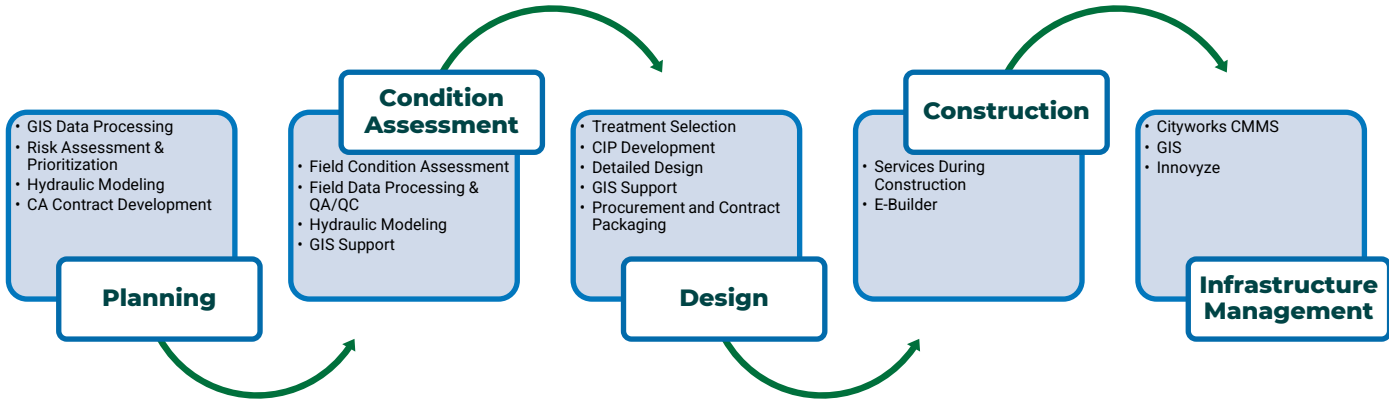


Improve level of service and quality of life by:

- Reducing water main breaks (inflow/infiltration) and non-revenue water
- Reduce costs to maintain the water and sewer infrastructure
- Reducing future investment in new CSO facilities (wet weather treatment) and having a stormwater infrastructure that provides benefit to the DWSD sewer system including partnering with adjacent communities
- Replacing 8,000 Lead Service Lines per year
- Coordinating with other agencies (DPW, DTE, MDOT) via the bi-weekly Infrastructure Coordination meeting to maximize dollars invested and minimize disruption from construction activity

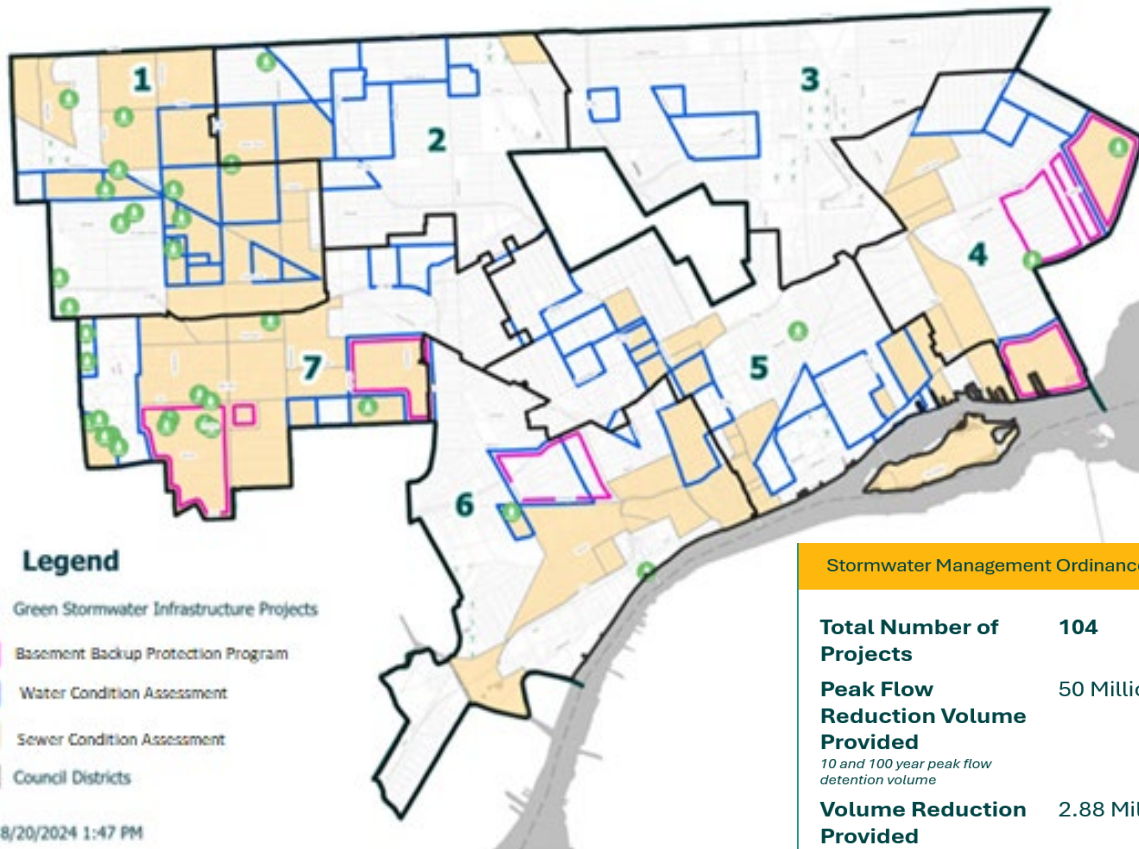
Building Neighborhood Resiliency

CIP Delivery Process



Building Neighborhood Resiliency

Condition Assessment and Stormwater Infrastructure



Legend

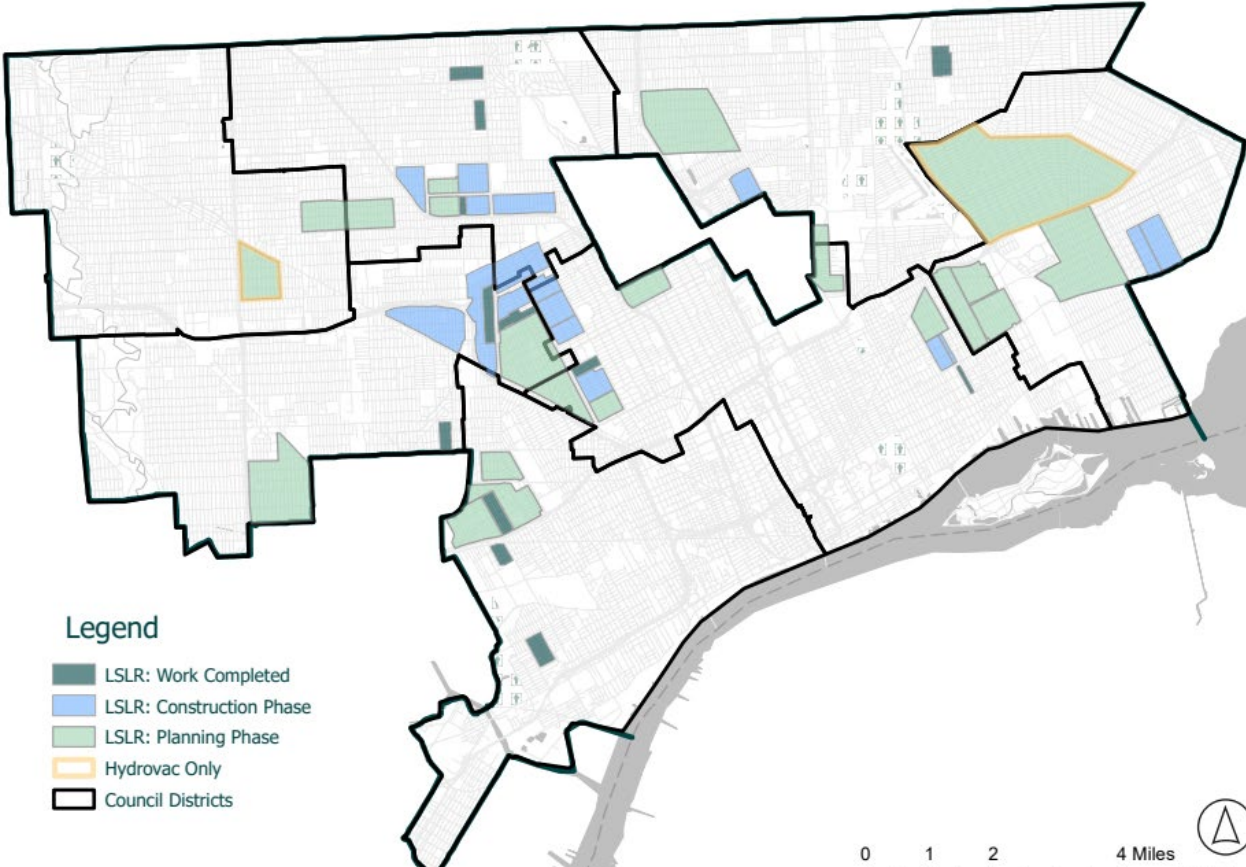
- Green Stormwater Infrastructure Projects
- Basement Backup Protection Program
- Water Condition Assessment
- Sewer Condition Assessment
- Council Districts

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Stormwater Management Ordinance

Total Number of Projects	104
Peak Flow Reduction Volume Provided <i>10 and 100 year peak flow detention volume</i>	50 Million Gallons
Volume Reduction Provided <i>Retention Volume</i>	2.88 Million Gallons

Lead Service Line Replacement



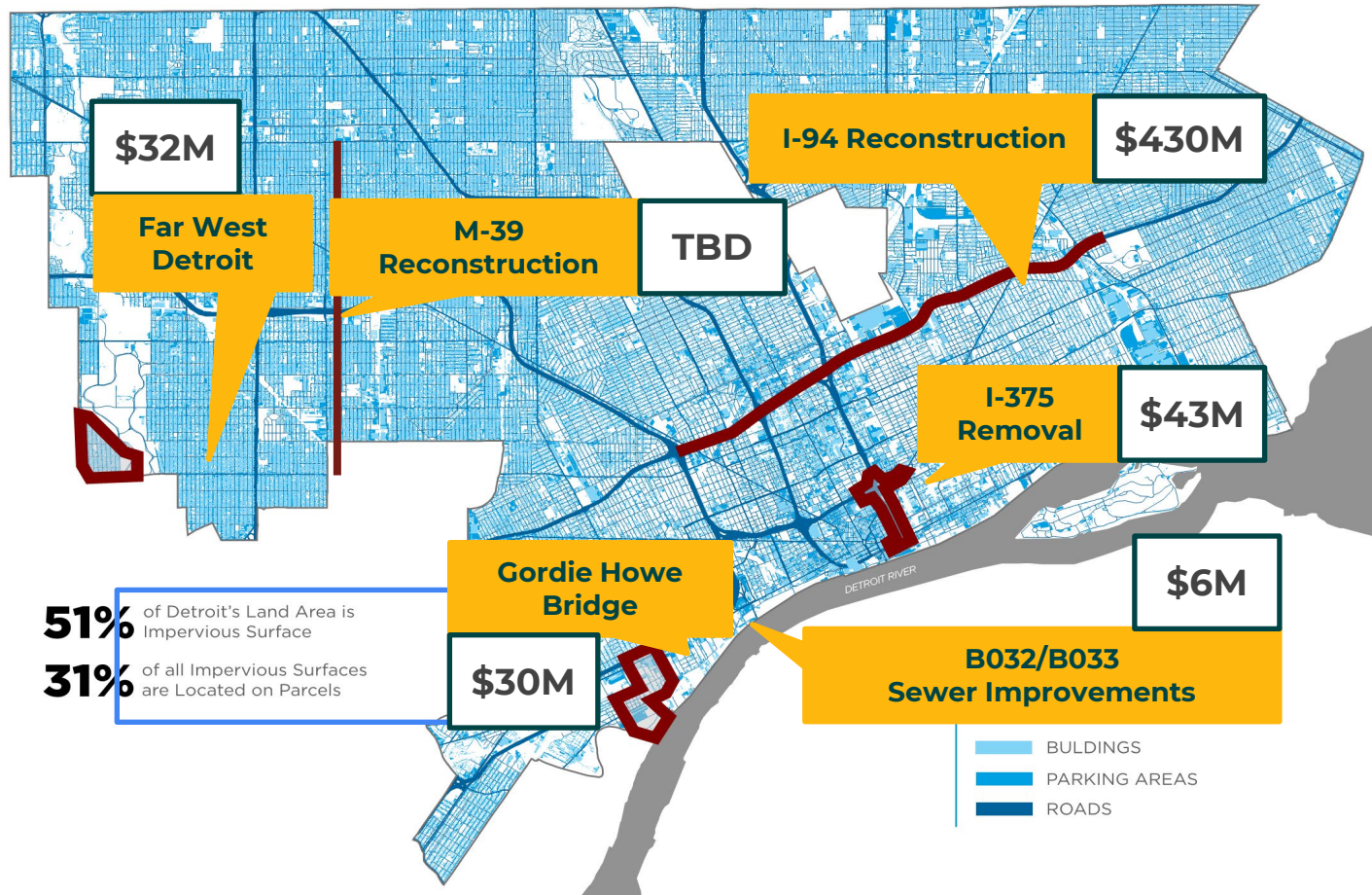
Legend

- LSLR: Work Completed
- LSLR: Construction Phase
- LSLR: Planning Phase
- Hydrovac Only
- Council Districts

0 1 2 4 Miles



Collaboration Projects that reduces Detroit's Wet Weather Peak Flows

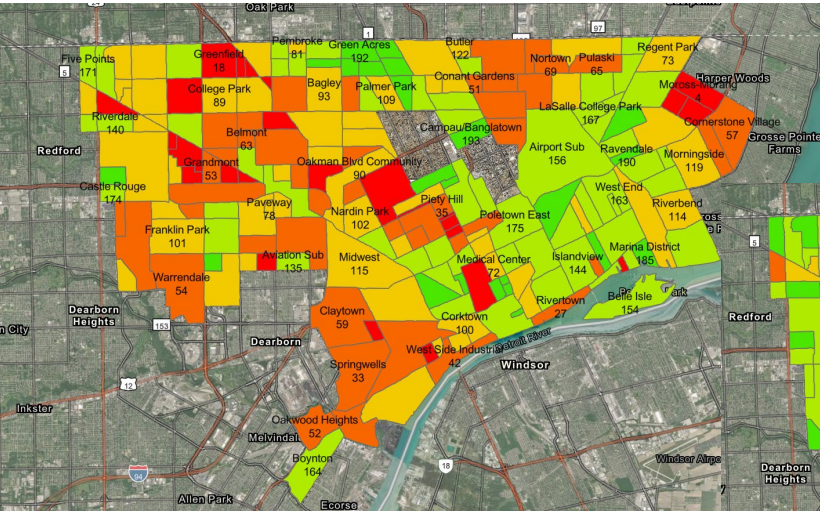


51% of Detroit's Land Area is Impervious Surface
31% of all Impervious Surfaces are Located on Parcels

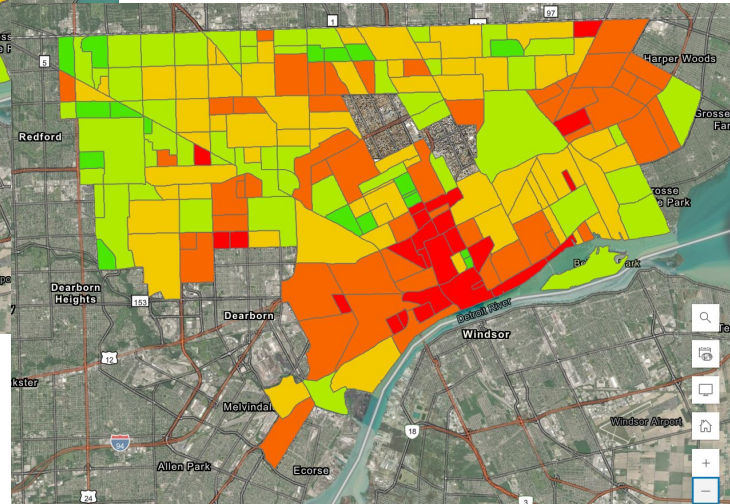
- BUILDINGS
- PARKING AREAS
- ROADS

Asset Management Program

Water Risk Assessment



Sewer Risk Assessment



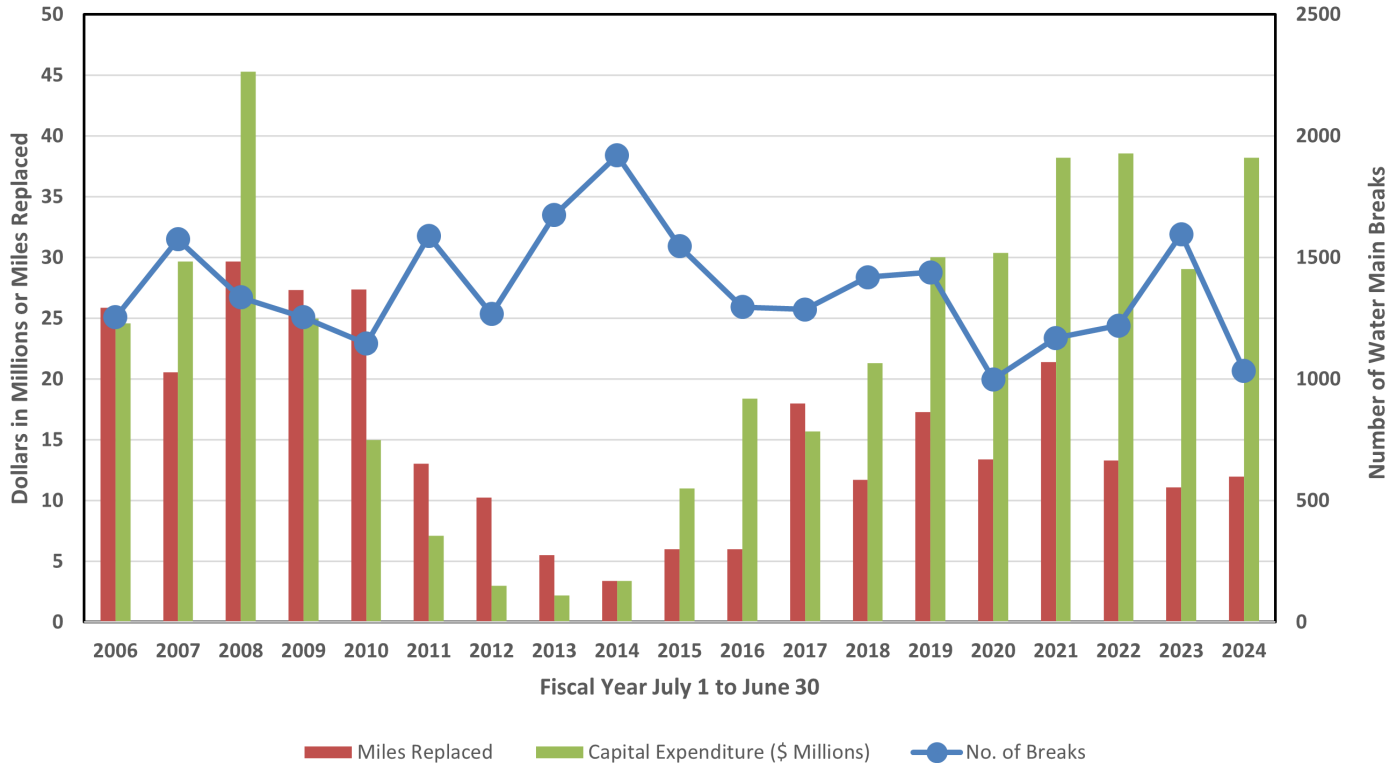
The DWSD Capital Improvement Program utilizes a comprehensive risk model to prioritize neighborhood condition assessment, inspection, and interventions.

3 miles of condition assessment typically identify 1 mile of needed rehabilitation

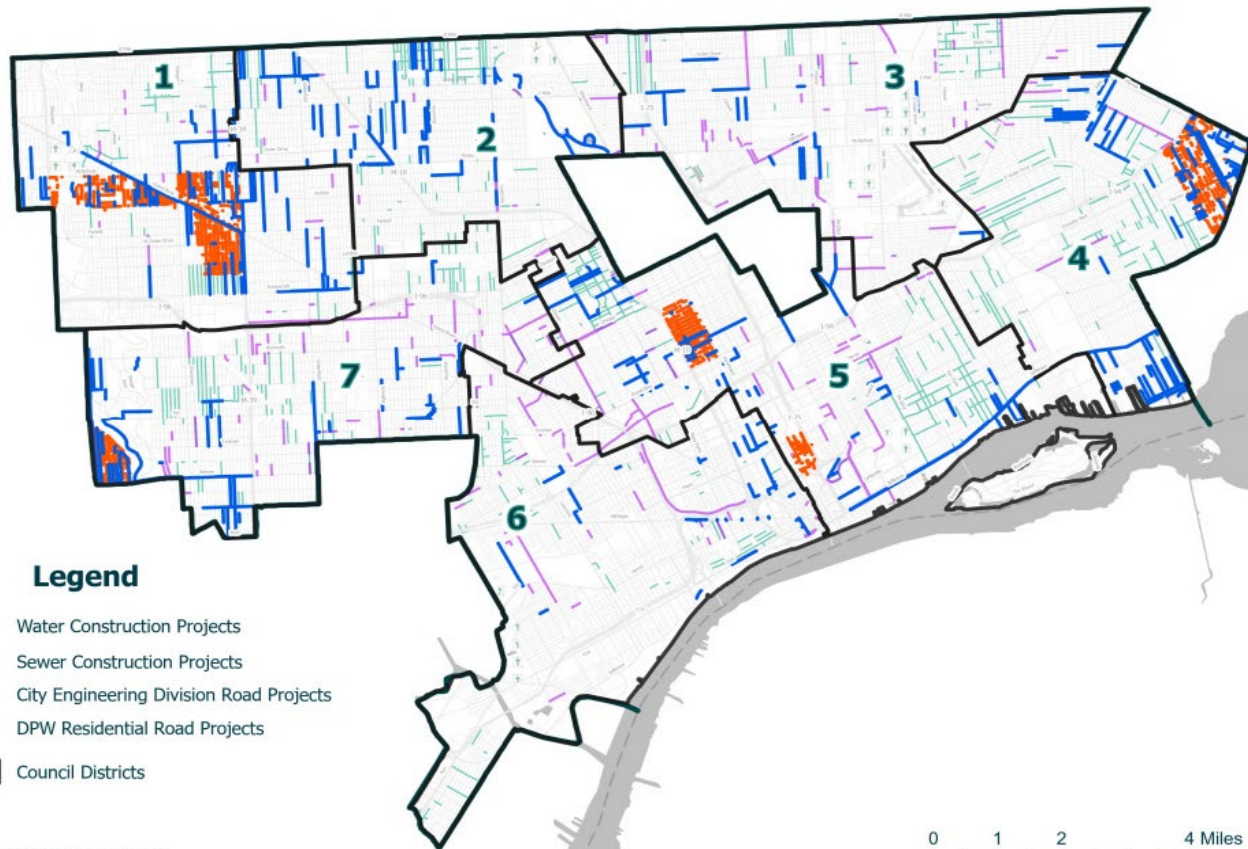
Water System Investments



Water Main Breaks, Miles Replaced, and Dollars Expended



Capital Improvement Projects from FY 2017 to 2024



ACTIVE SEWER PROJECTS



Contract No	Contract Name	Category	Sewer Lining Scope(Feet)	Sewer Lining Completed(Feet)	% Complete
DWS-908	Sewer Rehabilitation and Replacement, Cornerstone Village	Improvements	52,000	43,000	83%
DWS-916	Sewer System Improvement in Five High Priority Neighborhoods	Improvements	31,000	28,000	90%
DWS-917	Sewer Improvements at Riverdale Neighborhood	Improvements	50,000	31,800	64%
DWS-918	Sewer Improvements at Rosedale Park	Improvements	27,995	11,500	41%
DWS-920	Inspection and In-Place Rehabilitation of Existing Sewers in the City of Detroit	Emergency Repair	-	27,000	-
DWS-932	Large Diameter Sewer Improvements in Riverdale and Rosedale Park Neighborhoods	Improvements	2,862	2,811	98%
DWS-968	Inspection and In-Place Rehabilitation of Existing Sewers in the City of Detroit	Emergency Repair		1,000	
		TOTAL	163,857	145,111	89%

ACTIVE WATER PROJECTS



Project No	Contract Amount	Type of Project	Project Scope	% Complete
WS- 732	\$12,791,611.00	Watermain Replacement	Replace approximately 24,556 lf of water mains, 505 water services, and related items	31%
WS- 733	\$14,446,864.00	Watermain Replacement	Replace approximately 29,153 lf water mains, 442 water services, and related items	29%
WS- 725	\$15,460,000.00	Watermain Replacement	Replace approximately 31047 lf water mains, 639 water services, and related items	0%
WS- 738	\$14,984,817.20	Watermain Replacement	Replace approximately 32,108 lf water mains, 603 water services, and related items	0%
WS- 735	\$24,702,600.00	Lead Water Service Line Replacement	Replace approximately 2,500 full lead water services	82%
WS-737A	\$11,250,000.00	Lead Water Service Line Replacement	Replace approximately 1,092 full lead water services	62%
WS-737B	\$11,250,000.00	Lead Water Service Line Replacement	Replace approximately 1,092 full lead water services	54%
WS-737C	\$11,250,000.00	Lead Water Service Line Replacement	Replace approximately 1,092 full lead water services	76%
WS-737D	\$11,250,000.00	Lead Water Service Line Replacement	Replace approximately 1,092 full lead water services	29%
WS-739A	\$2,000,000.00	Lead Water Service Line Replacement	Replace approximately 186 full lead water services	0%
WS-737B	\$1,000,000.00	Lead Water Service Line Replacement	Replace approximately 93 full lead water services	0%
WS-737C	\$2,000,000.00	Lead Water Service Line Replacement	Replace approximately 186 full lead water services	0%

Questions

- **Reducing the impact of Likelihood of Failure**
- **Mitigating against Consequence of Failure**
- **A Visible Return on Investment for Building Neighborhood Resiliency**

