

DWSD Capital Improvement Program Update

2023



Water & Sewerage
Department



Purpose of the DWSD CIP



Improve level of service and quality of life by:

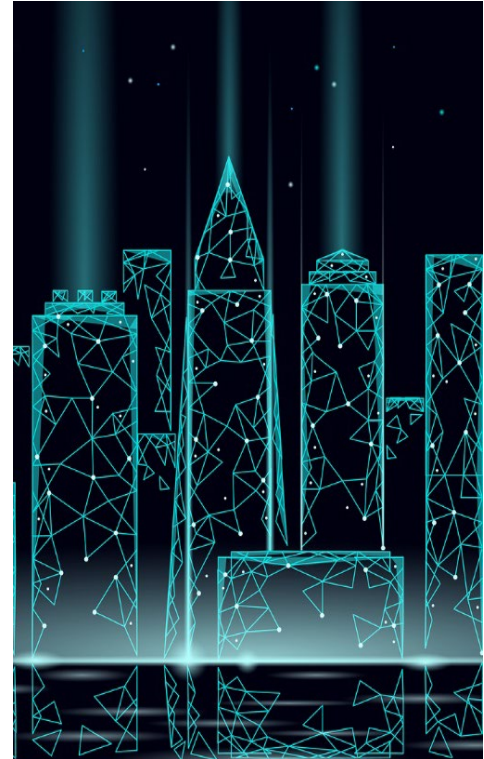
- Reducing water main breaks (inflow/infiltration) and non-revenue water
- Reduce costs to maintain the water and sewer infrastructure
- Reducing future investment in new CSO facilities (wet weather treatment) and having a stormwater infrastructure that provides benefit to the sewer system
- Coordinating with other agencies (DPW, DTE, MDOT) via the bi-weekly Infrastructure Coordination meeting to maximize dollars invested and minimize disruption from construction activity
- Upgrading and maintaining facilities, equipment and systems for effective operations

One Stop Shop for Data Driven Decision Making

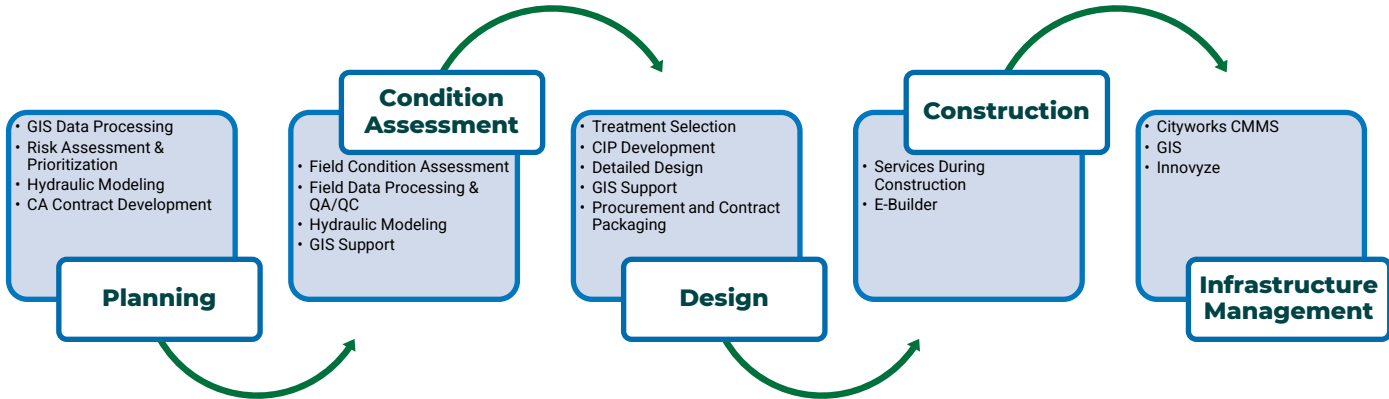
Our programmatic approach demands timely and reliable data to support better decision-making. GIS has always provided a powerful link between the physical and digital worlds, and its functionality as a dynamic, flexible, accurate, and up-to-date virtual representation of all asset types continues to improve.

Goals & Objectives

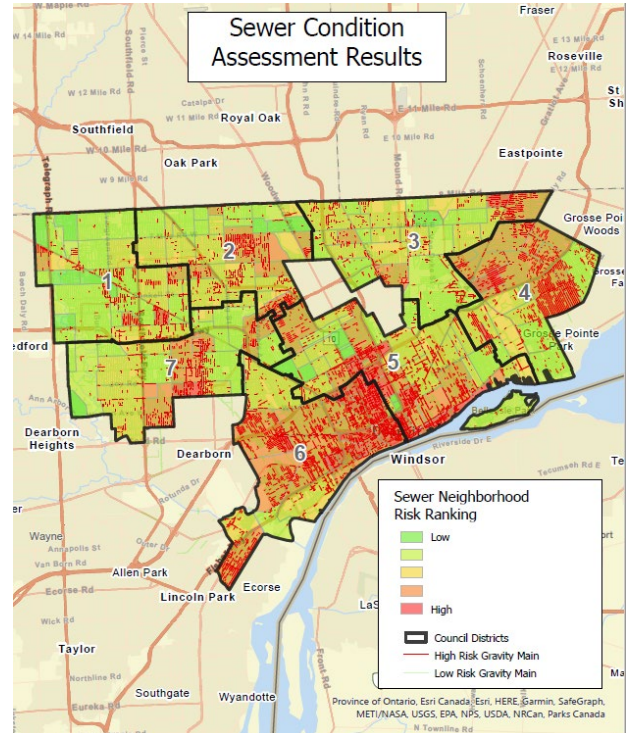
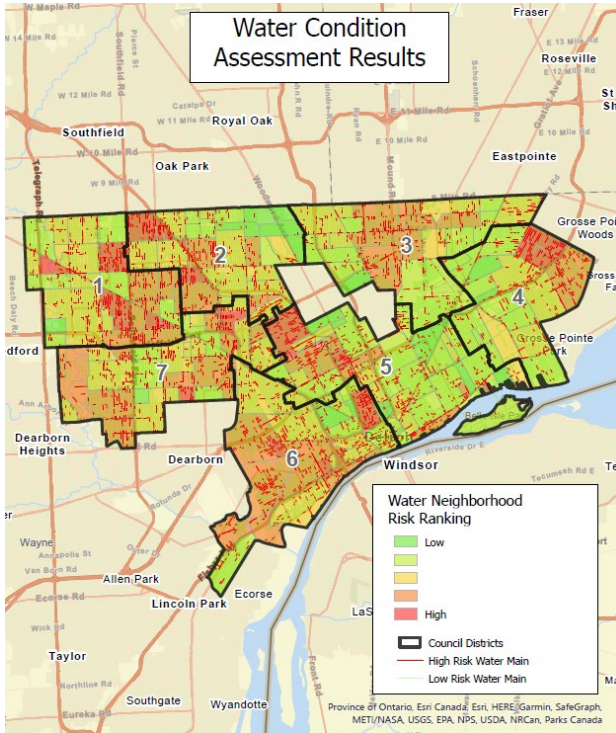
- Support the GIS-centric asset and work management system
- Collective GIS Mapping
- Centralized location for Reporting
- Gathering Near Real-time Asset Data and Analyzing
- Maintain the City's infrastructure assets and provide in-depth analysis using E-Builder, GIS and CityWorks



CIP Delivery Process



Prioritized Condition Assessment

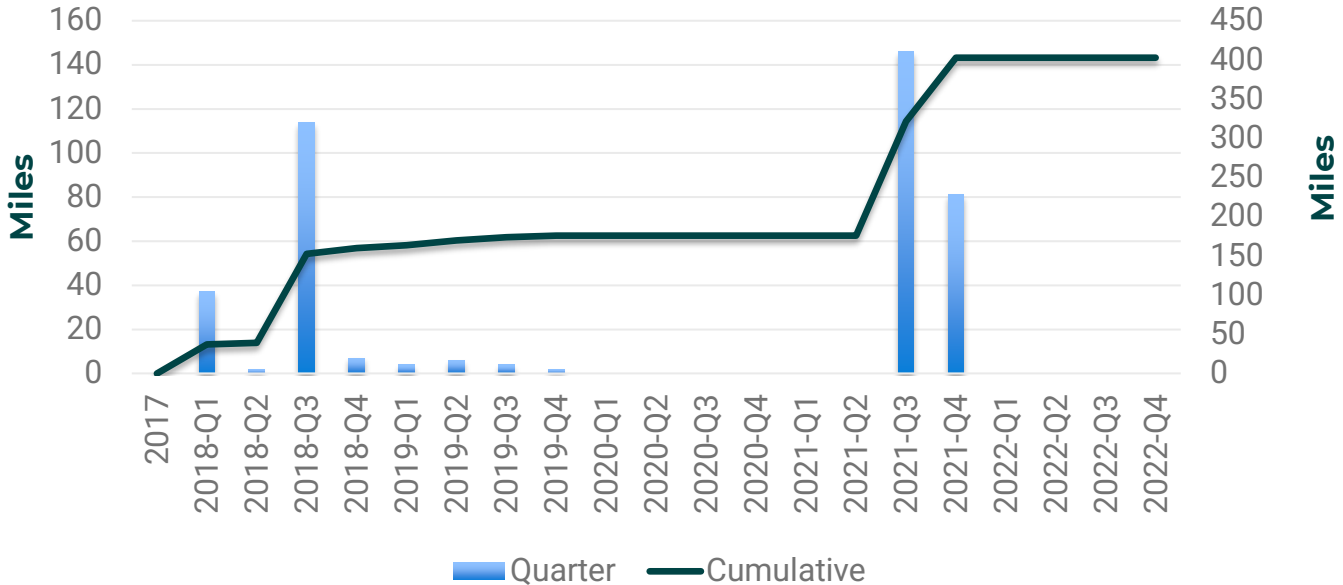


Assets are selected for Condition Assessment based on a Risk and Criticality Model
4 miles of condition assessment typically identify 1 mile of needed rehabilitation

Percent of Water System Assessed Since 2017



Miles of Water Condition Assessed



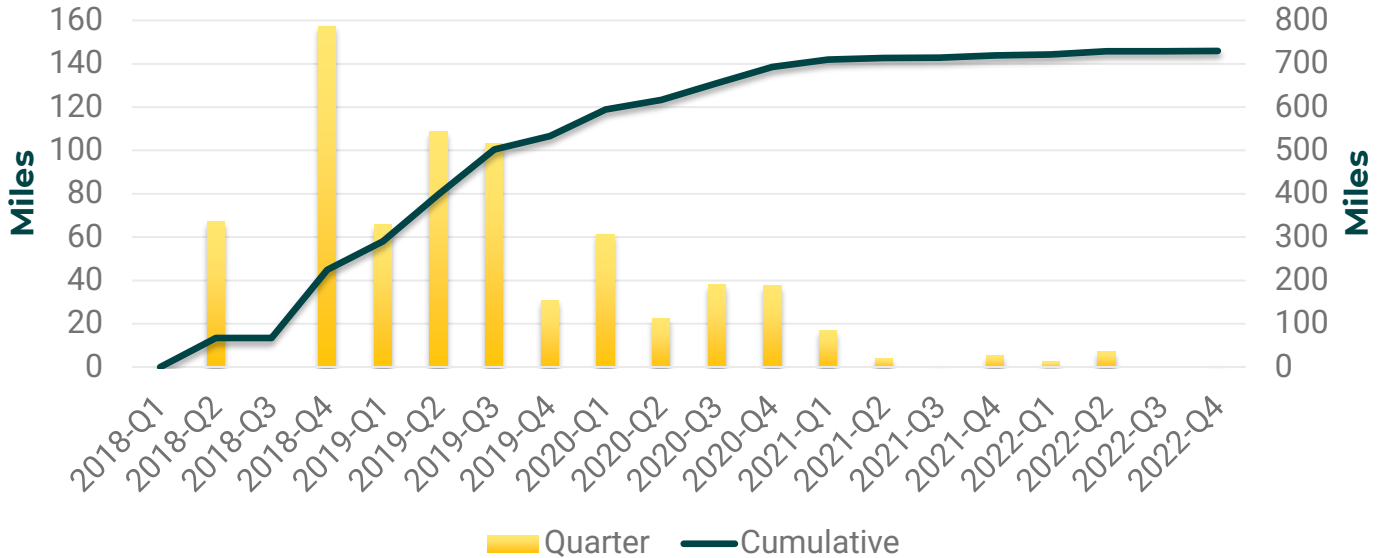
100% of DWSD hydrants are inspected 3 times per year by DFD between October thru April.

DWSD had 20% of the water main system replaced prior to 2017 (over a twenty-year period)

Percent of Sewer System Assessed Since 2017



Miles of Sewer Condition Assessed



DWSD had 15% of the sewer main system rehabilitated prior to 2017 (over a twenty-year period)

FY23 Expenditure Categories

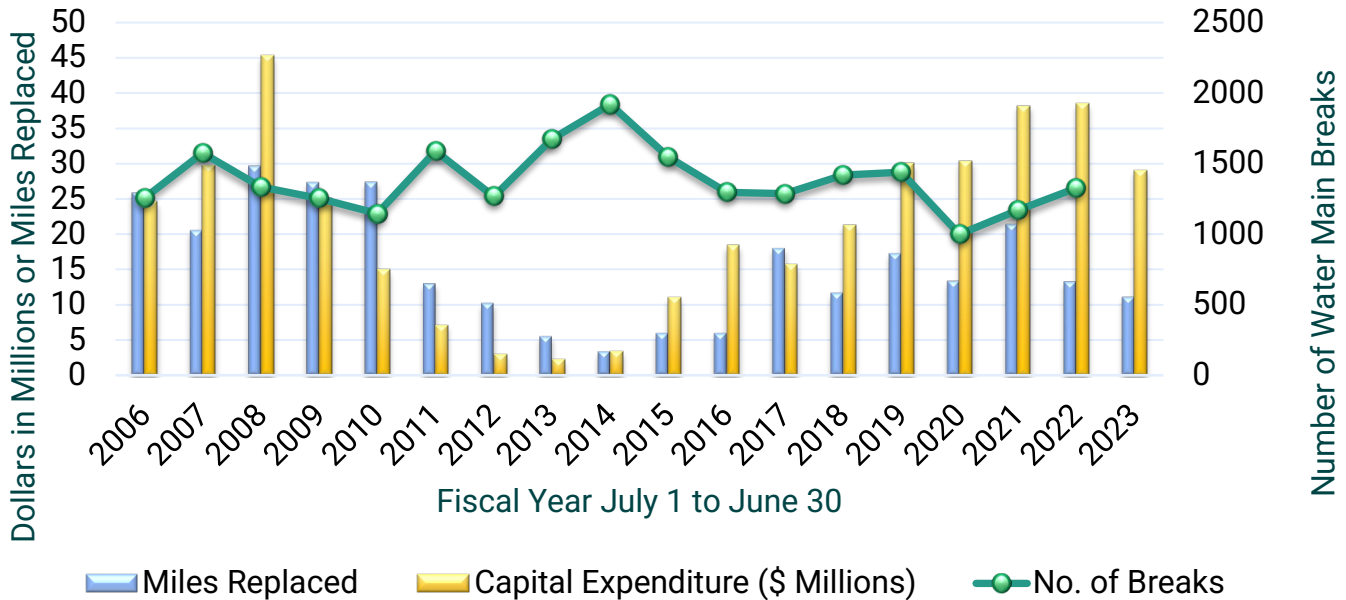
- 94% Infrastructure Assets:
 - Watermain, valves, sewer lines, fire hydrants, manholes, metering and green infrastructure
- 6% Facility, Fleet, and Information Technology :
 - Roofing, HVAC, fleet vehicles, heavy equipment, information technology.



Water System Investments



Water Main Breaks, Miles Replaced, and Dollars Expended

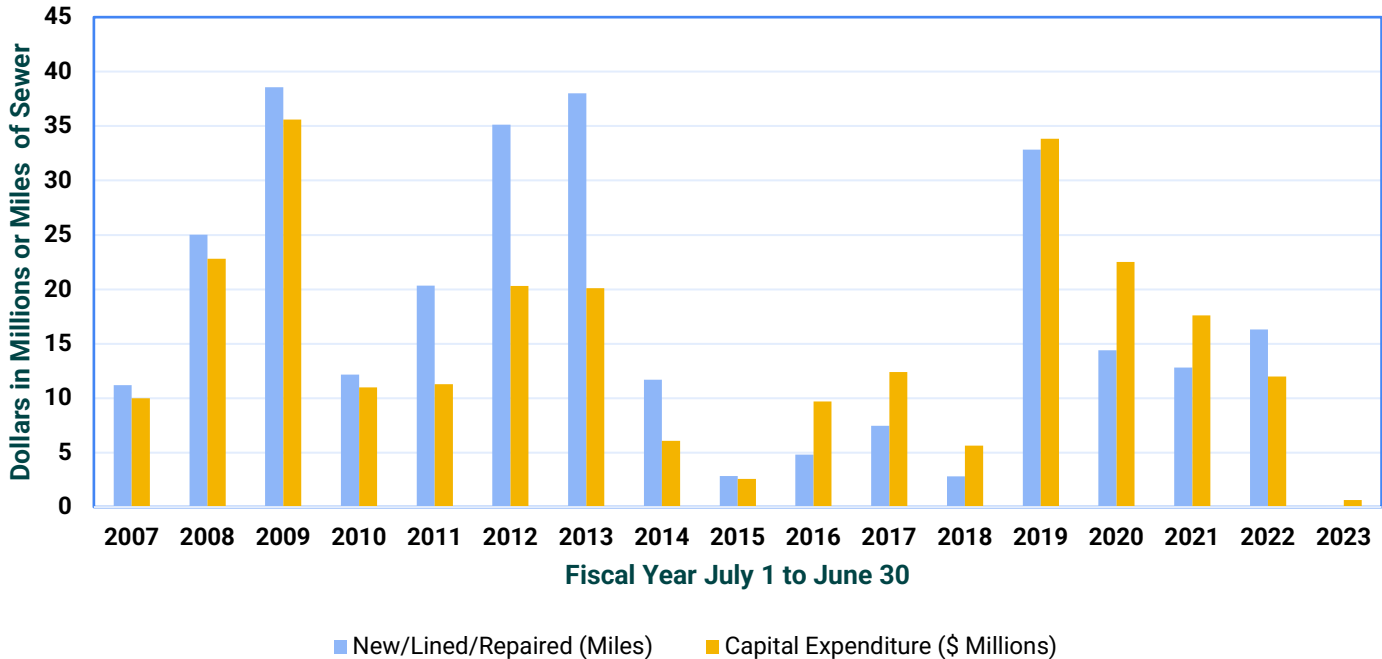


1300 Water Main breaks from 7/1/2022 to 4/27/2023.

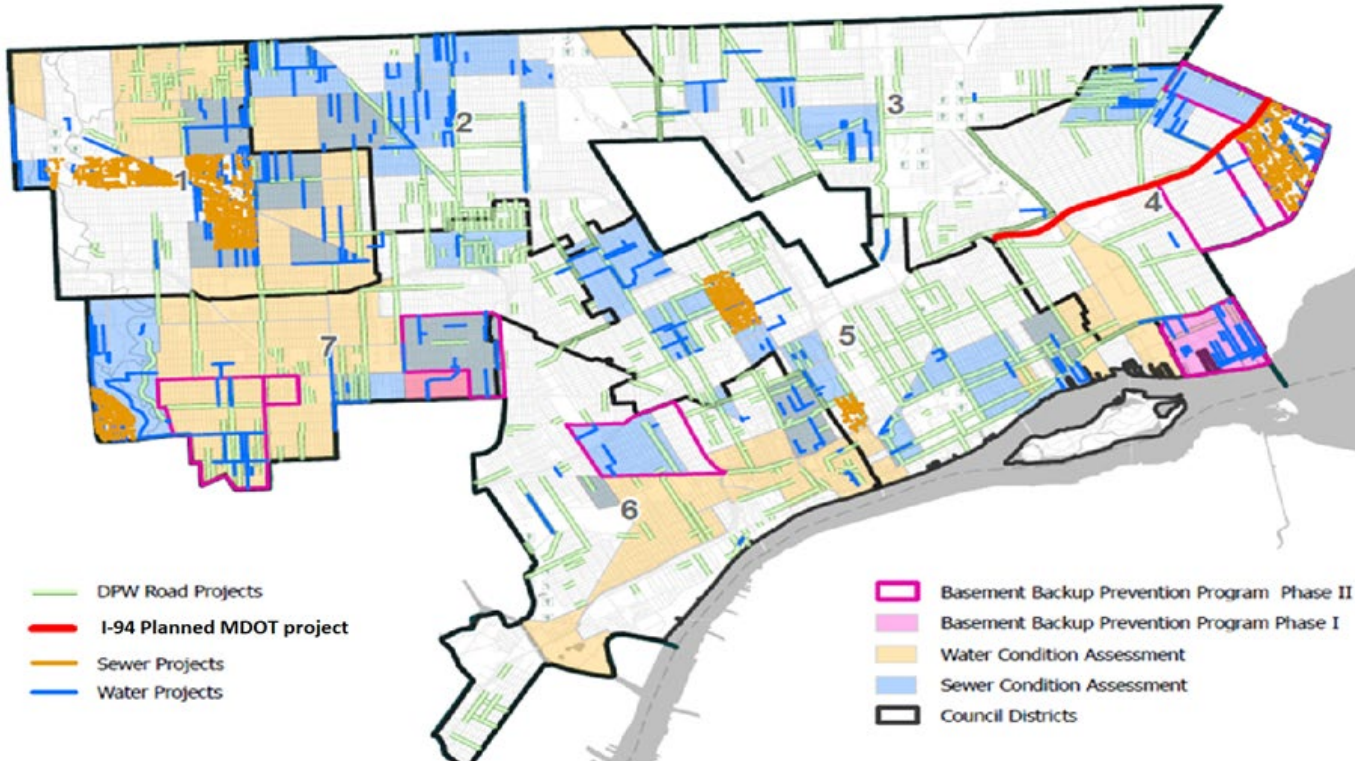
Sewer System Investments



Sewer Lining/Repair/Replacement and Dollars Expended



Capital Improvement Plan Projects from 2017 to 2022



- DPW Road Projects
- I-94 Planned MDOT project
- Sewer Projects
- Water Projects

- Basement Backup Prevention Program Phase II
- Basement Backup Prevention Program Phase I
- Water Condition Assessment
- Sewer Condition Assessment
- Council Districts

Market for Construction



Understanding the market

- Contractor capacity
 - Continuous outreach by DWSD leadership to encourage new contractors to bid.
 - From July 1 through March 31, 2023, DWSD awarded 78 contracts. Of those 78 contracts, 22 were awarded to contractors with at least one CRIO certification (28%).
 - Of the 78 total contracts, there were 59 distinct vendors (12 with certification, 47 without)
 - The total committed spend was \$90 million dollars (\$43 million contracts with at least once certification, \$46 million of contracts without)
 - The 28% of CRIO contracts made up 48% of the total dollars committed.
- Volume of construction
 - \$75 M per year is the target for CIP which is apart of the overall \$700 M per year in horizontal construction within the Detroit Metro area. By comparison, there is \$3-4 billion in vertical construction for the 2023-24 construction season.

Thank You

A Department Wide effort to achieve these goals!

- **Reducing the impact of Likelihood of Failure**
- **Mitigating against Consequence of Failure**
- **A Visible Return on Investment!**