

Cornerstone Village COMMUNITY MEETING

WELCOME

Saturday, January 19, 2019



Cornerstone Village COMMUNITY MEETING

Salem Memorial Lutheran Church – 21230 Moross Road
January 19, 2019
12:30 p.m. – 2:00 p.m.

AGENDA

- Samuel Smalley [Asset Manager], Water and Sewer Infrastructure Improvement and Lead Service Line Replacement
 - Pei Boayue [Engineering, Sewer]
 - Rodney Burlett [Engineering, Water]
- Barry Brown [Engineer], Green Stormwater Infrastructure
- Bryan Peckinpaugh [Public Affairs Manager], Communication and Outreach

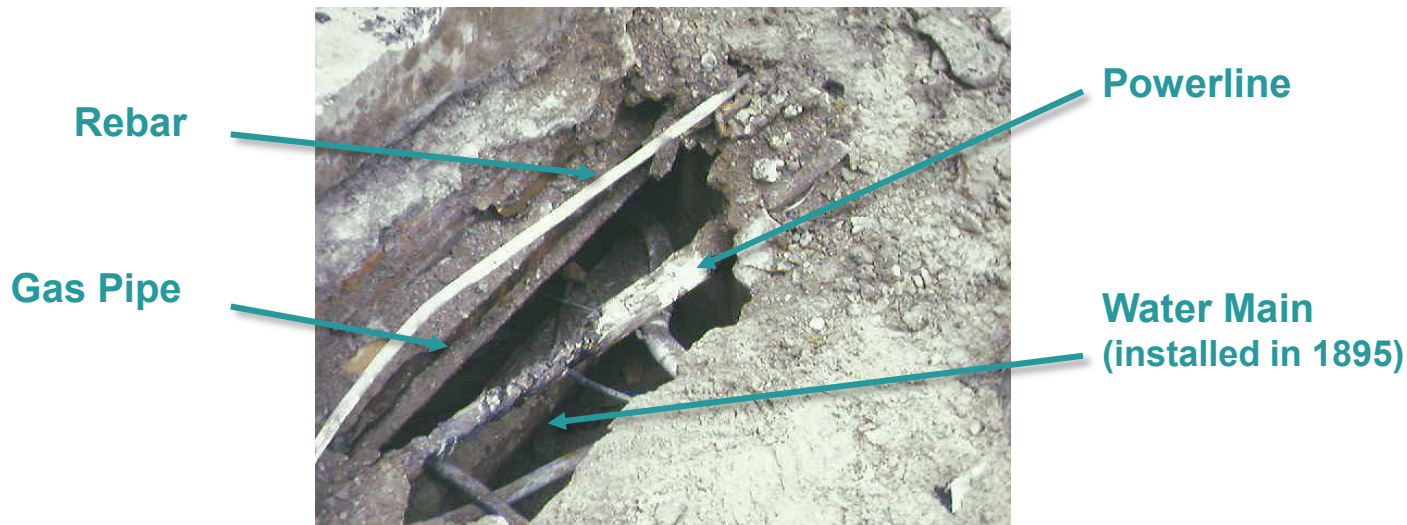
Samuel Smalley

Water & Sewer Infrastructure Improvement

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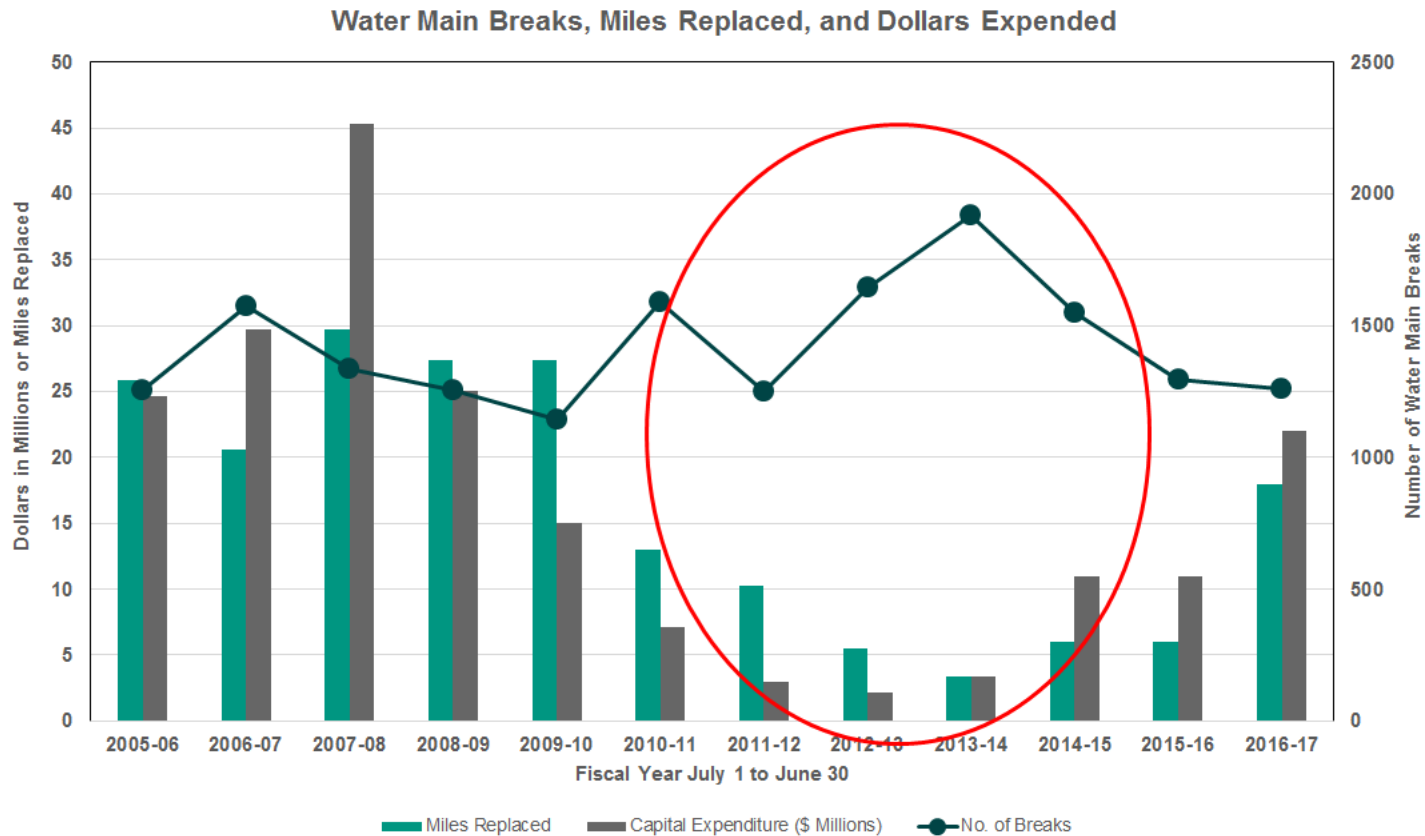
Background Information

- Industry standard for upgrade is **2% per year**, City of Detroit is currently at **<0.5%** per year
- Average water and sewer pipe age is **95 years**
- DWSD plans **\$400 Million** infrastructure investment over 5 years
- Critical need for coordinated Infrastructure Renewal Master Plan



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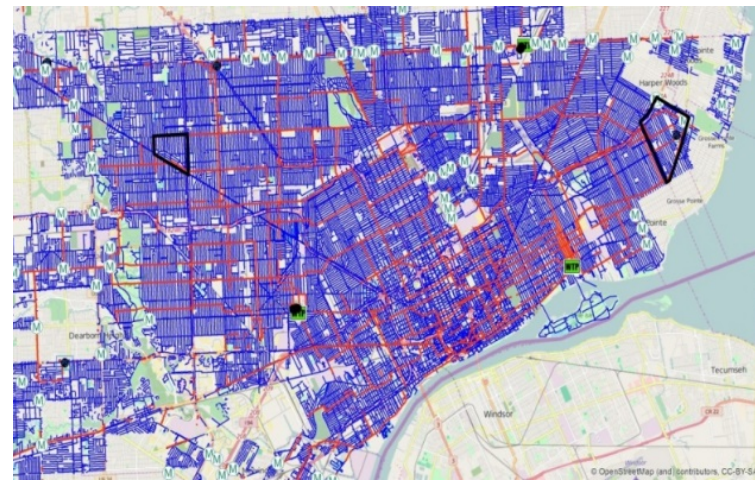
Water Main Investment Trend in Recent Years



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Water System

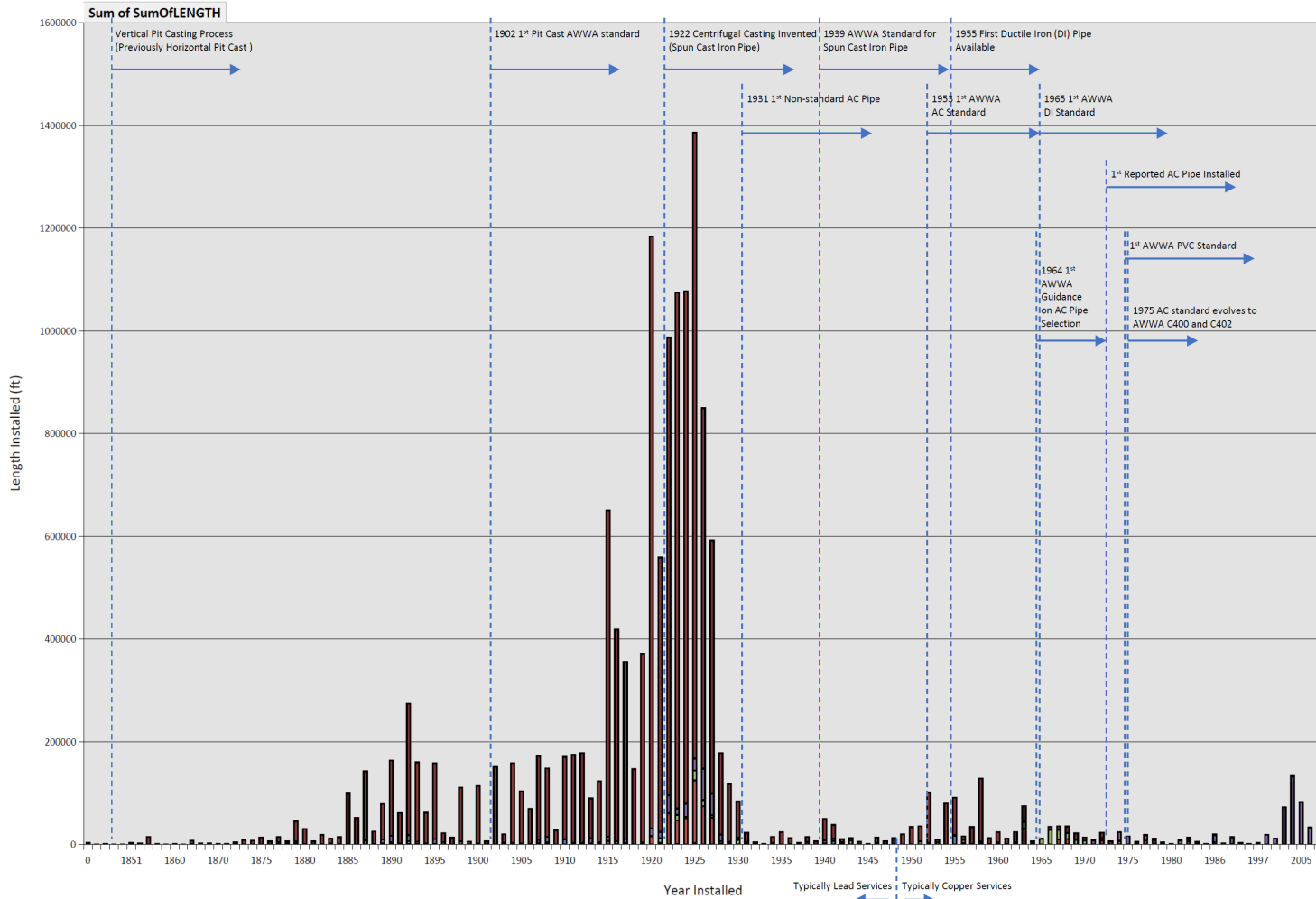
- 2,700 Miles
- 15% replaced since original installation in mid-1800's and 1920 - 1950
- Pipe Breaks: 1,500 per year
- Reduced pressure and flows



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OPERATED BY
DWS

Summary of Pipe Vintages Found in Detroit



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Sewer System

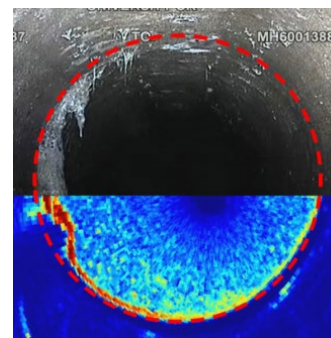
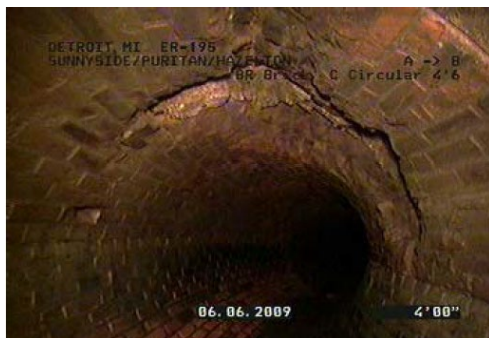
- 3,000 Miles
- 200 sink holes or cave-ins/year in past 5 years
- 15% sewers relined in past 20 years to increase integrity and capacity
- Master plan/changed land use requires reconfiguration
- Need for Green Infrastructure Integration Plan
- Over \$1B spent on CSOs since 1994



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Technical Objectives

- Improve system performance
- Develop and train DWSD Staff
- Develop new standards
- Encourage innovation through use of new tools and technology



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Public Outreach and Engagement

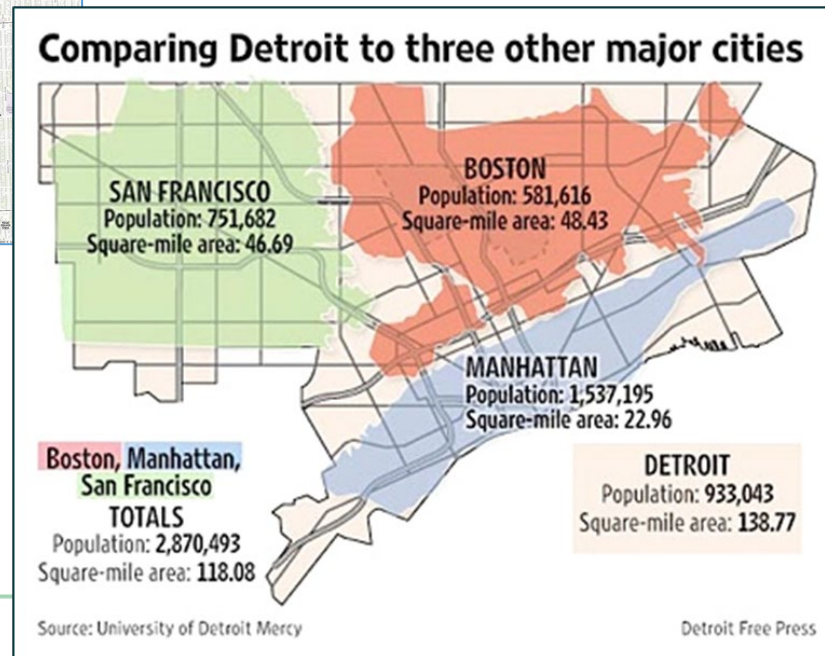
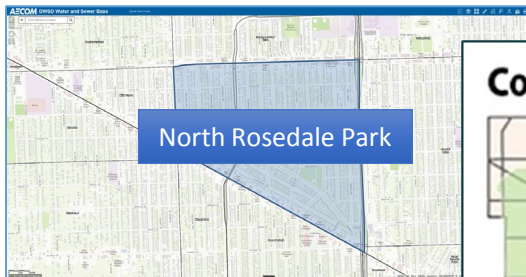
- New DWSD is much more customer centric
- Neighborhood Communications
- Workforce Development
- Contractor Outreach and Engagement



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Pilot Program Areas

- DWSD has an approx. 139-square-mile service area
- Two areas (Cornerstone Village and North Rosedale Park) to initiate the planning, public outreach, design standards, training, and establish best practices About 9 miles of water main interventions and 7 miles of sewer main interventions are planned for Cornerstone Village [together, that's about the length of **280** football fields!]



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Data Collection Programs (Pilot Areas)

- **Water System Assessment**
 - Leak Detection Surveys
 - Hydrant Flow
 - C-Factor Testing
- **Sewer System Assessment**
 - Flow Monitoring
 - PACP gravity main inspections
 - MACP manhole inspections



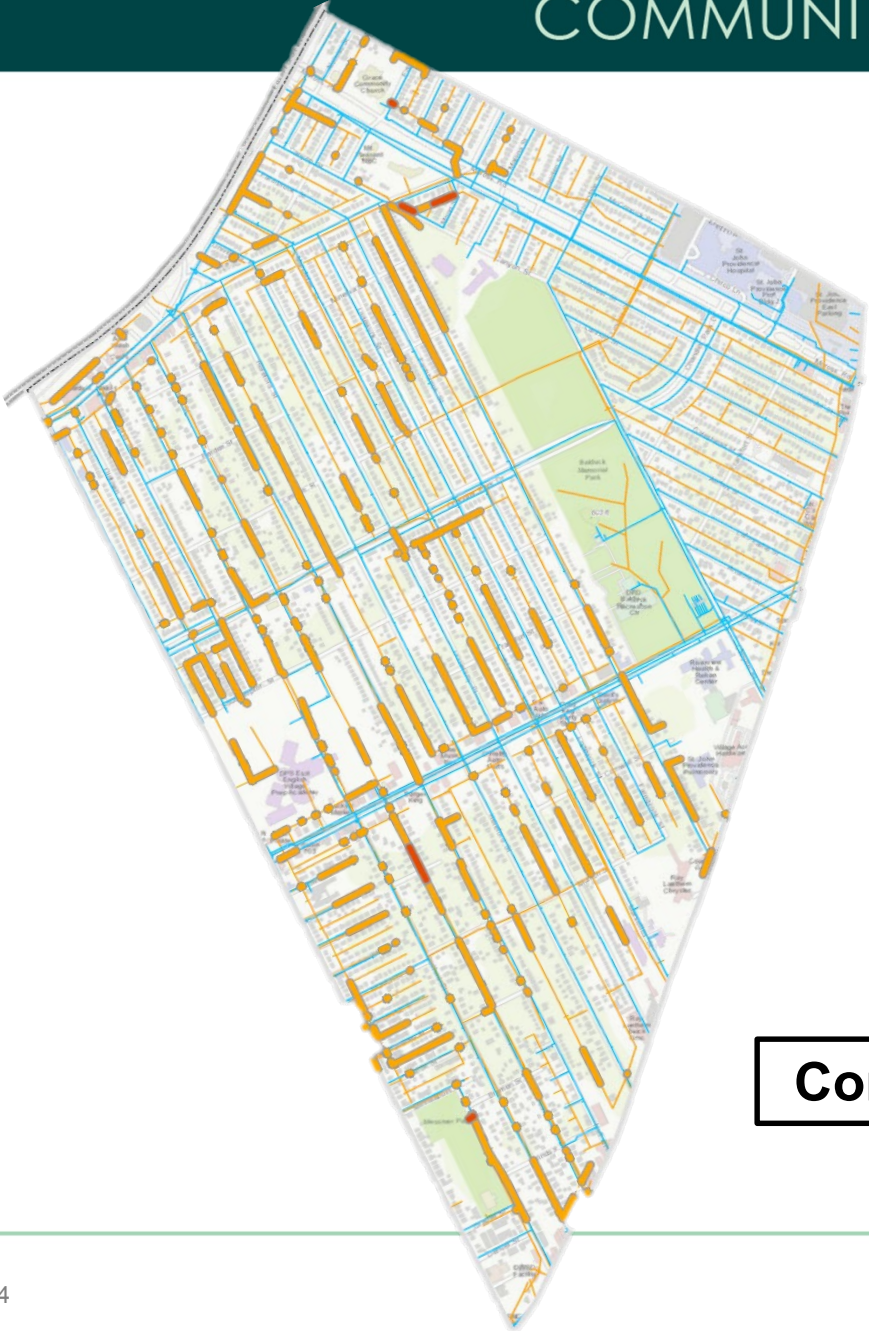
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 Pilot Area Boundary	 Water Main (Replace)
	 Water Main (Repair)
	 Water Main

Cornerstone Village CIP: Water Map

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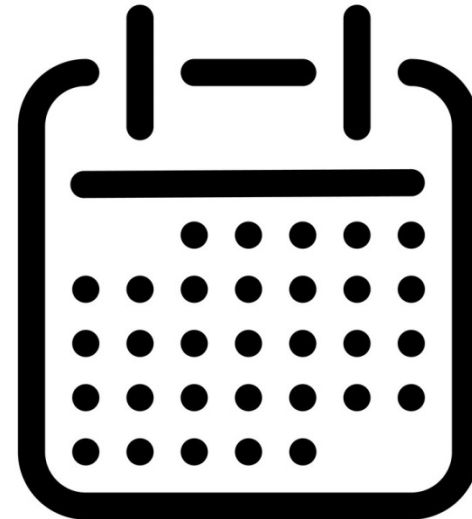
 Pilot Area Boundary	 Gravity Main (Replace)
	 Gravity Main (Repair)
	 Gravity Main

Cornerstone Village CIP: Sewer Map



Construction Schedule

- Start construction in May 2019
- Complete construction around June 2020
- Work will begin no earlier than 7am during the week
- No weekend work planned currently



Lead Service Line Replacement

Detroit is *Serious* About Lead Service Line Replacement

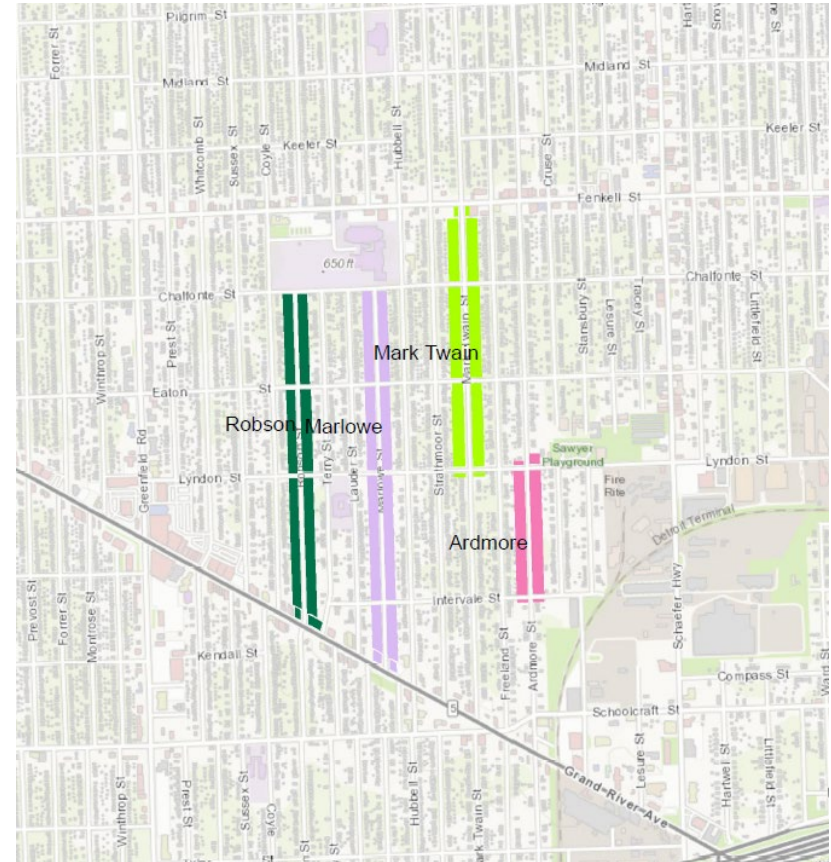
- Detroit occupies 139 square miles and has more than 100 neighborhoods
 - Primarily single-family homes built prior to 1950
- An estimated 125,000 lead service lines in Detroit, more than every major city on the east coast
- With a 40% poverty rate, many Detroit residents cannot afford to replace their service lines without a payment program, government assistance, and/or philanthropic funding
- Michigan Lead and Copper Rule – Requires water utilities to remove full lead service lines at 5% per year unless an alternate schedule in an asset management plan is approved by the MDEQ.



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Preparatory Data Review

- Review service line inventory, customer service database, and tax records for each affected property
- Identify likely LSL homes
- Update contact information
- Identify homes with known meter issues



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Filter Delivery

- Multiple notifications delivered directly to customers
- Filters delivered before construction; Meets NSF 53 for lead removal
- 6 month supply of cartridges
- Flushing and aerator cleaning instructions



Curb Box Excavations



- Excavate every curb box to identify public and private side material
- Upload pictures to GIS for record
- Ensure customers have a signed Water Service Replacement Agreement

Full Service Line Replacement Program



- DWSD has started a Full Lead Service Line Replacement Program
 - Program has been ongoing for about a year
 - Eliminate partial replacements
 - Using copper, complete full lead service line replacements for planned water main projects in neighborhoods
 - Homeowners and residents sign an agreement to have the work completed on their property
 - Any locations DWSD is conducting Water Main Replacements, they'll also be evaluating for LSLs and replacing

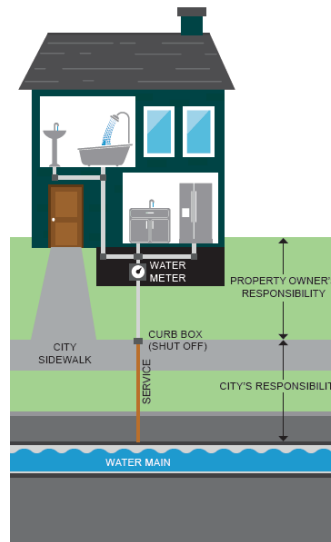
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Full Lead Service Line Replacement

- Trenchless whenever possible
- Copper always
- Follow AWWA Standard C810-17
- Shut off water before start
- Proper meter setting and reinstall/new meter
- Cannot leave water off overnight
- Leave flushing instructions
- Post construction photo record
- One year warranty
- 600+ LSL Replacements planned for Cornerstone Village

YOUR WATER SERVICE

A service line is a small pipe, typically less than one-inch in diameter, that connects the water main in the street to your home. DWSD owns and maintains service lines starting at the water main up to the curb box (shut off valve). Property owners are responsible for the service line from the curb box to the home (see Figure). In Detroit single-family homes, especially those built prior to 1950, the service lines may be made of lead.

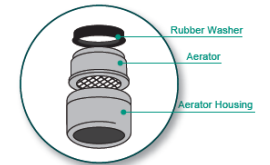
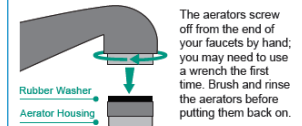
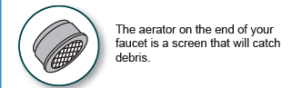


FLUSH YOUR PIPES AFTER WATER UTILITY WORK IN OR AROUND YOUR HOME

The Detroit Water and Sewerage Department (DWSD) recommends flushing your water taps after maintenance in your neighborhood or plumbing work in your home. DO NOT consume tap water, open hot water faucets, use your icemaker or filtered water dispenser until flushing is complete.

-  1 Remove faucet aerators from all water taps in the home.
-  2 Beginning in the *lowest level of your home*, open all the cold water taps in the house.
-  3 Let the water run for 5-10 minutes at the last tap you opened (top floor).
-  4 Turn off each tap starting with the first tap you opened (bottom floor). Clean and install aerators.

WHAT IS A FAUCET AERATOR?

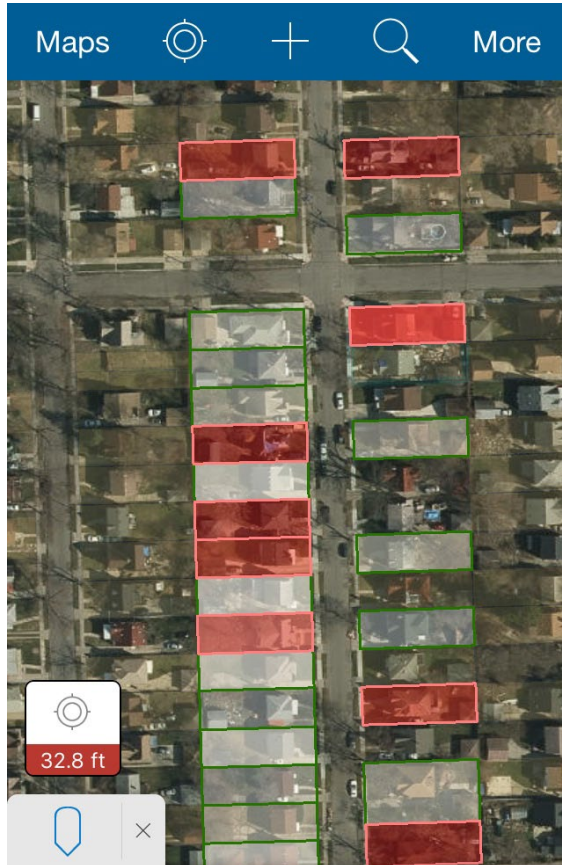


HOW TO IDENTIFY YOUR SERVICE LINE MATERIAL

This online tool to help you identify your service line material: <https://apps.npr.org/find-lead-pipes-in-your-home/en/#intro>



Data Collection and Tracking



- DWSD is improving its tracking of service lines which includes:
 - Reviewing existing records;
 - GIS field data collection;
 - Verified data from customers and city departments;
 - Visiting customer homes
- Creating outreach materials to better educate customers on minimizing lead in drinking water
- Offering lead sampling to any resident

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Community Outreach

- Block Meetings
- Invitations & Information Packages
- Explain LSLR procedures, collect replacement agreements
- Answer questions, show pictures, offer water sampling before, during, and after replacement



Barry Brown

Green Stormwater Infrastructure

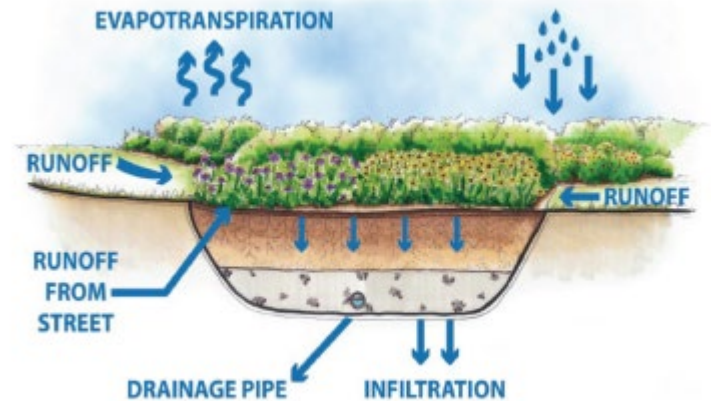
What is Green Stormwater Infrastructure?

- Approach to managing stormwater using the natural processes of soils and plants
- Assists with redirecting water from the sewer system
- Green infrastructure already exists in Detroit – you have most likely passed by GSI before and seen GSI practices along your regular commute
- GSI consists of different soils, plants, and rocks to store, filter, and slowly infiltrate water into the ground or into an underdrain pipe
- Adding GSI practices within Cornerstone Village would help redirect water from the sewer system, keeping our basements dry and waterways clean
 - During large rain events, sewers can become overwhelmed , leading to basement sewer backups or overflow into our rivers and streams



What is Bioretention?

- Bioretention cells are typically located at low points in the landscape
- Runoff water from grass and paved areas is designed to drain into these cells
- The water then infiltrates down through a filter bed of plants, soil, and gravel that help clean the water of pollutants
- Cells store water temporarily until it can slowly infiltrate into the ground or exit through an underdrain pipe
- Bioretention areas are designed to drain down within 24 to 72 hours



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Project & Construction Details

- Between Canyon Street and Gateshead Street
- DWSD Maintained
- 2019 Construction
 - Will occur in one season
 - Turf grass and plantings may take up to one year to fully establish
 - Construction crews will work M - F, Saturdays if needed
- Community & Neighborhood impacts
 - Chandler Park Drive will remain open, while one lane of traffic may be closed for a few days



Chandler Park Drive GSI Project

- The Chandler Park Drive bioretention cell will look like a part of the natural landscape – a shallow grass swale in the planting strip between the sidewalk and road
 - One on each side of the street
- Trench inlets installed to divert runoff from the street into the bioretention areas
- New street trees will be planted, too, and will assist with absorbing the stormwater while providing beautification benefits



Bryan Peckinpaugh

Communication and Outreach

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What's Next?

- Ongoing Community Outreach Throughout Construction
 - Email
 - Nextdoor announcements
 - Continue to work with the Cornerstone Village Neighborhood Association
- Contact DWSD Customer Service at 313.267.8000
- Leave Your Lead Service Line Agreement today

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Questions and Answers

