

WSSC's Sewer Repair, Replacement & Rehabilitation (SR3) Program *in* Roads, Laterals and Environmentally Sensitive Areas (ESAs)

Little Falls Basin



February 12, 2013
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WSSC PM



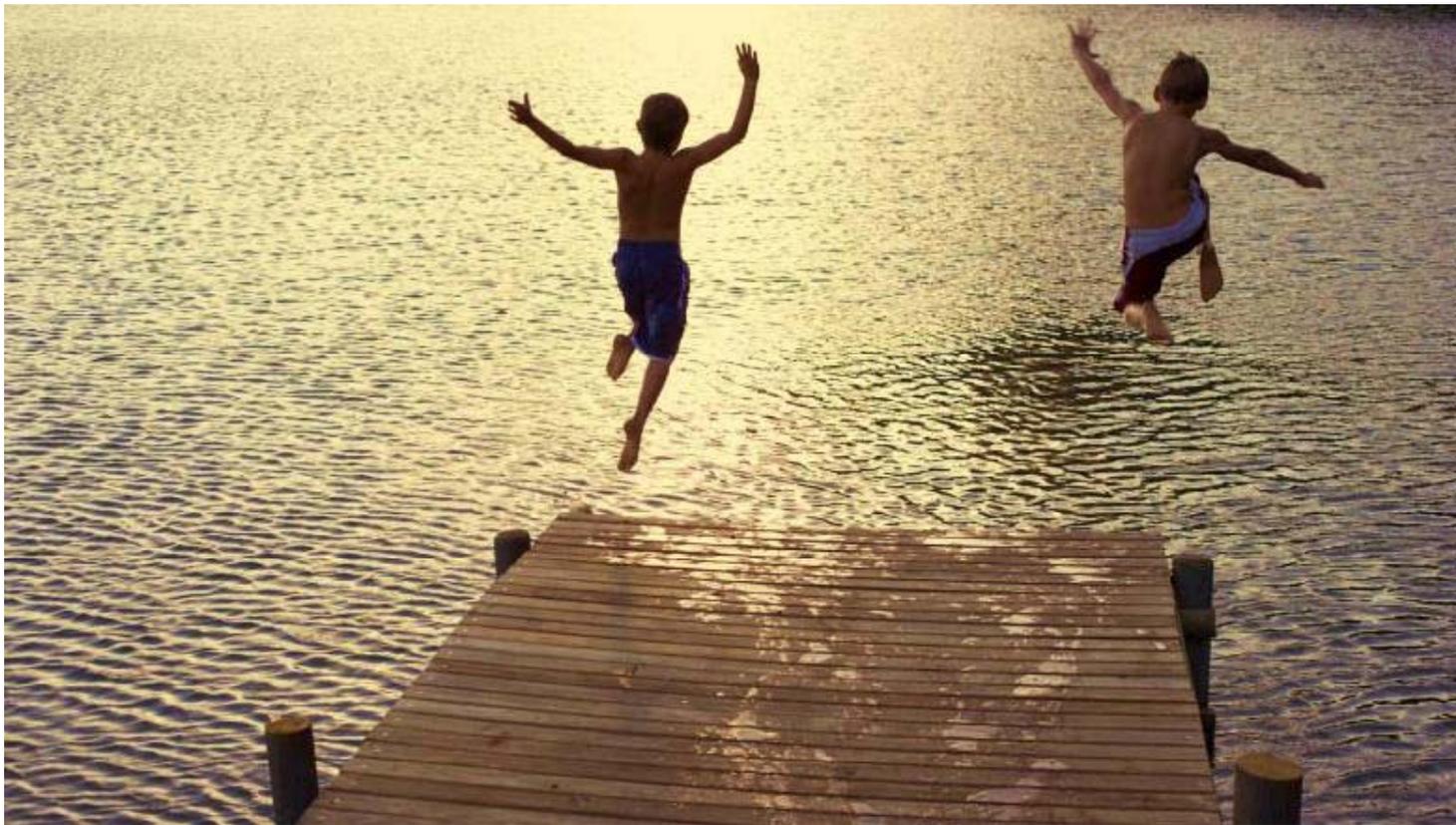
WSSC Mission

*...entrusted by our community to provide safe and reliable water,
life's most precious resource, and
return clean water to our environment, all
in an ethically and financially responsible manner.*



Doing Our Share

- For current and future generations
- For our waterways--streams, rivers, and the Chesapeake Bay

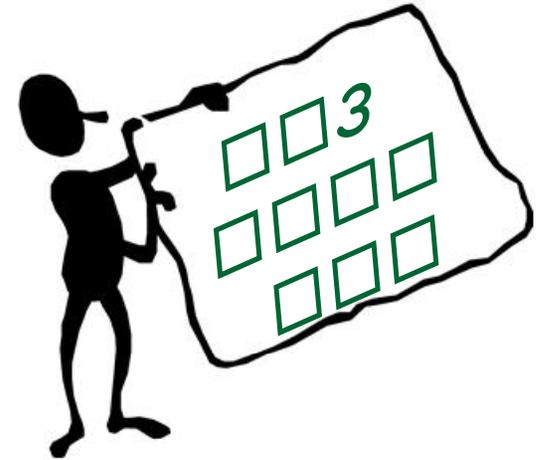


The Sewer Repair, Replacement and Rehabilitation(SR3) Program



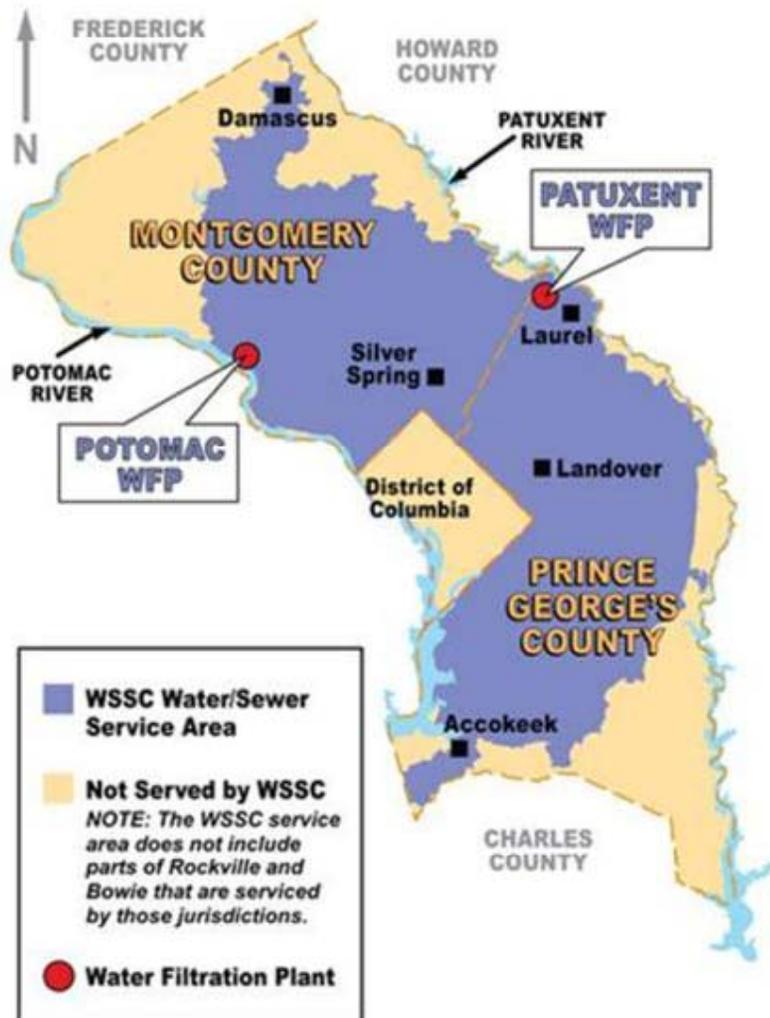
Today's Presentation

- Brief Introduction to WSSC
- The Consent Decree
- Goals and Benefits of the SR3 Program
- Environmentally Sensitive Areas
- Design and Construction Process
- Project Activities in the Little Falls Basin
- Schedule
- How to Stay Informed



WSSC– A Proud Legacy

WSSC Water/Sewer Service Area



- Providing water and sewer service to nearly 2 million people
- Maintaining 5,400 miles of sewer lines in 29 sewer basins
- Maintaining 5,600 miles of water mains

WSSC— A Proud Legacy

- Nearly a century of providing quality drinking water and collection and treatment of wastewater



The Consent Decree

- U.S. District Court Consent Decree
 - Address sanitary sewer overflows and rehabilitate failing sewer collection system
- Scope & schedule
 - Rehabilitate pipes and manholes
 - 1,000 square-mile area (WSSC service area)
 - 24 sewer basins
- Deadline: December 7, 2015



Goals of the SR3 Program

- Fix assets (pipes and manholes)
- Reduce leaks stemming from the sanitary collection system
- Restore streams

Benefits of the SR3 Program

- Extending the life of the sewer collection system 50 + years
- Providing dependable service
- Protecting the environment for future generations.



Benefits of the SR3 Program

- Stream restoration will enhance stream habitats for years to come

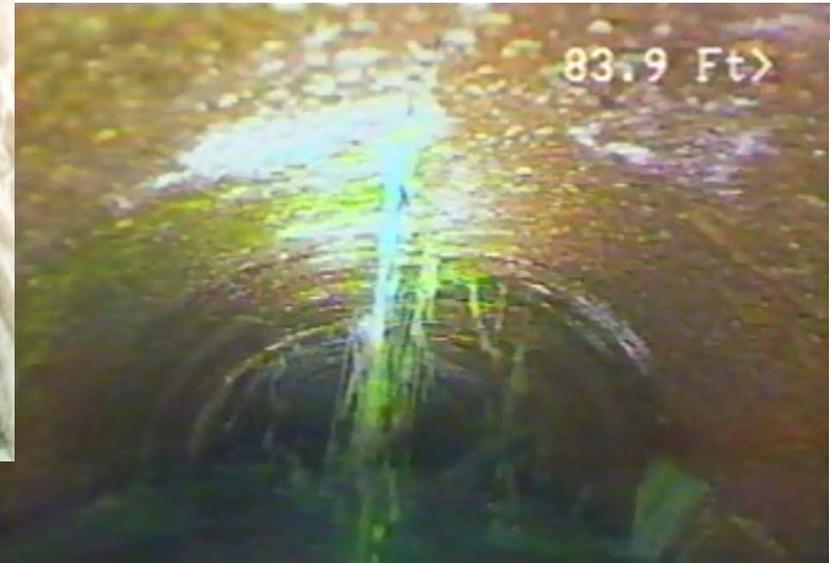


Benefits of the SR3 Program



- Economic benefits
 - Small, minority and local businesses
 - Environmental engineering design firms
 - Construction contractors
 - Home and business owners: reduce the occurrence of sewer backups
 - Recreation and fishing industries: improving the water quality of our recreational waters & fisheries

Aging Infrastructure



Aging Infrastructure – Exposed Sewer Elements



Exposed Sewer Infrastructure



SR3 Program – Three Components of Work

1. Roads

- Rehabilitation of residential sewer mains and manholes (primarily in roadways)

2. Laterals

- House connections from sewer mains to property lines

3. Environmentally Sensitive Areas (ESAs)



Environmentally Sensitive Areas (ESAs)

3. Environmentally Sensitive Areas (ESAs)

- Wetlands and Waterways
- Forests
- Critical Area
- Sensitive Species Habitat
- Historic Properties
- Parklands



Protecting Environmentally Sensitive Areas

- Regulatory and other agencies

- U.S. Army Corps of Engineers



- U.S. National Park Service



- Maryland Department of the Environment



- Maryland Department of Natural Resources



- Maryland National Capital Park and Planning Commission



- Maryland Historical Trust



- Montgomery County Department of Public Works and Transportation



- **Local Community Coordination (Hold for now)**

Process Overview

- Investigation of Sewer Basin Infrastructure
- Conceptual and Preliminary Design
 - Access path guidance
 - Apply for initial permits
 - Avoidance and minimization guidance
- Field Studies and Surveys
- Right of Entry Program (ROE)
- Project Design (including review periods)
- Project Construction (after all permits have been issued)



Field Studies and Surveys

- Wetlands Delineations
- Critical Area Surveys: all land within 1000 feet of Maryland's tidal waters and tidal wetlands, including lands under the Chesapeake and Atlantic Coastal Bays
- Forest Stand Delineations
- Rare, Threatened, and Endangered Species
- Cultural Resources (with MD Historical Trust)
- Stream Stability (if needed)

ESA Avoidance and Minimization Measures

- Avoidance:
 - Select access paths to avoid specific trees or other sensitive areas, where possible
 - Utilize existing roads, paths, and trails to maximum extent practicable



Paul Bachi, University of Kentucky Research and Education Center, Bugwood.org

ESA Avoidance and Minimization Measures

- Minimization:
 - Narrow access paths to minimum width
 - Clearing (but no grubbing) of vegetation
 - Welded wire fencing for tree protection.
 - Replanting with native vegetation (as appropriate)
 - Use of erosion and sediment controls



Wayne National Forest Photo Stream
<http://www.flickr.com/photos/waynenf/>

Types of Repairs

- Walk-behind equipment



Federal Highway Administration Recreational Trails Program
http://www.fhwa.dot.gov/environment/recreational_trails/equipment_database/machines/eq_categ.cfm?recordID=7

Sewer Basins and the SR3 Program

Impacts 24 of WSSC's 29 sewer basins within Montgomery and Prince George's Counties.

Tonight's focus is:

Little Falls Basin



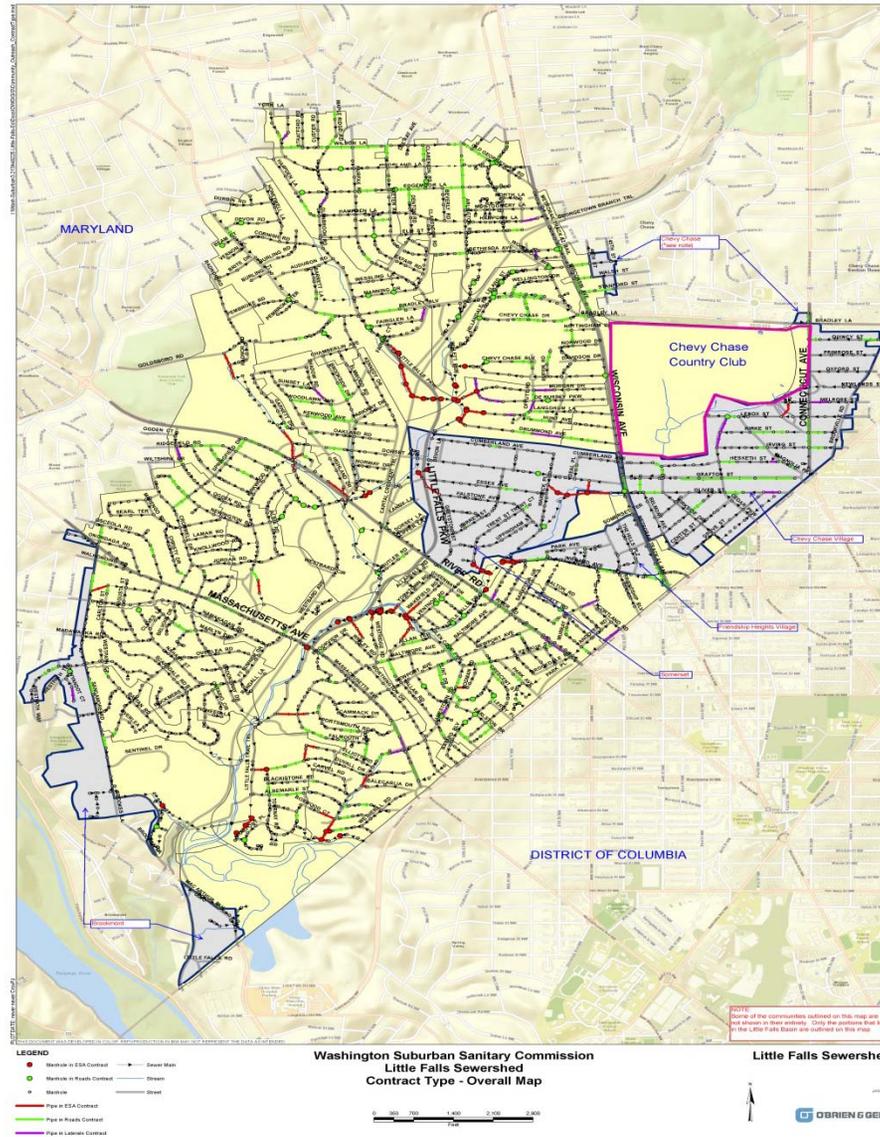
Communities in Little Falls Basin

- Chevy Chase Village
- Town of Chevy Chase
- Town of Somerset
- Bethesda
- Bethesda Urban Partnership
- Village of Drummond
- Village of Friendship Heights
- Town of Glen Echo
- Chevy Chase Terrace
- Village of Chevy Chase Section 3
- Village of Chevy Chase Section 5
- Chevy Chase View

Little Falls Basin

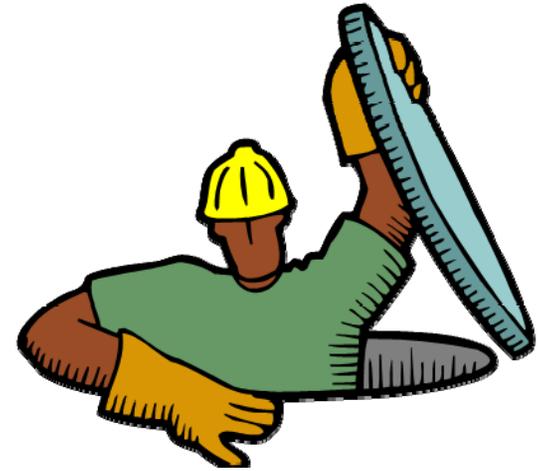
- Size: 3,167.54 acres
- County: Montgomery
- Parklands (state and local): Chevy Chase Local Park, Chevy Chase Club, Norwood Park, Elm Street Urban Park, Paint Branch Park, Rosedale Park, Woodacres Park, Meadowbrook Local Park, Little Falls Park, Cabin John Stream Valley Park and Rock Creek Stream Valley Park
- 81.2 miles of sanitary sewers
- 2,012 manholes within the area
- 14.46 miles of pipe to be repaired (378 segments)
- 119 laterals to be repaired
- 139 manholes to be rehabilitated
- Number of project sites: 25

Little Falls Basin



Types of Sewer Repairs Planned for Little Falls Basin

- Pipe lining
- External point repairs
- Internal spot repairs
- Joint sealing
- Stream restoration and pipe protection
- Manhole protection
- Manhole and sewer main replacement or relocation
- Replacing, resetting manhole frame and cover



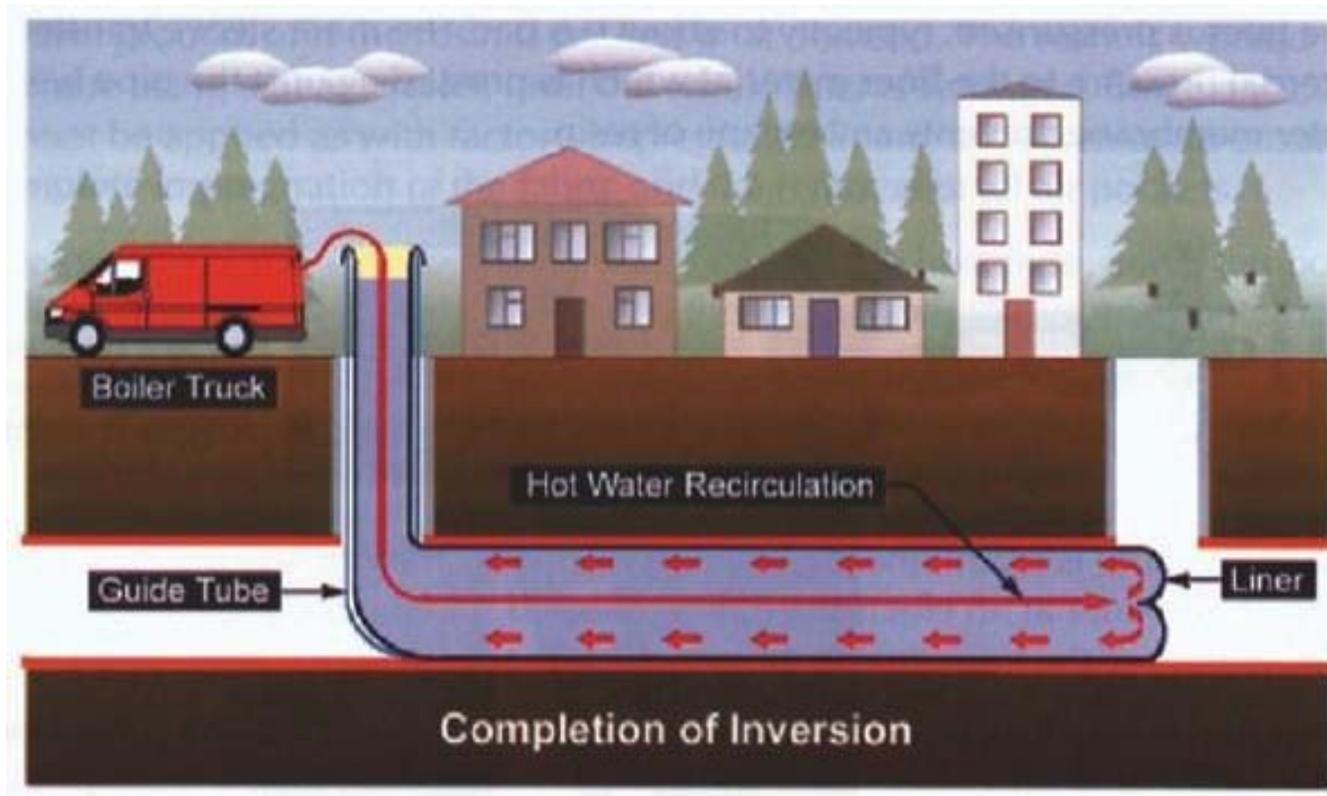
Types of Repairs

- Trenchless technology
 - Pipe Lining



Types of Repairs

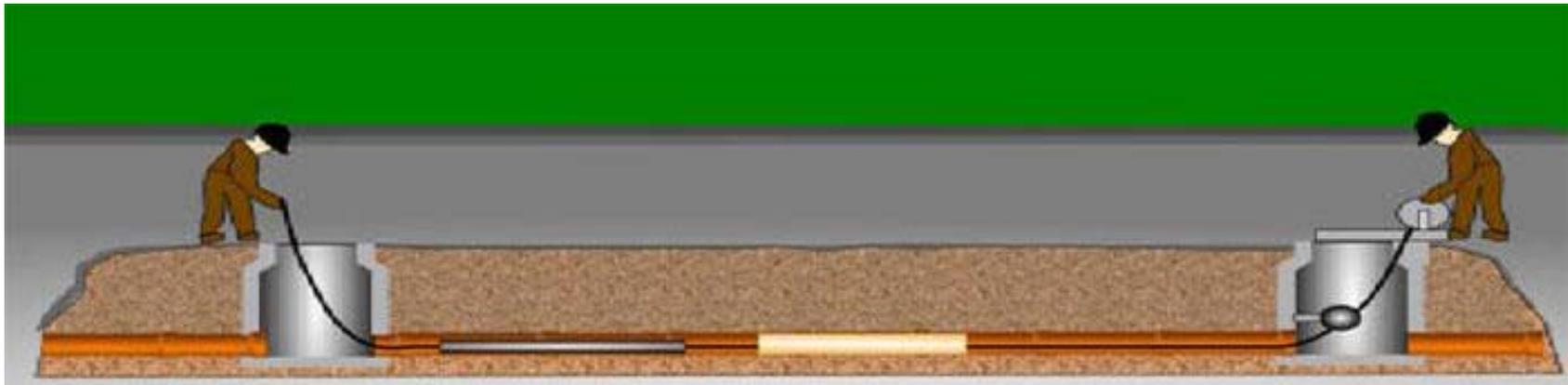
- Trenchless technology
 - Pipe repair



http://trenchlessinternational.com/news/cured-in-place_pipe_past_present_and_future/000863/#

Types of Repairs

- Trenchless technology
 - Internal spot repairs
 - Joint sealing between pipes



<http://www.tedberrycompany.com/municipal-services/trenchless-services/sectional-point-repair>

Types of Repairs

- Trenches necessary
 - External point repairs (small trenches)
 - Occasional replacement of a whole section of pipe



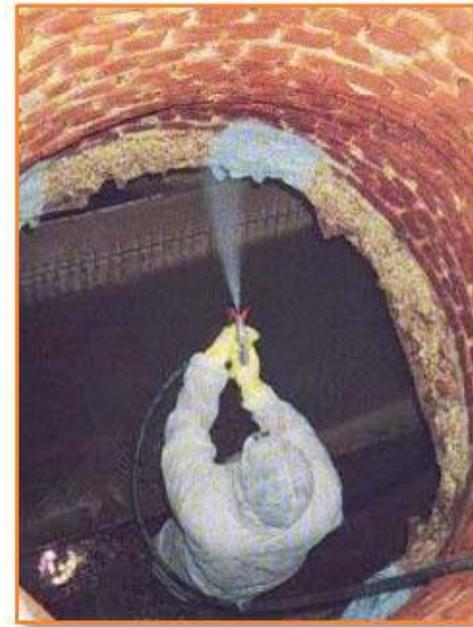
Type of Repairs

- Bypass sewer line



Types of Repairs

- Manhole repair



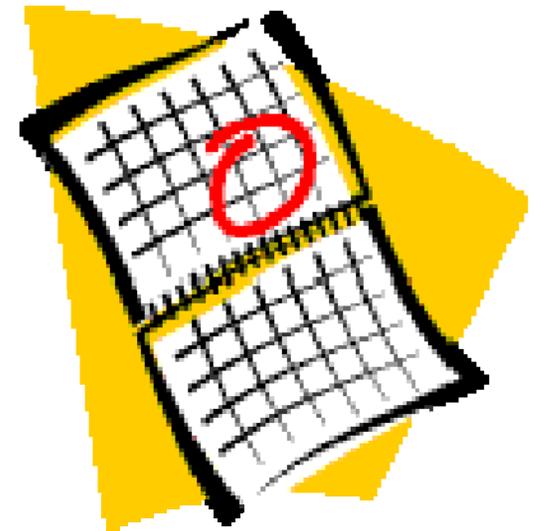
Schedule

- **Expected start of construction in basin:**

- Water Main Improvements – Currently under construction and design
- Sewer Rehabilitation – ESA – Fall, 2013
- Sewer Rehabilitation – Laterals – April, 2013
- Sewer Rehabilitation – Roads – April, 2013

Expected duration of construction

- Water Main Improvements – November, 2017
- Sewer Rehabilitation – ESA – December, 2015
- Sewer Rehabilitation – Laterals – August, 2013
- Sewer Rehabilitation – Roads – April, 2014



Opportunities to Stay Informed: WSSC's Website

- SR3 main page

www.wsscwater.com/sr3

- WSSC calendar

www.wsscwater.com/home/jsp/content/public-meetings-calendar.faces

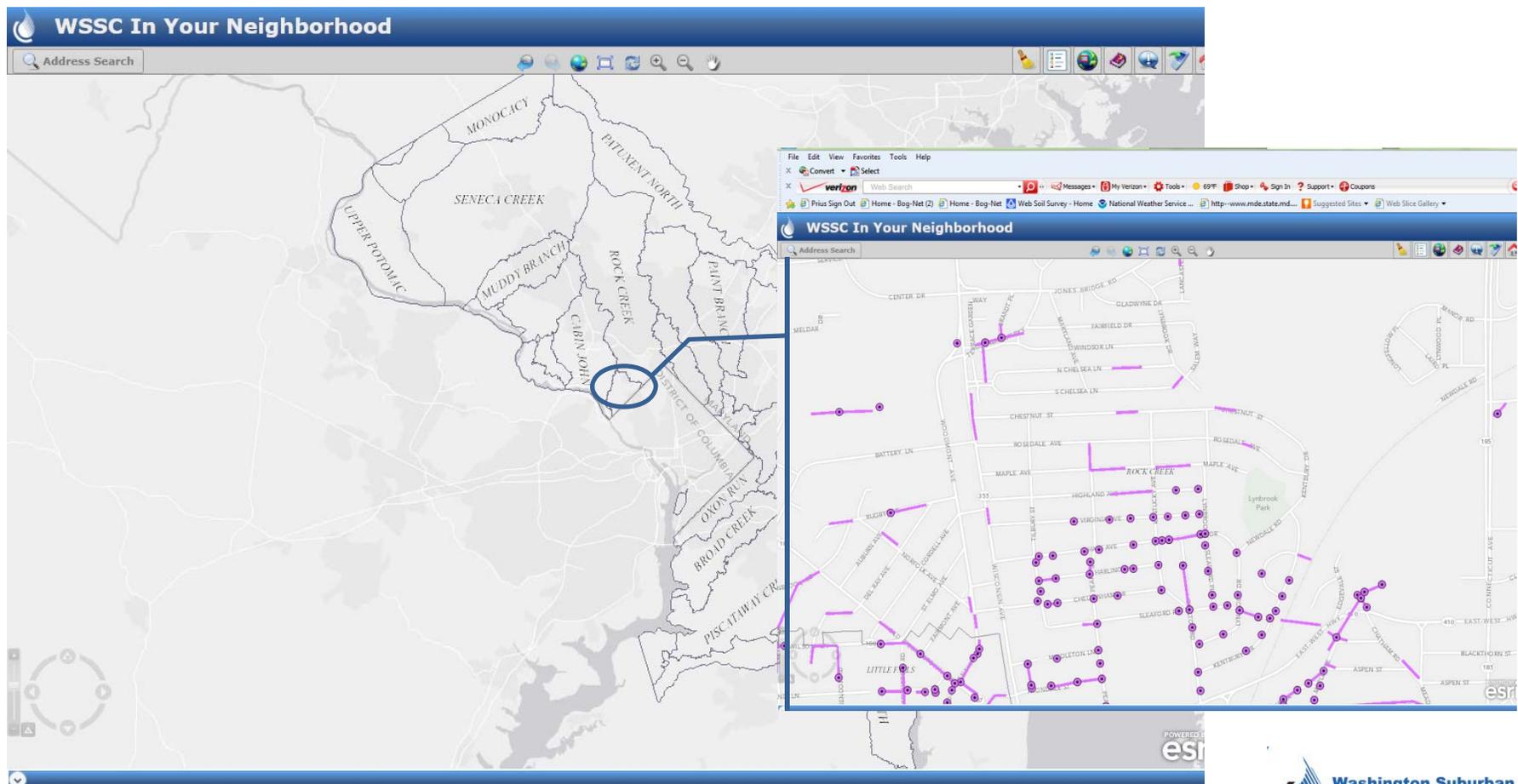
- Customer notification system

www.wsscwater.com/home/jsp/content/contactus-main.faces

Find Work in your Neighborhood

- SR3 Program interactive map

<http://gisweb.wsscwater.com/InYourNeighborhood/>



WATER MAINS AND LARGE METERS REPLACEMENT PROGRAMS

Existing water mains and large meters are at the end of their useful lives, in operation since the late 1920's. The water main and large meter replacement programs are being implemented to upgrade the existing distribution system, minimize disruptions to the community, the environment, and emergency services.

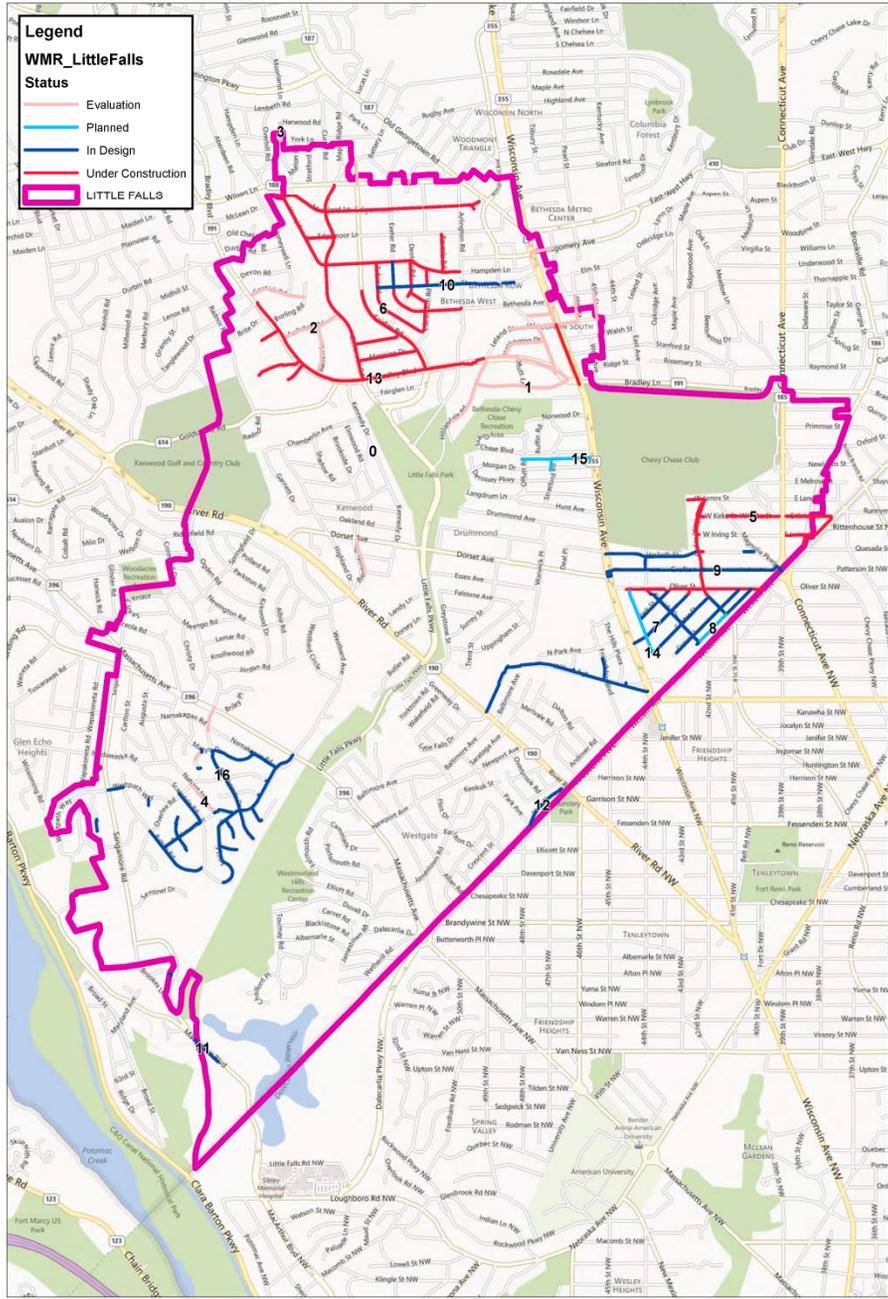


Legend

WMR_LittleFalls

Status

- Evaluation
- Planned
- In Design
- Under Construction
- LITTLE FALLS



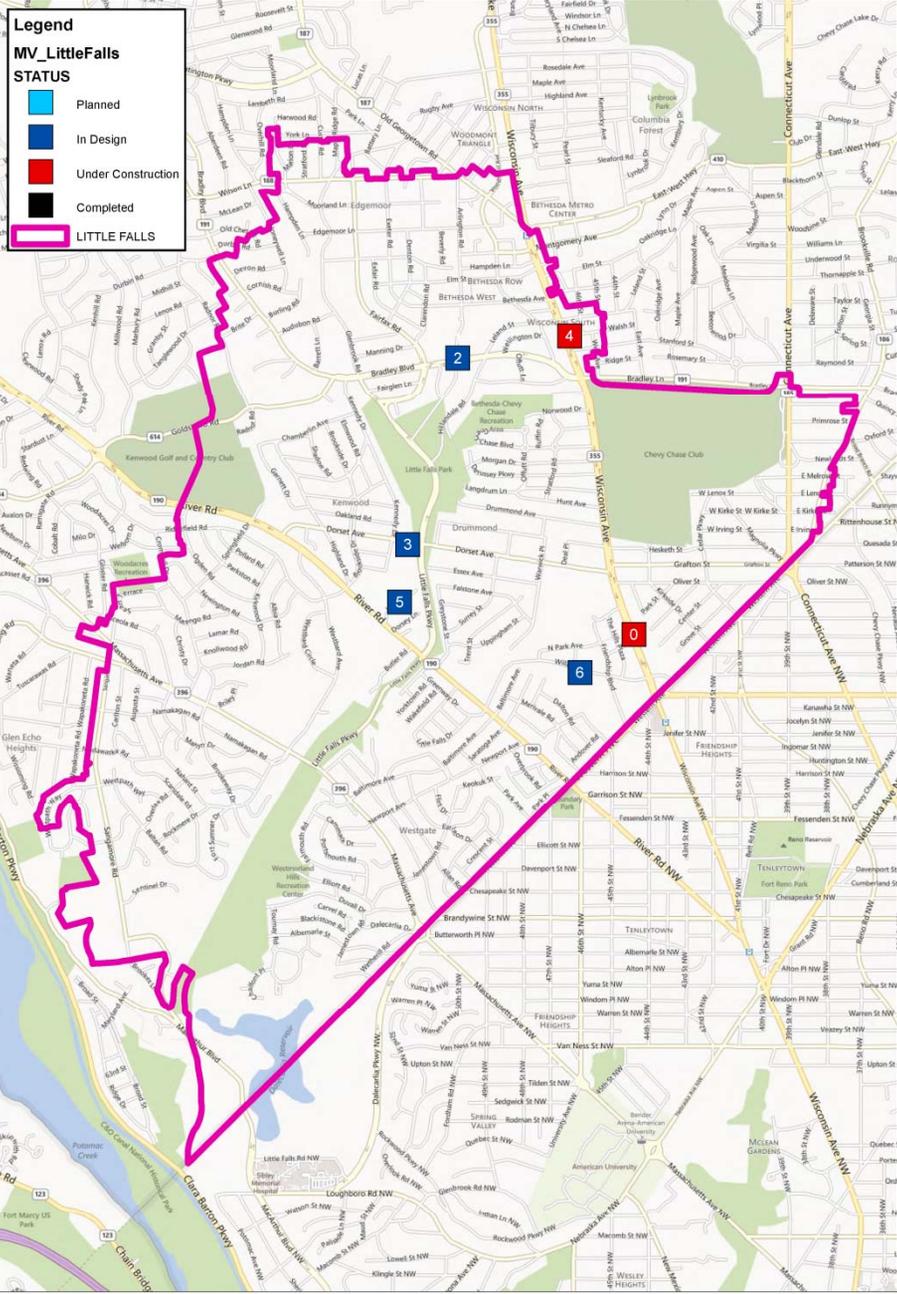
Typical Construction for Water Mains

Typical Water Main Installation



Typical Trench Repair





Typical Construction for Meter Vaults

Typical Meter Vault Installation



Typical Meter Vault in Grass Area



Typical Large Meter



Typical House Meter



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The Sewer Repair, Replacement and Rehabilitation (SR3) Program



Protecting our waterways, improving our service, for many years to come.....

Questions?

