



District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Briefing on:

Green Infrastructure Challenge Projects

May 28, 2015



DCWATER.COM

Agenda

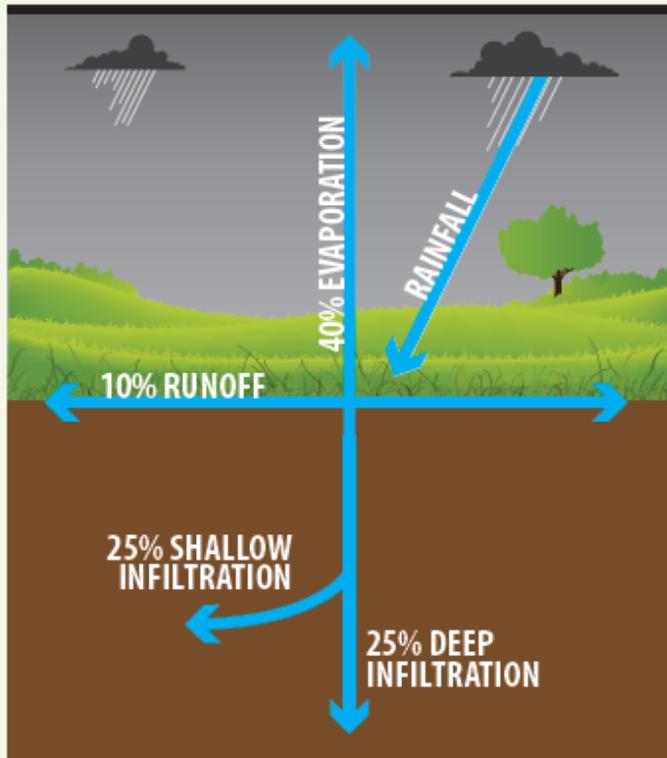
- Background
- DC Clean Rivers Project
- Recommended Green Infrastructure Plan
- Green Infrastructure Challenge Overview
- Next Steps
- Q&A



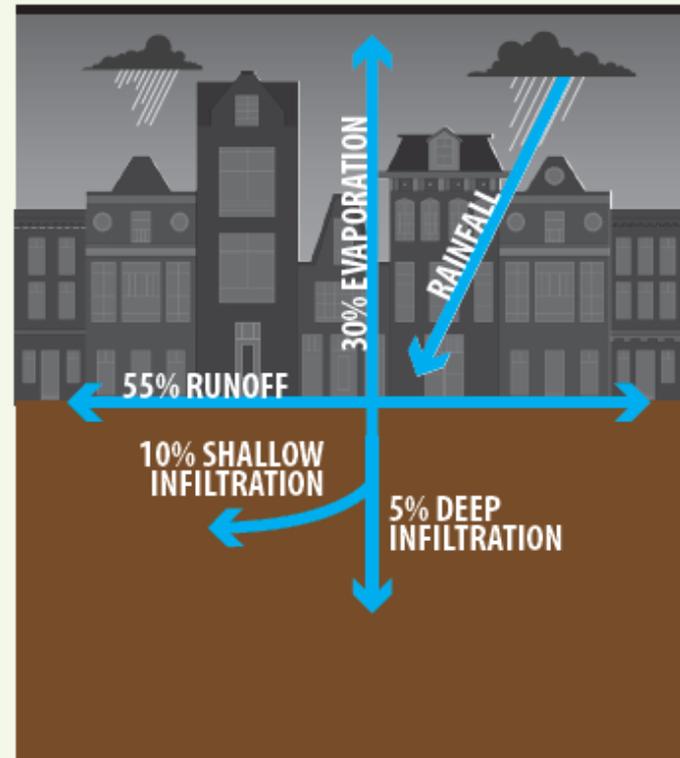
Background

Comparing Natural vs. Built Environment

NATURAL ENVIRONMENT
(natural ground cover)



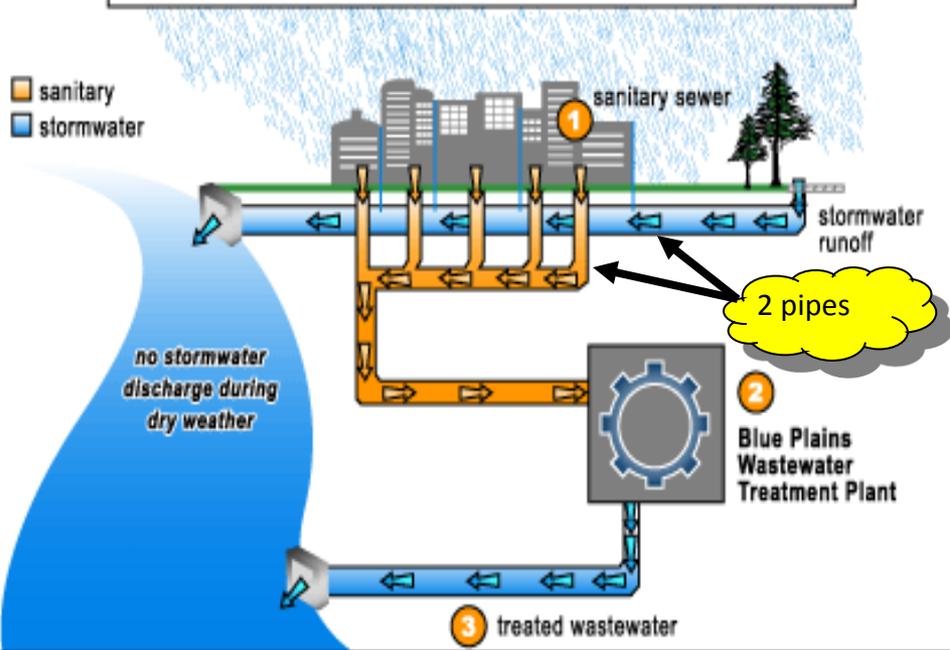
URBAN ENVIRONMENT
(75% - 100% impervious cover)



Background

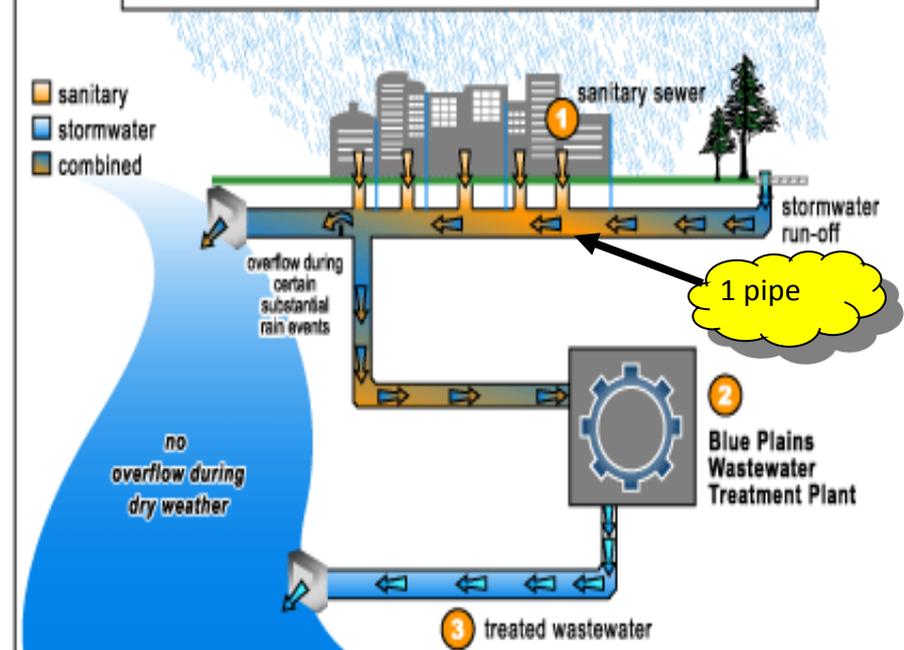
Separate and Combined Sewer Systems

SEPARATE SANITARY & STORMWATER SEWER SYSTEMS



100% of suburbs
67% of D.C.

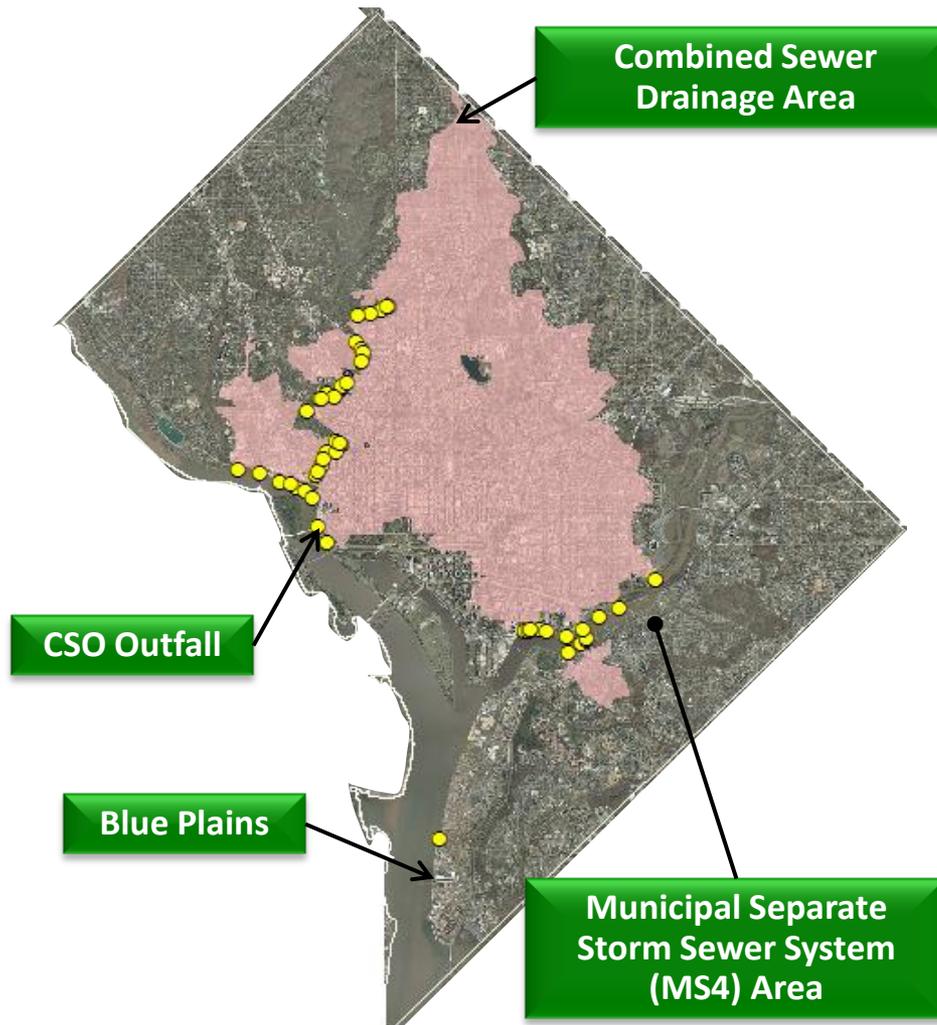
COMBINED SEWER SYSTEMS



0% of suburbs
33% of D.C.

Background

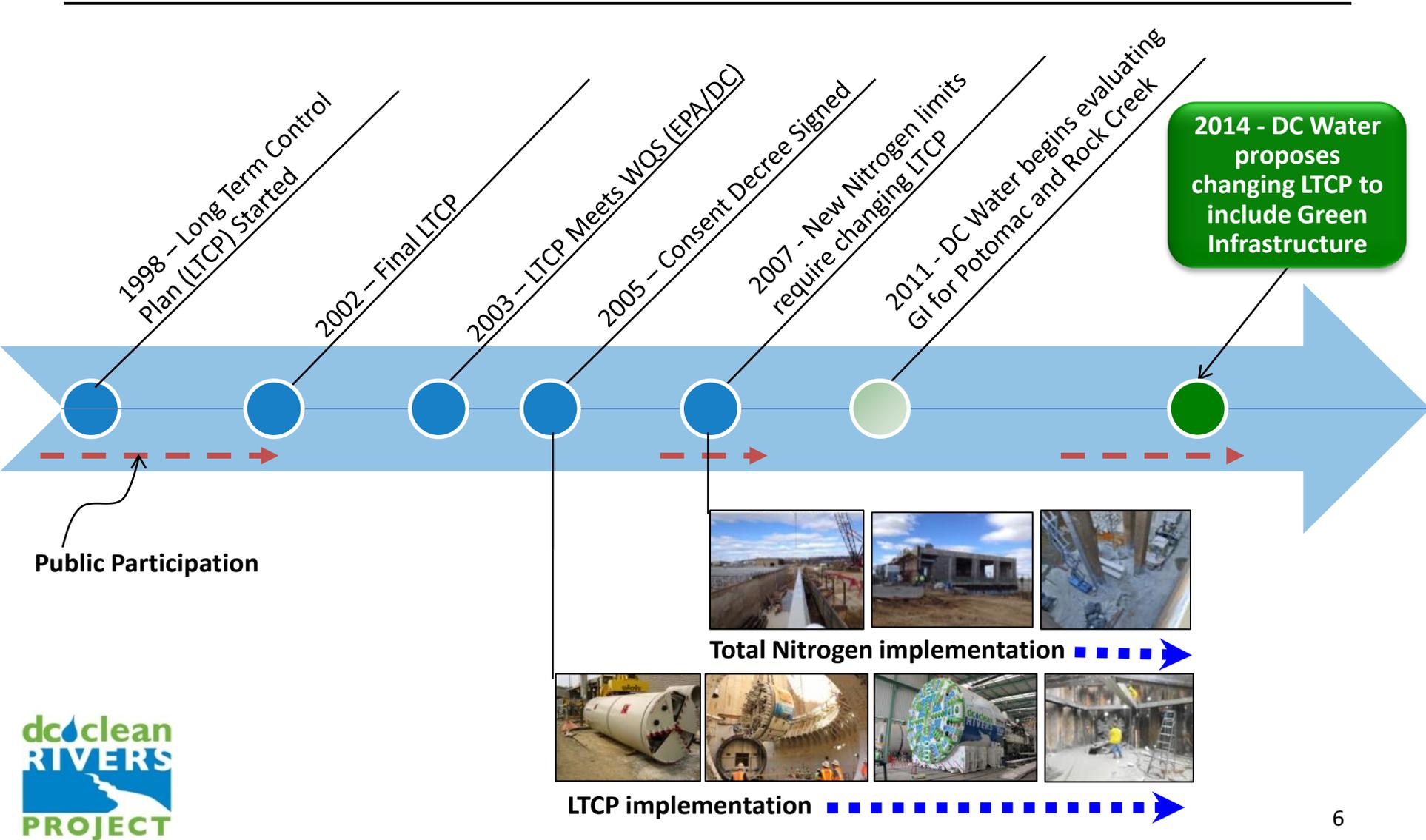
Where are Combined Sewers Located?



- 1/3 area is combined (12,478 acres)
- 53 CSO outfalls
 - 15 to Anacostia
 - 10 to Potomac
 - 28 to Rock Creek
- Three receiving waters
 - Anacostia River
 - Potomac River
 - Rock Creek

Background

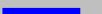
How was the DC Clean Rivers Project Developed?

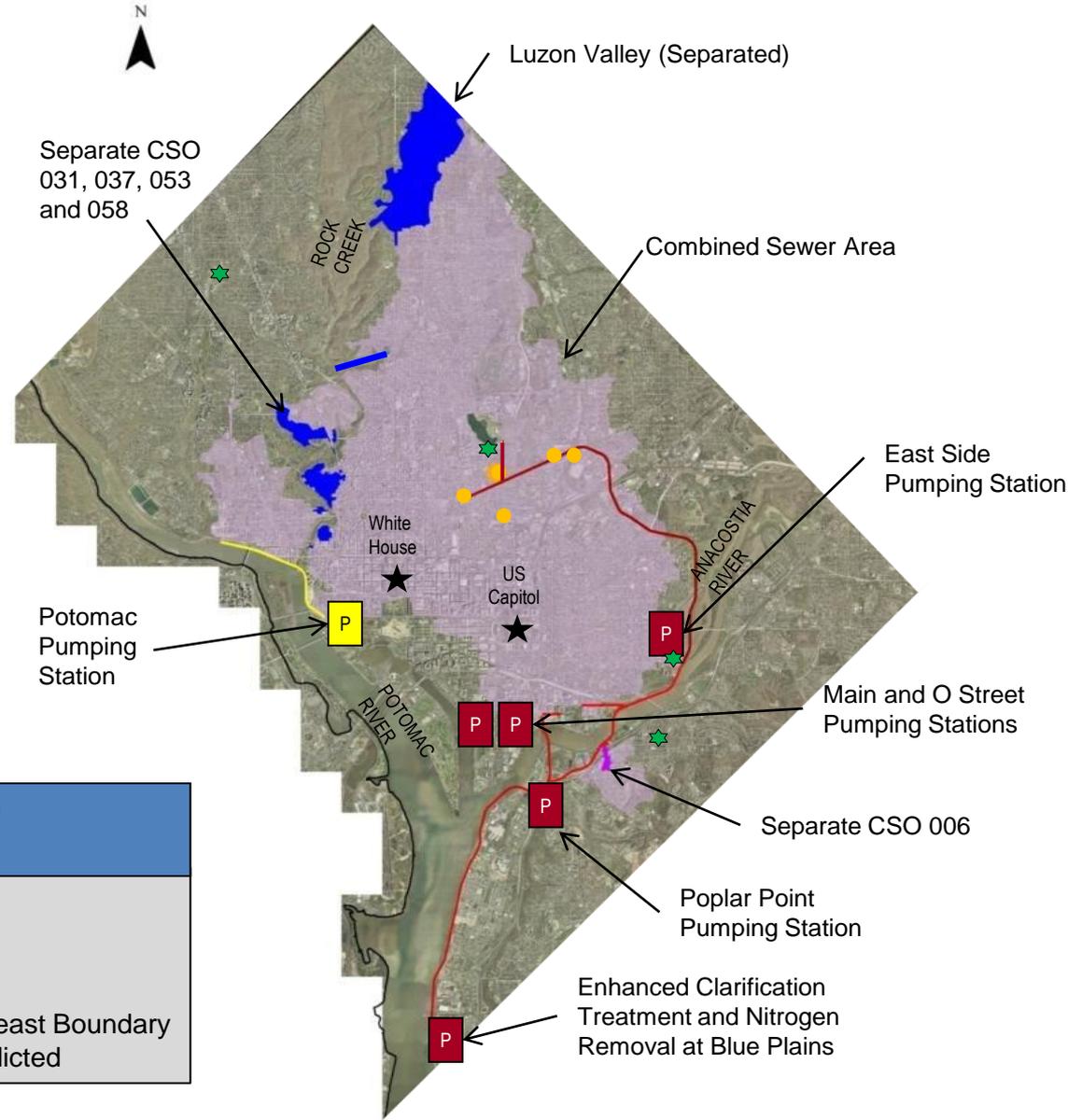


Background

DC Clean Rivers Project and Nitrogen Removal Programs – Prior to Modification

LEGEND

-  Anacostia River Tunnel System
-  Potomac River Tunnel
-  Piney Branch Tunnel
-  Pumping Station Rehabilitation
-  Known Flood Area
-  Green Infrastructure at DC Water facilities

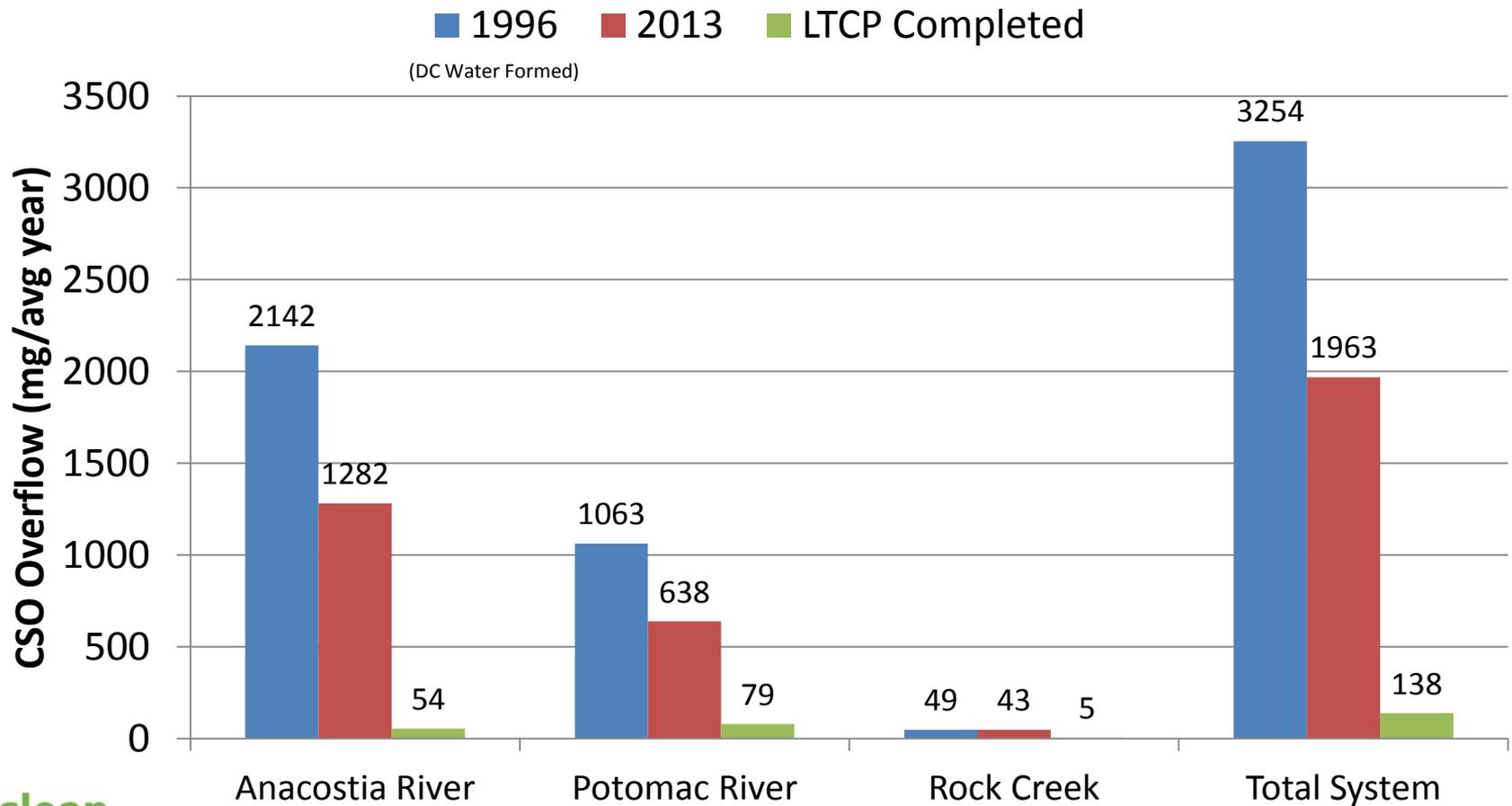


DC CLEAN RIVERS PROJECT AND NITROGEN REMOVAL PROGRAMS

- DC Clean Rivers Project: \$2.6 Billion
- Nitrogen Removal: \$950 Million
- Total > \$ 3.5 Billion
- 20 yr implementation (2005 – 2025)
- 96% reduction in CSOs & flood relief in Northeast Boundary
- Approx 1 million lbs/yr nitrogen reduction predicted

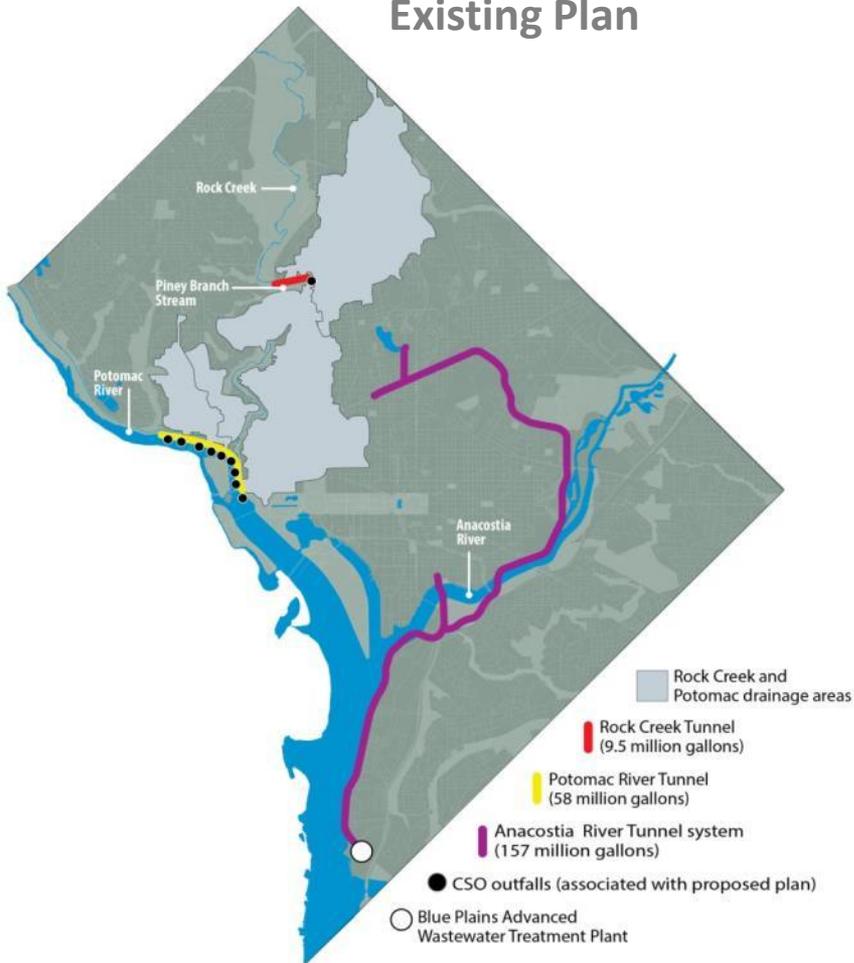
Background

Progress to Date Controlling CSOs

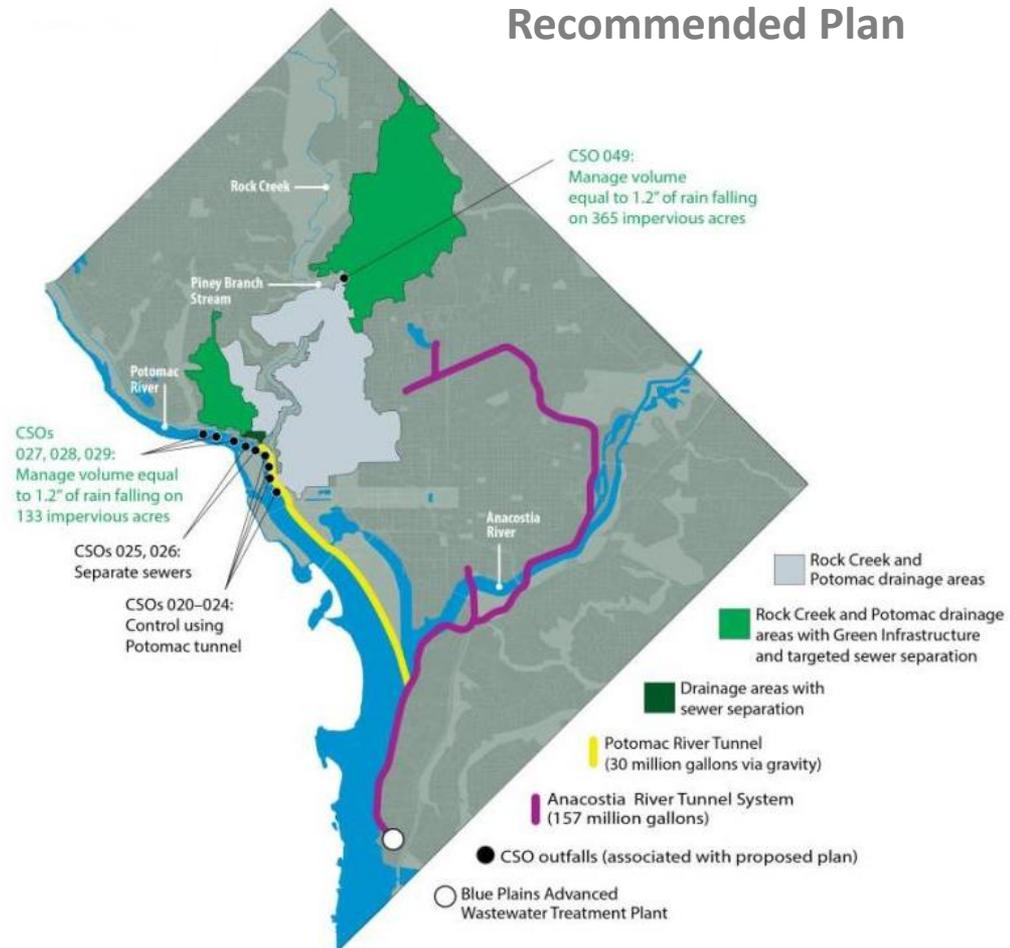


Background Recommended Plan

Existing Plan



Recommended Plan



GI Challenge Goals

- Challenge Goals
 - Proposing practical and implementable solutions that can be constructed
 - Demonstrating performance in capturing stormwater runoff volume
 - Retrofitting the urban environment and utilizing stormwater as a site amenity
 - Advancing innovative technologies
 - Demonstrating cost effective solutions



GI Challenge Design Phase Summary

- Two Planning Phase Winning Designs Selected for Final Design
- Categories for this Phase Include:
 - **Kansas Avenue Green Infrastructure Parks Project**
 - Designs for 2 GI Parks
 - Selected Team: CH2M
 - **Kennedy Street Green Infrastructure Streetscape Project**
 - Design for 1 GI Streetscape
 - Selected Team: Nitsch Engineering
- Streetscape project to be bid and constructed with DDOT Kennedy Street NW Improvement Project



GI Challenge Design Phase

GI Parks Project Description

Kansas Avenue NW Green Infrastructure Parks Project:

- Park 1:
 - Approx 150' L x 90' W. Bounded by Ingraham Street NW, Kansas Avenue NW, and 3rd Street NW
 - Brightwood Park Neighborhood
 - Existing Site Conditions:
 - Mix of shade and ornamental trees
 - Sidewalks on all sides
 - Adjacent to Washington Latin PCS
 - Surrounded by row houses
- Park 2:
 - Approx 170' L x 90' W. Bounded By Longfellow Street NW, Kansas Avenue NW, and 2nd Street NW
 - Brightwood Park Neighborhood
 - Existing Site Conditions:
 - Small, recently planted trees and turf
 - Sidewalks on all sides
 - Adjacent to Fort Slocum Park
 - Surrounded by row houses

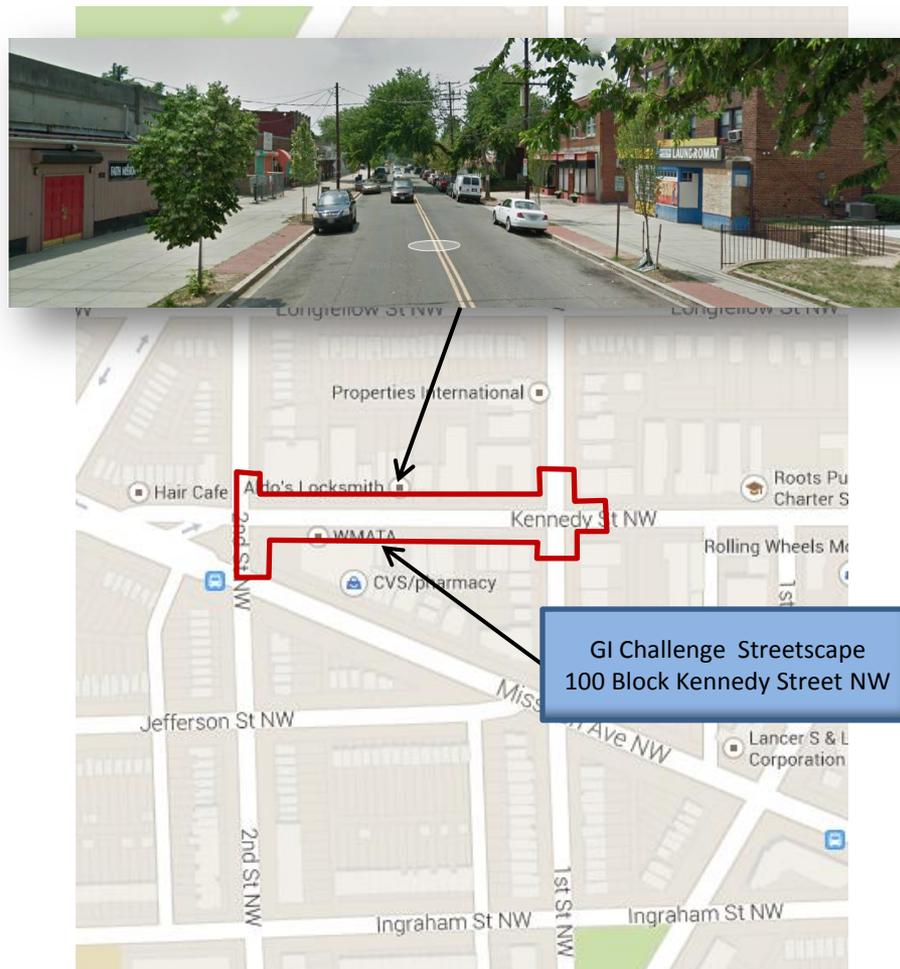


GI Challenge Design Phase

GI Streetscape Description

Kennedy Street Green Infrastructure Streetscape Project:

- Bounded by 1st Street NW and Missouri Avenue NW
 - Approximately 800' long with a right-of-way width of 60'
 - Primarily commercial site
 - Brightwood Park neighborhood
 - Characterized by broad sidewalks, a mix of recently planted trees and mature trees, and underutilized commercial properties
 - Design to be closely coordinated with DDOT work on Kennedy Street.



GI Challenge Design Phase Anticipated Schedule

Task	Date – GI Parks	Date – GI Streetscape
1. Public Outreach Meeting # 1	May 28, 2015	May 28, 2015
2. Public Outreach Meeting # 2	July 9, 2015	July 9, 2015
5. Public Outreach Meeting #3 (~ 90% Design)	December 2015	N/A
7. Construction	TBD (pending LTCP Modification)	w/ DDOT Kennedy Street NW Improvement Project October 2015 – Spring 2016 (Anticipated)

QUESTIONS AND ANSWERS

FOR MORE INFORMATION PLEASE CONTACT:

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OR VISIT THE WEBSITE

<http://www.dewater.com/greenchallenge>