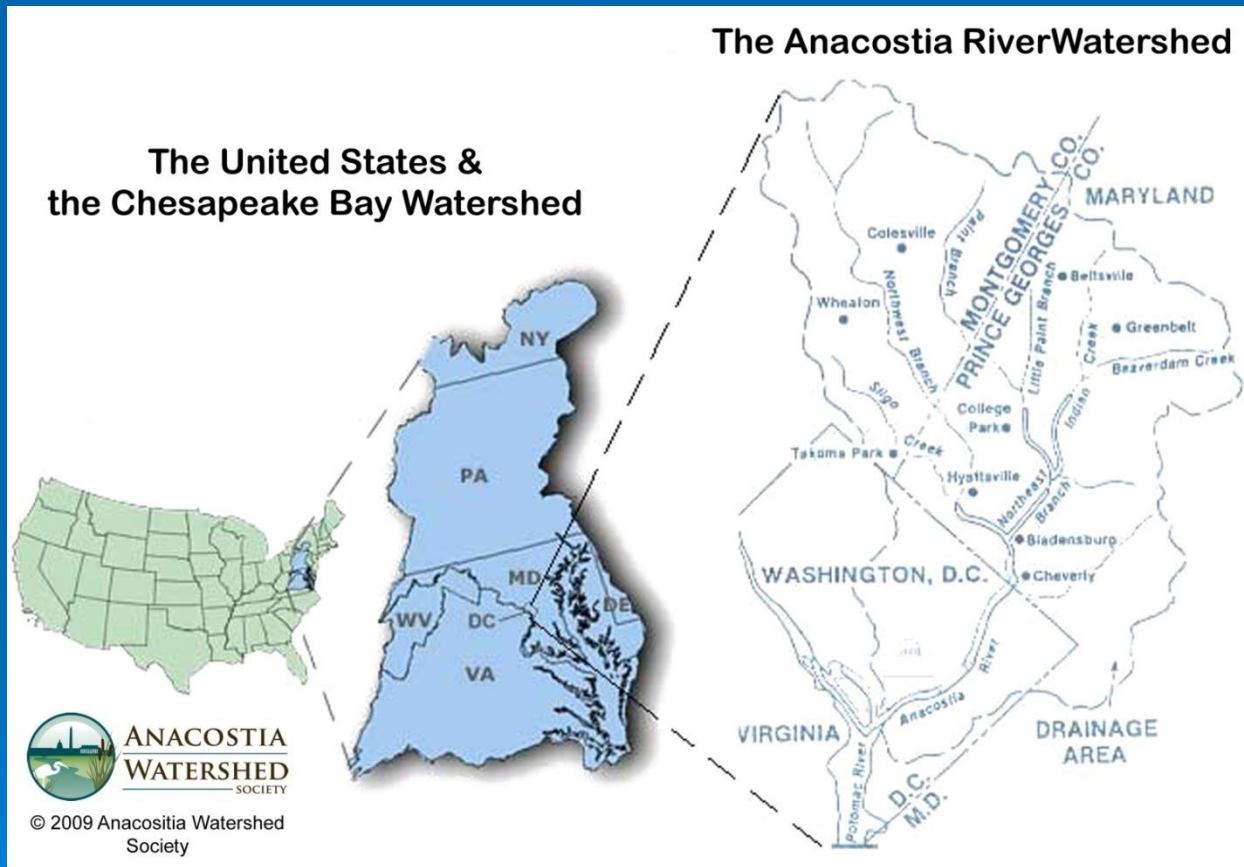
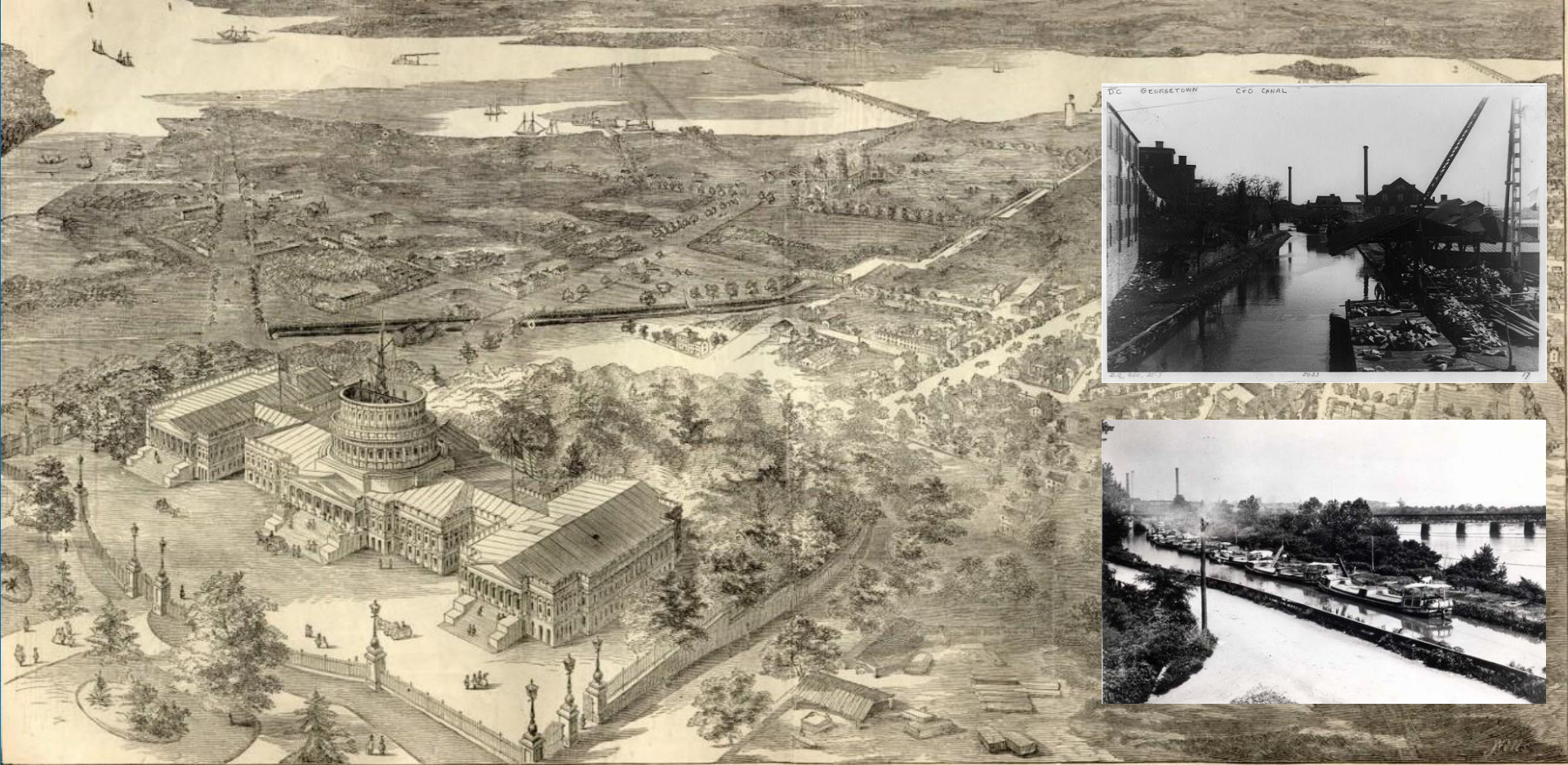


Leveraging Policy & Public Funds to Restore Waters in the District of Columbia



Challenges Many Years in the Making



Scale of the Challenges



Photo by Krista Schlyer

Major Sources of Impairment



LEGACY
TOXICS



RAW SEWAGE
IN CSOs

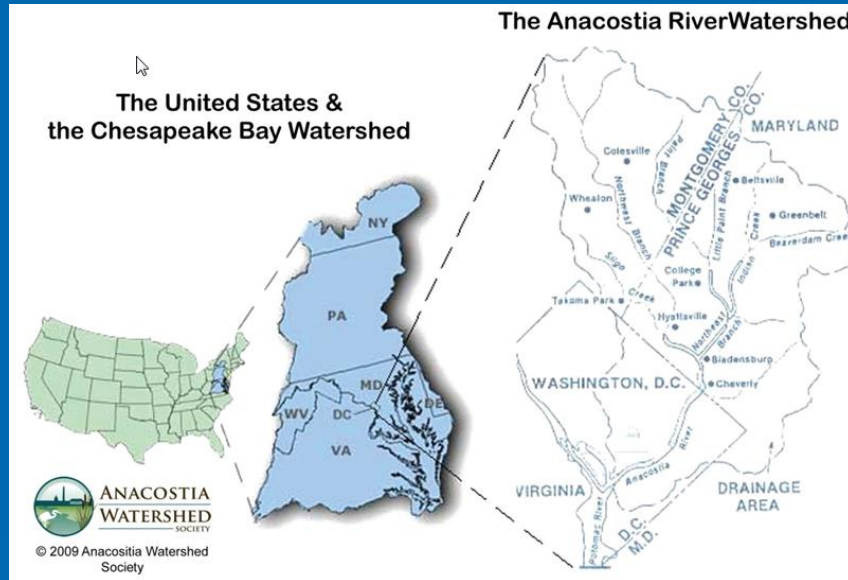


STORMWATER
RUNOFF



UPSTREAM
SOURCES

Upstream Sources



- The District of Columbia makes up only:
 - 0.5% of Potomac River Watershed
 - 18% of Anacostia River Watershed
 - 21% of Rock Creek watershed
- Pollution from beyond the District impacts our waters

Upstream Sources

- Regional coordination and collaboration to ensure District programs and efforts are mirrored upstream
- Federal Partnerships
 - Urban Waters Initiative
 - Federal Stormwater MOU



Legacy Toxics

- River bottom sediments contaminated with harmful chemicals from past industrial activity
- Contributes to pollutant loading and poses risks to health of wildlife and residents



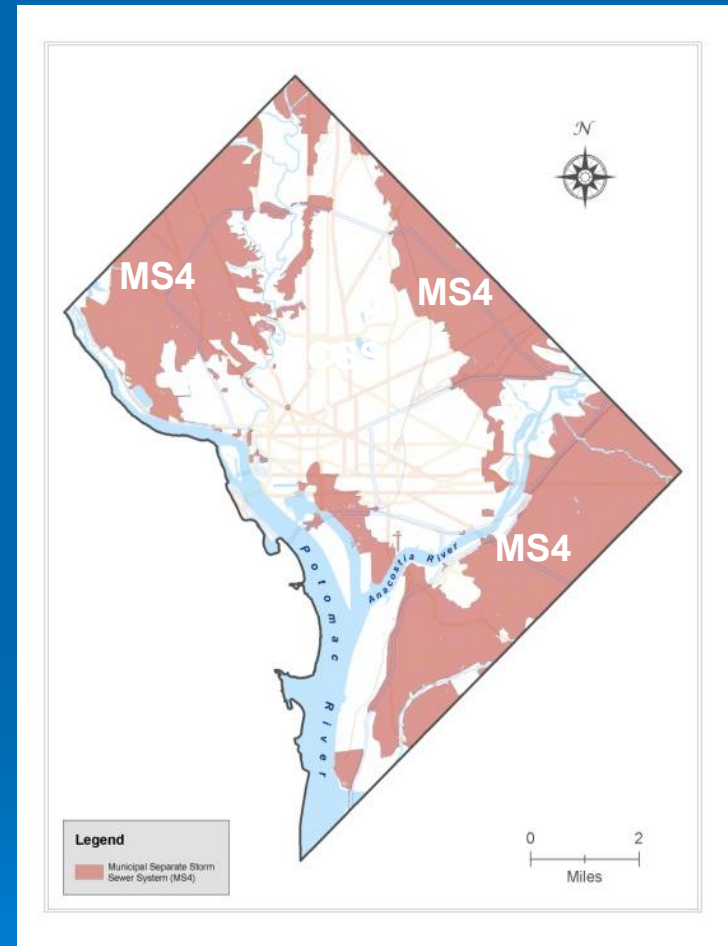
Anacostia River Sediment Investigation

- Sample sediment, water, and fish from a nine-mile segment of the Anacostia River
- Develop a cleanup plan for contaminated sediments
- Identify Responsible Parties




Combined Sewer System

- 1/3 of the District
- 3.2B gallons of sewage and stormwater overflows annually (historically)

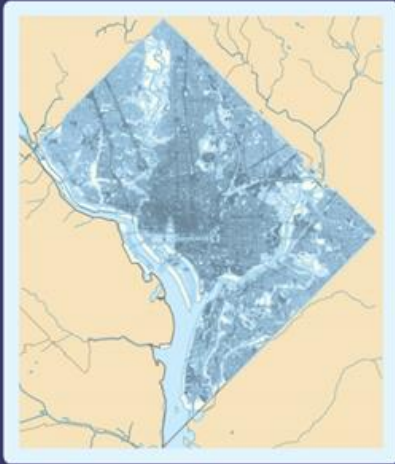


Clean Rivers Project

- DC Water's consent decree obligations to reduce combined sewer overflows
 - Will reduce combined sewer overflows by 96%
 - \$2.6B+ capital project
 - Largely funded by rate payers
- 

Stormwater Runoff

IMPERVIOUSNESS



43% IMPERVIOUS

1.2 INCH STORM=
525 MILLION GALS
OF RUNOFF



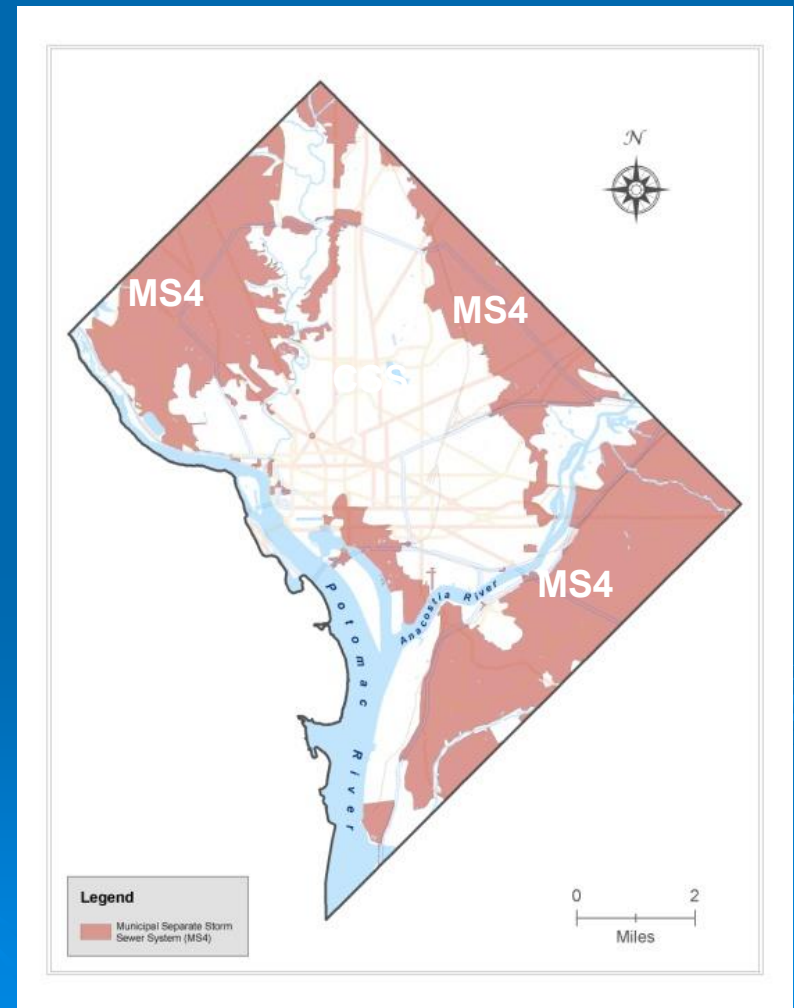
STORMWATER

DEGRADATION

Stormwater Runoff

➤ Separate Storm Sewer Sys

- 2/3 of District
- Direct discharge without treatment
- \$7B + GI build-out
- \$10 Mil/yr public funds for GI



Stormwater Improvements

STORMWATER IMPROVEMENTS

GOALS

TURN BACK THE CLOCK
ON DEVELOPMENT

RETROFIT IMPERVIOUS SURFACES
WITH **GREEN INFRASTRUCTURE**

LAYERED PROGRAMS

DIRECT PUBLIC INVESTMENT

INCENTIVES

REGULATIONS



522
524

Stormwater Improvements

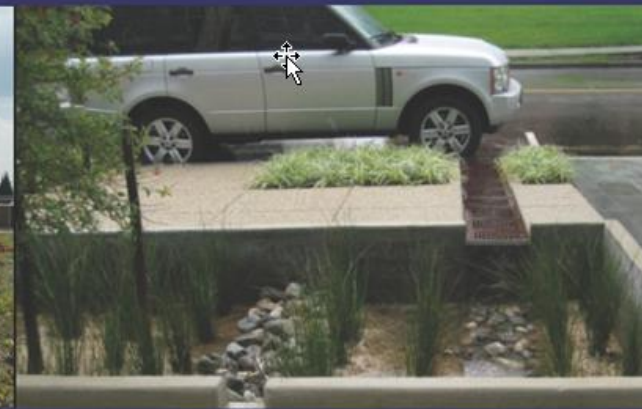
STORMWATER IMPROVEMENTS DIRECT PUBLIC INVESTMENT



TRANSPORTATION RIGHT-OF-WAY
PUBLIC BUILDINGS
STREAM RESTORATIONS

Stormwater Improvements

STORMWATER IMPROVEMENTS INCENTIVE PROGRAMS



SUBSIDIES FOR PRIVATE SECTOR (RIVERSMART)
STORMWATER FEE DISCOUNT PROGRAM
STORMWATER RETENTION CREDIT TRADING MARKET

Other SWM Initiatives

OTHER STORMWATER MANAGEMENT INITIATIVES

BAG LAW

COAL TAR BAN

STYROFOAM BAN

Revised Stormwater Regulations

- Effective January 2014
- Land-disturbing activities must retain the first 1.2” of rainfall.
- Interior renovation projects must retain the first 0.8” of rainfall.



Practical Approach: Off-Site Flexibility

- Free to go off site after achieving 50% of required retention on site.



Trading Maximizes Sustainability

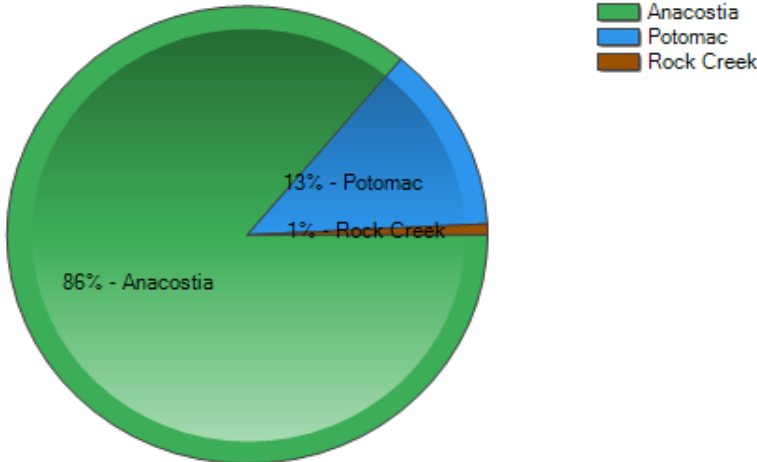
➤ Problem of imperviousness is opportunity for trading to:



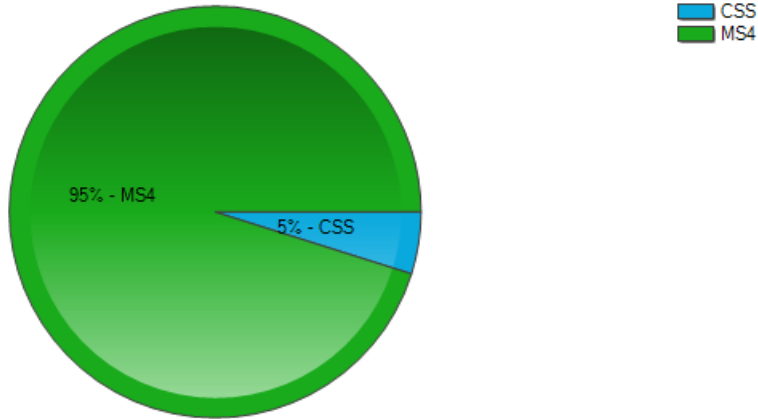
- Maximize cost savings & flexibility for regulated sites.
- Increase retention and accelerate restoration of waterbodies.
- Increase socioeconomic benefits, with more LID (health, aesthetics, environmental justice, green jobs).

Stormwater Retention Credits (SRCs)

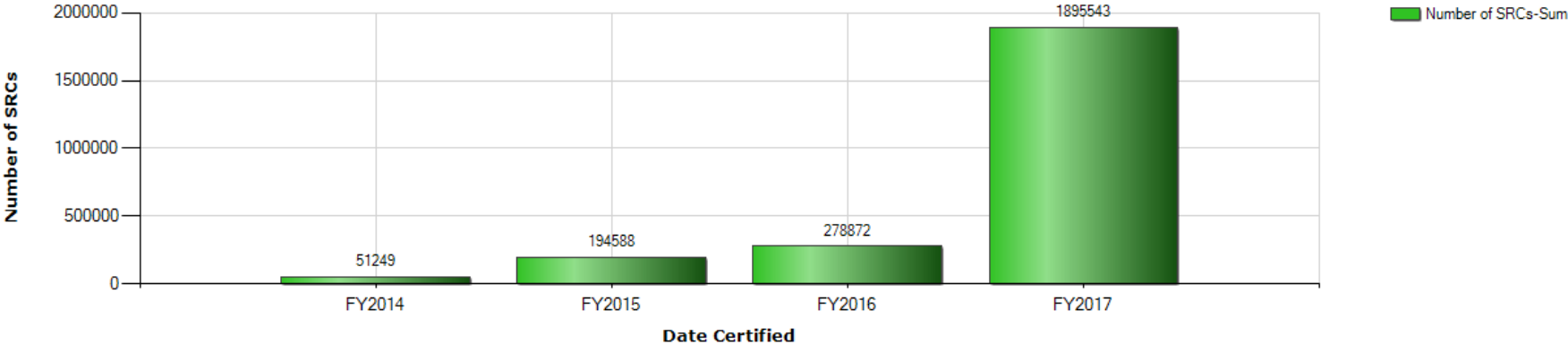
SRCs Certified per Watershed



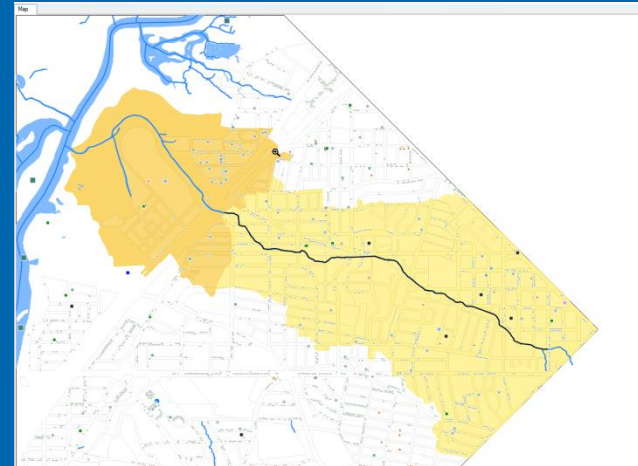
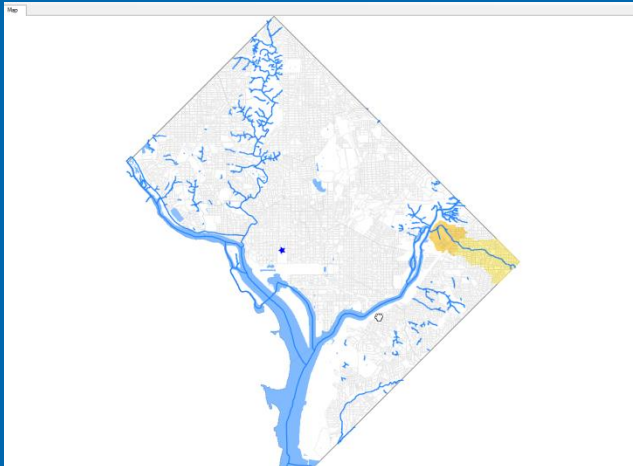
SRCs Certified per Sewershed



SRCs Certified Each Fiscal Year



Modeling Progress



Scenario - Current Condition

Export View Close

Time Scale: Annual TMDL Segment: Watts Branch

Allocation: WLA Pollutant:

Gap Analysis Gap Analysis Summary Chart Summary

TMDL Segment	Parameter Name	Allocation Type	Units	TMDL Allocation	Baseline Loads	Current Load	Additional Reduction Needed	Percent Reduction Needed to Meet Allocation
Watts Branch	BOD	WLA	lbs_year	14300	163000	163000	149000	91.2
Watts Branch	Total Nitrogen	WLA	lbs_year	1730	15100	15000	13300	88.5
Watts Branch	Total Phosphorus	WLA	lbs_year	248	1730	1640	1390	84.8
Watts Branch	TSS	WLA	lbs_year	48400	333000	330000	282000	85.4

Program Results

- GI is now standard practice
- 14 SRC trades completed
- Voluntary Private Investments in GI
- Over 4000 residential properties retrofit
- Over 2.7 Mil SF of green roof installed
- Forecast that 30% of MS4 impervious surfaces will be retrofitted by 2040



QUESTIONS?

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SRC trading - doee.dc.gov/src

Stormwater management regulations - doee.dc.gov/swregs

RiverSmart Programs - doee.dc.gov/riversmart

Stormwater Plan - dcstormwaterplan.org

