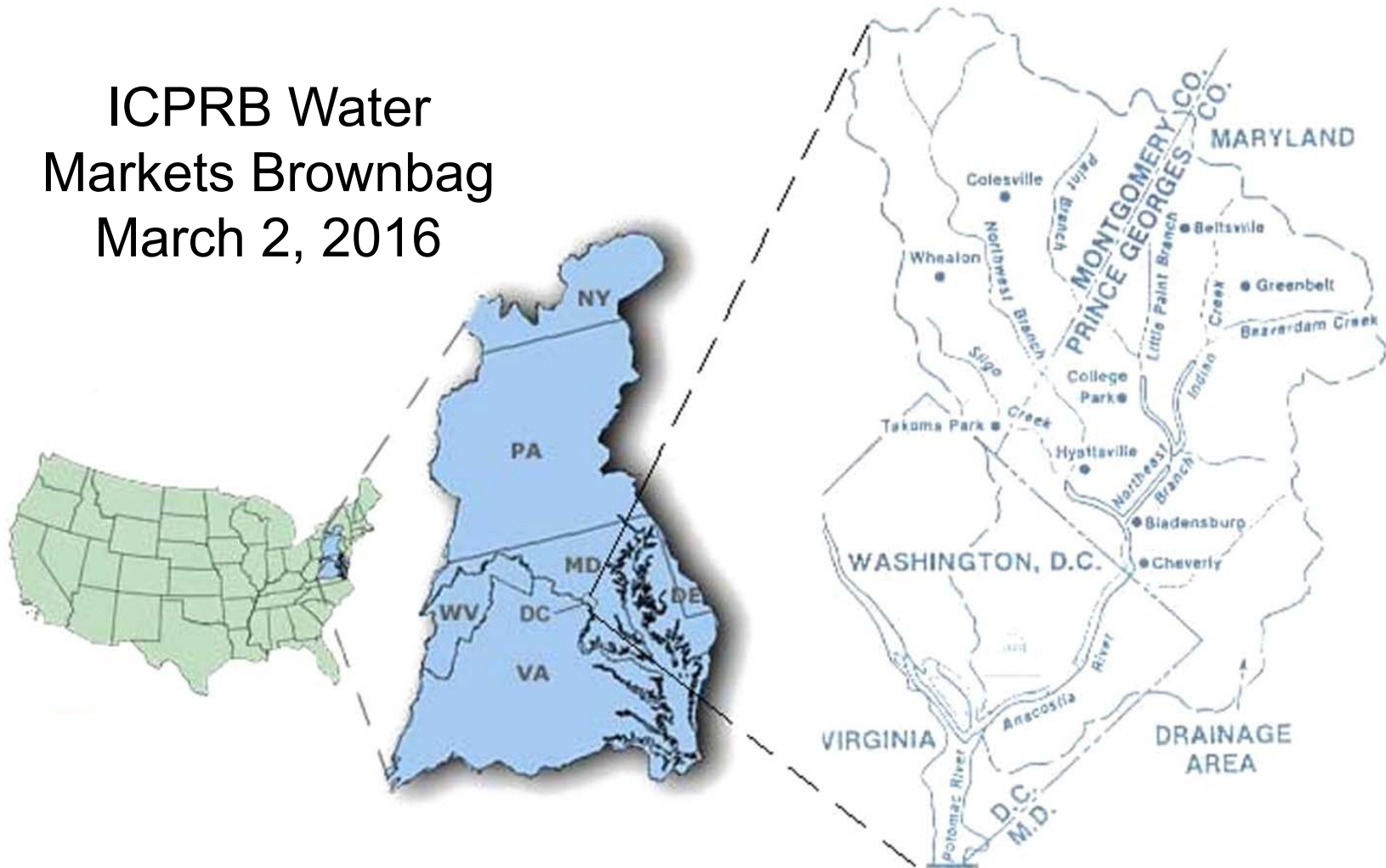


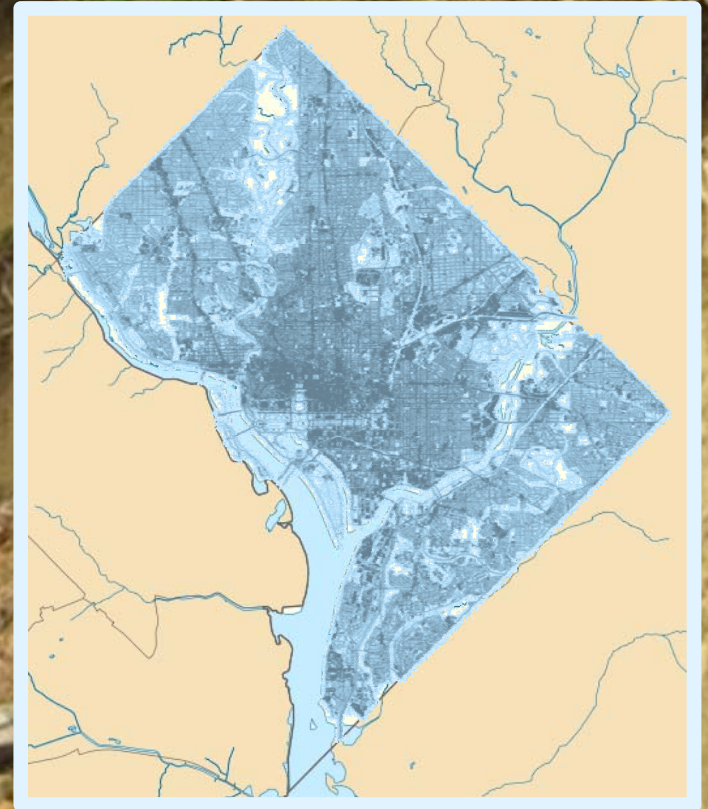
Stormwater Retention Credit Trading in Washington, DC

ICPRB Water Markets Brownbag
March 2, 2016



Problem of Imperviousness

- 43% of District's land area is impervious
- A single 1.2 inch storm falling on this area produces about 525 million gallons of stormwater runoff



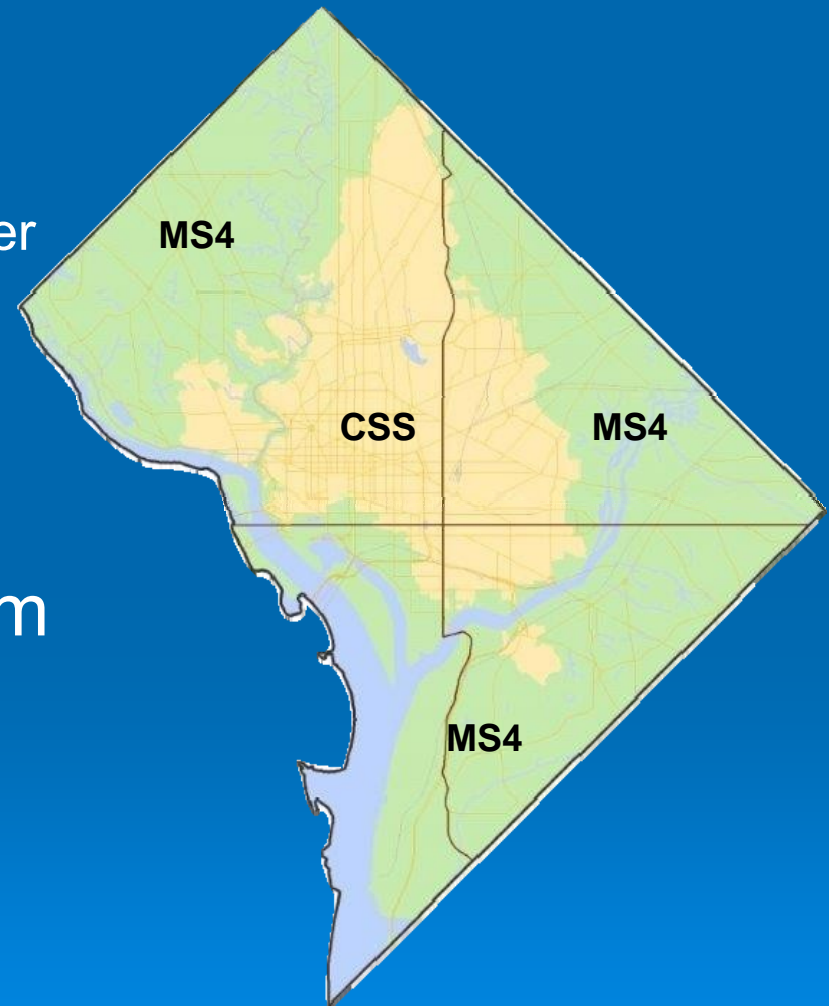
Stormwater Infrastructure in the District

➤ Combined Sewer System

- 1/3 of District
- 3.2B gallons of sewage and stormwater overflows annually
- \$2.6B+ capital project
- Largely funded by rate payers

➤ Separate Storm Sewer System

- 2/3 of District
- Direct discharge without treatment
- \$7B+ Green build-out
- \$18M/year public investment



Green Infrastructure Retrofits

- Retain runoff on site to mimic natural land cover
- Stormwater retention GI gradually makes District “spongier”
- Essential for long-term restoration of waterbodies



Stormwater Retention Performance Standards

Major land-disturbing activity

- 5,000 ft² or more of land-disturbing activity
- Retain the first 1.2” of rainfall on site or through a combination of on-site and off-site retention

Major substantial improvement activity

- Renovation for which:
 - Cost exceeds 50% pre-project value of structure and
 - Combined footprint of structure and land disturb $\geq 5,000$ ft²
- Retain the first 0.8” of rainfall on site or through a combination of on-site and off-site retention

Regulated Development Key Driver of Retrofits

- Most regulated development in District is redevelopment.
- Scale of development makes it biggest driver of retrofits and key part of the solution:

Total area subject to SWM regulations annually
(15 Mill SF - @ 1% of land)

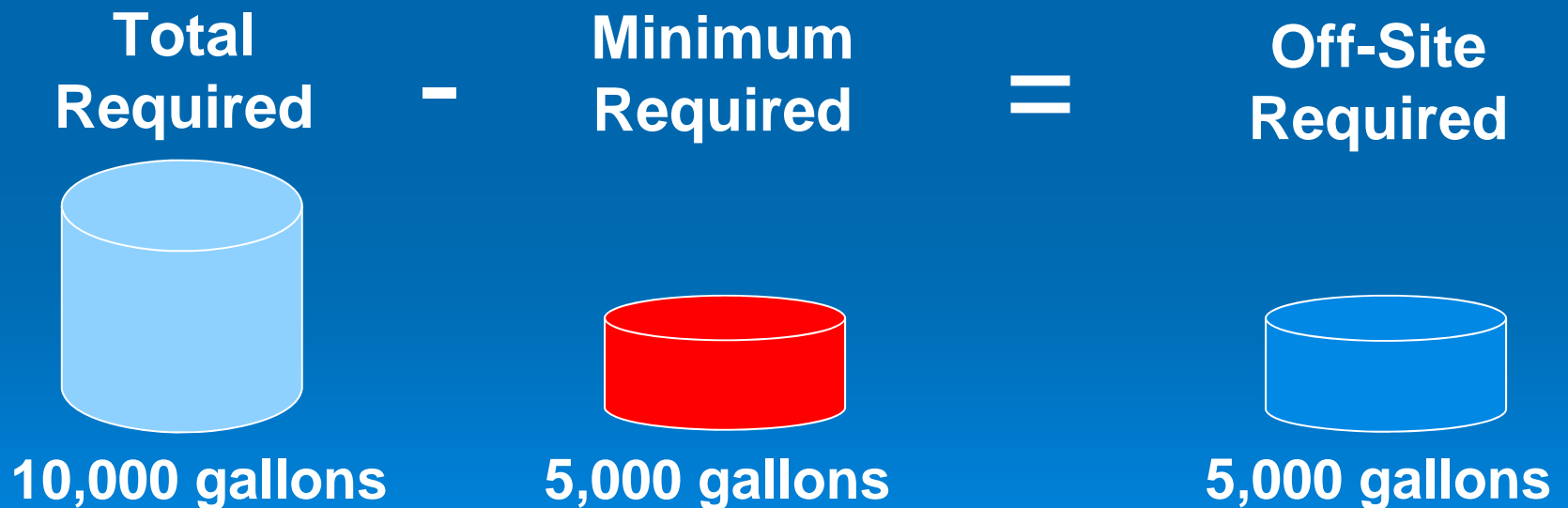
Total area retrofitted with retention via DOEE direct investment annually

10 : 1

- Gradual transformation of DC's 43% impervious land cover

Flexibility to Use Off-Site Retention

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



Achieving Off-Site Retention Volume

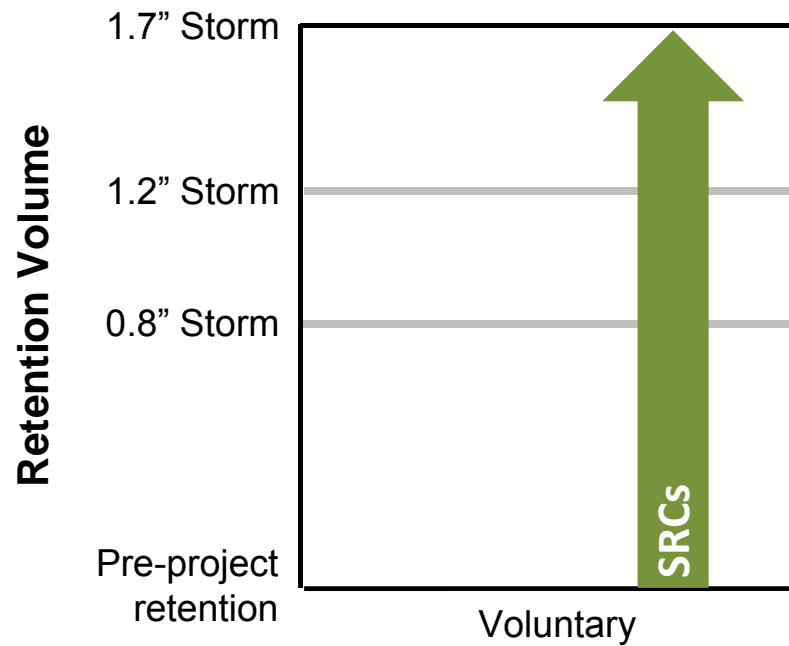
- Offv is an ongoing annual obligation
- Two options to achieve off-site volume:
 - In-lieu fee (ILF) payment to DOEE = \$3.58/gallon/year
 - Use of privately tradable Stormwater Retention Credits (SRCs)
- Off-site volume can be:
 - Met on yearly or multi-year basis
 - Met with a mix of ILF & SRCs and mix can change
 - Reduced in the future by increasing on-site retention

Eligibility for SRC Certification (cont'd)

Eligible BMPs & land cover changes must:

- 1) Achieve retention above existing retention or regs
- 2) Be designed and installed in accordance with DOEE-approved SW Management Plan (SWMP)
- 3) Successfully complete final DOEE construction inspection and ongoing inspections by DOEE
- 4) Have current maintenance contract or document ability/expertise to maintain

Eligibility for SRC Certification



Type of Activity Installing Retention Capacity

DOEE Facilitation of the SRC Market

- SRC registry, database and website
- SRC transaction template contract
- Information:
 - Map & layer of parking lots and driveways
 - Analyses of potential financial return, SRC price, supply, demand
- *Portfolio of potential SRC generating projects*
- *SRC purchase agreement to encourage new GI*
- *SRC purchase by DOEE to meet CWA requirements*
- *PACE for stormwater*

Market Activity



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[SRCs for Sale](#)

- SRCs for Sale (7) [Print](#) [Export](#)

Contact name	Contact email	Contact phone	Watershed where SRCs are generated	Asking price per SRC	Number of SRCs (tot)
Furbish Company, LLC	MFURBISH@FURBISHCO.COM	(443) 324-5804	Potomac	\$2.55	62,685
Greg DeHaven	GDEHAVEN@LENKIN.COM	(202) 477-9917	Rock Creek	\$2.00	12,948
Lano Parcel 12 LLC c/o CityInterests LLC	LBARDHI@CITYINTERESTS.COM	(202) 944-4729	Anacostia	\$2.55	19,413
Mary Harting	MHARTING@THEWESTCHESTERCORP.COM	(202) 965-1514	Potomac	\$2.25	29,223
Matt Ritz	MRITZ@WCSMITH.COM	(202) 465-7050	Anacostia	\$2.35	24,406
Ronan Heritier	RONAN.HERITIER@DIPLOMATIE.GOUV.FR	(202) 944-6196	Potomac	\$2.45	30,495
USP 700 6th Street LLC	MNATHAN@AKRIDGE.COM	(202) 756-3085	Anacostia	\$2.25	8,732
Totals (7 groups)					187,902



For assistance, please contact Matthew Espie at Matthew.Espie@dc.gov
or (202) 715-7644

Market Activity (cont'd)



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Expected Offv

- Expected Offv (21) [Print](#) [Export](#)

Watershed	Subshed	Sewershed	Offv (gal)
Anacostia	Anacostia River	CSS	1035
Potomac	Potomac River	CSS	4177
Potomac	Oxon Run	MS4	1825
Anacostia	Northwest Branch	MS4	15052
Potomac	Foundry Branch	MS4	8304
Rock Creek	Rock Creek	MS4	1368
Anacostia	Anacostia River	CSS	3077
Anacostia	Anacostia River	CSS	621
Anacostia	Anacostia River	CSS	903
Anacostia	Anacostia River	CSS	150
Anacostia	Anacostia River	CSS	1455
Anacostia	Anacostia River	CSS	705
Anacostia	Hickey run	MS4	1622
Anacostia	Anacostia River	CSS	419
Anacostia	Anacostia River	CSS	175
Rock Creek	Rock Creek	CSS	1343
Potomac	To Little Falls	MS4	6403
Potomac	Oxon Run	MS4	10127
Anacostia	Anacostia River	CSS	2142
Anacostia	Northwest Branch	MS4	223
Anacostia	Anacostia River	CSS	5443



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Market Activity (cont'd)



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Final SRC Sale Prices

- Final SRC Sale Prices (2) [Print](#) [Export](#)

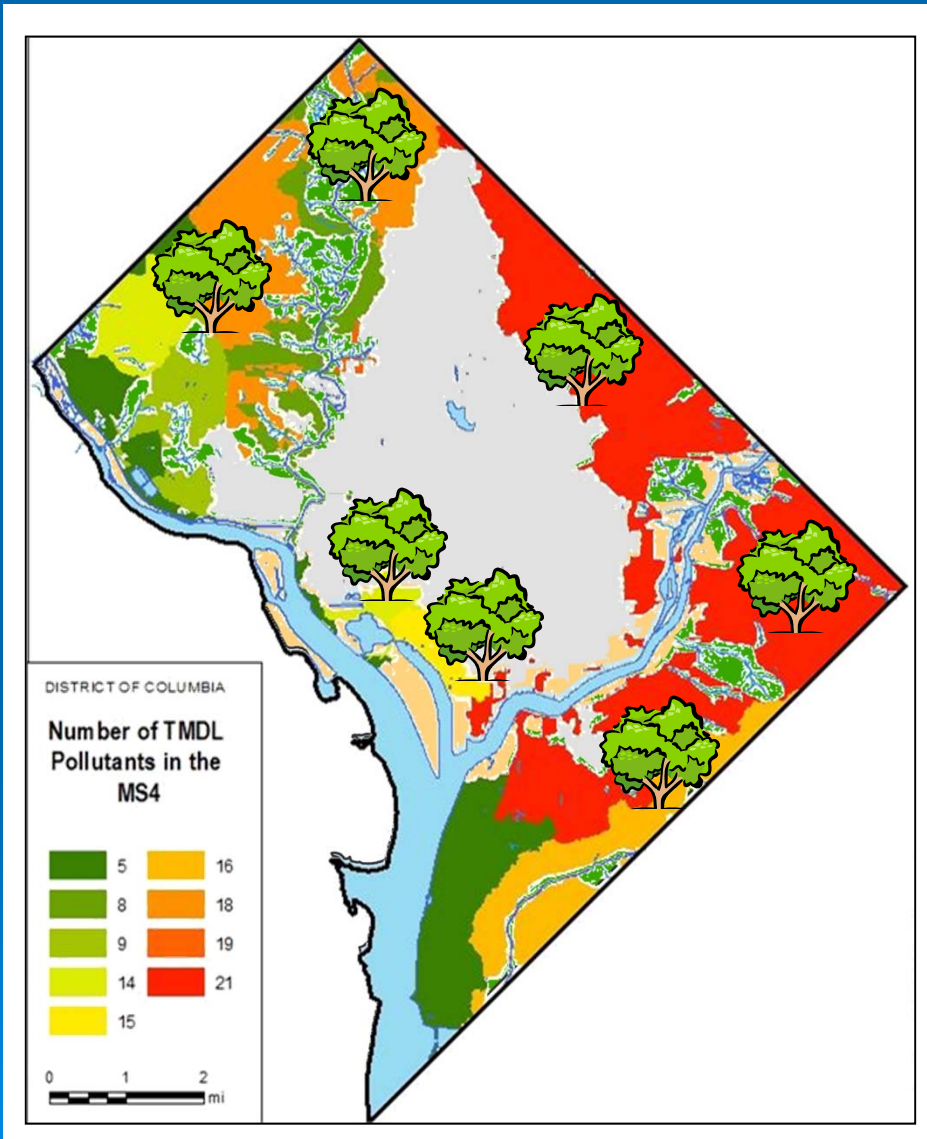
Transfer Date	Watershed where SRCs are generated	Purchase price per SRC	Number of SRCs (tot)	Total value of transfer (tot)
10-02-2015	Potomac	\$1.90	11,013	\$20,925
09-18-2014	Potomac	\$2.27	11,013	\$25,000
Totals (2 groups)			22,026	\$45,925



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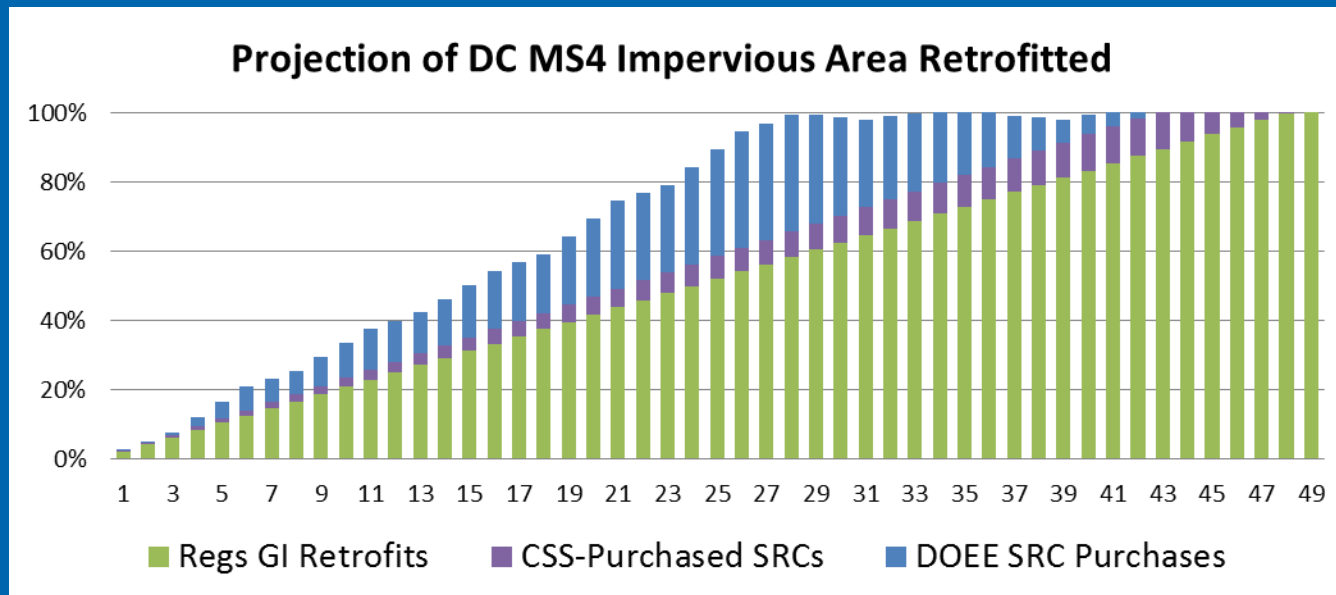
Benefits of SRC Trading and SW Regs

- Increased annual retention District-wide
- Increased capture of first-flush volume
- Shift retention BMPs to most vulnerable tributaries and improve socioeconomic outcomes



SRC Purchases Can Accelerate Retrofits

- Regs are fundamental driver of GI retrofits
- Shifts from CSS to MS4 can accelerate MS4 retrofits
- DOEE can accelerate retrofits with SRC purchases
 - As regulated GI retrofit increase, District investment shrinks
 - Minimizes long-term burden on taxpayers and ratepayers



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For more information visit
doee.dc.gov/src