

# 1. What is a Stormwater Utility?

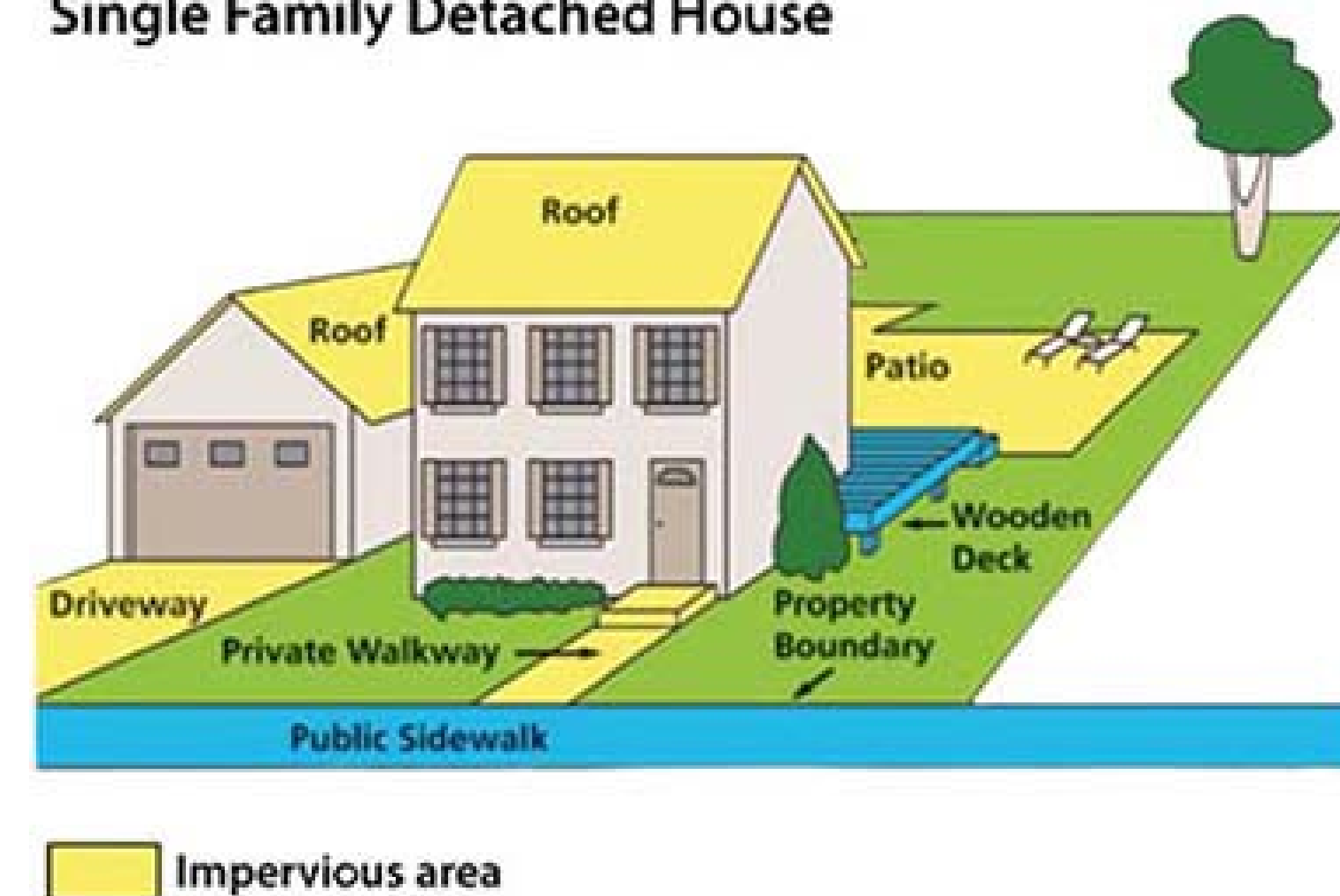
The stormwater program is currently funded through the Sanitary District Tax, based on a property's assessed value.

A Stormwater Utility would be an **alternative** way to pay for the County's Stormwater Management Program, based on the amount of hard surfaces (impervious area) on a property.

## Considerations

- ✓ Is it fair among all those who pay?
- ✓ Is it easy for staff to implement and administer?
- ✓ Is it easy for customers to understand?
- ✓ Does it accurately recover costs?
- ✓ Affordability
- ✓ Parity with peer jurisdictions

Single Family Detached House

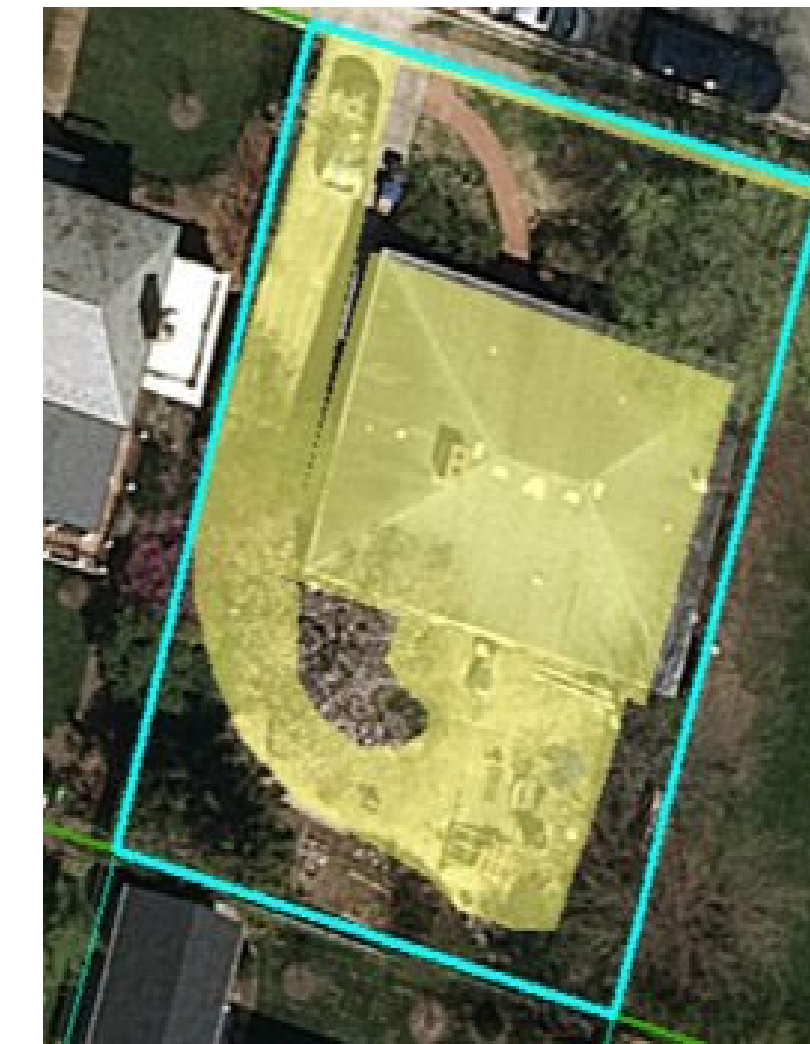


A property's impervious cover closely correlates with how much stormwater runoff each property generates

# 1. How Would a Stormwater Utility Work?

- Impervious area is measured through GIS imagery and is used to calculate the impervious square footage.
- Properties would be charged based on a unit of measurement called an ERU or **Equivalent Residential Unit** – the median amount of impervious square footage specific to Arlington County.

1 ERU = 2,400 sq. ft Impervious Area (IA)



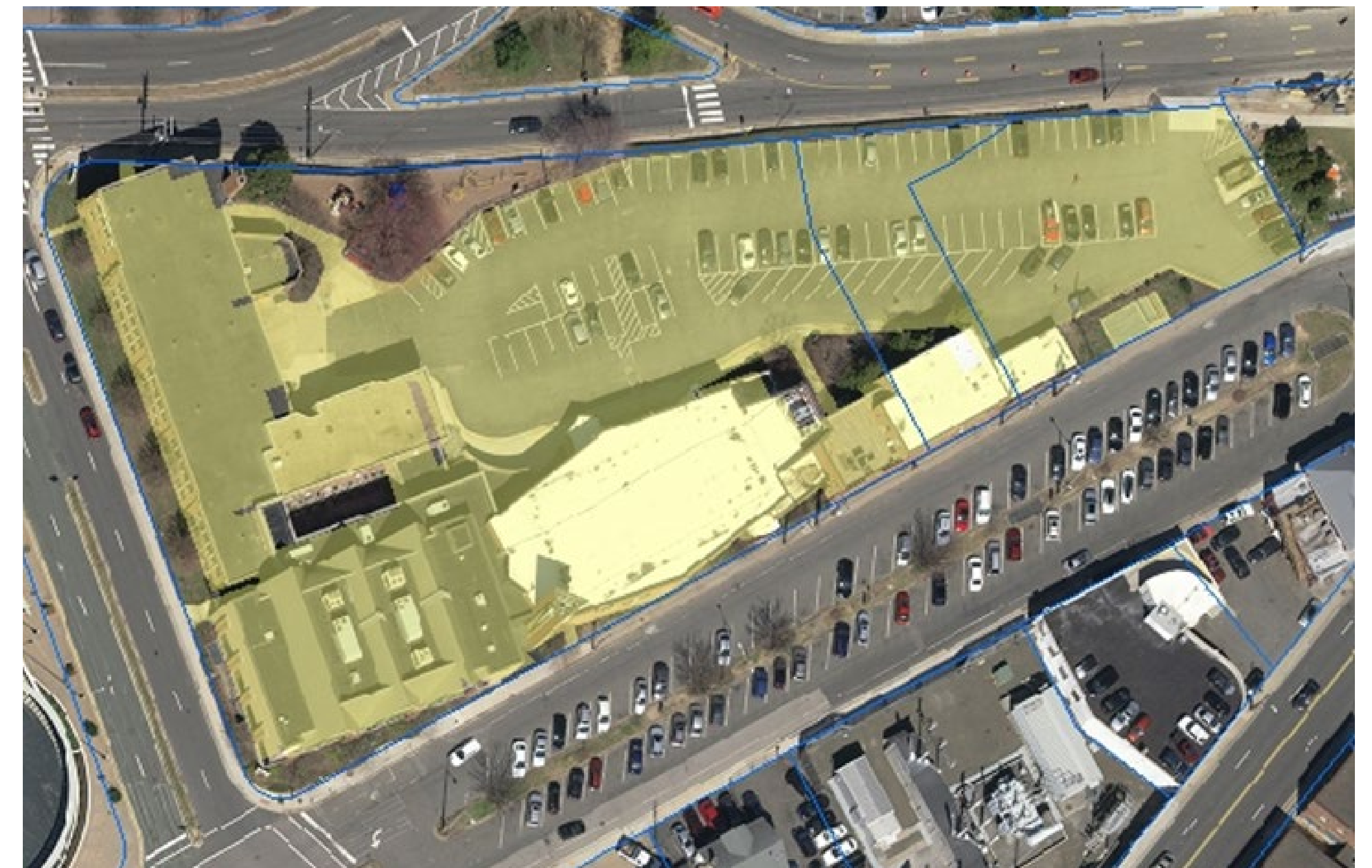
3,997 sq. ft.



1,465 sq. ft.



3,419 sq. ft.



88,198 sq. ft.

## 2. What will the Stormwater Utility Fund?

### Same elements paid for by the current tax:

- Maintaining over 250 miles of storm sewer pipe
- Tens of thousands of culverts, inlets, outlets and other elements
- Water quality and regulatory programs
- Funding to ensure increased capacity
- Green infrastructure and restoration projects
- Flood plain management
- Education and training
- Stream water quality monitoring

### **NEW COSTS:**

- *Operating costs to run the Utility, estimated at \$320k per year and 2.5 full time employees.*
- *A credit program, required under State Code, estimated to cost under \$200k, but will depend on credit program design.*



# 2. Stormwater Program Elements



## System Assessment and Upgrades

- Modeling, Assessment, Plan reviews
- Capacity projects
- Local drainage projects



## Development regulations

- Plan review and construction site inspections
- Training and outreach



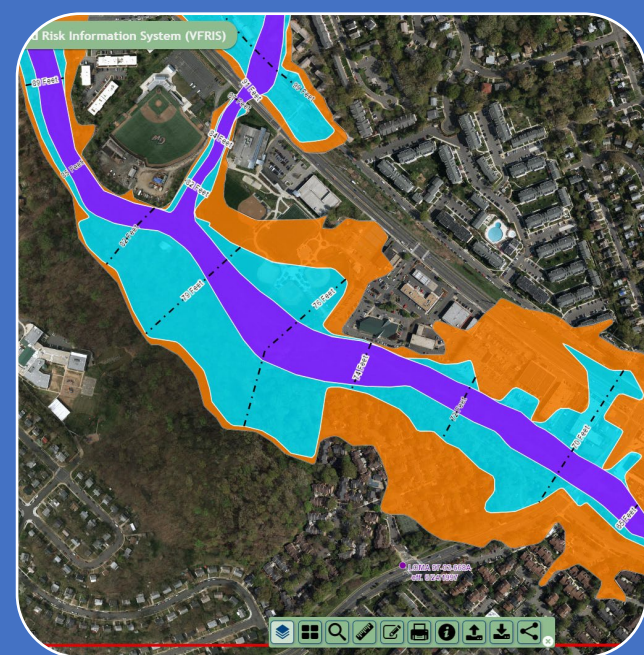
## System Maintenance

- System repairs
- Channel maintenance
- Routine maintenance



## Water Quality

- Stream resilience, pond projects, green streets
- MS4 permit (regulatory TMDLs), pollution prevention, training and outreach, monitoring



## Floodplains and RPAs

- Plan reviews
- Map updates and modeling
- Outreach and education



## Policy

- Legislative
- Regulatory

### 3. Stormwater Program Costs

# FY 2023 Operating Budget \$15.9 million

#### Personnel: 39%

- Funds salaries and benefits for 50.5 positions

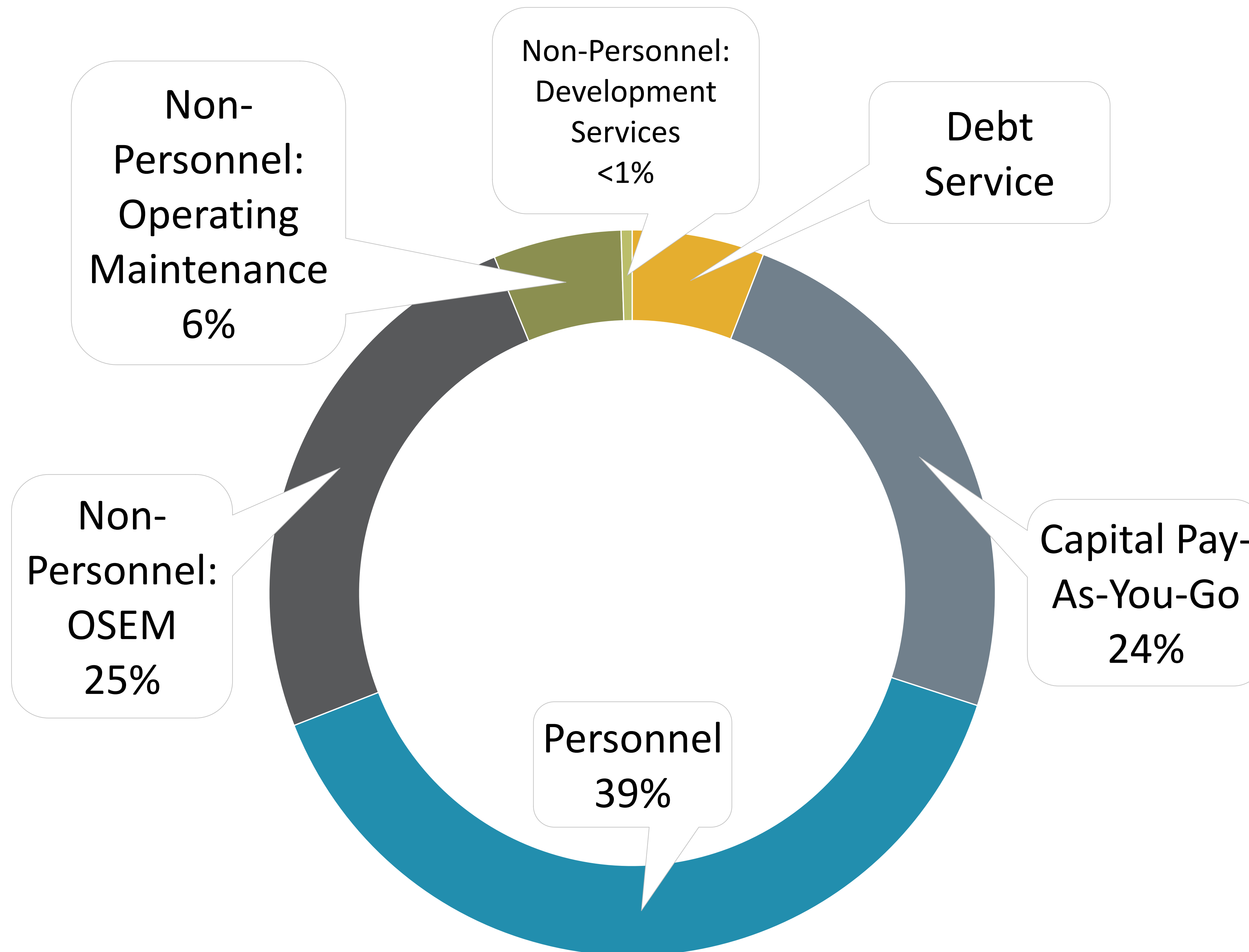
#### Non-personnel: 31%

- Indirect & Overhead costs
- MS4 permit compliance
- Stormwater facility maintenance

#### PAY-AS-YOU-GO: 24%

- Stormwater Maintenance Capital

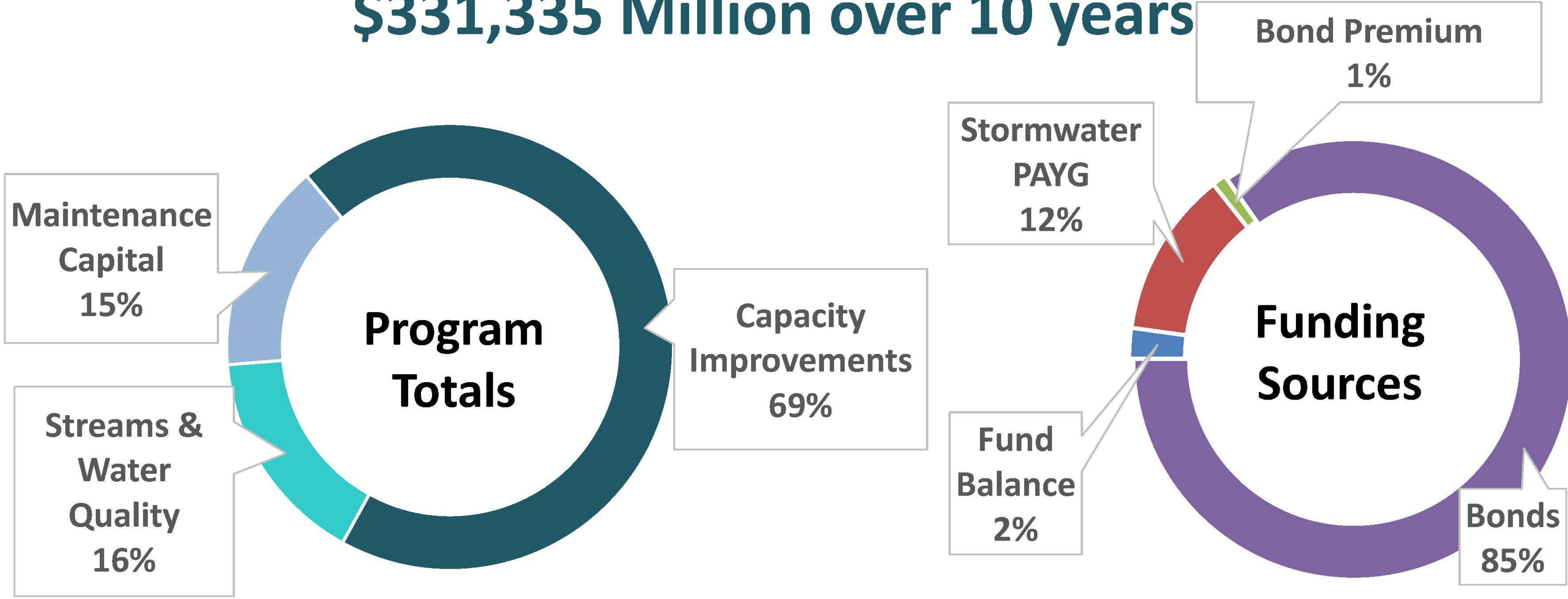
#### DEBT SERVICE: 6%



# 3. Stormwater Program Costs

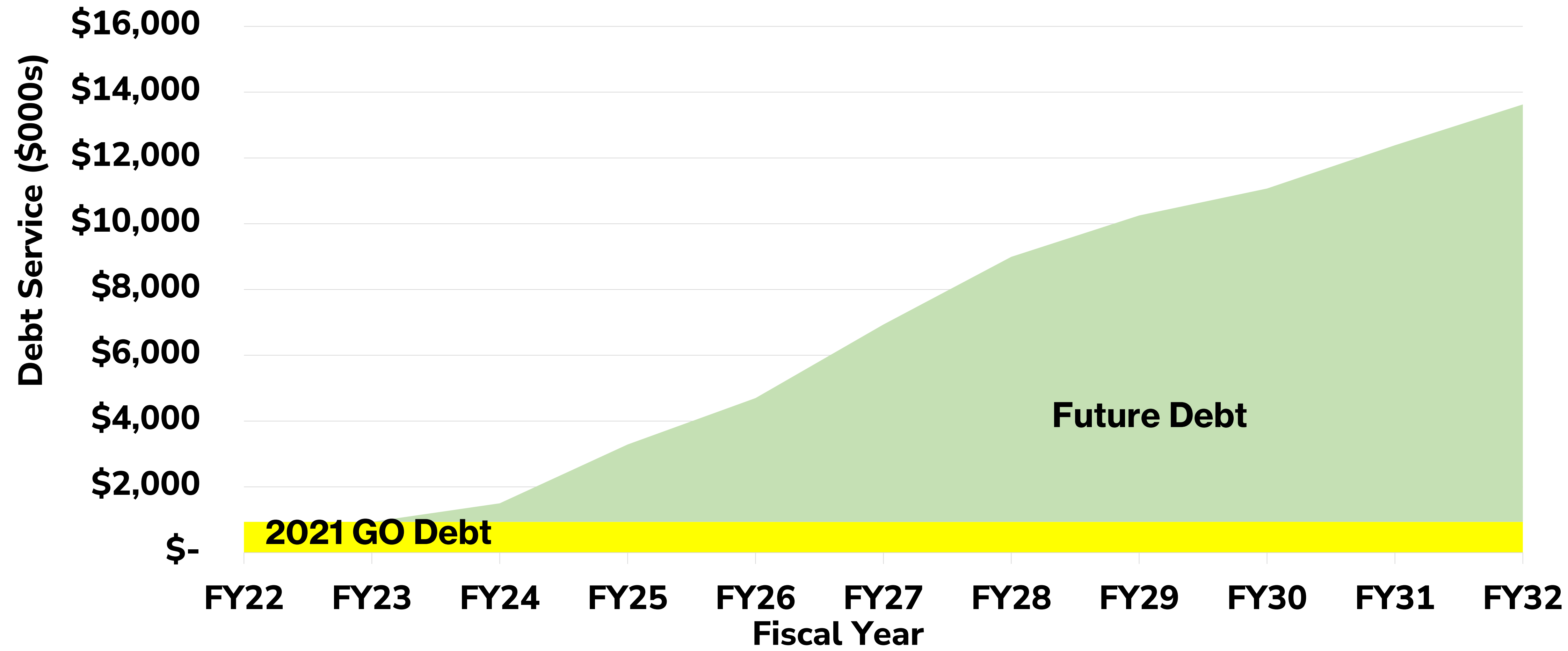
## Stormwater Capital (CIP) Programs & Funding Sources

\$331,335 Million over 10 years



# 3. Stormwater Program Costs

## Projected Debt & Rate Impact



	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
<b>Projected Debt Service (\$000s)</b>	\$936	\$1,499	\$3,289	\$4,701	\$6,938	\$8,992	\$10,250	\$11,070	\$12,387	\$13,627
<b>Projected Annual Rate</b>	\$0.017/ \$100	\$206/ ERU	\$235/ ERU	\$258/ ERU	\$292/ ERU	\$334/ ERU	\$348/ ERU	\$365/ ERU	\$382/ ERU	\$403/ ERU

*Issuing bonds to fund CIP projects will affect the Stormwater rate over the next 10 years.*



# 3. Flood Resilient Arlington

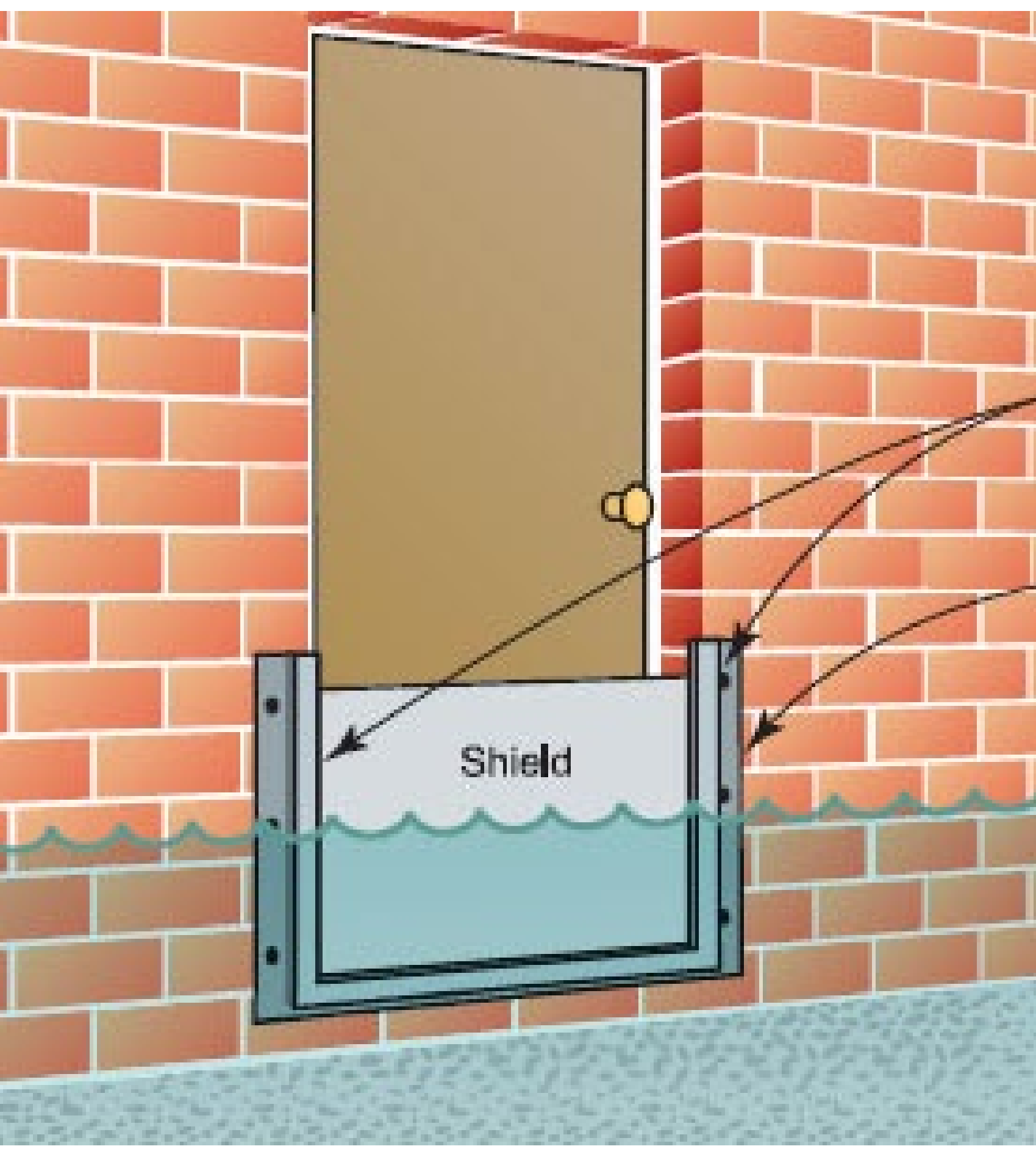


Analytics and Data Assessment

New Types and Locations for Capacity Projects

Increased Stormwater Requirements

Increased Investment



Voluntary Property Acquisition

Floodproofing Outreach



# 4. Example Capital Projects



## Cardinal School Stormwater Vault

- First major capacity constructed as part of Flood Resilient Arlington. Will be one of the largest stormwater vaults in the mid-Atlantic.
- Phase 1 completed in 2021 (top photo)
- Phase 2 construction started in December 2021 and will be completed Spring 2023
- Will reduce flood risk in the Torreyson Run watershed and the Westover commercial district

## 4. Example Capital Projects



### Four Mile Run Dredging

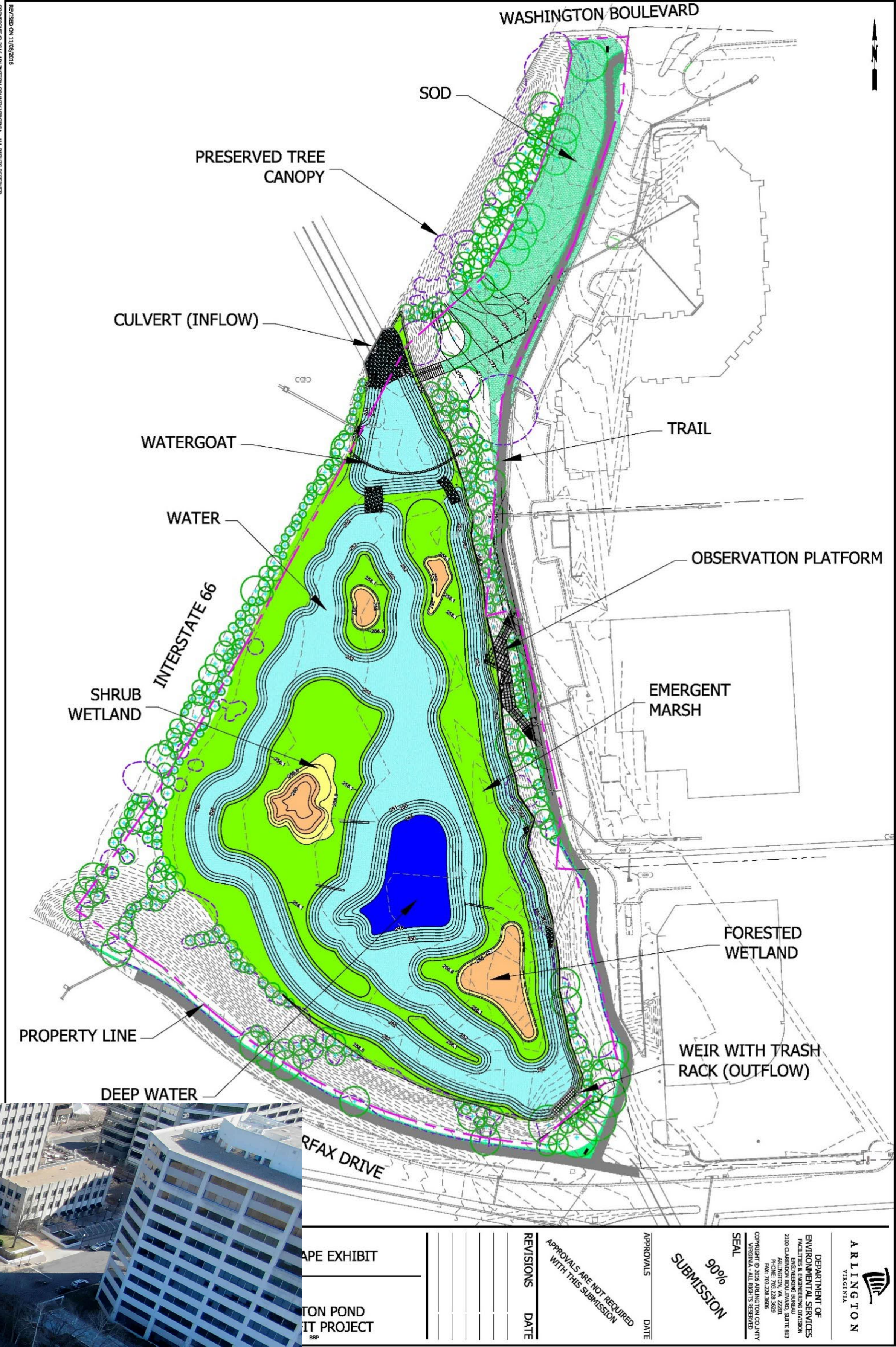
- Maintenance capital project to ensure capacity of Four Mile Run flood channel
- Will begin in Fall, 2022 and take 4-6 months
- Will reduce flood risk in South Arlington



# 4. Example Capital Projects

## Ballston Pond Project

- Water quality project will convert dry pond built when I-66 constructed to a wetland
- The pond reduces peak flows by 30%
- Started construction December 2021, construction 12-18 months
- Helps meet Arlington's pollution reduction regulations
- The design includes two trash collection devices, thousands of native plants and a new viewing platform



# 4. Example Capital Projects



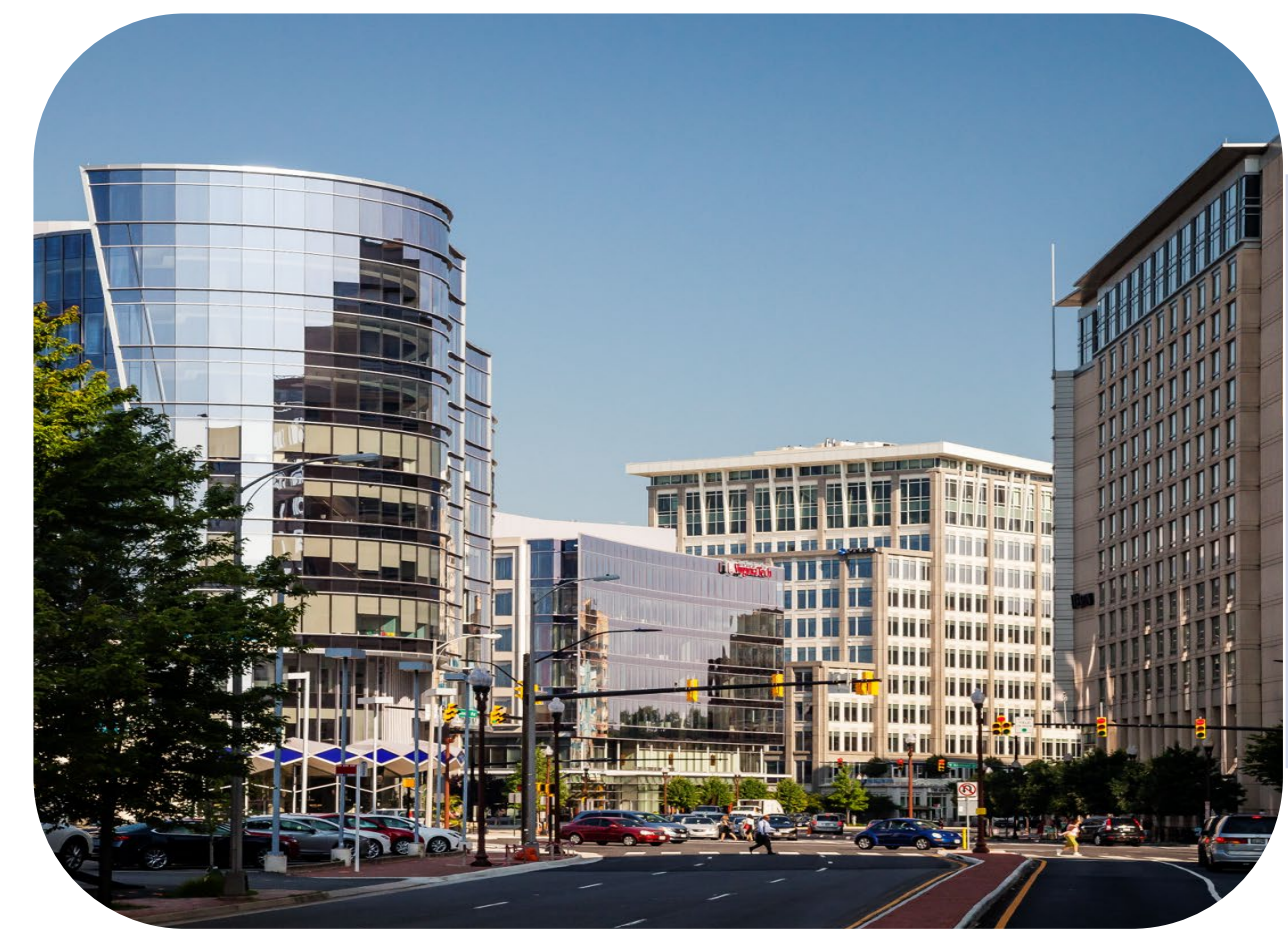
## Green Streets

- A green street adds stormwater treatment to a location without existing stormwater treatment
- They are vegetated areas that reduce the volume of stormwater and stormwater pollutants that enter our local streams, Potomac River and the Chesapeake Bay.
- Green streets help the County meet regulatory pollution reduction goals
- The County has installed more than 30 green streets

# 5. Stormwater Utility Customers



- **Single-Family Residential (SF)**
  - Dwellings, mostly single and detached, that share impervious area characteristics

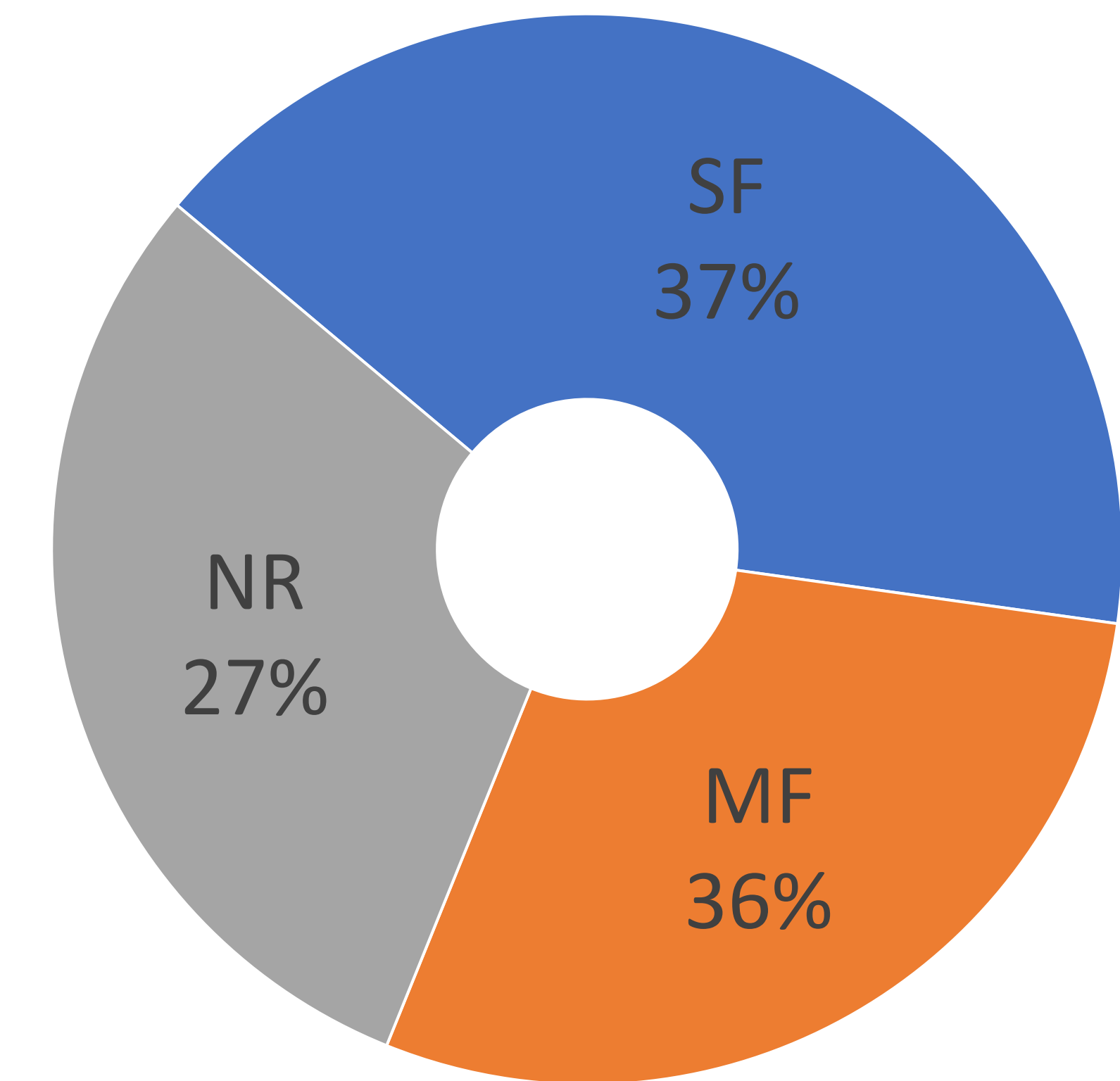


- **Multi-Family Residential (MF)**
  - Apartments & condos
  - Could be charged by impervious area or with a flat rate per unit

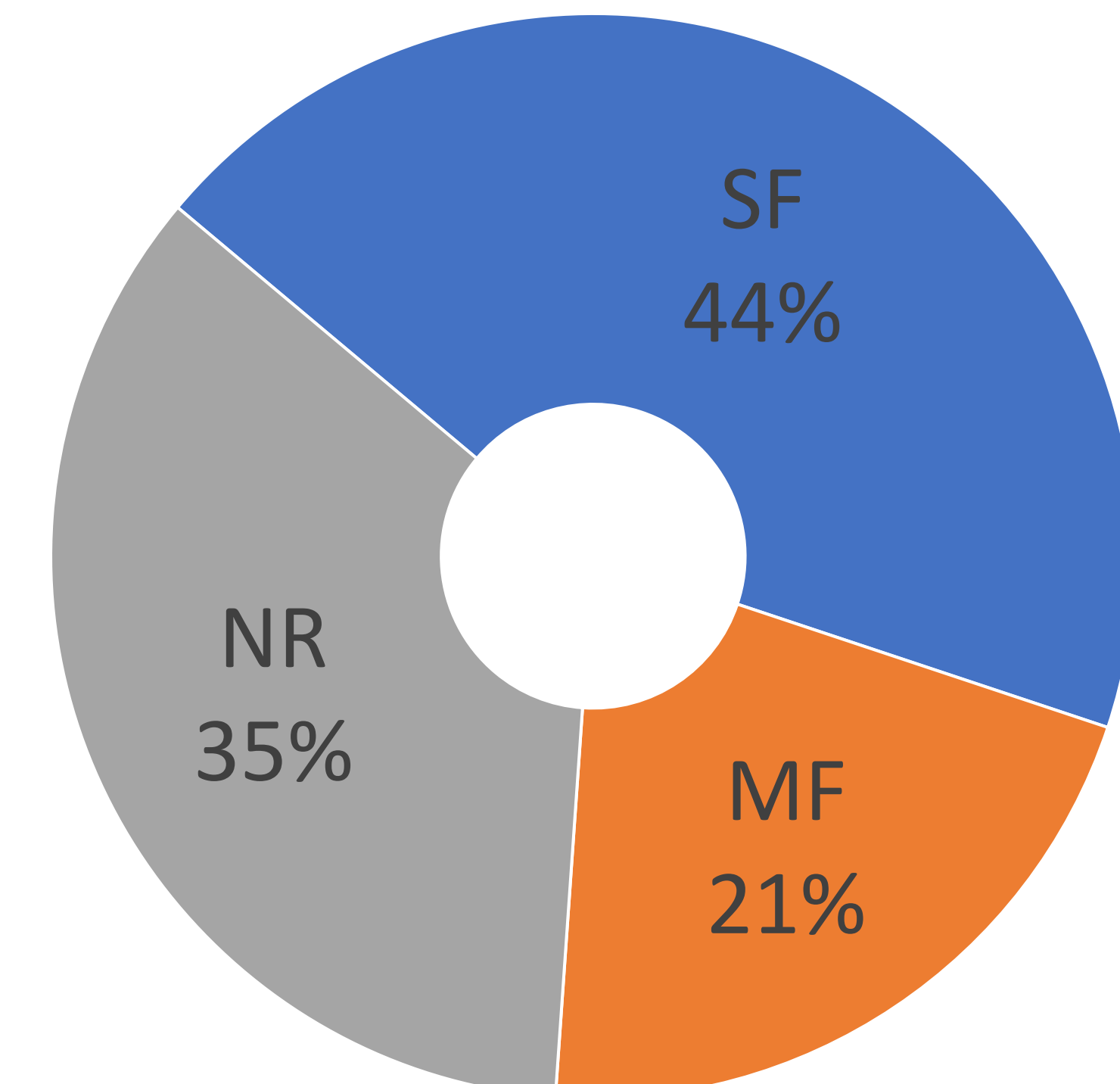


- **Non-Residential (NR)**
  - All other properties, includes commercial, industrial, and institutional

## A Fairer Distribution of Costs Sanitary Tax by Customer Group



## Impervious Area by Customer Group

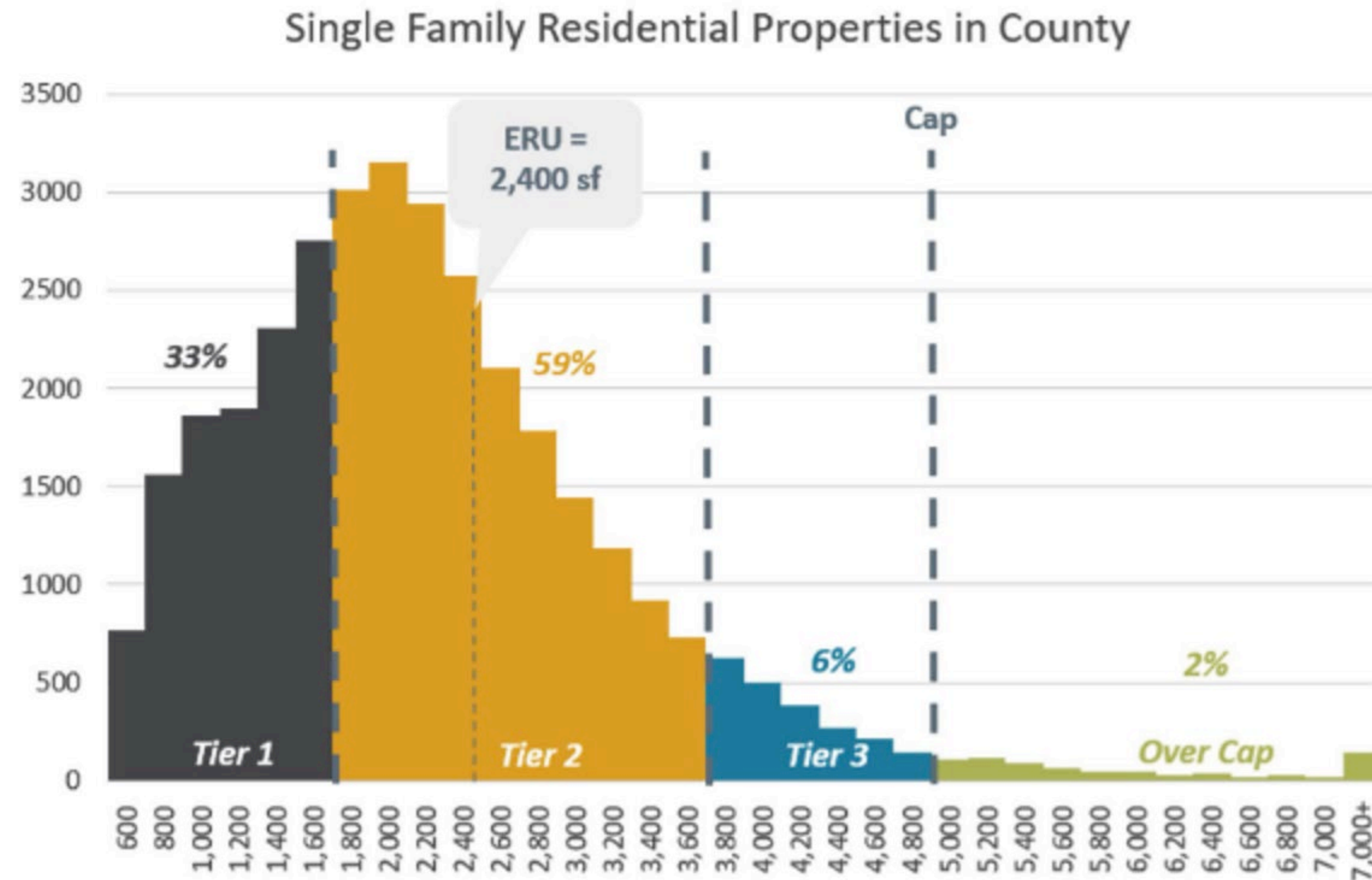


# 5. Rate Structure Elements

A rate structure uses **community, customer, and service characteristics** to determine how an agency recovers its costs

Type of Charge	Water Utility Equivalent	Stormwater Utility Equivalent	Purpose
<b>Fixed charges</b>	Base charge	Base charge	Recover fixed costs shared by all customers
<b>Variable charges</b>	Use (Volume) charge <i>Dependent on volume of water used</i>	ERU charge <i>Dependent on impervious area</i>	Recover variable costs  Charge customers based on usage of the system  Increased fairness with increased granularity

# 5. Single-family – Three Tiers with a Cap Option for a base charge



Impervious Area Size Range	Count of Properties
≤1600 SF	11,157
>1600 SF - ≤3600 SF	19,860
>3600 SF - ≤4800 SF	2,140
>4800 SF	744

Base Charge	Variable Charge (Tiers)	Total Amount Owed	Advantages
\$0	≤ 1600 SF	.6 ERU X rate	✓ Ease of understanding by County customers  ✓ Ease of administration for County staff, reducing program costs
	> 1600 - ≤ 3600 SF	1 X rate	
	> 3600 - ≤ 4800 SF	1.7 X rate	
	> 4800 SF	# of ERUs X rate	
\$6.45	≤ 1600 SF	Base + (.6 ERU X Rate)	✓ Mirrors water/sewer rate structure  ✓ Recovers some administrative costs in a more refined way
	> 1600 - ≤ 3600 SF	Base + (1 X Rate)	
	> 3600 - ≤ 4800 SF	Base + (1.7 X Rate)	
	> 4800 SF	Base + (# of ERUs X Rate)	

# 5. Single-Family Residential Examples

The most expensive home, which pays the highest stormwater fee under the sanitary district tax, has less impervious cover.



Prop	Assessed Value	Current Sanitary District Tax (Annual, 2022)	Impervious Area (SF)	ERUs	Baseline Annual Utility Fee	Baseline Utility + MF Flat Rate Option	Baseline Utility + Base Charge	Baseline Utility + MF Option + Base Charge
A	\$808,700	\$137.48	1,465	0.6	\$112.91	\$113.73	\$115.97	\$116.77
B	\$1,023,500	\$174.00	3,774	1.7	\$319.92	\$322.24	\$316.77	\$319.01
C	\$1,243,600	\$211.41	3,419	1	\$188.19	\$189.55	\$188.99	\$190.31



# 5. Multi-Family Residential

## Option 1. Based on total ERUs, with or without base charge

Utility Fee	Variable Charge - IA Option	Pros and Cons
With Base Charge	# ERUs X rate <b>Same as non-residential properties</b>	✓ Supports IA message ✓ Easier to administer  <b>BUT</b>  Does not consider affordability for garden style properties
Without Base Charge	# ERUs X rate <b>Same as non-residential properties</b>	

## Option 2. Flat rate for all MF Units, with or without base charge

Utility Fee	Variable Charge – Flat Rate Option	Pros and Cons
With Base Charge	Total MF ERUs ÷ Total Units	✓ Simplifies fees and rate structure ✓ Adds layer of fairness for garden-style apartments and affordable units  <b>BUT</b> Harder to administer (requires data on # units) Dilutes IA message
Without Base Charge	Total MF ERUs ÷ Total Units	

*Feasibility study calculated 0.18 ERUs/unit, but subject to change with the new data*

# 5. Multi-Family Examples



**High rise, more vertical building**

**Clarendon Apartments**

**Assessed Value:** \$139,924,000

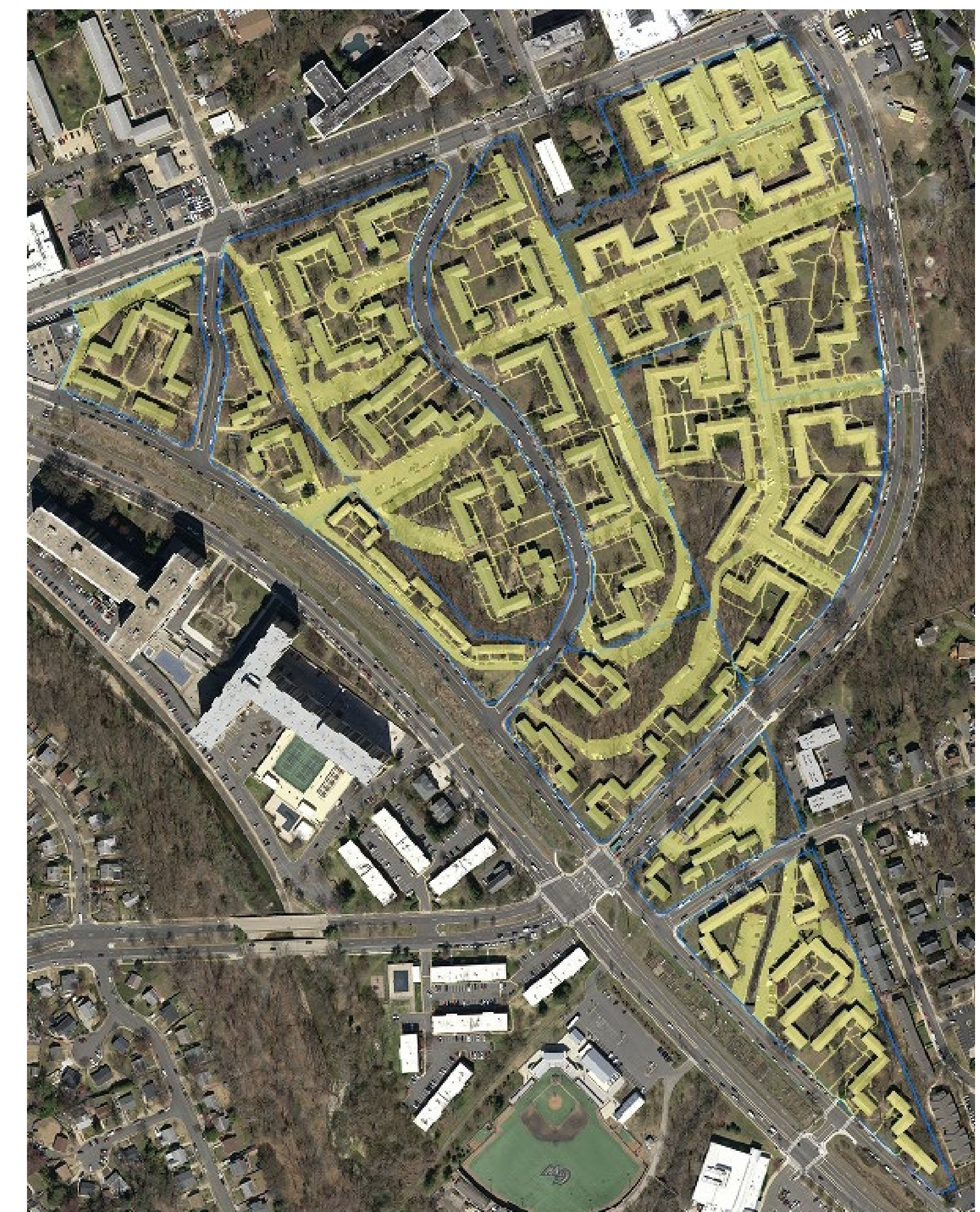
**Average Rent:** \$2,544

**Units:** 292

**Impervious Area:** 68,581 square feet

**Per Unit IA:** 235 square feet

**Baseline ERUs:** 35



**Garden style, more horizontal complex**

**Barcroft Apartments**

**Assessed Value:** \$138,156,400

**Average Rent:** \$1,483

**Units:** 1340

**Impervious Area:** 1,179,539 square feet

**Per Unit IA:** 880 square feet

**Baseline ERUs:** 492

Annual Fees	Current Tax (Annual, 2022)	Baseline Utility Fee	Baseline Utility + MF Option	Baseline Utility + Base Charge	Baseline Utility + MF Option+ Base Charge
Total	\$23,787	\$5,456	\$9,963	\$5,371	\$9,741
Per Unit Average	\$81.46	\$18.69	\$34.12	\$18.39	\$33.36

Annual Fees	Current Tax (Annual, 2022)	Baseline Utility Fee	Baseline Utility + MF Option	Baseline Utility + Base Charge	Baseline Utility + MF Option + Base Charge
Total	\$23,487	\$92,570	\$45,719	\$89,861	\$44,399
Per Unit Average	\$17.53	\$69.08	\$34.12	\$67.06	\$33.13

# 5. Non-Residential – Based on Total ERUs

## Option for a Base Charge

Base Charge	Variable Charges	Pros and Cons
\$0	# ERUs X rate	<ul style="list-style-type: none"> <li>✓ Ease of understanding by County customers</li> <li>✓ Ease of administration for County staff, reducing program costs</li> </ul>
\$6.45	# ERUs X rate	<ul style="list-style-type: none"> <li>✓ Mirrors water/sewer rate structure</li> <li>✓ Recovers some administrative costs in a more refined way</li> </ul>



**Church**  
**Assessed Value:** \$22,385,400  
**Impervious Area:** 88,198 square feet  
**Baseline ERUs:** 38

Annual Fees	Current Sanitary District Tax (Annual 2022)	Baseline Utility Fee	Baseline Utility + MF Flat Rate option	Baseline Utility + Base Charge	Baseline Utility + MF Option + Base Charge
Total	\$0 (exempt)	\$7,150	\$7,203	\$6,956	\$7,006

# 5. Non-Residential Examples



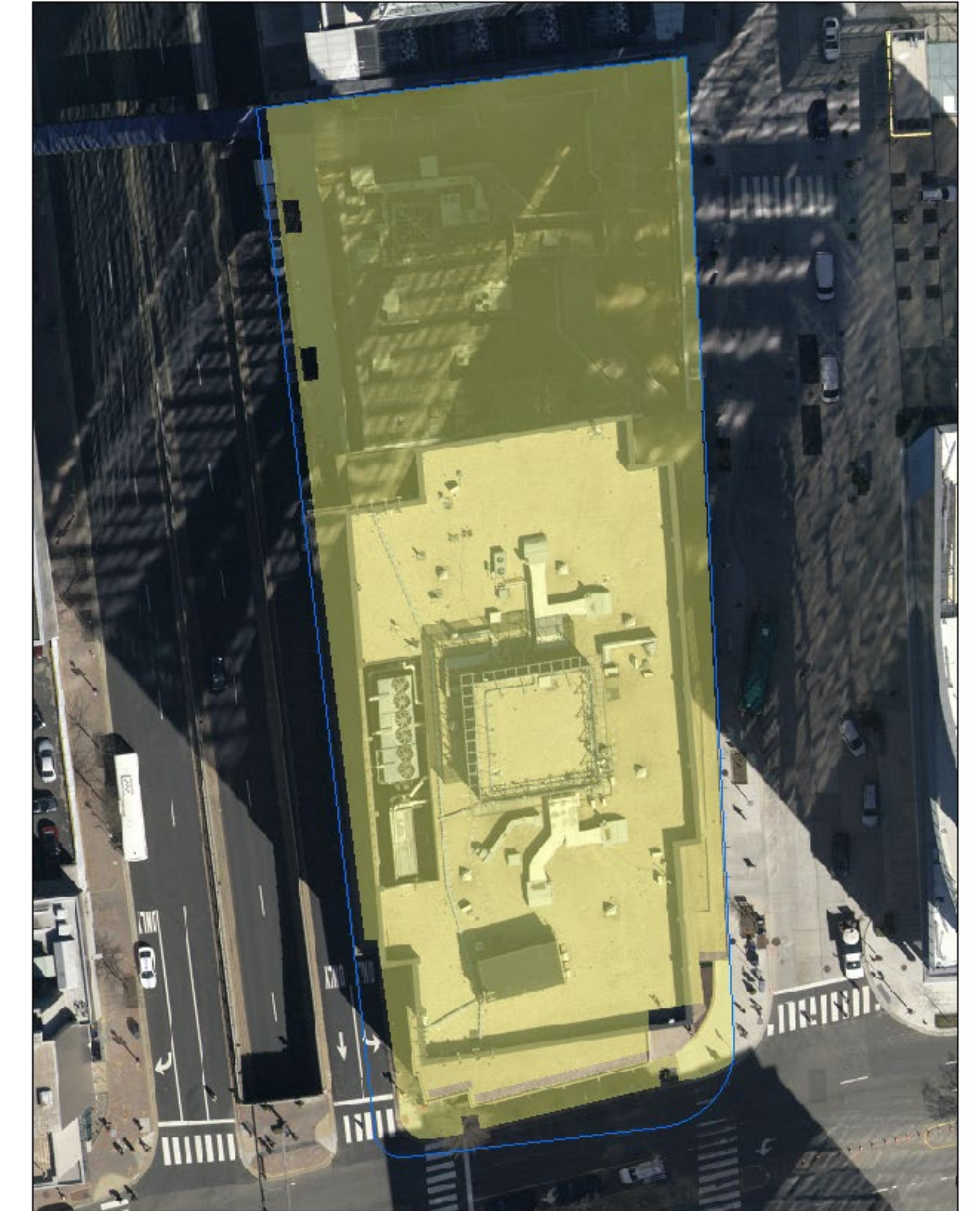
## Lyon Village Shopping Center

**Assessed Value:** \$33,388,700

**Impervious Area:** 164,203 square feet

**Baseline ERUs:** 69

Annual Fees	Current Tax (Annual, 2022)	Baseline Utility Fee	Baseline Utility + MF Option	Baseline Utility + Base Charge	Baseline Utility + MF Option + Base Charge
Total	\$5,676	\$12,982	\$13,079	\$12,602	\$12,693



## Rosslyn Center

**Assessed Value:** \$129,643,400

**Impervious Area:** 55,924 square feet

**Baseline ERUs:** 24

Annual Fees	Current Tax (Annual, 2022)	Baseline Utility Fee	Baseline Utility + MF Option	Baseline Utility + Base Charge	Baseline Utility + MF Option + Base Charge
Total	\$22,039	\$4,516	\$4,549	\$4,387	\$4,419

# 5. Relative Rate Comparison of One ERU

	Without Base Charge	With Base Charge
<b>Baseline Utility Fee</b>	\$188.19	\$182.54 + \$6.45 = \$188.99
<b>Baseline Utility Fee + MF Flat Rate Option</b>	\$189.55	\$183.86 + \$6.45 = \$190.31

*These preliminary rates are based on feasibility study data from 2020 and are subject to change. We have included them here for comparison between different options.*

# 6. Stormwater Credit Program Considerations



- Increases positive public perception and buy-in
- Encourage customers to take action to reduce runoff and participate in practices that improve environmental quality
- Low revenue impact



- Increased workload with minimal outcomes
- Participation can be hard to predict
- Challenge to align credit with the action taken
- Could conflict with the County's mandatory stormwater facility program for development projects

# 6. Stormwater Utility Credit Program

- Provide acknowledgement for property owners that have taken action to reduce runoff
- Program is still in development



Green roof



Tree Planting



Stormwater Planter



Rain Barrel



Rain Garden



Stream Cleanup



PerVIOUS pavement