City of Lynchburg

Stormwater Management

Stormwater Advisory Committee

October 21, 2010

Meeting #5

THE CITY OF LYNCHBURG

CDM

Tonight's Agenda

- Summary of Last Meeting
- Primary Funding Options (continued)
- Alternative Rate Structures
- Funding Option Comparisons

Future Level of Service Cost Summary

Example Costs for Various Levels of Service

Level of Service	*Program Management*	*Regulatory Compliance*	*Operation and Maintenance*	*Capital Improvement Projects*	*Total Program Cost*
5	$1,137,000	$828,000	$1,712,000	$854,000	$4,531,000
	Comprehensive Planning & Full Implementation Capabilities	Exemplary Permit Compliance	Fully Preventative/ 100% Routine	Prioritized / Fully-Funded	
4	$790,000	$530,000	$1,487,000	$754,000	$3,561,000
	Pro-Active Planning & Systematic CIP Implementation Capabilities	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	Phased Implementation / Allocated Budgets	
3	$551,000	$384,000	$1,262,000	$654,000	$2,851,000
	Priority Planning & Partial CIP Implementation Capabilities	Full Permit Compliance	Mixture of Inspection and Responsive Based	Complaint, Inspection-Based / Moderate Budget	
Existing LOS (2.5)	$342,000	$290,000	$1,146,000	$554,000	$2,332,000
	Well-Trained, In-House Staff Minimal Long Range Planning	Minimum Permit Compliance Resources At Capacity	Limited Routine Activities Lack of Dedicated Resources	Critical Needs Only / Minimum Budget	

Initial SWAC Feedback on Future LOS

Question 1: What is the most appropriate level of service for the City of Lynchburg?

	Existing LOS	Group 1	Group 2	Group 3	Group 4	Average
Program Management	2	4.5	4	5	4	4.4
Regulatory Compliance	3	3	3	3	3	3.0
O&M	3	4	3	3.5	3	3.4
CIP	2	3.9	2	3	4	3.2
						3.5

Question 2: How would you prioritize the areas of the City's stormwater management program?

	Group 1	Group 2	Group 3	Group 4	Rank
Program Management	3	1	1	1	1
Regulatory Compliance	4	4	4	4	4
O&M	1	2	2	2	2
CIP	2	3	3	3	3

Funding Mechanisms

Primary Funding

1. Fund with General Fund dollars. *(Current funding source for most City operations)*
2. Make the program user funded.

Secondary Funding

1. Use Grants and Loans.
2. Issue Bonds.
3. Levy Special Assessments.
4. Assess Development/ Impact Fees.
5. Others.

Update on Chesapeake Bay TMDL

- **EPA's Response to Virginia's Draft Plan**
  - "Serious deficiencies"
  - Reasonable assurance not provided
- **EPA Urban Stormwater Recommendations:**
  - 50 % of urban lands meet aggressive performance standards through retrofit/redevelopment
  - 50 % of unregulated land treated as regulated
- **Estimated Total Implementation Cost (Capital and O&M) for TMDL impact (stormwater only) to Lynchburg: $350M to $520M by 2025**

SWAC Process and Schedule

- Stormwater Management Overview: May 20 – 6:00 p.m.
- Program Components & Expenditures: June 24 - 6:00 p.m.
- Level of Service Analysis & Alternatives: July 15 – 6:00 p.m.
- Future Cost and Stormwater Funding Options: September 16 - 6:00 p.m.
- Revenue Scenarios: October 21 - 6:00 p.m.
- Review Recommendations: November 18 - 6:00 p.m.
- Evaluate/Modify Recommendations for Council: December 16 - 6:00 p.m.
- Finalize Recommendations for Council: January 20, 2011 - 6:00 p.m.

Primary Funding Options for Consideration

- **Tax-Based System**
  - Status Quo
  - Increase Tax Rate
  - Dedicated Tax
- **User Fee Based System**
  - ERU or SFU
- **Combination**

Status Quo
(reallocation of existing revenue)

- Advantages
  - No financial impact on citizens
- Disadvantages
  - Loss/reduction of other services
  - Long-term deterioration of storm sewer system and impaired performance of existing system
  - Major capital investment requirements would not be accomplished
  - Increased risk of US EPA/VDCR fines to City for non-compliance

Comparison: Tax Based vs User Fee Funding

Advantages and Disadvantages

Tax Based Systems

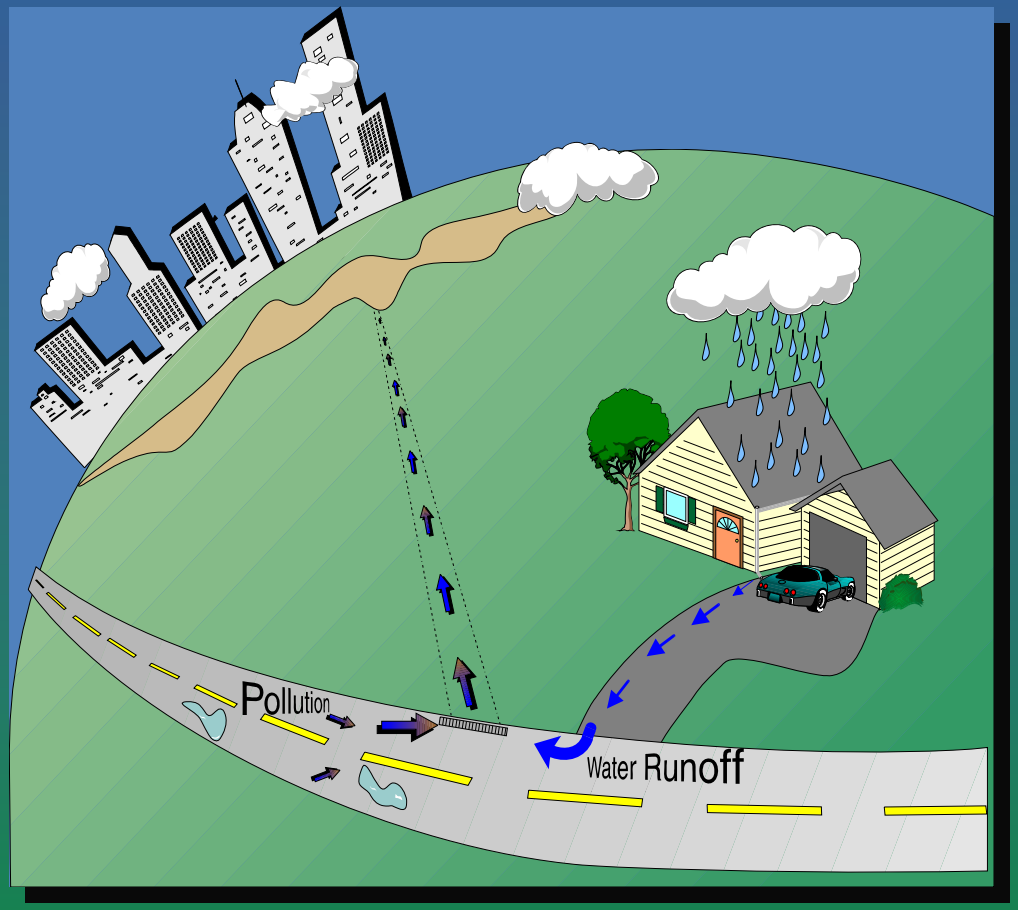
- **Advantages**
  - Billing System Already In Place
  - Easier to Collect and Administer (Tax Collector)
  - Can Be Sufficient for All Services
- **Disadvantages**
  - Not Equitable
  - Typically Not Dedicated*
  - Requires Increase in Real Property Tax

User Fee Based Systems

- **Advantages**
  - Equitable (i.e., Fee Related to Service Provided)
  - Stable & Dedicated Funding for All Program Services
  - Incentivizes Good Practices On-Site
- **Disadvantages**
  - Potential Startup Costs
  - New Funding Mechanism and Associated Fee

*** It is not typical for taxes to be dedicated for stormwater only, although there are three examples in Virginia where this is the case.**

Similar to Other User Fee Programs, Stormwater is Equity Based



- **Water –** Volume used
- **Wastewater –** Volume generated
- **Solid Waste –** Volume/Weight
- **Stormwater –** Runoff contribution

Equivalent Residential Unit (ERU) Basis is the Simplest Methodology

Single-Family
Multi-Family
Condominiums
Mobile Homes

→ = Flat Fee for Each Dwelling Unit 1 ERU

Governmental
Commercial
Institutional
Industrial

→ $\frac{\text{Parcel Impervious Area}}{\text{ERU (2,043 Sq. Ft.)*}}$ = Units

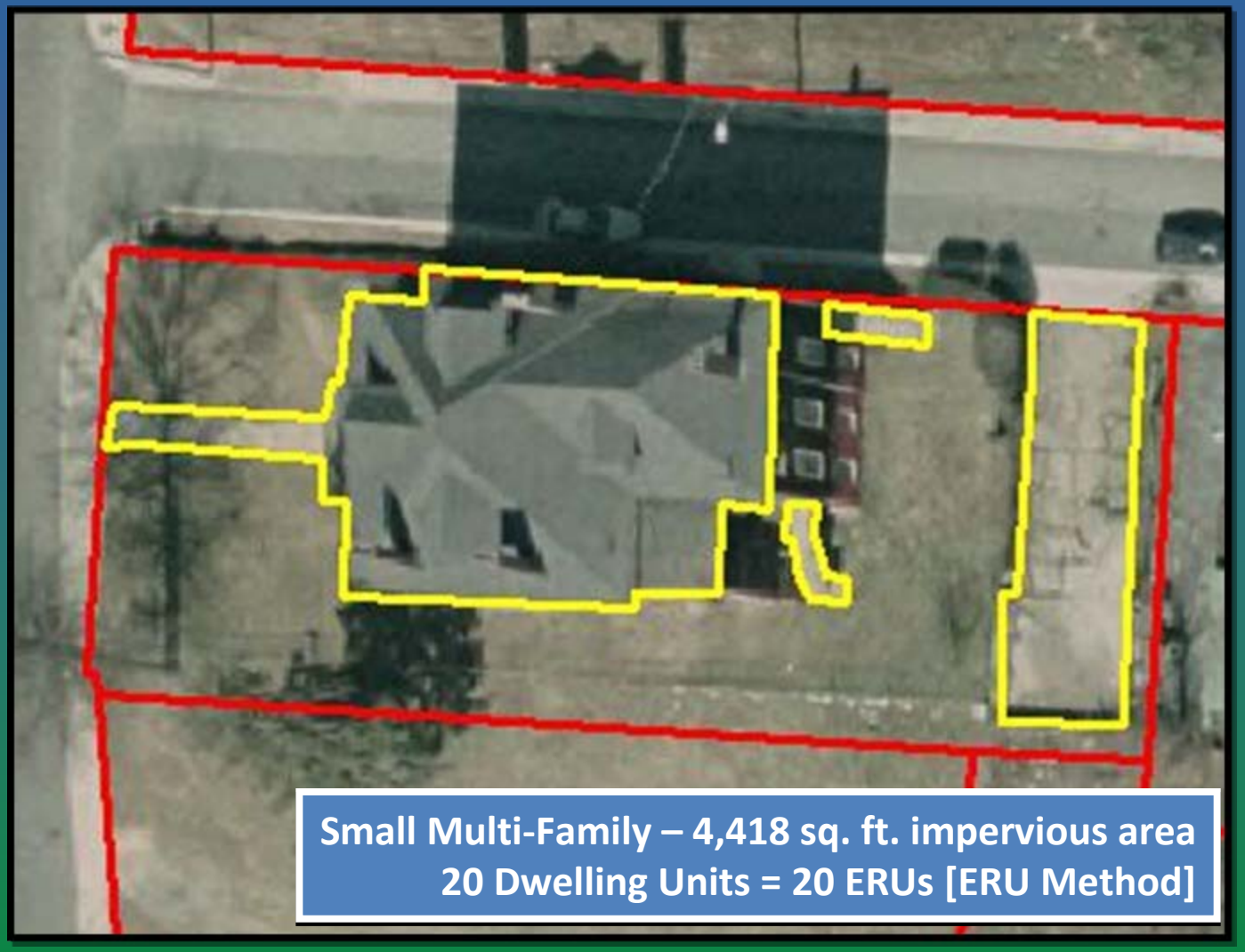
* Based on Statistical Sampling of All Residential Units in Lynchburg

Single-Family Examples [ERU Method]

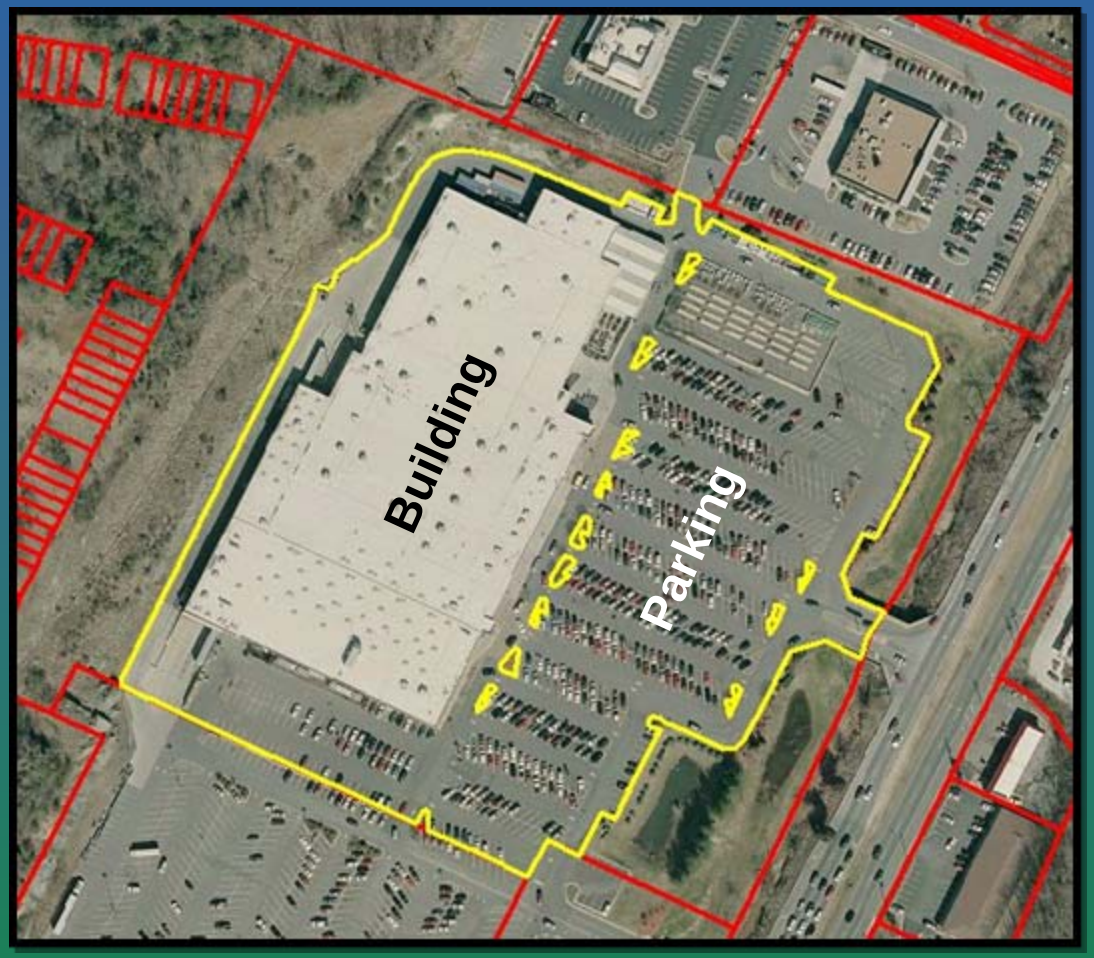
Small SFH – 1,145 sq. ft. impervious area
1 Dwelling Unit = 1 ERU [ERU Method]

Large SFH – 4,718 sq. ft. impervious area
1 Dwelling Unit = 1 ERU [ERU Method]

Multi-Family Example [ERU Method]

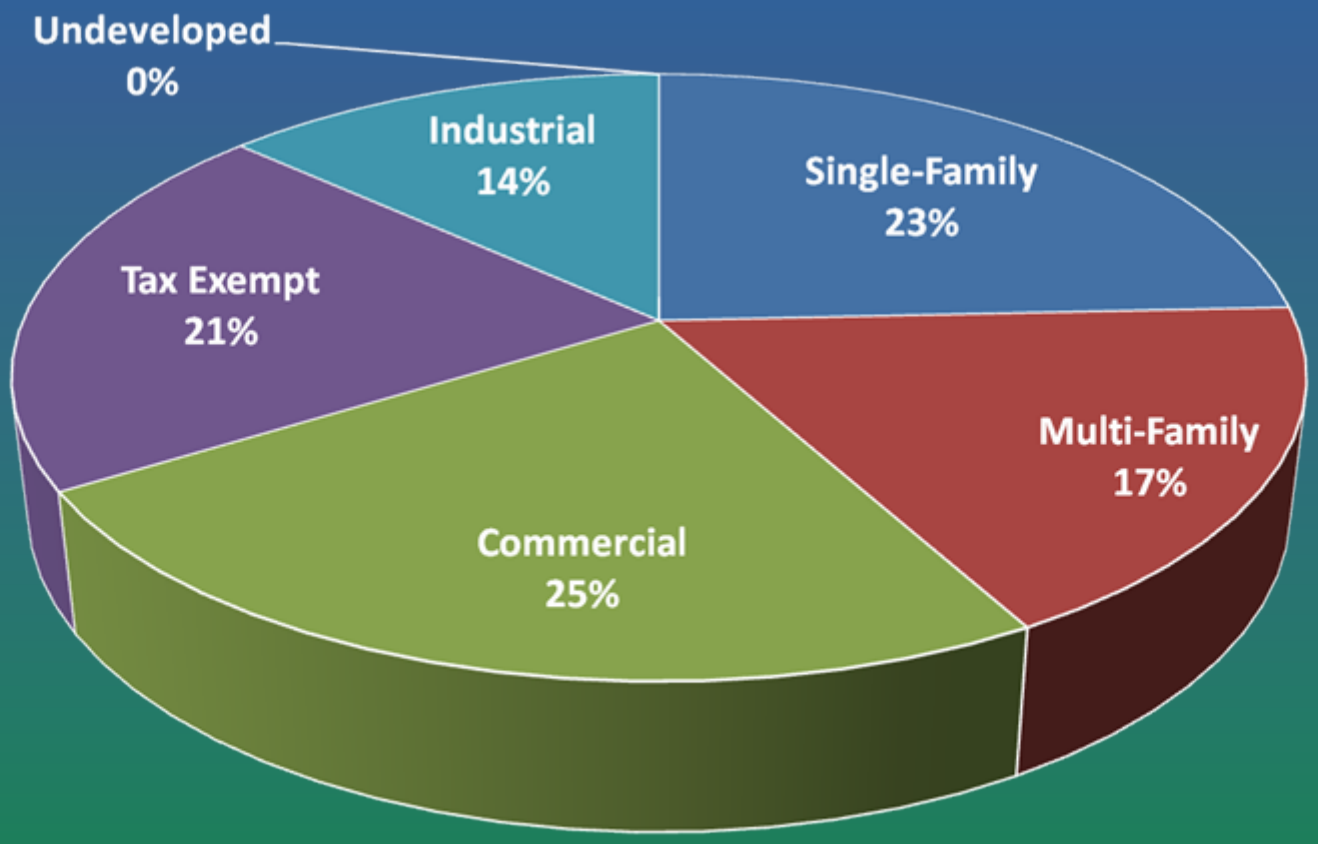


Non-Residential Property Example [ERU Method]



$$\frac{\text{554,750 Sq. Ft (Building + Parking)}}{\text{Equivalent Res. Unit (2,043 sq. ft./ERU)}} = \text{272 ERUs}$$

Percentage of ERUs in Lynchburg



Alternative Rate Structure
Tiered Residential Rates [SFU Method]

< 1,293 Sq. Ft. = 0.48 SFU

1,294 to 4,256 Sq. Ft. = 1.0 SFU

> 4,257 Sq. Ft. = 1.59 SFU

1 Dwelling Unit = 0.32- 0.97 SFU depending on type

$$SFU = \frac{\text{Non-Residential Impervious Area}}{\text{SFU (2,672 sq. ft.)}}$$

Summary of Multi-Family Units [SFU Method]

- Non Single-Family Properties are Sampled Separately
- Average Impervious Area Per Dwelling Unit is Determined

Type	SFU Assignment
Apartments	0.32
Town Homes	0.35
Condominiums	0.37
Duplex	0.53
Mobile Homes	0.74

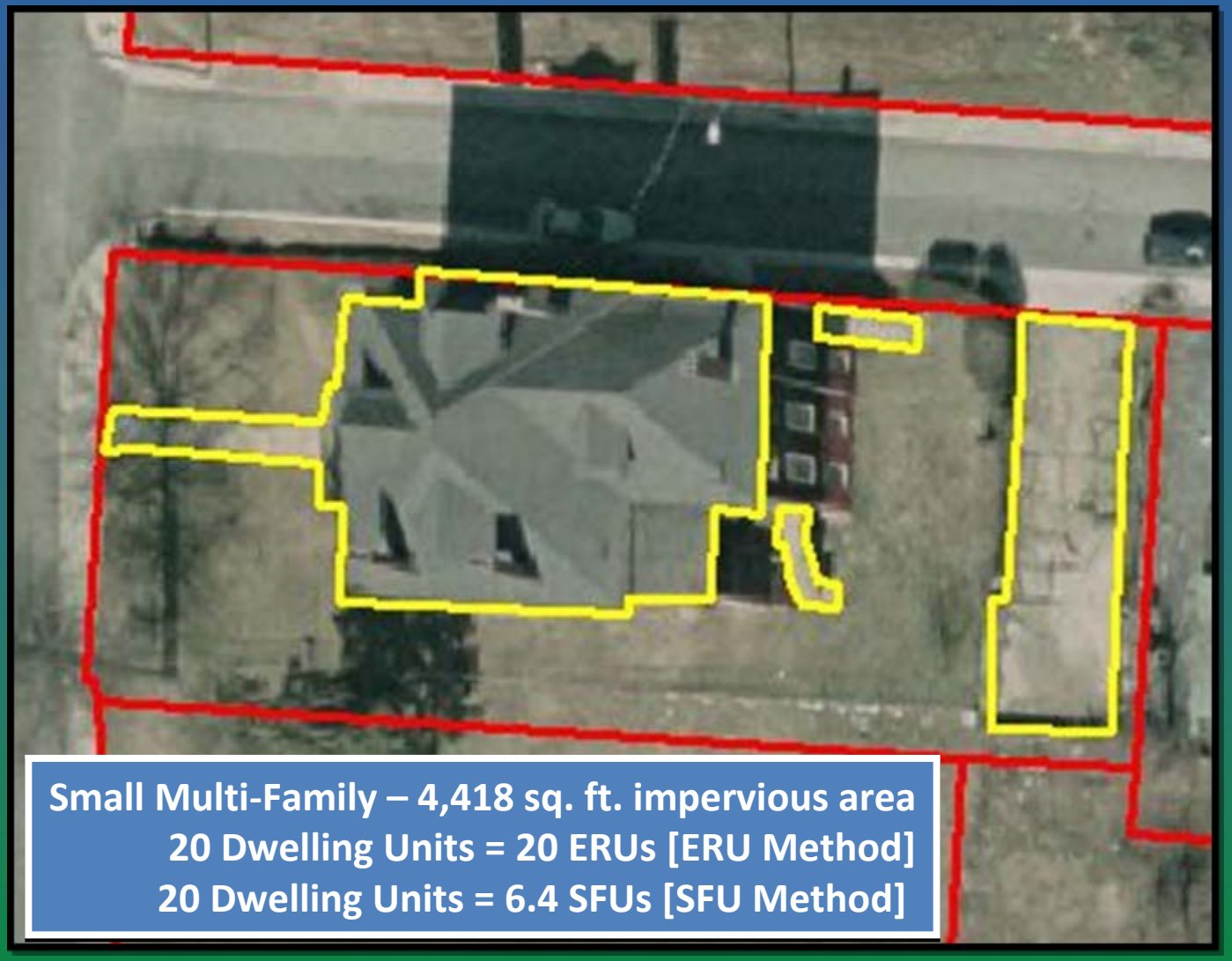
Based on Lynchburg Sample Measurements

Single-Family Examples
[ERU vs SFU Comparison]

Small SFH – 1,145 sq. ft. impervious area
1 Dwelling Unit = 1.0 ERU [ERU Method]
1 Dwelling Unit = 0.48 SFU [SFU Method]

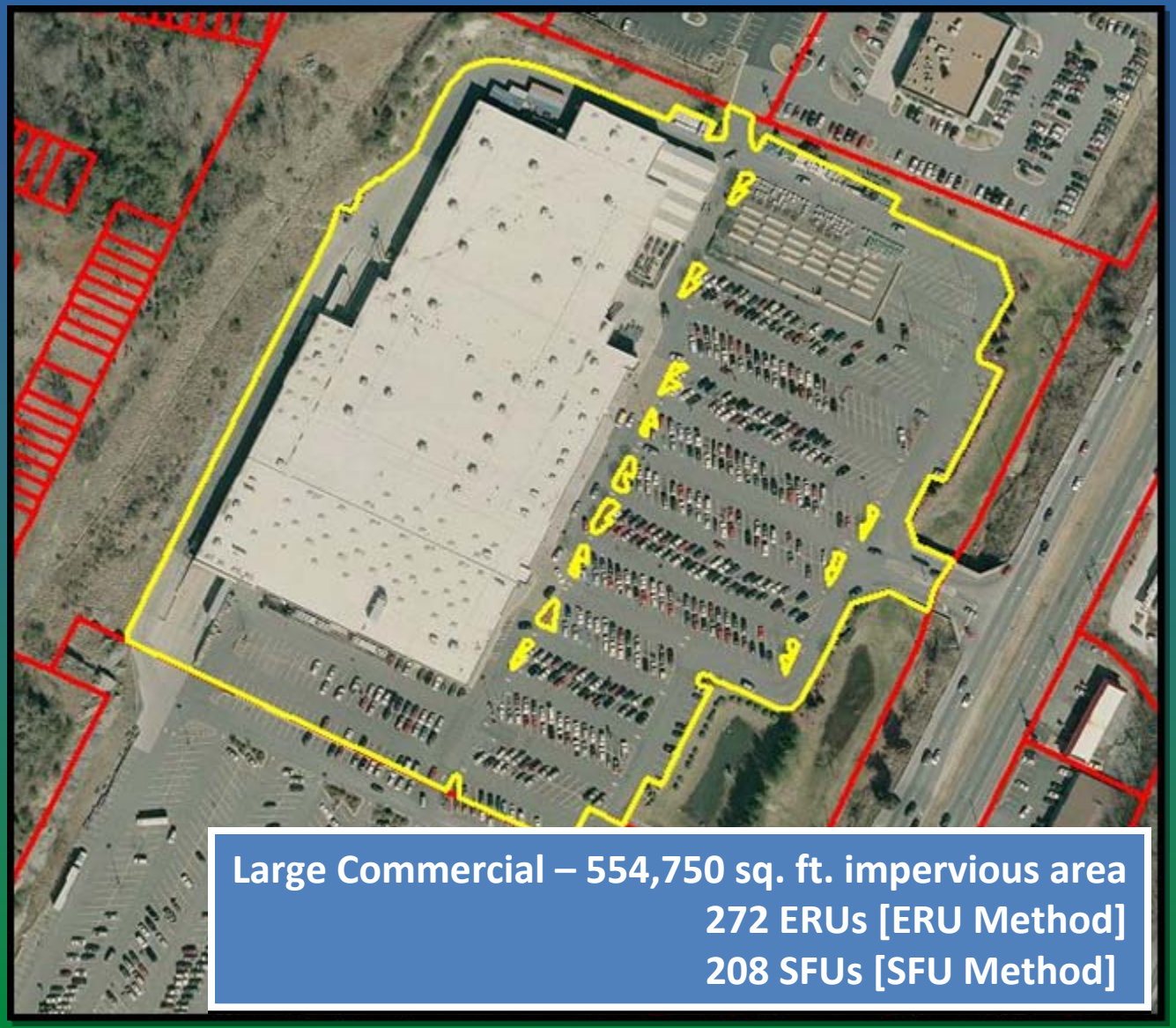
Large SFH – 4,718 sq. ft. impervious area
1 Dwelling Unit = 1.0 ERU [ERU Method]
1 Dwelling Unit = 1.59 SFU [SFU Method]

Multi-Family Example
[ERU vs SFU Comparison]



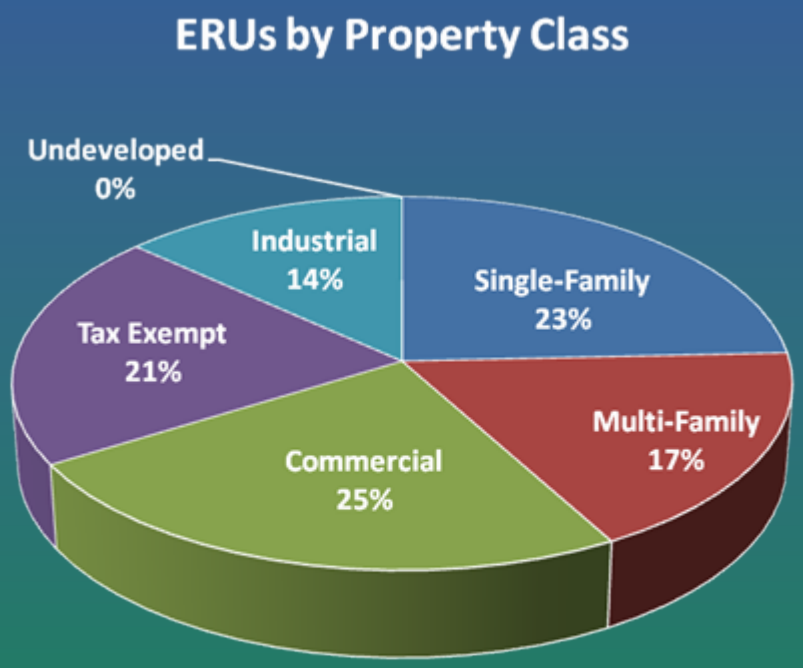
Small Multi-Family – 4,418 sq. ft. impervious area
20 Dwelling Units = 20 ERUs [ERU Method]
20 Dwelling Units = 6.4 SFUs [SFU Method]

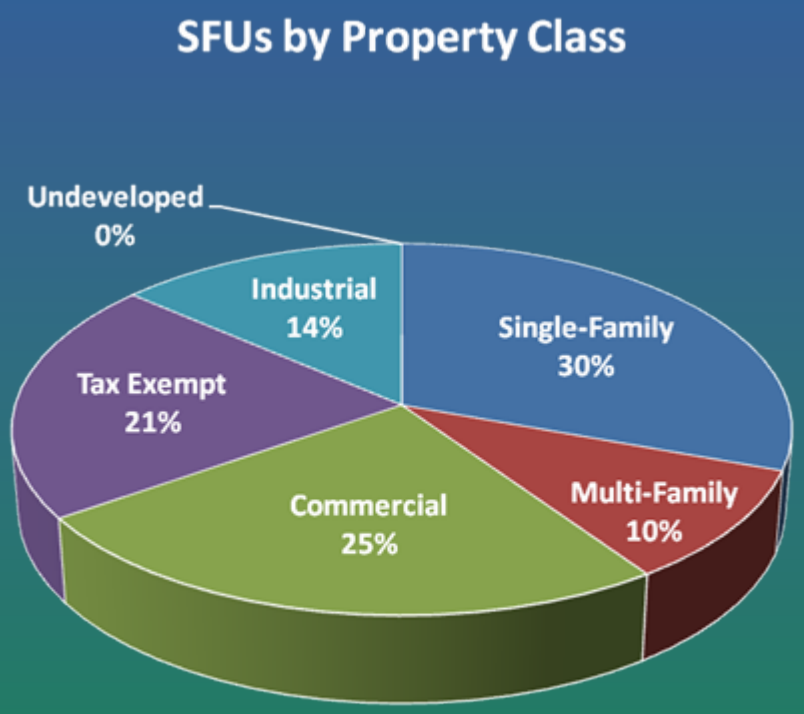
Non-Residential Property Example [ERU vs SFU Comparison]



Large Commercial – 554,750 sq. ft. impervious area
272 ERUs [ERU Method]
208 SFUs [SFU Method]

Comparison of ERUs & SFUs in Lynchburg



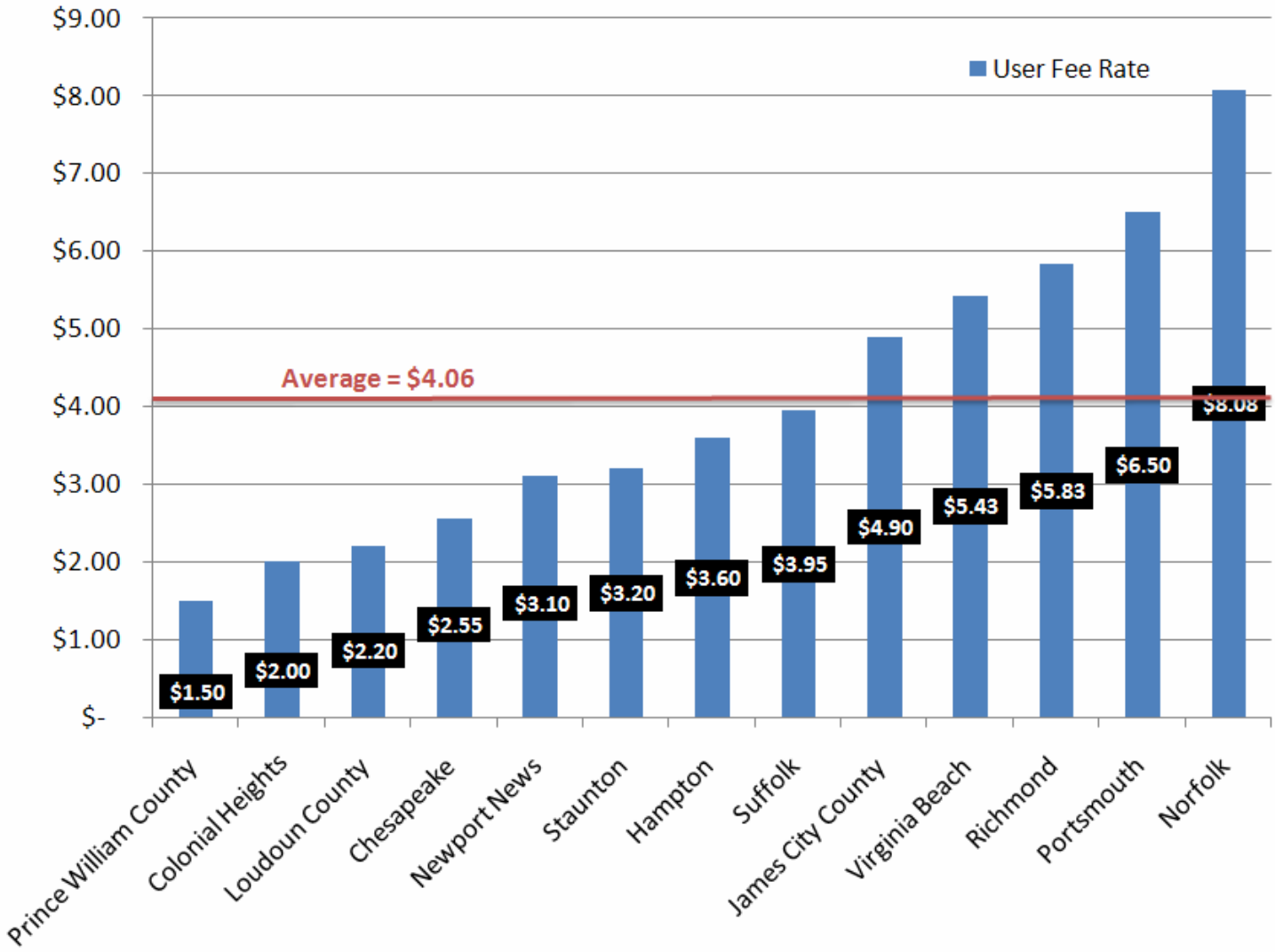


Lynchburg Projected Rate Comparison [ERU vs SFU Method]

Level of Service	*Total Program Cost*	*Estimated ERU Monthly Rate*	*Estimated SFU Monthly Rate*
Level 5 Program	$4,531,000	$5.36	$6.98
Level 4 Program	$3,561,000	$4.19	$5.48
Level 3.5 Program	$3,206,000	$3.78	$4.94
Level 3 Program	$2,851,000	$3.36	$4.39
Existing LOS (2.5)	$2,332,000	$2.75	$3.59

Notes:
- Highlighted row identifies results of preliminary feedback by SWAC
- Analysis assumes 95% collection rate

Stormwater User Fee Rates in VA



Virginia Dedicated Stormwater Funding Programs

- **16 programs have dedicated funding**
  - 13 are fee-based
    - 11 ERU
    - 2 SFU
  - 3 are tax-based ★
- **Two communities have pending fee programs and two are evaluating options**

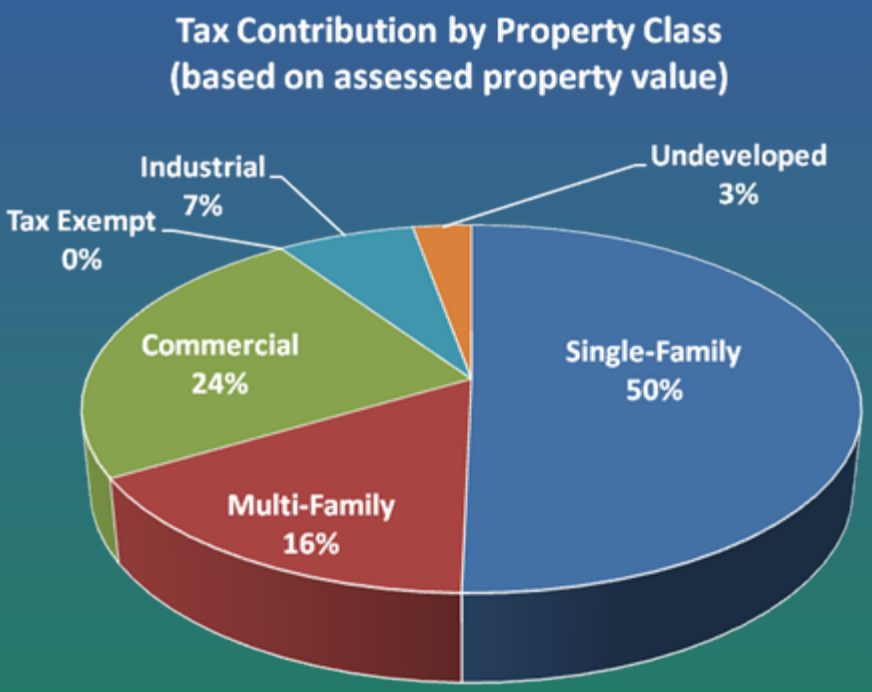
City/County	Population	Funding Method	Status
Fairfax County ★	1,015,302	Dedicated Tax	Implemented
Virginia Beach	435,619	User Fee (ERU)	Implemented
Prince William County	379,166	User Fee (ERU)	Implemented
Loudoun County	301,171	User Fee (ERU)	Implemented
Henrico County	296,415	n/a	Feasibility
Norfolk	229,112	User Fee (ERU)	Implemented
Chesapeake	220,560	User Fee (ERU)	Implemented
Arlington County ★	217,483	Dedicated Tax	Implemented
Richmond	192,913	User Fee (SFU)	Implemented
Newport News	178,281	User Fee (ERU)	Implemented
Hampton	145,017	User Fee (ERU)	Implemented
Alexandria ★	143,885	Dedicated Tax	Implemented
Portsmouth	101,377	User Fee (ERU)	Implemented
Roanoke	91,552	n/a	Pending
Suffolk	81,071	User Fee (ERU)	Implemented
Lynchburg	72,000	n/a	Feasibility
James City County	63,735	User Fee (ERU)	Implemented
Charlottesville	41,487	n/a	Pending
Staunton	23,853	User Fee (SFU)	Implemented
Colonial Heights	17,768	User Fee (ERU)	Implemented

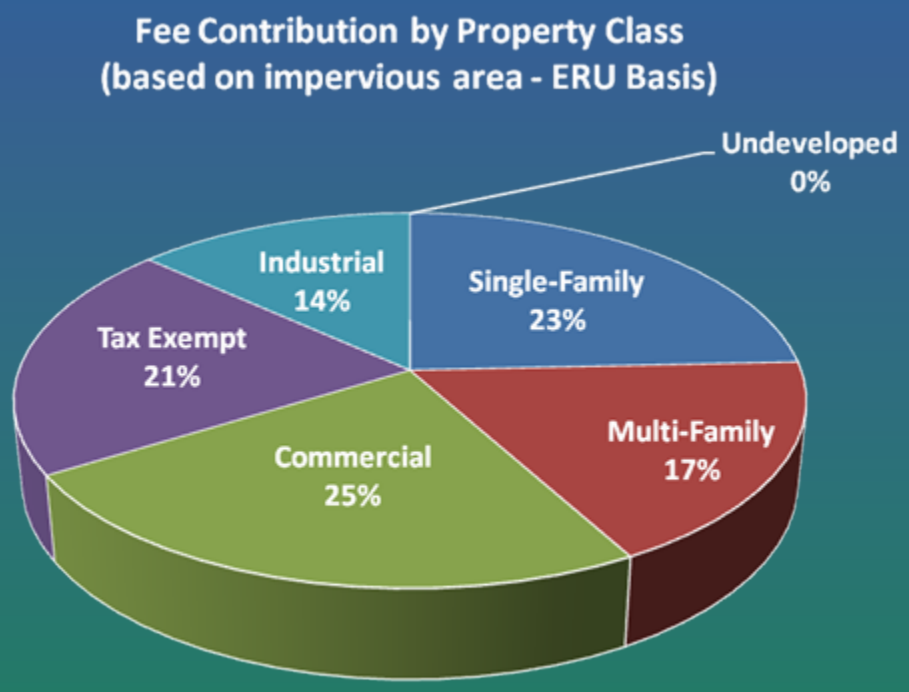
Dedicated Tax-Based Program
Ex. Fairfax County

- Previously dedicated one penny of the real estate tax for capital projects only
- Developed a County-wide Service District in 2010
- Levies a $0.015 (one and one half cent) tax per $100 of assessed real estate value
- Supports operation and maintenance costs along with stormwater capital projects
- County is considering an increase to comply with pending TMDL regulations

Comparison of Tax vs Fee Based System

Example LOS 3.5 = $3,206,000 annually





Property Owner Annual Cost Comparison for Example LOS 3.5 (Tax vs Fee)

Property Type	Equivalent Annual Tax[1]	Annual Fee (ERU)	Annual Fee (SFU)
Single-Family – Small	$ 38.00	$ 45.31	$ 28.44
Single-Family – Median	$ 96.39	$ 45.31	$ 59.24
Single-Family - Large	$ 279.84	$ 45.31	$ 94.20
Apartments (by complex)	$ 951.60	$ 1,631.07	$ 682.47
Commercial – Small[2]	$ 1,236.62	$ 770.23	$ 829.39
Commercial – Average[2]	$ 5,431.60	$ 6,161.83	$ 6,575.89
Commercial - Large[2]	$ 9,626.57	$ 11,553.44	$ 12,322.40
Industrial[2]	$ 1,314.69	$ 2,627.84	$ 2,784.39
Tax Exempt[2]	$ 0.00	$ 498.38	$ 533.18

Notes:

1. Annual tax provided is based on the average property value in each class. Actual tax value is property specific and will vary.
2. User fees are based on the average property within each class and may vary greatly depending on the actual impervious area on a property.

Break Out Session on Funding Options

Suggested Discussion Questions

1. **Is there a preferred funding mechanism?**
2. **If a tax-based system is preferred, the options are:**
   - No tax increase; reduce other services to fund stormwater program
   - Increase taxes to fund stormwater program (dedicated or non-dedicated)
3. **If a fee-based system is preferred, is there a preference for either the ERU (flat fee) or the SFU (tiered) method?**
4. **Is a combination of these methods preferred?**

Next Meeting

- **Topics**
  - Adjustments and Credits
  - Additional Information
  - Develop Draft Recommendations
- **Time and Location**
  - Thursday, November 18, 2010 (6pm to 8pm)
  - Location: James River Conference Center

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QUESTIONS?

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