

Roanoke County Stormwater Advisory Committee Recommendation



Presented to the
**Roanoke County Board of
Supervisors**

May 13, 2014



Introduction

- Overview
- Introducing Committee Members
- Introducing AMEC/Consultant

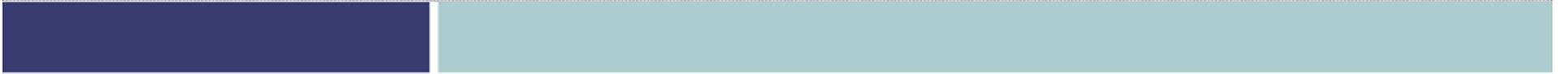


Key Issues for the Committee

- **Stormwater Program:**
 - Compliance with increased regulatory requirements.
 - Cost-efficient management of aging infrastructure.
 - Meet resident and business expectations.
- **Funding Source:**
 - Stability to allow long-term planning.
 - Adequate to meet needs.
 - Equitable cost distribution.



Findings



1.a. Increasing Regulations – *Roanoke River TMDLs*

- Must be based on Roanoke River Watershed Clean-Up Plan.
- Adequate progress must be demonstrated annually.
- Draft regional cost estimates:
 - DEQ projected costs are very high



Typical Problem





After Restoration



1.b. Increasing Regulations – *New Virginia Stormwater Regulations*

- Significant existing enforcement backlog (only ~130 out of ~700 private facilities are currently compliant).
- Existing inspection frequency does not meet new state minimum standards.
- No planning for eventual replacement of existing public facilities.
- New regulations will significantly increase the number of facilities.





Well-Maintained Facility



Facility Requiring Maintenance



2. Managing Aging Infrastructure

- Over 200 miles of stormwater conveyance system valued at ~\$100 million.
- Program is largely reactive:
 - Seven member crew – 200-300 complaints annually.
 - No stormwater projects in CIP.
 - Limited understanding of system condition.
- Current backlog of \$3.5 million in maintenance projects is increasing at 10-15% a year.



Visible Damage vs.



Undetected Damage

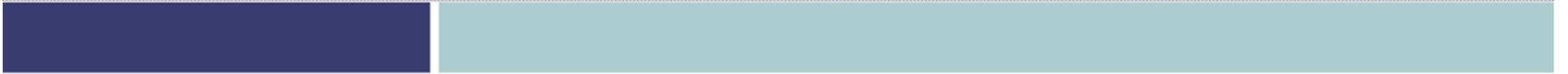


3. Quality of Life and Economic Growth

- Maintain economic competitiveness.
- Manage system cost-efficiently for the long-term.
- Provide the BOS with the right tools to make informed decisions.
- Engage the public and provide incentives to become good stewards.
- Solutions should be equitable and transparent.



Program Priorities



Prioritization Process

- Multiple level of service options were considered for how to address each driver or program gap.
- **The minimum level of service was generally chosen for regulatory mandates** unless there was also a local priority component.
- Members focused on options that could meet multiple objectives or would result in cost savings in the long term.



Identified Priorities

- 1. Storm Sewer Maintenance
 - Conduct system assessment and prioritize problem areas.
 - Plan for replacement cycle of ~100 years.
- 2. Mapping/GIS (Information Technology)
 - Improve ability to understand the system and conduct flooding/water quality modeling.



Identified Priorities

- 3. Equipment Replacement
 - Shift to amortization model for equipment replacement over next 10 years.
 - Enhance staff efficiency through more effective equipment.
- 4. Stormwater Project Backlog
 - Update County storm drainage plan to prioritize projects.
 - Clear project backlog over 10 years.



Identified Priorities

- 5. Stream Maintenance
 - Key component of TMDL compliance.
 - Develop watershed management plans over five year period to prioritize stream restoration opportunities.
 - More efficient use of funding and maximize chances of grants.



Identified Priorities

- 6. BMP Inspection & Maintenance
 - Amortize cost to eventually replace public facilities.
 - Adjust staffing to meet state minimum standards.
 - Set aside \$120,000 annually for eventual replacement of public facilities.
 - Consider service district model for maintenance of HOA facilities.
 - Regulatory compliance.



Recommended Five-Year Program

Program Area – Additional Costs*	Year 1	Year 2	Year 3	Year 4	Year 5
Storm Sewer Maintenance	250,000	350,000	500,000	500,000	500,000
Mapping/GIS (Information Technology)	70,000	70,000	70,000	70,000	70,000
Equipment Replacement	120,000	120,000	120,000	120,000	120,000
Stormwater Project Backlog	250,000	250,000	500,000	500,000	500,000
Public Education and Outreach	21,250	21,250	21,250	21,250	21,250
TMDL Action Plans	140,000	200,000	250,000	300,000	350,000
Stream Maintenance	50,000	50,000	100,000	150,000	150,000
BMP Inspection and Maintenance	115,000	175,000	235,000	202,500	202,500
Stormwater Pollution Prevention Plans	14,000	14,000	7,000	5,000	5,000
Staff Training/Nutrient Management Plans	13,500	13,500	10,000	16,500	13,000
Stormwater Utility Administration**	40,000	40,000	40,000	40,000	40,000
Total Draft Program – Additional Costs	1,083,750	1,303,750	1,853,250	1,925,250	1,971,750
Current Program Costs	1,816,129	1,816,129	1,816,129	1,816,129	1,816,129
Total Draft Program	2,899,879	3,119,879	3,669,379	3,741,379	3,787,879

* Does not consider inflation

**This cost is only applicable if a stormwater utility is instituted



Funding Options



Revenue Strategies

- **General Fund**
 - Increase general fund for stormwater needs.
 - Find money within the existing budget to fund stormwater.
- **Stormwater Service District Fee**
 - Based on property value.
- **Stormwater Utility Fee**
 - Based on impervious surface cover.



Key Factors Considered

- **Stability** – how important is long-term planning to program success?
- **Accountability** – how important is it that the fund is legally segregated from the General Fund?
- **Equity** – how important is the issue of “who pays?”
 - Should fees be linked to the service provided?
 - Should credit be given to those who already manage on-site infrastructure?
 - Should all property owners pay, including tax exempt?
- **Simplicity** – how important is it to keep the funding mechanism simple to understand?
- **Feasibility** – what is politically feasible to achieve?



Funding Comparison

Consideration	General Fund	Service District	Utility Fee
Stability	Less Stable – Competes Annually	Greater Stability Over Time	Most Stable – Fee Equals Program
Accountability	Not Legally Separate	Legally Separate	Legally Separate
Equity	<ul style="list-style-type: none"> No Relationship to Funding Tax Exempt Do Not Pay No Credit for On-Site Structures 	<ul style="list-style-type: none"> No Relationship to Funding Tax Exempt Do Not Pay No Credit for Onsite Structures 	<ul style="list-style-type: none"> Nexus to Funding Tax Exempt Does Pay Credits Required
Simplicity	Least Complicated	Relatively Simple	More Complex

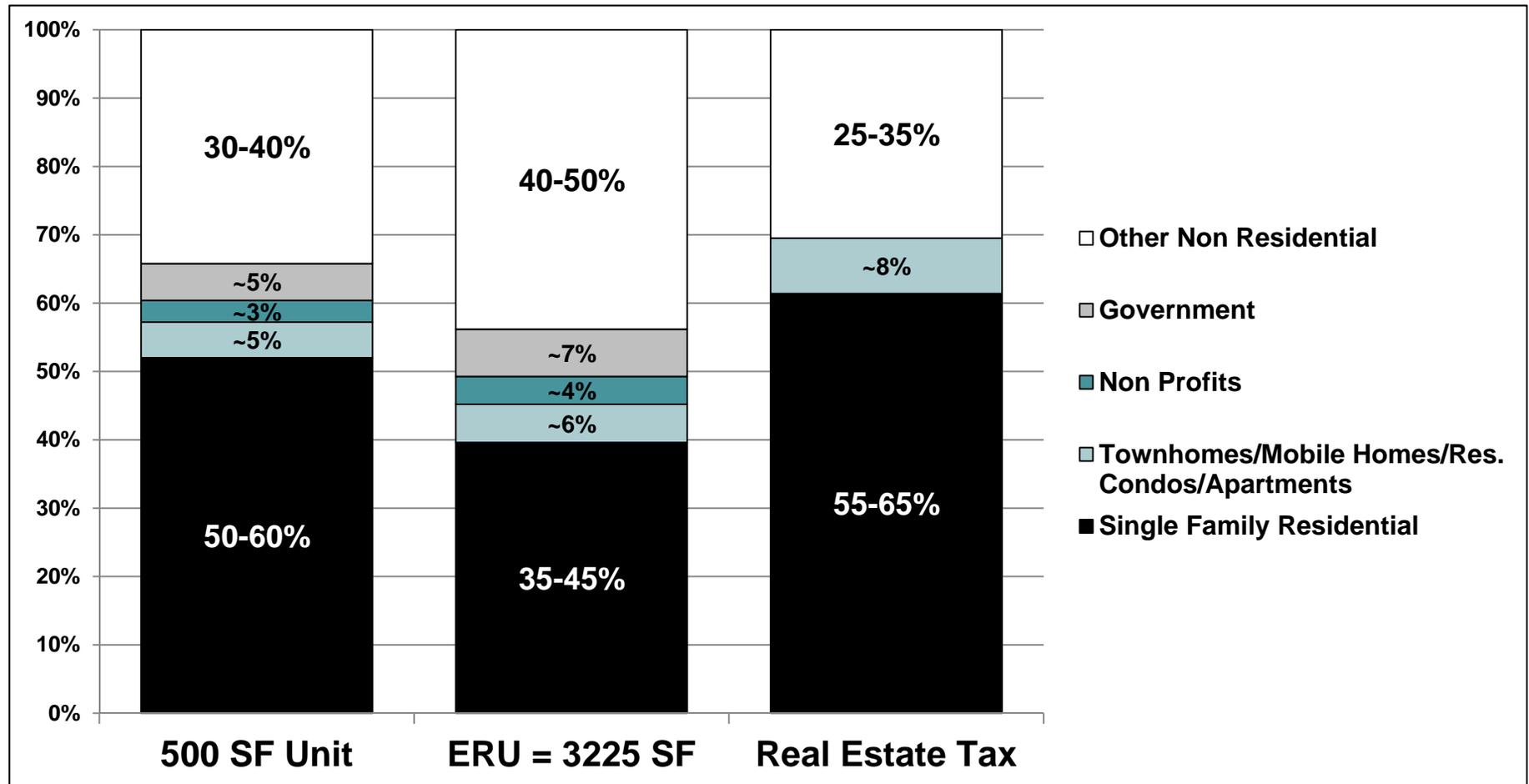


Utility Rate Options Considered

- Fixed Unit for Single Family Detached Residential: Equivalent Residential Units (ERUs)
 - Median impervious for SFD in Roanoke = 3,225 SF
 - All SFD pay the same flat rate.
 - Others pay based on number of ERUs
- Billing Unit Based on Impervious Area
 - Everyone pays based on impervious cover on their property, regardless of land use.
 - Used 500 SF for Roanoke analysis.



Estimated Distribution Among Land Use Sectors



Charts based on best data available



Committee Recommendations

Funding Recommendations

- Fund stormwater through a dedicated fund and move it out of the general fund.
- Fund stormwater through a utility structure with billing based on impervious surface because of equity.
 - Tax-exempt properties should not be excluded.
 - Establish a credit program.
- General fund taxes should be decreased if the entire program is funded by the utility.



Discussion

Q & A