Albemarle County
Water Resources Funding Advisory Committee

Stormwater Utility Rate Structures and Credit Policies

May 14, 2015
Tonight’s Agenda

- Comparing Utility Structures
  - Impervious cover only (500SF)
  - ERU approach (flat rate for single family residential)
  - Other approaches – tiered residential and density factors
  - Discussion

- Credits

- Public Engagement Process

- Next Steps
  - No meeting in June
  - Reconvene in July to discuss public feedback; discuss potential recommendations
Comparing Utility Structures
Impervious Cover Only

Key Components

• No differentiation among land uses.
• All properties are charged a rate per square feet (SF) of impervious cover.
• Billing unit of 500SF has been used for analysis.
• Billing unit can be adjusted larger or smaller.

Policy Considerations

• Requires initial and continued investment in mapping.
• Enhances equity… but shifts burden to rural SFR.
The County has good mapping; some quality assurance is needed.
Impact on Rural Single Family Residential

IA for Urban and Rural Residential

- Urban
- Rural
Example of Rural Residential Issue

Although rural, access roads increase the impervious cover of this property.
ERU Approach

Key Components

• Single family residential (SFR) charged a flat rate.
• All other properties are charged in increments of the Equivalent Residential Unit (ERU).
• An ERU of 2,500SF has been estimated for Albemarle.

Policy Considerations

• Approach does not require tracking of impervious cover for SFR properties.
• Reduces equity among SFR properties.
• Generally shifts the program cost burden to SFR.
ERU Approach Mechanics

*Flat rate for single family residential detached.*

**Any Single Family Detached House**
One Billing Unit

1 ERU

**Properties Other Than SFD Lots**
Based on Average SF in a Billing Unit

1 ERU
2 ERUs
3 ERUs
ERU Equity Issue

Smaller SFR are charged the same as larger SFR.
Two Additional Approaches

Concerns Expressed

• Inequity of ERU approach – very large versus very small SFR properties.
• Impact of 500SF approach on rural SFR properties.
• Should two properties with the same amount of impervious cover but different amounts of pervious area be charged the same?

Two Options for Consideration

• Tiered residential rate
• Density factor
Tiered Residential Rate

Key Components
• The total amount raised from the SFR sector remains the same.
• Tiers are created based on proportionate break-points.
• SFR properties within the same tier are treated the same.
• Number and range of tiers depends on County goals.

Policy Considerations
• More equitable than ERU approach.
• Less equitable than straight impervious cover.
• Effectively caps the charge for SFR (affects largest properties).
• Still requires residential mapping.
• Applies only to residential.
Example of Three Tiered Approach

Tier 1: Less Than Selected Percentile

Tier 2: Median + Percentile on Each Side

Tier 3: Greater Than Selected Percentile
Density Factor

Key Components

• Applies a weighting factor based on a site’s percent impervious surface area.
• Can be fine-tuned to increase or decrease sensitivity to the percent of impervious area.

Policy Considerations

• Requires coming up with the weighting factor. Several different approaches.
• Reduces fees for large residential properties and NSFR properties that have a lot of pervious areas.
• Conceptually easy to explain.
• Additional analysis needed to better understand how shift may impact other policies (sprawl, focusing density, etc.).
Example Density Factor

Density Factor = 0.67  
(20%/30%)

Density Factor = 1.0  
(30%/30%)

Density Factor = 1.83  
(55%/30%)

The density factor can then be applied to either the entire charge, or just a portion of the charge.
## Policy Consideration Summary

<table>
<thead>
<tr>
<th>IMPERVIOUS ONLY</th>
<th>ERU APPROACH</th>
<th>TIERED RESIDENTIAL</th>
<th>DENSITY FACTOR</th>
</tr>
</thead>
<tbody>
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Discussion Items

- What policy considerations are most important to you?
- What rate structure best aligns with your goals for the County’s stormwater funding program? Why?
Credit Policies
Purpose of Credits

- **Code of Virginia §15.2-2114.D** requires credits for anyone who installs, operates, and maintains a stormwater facility.
  - The amount of credit is up to the locality, but must be based in part on reductions in flow or pollutant loadings.
- Acknowledges that certain on-site actions can reduce the long-term cost of public stormwater services.
Credit Impacts

- ~900 private stormwater management facilities.
- Not all operators will take advantage of the credit.
- Credits shift the burden of the program to those who do not have credits.
- The impact of a credit on a specific property will depend on the amount of impervious cover.
Typical Policy Questions

• **Program goals:**
  • Minimum compliance with state law?
  • Incentive to maintain a facility?
  • Incentive to oversize or over treat?
  • Provide a way for residents to affect charge?
• **Maximum credit? Divide into water quality and quantity functions?**
• **Mandatory versus voluntary facilities?**
• **Low versus high efficiency facilities?**
• **Creditable facilities versus non-creditable facilities?**
• **Level of enforcement/inspection?**
Lynchburg, Virginia

- **Maximum credit amount is 50%.**
  - 20% water quality credit.
  - 50% water quantity credit.
  - Facility must meet Virginia Stormwater Management Handbook or Virginia Stormwater BMP Clearinghouse standards.
  - 20% credit for VPDES industrial stormwater permit.
- **Must submit an annual BMP Inspection Checklist and Stormwater Annual Report to maintain the credit.**
Richmond, Virginia

- **Maximum credit amount is 50%**.
  - 50% water quality credit.
  - 50% water quantity credit.
  - Facility must meet Virginia Stormwater Management Handbook or Virginia Stormwater BMP Clearinghouse standards.
  - 50% credit for VPDES industrial stormwater permit (can be 100% if the facility does not discharge to the MS4).
  - 10% green landscaping credit – choose 5 out of 8 practices.
- **Must submit an annual BMP Inspection Checklist and Stormwater Annual Report to maintain the credit.**
Follow these “Green” landscaping practices:

- Follow the Nutrient Management Standards in DCR’s Water Quality Agreement with Lawn Care companies. (http://www.dcr.virginia.gov/soil_and_water/documents/wqagreebro.pdf)
- Utilize plants that have low water, fertilizer & pesticide requirements.
- Cultivate plants that discourage pests. Minimize grassy areas which require high maintenance.
- Preserve existing trees, and plant additional trees and shrubs to help prevent erosion and promote on-site infiltration of water into the soil.
- Spread mulch on bare ground to help prevent erosion and runoff.
- Avoid using fertilizers near surface waters.
- Do not apply pesticides or fertilizers before or during rain to prevent runoff.
- Calibrate your applicator before applying pesticides or fertilizers. As equipment ages, annual adjustments may be needed.
Chesapeake, Virginia

• **20% credit for water quality facility.**
  - BMP must achieve no-net-increase over existing watershed conditions.

• **20% credit for water quantity facility.**
  - BMP must achieve “undeveloped” runoff levels.
  - Calculations must be submitted by a Professional Engineer.
Charlottesville, Virginia

- Credit depends on when and for what purpose the facility was built.
- Credit up to 90% for voluntary facilities, or 100% of the fee minus one billing unit, whichever results in the lower bill.

<table>
<thead>
<tr>
<th>Installation Date</th>
<th>Condition of Development or Voluntary</th>
<th>Percent Credit for Impervious Area Treated</th>
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</thead>
<tbody>
<tr>
<td>Pre-July 1, 2009</td>
<td>Either</td>
<td>20%</td>
</tr>
<tr>
<td>Post-July 1, 2009</td>
<td>Voluntary</td>
<td>40% to 100%¹ Depending on the Level of Pollutant Removal – See Credit Calculator for Post-July 1, 2009 Voluntary Facilities</td>
</tr>
<tr>
<td>Post-July 1, 2009 &amp; Pre-July 1, 2014</td>
<td>Condition of Development</td>
<td>30%</td>
</tr>
<tr>
<td>Post-July 1, 2014</td>
<td>Condition of Development</td>
<td>40%</td>
</tr>
</tbody>
</table>

¹ Depending on the level of pollutant removal.
In addition to more traditional credits, residents may receive 10% credit if 10 points are earned from a menu of options:

- 2 points each rain barrel
- 1 point per hour volunteered
- 5 points for each 50SF rain garden
- 2 points per tree
- 1 point per downspout disconnect
- 1 point for “no-fertilizer” pledge
Bottom Line

• Credit policy depends on the goals of the community.
• Consider the balance between the potential benefit and the administrative cost.
• Policies are typically, although not always, developed after the decision to move forward with a utility.
Next Steps