Stormwater Utility Credit Programs

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Stormwater user fee credit programs

- What are credits / incentives?
- How do credits / incentives work?
- Who qualifies for credits / incentives?
- How are credits / incentive programs administered?
- Example
- Will property owners retrofit?
- Examples of programs
- Survey results
What is a stormwater utility?

- A stormwater utility is a funding concept under which a property pays a fee that is based on its use of infrastructure or programs.
- Use is measured by demand for services, which is a function of runoff potential.
- Rate is determined as the quotient of the cost of services and the rate base.
- Cost of service is based on providing a target level of service to customers.
What are stormwater user fee credits?

- Rate modifier / equity builder
- A stormwater user fee credit is a reduction in stormwater fees charged to a qualifying property in return for implementing qualifying on-site stormwater management controls and/or activities
- A stormwater user fee credit is an acknowledgement that on-site stormwater management may:
  - reduce operational costs
  - reduce compliance costs
  - reduce capital costs
What are stormwater incentives?

- A stormwater management incentive can be a method of reducing a property’s user fees by reducing the amount of imperviousness on the property, or

- A stormwater management incentive can be a method of compensating a property owner for providing on-site stormwater management, such as:
  - Grant programs
  - Cost share programs
How do credits work?

- Direct reduction of user fees
- Applied after user fees are calculated
- Can be a one time credit (offset) or on-going
- Typically cannot exceed the periodic fees that would be paid by the property
- Must be applied for;
  - Qualifying criteria set by policy
  - Maintenance of stormwater controls required
How do incentives work?

- No reduction of computed user fees
- Can be a one time or on-going
- May or may not be related to fees calculated
- Participation may be capped
- Must be applied for;
  - Qualifying criteria set by policy
  - There may be criteria to keep on-going incentives or the application process may be repetitive
Who can receive credits or incentives?

- Credit programs
  - Most programs focus on non-residential customers only, though some programs allow credits for all properties
  - Credit application and maintenance requirements are typically cost prohibitive for residential and small non-residential customers

- Incentives
  - Many focus on residential and non-profit
  - Any group or individual may qualify depending on locally developed criteria
Who can receive credits or incentives?

- What activities typically qualify for credits?
  - Peak control
    - one level
    - multiple levels
  - Volume control
    - detention time w/ one design storm
    - detention time w/ multiple design storms
  - Water quality control
    - meet a standard
    - have a current NPDES stormwater permit
  - Must one meet or exceed local standards?
Traditional stormwater controls
Who can receive credits or incentives?

- What activities are typically incentivized?
  - Minimizing imperviousness areas
    - Build up, not out
    - Use green methods
    - Reduce imperviousness ➔ fewer ERUs ➔ lower fees
  - Best practices
    - Beneficial practices not required by local standards
    - Practices contracted by local government
    - All properties can be eligible
    - One-time or repetitive
    - Compensation is typically through grants, cost sharing
Green stormwater management
Green stormwater management
How are credit programs administered?

- Steps in setting up a credit program
  - Determine the structure of program (what & how)
  - Identify the application process
  - Define the requirements for maintaining the credit
  - Define the appeals process
  - Develop examples of credit applications
  - Develop a credit policy and credit manual
  - Provide training, both internally and externally
How are credit programs administered?

- Program structure
  - Should the credit program structure include both credits and incentives? If so, which types of practices fall into each?
  - What should be the maximum level of credit?
  - Mow much credit can be achieved for various practices?
  - How much funding should be made available to incentives?
  - Do properties that meet standards get credits, or only properties that exceed standards?
How are credit programs administered?

- Should the credit program structure be prescribed or menu based?
  - Prescribed
    - ✓ X% for one level of control
    - ✓ Y% for a second level
    - ✓ Z% for a third level
    - ✓ Absolute cap (50%, 60%, etc)
  - Menu based
    - ✓ Define credit available for a menu of controls
    - ✓ Allow property owner to apply as he/she sees fit
    - ✓ Absolute cap (maximum credit available)
How are credit programs administered?

Menu based credit structure example

- **Total credit maximum = 50%**
- **Peak control credit (PC)**
  - PC1 – meet standards  \( PC1_{max} = 20\% \)
  - PC2 – exceed standards  \( PC2_{max} = 20\% \)
- **Quality control credit (QC)**
  - QC1 – parking lot control  \( QC1_{max} = 10\% \)
  - QC2 – nutrient control  \( QC2_{max} = 10\% \)
  - QC3 – NPDES permit  \( QC3_{max} = 10\% \)
- **Ways to get to 50%**
  - PC1 + PC2 + (QC1 or QC2 or QC3)
  - PC1 + QC1 + QC2 + QC3
How are credit programs administered?

- Application process
  - How much detail should be required?
  - Map area served by each stormwater practice
  - Owner maintenance of facilities required
  - Will there be an application fee?
  - Certification by qualified professional?
  - Is an inspection required?
  - Should a photograph accompany the application?
  - Who will review and approve?
How are credit programs administered?

- Annual credit maintenance
  - Verification / certification that practices are operating as approved
  - Annual certification by owner (self certification)?
  - Annual inspection?
  - Annual photograph?
  - Receipts for maintenance services?
  - Are approvals indefinite or will periodic applications be required?
Stormwater Credit Program Example

Simple Credit Calculation (assume commercial zoning)

- PC = Peak Discharge Credit
- PCmax = 20%
- PC = % impervious area runoff controlled times PCmax
- All impervious drains to one point
- Design meets qualifying criteria
- PC = 100% x 20% = 20%
### Examples of credit programs

<table>
<thead>
<tr>
<th>City</th>
<th>Type</th>
<th>Activity</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>Non-residential</td>
<td>Detention</td>
<td>Water Quality</td>
</tr>
<tr>
<td>Columbus</td>
<td>Non-residential</td>
<td>Detention</td>
<td></td>
</tr>
<tr>
<td>Durham</td>
<td>Non-residential</td>
<td>Detention</td>
<td>Water Quality</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>Non-residential</td>
<td>Detention</td>
<td></td>
</tr>
<tr>
<td>Louisville</td>
<td>Non-residential</td>
<td>Detention</td>
<td></td>
</tr>
<tr>
<td>Minneapolis</td>
<td>Non-residential</td>
<td>Detention</td>
<td>Water Quality</td>
</tr>
<tr>
<td>Normal</td>
<td>Non-residential</td>
<td>Detention</td>
<td>Water Quality</td>
</tr>
<tr>
<td>Raleigh</td>
<td>Non-residential</td>
<td>Detention</td>
<td>Water Quality</td>
</tr>
<tr>
<td>Rock Island</td>
<td>All</td>
<td>Detention</td>
<td>Water Quality</td>
</tr>
<tr>
<td>St Paul</td>
<td>Non-residential</td>
<td>Discharge</td>
<td></td>
</tr>
</tbody>
</table>
Examples of incentive programs

- Chicago
  - Commercial
  - Green Roof Fund
- Knox County, TN
  - All
  - Vegetative filter
  - Impervious Disconnect
- Louisville
  - Residential
  - Rain Barrels
- Philadelphia
  - All
  - Green Roof (tax)
- Portland, OR
  - All
  - Green Roof Fund
- Rock Island, IL
  - Residential
  - Rain Gardens
- Sandy, OR
  - All
  - Impervious Disconnect
Credit program participation

<table>
<thead>
<tr>
<th>Community</th>
<th>Population</th>
<th>Rate</th>
<th>Limit</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morton, IL</td>
<td>15,760</td>
<td>$4.74</td>
<td>50%</td>
<td>&lt; 2%</td>
</tr>
<tr>
<td>Griffin, GA</td>
<td>23,450</td>
<td>$3.57</td>
<td>50%</td>
<td>&lt; 5% / &lt; 0.5%</td>
</tr>
<tr>
<td>Rock Island, IL</td>
<td>38,440</td>
<td>$3.62</td>
<td>100%</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>Normal, IL</td>
<td>45,390</td>
<td>$4.60</td>
<td>50%</td>
<td>17% / 2%</td>
</tr>
<tr>
<td>Franklin, TN</td>
<td>46,420</td>
<td>$4.00</td>
<td>75%</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>Raleigh, NC</td>
<td>276,090</td>
<td>$4.00</td>
<td>50%</td>
<td>&lt; 2%</td>
</tr>
<tr>
<td>Charlotte, NC</td>
<td>695,450</td>
<td>$5.51</td>
<td>100%</td>
<td>&lt; 0.5%</td>
</tr>
<tr>
<td>Columbus, OH</td>
<td>711,470</td>
<td>$3.32</td>
<td>80%</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Indianapolis, IN</td>
<td>791,930</td>
<td>$2.25</td>
<td>85%</td>
<td>&lt; 4%</td>
</tr>
</tbody>
</table>
How are incentive programs administered?

- Steps in setting up an incentive program
  - Determine the structure of program (what & how)
  - Determine the funding level for each type of incentive
  - Identify the application process
    - Determine content
    - Determine how to prioritize
    - Develop examples
  - Develop technical guidance where appropriate
  - Determine if any incentives can be repetitive
Stormwater user fee survey

Are credits provided for private detention/retention facilities?

<table>
<thead>
<tr>
<th>Year</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>2005</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>2002</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>1999</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Source: Black & Veatch 2007

Are user-fee credits provided to encourage customers to control or reduce stormwater pollution?

<table>
<thead>
<tr>
<th>Credit Type</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality only</td>
<td>1%</td>
<td>99%</td>
</tr>
<tr>
<td>Quantity only</td>
<td>11%</td>
<td>89%</td>
</tr>
<tr>
<td>Both quality and quantity</td>
<td>20%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Are incentives other than user-fee credits provided to customers to control or reduce stormwater pollution?

<table>
<thead>
<tr>
<th>Incentive Type</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality only</td>
<td>4%</td>
<td>96%</td>
</tr>
<tr>
<td>Quantity only</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Both Quality and quantity</td>
<td>7%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Source: Black & Veatch 2007
Why is participation low?

- The property developer is not (long term) property owner and won’t realize financial benefits
- Retrofitting for credit is rarely cost effective
- Application process issues
  - Can be burdensome
  - Can be too costly
  - Can require professional assistance
- Most credit programs require owner maintenance of stormwater control(s)
- Credit application and maintenance requirements are typically cost prohibitive for residential and small commercial customers
Retrofit analysis - dry detention

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Detention</td>
<td></td>
</tr>
<tr>
<td>Site area (ac)</td>
<td>5</td>
</tr>
<tr>
<td>Impervious acres @100%</td>
<td>5</td>
</tr>
<tr>
<td>10 Yr Storm Depth</td>
<td>4.37</td>
</tr>
<tr>
<td>Storage volume (cuft)</td>
<td>79,316</td>
</tr>
<tr>
<td>Pond Cost - Construction</td>
<td>$65,605</td>
</tr>
<tr>
<td>Land (4%)</td>
<td>$60,000</td>
</tr>
<tr>
<td>Design, Permits, Contingencies</td>
<td>$20,993</td>
</tr>
<tr>
<td>Pond Cost - Total</td>
<td>$146,598</td>
</tr>
<tr>
<td>Pond Cost - Annual</td>
<td>(50 yr, 3%)</td>
</tr>
<tr>
<td>Routine Maintenance - Annual</td>
<td>$656</td>
</tr>
<tr>
<td>Total Annual Cost</td>
<td></td>
</tr>
</tbody>
</table>

| Stormwater Fees      |         |
| ERUs @ 2500 sq ft gross | 87.1    |
|                       | billable | 87      |
| SW Charge @ $4.50/ERU |         | $392    |
| SW Charge - Annual    |         | $4,704  |
Questions ??

Contact Info:

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