Funding Sources for a Stormwater Utility

Presented at the NYWEA Watershed Science and Technical Conference

Thayer Hotel
September 14, 2012

Richard J Franzetti P.E.
Carpenter Environmental Associates
307 Museum Village Road
Monroe, New York 10950
(845) 781 – 4844
r.franzetti@cea-enviro.com
General Overview

- Studied over 1,300 in US; estimates 1,500 to 2,000

- Average monthly single residential fee is $4.20

- Fees range from less than $1.00 to $22.37 per month

Source: Western Kentucky University Stormwater Utility Survey 2012
Fee Structures

- A fee must be fair and equitable to all users
- Higher fees for a larger amount of stormwater runoff
- Various factors need to be considered
- Common method for allocating costs is based on impervious areas
Fee Structures

- Ad valorem/property value
- Flat Fee
- Land Characteristics
  - Impervious cover
  - Gross Land area
Ad valorem

- Easy to administer
- Costs based on assessed property value may not be the most equitable cost
- Tax-exempt properties do not contribute
Flat Fee

- Commonly used for residential property
- Simplest rate component to utilize
- Equitability issues
- Flat fees are used initially
Land Characteristics

Impervious Cover

- Fees are proportional to measured impervious area
- Specific runoff characteristics of each parcel or land use class
- Measuring the impervious area is labor intensive
- Undeveloped property is not included
- Water quality is not considered
Land Characteristics
Gross Land Area

- There is a high level of technical accuracy

- Susceptible to challenges

- Specific runoff characteristics of each parcel or land use class are used

- Undeveloped property included

- Water quality can be included
Fee Structures

- Customer Classification

- Equivalent Runoff Unit (ERU)
Customer Classification

- Typically two classes
  - Residential
  - Non-residential
- Can be further broken down
ERU

- Most common billing unit
- Based on stormwater generation
- Size depends on utility

### Sample Calculation – Commercial Property

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impervious area for a specific property *</td>
<td>20,000 sf</td>
</tr>
<tr>
<td>ERU Value – square feet</td>
<td>2,682 sf</td>
</tr>
<tr>
<td>ERUs for this specific property</td>
<td>7.5 ERUs</td>
</tr>
<tr>
<td>E RU value – Fee per ERU per month</td>
<td>$3.00</td>
</tr>
<tr>
<td>Monthly Stormwater Bill for this Property</td>
<td>$22.50</td>
</tr>
</tbody>
</table>

*Impervious area to be property-specific and based upon tax records and other sources (e.g., aerial photography)*
Example of Revenue Sources

ERUs provides a fair and equitable allocation of costs and reduces burden on residents.

<table>
<thead>
<tr>
<th>Property Class</th>
<th>Assessed Value</th>
<th>Based on Taxes</th>
<th>Based on ERU’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility</td>
<td>38,657,710</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Residential</td>
<td>3,031,442,500</td>
<td>59%</td>
<td>27%</td>
</tr>
<tr>
<td>Condo</td>
<td>34,441,960</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Industrial</td>
<td>322,555,660</td>
<td>6%</td>
<td>19%</td>
</tr>
<tr>
<td>Tax Exempt</td>
<td>2,535,227,590</td>
<td>0%</td>
<td>22%</td>
</tr>
<tr>
<td>Commercial</td>
<td>1,178,814,070</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Apartment</td>
<td>532,050,820</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>7,673,190,310</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Credits

- Financial incentive

- Typically for non-single family residence

- Reduce stormwater impact or management cost

- Applied as a percentage or flat fee reduction

- Limits to how much credit is allowed (1)

(1) Black & Veatch Enterprise Management Solutions. 2007 Stormwater Utility Survey
Example – Philadelphia Credit Program

- Uses a parcel based fee
- Allow for credit if retrofit is installed
- ~100% impervious area fee reduction
- Can reapply for credit must document:
  - Inspection
  - Maintenance
  - Functionality

Source: “Financing Stormwater Retrofits in Philadelphia and Beyond” February 2012 NRDC
For Additional Information

Richard J. Franzetti P.E., BCEE, LEED AP
Senior Engineer
Carpenter Environmental Associates
307 Museum Village Road
Monroe, New York 10950

Office (845) 781-4844 ext - 310
Cell (914) 843-4704

Email: R.Franzetti@cea-enviro.com
Website: www.ceaenviro.com