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# Appendix S

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Stormwater  
Fee  
Discount  
Program

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## **S.1 Stormwater Fee Discount Program: Overview**

The District Department of the Environment (DDOE), as a requirement of the Comprehensive Stormwater Enhancement Amendment Act of 2008, is in the process of establishing a Stormwater Fee Discount Program for District of Columbia Water and Sewer Authority (DC Water) customers. This program will provide discounts to the stormwater fee that appears on the customer's DC Water bill.

The United States Environmental Protection Agency (EPA) requires the District to minimize and treat its stormwater in order to protect the Anacostia and Potomac rivers, their tributaries, and the Chesapeake Bay through a Municipal Separate Storm Sewer System (MS4) Permit (January 22, 2012). In order to fund the program that responds to this requirement, the District charges each customer a stormwater fee, calculated on a monthly basis, that is based on the area of impervious surface found on the customer's property. An impervious surface is a surface that either prevents or retards the entry of water into the ground as occurring under natural conditions, or that causes water to run off the surface in greater quantities or at an increased rate of flow, relative to the flow present under natural conditions.

Stormwater Best Management Practices (BMPs), such as green roofs, bioretention, and harvest/reuse systems, reduce the amount of stormwater runoff generated from impervious surfaces. Such practices provide benefits. They reduce the negative environmental impacts from stormwater volume and pollutants and reduce the District's cost of complying with the EPA's permit requirements. District law requires DDOE to provide a stormwater fee discount to account for these benefits.

The proposed discount program, known as *RiverSmart Rewards*, would apply to existing, retrofitted, and newly-constructed BMPs that reduce stormwater runoff from residential and non-residential properties. Discounts would be granted for periods of three (3) years, as long as the customer maintains eligibility.

For properties that have installed BMPs prior to the establishment of the stormwater fee discount program, discounts could be applied retroactively and may apply as far back as May 1, 2009, if the customer provides adequate documentation verifying the date of installation.

On July 29, 2011, DDOE proposed rules that would establish the discount program, define the general categories of BMPs eligible to receive discounts, specify program eligibility requirements, specify the maximum discount available to customers, describe how discounts would be calculated and how they could be revoked, in whole or in part, and generally describe application, review, and appeal processes for the discount program. In response to this proposal, DDOE received eleven (11) comments, many of which warranted changes to the rule. DDOE

anticipates proposing a second version of this rule in summer 2012.

## **S.2 Calculating Stormwater Fees and Discounts**

The stormwater fee is based on the “Equivalent Residential Unit” (ERU), a unit of measurement established in § 556 of title 21, chapter 5 of the DC Municipal Regulations. Each ERU is equal to one thousand square feet (1,000 sq. ft.) of impervious surface. For a 1.2 in. rainfall event, each ERU produces seven hundred ten and seventy-five hundredths (710.75) gallons of stormwater runoff. Currently, a property pays \$2.67 per month per ERU.

Under the proposed program, a DC Water customer can earn a stormwater fee discount by installing one or more approved BMPs. The volume of stormwater retained will determine the amount of the discount. BMPs that retain the equivalent volume of stormwater created by a one and two tenths inch (1.2 in.) storm event are eligible for the maximum discount, which is a 55% reduction in the stormwater fee.

DDOE has developed two separate discount calculations for two different application processes: 1) Standard Discount Calculation and 2) Simplified Discount Calculation.

### **1) Sample Standard Discount Calculation**

The following sample calculation shows how a customer’s use of an eligible BMP can reduce the fee for twenty thousand square feet (20,000 sq. ft.) of BMP, in this case from the expected monthly fee of \$53.40, less a discount of \$21.63, to \$31.77:

Assume that a property has twenty thousand square feet (20,000 sq. ft.) of impervious surface, or twenty (20) ERUs. Assume also that the impervious area consists of seventeen thousand five hundred square feet (17,500 sq. ft.) of roof area and two thousand five hundred square feet (2,500 sq. ft.) of a concrete driveway. At present rates, \$2.67/ERU, the property must pay a monthly stormwater fee of \$53.40 for this impervious area ( $\$2.67 \times 20$  ERUs).

Now assume that the owner installs a green roof that has a DDOE-approved design, one that engineering calculations have demonstrated will retain a maximum of ten thousand three hundred sixty-two gallons (10,362 gals.) of stormwater runoff per storm event. As an eligible BMP, the green roof entitles the customer to a stormwater fee discount.

(This example assumes that the customer receives a DC Water bill monthly. Some customers receive their bill on a different interval, like six (6) months. For them, this calculation would be adjusted.)

The Department will calculate the monthly stormwater fee discount as follows:

Step 1: State the maximum volume of stormwater runoff retained (by the DDOE-approved and eligible BMP per storm event) in gallons, the “retention volume”:

10,362 gallons

Step 2: Convert the retention volume from Step 1 to ERUs. Divide it by seven hundred ten and seventy-five hundredths gallons per ERU (710.75 gals./ERU) (rounding the quotient up to the nearest tenth), the standard conversion factor:

$$10,362 \text{ gallons} \div 710.75 \text{ gallons/ERU} = 14.6 \text{ ERUs}$$

Step 3: Multiply the number of ERUs from Step 2 by the discount program's maximum allowable discount percentage of fifty-five percent (55%) (rounding the result up to the nearest tenth):

$$14.6 \text{ ERUs} \times 55\% = 8.1 \text{ ERUs}$$

Step 4: Determine the dollar amount of the monthly stormwater fee discount by multiplying the number of ERUs from Step 3 by the current monthly fee. Presently, the fee is \$2.67 per ERU:

$$8.1 \text{ ERUs} \times \$2.67/\text{ERU} = \$21.63 \text{ monthly discount}$$

Step 5: Figure the new bill. Subtract, normal bill amount minus the monthly discount calculated in Step 4.

$$\$53.40 - \$21.63 = \$31.77 \text{ per month}$$

## 2) **Sample Simplified Calculation**

This simplified calculation applies to small BMPs, for which a complex technical analysis would likely be unnecessarily expensive. DDOE will develop a Simplified Application, with a streamlined and simplified discount calculation, for small installations – for customers that install BMPs that retain runoff from an aggregate of two thousand square feet (2,000 sq. ft.) or less of impervious surface. This Simplified Application will likely be applicable to most single-family residences and some small businesses. As with the standard discount calculation, the maximum allowable discount for applicants using the simplified discount calculation is fifty-five percent (55%).

The simplified discount calculation relies on the same conceptual approach as the detailed discount calculation above but makes some assumptions in the customer's favor to streamline and simplify the calculation. The customer only needs to know the total footprint of impervious surface area (available from the DC Water bill) and the total area which the BMP(s) manages.

The simplified calculation assumes a BMP(s) sized to manage a one and two tenths inch (1.2 in.) volume of stormwater runoff. As a result, the simplified calculation is limited to determining the fraction of the property's total impervious area which the BMP(s) manages.

For example, assume a residential property originally determined to have one thousand square feet (1,000 sq. ft.) total of impervious surface. DC Water currently charges this property a monthly stormwater fee of \$2.67, based on DC Water's six- (6- ) tier rate structure for residential properties. Assume that the property's impervious area is comprised of seven hundred square feet (700 sq. ft.) of roof area, one hundred fifty square feet (150 sq. ft.) of cement patio in the back yard, and a front yard with one hundred square feet (100 sq. ft.) of cement patio plus fifty square feet (50 sq. ft.) of cement walkway. Prior to retrofits, the normal monthly charge for this property would be \$2.67.

Now, assume the property owner retrofits with multiple BMPs: three hundred fifty square feet (350 sq. ft.) of green roof, one hundred fifty square feet (150 sq. ft.) of permeable pavers in back to replace the cement patio, and a one hundred square foot (100 sq. ft.) rain garden in front (replacing the cement patio and draining the remaining three hundred fifty square feet (350 sq. ft.) of roof area.

(This example assumes that the customer receives a DC Water bill monthly. Some customers receive their bill on a different interval, like six (6) months. For them, this calculation would be adjusted.)

The discount for this property would be calculated as follows:

Step 1: Determine the total area which the BMP(s) manages, in square feet:  
 $350 \text{ square feet (green roof)} + 150 \text{ square feet (permeable pavers)} + 450 \text{ square feet (rain garden draining roof area)} = 950 \text{ square feet}$

Step 2: Divide the total area (in square feet) which the BMP(s) manages by the original total area of impervious surface (in square feet), in order to determine percentage of total area managed:

$$950 \text{ square feet} / 1,000 \text{ square feet} = 95\%$$

Step 3: Multiply the percentage of total area managed by the maximum allowable discount of 55%:

$$95\% \times 55\% = 52\%$$

Step 4: Determine the customer's monthly discount. Multiply the percentage result from

Step 3 by the monthly stormwater fee:

$$52\% \times \$2.67 = \$1.39 \text{ (monthly discount)}$$

Step 5: Figure the new bill. Subtract, normal bill amount minus the monthly discount calculated in Step 4.

$$\$2.67 - \$1.39 = \$1.27 \text{ per month}$$

### **S.3 Procedures for Eligibility and Applying for the stormwater Fee Discount**

Once the program becomes available, interested DC Water customers will apply to DDOE and must meet the following criteria in order to be eligible.

- Be current in all stormwater fee payments in the water and sewer bill;
- Submit a complete application to the Department, in a manner prescribed by the Department;
- If applying via the standard application, accurately describe the BMP(s) by referencing or submitting:
  - A final stormwater management plan approval notice issued by DDOE; or
  - All of:
    - Design;
    - Technical specifications; and
    -
  - Calculations of stormwater retention volumes.

A BMP shall, in order to be eligible for the discount:

- Be fully installed and functioning;
- Retain or infiltrate stormwater;
- Have received all required construction codes approval;
  
- Be properly sized and located;
- Be designed and functioning in accordance with applicable industry and professional standards and specifications in effect at the time of installation, including guidelines developed by the Department; and
- Be subject to inspection by the Department.

As a requirement of continued eligibility, the customer shall:

- Properly maintain the BMP so that it continues to function as designed and approved; and
- Continue to allow the Department access to the property to inspect the BMP.

An approved discount shall expire on the first of:

- The end of the stormwater fee discount period;
- The property or BMP is no longer eligible for the discount; or
- The property is sold or transferred to a new owner.

For more information on RiverSmart Rewards, please contact Emily Rice at 202-535-2679 or [emily.rice@dc.gov](mailto:emily.rice@dc.gov). Additional information will also be available at DDOE's website and in print, by request, once the proposed rule is finalized, likely in fall 2012