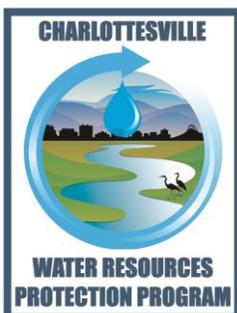

City of Charlottesville **Water Resources Protection Program**



Stormwater Utility Fee Credits Manual

Your guide to reducing stormwater utility fees and protecting our City's water resources.



City of Charlottesville, Virginia
605 E. Main St., Charlottesville, VA 22902
www.charlottesville.org/stormwater

City of Charlottesville

Water Resources Protection Program

Stormwater Utility Credits Manual

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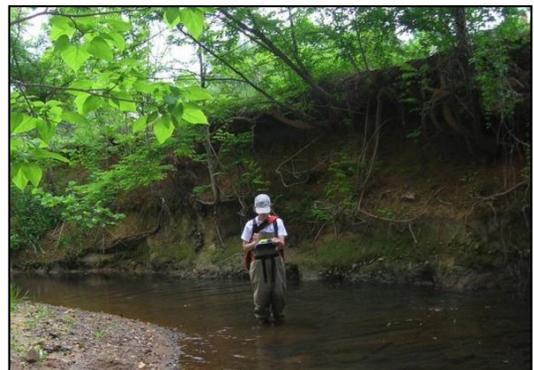
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Stormwater Overview

Everyone in Charlottesville is affected by stormwater! Stormwater is water that flows over our yards, streets, buildings, parking lots, and other surfaces when it rains or snows. When the land was covered by forests, most of this water soaked into the ground. Today, about one third of the City is covered with hard (impervious) surfaces. When rain falls on these surfaces, the water cannot infiltrate into the ground. Instead, it runs off as stormwater into a system of drains, ditches, and pipes. In all, the City is responsible for managing over 56 miles of stormwater pipe and 4,200 stormwater structures!

When stormwater flows over parking lots, lawns, and streets it picks up pollutants such as oil, grease, heavy metals, pesticides, fertilizers, sediment, trash, debris, and pet waste. These pollutants flow directly into our local creeks, streams, and the Rivanna River before ultimately reaching the Chesapeake Bay. As a result, many of our streams have been designated as “impaired” by the Virginia Department of Environmental Quality. State and federal law makes the City responsible for developing and implementing plans to restore these impaired waterways.

In addition, since less stormwater soaks into the ground, it can accumulate and lead to drainage issues. Increased stormwater flow also causes stream bank erosion, which threatens water quality and private property. Much of the City’s stormwater infrastructure was installed in the 1950s and 1960s and is now old and in need of repair, which also contributes to these problems.



Stream bank erosion caused by increased stormwater flows. Uncontrolled stormwater can result in drainage issues and degraded water quality.

Water Resources Protection Program

Over the past few years the City has been working hard to develop solutions to local water resources challenges. A Water Resources Protection Program (WRPP) is being implemented to address these challenges in an economically and environmentally sustainable manner. The WRPP is designed to comply with federal and state water quality regulations, rehabilitate aging stormwater infrastructure, implement projects to address drainage and flooding problems, and restore degraded streams.

Stormwater Utility Fee

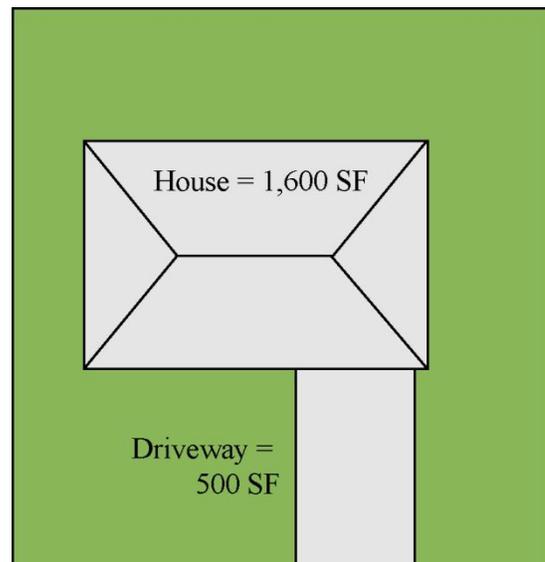
What is a stormwater utility fee?

The City of Charlottesville has adopted a stormwater utility fee to provide an adequate and stable source of funding for the WRPP. A stormwater utility fee is a fee for service based on the amount of impervious surface area on a property (roofs, parking areas, walkways, etc.). This is similar in concept to how the City distributes the cost for sanitary sewer and drinking water services. Per the stormwater utility ordinance passed by City Council, impervious surface is defined as “*area covered by hard surfaces such as structures, paving, compacted gravel, concrete, or other man-made features that prevent, restrict, or impede the downward passage of stormwater into the underlying soil*”.

This approach has several advantages. First, it fairly distributes the cost of the City’s stormwater services across all eligible properties based on the amount of impervious surface. Second, under State Law, the revenue from a stormwater utility must be placed in a special fund that can only be used for stormwater management; therefore establishing a dedicated funding source to accomplish the goals of the WRPP. Finally, State Law requires the City to provide “credits” to property owners who have implemented stormwater management facilities to reduce their stormwater utility fees.

How is the fee calculated?

Since a stormwater utility is a fee for service, all eligible properties are charged regardless of their tax status. **Each eligible property is charged in 500 square foot (SF) increments of impervious area.** These are called “billing units.” Fractions are rounded up to the next whole unit. For example, a property that has 2,100 square feet of impervious cover has five billing units ($2,100 / 500 = 4.2$, rounded to 5 billing units). The number of billing units is then multiplied by the rate adopted by City Council (\$1.20 per billing unit per month). Unimproved property (defined as a property with less than 300 square feet of impervious cover) is not assessed a fee.



Example Fee Calculation

- Total impervious area = 2,100 SF
- Divide by 500 SF = 4.2
- Round to the next whole number = 5 billing units (BUs)
- Multiply the number of BUs (5) by the rate (\$1.20) x 12 months for an annual fee of \$72.00

Is there anything I can do to reduce my bill?

Yes! There are two ways for you to impact the amount of your payment.

First, property owners can remove impervious surfaces from their property. This will result in a direct fee reduction if the removal of impervious surface results in fewer billing units.

Second, the City's Credit Program provides an opportunity for property owners to reduce their stormwater utility bill by operating and maintaining a stormwater management facility.

Credit Program

A credit is a reduction to the stormwater fee that can be pursued by a property owner if they operate and maintain a stormwater management facility that reduces pollution, helps to control stormwater runoff, or both. Existing stormwater management facilities are eligible for a credit regardless of when the facility was built as long as they meet the applicable standards at the time of installation. There are a wide variety of practices that can be implemented in Charlottesville that qualify for credit, including bioretention facilities, permeable pavement, and green roofs, just to name a few.

The City has adopted two goals for the credit program. First, credits should recognize the avoided cost to the City that is provided by the ongoing operation and maintenance of a stormwater management facility. Second, credits should provide a mechanism for property owners to make investments to help the City achieve the goals of the WRPP.



Examples of practices that can receive credit – bioretention facility (top); cistern (middle); permeable pavement (bottom).

What are the eligibility requirements?

To be eligible for credit, a stormwater management facility must meet the following criteria:

- ✓ A property owner must have installed the stormwater management facility prior to applying for the credit and the stormwater management facility must be functioning as designed.
- ✓ A property owner must own and physically maintain all components of the facility – a property owner who only provides aesthetic maintenance is not eligible for a credit.
- ✓ The facility must have been built in accordance with the City-recognized design standards in place at the time of installation.
- ✓ The facility must be actively maintained so that it is functioning as designed.
- ✓ The property owner must enter into a maintenance agreement with the City that includes the right of the City to conduct periodic inspections. The City may require that an existing agreement be modified in order for the facility to be eligible for credit.
- ✓ An unsatisfactory inspection by City staff will result in the facility being ineligible for credit unless corrective action is taken in the timeframe prescribed by the City.

Refer to “How do I apply?” and the Credit Application Form for additional details.

How much credit can I get?

The amount of credit depends on when the facility was built and whether it was implemented voluntarily or as a condition of development. **It is important to remember that only the impervious area treated by the facility, and not the entire impervious area of a site, is eligible for a credit.** Credit may also be taken for voluntarily treating off-site areas that are not currently controlled by another stormwater management facility. However, the credit will be adjusted if the off-site property owner decides to install their own facility that treats a portion or all of the impervious area treated by the facility receiving credit. It is recommended that a property owner coordinate with the City prior to considering any off-site treatment options.

The maximum credit that a property owner may receive for a stormwater management facility required as a condition of development is a 40% credit of the fee for the impervious area treated. The maximum credit is a 100% credit of the fee for the impervious area treated by a voluntary stormwater management facility. For voluntary treatment, the maximum credit that may be applied to a property’s stormwater utility bill is 90% of the stormwater utility fee or 100% of the fee minus the amount of one billing unit, whichever results in the lower bill.

Credit Level Table

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

1. The maximum credit that may be applied to a property’s stormwater utility bill is 90% of the stormwater utility fee or 100% of the fee minus the amount of one billing unit, whichever results in the lower bill.

Credit Calculator for Post-July 1, 2009 Voluntary Facilities

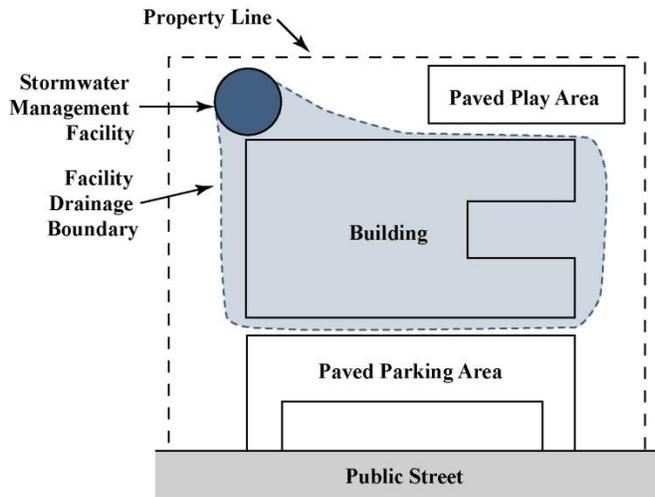
The following calculation is used to determine the credit to be given to a voluntary eligible facility installed post-July 1, 2009. The formula was developed as a sliding scale where a facility of minimum pollutant removal efficiency (15%) receives a 40% credit and a facility of 70% or greater efficiency receives the maximum credit. Facility efficiency is as documented in the Virginia Stormwater BMP Clearinghouse, the Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects, or other state-approved guidance documents.

- (A) Facility Phosphorus Removal Efficiency Must be 15% or Greater
- (B) Facility Phosphorus Removal Efficiency of ____% / 100 x 1.76¹ = _____
- (C) (B) – (0.264²) = _____
- (D) (C) / 0.016³ = _____
- (E) 40% + (D) = _____ Percent Total Facility Credit (up to maximum of 100%)

1. The phosphorus pollutant loading rate for the James River Basin from the City’s municipal separate storm sewer system (MS4) permit issued by the Virginia Department of Environmental Quality.
2. 0.264 is the result of equation (B) for a 15% Facility Efficiency ensuring that equation (D) results in a value of zero for a 15% Facility Efficiency.
3. 0.016 is a “distribution factor” to ensure that Facility Efficiency values between 15% and 70% result in equation (D) between 0% and 60%.

Credit Example 1

Condition of Development (COD) Stormwater Management Facility



Total Impervious Area = 15,120 SF

$15,120 \text{ SF} / 500 \text{ SF} = 30.24$

Property Billing Units (BU) = 31

Pre-Credit Annual Fee = (31 x \$1.20 per BU x 12 months) = \$446.40

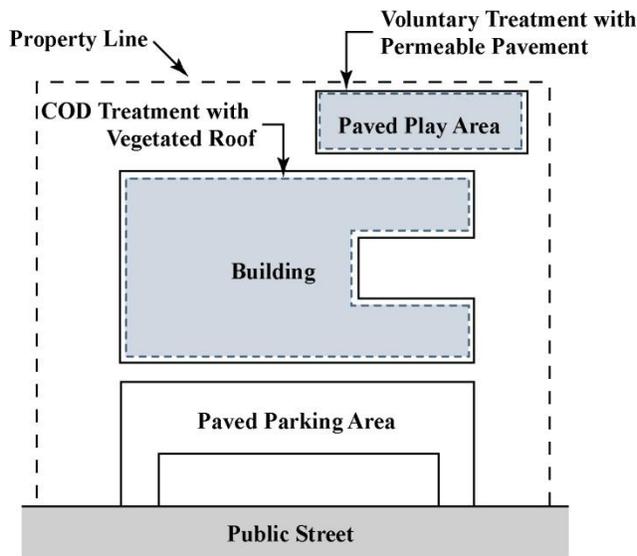
Impervious Area Treated (Building Rooftop Only) = 7,980 SF

Condition of Development Credit Examples

Facility Installation Date	Percent Credit	Percent Credit x Impervious Area (SF) Treated	Adjusted Impervious Area	Adjusted Billing Unit	Post-Credit Annual Fee
Pre-July 1, 2009	20%	$7,980 \times 20\% = 1,596$	$15,120 - 1,596 = 13,524$	$13,524 / 500 = 27.05 = 28$ BU	$28 \times \$1.20 \times 12 = \403.20 (\$43.20 Fee Reduction)
Post-July 1, 2009 & Pre-July 1, 2014	30%	$7,980 \times 30\% = 2,394$	$15,120 - 2,394 = 12,726$	$12,726 / 500 = 25.45 = 26$ BU	$26 \times \$1.20 \times 12 = \374.40 (\$72.20 Fee Reduction)
Post-July 1, 2014	40%	$7,980 \times 40\% = 3,192$	$15,120 - 3,192 = 11,928$	$11,928 / 500 = 23.86 = 24$ BU	$24 \times \$1.20 \times 12 = \345.60 (\$100.80 Fee Reduction)

Credit Example 2

Voluntary and Condition of Development (COD) Stormwater Management Facility



Total Impervious Area = 15,120 SF

15,120 SF / 500 SF = 30.24

Property Billing Units (BU) = 31

Pre-Credit Annual Fee = (31 x \$1.20 per BU x 12 months) = \$446.40

Impervious Area Treated by Voluntary Facility (Paved Play Surface) = 2,800 SF

Impervious Area Treated by COD Facility (Building Rooftop) = 7,980 SF

Voluntary and Condition of Development Credit Example

Voluntary Facility Installation Date	Percent Credit	Percent Credit x Impervious Area (SF) Treated	Impervious Area Reduction (SF)
After July 1, 2009	88.4% (see calculation below)	2,800 x 88.4% = 2,475	2,475

Voluntary Credit Calculation (After 7/1/2009)

- (A) Facility Efficiency for Level 1 Permeable Pavement (per Virginia BMP Clearinghouse) = **59%**
- (B) Facility Efficiency of **59%** / 100 x 1.76 = **1.038**
- (C) **1.038** - 0.264 = **0.774**
- (D) **0.774** / 0.016 = **48.4**
- (E) 40% + **48.4** = **88.4%** Total Facility Credit

COD Facility Installation Date	Percent Credit	Percent Credit x Impervious Area (SF) Treated	Impervious Area Reduction (SF)
After July 1, 2014	40%	7,980 * 40% = 3,192	3,192

Adjusted Stormwater Utility Fee Calculation for COD and Voluntary Facilities

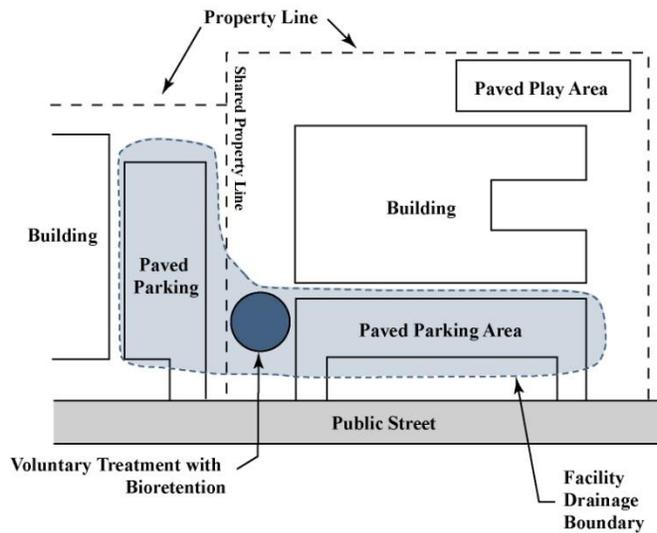
Adjusted Impervious Area (SF): 15,120 (pre credit) - 2,475 (voluntary reduction) - 3,192 (COD reduction) = 9,453

Adjusted Billing Units: 9,435 / 500 = 18.9 = 19 BUs

Adjusted Annual Stormwater Utility Fee: 19 BU x \$1.20 x 12 = \$273.60 (\$172.80 Fee Reduction)

Credit Example 3

Voluntary Onsite and Offsite Stormwater Management Facility



Total Impervious Area = 15,120 SF

15,120 SF / 500 SF = 30.24

Property Billing Units (BU) = 31

Pre-Credit Annual Fee = (31 x \$1.20 per BU x 12 months) = \$446.40

Impervious Onsite Area Treated by Voluntary Facility (Parking Lot) = 4,340 SF

Impervious Offsite Area Treated by Voluntary Facility (Parking Lot) = 4,560 SF

Voluntary Onsite and Offsite Credit Example

Voluntary Facility Installation Date	Percent Credit	Percent Credit x Impervious Area (SF) Treated	Impervious Area Reduction (SF)
Onsite After July 1, 2009	100% (see calculation below)	4,340 x 100% = 4,340	4,340
Offsite After July 1, 2009	100% (see calculation below)	4,560 x 100% = 4,560	4,560

Voluntary Credit Calculation (After 7/1/2009)

- (A) Facility Efficiency for Level 2 Bioretention (per Virginia BMP Clearinghouse) = **90%**
- (B) Facility Efficiency of **90%** / 100 x 1.76 = **1.584**
- (C) **1.584** - 0.264 = **1.32**
- (D) **1.32** / 0.016 = **82.5**
- (E) 40% + **82.5** = **122.5%** = **100%** Total Facility Credit

Adjusted Stormwater Utility Fee Calculation for COD and Voluntary Facilities

Adjusted Impervious Area (SF): 15,120 (pre credit) - 4,340 (voluntary onsite reduction) - 4,560 (voluntary offsite reduction) = 6,220

Adjusted Billing Units: 6,220 / 500 = 12.4 = 13 BUs

Adjusted Annual Stormwater Utility Fee: 13 BU x \$1.20 x 12 = \$187.20 (\$259.20 Fee Reduction)

How do I apply?

A **Credit Application Form** must be submitted and approved by the City to receive a credit. To be eligible for a credit, a stormwater management facility must have an agreement in place that will allow the City access to inspect the stormwater management facility. The following documentation is required:

1. **Credit Application Form** – see back of this manual.
2. **Drainage Area Map** – show property lines, impervious areas, facility drainage area boundaries, and the total impervious cover served by the facility.
3. **Facility Description** – include the type of facility, date of installation, and the percent pollutant removal efficiency based on information from the Virginia Stormwater BMP Clearinghouse or other state approved guidance documents.
4. **Operation and Maintenance Plan** – provide a brief summary of how the facility will be operated and maintained to ensure it continues to function as designed. Include an annual routine maintenance schedule. Include any modifications or repairs that have occurred from installation to the time of application.
5. **Photos** – provide a date-stamped image or images showing the facility within one month of the application date.
6. **Stormwater Facility Maintenance Agreement** – provide a copy of the agreement that allows the City access to the site.
7. **Stormwater Management Facility Inspection Form** – see back of this manual; the form must be prepared by or under the guidance of a professional engineer, licensed landscape architect, or other professional acceptable to the City. The form must verify the drainage area map and state that the facility is functioning as designed and will be adequately maintained.

The image shows a 'Credit Application Form' with the following sections and fields:

- Applicant Name:** [Blank field]
- Property Information:**
 - Owner: [Blank field]
 - Street: [Blank field]
 - City, State, ZIP Code: [Blank field]
- Mailing Address: (if different from property address)**
 - Street: [Blank field]
 - City, State, ZIP Code: [Blank field]
- Email Address:** [Blank field]
- Phone Number:** [Blank field]
- Stormwater Management Facility Description:**

Include type of facility, date(s) of installation and pollutant removal efficiency from the Virginia BMP Clearinghouse, Recommendations of the Expert Panel to Define Minimum Removal Rates for Urban Stormwater Retention Ponds, or other state-approved design guidance (provide documentation to support the determined pollutant removal efficiency). Attach additional information if necessary.

[Large blank area for description]
- Amount of impervious area credit to be subtracted from the total impervious area of the property (use the Credit Calculation Form):** [Blank field]

At the bottom, it says 'Stormwater Utility Fee Credit Program' and features a logo for 'GREEN RESOURCES PROTECTION FUNDATION'.

Once a credit has been approved, the property owner will remain eligible for the credit as long as all conditions of the maintenance agreement are met and the facility passes periodic inspections by City staff. If the property owner fails to submit required documentation or correct deficiencies within the time specified by City staff, the facility will no longer be eligible for credit. If this occurs, the property owner will be required to reapply through the initial credit process.

Important Resources and Links

General Information and Assistance

- Charlottesville Water Resources Protection Program
www.charlottesville.org/wrpp
- Virginia Department of Environmental Quality Stormwater Program
www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx

Stormwater Management Facility Standards

- Virginia Stormwater BMP Clearinghouse
<http://vwrrc.vt.edu/swc>
- Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects
<http://chesapeakestormwater.net/bay-stormwater/baywide-stormwater-policy/urban-stormwater-workgroup/retrofits/>

Credit Application Form

Applicant Name: **Date:**

Property Information:

Owner
Street
City, State, ZIP Code

Mailing Address: (if different from property address)

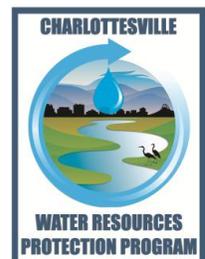
Street
City, State, ZIP Code

Email Address: **Phone Number:**

Stormwater Management Facility Description

Include type of facility, date(s) of installation and pollutant removal efficiency from the Virginia BMP Clearinghouse, [Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects](#), or other state-approved guidance documents (provide documentation to support the determined pollutant removal efficiency). Attach additional information if necessary.

Total amount of impervious area to be subtracted from the fee calculation for the property (provide the sum of all included Credit Calculation Forms):



The following supporting documentation and materials must accompany this application

- Drainage Area Map**
- Operation and Maintenance Plan**
- Copy of Stormwater Facility Maintenance Agreement**
- Photograph of the Stormwater Management Facility** – The photo should be no more than one month old.
- Stormwater Management Facility Inspection Form**

Owner Certification and Inspection Agreement

- I am the property owner or I am duly authorized to act on behalf of the property owner, I have reviewed the information contained in this application and the supporting documentation, and to the best of my knowledge believe that it is true and accurate.
- I commit to maintaining the stormwater management facility in good working condition.
- I authorize the City or its representative to enter on my property for the sole purpose of inspecting the stormwater management facility.
- I understand that if an inspection by the City indicates that the facility is not properly maintained, that the facility will no longer be eligible for credit if deficiencies are not corrected within the time-frame provided by City staff.

Signature

Date

This form and all supporting documentation and materials should be submitted to:

*City of Charlottesville
Water Resources Protection Program
305 4th St NW
Charlottesville, Virginia 22903*

<i>Internal Use Only:</i>	
<i>Facility ID#</i>	<i>Review Date:</i>
<i>Reviewer:</i>	<i>Approval Date:</i>
<i>Notes/Conditions:</i>	

Credit Calculation Form

Stormwater Management Facility Description:

Property Information:

Owner

Street

City, State, ZIP Code

Complete one form for each stormwater facility on the property. A single facility may be built as a condition of development but voluntarily sized to treat additional on-site or off-site impervious area beyond minimum regulatory standards.

COD or Voluntary Credit Fixed Percent	Voluntary Credit On-Site – Variable Percent	Voluntary Credit Off-Site – Variable Percent
(A) Impervious Area Treated: <input type="text"/> SF	(A) Impervious Area Treated: <input type="text"/> SF	(A) Impervious Area Treated: <input type="text"/> SF
(B) Percent Credit from Credit Level Table: <input type="text"/> %	(B) Percent Credit from Credit Level Table or Voluntary Facilities Calculator: <input type="text"/> %	(B) Percent Credit from Credit Level Table or Voluntary Facilities Calculator: <input type="text"/> %
(C) Impervious Area Credit = (A) x (B) = <input type="text"/> SF	(C) Impervious Area Credit = (A) x (B) = <input type="text"/> SF	(C) Impervious Area Credit = (A) x (B) = <input type="text"/> SF
Add Columns 1, 2, and 3 for the Total Impervious Area Credit:		<input type="text"/> SF

Credit Calculator for Post-July 1, 2009 Voluntary Water Quality Facilities

- (a) Facility Efficiency Must be 15% or Greater
- (b) Facility Efficiency of / 100 * 1.76 =
- (c) (b) – (0.264) =
- (d) (c) / 0.016 =
- (e) 40% + (d) = Percent Total Facility Credit

See the Virginia BMP Clearinghouse, [Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects](#), or other state-approved guidance document for pollutant removal rates.

Stormwater Management Facility Inspection Form

Applicant Name: **Date:**

Property Information:

Owner
 Street
 City, State, ZIP Code

Stormwater Management Facility Description:

Impervious Area Draining to the Facility: **SF**

Year Built: **City ID (if known):**

General Condition:	Yes	No	N/A
Is the primary outfall pipe/ ditch clear and functioning?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the inflow pipes/ ditches clear and functioning?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the water quality pool at the correct height (if present)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are water quality pool control weirs, pipes, etc. working properly (if present)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are emergency overflow devices clear and functional (if present)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the structure clear of sediment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the structure clear of trash?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is vegetation being managed in a manner appropriate to the facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Certification

This certification must be made by a licensed professional engineer, landscape architect, or other professional accepted by the City.

- Based on a visual survey of the above facility conducted on _____, I certify that the facility is currently functioning as designed.
- I certify that the total impervious cover served by the facility and the accompanying Drainage Area Map are true and accurate.

Printed Name

Date

Signature

Qualification

Address

Phone

Email