

# Town Of Christiansburg

## Stormwater Utility

### Credit Manual



**Town of Christiansburg, Virginia**  
**Engineering Department**  
**100 East Main Street**  
**Christiansburg, VA 24073**  
June 28 2016

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## GLOSSARY

**“Adjacent Property”** means, for the purpose of utility fee assessment, properties owned by a common entity that may apply to be grouped and assigned a tier based on the aggregate impervious area. Consistent with zoning ordinance, right-of-ways are not considered to separate adjacent properties.

**“Developed real property”** means real property that has been altered from its natural state by the addition of improvements such as buildings, structures, and other impervious surfaces. For new construction, property shall be considered developed pursuant to this section upon (a) issuance of a certificate of occupancy or (b) certification of the final building permit inspection for those facilities not requiring a certificate of occupancy.

**“Developed mixed-use property”** for the purpose of this chapter means a developed lot or parcel containing at least one residential unit and impervious area associated with non-residential use.

**“Developed nonresidential property”** means developed property that does not serve a primary purpose of providing permanent dwelling units. Such property shall include, but is not limited to, commercial properties such as retail, hotels, motels, extended living facilities, restaurants, and offices, industrial properties, parking lots, recreational and cultural facilities, and churches.

**“Developed residential property”** means a developed lot or parcel containing at least one (1) dwelling unit, common areas, and accessory uses related to but subordinate to the purpose of providing permanent dwelling facilities. Such property may include, but is not limited to, single-family houses, duplexes, apartments, townhouses, condominiums, and mobile homes.

**“Dwelling unit”** means a single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

**“Impervious surface area”** means the calculated area of a surface that is compacted or covered with material that is highly resistant to infiltration by water, including, but not limited to, most conventionally surfaced streets, structures, sidewalks, parking lots, gravel lots and driveways, and other similar surfaces.

**“Revenues”** means all rates, fees, assessments, rentals or other charges, or other income received by the stormwater management utility in connection with the management and operation of the system, including amounts received from the investment or deposit of moneys in any fund or account and any amounts contributed by the town, funds provided by developers or individual residents, and the proceeds from sale of general obligation bonds for stormwater projects or stormwater revenue bonds.

**“Stormwater billing unit”** or **“SBU”** means the equivalent impervious area of a single-family residential developed property per dwelling unit located within the town based on the statistical average horizontal impervious area of a single-family residence in the town. A SBU equals three thousand and thirty (3,030) square feet of impervious surface area.

**“Stormwater billing unit rate”** or **“SBU rate”** means the amount charged for a stormwater billing unit.

**“Stormwater management system”** or **“system”** means the stormwater management infrastructure and equipment of the town and all improvements thereto for stormwater control in the town. Infrastructure and equipment shall include structural and natural stormwater control systems of all types, including, without limitation, stormwater structural best management practices, storm drains, conduits, pipelines, pumping and ventilation stations, and other plants, structures, and real and personal property used for support of the system (but not including private drainage systems).

**“Stormwater management utility”** or **“utility”** means the system of stormwater utility fees and the enterprise fund created by this article to maintain and operate the town’s stormwater management system.

**“Stormwater utility credit manual”** or **“credit manual”** means the Town of Christiansburg manual, as amended from time to time, that serves to provide guidance, procedures, and standards for providing stormwater utility fee credits to property owners that implement on-site systems, facilities, measures, or other actions that mitigate the impact of stormwater runoff on their properties.

**“Stormwater utility fee”** means the monthly utility charges based upon the SBU rate applied and billed to property owners or occupants of developed residential property, developed nonresidential property and developed mixed use property, all as more fully described in Chapter 36 of the Christiansburg Town Code.

**“Tiered rates”** means the rates established for ranges of total impervious areas on developed nonresidential or mixed use properties. Rates for each tier are based on the low end of the impervious range divided by the SBU and multiplied by the SBU rate. Rates established by council can be found in the latest edition of the town stormwater utility fee schedule, which may be amended from time to time by the council.

**“Undeveloped property”** means any parcel which has not been altered from its natural state to disturb or alter the topography or soils on the property in a manner which substantially reduces the rate of infiltration of stormwater into the earth.

# INTRODUCTION TO THE STORMWATER ENTERPRISE FUND

## The Needs and Benefits of the Enterprise Fund

The Town of Christiansburg enacted the Stormwater Enterprise Fund and has implemented stormwater utility fees as a source of revenue for stormwater management activities necessary to protect the general health, safety, and welfare of the residents of the town. The fund will benefit properties within the town through control of flooding, improved water quality, and protection of the town's natural environment. The fund will be used as a source of revenue for funding of capital project improvements and the maintenance of the town's stormwater infrastructure. In compliance with state and federal regulations, revenues will be used to address the requirements of Christiansburg's Municipal Separate Storm Sewer System (MS4) permit to provide education, outreach and participation opportunities for the citizens of the town, to address the impaired condition of streams within the Town, and to comply with administrative and reporting requirements of the permit.



The stormwater infrastructure network includes channels and ditches, storm drainage pipes and stormwater BMPs that route and control stormwater during rain events. The network is a public system, similar to water or sanitary sewer, which provides a public benefit and is maintained by the Town.

The town's stormwater infrastructure network provides benefits and services to properties within the town through direct protection of property, control of flooding, protection of other public infrastructure, and protection of the town's natural environment.



The stormwater credit system is intended to recognize and/or promote on-site systems, facilities, measures, or other actions that mitigate the impact and improve the quality of stormwater runoff to our local water bodies.

## Overview of the Credit System

The stormwater utility credit program has been established based on the guiding principles of providing equitable credits in compliance with stormwater utility law while minimizing the administrative costs of the program. Minimizing administrative costs directs a maximum amount of the enterprise fund revenue toward addressing the Town's stormwater regulatory obligations and constructing capital projects.

The credit system is based on the management of stormwater quantity and stormwater quality as established in Virginia's Stormwater Management Program (VSMP) and mirrored in Town Code Chapter 16, Environment. Site designs that employ stormwater facilities to address stormwater quantity and quality under the VSMP program, provide water quality best management practices (BMPs) to the standards and specifications of Virginia Administrative Code section [9VAC25-870](#) and the Virginia Stormwater BMP Clearinghouse <http://www.vwrrc.vt.edu/swc/>. Water quantity management is based on the control of specific design rain storms that are based on the probability of a storm occurring in any particular time period.

The credit system provides the opportunity to recognize and credit innovative stormwater practices that reduce stormwater runoff volumes, enhance water quality, or provide other stormwater benefits. The credit system conforms with the Code of Virginia Regulation of Stormwater section 15.2-2114 by allowing for fee reductions for entities that evaluate strategies, techniques, or programs that reduce stormwater flow or pollutant loadings, or decrease the cost of maintaining or operating the public stormwater system. Innovative practices and corresponding credits will be evaluated on a case by case basis at the discretion of the Director of Engineering so that credits provided will be based on a sound and consistent credit policy.

Using these existing water quantity and quality standards provides the Town an equitable credit system that is compliant with the enabling state code for establishment of an enterprise fund. The credit system and percentage reductions in fees will be identical across residential and non-residential land uses and will be based on these established criteria. Re-development and new development that meet the threshold for addressing stormwater will use identical standards and specifications to meet development and utility credit requirements, therefore no new procedures and administrative evaluations are necessary to determine credits.

In many instances, combining the current billing rate for the utility fee and the cost of compliance with these credit standards will not provide an attractive economic rate of return for stormwater facility construction. In other words, the costs of constructing and maintaining BMPs may not provide a credit amount to justify the BMP as an economic investment. Instead, these BMPs will be an investment in the environmental health of our town, and the Town will recognize that investment with a credit reduction which will partially offset the BMP costs.

Residential BMPs will be encouraged by the town even if the property does not receive a utility fee credit, either because they are not built to the required standards and specifications or because they are not formally recognized in the current VSMP program BMP Clearinghouse. This policy is

based on the desire to focus administrative efforts on solutions to stormwater issues and to maintain equity between the percentage reductions provided to both residential and non-residential development. The Town can assist homeowners by evaluating properties for best management practices such as rain gardens, tree planting, rain barrels, lawn amendments, permeable hardscapes, and other practices that provide stormwater benefits. The Town may from time to time when available, seek grant funding opportunities to assist homeowners in the installation of these BMPs.

## CREDIT PROGRAM PROCEDURES

- Application must be submitted by January 1<sup>st</sup> of each calendar year.
- The Town staff will review the application. This may include requests for additional information and inspections of the applicant site to ensure that the application is complete.
- The Town will notify applicant of approval status by April 1<sup>st</sup> and the credit will be effective no later than July 1<sup>st</sup>. Applications for credits received after January 1<sup>st</sup> will be accepted, but not reviewed until the following year except at the discretion of the Director of Engineering.
- **No credit will be issued retroactively except during initial implementation of the Stormwater Utility Fee.** Initial applications must be submitted by January 1<sup>st</sup>, 2017. The Town will notify applicant of approval status by April 1<sup>st</sup>, 2017 and the credit will be calculated back to the July 1<sup>st</sup>, 2016 fee implementation date and the credit applied to subsequent bills until the amount due has been credited.
- Renewal of the stormwater utility credit shall be dependent on the continued inspection, maintenance, and proper function of BMPs.



## SUMMARY OF STORMWATER ENTERPRISE FUND CREDITS

The following general policies apply when considering stormwater credits:

- The engineering calculations and surveys of current conditions assessment associated with verification of credit eligibility must be performed, signed and sealed in accordance with the professional certification provisions outlined in the Town Code Chapter 16 stormwater program requirements. Professional certification requirements may be waived at the discretion of the Director of Engineering.
- Credits are only applied to eligible properties. An eligible property is defined as a property that contributes runoff to a qualifying stormwater BMP via natural or manmade systems and is identified in the maintenance agreement or in a memorandum of agreement (MOA) with the person(s) named in the maintenance agreement and the Town. Credit for sites that treat right-of-way impervious area shall be considered on a case by case basis and evaluated at the discretion of the Director of Engineering.
- When multiple properties are served by a BMP(s) then the credit will be applied to the customer on whose property the BMP resides. This applicant will be referred to as the primary applicant. If the applicant provides a memorandum of agreement (MOA) between the primary applicant and another property owner for which the BMPs serves, the Town will apply the credit to all property owners named in the MOA. This credit will apply to all of the applicants until the term expires or until such time as the primary applicant notifies the Town that the MOA is no longer in effect, whichever is sooner.
- No credits will be applied for BMPs located within the Town-owned rights-of-way or public drainage or stormwater easements unless an agreement has been made with the Town prior to credit application
- For the purposes of awarding the credit, the credit being applied for must be met for the entire development and must meet all credit conditions. Partial application of credit within a property will not be allowed except at the discretion of the Director of Engineering. Phased development will be considered on a site by site basis. The Town Code provides that adjacent properties owned by a common entity may be combined for assessment of impervious area. For the purposes of awarding the credit, the combined parcels must meet the credit being applied for and all credit conditions.
- The maximum total credit per property is 35%, excepting allowances for additional credit for innovative practices or volume reductions beyond those attributed to the practices employed to meet the quantity and quality technical criteria of the Virginia Stormwater Management program technical criteria of 9VAC25-870.

## APPLYING FOR A STORMWATER ENTERPRISE FUND CREDIT

All of the credits in this manual require an application, and some of the credit applications require engineering calculations to verify eligibility to receive the credit. The credits associated with engineering calculations are identified in the manual and the credit application forms. The Town requires that these calculations be performed, signed, and sealed in accordance with the professional certification provisions outlined herein, with allowances at the discretion of the Director of Engineering.

<b>Stormwater Credit Schedule</b>		
The maximum total credit per property is 35% except where Innovative Credits are applied		
5%	<b>1 year storm</b>  OR <b>Channel Protection Compliance</b>	<b>The 1-year postdeveloped peak rate of runoff from the development site shall not exceed the 1-year predeveloped peak rate of runoff</b> <b>OR</b> <b>Meet the 9VAC25-870-66.B.3 Channel Protection compliance criteria</b>
5%	<b>2 year storm</b>	<b>The 2-year postdeveloped peak rate of runoff from the development site shall not exceed the 2-year predeveloped peak rate of runoff</b>
5%	<b>10 year storm</b>	<b>The 10-year postdeveloped peak rate of runoff from the development site shall not exceed the 10-year predeveloped peak rate of runoff</b>
5%	<b>25 year storm</b>	<b>The 25-year postdeveloped peak rate of runoff from the development site shall not exceed the 25-year predeveloped peak rate of runoff</b>
5%	<b>100 year storm</b>	<b>The 100-year postdeveloped peak rate of runoff from the development site shall not exceed the 100-year predeveloped peak rate of runoff</b>
10%	<b>Water Quality</b>	<b>Meet current VSMP water quality standard, Code of Virginia 9VAC25-870-65, or Code of Virginia 9VAC25-870-96 if applicable at the time of facility construction.</b>
Variable, as determined by Director of Engineering	<b>Incentive Credits</b>	<b>Stormwater volume reduction, innovative stormwater practices, or stormwater strategies, techniques or programs agreed to by the Town in conformance with §15.2-2114 may qualify for a credit at the discretion of the Director of Engineering.</b>

## **The procedure for filing a credit application includes the following tasks:**

- Obtain an application packet from the Town.
- Retain a professional engineer to perform any required analysis, if not already completed and approved by the Town. Submit the completed application with all required information contained within or attached to the application.
- The Town will review and rule on the eligibility of the credit application prior to April 1 for applications submitted prior to January 1 of the calendar year submitted.
- Incomplete packages will not be considered by the Town and will be returned to the property owner for correction or revision.
- The decision by the Director of Engineering regarding credit eligibility is final. An aggrieved party may appeal to the Town Manager in conformance with Chapter 16, Environment, of the Town Code.
- If the credit application is approved, the Town will apply the stormwater credit to the billing cycle no later than July 1 of the calendar year submitted.
- During the credit term, the Town has the right to inspect the BMP facility to ensure it is functioning per the design documents and is being properly maintained.
- Stormwater Utility credits will continue as long as inspection, maintenance, and record keeping is current and there are no significant changes to the BMP that would require re-evaluation of the proper functioning of the facility.



All renewals should be delivered to the Department of Engineering or mailed to:

Town of Christiansburg

Attn: Engineering Department- Stormwater Program Credit Renewal

100 East Main Street

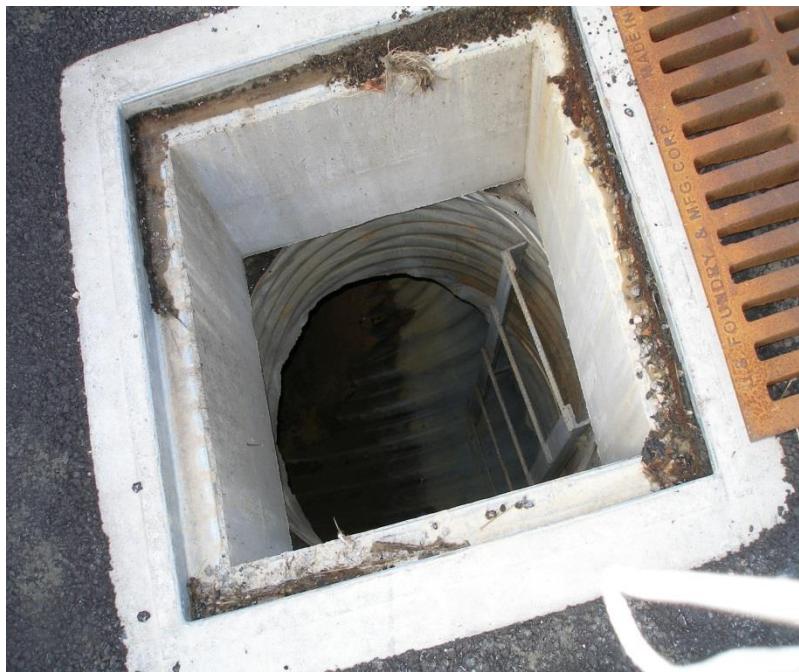
Christiansburg, VA 24073

## MAINTENANCE COVENANT

In order to remain eligible for a stormwater fee credit, a property owner must agree to adhere to a stormwater maintenance covenant for the facility(s) which qualify for the credit. For new facilities, the maintenance covenant is provided as part of the plan review and approval process and should be submitted as part of the credit application.

In the event the credit application is based on an existing BMP or stormwater control feature, a maintenance agreement will need to be submitted, approved and recorded as part of the stormwater fee credit application process.

## FACILITY MAINTENANCE AND INSPECTION REQUIREMENTS



In order for an applicant to continue to receive a stormwater credit, each BMP installed must be maintained to ensure continued function. The applicant is responsible for having all ongoing maintenance work completed to keep the facilities functional. The applicant must inspect BMP(s) and maintain inspection records on Town designated inspection forms, and address deficiencies noted on Town or applicant inspection reports. The Town

may revoke the credit if an inspection determines it is no longer properly maintained or functioning as designed. This revocation will be effective after the owner is notified in writing of the deficiencies and if the problems are not resolved in accordance with a compliance plan reviewed and approved by the Director of Engineering.

## CREDIT RENEWALS

Should stormwater credit be discontinued for any reason the applicant may reapply after addressing the deficiencies leading the cancellation of credit.

## REQUIRED MAINTENANCE

The owner of a credited Stormwater Facility must comply with all applicable maintenance practices below that are relevant to the credited facility. Operations and maintenance checklists specific to best management practice types are posted on the Town website and must be used to document inspection and maintenance of stormwater facilities. The following stormwater facility general maintenance activities are required for a customer to be eligible for a Stormwater Facility Credit. These activities are required to ensure that the facility performs as credited, complies with Town standards and State regulations, meets safety standards, and is not a public nuisance. Maintenance activities are required on all drainage structures related to the facility, including the embankment, in flow points, headwalls, velocity dissipaters, spillways, pipes, feeder channels, discharge channels, etc.

- **Debris and Litter Removal** – This activity must be performed after storm events totaling approximately two inches over a 24-hour period or as needed in order to prevent the structure from clogging and failing and to prevent a public nuisance.
- **Erosion and Structural Repair** – Side slopes, emergency spillways, and embankments all may periodically suffer from slumping and erosion. Regrading, re-vegetating, compacting and/or installing or replenishing rip-rap may be required to correct erosion problems that develop.
- **Mowing** – Side slopes, embankments, emergency spillways, and other grassed areas of stormwater facilities should be periodically mowed to prohibit woody growth and to prevent grass from growing over heights set forth in the Town code. More frequent mowing may be required in residential areas by adjacent homeowners or to meet State Dam Safety standards. Native grasses, which are water-tolerant, pest-tolerant, and slow growing, are recommended.
- **No Blockages** – Remove sediment or any blockage from pipes, channels, spillways, inlets, and outlets as needed to keep the facility in proper working condition.
- **Nuisance Control** – Standing water or soggy conditions within a “dry” stormwater facility can create nuisance conditions for nearby residents. Common nuisance conditions may include odors, mosquitoes, litter, and weeds. Regular maintenance to remove debris and ensure control structure functionally is required to control these potential problems. In addition, well maintained and established wetland plants in wet detention ponds or bird nesting boxes around the pond can provide a habitat for birds and predacious insects and fish that can actively serve as a natural check on nuisance insects such as mosquitoes.

- **Outlet Control** – Maintain outlet control devised to ensure proper functioning in the control of stormwater velocities at the outlet of the stormwater facility. Re- vegetating and/or replenishing or reinstalling rip-rap may be required to correct erosion problems at the outlet of stormwater facility pipes.
- **Removal of Log Jams and Debris** – All streams and ditches within the stormwater system should be inspected periodically for blockages. If identified, the blockages and debris should be removed as quickly as practicable.
- **Sediment Removal** – This activity is to be performed as needed or as required by the Town to ensure proper working order of the facility and its related stormwater facility features (channels, pipes, etc.) and to maintain the required storage volume.
- **Structural Repairs and Replacement** – Eventually, stormwater control structures will deteriorate and must be replaced. Major structural damage to outlet structures (i.e. cracks, leaks, or failure) must be repaired as soon as possible.

## REQUIRED ANNUAL INSPECTIONS

Annual documentation must be submitted to the Town to continue receiving a credit. The required documentation consists of the following:

- Annual inspection report.
- Recently dated photographs showing the condition (including any known damage or disrepair) of a stormwater facility.
- Records demonstrating that required maintenance activities and/or repairs have been completed.
- Records must be kept for a minimum of 8 years and must be made available to the town upon request.



## RESTRICTIONS ON CREDITS

### **Transfer of Credit**

The stormwater credit will apply to property upon transfer of ownership with proper notice to the Town and written notice that the new Owner understands the nature of the binding maintenance agreement for the BMP.

### **Off-Site BMP Credit**

In circumstances where an applicant is attempting to claim credit for a BMP owned by a separate entity, proof that the Applicant shares in the maintenance obligations and costs of the BMP will need to be submitted in order for credit to be applied.

### **Local Community Requirements**

The BMP must meet all applicable Town building, planning and other code requirements. If code requirements are violated, and no efforts are made to come into terminated.

### **Right to Inspect**

The Town may inspect the BMP at any time to perform compliance inspections.

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## CONTACT US

If you have questions or comment regarding the information discussed here, please contact the Town of Christiansburg.

**By email:** [stormwater@christiansburg.org](mailto:stormwater@christiansburg.org)

**By phone:** Environmental Program Manager – (540) 382-6120  
Engineering Director – (540) 382-6120  
For Emergencies, please call 911.

To report a misuse of the stormwater network or illegal discharge, please call the numbers listed above.