Town of Millis, MA

Stormwater Utility Credit Manual

Prepared for: Town of Millis, MA

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Introduction

Background

In November 2018, the Town of Millis sent its first Stormwater Utility bill. The Utility establishes a dedicated fund for stormwater, similar to the Town's existing utilities for water and sewer. The Town is offering a credit on this utility bill to property owners for actions that reduce the amount of pollution from stormwater runoff to local water bodies, as well as the total volume of runoff.

The actions eligible for credits reduce the negative impacts stormwater runoff can have on wildlife, recreation, and the water quality of our local rivers and ponds to which our stormwater drains. Outfalls, like that in Figure 1, discharge to receiving waters such as Bogastow Brook and the Charles River.

This manual includes information for property owners about how to receive credit on Stormwater Utility bills through environmental stewardship actions.

Figure 1: Drainage pipes transport stormwater to local rivers and ponds, including the Bogastow Brook and the Charles River.

What is stormwater?

During a storm, water flows over hard or impervious surfaces (such as rooftops, driveways, parking lots, and solar arrays), preventing water from draining into the ground. This creates runoff, as shown in Figure 2. Stormwater runoff transports pollutants like bacteria, sediment, and petroleum into the Town's drainage system and local waterbodies. More impervious area creates more runoff.

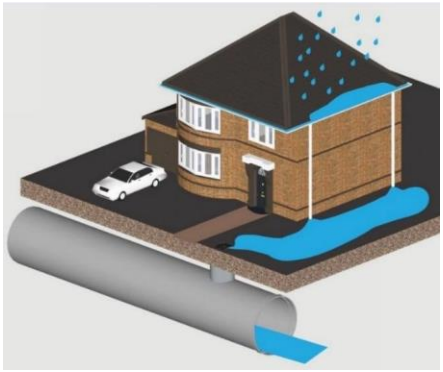

Figure 2: Illustration showing the flow of water onto developed land, carrying pollutants into the Town's drainage system.

The Town's Stormwater Utility provides a **sustainable and transparent funding mechanism** for an effective stormwater management program.

Millis' Role in Stormwater Management

The Town's Stormwater Management Program

To avoid negative environmental, public health, and economic impacts of pollution and flooding, the Town implements a stormwater management program. The program inspects, maintains, and improves stormwater infrastructure. The Town also takes actions to ensure that stormwater conveyed through the Town's drainage system reduces contribution of pollutants to the maximum extent practicable.

The Town's stormwater management program is required as a part of the Town's MS4 Permit (Municipal Separate Storm Sewer System). Millis is among more than 200 other communities in Massachusetts subject to the requirements of the MS4 Permit, many of which have implemented a Stormwater Utility, as shown in Figure 3. Many other communities are in the planning process to do so.

Stormwater Services

When you pay the Stormwater Utility bill each year, the Town is able to provide the following stormwater management services, among others:

- Operation and maintenance of stormwater infrastructure including: catch basin cleaning, ditch maintenance, drainage pipe repairs
- Implementation of capital investments to improve stormwater infrastructure
- Street sweeping and litter cleanup
- Stream restoration and stabilization
- Water quality monitoring and water quality programs
- Inspection and enforcement of stormwater bylaws at construction sites

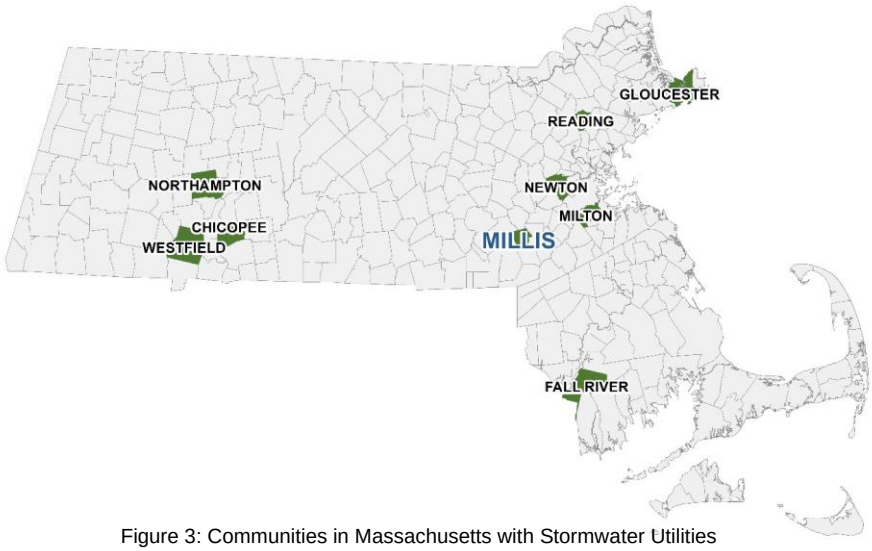

Figure 3: Communities in Massachusetts with Stormwater Utilities (based on a 2018 Study by Western Kentucky University).

About the Stormwater Utility

What is a Stormwater Utility?

The Town's Stormwater Utility provides a sustainable and transparent funding mechanism for an effective stormwater management program. This approach to the Stormwater Utility fee distributes the cost for stormwater services **more fairly** than funding the management program through a General Fund.

As a property owner in Millis, you are sent an annual Stormwater Utility bill based on the amount of impervious area on your property. The State captured aerial imagery of Millis in July 2017 and this imagery was updated to calculate the amount of impervious area on each property.

What is impervious area?

The Town's Stormwater Utility Bylaw defines impervious area as "any material or structure below or above the ground that prevents water infiltrating the underlying soil." Roads, parking lots, rooftops, sidewalks, driveways, and packed gravel and soil surfaces are all examples of impervious surfaces, which prevent or impede the natural infiltration of stormwater such as existed prior to development.

How was the Utility established?

In January 2017, the Town was awarded a grant from the Massachusetts Department of Environmental Protection (MassDEP) to conduct a stormwater utility feasibility study. This study provided preliminary information on the Town's stormwater management program **goals** and **funding needs**. The study also presented options and recommendations for funding a financially sustainable and environmentally compliant stormwater management program. Throughout the Utility implementation process, shown in Figure 4, the Town provided educational materials to residents and opportunities for public input at multiple public meetings.

The Town voted at the November 2017 Town Meeting to move forward with implementing the Utility. Following the Town Meeting, the Town determined the program's funding needs and developed credit policies described in this manual. The Board of Selectmen approved rates at a hearing on June 25, 2018.

Why did the Town Implement a Stormwater Utility?

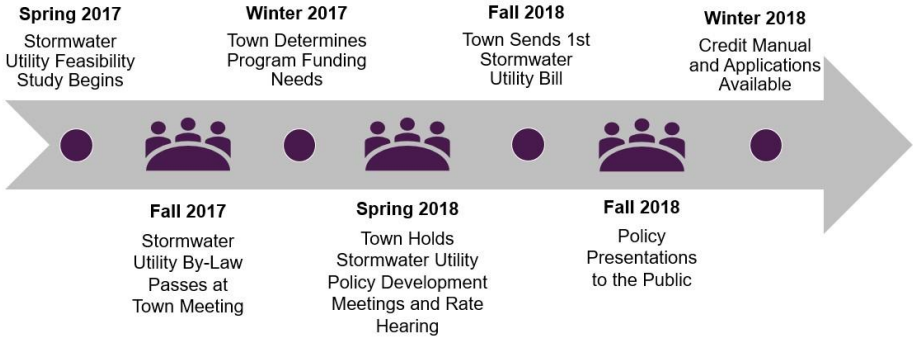

Figure 4: Stormwater Utility Implementation and Public Outreach Process

The Town established a Stormwater Utility to fund its stormwater management program. The program provides critical services, which preserve the Town's natural resources and ensures that the Town's stormwater infrastructure is managed responsibly. This includes matters of public health and safety as well as regulatory compliance.

The Stormwater Utility supports the Town's stormwater related priorities, as identified at a public workshop in April 2017, and as shown in Figure 5. These priorities include addressing **repair needs for aging stormwater infrastructure, ensuring the protection of water quality, and protecting against flooding.** Improvement projects also provide opportunities for the Town to implement green infrastructure, or infrastructure that allows for natural drainage.

Prior to the Utility, the Stormwater management program was funded through property taxes. With a dedicated fund for stormwater management, the Town can **maintain and improve the integrity of the existing drainage infrastructure** based on the amount of impervious area on a property, rather than the value of the property. This method of billing is more equitable.

The Town's stormwater management program is required to comply with state and federal regulations. New regulations are increasing the costs associated with stormwater management. Therefore, the Utility provides a sustainable method of funding as program needs change.

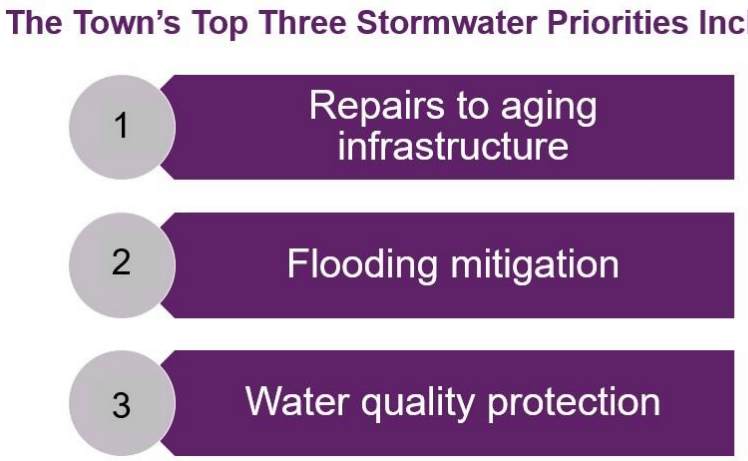

Figure 5: The Town identified and prioritized local stormwater issues at a Public Workshop on April 6, 2017.

Understanding the Stormwater Enterprise Fund

The Town of Millis has an obligation as a result of a mandate by the Federal and State authorities to meet specific criteria to manage pollutants in stormwater. Compliance with these mandates is costly.

There are several options that the Town has to meet these financial obligations. Rather than appropriate funds through the normal budgetary process, the Town's operating officials have chosen to implement an enterprise fund that sets a proportionate fee on all properties that contribute to stormwater runoff. To determine this fee, the Town calculates the total impermeable surface of all structures, roads, driveways, etc. to determine each property's share of the cost of compliance. This allows the setting of a fee to be paid to the Stormwater Enterprise Fund (SEF) on an annual basis. In determining this fee, the Town's officials have included Town buildings in the calculation. As a result, Town facilities are also charged their portion of the total fee for operating the SEF. This results in an offset of the amount directly charged to all property owners. However, the portion paid by the Town is in reality an indirect tax on all Town taxpayers. The alternative is to increase the direct fee to all taxpayers by the proportion that the Town pays. Either way, the total SEF fee must be met annually. The alternative chosen reduces the fee charged to each property owner, but it also results in the amount the Town pays to the SEF to be paid from funds available the Town in its annual budgetary process.

To help offset the cost to homewoners, the Town has implemented a credit system which reduces individual fees in exchange from measure that reduce stormwater runoff. It is important to understand, however, that any credits provided to individual residential family dwellings means that all of the residents will be charged incrementally for that credit. For example, if a dwelling is given a three (3) billing unit credits which, at present, amounts to a $99 credit, then the credit must be covered by all the remaining billing units charged. To further this example, if there were originally 1000 billing units, then the amount charged per billing unit would have been 9.9000 cents (99/1000=.099). By giving an owner 3 credits, the cost to all users is now 9.929789 (99/997=.09929789). Of course, the Town is much larger than this, and has many thousands of billing units, so any nominal number of credits will result in an additional charge to stormwater rate payers of just a few cents for each billing unit. However, collectively over a period of time, a lot of credits will offset any benefits to a homeowner as a result of many such credits having been authorized.

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Collectively, this Stormwater Utility helps the Town meet management and operational goals and priorities, maintain compliance with its stormwater permit, and ensure that fees are distributed fairly.

Who receives a bill?

All property owners in Millis with developed land **receive a bill starting November 2018.** All land uses and property types, including residential, commercial, institutional and public property, are subject to the fee.

Bills will be sent to all property owners **once annually in October**

Bills must be paid or paid and appealed within 30 days. Fees are proportionate to the amount of impervious area on each property. An example of impervious area is shown in Figure 6 below.

establishing billing units. Aerial imagery and impervious area data were provided by the State and was refined for each parcel to include a more accurate coverage of buildings and other impervious surfaces, such as driveways, pathways, pools, sport courts, and parking areas.

Impervious area within the Town-owned roadways and sidewalks was not considered as part of the total impervious area of a parcel. Privately owned roads and sidewalks were included in the impervious area calculations.

How is the fee calculated?

The Town calculated the amount of impervious area on each property using aerial imagery. This is standard industry practice and a commonly used manner of

Figure 6: The two outlined parcels are comparable in size. Due to the greater amount of impervious area, the parcel outlined in solid red will have a higher stormwater utility bill than the parcel outlined in dotted green.

How much will I pay?

The billing rate is presently $2.75 per billing unit per month (which is equivalent to $33/year). Billing units are generally each increment of 1,000 square feet of impervious area, except for properties with less than 200 square feet of impervious area (which have no fee) and properties with 200-1,499 square feet of impervious area (which have one billing unit). This billing rate may change over time as program funding needs change and impervious area calculations are updated. The current fee schedule is shown in Figure 7.

Most single-family homes have 1-3 billing units, while larger residential, commercial, and industrial properties may have greater than 3 billing units.

50% of billed parcels pay $99 or less per year at the current billing rate.

Number of Billing Units [1]	Square Feet of Impervious Area	Annual Fee [2]
0	0 – 199	$0
1	200 – 1,499	$33
2	1,500 – 2,499	$66
3	2,500 – 3,499	$99
[1] One additional billing unit for each additional 1,000 square feet increment of impervious area greater than 3,499 square feet		
[2] Annual Fee is based on the 2018 Rate of $2.75 / billing unit / month. This rate is subject to change and will be updated on a periodic basis at Public Rate Hearings		

Figure 7: Current Stormwater Utility Fee Schedule

How can I reduce my bill?

The first thing to understand is that the purpose of the Stormwater fee is to pay for treatment or removal of pollutants in stormwater. These pollutants include sediment and chemicals that are polluting our rivers and streams and affecting the quality of our water resources. Therefore, any credits to reduce your bill are aimed at encouraging the reduction in the amount of discharge associated with stormwater.

There are two primary ways to reduce your Stormwater Utility bill:

1) **Replace impervious area with natural drainage** (i.e.: replace

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pavement with vegetation or remove an unneeded shed).

2) Participate in the Town's **stormwater utility credit program**. The credit program and eligible activities are described in the subsequent sections of this manual.

Reduce your Stormwater Utility bill by replacing impervious area with natural drainage and by operating and maintaining stormwater best management practices.

Stormwater Utility Credits

What is a Stormwater Utility Credit?

As a property owner interested in reducing your Stormwater Utility bill, you can apply for a stormwater credit if you have completed one or more eligible stormwater stewardship actions. The goals of the credits program are to **recognize stewardship actions and provide an incentive for property owners** to operate and maintain stormwater facilities, which help decrease the Town's stormwater management program costs. There are multiple ways to earn credits, as described in the following sections.

What can I do to receive a Standard Credit?

Property owners can be awarded a credit and reduce their Stormwater Utility bills by implementing and maintaining on-site stormwater facilities. Credits are awarded for facilities that:

- **Improve stormwater quality** by reducing pollutants from stormwater runoff
- **Reduce the quantity of stormwater runoff** through stormwater detention, retention, or infiltration

Eligible stewardship actions are described in the following sections titled "Credits for Improving Stormwater Quality" and "Credits for Reducing Stormwater Quantity."

How much credit can I receive?

Property owners of residential single family dwelling occupied solely by the resident and her/his family can receive up to an 80% credit for operating and maintaining on-site stormwater controls in each of the noted facility categories. ~~Multiple credits can be awarded to eligible properties. The **maximum total credit is 40%** of a property's Stormwater Utility fee.~~

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How are Standard Credits Calculated?

Stormwater credits recognize actions that go above and beyond the minimum stormwater management requirements, as defined by the current Massachusetts

Stormwater Management Standards and the Town's Stormwater Bylaws (Articles I and II). Links to these resources are provided on Page 19.

~~To be eligible for a **20% credit for improving stormwater quality,** a facility must treat at least 500 square feet of impervious area and remove pollutants at a rate higher than is required by the State Stormwater Management Standards and Town's Stormwater Bylaws~~. The purpose of offering credits it to encourage the implementation of mitigation that encourages the homeowner to install and/or upgrade their stormwater disposal and mitigation facilities. For example, since the State's stormwater standard for removing total suspended solids (TSS) is "80% of the average annual load based on post-development conditions," a facility that treats 2,000 square feet of impervious area, meets applicable design standards, and removes more than the minimum required amount of TSS is eligible for a 20% credit.

Credits for activities which reduce the quantity of stormwater runoff are based on the **amount of peak stormwater runoff relative to pre-development rates**. The State's stormwater standards require that stormwater management systems are designed "so that post-development peak discharge rates do not exceed predevelopment peak discharge rates." Stormwater management facilities which reduce peak discharge rates by detaining, retaining, or infiltrating more than the predevelopment peak discharge rates will be eligible for a credit for reducing the quantity of stormwater runoff. ~~The **credit amount is relative to the reduction in peak runoff rates relative to pre-development rates, up to a maximum credit of 20%.**~~

Residential User Credits

The Town developed a Small User Credit specifically for single-family residential properties~~, **with 2 to 4 billing units (1,500-4,499 square feet of impervious area).**~~ The Residential User Credit provides a simplified application process for eligible property owners who operate and maintain on-site stormwater controls. In addition to the types of facilities listed in the sections titled "Credits for Improving Stormwater Quality" and "Credits for Reducing Stormwater Quantity," the Small User Credit can be awarded for the following types of facilities:

- permeable or porous paving,
- rain gardens,
- modified French drains,
- dry wells, and
- rain cisterns

The Residential User Credit application provides property owners with a **minimum credit of 1 billing unit** for employment of these actions, provided that they are employed in accordance with accepted standards for design, operation and maintenance . The Town, in its sole discretion, may grant credits in excess of one billing unit per activity depending on the particular qualitative and quantitative value that the activity provides with respect to storm water control and mitigation. At a minimum, facilities must be properly maintained to receive a credit and must capture at least 500 square feet of impervious area.

Residential single family home User Credits must be renewed every five years cannot be combined with Standard Credits.

General Policies for the Stormwater Utility Credit:

1. Multiple credits may be awarded to an eligible property. However, the

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total approved credit for the property may not exceed 60% of the Stormwater Utility bill.

2. The stormwater management improvement must be determined to appropriate for the subject property in order to be considered as a basis for a credit.
3. Design of stormwater management improvements and best management practices approved for a credit under this policy must meet the design guidelines as defined by the current Massachusetts Stormwater Handbook (Volumes 1 and 2), Town of Millis' Stormwater Management Bylaws (Articles I and II), and other technical references as defined by the Stormwater Commissioners or appointees.
4. Credits will be applied starting in FY20.
5. Residential User credits remain in effect for five (5) years, at which time a renewal application is required.

Figure 8: Operating and maintaining a Rain Garden may qualify a property owner for a Small User Credit.

may result in revocation of all or part of the credit.

8. A credit may be reduced or revoked at any time that it is determined by the Town that a credited facility is not performing adequately or is not being maintained to function as designed.
9. Credits are not transferrable when a property is sold to ensure new property owners are aware of proper facility operation and maintenance needs.
6. Ongoing maintenance and any required periodic condition reporting must be performed.
7. The Town maintains the right to inspect the property at the time of credit application and at any time that the site is receiving credit to determine credit applicability. Failure to allow inspection

REQUIREMENTS FOR NEW RESIDENTIAL DEVELOPMENTS

Developers of new residential properties are encouraged to utilize infrastructure, devices and other construction methods, including but not limited to, the foregoing methods and devices. For home-ownership units, the credits that may be available from such measures shall pass on to the purchaser of the residential unit.

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Credits for Improving Stormwater Quality

Water quality improvement credits are available to property owners that reduce pollution loading from their property through implementation of stormwater facilities and other best management practices (BMPs). Credits may be awarded, at the discretion of the DPW Director, for eligible facilities that meet or exceed regulatory requirements, state standards, and local ordinances at the time in which they were installed.

The Massachusetts Stormwater Handbook describes several common types of stormwater facilities that improve water quality of runoff. This section provides an excerpt of Volume 2 of the handbook, including examples of facilities eligible for a stormwater treatment credit.

The credit amount is based on the water quality pollutant reduction achieved through on-site treatment, up to a **maximum credit of 80%** of the Stormwater Utility bill.

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Bioretention Area and Rain Garden
Image Source: Kleinfelder

Bioretention Areas and Rain Gardens

Bioretention is a technique that uses soil, plants and microbes to treat stormwater before it is infiltrated and/or discharged. Bioretention cells (also called rain gardens in residential applications) are shallow depressions filled with sandy soil, topped with a thick layer of mulch and plated with dense native vegetation. Properly designed and maintained cells can remove suspended solids, metals and unwanted nutrients, and can infiltrate an inch or more of rainfall.

Constructed Stormwater Wetlands

Constructed stormwater wetland systems maximize the removal of pollutants from stormwater runoff through wetland vegetation uptake, retention, and settling. A constructed stormwater wetland temporarily stores runoff in shallow pools that support conditions suitable for the growth of wetland plants.

Proprietary Media Filters

Media filters are typically proprietary twochambered underground concrete vaults that reduce both TSS and other pollutants. After larger particles settle out in the first chamber, stormwater flows through the specific filter media in the second chamber.

Sand and Organic Filters

Sand and organic filters consist of self-contained beds of sand or peat, either underlaid with perforated underdrains or designed with cells and baffles with inlets/outlets. These can be installed in areas with thin soils, high evaporation rates, low soil infiltration rates and limited space.

Oil/Grit Separators

Oil/grit separators are underground storage tanks with three chambers designed to remove heavy particulates, floating debris, and hydrocarbons from stormwater. These are suitable for high-intensity and high-use parking lots, gas fueling stations, vehicles and equipment service and maintenance areas, and fleet storage areas.

Proprietary Separators

A proprietary separator is a flow-through structure with a settling or separation unit to remove sediments and other pollutants. These are applicable for pretreatment only, as they have limited pollutant removal and storage capacity.

Proprietary Separators

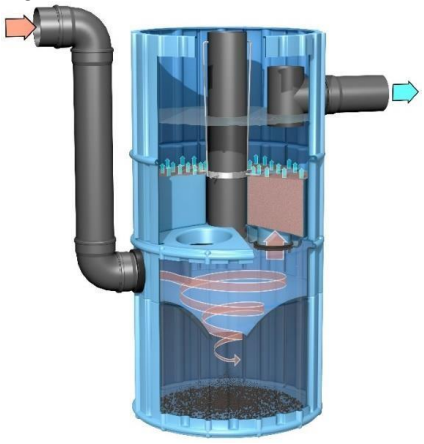

Image Source: Massachusetts Clean Water Toolkit

Detention Basin
Image Source: Kleinfelder

Extended Dry Detention Basins

Extended dry detention basins are designed to hold stormwater for at least 24 hours to allow solids to settle and reduce local and downstream flooding. It is the least costly BMP that controls both stormwater quality and quantity. To make this a practical application, the contributing watershed area should be at least 10 acres.

Wet Basins (Wet Retention Ponds)

Wet basins use a permanent pool of water as the primary mechanism to treat stormwater. The pool allows sediments to settle (including fine sediments) and removes soluble pollutants.

Sediment Forebays

A sediment forebay is a post-construction practice consisting of an excavated pit, bermed area, or cast structure combined with a weir, designed to slow incoming stormwater runoff and facilitate the gravity separation of suspended solids.

Deep Sump Catch Basin

These are also known as oil and grease or hooded catch basins and are underground retention systems designed to remove trash, debris, and coarse sediment from stormwater runoff. They serve as temporary spill containment devices for floatables such as oils and greases. These are suitable for residential subdivisions, office, and retail applications.

Credits for Reducing Stormwater Quantity

Stormwater reduction credits are available to property owners that reduce the peak rate of runoff during precipitation events. Credits may be awarded, at the discretion of the DPW Director, for eligible facilities that meet or exceed regulatory requirements, state standards, and local ordinances at the time in which they were installed.

The Massachusetts Stormwater Handbook describes several common types of stormwater facilities that reduce stormwater runoff. This section provides an excerpt of Volume 2 of the handbook including examples of facilities eligible for a stormwater runoff reduction credit.

The credit amount is based on the amount of **peak runoff reduction** achieved through onsite stormwater infiltration, retention, or detention facilities, up to a **maximum credit of 80%** of the Stormwater Utility bill.

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Grassed Channel

Image Source: Toronto and Region Conservation Authority

Drainage Channels

Drainage channels are traditional vegetated open channels that are designed to provide non-erosive conveyance. They receive no infiltration or TSS removal credit.

Grassed Channels

Grassed channels have a longer hydraulic residence time than drainage channels. The removal mechanisms are sedimentation and gravity separation, rather than filtration.

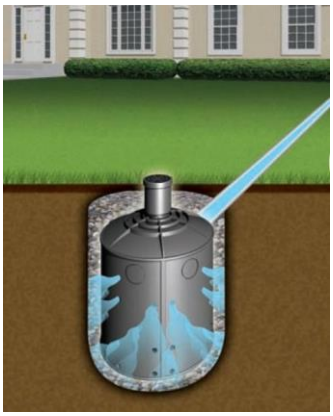
Dry Wells

Dry wells are small excavated pits, backfilled with a collection of fragmented rocks and gravel (aggregate), used to infiltrate uncontaminated runoff from roofs. Do not use dry wells to infiltrate any runoff that could be significantly contaminated with sediment and other pollutants.

Infiltration Basins

Infiltration basins are stormwater runoff impoundments that are constructed over permeable soils. Pretreatment is critical for effective performance of infiltration basins. Runoff from the design

storm, a critical rainfall event stored until it exfiltrates floor.



over a specified time period, is through the soil of the basin

Subsurface Structure

Image Source: Massachusetts Clean Water Toolkit

Subsurface Structures

Subsurface structures are underground systems that capture runoff and gradually infiltrate it into the groundwater through rock and gravel. There are several underground infiltration systems that can be installed to enhance groundwater recharge.

Leaching Catch Basins

A leaching catch basin is a pre-cast concrete barrel and riser with an open bottom that permits runoff to infiltrate into the ground.

Infiltration Trenches

Infiltration trenches are shallow excavations filled with stone. They can be designed to capture sheet flow or piped inflow. The stone provides underground storage from stormwater runoff. The stored runoff gradually exfiltrates through the bottom and/or sides of the trench into the subsoil and eventually into the water table.

Infiltration Trench

Image Source: Bentley Communities

More information on each of these eligible activities can be found in Volume 2 Chapter 2 of the Massachusetts Stormwater Handbook.

How to Apply for Credits

Credit Application Requirements

A Credit Application Form may be submitted at any time for review by the Town. To be eligible for credits for the next billing cycle, applications must be received by the Town by **June 30th**.

Standard Credit Applications must include the following documentation:

- ☐ **Completed Application Form** – Including a description of the facility and calculations.
- ☐ **Fee and Credit Calculations** –Calculated fee with credit applied (see Appendix A – Application Form).
- ☐ **Drainage Area Map or Sketch** – Showing the location of each facility, property lines, and the total amount of impervious area managed by the facility (in square feet).
- ☐ **Recent Photographs** – Provide a date-stamped image or images showing the facility within one month of the application date.
- ☐ **Operation and Maintenance Plan** – Attach a summary of how the facility will be operated and maintained to ensure it continues to function as designed, as required by the Town's Stormwater Management Regulations Article I, Section 8.B. This Plan must include a maintenance schedule for the drainage structure(s). If applicable, include any modifications to the facility.
- ☐ **Certification by a Licensed Stormwater Professional** – Attesting that the information is accurate and that the facility is functioning as designed. For single family occupied dwellings, measurements, pictures and a list of building materials are necessary. The resident may employ a licensed stormwater professional to submit the necessary documentation or request that the Town's Building Inspector or other agents review and approve the work that was done with supporting documentation. There will be a minimum fee of $xxx for such an inspection. At the discretion of the Building Inspector, complex mitigation facilities inspections will be charged with a higher fee of $yyy. If multiple inspections are required, the Building Inspector will charge for each such inspection.

Small User Credit Applications must include the following:

- ☐ **Completed Application Form** – Including a description of the facility and calculations.
- ☐ **Fee and Credit Calculations** –Calculated fee with credit applied (see Appendix A – Application Form).
- ☐ **Drainage Area Map or Sketch** – Showing the location of each facility, property lines, and the total amount of impervious area managed by the facility (in square feet).
- ☐ **Recent Photographs** – Provide a date-stamped image or images showing the facility within one month of the application date.

Approval for a Stormwater Utility Credit is at the discretion of the Department of Public Works Director. When an application for a credit is deemed complete by the Director, the Director may either grant the credit in whole, grant the credit in part, or deny the credit. For questions and additional information, please contact the Department of Public Works:

Contact: James McKay, Department of Public Works
Email: stormwatermgmtgrp@millisma.gov
Phone: (508) 376-5424
Website: http://www.millis.org/Pages/MillisMA_DPW/index

Credit Renewal

The standard credit term is **five (5) years for water quality and quantity facilities.** ~~The term for **Small User Credits is one (1) year** and therefore may be applied for on an annual basis.~~ Property owners must reapply prior to June 30th to be eligible for credit on the following billing date.

A credit can be revoked at any time if there is insufficient evidence of proper operation and maintenance. Credits do not transfer when property ownership is transferred or sold.

Site Inspections

By receiving a Stormwater Utility Credit, the property owner is providing the Town or its designees with authorization to inspect the facility for operation and proper maintenance. The Credit Application Form describes that the Town has access to the site for inspection, maintenance, preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities. This agreement should be included with the Stormwater Utility Credit Application.

Incentives

The Town may provide incentives to property owners to promote environmental and stormwater stewardship, such as rain barrels. These incentive programs complement but differ from the credit program and may not be eligible for a Stormwater Utility Credit.

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Abatement and Appeals Process

If a property owner believes the Stormwater Utility fee is improperly calculated or is otherwise incorrect, the property owner may apply to the Director for an abatement within thirty (30) days from the date of issuance of the Stormwater Utility bill and after payment of the bill is received in full by the due date. This process can be started by filling out Appendix B – Stormwater Fee Abatement Application.

The Director will issue a written response within sixty (60) days. A property owner can appeal this decision within thirty (30) days from the date of the written decision, by filing an appeal to the Board of Stormwater Commissioners with a letter describing the justification for appeal.

Abatements may be denied, in part, or in full, not to exceed the amounts paid. The appeals process is illustrated further in Figure 9.

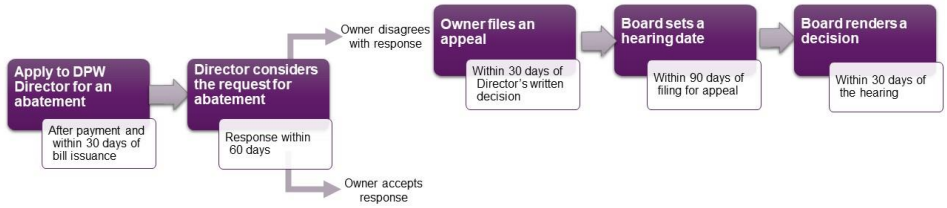


Figure 9: Diagram of the Stormwater Utility Fee Abatement and Appeals Process.
For the full appeals process, see Article 3, Section 11.0 of the Stormwater Utility Administration By-Law

Glossary

Credit means a reduction in the amount of a Stormwater Utility fee charged to the owner of a property where that property owner owns, maintains and operates on-site or off-site stormwater management systems or facilities, or provides services or activities that reduce or mitigate the

Town's cost of providing stormwater management services, in accordance with the Town's approved credit policy.

Developable shall mean a parcel of land, as designated by the Assessor or other local jurisdictional authority, that can be altered from its natural state to include impervious surface area.

Developed means property altered from its natural state by construction or installation of greater than or equal to two hundred (200) square feet of impervious surfaces.

Drainage system shall mean natural and manmade channels, swales, ditches, swamps, rivers, streams, creeks, wetlands, branches, reservoirs, ponds, drainage ways, inlets, catch basins, gutters, pipes, culverts, bridges, head walls, storm sewers, lakes, and other physical works, properties, and improvements that transfer, control, convey or otherwise influence the movement of stormwater runoff.

Billing Unit (BU) shall mean the measure of the average amount of impervious surface on all single family residential parcels in the Town of Millis used in assessing fees for each parcel of developed property.

General Laws means the General Laws of the Commonwealth of Massachusetts.

Impervious area per parcel is determined by the Town of Millis by utilizing available GIS data layers to calculate the area of building footprints, building structures, driveways, pathways, pools, sport courts, and parking areas. Any impervious areas within the town-owned right-ofway will not be attributed to the parcel and will not be considered as part of the total impervious area of the parcel.

Impervious surface includes any material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious surfaces include, without limitation, roads, paved parking lots, rooftops, buildings or structures, sidewalks, driveways, and other surfaces which prevent or impede the natural infiltration of stormwater runoff which existed prior to development.

Stormwater is surface water that results from precipitation and that travels over natural or developed land surfaces to discharge into a drainage system or surface water body. Stormwater includes stormwater runoff, snow melt runoff, and surface water runoff and drainage.

Stormwater management services mean all services provided by the Town which relate to the:

(a) Transfer, control, conveyance or movement of stormwater runoff through the Town;
(b) Maintenance, repair and replacement of stormwater management systems and facilities owned, controlled, or maintained by the Town;
(c) Planning, development, design and construction of additional stormwater management systems and facilities to meet current and anticipated needs; (d) Regulation, oversight, and enforcement of the use of stormwater management services, systems and facilities;
(e) Compliance with applicable State and Federal stormwater management regulations and permit requirements including, but not limited to, public education and outreach. Stormwater management services may address the quality of stormwater runoff as well as the quantity thereof.

Stormwater management systems and facilities mean those natural and manmade channels, swales, ditches, rivers, streams, creeks, branches, reservoirs, ponds, drainage ways, inlets, catch basins, pipes, headwalls, storm sewers, outfalls and other physical works, properties and improvements which transfer, control, convey, detain, retain, treat or otherwise influence the movement of stormwater runoff.

Stormwater Utility Bill means the periodic user fee imposed pursuant to this by-law by the Town of Millis which will be dedicated to the provision of public stormwater management services.

Undeveloped land shall mean all land that is not altered from its natural state to an extent that results in greater than two hundred (200) square feet of impervious surface area.

Additional Information

For additional information on stormwater management, please see the links below:

Stormwater Educational Materials

- EPA National Pollutant Discharge Elimination System (NPDES) - https://www.epa.gov/npdes/npdes-stormwater-program
- Town Stormwater Bylaws and Regulations - http://www.millis.org/Pages/MillisMA_DPW/StrmWtr/StormAdditional/SWMByLaw.pdf

Current Town Utility Rates

- Current Stormwater Utility Rates - http://www.millis.org/pages/Utility.pdf

Runoff Calculation Resource

- EPA National Stormwater Calculator - https://www.epa.gov/water-research/nationalstormwater-calculator

Massachusetts Stormwater Handbook

- Massachusetts Stormwater Handbook and Stormwater Standards https://www.mass.gov/guides/massachusetts-stormwater-handbook-and-stormwaterstandards
- Stormwater Management Best Management Practices (Volume 2 Chapter 2) - https://www.mass.gov/files/documents/2016/08/qi/v2c2.pdf
- Stormwater Standards (Volume 1) - https://www.mass.gov/guides/massachusettsstormwater-handbook-and-stormwater-standards#stormwater-handbook-volume-1

Appendices

Appendix A – Credit Application Appendix B – Stormwater Bill Abatement Application

Town of Millis, MA
Stormwater Utility Credit Application Form

Submit Completed Applications to: stormwatermgmtgrp@millisma.gov or
Town of Millis, MA
Department of Public Works
900 Main Street
Millis, MA 02054
Phone: (508) 376-5424

This form is for property owners in Millis, MA to apply for a credit to their stormwater utility bill for BMPs (Best Management Practices) installed and maintained on their property. All applications must be filled out completely and supporting documentation attached to ensure an effective review process.

Application Status (select one):
- ☐ This is a first-time application for credit
- ☐ This is an application for credit renewal

Applications must be submitted by June 30th, or prior, to receive credit on a subsequent bill

i. Parcel Owner Information	
Mailing Address:	Owner Name:
	Email:
	Phone Number:
Property Address (if different than mailing address):	**Impervious Area Managed (sq. ft.):**
Stormwater Account Number:	**Parcel ID:**

ii. Credit Type(s) (Check all that apply)
☐ Small User Credit *Or* ***Standard Credit(s):*** ☐ Stormwater Quality Credit ☐ Stormwater Quantity Credit
iii. BMP Description (Check all that apply and include quantity of each)

☐ __ Deep Sump Catch Basin	☐ __ Drainage Channel
☐ __ Oil/Grit Separator	☐ __ Grassed Channel
☐ __ Proprietary Separator	☐ __ Water Quality Swale
☐ __ Sediment Forebay	☐ __ Dry Well
☐ __ Vegetated Filter Strip	☐ __ Infiltration Basin
☐ __ Bioretention Areas and Rain Garden	☐ __ Infiltration Trench
☐ __ Constructed Stormwater Wetland	☐ __ Leaching Catch Basin
☐ __ Extended Dry Detention Basin	☐ __ Subsurface Structure
☐ __ Proprietary Media Filter	☐ __ Other: _____
☐ __ Sand and Organic Filter	☐ __ Other: _____
☐ __ Wet Basins	☐ __ Other: _____

iv. **Facility Description** – Include the type of facility, date of installation, and percent pollutant removal efficiency based on the Massachusetts Stormwater Handbook.

_____
_____
_____
_____
_____

v. **Required attachments to the Standard Credit Application:**

- ☐ **Completed Application Form** – Including a description of the facility.
- ☐ **Fee and Credit Calculations** – Calculated fee with credit applied (see end of Application Form).
- ☐ **Drainage Area Map or Sketch** – Showing the location of each facility, property lines, and the total amount of impervious area managed by the facility (in square feet).
- ☐ **Recent Photographs** – Provide a date-stamped image or images showing the facility within one month of the application date.
- ☐ **Operation and Maintenance Plan** – Attach a summary of how the facility will be operated and maintained to ensure it continues to function as designed, as required by the Town's Stormwater Management Regulations Article I, Section 8.B. This Plan must include a maintenance schedule for the drainage structure(s). If applicable, include any modifications to the facility.
- ☐ **Certification by a Licensed Stormwater Professional** – Attesting that the information is accurate, and that the facility is functioning as designed.

Required attachments to the Small User Credit Application:

- ☐ **Completed Application Form** – Including a description of the facility.
- ☐ **Drainage Area Map or Sketch** – Showing the location of each facility, property lines, and the total amount of impervious area managed by the facility (in square feet).
- ☐ **Recent Photographs** – Provide a date-stamped image or images showing the facility within one month of the application date.

Owner Certification

- I am the property owner (or designee), have reviewed the information contained in this application, and believe that it is true to the best of my knowledge.
- I commit to maintaining the stormwater management facility in good working condition.
- I understand that if an inspection by the Town 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 the Town.

I attest that the owner has legal ownership and maintenance responsibility for the BMP(s) included in this application.

Signature: _____ **Date:** _____

Submit Completed Application and required attachments to:

stormwatermgmtgrp@millisma.gov or

Town of Millis, MA
Department of Public Works
900 Main Street
Millis, MA 02054
Phone: (508) 376-5424

Credit Award Amount (For Town Use Only)

<table>
<tr><td>Received By:</td><td>Date Received:</td></tr>
<tr><td>Reviewed By:</td><td>Date Reviewed:</td></tr>
<tr><td colspan="2">Parcel Number:</td></tr>
<tr><td colspan="2">☐ Application Administratively Complete</td></tr>
<tr><td colspan="2">Credit Value</td></tr>
<tr><td>☐ Credit application denied (explain below)</td><td rowspan="3">☐ Small User Credit (1 Billing Unit Credit)</td></tr>
<tr><td>☐ Quality Credit: ___%
☐ Quantity Credit: ___%</td></tr>
<tr><td>Total Percent Credit (Maximum 40%): ___%</td></tr>
<tr><td colspan="2">Notes:</td></tr>
</table>

Credits for Improving Stormwater Quality

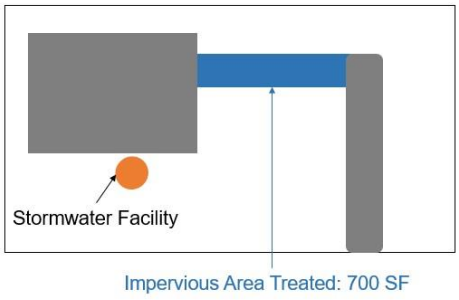
Water quality improvement credits are available to property owners that reduce pollution loading from their property through implementation of stormwater facilities and other best management practices (BMPs). Credits may be awarded, at the discretion of the DPW Director, for eligible facilities that meet or exceed regulatory requirements, state standards, and local ordinances at the time in which they were installed.

To be eligible for a **20% credit for improving stormwater quality,** a facility must treat at least 500 square feet of impervious area and remove pollutants at a rate higher than is required by the State Stormwater Management Standards and Town's Stormwater Bylaws. For example, since the State's stormwater standard for removing total suspended solids (TSS) is "80% of the average annual load based on post-development conditions," a facility that treats 2,000 square feet of impervious area, meets applicable design standards, and removes more than the minimum required amount of TSS is eligible for a 20% credit.

Credits for Improving Stormwater Quality Calculation

A. Percentage of Annual Total Suspended Solids (TSS) loads, based on post-development conditions: _____
   i. If the TSS reduction percentage is less than or equal to 80%, the property owner is **not eligible** for a Stormwater Quality credit.
   ii. If percentage is greater than 80%, the property owner is eligible for a 20% credit and should continue to (B).
B. Estimated IA Treated: _____
   i. If impervious area treated is less than or equal to 500 square feet (SF), the applicant is **not eligible** for credit.
   ii. If the impervious area is greater than 500 SF, the property owner is eligible for a 20% credit and should continue to (C).
C. Total Impervious Area: _____ SF
D. Number of Billing Units: _____
E. Bill = (D) x $33 per Billing Unit = $_____/year
F. Credit = (E) x 20% = _____/year
G. Final Bill = (E) – (F) = _____**/year**

Stormwater Quality Improvement Example 1: *20% credit*



Total Impervious Area = 3,890 square feet (SF) or 4 Billing Units

Stormwater Facility treats 90% of annual Total Suspended Solids (TSS) loads, based on post-development conditions → 20% credit is applied to property owner's bill

Billing Credit: $132/year x 20% = $26.40/year saved

Final Bill: $132/year – $26.40/year = **$105.60/year**

Credits for Reducing Stormwater Quantity

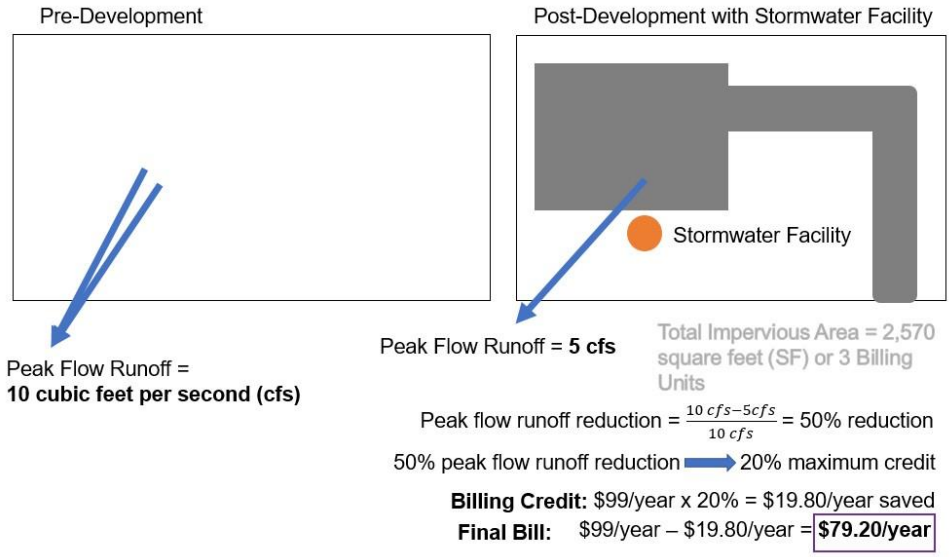
Stormwater reduction credits are available to property owners that reduce the peak rate of runoff during precipitation events. Credits may be awarded, at the discretion of the DPW Director, for eligible facilities that meet or exceed regulatory requirements, state standards, and local ordinances at the time in which they were installed. The Massachusetts Stormwater Handbook describes several common types of stormwater facilities that reduce stormwater runoff.

Credits for activities which reduce the quantity of stormwater runoff are based on the **amount of peak stormwater runoff relative to pre-development rates**. The State's stormwater standards require that stormwater management systems are designed "so that post-development peak discharge rates do not exceed pre-development peak discharge rates." Stormwater management facilities which reduce peak discharge rates by detaining, retaining, or infiltrating more than the pre-development peak discharge rates will be eligible for a credit for reducing the quantity of stormwater runoff. The credit amount is relative to the reduction in peak runoff rates relative to pre-development rates, up to a maximum credit of 20%.

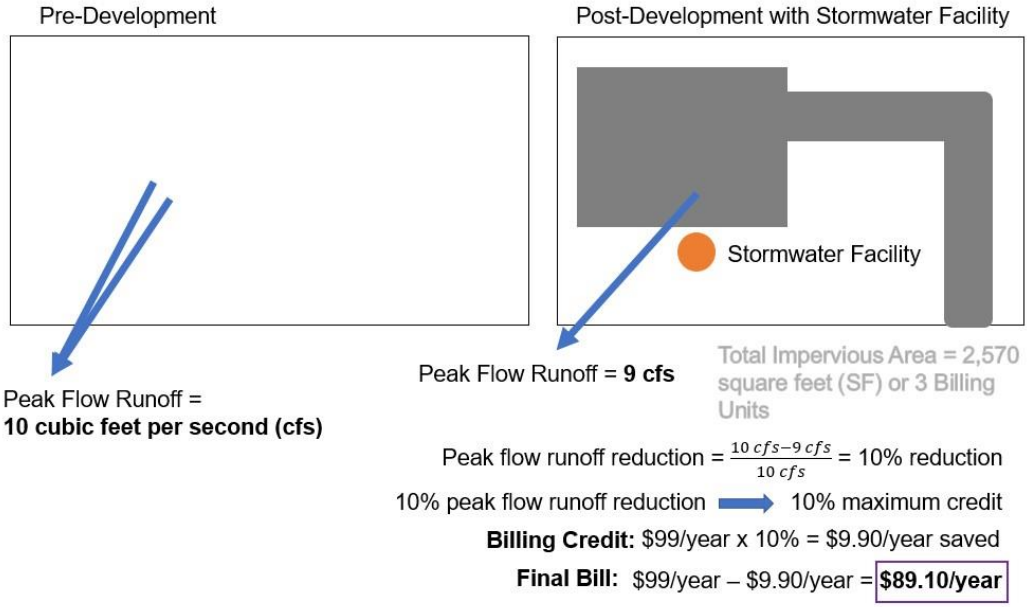
Credits for Reducing Stormwater Quantity Calculation

A. Pre-Development Peak Flow Runoff: _____ cubic feet per second (cfs)
B. Post-Development Peak Flow Runoff with Stormwater Facility: _____ cubic feet per second (cfs) C.
Peak Flow Runoff Reduction = [(A)-(B)]/(A) x 100=_____% Reduction
D. Circle the statement that best applies:
   i. If Peak Flow Runoff Reduction Percentage is less than 20%, credit is equal to (C): _____%
   ii. If Peak Flow Runoff Reduction Percentage is greater than or equal to 20%, credit is equal to 20%. E.
Number of Billing Units: _____
F. Bill = (E) x $33 per Billing Unit = $_____ per year
G. Credit = (F) x Credit Percentage from (D) = _____ per year
H. Final Bill = (F) – (G) = _____ **per year**

Stormwater Quantity Reduction Example Calculation 1: *20% Credit*



Stormwater Quantity Reduction - Example Calculation 2: *10% credit*



Small User Credits

The Town developed a Small User Credit specifically for properties **with 2 to 4 billing units** (1,500-4,499 square feet of impervious area). The Small User Credit provides a simplified application process for eligible property owners who operate and maintain on-site stormwater controls. In addition to the types of facilities listed in the sections titled "Credits for Improving Stormwater Quality" and "Credits for Reducing Stormwater Quantity," the Small User Credit can be awarded for the following types of facilities:

- permeable or porous paving,
- rain gardens,
- modified French drains,
- dry wells, and
- rain cisterns

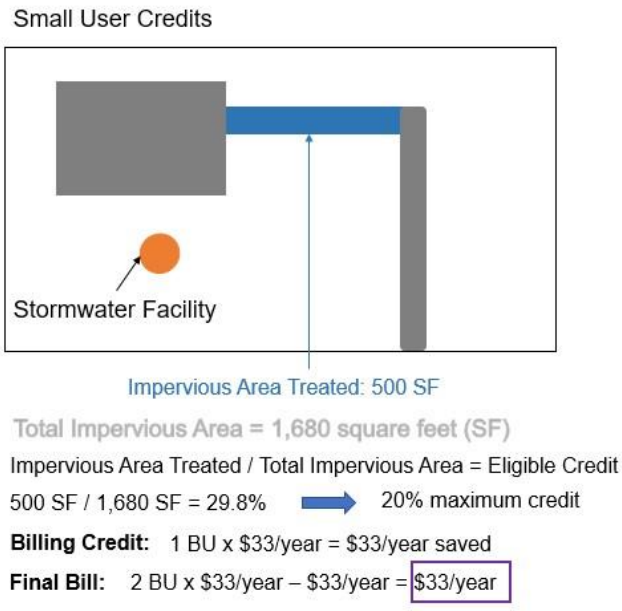
The Small User Credit application provides property owners with a **maximum credit of 1 billing unit** for these actions. Facilities must be properly maintained to receive a credit and must capture at least 500 square feet of impervious area.

Small User Credits must be renewed annually and cannot be combined with Standard Credits.

Small User Credit Calculation

A. Total area of property: _____ SF and Number of Billing Units: _____
   i. If the total area of the property is equivalent to 1 Billing Unit or greater than 5 Billing Units, the property is **not eligible** for a credit.
B. Impervious area treated: _____ SF
   i. If area treated is less than 500 SF, the applicant is **not eligible** for a credit.
   ii. If area treated is greater than or equal to 500 SF, the property owner may receive credit for 1 Billing Unit.

Small User Credit Example Calculation: *1 billing unit (BU) credit*



Town of Millis
Stormwater Fee Abatement Application

Submit Completed Applications to: stormwatermgmtgrp@millisma.gov or
Town of Millis, MA
Department of Public Works
900 Main Street
Millis, MA 02054
Phone: (508) 376-5424

1. Applicant Information

Owner Name:
Primary Address:
Phone Number:
E-mail Address:

2. Property Information

Stormwater Account Number:
Parcel ID:
Property Address:

3. Details of the Abatement Application

What is the justification for abatement? (check all that apply) ☐ Incorrect unit price ☐ Incorrect impervious area or billing unit ☐ Other: _____
If you selected incorrect unit price, what unit price was charged? $ __/Billing Unit
If you selected incorrect impervious area: Currently Billed Impervious Area (square feet): _____ Proposed Impervious Area (square feet): _____

If your bill is incorrect for another reason, please describe in further detail below.

_____
_____
_____
_____
_____

4. Required attachments to Abatement Application:

- ☐ A copy of your most recent **Stormwater Utility Bill**
- ☐ A **detailed description of the reason** for the abatement including any **property maps,** sketches**,** or measurements that may be needed to determine abatements

5. Certification

Please sign below certifying that you have read the following two statements:

- ☐ I hereby certify that the information in this application is truthful and accurate.
- ☐ I hereby grant the Town of Millis to access the property referenced in this application to confirm any of the information stated here to determine necessary abatements.

Signature:_____ Date:_____

Submit Completed Application and required attachments to:

stormwatermgmtgrp@millisma.gov

or

Town of Millis, MA
Department of Public Works
900 Main Street
Millis, MA 02054
Phone: (508) 376-5424

For additional information about the Stormwater Utility appeals process see the Town's Stormwater Utility By-Law (Article 3, Section 11.0):

http://www.millis.org/Pages/MillisMA_DPW/StrmWtr/StormAdditional/SWMByLaw.pdf