

**CITY OF BLOOMINGTON
UTILITIES**

**STORMWATER UTILITY
CREDIT MANUAL**



Adopted: Monday, November 03, 2003

PREFACE

Send Application Forms to:

City of Bloomington
Utilities Department
Attn: Stormwater Utility Credit
Box 1216
Bloomington, IN 47402-1216

Make Checks Payable to: City of Bloomington Utility Department

For Questions Regarding the Credit Application, Contact:

Michael Bengtson
Assistant Director Utility Engineering
Telephone: 812-349-3650
E-mail: bengtsom@bloomington.in.gov

Application Procedure:

Initial review of Stormwater Utility Credit Applications will be completed within 60 days of receipt of the application form and fee payment. Application fees are non-refundable. CBU reviewers will check application forms for completeness and accuracy. If the application is found to be complete and accurate, a letter will be sent to the applicant notifying approval and the amount of the credit. Application for any credit is an acknowledgement of the indemnification statement in Chapter 2, Section H of this document, and the City of Bloomington Utilities' (CBU) right-of-entry to inspect and verify the information submitted on said application. If deficiencies are found during the review, a deficiency letter will be sent to the applicant's contact person. Upon receipt of additional information from applicant, the review will resume and be completed within 60 days of receipt of the additional information. Billing adjustments required to implement credits shall be applied on the date of the customer's approval of the credit. If an application is denied, a letter explaining the reasons for the denial will be provided to the applicant. The applicant has the right to appeal this decision, in accordance with the procedures outlined in Section 9 of the City of Bloomington Utilities Rules and Regulations.

CHAPTER 1: INTRODUCTION

On September 9, 1998 the City of Bloomington, Indiana City Council passed Ordinance No. 98-29, which created a citywide Stormwater Utility to provide stormwater management activities including developing sound principles and guidelines for stormwater management, design & review of stormwater extensions, and the operation & maintenance of the stormwater collection system.

The primary revenue source for the Stormwater Utility is a monthly User Fee to all property in the Stormwater Utility Service Area. Stormwater User Fees for a property are related to the amount of stormwater runoff generated by the property. Using the Rational Formula, the runoff (Q) is equal to the sum of the various surface areas (A) multiplied by the appropriate runoff coefficient (C). The resulting sum is then multiplied by the rainfall intensity (i).

$$Q = (\sum (C_x A_x)) * i$$

Using the City's Geographical Information System (GIS), CBU can identify the amount of various impervious area features such as building roof lines, parking lots, and streets on a property. The GIS can also identify the acreage of open, pervious areas by their hydrological soil type, and the area of any water features on a property. Utilizing established engineering standards the impervious runoff coefficient is set to 0.95, the pervious runoff coefficient is set to 0.15 and the runoff coefficient for water features is set to 1.0. If the rainfall intensity is assumed to be 1.0 inch per hour the amount of runoff can be expressed in terms of area.

A statistical sampling of single family residential properties within the City determined that an average single-family residential property has 2,000 square feet of impervious area and 11,000 feet of pervious area. Using the Rational Formula described above the base single family residential unit (SFRU) was determined as follows:

(Impervious Area * impervious runoff coefficient) + (Pervious Area * pervious runoff coefficient)

$$(2000 * 0.95) + (11,000 * 0.15)$$

$$\text{SFR unit} = 3550 \text{ sq. ft.}$$

$$\text{SFR unit} = 0.0815 \text{ acres}$$

Each single-family residential property is billed the base rate according to the schedule contained in the Bloomington Municipal Code. The monthly stormwater User Fee for all other properties is determined on a case-by-case basis according to the calculated amount of runoff generated by the property. The runoff is calculated according to the Rational Formula described above and the result is divided by 0.0815 to determine the Equivant Runoff/Residential Units (ERU's) for the property. The number of ERU's is multiplied by the base rate contained in the Municipal Code yielding the monthly stormwater User Fee for that particular property.

The number of ERUs assigned to properties will remain constant unless physical changes are made that alter the amount of its impervious, pervious or water surface area. In these cases, billing changes will be made automatically at the completion of construction or with the application for

potable water service. Typically, these changes will be triggered through the building permit process or through the application for service.

The City of Bloomington Utilities has developed a system of credits for storm water service customers who:

Have facilities or controls in place to temporarily store and reduce the discharge rate of stormwater runoff, thereby reducing the impact on the drainage system.

Have facilities or controls in place to treat stormwater runoff, thereby reducing the impact on the drainage system.

Maintain a separate NPDES Stormwater Permit as required by the State of Indiana

Maintain infrastructure which drain public areas, thereby reducing the amount of work performed by the Utility.

Provide Education on Stormwater Issues, thereby increasing awareness of stormwater issues.

This manual details the policies and procedures applicable to the stormwater service charge credit program.

CHAPTER 2: CREDIT POLICIES

It is the Utility's intent to encourage sound technical design practices that reduce the negative impact of development on the drainage system through a simple but effective credit system. Certain policies have been developed to maintain a balance between simplicity and effectiveness. Properties whose impact on the stormwater drainage system is significantly limited or has been effectively reduced through specific controls shall be entitled to a credit adjustment that will be applied to stormwater service charge.

A. APPLICATION FEE AND DETERMINATION - A credit application will not be considered complete and will not be processed unless accompanied by the application fee and all appropriate forms and information as required in this manual. A one-time credit application fee of \$100.00 for Quantity Reduction Credits (RRC & ARC), and \$100.00 for Quality Credits (BPC & CAC) is required. So long as these credits are maintained reapplication is not required; however, if these credits are suspended for one-year or more reapplication shall be required. An annual credit application fee of \$20.00 for Quality Credits (NPC) Infrastructure Maintenance Credits and Education Credits (EDC) are required. A current customer may elect to be billed the application fee(s) as a part of their monthly CBU bill. As each credit runs to a specific property, individual properties or developments must submit individual credit applications and application fees for each type of credit. Please refer to Chapter 6, example 5 for an illustration.

It is the intent of the Department to process applications within sixty (60) days of submittal of the complete and correct application package. Billing adjustments required to implement credits shall be applied to the date the customer complete application is approved. A pending application for credit shall not constitute a valid reason for non-payment of the current Stormwater Monthly User Fees. In the case of new development, Stormwater Monthly User Fees and the associated credits detailed herein do not apply until construction is complete or upon approval of potable water service, whichever is earlier.

B. QUANTITY REDUCTION CREDITS (QRC) are offered to properties that maintain runoff facilities or controls, such as detention or retention facilities, which significantly restrict stormwater runoff rates released from their property. QRC shall be conditioned on continuing compliance with the design, operation and maintenance requirements of all the applicable ordinances and codes of the City of Bloomington, the Rules and Regulations of the City of Bloomington Utilities, State and Federal Permitting, and this Stormwater Credit Manual.

- The **Rate Reduction Credit (RRC)** is available for stormwater facilities that control the post-development peak rate of stormwater runoff to the natural rates for the two (2), ten (10), twenty-five (25), fifty (50) and one hundred (100) year design storms.
- The **Additional Rate Reduction Credit (ARC)** is available for stormwater facilities that reduce the peak flow rates of stormwater runoff in the post-developed condition at least 20% below the natural runoff rates. This additional reduction in runoff rates is beneficial to the City because it provides additional benefit to up and downstream properties.

Qualification requirements & application procedures for these credits are outlined in Chapter 3.

C. QUALITY IMPROVEMENT CREDITS (QIC) are offered to properties that discharge their runoff to structural best management practices (BMPs) or provide non-structural BMP's which significantly reduce pollutants in stormwater runoff. A QIC shall be conditioned on continuing compliance with the design, operation and maintenance requirements of all the applicable ordinances and codes of the City of Bloomington, the Rules and Regulations of the City of Bloomington Utilities, State and Federal Permitting, and this Stormwater Credit Manual.

A QIC is also available for non-structural BMPs such as a natural preservation area, which provides water quality benefits and/or the possibility of groundwater recharge, thus removing water from the stormwater system and improving water quality. Other BMPs can be submitted by the applicant for consideration to receive the QIC.

- The **Best Management Practices Credit (BPC)** is available for structural BMP's such as constructed wetlands & swirl concentrators and non-structural BMP's that are designed to remove 90 percent or more total suspended solids during the one-year storm.
- The **Conservation Areas Credit (CAC)** is available for developments that preserve high quality and/or sensitive areas such as forested areas, natural wetlands and floodplains placed in conservation easements.
- The **NPDES Credit (NPC)** is a specific, once-per-year, whole-dollar, Quality Credit that will apply to property owners who maintain individual NPDES Storm Water Discharge Permits issued by the Indiana Department Environmental Management (IDEM) under Rule 6 and Rule 13. NPDES permit holders must provide runoff quality controls in order to comply with their permit.

Qualification requirements and application procedures for these credits are outlined in Chapter 4.

D. INFRASTRUCTURE MAINTAINANCE CREDITS (IMC) are available to property owners that maintain private stormwater infrastructure that drain public areas. IMC are based on the size of the upstream drainage area, the capacity of the system being maintained and the annual maintenance activities performed. IMC shall be conditioned on continuing compliance with the design, operation and maintenance requirements of all the applicable ordinances and codes of the City of Bloomington, the Rules and Regulations of the City of Bloomington Utilities, State and Federal Permitting, and this Stormwater Credit Manual.

- **Major Systems** are systems that drain greater than 25 acres and are capable of conveying at least the 1% AEP storm.
- **Minor Systems** are systems that drain less than 25 acres and are capable of conveying at least the 10% AEP storm.

An annual report of all maintenance activities with their associated costs is required to maintain the IMC. Qualification requirements and application procedures for these credits are outlined in Chapter 5.

E. EDUCATION CREDITS (EDC) are available to all public and private schools or school systems that include the "**STORMWATER EDUCATION**", an environmental science program approved by the Indiana Department of Education in grades Kindergarten (K) through twelve (12). The education credit may be up to twenty (20%) of the monthly stormwater user fee for a

school's property or a school system's properties. The credit is proportional to the extent the approved curriculum is taught. The Superintendent of Schools shall annually certify to CBU, on or before July 15 the extent to which the curriculum was taught during the previous year and the intended extent to which the curriculum will be taught during the upcoming year. Education credits may be taken in addition to any QRC, QIC or IMC, making the maximum credit for a school or school system forty (40%).

F. UNIQUE AND SPECIAL CASES - Where a property owner or customer can unequivocally document and demonstrate through appropriate engineering studies that their property's stormwater runoff impact on the stormwater drainage system is significantly less than suggested by its assigned (gross) ERUs, the Utility Services Board, upon recommendation of the staff, may make adjustments consistent with the intent of the ordinance establishing charges for stormwater services.

G. MAXIMUM CREDIT – The maximum aggregate credit to the Stormwater Service Charge of any individual property is **20% of its gross billing amount**, regardless of how many individual QRC, QIC or IMC credits for which the property qualifies. **Educations are not a part of the 20% maximum, making the maximum credit for school or school system 40%.** Developments must still conform to all applicable ordinances and standards of the City of Bloomington and the Rules and Regulations of the City of Bloomington Utilities Department. **The NPC, which is a once-per-year credit, is NOT calculated as part of the 20% maximum credit. The EDC is only available to certified schools and school districts and is NOT calculated as part of the 20% maximum credit.** Credits will be incorporated as a part of the customers monthly user fees and be indicated on the customers monthly statement.

H. INDEMNIFICATION – In consideration for permission to construct or install a stormwater improvement/BMP, and by nature of applying for a stormwater user fee credit, the applicant is hereby legally acknowledging and agreeing to the following:

- 1) Upon completion of the construction or installation of the stormwater improvements/BMP's by the Owners and approval of the credits by CBU, the stormwater improvements/BMP's shall remain a privately owned and operated and maintained by the Owners. The stormwater improvement/BMP, shall not be accepted by the City, and shall not become a part of the maintenance program of the City of Bloomington Utilities. All maintenance responsibility and liability shall be and remain with Owners, their personal representatives, heirs, grantees, successors, and assigns.
- 2) The Owner shall be responsible for all maintenance of the stormwater system(s) and filing an annual report with CBU every subsequent year, as calculated from the original application date, in order to maintain any level of credit. This report shall include the following items:
 - a. Maintenance Activities
 - b. Mowing of dams
 - c. Amount of pollutants removed by type

If a property owner fails to file required annual inspection reports the credits will be revoked effective on the due date of the report. No retroactive credits will be given during said lapse period. Credits will be restored upon the submittal of the property

owner's annual report. If an annual report is not filed within one year of its due date, the property owner shall be required to file a new application before credits are restored.

- 3) CBU shall perform periodic inspections of the stormwater system(s) used for credits. If an inspection uncovers a failure of the system(s), CBU will send a letter informing the property owner of the required action to avoid revocation of the credits. If the property owner fails to take the required action within 30 days of the notification letter, the credits will be revoked until the situation is corrected. No retroactive credits will be given during said lapse period. Credits will be restored on the effective date of the submittal of the property owner's acceptable response. If the stormwater system remains in failure for greater than one year the property owner shall be required to file a new application before credits are restored.
- 4) The Owners, their personal representatives, heirs, grantees, successors, and assigns shall indemnify and hold harmless the City of Bloomington Utilities, its officers, agents, and employees from any and all claims, actions, causes of action, judgments, damages, losses, costs, and expenses (including attorney's fees) arising out of or resulting from the construction, installation, maintenance, or operation of the stormwater improvement/BMP.
- 5) This Agreement shall run with the real estate upon which the stormwater improvement/BMP has been constructed and shall be binding upon Owners, their personal representatives, heirs, grantees, successors, and assigns so long as the drainage facility and/or improvement or any part of it shall be used by them. This Agreement shall be disclosed upon transfer of real estate. At such time as the stormwater improvement/BMP shall cease to be so used, this Agreement and any credits shall immediately terminate.

CHAPTER 3: QUANTITY REDUCTION CREDITS - 20% MAXIMUM

Quantity Reduction Credits (QRC) will be available to properties whose peak stormwater runoff rate is restricted and controlled through onsite facilities or controls, such as detention and retention ponds, which are properly designed, constructed, and maintained according to City of Bloomington Utilities Rules and Regulations, standards and requirements.

LEVELS OF CREDIT

As explained in Chapter 2, property owners of private stormwater facilities, such as retention and detention facilities, are eligible for credit under this chapter. Property owners, at their option, may apply for the ARC in addition to the RRC as described below. One must qualify for an RRC to be able to qualify for the ARC.

1. Rate Reduction Credit (RRC) – 15% Credit

Stormwater facilities that control the post-development peak rate of stormwater runoff at or below the natural runoff rates may receive a credit for the following design storms:

- Two-year (2-year) – 5%,
- Ten-year (10-year) – 5%,
- Twenty-five-year (25-year) – 2%,
- Fifty-year (50-year) – 2% and
- One hundred-year (100-year) – 1%

2. Additional Rate Reduction Credit (ARC) – 5% Credit

Stormwater facilities that qualify for a RRC can also qualify for the ARC if they reduce the peak flow rates of stormwater runoff in the post-developed condition at least 20% below the natural runoff rates. An applicant may receive a 1% reduction for each of the five design storms listed above.

If a private stormwater management system on a property qualifies, it can receive both credits for a total of 20% credit. Individual single family residential units do not qualify for these credits.

APPLICATION REQUIREMENTS

- 1) Application fee: \$100.00
- 2) *The owner shall supply maintenance information along with their application.*
 - i) Any association agreements or contracts for inspection and/or maintenance are required to be disclosed as part of the application.
 - ii) Indicate the schedule for major maintenance that will be performed and how many times per year basic maintenance (such as erosion control and/or mowing) activities are performed.
 - iii) Inspection reports shall be filed with CBU every subsequent year, as calculated from the original application date, in order to maintain any level of Quantity credit. If a property owner fails to file required inspection reports or if a random CBU inspection results in failure, the CBU will send a letter informing the property owner of the required action to avoid revocation of the Quantity credits. If the property owner fails to take the required action, the quantity credits will be revoked until the situation is corrected. No retroactive

credits will be given during said lapse period. Credits will be restored on the effective date of the submittal of the property owner's acceptable response.

3) The owner shall supply the following technical information along with their application.

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- i) Plat of survey certified by an Indiana-Registered Land Surveyor, or site construction plan certified by an Indiana-Registered Professional Engineer, indicating the following:

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- (a) Location and dimensions of the BMPs on the property
- (b) Watershed breaks across the property
- (c) Layout of impervious surface areas on the property
- (d) Layout of the drainage system on the property, including location and elevations of natural and man-made features
- (e) Sufficient topographic data or elevations to verify general drainage patterns across the property.
- (f) Conceptual site plan and structural control location diagram
- (g) Locations, dimensions and characteristics of all existing and proposed drainage patterns and facilities
- (h) Existing and proposed grading and location of all structures, parking, driveways, and other impervious areas

- ii) Detailed engineering calculations providing the results of routing the storm runoff for the two (2), ten (10), twenty-five (25), fifty (50) and one-hundred (100) year design storm events through the basin or control, along with comparison to the natural runoff rates. Natural conditions are assumed to be open pasture in good condition. Stage-storage-discharge tables and emergency spillway configuration are also required. An Indiana Professional Engineer must certify these calculations.

- iii) The sum-total of the natural and post-developed runoff rates and volumes from all watersheds *within the property* must be calculated and compared, regardless of the number of natural or constructed watersheds in the property. Control of runoff in only one of the property's watersheds, ignoring all others, will not receive credit. However, control of runoff in only one watershed, *which takes into account the runoff from all others*, could receive credit.

- iv) Upon completion of construction, as-built data certified by an Indiana Professional Engineer shall be submitted in order to complete the application. The as-built data must verify the capacity of the detention facilities and outlet structures for which the credit has been applied.

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- 4) *Existing facilities will be eligible for credit as long as they meet the requirements* of the City of Bloomington Utilities Rules and Regulations, City of Bloomington Utilities Design & Construction Standards and all City of Bloomington Ordinances with regards to stormwater. In this case, the information required in Nos. 2 & 3 above and any other supporting material shall be submitted for review. Retrofitting of existing structures is also allowed to provide or increase the amount of credit for a property. The process for retrofitting existing structures is similar to that for new developments. As-built data shall be submitted for the existing or retrofitted structure before the credit will be applied.

Credits will not begin until certified as-built data has been submitted.

- 5) The owner shall be required to sign a statement certifying that information is correct and acknowledging that the credit determination will be based on information provided. A later determination that the information was inaccurate may result in loss of credit.
- 6) The owner shall be required to place stormwater infrastructure within a UTILITY EASEMENT which runs solely to CBU.

NOTE: Developers are encouraged to apply for all levels of quantity credits on new developments as part of the normal development plan review procedures. The credits, as well as the Stormwater Monthly User Fees, do not go into effect until construction is complete or upon approval of potable water service, whichever is earlier.

See Chapter 7 for an example application for the Quantity Reduction Credits.

CHAPTER 4: QUALITY IMPROVEMENT CREDIT – 20% MAXIMUM

Quality Improvement Credits (QIC) will be available to properties where structural or non-structural stormwater best management practices (BMP's) are located and used to treat stormwater runoff, specifically 90% removal of total suspended solid (TSS) loads, reducing the pollutant load before discharging into the City's system. Structural BMP's include constructed wetlands, retention ponds and swirl concentrators which are properly designed, constructed, and maintained according to City of Bloomington Utilities Rules and Regulations, standards and requirements. Non-structural BMP's included inlet stenciling, parking lot vacuuming and proper landscaping maintenance activities. Other professional techniques such as those published by U.S. EPA, National Resource Conservation Service, American Society of Civil Engineers, and other professional organizations will be considered on a case-by-case basis. To receive credit, it must be shown that each type of BMP will be applied in all feasible locations and situations that the site topography will allow, maximizing the amount of impervious area that will benefit from the BMP. This credit is not available to SFR homes.

LEVELS OF CREDIT

As explained in Chapter 2, property owners of private stormwater facilities, such as constructed wetlands and preservation areas, are eligible for credit under this chapter. Property owners, at their option, may apply for the BPC or the CAC as described below. Individuals who maintain a current NPDES Stormwater Permit may also apply for a NPC.

1. Best Management Practices Credit (BPC) – 15% Credit

Structural and non-structural BMPs such as constructed wetlands, retention ponds and swirl concentrators may receive a credit if they are designed to remove 90 percent or more total suspended solids during the one-year storm. NOTE: A detention pond that is being used for a Quantity Reduction Credit can also be approved as one of the BMPs for receiving a QIC, if properly designed; however, this type of BPC will be tied to the associated RRC, which means that termination of the RRC for any reason will also terminate the BPC for that structure. Appendix "A" contains a list of BMP's and their associated credit levels.

2. Conservation Areas Credit (CAC) – 5% Credit

Property owners may receive a credit if they set aside high quality and/or sensitive areas such as forested areas, natural wetlands and floodplains in appropriate protective easements or in ownership/control of entities that protect and maintain sensitive areas.

3. The NPDES Credit (NPC) – \$200 per year Credit

This credit will be given once per year, in addition to other credits, for those property owners who maintain individual NPDES Stormwater Permits. NPDES permit holders provide runoff quality controls and spill protection in order to comply with their permit and therefore can apply to receive this once per year credit. The NPC can be received even if the property is already receiving the maximum 20% credit to their monthly stormwater User Fees. The credit will be given on the next available billing as a whole amount. In no instances shall the NPC exceed the total annual stormwater user fees for a customer.

APPLICATION REQUIREMENTS

- 1) Application fee: \$100 for BPC and CAC. \$20 annual fee for NPC. Multiple BMPs can be listed on one QIC application, but the NPC requires separate and annual application.
- 2) *The owner shall supply maintenance information along with their application.*
 - i) Any association agreements or contracts for inspection and/or maintenance are required to be disclosed as part of the application.
 - ii) Indicate the schedule for major maintenance that will be performed and how many times per year basic maintenance (such as sediment removal) activities are performed.
 - iii) Inspection reports shall be filed with CBU every subsequent year, as calculated from the original application date, in order to maintain any level of Quantity credit. If a property owner fails to file required inspection reports or if a random CBU inspection results in failure, the CBU will send a letter informing the property owner of the required action to avoid revocation of the Quality credits. If the property owner fails to take the required action, the quantity credits will be revoked until the situation is corrected. No retroactive credits will be given during said lapse period. Credits will be restored on the effective date of the submittal of the property owner's acceptable response.
- 3) The owner shall be required to sign a statement certifying that the supplied information is correct and acknowledging that the credit determination will be based on information provided. A later determination that the information was inaccurate may result in loss of credit.

4) Requirements for the BPC: *The owner shall supply the following technical information along with their application.*

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- i) Plat of survey certified by an Indiana-Registered Land Surveyor, or site construction plan certified by an Indiana-Registered Professional Engineer, indicating the following:

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- (a) Location and dimensions of the BMPs on the property
- (b) Watershed breaks across the property
- (c) Layout of impervious surface areas on the property
- (d) Layout of the drainage system on the property, including location and elevations of natural and man-made features
- (e) Sufficient topographic data or elevations to verify general drainage patterns across the property.
- (f) Conceptual site plan and structural control location diagram
- (g) Locations, dimensions and characteristics of all existing and proposed drainage patterns and facilities
- (h) Existing and proposed grading and location of all structures, parking, driveways, and other impervious areas

- ii) Detailed engineering calculations providing the results of routing the storm runoff for the one (1) year storm through a selected BMP. An Indiana-Registered Professional Engineer must certify these calculations and the removal of at least 90% of TSS by the BMP.

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- iii) The sum-total of the one (1) year runoff rates and volumes from all watersheds *within the property* must be calculated and compared, regardless of the number of natural or constructed watersheds in the property. Pollution control of runoff in only one of the property's watersheds, ignoring all others, will not receive credit. However, pollution control of runoff in only one watershed, *which takes into account the runoff from all others*, could receive credit. For example, installing a filter in one catch basin will not qualify for a QIC, but installing a filter in ALL catch basins on a property would.

- iv) Upon completion of construction, as-built data certified by an Indiana Professional Engineer shall be submitted in order to complete the application. The as-built data must verify the capacity of the BMP for which the credit has been applied.
- 5) *Existing facilities will be eligible for credit as long as they meet the requirements* of the City of Bloomington Utilities Rules and Regulations, Design & Construction Standards and all City of Bloomington Ordinances with regards to stormwater. In this case, the information required in Nos. 2 & 3 above and any other supporting material shall be submitted for review. Retrofitting of existing structures is also allowed to provide or increase the amount of credit for a property. The process for retrofitting existing structures is similar to that for new developments. As-built data shall be submitted for the existing or retrofitted structure before the credit will be applied.
- 6) The owner shall be required to place stormwater infrastructure within a UTILITY EASEMENT which runs solely to CBU.

Credits will not begin until certified as-built data has been submitted.

7) Requirements for the CAC: High quality areas include natural forested areas, wetlands, and their associated buffers. Sensitive areas include sinkholes, and floodplains and their associated buffers. In order to receive a CAC credit, the following criteria must be met:

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- i) The minimum conservation area must be in excess of that required by the Environmental Performance Standards outlined in the City's Zoning Ordinance.
- ii) The City of Bloomington Planning Department must concur that the area meets the current Code requirements. A letter from the Planning Department to this effect must be included with the application.
- iii) The area must be placed in an appropriate protective easement. (Flood, Conservation etc)

iv) The area must be protected by limits of construction shown on all construction drawings and shall not be disturbed during any construction process.

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v) The applicant must be able to ensure protection and maintenance of the area for the duration of the credit.

8) Requirements for the NPC: In order to qualify for the NPC, the property owner must have and maintain a current NPDES Stormwater Permit under Indiana Rule 6 or Rule 13. This NPDES Permit must be in good standing with IDEM with no outstanding violations. In order to receive an NPC Credit the following criteria must be met:

- i) The property owner must submit to CBU copies of all reports required by and submitted to the State.
- ii) The property owner must reapply every year and provide a copy of the most current Permit in order to maintain the NPC Credit.

BMP's implemented as part of the property owner's NPDES Permit may also qualify for a BPC as defined in this Chapter. If a property owner wishes to apply for a BPC for any of the implemented BMP's, two separate applications and associated fees are required; one for the NPC and one for the BPC. There is no guaranteed that a property owner who receives a NPC will also receive a BPC as each BMP will be reviewed on its own merits.

NOTE: Developers are encouraged to apply for all levels of quality credits on new developments as part of the normal development plan review procedures. The credits, as well as the Stormwater Monthly User Fees, do not go into effect until construction is complete or upon approval of potable water service, whichever is earlier.

See Chapter 7 for an example application for the Quality Reduction Credits.

CHAPTER 5: INFRASTRUCTURE MAINTENANCE CREDITS – 20% MAXIMUM

Infrastructure Maintenance Credits (IMC) will be available to properties owners that maintain stormwater infrastructure according to City of Bloomington Utilities Rules and Regulations, standards and requirements. These credits are not available to SFR parcels.

LEVELS OF CREDIT

As explained in Chapter 2, property owners of private stormwater facilities, such as pipes, culverts, open channels, inlets and catch basins are eligible for credit under this chapter. Stormwater facilities such as ponds, constructed wetlands and BMP's that are eligible for other type of stormwater credits are **not** eligible for credit under this chapter. Property owners, at their option, may apply for either maintenance credit as described below. By apply for these credits the property owner assumes all costs for the maintenance, repair and replacement of the noted infrastructure, necessary to maintain to infrastructure in good working order. CBU will inspect and determine whether or not the stormwater infrastructure is in good working order. If at any time CBU is called upon to maintain, repair or replace this infrastructure the property owner shall be assessed a fee equal to the either the actual cost of the required maintenance activities or one year's credits, whichever is greater. Furthermore the property owner shall be barred from making application for this type of credit in the future on any property.

1. Major Systems Maintenance (SMC) – 15% Credit

Major stormwater systems are defined as draining greater than 25 acres of runoff from areas other than the property. Major systems must also be able to convey at a minimum the runoff from the 1% AEP Storm (100-year storm) as approved by CBU.

2. Minor System Maintenance (MSC) – 10% Credit

Minor stormwater systems are defined as draining less than 25 acres of runoff from areas other than the property. Minor systems must also be able to convey at a minimum the runoff from the 10% AEP Storm (10-year storm) as approved by CBU.

The amount of the credit is calculated annually and is based on the cost of the annual maintenance activities for the prior year divided by the annual user fees for the prior year.

APPLICATION REQUIREMENTS

- 1) Application fee: \$20.00 per year
- 2) *The owner shall supply maintenance information along with their application.*
 - i) Any association agreements or contracts for inspection and/or maintenance are required to be disclosed as part of the application.
 - ii) Indicate the schedule for major maintenance, repairs and replacement that will be performed and how many times per year basic maintenance (such as erosion control and/or trash collection) activities are performed.
 - iii) Inspection reports shall be filed with CBU every subsequent year, as calculated from the original application date, in order to maintain any level of Maintenance credit. If a property owner fails to file required inspection reports, the CBU will send a letter informing the property owner of the required action to avoid revocation of the Maintenance credits. If the property owner fails to take the required action, the Maintenance credits will be revoked until the situation is corrected. No retroactive

credits will be given during said lapse period. Credits will be restored on the effective date of the submittal of the property owner's acceptable response.

- iv) If a random CBU inspection notes infrastructure in an unsuitable condition, the CBU will send a letter informing the property owner of the required action to avoid revocation of the Maintenance credits. If the property owner fails to take the required action, the Maintenance credits will be revoked until the situation is corrected. No retroactive credits will be given during said lapse period. Credits will be restored on the effective date of the submittal of the property owner's acceptable response. If the property owner fails to correct the situation, CBU will correct the deficiency to this infrastructure and assess the property owner a fee equal to the either the actual cost of the required maintenance activities or one year's credits, whichever is greater. Furthermore the property owner shall be barred from making application for this type of credit in the future on any property.

3) The owner shall supply the following technical information along with their application.

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- i) Plat of survey certified by an Indiana-Registered Land Surveyor, or site construction plan certified by an Indiana-Registered Professional Engineer, indicating the following:

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- (a) Location, dimensions and critical elevations of the stormwater infrastructure on the property for which the credits are being applied for.
- (b) Watershed breaks across the property
- (c) Layout of impervious surface areas on the property
- (d) Layout of the drainage system on the property, including location and elevations of natural and man-made features
- (e) Sufficient topographic data or elevations to verify general drainage patterns across the property.
- (f) Conceptual site plan and structural control location diagram
- (g) Locations, dimensions and characteristics of all existing and proposed drainage patterns and facilities
- (h) Existing and proposed grading and location of all structures, parking, driveways, and other impervious areas

- ii) Detailed engineering calculations providing the results of routing the storm runoff for the ten (10) and one-hundred (100) year design storm events through the basin or control. An Indiana Professional Engineer must certify these calculations.

- iii) Upon completion of construction, as-built data certified by an Indiana Professional Engineer shall be submitted in order to complete the application. The as-built data must verify the capacity of the detention facilities and outlet structures for which the credit has been applied.

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- 4) Existing facilities will be eligible for credit as long as they meet the requirements of the City of Bloomington Utilities Rules and Regulations, Design & Construction Standards and all City of Bloomington Ordinances with regards to stormwater. In this case, the information required in Nos. 2 & 3 above and any other supporting material shall be submitted for review. Retrofitting of existing structures is also allowed to provide or increase the amount of credit for a property. The process for retrofitting existing structures is similar to that for new developments. As-built data shall be submitted for the existing or retrofitted structure before the credit will be applied.

Credits will not begin until certified as-built data has been submitted.

- 5) The owner shall be required to sign a statement certifying that information is correct and acknowledging that the credit determination will be based on information provided. A later determination that the information was inaccurate may result in loss of credit.
- 6) The owner shall be required to place stormwater infrastructure within a UTILITY EASEMENT which runs solely to CBU.

NOTE: Developers are encouraged to apply for all levels of quantity credits on new developments as part of the normal development plan review procedures. The credits, as well as the Stormwater Monthly User Fees, do not go into effect until construction is complete or upon approval of potable water service, whichever is earlier.

See Chapter 7 for an example application for the Infrastructure Maintenance Credits.

CHAPTER 6: EDUCATION CREDIT – 20% MAXIMUM

AWAITING ACTION BY STATE DEPARTMENT OF EDUCATION

City of Bloomington Utilities Department

FORM 1 - STORMWATER SERVICE CHARGE CREDIT APPLICATION

Credits Applied for: Rate Reduction (RRC) Add. Rate (ARC) NPDES (NPC)
(check all that apply) BMP (BPC) Conservation Area (CAC)
 Maintenance (IMC) Education (EDC)

Applicant Information (Financially Responsible Entity): (Please print or type)

Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Contact Person: _____ Telephone: (____) _____

Property Owner Information (If Different from Above):

Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____

Property Information:

Property Location/Address: _____
Parcel Identification Number (PIN): _____ Property Size (SF/acre): _____
Receiving Water's Name (if applicable): _____ Impervious Area (SF/acre): _____
Receiving Water's Name (if applicable): _____ Equivalent Runoff Units: _____

Plan Review Information:

Has this project and its storm water calculations been approved by the City? Yes No

If Yes, date of final approval of plan and calculations: _____
(If no copy is on file, City will notify Applicant to request a copy.)
If No, provide copies of as-built plans and calculations showing the project meets minimum City requirements.

Please indicate the review information that you are attaching to this application:

Sketch Plans/Narratives Final Recorded Plat Construction Plans Survey Plat
 Construction Specifications Runoff Calculations Routing Calculations As-Built Plans
 Certified Education Program NPDES Permit Maintenance Plans TSS Calcs

Certifications:

The information submitted in this application is true and correct to the best of my knowledge and belief. (This form must be signed by the financially responsible person if an individual, or if not an individual, by an officer, director, partner, or registered agent with authority to execute instruments for the financially responsible person). I agree to provide corrected information should there be any change in the information provided herein.

Type or print name

Title or Authority

Signature

Date

The following certification is required for approval of all credits for which a certified technical submission was required:

The information submitted in this application was prepared either by or under the supervision of myself as the qualified professional and is true and correct to the best of my knowledge and belief.

Type or print name

Professional License Type and Number

Signature

Date

(____) _____
Phone

City of Bloomington Utility Department

FORM 2 - STORMWATER SERVICE CHARGE CREDIT APPLICATION

(Form 1 must accompany this application form)

Quantity Reduction Credits (RRC, ARC):

The summary table below should be completed as a part of the application for Quantity Reduction Credits. Supporting calculations, site plans, details, specifications and other supporting data should be supplied to verify the data in this table. If multiple structures are being used on the site to control runoff rates additional summary tables for each structure are required. Information on the one-year storm is required only when applying for Quality Credits.

Storm Event	Natural Q (cfs)	Developed Q (cfs)	Routed Q (cfs)	% Reduction	Pond WSEL (ft)	Pond Storage (ft ³)
1						
2						
10						
25						
50						
100						

Quality Improvement Credits (QIC):

A credit application for BPC requires plans, specifications, calculations, maintenance schedule and/or other supporting data for each BMP in the application. A credit application for CAC requires a copy of the final recorded plat showing the conservation area and a plan for maintenance.

BMP #1: Description of BMP _____

BMP #2: Description of BMP _____

BMP #3: Description of BMP _____

BMP #4: Description of BMP _____

BMP #5: Description of BMP _____

Check Here if additional BMP's are attached for consideration

NPDES Permit Credit (NPC)

NPDES Permit Type and Number: _____

(Copy of NPDES Permit must be attached)

Infrastructure Maintenance Credits (IMC):

A credit application for IMC requires plans and profiles, calculations, maintenance schedule and/or other supporting data for each segment of infrastructure in the application. A structure data table listing the infrastructure being considered along with the information below is required.

Structure Number	Pipe Material Type
Structure Type (INDOT Reference)	Pipe Length in feet
Casting Type (Manufacture Number)	Pipe inverts up and downstream
Top of casting elevation at flow line	Pipe slope
Structure Invert Elevation	Pipe Full Capacity
Downstream Structure Number	10-year discharge to infrastructure
Pipe Size in inches	100-year discharge to infrastructure

Credit Summary:

Quantity Reduction Credits (QRC)	
Rate Reduction Credit (RRC):	_____ % (15%)
Additional Rate Credit (ARC):	_____ % (5%)
Total Quantity Credits:	_____ % (Maximum is 20%)
Quality Improvement Credits (QIC)	
Best Management Practices Credit (BPC):	_____ % (15%)
Conservation Areas Credit (CAC):	_____ % (5%)
Total Quality Credits:	_____ % (Maximum is 20%)
Infrastructure Maintenance Credits (IMC)	
Major System Maintenance	_____ % (15%)
Major System Maintenance	_____ % (10%)
Total Maintenance Credits:	_____ % (Maximum is 20%)
Total Annual Stormwater Credit:	_____ % (Maximum is 20%)
Additional Special Case Credits	
NPDES Credit (NPC):	(\$200)
Education Credit (EDC):	_____ % (20%)
Total Annual Stormwater Credit:	_____ % (Maximum is 20%)

CHAPTER 6: EXAMPLE CREDIT APPLICATIONS

Following are example applications for credit adjustments to the Stormwater Monthly User Fees. The filled out example applications are attached.

Example #1: Rate Reduction Credit and Additional Rate Reduction Credit, (RRC, and ARC per Chapter 3)

A new commercial development on a five acre site is being proposed adjacent to an existing 25 acre single family residential (SFR) development. The commercial development is proposing an underground detention system that will discharge into an existing detention pond in the residential development. The underground detention system can only maintain discharge rates between the pre and post development for the 2 and 10 year storms. However the commercial developers are proposing modifications to the existing SFR detention pond which was built to reduce the 100-yr post development storm to the 10-yr pre-development storm. The developer supplies certified calculation for the entire drainage basin which show the modifications not only maintain natural discharge rates for all design storms but also reduce the discharge rates for the 2-yr storm from natural rate of 10.2 cfs to 7.95 cfs, and for the 10-yr storm from natural rate of 18.6 cfs to 14.8 cfs.

Example #2: Best Management Practice and Conservation Area Quality Credit, (BPC and CAC per Chapter 4)

An industrial customer on a ten acre site has installed a retention pond the control discharge rates from the site. Runoff to the pond must pass through a with a sediment trap before entering the pond and the discharge from the pond passes through a constructed wetland before entering a local stream. Monitoring wells at the primary inlet and outlet indicate an average TSS removal of 75% for all storms and 92% for all storms less than or equal to the 1-year event.

In addition the customer has placed the floodplain of the local stream in a FLOOD PROTECTION EASEMENT,(0.5 acres), two sinkholes on the site in a SINKHOLE CONSERVANCY EASEMENTS, (0.1 acres), and a stand of old growth woods in a CONSERVATION EASEMENT (2.6 acres). The woods are adjacent to a public park and the City's Parks Department has agreed to maintain and manage the woods as a nature preserve within the park. All the easements prohibit future development in these areas and total 3.2 acres.

Example #3: NPDES Credit (NPC per Chapter 4)

The industrial customer from Example #2 obtains an NPDES Storm Water Discharge Permit from the Indiana Department of Environmental Management under Rule 6, due to the type of industrial activity on site. They are already receiving the other credits referred to in Example #2, so this application is for the NPC only. Once per year, the customer must re-apply for this credit.

Example #4: Infrastructure Maintenance Credits (NPC per Chapter 5)

A commercial customer with an annual stormwater user fee of \$5000 maintains 450 feet of 48" RCP that drains 37 acres through his site. His site contributes 15 acres of drainage to the pipe and the remaining 22 acres is from properties owned by other persons. The Q10 discharge is 135 cfs and

the capacity of the pipe is 148 cfs. Since the pipe drains less than 25 offsite acres and can handle up to the 10 year storm the system is classified as a minor system. Each year the customer removes sediment from the system and patches small cracks at a cost of \$450 per year. Since the maintenance cost divided by the user fees is 9% the customer receives a 9% credit for infrastructure maintenance each year. Last year, in addition to the annual maintenance, the customer also replaced 3 sections of pipe that had completely failed at a cost of \$1500. Although the maintenance cost divided by the user fees for the prior year is 39% the maximum credit for a minor system is 10%; therefore, the credit for the current year will be 10%.

Example #5: Application Fees

Monroe County Community School Corporation (MCCSC) is applying for credits for their various schools through the City. After careful consideration MCCSC has determined at this time it is only feasible to apply for credits for the two high schools, Bloomington North and Bloomington South. Both schools have detention areas which have been recently modified to treat the one-year storm as well as several BMP's on campus; however, the detention area at South regulates discharges far below the natural levels. Bloomington North also will dedicate a nature preserve and sign an agreement to maintain it in perpetuity. Both schools also will teach Stormwater Education as a part of their required curriculum.

For Bloomington North and South MCCSC will initially pay \$440 in application fees and \$20 each year afterwards. The fees for each school are as follows:

Bloomington North:

- Quantity Reduction Credit: \$100
(For rate reduction credit (RRC) only)
- Quality Improvement Credit: \$100
(For both BMP's and Nature Preserve (BPC and CAC))
- Education Credits: \$20 annual fee

Total Fee: \$220

Bloomington South:

- Quantity Reduction Credit: \$100
(For rate reduction and additional reduction (RRC and ARE))
- Quality Improvement Credit: \$100
(For both BMP's (BPC) only)
- Education Credits: \$20 annual fee

Total Fee: \$220

Appendix A. Stormwater Best Management Practices (BMP's):

Best Management Practices (BMP's) are structural and non-structural practices and techniques that mitigate the adverse impacts of stormwater runoff quality resulting from land development and urbanization. Structural BMP's include the construction of extended detention ponds, retention ponds and bio-infiltration swales or the use of porous pavement and catch basin inserts. Non-structural practices include activities such as parking lot vacuuming, eliminating fertilizer and pesticides from landscaping activities, and promoting stormwater education.

- 1) **Parking Lot Sweeping/Vacuuming:** Property owners who sweep and vacuum their parking lots eliminate sediments, heavy metals, hydrocarbons and other pollutants before they are able to enter the system. While this is a very effective method for improving the quality of the runoff, it requires a constant effort in order to work. In order to qualify property owners must sweep and vacuum their parking lots at least once every two days. A log of the activities with the date, weather conditions, start and finish times, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This log shall be included in the annual report submitted to CBU and shall be available upon request. Maximum credit for this activity is 5%.
- 2) **Bio-infiltration Areas:** Bio-infiltration areas address both water quantity and quality issues by storing runoff from small areas, forcing infiltration and trapping sediments. Bio-infiltrations areas include vegetative filter strips and landscapes areas. To be approved by CBU the bio-infiltration areas must meet the standards outlined in Section VII Chapter 6 of the CBU Engineering Design and Construction Manual. In order to be effective periodic maintenance to remove trapped sediment is required. A log of the maintenance activities with the date, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This log shall be included in the annual report submitted to CBU and shall be available upon request. The credit shall be applied only to the drainage area being served and the maximum credit for this activity is 5%.
- 3) **Sand Filter:** Sand filters work by forcing runoff collected by surface inlets through a sand bed to removed solids suspended in the water. To be approved by CBU the sand filter must meet the standards outlined in Section VII Chapter 6 of the CBU Engineering Design and Construction Manual. In order to be effective periodic maintenance to remove trapped solids and refresh the sand bed is required. A log of the maintenance activities with the date, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This log shall be included in the annual report submitted to CBU and shall be available upon request. The credit shall be applied only to the drainage area being served and the maximum credit for this activity is 7%.
- 4) **Catch Basin Insert:** Catch basin inserts improve the efficiency of individual catch basin by trapping sediments and trash in the catch basin. To be approved by CBU the catch basin must meet the standards outlined in Section VII Chapter 6 of the CBU Engineering Design and Construction Manual. In order to be effective all the structures collecting runoff from a drainage area must be fitted with an insert and periodic maintenance to remove trapped sediment is required. A log of the maintenance activities with the date, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This

log shall be included in the annual report submitted to CBU and shall be available upon request. The credit shall be applied only to the drainage area being served and the maximum credit for this activity is 5%.

- 5) **Stormwater Quality Ponds:** Ponds designed to mitigate the rate of runoff leaving a developed area can be designed and modified to also address water quality. To be approved by CBU the ponds must meet the standards outlined in Section VII Chapter 6 of the CBU Engineering Design and Construction Manual. In order to be effective periodic maintenance to remove trapped sediment is required. A log of the maintenance activities with the date, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This log shall be included in the annual report submitted to CBU and shall be available upon request. The credit shall be applied only to the drainage area being served and the maximum credit for this activity is 7%.
- 6) **Swirl Concentrators:** Swirl Concentrators work by forcing runoff collected by surface inlets through a structure that separates solids suspended in the water. To be approved by CBU the swirl concentrator must meet the standards outlined in Section VII Chapter 6 of the CBU Engineering Design and Construction Manual. In order to be effective periodic maintenance to remove trapped solids is required. A log of the maintenance activities with the date, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This log shall be included in the annual report submitted to CBU and shall be available upon request. The credit shall be applied only to the drainage area being served and the maximum credit for this activity is 7%.
- 7) **Education Kiosks:** Individuals that participate in educating the public improve water quality by raising the knowledge and concern of the community on stormwater issues. A kiosks place in with a minimum size of thirty-six square feet placed in a prominent public area displaying current and relevant stormwater quality information is eligible for a credit. The applicant should submit a design showing the size, information to be displayed and the location of the kiosks for approval by CBU. Each kiosks placed will reduce the stormwater user fee by 0.5% with a maximum credit for this activity of 2.5%. In order to receive the maximum credit individual kiosks should not be clustered together but maintain a separation of approximately 1000 feet. The kiosks shall be periodically reviewed, ensuring that the information is up to date and clearly displayed.
- 8) **Constructed Wetlands:** Natural wetlands are an important part of our environment providing areas for storage of runoff, removal of pollutants through settlement and vegetative uptake, and a habit for many species. Constructed wetlands attempt to mimic this process by creating similar wet areas with suitable plantings. To be approved by CBU the constructed wetland must meet the standards outlined in Section VII Chapter 6 of the CBU Engineering Design and Construction Manual. In order to be effective periodic maintenance to remove trapped solids and decaying vegetation is required. A log of the maintenance activities with the date, amount of pollutants collected by weight, type of pollutants collected and disposal location must maintained. This log shall be included in the annual report submitted to CBU and shall be available upon request. The credit shall be applied only to the drainage area being served and the maximum credit for this activity is 10%.

Appendix B. Maintenance Requirements:

Appendix C. Definition of Terms: