

**STORMWATER
CREDIT MANUAL**

City of Rhineland, Wisconsin

September 2012

STORMWATER CREDIT MANUAL

City of Rhinelander, Wisconsin

September 2012

Table of Contents

Preface	2
1. Introduction	3
2. Credit Policies	5
3. Direct Discharge Credits	7
• Direct Discharge Credit to owners of properties which discharge all of a portion of their runoff directly to the Wisconsin River or the Pelican River, and which do all riverbank maintenance	
4. Quantity Reduction Credits	8
• Peak Flow Rate Reduction Credit for properties that control post-developed peak runoff rates for the 10-year and 100-year design storms to pre-settlement levels	
• Volume Reduction Credit for those properties which provide at least 100% of the pre-settlement stay-on runoff volume for the annual average storm	
5. Quality Credit	10
• Quality Credit for those properties which provide at least 85% suspended solids reduction as compared to no controls and which limit sediment leaving the site to at least undeveloped conditions	
6. Application Form	12

PREFACE

Send Application Forms to:

City of Rhinelander
Department of Public Works
Attn: Stormwater Utility Credit
135 South Stevens Street
Rhinelander, WI 54501

Make Checks Payable to: City of Rhinelander

For Questions Regarding the Credit Application, Contact:

Water Utility Clerk
(715) 365-8600

Application Procedure:

Initial review of Stormwater Utility Credit Applications will be completed within 30 days of receipt of the application form and fee payment. Application fees are one-time and non-refundable. Reviewers will check application forms for completeness and accuracy. Application for any credit is an acknowledgement of the indemnification statement in Chapter 2 of this document (Section G), and the City of Rhinelander's (City) right-of-entry to inspect and verify the information submitted on said application. If deficiencies in the application or supporting information 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 30 days of receipt of the additional information. Billing adjustments required to implement credits shall be applied retroactively to the next full billing period following the date of the customer's completed application. 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 Chapter 3.07.08 of the City of Rhinelander Code of Ordinances.

CHAPTER 1: INTRODUCTION

The City Council of the City of Rhinelander, Wisconsin passed Ordinance 3.07.08 which created a citywide Stormwater Utility to provide stormwater management activities.

The primary revenue source for the Stormwater Utility is Stormwater Service Charges to all developed property in the City. Stormwater Service Charges to a property are related to the impervious surface area on the property. In general terms, the impervious areas are the portions of the property that shed water during a storm. Typical impervious areas include sidewalks, driveways, roofs, awnings, patios, parking lots and compacted aggregate.

A statistical sampling of residential properties within the City determined that an average developed single-family residential/duplex property has 3305 square feet of impervious area. As a result, 3305 square feet is used as the base billing unit, or ERU (equivalent runoff unit).

Each single-family residential, duplex or triplex residential property is billed according to a flat rate schedule established by resolution by the City Council. For properties other than single-family, duplex and triplex residential properties, the amount of impervious area is measured in square feet and divided by 3305, the calculated amount of impervious surface area on an "average" single-family residential parcel, duplex residential or triplex residential parcel. The result of that division is rounded to the nearest tenth of an ERU and becomes the number of ERUs assigned to the property. That number multiplied by the unit billing rate contained in the current stormwater utility charge resolution yields the stormwater service charge for that particular property.

The number of ERUs assigned to properties other than single-family, duplex and triplex properties will remain constant unless physical changes are made that alter the amount of its impervious surface area. In these cases, billing changes will be made automatically at the completion of construction. Typically, these changes will be approved and implemented through the City of Rhinelander Inspection Department building permit process.

The City of Rhinelander has developed a system of credits for stormwater service customers who:

- (1) Discharge all or a portion of the stormwater directly into the Wisconsin River or Pelican River without sending it through the public drainage system or across property owned by another person or entity, and where the customer assumes full responsibility for maintenance of the river bank.
- (2) Have facilities or controls in place to temporarily store stormwater runoff or infiltrate stormwater runoff, thereby reducing the quantity impact on the public drainage system.
- (3) Have facilities or controls in place to remove suspended solids from stormwater runoff, thereby reducing the stormwater pollutant impacts on the public drainage system.

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

The total ERU charge is split into three parts. The administrative part (5% of the total charge) is not eligible for credits. The operation and maintenance part (69% of the total charge) and the capital improvement and debt service part (26% of the total charge) are eligible for 50% to 100% credits, depending upon the type of credit being requested. A summary of the available credit percentages for each type of credit under the current credit policy is presented on the following page.

SUMMARY OF THE CURRENT CREDIT STRUCTURE FOR RHINELANDER STORMWATER UTILITY

		Administrative Part of Total Charge	Operation & Maintenance Part of Total Charge	Capital Improvement and Debt Service Part of Total Charge
	Percent of Total ERU Charge>	5%	69%	26%
	<i>Type of Credit</i>	<i>Percent of The Part of the Charge That Is Eligible for Credit</i>		
1.	Direct Discharge (To Pelican River or Wisconsin River, only, not to ditches, tributaries, etc.)	None	100%	100%
2.	Quantity Reduction			
a.	Peak Flow Rate Reduction	None	50%	50%
b.	Total Runoff Volume Reduction	None	100%	100%
3.	Quality Improvement (Pollutant Reduction)	None	50%	50%

CHAPTER 2: CREDIT POLICIES

It is the City'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. The policy has been crafted to maintain a balance between simplicity and effectiveness.

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. The credit application fee is \$200.00. It is the intent of the City to process applications within thirty (30) days of submittal of the complete and correct application package. Billing adjustments required to implement credits shall be applied retroactively to the next full billing period following the date the customer submitted a complete application. Adjustments shall be made by crediting the customer's stormwater service charge until any overpayment has been fully repaid. A pending application for credit shall not constitute a valid reason for non-payment of current Stormwater Service Charges. For new developments, credits detailed herein do not apply until the stormwater service charge would initially be levied.

B. DIRECT DISCHARGE CREDIT – A direct discharge credit is available to properties that discharge stormwater directly into the Wisconsin River or Pelican River under certain circumstances. Qualification requirements and application procedures for this credit are outlined in Chapter 3.

C. QUANTITY REDUCTION CREDITS – Two different quantity reduction discharge credits are offered to customers that maintain runoff facilities or controls, such as detention or retention facilities, that restrict peak stormwater runoff rates released from their property below the rates required by current regulations or controls that prevent the discharge of stormwater runoff generated on their property beyond levels required by current regulations. Quantity Reduction Credits shall be conditioned on continuing operation and maintenance of these facilities.

- The **Peak Flow Rate Reduction Credit** is available for stormwater facilities that control the post-development peak rate of stormwater runoff at the pre-development rates for the ten (10) and one hundred (100) year design storms to reduce the peak flow rates of stormwater runoff to levels that would occur if the site was in a pre-settlement condition. This reduction in runoff rates is beneficial to the City because it provides additional benefit to downstream properties from larger storm events
- The **Volume Reduction Credit** is offered to customers that provide reduction in the volume of runoff from the average annual storm at least to pre-settlement levels. This volume reduction is beneficial to the City because it protects downstream properties from longer duration storm runoff events and enhances groundwater recharge

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

D. QUALITY CREDITS are offered to properties that reduce suspended solids in stormwater runoff to levels that would occur under undeveloped conditions, provided that the reduction is at least 85% of the suspended solids discharge level that would occur with no runoff controls.

Qualification requirements and application procedures for these credits are outlined in Chapter 5.

F. INDEMNIFICATION - In consideration for permission to construct or install a stormwater improvement Best Management Practice (BMP), and by nature of applying for a stormwater user fee credit, the applicant is hereby legally acknowledging and agreeing to the following:

1. After completion of the construction or installation by Owners and approval by the City, the construction or installation of a stormwater improvement/BMP shall remain a privately owned and maintained stormwater improvement BMP, shall not be accepted by the City, and shall not become a part of the maintenance program of the Rhinelander Stormwater Utility or the Rhinelander Department of Public Works (DPW). All maintenance responsibility and liability shall be and remain with the property owners, their personal representatives, heirs, grantees, successors, and assigns.
2. Owners, their personal representatives, heirs, grantees, successors, and assigns shall indemnify and hold harmless the City of Rhinelander, 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.

This Agreement shall run with the real estate upon which the stormwater improvement BMP as been constructed and shall be binding upon Owners, their personal representatives, heirs, grantees, successors, and assigns. This Agreement shall be disclosed upon transfer of real estate.

CHAPTER 3: DIRECT DISCHARGE CREDIT

A 100% Direct Discharge Credit against the operation and maintenance part (69% of the total charge) and a 100% Direct Discharge Credit against the capital improvement and debt service part (26% of the total charge) of the stormwater service charge is available to properties that are contiguous to the Wisconsin River or Pelican River. Runoff that passes through a public or private drainageway prior to outfalling to the Wisconsin River or Pelican River is not considered direct discharge. Proportionate credit may be granted for that portion of the property's impervious surface area that discharges directly into the Wisconsin River or Pelican River. **In order to qualify for this credit, the property owner must also assume all maintenance responsibility for the river bank(s).**

This credit need only be applied for once, but will be reviewed if the property is redeveloped or regraded.

APPLICATION

The completed Direct Discharge Credit application must include a \$200.00 application fee and the following information:

- 1) Plat of survey or site construction plan certified by a Wisconsin Registered Land Surveyor or certified by a Wisconsin Professional Engineer, indicating the following:
 - a. The location of the Wisconsin River or Pelican River
 - 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. A calculation of the percent of the property that drains directly to the Wisconsin River or the Pelican River.

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

The owner shall submit 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.

CHAPTER 4: QUANTITY REDUCTION CREDITS

Quantity Reduction Credits are available to properties whose peak stormwater runoff rate is restricted and controlled through onsite facilities or controls, such as detention and retention ponds, or whose total runoff volume is reduced by biofiltration facilities or similar infiltration facilities, which are privately designed, constructed, and maintained according to City standards and requirements.

TYPES OF CREDIT

1. Peak Rate Reduction Credit

- Mathematical Model to Be Used – TR-55, TR-20, or other approved model that generates a hydrograph and allows routing through detention facilities.
- Criterion – Reduce calculated peak flow rates from ten (10) year and one hundred (100) year return frequency storms of a Type II distribution to levels that would occur if the site was in pre-settlement conditions. Pre-settlement conditions is defined as “good” hydrologic conditions for a woods-grass combination land cover
- Credits – 50% of the operation and maintenance part of the stormwater service charge. (The operation and maintenance part represents 69% of the total ERU charge.) 50% of the capital improvement and debt service charge. (The capital improvement and debt service charge represents 26% of the total ERU charge.) The applicant must qualify for the entirety of both credits. Fractions will not be given.

2. Volume Reduction Credit

- Mathematical Model to Be Used – RECARGA or SLAMM
- Criterion – Match or exceed 100% of the annual average stay-on volume would occur if the site was in pre-settlement conditions. Pre-settlement conditions is defined as “good” hydrologic conditions for a woods-grass combination land cover. For SLAMM a pre-settlement condition is defined as the “undeveloped” condition.
- Credits –100% of the operation and maintenance part of the stormwater service charge (69% of the total ERU charge) and 100% of the capital improvement and debt service charge (26% of the total ERU charge). The applicant must qualify for the entire credit. Fractions of this credit will not be given.

APPLICATION REQUIREMENTS

1. Application fee: \$200.00
2. *The owner shall supply maintenance information along with his/her application. Any association agreements or contracts for inspection and/or maintenance are required to be disclosed as part of the application. 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. Inspection reports shall be filed with the City every subsequent year, as calculated from the original application date, in order to maintain either Quantity credit. If a property owner fails to file required inspection reports or if a random City inspection results in a judgment by the City that the facility is ineffective, the City will send a letter informing the property owner of the required action to avoid revocation of the Quantity credit. If the property owner fails to take the required action, the Quantity credit will be revoked until the situation is corrected. No retroactive credit will be given during said lapse period. Credit 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.*
- Conceptual site plan and structural control location diagram
 - Locations, dimensions and characteristics of all proposed and existing drainage patterns and facilities
 - Existing and proposed grading and location of all structures, parking, driveways, and other impervious areas
 - Detailed engineering calculations using approved mathematical models. A Wisconsin Professional Engineer must certify these calculations.
 - The sum-total of 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. Control of runoff in only one watershed, *which compensates for the runoff from all others*, could receive credit.
 - Upon completion of construction, as-built data certified by a Wisconsin Professional Engineer shall be submitted in order to complete the application. The as-built data must verify the capacity of the facilities for which the credit has been applied.

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

The owner shall submit 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.

CHAPTER 5: QUALITY CREDIT

A Quality credit will be available to properties where structural or non-structural stormwater best management practices (BMPs) are located and which are used to treat stormwater runoff, specifically suspended solid (TSS) to levels greater than otherwise required by state or local regulations.

NOTE: A detention pond that is being used for a Quantity Reduction Credit may also be approved as a BMP for a quality credit if properly designed. Calculations or professional certifications showing the required removal of TSS in the pond must accompany the application for quantity reduction credit. This type of quality credit will be tied to the associated quantity credit, which means that termination of the quantity credit for any reason will also terminate the quality credit for that BMP.

- Mathematical Model to Be Used – SLAMM or P-8, run in accordance with the latest requirements established by the Wisconsin Department of Natural Resources
- Criterion – Reduce sediment leaving the site to levels that would occur under “undeveloped” conditions, or by 85% as compared to no runoff controls, whichever is greater. The definition of “undeveloped” shall be that used in the SLAMM model.
- Credit – 50% of the operation and maintenance part of the stormwater service charge. (The operation and maintenance part represents 69% of the total ERU charge.) 50% of the capital improvement and debt service charge. (The capital improvement and debt service charge represents 26% of the total ERU charge.) The applicant must qualify for the entirety of both credits. Fractions will not be given.

APPLICATION REQUIREMENTS

1. Application fee: \$200.00. Multiple BMPs can be listed on one application and under one application fee, but the application must make clear what credits are being requested.
4. *The owner shall supply maintenance information along with his/her application.* Any association agreements or contracts for inspection and/or maintenance are required to be disclosed as part of the application. Indicate the schedule for major maintenance that will be performed and how many times per year basic maintenance activities are performed. If a random City inspection results in a judgment by the City that the facility is ineffective, the City will send a letter informing the property owner of the required action to avoid revocation of the Quality credit. If the property owner fails to take the required action, the Quality credit will be revoked until the situation is corrected. No retroactive credit will be given during said lapse period. Credit will be restored on the effective date of the submittal of the property owner's acceptable response.
5. *The owner shall supply the following technical information along with their application.*
 - Conceptual site plan and structural control location diagram
 - Locations, dimensions and characteristics of all proposed and existing drainage patterns and facilities
 - Existing and proposed grading and location of all structures, parking, driveways, and other impervious areas
 - Detailed engineering calculations using approved mathematical models. A Wisconsin Professional Engineer must certify these calculations.
 - The sum-total of suspended solids discharges 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. Control of runoff in only one watershed, *which takes into account the runoff from all others*, could receive credit.

- Upon completion of construction, as-built data certified by a Wisconsin Professional Engineer shall be submitted in order to complete the application. The as-built data must verify the capacity of the facilities for which the credit has been applied.

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

The owner shall submit 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.

City of Rhinelander, Wisconsin, Public Works Department

STORMWATER SERVICE CHARGE CREDIT APPLICATION

Credits Applied for: [] Direct Discharge [] Peak Rate Reduction
(check all that apply) [] Volume Reduction [] Quality

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:
Tax Parcel Identification Number (PIN):
Receiving Water's Name (if applicable): Impervious Area (SF):
Brief Description of Storm Water Facilities at Location (if applicable):

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 [] Survey Plat [] Construction Plans [] As-Built Plans
[] Construction Specifications [] Runoff Calculations [] Routing Calculations [] TSS Calcs

Certifications:

The above information 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 above and following information 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

Type or print name Professional License Type and Number
Signature Date () Phone

Direct Discharge Credit

Total Gross Impervious Area (sf): _____ Impervious Area Discharging Direct (sf): _____

Percent of Direct Discharge of Impervious Area (%): _____

Quantity Reduction Credits

Peak Flow Rate Reduction Credit, Only

Pre-Settlement **10-year** flow (cfs): _____ Designed **10-year** flow (cfs): _____

Pre-Settlement **100-year** flow (cfs): _____ Designed **100-year** flow (cfs): _____

Required Volume of Pond (ac-ft): _____ Provided Volume of Pond (ac-ft): _____

Elevation of 100-year event (ft): _____ Discharge at that Elevation (cfs): _____

Elevation of Emergency Spillway (ft): _____ Discharge at that Elevation (cfs): _____

Volume Reduction Credit, Only

Pre-Settlement Annual Runoff (acre-feet): _____

Designed Annual Runoff (acre-feet): _____

Quality Credits

Description of BMP _____

Pre-Settlement Suspended Solids Discharge Amount (tons): _____

Suspended Solids Discharge Amount Without Controls (tons): _____

Design Suspended Solids Discharge Amount (tons): _____

Reduction of Solids Provided (tons): _____

Percent Reduction of Solids (%): _____

(Plans, specifications, calculations, or other supporting data should be supplied for each BMP)

Credit Request Summary

Direct Discharge Credit : _____% (Maximum Is 100% of Operation & Maintenance Part and Capital Improvement and Debt Service Part of the Total Charge)

Quantity Credits:

Rate Reduction Credit : _____% (Credit Is 50% of Operation & Maintenance Part and Capital Improvement and Debt Service Part of the Total Charge)

Volume Reduction Credit : _____% (Credit Is 100% of Operation & Maintenance Part and Capital Improvement and Debt Service Part of the Total Charge)

Quality Credits: _____% (Credit Is 50% of Operation & Maintenance Part and Capital Improvement and Debt Service Part of the Total Charge)