

## **1.0 INTRODUCTION**

On August 7, 2007, the Whitewater City Council adopted an ordinance creating a Stormwater Utility. In establishing the stormwater utility, the City recognized that certain properties may have less impact on stormwater utility costs than others in a similar rate class, either because of their geographic location, stormwater management practices property owners have implemented on-site, or because of other factors not identified in the original stormwater utility rate study. As a result, the City has developed a Stormwater Credit System to provide owners of such properties with the opportunity to apply for stormwater utility credits. This document summarizes policies and procedures for determining eligibility for stormwater utility credits.

## **2.0 OVERVIEW OF STORMWATER UTILITY**

The City of Whitewater currently owns and maintains over 50 miles of streets, 19 miles of storm sewer, over 1,700 drainage structures such as inlets and manholes, and 6 detention basins. Much of the existing drainage system is over 30 years old and in need of repair. In addition, increasing emphasis by the United States Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources (DNR) on impacts of stormwater runoff-borne pollutants on waters of the state has increased, and will likely continue to increase, local administrative and construction costs.

To provide a means of funding needed maintenance and improvements to the City's stormwater management system, the City has created a stormwater utility. The fee structure for the stormwater utility is based on the amount of "impervious area" on a land parcel. Impervious areas are areas where the amount of seepage into the ground is restricted because of the presence of hard surfaces such as rooftops, parking lots, or driveways. Because seepage is limited, a higher proportion of rainfall or snowmelt drains from the land parcel to the City's drainage system than would on from a parcel having a vegetative cover. As a result, the cost of constructing and maintaining the City's drainage system is typically higher downstream from areas with a greater amount of impervious areas.

Under the City's stormwater utility, a property owner having a greater amount of impervious area will typically pay a proportionally higher fee than a property owner with a lower amount of impervious area because the impact of his land use on the stormwater system is greater. For example, a commercial establishment having eight times the amount of impervious area of a typical residential property would pay a user fee eight times higher than that of a residential property owner.

Responsibilities of the stormwater utility include the following:

1. Develop and administer programs and practices to reduce sediment, heavy metals, pesticides, nutrients, bacteria, and oxygen-demanding organic waste from pollutant "source areas" that have been recognized as a cause of water quality degradation in the City's streams, lakes, ponds, and other water resources. These programs and practices are necessary for compliance

with EPA and DNR nonpoint source pollution control rules and local stormwater management and erosion control ordinances.

2. Fund and administer stormwater management operation and maintenance activities. Activities include cleaning and routine repair of ditches, detention basins, storm sewers, catch basins, manholes, streambanks and associated facilities, street sweeping, leaf collection, and construction of stormwater treatment, detention, and conveyance facilities serving a public purpose.
3. Respond to customer billing and service inquiries.

**3.0 STORMWATER UTILITY RATE STRUCTURE**

Stormwater service charges are based on Equivalent Runoff Units (ERU). One ERU equals the average impervious area on a typical residential property. Single-family residential parcels are assigned one ERU. In Whitewater, one ERU is equivalent to approximately 3,850 square feet of impervious area. The fee for nonresidential parcels is based on the number of ERUs. The number of ERUs is estimated by dividing the total estimated impervious area on the parcel by the typical residential impervious area. Appropriate credits will be provided to nonresidential parcels that do not fully utilize city stormwater management facilities.

Whitewater’s Stormwater Utility rate structure includes the following customer rate classes:

1. Residential -- single family unit (lot size less than 5,445 square feet) – 0.7 ERU
2. Residential – single family unit (lot size between 5,446 and 21,780 square feet) – 1.0 ERU
3. Residential – single family unit (lot size 21,781 square feet or larger) – 1.2 ERU
4. Residential -- duplex: 0.5 ERU multiplied by each dwelling unit.
5. Residential – multifamily: (including apartments greater than or equal to 3 Units, Condominiums, and Mobile Homes) The charge per unit shall be calculated by dividing the number of ERU’s calculated for the entire property by the number of units existing on the property
6. Nonresidential – one ERU times a factor obtained by dividing the total impervious area of the property by the square footage equivalent for one ERU. Such impervious area shall be determined based upon the best information reasonably available. The result shall be rounded down to the nearest one-tenth (0.1).
7. Undeveloped -- no stormwater charge shall be assigned to undeveloped land.

The stormwater user fee for each rate class includes three distinct components:

- a. Base Component: The base component includes the stormwater utility’s estimated annual administrative and management costs, water quality costs, and other miscellaneous costs.

- b. Operation and Maintenance Component: The O&M component includes the utility’s estimated annual operation and maintenance costs for the city’s stormwater management system, including storm sewer and detention basin maintenance, street sweeping, and so on.
- c. Capital and Debt Service Component: This includes capital costs and debt service payments for the city’s stormwater management system.

The rate for each ERU is determined by dividing the total revenue that must be generated for the stormwater system by the total number of ERUs within the utility district.

**4.0 CORRECTIONS, ADJUSTMENTS, CREDITS, AND EXEMPTIONS**

The City recognizes that certain properties may have less impact on stormwater utility costs than others in a similar rate class, either because of their geographic location, stormwater management practices property owners have implemented on-site, or because of other factors not identified in the original stormwater utility rate study. Modifications to stormwater utility fees will be considered through corrections, adjustments, or credits, as described in this Section.

A. Corrections

A customer may apply for a correction if the customer believes the impervious area calculation used for the ERU designation on the subject property is incorrect. To be eligible for a Correction, the customer must provide the Stormwater Utility with site-specific information specified in Section 5.0A.

B. Adjustments

An adjustment is defined as a modification to a customer’s stormwater utility fee to reflect site specific runoff characteristics that are substantially different from those attributed to the base billing unit. An adjustment may be applicable if a customer in a nonresidential or multifamily residential class believes a portion of the subject property has significant surface area that is not being served by City-owned infrastructure. This means that all or a portion of the customer’s property does not directly or indirectly discharge to any natural or manmade stormwater conveyance, storage, or treatment facility owned or maintained in any way by the stormwater utility. To be eligible for an Adjustment, discharge from the property must not be in violation of any environmental code or federal, state, or local surface water drainage requirements.

Adjustments shall be applied only to the capital and debt service and operation and maintenance components of the stormwater utility fee. Properties qualifying for an adjustment are still responsible for the base component unless the applicant can demonstrate the property is regulated by a separate municipal Stormwater Discharge Permit (WPDES). An adjustment need only be applied for once, but can be reviewed if the property is redeveloped or re-graded.

C. Credits

1. Definition

A credit is defined as a percentage reduction applied to the operation and maintenance and capital and debt service components of a customer’s stormwater utility fee based on existence of an on-site stormwater management practice or facility that reduces the rate or volume of stormwater or sediment discharge to facilities owned or maintained by the Stormwater Utility. A credit may be applicable if a customer in the nonresidential or multifamily residential class has constructed a detention basin, infiltration basin, or similar facility that reduces impacts of stormwater runoff from the customer’s property to the City’s stormwater management system. To be eligible for credit, all practices must comply with the design, operation, and maintenance requirements of all the applicable ordinances and codes of the City of Whitewater, State or Federal Permitting, and this Manual. Application procedures and requirements for these credits are outlined in Section 5.

2. Fee Credit Criteria

- a. Peak Flow Reduction Credit: This credit is based on the reduction of post-development peak flow for the specified rain event (see below). An applicant must demonstrate that runoff from the land parcel is released at a lower rate than without storm water management. To determine the amount of credit, the “post-site development” peak flow with no management will be compared to the “post-site development” peak flow with management. The percentage change will then be multiplied by the number of ERU’s “served” by the stormwater management facility. All calculations shall use the 10-year, 24-hour, SCS Type II distribution rainstorm of 3.9 inches and SCS curve number hydrology.

For example, the owner of a 30-acre nonresidential property having an impervious area of 8.84 acres (100 ERUs) applies for a credit based on the presence of a detention basin that reduces the 10-year peak flow rate from the site from 40 cfs to 25 cfs (37.5 percent peak flow reduction). The detention basin serves an on-site impervious area of 4.42 acres square feet (50 ERU’s) of the total 8.84 acres of impervious area (100 ERU’s) present on the site. The owner would then be eligible for a credit of 18.8 ERU’s to the operation and maintenance and capital and debt service components of the stormwater utility fee, based on multiplying 37.5 percent times the number of ERU’s “served” by the facility (50 ERU’s times 37.5 percent). The property owner would still be responsible for the full number of ERU’s for the base component, unless he or she can demonstrate that the property is regulated by a separate WPDES Stormwater Discharge Permit (MS4).

- b. Stormwater Quality Credit: This credit may be granted for parcels that provide a quantifiable stormwater quality benefit through implementation of Best Management

Practices for treatment of stormwater runoff to capture nonpoint source pollutants. The following credits will be considered:

- i) Provision of a permanent pool designed in conformance with Wisconsin Department of Natural Resources Conservation Practice Standard 1001 to capture sediment and other pollutants. This practice will be eligible for up to a 25 percent credit applied to the number of ERU's "served" by the facility.
- ii) Infiltration Basins, Infiltration Strips, rain gardens or bioretention systems will be eligible for up to a 20 percent credit applied to the number of ERU's "served" by the facility. To be eligible for the maximum credit, the applicant must demonstrate that the facility is sized and designed in accordance with Wisconsin Department of Natural Resources Conservation Practice Standards.
- iii) Manufactured devices designed to remove sediment from stormwater runoff (e.g. "Stormceptor", "Vortechs", "Downstream Defender", etc.) will be eligible for up to a 15 percent credit applied to the number of ERU's "served" by the facility. The maximum number of ERU's subject to credit will be capped with consideration of the maximum capacity of each unit, per manufacturer's specifications. For example, if the device specified is designed to serve a maximum area of 1 acre (43,560 square feet) of impervious area, the maximum ERU credit allowable is 1.7 ERU's (43,560 square feet divided by 3,850 square feet per ERU times 15 percent).
- iv) Provision of measures to trap oil and grease using oil/water separators, replaceable inlet inserts, or other approved practices will be eligible for up to a 10 percent credit applied to the number of ERU's "served" by the practice.

### 3. Maximum Credit

The maximum aggregate credit to the Storm Water Service Charge of any individual property is 50 percent of its gross calculated ERU's, regardless of how many individual credits for which the property qualifies. The credit level is based on the amount of utility budget expended on maintaining the flow capacity of the storm water conveyance system. Developments must conform to all applicable ordinances and standards of the city of Whitewater to be credit eligible.

### 4. Application of Credits

The total credit applied to a site will be the sum of individual credits applied for. For example, an applicant may be eligible for both a peak flow reduction credit and a water quality credit for a wet detention basin that provides both peak flow reduction and water quality benefits to the City. Likewise, if different portions of a site are served by different stormwater facilities, the total amount of credit is additive up to the maximum credit specified below. The following example summarizes the possible use of additive credits.

A nonresidential property having a total impervious area of 8.84 acres (100 ERU's) is located near the crest of a hill near the City Limits. The westerly 2.21 acres square feet of impervious area (25 ERU's) drains to a detention basin without a wet pool located on the west side of the property that reduces peak flow for the 10-year storm by 37.5 percent, and the easterly 4.42 acres square feet of impervious area (50 ERUs) drains to a detention basin on the east side of the property having a permanent wet pool designed in accordance with Wisconsin Department of Natural Resources technical standards that reduces peak flow for the 10-year storm by 20 percent. Approximately 1.11 acres square feet of impervious area (12.5 ERU's) discharges through a wet detention basin to a Town owned drainage ditch outside the jurisdiction of the stormwater utility, and approximately 1.11 acres square feet of impervious area (12.5 ERUs) drains directly to a storm sewer owned and maintained by the stormwater utility without treatment. The following adjustments and credits would apply:

- a. The site would be eligible for an adjustment of (-12.5 ERU's) because 1.11 acres square feet of impervious area does not drain to a stormwater facility owner or maintained by the stormwater utility. This adjustment would only apply to the capital and debt service and operation/maintenance components of the fee.
- b. The site would be eligible for a peak flow reduction credit of 19.4 ERU's (9.4 ERU's to the west pond plus 10 ERU's to the east pond).
- c. The site would be eligible for a water quality credit of 12.5 ERU's based on the presence of a wet pool serving 50 ERU's (25 percent Credit).

Based on these individual adjustments and credits, the operation/maintenance and capital/debt service components of the stormwater utility fee would be reduced by a total of 44.4 ERU's. Of this reduction, 12.5 ERU's is considered an adjustment, and 31.9 ERU's is considered a credit. Since the number of credited ERU's (31.9) is less than 50 percent of the gross number of ERU's on the site, the entire credit applies.

A sample worksheet depicting this calculation is included as Attachement 1.

D. Exemptions

Properties that are exempt from property taxes are not exempt from the stormwater utility fee. Public right-of-way and railroad right-of-way is considered part of the City's stormwater conveyance system and therefore exempt. No other exemptions from stormwater utility fees will be considered.

E. Right of Access

Prior to receiving a credit or exemption, the Director of Public Works or designee shall be allowed access to the property to determine the amount of credit or exemption to be granted. No credit shall be considered for any "natural" features, including but not limited to, wetlands, streams and creeks,

floodplains, or water impoundment of any kind in existence prior to the passage of the stormwater utility ordinance.

**5.0 APPLICATION PROCEDURES AND REQUIREMENTS**

The Stormwater Utility will accept applications from property owners requesting consideration for corrections, adjustments and credits. Applications may be obtained from the Director of Public Works. A correction, adjustment, or 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. It is the intent of the Stormwater Utility to process applications within thirty (30) calendar days of submittal of the complete and correct application package. Billing adjustments required to implement credits shall be applied retroactively to the date the customer submitted a complete application. Adjustments shall be made by crediting the customer’s storm water service charge until any overpayment has been fully repaid. A pending application for credit shall not constitute a valid reason for non-payment of the current Storm Water Utility Fees. In the case of new development, Storm Water Utility Fees and the associated credits detailed herein do not apply until construction is complete and verified by the Stormwater Utility, or upon granting of conditional occupancy, whichever is earlier.

Upon receipt of the application, 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 of the credit. 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 thirty (30) calendar days of receipt of the additional information. 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 the City of Whitewater Stormwater Utility Ordinance.

Submittal requirements for Correction, Adjustment, and Credit Applications are described below.

**A. Correction Applications**

The completed Stormwater Utility Correction application must include a \$100.00 application fee and plat of survey certified by a Wisconsin-Registered Land Surveyor, or as-built construction site plan certified by a Wisconsin Professional Engineer or Professional Hydrologist, indicating the following:

- a) Property location
- b) Layout of impervious surface areas on the property
- c) A calculation of impervious area (in square feet) for each delineated drainage area on the property.

The \$100 application will be refunded to the property owner if the correction is found to be warranted.

**B. Adjustment Applications**

The completed Stormwater Utility Fee Adjustment application must include a \$200.00 application fee and plat of survey certified by a Wisconsin-Registered Land Surveyor, or as-built construction site plan certified by a Wisconsin Professional Engineer or Professional Hydrologist, indicating the following:

- a) Property location
- b) Drainage basin divides on 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 impervious area (in square feet) for each delineated drainage area on the property.

The \$200 application will be refunded to the property owner if the adjustment is found to be warranted.

**C. Credit Applications**

The completed Post Development Flow Control Credit application must include a \$200.00 application fee and the following information:

- 1. Maintenance information: Any 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. In order to maintain the credit, the property owners shall provide the city with inspection reports by January 1st of every subsequent year. If a property owner fails to file required inspection reports or if a city inspection finds the system not meeting the conditions set forth in this manual, the city 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, the credits will be revoked until the situation is corrected. No retroactive credits will be given during the lapse period. Credits will be restored on the effective date of the submittal of the property owner’s acceptable response.
- 2. Technical information (certified by a Wisconsin Professional Engineer):
  - a) Site plan(s) at a scale of 1”=100’ or larger (i.e. 1”=50’ or 1”=20’ etc.) appropriate to display the following information clearly:
    - 1) Locations, dimensions, and characteristics of all drainage patterns and storm water management facilities

- 2) Location of all impervious surfaces including, but not limited to: structures, parking, and driveways.
  - 3) Soils
  - 4) Site topography
  - 5) Details of detention facility outlet structure(s)
  - 6) Diagram of watershed routing to the detention facility(s)
  - 7) As built construction drawings verifying the storm water management structural information.
- b) Summary of runoff peak flow calculations for the 10-year, 24-hour rain event, by watershed, including the following:
- 1) Existing flow rates
  - 2) Postdevelopment flow rates without management
  - 3) Postdevelopment flow rates with management
- c) Calculations (and factors used for calculations) performed to determine existing, postdeveloped "managed", and postdeveloped "unmanaged" peak flow control including, but not limited to the following:
- 1) Time of concentration(s)
  - 2) Curve number(s)
  - 3) Watershed areas
  - 4) Watershed routing
  - 5) Engineered designs for all structural flow control management practices
  - 6) Stage-storage-discharge tables or curves for the detention facility(ies)
  - 7) Tailwater impacts, if any
3. Statement of Certification: The owner shall 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 application information was inaccurate may result in loss of credit. NOTE: Developers are encouraged to apply for flow control credits on new developments as part of the city's normal development plan review procedures. The credits, as well as the Storm Water Service Charges, do not go into effect until the construction is complete or upon granting of conditional occupation. Credits will not be in effect until as-built data have been submitted for new storm water management facilities.

Attachment 1 – Sample Calculation Worksheet

**City of Whitewater  
Stormwater Utility ERU Credit and Adjustment Calculation**

Owner Name: Report Example  
 Owner Address: Whitewater, WI  
 Parcel Number: \_\_\_\_\_  
 Parcel Area: 30 Ac  
 Impervious Area: 8.84 Ac  
 ERU's: 100.0

**Credit Calculation**

**A. Peak Flow Reduction Credit**

1 Pond 1

- a. Description: Dry Pond on west side
- b. Impervious Area Draining to Pond: 2.21 Ac
- c. ERU's to Pond: 25.0 ERU's
- d. 10-Yr, 24-Hr Peak Flow (No Management): 25 cfs
- e. 10-Yr, 24-Hr Peak Flow (With Management): 15.6 cfs
- f. Peak Flow Reduction Ratio: 0.38

2 Pond 2

- a. Description: Wet Pond on east side
- b. Impervious Area Draining to Pond: 4.42 Ac
- c. ERU's to Pond: 50.0 ERU's
- d. 10-Yr, 24-Hr Peak Flow (No Management): 40 cfs
- e. 10-Yr, 24-Hr Peak Flow (With Management): 32 cfs
- f. Peak Flow Reduction Ratio: 0.20

**B. Water Quality Credit**

Device	Impervious Area Served (Ac)	ERU's Served	Allowable Credit Ratio	Credited ERU's
Wet Basin	<u>4.42</u>	50.0	0.25	12.5
Infiltration Basin		0.0	0.20	0.0
Infiltration Strip		0.0	0.20	0.0
Rain Garden		0.0	0.20	0.0
Other Bioretention		0.0	0.20	0.0
Manufactured Device		0.0	0.15	0.0
Oil/Grease Trapping		0.0	0.10	0.0
<b>Total</b>				<u>12.5</u>

**Adjustment Calculation**

A. Adjustment Calculation

a. Description:

Area draining to Town-owned drainage system outside of city.

- b. Impervious Area Draining From MS4 1.105 Ac
- c. ERU's From MS4 12.5 ERU's

**Overall Credit and Adjustment Calculation**

	Impervious Area Served (Ac)	ERU's Served	Calculated Credit Ratio	Gross Credited ERU's
A. Peak Flow Credit				
1 Pond 1	2.21	25.0	38%	9.4
2 Pond 2	4.42	50.0	20%	10.0
3 Total Peak Flow Credit				19.4
B. Water Quality Credit				12.5
C. Gross Credited ERU's				31.9
D. Maximum Allowable ERU Credits		100.0	50%	50.0
E. Total Credits				<b>31.9</b>
F. Total Adjustments	1.105	12.5	100%	<b>12.5</b>
G. Total ERU Reduction				<b>44.4</b>