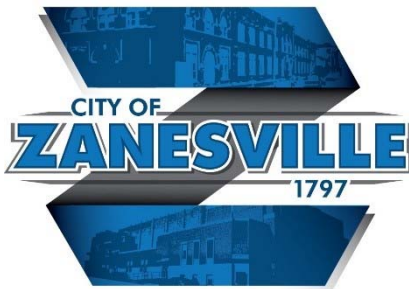


Credits Manual

Stormwater Utility Program

City of Zanesville

Public Service Department
Engineering Division
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Zanesville, Ohio 43701



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STORMWATER CREDIT PROGRAM**I. Introduction**

The purpose of the Stormwater Credit Program and this application is to provide both the incentive and opportunity to non-residential property owners and regional residential property owners to obtain credit for conducting good stewardship practices that benefit the operation and maintenance of the City of Zanesville stormwater system and improve water quality. The benefit to the property owner is a reduction in the stormwater service charge by performing an activity or experiencing an actual cost to reduce flows or improve the quality of runoff from their properties that ultimately flow into the City of Zanesville stormwater system or streams, rivers and creeks. The concept is that the entire community benefits from these enhancements or improvements to the stormwater system through the resulting improvements in water quality and through reduced flooding.

The property owner can reduce the stormwater service charge being assessed to their respective property by performing activities that reduce stormwater volume and improve downstream stormwater quality. Credits are offered for performing one or more of the following activities:

- ◆ Reducing the impact of stormwater (either quantity or quality) for a property to an acceptable standard.
- ◆ Reducing the stormwater cost of service to the City of Zanesville by performing activities on accepted properties that otherwise would have to be performed by and be the responsibility of City of Zanesville staff.
- ◆ Educating the public on issues related to water quality and stormwater, as outlined in the Educational Credit (K-12) and the Watershed Stewardship Credit.

Once a credit is established and approved by City of Zanesville staff, an annual report, and where applicable a maintenance agreement, will be required to be submitted by the property owner/customer as an on-going verification of the activities and measures outlined in the credit. This includes verification that any and all Stormwater Control Measures (SCMs) are being maintained and are in good working order.

Additionally, a potential credit may be available as a one-time reduction for a single action on a case-by-case basis. However, this type of credit is extremely rare.

The intent of the credit program is to offer credits to the non-residential properties and only to specific residential (regional) properties, but not to individual residential properties. The regional residential credit will be offered to a homeowner's association that properly operates and maintains a (regional) detention/retention facility for a community and/or subdivision. More information on this credit can be found below in **Section II – Available Credits**.

The credit program is not available to individual residential properties for the following reasons:

- ◆ The stormwater utility program rate structure is based in the impervious area (whole) ERU method and therefore the minimum fee is equal to one whole (ERU). Residential properties only receive the minimum charge of one ERU;
- ◆ The cost of providing a credit to residential property owners exceeds the benefit (cost reduction) that the residential property owner would obtain.

The maximum credit any one non-residential property can achieve is 50% of the total property ERU irrespective of the number and amount of credits each property may qualify for.

II. Available Credits

1. Water Quantity Credit

The principle of water quantity credits is based on peak flow and/or volume reduction. Peak flow reduction is based on following the Critical Storm Method for detention basin design. Volume reduction is based on low impact development, reducing impervious area on a site, recycling rainwater and/or increasing infiltration.

- A. For Critical Storm Calculations, the following applies per the ODNR Rainwater and Land Development (RW & LD) Manual, current editions:
 - a. The peak rate of runoff from the critical storm and all more frequent storms occurring on the development area does not exceed the peak rate of runoff from a one-year frequency storm (of 24 hours duration) occurring on the same area under predevelopment conditions.
 - b. Storms of less frequent occurrence than the critical storm, up to the one hundred year storm, have peak runoff rates no greater than the peak runoff rates from equivalent size storms under pre-development conditions.

The critical storm for a specific development area is determined as follows:

- a. Determine by appropriate hydrologic methods the total volume of runoff from a one-year frequency, 24-hour storm occurring on the development area before and after development.
- b. From the volumes determined in (a), determine the percentage increase in volume of runoff due to development, and using this percentage, select the 24-hour critical storm from this table.

If the percentage of increase in volume of runoff is:

Equal to or Greater than	And less than	The Critical Storm for Peak Rate Control will be
-	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year
500	-	100 year

To Calculate the Critical Storm:

$$\frac{\text{Post Developed 1 yr storm (ac-ft)} - \text{Pre-developed 1 yr storm (ac-ft)}}{\text{Pre-developed 1 yr storm (ac-ft)}} * 100$$

- B. Volume reductions can be achieved by:

- a. Methods listed in item (C) of Appendix 11 of the 2006 ODNR (RW & LD) Manual
- b. reducing the amount of impervious area, through practices such as porous pavement
- c. rainwater harvesting, through practices such as green roofs
- d. other City of Zanesville approved methods

Credits will be provided according to the following matrix:

Credit Type	Criteria	Credit
Peak Flow	Meeting Critical Storm Method Standard	10%
	Exceeding Design Storm by one level in Critical Storm Method*	30%
Volume	No increase in volume with development or redevelopment	10%
	25% decrease in volume of stormwater runoff from the 2-yr 24-hr design storm	30%
Maximum Credit Available (using combination of Peak Flow and Volume)		50%

* Example - If the Critical Storm Method shows that a 10-yr design storm is required to meet standards, the applicant would design peak flow calculations based on the 25-yr design storm event.

2. Water Quality Credit

The water quality credits are offered to properties that perform an activity or activities that improve the quality of the stormwater entering the City of Zanesville stormwater system. This can include “natural” as well as manmade water quality system structures that are properly maintained and are operating for water quality enhancements and reduce the burden on the City of Zanesville stormwater system.

The basis for this credit is Ohio EPA’s Construction General Permit in conjunction with the ODNR Rainwater and Land Development (RW & LD) Manual, current editions. All criteria for the planning, design, construction, operation, and maintenance for these facilities shall be done in accordance with said guidelines.

Currently all new development is required to treat the water quality volume (WQv) to ensure compliance with Ohio’s Water Quality Standards in OAC Chapter 3745-1. Per the Ohio EPA Construction General permit, the WQv shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined according to the following equation:

$$WQv = Rv * P * A / 12$$

where:

- WQv = water quality volume in acre-feet
- Rv = the volumetric runoff coefficient calculated using equation below
- P = 0.90 inch precipitation depth
- A = area draining into the SCM in acres

$$Rv = 0.05 + 0.9i$$

where i = fraction of post-construction impervious surface

Acceptable Water Quality SCMs include the following:

Best Management Practice	Drain Time of WQv
Wet Extended Detention Basin	24 Hours
Constructed Extended Detention Wetland	24 Hours
Dry Extended Detention Basin	48 Hours
Permeable Pavement – Extended Detention	24 Hours
Underground Storage – Extended Detention	24 Hours
Sand & Other Media Filtration – Extended Detention	24 Hours
Bio retention Area/Cell	24 Hours
Infiltration Basin	24 Hours
Infiltration Trench	48 Hours
Permeable Pavement – Infiltration	48 Hours
Underground Storage – Infiltration	48 Hours

(From Ohio EPA Construction General Permit, Table 4a and 4b)

Credits are also available for Riparian/Wetland Setbacks and Preservation of the 100-Year Special Flood Hazard Area (SFHA)

The **Riparian Setback Credit** is available to property owners to provide a Riparian Easement to the City of Zanesville that establishes a protected riparian area from the edge of a major stream, river or wetland. The credit may be granted as follows:

1. 2 ERU per 50 LF for a 25' wide Riparian Setback Easement
2. 4 ERUs per 50 LF for a 50' wide Riparian Setback Easement.
3. Up to a total of 20% credit is available.

Preservation Credits may be granted to properties located all or in part of the Special Flood Hazard area regulated by the City. Preservation credits may be granted to preserve the flood hazard area resulting in the reduction of flood damage, improvements in water quality and reduction of water quantity as follows:

1. A 10% credit may be given for preserving 100% of the special flood hazard area (excluding the floodway) as pervious areas and without altering the existing ground elevations.
2. A credit of up to 20% for projects to replace special flood hazard area (excluding the floodway) by construction of flood storage basins or other SCMs that increase the amount of flood storage, determined and approved by the City Engineer designed to meet specific site situations.

Credit Type	Criteria	Credit
Water Quality	Meeting WQv Requirements, 2013 OEPA permit	20%
Water Quality	Meeting WQv Requirements, P=.90 inches	30%
Riparian/Wetland Setbacks	Meeting setback recommendations in ODNR RW & LD Manual and providing a 25' or 50' setback.	Up to 20%
100 Yr SFHA	Repairing and/or Preserving the 100 Yr SFHA	Up to 20%
Maximum Credit Available		50%

City of Zanesville Staff will consider alternative SCMs that meet the requirements on a case by case basis.

3. Industrial NPDES Permit Credit

Credit is available for Industrial property owners who are permitted under the current Ohio EPA Industrial General Permit. To obtain this credit, the applicant must provide proof of compliance with the permit requirements including a Stormwater Pollution Prevention Plan and permit number. If water quality sampling is provided at outfalls, additional credits are available. The credit is 20% per tributary area to an outfall that is sampled and meets effluent limitations/benchmark guidelines.

Credit Type	Criteria	Credit
Industrial NPDES Permit	Meeting Ohio EPA's Industrial NPDES General Permit Requirements.	10%
Industrial NPDES Permit WQ Sampling	Outfall is sampled quarterly in accordance with Ohio EPA sampling guidelines and meets effluent limitations/benchmark guidelines	20%
Maximum Credit Available		30%

4. Regional Residential Facilities Credit

The City of Zanesville has approved several policies and procedures that do not allow a reduction to the individual residential stormwater charge. All properties receive a minimum of 1 ERU. The **Regional Residential Facilities Credit** will apply only to regional residential facilities owned and operated by a homeowner's association that are properly operating and maintaining detention/retention facilities. A single credit "payment" will be made to the homeowner's association on an annual basis. It will be up to the homeowner's association to allocate the credit payment back to the individual homeowners.

Credit Type	Criteria	Credit
Peak Flow	Meeting Critical Storm Method Standard	10%
	Exceeding Design Storm by one level in Critical Storm Method*	30%
Maximum Credit Available (using combination of Peak Flow and Volume)		30%

* Example - If the Critical Storm Method shows that a 10-yr design storm is required to meet standards, the applicant would design peak flow calculations based on the 25-yr design storm event.

5. Gravel Credit

The City of Zanesville considers all compacted gravel areas (drives, storage areas, etc.) as impervious areas, and includes these surfaces in calculating the stormwater fee. The City of Zanesville acknowledges that gravel surfaces do allow for the infiltration of stormwater flow in a slightly different manner than impervious surfaces. Therefore, an allowance for gravel surfaces on a case by case basis for these surfaces is offered. It is up to the non-residential property owner of these properties to submit a credit application to receive credit for gravel surfaces. The credit shall only apply to the gravel area of the property and not all impervious area of the site. The gravel credit is subject to an onsite review to be performed by the City of Zanesville to make the final determination prior to any credit approval.

Credit Type	Criteria	Credit
Gravel	Credit is for gravel areas of a non-residential property	30%
Maximum Credit Available		30%

Gravel Credit Example:

A non-residential property has a total impervious area of 135,000 SF. Included in that area is a 40,500 SF gravel parking area. The gravel parking area only is available to receive a Gravel Credit. Following is the calculation used to determine the Gravel Credit available.

Gravel Area = 40,500 SF
Gravel Credit % = 30%

Gravel Credit Available = 40,500 SF x 30% = 12,150 SF

1 ERU = 2,300 SF

ERU Credit = 12,150 SF / 2,300 SF = 5.28 ERUs rounded to 5 ERUs

The result credit available for the Gravel area corresponds to 5 ERUs.

1 ERU = \$3.00/month

Total Gravel Credit = 5 ERUs x \$3.00/month = \$15.00/month = \$180.00 per year

Therefore:

135,000 / 2,300 = 58.69 ERU's rounded to 59 ERUs

59 Total ERUs less 5 ERUs for gravel credit = 54 ERU's

54 ERUs x \$3.00 /month = 162.00/month = \$1,944.00 revised annual bill

6. Education Credit

Education credits are provided to public and private schools (K through 12) for the purpose of providing stormwater (flooding, water quality, and watershed management) type education programs to students. To obtain this credit public and private schools are required to teach a stormwater curriculum including programs such as “**Project Wet**” and “**Globe**” which are an example of a spiral water-related curriculum that would provide a basis for credit.

Stormwater education credits of up to 50% of the Stormwater bill can be granted for approved programs providing public awareness and education on Stormwater issues as follows:

- This credit is available to all schools as defined in the zoning code, public or private that offer a compulsory education curriculum for grades K through 12 or part thereof.
- Where a site is jointly used by a school and another use (e.g. church) the Stormwater fee will be prorated based on usage and the credit will be issued to the school portion of the fee only;
- Where the school or “education” system includes multiple sites at separate addresses/complexes, the Stormwater credit and fee reduction will apply to that individual site and / individual address the credit application pertains to. The credit may only be applied to the property where the educational activities are taught. Credits cannot be applied to administrative facilities, bus lots, parking lots that are not associated with the educational facility, or warehouse/facility operations related parcels. The credit may only be applied to the property where the educational activities are taught. Credits cannot be applied to administrative facilities, bus lots, parking lots that are not associated with the educational facility, or warehouse/facility operations related parcels.
- For example, many public-school systems own many separate properties at separate complexes. Each property and site will be required to either adopt the same credit or submit a separate credit application for each site;
- Water Quality Educational Curriculum for public/private schools shall utilize a water curriculum in grade levels to be determined by the school. Appropriate guides to be used include **Project WET**, **GLOBE**, **Project WILD Aquatic**, and **Healthy Water, Healthy People**. Other water related materials may be utilized with prior approval of the City of Zanesville.
- To receive the maximum credit, the programs noted above should be integrated into standard curriculum for at least 20% of the students in the school and at least all the students in one grade level;
- Schools will conduct at least one school-wide awareness activity to be chosen from: water festival day, poster contest, or litter collection day. Additional opportunities include a stenciling project, brochure development, public service announcements, videos, or other projects as approved by City of Zanesville staff.
- To receive educational credits, the school shall submit an application and provide supporting documentation. The application will be due by July 1st of the preceding year the credit is to be given. The plan shall be reviewed and approved by the City of Zanesville prior to implementation of the curriculum. Once approved, the credit shall be applied to the appropriate Stormwater bill.
- Upon completion of the educational curriculum and no later than the end of the school year, the school shall submit an annual report indicating compliance with the approved plan. The annual report shall be broken down by the activity type and indicate the number of participants. If the school did not substantially comply with the plan, the report will include an explanation of the failure and any needed corrective action. Additional reporting requirements may be required as part of the plan approval and shall be included in the annual report.
- The City of Zanesville will review the annual report. If upon review, the school did not substantially comply with the approved plan, the City of Zanesville may:
 - Require additional activities as a corrective action;
 - Reduce the education credit to a level comparable to compliance;
 - Refuse approval of any new education plan.

Potential Stormwater Guides for the Education Credits

- Healthy Water, Healthy People - HWHP is an EPA approved curriculum that will provide the opportunity to create additional partnerships. The purpose of this publication is to raise educators’ awareness and understanding of water quality topics and issues by demonstrating the relationship of water quality to personal, public, and environmental health. This publication gives teachers, students, non-formal educators, water managers, treatment plant operators and citizens an opportunity to explore water quality topics in an interactive, easy-to-use, hands-on format.
- Project WET (Water Education for Teachers) - Project WET is a nonprofit water education program and publisher for educators and young people ages 5 to 18. The program facilitates and promotes awareness, appreciation, knowledge, and stewardship of water resources through the dissemination of classroom-ready teaching aids and the establishment of internationally sponsored Project WET programs.
- GLOBE (Global Learning and Observations to Benefit the Environment) - GLOBE is a worldwide hands-on, primary and secondary school-based education and science program. For students, GLOBE provides the opportunity to learn by taking scientifically valid measurements in the fields of atmosphere, hydrology, soils and land cover depending upon their local curricula. It also allows them to create maps and graphs on the free interactive web site to analyze data sets while collaborating with scientist and other GLOBE students around the world. You can visit the Globe website at <http://www.globe.gov/>
- Project WILD Aquatic - The *Project WILD Aquatic K-12 Curriculum and Activity Guide* emphasizes aquatic wildlife and aquatic ecosystems. It is organized in topic units and is based on the Project WILD conceptual framework. Because these activities are designed for integration into existing courses of study, instructors may use one or many Project WILD Aquatic activities or the entire set of activities may serve quite effectively as the basis for a course of study.

Credit Type	Criteria	Credit
Education	Provide formal stormwater education to 20% of students	Up to 50%
Maximum Credit Available		50%

7. Watershed Stewardship Credit

Non-residential property owners are eligible for a Stormwater credit if they participate in an eligible, City of Zanesville approved local watershed stewardship activity. To be considered as an eligible activity, the activity must be set up, organized, and executed by the non-residential property owners and/or through a partnership with citizens, local groups, City of Zanesville, and/or federal agencies and should be identified as a BMP for compliance with the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Permit. To receive credit for participation in an approved program, the non-residential property owner will need to submit an application and a request for roadway/stream designation. To receive credit for participation in a sanctioned cleanup program, the non-residential property owner will need to submit an application and tentative list of participants. Participants must register at the event and identify themselves as credit program participants. The applicant must also coordinate before and after cleanup inspections with the City of Zanesville.

Additionally, businesses can aid in engaging and educating the public about the City of Zanesville’s stormwater program. Business owners that are willing to provide such services to the community may also be eligible for a credit. Eligible activities to receive the credit are at the discretion of the City of Zanesville and identified as a BMP for compliance with the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Permit. Other eligible programs outside of those listed below may be considered if they assist with compliance with the City of Zanesville’s NPDES Phase II Stormwater Permit. To receive credit for training/education/outreach efforts, the property owner will need to submit an application and a description of the activity.

Credit Type	Criteria	Credit
Adopt a Stream	City of Zanesville Approved Program - Maintain 1 mile of Stream for 1-Yr. Value = 50 ERUs per mile of stream adopted and the stream must be cleaned 2 times per year. Each bank of the Muskingum and Licking Rivers will counted separately. Intermittent streams may be considered at reduced rate. USGS topo maps will be used for reference.	Up to 30%
Adopt a Road	City of Zanesville Approved Program - Maintain 1 mile of Road for 1-Yr. Value = 50 ERUs per mile of road adopted and the roadside must be cleaned 3 times per year.	Up to 30%
Storm Drain Stenciling	City of Zanesville Approved - Based on number of participants Value = 1 ERU per 1 storm drains stenciled.	Up to 10%
Sponsor Educational Material Development	City of Zanesville Approved - Poster, Brochure, Essay Contests; Public Service Announcement, Multimedia, etc. Value = 2 ERU per 100 residents reached.	Up to 10%
Litter Collection Day	City of Zanesville Approved - Based on number of participants Value = 2 ERU per 5 people participating	Up to 10%
Other	Other City of Zanesville Approved - Programs or Projects	Up to 30%
Maximum Credit Available		50%

8. Direct Discharge Credit

The Direct Discharge Credit will be given to nonresidential properties, or portions thereof, directly discharging stormwater to waters located outside of the city or to waters not maintained in any way by the city and do not receive any city maintenance or other services to their stormwater system. The goal of this credit is to allow nonresidential property owners to reduce their service charge if they maintain a private stormwater drainage system for the area the credit applies to and it drains directly outside of the city or to the waters not maintained by the city listed below. Nonresidential property owners that can demonstrate that stormwater discharges directly to waters located outside of the city or to the Licking River or Muskingum River may be able to reduce their service charge by up to 50 percent. The nonresidential property owner will be required to complete the credit application with data requirements according to section IV including the certification of a licensed professional engineer providing proof and evidence that some or all of the property drains directly and at the property owners expense to outside the city or to the Licking River or Muskingum River. Credit will be reviewed on a case by case basis and will need to be verified in an annual basis by submitting the annual report as included in the credit application documents.

The Direct Discharge Credit will not be granted under the following situations:

1. The discharge point is upstream of and tributary to any public drainage facility that the City of Zanesville maintains including, but not limited to, bridges, culverts, storm sewers, ditches, gutters, and open channels.
2. The discharge point is outside of the corporation limits but drains back into a City of Zanesville public drainage facility downstream.

Credit Type	Criteria	Credit
Direct Discharge	Credit for portions of the site that direct discharge	Up to 50%
Maximum Credit Available		50%

III. Credit Application Procedures

Submit the Application and Annual Reports via email preferred to the following:

City of Zanesville
 City Engineer, Department of Public Service
 401 Market St.
 Zanesville, Ohio 43701
 Phone: (740) 617- 4910
csaunders@coz.org

The credits offered by the City of Zanesville that appear in Section II of this document are based on the following baseline guidelines. It is recommended to review each of these documents when preparing your credits application.

1. Codified Ordinances of Zanesville, Chapter 925.02 – Storm Water Utility Program Rate Structure and Fees
2. Codified Ordinances of Zanesville, Chapter 926 – Storm Water Utility Program
3. Ohio EPA NPDES Construction General Permit, Current Edition
4. “Rain Water and Land Development”, Ohio’s Standards for Stormwater Management Land Development and Urban Stream Protection. You may download for free at the following location:

http://epa.ohio.gov/dsw/storm/technical_guidance.aspx

The following protocol for property owners that are approved for and accepted into the Stormwater Credits Program applies:

1. The credit policy applies to both new and existing facilities
2. Each property will be limited to a maximum of 50% total credit per property.
3. Credits will be applied to the percent of impervious area impacted. For example, if a detention basin is eligible for credit the credit applies to the impervious area draining to the detention basin. So, if the total impervious area is 3 acres and 1.5 acres drain to the detention basin, the total credit available would be multiplied by a factor of 50%.
4. The city reserves 30 days to review complete credit applications or request additional information.
5. The Stormwater Credit Program will apply the credit to reduce your bill as soon as possible following the approval of the credit application and process.
6. For the credit to be continued through the next calendar year, and subsequent years, an annual report, and maintenance documentation if necessary, must be submitted by July 1st of each year. If documentation is not received by said due date, the City reserves the right to revoke the credit for the applicable year. Upon receipt of sufficient documentation, the City may reinstate the credit for the following year.
7. There is currently no cost at this time to submit the initial (one time) application for credits. There is no cost to submit the one-page annual maintenance agreement to maintain the approved credits.

IV. Application Data Requirements

Supporting data is required for each credit. The type of supporting data varies depending on the type of credit requested as shown in the table below.

Credit	Supporting Data									
	Site Plans	Site Survey	Calculations	Maintenance Plan & Schedule	Easement / Deed Restrictions	NPDES Permit	Pollution Prevention Plan	Education Plan	Watershed Activity Plan	Adopt A Stream / Road Application
Water Quantity	x	x	x	x						
Water Quality	x	x	x	x	Riparian / Preservation Credits					
Industrial NPDES	x					x	x			
Regional Residential Facilities	x	x	x	x						
Gravel	x									
Education (K-12)								x		
Watershed Stewardship									x	If Needed
Direct Discharge	x	x	x							

Supporting Data Requirements:

The following is a list of potential supporting data that will be required with your credit application submittal. Please provide all pertinent information with your application. This will expedite the City’s review process of your credit application. You are encouraged to provide additional information that will be appropriate for your property and assist in evaluating your property’s credits.

Site Plans and Surveys

- ___ Adjoining lakes, streams, or other major drainage ways
- ___ Existing and proposed contours
- ___ Impervious delineation and labels (buildings, driveways, etc.)
- ___ Drainage area map, including off-site areas draining through the site
- ___ Size and location of all stormwater structures
- ___ Construction Drawings if not previously approved
- ___ Plat Maps
- ___ Professional Engineer Stamp, Professional Surveyor Stamp
- ___ County Auditor Maps
- ___ Other permits

Calculations

- ___ Hydrologic calculations for undeveloped and developed land uses
- ___ Hydraulic calculations stage-discharge relationships of controls
- ___ Floodplain encroachment calculations

Maintenance Management Plan and Schedule

- Maintenance Management Plan
- Maintenance schedule of all operations that affect the efficiency of the structural control **including** mowing, sediment removal, cleaning, planting, monitoring, watering, and channel restoration
- Maintenance Agreement

Easement and Deed Restriction (for inspection access and long term maintenance of BMP)

- Easement
- Deed Restriction
- Other (Please describe) _____

Other Data

- Spill Prevention Control
- Pollution Prevention Plan
- Counter Measures
- Education Plan
- Adopt A Road/Stream Application
- Watershed Stewardship Activity Plan
- Clean Up Participation List
- Other (Please describe) _____

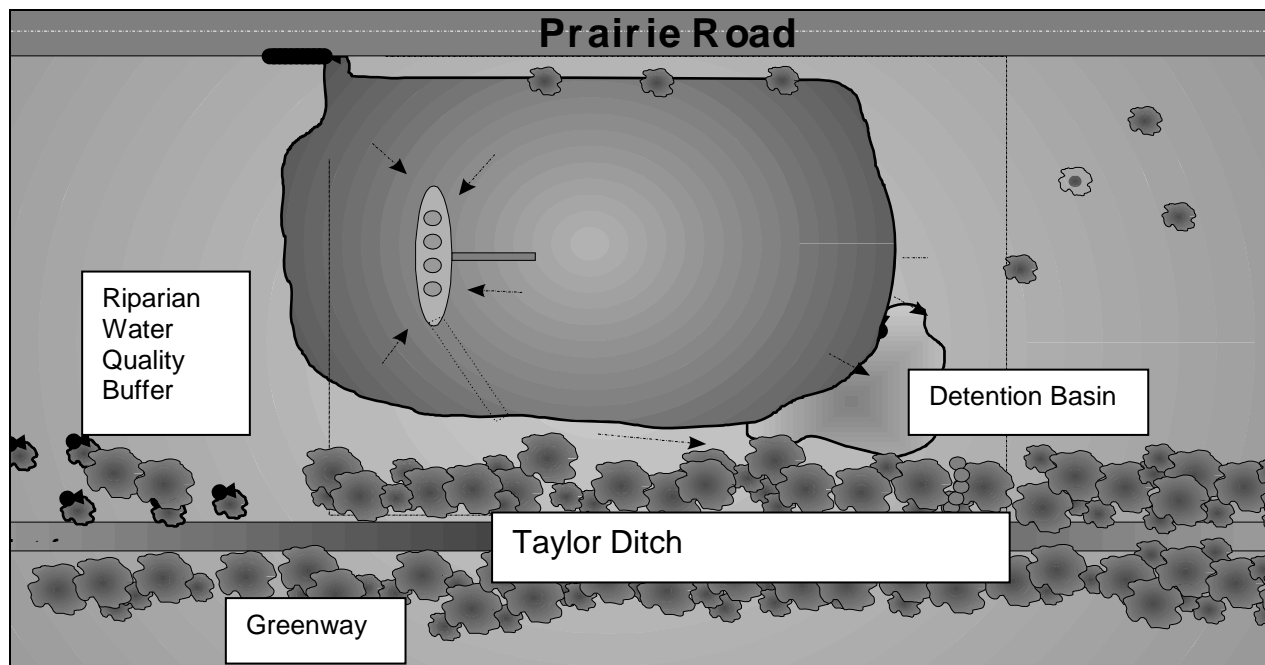
V. Credit Example

An example credit calculation is shown in this section that is intended to assist in providing a guide for the preparation of a credit calculation for your specific situation and property.

Example:

A developer has submitted preliminary plans to construct a warehouse on a vacant 10-acre site with no existing impervious area. The development includes a warehouse, parking lot, and driveway which equals 3 acres of impervious area. He has submitted an application for two credits including a credit for detention/retention and a credit for a riparian water quality buffer.

The Critical Storm Method requires that all new development detain the 25 year storm. The owner of the property wishes to exceed the minimum requirement and detain the 50 year storm. The owner also wishes to provide a greenway and walking trail along Taylor Creek which qualifies as a riparian water quality buffer credit.



Given:

- 10 acre site with 3 acres of impervious area.
- The detention/retention basin receives 100% of drainage from the impervious area
- The riparian water quality buffer and greenway is 25' wide and 150' long
- 20% credit available for the greenway which is the riparian water quality buffer
- 30% credit available for the detention basin
- The maximum credit allowed for any property is 50%
- 1 Equivalent Residential Unit or ERU is equal to 2,300 square feet of impervious area
- The rate is \$6.50 per ERU per month

Step 1: Calculate the estimated impervious area of property prior to awarding the credit.

- 3 acres x 43,560 (sq. ft. in acres) = 130,680 sq. ft. of impervious area
- Calculate the number of ERU's for the property

130,680 sq. ft. of impervious area divided by 2,300 (ERU) = 56.81 ERUs rounded to 57 ERUs

- Calculate User Fee based on impervious area of property

57 ERUs x \$6.50 = \$370.50 per month = \$4,446.00 per year

Step 2: Determine amount of impervious area subject to credit

Detention/Retention Basin

Measured Impervious Area or MIA = 130,680 sq. ft. * 100% (impervious area) * 30% (credit) = 39,204 sq. ft.

Step 3: Determine the amount of ERU's available for credit reduction

Detention/Retention Basin

39,204 sq. ft. / 2,300 = 17.04 rounded to 17 ERU Credits

Riparian Setback

2 ERU per 50 lf, for a 25' Riparian Setback

150 lf of setback / 50 lf x 2 = 6 ERUs

Total Credit Reduction = 17 ERU + 6 ERU = 23 ERU = 40% Reduction*

*50% Reduction is the maximum allowed.

Step 4: Determine estimated credit and modified Stormwater service fee

Reduction (\$) = 23 ERU Credit * \$6.50 per month * 12 Months = \$1,794.00

Estimated Stormwater Bill = \$4,446.00 – \$1,794.00 = \$2,652 (reduced Stormwater bill after credit reduction per year)

VI. Instructions for Completing the Application

Section A – Applicant

- Refer to and complete the application contained at the end of this document.
- Name, address, e-mail and phone number of the person or persons responsible for stormwater charge.

It is encouraged to use the primary “baseline guidelines” for preparing your credits application, as referenced in **Section III – Credit Application Procedures**. These will be used as the primary guidelines and documentation to approve your application. In addition, documentation from other states that offer experimental BMP’s not listed in this application that are proven to work, will be considered, as long as the documentation is included as part of your credits application documentation. It will be the responsibility of the parcel owner to provide the documentation necessary to evaluate the "experimental SCM applied for, if applicable.

Section B – Site Information

- Utility Account Number and a Parcel Number associated with the site
- Physical address of the site
- Location description where credit is to be applied (if the credit does not pertain to 100% of the site)

Section C – Engineer Certification (if required)

- Name, address, e-mail, phone number and official stamp of the Certifying Engineer

Section D – Supporting Data

- Not all data is required for all credits. Refer to **Section IV – Application Data Requirements** to review the supporting data needed for your specific credit. Mark N/A for items not included in the application.

Section E – Credit Summary

- Fill out the requested credit percentage. The City of Zanesville staff will review and assign a stormwater credit with a maximum of 50% credit to any one property.

Section F – Adjusted ERU & Stormwater Fee

- Fill out the ERU Credit Table for all credits being applied for and calculate the ERU Requested. Current account ERU’s should be obtained from City of Zanesville Engineering.

Section G – Applicant Certification

- Name, title, signature, and date of the Applicant

**CITY OF ZANESVILLE
STORMWATER CREDIT APPLICATION FORM
ONE TIME APPLICATION DUE BY JULY 1ST TO BECOME EFFECTIVE THE FOLLOWING YEAR**

SECTION A – APPLICANT

Applicant Name:	Contact Name:
Applicant Address: City: State: Zip:	
Phone:	Email:

SECTION B – SITE INFORMATION

Utility Bill Customer Account Number:	Property Parcel Number:
Street Address: City: State: Zip:	
Location:	

SECTION C – ENGINEER CERTIFICATION

Name:	Company:
Address: City: State: Zip:	
Phone:	Email:

Signature

Date

ENGINEER STAMP

SECTION D – SUPPORTING DATA REQUIRED FOR SUBMISSION

Type of Data	Submitted	Accepted
Site Plans & Surveys		
Calculations		
Maintenance Plan & Schedule		
Easement/Deed Restrictions		
NPDES Permit		
Pollution Prevention Plan		
Education Plan		
Watershed Activity Plan		
Adopt A Road/Stream Plan		

SECTION E – CREDIT SUMMARY

Credit Type	Max Credit Available	Credit Requested	Credit Approved
Water Quantity	50%		
Water Quality	50%		
NPDES	30%		
Regional Residential	30%		
Gravel	30%		
Education (K-12)	50%		
Watershed Stewardship	50%		
• Adopt a Road	30%		
• Adopt a Stream	30%		
• Storm Drain Stenciling	10%		
• Educational Material	10%		
• Liter Collection Day	10%		
• Other:	30%		
Direct Discharge	50%		
TOTAL Credit	50%		

SECTION F – ADJUSTED ERU & STORMWATER FEE

Please fill out the ERU Credit Table below to determine your ERU requested (see example).

- **Utility Rates** = \$3.00 (2019) - \$3.50 (2020) - \$4.00 (2021) - \$4.50 (2022) - \$5.00 (2023)
- **ERU Credit** = (Area Subject To Credit / 2300 or Measurement) * Credit Rate
(Rounded to the nearest whole number)
- **Stormwater Fee** = (ERU - Total ERU Credit) * Utility Rate

Example

CREDIT	ERU	Area / Measurement Subject To Credit	Credit Rate	ERU Credit	ERU Requested	ERU Approved
Gravel		46,000 sf	30%	6		
Adopt a Stream		0.5 miles	50 ERU / mile	25		
Totals	91			31	60	

Approved Monthly Stormwater Fee: \$180 (2019)

ERU Credit Table

CREDIT	*ERU	Area Subject To Credit	Credit Rate	ERU Credit	ERU Requested	ERU Approved
Totals						

***Current Account ERU's should be obtained from the City of Zanesville Engineering**

Approved Monthly Stormwater Fee: \$ (20)

SECTION G – APPLICANT CERTIFICATION

I hereby request consideration for a Stormwater Credit. I certify that I have authority to make such a request and authorization for this property. I further certify that the information provided in this application is true and correct to the best of my knowledge and belief. I agree to provide corrected information should there be any change in the information provided herein.

Name	Title
Signature	Date

VII. Annual Reporting Requirements

Annual reporting is required by all credit recipients to maintain the service fee reduction. A letter or report that describes the status, operation and maintenance of each management practice is to be submitted to the City of Zanesville with the following Maintenance Agreement no later than July 1st of each year to qualify for the following year. Failure to submit the annual report will result in cancellation of the credit. In addition, the City of Zanesville reserves the right to periodically inspect the credited management practice to assure City of Zanesville requirements are being followed. The annual report will generally require the following information:

- Utility Bill Customer Account Number and associated information from the stormwater bill;
- Applicant statement certifying that the conditions under which the credit was originally issued have substantially remained the same;
- Applicant statement certifying that if structural management practices are receiving credit, they are being inspected and maintained within appropriate standards for the management practice;
- Summary of regular inspection results; and
- Summary of maintenance activities.

Submit Application and Annual Maintenance Reports to:

Submit this Application and Annual Reports via email preferred to the following:

City of Zanesville
City Engineer, Department of Public Service
401 Market St.
Zanesville, Ohio 43701
Phone: (740) 617- 4910
csaunders@coz.org

**CITY OF ZANESVILLE
STORMWATER ANNUAL REPORT & MAINTENANCE AGREEMENT**

DUE BY JULY 1ST TO STAY IN EFFECT FOR THE FOLLOWING YEAR

SECTION A - APPLICANT

Applicant Name:	Contact Name:
Applicant Address: City: State: Zip:	
Phone:	Email:

SECTION B - SITE INFORMATION

Utility Bill Customer Account Number:	Property Parcel Number:
Property Address: City: State: Zip:	
BMP / Credit to continue:	

CERTIFICATION:

I hereby certify that I have authority to make a request and authorization for this property for continued credit. I further certify that the BMP's for which I have received credit continues to be in operation and I have performed the prescribed inspections and maintenance per City of Zanesville requirements. I hereby release the City of Zanesville from any maintenance responsibility whatsoever on the above identified management practice located on my property. I agree to provide corrected information should there be any change in the information provided herein.

_____	_____
Name	Title
_____	_____
Signature	Date

**CITY OF ZANESVILLE
STORMWATER EDUCATION CREDIT APPLICATION & ANNUAL REPORT**

DUE BY JULY 1ST TO BECOME EFFECTIVE THE FOLLOWING YEAR

School: _____

Contact Name: _____

Address: _____

Phone #: _____ Email: _____

Program(s) Offered: _____

Percent of student body that will participate in the stormwater curriculum: _____

Please list:

Teacher (s) Name	Grade/ Subject	# Students	Contact Number	Email

Attach additional information as needed.

School Administrator

Date

Approved:

City of Zanesville

Date