

UTILITIES DIVISION

Stormwater Management



Determination of Stormwater Credit Amounts

The following is a general accounting for the determination of appropriate credits for the Stormwater Utility Fee. The credit is based on stormwater quantity and quality issues as discussed below:

City Stormwater Program Elements

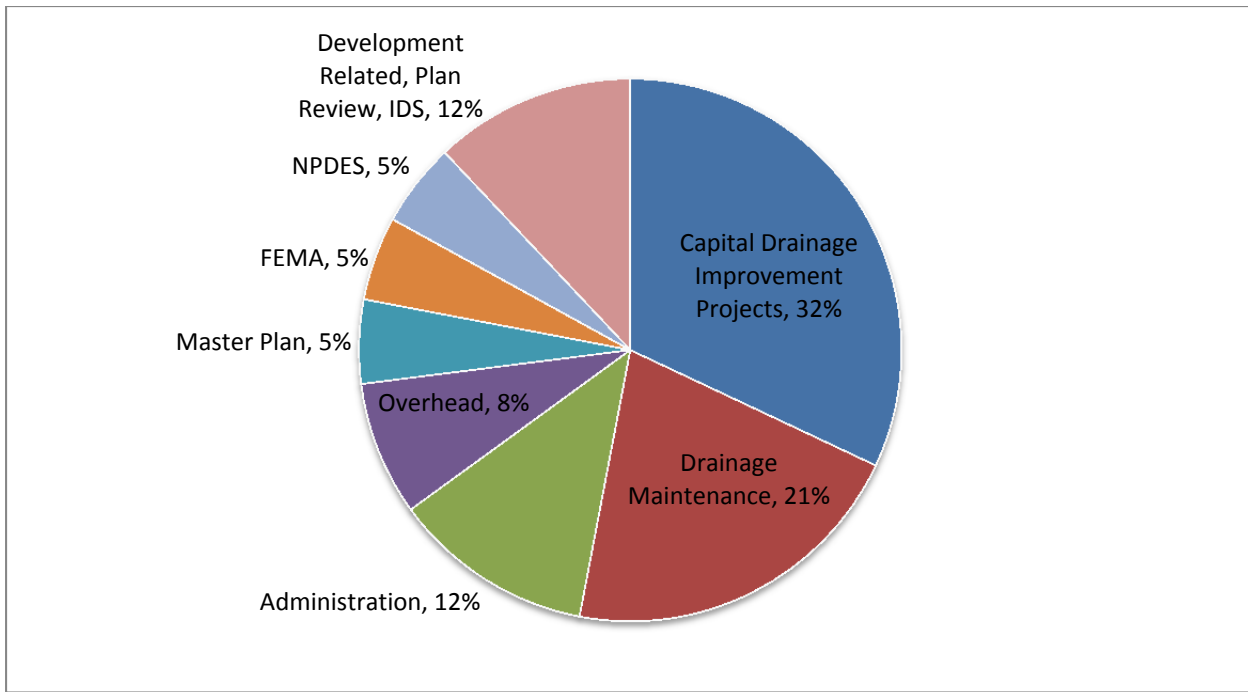
An assessment of the City's Stormwater Management Activities is necessary in order to determine appropriate credits. Essentially, the Program has two overall functional areas that include many sub-categories: Stormwater Quantity and Stormwater Quality. Stormwater Quantity is clearly the larger of the two and includes the following activities:

- Regulatory Compliance: FEMA Regulations, ADWR Regulations, City Floodplain Regulations, Floodplain Permits, CRS, NFIP
- Civil Plan Review and Drainage Report Review
- Capital Drainage Improvement Program
- Masterplan activities
- Drainage Maintenance

Stormwater Quality activities include:

- NPDES Compliance Activities
- Low Impact Development projects

The general budget breakdown for Stormwater Section activities are shown in the following pie-chart:



Relationship of mitigations to program elements

The goal of determining specific credit amounts is based on the effectiveness of the mitigation and its relationship to the program. Please note that the calculation of specific credit amounts are based off data that is subject to minor fluctuations respecting specific budget items in any given year. Therefore credit calculations should be considered general in nature.

Detention Basins

Detention basins control the rate of runoff thereby ensuring that downstream properties are not adversely impacted by increased flow rates. Detention is directly related to capital improvements (controlling the need for upsizing), FEMA activities (flooding potential) and Master Planning (flood flow increases). Furthermore, detention can reduce flood flow rates by up to 50% when compared with pre-development flood flows.

Therefore, a credit for detention basins that meet the current standard for attenuation of the 100 year storm is 20%.

For detention basins constructed from 1990 to 2000 that are only designed to attenuate the 25 year storm, a credit of 9%.

Low Impact Development (LID) and Active Rainwater Harvesting (non-residential)

LID facilities or active rainwater harvesting systems designed to retain 1 inch of runoff have direct relationships with Capital Improvements, FEMA activities, NPDES and master planning. Also, LID or active rainwater harvesting retains 1 inch of stormwater as compared to the 100 year 24-hour storm volume of 4.5 inches.

Therefore a credit of 10% is provided for LID or active rainwater harvesting mitigations constructed to the 1 inch level. Credit may be provided for varying amounts of LID on a prorated basis not to exceed 68%.

Conservation Easements

A credit is proposed for the recordation of a Conservation Easement. A Conservation Easement is defined as a no possessory interest of a holder in real property that, for conservation purposes as defined by A.R.S. 33-271(2), permanently protects that property from being developed or otherwise altered from its natural state in the future. A Conservation Easement operates like a deed restriction and is held by a governmental body empowered to hold an interest in real property, or by a charitable corporation or trustee of a charitable trust.

To qualify for a stormwater credit, the Conservation Easement must protect a minimum of 10 contiguous acres. The effect of the undisturbed land on stormwater quality can only be measured qualitatively.

The proposed credit for the granting of a Conservation Easement is 10%.

Development and Implementation of a Structured Educational Program

A credit is proposed for an institution or organization that develops and implements a Public Education Program for primary, secondary and college-level students on stormwater management and water quality issues. The program must be designed to meet the goals and requirements of public education and outreach as defined in 40 CFR Parts 9, 122, 123 and 124 and also, A.R.S., Title 49, Chapter 2, Article 3.1 and Arizona Administrative Code, Title 18, Chapter 9, Articles 9 and 10.

The effects of a public education program on stormwater quality can only be assessed qualitatively, but it is considered a vital component of the City's Stormwater Quality Program. If such a program is properly structured, the program would assist the City with NPDES compliance activities. If an applicant proposes such a program, the City should assist in program development to ensure compliance with the above-cited requirements.

The proposed credit for the development of a Structured Educational Program is up to 20%. The Credit will be provided so long as the Educational Program is active.

Water Harvesting for Residential Development

Residents who provide rain barrels of sufficient size on roof downspouts or other similar method(s) of collecting rainwater and use the rainwater for irrigation or consumption should be afforded credits. Collection of rainwater relates to reduced volume as well as improvements in quality.

A typical rain barrel only collects a small percentage of the total runoff from a typical roof section during the 100-year event. For a 20x20' roof section, 1000 gallons may be expected to run off. Nevertheless, there is a significant impact to water quality issues that must be addressed qualitatively. Roofs generate metals as pollutants and frequent rainfall runoff events are captured. The use of the roof water on vegetation as irrigation results in improvements to water quality. Harvesting also decreases demands on potable water use.

The proposed credit for the installation of rain barrels on all residential downspouts should be credited 10%.

Proposed Procedure For Application of Credits:

An applicant must complete the Application Form and submit it to the Stormwater Division. Staff will review the application to assess completeness and partial credits, if any. Assuming eligibility requirements are met, an adjustment to the utility bill will be entered within 10 business days after the completion of the staff review.

The Stormwater Division Staff may provide periodic inspection activities to verify credits and to verify that credited facilities are being properly maintained. Upon discovery of a deficiency, a letter will be sent to the applicant noting the deficiency and suspension of the credit. Upon receipt of a correction notification attesting that the deficiencies have been corrected and upon verification of the corrections by the City, the credit will be reinstated.



City of Flagstaff, Stormwater Division

Application for Stormwater Utility Fee Credit

Dear Citizen;

This is an application to the City of Flagstaff to reduce your Stormwater Utility Fee. If you have implemented certain Stormwater controls on your property, you may be eligible for a reduction in your current fee. Please check the appropriate boxes and provide any necessary supporting documents requested with this application. An incomplete application will not be processed.

Upon review, verification and approval of your application, the City will provide the credit to your account within 10 business days. A copy of the processed application will be provided to you for your records.

CREDITS:

___ **Stormwater Detention** (commercial, industrial, multi-family, and members of homeowners associations):

___ There is a detention basin on my property constructed after year 2000 that provides detention for the 2, 10 and 100-year events. The basin is presently functional and maintenance is performed as necessary (for a home owner's association, please provide documentation that basins are inspected and maintained).

A credit of 20% is provided.

___ There is a detention basin that was constructed between years 1990 and 2000 that provides detention for the 25-year flood event. The basin is presently functional and maintenance is performed as necessary (for home owner's association, please provide documentation that basins are inspected and maintained).

A 9% credit is provided.

___ **Residential Water Harvesting** (individual residential only):

___ I have installed at least two rain barrels, of a minimum 50 gallon capacity each, on roof downspouts and utilize the stormwater for irrigation or other recycling purposes, or I have installed other types of catchments and reuse the stormwater for purposes of recycling. Attached is a sketch of my lot and house showing the locations and sizes of my rain barrels or catchments. Also attached is a description of the use of the stormwater.

A 10% credit is provided.

___ **Low Impact Development (LID) or Active Rainwater Harvesting** (commercial, industrial, multi-family or members of homeowner's associations)

___ My property has been constructed with city-approved LID or active rainwater harvesting. The facilities are presently functional and maintenance is performed as necessary (for home owner's association, please provide documentation that facilities are inspected and maintained).

A 10% credit is provided. Partial, prorated credits may be applied for varying amounts of LID/Active harvesting.

___ **Conservation Easement**

___ I am applying for the Conservation Easement Credit and have attached a copy of the recorded Conservation Easement, recorded Holder Acceptance, and survey map with legal description of the Conservation Easement. I acknowledge that the Conservation Easement protects at least 10 contiguous acres. Note: Prior to recordation of the Conservation Easement and Holder Acceptance, the applicant is encouraged to have all of the required documentation reviewed by City staff.

A 10% credit is provided.

___ **Structured Educational Program**

___ My institution/organization is applying for the credit for the development and implementation of a Stormwater Education Program. I have developed the program in conjunction with City staff and the program meets the goals and requirements of appropriate State and Federal Codes. Up to a 20% credit may be provided.

Name: _____

Site Address: _____

Mailing Address: _____

Telephone (wk/home): _____

Subdivision Name (if applicable): _____

Home Owner's Association Name and contact phone # (if applicable)

By signing below, I attest that the above information is true and correct. I acknowledge and agree that the City of Flagstaff may inspect my property to verify that my stormwater credits are existing and functioning properly. I further agree that I will ensure that my stormwater facilities will be properly maintained. I understand that if my stormwater facilities are no longer in place, or are not functioning properly, my credit will be revoked. I also acknowledge that misrepresentation of the above information may constitute fraud and may be punishable by law.

Print Name

Signature

You will be sent an executed copy of this form for your records.

For office use only
Received by: _____
Application Verification: _____
Date applied toward billing: _____
Authorized signature: _____