

Stormwater Credit Manual Revisions

November 1, 2022





Overview



- Purpose – review and revise Stormwater Credit Manual to provide better equity and opportunities
- Review of existing 2015 Credit Manual
- Proposed revisions
- Feedback from Water Commission
- Discussion
- Next Steps



Review of 2015 Credit Manual

- The existing 2015 Credit Manual is a revision of the original 2006 Credit Manual
- Intent is to provide incentives for the community to go above and beyond in stormwater
- Credits are applied by Customer Service with review by Stormwater staff
- Credits are continual (not one-time)



Review of 2015 Credit Manual

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

4master 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%.



Review of 2015 Credit Manual

Conservation Easements

A credit for the recordation of a Conservation Easement. A Conservation Easement is defined as a non-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 Conservation Easement must contain significant stormwater assets, such as regional watercourses to be eligible.

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

Development and Implementation of a Structured Educational Program

A credit 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.



Review of 2015 Credit Manual

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

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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 roof water as irrigation on vegetation results in improvements to water quality. Harvesting also decreases demands on potable water use.

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



Proposed Revisions

- Stormwater Detention
 - Staff recommends removing both existing credits and replacing with a 10% credit for detention basins that provide detention, or retention, beyond current code. Specifically detention or retention for 500 year recurrence events.



Proposed Revisions

- Residential Water Harvesting
 - Staff recommends changing the 10% credit from a minimum of 2 rain barrels (100 gallons) to 300 gallons of on-site residential water harvesting. This change is intended to show a real reduction in runoff while still being attainable for an average household.
 - Benefit can be “stacked” with Water Conservation’s incentive for rainwater harvesting



Proposed Revisions

- Conservation Easement

- Recommend changing from a minimum of 10 contiguous acres of conservation easement to 2 contiguous acres for a 10% credit. The number of 10 acre undeveloped parcels is very low within City Limits.



Proposed Revisions

- Structured Educational Program
 - No changes recommended.
- NEW credit recommendation:
- Floodproofing of primary structures
 - Recommend a 10% credit for “wet” or “dry” floodproofing of a parcel’s primary structures.



Additional comments

- Recommend grandfathering in any current credited accounts
- Recommend credit remaining with a parcel if/when account holders change (new owner)
- Credits are per month and not a one-time benefit
- Impacts to Stormwater Fund balance should be negligible.



Feedback from Water Commission



- Stormwater staff met with the Water Commission in Sept. 2022 to provide recommended revisions.
- General consensus to move forward
- Comments/Questions about providing a more nuanced approach (e.g. different incentives for more pervious materials).

Discussion and Questions





Next Steps



- Council decision on moving forward with a new Credit Manual.
- November 15th first read for new ordinance, at Council worksession.
- Second read at Council worksession in December.
- Implementation in early 2023.