

George Burton

From: Dolf Strom <dolfstrom@cox.net>
Sent: Sunday, August 06, 2017 9:08 PM
To: Planning Commissioner Campbell; Daran Wastchak; Paul Mood; George Burton
Cc: Eva Cutro
Subject: Hillside Ordinance, Storm Water

Here are some comments on hillside storm water. I recommend that we have four definitions

Storm water off-site. This is the water coming down into the lot via a wash or sheet flow.

Storm water on-site. This is rainwater falling on the lot.

First flush. This is the initial on-site runoff that may contain sediment and debris.

Runoff coefficient. The factor used for determining the volume of rainwater runoff from a hillside lot

Now we need some rationale for Hillside lot water retention

Storm water off-site typically enters the lot from above and exits from the low portion of the lot. The entrance and exit locations of storm water can not be altered from the historic locations. Storm water off-site has no retention requirements.

Storm water on-site retention requirement is the increased volume of rainwater runoff from the lot as a result of development. The amount of rain is the amount during a 100-year rain event, 2.2 inches of rain in one hour. The amount of retention volume is a function of the slope of the lot. Lot slopes between 10% to 20% require 100% of retention. Lots slopes 20% to 30% require 50% of retention. Lot slopes greater than 30% have no retention requirement based on the difference between post-development and pre-development runoff flows.

First Flush is the initial 0.5 of inches of on-site storm water from the developed surfaces and applies to all lots.

Runoff coefficients are listed in the Drainage Design Manual for Maricopa County. Current coefficients are 0.70 for undeveloped hillside lots and 0.95 pavement and rooftops.

In conclusion I recommend that Council be advised that steep lots require less to none rainwater retention. The SOD states we catch as much as possible. If we require all lots to capture all the increased runoff it will make harder to have very large homes on the steeper lots. I also recommend that the draft Town Storm Drainage Manual be more user friendly for residential lot requirements. Interesting that when you use Google to find the draft Town manual it looks like it is approved. A minor item is that it does not use our Town logo. It should.

Dolf