

Watershed Protection Leadership Does NOT Know What Causes Flooding

Last night, Mr. Matt Hollon made clear to all that he does not understand the causes and mitigation of flooding. Mr. Hollon is the acting Head of City of Austin's Watershed Protection Department, soon to be replaced by Jorge Morales. The meeting was the general membership of Austin Neighborhood Council, an umbrella organization of Austin's Neighborhood Associations.

Mr. Hollon stated that, to reduce flooding, Watershed Protection is not allowing the building in or placement of Transition Zones in the 500-year floodplain, which is NOW declared the actual 100-year flood plain.

First of all, FEMA would cancel the Austin Flood Insurance Program if the City blatantly encouraged and allowed building in the designated 100-year floodplain.

Secondly, the City WPD staff has, in fact, drawn large apartment buildings in Transition Zones in the floodplain because they apparently believe they can tweak a model to indicate that it will cause 'no significant' flooding. They apparently believe apartments will not wash away and that people will not be drowned if they move to higher floors. They did not try to explain how apartments would be built without impeding the storm-water flow to the creeks.

Both of these ideas indicate that WPD staff is untethered from science and does not realize what the causes and mitigation measures are for flooding. Collecting fees in lieu does not mitigate flooding, because the fees are insufficient to cover the mitigation costs AND they are not spent for up to 20 years after the cause of flooding is allowed to build in the floodplain. Even then, the 'mitigation project' may only accelerate the flow of storm water, not reduce that storm-water volume and flood elevation. Case in point, the 6'x8' Giant Tunnel from Burnet Rd. to Shoal Creek.

Barbara McArthur mentioned later in the meeting that the City has determined that the cost to mitigate flooding in the Brentwood/Crestview areas would cost \$200 million and they only have \$14 million in the mitigation fund.

I was shocked to learn last night that the Head of WPD does not understand the causes of flooding. The 500-year floodplain has been shown to flood, not because it has impervious cover (IC) over it, but because it is **below the elevation of flood waters**. Even if you remove the driveways and houses in the 500-year floodplain, **it will be under water**. The causes of flooding -- heavy rains, IC and loss of trees and grass -- can be miles away. It is often impediments to flow that cause flooding. Case in point, refrigerators in culverts during '80 and '81 Allandale floods.

The causes of flooding are many.

- First, there is the location, and rate of rainfall -- it can be outside the floodplain, but still flow into the floodplain and cause flooding.

- Secondly the amount of building IC over the area of storm-water flow determines the area over which the water can accumulate -- the more area available for water flow around the buildings, the lower the water elevation. The more houses, apartments, and other impediments, the less room for water. It is a volume calculation.
- Thirdly, there is the mitigation effect of trees, bushes and grass in the storm-water flow area. Grass blades cause friction and slow the flow of water. Tree leaves become coated with water and slow the fall of water drops to the ground and slow the accumulation of storm-water flow. Bushes and other landscaping have mitigation properties that are a combination of those for grass and trees.

Despite City of Austin's paying million\$\$ to have engineers determine the FEMA floodplain elevations on Austin creeks since the late 1980s, none of the estimates have been accurate. Since the late '80's determination and installation of flood mitigation structures, the flood elevation of Shoal Creek had risen TEN FEET up until the latest flood a couple of years ago. Meanwhile, City has told me repeatedly that the new larger McMansions, etc have "not significantly increased flooding".

That is FOUR INCHES per YEAR. Most of that time was NOT the recent past when we have seen cottages replaced by mansions and duplexes and trees and lawns replaced by concrete and gravel.

The bottom line is that the City of Austin has no idea where the target elevation is or how to protect our homes from flooding. They are simply flapping their gums.

Flooding is not a trivial thing. It is serious and life threatening. Flooding is a life and death matter. It is an important facet of public safety. Protecting our homes from flooding is a matter of our financial security.

It is cruel and unusual for a City to be so callous about such a serious matter concerning the safety and lives of its citizens, children, residents and taxpayers.

Caroline Reynolds
Allandale Resident since 1979