



POSITION PAPER OF THE CENTRAL TEXAS LAND AND WATER SUSTAINABILITY FORUM

Resolution on Hydrology Water Quality and Drought Management

The Central Texas Land and Water Sustainability Forum has been following the progress of the City of Austin's ongoing Watershed Protection Ordinance Revision Process (WPO). We offer the following insight, based on our individual and collective experience, about how the WPO could address hydrology and enhance water quality to best face the water challenges in Central Texas.

Challenges

Water is an essential element of life, vital to both existence and enjoyment. It has long been recognized as central to the continued resiliency and lifestyle of Austin and Central Texas. The challenges are many and daunting and require a shift in how we manage water.

1. Central Texas is prone to periodic droughts, straining economic, agricultural, and ecological systems.
2. Drought conditions are predicted to worsen in the future due to climate change.
3. Regional water supplies are finite while area population growth is among the fastest in the nation, expected to double in the next 30 years.
4. Natural land cover retains more than 90% of total annual rainfall on average; the water retained sustains plants, creek flows, and aquifer recharge.
5. Water retained on-site is available to plants for shading and cooling, habitat and beauty.
6. Urban land cover decreases rainfall retention and associated benefits; a commercial site with 80% impervious cover retains only about 30% of annual rainfall on site; the rest is lost to runoff.
7. Most developments are not currently built to counter this loss of retention; the conventional design focus views runoff as a problem to be removed from a site as quickly as possible.
8. Rainfall converted to rapid runoff reduces long-term baseflow that sustain creeks, rivers, and aquifers.

Community Direction

Water management is, of course, not a new topic to Central Texas. Austin has most recently called for action in the following ways:

1. The Imagine Austin Comprehensive Plan asks that we "sustainably manage our water resources" in the face of a growing population; use of rainwater capture is specifically encouraged and water conservation made a specific goal.
2. The Imagine Austin Comprehensive Plan calls for "use green infrastructure to protect environmentally sensitive areas and integrate nature into the city."

3. Austin's land development code addresses flooding, erosion, and water chemistry, but not retention, infiltration, or baseflow (except in the Barton Springs Zone).

A Path Forward:

Fortunately, solutions not only exist but are already in use. Other US cities, states and the Lower Colorado River Authority have enacted stormwater management strategies to protect or restore retention and infiltration and associated benefits, including water conservation. An important step will be a shift in how rainfall is viewed and managed at the site level. The Watershed Protection Ordinance review, now underway, will consider revisions to code sections that govern hydrology for new development. The ordinance should consider the following:

- A. Treat rainfall as a vital resource.
- B. Integrate water conservation strategies into water quality protection.
- C. Develop stormwater management approaches that mimic natural hydrologic patterns, to both conserve water and maintain vital baseflow to creeks, lakes, and aquifers.
- D. Change impervious cover from watershed liability to valued rainwater-catchment asset.
- E. Integrate outdoor landscaping strategies that sharply reduce potable water required.
- F. Explore US, LCRA and international strategies to maximize the beneficial use of rainwater and reduce the negative impacts of urbanization on natural hydrology.
- G. Focus on stormwater management options that are easily maintained and serve as amenities.
- H. Develop a design and permitting process that is user-friendly for the engineer, project owner, and permitting staff and negates conflicts with other codes and criteria.