ASLA Central Texas | submitted to CodeNEXT

Austin needs a socially just, economically efficient, and ecologically resilient approach to manage its precious water resources. Thoughtful water conservation and use policies can support the conditions that will ensure the successful integration of Nature and City as the city builds to accommodate increasing population densities. This position paper describes the current water situation in Austin and outlines measures to realize the ultimate goal of embedding sustainable water management into the city's new land development code.

Looking Forward: The Promise of *Imagine Austin*

Austin is known for the ways the natural environment is tightly woven into the fabric of the city. The city was laid out between Waller and Shoal Creeks, both of which are being reimagined as part of a thriving downtown area. The Butler hike-and-bike trail, Barton Springs Pool, Mount Bonnell, Red Bud Isle, and our many other public parks are highly used and deeply cherished. Our private landscapes, shade trees, and gardens also contribute to a healthy human environment. These natural features also provide economic benefit. Dr. Frances Kuo, a leading researcher on the relationship between human health and green space, has shown that landscape can account for 18 percent of overall real estate value.

Imagine Austin, adopted as our comprehensive plan in 2012, recognized the unique qualities of our urban environment and explicitly called for the goal of integrating nature into the city. A critical factor for success will be sustainable water management. Several *Imagine Austin* strategic policies advance this agenda:

CFS P4 – Expand efforts to diversify water sources, including through reuse, conservation and efficiency measures for long-term and reliability planning.

CFS P5 – Plan for and adapt to increased drought, severe weather and other potential impacts of climate change on the water supply.

CFS P9 – Reduce per capita potable water use through conservation, water reclamation and other water resource stewardship programs.

Thinking Forward: Re-Evaluating Water Needs and Uses

Implementing these policies requires careful analysis and planning. With regard to Austin's future water demand, we must anticipate pressures associated with increasing population and a growing economy. With regard to future water supply, we must recognize the possibility that prolonged droughts, like those that have affected the region in the past, may occur—and that they may occur more frequency and last longer.

A thoughtful examination of water availability and need is an important first step to realize sustainable water management goals. The effort to develop an Integrated Water Resource Plan is very valuable for helping to identify opportunities for regional partnerships, technology cost sharing, regional water reliability, and improved drought preparedness. Including cost/benefit analyses of ecosystem services—the contributions of natural systems to society including the provision of clean water and air, decomposition of wastes, microclimate modification, carbon sequestration, and recreational opportunities—would help quantify the true value of water in the urban landscape. Case studies of other cities in central Texas, drought prone areas of California, and places with extreme arid climates such as Arizona would also be instructive.

Future initiatives must be based on a holistic understanding of urban water budgets and include many technical considerations. Drawing on the knowledge of landscape experts, we must develop innovative ways to capture, convey, and conserve water to meet our shared needs. We should expand our water supply by utilizing alternative sources, such as harvested rainwater, greywater, and air-conditioning condensate. We should also use native and adapted plants that require less water, establish irrigation zones by landscape type and size, and utilize smart irrigation systems. Policies must also be nuanced and consider interrelationships among multiple factors. For example, while the use of potable water for irrigation should be generally limited, some specific areas may require it so that the urban tree canopy, which helps mitigate urban heat island effects and is valuable to our economy, can be maintained.

Beyond implementing best practices, we believe Austin has a unique opportunity to be a leader in water conservation. A “sustainability incubator” program that allows innovative irrigation companies to test new products can be an appropriate way to support our water conservation goals. Offering tax rebates or other incentives could support the use of new products and help promote the use of more efficient water systems.

Moving Forward: Recommendations for Sustainable Water Management

- Act on knowledge. Local landscape professionals, particularly those with expertise in water conservation practices, must help lead the change needed. Multiple kinds of expertise and varied technical perspectives are necessary to produce practical solutions that can accommodate change over time.

- Create guidelines that are flexible and dynamic. As Mayor Steve Adler noted earlier this year, successful change requires three things: inclusion, innovation, and intentional improvisation. Measuring and monitoring will provide a basis to assess and continually adapt.

- Increase alternative water sources and encourage aquifer recharge through on-site stormwater management. Developing a “water toolbox” that encourages new technology will help meet these goals.

- Incentivize good water management practices. Incentives to upgrade existing plantings—groundcovers, shrubs, and canopy trees—and irrigation systems will create immediate opportunities for businesses and save money over the long term for property owners. Educating maintenance companies and consumers about native landscapes and water-conserving irrigation control will be the key to success.

- Institute forward-thinking policies on the use of potable water, greywater, and stormwater. ASLA Central Texas is a great resource for these efforts and is willing to assist and inform in a variety of ways.