



August 16, 2011  
10:30 a.m. to 11:30 a.m.  
Conference Room B-2

**Council Sustainability Committee Members:**

Present were Councilmember/Chairperson Yvonne Knaack (Barrel District), Vice Mayor Steve Frate (Sahuaro District)

**City Staff Members:**

Present were Marilyn Clark, Craig Johnson, Karen Hesser, Stuart Kent, Bob Manginell, Jo Miller, Brad Tarrant, and Martina Longoria

**I. Approval of the Minutes of June 21, 2011**

Chairperson Knaack called for a motion to approve the minutes for the June 21, 2011 Council Sustainability meeting. Vice Mayor Frate made a motion to approve. The motion was seconded by Chairperson Knaack. The minutes were approved as written.

**II. Presentation on Tree and Shade - Planning and Education**

Stuart Kent, Executive Director, Public Works made the opening remarks and introduced Jo Miller, Environmental Program Manager, Environmental Resources, and Karen Hesser, Deputy Director, Parks, Recreation, and Library Services who presented this agenda item.

Ms. Miller introduced Brad Tarrant, the new Energy Education Specialist to the committee before the start of the presentation.

The purpose of the presentation is to discuss how tree and shade planning encompasses the environmental, economical, and social elements of sustainability.

Some segments will show what Glendale is doing today with respect to tree and shade planning, starting with a brief history of trees in the valley and how they have played an important part in shaping our community. Other portions will highlight some of the trends, research, and new technologies that are currently in place, and how this relates to sustainability.

The Grand Canal, which helped shape the character of Glendale, has been a big part of Arizona's heritage since the early 1900s. Propagation of native trees was relatively new and was still in the primitive stages. The unlined canals were used as a water source for trees, which made it possible for people to transplant non-native trees as they migrated here from other parts of the country. During that period, the most predominant trees in the state were large non-native shade trees and citrus trees.

In the early years, the four Cs were vital to the growth of agriculture, farming, ranching, and mining in the state of Arizona. Cotton, Citrus, Cattle, and Copper are the four that have honorable mention in pages of Arizona's history books. Climate and Cactus have also been referenced as the fifth and possibly the sixth C.

Planting trees has long been a part of place-making and economic development in the valley. During World War II, cork was used in a wide range of military equipment. After the start of the war, there was shortage of cork. The military was looking for an area to grow cork oak trees and thought Arizona had the perfect climate. The cork oak tree was introduced to the area by way of railroad cars, importing truckloads of cork trees to farmers with the understanding that after they harvest them, they would be given to the military to continue their war efforts.

Around the same time, the City of Phoenix adopted a rose ordinance whereby people were asked to plant roses along the main streets of the city in an effort to attract eastern investors to the valley.

As the valley grew, trees defined communities, neighborhoods, and outdoor public gathering spaces. A community park such as Murphy Park, in Glendale, is the perfect example of blending old with new. People longed for areas with vegetation. Flood irrigation allowed residents to plant very large trees such as eucalyptus, cottonwood, carob, ash, and mulberry, which are typically not planted today.

Until the 1980s, it was easier to import tree species. Native tree propagation techniques were still in the experimental stages. Often, the date of establishment for a park or community can be determined through the types of trees that were planted.

More recently, trees are being promoted as urban amenities, creating environments that maintain and enhance the livability of a community. They create a sense of place, connect people to nature, promote healthy living, and are aesthetically pleasing. This inspires the economic development of a community by creating a place where people want to live.

Current trends continue to look at the management of trees and shade holistically as an entire urban forest and green infrastructure. Glendale maintains approximately 2,188.5 acres of parks and facilities with about 500 acres of right-of-way, and 22 miles of alleyway. Many city departments have been involved in the planning, care, and maintenance of these infrastructures.

Trees are the foundation of green infrastructure, influencing strategically planned landscaping in parks, trails, basins, and communities. City maintained green infrastructure often parallels with built infrastructure such as roads, utilities, aesthetic planting of trees in parks, along trails, in medians, in retention basins, in right-of-ways, and in parking lots at city facilities and parks.

In our urban desert environment, trees can provide a host of benefits. A few of the most obvious are the reduction of energy costs, heat island mitigation, dust control, and healthier livability in our communities. A Tucson study assessing the cooling value of strategically placed trees found a twenty-five to forty percent reduction in summer electrical costs for residential customers. ASU studies on the heat island effect shows a positive effect of desert trees in reducing nighttime temperatures. National studies found that each tree removes approximately 42 to 600 pounds of particulate dust per year, depending on size.

In a recent citizen survey conducted for the Parks and Recreation Master Plan Update, sixty-eight percent of the citizens ranked trees as the number one amenity respondents would like to have in parks.

As has been previously shared with the committee, Glendale was ranked 12th in the top 100 most walk-able U.S. cities in Prevention Magazine in 2006. Real estate data shows that homes within a quarter mile of a park or trail averaged at least a ten percent higher property value.

Street trees are important assets to any community. They provide economic benefits, place-making benefits, and commerce benefits, in addition to safety, aesthetics, and health benefits.

Greening up has dramatic impacts not only the environment, but it also benefits property values and rent rates. Planting a tree on a residential property can increase the value of a home. Moreover, the reclamation and greening of vacant lots has been shown to increase adjacent property values by thirty percent. Cities that offer tree-lined streets and well-maintained public spaces draw new residents and businesses, as well as visitors. Treescaped business districts average higher revenue than treeless areas and consumer responses to green retail and business locations are consistently positive. Beautification with vegetation not only brings neighbors together, it builds community support and pride.

There are many challenges for trees in urban areas. A recent national study on urban tree expectancy and longevity indicated that the life expectancy of an urban tree in the nation is seven to ten years. A case study in Tucson, found the average life span of their urban trees to be ten to twelve years.

During the first three years of a tree, there is a large mortality rate. The lifespan of a tree can be influenced by stressful conditions such as improper planting and care, which effects the tree's health and vitality. Some problems result from individual perceptions, such as not understanding the unique environment in which we live. Desert trees in an urban environment are relatively new and generally flourish. Compared to flood irrigation, maintaining trees on a drip system is a comparatively new approach that brings with it additional challenges and expertise.

Urban conditions are frequently more severe for the growth of vegetation than in natural environments. Trees are in competition with other uses of space. They commonly compete with concrete and asphalt, utilities below and above ground, and the small spaces that streetscapes provide.

The planning of the 2011 Regional Tree and Shade Summit was a collaborative effort with Mesa, Glendale, Phoenix, and Arizona State University's Sustainable Cities Network. Councilmember Knaack provided opening remarks at the event. The program provided training for 225 municipal staff from across the valley.

Parks and Recreation staff are reviewing and monitoring the Phoenix Tree and Shade Plan to determine its effectiveness and what elements that would or could pertain to Glendale.

The New Mexico State Forestry Division recently chose the City of Glendale as one of five urban cities in the southwest United States to participate in an urban tree study. This study will provide a good statistical survey of trees in Glendale. Data collected will be based on a random sampling of trees.

Regionally, there has been more and more interest in green infrastructure and trees, due in part to the EPA requiring most of the cities and municipalities in the valley to develop a stormwater plan using a low impact development best practices design by 2014. Many of the best practices have the potential to use rainwater to help water trees in some the streetscapes.

Arizona was selected to participate in an Urban Forestry, iTree Inventory grant out of New Mexico. The goal is to receive state forestry funding that will enable the city to build a database that measures the dollar value of trees, canopy cover, energy impacts, and stormwater impacts.

Glendale has been a Tree City USA for over fifteen years and annually provides an Arbor Day event. Since 2003, each council district has benefitted from the annual program by having trees planted at city parks. To qualify as a Tree City USA community, a town or city must incorporate a tree ordinance and a tree inventory. As of August 5, 2011, under the Parks and Recreation area of responsibility, there are 13,129 trees in the city park's current tree inventory.

Over the past three fiscal years, the Dedicate-A-Tree Program budget helped provide planting of thirty trees in the city at a cost of \$1,000, which included plaques.

Staff from Parks and Recreation, Right of Way, and Water Services meets monthly to review landscape and watering practices. The Water Services Department, Conservation, and Sustainable Living Office have been very active with several community outreach programs. Thanks to a Council approved Bureau of Reclamation grant, Glendale now has a new tree trail at the Glendale Xeriscape Demonstration Garden.

In partnership with Arizona Public Service, the city held tree care classes for residents that included a free tree give-away. More than 500 trees have been distributed to-date. At the classes, residents received an aerial view of their property to help them layout the best location for their trees to achieve greater energy savings.

The Bureau of Reclamation grant, made it possible for Glendale to establish itself as a training location due in part to Glendale having a demonstration site complete with hands on outdoor training that allows training programs for contractors, municipal staff, and homeowners on how to plant, trim, and grow trees. The Arizona Landscaping Association jumped on the green bandwagon with a new certification program on sustainable landscaping, and asked Glendale to be the west valley site for their program.

On a regional level, the city is researching what is appropriate planting and the expansion of plant varieties for the southwest, as well as looking at regional guidelines for planting and care that have emerged from various studies.

The biggest focus right now is ascertaining how to include best practices with the new stormwater low impact development plan. For example, curb cuts can be used to assist the flow of stormwater from parking lots into planted medians to help water trees and other vegetation. This technique is considered by EPA as one of the best management practices.

A few examples of low impact development practices within Glendale are the Social Security building and the ADOT building, where planted retention is used. A good illustration of using low impact designing as an amenity can be seen at the Musical Instrument Museum in Scottsdale.

This concluded the presentation by staff on Tree and Shade – Planning and Education. Chairperson Knaack thanked everyone for their time and the information presented at the meeting.

This agenda item was for informational purposes only, therefore no action was required on the part of staff.

**III. Appointment of New Committee Chairperson**

Vice Mayor Steve Frate was selected as Chairperson for a one-year term beginning September 20, 2011.

**IV. Staff Updates**

There were no staff updates to report.

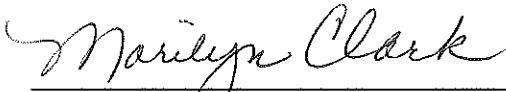
**ADJOURNMENT:**

The meeting was adjourned at 11:41 a.m.

**NEXT MEETING:** September 20, 2011  
10:30 a.m. to 11:30 a.m.  
Conference Room B-2

**TOPIC:** Energy Code Adoption – 2012 Code

Respectfully submitted,



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Marilyn Clark, Recording Secretary