REPORT TO THE
CITY COUNCIL
City of Salinas, California

Urban Forestry Management

Trees are everywhere, yet remain largely invisible to us. And if you were to talk to someone about Salinas's Urban Forest, the response might be: "Where is it?" Yet, trees, and collectively, the City's Urban Forest, are the City's "green infrastructure" that provides millions of dollars in economic and other value to the City and its residents. Knowing the monetary value of things is important in our society. While trees in cities are not grown and managed for products that can be bought and sold on markets, they do provide many intangible services and benefits. In terms of economic benefit, all of the trees collectively within Salinas—our urban forest--provide over $2.9 million annually in environmental and property benefits (Davey Resource Group). In a Portland, Oregon study, researchers found that street trees add $8,870 to the sales price of a home, or a total value increase of $1.35 billion for all home sold annually. *(Donovan, G.H., and D.T. Butry. 2010. Trees in the City: Valuing Street Trees in Portland, Oregon.* Landscape and Urban Planning *94, 1:77-83.)*

And while trees' economic value is substantial, compared to all the benefits they provide, economics is likely not at the top of the list. Below is a listing demonstrating the breadth and depth of the benefits of urban trees.

BENEFITS

Trees:

a. **Reduce Crime:** In an inner-city neighborhood, the *greener the residence, the lower the crime rate.* Residents reported fewer violent crimes and property crimes in green neighborhoods as compared to those that were barrern. *(Kuo, F.E. 2001, "Environment and Crime in the Inner City: Does Vegetation Reduce Crime?" Environment and Behavior, Volume 33, Number), pp 343-367.—www.herluiuc.edu)*

   Researchers found fewer reports of physical violence in homes that had trees outside their buildings. Of the residents interviewed, 14% of residents living in barren conditions have threatened to use a knife or gun against their children versus 3% for the residents living in green conditions. (*Prow, Tina., "The Power of Trees", Human Environmental Research Laboratory at University of Illinois.)*

b. **Reduce chronic childhood illness--**Reduced air pollution from the presence of trees helps to ameliorate respiratory problems, such as asthma—the leading serious chronic illness among children. (*Georgia Urban Forestry Publication, Shade-Healthy Trees, Healthy Cities, Healthy People, 2004)*

c. **Promote health and cognitive focus**: School children with ADHD show fewer symptoms and girls show more academic self-discipline if they have access to natural settings.

d. **Provide wildlife habitat value**—*(USDA Forest Service)*

e. **Calm traffic speeds;** *(Coping with ADD: The Surprising Connection to Green Play Settings, Environment and Behavior. Vol. 33 No. 1. January 2001. 54-77, 2001 Sage)*

f. **Reduce human stress/promote human healing**: A U.S. Department of Energy study indicates that trees help create relaxation and well-being. *www.colorado trees.org, Benefits of Trees)*

g. **Increased human performance**: Time spent in nature reduces mental fatigue, restoring the ability to concentrate and pay attention. Exposure to even small amounts of trees and grass aids concentration, leading to greater effectiveness. (Prow, Tina. *The Power of trees*)

h. **Reduce noise pollution**; A U.S. Department of Energy study reports that trees reduce noise pollution by acting as a buffer and absorbing 50% of urban noise. (www.colorado trees.org, *Benefits of Trees*)

i. **Promote economic development and increased sales tax:** In a study of shoppers' preference, shoppers claim they will spend 9-12% in more retail settings having a quality urban forest. *(Underhill, P. 1999.* Why We Buy: The Science of Shopping. *Simon and Schuster, New York, 257 pp.)*

j. **Create a sense of place/community.** Throughout time people have noted that nearby nature is an important part of places that are livable and have a high quality of life. Having gardens, parks, and trees in cities leads to life satisfaction and a positive outlook. This understanding is one of the pillars of the City's Neighborhood Vibrancy-Urban Greening Plan that is being considered at the January 24, 2016 council meeting. (Wolf, K.L. 2010. Community Economics - A Literature Review. In: Green Cities: Good Health (www.greenhealth.washington.edu).

HISTORY

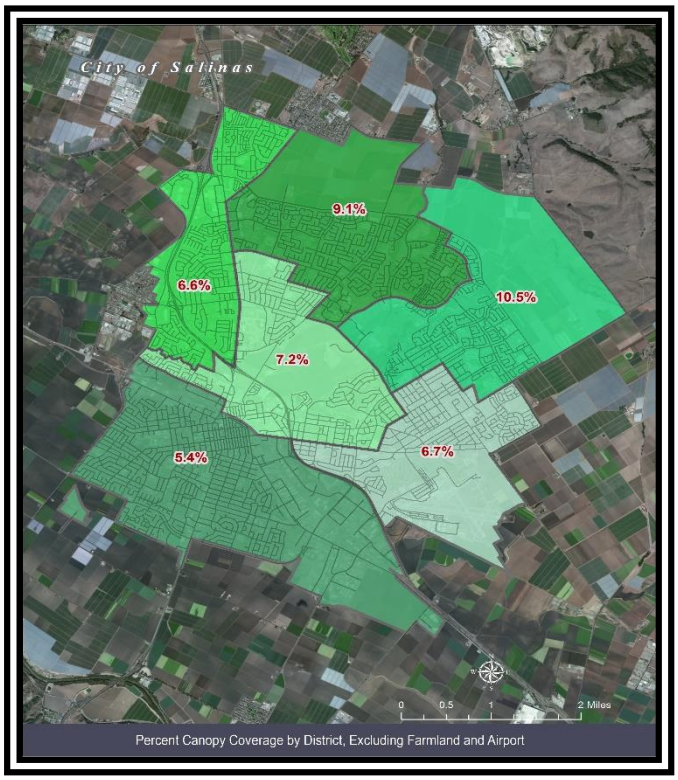
Salinas has had a long-term commitment to trees. For 21 consecutive years, Salinas earned the designation as a *Tree City USA City* from the Arbor Day Foundation. With the recent economic downturn, resources for forest management have been reduced. Deferred maintenance, drought, and the aging process have taken their toll on the city's forest (Davey Resource Group). With a rebounding economy and three state grants, the City has taken significant towards forest revitalization.

Urban trees face many stressors, including drought, high temperatures, and storm surge during extreme weather events; early stress detection can save trees. As with all infrastructure, green infrastructure needs maintenance and must be replaced on a scheduled basis. Arborists' speak of a tree's life cycle in terms of youth, maturation and decline. Each stage has an associated maintenance requirement. Maturing trees need watching and pruning. Over the past two years, increased budgets have enabled the City to undertake long deferred tree maintenance. Hundreds of trees are now being trimmed under the City's new "grid pruning program". This is a huge step forward.

In addition, maturing trees reaching their prime can stress surroundings. For example, the drought has forced many trees roots to the surface searching for moisture. The Magnolia trees along the City's South Main Street are an example of maturing trees.

Recent rains have been a tremendous benefit, but long-term drought effects have left many trees damaged, some past the point of survival (Davey Resources Group). Dead and dying trees will need to be

cut down and stumps removed to make way for new plantings. If declining trees need to be removed and mature trees trimmed, young trees need to be planted.



Due to financial constraints and environmental stressors, Salinas has not conducted a significant tree planting/tree replacement program in more than a decade. Among other constraints, Salinas lacked the resources to properly take care of young trees, especially providing regular watering. Consequently, with no new trees being planted, the City's forest can be viewed as "mature and aging", rather than "youthful and growing". This points to a need to plant new trees; to renew the City's urban forest and build resilience.

In 2014, Salinas conducted a geo-spatial (GIS) tree inventory using a State CalFire grant that identified all publicly-owned trees. This assessment included tree type, size, condition and other attributes, such as vacant sites where a street tree could be planted. The inventory and associated Urban Forest Assessment can be viewed online at the City Water, Waste and Energy web site. The survey concluded with numerous findings, including:

Number of public trees:	31,480
Canopy cover	7.6%
Number of Dead Trees	334
Number of Tree Stumps	1,303

What do these number mean? Let's take just one—tree canopy coverage and look at what it is telling us. The vast number of benefits that an urban forest can provide to a community is highly dependent upon the amount and distribution of leaf surface area- referred to as tree canopy. As canopy cover increases, so does the extent to which trees and forests provide critical services to local residents. These services include reduced energy use, improved water quality, diverse wildlife habitat, reduced crime rate, and increased human health and well-being (Nowak et al. 2010, Sullivan et al. 2001.

Tree canopy coverage for several cities and the United States national averages are shown below:

National average	27.1%
Atlanta, GA	36.7%
Houston, TX metro	30.0%
Boston, MA	29.0%
New York, NY	24.0%
Los Angeles, CA	18.0%
Salinas, CA	**7.6%**

In comparing Salinas' tree canopy coverage with the percentages above, one can see that there is considerable opportunity to expand the City's urban forest.