



CITY OF SALINAS COUNCIL STAFF REPORT

DATE: NOVEMBER 6, 2018
DEPARTMENT: PUBLIC WORKS
FROM: DAVID JACOBS, DIRECTOR
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TITLE: URBAN FORESTRY STATUS REPORT

RECOMMENDED MOTION:

There is no motion recommended.

RECOMMENDATION:

That the City Council receive and file this report.

EXECUTIVE SUMMARY:

This report will consolidate into one document the various ways the City is working to preserve and sustain Salinas' Urban Forest.

BACKGROUND:

Long Range Planning and Management

Public Works' Division of Water Waste and Energy Division helps to manage the long-range planning urban forest, and promote its benefit to the general public. Over the past several years, Public Works has been successful securing several grants that study and promote the growth of the Salinas Urban Forest. In March 2015, an Urban Forest Assessment was completed, with the findings shown on the table provided in Attachment "A."

This Tree Assessment data is stored and maintained on a software called "Tree Keeper" that is available on the City's website at this link: <https://salinasca.treekeepersoftware.com/>.

The Forest Assessment describes the benefits of having an urban forest and the importance of sustaining and growing it. These benefits are summarized in the Attachment to this report and the whole report can be found at this link:

https://www.cityofsalinas.org/sites/default/files/departments_files/public_works_files/water_solid_waste_energy/final_forest_assessment_web_6-2015.pdf

The City's most recent and substantial Urban Forest planning accomplishment is the completion of the 2017 Salinas Vibrant Neighborhood- Urban Greening Plan. This Plan was paid for by the State of California Strategic Growth Council Proposition 84 Bond. Public Works led months of community engagement to develop this Plan and it sets the course for the future of the City's Urban Forest. The Urban Greening Plan will guide the redevelopment of the City's mature neighborhoods, help guide future growth areas, and inform the update of the General Plan, the Alisal Vibrancy Plan, and the Downtown Vibrancy Plan. It speaks specifically to the neighborhoods of Salinas and promotes the benefits of connecting them together through open-space and well-planned sustainable forestry practices. It can found on the City Web Site: https://www.cityofsalinas.org/sites/default/files/departments_files/public_works_files/urban-greening-plan_0.pdf . The Neighborhood Vibrancy and Urban Greening Plan relies in part on the City's tree program to assimilate environmental benefits and human needs with City Strategic Goals.

Most recently, the City of Salinas was fortunate to receive a grant from the State Department of Forestry and Fire Protection (CALFIRE). Funds will enable Salinas to prepare a Forest Master Plan and to plant over 200 trees. The Tree Inventory will be critical in conducting this work. This program is part of Governor Brown's commitment to manage California's forest as multi-benefit carbon sinks and to increase the statewide tree canopy by 10 percent above current levels.

Daily Urban Forestry Work

Within the Environmental and Maintenance Services Division and as part of the Parks and Community Services Division, lies the Urban Forestry work force. The mission of the Salinas Urban Forestry Division is to maintain Salinas' Urban Forests, including street, golf course, greenbelt and median trees, and trees within public facility landscapes, by providing professional quality service, utilizing International Society of Arboriculture tree care practices and standards set forth by the American National Standards Institute and the Tree City USA program. This Division completes safety pruning operations with in house and contract staff. It responds to storm related emergencies and fallen tree safety issues. It completes a limited number of full-service pruning operations through contractual services, plants replacement trees in streetscapes, and performs tree maintenance, planting, removal stump grinding in City parks and green belts. This includes required work related to City sidewalk replacement, and the sidewalk "50/50" program. The fundamental services of the Urban Forestry Division are deeply rooted in many different City maintenance efforts (street and sidewalk repair, parks, landscape districts, street medians, public facility maintenance, new public and private development design standards).

The Urban Forestry staff receive several hundred requests for service each month. Each service request is inspected as soon as possible to identify and resolve eminent threats to public safety, or property. By the end of this year, new contracts will be executed that will support the current staff efforts. This will improve the tree trimming maintenance work and increase response times.

Capital Improvement Budget

The Capital Improvement Budget funds tree trimming (CIP 9237 with \$373,217 this fiscal year), Tree Planting (CIP 9105 \$170,000 in FY 17/18), and maintenance relying on portions from Street Medians (CIP 9775) and Fairways Golf Course (CIP 9404). A new wood chipper and truck are being purchased this fiscal year. The 2017 storms resulted in damages to the City's parks and landscapes in an amount of \$3.5 million. FEMA, State Office of Emergency Services and property insurance proceeds are reimbursing the City for part of the debris removal costs. The City has set aside \$200,000 of the insurance funds from the storm to help with stump grinding.

Tree replacement occurs in one of three ways: landscape medians with irrigation, City Parks, or where homeowners agree to help water new trees. Combining the amount reserved from the CALFIRE Grant and the funds left in CIP 9105 (\$170,000) the City does have \$370,000 to buy and plant new trees. At \$300 per tree, this will help replace at least 1,000 trees. These can be replanted by City Urban Forestry staff and by the new contract services.

In a separate report to the City Council an "adopt a tree program" is proposed. This program engages the City's partners like Sustainable Salinas, to help identify homeowners who would like their own street tree, and will promise to water it.

CEQA CONSIDERATION:

This status report is not specific project.

STRATEGIC PLAN INITIATIVE:

The Salinas Urban Forestry Program speaks directly to the Quality of Life in Salinas.

DEPARTMENTAL COORDINATION:

Public Works has coordinated its Urban Forestry Program with the Department of Library and Community Services to assure that the use of City's parks corresponds with the quality of the park's urban canopy. As previously noted the Salinas Urban Forestry is deeply embedded into various Public Works functions.

FISCAL AND SUSTAINABILITY IMPACT:

This status report has no fiscal impact.

ATTACHMENTS:

- A: Urban Forest Assessment
- B: The Benefits of a Healthy Urban Forest

ATTACHMENT A URBAN FOREST ASSESSMENT

SUMMARY OF SALINAS' PUBLIC TREE RESOURCES

Number of Trees	31, 480
Unique Species	254
Most Common Trees	Liquidambar (10.1%) Plum (9%)
Deciduous Broadleaf Trees	91%
Top 15 species	59% of total population
Relative Size of Top 10 Species	30% are above 24" dia.
Canopy Cover	7.6%
Recommended Canopy Cover	25 – 30 %

CONDITION OF PUBLIC TREE RESOURCES

Trees in Good Condition	50%
Percent Drought-Tolerant/Natives	10.5%
Number of Dead Trees	334
Number of Tree Stumps	1,303
Priority #1 Maintenance Issues	226

STREET VALUES, BENEFITS, AND COSTS

Average Annual Benefits Per Tree	\$153.77
Per Tree Annual Spending	\$31.49
Cost/Benefit Ratio	1:5
Replacement Value of Forest	\$4,892,039
Total Yearly Ecologic Benefits	\$3,546,837
Greenhouse Gas Benefits	\$32,157.66 1,854,848.41 lbs CO2 avoided 2,862,163.56 lbs CO2 sequestered
Water Benefits	\$101,475.01 25,368,753.59 gallons saved
Energy Benefits	\$407,453.17 2,558,162.48 kWh saved 52,888.01 Therms saved
Air Quality Benefits	\$97,118.03 6,529.87 lbs pollutants saved
Property Benefits	\$2,908,643

ATTACHMENT B

The Benefits of a Healthy Urban Forest

Over the years, the City has invited experts, such as Dan Burton (*Walkable Cities*), Peter Kageyama (*For the Love of Cities*) and others to share their wisdom on making Salinas a vibrant and livable place. Recent City planning programs such as the Urban Greening Plan, Downtown Vibrancy Plan and the currently underway Alisal Vibrancy Plan are attempts to integrate human needs with City Strategic Goals to improve the built environment. Experts consider trees and green spaces important foundational building blocks which help shape and improve a city's environment. Trees many benefits have been the subject of several studies and span disciplines from crime reduction, mental well-being to environmental enhancement. The first six items in the list below come from a University of Washington study (*Green Cities: Good Health* by K. Wolf, August 2018). For more please see: https://depts.washington.edu/hhwb/Top_Introduction.html and <http://www.naturewithin.info/>.

Benefits of a Healthy Urban Forest

1. **Crime and Public Safety:** Public housing buildings with greater amounts of trees and vegetation had over 50% fewer crimes than buildings with low amounts of vegetation. Studies of residential neighborhoods found that property crimes were less frequent when there were trees in the right-of-way, and more abundant vegetation around homes.
2. **Safe Streets:** Urban foresters, designers, and city planners encourage tree planting to enhance the livability of urban streets and calm traffic speed.
3. **Mental Health and Function:** Research shows that nature experiences provide an antidote to stress and support general wellness, offering restorative experiences that ease the mind and heal the body. Within built environments trees, parks and green spaces are such settings for respite, as they encourage social interaction and de-stressing through exercise or conversation and provide calming settings.
4. **Economics:**
 - The presence of larger trees in yards and as street trees can add from 3% to 15% to home values throughout neighborhoods.
 - Shoppers claim that they will spend 9% to 12% more for goods and services in central business districts having high quality tree canopy.
 - Shoppers indicate that they will travel greater distances to visit a district having high quality trees and spend more time there once they arrive.
5. **Livable Cities:** Urban green spaces are generally recognized as a component of more livable cities. They can provide a neutral space within which people of all different backgrounds come together, socialize and form relationships.
6. **Place attachment and Meaning:** Salinas' Strategic Plans include becoming "A community to Celebrate." Place attachment and meaning are particularly relevant when considering issues

of urban development and community-building and are often related to parks, green spaces, and natural areas.

7. **Environmental:** Large, healthy, long-living trees act as “green infrastructure”. They help keep temperatures low, diminish the heat-island effect, filter the air from pollution and reduce CO₂. When integrated into the streetscape thoughtfully, trees provide effective on-site stormwater management.

BENEFITS PROVIDED BY TREES (Pages 2-4 of the 2015 Forestry Assessment)

Trees are a natural wonder. Among the many benefits trees provide to urban environments are: they produce oxygen and store carbon dioxide, contributing to a natural balance of atmospheric gases. Trees are one of the planet’s natural resources for moderating the influence of climate. Their leafy branches shade and cool, and absorb harmful ultraviolet rays. Trees in heavily populated areas play an important role, because they significantly reduce the demand for energy.

In Salinas, street trees (including front yard trees within 12.5 feet of the right-of-way), annually reduce energy cost by \$407,000. This equates to approximately \$2.62 per-capita. Salinas’ urban forest is fairly young, so if managed well, this number will increase with time as the trees mature and provide more benefit. If all available planting spaces were filled with energy-saving trees, this number could also increase significantly. In addition to reducing temperatures and energy demand, trees improve our air quality by directly absorbing ozone and by capturing and filtering air pollutants like carbon dioxide, particulate matter, nitrogen oxide, and sulfur oxide. The annual benefits of trees to Salinas air quality equate to \$97,118. Improvements to energy savings and air quality not only benefit Salinas and its citizens, but also provide benefits for the entire Salinas Valley region.

The most financially lucrative benefit of trees in Salinas is aesthetics and their effects on property values. Partially, this is due to the fact that most street trees in Salinas are on private property. The value added by trees to homes citywide is high: \$2,908,632. Healthy urban trees also provide many less tangible benefits such as increasing the overall attractiveness of a community. Studies have shown that trees increase the value of local real estate by 7 to 10%, as well as promoting shopping, retail sales, and tourism⁵. Community trees, both public and private, help to soften the urban hardscape by providing a “green sanctuary” and making Salinas a more enjoyable place to live, work, and play.

Further, trees have proven to reduce human stress levels, and provide an overall calming effect that can reduce crime rates. The City’s 31,814 public trees provide environmental, economic, and social benefits all at very little cost to the community. Tree value/benefits was generated in conjunction with the benefit-cost modeling software program called: i-Tree.

Salinas’ inventoried trees provide cumulative benefits to the community at an average value of \$153.77 per tree, for a total gross value of \$2,891,318 per year. These trees are providing the following substantial annual benefits to the City:

1. Street trees reduce electricity and natural gas use in their neighborhoods through shading and climate effects; a benefit totaling \$365,797, an average of \$19.45 per tree.
2. Trees remove 1,779 US tons of atmospheric CO2 per year resulting in a benefit of \$26,681 per year to Salinas or an average of \$1.42 for each tree. This process is often called carbon sequestration.
3. Street trees protect and improve local air quality through the absorption and deposition of chemical pollutants. The trees in this inventory remove 37,700 lbs. of ozone, nitrogen dioxide, sulfur dioxide and particulate matter (PM10) annually for an estimated benefit to the City of nearly \$200,000 each year.
4. Salinas' inventoried trees intercept an estimated 19.2 million gallons of water runoff (stormwater) annually for a total value of \$189,074 per year, an average of \$10.06 per tree. This is money the city would have to spend otherwise on water drains or other improvements.
5. The total annual benefits contributed by inventoried trees to property value increases, aesthetics, and socioeconomic value are approximately \$2,908,643, an average of \$91.42 per tree.

