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City of SACRAMENTO

Sacramento Urban Forest Plan

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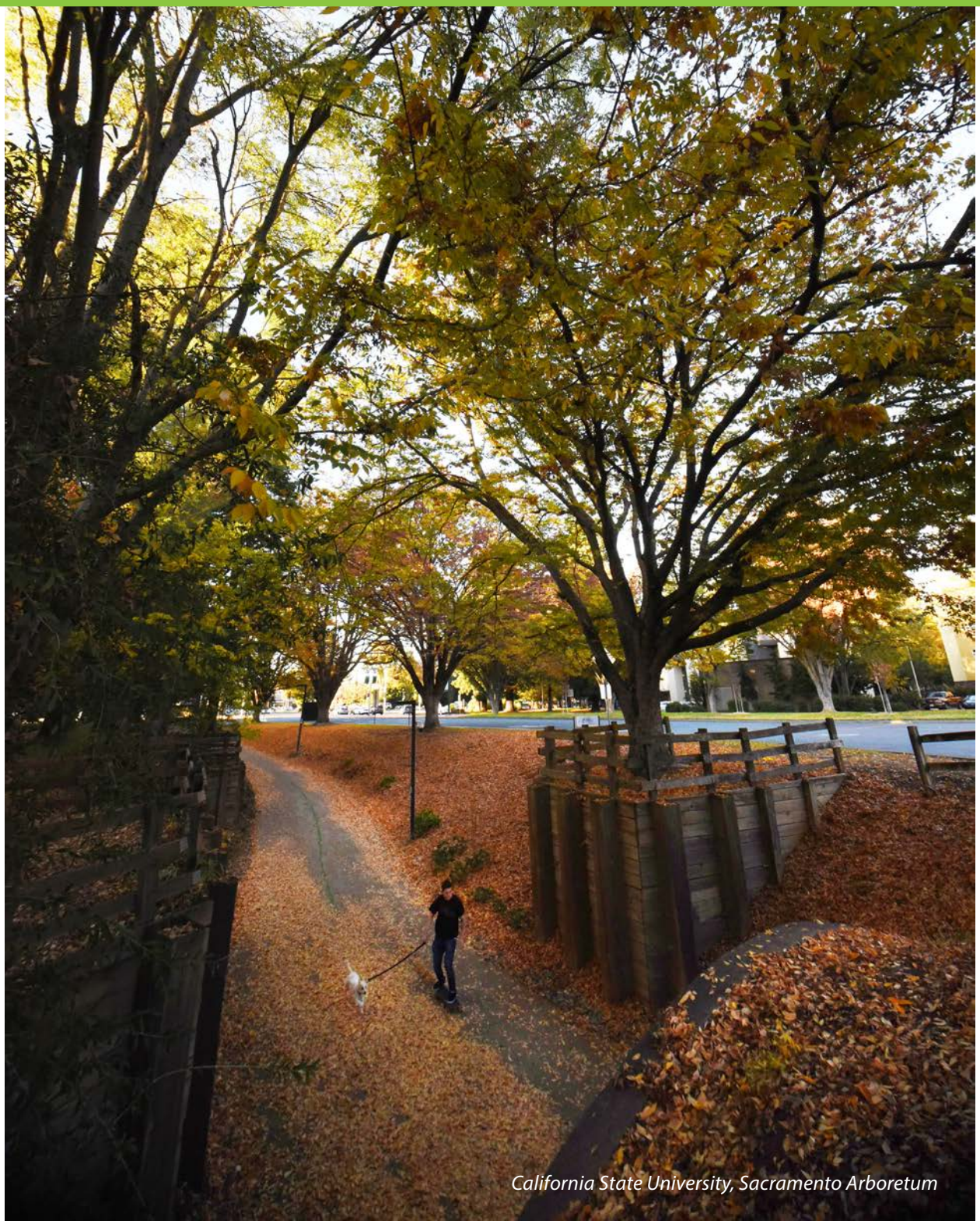
Introduction



California State University, Sacramento Arboretum

Sacramento's urban forest is made up of an estimated one million trees, extending across public property, private land, residential yards, parks, natural areas, streetscapes, schools, and commercial businesses throughout the City.

Many residents consider Sacramento's urban forest to be its most notable characteristic and take pride in being from the "City of Trees." The tree canopy that shades the City today is the result of deep commitment from Sacramentans, past and present, who established the City's tree legacy. While many cities with lush urban forests were built in areas once covered by native forests or woodlands, Sacramento is primarily a natural grassland. Aside from the native oaks along rivers and creeks, nearly all the one million trees in Sacramento were individually selected and planted.

Sacramento's urban forest creates a more livable, healthy, and sustainable City. These trees cool our homes, roads, and neighborhoods; clean our air and water; create beautiful spaces for rest and recreation; improve public health; and absorb greenhouse gases. While the benefits trees provide can be difficult to quantify, the cumulative environmental benefit Sacramento's trees provide to the community are estimated to be over $100 million annually[1].

Sacramento's urban forest is fundamental to the City's character and to its residents' quality of life; however, it faces several challenges. Uneven distribution of canopy cover across the City, management and infrastructure needs, pressure from development, and environmental threats worsened by climate change—such as extreme heat, drought, severe storms, and increases in pests—all require ongoing attention and action to ensure existing trees are preserved and new trees grow.

The trees owned and maintained by the City are a vital piece of the City's infrastructure and a valuable capital asset worth $409 million . Like any piece of infrastructure, such as the roads on which we drive and bicycle and the pipes that bring water to our faucets, the urban forest supports the function of the City and requires a long-term plan to ensure its longevity and sustainability. The Sacramento Urban Forest Plan (SUFP) provides a guiding vision and policy framework to ensure a thriving, growing urban forest that supports our community health and climate resilience goals now and for generations to come.

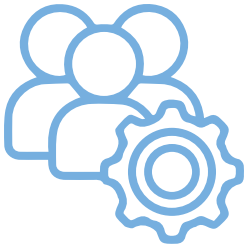
[1] City of Sacramento Urban Forest Resource Analysis (2018) (https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Maintenance-Services/Urban-Forest-Master-Plan/SacramentoCA_ResourceAnalysis_20180522.pdf?la=en)

PURPOSE OF THE SACRAMENTO URBAN FOREST PLAN

The SUFP is the City's primary planning tool for the protection, expansion, maintenance, sustainability, and enhancement of Sacramento's Urban Forest. The core of the SUFP is a set of goals, policies, implementation measures, and actions that set ambitious urban forestry targets, measure progress towards those targets, and support a healthy and sustainable urban forest.

The policy and program framework of the SUFP informed the development of the City's 2040 General Plan and the Climate Action & Adaptation Plan (CAAP), as related to the urban forest, and was integrated into these plans to serve as an implementation tool.

DEVELOPING THE SACRAMENTO URBAN FOREST PLAN



The SUFP was developed by the Department of Public Works and a consultant team in close collaboration with City staff across departments, the City's Urban Forester, and community partners. The process began in 2017 and included research and analysis of existing urban forest programs, current conditions of City-owned trees, and status of City-wide canopy cover. The SUFP was further informed by community engagement efforts to learn the values and priorities of Sacramento community members and utilize their input to guide the creation of strategic goals, policies, and actions. Core components of the process to develop the SUFP are summarized in Table 1 on the next page. After an initial draft document was developed by the consultant team in 2019, Public Works staff began working internally to strengthen the recommendations of the SUFP and align them with the recommendations of the 2040 General Plan and CAAP. The following section describes the research, analysis, and community engagement activities used to develop the SUFP recommendations. The results of each step are further outlined in detail throughout the "Status of Sacramento's Urban Forest" Chapter of this SUFP.

Table 1 Research and analysis stages of developing the Sacramento Urban Forest Plan

Urban Forest Resource Analysis[2]	Urban Tree Canopy Assessment[3]	Community Engagement[4]
To understand the structure, function, and value of Sacramento's public trees, the City performed a resource analysis. The resource analysis assessed the City's inventory of City-managed trees in conjunction with i-Tree Streets—a benefit-cost modeling software—to examine the composition, canopy cover, age, distribution, condition, and performance of public trees. This analysis also established benchmarks to inform management decisions and assessed the economic value public trees hold.	To understand City-wide tree canopy, the City performed an Urban Tree Canopy Assessment (UTC) using high-resolution aerial imagery and remote-sensing software. The assessment resulted in Geographic Information Systems (GIS) maps detailing the location and extent of existing tree canopy, on both public and private property. The UTC identifies canopy cover and potential plantable space by zoning type, park land, neighborhood, and community plan area. It also assesses change over time by comparing imagery from 2004 and 2016. The UTC establishes a baseline for monitoring overall tree canopy cover throughout the community, provides a foundation for developing community goals and urban forest policies, and creates a benchmark for measuring the success of long-term planning objectives.	To understand community values and provide residents and partners multiple opportunities to express their views, the development of the SUFP included the formation of and meetings for a Partner Advisory Committee (formerly called the Stakeholder Representative Group), numerous public meetings and workshops, a digital survey, and a series of pop-up booths at community events.

[2] City of Sacramento Urban Forest Resource Analysis (2018) (https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Maintenance-Services/Urban-Forest-Master-Plan/SacramentoCA_ResourceAnalysis_20180522.pdf?la=en)

[3] City of Sacramento Urban Tree Canopy Assessment (2018) (https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Maintenance-Services/Urban-Forest-Master-Plan/Copy-of-Sacramento-UTC-Assessment-20180515.pdf?la=en)

[4] Community Engagement efforts for developing this plan are outlined in Appendices C, D, and E.

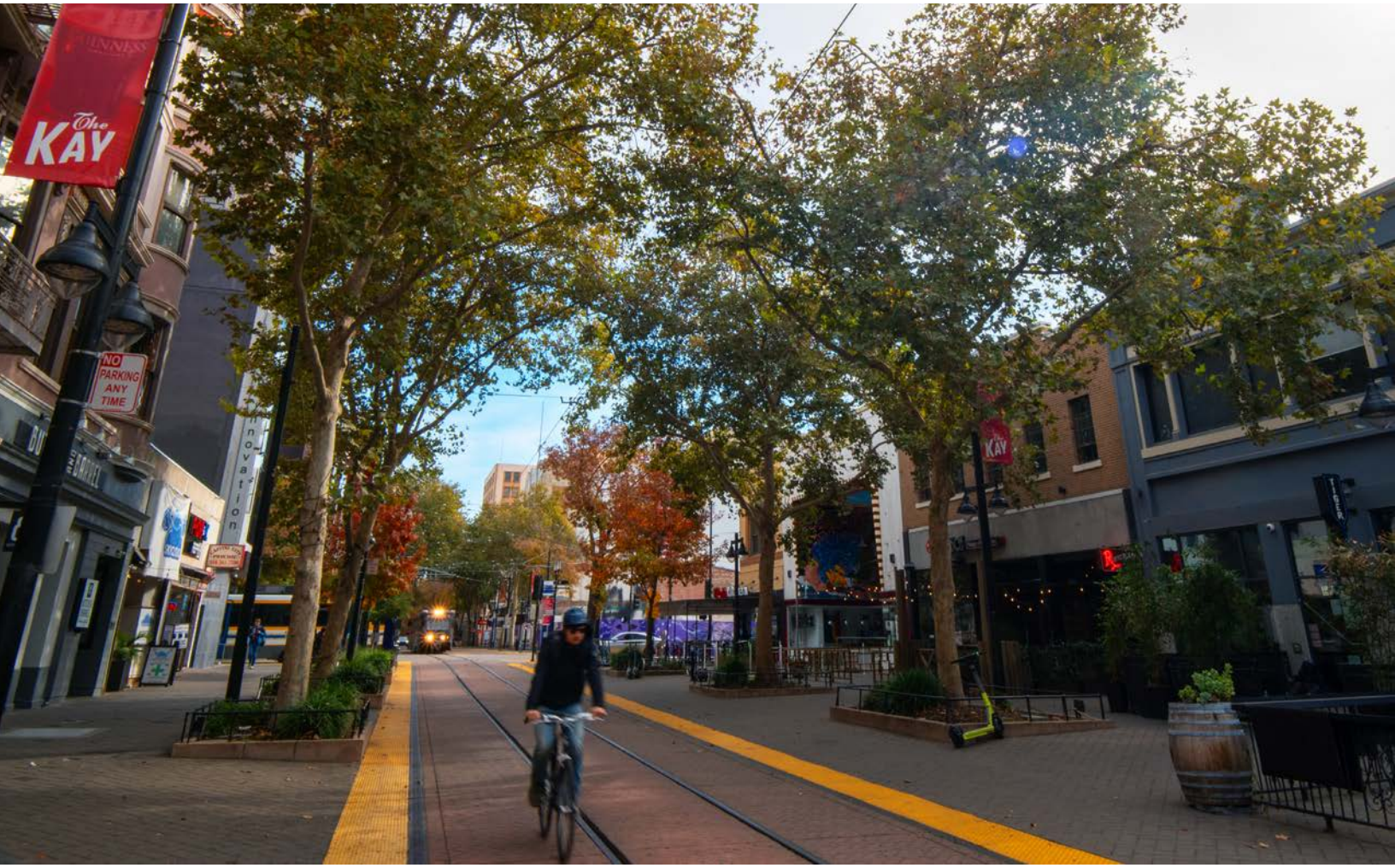
WHAT IS AN URBAN FOREST?

"Urban forest" is a term used to describe the collection of trees found within the built environment. An urban forest is defined by its ***urban setting*** full of paved surfaces, buildings, parks, and large ***human population.*** Sacramento's urban forest is primarily human-created – the result of tree planting and greening activities carried out by people – with pockets of remnant native forest ecosystem. Given its location, an urban forest ***requires regular maintenance*** to keep roads, sidewalks, and parks clear and safe.

WHY INVEST IN TREES?

Sacramento's trees work hard around the clock to improve and enhance public health, the urban environment, and community quality of life. It is difficult to overstate the value of urban trees. There is no other investment that delivers the vast array of benefits as a healthy urban forest. A thriving urban forest is also an infrastructure investment that increases in aesthetic, functional, and economic value over time. With proper care and maintenance, trees' value and community benefits increase as they age and grow. This section discusses the social, economic, and environmental benefits that Sacramento's trees provide, and gives context to our urban forest's role in providing protection from the impacts of extreme heat and climate change.

The tree benefits that Sacramentans identified as most important during community outreach are highlighted in green.



Benefits of Trees

Social benefits

Infuse beauty: The visual characteristics of trees and landscaping (e.g., form, color, texture) add to the aesthetics of urban spaces, provide character and a sense of place within neighborhoods.

Strengthen communities: Trees enhance neighborhoods by strengthening ties between neighbors, fostering neighborhood pride, and promoting connection through the shared planting and caring for trees.

Support education: Tree canopy cover near and around schools has been associated with higher standardized student test scores in reading and math[5].

Improve physical and mental health: People living in neighborhoods with more tree canopy cover have been shown to have better overall health[6], including lower rates of obesity, less chronic stress, lower blood pressure, lower rates of depression and anxiety, improved healing times from injury and illness, and fewer incidents of hospitalization from acute respiratory symptoms and heat related illnesses.

Calm traffic: The presence of trees can reduce driving speeds by narrowing the visual width of the roadway and signaling to drivers that people walking and bicycling are present.

Promote active transportation: Trees also support walking, bicycling, and use of public transit by making roadways and transit stops safer, cooler, and more comfortable.

Reduce violent and property crimes: Increased neighborhood tree canopy cover has been associated with a reduction in violent and property crimes as well as an overall improved sense of safety.[7]

[5] Kuo, M., Klein, S. E., Browning, M. HEM., & Zaplatosch, J. "Greening for academic achievement: Prioritizing what to plant and where," Landscape and Urban Planning, Volume 206, 2021. (https://www.sciencedirect.com/science/article/pii/S0169204620314456)

[6] Ulmer, J. M., Wolf, K. L., Backman, D. R., Tretheway, R. L., Blain, C. J., O'Neil-Dunne, J. P., & Frank, L. D. (2016). "Multiple health benefits of urban tree canopy: The mounting evidence for a green prescription," Health & Place, Volume 42, 2016. (https://www.sciencedirect.com/science/article/abs/pii/S1353829216301332?via percent3Dihub)

[7] Ogletree, S. S., Larson, L. R., Powell, R. B., White, D. L., & Brownlee, M. T. J. "Urban greenspace linked to lower crime risk across 301 major U.S. cities," Cities, Volume 131, 2022. (https://www.sciencedirect.com/science/article/pii/S0264275122003882)

Economic benefits

Lower electricity bills: Trees can reduce energy use for summer cooling by 20-40 percent[8]. Trees help buildings conserve energy by shading buildings from the sun, providing a wind break that slows the loss of heat from buildings, and shading air conditioning units so they run more efficiently. This benefit is anticipated to significantly increase over time as extreme heat impacts grow in the coming decades.

Increase property values: Mature, healthy trees can increase property values for both residential and commercial properties.

Boost commercial activity: Shoppers tend to spend more time and money in commercial districts with mature, healthy trees[9].

Create jobs: In 2009, urban forestry supported 60,067 jobs in California resulting in $3.3 billion in individual income[10].

Promote productivity: Employees with views of nature are often more productive, happier, and healthier[11].

[8] Monitoring conducted by the California Institute of Energy Efficiency and Sacramento Municipal Utility District in the summer of 1991 indicated these savings are achievable. (https://www.aceee.org/files/proceedings/1992/data/papers/SS92_Panel5_Paper28.pdf)

[9] Wolf, K.L. "Community Economics - A Literature Review," Green Cities: Good Health, 2010. College of the Environment, University of Washington. (https://depts.washington.edu/hhwb/Print_Economics.html)

[10] Urban forestry jobs impact (https://www.vibrantcitieslab.com/research/economic-development-jobs-impact)

[11] Berto, R. "Exposure to Restorative Environments Helps Restore Attentional Capacity," Journal of Environmental Psychology, Volume 25, 2005. (https://www.sciencedirect.com/science/article/abs/pii/S0272494405000381)

Environmental benefits

Lower temperatures: Shade from large, healthy, mature trees reduces the amount of sunlight that is absorbed and stored by impervious surfaces, such as roads and buildings. When temperatures are high, trees release water vapor from their leaves into the air through a process called transpiration, which cools down both the plant and the surrounding area. Through shade and transpiration, trees lower ambient air temperature and reduce urban heat island effects.

Improve air quality: Trees clean the air by absorbing harmful gaseous pollutants like carbon dioxide, sulphur dioxide, and nitrous oxide. Trees also capture airborne particulate matter such as dust, ash, pollen, and smoke on their leaf surfaces; turn carbon dioxide into fresh oxygen through photosynthesis; and reduce ozone formation[12] by shading surfaces and reducing air temperatures.

Reduce flooding: During storm events, trees intercept rainfall in their canopies and tree roots increase the amount of water soil can hold. Rainfall then evaporates from the leaves or slowly soaks into the ground, which slows and reduces and slows stormwater runoff and limits sediment and pollutants from entering waterways[13].

Carbon sequestration: Trees sequester greenhouse gases that trap and retain heat in the atmosphere and cause climate change. Carbon dioxide, a major greenhouse gas, is stored in tree trunks, branches, leaves, and roots through photosynthesis. The amount of carbon that can be stored is directly related to the size of the tree, meaning larger trees store more carbon[14]. Sacramento's CAAP identifies carbon sequestration through expansion of the urban forest as providing approximately 2 percent of the total greenhouse gas reductions possible by 2030.

Support wildlife: Trees provide critical habitat, food, and shelter for birds, mammals, reptiles, insects, fish, and other aquatic species and create wildlife corridors that support migration and preservation of species.

[12] Shade from trees in parking lots reduce surface asphalt temperatures as much as 36 degrees F. The cooler parking lot temperatures reduce ozone concentrations and hydrocarbon emissions (fuel evaporation) from parked cars. (https://extension.psu.edu/green-parking-lots-mitigating-climate-change-and-the-urban-heat-island)

[13] Xiao, Q., McPherson, E. G., Simpson, J. R., & Ustin, S. L. "Rainfall Interception by Sacramento's Urban Forest," Journal of Arboriculture, Volume 24, 1998. (https://www.fs.usda.gov/psw/publications/mcpherson/psw_1998_mcpherson005_xiao.pdf)

[14] Gomez-Baggethun, E., & Barton, D. N. "Classifying and valuing ecosystem services for urban planning," Ecological Economics, Volume 86, 2013. (https://www.sciencedirect.com/science/article/abs/pii/S092180091200362X)

Benefits of Public Trees Measured

Trees benefit Sacramento in many ways that cannot be measured, such as beauty and connection to nature. Yet, many of the benefits from trees are quantifiable. Utilizing iTree software[15], the benefits that our public trees return to the City have been estimated and are depicted in the figure below.

These calculations are a snapshot that account for City-owned trees in the City inventory from 2018, or just under 10 percent of all trees in the City. Note that this does not include all City trees as that estimate is about 100,000 as of 2023 – the inventory requires consistent updates as trees are planted and removed. Based on the trees identified in this inventory snapshot, if the environmental benefits of all trees in the City were estimated, including the additional 90 percent of trees on private property, the total community benefit of the City-wide urban forest would be about ten times greater.

- > **19%** Canopy cover – total surface area of the entire City of Sacramento shaded by trees
- > **1,000,000** Estimated number of trees in the entire City
- > **87,324** Number of City-maintained trees in the City inventory
- > **$408,000,000** Capital value of Sacramento's public trees (Cost to replace canopy with trees of equivalent species, size, and condition)
- > **65,000,000** gallons Stormwater diverted from the drainage system annually
- > **6,485** tons Carbon dioxide captured by City trees annually
- > **21.4** tons Pollutants removed from the air by City trees annually
- > **$1,200,000** Annual savings from reduced electricity and natural gas usage for heating and cooling
- > **$7,700,000** Property value increase provided by public trees annually

Cumulative benefits to the community from these environmental services value nearly $10.5 million annually. When the annual investment of $8.2 million in maintenance and care for these public trees is considered, there is an annual net benefit to the community of about $2.3 million dollars. In other words, for every $1 spent on public tree maintenance and care, the community receives $1.28 in benefits – a positive return on investment.

[15] iTree is a peer-reviewed software tool developed by the U.S. Forest Service that can quantify the ecosystem services of urban trees. (https://www.itreetools.org)

Extreme Heat and Climate Change Adaptation

The effects of climate change are already being felt in Sacramento with impacts to public health, ecosystems, and the local economy. Scientists project that climate-driven impacts will increase significantly throughout the century.

Specific impacts of climate change expected in Sacramento include:

Increased temperature

- increased number of extreme heat days
- increased incidents of heat-related illness and death
- growing urban heat island effect
- heat-related disruption to energy generation and distribution
- increased cost of cooling
- decreased safety and comfort of active transportation on high heat days

Changes in precipitation

- more frequent flooding and extreme storm events
- increased frequency and length of droughts
- decreased groundwater supply

Worsening air quality

- more frequent regional wildfires that negatively impact water, soil, and air quality

These impacts will not be evenly distributed across the City as climate change compounds the effects of historical lack of investment in trees and areas where development patterns were not planned for tree inclusion, greater exposure to pollution, and other existing inequities, thus disproportionately affecting people of color and low-income communities.

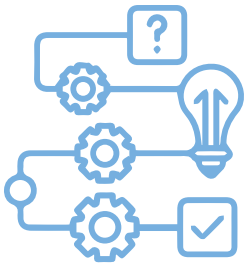
The City has recently taken several critical steps to advance long-standing efforts to mitigate and adapt to climate change, including the development of the CAAP, the City's 2021 Climate Implementation Work Plan, 2020 Mayors' Commission on Climate Change Report, and the 2019 Climate Emergency Declaration[16]. Both the Mayors' Commission on Climate Change Report and the CAAP identify urban tree canopy as centrally important to sequestering carbon, building resilience to heat and air quality impacts, and improving community health.

The CAAP is the City's overarching strategy to address climate change and includes targets to reduce greenhouse gas emissions as well as specific adaptation measures. The CAAP identifies clear goals for urban forestry and this Urban Forest Plan includes policies and implementation measures that were developed to support and achieve the CAAP targets. The CAAP urban forestry goal is:

When comparing the expected impacts of climate change to the benefits of trees, the rationale for the prioritization of trees is clear. Trees are a unique, multi-benefit approach to help decrease temperatures, clean the air, protect residents from negative health impacts, make outdoor recreation safer, make active transportation and transit use safer and more comfortable, and protect against flooding while increasing groundwater infiltration.

[16] The City's Office of Climate Action & Sustainability webpage links to key policy documents, recent meetings, and ongoing initiatives. (https://www.cityofsacramento.org/climateaction)

CHALLENGES AND ISSUES



Sacramento's urban forest provides essential benefits and services to the City and its residents; however, those benefits are not guaranteed without ongoing attention and action. Since Sacramento's urban forest was primarily planted by humans in urbanized settings, the urban forest requires ongoing human intervention to sustain and preserve growth, optimize benefits, and meet established safety and economic goals. Sacramento's urban forest is currently facing several challenges; without intervention, these issues may threaten the long-term health and success of the City's canopy. The most significant challenges and issues facing the urban forest are summarized in this section. For a more detailed discussion of each topic, please refer to the "Status of Sacramento's Urban Forest" section.

The primary challenges and issues facing Sacramento's urban tree canopy include:

1) Uneven distribution of canopy and benefits
2) Lack of awareness and compliance with City ordinances
3) Pressure from planned development
4) Dispersed maintenance and management responsibilities
5) Demands on City resources and responsibilities
6) Emergent environmental threats

Uneven distribution of canopy and benefits

In 2017, Sacramento was identified as the greenest City in the United States according to TreePedia, a project conducted by MIT's Senseable City Lab[17]. While large-stature trees along streets in the Central City and surrounding neighborhoods garnered this recognition by providing an impressive eye-level perspective of greenery, Sacramento is not a "green" City in every neighborhood. Canopy cover—measured by the amount of land covered by trees when viewed from above—varies wildly from one area of the City to another. Sacramento's average tree canopy is 19.1 percent with canopy in residential neighborhoods varying from 43 percent to 12 percent. This discrepancy in access to canopy and green space leads to disparities in who receives the social, economic, and environmental benefits of trees.

The City's canopy is growing, but the current rate is not enough to achieve the ambitious goals of this Plan or to create equity without intervention. Every zoning type, planning area, council district, and major park has seen an increase in canopy cover over the past two decades. This growth, while historic and important, is not aggressive enough to achieve canopy cover goals across the City. Specific focus needs to be given to planting and maintaining trees in neighborhoods that are below the target canopy ranges, starting with the lowest canopy areas and neighborhoods with the most vulnerable populations.

Lack of awareness and compliance with City ordinances

The City has both a tree protection ordinance[18] and a parking lot shade ordinance[19]. These ordinances establish policies that protect large and native trees on private property and require 50 percent shade cover in newly built or improved parking lots. City staff and stakeholders expressed, in community engagement meetings, that most private property owners are not aware of these City ordinances and that compliance is primarily enforced through community reporting. The City only becomes aware of private tree removals if reported or by the filing of a permit application. This makes it difficult to protect against prohibited tree removals. Additionally, the results of the UTC assessment found that only 5.9 percent of parking lots in the City achieve 50 percent shading, a result driven by both issues with ordinance compliance and legacy parking lots constructed before the ordinance was effective.

Increasing canopy cover is dependent on both preserving trees - especially mature shade trees - and planting new trees. It will be difficult for the City to protect the existing canopy if residents are not aware of the regulations that limit when trees can be removed on private property, and without enforcement of these maintenance and protection policies.

[17] https://senseable.mit.edu/treepedia/cities/sacramento

[18] Sacramento City Code Title 12.56

[19] Sacramento City Code Title 17.612.040

Pressure from planned development

Sacramento is among the fastest growing communities in the state and is projected to experience significant growth over the next 20 years. City policies support accommodating much of this growth through infill development, especially in the Central City, older commercial corridors, and in transit-oriented development.

While higher densities and infill development do not preclude trees and trees shading, policies and design standards can help ensure that trees are preserved and incorporated throughout the design process and are afforded the above- and below-ground growing space needed to reach maturity, all while minimizing conflicts with other infrastructure (e.g., roads, sidewalks, streetlights, solar panels, and utilities).

Strategic review and updating of community development and design standards, as well as monitoring development to achieve canopy cover goals, is necessary to ensure that neighborhoods and business districts include trees that can grow to maturity and provide canopy cover.

Demands on City resources and responsibility

Within the City, staff from a variety of departments play a role in managing the urban forest and are responsible for the planting, maintenance, and care of trees on City property and right-of-way and ensuring compliance with relevant City codes.

Funding for urban forestry is not increasing at the same rate as costs for maintenance of City-managed trees. The City is currently not able to achieve the recommended five-year cycle for maintenance of all City trees. Increasing maintenance intervals is not a viable option as it increases the risks of decay, deadwood, and heavy limbs, thereby increasing potential risks and reducing the opportunities to identify health issues – resulting in potential liability to the City.

With a focus on funding tree maintenance, funding to regularly update tree inventories has declined resulting in a backlog of tree entries. Additionally, many City parks are older facilities built without appropriate irrigation that best serves needs for trees. Reducing lawn watering in times of drought also impacted trees. Identifying necessary funding to install or retrofit irrigation to provide appropriate watering to trees presents significant challenges for canopy expansion in parks.

For the City to successfully implement the goals, policies, and programs identified in this plan additional resources will be required, particularly for ongoing maintenance of an urban forest that needs to nearly double its current size to reach canopy goals.

Dispersed maintenance and management responsibilities

The responsibility for the urban forest is shared by many. About 90 percent of Sacramento's urban forest exists on property that is managed by private owners and public agencies other than the City of Sacramento. Each agency and property owner has different goals, priorities, and available resources, making tree management oversight complex and, at times, a competing priority. There is also a gap in technical expertise, particularly with private property owners - around proper maintenance practices such as irrigation and pruning.

This dispersed ownership structure results in varying levels of investment, maintenance, planting, and care. Reaching canopy cover goals City-wide requires the support and investment of each of these parties as they control most of the City-wide urban forest. The City's direct role is primarily on City-managed right-of-way, street trees, parks, and other City property. Partnership, education, and outreach is required to achieve the goals of this Plan, with strong collaboration between the City, other public agencies, private businesses, community-based organizations, and the public.

Emergent environmental threats

Over the past century, average maximum temperatures in California have increased between 1.6°F and 2.5°F, and temperatures are expected to continue to rise due to climate change impacts on California. These changes are projected to bring more frequent, lasting, and intense periods of heatwaves and drought as well as increasingly intense winter storms. Drought conditions will weaken trees without proper irrigation and intense storms will affect weakened trees with increased incidents of limb drop and felling. Finding additional water and funding for irrigation improvements will present a challenge. Care needs to be given to drought-related watering restrictions, drought messaging, and water meter implementation to ensure that water-saving measures do not adversely affect trees. The City will also need to continue to critically examine its tree palette and plan for a hotter, drier future.

A new invasive species afflicts California approximately every 40 days, and the Sacramento region has been identified by the California Department of Food and Agriculture as one of the top five regions at risk for the establishment of invasive pests and diseases. These new threats have the potential to cause significant damage to the urban forest and pose a substantial risk to tree benefits. Frequent monitoring and early detection of signs and symptoms of disease development and pest infestation will provide the City with the best chance to sustain a healthy canopy into the future. Best practices recommend that no single species represents greater than 10 percent of the total tree population and that no single genus represents more than 20 percent. Increasing diversity in trees planted to meet this standard would increase City-wide resilience to new pests and diseases.

Key Recommendations

The SUFP provides a long term vision and strategy for the city's trees focused on these key recommendations, summarized below and on the following pages. For a more detailed discussion of specific policy recommendations and implementation measures, please refer to the policy and program framework section.

1) Trees and _____

Trees should be addressed as critical infrastructure that helps support climate adaptation and targeted environmental and public health goals. The co-benefits of trees **and** other essential community planning efforts can be achieved through strategic planning and policy: trees and development, trees and density, trees and active transportation, trees and solar, trees and energy management, trees and public health.

2) City of Trees for All

The SUFP calls for increasing City-wide tree canopy from 19 percent to 35 percent by 2045. To reach that goal, the combined efforts of the City, other agencies, and the public will need to plant and maintain an additional ~25,000 trees per year. Targeting planting efforts in the neighborhoods with the lowest canopy levels, highest heat exposure, and most socio-economically vulnerable residents will ensure that Sacramento can be the City of Trees for all residents and the benefits of trees are shared equitably.

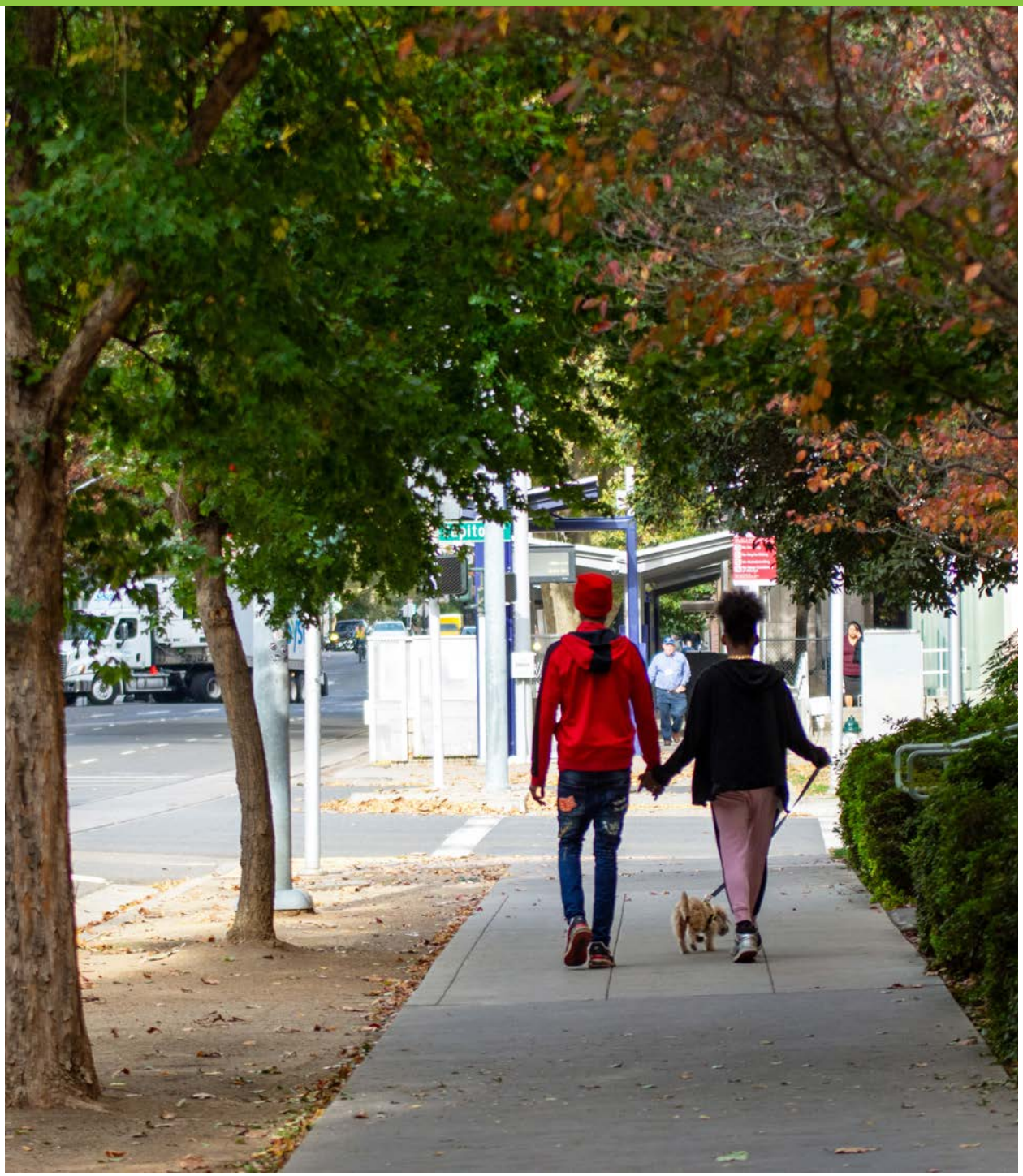
3) Protect Trees

Reaching the canopy goal will require protecting existing, healthy trees and ensuring that young trees are able to grow to express their full potential canopy. Sacramento will not be able to reach 35 percent canopy coverage through planting alone; maintaining the existing canopy is key. Strong ordinances, increased enforcement capacity, creative planning, expert tree care, and public-private partnerships are necessary to protect and care for as many trees as possible.

4) Invest in Canopy

Increased City funding, staffing, and maintenance capacity is needed to carry out the expanded planting, maintenance, enforcement, and engagement responsibilities necessary to achieve the City-wide tree canopy goal of 35 percent. Associated efforts and investments from private partners and the public will be necessary; the City does not own sufficient plant-able space to reach the community canopy goal alone.

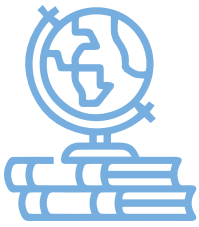
Status of Sacramento's Urban Forest



Sacramento's urban forest has been profoundly shaped by its past and current residents, the natural environment, and changes in physical conditions. It is constantly evolving as trees are planted, die, or are removed. The urban forest is living infrastructure that benefits the entire city and its residents. Made up of individual trees growing on both private and public land, the responsibility for stewarding Sacramento's urban forest is shared by the entire community.

This chapter reviews the state of the urban canopy, past and present; provides detailed analysis of City-managed trees; and explains existing policies, programs, and tree management structure. The details and analysis in this chapter inform the Key Recommendations, Policy and Program Framework, and Implementation Strategy sections of this SUFP.

HISTORY OF SACRAMENTO'S URBAN FOREST



The City of Sacramento has a rich history of trees, driven by substantial City investment and community advocacy. Understanding the historical context of the urban forest and lessons learned from previous challenges is essential to informing future actions and investments. Trees were critical to the City's past and are essential for addressing current and future challenges facing Sacramento.

Pre-urban Sacramento

The area encompassing Sacramento was, and still is, the Tribal land of the Nisenan people. Sacramento was a gathering place for many local Tribes who have lived throughout the central valley and foothills for generations and were the original stewards of this land, including the Southern Maidu People, the Valley and Plains Miwok/Me-Wuk Peoples, and the Patwin Wintun Peoples.[20]

Before European American settlers arrived in Sacramento, the area was predominated by dry grassland with native riparian forests that grew along the rivers and savanna-like native oak woodlands at higher elevations. Native trees found in this region, historically and current day, include blue oak, interior live oak, valley oak, foothill pine, willow, cottonwood, Oregon ash, western sycamore, and California black walnut.

The influence of Indigenous Peoples on woodlands in the area can be inferred from observations made at the time of initial contact by European Americans, oral histories of elders, and landscape changes that have been documented since the dispossession of Indigenous populations. The open, park-like woodlands dominated by majestic oaks—that early European colonizers consistently describe throughout the Central Valley—suggest that these woodlands were the result of intense manipulation by fire. Fire and controlled burning were used by Indigenous Peoples to increase acorn production, promote secondary tree growth used for basketry material, reduce pest and diseases in acorn crops, and expand oak woodlands among other uses. This burning was done in large part due to oak acorns being a staple food source.[21]

[20] Center, S. N. "Our Native Community," Sacramento Native American Health Center, 2022. (https://snahc.org/our-native-community)

[21] Mensing, S. "The History of Oak Woodlands in California, Part II: The Native American and Historic Period," The California Geographer, Volume 46, 2006. (https://www.researchgate.net/publication/232041282_The_History_of_Oak_Woodlands_in_California_Part_II_The_Native_American_and_Historic_Period)

Sacramento City Hall in 1923. Photo courtesy of Sacramento Center for History, McCurry Foto.

Urban Sacramento

European American settlers began to arrive in the mid-1800s. Following the 1848 discovery of gold in the Sierra foothills, Sacramento experienced rapid growth, dispossession of land from the Indigenous Peoples, and significant changes to the native forest. Settlers and miners cut down and damaged trees for fuel and shelter while also recognizing the value of shade relief, often building around existing mature trees.[22]

As the area urbanized, trees and open space were intentionally included as a part of the urban fabric. Efforts to preserve open space and trees (e.g., as public parks) and to plant street trees date back to 1849 and 1855 respectively. Sacramento, initially known as the "City of Plains" due to the predominant grasslands, was quickly dubbed the "City of Trees." Two early reporters described this transition: *"Our citizens have a mania for planting trees. There is hardly a street in the suburbs that in a few years will not be beautifully shaded"*[23] and *"Shade trees add much to the beauty of the place; it will be, in a few years, the city of trees."*[24]

Early in Sacramento's history, both the City and its citizens took an active role in the care and creation of the urban forest and that legacy has persisted today. The City of Sacramento has been a leader in developing the area's urban forest. Ordinances and action from the Sacramento City Council, dating back to the 1850s, have progressively required tree plantings for public health, flood protection, street shading, new development, parking lots, and protection of large and native trees.

[22] McPherson, E. G., & Luttinger, N. "From nature to nurture: the history of Sacramento's urban forest," Journal of Arboriculture, Volume 24, 1998. (https://www.fs.usda.gov/psw/topics/urban_forestry/products/cufr_20_EM98_19.pdf)

[23] Daily Democratic State Journal. February 13, 1855.

[24] Holden, W. "Sacramento: Excursions into its History and Natural World, Two Rivers Publishing Company, 1987.

While the City has taken these steps, progress has been buoyed by the engagement and passion of Sacramento residents and civic leaders, particularly women. Mrs. J. Henry Miller led a lengthy campaign to convert a swamp into what is now McKinley Park. Other women, including Effie Yeaw and Eleanor McClatchy, were active champions in protecting ecology and trees. Fred N. Evans designed many parks for the city, including William Land Park, and developed a professional tree management program for the City. C.K. McClatchy, the editor of the Sacramento Bee from 1883 to 1936, became a leading advocate on the behalf of Sacramento's trees and is credited with promoting the City's reputation as a "City of Trees" in the paper, as well as publishing front-page obituaries for trees cut down or vandalized to raise public awareness and pride in city trees.[3]

In 1981, in response to the City's declining budget for urban forest programs, the mayor and county board of supervisors gathered more than 125 civic, business, and community leaders to develop the concept of a community-based non-profit organization aimed at increasing tree planting and providing resources and education about stewardship and care of trees. By 1982, the non-profit Sacramento Tree Foundation (STF) was formed, led by a group of 50 volunteers. Today, STF provides urban forest programming and tree care to historically disinvested areas in the Sacramento region. With financial sponsorship from the Sacramento Municipal Utility District (SMUD) and volunteerism from residents, STF has planted more than 500,000 trees in the Sacramento region.

While the City and its residents have put considerable investment into the urban forest, the opposing perspectives of trees as both essential to health and as nuisances have persisted. Affection for different tree species has changed over time, resulting in mass planting of certain species sometimes followed by mass removal. Widespread tree damage during large windstorms in the 1930s and 1940s prompted residents to view trees (particularly large trees) as a safety hazard, even though pruning practices and damage to root systems from road expansions were to blame at that time.

Following World War II, rapid suburbanization, widespread support and availability of automobile travel, and availability of air conditioning led to changes in civic support of the urban forest. Tree removals increased to accommodate street widening, underground utilities, and commercial development. By the 1950s, subdivisions were frequently built with air conditioning and without trees to provide natural cooling. Ordinances that protected and required trees were relaxed and community involvement in the urban forest declined.

While support for trees has ebbed and flowed, it has never disappeared. Periods of decreased interest and protection of trees have been punctuated with public protest over tree removals, mobilization to demand that City Council strengthen tree removal ordinances and permitting requirements, changes in development patterns to require trees, dedicated volunteerism, and investment of residents' time and City resources to protect and steward trees.

Today, many past challenges and strengths are still on display. The City continues to prioritize and invest in maintaining a substantial public tree resource; however, its scope of oversight, budget, and capacity is insufficient to support the entire urban forest. As a result, investment and involvement from the community, businesses, and private entities is essential for the continued growth and success of the urban forest.

SACRAMENTO ECOLOGY AND ENVIRONMENT

Located at the confluence of two major rivers within California's northern Central Valley, Sacramento exists in a unique location with a diverse ecology and environment that shapes the growth of the urban forest throughout the city. Understanding the natural ecological and environmental factors at play allows the City to make informed management decisions about both natural and urban forests within the city.

Sacramento's trees and vegetation support local wildlife by providing food, shelter, and nesting areas to a wide variety of birds, animals, and insects. The city is home to a diverse ecology of native plants and animals—some of which cannot be found anywhere else on the planet[25]—and the interconnectedness of these native and non-native species contributes to the environmental health of the city and region. This biodiversity, or variety of plants and animals in local Sacramento habitats, is important for the resilience of the ecosystem. Particularly in the rapidly changing environment caused by climate change impacts, preserving and propagating locally acclimated populations, where suitable, can enhance urban forest resilience. The SUFP strives to maintain and strengthen the capacity of the city's urban forest to support wildlife and local biodiversity. Strategies include preserving native oak woodlands, planting native trees, and promoting more adaptive tree planting palettes.

[25] Sacramento Orcutt Grass is a California endangered plant species found only in the bottom of vernal pools in eastern Sacramento County. It is the only plant known to be endemic (restricted to) Sacramento County.

Mediterranean Climate

Consistent with the majority of California, Sacramento has a Mediterranean climate characterized by hot, dry summers and mild, rainy winters, each lasting about 6 months. Mediterranean climate zones are unique, found in few places around the world. Similar conditions are found in areas around the Mediterranean Sea, Australia, South America, and Africa.

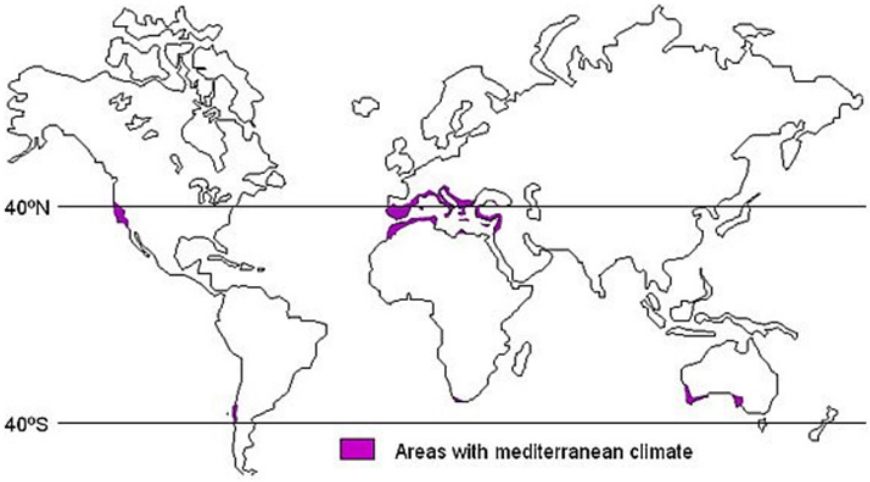


Figure 1 Areas with mediterranean climate[26]

The California Floristic Province

Sacramento is located in the California Floristic Province, one of only 36 biodiversity hotspots worldwide.[27] The California Floristic Province is home to over 3,500 plant species, 61 percent of which are endemic, and Oak Woodlands are the region's largest, most important habitat types.[28]

In Sacramento, one of the primary native habitats is Blue Oak and Valley Oak Woodlands. These native oaks are keystone species[29] in our ecosystem and provide critical habitat for a diverse array of plants and animals. Without these native oaks, Sacramento's ecosystem would change drastically; many plant and animal species would die off, others would explode in number. When the keystone species like native oaks are removed, it is called a "top-down trophic cascade" and can have major long-term damaging effect on an ecosystem.

Figure 2 California Floristic Province

[26] https://www.mediterraneangardensociety.org/climate.html

[27] Biodiversity hotspots an exceptionally high number of plants and animals that are found nowhere else in the world (i.e., are endemic) and have lost at least 70 percent of the native vegetation coverage. (https://www.conservation.org/priorities/biodiversity-hotspots)

[28] https://www.cepf.net/our-work/biodiversity-hotspots/california-floristic-province/species

[29] Keystone species have low functional redundancy meaning if the species were to disappear from the ecosystem, no other species would be able to fill its ecological niche.

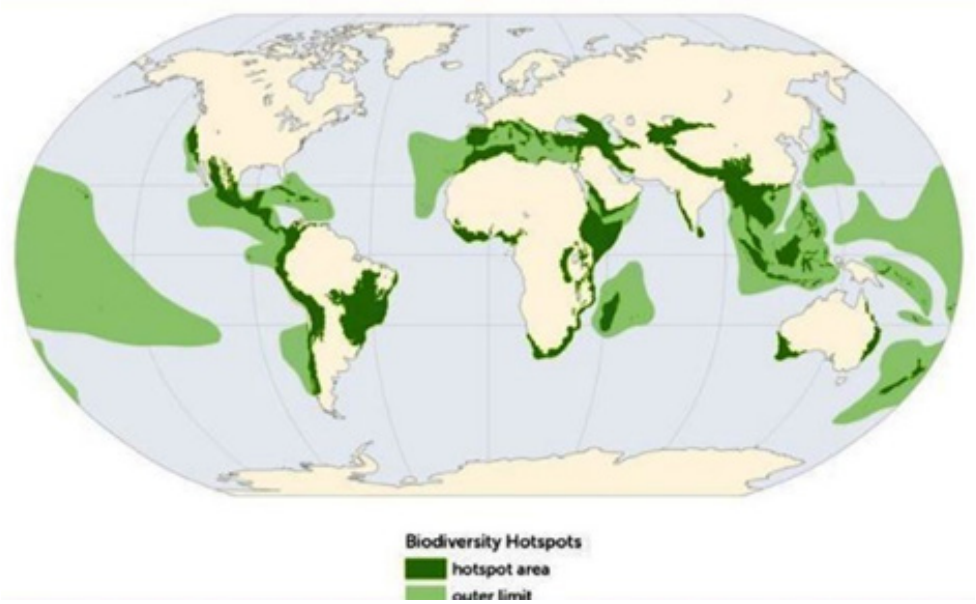


Figure 3 Biodiversity hotspots

The Pacific Flyway

The Pacific Flyway is a major north-south travel route for migratory birds that runs along the Pacific Coast, from Alaska to Patagonia. Every year, at least a billion birds travel some or all this distance in both spring and fall to follow food sources, find breeding grounds, or reach over-wintering sites.[30] For those birds that travel this avian superhighway through the Sacramento region, the city's trees, parks, and water bodies provide critical food and shelter along their journey.

Figure 4 Pacific Flyway

[30] https://abcbirds.org/blog/north-american-bird-flyways/#:~:text=Birds percent20navigate percent20along percent20more percent20or, percent2C percent20Central percent2C percent20and percent20Pacific percent20Flyways

CITY-WIDE TREE CANOPY ASSESSMENT

The best way to understand Sacramento's urban forest is to assess its "tree canopy." Tree canopy—also referred to as canopy cover—is the layer of leaves and branches of trees and other woody plants that cover the ground when viewed from above. Most of us notice tree canopy based on how much shade we can find on a hot summer day; Similarly, canopy cover is quantified as a percentage of the total surface area of the ground that is shaded by trees. Understanding canopy cover is important to measure the benefits of the urban forest, assess how the urban forest is distributed geographically, establish a baseline, and measure changes over time.

The development of the SUFP included an urban tree canopy assessment (UTC) using high resolution aerial imagery and remote sensing software that was completed in 2018. This assessment provides a bird's-eye view of the entire urban forest, including all trees on both public and private property. To identify and evaluate geographic issues and trends, canopy data from the UTC[31] was aggregated in several ways. Exploring canopy distribution across the city can help guide tree investment opportunities and identify areas for focus in the plan.

Tree Canopy Summary

In 2018, the City of Sacramento encompassed 99.7 square miles (63,784 acres), of which 19 square miles (12,198 acres) were shaded by tree canopy:

City-wide

- 19.1 percent tree canopy (12,198 acres)

Parks

- 27.4 percent tree canopy (1,639 acres)

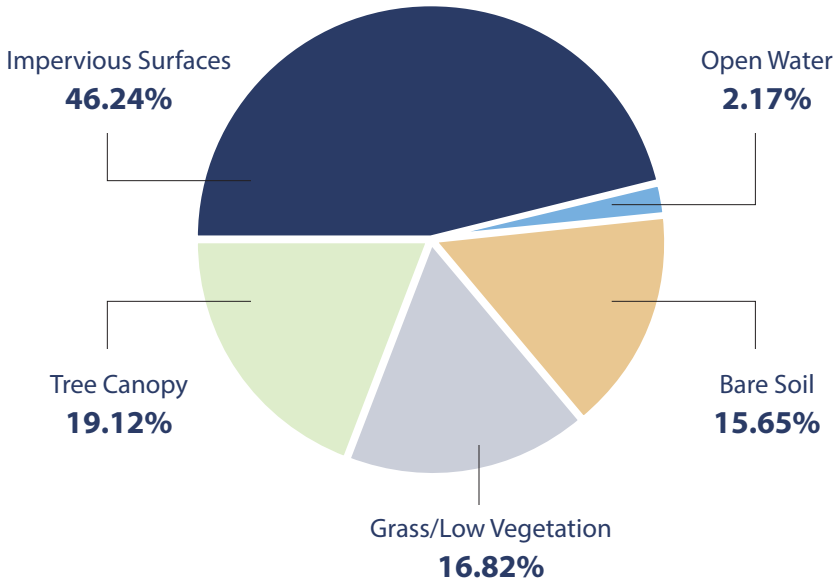


Figure 5 Sacramento land cover classes

[31] For more detailed information, refer to the full Urban Tree Canopy Assessment (https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Maintenance-Services/Urban-Forest-Master-Plan/Copy-of-Sacramento-UTC-Assessment-20180515.pdf?la=en)

The UTC conducted a high-level assessment of a maximum potential canopy cover, including existing canopy and potential plant-able area[32]. The UTC overstates plant-able areas, as it does not include an analysis of areas currently planned for future development, play areas, drainage facilities, or other restrictions. The City may also seek to incorporate trees in areas currently covered with pervious surfaces, such as creating new landscape strips as part of complete streets projects and promoting trees in private parking lots. While the exact percentages for potential canopy cover are not exact, the UTC shows there is an opportunity to increase urban tree canopy throughout the city.

The CAAP identifies 35 percent canopy by 2045 as the target canopy cover for Sacramento[33], a goal that was supported by the Partner Advisory Committee that has guided the development of the SUFP. According to national analysis by two U.S. Forest Service researchers, "40–60 percent urban tree canopy is attainable under ideal conditions in forested states, 20 percent in grassland cities and 15 percent in desert cities are realistic baseline targets, with higher percentages possible through greater investment and prioritization." [34]

Considering Sacramento's natural ecology—primarily grassland with riparian woodlands—existing canopy cover, and potential for growth, 35 percent is an ambitious and important target that is likely close to the maximum ecological capacity for the city.

To reach the 35 percent canopy goal by 2045, an estimated 540,000 additional trees need to be planted—about 25,000 per year—while maintaining existing canopy levels.

[32] Potential plant-able areas include bare soil and grass/low vegetation.

[33] CS-1 (Carbon Sequestration 1): https://www.cityofsacramento.gov/content/dam/portal/cdd/Planning/General-Plan/2040-General-Plan/PDC%20Public%20Hearing%20Draft%20Climate%20Action%20and%20Adaptation%20Plan.pdf

[34] Leahy, I. "Why We No Longer Recommend a 40 Percent Urban Tree Canopy Goal," American Forests, 2017. (https://www.americanforests.org/article/why-we-no-longer-recommend-a-40-percent-urban-tree-canopy-goal)

Table 2 Number of Trees Needed to Increase Canopy Cover[35]

Total Canopy Cover	Small (20-ft)[36]	Medium (30-ft)[37]	Large (40-ft)[38]	Very Large (60-ft)[39]	Average[40]
19%	0	0	0	0	0
20%	55,880	34,925	19,269	8,597	29,668
25%	374,800	234,250	129,241	57,662	198,988
30%	693,720	433,575	239,214	106,726	368,309
35%	**1,012,640**	**632,900**	**349,186**	**155,791**	**537,629**

Table 3 Number of trees needed to be planted per year to reach canopy target by 2045, assuming an average annual mortality rate of 5 percent[41]

Total Canopy Cover	Small (20-ft)[36]	Medium (30-ft)[37]	Large (40-ft)[38]	Very Large (60-ft)[39]	Average[40]
19%	0	0	0	0	0
20%	2,667	1,667	920	410	1,416
25%	17,888	11,180	6,168	2,752	9,497
30%	33,109	20,693	11,417	5,094	17,578
35%	**48,331**	**30,207**	**16,666**	**7,435**	**25,660**

[35] Each cell is the total number of trees of the specified size need to reach the canopy cover identified in the row. The rows/columns are not cumulative.

[36] Eastern Redbud and Crape Myrtle were used to represent a small tree with a 20-foot canopy diameter.

[37] Strawberry Tree and Chinese Pistache were used to represent a medium tree with a 30-foot canopy diameter.

[38] Zelkova and Red Oak were used to represent a large tree with a 40-foot canopy diameter.

[39] Valley Oak and American Elm were used to represent a very large tree with a 60-foot canopy diameter.

[40] Calculation of the number of additional trees needed to achieve the identified canopy cover percentage, assuming that equal numbers of trees of each size are used. This is not a sum of the number of trees needed.

[41] Average annual mortality rates were drawn from: Roman, L. A., & Scatena, F. N. "Street tree survival rates: Meta-analysis of previous studies and application to a field survey in Philadelphia, PA, USA," Urban Forestry & Urban Greening, Volume 10, 2011. (https://www.researchgate.net/publication/238003598_Street_tree_survival_rates_Meta-analysis_of_previous_studies_and_application_to_a_field_survey_in_Philadelphia_PA_USA)

Neighborhood

A neighborhood-based analysis—using Sacramento's 129 identified neighborhoods—can better reflect geographies that are well understood by community members.[42] Exploring canopy distribution and socioeconomic indicators at the neighborhood level can provide a more meaningful understanding of tree canopy and guide implementation of outreach, education, and planting activities.

A table of canopy levels in City Parks is included in Appendix A. Ten neighborhoods currently meet or exceed 35 percent canopy cover. An additional 26 neighborhoods have between 25–35 percent canopy cover. Those ten neighborhoods with the highest tree canopy are Boulevard Park, Campus Commons, Elmhurst, Land Park, Marshall School, Natomas Corporate Center, New Era Park, Richmond Grove, River Park, and Southside Park. These neighborhoods are primarily characterized by mature trees planted many decades ago, and many have large public parks that are rich in trees or are neighborhoods adjacent to riparian corridors. Most of these neighborhoods also host significant street tree resources within the City's right-of-way and on City property.

Of the areas with the lowest canopy cover, 24 neighborhoods have between 20–25 percent canopy cover and 69 neighborhoods have 20 percent or less canopy cover. Many of the neighborhoods with the very lowest tree canopy are industrial areas, most with canopy cover less than 5 percent. Residential neighborhoods with the lowest canopy cover are primarily in South Sacramento, North Sacramento, and North Natomas. The factors behind the lower canopy coverage vary from neighborhood to neighborhood, but include development patterns[43], neighborhood age, amount and size of parks, school sites with low canopy, limited street tree planter strips, high proportions of rental housing and short-term occupancy,[44] history of redlining and racist housing covenants, and other socio-economic factors. Details about how redlining and demographics correlate to the urban forest are further discussed in the Tree Canopy and Social Equity section.

[42] It is important to note that these neighborhood boundaries are intended to be illustrative only and do not correspond directly to neighborhood association boundaries; rather, they are intended to provide a general assessment of conditions.

[43] Issues with development patterns include but are not limited to annexation of neighborhoods that were developed under both Sacramento County and City of North Sacramento design requirements, which varied from the City's at the time of development.

[44] Roman L. A. "Urban Tree Mortality: A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy in Environmental Science, Policy, and Management in the Graduate Division of the University of California, Berkeley," 2013.

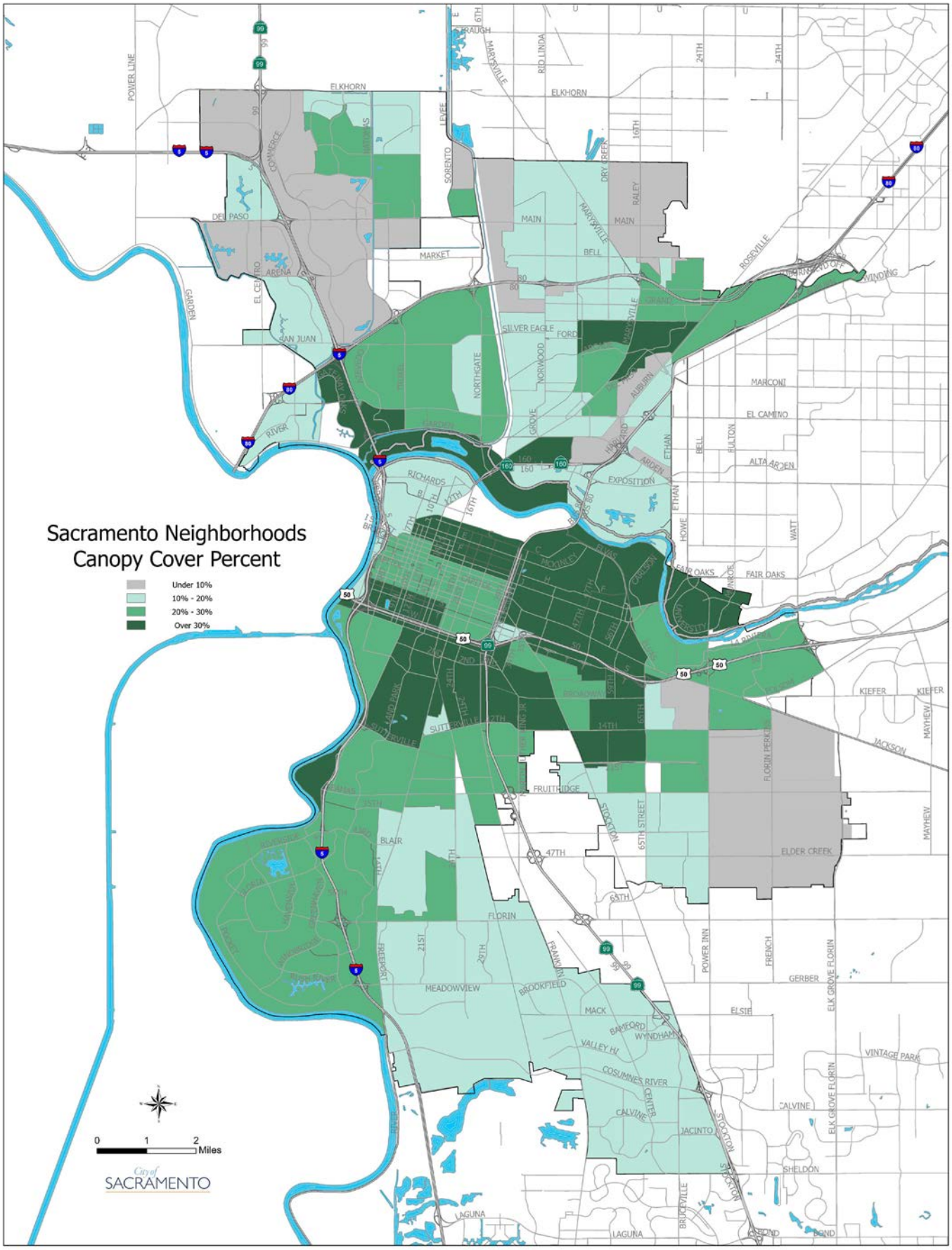


Figure 6 Neighborhood canopy cover map

Census Tract

Analysis of canopy coverage at a census tract level is important because most grant funding opportunities allocate funds based on project boundaries defined by census tract. Looking at tree canopy by census tract allows the City to target urban forest grant opportunities to grow canopy where is it below target goals. Assessing canopy cover this way, a similar pattern to neighborhood level canopy is visible; there are the highest levels of canopy in older neighborhoods, near the City's core, and adjacent to riparian corridors and fewer trees in South Sacramento, North Sacramento, and North Natomas.

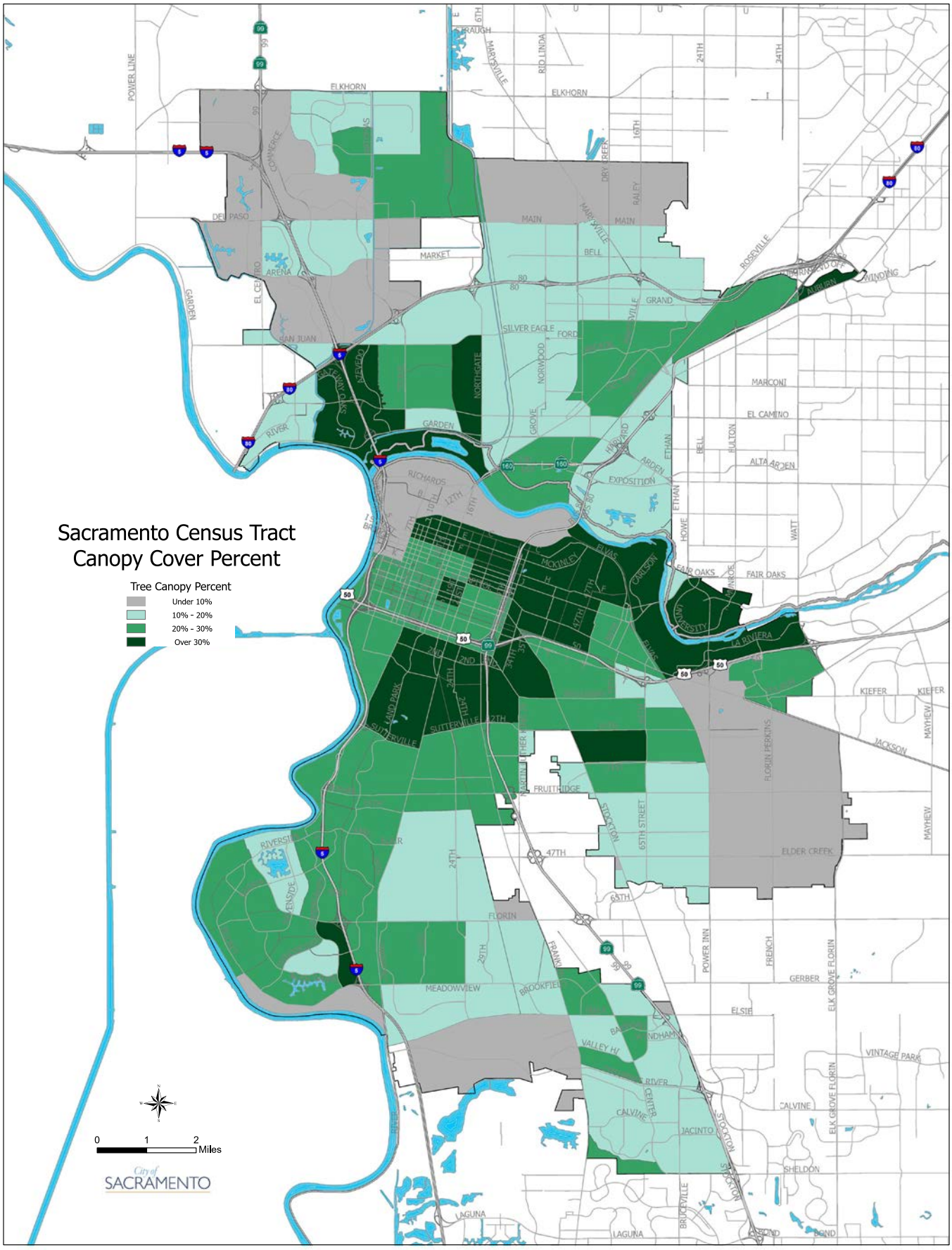


Figure 7 Census tract canopy cover map

Zoning

Zoning is a regulatory tool through which governments assign land area into "zones," each of which has a set of regulations governing the type of new development in each zone to help guide urban growth and development. The City's zoning requirements, found in Title 17 of the City Code (the Planning and Development Code), regulate the height, lot coverage, parking standards, landscaping requirements, and setback requirements that apply within each zone. Zones may be defined for a single use (e.g., residential, commercial) or have several combined activities that are compatible (e.g., residential mixed use, which allows a mix of residential and commercial uses). Given the variation in types of development, density/intensity, and lot coverage, canopy cover varies significantly among different zones.

In Sacramento, the American River Parkway-Flood Zone, Residential Office, Office Buildings, and Residential zones have the greatest canopy cover percentages; Manufacturing, Industrial, and Highway Commercial zones have the lowest canopy cover. Due to the localized, household and community-level public health and environmental benefits of trees, high levels of canopy cover in the areas where most residents spend most of their time is essential. Residential zoning comprises the areas of the City where most people live; specific attention to canopy maintenance and expansion in these areas is a priority.

Residential zones cover the greatest proportion of the city. Current canopy levels in Single Family Residential (R-1) residential zones are 26 percent – above the City average of 19 percent. With R-1 zones reflecting 35 percent of the City's footprint, trees in R-1 zones make up 49 percent of all trees in the City. While trees in R-1 make up a huge proportion of the total trees in the City, the amount of City canopy in R-1 is consistent with how much of the City's land mass is within the R-1 zone.

Recent land use changes to allow greater densities in single family neighborhoods by allowing duplexes to fourplexes and multiple accessory dwelling units (ADUs) have raised community concerns related to potential effects on tree canopy. The City is also focusing on other actions to address residential densities in other land use and zoning categories to support provision of more housing opportunities. An analysis of current canopy levels by residential zoning type shows very limited correlation between density and canopy; overall, all residential zones regardless of density have between 19 and 26 percent canopy.

To provide for the successful implementation of housing density development and tree canopy preservation and enhancement, several key recommendations are included in the policy and program framework, including: reviewing and amending development standards, city code, and design guidelines as necessary to promote future canopy levels, allowing maximum flexibility in development standards to encourage preservation of existing trees, continuing to enforce the tree protection ordinance (City Code chapter 12.56), and developing metrics to track and report on tree removals and projected canopy levels for development projects.

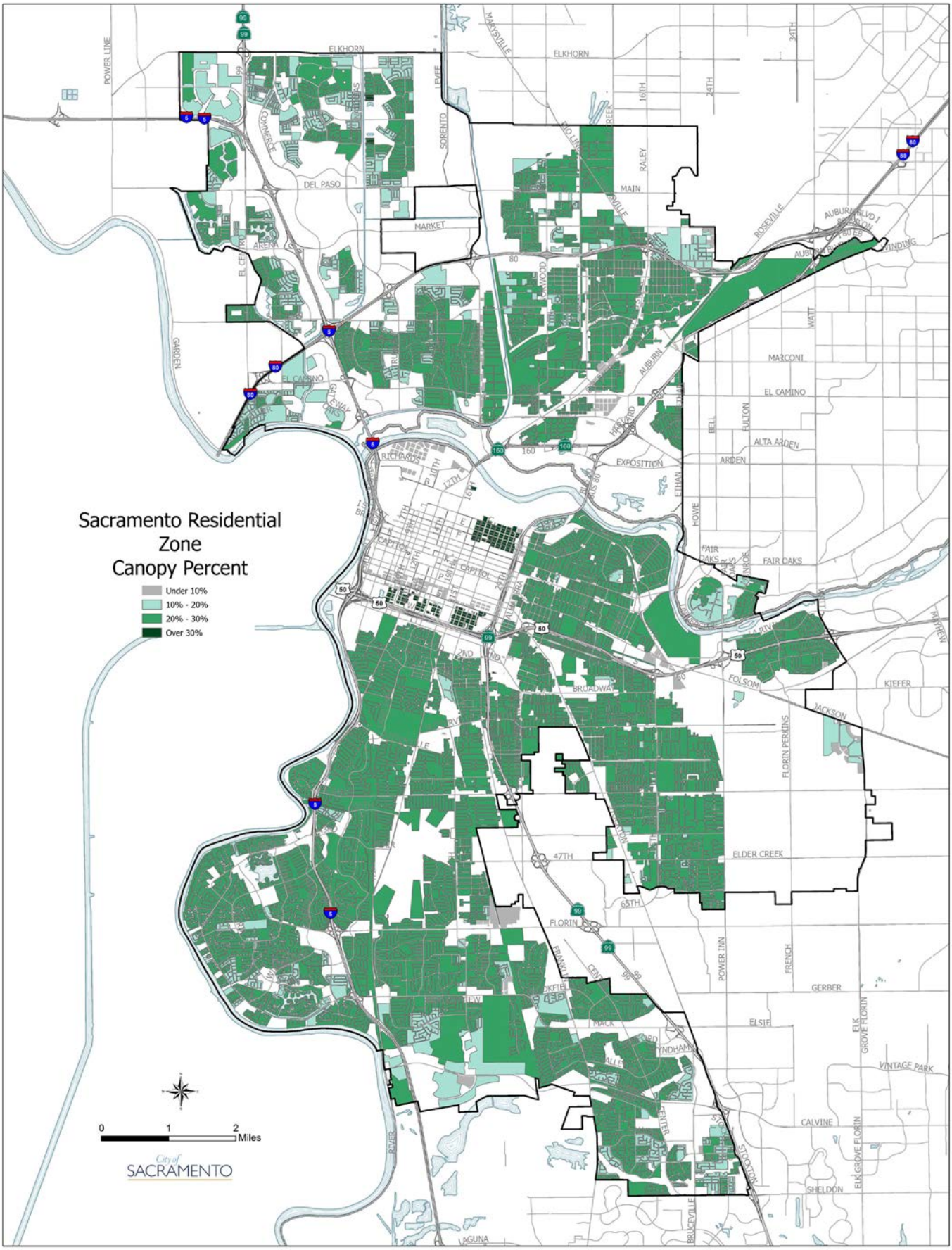


Figure 8 Residential zoning canopy map

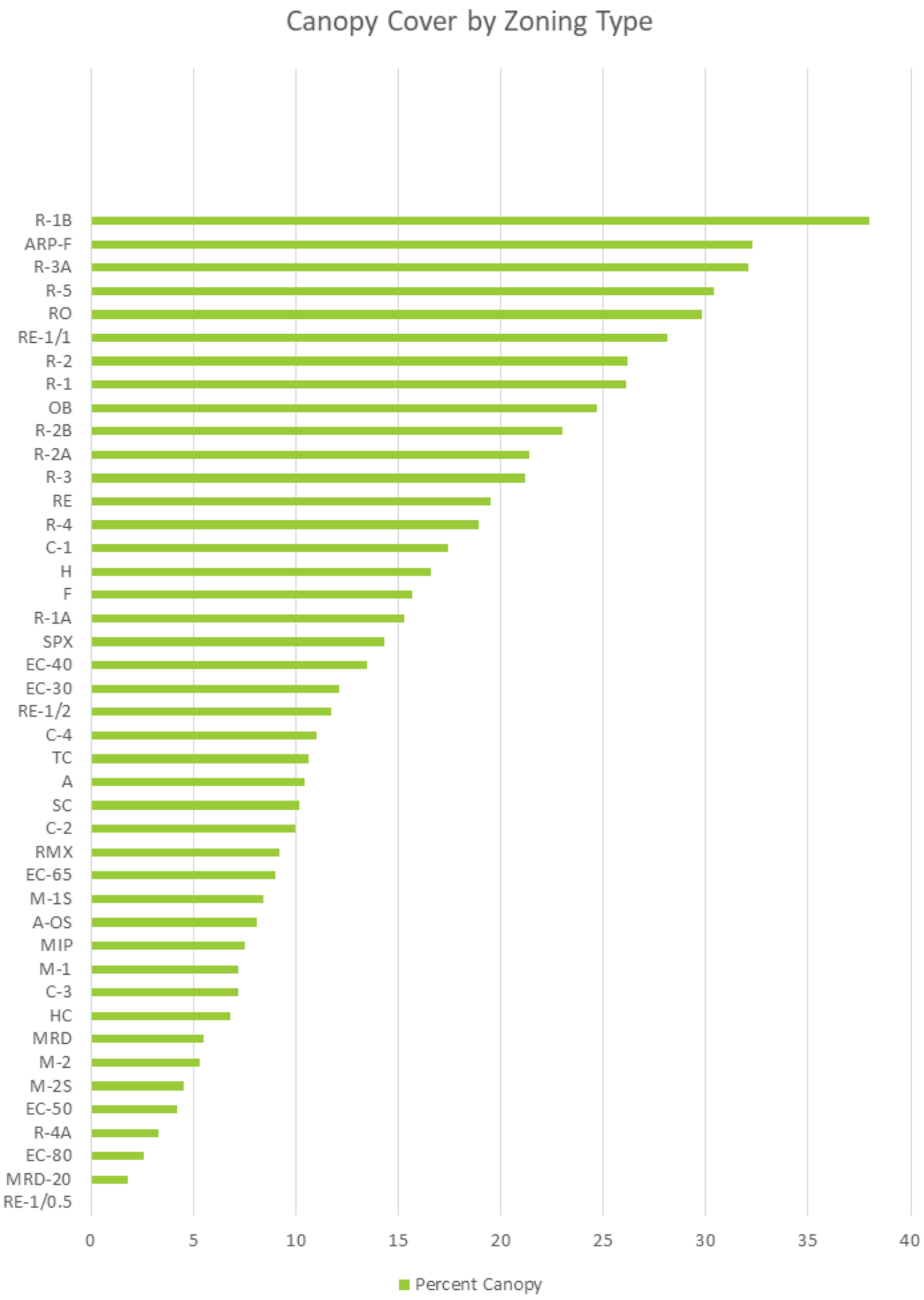


Figure 9 Canopy cover by zoning type

Parks

Public parks are a primary area for people to take advantage of the benefits of public trees, through both passive and active recreation. This is particularly important in areas where there is less overall tree canopy, as public parks may be the main source of green space and shade. The potential canopy cover in public parks depends on the use of the park (e.g., open play areas and swimming pools versus natural and picnic areas) and available plant-able space that does not conflict with these recreational uses.

Within city limits, there are 278 parks covering 5,993 acres managed by the City of Sacramento. This does not include parks managed by Sacramento County, the State of California, and other organizations. Among the top ten largest City parks, William Land Park has the greatest canopy cover at 67.1 percent and Sutter's Landing Regional Park, which was a former landfill and as a result has limits on planting in and adjacent to the landfill area, has the lowest canopy cover at 1.8 percent.

Overall, tree canopy covers 27.4 percent of parks and open space areas. A table of canopy levels in City parks in included in Appendix B. Additional planting at parks and open space areas can increase access to trees in communities with lower tree canopy levels. Similar to neighborhood-level strategies, prioritizing canopy expansion efforts in parks with priority communities that have the lowest canopy, that serve the most vulnerable populations and have the most significant potential for canopy increase, will be important in the implementation stages of this plan.

Parking Lots

Though not as obvious as neighborhoods and parks, parking lots are important areas of the urban forest. Parking lots are areas of the city that often have high urban heat island effect and poor air quality, and trees are effective tools for combatting both problems.

The materials that are used to build parking lots, such as asphalt and concrete, absorb heat. These materials then radiate absorbed heat and can raise temperatures by several degrees.[45] Additionally, the operation of conventional gas and diesel cars that combust fossil fuels can also raise air temperatures.[46] As temperatures in parking lots increase, gasoline from leaky fuel tanks and worn hoses evaporates and results in hydrocarbon emissions and the formation of ground-level ozone. Ground-level ozone is one of Sacramento's biggest air quality problems and Sacramento has been classified as a severe nonattainment zone—an area that does not meet the EPA's national ambient air quality standards.

Planting trees in parking lots reduces heat through shading asphalt and concrete, reducing both heat absorption and the radiation of heat, and by reducing the ambient air temperature through transpiration[47]. Cooler air temperatures reduce ozone concentrations by lowering the emissions of

[45] Golden, J. S. "The built environment induced urban heat island effect in rapidly urbanizing arid regions–a sustainable urban engineering complexity," Environmental Sciences, Volume 1, 2004. (https://www.tandfonline.com/doi/abs/10.1080/15693430412331291698)

[46] Wilby, R. "A Reivew of Climate Change Impacts on the Built Environment," Built Environment, Volume 33, 2007. (https://www.ingentaconnect.com/content/alex/benv/2007/00000033/00000001/art00003)

[47] Transpiration is the process of water movement through a plant and out the surface of a plant.

hydrocarbons that are involved in ozone formation. Planting trees in parking lots throughout the Sacramento region to achieve 50 percent shade on paved areas is estimated to have the potential to reduce hydrocarbon emissions by 1 meteric ton per day.[48]

The City first enacted a parking lot shading ordinance, City Code section 17.612.040, in 1983, which established tree shading requirements and standards for planting, maintenance, protection, removal, and replacement of trees in parking lots. However, many existing parking lots in the city pre-date the 1983 application of these standards and are not subject to the ordinance. In addition, many parking lots developed since 1983 have failed to reach 50 percent shade coverage. A randomized assessment (as a part of the UTC in 2018) of 648 parking lots found that the average canopy was 15.3 percent and only 5.9 percent of parking lots had 50 percent shading. This analysis did not consider when parking lots were approved.

One challenge to enforcing the ordinance is that a complex series of calculations is necessary to determine if a given plan or existing parking lot complies with the ordinance. There are mechanisms within the ordinance to allow for enforcement of the code but without clear, objective, and observable metrics of compliance, only the most drastic examples of non-compliance are noticed and corrected.

Table 4 Summary of statistical findings for parking lot shading of randomized sample of 648 parking lots in the City of Sacramento

Highest Canopy Cover	89.4%
Lowest Canopy Cover	0.0%
Average	15.3%
Standard Deviation	16.8%
Percent Compliance	5.9%
Percent Non-Compliance	94.1%

Based on these findings, evaluation of and amendments to the Parking Lot Shade Ordinance and the Parking Lot Tree Shading Design and Maintenance Guidelines as well as exploration of enforcement options and incentives to increase parking lot shading will be needed.

[48] McPherson, E. G. "Sacramento's parking lot shading ordinance: environmental and economic costs of compliance," Landscape and Urban Planning, Volume 57, 2001. (https://www.sciencedirect.com/science/article/abs/pii/S0169204601001967)

Street Trees

Sacramento's large inventory of City-maintained street trees is a unique asset compared to other cities and is a critical component of the robust canopy cover that the City currently enjoys. Of the about 100,000 City trees maintained by the City, the majority of them are street trees. Street trees are primarily located in areas developed when standards required inclusion of landscape strips between the sidewalk and street. These standards primarily exist in older neighborhoods such as the Central City and immediately adjacent neighborhoods, like Land Park, Curtis Park, and East Sacramento. Where there were no landscape strips, these same areas often included an easement in front yards for street trees. These neighborhoods tend to have the largest, most mature trees within the City, as many are many decades old due to when the neighborhoods were developed. In all areas with street trees, adjacent property owners are responsible for watering street trees.

In areas developed after the 1980s, City development standards also typically required landscape strips and tree planting, although depending on tree selection and planter width, these may not include the largest canopy trees. Many areas developed after World War II and those originally developed in the unincorporated County and the former City of North Sacramento were developed with different development standards and often do not include landscape strips, thus lacking space for publicly maintained street trees, and in some cases also lacking sidewalks. Past community wide planting efforts often neglected many of these neighborhoods. This resulted in lower exitsting canopy levels and presents a major challenge to create planting space along streets in many Sacramento neighborhoods. As a result, options for planting and maintaining trees to provide neighborhood canopy coverage becomes a greater responsibility for private property owners to plant trees in the front and back of properties. Many of these areas are in low-income and racially diverse communities with the least financial and social resources to accomplish this goal.

While this does pose a signification challenge to planting and maintenance efforts, it does not preclude any neighborhood from reaching the canopy cover goals. The distribution of City street trees does not directly correlate to canopy cover level in neighborhoods throughout the City, as can be seen in Figure 10. It does, however, require more incentive programs and intervention efforts to convert more public spaces for trees and supporting private property owners and other agencies to plant trees to accomplish the tree canopy goal.

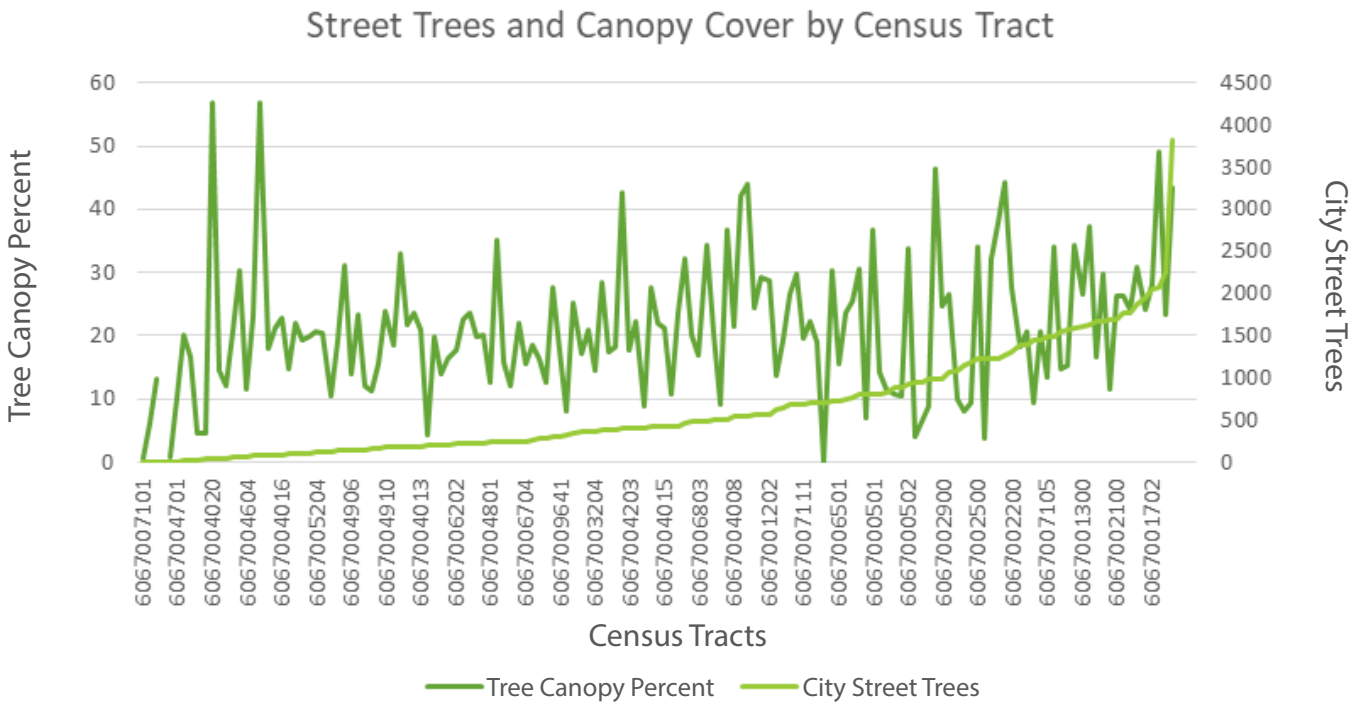


Figure 10 Street Trees and Canopy cover by Census Tract

Historic Change

The last tree canopy assessment using the same methodology was in 2004. In 2004, the tree canopy was 8,856 acres, which at the time was 13.9 percent of the city's land cover. By the time the aerial imagery used for this study was captured in 2016, tree canopy had increased by 3,343 acres to 12,199 total acres or 19.1 percent of the city's land cover, which is a 37.8 percent overall increase. Every zoning type, planning area, council district, and major park saw an increase in canopy cover between 2004 and 2016.

Factors that have affected the increase in tree canopy include:

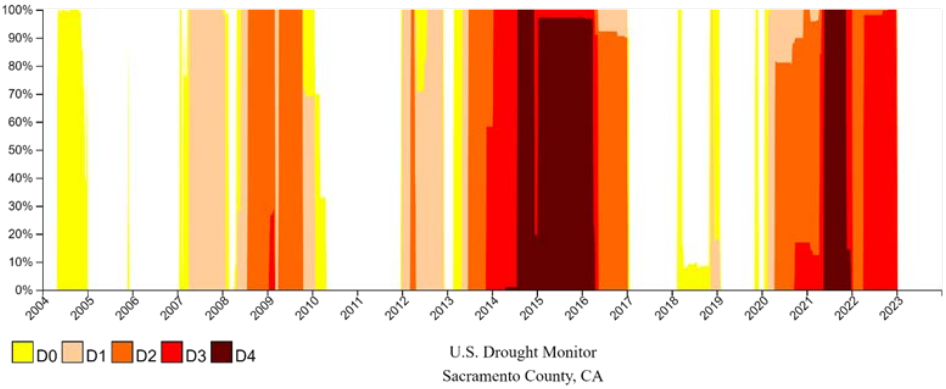
The addition of thousands of trees to the City-managed public tree resource through new plantings along streets and in parks.	New developments with urban trees in areas that were formerly agricultural or grass fields.
The planting of thousands of new trees on private property by community members.	The increase in size of existing trees and new trees.

This significant change should inspire both optimism and caution. It is a marked improvement that indicates trees are being preserved, planted, and are growing across the City. However, it is challenging to differentiate the relative weight of each factor in driving this increase in canopy cover, specifically how much growth is due to trees maturing and increasing in canopy diameter, versus new trees being planted.

Much of the increase in canopy in new development areas, many of which were formerly grasslands or agricultural lands with close to zero canopy, is the result of newly planted urban trees. In these areas, development patterns as well as development standards and design guidelines have a substantial impact on the continued expansion of the canopy over time. Several factors will impact the total percent canopy cover of these areas when planted trees reach full maturity, including minimum required size of planting strips and tree wells, required tree spacing, tree species selection, residential yard size, and road width. Evaluation of and possible amendments to the planning ordinances, policies, standards, and guidelines that effect how trees are incorporated into new development as well as exploration of programs and funding needed to increase enforcement efforts is needed to ensure all new development can achieve a minimum of 35 percent canopy.

Another cause for caution is the recent extreme and exceptional periods of drought in Sacramento. During the 2004 to 2016 period, Sacramento experienced two major periods of drought. One from 2007 through 2010 and another beginning at the end of 2011 and extending into 2017.[49] At the peak of the drought in 2015, Governor Brown issued a call to conserve water that led many Californians to stop irrigating lawns and other landscaped areas. This had the unintended consequence of further impacting trees within those lawns and landscaped areas that were reliant on irrigation to supplement the increasingly scarce amounts of rainfall that the region had experienced for several years. While healthy trees can recover from short periods of drought stress, prolonged periods without water will eventually kill the tree, although it may take years before the tree finally succumbs. There are many trees lost because of drought that are not captured in the most recent UTC. Future urban tree canopy assessments will be required to understand the impact of increasingly frequent extreme weather events on the urban canopy.

Figure 11 Sacramento County Drought Monitor from National Oceanic and Atmospheric Administration National Integrated Drought Information System[50]



Overall, the city's canopy is growing, but not enough to achieve the ambitious goals of this SUFP or to create geographic equity without intervention. Specific focus needs to be given to planting trees in areas that are below the target canopy cover, starting with the lowest canopy areas and most vulnerable populations. Alongside new and replacement planting, existing mature trees should be maintained and protected whenever possible since the greatest benefits accrue from continued growth and longevity of existing canopy.

[49] Data for California from the National Integrated Drought Information System, May 2023 (https://www.drought.gov/states/california)

[50] https://www.drought.gov/states/california

Social Equity

As part of the 2040 General Plan Update, the City commissioned a Race & Place report[51] to outline the context of and provide baseline data for environmental justice issues in Sacramento. The report details the connection between Sacramento's environmental conditions and intergenerational patterns of race and urban development that shape the city, in particular the historic impact of racial inequality in housing and the impacts of discriminatory housing programs. The cumulative effects of this trauma created disparities across Sacramento in social determinants of health, population, income, housing, education, employment, infrastructure, and tree canopy. The report identifies a north/south corridor across the city that exhibits poverty and segregation and an east/west corridor that exhibits wealth and opportunity. The neighborhoods in the north/south corridor are the locations most vulnerable to climate change impacts and environmental injustice.

[51] Hernandez, J. "Race and Place in Sacramento: A Report for the City of Sacramento to support preparation of the Environmental Justice Element of the Sacramento 2040 General Plan Update," JCH Research, 2021. (https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2040-General-Plan/Race_Place_Nov-2021.pdf?la=en)

Multiple scientific studies have been conducted in Sacramento regarding the social geography of tree canopy, and the correlation between urban heat and tree canopy as well as public health and tree canopy.

One study on the distributional equity of urban tree canopy in U.S. cities found that areas with more Black and Latino residents in Sacramento have fewer trees[52]. This association between income, race, and tree canopy cover was unique to Sacramento and Los Angeles when compared to the other cities in the study, which the authors suggest may be due to the hot, dry climate and the need for irrigation.

When analyzing the UTC report prepared for this plan, canopy data overlayed with income statistics shows that Sacramento neighborhoods with higher levels of income also have greater percentages of tree canopy, while neighborhoods with low- to moderate-income—such as historically redlined neighborhoods like Meadowview, Del Paso Heights, Parkway and Valley Hi—have noticeably fewer trees and less shade.[53]

An exploratory study on tree cover and health in the Sacramento region showed that more neighborhood tree cover was associated with positive effects on health conditions for adults aged 18 to 64 years. The study, conducted by Urban Design 4 Health and the Sacramento Tree Foundation, showed that higher levels of tree cover in a neighborhood were significantly associated with more vigorous physical activity, less obesity, better general health, lower rates of asthma, and better social cohesion.[54]

A 2019 study on Sacramento's heat islands by Portland State University's Heat Mapping Project, found that the temperature differentials between neighborhoods can vary by as much as 20 degrees during summer days.[55] The study found that wealthy, tree-canopied neighborhoods are typically cooler, while low-income, asphalt-heavy communities are hotter. Historically redlined neighborhoods were an average of six degrees hotter than the rest of the region, turning these locations into places where outdoor activities are less safe and enjoyable.

The environmental inequity of tree canopy in Sacramento is further complicated by the fact that tree planting efforts are also affected by social and economic disparities. A five-year study of trees distributed through the Sacramento Tree Foundation residential free shade tree program found that homeownership and educational attainment were directly linked to increased levels of both tree planting and tree survival.[56] While income levels showed no consistent trend, stable homeownership was the best predictor of tree establishment success, a factor that is deeply influenced by the historical, racist housing practice of redlining.

[52] Schwarz, K., Fragkias, M., Boone, C. G., Zhou, W., McHale, M., Grove, J. M., . . ., Whitmer, A., & Cadenasso, M. "Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice," PLoS One, Volume 10, 2015.

[53] Development patterns at the time of development when many of these areas were in the County prior to annexation into the City, did not require medians or separated sidewalks which has directly correlated to lower canopy.

[54] Ulmer, J. M., Wolf, K. L., Backman, D. R., Trethy, R. L., Blain, C. J., O'Neil-Dunne, J. P., & Frank, L. D. "Multiple health benefits of urban tree canopy: The mounting evidence for a green prescription," Health Place, Volume 42, 2016.

[55] White, R. "Summer Days Often Feel Much Hotter If You Live In One Of California's Historically Redlined Neighborhoods," CapRadio, May 2020. (https://www.capradio.org/articles/2020/05/26/summer-days-often-feel-much-hotter-if-you-live-in-one-of-californias-historically-redlined-neighborhoods)

[56] Roman, L. A., Battles, J. J., & McBride, J. R. "Determinants of establishment survival for residential trees in Sacramento Count, CA," Landscape and Urban Planning, Volume 129, 2014. (https://www.sciencedirect.com/science/article/abs/pii/S0169204614001273)

When assessing these reports and studies cumulatively, the results clearly depict a persistent pattern of social inequity in Sacramento's tree canopy. Racially diverse and economically disadvantaged neighborhoods have fewer trees and experience greater heat island effects; as a result, residents suffer negative health effects.

Policies and implementation measures in this SUFP must include efforts to not only increase the city-wide canopy cover but to strive for greater parity across all neighborhoods while doing so. This will require strategically developed programs and consistent, dedicated funding to increase tree planting and care efforts in neighborhoods with low tree canopy, high heat island effects, and high social vulnerability. Additionally, because 90 percent of the tree canopy is privately-owned, focusing only on equity in the City-owned public tree resource will be insufficient. Additional policies, programs, and partnerships should be developed to bolster the efforts of residents, community groups, non-profits, and other private entities in growing trees canopy in disadvantaged communities.

Canopy expansion efforts should be focused first on residential neighborhoods with the lowest canopy, highest vulnerability to extreme heat, most socio-economically vulnerable populations, and the most significant potential for canopy increase.

Planting in these areas can provide the greatest marginal benefit per tree planted, including household and community-level resilience to climate impacts including extreme heat, associated public health benefits, energy bill savings, improved active transportation conditions, and economic benefits. Areas that meet these criteria have been identified as "urban forest priority intervention areas" for investment in urban forestry programs.

These "urban forest priority intervention areas", shown in Figure 12, were ranked using data at the census tract level. Priority metrics used to rank census tracts include state or federal designation as a disadvantaged community[57], canopy coverage below 25%, and Day Time Land Surface temperature greater than or equal to 103 degrees Fahrenheit[58]. Census tracts meeting all three criteria were ranked Very High priority; census tracts meeting 2 criteria were ranked High priority; census tracts meeting one criterion were ranked Medium priority; and census tracts that did not meet any criteria were ranked Low priority.

The Urban Forest Priority Intervention Areas map will be utilized to support strengthened interventions in areas with the highest need. Within priority areas, program efforts will further emphasize residential areas, corridors, and parks with consideration to existing infrastructure constraints.

[57] SB 535 Disadvantaged Communities and Climate and Economic Justice Screening Tool disadvantaged community maps were used to identify disadvantaged status.

[58] Based on Sacramento's average relative humidity ranges during summer months, this temperature would likely reach a wet-bulb temperature near or above 86 degrees Fahrenheit, which could pose potentially fatal danger to humans outside. (https://www.technologyreview.com/2021/07/10/1028172/climate-change-human-body-extreme-heat-survival/)

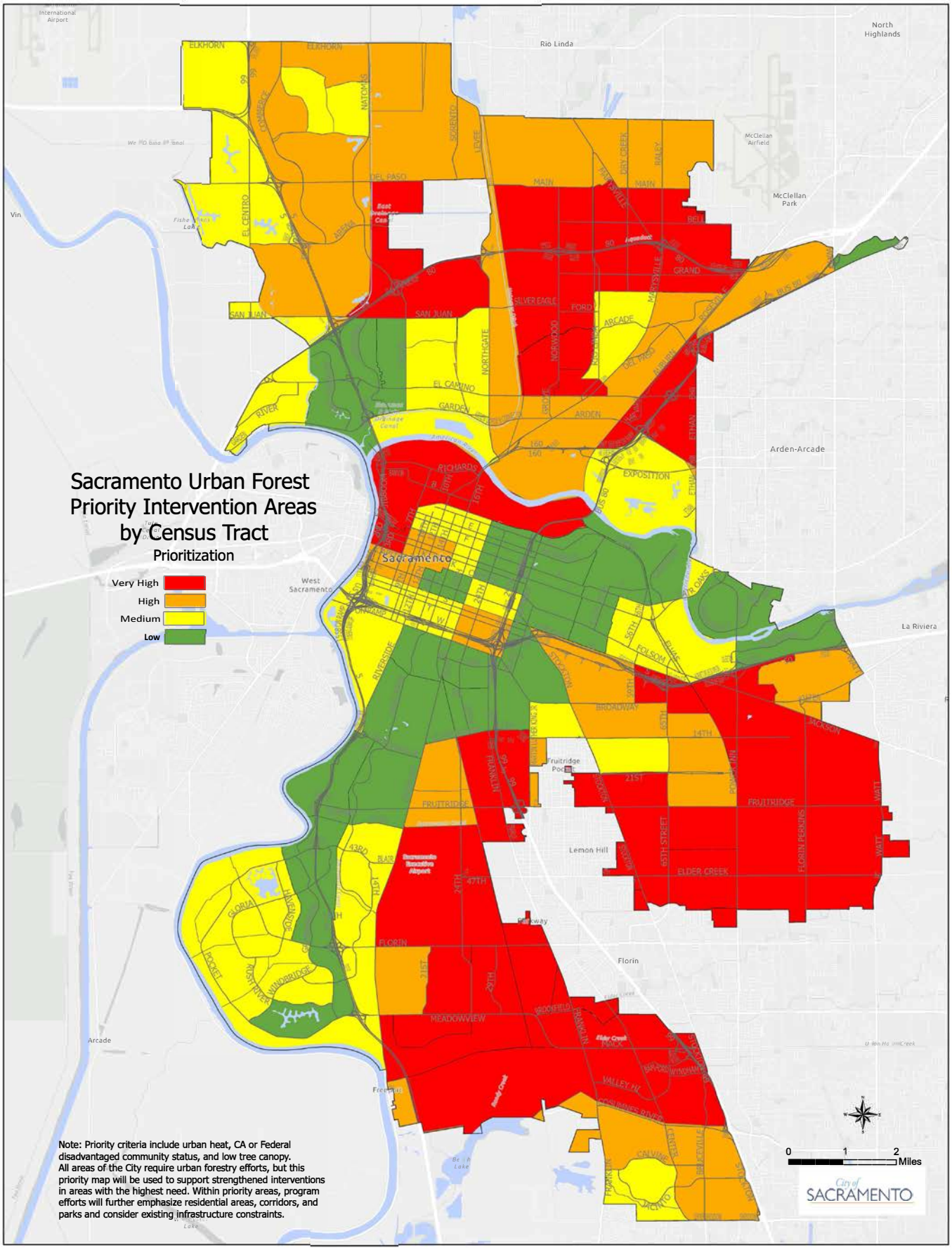


Figure 12 Urban Forest Priority Intervention Areas Map

CITY-MANAGED TREES ANALYSIS

Within Sacramento city boundaries, there are an estimated one million trees; however, only about ten percent of those trees are managed by the City of Sacramento. The previous section, the City-wide Tree Canopy Assessment, focused on all one million trees. This section focuses only on the ten percent of trees managed by the City of Sacramento.

The City inventoried all City-managed street and park trees in 2018 - a total of 87,324 trees. Data collection included species, size, condition, and geographic location. Since then, the City's public tree resource has increased in population; the City estimates that it currently manages about 100,000 trees, including trees in new parks, streets, and City-managed facilities that have not yet been inventoried. While not perfect, this inventory provides a snapshot of the type and distribution of City trees.

An Urban Forest Resource Analysis[59] of City-managed trees was completed in 2018 using i-Tree Streets, a benefit-cost modeling tool. The results quantified the existing structure, function, and value of the City's public tree resource, including examination of composition, species diversity, age distribution, condition, and performance.

Species Diversity

Species diversity is important to the biological resilience of the urban forest. Species, in this context, refer to distinct types of trees. Similar species that are genetically related are grouped into a genus, and similar genera are grouped into a common family. This means that species in a common genus or family are genetically related to each other.

Maintaining diversity in the tree canopy is important for overall resilience of the urban forest. Dominance of any single species or genus can have detrimental consequences in the event a specific type of tree is particularly susceptible to the impacts of storms, drought, disease, pests, or other stressors. Many pests and disease-causing pathogens tend to preferentially impact a specific species of tree or group of species that are closely related genetically, while leaving other more distantly related species of trees completely unaffected. Dutch elm disease and sudden oak death disease, for example, have had catastrophic impacts on the populations of elm trees and oak trees respectively, but do not impact other types of trees. A diverse mix of trees makes it harder for diseases to spread throughout a region since the trees that are not susceptible can act as a barrier between the disease-causing pathogen and the trees that are susceptible. Additionally, a diverse mix of trees

[59] https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Maintenance-Services/Urban-Forest-Master-Plan/SacramentoCA_ResourceAnalysis_20180522.pdf?la=en

minimizes losses to the overall tree population from any particular environmental stressor by limiting the number of trees that are vulnerable to it. The "10-20-30 rule" is a widely used standard that recommends no single species represent greater than 10 percent of the total population, no single genus more than 20 percent, and no single family more than 30 percent.[60]

City-managed trees include a mix of 194 unique species, significantly higher than the mean of 53 species reported by a nationwide survey of street tree populations in 22 U.S. cities.[61] Of the 194 species, 165 species each account for no more than one percent of the overall tree population and only two species account for more than five percent. Except for *Platanus x acerfolia* (London plane) at 15.5 percent, the City's inventory meets industry recommended species diversity standards.

The overreliance on *Platanus x Acerfolia* in the City inventory should be minimized. There are emergent threats (e.g., Polyphagous Shot Hole Borer) that, while not yet in the Sacramento area, have the potential to cause significant die back in the species. Future planting should focus on increasing diversity and reducing reliance on this overused species. New and underutilized tree species should be considered for replanting sites left vacant by the loss of trees whose species is overrepresented in the City's tree inventory. The City should continue to explore the use of new species that show the potential to be resistant to the known pests that currently pose a threat to the region and the potential to withstand climate impacts affecting the Sacramento region, such as extreme heat, drought, and precipitation. Tree species lists and standards for City projects and private development should be reviewed and updated to ensure adherence to current best practices regarding species diversity and selection.

Age Distribution

As trees age and increase in size, they need different management and care. The age distribution of individual trees within the urban forest influences present and future costs of maintenance as well as the flow of benefits. While large, mature trees provide the greatest level of benefits, they also cost more to maintain due to their size and need for specialized equipment. Having a large portion of mature trees in an urban forest can strain municipal budgets.[62]

An "ideal" age distribution of trees has a high proportion of young trees to offset establishment and age-related mortality as a percentage of older trees declines over time: 40 percent immature, 30 percent young, 20 percent middle aged, and 10 percent mature. An urban forest with an ideal age distribution allows for predictable annual maintenance costs and continuity in tree canopy coverage and associated benefits.

Age distribution can be approximated by considering the range of trunk diameters within the overall inventory and of individual species.[63]

[60] Santamour, F. S. "Trees for Urban PLanting: Diversity, Uniformity, and Common Sense," Metropolitan Tree Improvement Alliance (METRIA) Conference, 1990.

[61] McPherson, E. G., & Rowntree, R. A. "Using structural measures to compare twenty-two U.S. street tree populations," Landscape Journal, Volume 8, 1989.

[62] McPherson, e. G., van Doorn, N., & de Goede, J. "Structure, function and value of street trees in California, USA," Urban Forestry & Urban Greening, Volume 17, 2016. (https://www.sciencedirect.com/science/article/abs/pii/S1618866715301400)

[63] In all trees except palms, the trunk diameter increases with age, so trees of the same species with smaller trunk diameters tend to be younger and those with larger trunk diameters tend to be older. Palms were not considered in this analysis because their diameters do not increase as they age.

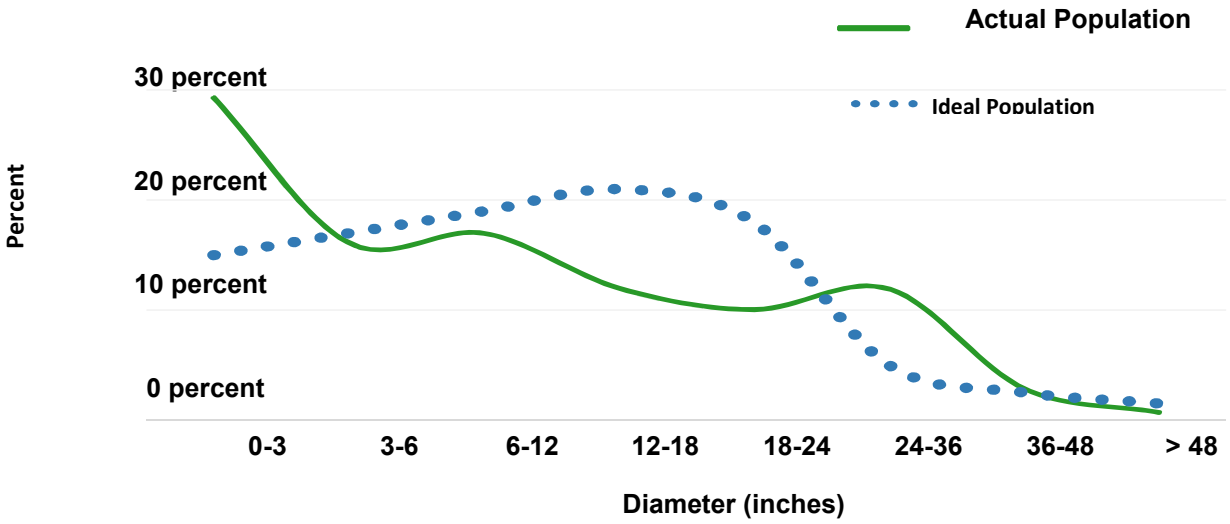


Figure 13 Age distribution of City of Sacramento trees compared to ideal population distribution

The City-managed tree resource has 62.3 percent of trees with a diameter of 12 inches or less and 15.5 percent of trees with a diameter of 24 inches or more (Figure 9), although the diameter distribution—and therefore the age distribution—in the City-managed inventory varies across species.

Compared to the ideal age distribution, Sacramento's public tree resource includes more small stature, immature, and young trees than are recommended for an urban forest. In a growing city like Sacramento, this trend is expected due to newly developed areas being more likely to have a higher proportion of younger and smaller trees. The city can expect environmental services provided by the urban forest to significantly increase as the current young tree population ages and tree size increases. Continued investment in tree planting and existing tree maintenance will be needed to ensure an ideal age distribution is achieved and retained. Additionally, young and immature trees require more frequent pruning to establish appropriate and safe structure which should be considered in urban forest management decisions.

URBAN FOREST MANAGEMENT AND REGULATION

Sacramento's vast urban forest is owned, managed, and regulated by a diverse collection of stakeholders. This section provides an overview of the primary stakeholders and details the City's role in managing public trees, including department responsibilities, services provided, funding, regulations and policies, and the effectiveness of City Code in protecting and expanding the urban forest.

Who Manages Urban Trees?

Sacramento's trees are owned and maintained by a mix of public agencies and private stakeholders who collectively share the responsibility of maintaining the urban forest. Each agency and property owner has different goals, priorities, and available resources, making uniform tree management and oversight that accounts for these differences a complex task. The primary agencies and groups responsible for the urban forest are described below.

City of Sacramento: Manages trees on City property and in City rights-of-way, primarily street trees, trees in City parks, and at City facilities.

Sacramento County: Manages trees on County-owned and managed property, including County facilities and County parks that are within the city limits, such as the American River Parkway.

State of California: Manages trees on State property and rights-of-way, including State parks, state-owned facilities, Cal Expo, and along state highways.

School Districts: Manages trees on school district and educational institution property, including Sacramento State University, University of California Davis, Los Rios Community College District, and multiple K-12 public school districts, various campuses and related parking lots.

Private Property Owners: Most of the land within the city is under private ownership, including commercial, industrial, and residential properties. Owners are responsible for planting and maintaining trees on private property, as well as watering city street trees unless they are a part of a tax-funded maintenance district that includes irrigation facilities for street trees.

Regulatory Agencies: Various flood control agencies manage activities on the river levees and may restrict planting activities. Public wildlife agencies enforce environmental regulations that protect certain trees, particularly in natural areas. Public and private utilities, particularly the electrical and natural gas providers, also drive tree decisions, such as removal and trimming of trees to avoid conflicts with underground and overhead utilities.

Sacramento Tree Foundation: A community benefit non-profit that advocates for and supports private planting efforts and provides public education regarding proper tree planting and maintenance.

This range of ownership structure results in varying levels of investment, maintenance, planting, and care. Most entities with tree management oversight have other, sometimes competing, priorities or missions beyond tree care. Public safety concerns may result in tree removals or restrictions. Agencies with another core mission, such as public education, may have challenges devoting adequate resources to tree planting and maintenance within limited resources. Private owners may be concerned with the costs of tree care or lack the technical expertise to understand and implement proper pruning, irrigation, and other maintenance activities. Requirements for development may compete with existing trees.

Reaching canopy cover goals city-wide requires the support and investment of each of these parties. Partnership, collaboration, education and outreach between the City, other public agencies, private businesses, non-profit urban forest organizations, and the public will be required to achieve the goals of this plan.

City of Sacramento – Department Roles

Within the City, staff from a variety of departments play a hand in managing the urban forest.

Urban Forestry Section of Department of Public Works (DPW): The urban forestry section is responsible for planting, maintaining, and protecting trees within the public right-of-way, advising other departments on proper tree care and compliance with city codes related to trees, and providing recommendations to the Community Development on trees in connection with proposed private development. Street trees are considered an essential element of city transportation infrastructure.

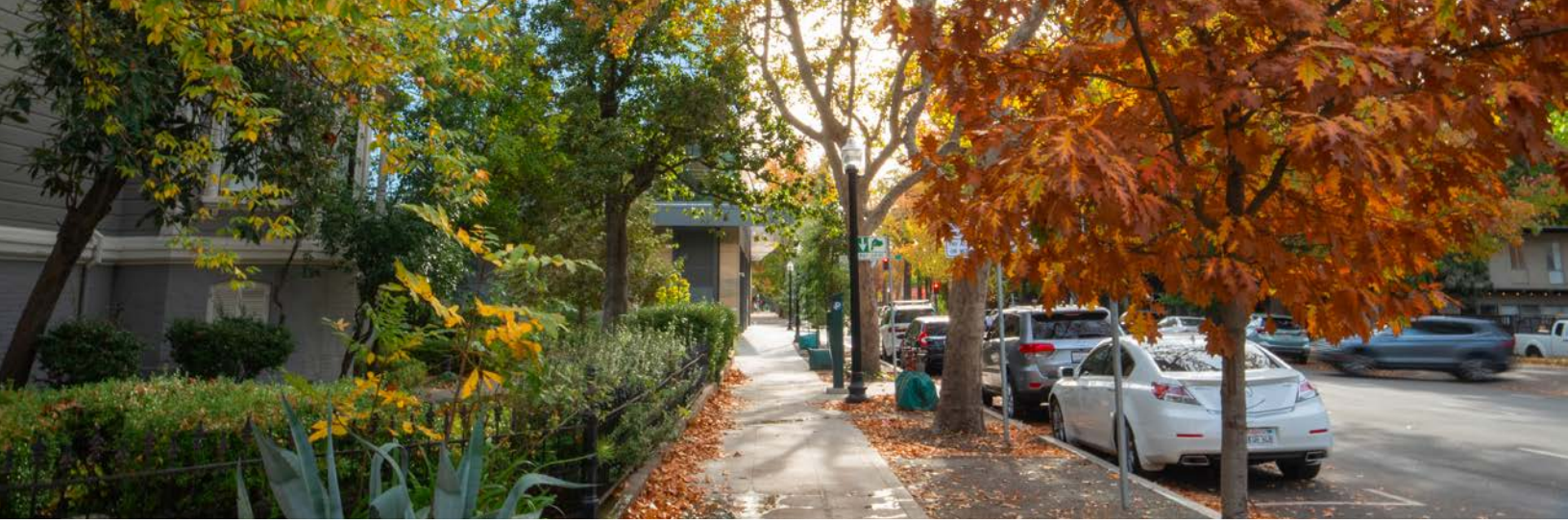
Facilities Division of Department of Public Works: The Facilities Division is responsible for planting, maintaining, and protecting trees at City facilities, including City office buildings and parking lots, libraries and community centers.

Marina Section of Department of Public Works: The Marina section manages the Sacramento Marina, which includes open space adjacent to the Sacramento River, as well as the Marina parking lot.

Department of Youth, Parks, and Community Enrichment (YPCE): YPCE is responsible for planting, maintaining, and protecting trees within city parks and parkways.

Department of Utilities (DOU): DOU is responsible for planting, maintaining, and protecting all trees within City water, wastewater, and drainage facilities and easements.

Community Development Department (CDD): CDD is responsible for permitting new development and enforcing city codes and ordinances regarding trees in private development projects.



City Services

The following general services are provided for City-managed trees:

1) Pruning of City-managed trees
2) Removals of City-managed trees
3) Planting of city-managed trees
4) Irrigation in parks and irrigated planters and medians
5) Review, issuance, and appeals of permits
6) Implementation of City tree protection regulations
7) Development review
8) Response to 311 community lines
9) Emergency response
10) Biomass disposal and utilization
11) Pest management for City-managed trees

Pruning

A pruning cycle is the number of years it takes to prune all trees managed by the City. The City strives to achieve a five-year pruning cycle, meaning that one fifth of the city's inventory of trees are pruned every year, with each tree receiving maintenance once every 5 years. Currently, the City is on an estimated eight-year pruning cycle for street trees and ten-year pruning cycle for park trees. The length of the pruning cycle has a significant effect on tree value. Proactive routine maintenance can identify and correct defects in trees and improve their structure which can reduce the need for additional and more costly maintenance in the future. Longer pruning cycles may require less initial financial output but any short-term savings to the city is offset by a loss in tree value and increased costs for future maintenance, with the decline in value and the increase in maintenance costs accelerating over time. While the City's current pruning cycle is appropriate, a goal of reaching a five-year pruning cycle has the potential to save maintenance cost over time and increase tree longevity.[64]

Trees are pruned out of cycle only if the tree is impacting private property (building clearance), the right-of-way (road and sidewalk clearance, sign clearance), or if the tree represents an immediate danger to the safety of the public. To mitigate problematic structural defects that develop early in a tree's life and become a greater problem as trees mature, structural pruning is used by City Arborists to develop stable trees and reduce risks to the public.

[64] Miller, R. W., & Sylvester, W. A. "An Ecomonic Evaluation of the Pruning Cycle," Journal of Arboriculture, Volume 7, 1981.

Removals

Generally, City-managed trees will only be removed for reasons of public safety. Private parties can request to remove a City tree at their own expense for reasons other than public safety (i.e., new construction, trees affecting hardscape or foundations). Applicants are required to apply for a permit to remove a City tree and provide for any required replacement or mitigation. A City Arborist will evaluate the request to determine if the impact of the proposed removal and replacement on the City's urban forest is justified for that individual case. The City has a public notification process for all tree removals that do not involve an immediate danger to the public. Public notice generally involves a notice on the tree and the City website for 15 days to allow for objections or appeals from any members of the public. If a tree is illegally removed, violators are subject to fines of up to $25,000 in addition to any civil and/or criminal penalties that may apply to the situation[65].

Planting

Tree planting is part of the reforestation efforts of the Urban Forestry Section. Trees are planted on City property, within the public right of way along streets or City easements, by maintenance staff according to widely accepted best management practices for the tree care industry (ANSI A300 standards).

The City generally plants a new tree to replace each tree that has been removed unless there is an unavoidable conflict that prevents planting. As trees are removed, the City endeavors to replace that tree within two years. Planting typically takes place in the Spring and Fall. Planting sites are evaluated for their ability to sustain a tree to maturity. Sites with irrigation are preferred over non-irrigated sites and larger planting sites are preferred over smaller sites. Volunteer tree planting events with City parks require oversight by City staff.

Irrigation

Trees in parks and at City facilities are passively watered by turf irrigation systems. Trees within the public rights-of-way are irrigated by adjacent property owners, except in instances where they are a part of a tax-funded maintenance district that includes irrigation facilities for street trees. Non-irrigated newly planted trees may be watered by City staff with water trucks for the first three years.

The City's Department of Utilities promotes water conservation and drought response, while valuing the importance of tree care. Trees should be watered separately from lawns and landscapes due to varying water needs. Lawns and landscapes need frequent and short watering intervals whereas trees require infrequent and long watering intervals. In addition, lawns and landscapes are both subject to the City's watering schedule but trees watered via soaker hose or drip irrigation are not.

[65] Sacramento City Code 12.56.090C (https://library.qcode.us/lib/sacramento_ca/pub/city_code/item/title_12-chapter_12_56)

Permitting

Tree permits are required for trimming and removal of City-managed trees and private protected trees. A City Arborist reviews applications for tree permits; removals are posted for 15-days and posted on the City's web site and can be appealed by the public.

Enforcement of City Tree Protection regulations

The City's Code Enforcement Officers have the duty to enforce all city codes and City Arborists are also authorized to enforce section 12.56 of the city code titled Tree Planting Maintenance and Conservation. City Code Enforcement Officers and City Arborists routinely respond to reports from community members about suspected violations of the city code related to trees and address violations observed during the course of their planned inspections and on-the-job observations. Violations of the city code may be subject to criminal, civil, or administrative penalties, but they are most often addressed by the City through education and administrative penalties ranging from $250 to $25,000. The amount of the administrative penalty for any specific action is at the discretion of the person enforcing the code and may be reduced by a hearing examiner if the penalty is appealed. Current policy requires that all monetary penalties received from enforcing the Tree Planting Maintenance and Conservation code be placed in the City's Tree Planting and Replacement Fund and used to fund tree planting projects within the City.

Development Review

The City's Community Development Department oversees new development and compliance with zoning regulations. The Public Works Urban Forestry section supports development review using arborists to consult and advise on critical tree decisions and consistency with City tree regulations. Compliance with tree requirements occurs as new development project applications are submitted and on a complaint basis within the Community Development Department's Zoning Investigation section. The City maintains lists of tree species that are suitable for parking lots and street trees.

Response to 311

The 311 24-hour call and web hotline processes requests for routine and emergency tree work involving city owned and maintained trees. Currently, the 311 service receives 500-700 calls per month for tree-related issues. Most calls are related to non-emergency service requests, and general information.

Emergency Response

Every year, the City of Sacramento creates an emergency response plan. The response plan outlines procedures for city staff to respond to emergencies during and outside of normal business hours and gives guidance on how to prioritize various types of tree related issues to maximize the overall safety to the public. The City responds to all tree emergencies that affect the public, regardless of whether the tree is a public or private tree.

Biomass Disposal and Utilization

The City provides residents with yard waste containers that are collected year-round to manage the leaf litter from publicly managed and privately managed trees. From November through January, Sacramento allows residents to put green yard waste (specifically, fallen leaves) in the street where "The Claw," a yard-waste pick-up machine, picks up piles of leaves. The City recycles all wood and tree related debris generated by pruning and removal activities performed by city staff and contractors. No wood and tree related debris is ever taken to a landfill. Small tree parts are generally processed into wood chips at the work site and used as mulch within City maintained landscaped areas such as street medians and parks. Wood chip mulch can help conserve soil moisture, moderate soil temperatures, and provide additional fertilization to the soil as it slowly decomposes. Larger tree parts are generally taken to a recycling facility that is authorized by the State to receive and process recyclable materials. The fate of the wood depends on the capacity of the recycling facility, but it is not uncommon for wood that originates in Sacramento to be used to make mulch or plywood or be burned to generate electricity. Contractors performing tree care work for the City of Sacramento recycle any wood and tree related debris they generate during the course of their work in a similar manner to City staff. The City's current tree care contractor, West Coast Arborist, also has the capacity to process larger tree parts to make usable consumer products such as lumber, and furniture through their Street Tree Revival program. The Sacramento Tree Foundation has a similar program called the Urban Wood Rescue program that also processes tree parts into usable consumer products. The City of Sacramento supports this program by donating large tree parts to STF whenever possible. These programs not only recycle the wood and prevent it from going in a landfill, but they also create valuable and long-lasting products that maximize the carbon storage potential and benefits that Sacramento's urban forest can provide to the public.

Pest Management

The City performs pest and disease management for City-managed trees. Management includes identifying and monitoring pests and diseases and employing a broad range of techniques aimed at protecting and enhancing tree health to keep pests and diseases at a tolerable level. One notable disease found in Sacramento trees is Dutch elm disease (DED), a disease fatal to elm trees but not impacting other species of trees. DED decimated elm population across the United states and reached Sacramento in 1990. Sacramento had been anticipating its arrival since 1982 and proactively prepared a comprehensive plan to address the situation. Over the years the plans and methods used to control Dutch elm disease have been modified and adjusted to address the changing situation but always involved trained staff, early detection, swift action, reforestation and community involvement. Today Sacramento still has approximately 2,000 elm trees with approximately 200 estimated to be over a hundred years old. It is rare to see so many mature elms in any city in the United States. This tremendous success can serve as an example of what is possible when the City makes a dedicated effort to provide pest and disease management care for trees. The City continues to stay informed about many pests and diseases that pose new threats to our urban forest. Emerald Ash Borer and Polyphagous Shot Hole Borer are two notable examples of pests that pose a potential threat to our urban forest if they were to be introduced to Sacramento. Emerald Ash Borer is an insect that can fatally injure ash trees. It has decimated ash trees across the country and is approaching California. The polyphagous shot hole borer is an insect that can fatally injure a wide variety of species but is known to impact London plane trees preferentially. It is already in California. The loss of significant amounts of ash trees and/or London plane trees in Sacramento would be catastrophic. Efforts to minimize the impacts will once again require proactive planning, trained staff, early detection, swift action, reforestation and community involvement.

Funding

Proactive and professional management of any public infrastructure asset requires sufficient funding to maintain the asset at industry and community standards, and the urban forest is no different. Stable and predictable funding is critical to effective and efficient management of the urban forest as well as the urban forest program's viability and sustainability.

Table 5 City funding for City-managed trees

Investments	
Urban Forestry Division Operations	$6,600,000
Park Trees	$800,000
Other Landscaping Costs (City facilities)	$300,000
Total Investments	**$7, 700,000**

Note that this does not include costs associated with collection and disposal of leaves, estimated at nearly $2 million annually but primarily covered through ratepayer green waste collection and disposal, or emergency response for major storm events, which are unplanned and costs can be substantial, as was evidenced in the early 2023 storms. In fiscal year 2022/2023, the City's total budget for urban forest maintenance activities across departments was approximately $7.7 million, or $14.80/capita. Urban forestry program funding comes from several sources and varies by department, as described below.

Public Works Urban Forestry Section

Virtually all funding for the City's Urban Forestry section is through proceeds from the City-wide Landscaping and Lighting District (L&L), enacted in 1989. This special assessment district raises funds for installing, maintaining, and servicing public lighting, landscaping, and park facilities through special assessments on the property tax bill of all parcels within the city.

The portion of the annual L&L assessment applied for Street Trees is about $25 per single family home , with commensurate rates for other types of land use. In 2023, this funding source is estimated to contribute approximately $6.6 million annually. This funding is used for urban forestry staff salaries, contracted maintenance work, equipment, vehicles and fuel, responding to customer inquiries through 311, and trees for planting and other equipment. Based on approved staffing levels, the current practice is for the Urban Forestry section to contract out about half of its routine tree maintenance. The use of L&L is limited to planting and maintenance of City trees and landscaping. L&L funding is not eligible for programs, planting, or maintenance of trees on private property or property owned by other agencies or for educational programs or materials.

Youth Parks and Community Enrichment

Youth Parks and Community Enrichment (YPCE) dedicates approximately $800,000 annually from L&L funding for tree maintenance in City parks and parkways, including scheduled maintenance and emergency removals. YPCE does not include any City tree maintenance staff, so all maintenance work is performed by third party contractors. YPCE also supports community tree planting efforts in City parks. YPCE does have a dedicated arborist position.

Public Works Facilities Division & Department of Utilities

Both the Public Works Facilities Division and the Department of Utilities utilize third party contractors to perform emergency maintenance and hazard management work on trees located at facilities within their purview, but they do not have dedicated budgets, programs, or staff to perform routine maintenance.

Tree Planting and Replacement Fund

On August 4, 2016, the City Council added Chapter 12.56 to the City Code, which among other things, allows in-lieu fees and civil penalties for tree removals to be deposited into the Tree Planting and Replacement Fund. This Fund is used for tree planting projects for City trees on City property and restricts plantings on private property .

Assessment of Funding

The City's urban forest budget per capita ($14.80) is considerably higher than the nationwide average ($7.37) and exceeds the minimum $2 per capita required by the Arbor Day Foundation as one condition of Tree City USA recognition.[66] It must be noted, while the City investment exceeds these two metrics, neither are tied to tree canopy goals, local labor markets, or other issues unique to individual communities.

Existing funding levels allow the City to meet its current urban forest maintenance obligations, such as pruning existing inventory, service requests, and emergency response. These funding levels will not be sufficient to achieve the ambitious canopy and climate resilience goals of the City, increase tree planting efforts, retrofit and install irrigation, increase maintenance capacity as canopy increases, support unplanned emergency response, and enforce key ordinances.

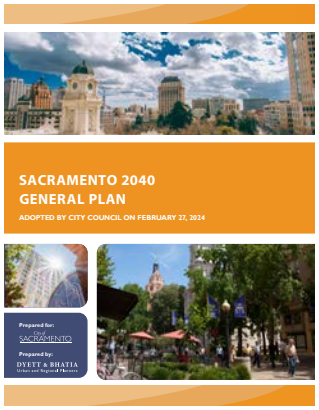
[66] Arbor Day Foundation. "Economics of Urban Forestry," Arbor Day Foundation, 2023. (https://www.arborday.org/urban-forestry-economic)

Tree Regulations & Policies

The Sacramento Urban Forest Plan builds on several City documents focused on improving the city's design, mobility, and ecological resilience. The City's tree regulations and policies establish the regulatory framework for the protection and preservation of the urban forest. Below is a summary of the most significant existing policy documents, plans, and codes that affect our urban forest.

1) **Adopted 2024 Sacramento General Plan[67]:** The General Plan's Environmental Resources & Constraints Element provides the policy frameworks that support urban forestry and landscaping on City's streets, open space, and development projects.

   a) **Community Plans:** Community Plans are a portion of the General Plan prepared for a specific area or community within the city – allowing the City to guide investment and development decisions by community. As a part of the General Plan, Community Plans include policies that supplement city-wide urban forest policies to address specific community forest needs.



2) **Adopted 2024 Climate Action & Adaptation Plan (CAAP)[68]:** The Climate Action & Adaption Plan includes an inventory of Sacramento's greenhouse gases (GHGs) and sets goals for GHG reduction for the city to meet. The CAAP also includes a Climate Change Vulnerability Assessment that evaluates projected climate impacts in Sacramento through the end of the 21st Century, and an Adaptation chapter that identifies six primary adaptation goals and a range of supporting policies and actions intended to guide City efforts to mitigate the effects of projected climate change impacts. Expanding the urban forest to 35 percent by 2045 to sequester carbon is one of twelve CAAP measures that have been identified to reduce GHG emissions. The adaptation chapter also includes a variety of policies and actions intended to support urban forest expansion as a key approach to mitigate projected significant increases in extreme heat impacts and heat island impact over the course of the 21st Century.

3) **Urban Forest Plan:** This plan, the Urban Forest Plan, will provide the policy framework, goals, and implementation actions for maintaining, expanding, and sustaining the urban forest in Sacramento.

4) **Parks Plan 2040[69]:** The Draft Parks Plan 2040 provides a guideline for maintaining, improving, and expanding City parks. City parks represent an opportunity to protect the existing urban forest, expand the City-owned urban forest, and provide access to green space in disadvantaged communities. Strategies to support the expansion and enhancement of the urban forest program shall be included in the Parks Plan 2040. *Adoption of the Parks Plan is expected in 2024.*

[67] https://www.cityofsacramento.gov/community-development/planning/long-range/general-plan

[68] https://www.cityofsacramento.gov/community-development/planning/long-range/climate-and-sustainability-planning

[69] http://www.cityofsacramento.org/ParksPlan

5) **Active Transportation Plan[70]:** The City's Bicycle Master Plan (2016) and Pedestrian Master Plan (2006) identify plans for improving walking and bicycling on city streets and on off-street shared-use paths. Street trees have been proven to have traffic calming, urban heat, and air quality benefits and should be employed as part of strategies to create more bikeable and walkable streets and paths. These two plans will be updated and integrated into one Streets For People active transportation plan, which will include assessment and recommendations for tree shading for walking and bicycling infrastructure. *Adoption of the plan is anticipated by 2025*.

6) **Sacramento City Code[71]:** The City Code includes standards and ordinances needed to implement the urban forestry policies and goals of the general plan and other plans. It includes the Planning and Development Code (Title 17) that guides requirements for trees in new development. The General Plan 2040 and CAAP include policy direction to update the City Code to support urban forest expansion. Important existing standards and ordinances related to the urban forest include the following:
   a) Chapter 12.56 Tree Planting Maintenance and Conservation
   b) Chapter 15 Street Design Standards
   c) Chapter 17.612 Landscaping and Paving Regulations

7) **Specific Plans[72]:** Specific Plans are comprehensive planning and zoning documents for a defined geographic region of the City. They implement the General Plan by providing a special set of development standards, including related to trees. Specific Plans can either be adopted by ordinance, which allows it to supersede the zoning code, or adopted by resolution, so that it is treated as a City policy.

8) **Planned Unit Developments[73]:** Planned Unit Development, or PUD, is a flexible zoning device that redefines the land uses allowed within a stated land area. PUD's promote large scale, site-specific, mixed-use land development. PUDs are subject to the requirements of the schematic plan and development guidelines adopted for the PUD, in addition to the planned unit development. This allows PUDs to follow unique guidelines specific to that area, which may deviate from City-wide design guidelines.

9) **Urban Design Guidelines[74]:** The Urban Design Guidelines provide site design guidance by project type and area. Design Guidelines important to the urban forest include the Parking Lot Tree Shading Design and Maintenance Guidelines which provides standards and guidance for the planting, maintenance, protection, removal, and replacement of parking lot trees with the purpose of achieving the 50 percent shading requirement in parking facilities. Street Standards are another set of design guidelines, which provide guidelines for the design and planting of trees along streets.

[70] https://www.cityofsacramento.gov/public-works/transportation/current_transportation_efforts/streets_for_people_sacramento_active_transportation_plan

[71] https://library.qcode.us/lib/sacramento_ca/pub/city_code

[72] https://www.cityofsacramento.gov/community-development/planning/long-range/specific-plans

[73] https://www.cityofsacramento.gov/community-development/planning/long-range

[74] https://www.cityofsacramento.gov/community-development/planning/site-plan-and-design-review

Figure 14 Heirarchy of policies, plans, and codes that effect and regulate trees in the City of Sacramento

Climate Action & Adaptation Plan

Urban Forest Plan

Parks Plan

Active Transportation Plan

City Code

Specific Plans

Planned Unit Development

Urban Design Guidelines

Sacramento City Code – Tree Ordinances and Standards

The previous sections outline the regulatory framework that governs the City's urban forest. Building on this review, the following sections evaluate the efficacy of the tree regulations found in the Sacramento City Code in greater detail. Outlining the specific tree regulations allows for determining if they are sufficient to reach the canopy cover goals of the City and what changes are necessary.

Chapter 12.56 Tree Planting Maintenance and Conservation

The Tree Planting Maintenance and Conservation Ordinance requires a permit for pruning and removal of any City tree (any tree on City-managed right-of-way) and regulates private protected trees. Private protected trees are defined as:

1) A tree that is designated by city council resolution to have special historical value, special environmental value, or significant community benefit, and is located on private property;
2) Any native Valley Oak *(Quercus lobata),* Blue Oak *(Quercus douglasii),* Interior Live Oak *(Quercus wislizenii),* Coast Live Oak *(Quercus agrifolia),* California Buckeye *(Aesculus californica),* or California Sycamore *(Platanus racemosa),* that has a Diameter at Standard Height (DSH) of 12 inches or more and is located on private property;
3) A tree that has a DSH of 24 inches or more located on an undeveloped lot or a lot that does not include any single unit or duplex dwellings; or
4) A tree that has a DSH of 32 inches or more located on private property that includes any single unit or duplex dwellings.

Unless the tree is deemed to be an immediate threat, any removal of City trees must be posted for 15 days prior to removal, allowing any person to file a written objection. Removal of City trees in connection with public projects must be approved by the City Council. If the Community Development Department determines that tree removal is necessary for a discretionary development application, the approval shall occur with the body that approves the development application with the same appeal process. This process gives a high level of oversight, transparency, and community input on tree removal decision making.

Chapter 15 Street Design Standards

The City's Street Design Standards require newly developed streets to include landscape buffers (planter strips) between curbs and sidewalks. The standards require a 6-foot minimum planter. Where existing streets do not comply with these standards, individual standards are established when the City conducts complete street projects to retrofit existing corridors. When infill development is proposed, projects are typically required to match the existing conditions.

A 6-foot minimum width for medians and planting strips allow for small and medium stature trees according to the City's recommended street tree list[75]. This City list includes approved tree species with minimum spacing recommendations based on the tree size at maturity. By exploring opportunities to increase the minimum median and planter strip width, the City can provide space for more medium and large size trees which will in turn increase potential canopy cover and species diversity.

Table 6 Shade trees approved for use as street trees on the City of Sacramento Street Tree List

	Planter Width (ft)	Tree Height (ft)	# of species on City list
Small Trees	4'	15-25'	15
Medium Trees	6'	25-35'	14
Medium-Large Trees	8'	36-50'	21
Very Large Trees	10'	>50'	6
Trees for Narrow spaces[76]	8-10'	18-45'	11

The street design standards support utilizing trees to improve walking safety and comfort and as traffic calming devices, but no other standards or codes require maximizing other benefits of trees in development projects.

Standards or design guidelines providing guidance on how to maximize cooling benefits would be beneficial to reaching canopy goals and increasing community climate resilience. Buildings and landscaping should be planned to provide cooling benefits for buildings by providing summer shade. In addition to providing shade for the pedestrian environment along streets, trees can also be strategically planted around buildings to yield energy cost savings and keep indoor spaces cooler. Tree shade can contribute to reducing energy needs by 30 percent for air conditioning and 20-50 percent for heating[77]. Trees should be planted to shade east- and west-facing walls to maximize these benefits and should also be planted to shade heating, ventilation, and air conditioning (HVAC) units to increase efficiency. For buildings with solar panels, tree selection and solar panel placement should be planned and designed to the extent feasible in a manner that allows panels to operate with the existing and expected conditions of trees.

[75] https://www.cityofsacramento.gov/public-works/maintenance-services/urban-forestry/urban-forestry-tree-permits/street-treet-list-

[76] Narrow spaces include areas where there are restriction on side-to-side canopy growth such as buildings or powerlines. Trees that grow tall and narrow are most appropriate in these areas.

[77] Nowak, D. J. (2017). *Urban Trees Save Billions of Dollars Through Reduced Energy Costs.* New York: U.S. Department of Agriculture Forest Service

Chapter 17.612 Landscaping and Paving Regulations

The City's existing guidelines for parking lot shading requirements call for 50 percent of the total parking lot area to be covered by tree canopies within 15 years after establishment of the parking facility. The natural growth rate of the tree, establishment care and maintenance provided, spacing between trees, planter size and soil structure all impact the growth of the tree canopy and timeline of when and if 50 percent canopy cover is achieved.

Currently, the City does not have a program to inspect parking lots after completion to ensure ongoing compliance with tree shading plan approved with the project, and has not identified a process for parking lot owners to replace trees if they die or are removed. As property changes hands, parking lot owners may not be aware that the trees were a condition of approval. As a result, ongoing compliance is not guaranteed and many parking lots do not achieve the stated goal.

Other Considerations Related to Tree Ordinances and Standards

One of the extraordinary elements of Sacramento's urban forest is that most of the trees were not planted due to City requirements, but in recognition of the inherent benefits of trees. While the City's Street Standards include trees for some of its history, most requirements were added beginning in the 1980s (e.g., the Parking Lot Shading Ordinance). While design standards and other guidelines may suggest inclusion of trees, the City's standard zoning does not require that lots include trees in front yards; there are not requirements for back yard trees, and tree placement and recommendations are only examined when new development or redevelopment requires discretionary approvals.

In areas with a greater levels of rented homes and with concerns over water use increasing due to recent droughts and installation of water meters, there are more barriers to voluntary planting of trees and preservation of trees. Some basic zoning requirements may assist in supporting trees where there are barriers to voluntary plantings.

Community Priorities

Partnership and Engagement is a guiding principle utilized in the formation of this plan. To establish this principle of collaboration and shared responsibility, the development of the Sacramento Urban Forest Plan included significant community engagement. Community engagement efforts included the formation of a Partners Advisory Committee (PAC)[78], a digital survey, numerous public meetings and workshops, and a series of pop-up booths at community events. Through these activities, participants shared their values, priorities, and recommendations. The results of the community engagement activities are summarized in this section and were utilized to inform the urban forest vision, guiding principles, policy framework, and key recommendations.

Partner Advisory Committee (PAC)

Developing an urban forest plan not only involves technical analysis and data that can be researched, gathered, and analyzed. Additional information rests in the firsthand knowledge and experience of various groups and individuals that directly manage trees, engage the community, and complete projects that impact trees. To ascertain this information the City invited leaders from the following 30 groups to participate in a Partner Advisory Committee (PAC):

- 350 Sacramento
- Asian Resources Inc.
- Avondale/Glen Elder Neighborhood Association
- California Department of Forestry and Fire Protection
- California Strategic Growth Council
- City of Sacramento Youth Commission
- Council Member District 3 Jeff Harris
- Elmhurst Neighborhood Association
- Explore Midtown
- Friends of Capitol Mansions
- Hagginwood Neighborhood Association
- Historic Monterey Trail District
- Hodgson and Company
- Hollywood Park Communi-Tree Committee
- LDK Ventures, LLC
- Meadowview Urban Tree Project
- Midtown Association
- North Natomas community representative
- North State BIA
- Preservation Sacramento
- Public Health Institute
- River Park Neighborhood Association
- Sacramento Area Bicycle Advocates
- Sacramento Area Council of Government
- Sacramento City Unified School District
- Sacramento Metropolitan Air Quality Management District
- Sacramento Municipal Utility District
- Sacramento Tree Foundation
- South Natomas community representative
- Trees4Sacramento

[78] Originally called the Stakeholder Representative Group or SRG.

City staff convened two meetings with the PAC in the beggining stages of the project development process in 2018 and twice more after development of the administrative draft plan in 2023. The PAC provided review and feedback of the findings from the Urban Tree Canopy Assessment and Resource Analysis as well as the SUFP goals, policy and program framework, and implementation strategy.

A full summary of the meetings is available in Appendix C.

Highlights from SRG input include:

- Unanimous agreement that the City is not appropriately shaded at the current tree canopy level and there is a need for an ambitious tree canopy goal in the SUFP.
- Concern with lack of canopy cover in low canopy residential neighborhoods and parking lots.
- Recommendations to prioritize low-income and disadvantaged neighborhoods, commercial corridors, and streets (to promote walking and biking) as the highest priority planting areas.
- Importance of stronger policies and enforcement mechanisms to achieve increased canopy cover of the urban forest.
- Education for homeowners is a helpful strategy to increase canopy cover, such as resources for tree planting, species selection, tree maintenance, and the benefits of trees.

Survey

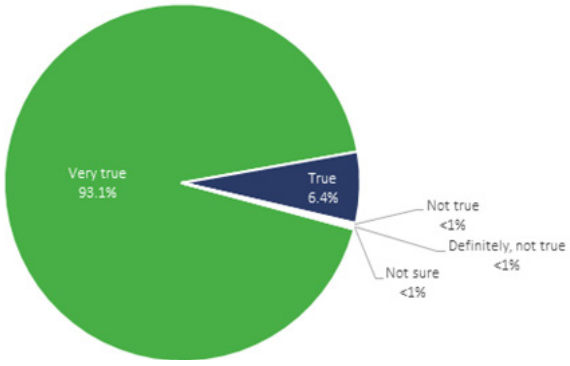
To understand how the Sacramento community thinks and feels about trees, and how these perceptions affect the urban forest, an online survey was utilized to reach a wide array of community members. The survey was available on the Urban Forest webpage section, emailed out via local media, social media, and available at public workshops. The survey was open for 15 weeks, beginning July 26, 2018, and closing November 1, 2018; in total 1,699 people responded.

The survey included a series of 13 questions, including questions about public views of the benefits of trees, awareness of the urban forest program, expectations for public tree maintenance and planting, perception of strategies to increase planting trees on private property, and tree education topics. For the complete survey and results, see Appendix D.

Major themes of the survey results included:

Question 1: "Trees are important to the quality of life in Sacramento"

> Respondents overwhelmingly agreed that trees were important to the quality of life in Sacramento, 99.5 percent of respondents responded "true" or "very true".



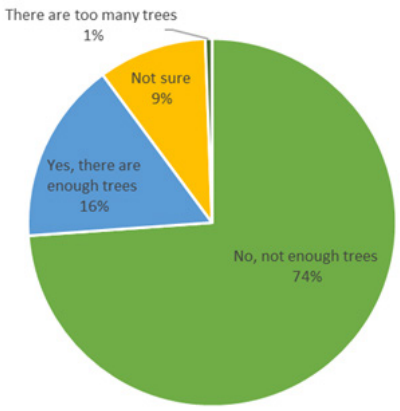
Question 2: "I value trees for the following reasons: (select your top five)"

> Respondents identified shade and cooling, air quality, and beautification as the main reason they value trees.

- 76.5% identified that trees "shade streets, sidewalks, and bike trails"
- 70.7% identified that "they clean the air"
- 70.2% of respondents identified "their beauty"
- 46.6% responded, "they bring birds and wildlife"
- 46.14% responded, "they save energy"
- 41.4% responded, "they support human health"
- 37.4% responded, "they reduce greenhouse gases"
- 35.3% responded, "they define my neighborhood"

Question 4: "Are there enough trees throughout the City?"

> Most respondents believed that there are not enough trees throughout Sacramento.



Question 8: "Where does Sacramento need to plant more trees?"

> Nearly 83% of respondents identified neighborhoods lacking trees as highly important and 51% said along public streets

> Common comments included:

- Concerns about the cost of maintenance of trees on private property
- Cost of watering trees and lack of knowledge on how to effectively water trees
- Lack of understanding regarding who is responsible for the care of street trees
- Lack of understanding around identifying which trees are owned by the City

Pop-up Workshops

To ensure that the perspectives of residents from around to city were captured, at least one pop-up workshop was held in each of the eight city council districts. The project team, with support from the Sacramento Tree Foundation, hosted 13 pop-up workshops in 2018. Each pop-up workshop was advertised through the City of Sacramento's Urban Forest Project webpage, as well as through email notifications sent to the project's PAC, through community partner networks, and council members community events and mailing lists.

Questions presented at each pop-up workshop were geared toward neighborhood preferences. The results from the pop-up workshops showed that participants were interested in all types of trees and would primarily like to see large and medium trees that provide air quality, shade, and health benefits in their neighborhoods. Participants were also asked where they would like to see more trees planted in their neighborhoods. Most of the locations were on streets, in parks, and at schools. The complete list of pop-up events and a list of responses with specific locations can be found in Appendix E.

Policy and Program Framework

Sacramento City Hall

The Sacramento Urban Forest Plan outlines a comprehensive framework to align urban forestry policies and programs with the City's land use, climate, health, transportation, and equity goals.

Based on assessment of the urban forest and professional and community input, the goals, policies, and implementation strategies identified in this Policy and Program Framework are grounded in the following vision and guiding principles.

VISION

The City of Sacramento, together with community investment and involvement, will reinforce Sacramento's legacy as the "City of Trees". The City will address historic inequity in access to nature, and prioritize the sustainable management and expansion of the urban tree canopy to provide extensive benefits and reprieve from the impacts of climate change for generations of Sacramentans to come.

GUIDING PRINCIPLES

Identified with collaborative input from community stakeholders, the following guiding principles established the foundation on which all Goals, Strategies, Policies, and Implementation Actions included in the SUFP were developed.

> **Civic Pride and Community Health:**
Sacramento's urban forest is essential to the city's identity, livability, and community health.

> **Resilience to Climate Change:**
Preserving, strengthening, and adapting the urban forest is a critical strategy in responding to climate change.

> **Equity:**
All communities are entitled to the same access to tree canopy and its benefits. Inequities in tree canopy must be addressed.

> **Partnership and Engagement:**
The urban forest is a community resource, and urban forest programs and priorities need to be achieved through collaboration and shared responsibility between the City, community members, and external partners.

> **Planned-for Trees:**
Incorporating tree canopy into development is a priority, to allow trees to grow to maturity without interfering with adjacent infrastructure and contribute to canopy cover goals.

GOALS & STRATEGIES

The Policy and Program Framework and Implementation Strategy are both based on the following five goals for the urban forest. Each goal is accompanied by a series of strategies, which are required to achieve it.

Goal 1: GROW

Grow the urban forest through new plantings to support livable neighborhoods, mitigate the impacts of climate change and reinforce the City's legacy as the "City of Trees."

Strategies:

1. Expand Canopy
2. Plan for Trees
3. Canopy Equity

Goal 2: STEWARD

Steward the City's existing trees to preserve canopy and protect the urban forest from biological and cultural threats and loss.

Strategies:

1. Canopy Resilience
2. Native Forest Resilience
3. Tree Protection

Goal 3: MANAGE

Manage the urban forest through coordinated planning, design, and maintenance to ensure its long-term health and sustainability.

Strategies:

1. Organizational Best Practices
2. Manage Risk
3. Regular Maintenance
4. Enforce Standards
5. Manage for Co-benefits

Goal 4: ENGAGE

Engage, educate, and coordinate with community members, public agencies, partners, and private businesses to care for and grow the urban forest.

Strategies:

1. Community Engagement
2. Partner Coordination
3. Youth Engagement
4. Workforce Development

Goal 5: SUSTAIN

Sustain the growth, development, and continuity of city urban forest programs through dedicated funding and innovation.

Strategies:

1. Program Funding
2. Incentive Programs
3. Innovation

Grow

Goal 1: Grow the urban forest through new plantings to support livable neighborhoods, protect residents and visitors from the impact of climate change, and reinforce the City's legacy as the "City of Trees."

Strategy 1.1 Expand Canopy

Increase the current levels of canopy to maximize the benefits of the urban forest.

Policies + Implementation Actions

1.1.1 The City shall strive to achieve a minimum average City-wide tree canopy of 25 percent by 2030 and 35 percent by 2045.

A. To this end, the City shall aim for the following minimum City-wide 2045 canopy coverage goals in its planning, restoration, and urban forest implementation efforts.

- Residential neighborhoods: 40 percent
- Streets and sidewalks: 50 percent
- Parking lots: 50 percent[79]
- Commercial and mixed-use areas: 25 percent
- Industrial areas: 20 percent
- Public facilities and parks: maximize tree canopy based on usable space.

B. These goals will help drive land use and planning standards and decisions. The City will prioritize efforts and programs for more tree planting in those areas substantially below these goals, particularly in disadvantaged communities, and where heat island effects are greatest.

1.1.2 Establish a parks tree planting program.

A. Maximize trees within new parks' plans to the extent feasible while providing for other desired recreational amenities.

B. Increase tree planting in passive recreation and landscape areas within existing parks that can accommodate more new trees.

C. Prioritize tree plantings and installing appropriate irrigation in parks and public spaces in communities where tree canopy coverage is low to provide greater access to greenery and shade.

D. Identify funding to establish a consistent tree planting, irrigation, and tree replacement program for parks.

[79] In some instances, shading may be accomplished through installation of carports and/or overhead solar arrays or other efforts that have sustainability benefits.

1.1.3 Continue to operate a street tree planting program.

A. Maintain optimum stocking density along City right-of-way.

B. Strive to replace removed trees within a maximum of two years.

C. Incorporate street tree plantings into new development.

D. Where feasible, incorporate street tree planting into complete street transformations for corridors developed without planting strips.

Strategy 1.2 Plan for Trees

Incorporate trees into all levels of planning and development to ensure existing trees are preserved, an adequate number of new trees are planted to reach canopy goals, and that trees can grow to maturity without interfering with adjacent infrastructure.

Policies + Implementation Actions

1.2.1 Amend Sacramento City Code[80] as necessary to improve tree canopy inclusion and require minimum levels of tree planting in development projects. Review the following topics at a minimum:

A. Review City Code and Planned Unit Development Guidelines for opportunities to add requirements for trees in setback areas, particularly located to shade sidewalks, bikeways and streets based on minimum canopy goals, particularly in new single-unit dwelling developments/subdivisions

B. Opportunities to provide incentives or requirements for inclusion of trees in front, back, and side yards;

C. Requiring consideration of tree placement in site plan and design review to maximize energy conservation;

D. Guidance on solar panel installation requirements to minimize potential conflicts with tree plantings;

E. Guidance defining how tree permits for ministerial development project reviews are processed, including timing of tree removal permit application processing and approved tree removals within the review, and permitting process;

F. Guidance on tree selection, prioritizing City-approved tree species that are climate-appropriate and more likely to survive projected climatic changes in the Sacramento Valley; and

G. Identify types of commercial and industrial developments with space appropriate for large trees and consider applying a higher level of specificity of tree-related requirements, including but not limited to trees species, mature canopy diameter, and post-construction inspection.

[80] Review and amendment of Sacramento City Code shall include Title 17 Planning and Development Code and Title 12 Streets, Sidewalks and Public Places code. (https://library.qcode.us/lib/sacramento_ca/pub/city_code)

1.2.2 Review and update design guidelines and development standards to support achievement of minimum canopy goals, outlined in strategy 1.1.1, and maximize benefits.

A. Trees should be provided with adequate growing space, aligned to reduce building heat and to shade public walkways to the extent feasible.

B. Require adequate soil treatment and space in plantings to ensure long term success.

C. Identify appropriate long-term irrigation solutions. Include tertiary treated water and/or water re-use for new plantings on city property where feasible.

D. Plant the right tree, in the right place, for the right reason. When planting trees or preparing or approving tree plans, require adequate space and appropriate species for the location. Incorporate shade trees as street trees to the extent feasible.

E. Identify appropriate recommendations for tree height and placement to avoid conflicts with pedestrian scale lighting and signage.

1.2.3 Encourage development plans to meet minimum canopy goals, identified in strategy 1.1.1, within 15 years.

A. Identify and implement methods to include tree canopy assessment and recommendations in the development review process. Enact new review fees as necessary to address this requirement.

B. In development plans where there is not adequate space to allow for trees on individual lots, strategies such as plazas, paseos, parks, and robust street tree programs should be utilized to meet canopy goals.

C. When development is proposed with no or limited trees due to the level of lot coverage or other conditions, identify how and where occupants or users will access trees or other shading and employ adequate shading mitigations.

D. Develop a calculator tool to help determine canopy potential for development projects.

E. Identify and establish metrics, processes, and fees to begin monitoring, tracking, and reporting on number of trees planted in new development, average future canopy predicted, and trees removed.

1.2.4 Develop mechanisms that require or incentivize preservation of existing trees during site development when feasible.

A. Provide maximum flexibility in development standards to preserve existing trees and promote improved future tree canopy levels, especially for residential urban infill projects.

B. Continue to ensure Chapter 12.56 of City Code is enforced for all tree removals associated with development projects requiring ministerial review.

1.2.5 Identify strategies to strengthen implementation of the Parking Lot Shading Ordinance and Parking Lot Shading Design and Maintenance Guidelines to support achievement of a minimum of 50 percent shading within 15 years.

A. Review and amend Chapter 17.612.040 of City Code Tree Shading Requirements for Parking Lots and Parking Lot Shading Design and Maintenance Guidelines to ease compliance, improve site plan review, climate-resilient tree selection, inspection, and monitoring, and strengthen requirements for ongoing maintenance and replacement of parking lot trees.

B. Identify when and how shading requirements may be satisfied through alternate methods such as canopies and solar arrays.

C. Develop resources to strengthen monitoring and enforcement of the Parking Lot Shade Ordinance after parking lots are completed.

D. Develop an inventory of parking lots that are subject to the parking lot shade ordinance to aid in monitoring and enforcement efforts.

E. Explore amending Chapter 12.56 of City Code to include required parking lot trees under the definition of private protected trees.

F. Pursue opportunities, including grant funding and partnerships, to add trees in existing parking lots that have no or limited tree canopy. These efforts shall focus on disadvantaged neighborhoods, particularly those with the greatest heat island impacts.

1.2.6 Support the achievement of 50 percent tree shading over streets and sidewalks.

A. Incorporate tree canopy strategies in the *Streets for People* active transportation plan.

B. Update street standards to optimize tree canopy and provide solutions for various street functions and conditions.

C. Require street trees on approved private streets unless clearly infeasible. Develop specific conditions under which trees on private streets may be deemed infeasible and plans approved without the inclusion of street trees. If street trees are infeasible, locations within the development shall be identified for inclusion of green space and tree canopy.

D. When planning and implementing complete streets projects, the City will incorporate tree planting with adequate planter space and irrigation as an essential infrastructure element to the extent feasible given physical conditions. Emphasis will be placed on shading sidewalks and bikeways.

1.2.7 Ensure the successful establishment of trees incorporated into development.

A. Developers will be responsible for planting required trees and ensuring health and survival for those trees using landscape warranty conditions where feasible and identifying the party responsible for tree maintenance and establishment when their obligation ends.

B. Developers shall use healthy trees and responsible irrigation practices in planting efforts to promote success and reduce young tree mortality.

C. Trees that are not healthy shall be replaced prior to the completion of the building permit. Explore options to provide for tree warranties on private property after the building permit is completed.

D. Develop resources to broaden the inspections of development projects to include review of compliance with approved landscaping plans, technical planting requirements, and tree health.

Strategy 1.3 Canopy Equity

Seek to address historic inequities, remove barriers to tree adoption, and ensure the urban forest is shared equitably[81] across all communities[82].

Policies + Implementation Actions

1.3.1 Prioritize City planting efforts and implementation of urban forest programs in priority communities.

1.3.2 Support and facilitate canopy expansion efforts on private property across the City with focus in priority communities.

A. Take action to support equitable urban forestry canopy expansion, maintenance, and benefits on private property across all communities and ensure programs are informed by diverse perspectives and focused to address those communities in greatest need.

B. Maximize involvement in urban forestry programs from residents in disadvantaged neighborhoods by enhancing community engagement and available urban forestry programs and resources.

[81] Because equity is a guiding principle of the SUFP, equity-centered policies and implementation actions are also embedded into the other goals and strategies in this plan.

[82] Priority communities for urban forestry programming will be identified through regular assessment of Disadvantaged Community status, urban heat indices, tree canopy percentage, air quality indices, and public health concerns.

Steward

Goal 2: Steward the City's existing trees to preserve canopy and protect the urban forest from biological and cultural threats and loss.

Strategy 2.1 Canopy Resilience

Ensure Sacramento's urban forest is resilient and prepared for the biotic and abiotic[83] impacts of climate change necessary for the longevity and success of the city's trees.

Policies + Implementation Actions

2.1.1 Promote biological diversity in tree species and age for the city's urban forest to maintain resilience.

Strive to ensure that overall City tree planting efforts, including trees planted by the City and trees associated with approved development projects, follow the 10/20/30 rule for species diversity, except in instances when planting native trees for native forest enhancement or reforestation.

2.1.2 Create a master recommended tree list to ensure that all trees planted by the City or associated with approved development projects are suitable for changing climate conditions in Sacramento.

A. Recommended trees shall be used to guide public and private plantings. This list will be modified as conditions change and will identify how trees not on this list will be evaluated for inclusion in City approvals.

B. Continue to support research and partnerships with research institutions to identify tree species that demonstrate substantial adaptability to the impacts of climate change expected in the Sacramento area.

C. Update the recommended tree list to include identifying information about each species to assist in proper tree selection, include characteristics such as amount of shade cover provided, size of planter needed, soil conditions needed, water use needs, and carbon sequestration capabilities.

D. Include native trees on the master recommended tree list and identify appropriate use cases.

2.1.3 Continue to monitor and identify pest threats and take preventative actions to anticipate threats and minimize potential impacts.

[83] Biotic factors are living things with an ecosystem (ex: plants, animals, bacteria); Abiotic factors are non-living components in an ecosystem (ex. water, soil, atmosphere).

Strategy 2.2 Native Forest Resilience

Conserve native oaks and woodlands as a valuable tool for climate adaptation that can address the twin crises of climate change and biodiversity loss.

Policies + Implementation Actions

2.2.1 Preserve native trees, woodlands, native species, and riparian areas to the extent feasible in recognition of their ties to the area's natural history, ability to sustain ecosystems, and adaptation to Sacramento's hot and dry climate.

2.2.2 Incorporate native plantings into the urban forest and parks when appropriate and to the extent feasible.

When planting native trees for native forest enhancement or reforestation, select species based on ecological appropriateness instead of adhering to the 10/20/30 rule for species diversity.

2.2.3 Advocate for regional forest corridors to facilitate adaptation and migration of native tree species and wildlife.

Explore developing and adopting a natural area plan in coordination with other agencies in the region.

Strategy 2.3 Tree Protection

Preserve existing tree canopy and healthy mature trees[84] as vital for maintaining current canopy levels, meeting canopy goals, and adapting to climate change. Enforce tree protection standards to better protect the urban forest from loss of existing trees.

Policies + Implementation Actions

2.3.1 Preserve mature trees in development to the extent feasible.

A. Support preservation of healthy trees in the City's regulations and discretionary decisions for new development and redevelopment.

B. Require development projects to consider alternatives to removal of healthy trees and only consider removals of healthy, mature trees when alternatives to removal prove infeasible.

C. Consider long-term energy and economic benefits of tree inclusion against reductions in initial development costs when assessing development proposals.

D. Design public projects to avoid the removal of or damage to city trees to the extent feasible.

[84] For this policy document, mature trees are defined using the definition of private protected trees within Chapter 12.56 of City Code.

2.3.2 Protect existing trees during construction.

A. Require adequate protection during construction to protect existing tree roots and structure.

B. Develop a tree protection manual for construction projects.

2.3.3 Require mitigation for tree removal to include onsite or offsite plantings and/or tree removal fees.

A. Support opportunities to allow for mitigation in priority communities.

2.3.4 Encourage appropriate watering and irrigation practices to minimize water use while supporting healthy tree growth.

A. Support initiatives that encourage other entities and private property owners to practice responsible tree irrigation during droughts to minimize tree stress and loss.

B. Upgrade or supplement irrigation in parks and streetscapes where needed to support appropriate tree watering practices.

2.3.5 Assess the success of objectives and enforcement of the City's Tree Ordinance (City Code Chapter 12.56) to encourage the preservation and care of private protected trees.

A. Take action as necessary to strengthen enforcement of tree regulations and requirements.

B. Regularly assess fines for violations, especially for repeat offenders.

C. Develop educational materials to promote tree protection ordinance and increase community awareness about tree protection requirements, particularly to landscape and tree care companies.

D. Require tree removals that are a part of private development projects or City projects be approved by the hearing body as a part of project approval.

2.3.6 Support the use of proper pruning techniques on privately maintained trees.

A. Provide education to support appropriate pruning practices on privately maintained trees and trees maintained by other agencies.

B. Encourage use of certified arborists for guidance on tree care and maintenance.

Manage

Goal 3: Manage the urban forest through coordinated planning, design, and maintenance to ensure its long-term health and sustainability.

Strategy 3.1 Organizational Best Practices

Seek to include necessary resources to manage city trees at a sustainable level.

Policies + Implementation Actions

3.1.1 Employ professional urban forest staff and rely on urban forestry best management practices.

A. Seek to maintain adequate and qualified urban forestry staffing and supporting contracts to appropriately maintain City trees and provide high levels of customer service.

B. Maintain a high level of professionalism by requiring certified arborists and adherence to professional standards and best urban forest management practices for decision making, maintenance, care, and planting of trees under City authority.

3.1.2 Strengthen collaboration and support between all City departments that manage trees.

A. Coordinate an internal working group with key staff from relevant departments and divisions.

3.1.3 Conduct annual reporting on the urban forest plan to ensure progress toward goals and appropriate resource allocation.

A. Assess the urban forest program staffing levels, funding allocation and utilization, status of SUFP objectives, and tree planting and removal activities.

B. Provide an annual update to the City Council.

3.1.4 Strive to perform regular 5-year updates to the Urban Forest Plan and canopy cover assessment and analysis reports.

A. Strive to perform a canopy cover assessment aligned with the CAAP update greenhouse gas inventory.

B. Explore funding to support SUFP and canopy cover assessment and analysis report updates.

Strategy 3.2 Manage Risk

Utilize tree risk management policies, procedures, and practices to minimize the risk of injury and property damage.

Policies + Implementation Actions

3.2.1 Rely on industry best management practices for pest control, disease prevention, and hazard mitigation measures in urban environments in treatment of City-managed trees.

A. Require regular disease and pest training for City urban forestry staff.

B. Continue to monitor City-managed trees for signs of emergent pests and diseases and take proactive measures to address threats.

C. Continue to monitor and address as necessary City-managed trees that have structural deficiencies, disease, or may cause harm.

3.2.2 Maintain and implement emergency response plans for storm events that result in tree loss and damage.

3.2.3 Minimize future damage or conflict by planning for trees as a part of infrastructure.

A. Require proper planting space and tree selections to minimize conflicts and damage to infrastructure assets, including sidewalks, overhead lines, underground utilities, and solar panels.

Strategy 3.3 Regular Maintenance

Perform regular maintenance on City trees to improve the health, longevity, safety, and functional capacity of the urban forest.

Policies + Implementation Actions

3.3.1 Continue to operate a proactive tree maintenance program to preserve and protect City-managed trees.

A. Strive to achieve a 5-year maintenance pruning cycle.

3.3.2 Update and regularly maintain a comprehensive inventory of all City-managed trees.

A. Integrate inventories across City departments into one central inventory.

B. Perform a comprehensive inventory update to capture all street trees, park trees, trees on City-managed facilities, and vacant planting stalls.

C. Implement procedures to regularly incorporate new plantings, tree removals, and tree maintenance into the inventory on an on-going basis.

D. Explore coordination and integration of inventories with other public agencies with land in the city limits, including but not limited to the State of California, County of Sacramento, UC Davis, Sacramento State, Los Rios Community College District, public school districts, and public utilities.

Strategy 3.4 Manage for Co-benefits

Plan to maximize the co-benefits of the urban forest throughout trees' full life cycle.

Policies + Implementation Actions

3.4.1 Support tree reuse efforts within the City to extend the life cycle of trees.

A. When large trees need to be removed as a part of a Capital Improvement Project or private development, identify options for the highest and best use of the wood, including urban lumber or mulching programs.

3.4.2 Explore opportunities to leverage the benefits of trees to retain stormwater runoff.

A. Identify opportunities to incorporate trees into stormwater runoff systems.

3.4.3 When designing transportation improvements, support the inclusion of adequate tree canopy to provide substantial shade for active transportation infrastructure and support achievement of 50 percent shading on streets and sidewalks.

A. When conducting active transportation audits, identify opportunities to add shade trees on public and private land.

B. Review procedures to ensure that inclusion and preservation of trees are part of transportation planning and projects.

C. To the extent feasible require the inclusion of trees and irrigation in all road diets, transportation Capital Improvement Projects, and private development projects altering the roadway.

D. When conducting active transportation audits, identify opportunities to add shade trees on public and private land.

Engage

Goal 4: Engage, educate, and coordinate with community members, public agencies, partners, and private businesses to care for and grow the urban forest.

Strategy 4.1 Community Engagement

Support community advocacy for and involvement in the urban forest.

Policies + Implementation Actions

4.1.1 Recognize and promote the city's urban forest.

A. Annually celebrate Arbor Day to promote awareness of the city's tree canopy and benefits.

B. Annually maintain the City's status as a Tree City USA[85].

C. Promote the City of Sacramento's urban forest nationally and internationally to encourage visitors and tourism.

4.1.2 Conduct City-wide urban forest public outreach and education.

A. Inform and educate residents about the urban forest, City-maintained tree operations and maintenance, available tree planting and water-wise irrigation programs, and opportunities to support the urban forest.

B. Develop informational materials to provide to homeowners, tenants, and business owners to support tree canopy, including but not limited to the following topics:

- Information on tree benefits, planting guidance, tree selection and care, available programs, and water-wise irrigation.
- Information about tree species that are adapted to Sacramento's climate and resilient to drought and climate change.
- Guidance on tree planting to maximize building energy conservation.
- Guidance to plant and maintain healthy trees in parking lots.
- Options and strategies to convert paved areas to tree planting areas.

C. Update the City's urban forestry website to improve available information and references to tree partners and opportunities.

D. Target public outreach in disadvantaged, high heat, and low-canopy neighborhoods.

E. Identify opportunities to provide translated and/or bilingual outreach and education materials.

F. Develop partnerships with community-based organizations to strengthen multi-lingual and culturally appropriate engagement.

[85] Tree City USA is a recognition earned from the Arbor Day Foundation through demonstrated commitment to trees. (https://www.arborday.org/programs/treecityusa/)

4.1.3 Encourage active participation by residents in the development and promotion of a sustainable urban forest.

A. Establish a tree ambassador program.

B. Provide and support educational events about the benefits of trees, proper irrigation and water use, and tree care and pruning.

C. Encourage and support community tree planting, volunteer, and community forestry efforts of other agencies and partners.

D. Target City-led community tree planting events and volunteer opportunities in disadvantaged, high heat, and low-canopy neighborhoods.

Strategy 4.2 Partner Coordination

Facilitate coordination, involvement, and commitment from all entities that own, control, regulate, or affect the urban forest.

Policies + Implementation Actions

4.2.1 Continue existing partnerships and establish new partnerships.

A. Strengthen partnerships with other agencies, organizations, contractors, and public utilities whose activities impact trees through regular dialogue and project coordination.

B. Establish new partnerships and memoranda of understanding with partners to deliver tree planting, maintenance, and education projects and reach City tree program goals.

C. Collaborate with groups such as the Sacramento Metropolitan Air Quality Management District, Sacramento Municipal Utility District, State of California, Sacramento County, Los Rios Community College District, K-12 school districts, Tribes, Sacramento Tree Foundation, environmental groups, community and neighborhood associations, business and property improvement districts, and other agencies and organizations to expand tree planting, preservation, and care programs throughout the city.

4.2.2 Support and encourage businesses to increase tree canopy.

A. Work with businesses and property improvement districts to incorporate and add trees to business corridors, streets, and parking lots.

B. Explore incentives and other programs to encourage the addition of trees to commercial properties and parking lots.

C. Develop and implement a pilot program to retrofit existing low canopy parking lots to increase tree canopy and reduce urban heat.

4.2.3 Strengthen partnerships with entities in disadvantaged and low tree canopy neighborhoods.

A. Build and strengthen partnerships with community-based organizations, businesses, non-profits, neighborhood groups, faith-based organizations, and other entities within or that serve disadvantaged, low tree canopy, and high heat neighborhoods to promote and expand access to urban forest programs.

4.2.4 Support science-based urban forest decision making among partners.

A. Encourage other agencies and utilities that govern tree removal, maintenance, policies, and/or restrictions to ensure these decisions are based in ecological and science-based information and balance decisions for tree removal or restrictions with longer-term environmental consequences.

Strategy 4.3 Youth Engagement

Cultivate youth engagement in the urban forest to continue Sacramento's legacy of tree stewardship.

Policies + Implementation Actions

4.3.1 Support opportunities for youth leadership in urban forest programs.

A. Sponsor and support youth leadership efforts and programs around tree planting and care.

B. Partner with the Youth Commission and YPCE Youth Division to take a leadership role in promoting planting programs, developing efforts to increase access to trees in disadvantaged communities, and training youth "tree stewards" within the community.

C. Provide seed funding as needed to support urban forest youth leadership programs.

4.3.2 Increase youth tree literacy and access to trees.

A. Partner with schools to increase trees, tree maintenance, and irrigation on school grounds.

B. Partner with schools to offer tree care curriculum and programs.

Strategy 4.4 Workforce Development

Advance career pathways in urban forestry.

Policies + Implementation Actions

4.4.1 Promote workforce development programs for tree care professions as a critical component of green industry.

A. Explore developing and facilitating tree care apprenticeship programs in the city with local tree care companies, certified arborists, workforce development organizations, and educational institutions.

B. Coordinate with the Landscape and Learning program[86], local high schools, and community colleges to promote careers in tree care.

C. Identify opportunities to utilize workforce development programs, such as the regional and state conservation corps, in City urban forest efforts.

4.4.2 Build workforce pipelines from Sacramento's historically under-employed and low-income neighborhoods into the City's urban forest workforce.

A. Strengthen partnerships and training opportunities to offer pre-employment training, job placement support, and advertisement to increase awareness about career pathways into urban forestry.

B. Prioritize outreach for workforce development programs to Sacramento's historically under-employed and low-income neighborhoods to facilitate entry into well-paying urban forestry careers.

[86] https://www.cityofsacramento.org/ParksandRec/Youth-Division/Youth-Employment/LandscapeAndLearning

Sustain

Goal 5: Sustain the growth, development, and continuity of City urban forest programs through dedicated funding and innovation.

Strategy 5.1 Program Funding

Pursue sustainable funding to support the ambitious canopy and program goals within this Plan.

Policies + Implementation Actions

5.1.1 Perform a cost analysis to determine the projected cost to meet the tree planting and maintenance targets identified in the Urban Forest Plan to reach 35 percent canopy cover by 2045.

5.1.2 Pursue an increase in dedicated long-term funding to provide an increased level of tree canopy, perform associated care and maintenance, and expand core urban forestry services and programs.

A. Provide information on the level of funding and staff needed to ensure adequate maintenance of City-managed trees to meet professional standards, including five-year maintenance cycle for all City trees and regular maintenance of the City inventory and to address additional trees and canopy levels.

B. Develop a cohesive funding program for tree planting and irrigation within City parks.

5.1.3 Pursue grant funding to promote tree planting and partner engagement.

A. Whenever feasible, seek grant funding for programs to promote tree planting efforts, public-private partnerships, workforce development, community education, street tree expansion, and parking lot greening.

5.1.4 Optimize existing funding sources to meet canopy and management goals.

A. Assess current processes and fees to identify improvements to better achieve objectives.

5.1.5 Explore new funding sources.

A. Explore opportunities to utilize taxes, special assessments, and special tax districts to receive dedicated program funding.

B. Explore non-traditional and technology-driven funding techniques, such as donation and gifting programs.

Strategy 5.2 Incentive Programs

Explore incentive programs to reduce barriers to tree planting and care on private property.

Policies + Implementation Actions

5.2.1 Explore providing financial support to residents in disadvantaged communities for tree planting and care.

A. Identify funding options or incentives to support mature tree care, including water use and maintenance costs related to trees.

B. Identify funding options or incentives to reduce barriers to tree planting, including education, support for irrigation installation, and support for maintenance costs.

5.2.2 Explore financial incentives to support residents with mature trees.

A. Investigate potential tax break for properties with City-protected and registered trees.

Strategy 5.3 Innovation

Advance innovative technologies and approaches to support the urban forest.

Policies + Implementation Actions

5.3.1 Support new technologies for tree canopy assessment and planning.

A. Utilize technology that allows for public access to urban forest data and can be easily used by residents and other organizations.

B. Identify innovative tools that allow for improved assessment of urban forest resources and utilize that data to improve program and project planning.

Implementation Strategy

North Sacramento

Implementation of the Sacramento Urban Forest Plan will require participation from multiple departments across the City, other agencies, and key partners. The following section assigns responsibility and a suggested timeframe for implementing the SUFP's strategies, policies, and implementation actions.

Department Key	
PW	Department of Public Works
YPCE	Department of Youth, Parks, and Community Enrichment
CDD	Community Development Department
DOU	Department of Utilities
OIED	Office of Innovation and Economic Development

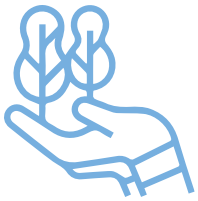
GROW

Grow the urban forest through new plantings to support livable neighborhoods, protect residents and visitors from the impact of climate change, and reinforce the City's legacy as the "City of Trees."

Strategies	Policies + Implementation Actions	Lead	Support	Timeframe
1.1 Expand Canopy: Increase the current levels of canopy to maximize the benefits of the urban forest.	**1.1.1** The City shall strive to achieve a minimum average City-wide tree canopy of 35 percent by 2045.	PW	CDD, YPCE	15–20 years
	1.1.2 Establish a parks tree planting program.	YPCE	PW	0–5 years
	1.1.3 Continue to operate a street tree planting program.	PW		Ongoing

1.2 Plan for Trees: Incorporate trees into all levels of planning and development to ensure existing trees are preserved, an adequate number of new trees are planted to reach canopy goals, and that trees can grow to maturity without interfering with adjacent infrastructure.	**1.2.1** Amend Sacramento City Code as necessary to improve tree canopy inclusion and require minimum levels of tree planting in development projects.	PW, CDD		0–5 years
	1.2.2 Review and update design guidelines and development standards to support achievement of minimum canopy goals and maximize benefits.	CDD	PW	0–5 years
	1.2.3 Encourage development plans to meet minimum canopy goals within 15 years.	CDD	PW	0–5 years
	1.2.4 Develop mechanisms that require or incentivize preservation of existing trees during site development when feasible.	CDD	PW	0–5 years
	1.2.5 Identify strategies to strengthen implementation of the Parking Lot Shading Ordinance and Parking Lot Shading Design and Maintenance Guidelines to support achievement of a minimum of 50 percent tree shading within 15 years.	PW	CDD	0–5 years
	1.2.6 Support the achievement of 50 percent tree shading over streets and sidewalks.	PW	CDD	0–5 years
	1.2.7 Ensure the establishment of trees incorporated into development.	PW	CDD, DOU	0–5 years
1.3 Canopy Equity: Seek to address historic inequities, remove barriers to tree adoption, and ensure the urban forest is shared equitably across all communities.	**1.3.1** Prioritize City planting efforts and implementation of urban forest programs in priority communities.	PW	YPCE	0–5 years
	1.3.2 Support and facilitate canopy expansion efforts on private property across the City with focus in priority communities.	PW	CDD	15–20 years

STEWARD



Steward the City's existing trees to preserve canopy and protect the urban forest from biological and cultural threats and loss.

Strategies	Policies + Implementation Actions	Lead	Support	Timeframe
2.1 Canopy Resilience: Ensure Sacramento's urban forest is resilient and prepared for the biotic and abiotic impacts of climate change necessary for the longevity and success of the city's trees.	**2.1.1** Promote biological diversity in tree species and age for the city's urban forest to maintain resilience.	PW	YPCE, CDD	0–5 years
	2.1.2 Create a master recommended tree list to ensure all trees planted by the City or associated with approved development projects are suitable for changing climate conditions in Sacramento.	PW	CDD, YPCE	0–5 years
	2.1.3 Continue to monitor and identify pest threats and take preventative actions to anticipate threats and minimize potential impacts.	PW		Ongoing
2.2 Native Forest Resilience: Conserve native oaks and woodlands as a valuable tool for climate adaptation that can address the twin crises of climate change and biodiversity loss.	**2.2.1** Preserve native trees, woodlands, native species, and riparian areas to the extent feasible in recognition of their ties to the area's natural history, ability to sustain ecosystems, and natural climate adaptation.	PW	YPCE, CDD	Ongoing
	2.2.2 Incorporate native plantings into the urban forest and parks when appropriate and to the extent feasible.	YPCE		Ongoing
	2.2.3 Advocate for regional forested corridors to facilitate adaptation and migration of native tree species and wildlife.	PW, YPCE	CDD	5–10 years

2.3 Tree Protection: Preserve existing tree canopy and healthy mature trees as vital for maintaining current canopy levels, meeting canopy goals, and adapting to climate change. Enforce tree protection standards to better protect the urban forest from loss of existing trees.	**2.3.1** Preserve mature trees in development to the extent feasible.	CDD	PW	Ongoing
	2.3.2 Protect existing trees during construction.	PW	CDD	0–5 years
	2.3.3 Require mitigation for tree removal to include onsite or offsite plantings and/or tree removal fees.	PW	CDD	Ongoing
	2.3.4 Encourage appropriate water and irrigation practices to minimize needed water use and support healthy tree growth.	PW	YPCE, DOU	Ongoing
	2.3.5 Assess the success of objective and enforcement of the City's Tree Ordinance to encourage the preservation and care of private protected trees.	PW	CDD	0–5 years
	2.3.6 Support the use of proper pruning techniques on privately maintained trees.	PW		0–5 years

MANAGE

Manage the urban forest through coordinated planning, design, and maintenance to ensure its long-term health and sustainability.

Strategies	Policies + Implementation Actions	Lead	Support	Timeframe
3.1 Organizational Best Practices: Seek to include necessary resources to manage City trees at a sustainable level.	**3.1.1** Employ professional urban forest staff and rely on urban forestry best management practices.	PW	CC	Ongoing
	3.1.3 Strengthen collaboration and support between all City departments that manage trees.	PW	CDD, DOU, YPCE	Ongoing
	3.1.4 Conduct annual reporting on the urban forest plan to ensure progress towards goals and appropriate resource allocation.	PW	YPCE, CDD, DOU	Annually
	3.1.5 Strive to perform regular 5-year updates to the Urban Forest Plan and canopy cover assessment and analysis reports.	PW	CDD, YPCE	Every 5 years, aligned with CAAP
3.2 Manage Risk: Utilize tree risk management policies, procedures, and practices to minimize risk of injury and property damage.	**3.2.1** Rely on industry best management practices for pest control, disease prevention, and hazard mitigation measures in urban environments in treatment of City-managed trees.	PW		Ongoing
	3.2.2 Maintain and implement emergency response plans for storm events that result in tree loss and damage.	PW		Ongoing
	3.2.3 Minimize future damage or conflict by planning for trees as a part of infrastructure.	PW, CDD, YPCE		0–5 years

3.3 Regular Maintenance: Perform regular maintenance on City trees to improve the health, longevity, safety, and functional capacity of the urban forest.	**3.3.1** Continue to operate a proactive tree maintenance program to preserve and protect City-managed trees.	PW		Ongoing
	3.3.2 Update and regularly maintain a comprehensive inventory of all City-managed trees.	PW	YPCE, DOU	0–5 years, Ongoing once updated
3.4 Manage for Co-benefits: Plan to maximize the co-benefits of the urban forest throughout trees' life cycle.	**3.4.1** Support tree reuse efforts within the City to extend the life cycle of trees.	PW	YPCE	5–10 years
	3.4.2 Explore opportunities to leverage the benefits of trees to retain stormwater runoff.	DOU	PW	0–5 years
	3.4.3 When designing transportation improvements, support inclusion of adequate tree canopy to provide substantial shade for active transportation infrastructure and support achievement of 50 percent shading on street and sidewalks.	PW		0–5 years

ENGAGE

Engage, educate, and coordinate with community members, public agencies, partners, and private businesses to care for and grow the urban forest.

Strategies	Policies + Implementation Actions	Lead	Support	Timeframe
4.1 Community Engagement: Support community advocacy for and involvement in the urban forest.	**4.1.1** Recognize and promote the city's urban forest.	PW		Annually
	4.1.2 Conduct a City-wide urban forest public outreach and education.	PW		0–5 years
	4.1.3 Encourage active participation by residents in the development and promotion of a sustainable urban forest.	PW	YPCE, DOU	Ongoing
4.2 Partner Coordination: Facilitate coordination, involvement, and commitment from all entities that own, control, regulate, or affect the urban forest.	**4.2.1** Continue existing partnerships and establish new partnerships.	PW		Ongoing
	4.2.2 Support and encourage businesses to increase tree canopy.	PW		0–5 years
	4.2.3 Strengthen partnerships with entities in disadvantaged and low tree canopy neighborhoods.	PW		0–5 years
	4.2.4 Support science-based urban forest decision making among partners.	PW		Ongoing
4.3 Youth Engagement: Cultivate youth engagement in the urban forest to continue Sacramento's legacy of tree stewardship.	**4.3.1** Support opportunities for youth leadership in urban forest programs.	PW		0–5 years
	4.3.2 Increase youth tree literacy and access to trees.	PW		5–10 years

4.4 Workforce Development: Advance career pathways in urban forestry.	**4.4.1** Promote workforce development programs for tree care professions as a critical component of green industry.	PW	YPCE	0–5 years
	4.4.2 Build workforce pipelines from Sacramento's historically under-employed and low-income neighborhoods into the City's urban forest work force.	PW	OIED, YPCE	5 years

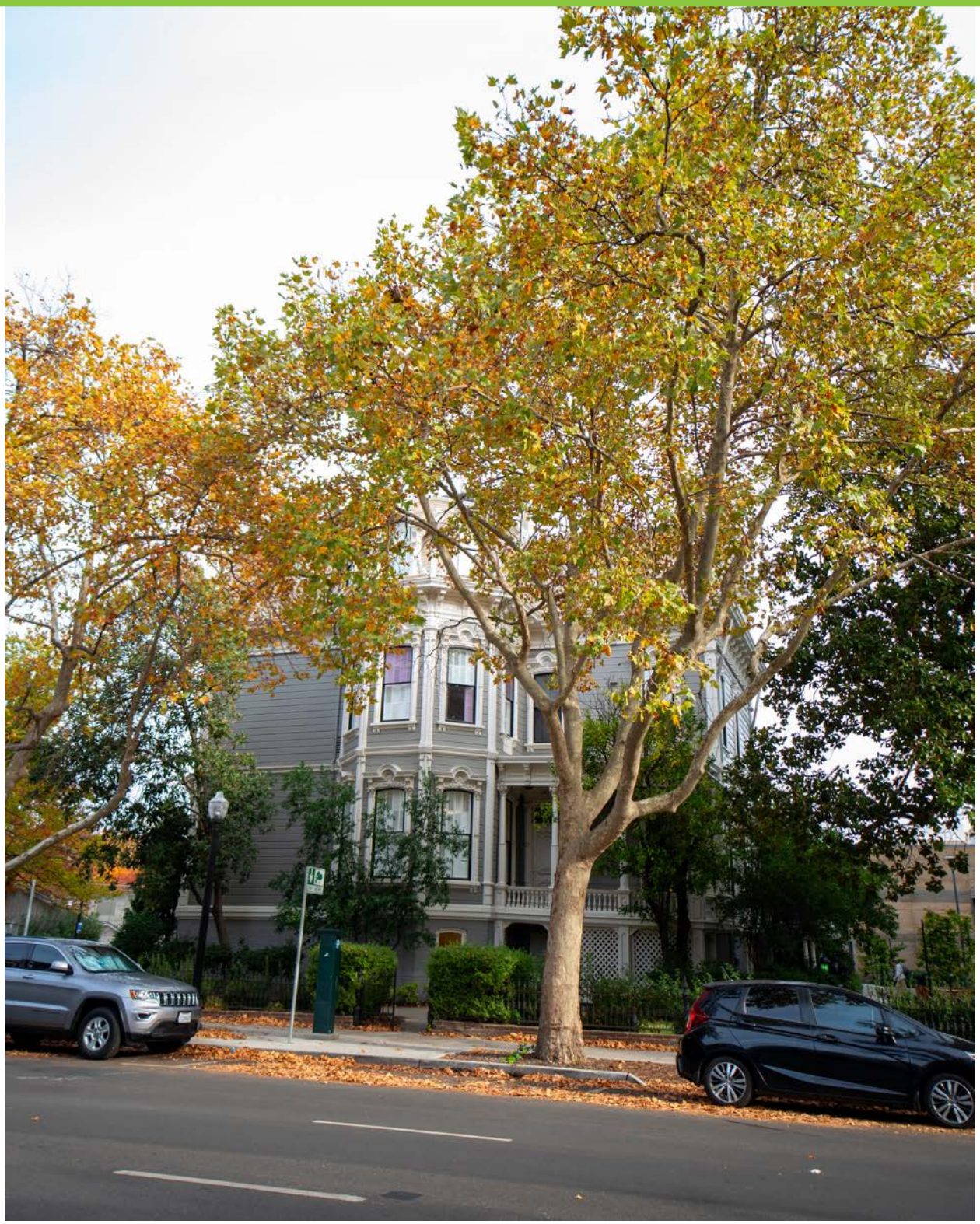
SUSTAIN

Sustain the growth, development, and continuity of City urban forest programs through dedicated funding and innovation.

Strategies	Policies + Implementation Actions	Lead	Support	Timeframe
5.1 Program Funding: Pursue sustainable funding to support the ambitious canopy and program goals within this Plan.	**5.1.1** Perform a cost analysis to determine the projected cost to meet the tree planting and maintenance targets identified in the Urban Forest Plan to reach 35 percent canopy cover by 2045.	PW	CDD, DOU, YPCE	0–5 years
	5.1.2 Pursue an increase in dedicated long-term funding to provide an increased level of tree canopy, perform associated care and maintenance, and expand core urban forestry services and programs.	PW	YPCE	0–5 years
	5.1.3 Pursue grant funding to promote tree planting and partner engagement.	PW		Ongoing
	5.1.4 Optimize existing funding sources to meet canopy and management goals.	PW	YPCE, DOU	0–5 years
	5.1.5 Explore new funding sources.	PW		0–5 years
5.2 Incentive Programs: Identify incentive programs to reduce barriers to tree planting and care on private property.	**5.2.1** Explore providing financial support to residents in disadvantaged communities for tree planting and care.	PW	PW	5–10 years
	5.2.2 Explore financial incentives to support residents with mature trees.	PW		5–10 years

5.3 Innovation: Advance innovative technologies and approaches to support the urban forest.	**5.3.1** Support new technologies for tree canopy assessment and planning.	PW		5–10 years

Appendices



APPENDIX A: TREE CANOPY BY NEIGHBORHOOD

Neighborhood	*Acres*	*Canopy Acres*	*Canopy %*	*Impervious Acres*	*Grass/ Low Veg. Acres*	*Bare Soil Acres*	*Water Acres*
Airport	851.97	96.55	11.33	290.73	138.27	326.41	0.00
Alhambra Triangle	88.92	14.31	16.10	64.86	4.04	5.71	0.00
Alkali Flat	89.25	27.77	31.11	49.66	7.71	4.11	0.00
American River Parkway	1,041.94	362.76	34.82	96.30	387.00	30.60	165.28
Arden Fair	78.45	4.95	6.30	71.13	1.78	0.60	0.00
Avondale	307.59	43.89	14.27	146.94	96.58	20.19	0.00
Belvedere	315.25	10.17	3.23	236.33	15.43	53.31	0.00
Ben Ali	242.87	40.11	16.52	151.58	38.40	12.78	0.00
Boulevard Park	154.68	68.34	44.18	72.86	13.07	0.41	0.00
Brentwood	201.29	29.19	14.50	128.09	29.25	14.75	0.00
Cal Expo	846.21	168.71	19.94	226.27	291.19	80.95	79.09
Campus Commons	404.83	177.69	43.89	159.22	53.93	9.99	4.01
Cannon Industrial Park	195.24	15.93	8.16	128.39	22.54	28.38	0.00
Carleton Tract	120.18	24.37	20.28	77.23	17.22	1.36	0.00
Central Oak Park	396.90	126.69	31.92	202.32	58.80	9.10	0.00
College Town	200.43	48.65	24.27	95.97	22.09	10.69	23.03
College/Glen	964.87	232.26	24.07	550.42	153.53	28.59	0.08
Colonial Heights	178.45	61.46	34.44	90.12	24.99	1.88	0.00
Colonial Manor	346.01	71.71	20.72	187.07	73.76	13.47	0.00
Colonial Village	214.21	45.77	21.37	124.16	43.96	0.33	0.00
Creekside	489.26	25.21	5.15	172.04	56.46	235.55	0.00
CSUS	402.11	104.70	26.04	207.74	62.85	11.76	15.07
Curtis Park	658.83	216.59	32.88	317.99	69.75	54.49	0.00
Del Paso Heights	407.48	64.67	15.87	200.49	108.71	33.61	0.00
Del Paso Park	820.42	235.57	28.71	170.26	303.10	109.86	1.63
Depot Park	496.67	21.03	4.23	306.33	37.80	128.67	2.84
Dos Rios Triangle	52.12	8.57	16.44	30.86	12.47	0.21	0.00
Downtown	530.44	123.40	23.26	355.21	48.32	3.50	0.00
East Del Paso Heights	550.07	117.24	21.31	266.24	116.55	50.03	0.00
East Sacramento	2,148.80	710.91	33.08	1,050.12	313.45	73.54	0.78
Elder Creek	146.33	4.78	3.27	125.82	6.39	8.76	0.58
Elmhurst	225.29	91.40	40.57	107.55	25.20	1.14	0.00

Neighborhood	Acres	Canopy Acres	Canopy %	Impervious Acres	Grass/ Low Veg. Acres	Bare Soil Acres	Water Acres
Erikson Industrial Park	270.15	13.80	5.11	213.22	18.74	24.39	0.00
Fairgrounds	151.58	32.10	21.18	87.25	23.63	8.60	0.00
Florin Fruitridge Industrial Park	757.71	42.63	5.63	544.08	37.69	130.19	3.12
Freeport Manor	177.27	25.76	14.53	119.56	24.46	7.49	0.00
Fruitridge Manor	453.19	71.28	15.73	268.26	91.16	22.49	0.00
Gardenland	389.13	82.09	21.10	162.41	118.81	25.81	0.00
Gateway Center	134.20	42.78	31.88	56.12	19.24	16.07	0.00
Gateway West	762.85	77.00	10.09	359.75	146.94	161.07	18.09
Glen Elder	269.58	44.19	16.39	128.58	92.16	4.03	0.62
Glenwood Meadows	343.50	53.62	15.61	179.78	85.49	24.60	0.00
Golf Course Terrace	388.42	89.96	23.16	209.94	83.88	4.63	0.00
Granite Regional Park	320.67	82.68	25.78	77.90	63.48	87.53	9.08
Greenbriar	640.58	2.84	0.44	25.99	1.69	608.02	2.03
Greenhaven	1,014.76	213.79	21.07	529.37	165.90	9.95	95.74
Hagginwood	595.60	203.66	34.19	217.58	132.26	40.51	1.59
Hansen Park Golf Course Site	288.34	19.01	6.59	3.04	35.73	223.04	7.53
Heritage Park	294.92	46.38	15.73	166.23	34.21	44.12	3.97
Hollywood Park	268.10	66.05	24.64	148.09	50.49	3.47	0.00
Johnson Business Park	188.83	28.03	14.84	111.19	22.61	25.20	1.80
Johnson Heights	141.22	20.43	14.47	22.74	33.33	64.72	0.00
Land Park	1,137.38	486.88	42.81	423.56	192.83	19.37	14.73
Lawrence Park	163.11	31.66	19.41	103.11	24.11	4.23	0.00
Little Pocket	273.85	89.84	32.81	95.18	40.14	3.77	44.92
Mangan Park	105.83	21.21	20.04	66.90	17.67	0.05	0.00
Mansion Flats	132.41	43.76	33.05	77.35	10.86	0.44	0.00
Marshall School	108.27	55.37	51.14	44.81	8.09	0.00	0.00
Meadowview	3,495.54	432.87	12.38	1,231.78	685.30	1,124.48	21.11
Med Center	230.19	51.26	22.27	145.65	27.94	5.35	0.00
Metro Center	185.46	63.35	34.16	86.54	19.37	15.33	0.87
Midtown / Winn Park / Capital Ave	422.38	122.52	29.01	262.87	33.93	2.81	0.24
Morrison Creek	671.80	26.31	3.92	390.70	61.17	193.62	0.00
Natomas Corporate Center	160.77	65.04	40.45	64.04	31.45	0.24	0.00

Neighborhood	Acres	Canopy Acres	Canopy %	Impervious Acres	Grass/ Low Veg. Acres	Bare Soil Acres	Water Acres
Natomas Creek	312.92	23.73	7.58	161.74	34.08	93.38	0.00
Natomas Crossing	673.40	44.24	6.57	273.50	114.05	218.97	22.64
Natomas Park	1,029.16	225.73	21.93	588.84	158.98	46.40	9.21
New Brighton	748.71	24.99	3.34	145.62	53.21	524.27	0.62
New Era Park	168.15	65.25	38.80	83.36	18.40	1.15	0.00
Newton Booth	234.68	64.34	27.42	147.66	17.36	5.31	0.00
Noralto	292.52	57.23	19.56	109.24	68.92	57.13	0.00
North City Farms	406.22	82.28	20.26	230.89	56.35	36.70	0.00
North Oak Park	348.98	116.50	33.38	186.65	37.70	8.12	0.00
Northgate	340.18	60.08	17.66	174.74	91.06	13.86	0.43
Northpointe	122.82	19.48	15.86	69.56	25.64	8.15	0.00
Norwood I-80	45.42	3.83	8.43	29.79	5.68	5.13	1.00
Norwood Tech	68.09	9.94	14.60	47.56	8.84	1.04	0.71
Oak Knoll	161.31	15.01	9.30	63.23	31.19	50.98	0.89
Old North Sacramento	436.87	62.30	14.26	289.22	59.94	25.42	0.00
Old Sacramento	139.38	16.32	11.71	76.50	7.91	8.79	29.85
Parker Homes	43.81	12.42	28.36	20.45	6.51	4.42	0.00
Parkway	1,371.93	220.15	16.05	824.23	209.69	111.80	6.06
Pell/Main Industrial Park	227.01	11.40	5.02	178.11	24.92	12.58	0.00
Pocket	2,850.30	628.63	22.05	1,403.10	513.50	60.34	244.73
Point West	390.56	77.02	19.72	225.26	74.68	10.28	3.33
Power Ridge	323.83	9.67	2.99	246.25	17.94	49.96	0.00
Raley Industrial Park	1,070.83	66.11	6.17	316.44	61.88	616.54	9.84
Ramona Village	326.58	18.75	5.74	231.21	30.31	46.30	0.00
Regency Park	362.95	46.68	12.86	198.16	78.90	29.18	10.03
Richardson Village	139.31	17.07	12.26	58.99	48.17	15.06	0.01
Richmond Grove	143.32	50.10	34.96	79.00	12.25	1.97	0.00
River Gardens	173.71	42.61	24.53	77.13	49.51	4.46	0.00
River Park	491.99	176.37	35.85	181.76	96.01	12.91	24.94
Robla	1,481.68	192.32	12.98	360.65	230.78	687.81	10.12
RP - Sports Complex	931.99	84.72	9.09	355.36	104.35	372.24	15.32
SCC	71.85	7.77	10.81	50.97	11.14	1.97	0.00
Sierra Oaks	248.55	77.71	31.26	142.82	26.04	1.99	0.00
South City Farms	132.99	32.03	24.09	67.71	27.06	6.18	0.00

Neighborhood	*Acres*	*Canopy Acres*	*Canopy %*	*Impervious Acres*	*Grass/ Low Veg. Acres*	*Bare Soil Acres*	*Water Acres*
South Hagginwood	435.83	105.85	24.29	196.07	91.77	41.40	0.73
South Land Park	1,810.41	481.22	26.58	971.27	307.15	38.70	12.07
South Natomas	1,903.27	409.12	21.50	862.77	375.83	251.14	4.41
South Oak Park	367.94	80.92	21.99	187.78	76.25	22.98	0.00
Southeast Village	338.31	43.56	12.88	187.93	85.35	20.26	1.21
Southern Pacific / Richards	789.88	79.28	10.04	418.39	81.43	169.85	40.92
Southside Park	214.16	76.23	35.60	108.05	24.47	1.34	4.06
Strawberry Manor	231.68	28.64	12.36	96.35	67.71	35.51	3.48
Sundance Lake	796.26	50.00	6.28	359.57	93.35	241.43	51.91
Swanston Estates	301.21	55.06	18.28	187.52	49.64	8.99	0.00
Tahoe Park	409.35	128.10	31.29	197.60	81.84	1.82	0.00
Tahoe Park East	171.76	20.30	11.82	111.10	29.94	10.42	0.00
Tahoe Park South	201.75	60.90	30.18	94.36	45.62	0.87	0.00
Tallac Village	183.16	43.83	23.93	92.72	39.94	6.67	0.00
Upper Land Park	643.75	179.18	27.83	269.60	97.87	26.91	70.18
Valley Hi / North Laguna	3,533.70	578.83	16.38	1,887.42	623.27	431.73	12.45
Valleyview Acres	145.01	11.12	7.67	13.12	34.21	86.50	0.05
Village 12	121.15	17.83	14.72	77.83	18.20	7.29	0.00
Village 14	121.29	32.92	27.14	22.43	30.88	35.07	0.00
Village 5	313.11	27.60	8.81	111.28	26.37	127.23	20.63
Village 7	162.74	4.75	2.92	71.29	44.83	41.88	0.00
Village Green	51.84	9.80	18.91	28.51	11.30	2.23	0.00
West Del Paso Heights	322.90	60.60	18.77	121.03	91.71	49.10	0.47
West Tahoe Park	136.05	39.11	28.74	76.88	18.91	1.16	0.00
Westlake	446.27	44.93	10.07	214.36	61.53	107.27	18.18
Willowcreek	597.13	109.75	18.38	240.93	75.34	139.33	31.80
Wills Acres	119.66	19.31	16.14	51.89	42.65	5.80	0.00
Woodbine	346.74	47.27	13.63	187.34	62.89	49.24	0.00
Woodlake	230.76	71.67	31.06	94.29	42.73	21.55	0.51
Youngs Heights	44.81	8.23	18.37	22.02	8.21	6.36	0.00
Z'berg Park	314.20	69.38	22.08	137.09	63.13	44.07	0.52
Neighborhood Total	***61,223.08***	***11,801.65***	***19.28%***	***28,478.39***	***10,306.59***	***9,455.28***	***1,181.17***

APPENDIX B: TREE CANOPY IN CITY PARKS

Park	*Acres*	*Canopy Acres*	*% Canopy*	*Impervious Acres*	*Pervious Acres*	*Water Acres*	*Bare Soil Acres*
24th Street Bypass Park	7.41	0.39	5.27	0.52	2.48	0.00	4.02
4-Way Parklets	2.89	0.19	6.56	0.00	0.40	0.00	2.29
7th Street Promenade	1.07	0.26	24.51	0.73	0.07	0.00	0.00
Adventure Park Site	3.51	0.01	0.36	0.00	0.05	0.00	3.44
Airfield Park Site	9.19	0.00	0.00	0.00	0.00	0.00	9.19
Airport Little League Park	10.02	0.52	5.22	1.31	3.90	0.00	4.28
Alan And Helen Post Park	0.69	0.05	7.31	0.28	0.07	0.00	0.28
Albert Winn Park	2.56	1.48	57.67	0.25	0.83	0.00	0.00
Alder Park	2.03	0.44	21.74	0.18	1.21	0.00	0.20
American River Parkway	1,459.16	541.56	37.11	89.25	636.85	94.47	97.04
Anthony Park	1.66	0.41	24.85	0.10	0.61	0.00	0.54
Argonaut Park	8.57	0.98	11.45	3.63	3.86	0.00	0.09
Army Depot Park	19.50	0.24	1.24	2.70	3.61	0.24	12.70
Artivio Guerrero Park	2.51	0.04	1.62	1.09	1.38	0.00	0.00
Autumn Meadow Park	6.07	0.23	3.73	0.85	5.00	0.00	0.00
Bannon Creek Park & Parkway	18.94	16.17	85.41	0.48	2.24	0.00	0.05
Bannon Creek Preserve	5.52	5.36	97.11	0.00	0.16	0.00	0.00
Bartley Cavanaugh Golf Course	0.11	0.08	75.75	0.00	0.03	0.00	0.00
Belle Cooledge Community Center Park	10.20	3.37	33.04	1.30	5.53	0.00	0.00
Belle Cooledge Park	8.68	4.09	47.09	1.37	3.14	0.00	0.08
Bercut Richards Plaza Site	0.21	0.13	60.81	0.07	0.02	0.00	0.00
Bertha Henschel Park	2.55	0.82	32.08	0.31	1.33	0.00	0.09
Bicycle Easement	1.04	0.01	1.17	0.28	0.11	0.00	0.64
Bill Bean Jr Memorial Park at Colonial Manor	4.33	0.96	22.24	0.48	2.83	0.00	0.07
Bill Conlin Youth Sports Complex	21.63	1.94	8.96	2.58	10.48	0.00	6.64
Bing Maloney Golf Course	175.31	49.95	28.49	8.32	102.06	0.00	14.98
Blackbird Park Site	10.18	0.09	0.84	0.37	0.99	0.00	8.74
Blue Oak Park	0.98	0.36	37.06	0.12	0.50	0.00	0.00
Brockway Park	0.93	0.91	98.17	0.00	0.01	0.00	0.00
Brooks Truitt Park	0.89	0.01	1.64	0.11	0.21	0.00	0.56
Burberry Community Park	11.76	1.48	12.60	1.72	8.43	0.00	0.13
C.K. McClatchy Park	15.41	6.61	42.86	2.89	5.10	0.00	0.82

Park	Acres	Canopy Acres	% Canopy	Impervious Acres	Pervious Acres	Water Acres	Bare Soil Acres
California Lilac Park	3.23	0.77	23.71	0.50	1.54	0.00	0.43
Camellia Park	2.01	0.47	23.33	0.35	1.19	0.00	0.00
Campus Commons Golf Course	23.36	4.59	19.67	0.84	17.85	0.01	0.08
Cannery Plaza	0.22	0.01	6.04	0.20	0.00	0.00	0.00
Capitol Park	36.01	20.28	56.31	7.05	8.66	0.00	0.03
Carl Johnston Park	24.28	3.10	12.78	1.62	17.41	0.00	2.14
Central Shops Plaza	3.04	0.00	0.14	2.26	0.15	0.00	0.63
Cesar E. Chavez Plaza	2.54	1.59	62.59	0.52	0.43	0.00	0.00
Charles Robertson Park	9.05	2.11	23.27	2.38	3.95	0.00	0.62
Charlie Jensen Park	2.81	1.02	36.26	0.28	1.33	0.00	0.17
Charter Pointe Park	4.89	2.68	54.73	0.08	2.04	0.01	0.08
Chicory Bend Park	11.01	8.44	76.65	1.29	0.91	0.19	0.19
Chuckwagon Park	1.80	0.72	40.29	0.00	1.07	0.00	0.00
Coloma Park	3.04	1.09	35.73	1.61	0.35	0.00	0.00
Colonial Park	2.15	0.60	27.96	0.22	1.08	0.00	0.24
Commerce Station Park Site	4.02	0.00	0.00	0.00	0.00	0.00	4.02
Cool Wind Way Park	1.15	0.48	41.22	0.04	0.64	0.00	0.00
Cosumnes River College Park	8.09	0.02	0.31	1.24	6.82	0.00	0.00
Cottonwood Park	4.99	1.04	20.89	0.26	3.50	0.00	0.19
Crocker Park	2.58	1.93	74.82	0.00	0.65	0.00	0.00
Danny Nunn Park	12.34	2.25	18.26	1.81	8.28	0.00	0.00
Del Paso Regional Park	596.43	195.15	32.72	36.23	270.22	1.63	93.21
Depot Park	1.49	0.06	3.94	0.22	0.71	0.00	0.49
Discovery Park	55.64	33.04	59.38	7.52	11.93	3.15	0.00
Dixieanne Tot Lot	0.15	0.11	69.71	0.02	0.03	0.00	0.00
Dogwood Park	3.02	0.00	0.00	0.64	2.32	0.00	0.07
Earl Warren Park	5.02	0.87	17.34	0.60	3.55	0.00	0.00
East Lawn Children's Park	0.33	0.22	65.56	0.00	0.12	0.00	0.00
East Portal Park	7.35	3.19	43.36	0.17	3.76	0.00	0.24
Edward Kemble Park	1.74	0.14	7.86	0.27	1.32	0.00	0.01
Edwin Z'berg Park	2.48	0.60	24.37	0.31	1.56	0.00	0.00
Egret Park	4.93	0.50	10.08	0.54	3.89	0.00	0.00
Egret Park Open Space	3.59	0.40	11.25	0.38	2.75	0.00	0.06
Eileen Dutra Park	0.41	0.31	76.66	0.01	0.09	0.00	0.00
Elderberry Park	2.19	0.24	10.95	0.40	1.56	0.00	0.00
Emil Bahnfleth Park	6.33	1.67	26.44	0.04	4.62	0.00	0.00
Emiliano Zapata Park	0.95	0.54	56.94	0.11	0.29	0.00	0.01
Fisherman's Lake Parkway & Open Space	33.39	2.16	6.47	4.76	3.48	0.04	22.95

Park	Acres	Canopy Acres	% Canopy	Impervious Acres	Pervious Acres	Water Acres	Bare Soil Acres
Five Star Park	0.35	0.03	8.57	0.12	0.21	0.00	0.00
Fourth Avenue Park	1.07	0.33	30.35	0.01	0.03	0.00	0.71
Frank Seymour Park	43.60	26.82	61.51	2.27	14.43	0.00	0.09
Franklin Boyce Community Park	9.80	0.06	0.65	0.71	3.91	0.21	4.91
Fredrick Miller Regional Park	38.68	19.54	50.52	12.03	5.85	0.48	0.79
Freeport Park	3.96	0.97	24.37	0.03	1.98	0.00	0.99
Fremont Community Garden	0.46	0.04	9.16	0.23	0.18	0.00	0.00
Garcia Bend Park	19.71	6.25	31.69	3.74	8.04	0.95	0.73
Garden Highway Bikeway	24.41	18.82	77.08	1.79	1.42	2.08	0.30
Gardenland Park	6.03	1.64	27.14	0.66	3.59	0.00	0.15
Gateway Park	5.02	0.75	14.90	0.00	3.97	0.00	0.30
George Sim Park	13.92	1.71	12.26	4.45	7.03	0.11	0.62
Glenbrook Park	17.64	3.94	22.34	1.10	11.47	0.00	1.13
Glenbrook River Access	4.03	0.52	12.86	0.46	0.27	0.00	2.78
Glenn Hall Park	8.13	2.55	31.43	1.62	3.91	0.00	0.04
Golden Poppy Park	2.03	0.28	13.86	0.72	1.03	0.00	0.00
Governor's Mansion	0.79	0.36	46.07	0.29	0.13	0.00	0.00
Granite Regional Park	83.70	19.95	23.83	7.79	26.14	2.07	27.75
Greenfair Park	0.61	0.48	78.00	0.00	0.13	0.00	0.00
Hagginwood Park	15.43	4.95	32.05	2.81	7.50	0.00	0.17
Hampton Park	6.16	0.48	7.81	0.88	3.06	0.00	1.73
Hansen Ranch Regional Park Site	265.95	13.24	4.98	1.94	32.34	7.21	211.23
Harrier Park	0.74	0.19	25.72	0.22	0.28	0.00	0.04
Heron Park	3.95	1.12	28.24	0.12	2.72	0.00	0.00
Hite Park	4.99	0.97	19.38	0.19	3.73	0.00	0.11
Hummingbird Park	4.32	0.37	8.47	0.50	2.21	0.00	1.25
J. Neely Johnson Park	0.97	0.74	76.45	0.09	0.14	0.00	0.00
Jacinto Creek Park	11.74	1.73	14.70	1.42	7.82	0.00	0.77
Jacinto Creek Parkway	14.62	1.74	11.91	1.97	3.24	0.04	7.62
Jack Rea Park	0.34	0.09	26.52	0.06	0.19	0.00	0.00
James Mangan Park	8.19	2.19	26.74	1.03	4.73	0.00	0.24
James W. Marshall Park	2.51	1.47	58.55	0.55	0.49	0.00	0.00
John Cabrillo Park	5.63	0.90	15.92	1.03	3.63	0.00	0.07
John Fremont Park	2.57	1.23	47.68	0.21	1.13	0.00	0.00
John Mackey Memorial Park at Kenwood Oaks	11.56	1.03	8.92	0.04	7.33	0.00	3.16
John Muir Children's Park	2.50	1.48	59.34	0.07	0.94	0.00	0.01
John Reith Park	1.27	0.29	22.78	0.06	0.92	0.00	0.00

Park	Acres	Canopy Acres	% Canopy	Impervious Acres	Pervious Acres	Water Acres	Bare Soil Acres
Joseph Reichmuth Park	43.49	27.26	62.69	1.97	13.53	0.00	0.73
Kaiser Promenade	0.77	0.04	4.88	0.01	0.00	0.00	0.73
Kokomo Park	7.01	0.48	6.85	0.81	5.72	0.00	0.00
Lawrence Park	5.08	1.76	34.57	0.21	2.42	0.00	0.69
Leland Stanford Mansion State Historic Park	0.60	0.20	33.17	0.27	0.13	0.00	0.00
Leland Stanford Park	2.76	0.46	16.80	0.05	2.25	0.00	0.00
Lewis Park	3.31	1.69	51.06	0.32	1.16	0.00	0.14
Linden Park	4.91	1.47	29.92	0.22	3.11	0.00	0.12
Mae Fong Park	8.26	0.26	3.20	1.17	1.17	0.00	5.65
Magnolia Park	6.42	0.40	6.28	1.13	4.15	0.00	0.74
Magoichi Oki Park	15.04	3.64	24.21	0.58	5.77	0.00	5.05
Manuel Barandas Park	13.02	2.67	20.52	0.28	3.15	0.00	6.91
Manuel E. Silva Park	3.15	0.11	3.62	0.58	1.79	0.00	0.67
Maple Park	1.07	0.19	17.51	0.47	0.26	0.00	0.15
Margarette "Mama" Marks Park	4.80	0.94	19.70	0.51	3.24	0.00	0.10
Mark Hopkins Park	6.36	0.59	9.26	0.65	4.78	0.00	0.35
Market Plaza	0.65	0.00	0.08	0.57	0.00	0.00	0.08
Martin Luther King Jr Community Garden	0.30	0.08	27.79	0.06	0.14	0.00	0.01
Martin Luther King, Jr. Park	1.49	0.32	21.25	0.33	0.75	0.00	0.08
Matsui Waterfront Park (Robert T.)	6.79	0.54	7.95	2.04	4.05	0.05	0.10
Max Baer Park	4.10	0.79	19.21	0.52	2.80	0.00	0.00
Meadows Community Park Site	11.15	0.01	0.05	0.02	0.00	0.00	11.12
Meadowview Park	8.26	1.49	17.99	0.31	5.73	0.00	0.74
Mesa Grande Park	6.30	1.44	22.79	0.59	4.14	0.00	0.14
Michael Himovitz Park	0.09	0.00	0.00	0.02	0.00	0.00	0.07
Mls Promenade	0.68	0.01	1.81	0.00	0.40	0.00	0.27
Museum Plaza	5.65	0.01	0.24	4.54	0.18	0.00	0.92
Natomas Oaks Park	13.02	10.15	77.97	0.31	2.56	0.00	0.00
Ninos Park	4.20	1.10	26.19	0.22	2.88	0.00	0.00
Ninos Parkway	46.73	3.72	7.96	3.22	14.50	0.24	25.05
North Laguna Creek Park	21.45	5.43	25.29	2.96	12.50	0.44	0.13
North Laguna Creek Wildlife Area	120.82	19.52	16.16	3.67	28.44	5.76	63.44
North Natomas Community Park	35.33	3.41	9.65	3.67	23.66	0.00	4.59
North Natomas Park Nature Area	7.09	1.82	25.62	0.73	0.42	1.10	3.02
North Natomas Regional Park	212.82	6.45	3.03	12.33	32.90	12.72	148.41

Park	Acres	Canopy Acres	% Canopy	Impervious Acres	Pervious Acres	Water Acres	Bare Soil Acres
North Point Way River Access	5.10	1.70	33.30	1.31	0.91	0.05	1.13
North Pointe Park	1.73	0.63	36.27	0.07	1.03	0.00	0.00
Northborough Park	4.01	0.84	20.98	0.58	2.48	0.00	0.12
Northgate Park	15.88	4.75	29.90	1.23	9.64	0.00	0.26
Nuevo Park	6.80	1.00	14.65	0.36	5.08	0.00	0.36
Oak Park	8.45	2.40	28.36	3.70	2.21	0.00	0.14
Oak Park Open Space	1.95	0.10	4.95	0.59	1.08	0.00	0.18
Oakbrook Park	4.75	0.24	4.98	0.04	0.20	0.00	4.27
Old Sacramento State Historic Park	6.24	0.53	8.52	4.64	0.38	0.05	0.65
O'Neil Field	5.44	0.83	15.19	0.50	3.98	0.00	0.14
Orchard Park	11.91	2.09	17.58	1.01	8.67	0.00	0.13
Pannell/Meadowview Community Center Park	11.92	1.85	15.55	4.46	5.05	0.00	0.56
Park Es 3	0.68	0.00	0.00	0.53	0.07	0.00	0.08
Park Es 4	0.13	0.00	0.00	0.00	0.00	0.00	0.13
Park Plaza	1.62	0.82	50.60	0.15	0.65	0.00	0.00
Park Site 15a	22.50	0.00	0.02	0.00	0.00	0.00	22.50
Park Site 15b	10.11	0.00	0.00	0.00	0.00	0.00	10.11
Park Site 15c	2.53	0.00	0.00	0.00	0.00	0.00	2.53
Park Site 15d	3.00	0.01	0.34	0.00	0.00	0.00	2.99
Park Site 2d (Basin 8b)	5.07	0.04	0.84	0.32	0.06	0.00	4.65
Park Site Ns1	2.50	0.00	0.00	0.00	0.00	0.00	2.50
Park Site Ns2	5.16	0.00	0.00	0.00	0.00	0.00	5.16
Park Site P1	2.93	0.00	0.00	0.00	0.03	0.00	2.89
Park Site P2	5.96	0.85	14.23	0.15	2.60	0.00	2.37
Park Site P3	5.10	0.00	0.00	0.00	0.00	0.00	5.10
Park Site P4	2.07	0.00	0.00	0.00	0.00	0.00	2.07
Park Site P5	1.89	0.00	0.00	0.02	0.00	0.00	1.86
Park Site P6	4.80	0.00	0.00	0.00	0.00	0.00	4.80
Park Site P7	4.25	0.01	0.22	0.55	0.05	0.00	3.64
Park Site P8	5.32	0.08	1.44	0.00	0.00	0.00	5.24
Park Site P9	26.59	0.00	0.00	0.12	0.79	0.00	25.68
Park Site Sn2	3.93	0.38	9.72	0.15	1.28	0.00	2.12
Park Site Sn4	0.23	0.11	47.25	0.00	0.04	0.00	0.08
Parkway Oaks Park	8.98	5.29	58.95	0.17	3.52	0.00	0.00
Peach Paseo	0.50	0.00	0.00	0.00	0.00	0.00	0.50
Pear Paseo	0.42	0.00	0.00	0.00	0.00	0.00	0.42
Peregrine Park	8.23	1.13	13.68	1.48	4.64	0.00	0.99
Persimmon Paseo Site	0.19	0.00	0.00	0.00	0.00	0.00	0.19
Phoenix Green	1.78	0.44	24.96	0.16	1.09	0.00	0.08
Pioneer Landing Park	1.49	0.03	1.97	1.13	0.20	0.00	0.13

Park	Acres	Canopy Acres	% Canopy	Impervious Acres	Pervious Acres	Water Acres	Bare Soil Acres
Plaza Cervantes	0.64	0.28	44.01	0.00	0.36	0.00	0.00
Plover School Park	0.52	0.05	9.22	0.27	0.20	0.00	0.00
Pocket Canal Parkway	52.06	10.12	19.45	14.21	6.70	20.52	0.51
Pollack Ranch Park	7.17	2.14	29.84	0.34	4.68	0.00	0.01
Portuguese Community Park	3.19	1.51	47.21	0.12	1.57	0.00	0.00
Quail Park	5.21	0.56	10.70	0.57	4.08	0.00	0.00
R. Burnett Miller Park	1.01	0.00	0.00	0.15	0.00	0.00	0.87
Red Tail Hawk Park	5.00	0.56	11.28	0.57	3.77	0.00	0.11
Redbud Park	1.38	0.28	20.70	0.18	0.85	0.00	0.06
Redwood Park	3.61	0.54	14.92	0.75	2.03	0.00	0.29
Regency Community Park	42.06	3.39	8.07	4.84	32.61	0.00	1.22
Reginald Renfree Park	6.69	2.71	40.55	0.08	3.75	0.00	0.14
Richard Marriott Park	7.58	5.44	71.74	0.12	2.02	0.00	0.00
Richardson Village Park	8.88	0.39	4.41	0.25	6.79	0.00	1.45
Richfield Park	3.15	0.19	5.95	0.37	1.79	0.00	0.81
River Birch Park Site	20.54	1.31	6.36	1.73	4.25	8.00	5.25
River Otter Park	2.10	0.31	14.57	0.19	1.26	0.00	0.35
River Park	1.58	0.49	31.21	0.16	0.82	0.00	0.10
River View Park	5.19	1.10	21.25	0.29	3.74	0.00	0.06
Riverfront Park	1.07	0.03	2.43	0.51	0.53	0.00	0.00
Robla Community Park	17.82	1.31	7.34	1.81	12.15	0.00	2.55
Rocket Park Site	5.09	0.00	0.00	0.00	0.00	0.00	5.09
Roy Nielsen Park	8.09	2.43	30.09	0.56	4.82	0.00	0.28
Sacramento Historic Old City Cemetery	31.29	10.69	34.15	2.63	17.97	0.00	0.00
Sacramento Northern Parkway	60.04	17.47	29.10	10.43	17.72	0.04	14.37
Sacramento River Parkway (Central Area)	11.52	3.75	32.54	2.60	2.94	1.22	1.01
Sacramento River Parkway (Future)	100.03	34.38	34.37	16.12	17.31	6.16	26.06
Sacramento River Parkway (Land Park Area)	39.41	13.34	33.84	9.08	1.70	3.14	12.15
Sacramento River Parkway (Pocket Area)	7.70	2.51	32.59	1.42	1.10	1.12	1.55
Saint Rose of Lima Park	0.51	0.24	46.16	0.25	0.03	0.00	0.00
Sally Hudson Park	0.61	0.50	81.70	0.03	0.02	0.00	0.06
San Juan Reservoir Park	32.86	1.93	5.87	2.70	3.27	2.26	22.70
Sand Cove Park	9.39	6.90	73.45	0.54	1.80	0.00	0.16

Park	Acres	Canopy Acres	% Canopy	Impervious Acres	Pervious Acres	Water Acres	Bare Soil Acres
Shasta Community Park	18.68	2.28	12.23	5.85	9.99	0.00	0.56
Shore Park	2.37	1.34	56.44	0.05	0.98	0.00	0.00
Shorebird Park	2.35	0.62	26.37	0.35	1.20	0.00	0.18
Sierra 2 Park	2.67	1.31	48.84	0.05	1.31	0.00	0.00
Skylark Park	2.53	0.00	0.00	0.06	0.06	0.00	2.41
Sojourner Truth Park	6.04	0.60	9.89	0.17	5.27	0.00	0.00
South Natomas Community Park	24.19	5.44	22.49	4.24	13.24	0.00	1.27
Southside Community Garden	0.79	0.29	36.83	0.04	0.46	0.00	0.00
Southside Park	19.53	9.36	47.92	1.85	3.92	4.06	0.34
Sparrow Community Garden	0.13	0.00	0.00	0.13	0.00	0.00	0.00
Sparrow Park	1.75	0.27	15.52	0.13	1.04	0.00	0.31
Steve Jones Park	6.73	0.26	3.88	0.63	5.64	0.00	0.20
Strauch Park	3.21	0.91	28.34	0.14	2.16	0.00	0.00
Strawberry Manor Park	1.29	0.14	10.92	0.46	0.69	0.00	0.00
Sundance Park	2.01	0.20	10.14	0.46	1.34	0.00	0.00
Sutter's Fort & State Indian Museum	6.15	2.04	33.27	1.64	2.22	0.24	0.00
Sutter's Landing Regional Park	161.43	2.96	1.83	35.30	15.95	0.00	107.22
Swainson's Hawk Park	5.71	0.28	4.90	1.30	4.05	0.02	0.06
Sycamore Park	5.29	0.51	9.63	1.02	3.54	0.00	0.23
Tahoe Park	17.92	6.12	34.18	1.29	9.81	0.00	0.69
Tahoe Tallac Park	6.78	0.91	13.45	0.56	4.66	0.00	0.65
Tanzanite Community Park (Basin 6a)	31.90	3.50	10.97	3.09	13.17	7.32	4.82
Tbd	27.05	5.66	20.93	11.86	6.19	0.17	3.16
Temple Avenue Park	1.03	0.42	41.16	0.11	0.45	0.00	0.05
Theodore Roosevelt Park	2.55	0.51	19.89	0.21	1.66	0.00	0.17
Thomas Jefferson Park	5.67	2.16	38.13	0.41	2.95	0.00	0.15
Tiscornia Park	14.36	1.95	13.56	1.18	2.18	8.52	0.53
Tony Court Park	0.89	0.41	46.65	0.00	0.47	0.00	0.00
Township 9 Park Site	15.27	3.93	25.71	2.44	1.72	4.52	2.67
Triangle Park	1.20	0.02	1.69	0.01	1.04	0.00	0.14
Two Rivers Park	3.03	0.55	18.08	0.17	2.28	0.00	0.03
Ulysses S. Grant Park	2.34	0.53	22.54	0.18	1.38	0.00	0.25
Under I-5 Experience	2.70	0.00	0.00	1.91	0.39	0.00	0.40
University Park	3.72	1.33	35.72	0.11	2.28	0.00	0.00
Valley Hi Community Park	16.19	4.45	27.47	1.56	9.70	0.00	0.48
Valley Oak Park	8.69	0.17	2.00	1.42	6.67	0.00	0.43

Park	*Acres*	*Canopy Acres*	*% Canopy*	*Impervious Acres*	*Pervious Acres*	*Water Acres*	*Bare Soil Acres*
Victory Park	0.82	0.00	0.00	0.45	0.00	0.00	0.36
Victory Promenade	0.26	0.00	0.00	0.01	0.00	0.00	0.24
Victory Promenade Site	0.49	0.00	0.00	0.01	0.00	0.00	0.47
Vista Connector To 4-Way	0.42	0.01	3.52	0.00	0.30	0.00	0.11
Vista Park	9.27	0.22	2.33	0.01	0.79	0.00	8.26
Walter S. Ueda Parkway	454.76	74.59	16.40	44.81	147.98	20.86	166.52
Washington Park	1.58	0.52	32.94	0.12	0.94	0.00	0.00
Westhampton Park	4.31	0.49	11.33	0.70	3.12	0.00	0.01
Westlake Community Park	10.35	1.25	12.06	1.60	5.68	0.00	1.82
Wild Rose Park	8.63	0.51	5.92	1.67	5.90	0.00	0.56
William Chorley Park	31.18	17.54	56.26	0.87	8.83	0.00	3.94
William Curtis Park	18.80	12.11	64.43	0.68	5.97	0.00	0.04
William Land Golf Course	91.06	43.77	48.07	1.55	42.80	2.46	0.49
William Land Regional Park	115.27	77.32	67.08	6.25	30.10	0.15	1.45
William McKinley Park	31.09	15.20	48.89	3.75	11.35	0.78	0.00
Willow Park	2.50	0.49	19.79	0.48	1.53	0.00	0.00
Winner's Circle Park	1.87	0.28	14.81	0.38	1.18	0.00	0.03
Witter Ranch Park	9.01	1.30	14.45	0.68	6.79	0.00	0.25
Witter Ranch State Historic Park	24.09	0.24	0.99	0.48	0.01	0.00	23.37
Wood Park	5.56	1.85	33.35	0.53	3.10	0.00	0.08
Woodbine Park	6.48	2.60	40.08	0.37	3.37	0.00	0.15
Woodlake Park	6.16	2.57	41.79	0.72	2.87	0.00	0.00
Zacharias Park	6.12	2.58	42.15	0.29	3.06	0.00	0.18
Grand Total	***5,993.23***	***1,639.07***	***27.35%***	***536.62***	***2,202.35***	***224.87***	***1,390.33***

APPENDIX C: PARTNER ADVISORY COMMITTEE SUMMARY

To support preparation of the Sacramento Urban Forest Plan, City staff convened a Partner Advisory Committee (PAC) to solicit firsthand knowledge and guidance from key groups and individuals directly involved in the management, community engagement, and project implementation work related to trees in Sacramento. The PAC met four times during the SUFP development, twice during the initial research and analysis phase in 2018 and twice during the development of the public review draft in 2023. Participants from the following 30 groups were involved in providing feedback via the PAC:

- 350 Sacramento
- Asian Resources Inc.
- Avondale/Glen Elder Neighborhood Association
- California Department of Forestry and Fire Protection
- California Strategic Growth Council
- City of Sacramento Youth Commission
- Council Member District 3 Jeff Harris
- Elmhurst Neighborhood Association
- Explore Midtown
- Friends of Capitol Mansions
- Hagginwood Neighborhood Association
- Historic Monterey Trail District
- Hodgson and Company
- Hollywood Park Communi-Tree Committee
- LDK Ventures, LLC
- Meadowview Urban Tree Project
- Midtown Association
- North Natomas community representative
- North State BIA
- Preservation Sacramento
- Public Health Institute
- River Park Neighborhood Association
- Sacramento Area Bicycle Advocates
- Sacramento Area Council of Government
- Sacramento City Unified School District
- Sacramento Metropolitan Air Quality Management District
- Sacramento Municipal Utility District
- Sacramento Tree Foundation
- South Natomas community representative
- Trees4Sacramento

Meetings #1 and #4 functioned as workshops, with substantial group feedback; whereas meetings #2 and #3 were primarily focused on information sharing with the PAC. PowerPoint presentations for each meeting can be found on the project website (www.cityofsacramento.gov/sactreeplan) and summaries of meetings #1 and #4 are provided below.

Urban Forest Master Plan

Stakeholder Meeting #1

5.9.2018

SUMMARY

City of SACRAMENTO

DAVEY
Proven Solutions for a Growing World

AIM CONSULTING

Meeting Summary

On Wednesday, May 9, 2018, the City of Sacramento held the first of three Stakeholder Representative Group meetings (SRG) for the Urban Forest Master Plan. The meeting took place from 4:00 – 6:00 p.m. at Sacramento City Hall, located at 915 I Street, in Sacramento.

The following project team members attended the meeting:

City of Sacramento	Davey Resource Group	AIM Consulting
Lucinda Willcox	Tina McKeand	Gladys Cornell
Kevin Hocker		Nicole Porter
Jennifer Venema		Katie Durham
Stacia Cosgrove		
Kevin McClain		
Eugene Loew		
Jesus Munoz		
Kevin Wasson		

19 stakeholder representatives attended the meeting, representing the following organizations:

- 350 Sacramento
- Asian Resource Center
- California Strategic Growth Council
  Public Health Institute
- Elmhurst Neighborhood Association
- Friends of Capitol Mansions
- LDK Ventures, LLC
- Midtown Association
- North State BIA
- Preservation Sacramento
- River Park Neighborhood Association
- Sacramento Metropolitan Air Quality Management District (SMAQMD)
- Sacramento Municipal Utilities District (SMUD)
- Sacramento Tree Foundation
- The Historic Monterey Trail District
- Trees4Sacramento
- U.S. Forest Service
- WALK Sacramento

The meeting objectives included:

- Introduce the project background and goals
- Outline the project process and timeline
- Review updates from the City's 2016 Tree Ordinance
- Present key findings from the Urban Tree Canopy and iTree reports
- Discuss the vision for Sacramento's urban tree canopy and potential strategies to achieve the vision
- Identify next steps for the project

Stakeholder representatives discussing the Urban Forest Master Plan.

Project Overview

The City of Sacramento has a long-standing reputation as the City of Trees. Emphasis on the importance of trees in Sacramento dates to its founding in 1849. In the late 1970s and the 1980s, Sacramento's urban forestry program was recognized for its beautiful tree canopy and partnerships; today, our urban forest is rated as one of the top ten in the country.

In August 2016, the City adopted comprehensive updates to the City Code to update and clarify its tree regulations. During the process of revising the city's tree-related ordinances, additional policy issues were raised regarding the City's urban forest and its future. With a changing environment and new technological tools, an updated Urban Forest Master Plan is required to preserve the health and stewardship of Sacramento's urban forest.

Lucinda Wilcox, City of Sacramento, presenting the project background and goals.

The City's updated Urban Forest Master Plan will address the protection, maintenance, sustainability, and enhancement of Sacramento's tree canopy.

Meeting Format & Presentation

The first SRG meeting included a presentation and large group discussion. The project team presented on the project's goals and background, the process and timeline, updates from the 2016 Tree Ordinance, and key findings from the Urban Tree Canopy Assessment and public tree Resource Analysis. Throughout the presentation, stakeholder representatives asked questions. Following the presentation, stakeholder representatives participated in a group discussion and were encouraged to provide additional input through feedback forms. Below is an overview of the presentation.

Councilmember Jeff Harris discussing the importance of the Urban Forest Master Plan.

Project Background, Goals, & Process

Lucinda Willcox, Project Manager from the City of Sacramento, introduced the Urban Forest Master Plan and its goals. Building upon community interest and priorities identified in the 2016 Tree Ordinance update, the Urban Forest Master Plan development process will assess the City's existing tree canopy through resource and historic analyses.

The process includes collaboration with internal partners, stakeholder groups, and the community-at-large to help inform the goals the City sets for Sacramento's tree canopy. The Urban Forest Master Plan will include an action plan for how to achieve the goals, as well as a plan to monitor the tree canopy regularly in the future and evaluate if and how the goals are being achieved.

- **Question**: Will the project timeline be available online?
  - **Project team response**: Yes, the timeline is available on the project webpage.

Updates from the 2016 Tree Ordinance

Kevin Hocker, Urban Forest Manager at the City of Sacramento, provided a brief overview of some of the updates to City code that resulted from the 2016 Tree Ordinance. The ordinance aimed to consolidate three previous ordinances into one, clarify confusing language, and protect more trees when possible. Effective in September 2016, the ordinance accomplishes the following:

- Protects all City trees

Gladys Cornell, AIM Consulting, welcoming stakeholder representatives to the meeting.

- Identifies "private protected trees" as private trees with diameters larger than 30-inches; native oak trees are classified in this category if their diameters are larger than 12-inches
- Created a tree removal public notice process and procedure through the City website
- Created a Tree Mitigation Fund dedicated towards replacing trees and creating more space to plant trees

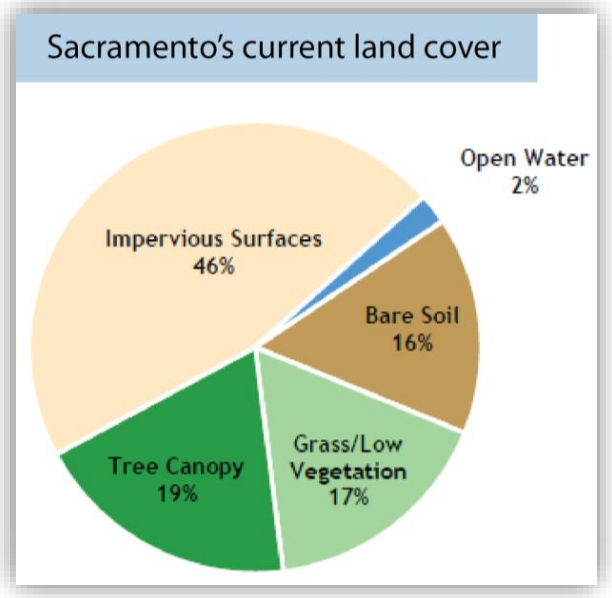
Additional issues not addressed by the ordinance were specifically identified as issues to be discussed and addressed during the Urban Forest Master Plan development process. These additional issues include:

- Trees located on public land, excluding the public right-of-way
- Concerns about parking lot shade
- Formation of an urban forestry citizen advisory group
- Tree planting
- Monitoring, evaluating, and reporting, by community plan area and citywide
- Tree Preservation Funds
- Tree Protection Standards
- Incentive programs
- Canopy coverage goals

- Question: Does the 2016 Tree Ordinance prohibit tree-topping?
  - Project team response: Yes; tree-topping is not a routine or acceptable practice. There will be rare times where tree-topping is preferable to removing a tree, and in those circumstances, you would need special permission from the City.
- Question: Does this ordinance only apply to City trees and private protected trees?
  - Project team response: Yes. City code only regulates City trees and private protected trees. There are some trees that are not regulated by the ordinance, and City code does not apply to them.
- Comment: Species diversity is an important topic that should be discussed in the Urban Forest Master Plan.

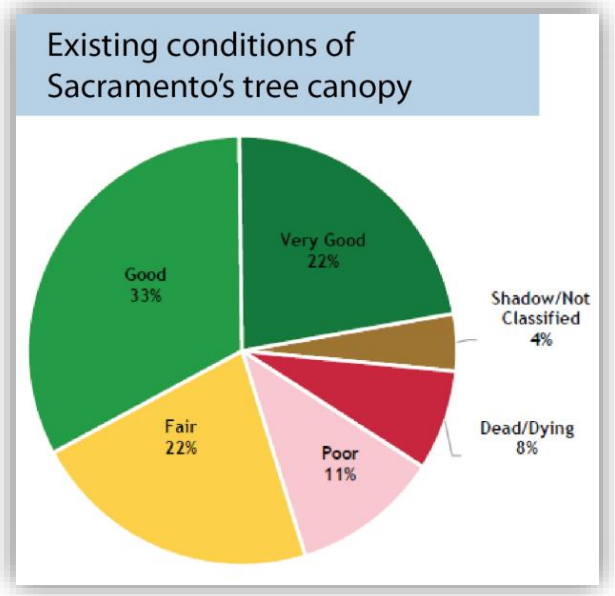
Resource Analysis and Key Findings

Tina McKeand, Project Manager with Davey Resource Group, presented key findings about the urban forest identified by the Urban Tree Canopy Assessment and the public tree Resource Analysis. This information provides the foundation for the Urban Forest Master Plan. The Urban Tree Canopy assessment considers all public and private trees in the City from a bird-eye view, and the public tree Resource Analysis evaluates all public trees in the City's inventory and the benefits they provide.



Urban Tree Canopy Assessment

The Urban Tree Canopy Assessment was conducted as a top down assessment using high-resolution aerial imagery and infrared photography to determine the coverage and health of the City's urban tree canopy.



Sacramento has 19 square miles (12,198 acres) of tree canopy. Today, 77% of the trees in Sacramento are in fair or better condition. Land cover in the City can be identified as one of five classifications:

- Tree canopy
- Impervious surface (e.g. buildings, streets, and parking lots)
- Low lying vegetation (e.g. shrubs, grasses)
- Open water
- Bare soils

On average, the City has a 19% tree canopy cover. Based upon the area's current land cover, Sacramento has the potential to support a tree canopy of 45%. However, it may not be possible to reach this full potential due to areas that are undeveloped where other uses, such as buildings and housing developments, may be built.

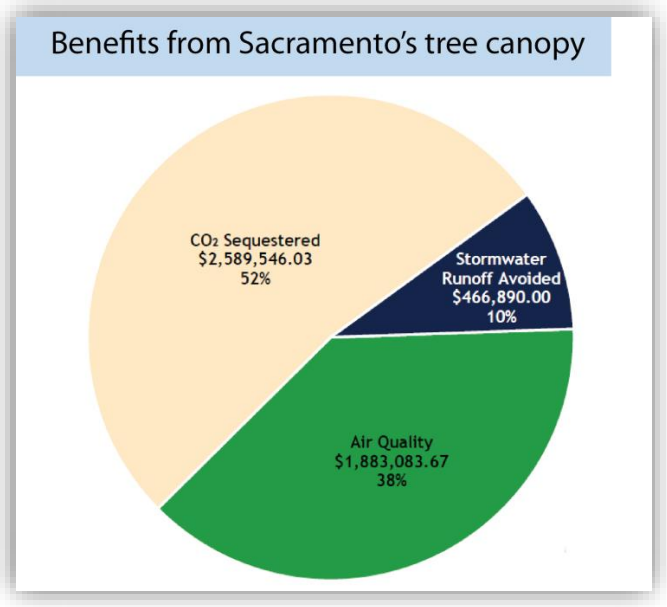
- Question: How do you assess the health of the tree canopy?
    - Project team response: You can assess canopy health through infrared imagery. The reflection of light off a tree's leaves can help us detect if a tree is "stressed" or not. However, it is important to note that stress does not automatically mean a tree is dying; it could just be going through a period of stress (e.g. aphids). The only way to fully determine what is causing stress on a tree is to physically inspect it.

Parking Lots

Parking lots developed after 1983 are required to have a 50% tree canopy cover within 15-years of construction. From a sample of 648 parking lots throughout the City, the average tree canopy cover is 15%. While the project team cannot identify which parking lots, if any, were built after 1983, it is important to note that only 6% of the parking lots assessed are currently meeting the shade standards; 94% are not.

Tree Canopy Benefits

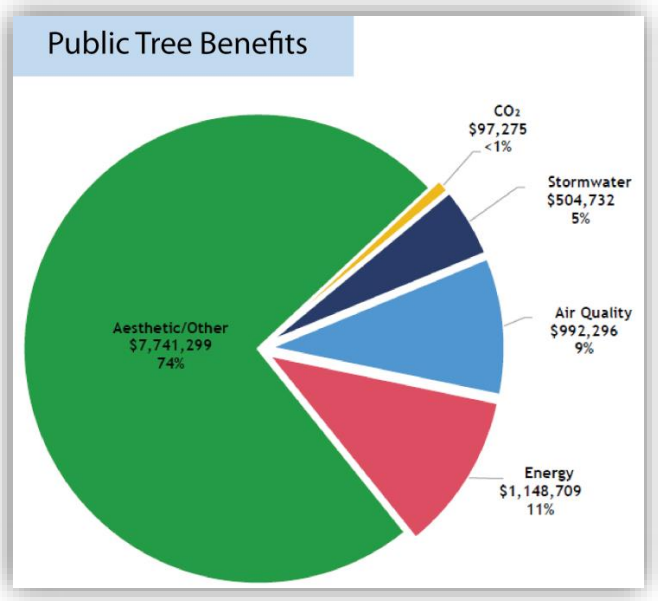
Sacramento's tree canopy is currently storing 1.5 million tons of carbon dioxide (CO_2). Annually, this resource provides an added $4.5 million in annual benefits, including: removing 392 tons of air pollutants, reducing storm water runoff by 58 million gallons, and sequestering an additional 73,541 tons of CO_2.



- **Question:** Have you done any quality assessment for the aerial measuring you've done?
    - **Project team response:** Yes. DRG uses iTree Canopy (itreetools.org) to cross check the results of the GIS land cover analysis. iTree Canopy uses randomly generated points which are manually evaluated for land cover type. Points are sampled until an acceptable standard error is achieved, (typically <+/- 2%). The results confirm the overall percentage of land cover type found by the GIS analysis.
- **Question**: What are the dates from this data?
    - The Resource Analysis utilized current data provided by the City. The Urban Tree Canopy assessment imagery was from 2016.
- **Question**: If a vacant parcel of land has a specific zoning already identified, does the Urban Tree Canopy assessment consider this information?
    - **Project team response**: No, it does not take that into consideration.
- **Question**: Are there energy savings from the benefits of the tree canopy?
    - **Project team response**: The Resource Analysis concluded that public trees provide an estimated $1.2 million in benefits annually.
- **Question**: How do these assessments measure and take into consideration air pollutants that are emitted from certain tree species? Are their effects included in this data?
    - **Project team response**: That is an important factor to consider. We will check the methodology of the assessment and get back to you. This assessment is based on the overall tree canopy and there is no way to identify species specifically as it relates to benefits.
- **Comment**: I think it is important to be candid; everyone loves trees, but there are important characteristics and impacts of certain tree species that affect tree selection and public health.
- **Comment:** There are also costs associated with the urban tree canopy, due to property damage and injuries. We and the community will need to consider this as well.

<u>Public Trees</u>

Public trees in Sacramento are comprised of 87,324 trees with 194 unique species. Some species of trees represent a greater part of the inventory; for example, the Londonplane tree represents 15% of the City's entire urban tree canopy. Best urban forest practices dictate that no single tree species should represent more than 10% of the entire tree population and no tree genus should represent more than 20% of the population.



- Comment: While London Plane trees represent a large portion of the tree canopy in older neighborhoods such as East Sacramento, I am not seeing a lot of them being planted now. We should consider the different ages of tree species.
    - Project team response: The Urban Tree Canopy Assessment presents more detail about the age of Sacramento's trees.
- Question: Is the total number of trees in Sacramento (87,324) based on street trees as well as park trees?
    - Project team response: Yes, both are included in the inventory. However, street and park trees that are in bicycle paths are not included. There are potentially thousands of trees that have not been added to the inventory.
- Question: Are the 87,324 public trees the only street trees the City recognizes to maintain?
    - Project team response: This inventory lists trees on City-managed public right-of-way; primarily street trees and tree in public parks. It does not include public trees in areas managed by other agencies (e.g., County in Sacramento River Parkway, State Parks, public schools). The inventory is not completely up to date; many newly planted trees are not yet entered so the actual inventory of City-maintained trees is closer to 100,000. While trees on private properties may also provide tree shading, unless it is in a City-owned easement, then these trees are not reflected in the public inventory.

Public Tree Benefits & Investment

The values of public and private trees are determined by the U.S. Forest Service. The annual benefits of Sacramento's tree canopy total about $10.5 million. The average tree provides $120.06 in benefits; smaller trees provide fewer benefits and larger trees provide more.

A rough estimate of the City of Sacramento's public costs for trees is approximately $8.2 million annually; about $6 million for urban forestry staff and contracts and the rest for green waste disposal. The net benefits, after the $8.2 million investment, are $2.3 million. This means that for each $1 spent, Sacramento received $1.28 in benefits from the tree canopy.

With $6.0 million in urban forestry operations, the City conducts the following operations: tree maintenance, tree removal, development review, tree species protection, permitting, emergency response, and outreach and engagement.

Discussion Summary

Below is a summary of the large group discussion that followed the meeting presentation.

Sacramento's current tree canopy is at 19%. The Greenprint sets an average 35% shade canopy goal for our region based on the best available science. What percentage should the City aim for?

- Comment: I live in one of the denser-canopied neighborhoods, but we don't think it is enough. It is clear to me that we live in an area of "surplus" but there are other areas that are still under-canopied. In my opinion, the only way to increase those areas is to have a higher City-wide goal. We need to increase the entire City's canopy to increase livability. If you set it the goal too low, then it will be too easy for some areas to achieve. We should set it high.
    - Project team response: Thank you for your input. Keep in mind that this is a 20-year plan. While the City is not opposed to setting the goal high, it is important that we as a group do not set the goal too high and we see no progress within the next 20 years.
- Comment: In thinking about areas that are under-canopied, we need to look at how to funnel resources to help them achieve a higher tree canopy. Maintenance is quite expensive and is an important piece of this effort. It is so important to think about goals and resources; but how do we pair them while focusing on those underserved areas?
- Comment: The topic of injustice is very important. However, we do need to make the goal reasonable so citizens, as well as developers, don't oppose it.
- Comment: We talk about planting trees, but when California was in a drought and the Governor's office encouraged people to stop watering parks, many trees became stressed. We cannot plant a huge number of trees and not take care of them – we need to worry about the health of trees.
    - Project team response: That is a good point. There is an annual cost to taking care of trees, in addition to the issue of water restrictions during drought years. Based on the Resource Analysis, the City pays an average of $94 annually per tree.
- Comment: What we are experiencing in the Central City is a dramatic increase in density; I don't see any of this study addressing population density as it relates to the tree canopy. Density will be a pressure over time to consider. This also doesn't consider the cost to the public. For example, recently my car was parked on the street and the tree caused $1,700 in damage to my car. There is a cost to the public that hasn't been considered in this resource analysis. I would like to see a

program that addresses the replacement planting of certain trees that are not contributing to the overall canopy's benefits.

  - **Project team response**: These assessments are based upon the data we have. They can be used as a management tool and contribute to the Urban Forest Master Plan, but they are not only sources of input and/or data. The issues you bring up today are good considerations.

- **Comment**: I would like to see if there is a correlation between income levels and canopy levels.
- **Comment:** There is a soil-type correlation to consider; soils change dramatically from area to area in Sacramento, so it is hard to establish tree canopies in some places. To achieve a higher percentage of tree canopy in some areas, it is not a social just issue but a soil-type issue. For example, a lot of trees aged out and died in South Natomas due to bad soil.
- **Comment**: The Energy Commission, today, adopted a new building standard for all construction after 2020 – solar panels need to cover 20% of all new housing developments.
- **Comment**: With California now requiring solar to be built on all new developments' roofs after 2020, I see a natural competition between tree canopy and solar need. Are there other communities with similar predicaments?
  - **Project team response:** Some communities look at walk-in gardens or look for a centralized place to put solar panels. With this new requirement, the City will have to examine its effects on tree planting and consider where to place solar panels in relation to planting trees.
- **Comment:** Regarding neighborhoods we want the City's tree canopy to resemble, Land Park has a tree canopy that covers the streets and helps shade homes, reduce energy costs, increase property values, and reduce the cost of maintaining streets. I think all neighborhoods should look like Land Park.
- **Comment**: In 100 years, the climate of Sacramento will be more like the climate of Tucson, Arizona. At the current rate of climate change, it is important that we plan for tree species in the future that are heat and drought resilient. There will be more swings between heavy storms and dry winters. This is something that will be very important to consider. However, this shouldn't be a discouragement to planting more trees. More trees will help make summers more pleasant and cool, and trees also encourage people to walk and bike outside and enjoy the outdoors. Factoring in the urban heat island effect, which is a growing problem for region, I think a higher tree canopy would be better. Plus, trees can also encourage more rainfall.
- **Comment**: I think at least a 35% canopy goal is good; the City of Citrus Heights has this goal. For a 20-year time frame, it is important to set an ambitious goal.
- **Comment**: How do we motivate property owners to plant and maintain a tree? If a tree causes damage to a sidewalk, who is responsible for fixing it and how will the City address it?
  - **Project team response**: In general, for smaller trees, planting, maintenance, and removal is not regulated by the City. If a tree is larger than a certain size, then it is the property owners' responsibility to apply for a permit and requires City approval to remove the

tree. Sidewalk repairs are the property owners' responsibility, regardless of the cause of damage.

- Comment: To reach a 35% canopy goal, would we have to plant all of the trees necessary within in next 5 years so that we reach the goal within the 20-year time-frame?
    - Project team response: No. The canopy goal does not have to be set as a 20-year goal.
- Comment: Ignoring the cost, I'd want 45% or an even higher canopy. But cost is an important factor.
- Comment: Since most trees are smaller than 12-inches in diameter, is there a way to see what kind of benefits we can expect from those?
- Comment: The City should look at the canopy cover over trails, bicycle and pedestrian facilities, and sidewalks to see where we can plant trees. If we see what space would be needed to plant trees there, then you can use that information to inform the City's canopy goal. Shade over streets and bike trails is desirable, especially where it is exceptionally hot in the summer. Also, shade over streets would encourage pedestrian and bike activity.

Is 50% a reasonable goal for shade required in parking lots? Do we want to adjust that? How can the City make this goal more successful and increase compliance? How should the City factor in solar with these requirements?

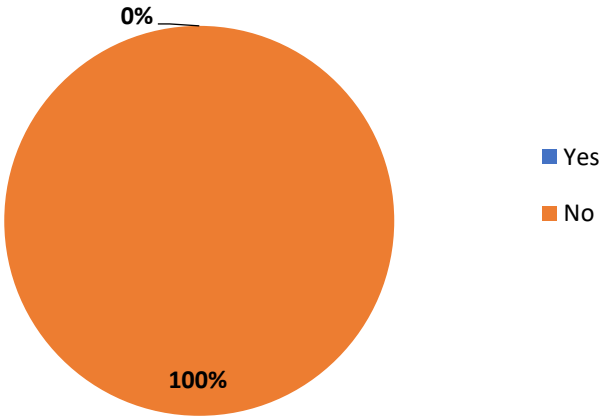
- Comment: Build less parking and require less parking. For existing parking lots, the City should implement a pilot program aimed towards finding a balance between solar panels and trees. This is an important question about infrastructure that needs to be handled.
- Comment: We need more outreach and education of the rules around tree planting and maintenance. At the Cannery, people are complaining because the property owner recently cut down some of the trees in the parking lot. The trees were not large enough to be privately protected, but they provided significant shade. It is important to keep private property owners aware of what they are supposed to be doing. People break rules all the time without knowing it.
- Comment: We do not have strong enough language to enforce parking lot shade requirements. The City should reshape the Urban Forest Master Plan so there is a focus on air quality, water quality, and urban heat ordinances.
- Comment: A bare parking lot is the best place to plant a tree, in terms of the water quality benefits it provides, because of all the oil that is left at the lot.
- Comment: Suburban parking lots should have different requirements than urban parking lots.
- Comment: The City should consider different requirements for different land uses and conditional use permits. For example, new cannabis operations in warehouse districts have a tremendous opportunity for additional trees around their buildings and in their parking lots.
- Comment: There must be enforcement.

- **Question**: Giving more spaces for trees only applies to new parking lots. To my understanding, older or retro-fitted parking lots do not have to comply, correct?
    - **Project team response**: If a parking lot was built before 1983, and expands by less than 50%, they are only required to meet the 50% shade goal on the newer portion of the lot. However, if the lot expands by more than 50%, the shade goal must be met for the entire lot.
- **Comment**: Property owners of spaces that stress open air could explore community solar benefits. If a space cannot have trees, then there should at least be a requirement for solar panels on parking lot roofs, so the lot provides some type of positive benefit to communities.

Feedback Forms

Below is a summary of all the input obtained from stakeholder representatives through feedback forms.

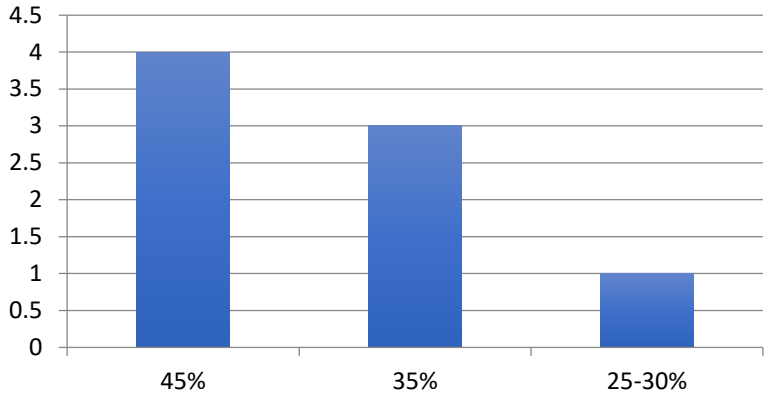
1a. Is the City appropriately shaded at the current tree canopy level?



No

- Sacramento's tree canopy is specifically lacking in underrepresented neighborhoods.
- The city's canopy coverage is uneven and often sparse in lower-income areas.
- The parking lot ordinance needs to be enforced.
- For an example of a "good feeling" shaded street, see Stacia Way in Hollywood Park.
- In particular, low-income and communities of color in Sacramento have less access to the benefits of the urban forest.
- The City needs more trees, especially in currently under-shaded communities, for the benefits: air quality, aesthetics, storm water, and cooling to mitigate heat islands and extreme heat.
- It's great, but surrounding neighborhoods could be much better.
- Many neighborhoods need trees for shade; all neighborhoods should be 40%.
- Even the Midtown / East Sacramento areas have gaps, and certain neighborhoods are very canopy deprived.

1b. If not, what percentage of tree canopy should the City aim for?

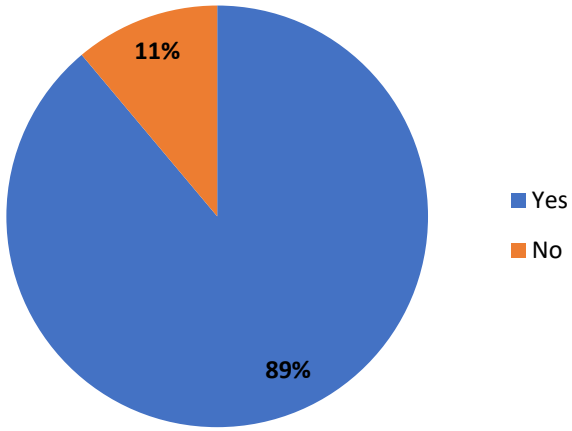


- I recommend 35%, given the impacts of a warmer climate on health; heat island effect, air quality, the economy, etc.
- Set an ambitious tree canopy goal.

2. What outreach would be helpful to achieve a higher percentage of tree canopy?

- Education on tree maintenance, selection of species, benefits, and economic value. Reach out to commercial and residential landowners.
- Education on the conflicts and (perceived or real) negative qualities of trees.
- Educate people on the rules and enforce them.
- Education on social justice and equality as it relates to trees. The City should work with private property owners, educate people on the health of trees, and find trees that will work for all communities.
- Increased outreach to property owners.
- Display the benefits of trees to residents, property values, safety, visual appeal, etc.
- Increased canopy may reduce particulate matter concentration, ozone levels, incidence of asthma, as well as many other health benefits.
- Help homeowners select and plant appropriate trees. Also help folks learn how to care for trees.

3a. For parking lot shade requirements, is 50% a reasonable goal?



Yes

- With good parking lot designs, a higher percentage of tree canopies may be achievable. What's missing is enforcement.
- I think this can be achieved through a mix of solar panels and increased tree canopy.
- Parking lots are giant frying pans.
- The ordinance needs to be revised to require the total parking lot to be shaded, not just new positions of parking lots for retrofits.

No

- 75% should be the goal

3b. If yes, what are some ideas to increase shade in parking lots? If no, why?

Enforcement

- Enforcement is needed.
- Amend the ordinance with stricter enforcement.
- Enhance compliance; increase code enforcement involvement where non-compliance with parking lot shade ordinance is observed or reported. The City could use volunteers to assist with identifying non-compliant parking lots.

Specific Zones

- Clarify that pruning is allowable for security cameras in cannabis project parking lots.
- The City could increase its tree canopy through conditions of approval in Conditional Use Permit requests for cannabis projects, which are generally in warehouses with large, bare parking lots. Link the tree canopy goal with cannabis approvals to provide a community benefit.

Physical environment

- Increase the City's soil capacity.
- Water trees for the first three years to guarantee more root space.

Update regulations

- Check the formula for tree shade – it should be realistic for parking lots.
- Prohibit tree topping.
- Ensure construction plans include sufficient planting / growth space.
- Plant trees in medians and borders of buildings.
- Plant the right trees, at right size, and in the right locations.
- Increase required planting areas for trees.
- Require trees to be planted at one of the following times: at a building's initial construction, when a parking lot is retrofitted to install EV chargers (part of the City's EV strategy), or when a street is first paved.
- Implement new regulations with any new developments in which lots are reconfigured.
- Revamp the parking lot shade requirement to emphasize the placement of large trees in parking lots.
- Develop Public Works Standards for tree maintenance.
- Instruct all local landscaping companies how to take care of trees including: pruning, maintenance, removing diseased trees.
- Codify through council resolution a revised Parking Lot Shade Tree Design and Maintenance Guideline document to improve the current planter dimension requirements, planting specifications, and approved species list. Rename this document a "manual" instead of a "guideline."
- Revise chapter 17 (17.68.040 F.) of the Parking Lot Shade Tree Design and Maintenance Guideline document to explicitly require permits to prune or remove parking lot trees.
- Revise Chapter 17 of the Parking Lot Shade Tree Design and Maintenance Guideline document to require that existing parking lots subject to the shade ordinance make improvements as needed to meet the 50% shade coverage requirement following a notice of non-compliance.

4. Where would you like to see more trees?

- Public spaces in low-income neighborhoods and low-canopy areas. This would bring tree benefits and encourage private and commercial landowners to plant more trees.
- Low-income residential and commercial areas to promote and enable more people to walk, bike, and ride transit.
- Walkable areas including private developments, public properties, and around building developments.
- Front yards near sidewalks.
- New infill under canopied areas.

Additional Comments

Consider Sacramento's climate

- We will have more years of drought and water-use reduction. Let the grass in parks and public / private properties die, but stress the need for infrequent, deep watering.
- For reduced ozone formation, select tree species that are low emitters of biogenic volatile organic compounds.
- Plant drought-tolerant trees to anticipate future heat and drought.
- Anticipate urban heat island and vulnerable communities.
- Develop strategies for keeping trees watered during severe drought, include standard policy / practices for placing vegetative barriers between freeways and other busy roadways and development such as residential, schools, parks, and other places where more people most vulnerable to air pollution may be located.

Policy & Enforcement

- Make sure there is consistent tree-canopy-supportive policy among the General Plan, the Urban Forest Master Plan, and specific plans. For instance, require a minimum 7-foot width for tree planters.
- Increase requirements for front yard trees. Develop incentives for planting backyard trees.
- Work to get school districts to adopt the parking lot shade ordinance.

- Look at the relationship between the population density and canopy. Set a goal accordingly. Consider costs to the public in maintaining canopy, particularly in areas with again or inappropriate species.
- Develop specific recommended tree removal mitigation measures that will promote the return of health benefits of tree canopy as quickly as possible.
- Develop street tree policy to promote increased canopy, including adequate planter sizes. Include street trees in definitions of Complete Streets. Focus on street tree planting to provide sidewalk shade versus just in medians.
- Building setback standards need to allow space for shade tree planting.
- Planning guidelines need to allow for canopy trees.
- Consider reinstituting registration of tree companies – stop tree-topping!
- Enforce tree protection for construction sites.
- Consider revising sidewalk accommodations for major trees (i.e. more room to root zone).
- Embed irrigation infrastructure into trenches for EV charging conduits when EV chargers are installed.
- Maintenance is critical and should have more investment.

Tree Size

- A focus on large stature trees (where growth space is available) to maximize benefits.
- Emphasize the planting of large trees for shade.

Other

- Demonstrate net dollar benefits for private landowners to encourage planting and care.
- Why is Urban Forestry in the Public Works Department? The Parks department would be more appropriate.
- Parking lots seem to be a no-brainer.
- The report was very data driven, not ready for prime time, some numbers were "unreasonable."
- In your reports, it would be helpful to see the City's population density layered over the current canopy.

Next Steps

The next steps in creating the Urban Forest Master Plan include an online community workshop along with a series of Pop-Up events throughout the late spring and summer 2018. A community workshop will be held in the summer of 2018. By fall, the project team will have an administrative draft of the Urban Forest Master Plan for the second Stakeholder Representative Group Meeting. Following the second SRG meeting, there will be a public draft of the plan available for comment and review. A third and final SRG meeting will take place in winter of 2018, with the Final Urban Master Plan published in Spring of 2019.

Appendix

- Meeting invite
- Presentation
- Meeting agenda
- Feedback Form

Urban Forest Plan

Partner Advisory Committee Meeting #4

December 13, 2023 | 5:00 – 6:30 PM

Meeting Summary

On Wednesday, December 13, 2023, the City of Sacramento held the fourth and final meeting of the Partner Advisory Committee (PAC) for the Urban Forest Plan (UFP). The meeting took place from 5:00-6:30 p.m. at Sacramento City Hall, located at 915 I Street, in Sacramento.

The following City staff and project team members attended the meeting:

- **Rachel Patten**, Sustainability Analyst, Public Works
- **Lucinda Willcox**, Assistant Public Works Director, Public Works
- **Kevin Hocker**, City Urban Forester, Public Works
- **Sarah Kolarik**, Sustainability Analyst, Office of Climate Action and Sustainability
- **Taner Pasamehmetoglu**, Arts Program Assistant, Office of Climate Action and Sustainability

PAC members attended the meeting, representing the following organizations:

- 350 Sacramento
- California Department of Forestry and Fire Protection (CALFIRE)
- Elmhurst Neighborhood Association
- Hollywood Park Neighborhood Association CommuniTree Project
- Meadowview Urban Tree Canopy Project (MUTP)
- North Natomas community
- Preservation Sacramento
- River Park Tree Canopy Project
- Sacramento Metropolitan Air Quality Management District (SMAQMD)
- Sacramento Municipal Utilities District (SMUD)
- Sacramento Tree Foundation
- Trees4Sacramento

After the third PAC meeting, on Thursday November 2, 2023, PAC members were asked to review and provide comments on the Preliminary Administrative Draft Urban Forest Plan. The PAC's review was focused on: recommendations for Vision Statements, prioritization of Implementation Measures, and identifying any major topic areas that were missing, unclear, or inaccurate.

PAC members were asked to provide comments through two methods:

1) Responding to a digital survey
2) Sending additional comments not captured by the survey via email

The focus of PAC meeting #4 was to summarize the PAC feedback on the Preliminary Administrative Draft Urban Forest Plan, provide staff responses to major topic areas, facilitate group discussion of the plan and allow final comments, and finally to outline the next steps for the UFP and the PAC.

Meeting Agenda

- Welcome and Introductions
- Summary of survey responses and comments
- How staff will respond to comments
- Next steps for the draft Urban Forest Plan and Partner Advisory Committee
- Discussion/Question and Answer

Meeting Notes

Summary of Survey Responses and Comments

18 of 31 PAC members completed the digital survey to provide feedback and comments on the Preliminary Administrative Draft Urban Forest Plan. The survey consisted of 15 questions that asked participants to rank preferred Vision Statements, prioritize Implementation Strategies from each of the five Goals of the UFP, rank how well they felt the UFP addressed the unique needs and challenges of Sacramento's urban forest, and spaces for narrative comments on each topic. The results of that survey are as follows:

Vision Statement

Survey respondents voted for the vision statement:

> *The City of Sacramento, together with community investment and involvement, will reinforce Sacramento's legacy as the "City of Trees". The City will address historic inequity in access to nature, and prioritize the sustainable management and expansion of the urban tree canopy to provide extensive benefits and reprieve from the impacts of climate change for generations of Sacramentans to come.*

Priority Implementation Strategies

There were nine total Implementation Strategies across all five Goals that at least ~50% of survey respondents voted as high priority for implementation. Those Implementation Strategies fell into four broad categories: 1) Funding for UFP strategies, 2) Shading streets and sidewalks, 3) Supporting Disadvantaged Communities, and 4) Protecting native trees.

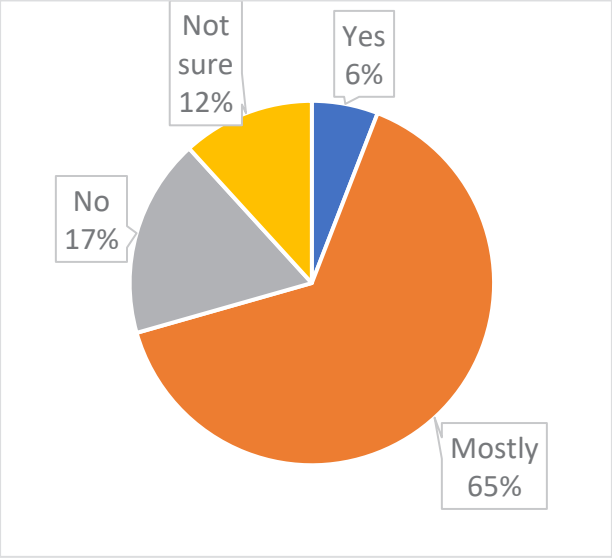
The nine high priority Implementation Strategies listed in order of priority ranking were:

- **5.1.2** Pursue an increase in dedicated long-term funding to provide an increased level of tree canopy, perform associated care and maintenance, and expand core urban forestry services and programs.
- **5.2.1** Explore providing financial support to residents in disadvantaged communities for tree planting and care.

- **1.2.7** Support the achievement of 50 percent tree shading over streets and sidewalks.
- **3.4.3** When designing transportation improvements, support the inclusion of adequate tree canopy to provide substantial shade for active transportation infrastructure and support achievement of 50 percent shading on streets and sidewalks.
- **4.2.3** Strengthen partnerships with entities in disadvantaged and low tree canopy neighborhoods.
- **3.4.3** When designing transportation improvements, support the inclusion of adequate tree canopy to provide substantial shade for active transportation infrastructure and support achievement of 50 percent shading on streets and sidewalks.
- **4.2.3** Strengthen partnerships with entities in disadvantaged and low tree canopy neighborhoods.
- **3.1.3** Strengthen collaboration and support between all City departments that manage trees.
- **5.1.1** Perform a cost analysis to determine the projected cost to meet the tree planting and maintenance targets identified in the Urban Forest Plan to reach 35 percent canopy cover by 2045.

Effectiveness of the UFP

Survey respondents voted that the Preliminary Administrative Draft Urban Forest Plan "Mostly" addressed the unique needs and challenges of Sacramento's Urban Forest.



Comments about why the draft plan did not fully address the needs of Sacramento's urban forest mainly focused on the need for more resource allocation, additional specifics about implementation, and aggressive private property canopy goals. Many comments also expressed appreciation of the details and high-level guidance that the UFP draft provided.

General Feedback

In addition to the 18 survey responses, Staff also received 8 comment letters via email. Staff will review and respond to the feedback through two ways:

1) Incorporate changes into public review draft. (E.g., higher-level changes)

2) Respond to comments during the public review period (E.g., more specific implementation action changes or topics that require broader public discussion)

There were four major theme's that appeared in many survey responses and comment emails that staff wanted to address directly with the PAC.

Strengthen Language

PAC Comments: Reduce the use of words that do not convey a specific measurable outcome or add a measurable outcome to the statement to bolster words like "encourage," "seek," and "support."

Staff Response: We will go through and look at each instance, limit the usage as much as possible, and add direction. Some will likely stay in the document based on staffs' authority to recommend changes and ability/resources to guarantee policies and programs.

Increase Canopy Goal

PAC Comments: Some calls to increase the overall canopy goal above 35% or to achieve the 35% goal before 2045.

Staff Response: Based on UTC report by Davey, underlying ecological conditions, and urban forestry best practices, staff believe 35% canopy (shading 35% of the entire land surface of the City of Sacramento) is the maximum feasible that we can achieve on this timeline.

We want to set an ambitious but realistic goal. 35% would nearly double the number of trees in the City. Nothing will prevent us from exceeding this goal.

City Maintenance of Private Trees

PAC Comments: Calls to revive previous practices of planting and maintaining trees on private property.

Staff Response: Several decades ago, the City attempted to help homeowners provide care of trees in the "private maintenance easement" or private front yard trees in close physical and visual proximity to public-right-of-way trees. After review, it was identified that not only did this result in unacceptably long pruning cycles, but was also not an allowable practice. Since 1990, only trees within public-right-of-way easements are pruned by the City.

Legally, the City does not have the right to begin pruning trees on private property without permission or an easement, and that process does not appear feasible. While staff does not see a legal avenue for the City to directly care for trees on private property, the Plan does explore alternative options to provide tree care assistance through other programs.

To grow tree canopy on private property the City must:

- Support increased planting efforts.
- Support ongoing tree maintenance.

Policy + Implementation Actions recommended to address this need:

- **1.3.2** Support and facilitate canopy expansion efforts on private property across the City with focus in priority communities.
- **2.3.6** Support the use of proper pruning techniques on privately maintained trees.
- **4.2.2** Support and encourage businesses to increase tree canopy.
- **5.2.1** Explore providing financial support to residents in disadvantaged communities for tree planting and care.
- **5.2.2** Explore financial incentives to support residents with mature trees.

Continued Involvement of the PAC

PAC Comments: The City should continue to involve the PAC in the implementation of the UFP and/or create a tree commission.

Staff Response: It is currently not a Council priority to expand commissions. Community members are welcome to recommend this to Council for consideration.

The PAC's feedback is extremely valuable in the development of this planning and visioning document. Staff are not recommending ongoing engagement with this specific group past the plan development. But implementation of the UFP will require deep engagement with many partners and constituents.

Policy + Implementation Actions recommended to address this need:

- **1.2.2** Amend Sacramento City Code as necessary to improve tree canopy inclusion and require minimum levels of tree planting in development projects.
- **3.1.4** Conduct annual reporting on the urban forest plan to ensure progress towards goals and appropriate resource allocation.
- **4.1 Community Engagement:** Support community advocacy for and involvement in the urban forest.
- **4.2 Partner Coordination:** Facilitate coordination, involvement, and commitment from all entities that own, control, regulate, or affect the urban forest.
- **4.3 Youth Engagement:** Cultivate youth engagement in the urban forest to continue Sacramento's legacy of tree stewardship.
- **4.4 Workforce Development:** Advance career pathways in urban forestry.

Next Steps

Staff finalize public review draft over the next few months. Public review will likely begin winter/spring 2024.

- Goal of Feb. 2024 for launch of public review period
- At least 30 days of public review
- Will go through commissions, Council, community meetings, and have an online public review draft.
- PAC can comment again at that time. PAC can share widely with their networks.

Discussion / Q&A

Below is a summary of the large group discussion that followed the meeting presentation.

1) *Will there be a mailing list that updates people every time something happens on the project (e.g., missing middle, CAAP)?*
    - **Project team response:** Yes! We have a mailing list Join mailing list for email updates We can automatically add the full PAC to the list. And We will send notices throughout process.
2) *Ordinance reviews will go through Law and Leg?*
    - **Project team response:** Correct
3) *Rancho Cordova has a program to provide free trees to property owners. Has the City of Sacramento considered that?*
    - **Project team response:** No, the City hasn't looked at the approach of providing trees directly to homeowners. STF already runs this type of program and is partnering with the City of Rancho Cordova to offer that program. The City not set up to administer its own free tree program at this point.

      We do have recommended Policy and Implementation Strategies recommended in the UFP to address financial assistance to homeowners for tree planting and care, understanding that this is can be a financial obstacle that prevents tree care.
4) *You mentioned that the City used to have a tree easement.*
    - **Project team response:** There has never been a tree easement. The City used to trim trees in what was called a "private maintenance easement" but was just private front yards that were close physically and visually to the public-right-of-way. The City did this work because it was a public good. But, the City didn't have the financial resources to continue, and it negatively impacted broader tree maintenance capacity. It's also not legal for the City to do that work without property owner permission, so we can't just start doing it again.
5) *Trees for Sacramento is interested in continuing a dialogue for implementation. Can't wait 5 years with the timelines on this plan. Requesting sign ups to mailing list.*
6) *Interest in keeping the dialogue open (echoed from many members)*
    - **Project team response:** Implementation Strategy 4.1.3 – tree ambassador program as an avenue for continued engagement.
7) *Frustration regarding that developers remove a lot of trees and feeling that petitions to save trees don't matter. Need this change to happen before the 0-5 year timeline for most tasks. Regulations feel like they are set up to remove trees.*
    - **Project team response:** Need this plan in place to advance some of the ordinance update pieces.
8) *Front yard maintenance – EJCGC had discussed that many of those homes receiving that maintenance were in low-income areas. Want to find ways to incentivize people. Need to find ways to help cover unaffordable costs of tree maintenance. Lack of equity.*
9) *Community education. Are people adequately watering trees in their yards? Need outreach. Can there be information as part of the low-water use application that provide info about tree watering needs?*
    - **Project team response:** Yes, great idea!

10) *City should be looking into marketing for this thing. Needs to have central management from the City*
11) *Document is amazing! Full of information.*
12) *For easement issue. Isn't it a policy issue?*
    - **Project team response:** No policy around it. Something that changed prior to the 1994 Urban Forest Management Plan.
        - *If owner gave permission, you could do it*.
            - **Project team response:** Theoretically, but we would need a program in place to do so. Liability and cost are major concerns that makes this infeasible. Operationally it would be challenging and very inefficient because each property owner would need to opt-in and give permission, likely resulting in a patchwork of homes receiving care. We won't have more staff or money to do this so a program of this type would decrease City tree maintenance overall, which was a major factor for moving away from the practice originally.
                - *What about overarching benefit of reducing urban heat island impact? Liability concerns of climate change. Lots of benefits from trees (e.g., multi-modal safety, etc.). Looking at doing something precedent setting. How do we make these big goals happen?*
13) *Community partnerships and awareness. Need that first to bring in the money needed for the UFP. Would want to see that as part of the priority of implementation.*
14) *State Water Board outdoor water efficiency standards decrease amount allocated for water providers for outdoor water use. What about incentives for outdoor asphalt removal that have related benefit? Asphalt is part of the water efficiency score. Can you look at all City incentives city wide.*
    - **Project team response:** Yes, we will talk with DOU
        - *Fellows at Air District are working on an urban heat island project. Trees are fantastic, but also cool pavements. Both heat mitigation measures together.*
            - *Doesn't have to be an either or. How do you make it work together at a high level. But driveways – do people need that much parking? Can there be incentives to remove pavement? And remaining pavement could be cool pavements. Reducing parking and replacing with trees.*
                - *Cal Fire: reflective paints are not proven yet. More of a band-aid approach. Caution around this approach.*
                    - *State laws that reduce and/or eliminate requirements for off-street parking (e.g., not required for ADUs, not required for other new development (??)*

15) *Also artificial turf removal. Can City ban? Not supposed to have artificial turf under the drip line of the tree. Not in the tree ordinance (Title 12.56), but in a separate City policy (Title 17).*
16) *Objective design standards are needed to preserve existing canopy in infill projects. Matt and Ngyuen (Planning staff) said they were going to start working on that.*
    - **Project team response:** Yes, CDD has started working on the Missing Middle Housing update and our project team are engaged in discussions with them about the needs of trees/canopy related to those updates.
17) *Old arena side in Natomas is a giant parking lot with dying trees. Want to see parking garages rather than sprawl. With solar on top*
    - *Or transit and active transportation so we don't need parking lots!*
18) *Home insurance conflicts. Home insurance providers are pulling out of CA. They are wanting people to remove all trees on property to receive insurance (they are looking for any reason to drop coverage). Does the City fit into that conversation? Discussion with the insurance commissioner? Using wildfires as excuse, even in urban areas.*
    - **Project team response:** This is a great flag. We will looking this.
19) *NASA cool community project. Projected that doubling the canopy would reduce ambient air temperature by a couple degrees.*
20) *Want to see pervious pavement if pavement is needed in the future. Concern about flooding. Want a holistic approach to ordinances so that they work together to create a green city.*
21) *North Natomas Development Commission reviews proposals (e.g., a hotel). They are including a bioretention facility as part of the periphery of the facility. Includes trees in facilities.*
    - *But caution that the correct trees are planted. Needs to be carefully designed.*
        - *Rain gardens. DC will design these for you.*
            - *North Natomas has a lot of retention basins. Not a combined storm-sewer system.*
22) *Post-project clean-up. Frustration about working with the City since they see old materials (e.g., stakes or out of date irrigation).*
    - **Project team response:** Can you give more details about the project that has issues?
        - *Native tree planting*
            - *Regional park is mostly undeveloped. Lots of construction debris that doesn't make it safe to use. Sheep and goats do weed maintenance.*
23) *Process question: Best case scenario. When will it get all of the necessary approvals and to start implementation?*
    - **Project team response:** Firstly, we are not waiting for the plan adoption for high-level things we know are needed (e.g., increased planting in DACs). Already got approval to add trees to street design update and the Streets for People Active Transportation Plan.

Best case scenario is public review will start in Feb. and go through March-early April. Processing comments will take a couple of months. The best case is adoption middle of May. Otherwise, will wait until after the budget is adopted in mid-July.

24) *How can this group support next steps?*
    - **Project team response:** Go back into the plan during public review. Share with networks. Want this to get a lot of detailed, diverse feedback. For implementation – not quite there yet. PAC will be tapped as part of that process. Getting through this step first.
25) *Will the PAC receive direct responses to the comments they submitted? Want to know how they were addressed. Access to public comments?*
    - **Project team response:** Wasn't going to directly respond to each comment. Happy to have deeper discussions as requested. Everyone will have access to the summary of public comments with responses as part of the Council report package. Responses will be grouped by topic.
26) *Want to see another canopy assessment. This wasn't highlighted in top takeaways. Last time was 2018/2019. Want to see change from "ground zero" from adoption.*
    - **Project team response:** Noted. There is an implementation measure regarding the more frequent canopy assessments.
        - *Been 5 years from the Davey Resource Group. Money issue?*
            - **Project team response:** Everything is tradeoffs. Could spend money on a canopy assessment, but would have to reduce spending elsewhere.
                - *How much did it cost?*
                - **Project team response:** Assessment was part of the bigger DRG contract. We can look into determining how much was specifically for the canopy data.
27) *35% increase of tree canopy for what? What's the baseline for the 35% increase?*
    - **Project team response:** The goal is not an increase from a baseline – the goal is to achieve 35% of ALL city land area as being covered by tree canopy.
28) *Conflicts/alignment with missing middle housing. Front setbacks are being removed with missing middle. Need to save space for trees. Many benefits from those trees. Don't want lots to be developed without any space for trees.*
    - **Project team response:** Currently working with the missing middle housing staff on this update and improving provisions for trees.
        - *Setbacks for second story of home that allow for tree canopy. Some housing advocates want to remove that setback. Though flexible design standards to save trees on request. Want to see sign off of trees being planted as part of the site.*
            - **Project team response:** Kevin and Rachel are coordinating with them. Requesting reductions in rear yard setbacks instead of setbacks in front in public realm. Talking about minimum

reasonable space for trees and requiring trees in development. Will share this info and have that dialogue with them.
    - *PUDs – can have a very large tree that would provide shade for multiple homes on a street.*

29) *Charts of sizes of trees that would be planted. Lots of favoritism toward small trees, not medium or large. Want to see large trees along streets and sidewalks. Want to maximize canopy where there is space for it.*
    - **Project team response:** The tables don't recommend which trees we plant. One is about how many of each size of tree would be needed to meet canopy goal (pg. 21). The other table is for trees currently on the street tree list (pg. 47)
        - *Want to see 8' in parkways to have enough space for trees in parkway strip.*
            - *Can all ordinances be aligned to meaningfully contribute to City canopy?*
30) *Key opportunities: private industry partnerships. Want to see no net loss of tree canopy. Tree removals would require tree planting elsewhere. Tree planting on schools. Maintenance is a big challenge. Want to see that partnership. Partnership with State. Cal Fire program was mandated to increase canopy cover across the state. Also urban canopy cover assessment taking place statewide.*
31) *Lots of state buildings in Sacramento. Lots of new developments that haven't included a lot of tree canopy.*
    - *State buildings and public schools are DSA. Fall under state building code. That code doesn't encourage planting a lot of trees.*
        - *State of CA recently establishes 35% canopy cover, 50% parking lot coverage requirements for NEW schools*
32) *Underground infrastructure. Conflicts with SMUD infrastructure. City investment in EV charging will pose a conflict. Want the City to map these out together. Share that information regarding planting potential.*

APPENDIX D: COMMUNITY SURVEY RESULTS

To get input on community priorities for preparation of the Sacramento Urban Forest Plan, the following survey was available online and distributed at pop-up events from August–October 2018. The following summarizes the responses to the survey and the numerous individual comments. Each written comment has been "coded" with a brief description that helps capture what the response is about and allows for better summarizing the results of the entire survey effectively. The coded summaries of the written responses are provided below the results of the corresponding question.

Sacramento Urban Forest Master Plan: Community Survey

The trees planted throughout the City of Sacramento are its "urban forest." An urban forest is the network of trees in a city. Scientists have found that urban forests provide many environmental and health benefits. Unlike natural forests, however, most City trees have to be planted and cared for by people.

We really want to hear Sacramento residents' ideas! Your responses to this survey will be used to create the Urban Forest Master Plan. The Urban Forest Master Plan is important because it will establish the City's goals and actions necessary to ensure that future generations continue to enjoy the benefits of a healthy urban forest in Sacramento.

The survey should take about 5 to 10 minutes. Thank you for your input.

1)

Trees are important to the quality of life in Sacramento.	Response %	Response Count
Very True	93.05%	1,581
True	6.42%	109
Not True	0.24%	4
Definitely, not true	0.18%	3
Not Sure	0.12%	2
TOTAL		**1,699**

2)

I value trees for the following reason: (select your top five)	Response %	Response Count
They shade streets, sidewalks, and bike trails	76.46%	1,299
They clean the air	70.69%	1,201
Their beauty	70.22%	1,193
They bring birds and wildlife	46.62%	792
They save energy	46.14%	784
They support human health	41.44%	704
They reduce greenhouse gases	37.3%	636
They define my neighborhood	35.31%	600
I enjoy being outside in shady parks	25.78%	438
They shade parking lots	19.42%	330
They increase property values	13.89%	236
They absorb stormwater runoff	11.54%	196
Other (please specify)	5.06%	86
TOTAL		**1,699**

Respondents who selected "Other" wrote responses that fell into the following categories:

- Desire to select more than five reasons they value trees
- Importance of trees to Sacramento's city identity
- Importance of trees for cooling and urban heat reduction
- Importance of trees for ecological and environmental health
- Trees providing calming and connection to nature
- Trees improving quality of life and livability
- Trees providing food
- Trees providing resilience to climate change
- Trees improving air quality
- Trees providing noise pollution reduction

3)

Are there enough trees in your neighborhood?	Response %	Response Count
No, not enough trees	55.56%	944
Yes, there are enough trees	38.38%	652
Not sure	4.83%	82
There are too many trees	1.24%	21
TOTAL		**1,699**

4)

Are there enough trees throughout the city?	Response %	Response Count
No, not enough trees	73.87%	1,255
Yes, there are enough trees	16.01%	272
Not sure	9.54%	162
There are too many trees	0.59%	10
TOTAL		**1,699**

5)

Is there anything else you would like to say about trees in Sacramento?	Response Count
	1,012 Answered
	687 Skipped
TOTAL	**1,699**

Respondents wrote responses that fell into the following categories:

Increasing canopy and planting trees:

- Respondents described a desire to see more trees planted, desire for large scale planting efforts, concern about lack of trees in new development, desire for more large and mature trees, desire for more park school and parking lot trees, desire for removed trees to be replaced, expressed concern about small trees being planted to replace large trees, and recommended specific planting locations.

Protecting existing trees:

- Respondents described the importance of proactive preservation of mature and heritage trees, opposition to removing trees, emphasis on caring for existing trees, concern about private property owners removing trees, and concern about topping and excessive pruning.

Proper care and maintenance:

- Respondents emphasized the importance of managing tree hazards and unhealthy/dead/dying trees. Emphasized the importance of proper care for safety and tree health. Described the importance of maintenance for pest and disease control and longevity of mature trees. Expressed uncertainty about who holds responsibility for maintenance, concerns about proper watering and drought stress, and concerns about maintenance costs.

Equity and distribution of trees across the city:

- Respondents noted canopy cover changed significantly between certain neighborhoods and expressed concern that there were not enough trees in socio-economically disadvantaged neighborhoods.

Recognition of trees as a defining feature of Sacramento:

- Respondents identified trees as important to livability in Sacramento, as an important consideration in why they live in or moved to Sacramento, a desire to rebrand Sacramento as "the City of Trees", and trees as beautifying their neighborhoods and as important cultural resources.

Criticism of city policies and programs:

- Respondents expressed concerns that city policies and enforcement efforts are insufficient to protect existing canopy, that tree requirements in new development are insufficient, that tree removals for development need to be more strictly regulated, that maintenance of city trees in insufficient, and a perception that city services are unequally distributed between all neighborhoods.

Appreciation for the benefits and importance of trees:

- Respondents expressed appreciation for the benefits trees provide including shading, cooling, beauty, environmental benefits, crime prevention, air quality, increased home values, and increased appeal of neighborhoods. Respondents also expressed preferences and appreciation for specific tree species.

Concerns about trees:

- Respondents expressed concerns about property damage from trees, allergies, the tree population aging and dying off, and specific criticism of certain tree species. A few respondents questioned the importance of trees as a city priority.

Concerns about conflicts between trees and other infrastructure:

- Respondents expressed concerns about conflicts between trees and utilities (both overhead and underground), streetlights, sidewalks, and generally trees being planted in unsuitable locations that cause damage.

Concerns about climate change:

- Respondents raised concerns about the impact of climate change on the urban forest, specifically issues regarding tree species diversity, hardiness, and adaptability to increased drought and extreme storms. Respondents also highlighted the importance of trees for combatting climate change, including for air quality and urban cooling.

Importance of native trees:

- Respondents expressed appreciation for native oaks and heritage trees and identified native trees importance for the natural ecology and wildlife as a priority.

Addressing food insecurity:

- Respondents hoped to see more fruit and nut bearing trees in the city and increased gleaning efforts to provide food to low-income and un-housed populations.

New programs:

- Respondents wanted to see workforce development programs to provide entry level employment to local youth and young adults. Respondents wanted to see the city develop incentive programs for private maintenance, planting, and watering.

Desire for more collaboration across sectors:

- Respondents showed support for the Sacramento Tree Foundation and desire for SMUD and PG&E to be more proactive in managing tree/utility conflicts and replanting efforts. Respondents expressed desire to see increased planting in collaboration with schools, including outdoor education for K-12.

Appreciation of city efforts to maintain trees:

- Respondents expressed appreciation for city maintenance crews caring for trees along streets and in parks and want to see increased funding for maintenance.

6)

Did you know that the City has a program for planting and taking care of public trees? Please check all the answers below that are true for you:	Response %	Response Count
I was aware the City responds to tree emergencies (falling trees and limbs)	58.26%	924
I have seen trees with signs that say they'll be removed	42.12%	668
I did not know that the City has a program for planting and taking care of trees	39.03%	619
I have used the City's tree website or called for information about trees	17.02%	270
I have read in the newspaper about what the City is doing to plant and take care of trees	46.14%	784
I have asked for a permit to remove a City tree	2.59%	41
Other (please specify)	12.36%	196
TOTAL		**1,586**

Respondents who selected "Other" wrote responses that fell into the following categories:

- Criticism of the city program
- Limited knowledge/uncertainty about the city tree program
- Confusion about the city program vs other programs
- Praise of the city program
- General comments, including specific issues and personal experiences

7)

Do you think that the public trees in Sacramento are getting good care from the City?	Response %	Response Count
I don't know	39.22%	622
Yes	36.82%	584
No	15.38%	244
Yes, very good	5.23%	83
No, not at all	3.34%	53
TOTAL		**1,586**

8)

Where does Sacramento need to plant more trees? Please pick your top three.	Response %	Response Count
In neighborhoods lacking trees	82.98%	1,316
Along public streets	51.51%	817
In parking lots	34.87%	553
In industrial areas or business parks	28.44%	451
At schools	25.98%	412
In median islands in roads	25.09%	398
In parks	21.88%	347
Along trails and bike paths	19.92%	316
Sacramento has enough trees and doesn't need to plant any more	1.77%	28
Other (please specify)	7.57%	120
TOTAL		**1,586**

Respondents who selected "Other" wrote responses that fell into the following categories:

- In disadvantaged communities (specifically areas in South and North Sacramento were frequently mentioned)
- Along streets and sidewalks to make biking, walking, and public transit safer
- To shade buildings: apartments, new homes, and commercial businesses
- To replace removed trees
- Specific locations: addresses, schools, vacant lots, parks, playgrounds
- General comments, including specific issues and personal experiences

9)

What would you like to learn about? Please check all that you would enjoy.	Response %	Response Count
How to properly water trees during drought	51.70%	820
Caring for trees on my property	42.18%	669
Different kinds of trees in the City	42.06%	667
Caring for street trees	33.98%	539
How to get free trees to plant at my house	31.27%	496
How to contact the City about tree problems	24.19%	395
Best places in Sacramento to see trees	21.25%	337
Planting trees	21.19%	336
How trees save money	16.02%	254
Benefits of trees	13.37%	212
How to recycle and dispose of leaves and tree trimmings	12.99%	206
Jobs in the tree care industry	7.06%	112
Other (please specify)	10.84%	172

Respondents who selected "Other" wrote responses that fell into the following categories:

- Tree care and maintenance
- City policies and programs
- How to get involved in supporting tree services
- General urban forestry concepts
- Agroforestry and urban food forests
- Resources for renters and landlords
- Multilingual resources
- Not interested/already knowledgeable

10)

What would inspire you to plant more trees? Check all that apply to you.	Response %	Response Count
Free or low-cost trees	61.60%	977
Get money back (a rebate)	37.89%	601
Have big tree classes in my neighborhood	34.62%	549
Nothing, there are enough trees	6.37%	101
Other (please specify) *Coded responses listed below	24.02%	381
TOTAL		**1,586**

Respondents who selected "Other" wrote responses that fell into the following categories:

- Education and outreach about why tree planting is important
- Community events (some respondents recommended raffles and give aways at events)
- Enthusiasm from their neighbors (i.e., promotion at neighborhoods association meetings, being a part of a community-wide effort)
- They would but they do not have the space or personal property
- Assistance with planting and maintenance
- Education about planting, care, watering, and maintenance
- Do not want to plant because of concerns with water usage and root damage
- Financial incentives such as grants and subsidies for planting, maintenance, dead tree removal, and water
- Environmental benefits of planting
- They want to but are unable to plant due to restrictions (i.e., HOA, landlord, etc.)

11)

Do you have any other comments on how to increase tree planting in Sacramento?	Response Count
TOTAL	**491**

Respondents wrote responses that fell into the following categories:

Policy and Regulation:

- Enforce existing policies
- Develop new policies and codes requiring trees
- Increase funding
- Increase city tree inventory by taking responsibility for all front yard trees and maintenance cost

Education and Awareness:

- Advertise existing programs
- Perform education and awareness-raising campaigns about tree care topics
- Provide educational resources about the benefits and importance of trees
- Provide education about the value and importance of California native oaks

Community Engagement:

- Host community tree planting events and provide volunteer opportunities
- Provide neighborhood-based programs and workshops to encourage residents to plant and care for trees
- Focus on disadvantaged communities for education, outreach, planting, and maintenance programs
- Provide education to K-12 youth in coordination with schools

Tree Management and Maintenance:

- Properly fund and implement maintenance of newly planted trees on public and private property throughout their lifetime
- Prioritize preserving existing mature trees and limit tree removals
- Ensure diseased and dying trees are quickly removed and replaced

Strategic Planting:

- Target school districts and school campuses for tree planting and youth education
- Prioritize planting in low-canopy disadvantaged neighborhoods and streets
- Use documented tree canopy cover to monitor and create a plan for city policy and practices to expand tree canopy cover
- Strategically plant trees to shade playgrounds, parks, vacant lots, parking lots, streets, and on/off ramps

- Maximize canopy on city property
- Replace removed trees and target age-related succession planting

Financial Incentives

- Offer low or no-interest loans, rebates, and grant programs to private residential property for tree maintenance
- Providing incentives to commercial property owners to improve existing parking lots and landscape areas
- Offer rebates, and economic incentives to increase tree planting
- Offer free trees and tree care supplies (i.e., irrigation, pruning services, etc.)
- Develop a workforce development program

Appreciation

- For trees, city services, and community engagement on tree topics

Personal Anecdotes

No comment

12)

What is your age?	Response %	Response Count
56+	37.64%	592
46–55	15.83%	249
36–45	20.15%	317
26–35	21.93%	345
18–25	<1%	68
Under 18	<1%	2
TOTAL		**1,573**

13)

Please check all that are true about you.	Response %	Response Count
I live in Sacramento	91.99%	1,447
I have planted trees in my own yard or I've convinced neighbors to plant trees in their yards	59.82%	941
I work in Sacramento or I come to Sacramento often	54.61%	859
I have donated to a non-profit tree organization or I'm a volunteer for one	22.70%	357
I have planted public trees as a volunteer	16.47%	259
None of the above	<1%	10
TOTAL		**1,573**

APPENDIX E: POP-UP WORKSHOP SUMMARY

City of SACRAMENTO

City of Sacramento – Urban Forest Master Plan
Pop-up Workshop Series
August–October 2018

Pop-up Workshop Series Summary of Input

Project Overview

The City of Sacramento has a long-standing reputation as the City of Trees. Emphasis on the importance of trees in Sacramento dates to its founding in 1849.

In August 2016, the City adopted comprehensive updates to the City Code to update and clarify its tree regulations. During the process of revising the city's tree-related ordinances, additional policy issues were raised regarding the City's urban forest and its future. With a changing environment and new technological tools, an updated Urban Forest Master Plan is required to preserve the health and stewardship of Sacramento's urban forest.

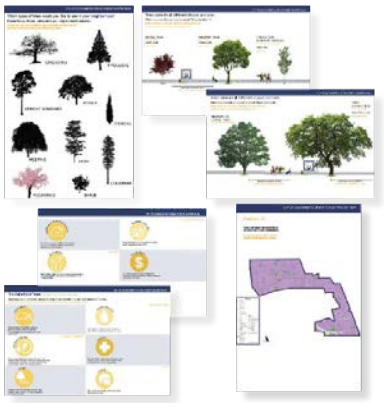
The City's updated Urban Forest Master Plan will address the protection, maintenance, sustainability, and enhancement of Sacramento's tree canopy, and allow the City to establish goals and monitor our progress.

Pop-up Workshop Series Objective

The objective of the pop-up workshop series was to engage community members throughout the City of Sacramento in a grassroots effort. The project team and the Tree Partners attended several community events throughout each district in Sacramento to obtain input.

Questions presented at each pop-up workshop included:

- What types of trees would you like to see in your neighborhood?
- Trees come in all different shapes and sizes. Which trees best fit your neighborhood? Where do they fit?
- Trees have a lot to offer us. Choose the top three benefits that are most important to you.
- Where would you like to see more trees in your neighborhood?

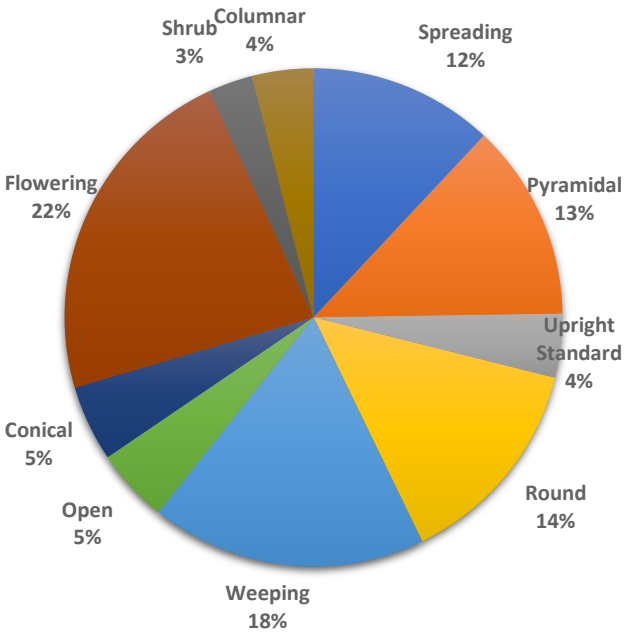


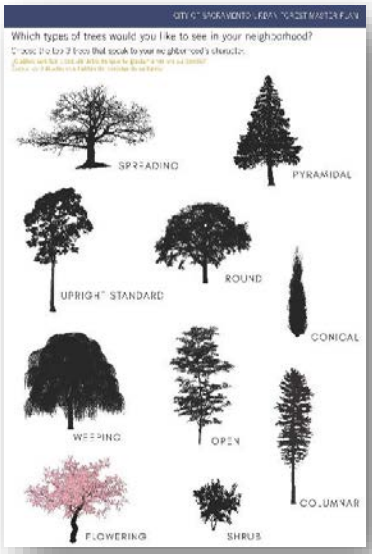
A total of 13 pop-up workshops were held by the project team and the Tree Partners in each district in Sacramento. The various events included farmers markets, family-friendly music and movie events, community tree planting workshops, a high school, and various neighborhood association events.

Pop-up Workshop Series Summary: All Districts

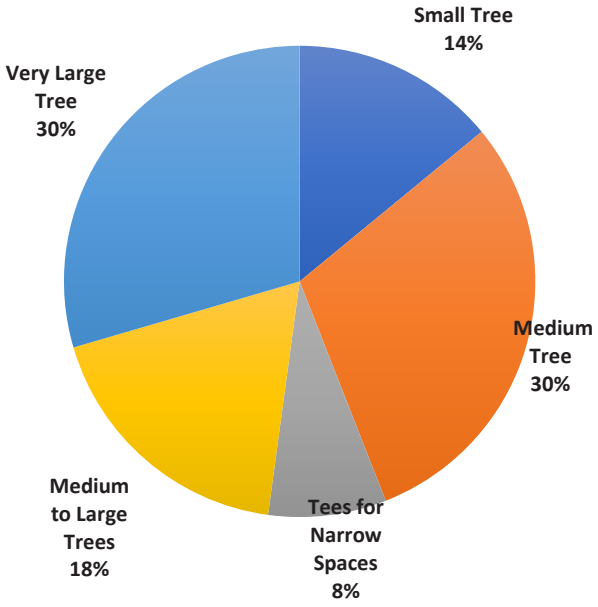
Below are community responses received from 13 pop-up workshops in each district, organized by question. The graphs below depict the responses received from all districts combined.

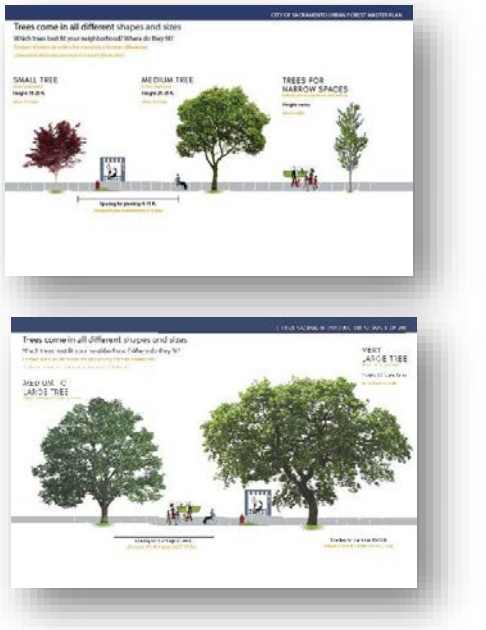
What types of trees would you like to see in your neighborhood?



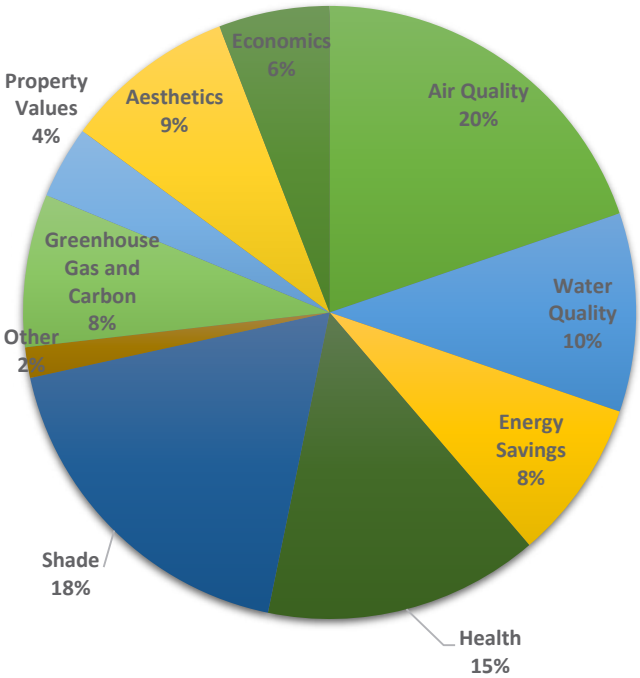


Trees come in all different shapes and sizes. Which trees best fit your neighborhood?





Trees have a lot to offer us. Choose the top three benefits that are most important to you?



Pop-up Workshop Series Summary by District

Below are community responses received from 13 pop-up workshops in each district, organized by district.

District 1

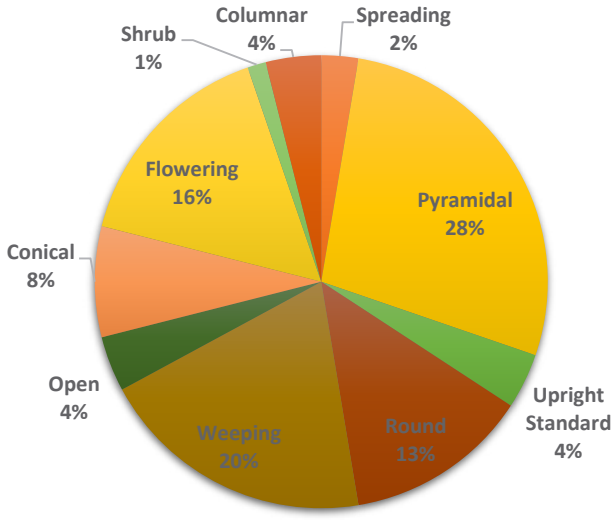
The project team held one pop-up workshop in District 1 at Councilmember Angelique Ashby's First Friday family event.

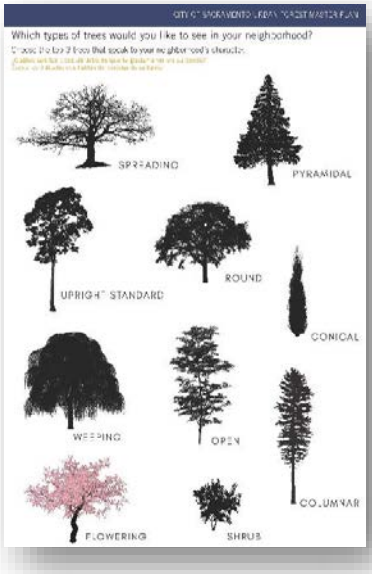
The pop-up was held on Friday, September 7, at Natomas Regional Park, from 5:00 p.m. – 8:00 p.m.

The project team received input from more than 30 community members, including families and children.

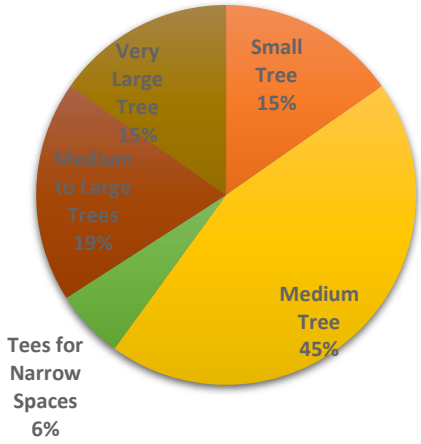
Below is a compilation of feedback received from District 1.

What types of trees would you like to see in your neighborhood?





Trees come in all different shapes and sizes. Which trees best fit your neighborhood?



Comments:

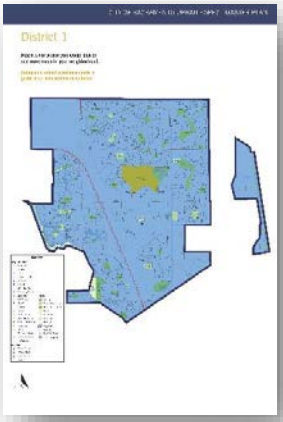
- Small trees in the center divider.
- Fewer trees with sap. Small trees mean fewer leaves to rake.
- Medium trees in parking lots, but no trees with sap! It sticks to cars.
- No berry trees.
- I am considering buying a home, and when there are large trees with shade around, it is an incentive to buy.
- Fruit trees are good.

Trees have a lot to offer us. Choose the top three benefits that are most important to you?

No input received.

Where would you like to see more trees in your neighborhood?

- Along Mabry Drive and Cliff Breeze Place
- North Natomas Regional Park
- Tower Center Drive and New Market Drive



Additional comments:

- Weeping willows (at North Natomas Regional Park).
- We have incentive to buy based on trees.
- No trees that rain pollen on homes.

District 2

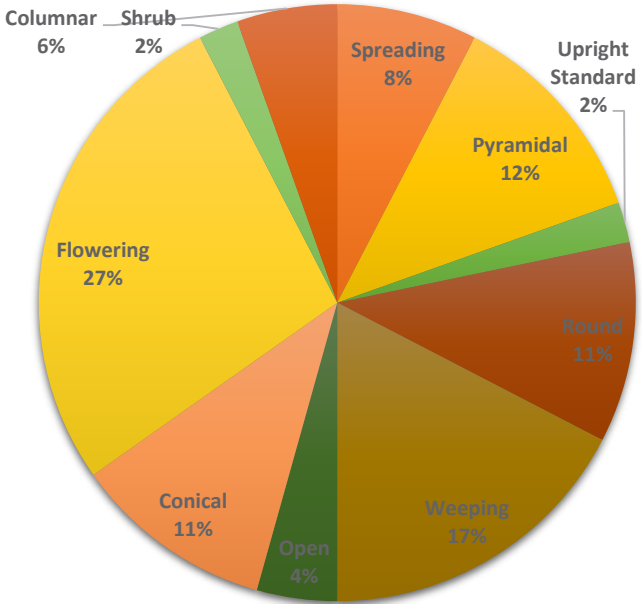
The project team held one pop-up workshop in District 2 at Grant Union High School during their lunch hour.

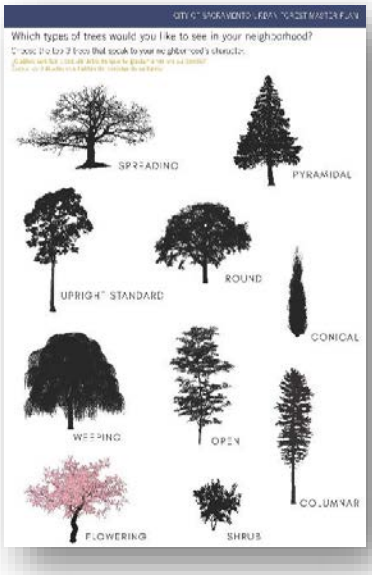
The pop-up was held on Thursday, October 4, in the Promenade at GUHS from 11:55 – 12:35.

The project team received input from more than 40 students, and several faculty members.

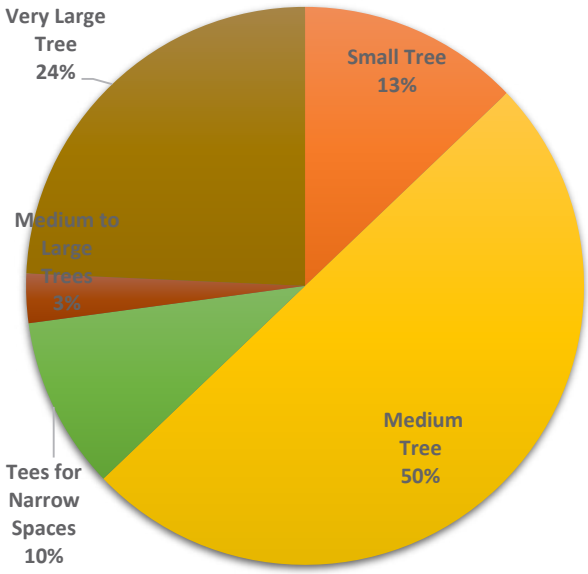
Below is a compilation of feedback received from District 2.

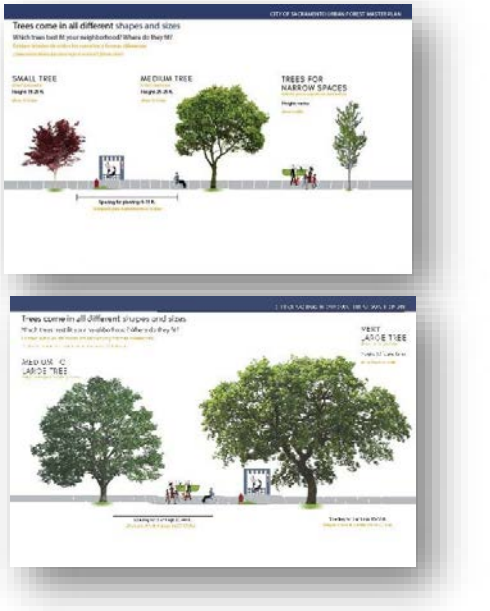
What types of trees would you like to see in your neighborhood?





Trees come in all different shapes and sizes. Which trees best fit your neighborhood?

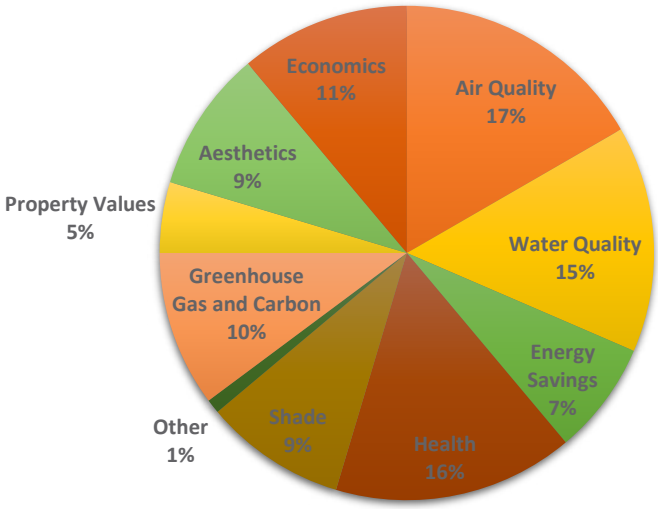


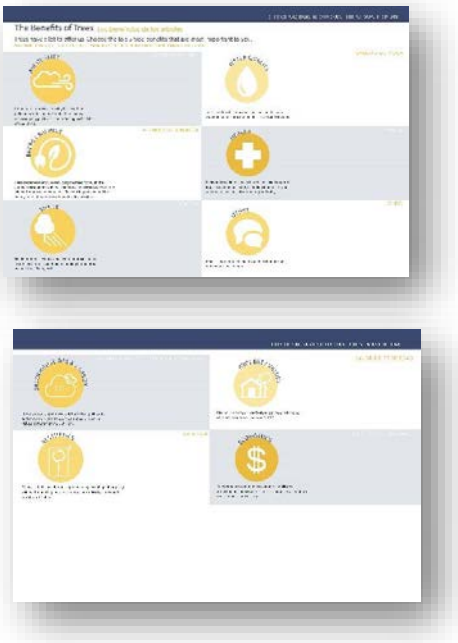


Comments:

- Plant more native trees

Trees have a lot to offer us. Choose the top three benefits that are most important to you?



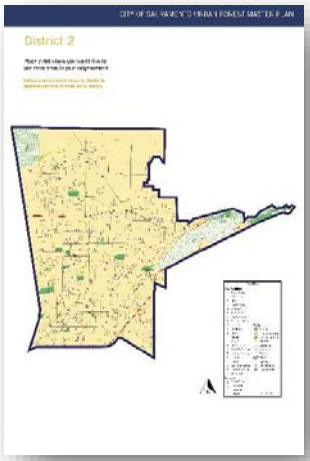


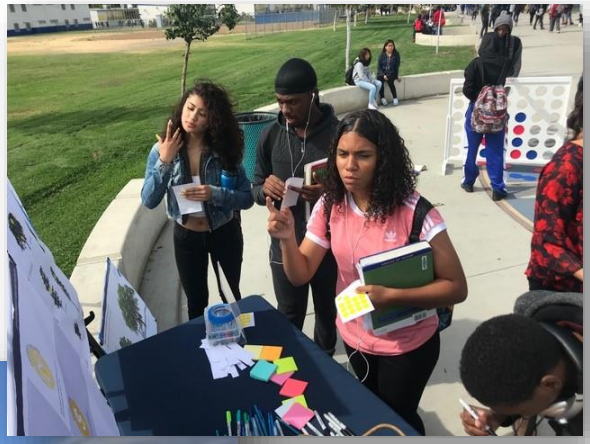
Comments:

- Greenhouse gas reduction helps with the future

Where would you like to see more trees in your neighborhood?

No input received.





District 3

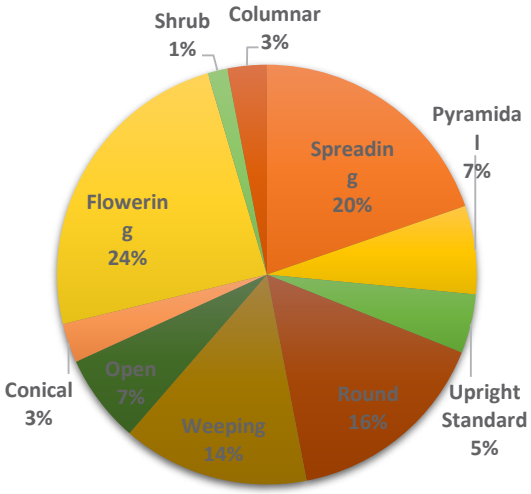
The project team held three pop-up workshops in District 3, with the help of the project's Tree Partner, Sacramento Tree Foundation, at Councilmember Jeff Harris' Food Truck Mania event at Glen Hall Park, a Sacramento Tree Foundation Mulching event at Gardenland Park, and a Sacramento Tree Foundation Planting Workshop at the South Natomas Community Center.

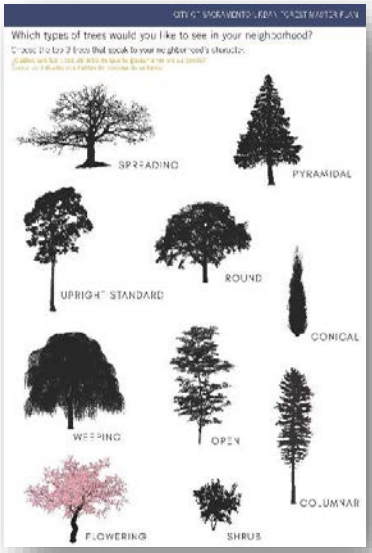
- Food Truck Mania: Friday, August 10
- Mulching Event: Saturday, August 18
- Tree Planting Workshop: Saturday, October 6

The project team received input from more than 60 community members from all pop-up workshops.

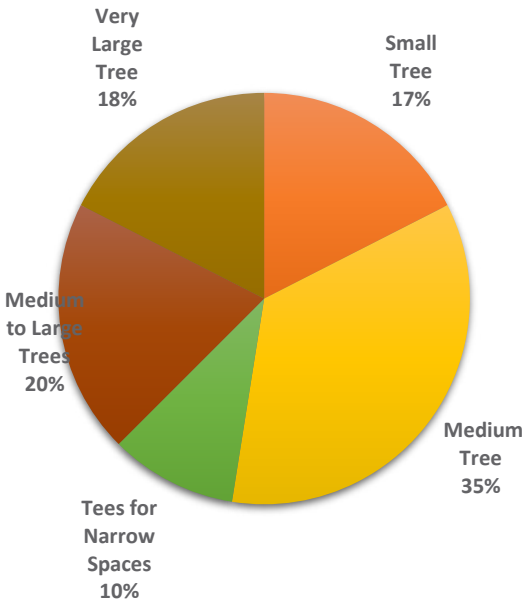
Below is a compilation of feedback received from District 3.

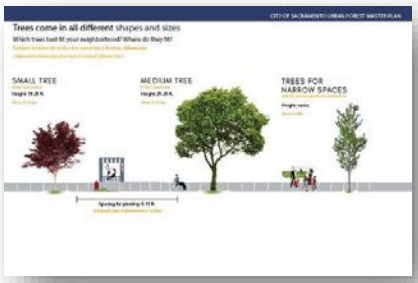
What types of trees would you like to see in your neighborhood?



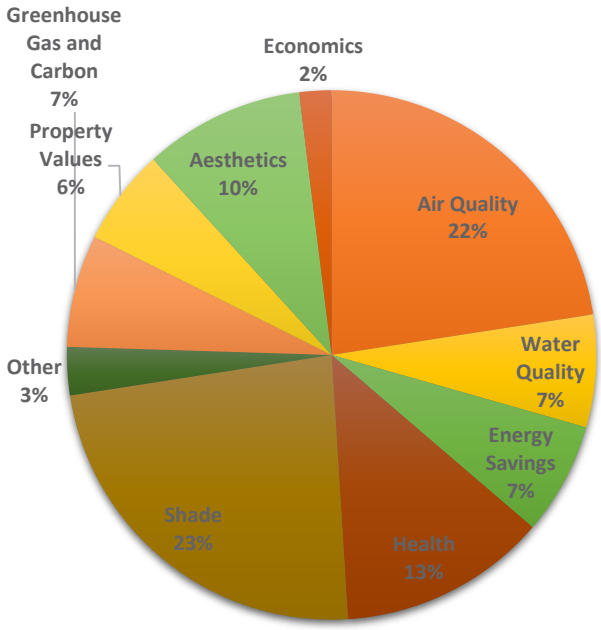


Trees come in all different shapes and sizes. Which trees best fit your neighborhood?



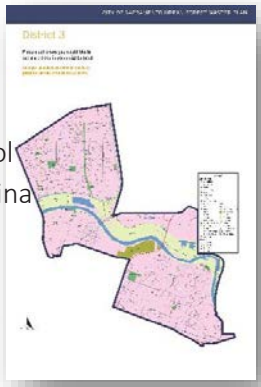


Trees have a lot to offer us. Choose the top three benefits that are most important to you?



Where would you like to see more trees in your neighborhood?

- Intersection of Nordyke Drive and Winter Garden Avenue
- Northgate Park
- South Natomas Community Park
- Cal Expo
- Sutter's Landing Regional Park
- Northgate Boulevard and Haggin Avenue
- McKinley Park
- Glen Hall Park
- Sandburg Drive
- Caleb Greenwood Elementary School
- Elvas Avenue
- J and 51st Street
- East Portal Park
- Kit Carson Middle School
- Carlson Drive and Messina Drive
- Gardenland park
- West El Camino Avenue
- Winds Parkway
- Northgate Boulevard



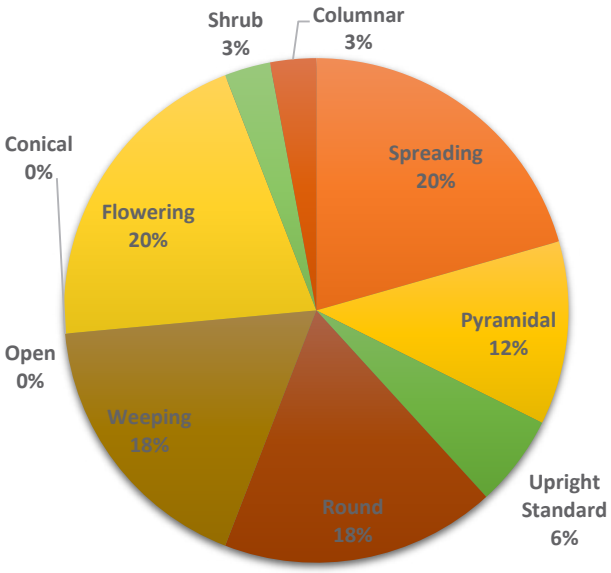
District 4

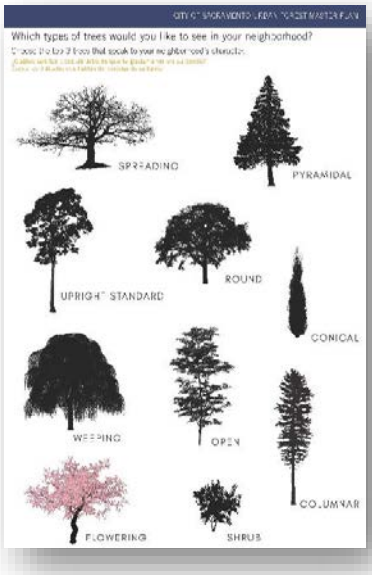
The project team held one pop-up workshop in District 4, at the Saturday morning Midtown Farmer's Market, on 20th Street between J and K Streets in Downtown Sacramento.

The project team received input from around 25 community members from this pop-up workshop.

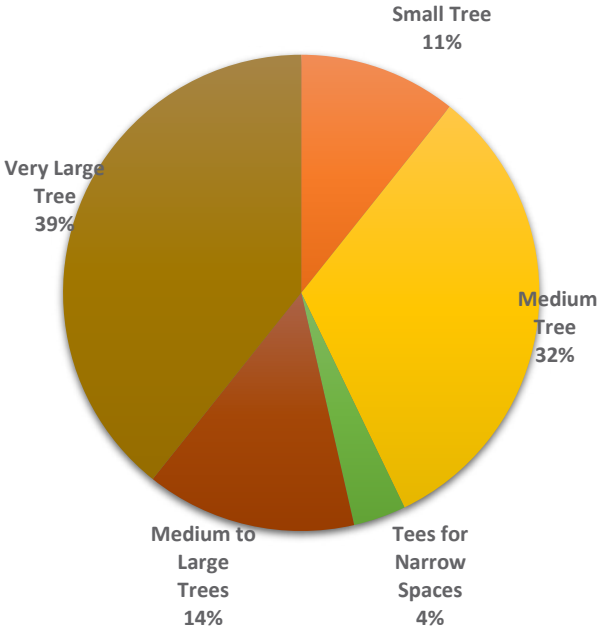
Below is a compilation of feedback received from District 4.

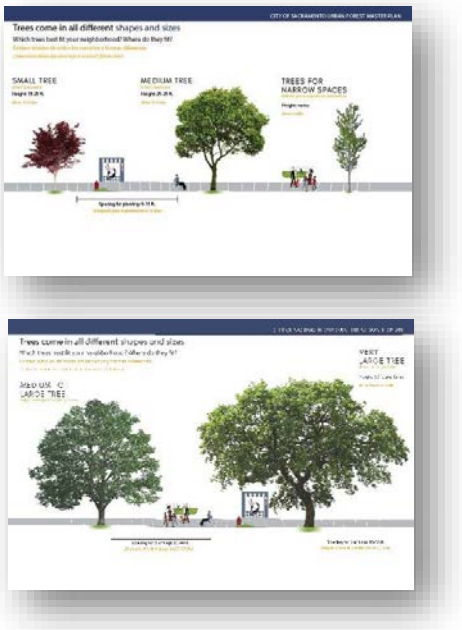
What types of trees would you like to see in your neighborhood?



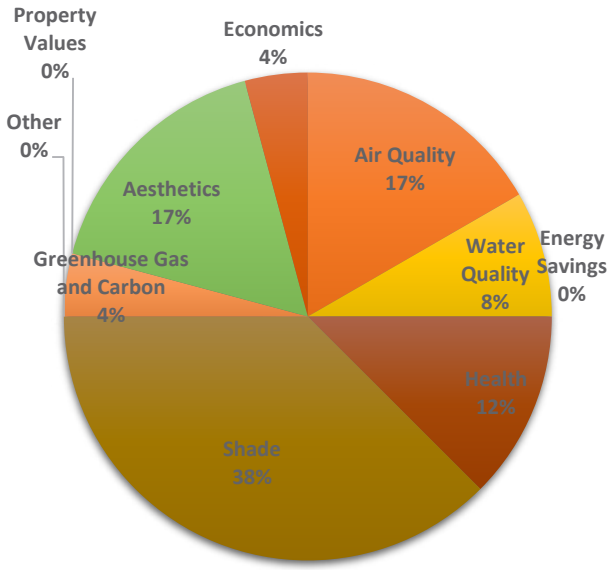


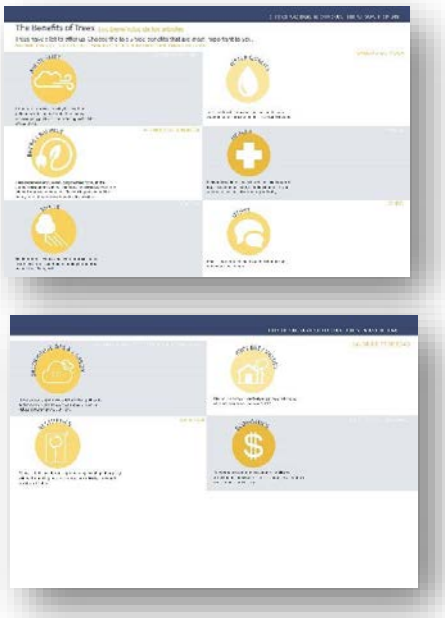
Trees come in all different shapes and sizes. Which trees best fit your neighborhood?



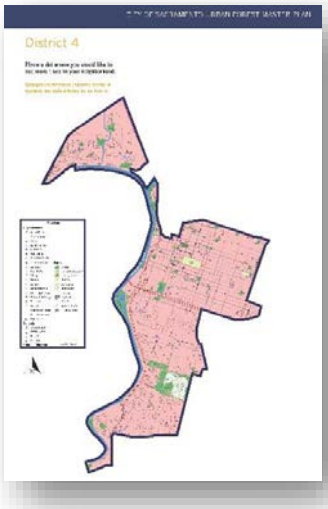


Trees have a lot to offer us. Choose the top three benefits that are most important to you?





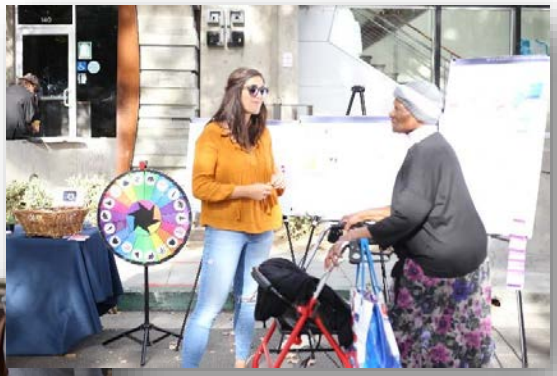
Where would you like to see more trees in your neighborhood?



- West El Camino Avenue
- Gateway Oaks Drive: Natomas Oak Park
- G and 26th Street
- Front Street under I-80
- 3rd Street, Leataata Floyd School
- Broadway and 17th Street
- S and 19th Street

Additional Comments

- Oak Park needs trees
- North Highlands needs more trees
- At the post office downtown, a tree died, was removed and nothing was re-planted.
- Freeport Boulevard needs trees
- More trees on main streets, i.e. Boulevards



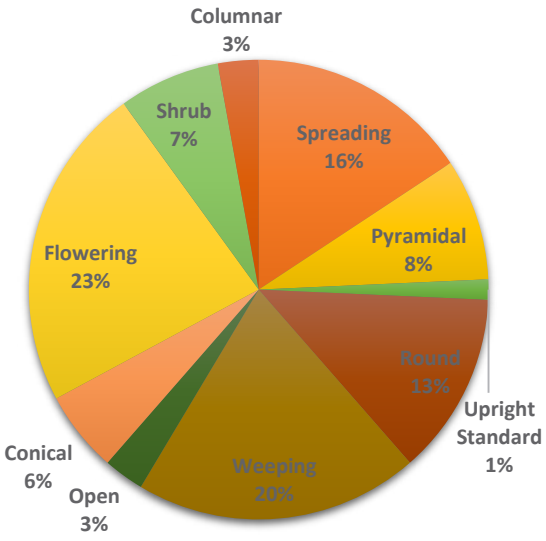
District 5

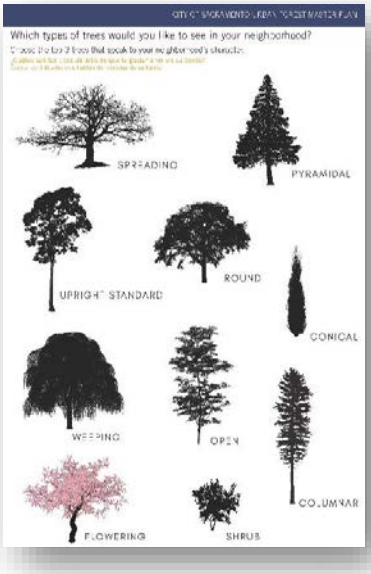
The project team held one pop-up workshop in District 5, at the Saturday morning Oak Park Farmer's Market, at McClatchy Park on Saturday, September 22.

The project team received input from more than 25 community members from this pop-up workshop.

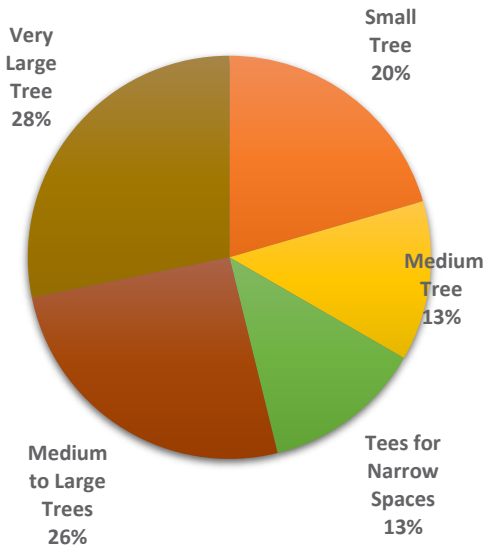
Below is a compilation of feedback received from District 5.

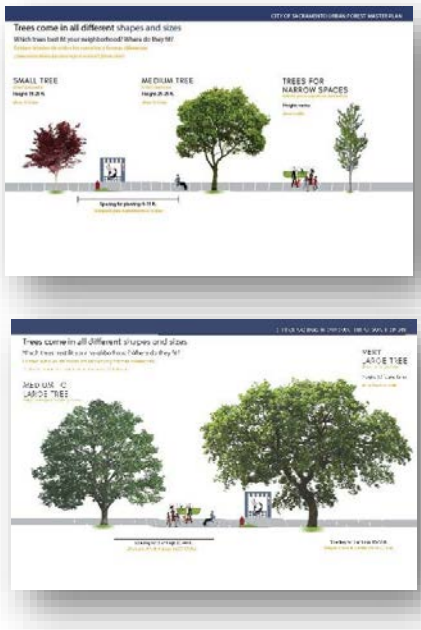
What types of trees would you like to see in your neighborhood?



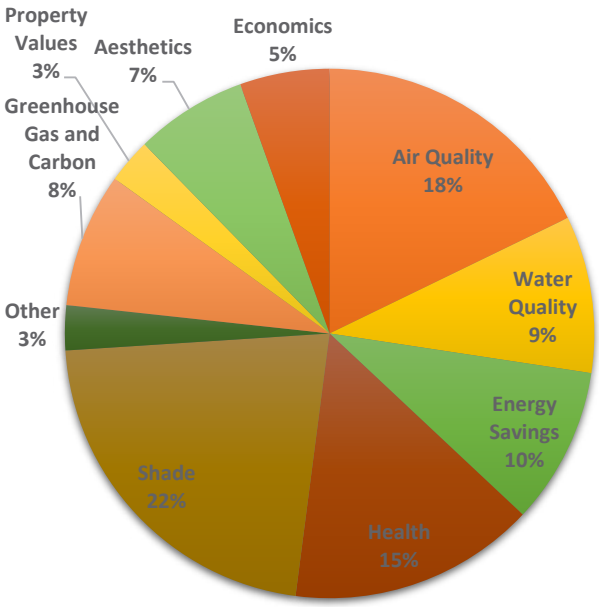


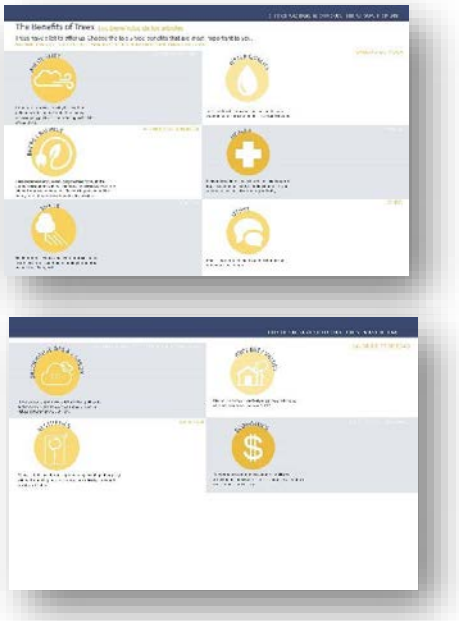
Trees come in all different shapes and sizes. Which trees best fit your neighborhood?





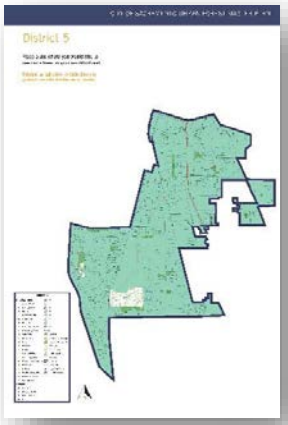
Trees have a lot to offer us. Choose the top three benefits that are most important to you?





Where would you like to see more trees in your neighborhood?

- 3rd Avenue and Santa Cruz Way
- 6th Avenue by C.K. McClatchy Park between 33rd Street and 37th Street
- 20th Avenue and 52nd Street 53rd Street Alley
- 49th Street and Lawrence Drive
- 25th and 25th Avenue between 36th Street and Martin Luther King Jr Boulevard
- 23rd Avenue and 36th Street
- 28th Street and Fruitridge Road
- Norman Way and Fruitridge Road
- Helen Way and Fruitridge Road
- 35th and 38th Avenue and Freeport Boulevard
- Police Station at Blair Avenue and Belleua Wood Lane
- Pony Express School Park at Los Cerros Drive between San Augustine Way and 58th Avenue
- Woodfield Avenue and South Land Park Drive
- Silver Oak Way and Mooncrest Way



Additional Comments

- Trees at public libraries.
- Along Freeport Boulevard and other major roads (Fruitridge Road, 12th Avenue, Sutterville Road).
- Small to medium trees south of McClatchy Park.
- Near Christian Brothers High School. People walk around a lot there.
- 14th Avenue and Lisetta Avenue. There is a church there and bus stop. Twelve to 15 people ride it, and there is no shade.
- In schoolyards throughout the city.
- Senior community on Broadway.
- 55th Avenue by EDD (Sacramento Job Services).
- Transit stop past Stockton Boulevard.
- By Gerber Road and Florin area

District 6

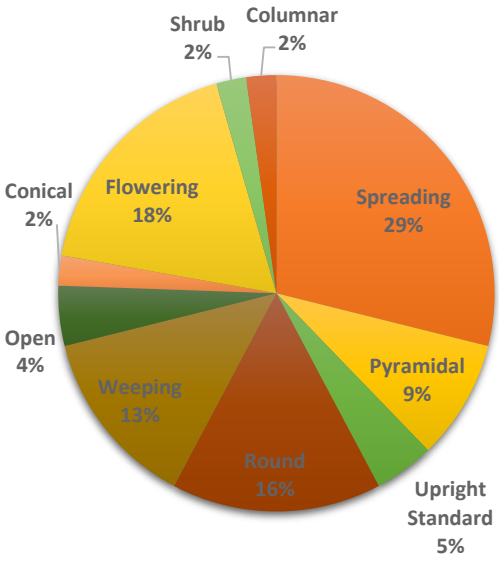
The project team held three pop-up workshops in District 6 with the help of the Sacramento Tree Foundation. The three events included Councilmember Guerra's State of the Trees, a Sacramento Tree Foundation Mulching Event, and the District 6 Resource Fair.

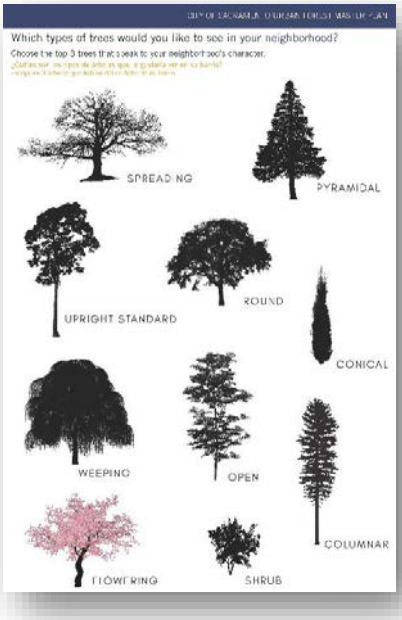
- State of the Trees: Saturday, July 28
- Mulching Event: Saturday, August 18
- Resource Fair: Friday, September 7

The project team received input from more than 50 community members from all three pop-up workshops.

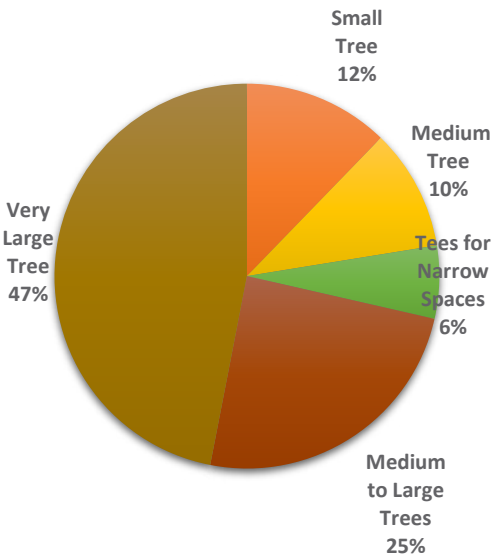
Below is a compilation of feedback received from District 6.

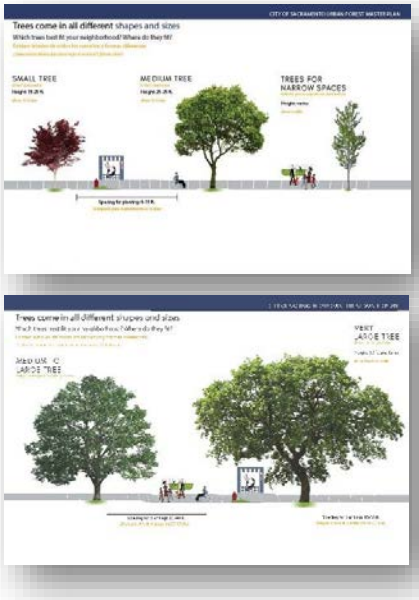
What types of trees would you like to see in your neighborhood?



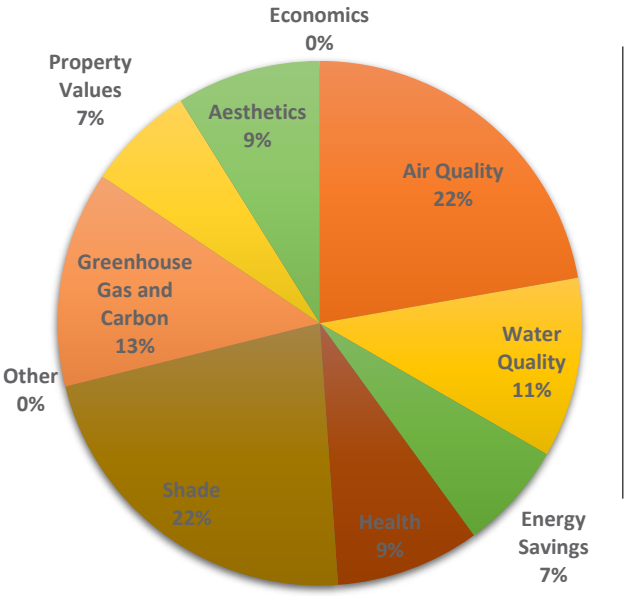


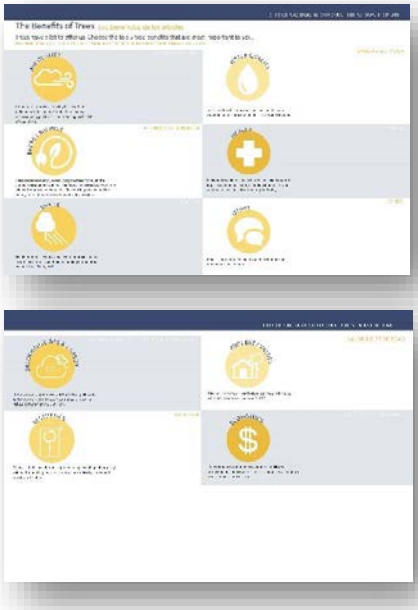
Trees come in all different shapes and sizes. Which trees best fit your neighborhood?





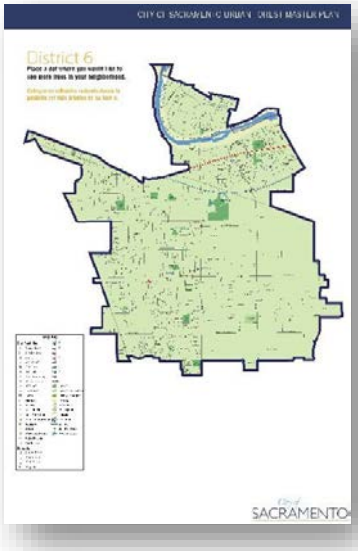
Trees have a lot to offer us. Choose the top three benefits that are most important to you?





Where would you like to see more trees in your neighborhood?

- Fruitridge Road
- Fruitridge and Power Inn
- 21st Avenue and 65th Street Expressway
- 21st Avenue at 20th Avenue
- T Street by the freeway
- Coloma Park
- Tahoe Park
- Hiram Johnson High School
- Power Inn Road and 32nd Avenue
- Power Inn Road and 37th Avenue
- Sun River Drive by George Sims Park
- Camellia Park
- Elder Creek Road



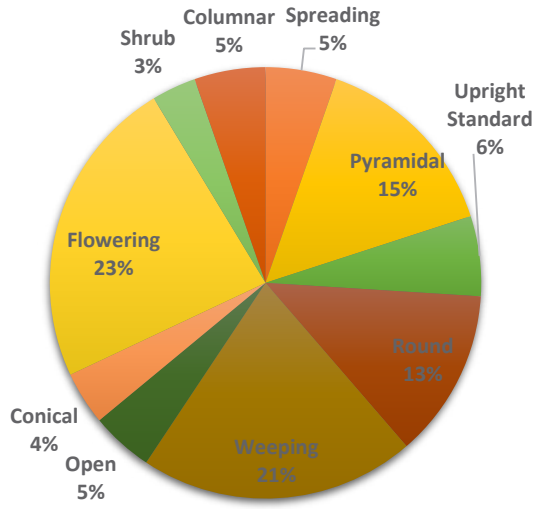
District 7

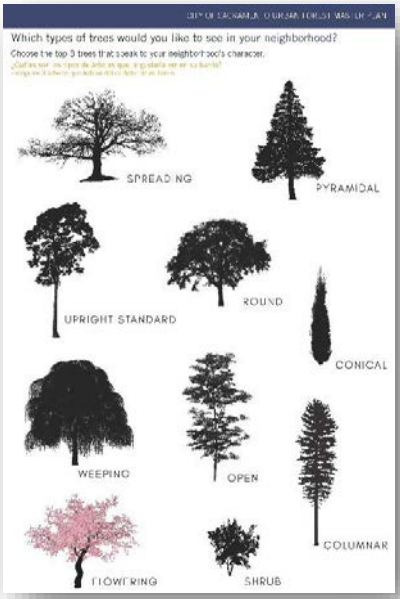
The project team held one pop-up workshop in District 7 at Councilmember Jennings Trucks & Such Foodtruck Mania and Backpack Giveaway, on Friday, August 17, at Garcia Bend Park.

The project team received input from more than 40 community members from this pop-up workshop, including young students and their parents.

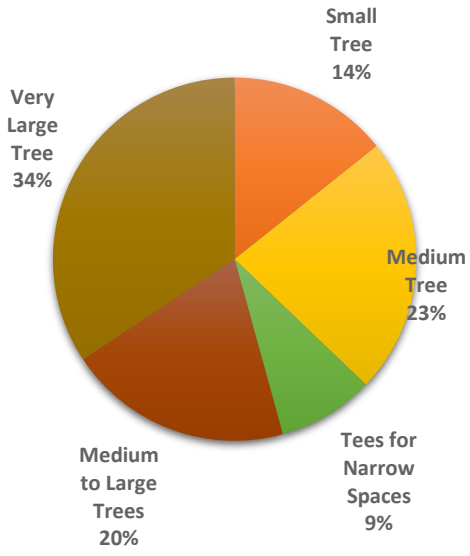
Below is a compilation of feedback received from District 7.

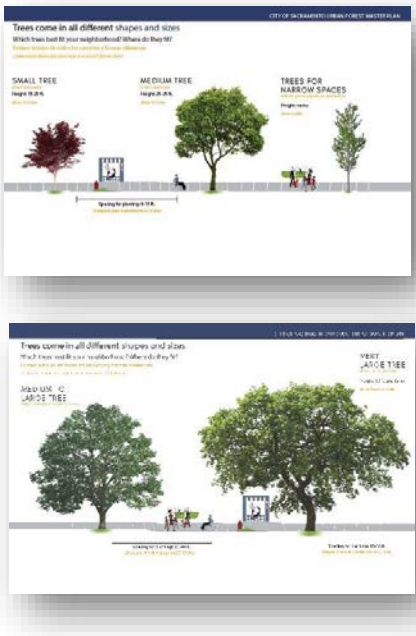
What types of trees would you like to see in your neighborhood?



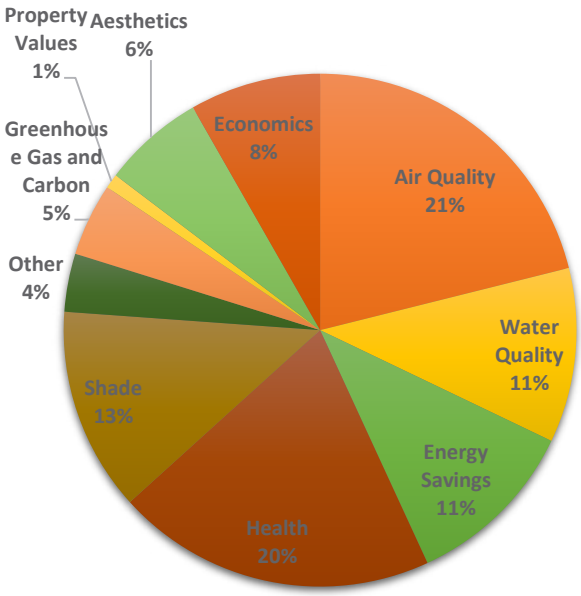


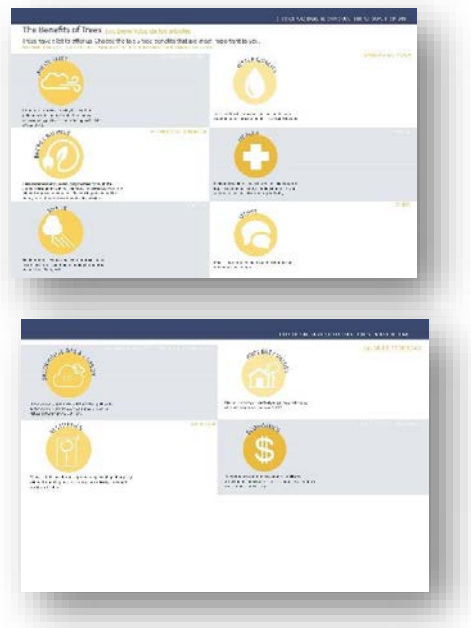
Trees come in all different shapes and sizes. Which trees best fit your neighborhood?





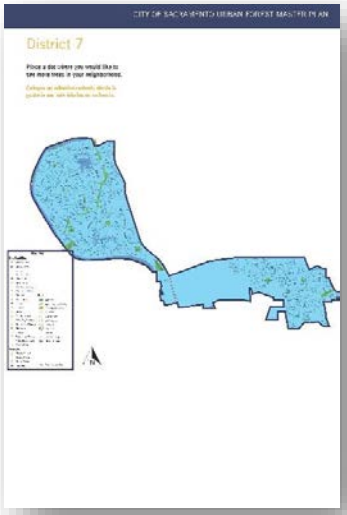
Trees have a lot to offer us. Choose the top three benefits that are most important to you?





Where would you like to see more trees in your neighborhood?

- Riverside Boulevard and Havenside Drive
- School of Engineering and Sciences
- Riverside Boulevard and Pocket Road
- Along the river at Marina Parkway
- Garcia Bend Park
- Gloria Drive and Florin Road
- Rush River Drive by Summerwind Way
- Maryhill Park City Middle School
- South Lan Park Drive and Corporate Way
- Bill Conlin Regional Youth Sports Complex
- Valley Hi Community Park
- Rocklin



District 8

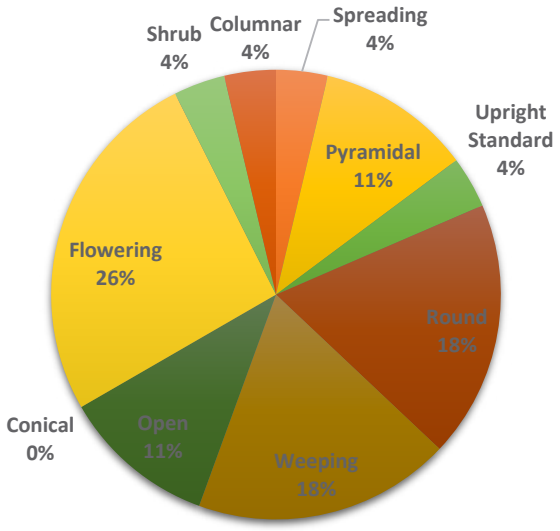
The project team held two pop-up workshops in District 8 with the help of the Sacramento Tree Foundation. The pop-up workshops included the ECOS Council Meeting and the Valley Mack Farmers Market.

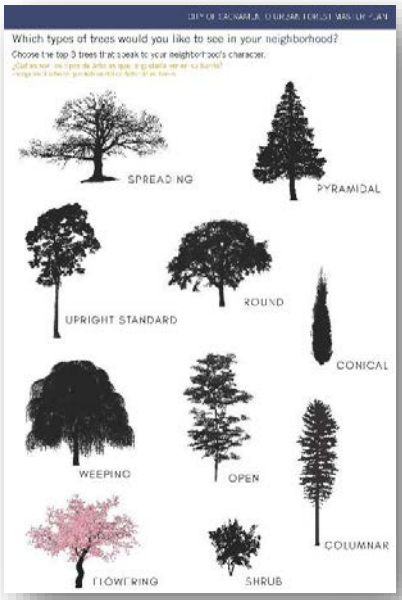
- ECOS Council Meeting: Thursday, September 6
- Valley Mack Farmers Market: Friday, September 7

The project team received input from more than 20 community members from both pop-up workshops.

Below is a compilation of feedback received from District 8.

What types of trees would you like to see in your neighborhood?





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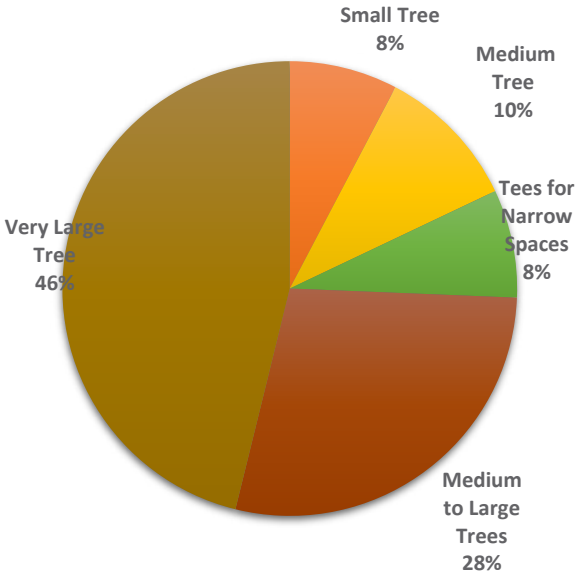

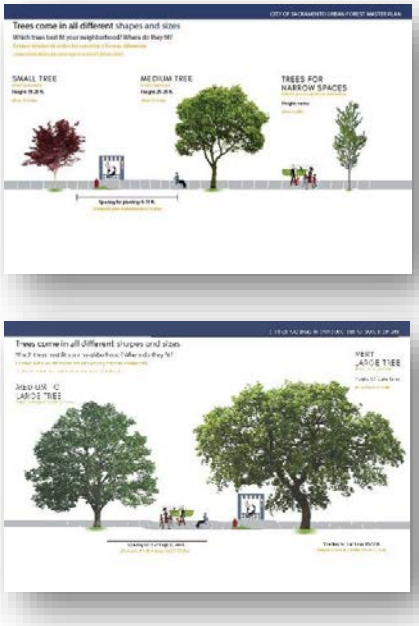

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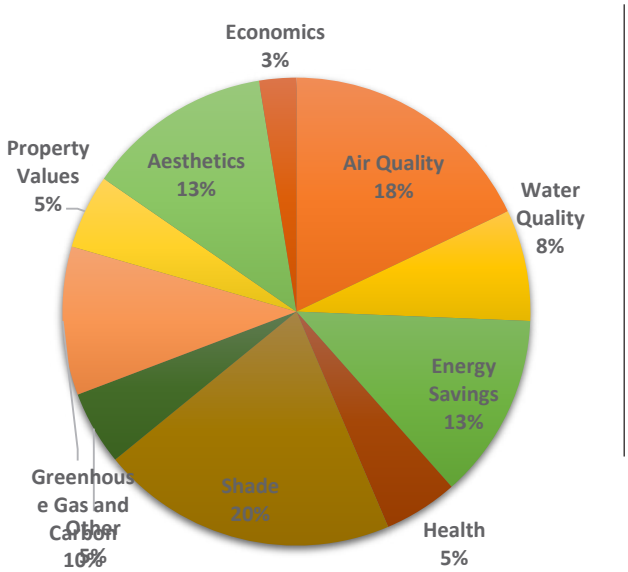
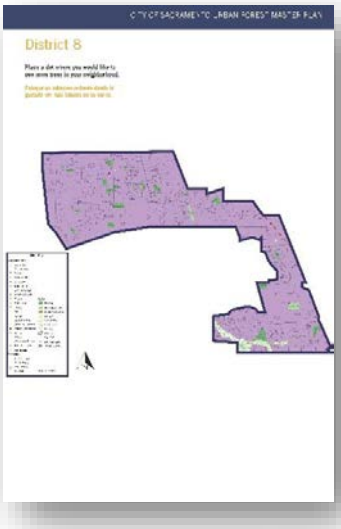


Where would you like to see more trees in your neighborhood?



- Beyond Meadowview Road and John Still Drive
- Pannell Meadowview Community Center Park
- Steve Jones Park
- Chesterbrook Drive and Laguna Star Drive
- El Terraza Drive and Gerber Road (Florin, CA)
- 24th Street Bypass Park
- 67th Avenue and 24th Street
- 24th Street and Meadowview Wood Circle
- Manuel E. Silva Park
- Steve Jones Park
- Along Meadowview Road, by the Pannell Center
- John Still Drive

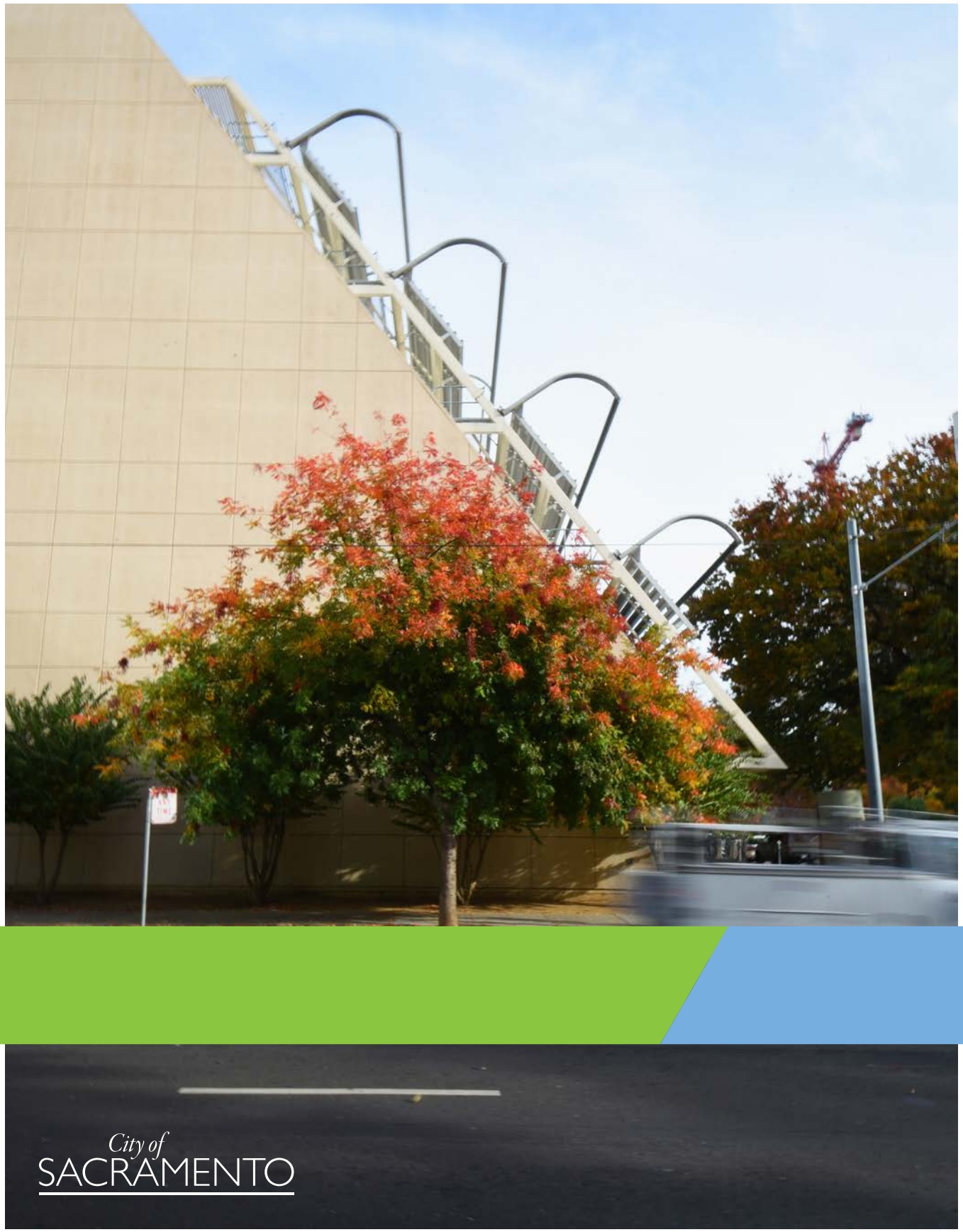
Additional Comments

- Only small trees at Steve Jones Park.
- At the schools.
- Places with grass.
- We have enough trees.

Notification

Each pop-up workshop was advertised through the City of Sacramento's Urban Forest Project webpage as well as through email notifications sent to the project's Stakeholder Representative Group and interested community members who signed up for updates through the project website and at the pop-up events with their email. The Sacramento Tree Foundation, which helped the project team hold additional pop-up workshops, also shared information to their organization.

Councilmember Angelique Ashby of District 1, Councilmember Jeff Harris of District 3, and Councilmember Rick Jennings of District 7 shared information about the pop-up workshop series through the promotion of their community events that the project team attended.



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