



TreePeople

Urban Forest Management Plan

City of Paramount

Acknowledgements

City of Paramount

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Executive Summary

The urban forest provides many benefits to the Paramount community. This plan is structured around nine benefits that directly influence community health and well-being: Mental Health, Outdoor Activities, Stormwater Management, Shading & Cooling, Climate Resilience, Social Cohesion, Privacy & Quiet, Food Forest, and Biodiversity. These benefits play a key role in framing the community engagement, analyzing the urban forest, and informing strategies and goals.

The plan reflects community perspectives through the results of a survey that was conducted at three workshops and the Eco-Friendly Fair. The survey revealed that residents believe the benefits of Shading & Cooling, Mental Health, and Outdoor Recreation were most important. Community members most want to see more trees in Schools, along Streets and Sidewalks, and in Parks. Maintenance of trees was the highest concern among residents, followed by damage caused by trees.

Paramount's urban forest depends on the social and ecological contexts that shape it. Paramount was not historically forested, but rather had coastal sage scrub and riparian habitat. Trees were important to the indigenous peoples that lived in the area who cultivated oak trees for acorns. The area began to urbanize in the 20th century, first as a dairy center, then as a center of industry.

Paramount has a climate of hot, dry summers and mild, wet winters, which supports many types of trees, especially those that are drought tolerant. Climate change is altering that balance by increasing temperatures and making precipitation more variable. Not everyone will feel the impacts of climate change equally, with vulnerable populations including low-income residents, older adults, and those with existing medical conditions, facing greater risks. Policies both at the state and local level influence the ability to fund and grow the urban forest.

Paramount has an existing tree canopy of 12%, which is distributed unevenly across the city. Different land uses have differing levels of canopy cover, with industrial areas having the least canopy and parks having the most canopy. Even within residential land use, canopy cover varies significantly, leaving low canopy neighborhoods that are highest priority areas for tree planting. Looking specifically at street trees in the public right-of-way, some neighborhoods and major streets have high canopy cover, while others have almost no public canopy.

Paramount has a very diverse urban forest, with over 200 species, and no one species comprising more than 10%. A high proportion of Paramount's trees are mature, with a lack of young trees to grow to replace them. Paramount's urban forest is very healthy, with 90% of trees in good condition and less than 2% of trees in dead or poor condition. Paramount receives over \$100,000 worth of measurable economic

benefits annually from the urban forest in the form of avoided stormwater, removed pollution, and sequestered carbon.

There are many opportunities to plant new trees in Paramount including on existing vacant sites in the public right-of-way, and by modifying existing vegetated and hardscape landscapes to accommodate more trees. Additionally, the design of the right-of-way can be adjusted to accommodate more trees, and zoning codes can be modified to create more space for the urban forest on private property.

Based on the results of the community engagement and analysis of the urban forest, canopy targets have been set for each land use. To accomplish these targets, strategies have been outlined that are supported by specific recommendations for City operations or policies to support the urban forest.

Implementing the plan will require coordinating people and funding. Stakeholders across the city have different roles in realizing the urban forest laid out in the plan. Achieving that urban forest will take time as trees grow, with differing responsibilities through time as the plan unfolds. Finally, funding to support the planting, maintenance, and engagement of the urban forest will need to be allocated to act on the strategies.

Key Takeaways by Chapter

COMMUNITY VOICES

- Mental Health, Shading & Cooling, and Outdoor activities were the most desired benefits with 86% of resident ranking them as highly desirable
- Public land including Streets & Sidewalks, School Property, and Public Parks are the highest priority planting locations
- Tree maintenance is the highest area of concern of the urban forest
- Community members are supportive of the project and would like to see more trees in Paramount, as well as more engagement around the urban forest

CONTEXT

- The landscape of Paramount has gone through many transitions from Indigenous managed oak woodlands to an urban city
- Paramount has a warm, semi-arid climate that is projected to become hotter and less predictable with climate change
- Environmental burdens are disproportionately felt by vulnerable populations
- State regulations influence the resources dedicated to the urban forest and local regulations influence the land use available for tree planting

EXISTING FOREST

- The existing public urban forest is diverse, mature, and healthy
- Tree canopy varies considerably by land use
- There is an unequal distribution of canopy cover within land uses requiring some areas to be prioritized to create an equitable urban forest

OPPORTUNITIES TO GROW

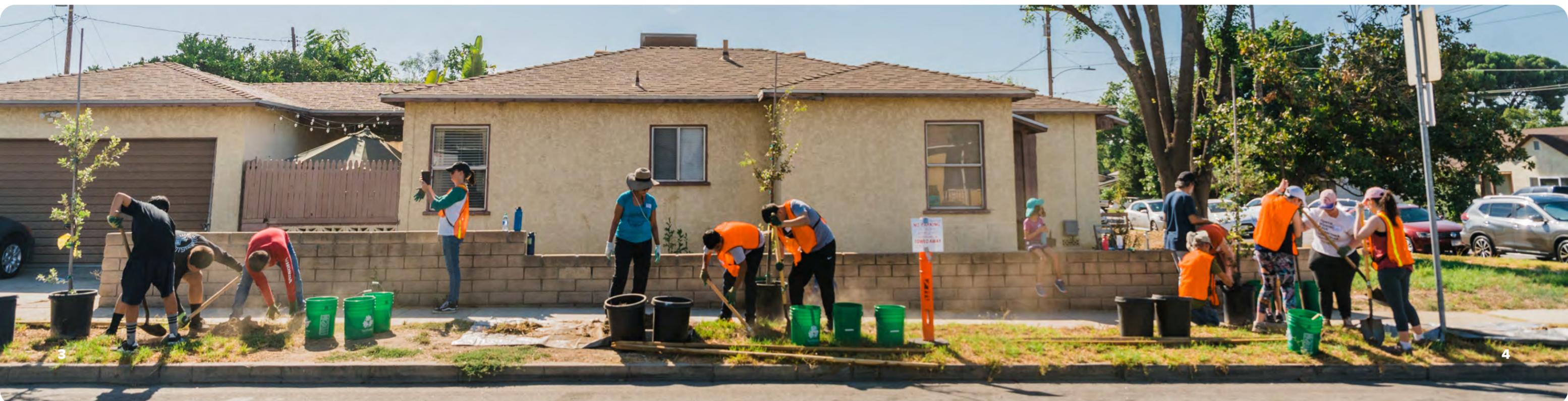
- There is a lot of potential to increase tree canopy in Paramount, realizing much of this potential will require modifying existing paved areas
- More space can be created for the private urban forest by adjusting residential, commercial, and industrial zoning requirements
- Reallocating space in the public right-of-way from cars to trees creates space for more public trees, allows larger trees to be planted, and reduces conflict between trees and sidewalks

GOALS AND STRATEGIES

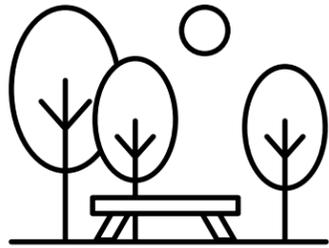
- Prioritizing planting trees early in the project will allow time for tree growth throughout the project
- Coordinating stakeholders will help achieve a common goal
- Funding will be required to implement strategies
- The plan is a living document that will change over time

IMPLEMENTATION

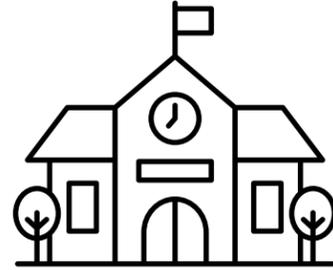
- Citywide canopy goal is supported by goals for each land use based on community priorities and existing canopy
- Planting large trees will make it easier to achieve canopy goals with fewer planting spaces
- Strategies support canopy goals with specific operations and policy recommendations



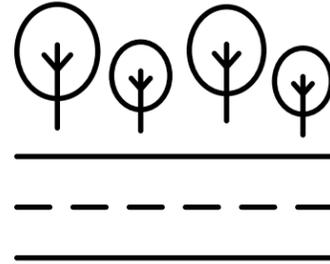
Goals



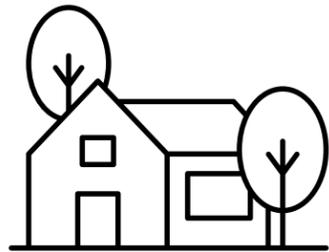
30%
canopy in
public parks



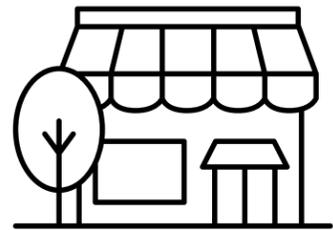
30%
canopy in
school zones



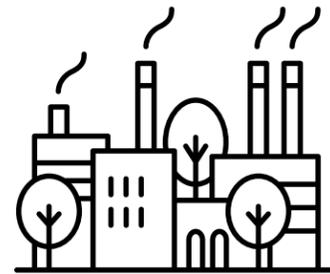
25%
canopy along
the right-of-way



25%
canopy in residential
neighborhoods



15%
canopy in
commercial districts



10%
canopy in
industrial zones



20%
canopy citywide

Strategies

Plant	1. Provide green areas for recreation in parks and around schools
	2. Maximize shade in the public right-of-way
	3. Create immersive green neighborhoods for all residents
	4. Ensure industrial areas maintain beneficial canopies
	5. Create canopied commercial corridors
	6. Pursue opportunities to expand the urban forest
Protect	7. Conserve the existing public urban forest
	8. Conserve the existing private urban forest
Partner	9. Partner with agencies outside the City to coordinate tree planting
	10. Engage the community with the urban forest

Vision

A future where trees are abundant throughout the City and accessible to the whole community, creating immersive greens spaces in all neighborhoods, providing cooling on hot days, and promoting opportunities for outdoor recreation



Image: Arbor Day 2018 (Source: City of Paramount)



Image: Arbor Day 2018 (Source: City of Paramount)

"I hope that with this urban forest we are able to see the sidewalks lined with tall shady trees once again."

"I love that Paramount is recognized as such a green, tree filled city. Let's continue that!"



Introduction

Importance of having a plan for managing and growing the urban forest

Trees on public land and private property collectively form the urban forest of Paramount. The urban forest serves as part the City’s critical infrastructure, which, like sidewalks and utilities, provides essential services that must be invested in and maintained. As such, a solid and agreed upon plan for managing the urban forest is needed to guide policy, investments, and effective management practices.

Urban forest management planning creates a road map towards an urban forest that provides a multitude of benefits to all residents of Paramount and is cared for in a way that allows the trees and the community they serve to thrive.

The importance of planning for the urban forest is essential now more than ever. Environmental hazards like climate change mean we need resilient living infrastructure like trees to help adapt to the changes happening now and in the years ahead.

A good plan guides smart investing in the urban forest to realize a greener and more resilient Paramount in the future. It is necessary as maintaining and growing a forest in the urban fabric requires being intentional about making space for trees. Planning for the future of the urban forest will require finding more opportunities to plant trees and creating the capacity to care for those trees over the course of their lives.

Creating Paramount’s Urban Forest Management Plan

This plan was created with input from community members, guidance from the City, and analysis of existing forest conditions and policies. Together, these insights informed recommended strategies to grow and sustain the urban forest over the next 50 years with expectation that the plan will be updated every 10 years based on progress made and changing community needs.

Trees in Paramount provide many benefits—a background of bird song, shady places to rest, or calming green scenery—and so naturally that they can go unremarked upon in daily life. Unremarked or intentionally beloved, the urban forest has a profound impact on community resilience, personal health and well-being, business success, and overall quality of civic life in Paramount.

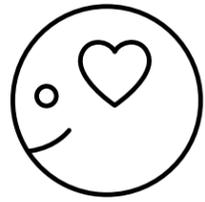
While by no means inclusive of all the services of the urban forest, nine existing or potential benefits of the urban forest—listed and described in the **Urban Forest Benefits** chapter—are used extensively to develop Paramount’s urban forest management plan. Selection of benefits was guided by several considerations with priority for benefits that residents could reasonably be expected to have experienced directly and therefore could provide input based on this experience in Paramount.

To realize specific benefits, especially those important to the Paramount community, strategies for growing the urban forest can be optimized by species selection, location of trees, and the extent of tree canopy in different parts of the city. However, trees can provide multiple benefits simultaneously and, therefore, a healthy and growing urban forest can improve all.

Workshop surveys asked members of the Paramount community to prioritize which of the nine benefits were most relevant to them and where in the city it was most important to gain more of urban forest benefits. See the **Community Voices** chapter.

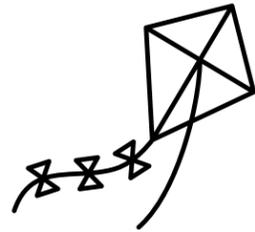
The current urban forest was assessed for its contributions to these benefits in the **Existing Forest** chapter. This analysis leads to an exploration of ways to expand the urban forest in the **Opportunities to Grow** chapter. These opportunities were developed into actions to move the existing forest to better support the benefits prioritized in community surveys in the **Goals & Strategies** chapter. Finally, coordination of resources as well as resources to enact these actions are laid out in the **Implementation** chapter.

Benefits of the Urban Forest



Mental Health

Provides immersive green spaces that are accessible to all residents



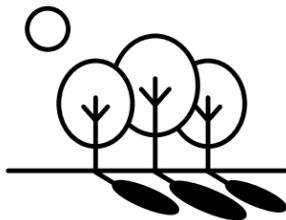
Outdoor Activity

Supports a wide array of recreation outdoors



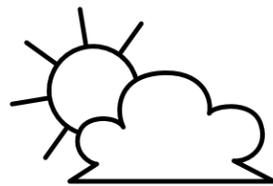
Stormwater Capture

Supports a wide array of recreation outdoors



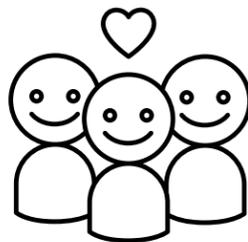
Shade and Cooling

Provides shade and cooler temperatures



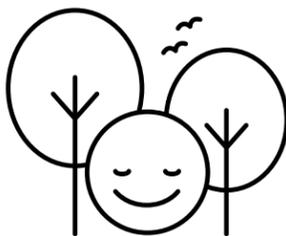
Climate Resilience

Thrives in a hotter, drier climate



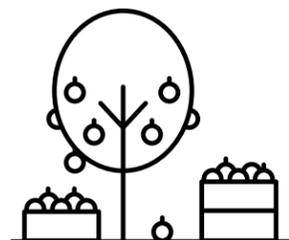
Social Cohesion

Encourages gatherings in spaces like public squares and parks



Privacy and Quiet

Provides screening to create privacy and filter noise



Food Forest

Provides culturally relevant fruits and nuts



Biodiversity

Supports biodiversity and provides a wildlife habitat



Community Voices

Key Takeaways

- Mental Health, Shading & Cooling, and Outdoor Activity are the most desired benefits
- School Property, Streets & Sidewalks, and Public Parks are the highest priority planting locations
- Maintenance is the highest area of concern of the urban forest
- Community members are supportive of the project and would like to see more trees in Paramount, as well as more community engagement around the urban forest

“I would like all the areas where there is free space to be populated with trees... All for a better planet.”

“Me gustaria que se poblara de arboles todas las areas donde esta el espacio libre... Todo por un planeta mejor.”

WORKSHOPS

Members of the Paramount community were engaged to understand their priorities and concerns regarding the urban forest. Community engagements included outreach to recruit participants with a broad range of perspectives to participate in workshops with an activity-based survey.

Three workshops, conducted in English and Spanish, were held at Progress Park Plaza and the Paramount Park Community Center. Workshops included an educational presentation on nine benefits of the urban forest as listed and described in the **Benefits of the Urban Forest** chapter as well as a summary of Paramount’s existing forest and a description of the urban forest management planning process. Following the presentation, participants completed activities in a survey packet. Workshops concluded with a tree planting and care demonstration after which participants were invited to take home a free fruit tree.



Image: Urban Forest Management Plan Workshop (Source: Adam Corey Thomas)

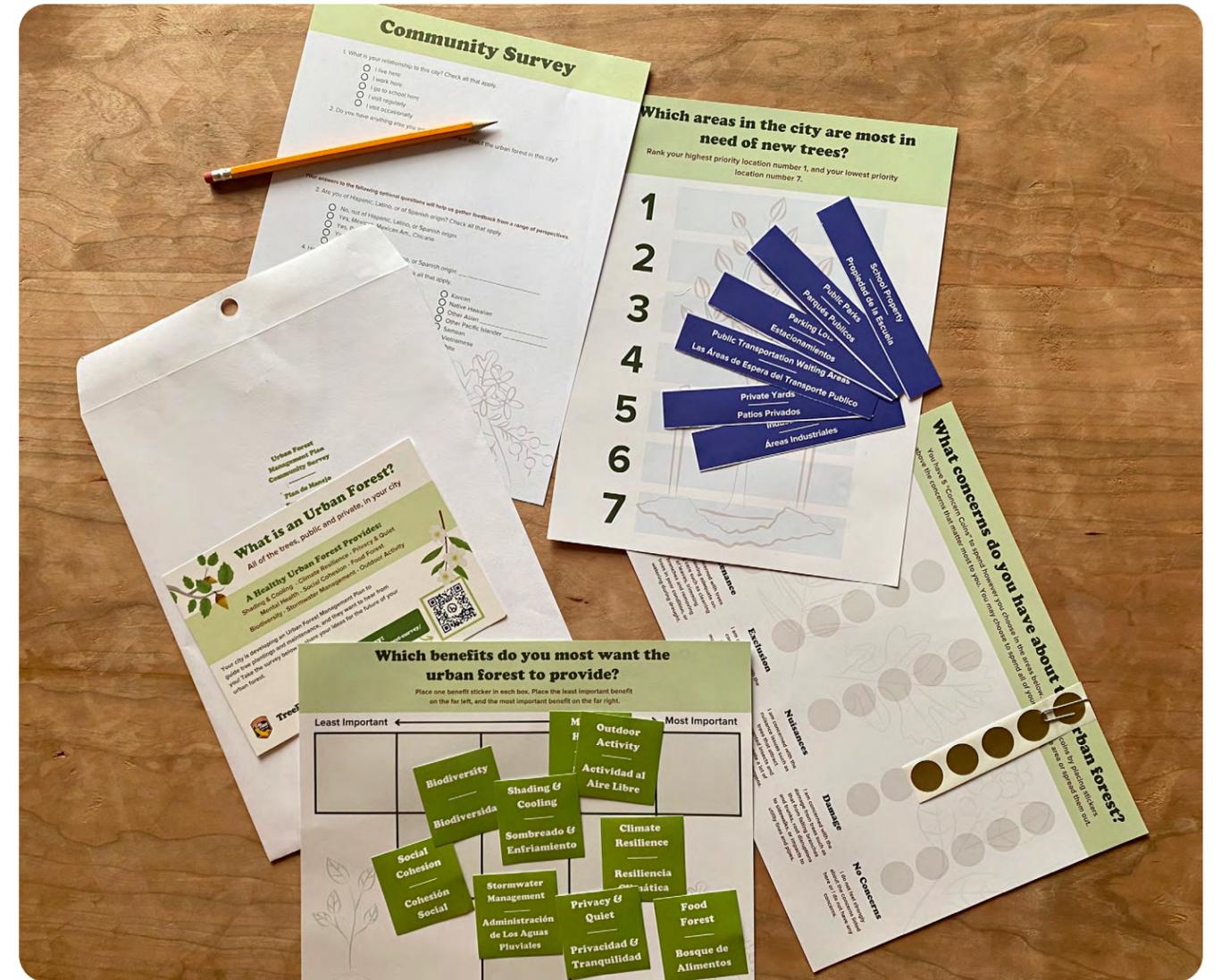


Image: Survey activity packets (Source: Mary Hillemeier)

SURVEY ACTIVITY PACKETS

The surveys included three one-page activities that asked 1) which benefits of the urban forest are most important to community members, 2) where it is the highest priority to plant new trees, and 3) what are the top concerns about the urban forest. The colorful worksheets were provided in Spanish and English with stickers to indicate selections. Packets also included a brief demographic questionnaire with an opportunity for participants to give additional open feedback.

Outside of the three community workshops, community members completed the survey at the Paramount Eco-Friendly Fair in April 2023. Participants were also given a free fruit tree in exchange for completing the survey at the fair. Further, some community members completed the survey online, through a link distributed via the workshop take-home flier or through digital promotion.

In total, 120 surveys were completed.

What benefits do you most want the urban forest to provide?

This survey activity asked participants to rank the nine benefits of the urban forest, as listed and described in the **Benefits of the Urban Forest** chapter, from most to least important. The question was structured so participants had to create a hierarchy of benefits, such that not all benefits could be considered of high importance. Benefits rated lower are still potentially important benefits for the urban forest to provide, but were considered less important than other benefits.

While the benefits collectively identified as most important carry a lot of weight in this plan, it is also relevant that many participants rated benefits that performed lower overall as among the benefits most important to them.

Benefit	Top 3 Choice (% of participants)
Shading & Cooling	49%
Mental Health	48%
Outdoor Activity	38%
Food Forest	38%
Climate Resilience	32%
Stormwater Management	32%
Privacy & Quiet	26%
Biodiversity	19%
Social Cohesion	18%

Percent of participants with a benefit in their top three most important

Least Important

Important

Most Important

Mental Health

Shading & Cooling

Outdoor Activity

Climate Resilience

Stormwater Management

Food Forest

Privacy & Quiet

Biodiversity

Social Cohesion

Overall community rankings for relative importance of benefits for the urban forest to provide

Which areas in the city are most in need of new trees?

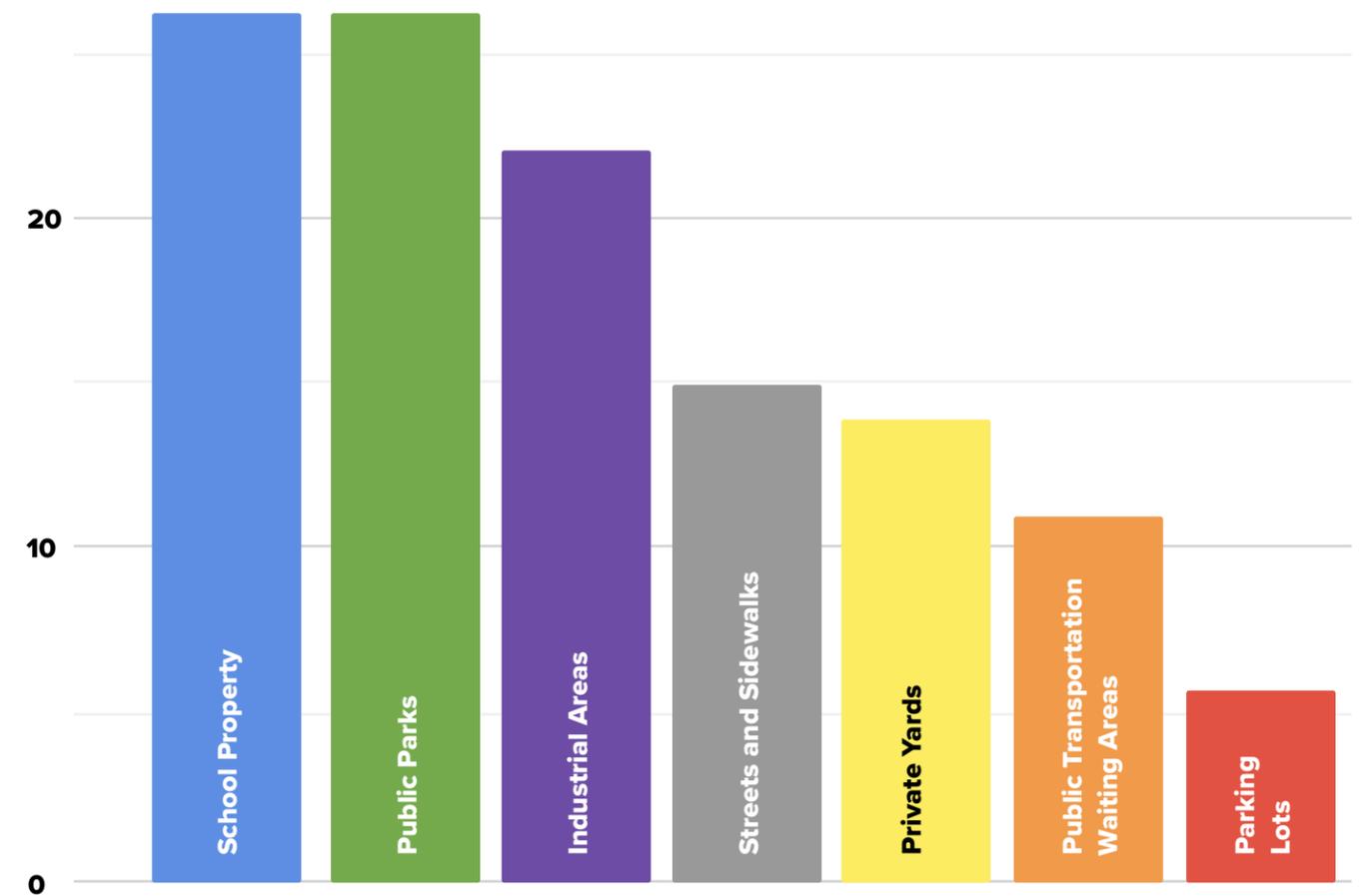
Survey participants ranked the types of locations in Paramount most in need of new trees. School Property followed by Streets & Sidewalks and then Public Parks were ranked the highest priority areas to grow the urban forest. Industrial Areas and Parking Lots were ranked the lowest priority areas to plant new trees with Private Yards as ranked similarly low in relative priority.



*Tied at 6

Overall community rankings for priority locations to plant more trees and grow the tree canopy

Of special note, Industrial Areas, though ranked low in the collective rankings, were the third most frequently cited by participants as their highest priority location for new trees. While participants were not asked to explain their rankings, there are a number of possible reasons for Industrial Areas being a top rank for many participants, including those who live or work in or near industrial areas viewing them as a higher priority as well as participants viewing Industrial Areas as sources of pollutants they would like to see mitigated.



Number of participants ranking each location as their top priority for planting more trees



What concerns do you have about the urban forest?

Survey participants were asked to allocate five 'concern coins' over five categories. More coins placed in a category indicated this was a greater concern. The categories were titled and described as:

Maintenance

I am concerned with trees not receiving adequate on-going care such as cleaning of leaves, trimming of branches and removing trees in poor condition, or watering during drought.

Damage

I am concerned with the damage from trees such as that from falling branches and trunks, root disruptions to sidewalks, or impacts to utility lines and pipes.

Nuisances

I am concerned with the nuisance issues such as trees that attract unwanted insects and pests or create a lot of pollen and other allergens.

Exclusion

I am concerned with the community not being consulted in forest management decisions or not being included in stewardship activities.

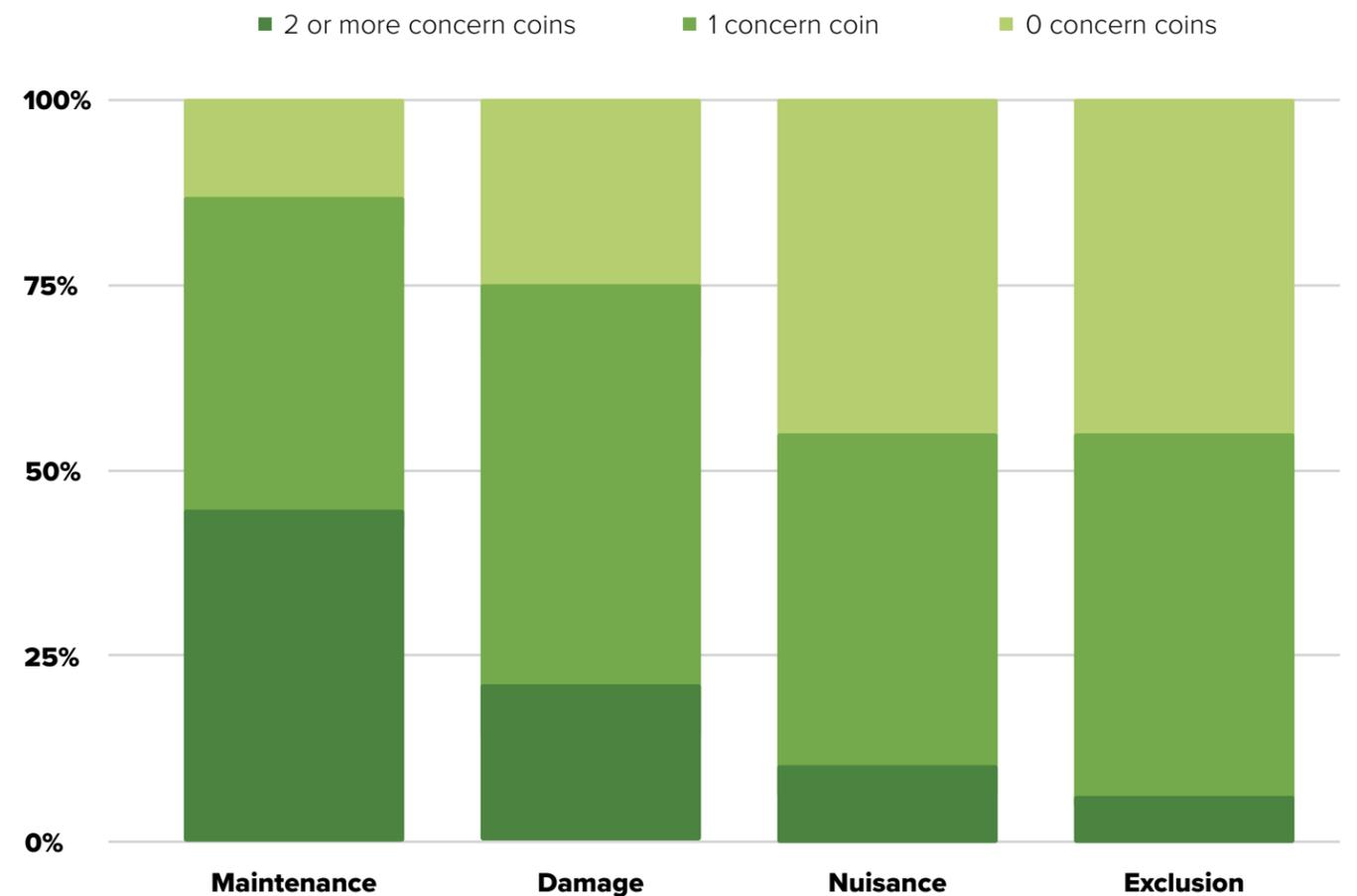
No Concerns

I do not feel strongly about the concerns listed here or I do not have any concerns.

GOOD UPKEEP IS PARAMOUNT

Maintenance is the clear top concern as 87% of participants spent at least one concern coin in the category and 45% allocated two or more of their five concern coins, twice as many as the next highest category.

Damage is the second biggest concern as marked by three-fourths of participants. If damage is perceived as due to maintenance issues, the results indicate that ongoing care and repair is central to urban forest management in Paramount.



A majority of survey participants expressed concern for all issues with nearly half emphasizing maintenance of the urban forest as a top concern.

Do you have anything else you would like to share about the urban forest in Paramount?

Survey participants were provided the opportunity to provide written comment to this open ended question as an opportunity to provide feedback that was not captured by the activities.

Out of 120 completed surveys, 36 respondents provided written input in response to this prompt.

Thirteen comments voiced strong support for the urban forest planning project and enthusiasm for more trees.

Other commenters provided personal reflections on the urban forest, specific directives about what they would like to see, and other guidance. Specific themes mentioned included the following.

- Wanting more engagement with the community around environmental stewardship and tree care
- Reinforcing the findings by further voicing concern regarding the maintenance of city trees in support of tree survival, protection against pests, and pruning as well as sharing feelings of sadness over tree removals
- Advocating for more trees, some for public places like parks, schools, and along sidewalks, others in areas where the City lacks greenery such as next to the freeway and industrial areas, and others advocating for more trees on private property
- Voicing a desire for a greater diversity of trees

“Would like to see more equity in the urban forest. Planting in areas where the community has a lack of greenery.”

“I would like to see efforts spent on educating our community on the importance of environmental stewardship.”

“It would be great to have fruit trees in public spaces and beautiful huge trees that create lots of shade.”

“This city is beautiful because of the trees. Makes me feel happy.”

Context

Key Takeaways

- The landscape of Paramount has gone through many transitions from Indigenous managed oak woodlands to an urban city
- Paramount has a warm, semi-arid climate that is projected to become hotter with climate change
- Environmental burdens are disproportionately felt by vulnerable populations in Paramount
- State regulations affect resources for urban forestry and local regulations influence the land use available for tree planting

NATURAL HISTORY OF PARAMOUNT

Natural history and past ecological relationships are important to acknowledge when managing the urban forest as it now becomes part of that story. While they are not present within Paramount today, the historical ecosystems of Paramount were coastal sage scrub and riparian forest.

Coastal sage scrub ecosystems in the region contained few trees and were primarily composed of low-growing shrubs. Plants in coastal sage scrub are adapted to capture water from fog and light rain. Common coastal sage scrub plants include sagebrush, black sage, purple sage, and buckeye. Coastal sage scrub supports a diversity of wildlife, including 150 species of butterflies, 1500 species of bees, and 150 species of birds including the endangered California Gnatcatcher.

Riparian forest would have been found in a narrow corridor along the Los Angeles River, and be composed of water-loving plants, including trees such as willows, cottonwoods, alders and sycamores.



SOCIAL HISTORY OF PARAMOUNT

Paramount is on the ancestral lands of the Chumash and Tongva-Gabrielino people, who have lived in the region for around 9,000 years. Indigenous people shaped the ecological landscape through low-intensity managed burning that converted shrubland to grassland mixed with oak woodland.

Beginning in 1769, Spanish colonizers settled in the area. The oak groves were logged, and orchards or vineyards planted in their place. Fields were used to graze livestock leading to replacement of historical meadow species with invasive grasses from Europe adapted to the Mediterranean climate and livestock grazing.

Early in the 20th century, a population boom began in what was then known as the villages of Hynes and Clearwater emerged as a center for dairy and hay production and was known as the “World’s Largest Hay Market.” Each day, the price of hay would be set under a large camphor tree, known as the Hay Tree. Today, the Hay Tree stands 50 ft tall and is designated as a California Historic Landmark.

Starting in the mid-20th century, Hynes and Clearwater combined to form the City of Paramount and converted to a center of industry and commerce alongside suburban development. Beginning in the 1960s, Paramount made improvements to civic life through street and sidewalk upgrades and creating parks. Trees from around the world were introduced and cultivated, creating the primarily non-native urban woodland that exists in Paramount today.

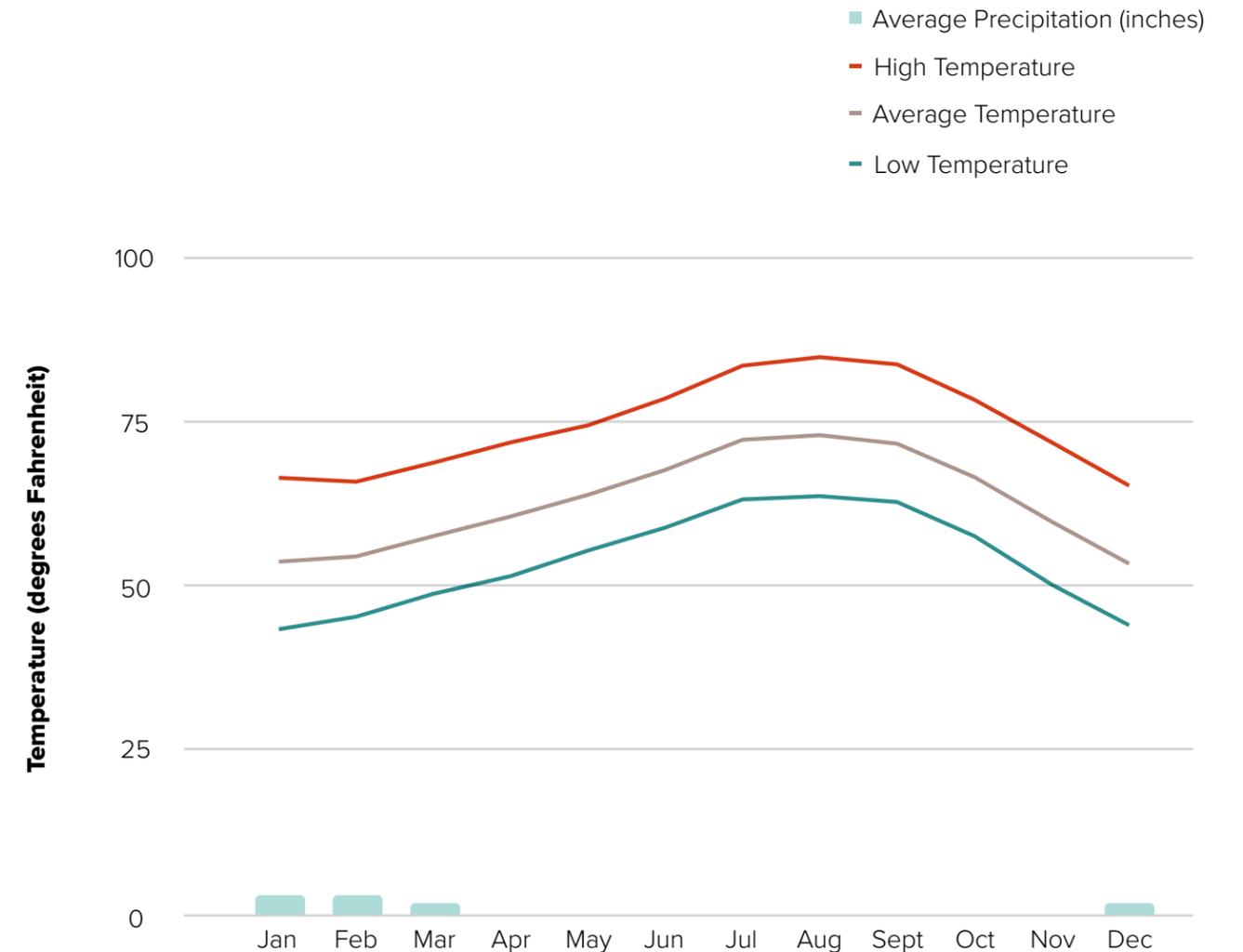


Image: Paramount & Jackson Boulevard circa 1930. (Source: Paramount Historic Gallery)

CLIMATE OF PARAMOUNT

Paramount is classified as having a Hot-Summer Mediterranean climate. It has a temperate climate with dry, hot summers and mild winters. Paramount receives an average of 14 inches of rain annually, which primarily falls between the months of December and March.

The climate of Paramount is important because it determines what kinds of trees can thrive here. Fortunately, due to the mild winters, many tree species can grow in Paramount with the right care. In particular, trees require regular irrigation during their establishment years and for some species irrigation can reduce drought stress during dry or especially hot periods.



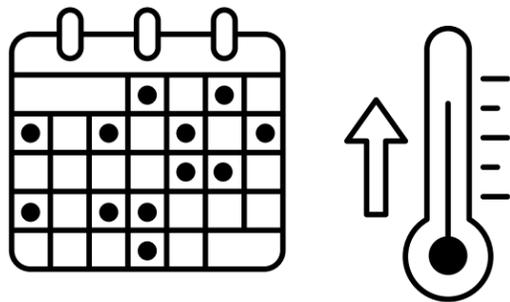
Mild winters means many tree species can grow in Paramount and thrive with good tree care through hot or dry periods.

CLIMATE CHANGE RESILIENCE

Climate change is creating more extreme heat days for Paramount. In urban areas, hot days are made hotter as pavements hold more heat limiting nighttime cooling.

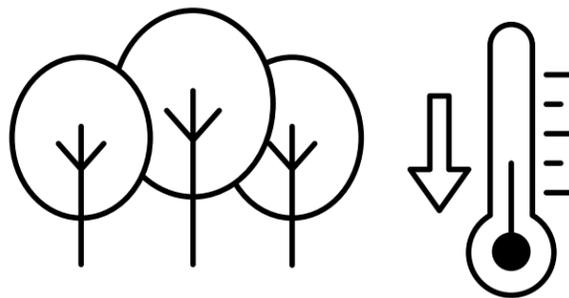
A healthy urban forest with big trees and widespread canopy cover can help build resilience to extreme heat because trees provide shade, which is not only cool to stand under but also reduces heat absorbed by hard surfaces. In addition to blocking heat, healthy trees cool the air through evapotranspiration. The extent of the cooling benefits of trees depend on the type of tree, their size, and their health as dependent on care and maintenance.

The number of days above 90°F each year is expected to increase 60 days before the end of the century



The average high temperature is projected to increase up to 8°F by the end of the century

Shade from trees can cool surfaces 20°F-40°F compared to surrounding surfaces



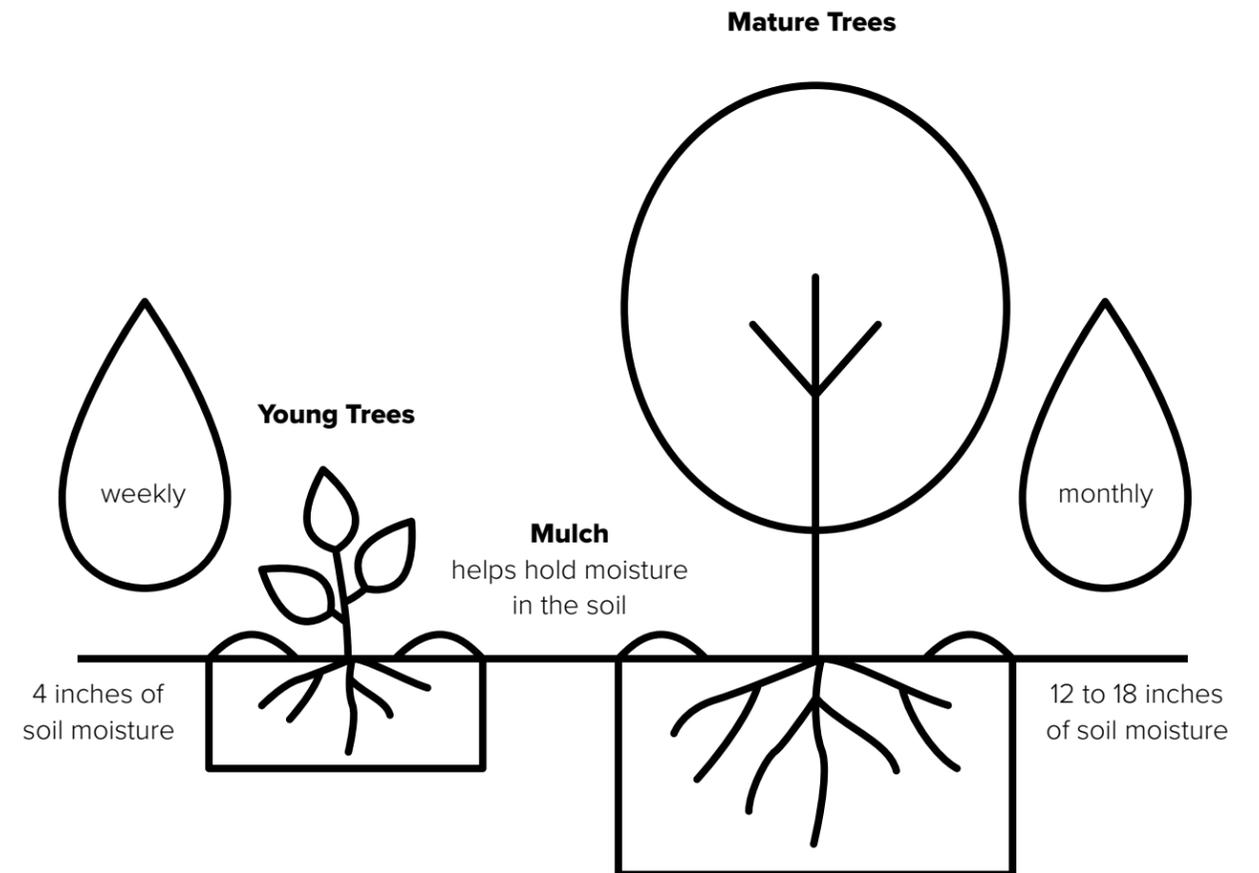
Water evaporated from trees can cool the surrounding air up to 9°F

Higher temperatures are expected as climate change amplifies the urban heat effect. More trees create shade and cool the air which buffer against rising temperatures.

WATER NEEDS AND CHALLENGES

Established urban trees typically do not require extensive irrigation support as their deep roots access underground water resources. In some cases, trees can be a water-saving measure when they replace or shade water demanding landscapes, such as lawns. There are two situations where trees need supplemental water to survive and thrive long term: young trees in their first 3-5 years after planting and mature trees during dry stretches. In all cases, maintaining an organic layer of mulch at the surface improves retention of soil moisture and is a recommended practice.

Drought-tolerant trees, especially once they reach maturity, are more likely to survive dry periods without supplemental watering than those whose water requirements are greater. As such, drought tolerant trees are highly recommended in planting situations where supplemental watering over a tree's lifespan is unlikely. Drought tolerant trees could be used in more situations, but it comes with the tradeoffs of limiting the number of species planted and traits that confer drought tolerance often mean trees are slow growing or have less potential for providing shading and cooling.



Young trees need light watering weekly in the absence of rain. Mature trees benefit from deep, but less frequent waterings and only during prolonged dry periods.



CONSIDERING SOCIAL VULNERABILITY

It is critical that the benefits of the urban forest reach everyone in the Paramount community. To do so means focusing on growing trees in low canopy areas so communities do not have to overcome hurdles to have trees and their benefits where they live, work, and recreate. The vulnerability of communities can be driven by health, economic, and social factors.

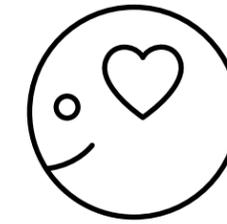
For health factors, community members with pre-existing health conditions, people older than 65, infants and young children, pregnant women, and

outdoor workers are all at increased risk of adverse impacts from environmental stressors. Economic factors such as home ownership, employment, and income influence access to resources. Homeowners may be able to choose to plant trees in their yards, while tenants may rely on landlords to make such improvements. Finally, social factors, such as language, education, and race or ethnicity can impact community members' access to resources and opportunities to influence policy changes.

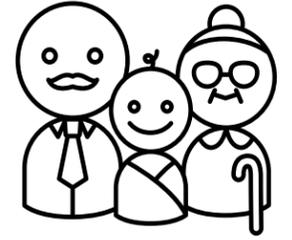
Health



15% of residents report not good physical health

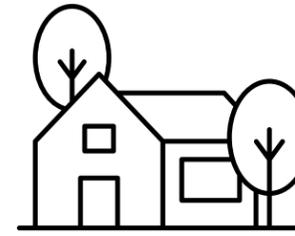


16% of residents report not good mental health

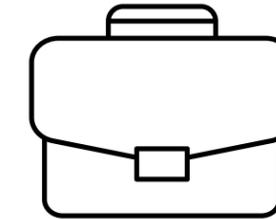


7% of residents are under 5 and 9% are over the age 65

Economic



41% of residents are homeowners

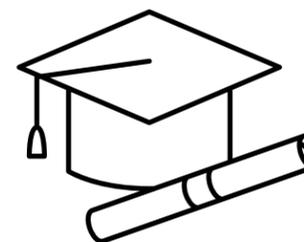


72.5% of residents are employed



56% earn more than 200% of the Federal Poverty Level

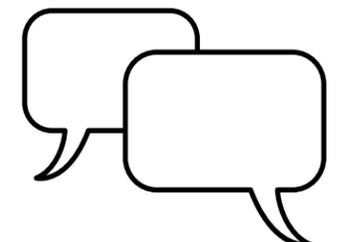
Social



11% have a Bachelor's degree or higher



95% of residents identify as People of Color



27% of residents have limited English

Some Paramount community members are more vulnerable to environmental stressors or have less capacity to access resources.

Policies relevant to urban forest management in Paramount

The potential for the urban forest is shaped by the forces of the regulatory landscape. State legislation allocates resources for the urban forest, such as funding and technical assistance. It also sets standards for what local municipalities must consider for local land use planning. Local policy drives most land use decisions and sets local priorities and initiatives. Plans chart a vision for a community while codes establish the rules. Together, state and local policies play an important role in determining how and where the urban forest is developed.

STATE POLICIES

California Urban Forestry Act: The Urban Forestry Act was passed in 1978 in response to declining urban forests. It directs CalFire to provide technical assistance and grant money for urban forestry projects. This led to the creation of the Urban and Community Forest Program under CAL FIRE, which funds urban forestry workforce education, expansion and management activities.

California Solar Shade Control Act: The Shade Control Act was originally passed in 1978 and then amended in 2008. The act is intended to prevent existing solar panels from being shaded by trees or shrubs planted after the solar panels were installed. Under the act, maintaining a tree that shades more than 10% of a solar collector between 10 am and 2 pm constitutes a private nuisance. Municipalities may pass an ordinance exempting themselves from the Act, which would prevent any trees planted and maintained by the municipality from violating the Act.

Integrated Climate Action and Resiliency

Program: Senate Bill 246, passed in 2015, directed the Governor's Office of Planning and Research (OPR) to form the integrated Climate Action and Resiliency Program. The program creates a State Adaptation Clearing House and Technical Advisory Council (TAC). The clearinghouse is a searchable database of research and plans relating to climate adaptation. The TAC coordinates climate adaptation efforts between state, regional, and local agencies.

Environmental Justice in Local Land Use

Planning: Passed in 2016, SB 1000 requires jurisdictions to identify disadvantaged communities and address environmental justice in their general plans. The California Environmental Protection Agency defines disadvantaged communities as census tracts with the highest 25% CalEnviroScreen scores.

LOCAL POLICIES

General Plan: All policies in Paramount must be consistent with the 2007 General Plan. Elements of particular relevance include Land Use (which addresses open space), Resource Management, Public Facilities (which addresses school facilities), and Environmental Justice (EJ). The EJ element, adopted in 2022, identifies strategies to alleviate environmental burden, including increasing trees.

Municipal Code: The municipal code sets out the rules and regulations of the City. Of particular relevance to this plan is Chapter 12.32 which details regulations regarding parkway trees and landscaping. The code stipulates that trees in parks and along major and secondary arterioles are the responsibility of the City to maintain, while trees in parkways adjacent to private residences are the responsibility of the residents to water, maintain, and notify Public Works about hazards.

Zoning Code: Zoning regulations are included in the City of Paramount Municipal Code under Title 17. Zones are divided into three residential zones (Single-Family, Medium Density, and Multiple-Family), two commercial zones (General Commercial and Commercial-Manufacturing), and two industrial zones (Light Manufacturing and Heavy Manufacturing). The zoning code establishes standards for the physical form of land-uses that have impacts on space available for the urban forest.

Climate Action Plan: The City of Paramount Climate Action Plan was adopted in 2021 with the purpose of reducing municipal and community emissions and preparing the community for anticipated impacts of climate change. Tree canopy is referenced both as a greenhouse gas reduction strategy and as part of a resilience strategy. The plan sets an objective to "Increase tree canopy city-wide by 10 percent by 2030."

Existing Forest

Key Takeaways

- Tree canopy is most bountiful in parks and residential areas and most lacking in industrial and commercial areas
- The existing public urban forest is diverse, mature and relatively healthy
- The urban benefit provides economic benefit to Paramount in the form of stormwater management, pollution removal, and carbon sequestration

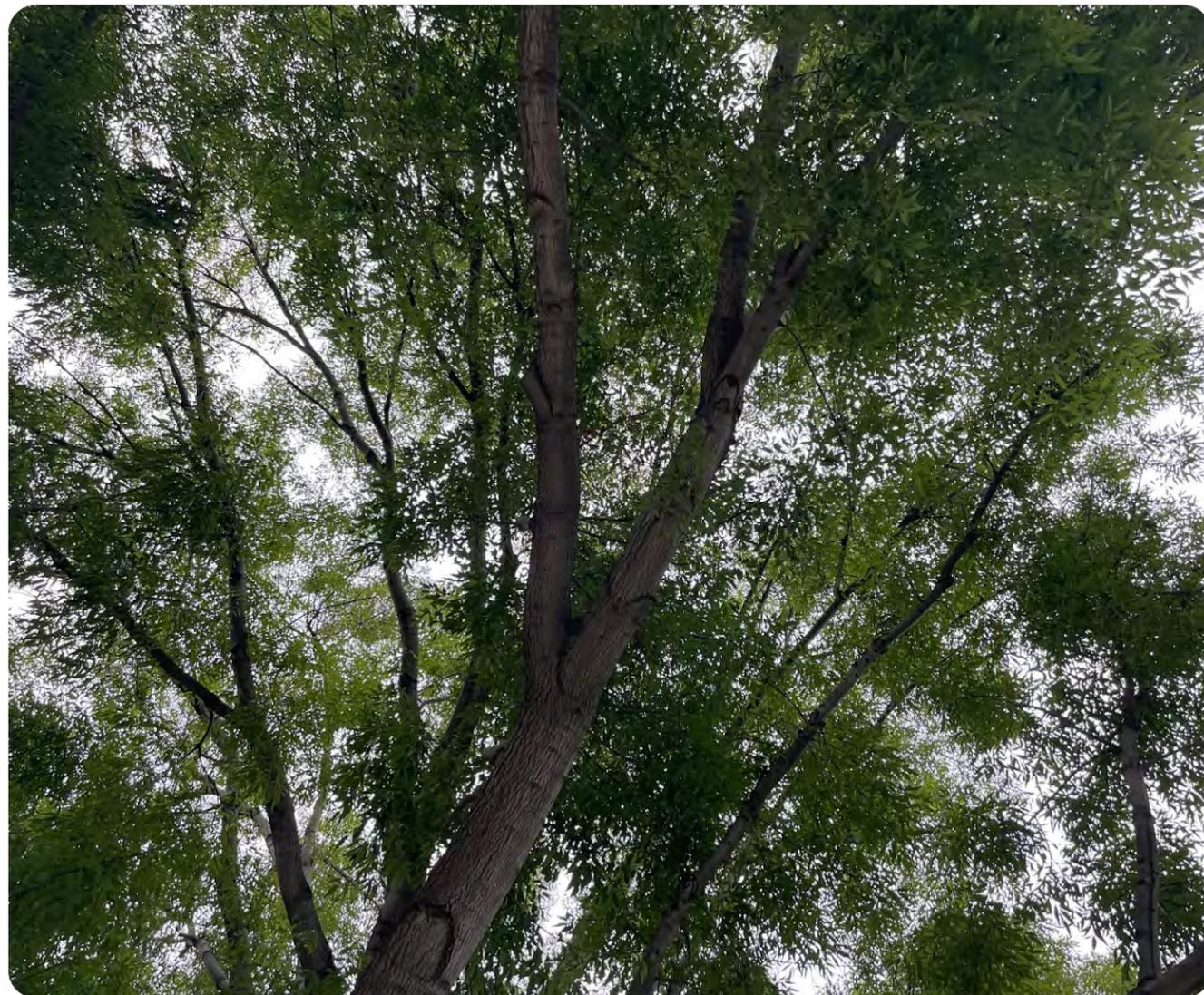


Image: Ash tree in Progress Park

The urban forest of Paramount consists of all the trees within the City, including both public trees and private trees. Public trees are trees on land managed by a public agency and include trees in public rights of way and city parks. Private trees are trees on private parcels. To manage the urban forest, it is important to know the makeup of the existing urban forest. Two datasets are available that quantify Paramount's urban forest: a public tree inventory and citywide tree canopy cover.

Public Tree Inventory

An inventory of the public trees in Paramount was conducted in 2023, inclusive of trees in parkways (i.e., street trees) and parks. The inventory characterized each tree's species, size, and condition as well as attributes of the planting site such as width of the planting strip in parkways and presence of absence of overhead utilities. In addition, vacant tree planting sites were included.

Tree Canopy Cover

The canopy assessment uses data from remote sensing to gauge the extent of the forest canopy in Paramount as a whole, including both the public and private forests. This is valuable in understanding how the benefits of trees are distributed throughout Paramount.

While both public trees and private trees are integral to the vitality of the urban forest, they are addressed separately in this plan due to the different involvement the City has in managing each.



Image: Tree Canopy Cover Data over Paramount City Hall (Source: Maxar, NASA)

Street Trees in Paramount



Small London plane trees grow in tree wells along Paramount Boulevard.



Large camphor and Afghan pine trees grow in the planting strip along Jefferson Street across from Progress Park and Jefferson Elementary School.



Large Canary Island pines line the median along Downey Avenue.

Paramount's Public Trees

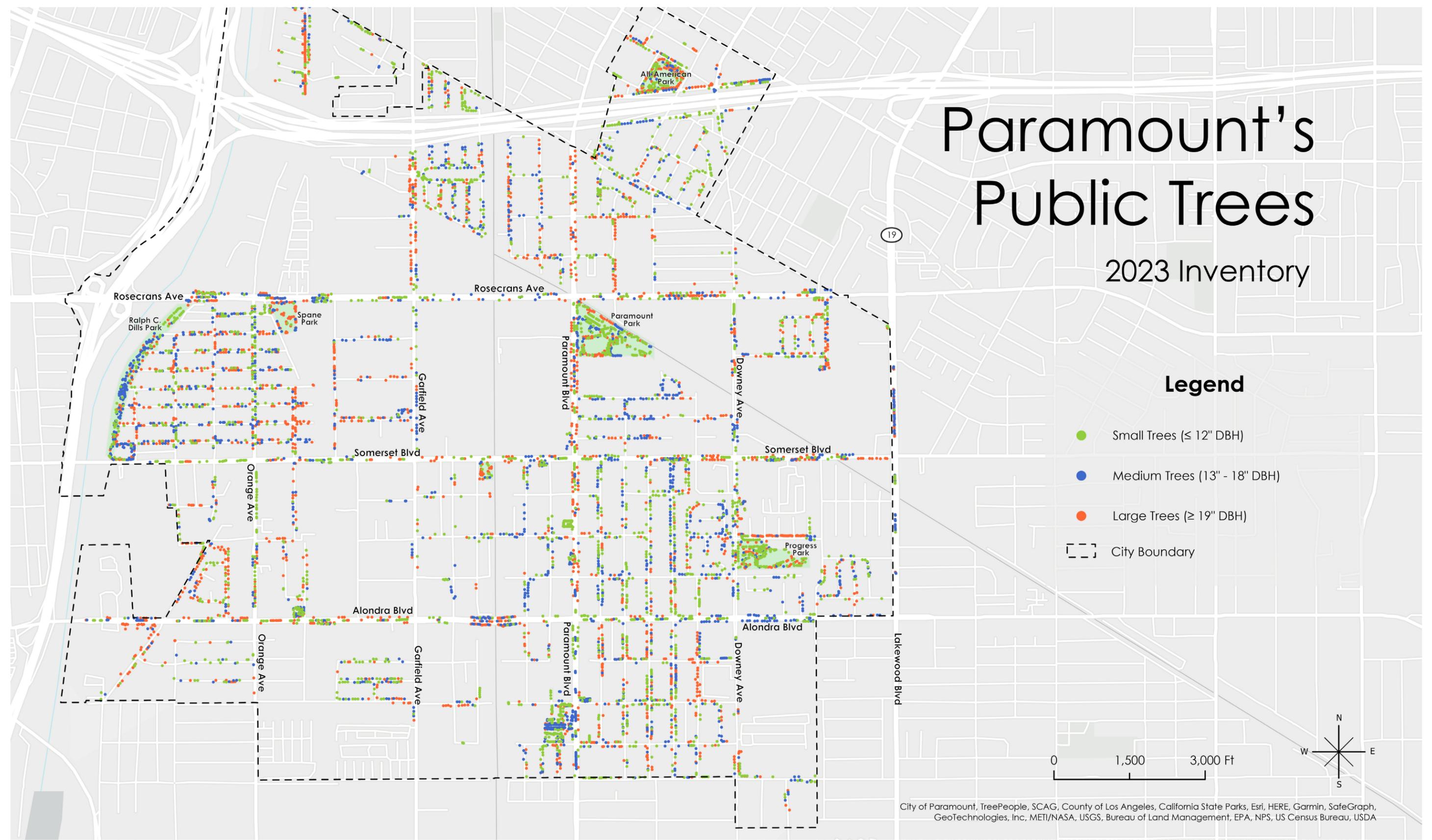
2023 Inventory

Legend

- Small Trees (≤ 12" DBH)
- Medium Trees (13" - 18" DBH)
- Large Trees (≥ 19" DBH)
- ▭ City Boundary



City of Paramount, TreePeople, SCAG, County of Los Angeles, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

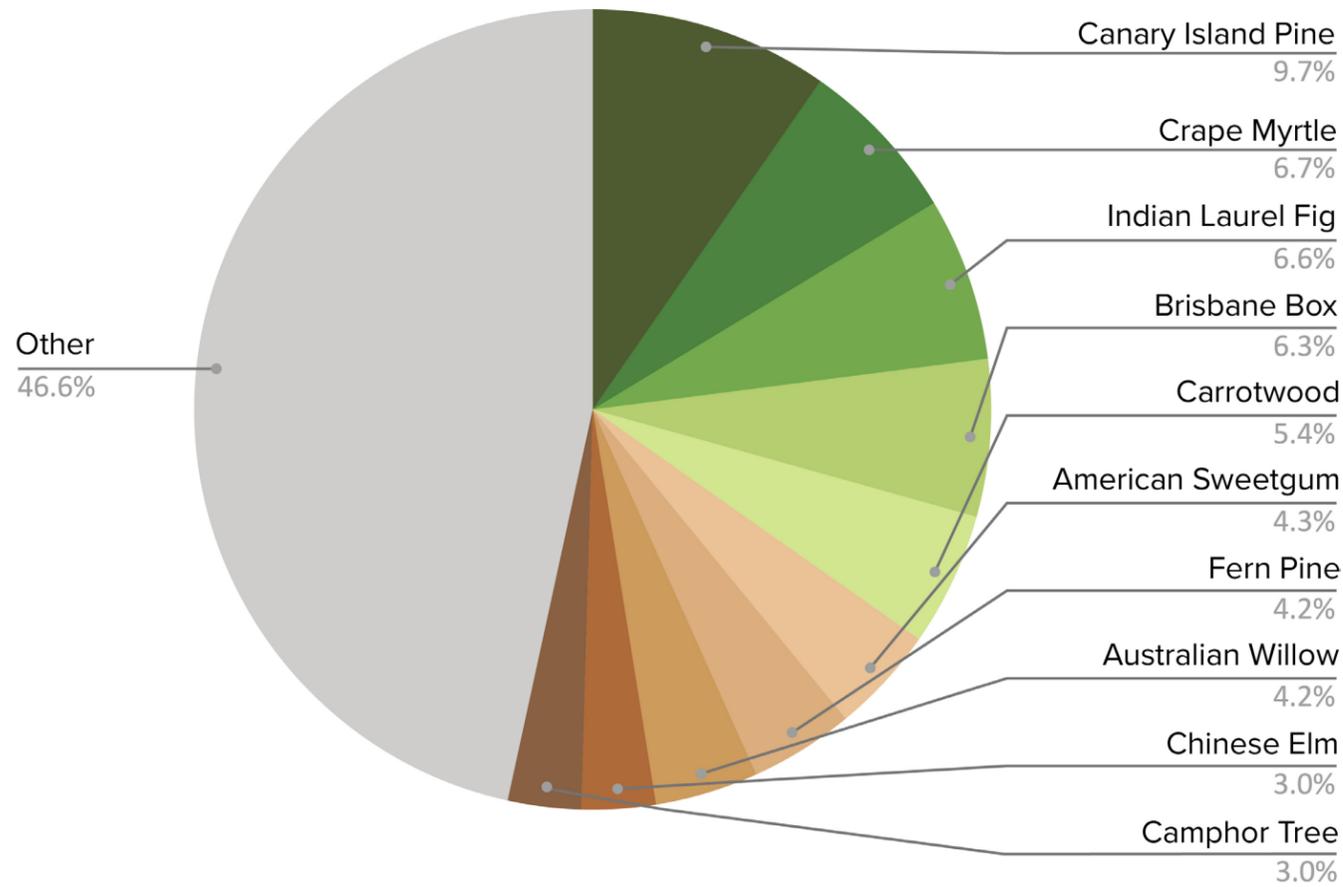


Map provides locations of public street trees in Paramount and their size class based on trunk diameter. Data is from the 2023 Public Tree Inventory.

Characterizing Paramount's existing public trees

TREE SPECIES AND THEIR ABUNDANCE

Paramount has 7,073 public trees representing over 200 species of trees. Biodiversity is essential to the health of the urban forest because a diverse urban forest is more resilient to disasters such as disease and drought. Best practice in urban forestry recommends no more than 10% of trees from a single species. Paramount's urban forest fulfills this criteria with the Canary Island pine (*Pinus canariensis*) making up the largest proportion of the existing forest at 9.7%.

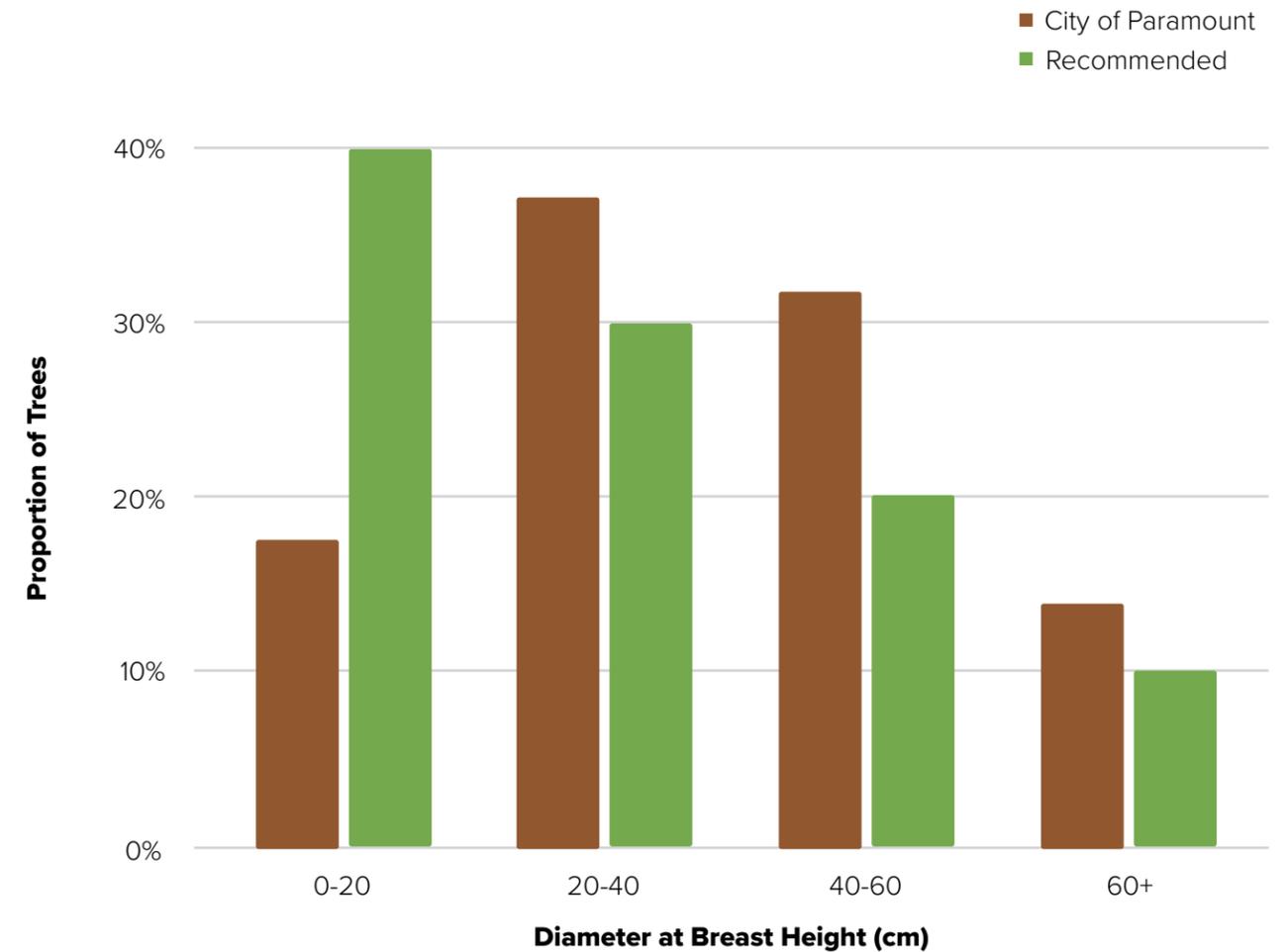


Paramount has a diverse urban forest

TREE SIZE

Size is an important metric for trees in the urban forest as an indicator of their benefits, but also as a proxy for gauging their age. Tree trunk diameter at breast height (DBH; about 4.5 feet above the ground) is a common measure that correlates with overall tree size. Paramount's public trees are typically medium to large in stature. This is good news, as larger trees are desirable as they typically provide more benefits. However, this also means many of Paramount's trees are approaching the end of their lifetime.

A healthy urban forest should have the highest proportion of small, young trees that will grow into larger trees replacing aging trees. Paramount currently has too few young trees to be able to replace the larger aging trees, which can result in a loss of urban forest over time. Fortunately, the solution is straightforward: planting new trees can readily remedy this concern.



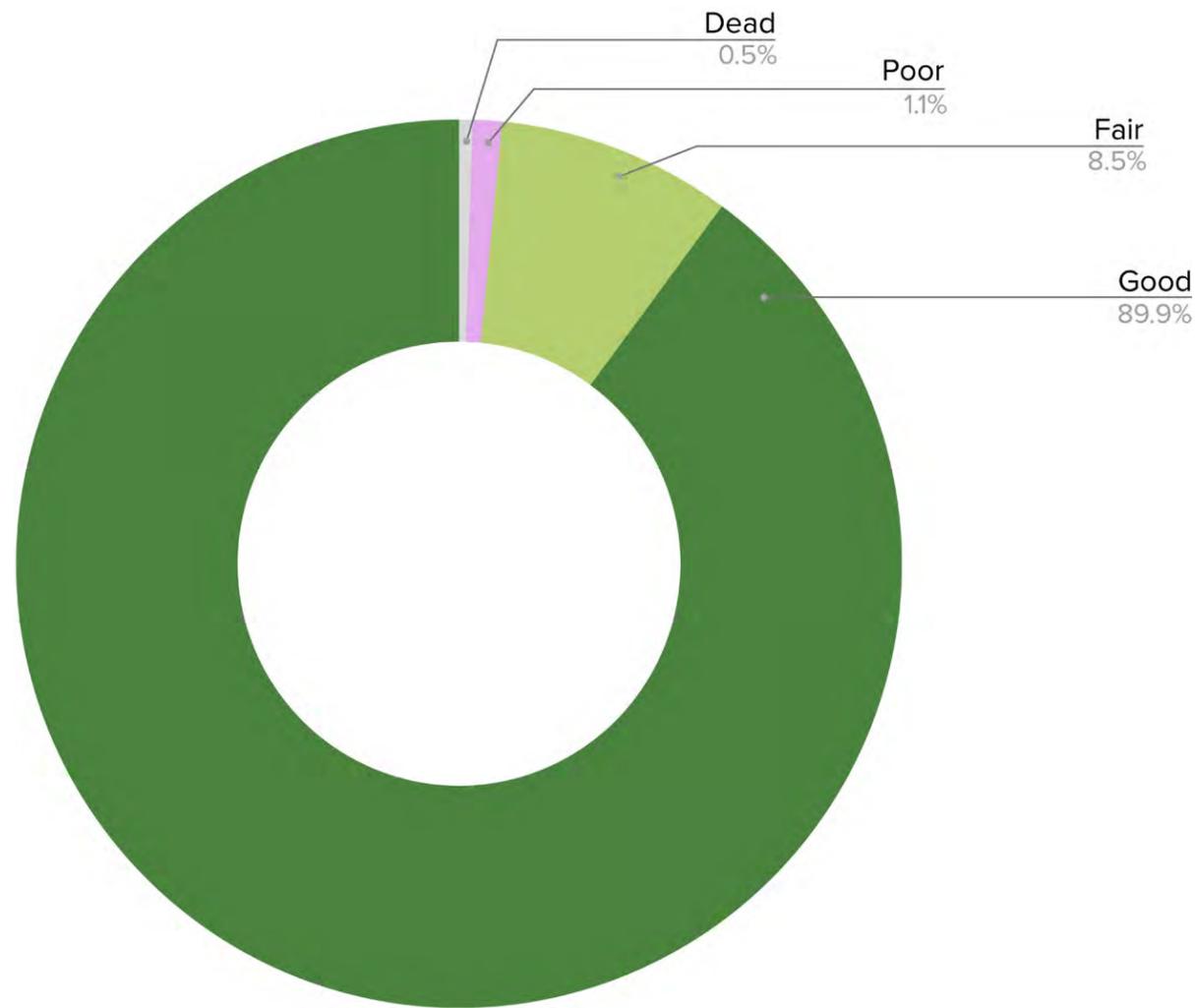
Adding young trees that can grow into mature trees is critical

TREE HEALTH

Paramount has a very healthy urban forest. Less than 2% of trees were assessed as in “Dead” or “Poor” condition, and 90% of trees were assessed as in “Good” condition. This indicates that the vast majority of trees in Paramount are thriving, requiring only routine maintenance to remain healthy.

Tree condition is measured by the proportion of foliage that is dead or dying, known as tree dieback. There are a number of potential causes of dieback including drought, pests, physical damage, or pollution damage.

It can be difficult to discern with certainty the cause of dieback. However, drought is often cited as the primary cause of tree dieback and is consistent with recent dry conditions in Southern California. Concerns that were specifically identified in the 74 tree identified as in poor condition were poor root function (9 trees) and decay (7 trees).



Paramount's public tree forest is very healthy



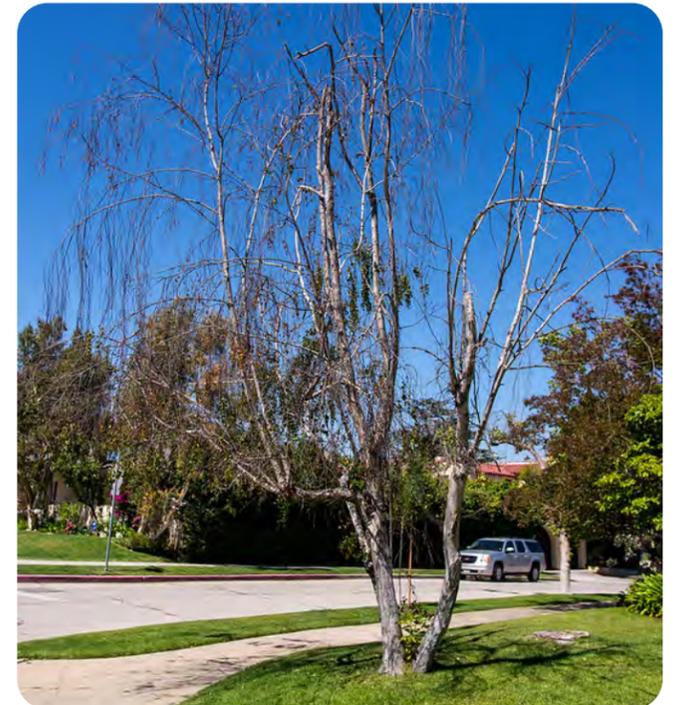
Trees in Good condition should be inspected and maintained on regular grid trimming cycle.



Trees in Fair condition should be inspected and maintained on a regular grid trimming cycle.



Trees in Poor condition should be inspected closely and frequently to achieve an action that mitigates the poor condition or liability.



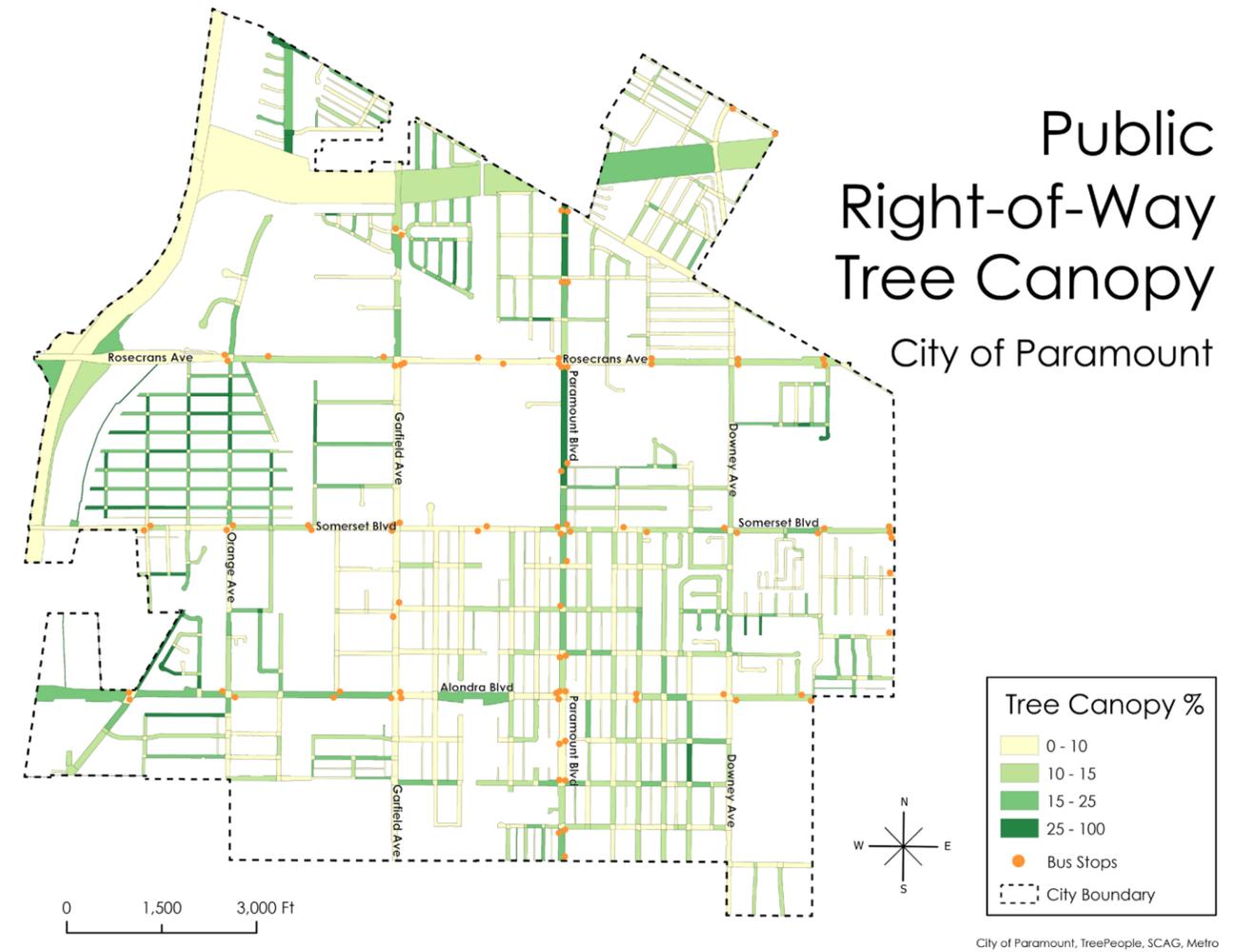
Dead trees should be removed, stump ground and replaced.

PUBLIC RIGHT-OF-WAY CANOPY

The public right-of-way is the third largest land use in Paramount and by far the largest publicly managed land use. It consists of all the streets and sidewalks that connect the City. Currently, there is 15% canopy cover across the right-of-way. Trees in the right-of-way create shaded corridors for people to move through, which is especially important for public and active transit users. Right-of-way trees promote outdoor activity by creating a comfortable and appealing environment to walk, bike, or roll. Additionally, trees offer screening from the road, providing privacy. Trees are also valuable for capturing stormwater from an area otherwise dominated by hardscape. Finally, trees in the right-of-way can promote social cohesion by providing a comfortable public space for community members to interact, and enhance mental health by increasing access to greenery in neighborhoods.



Image: London plane trees create a shady canopy over the public right of way along Paramount Avenue



Paramount Boulevard has blocks of high tree canopy that can set a precedent for other corridors throughout the City.

Characterizing all of Paramount's existing tree canopy cover

EXISTING CANOPY

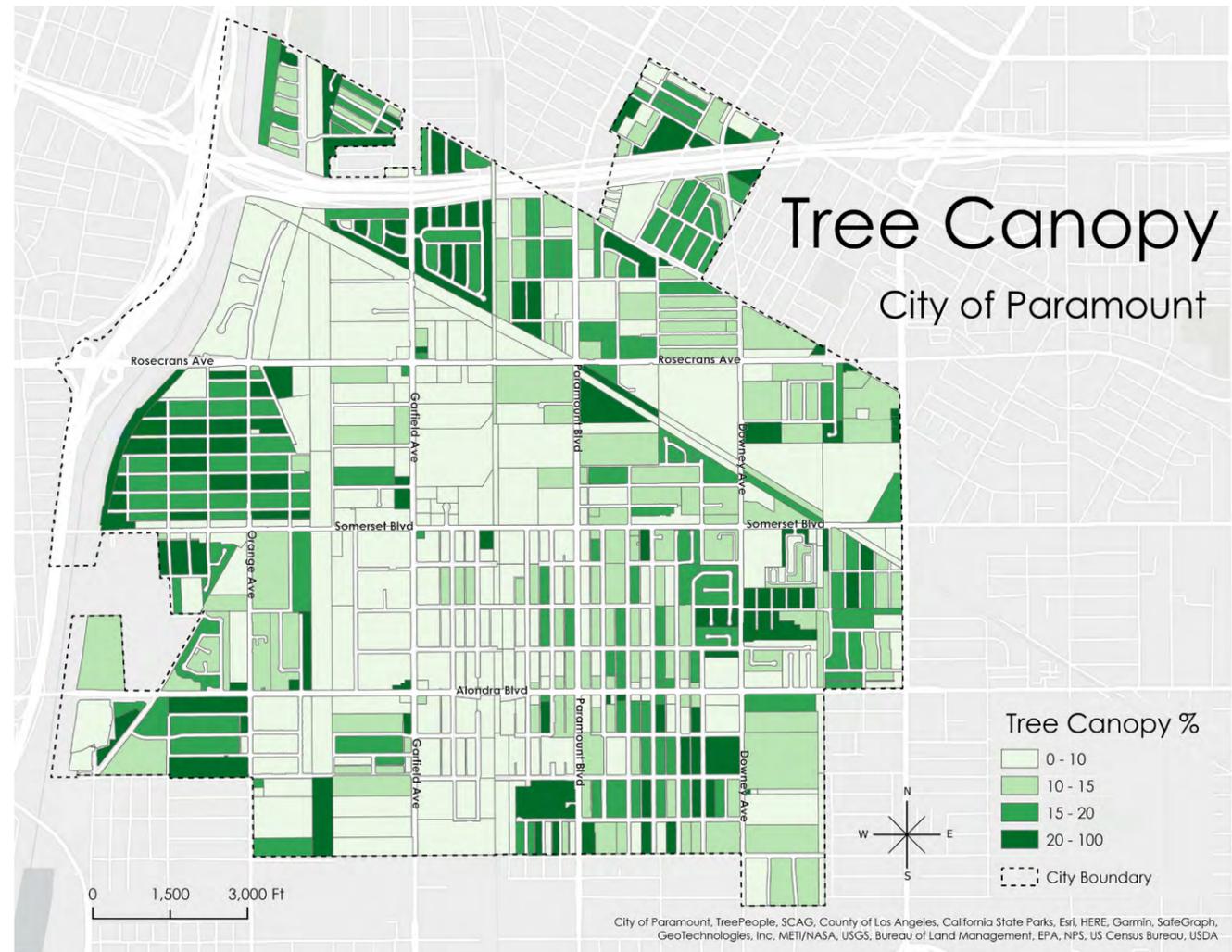
Based on 2016 data, Paramount has 12% tree canopy cover citywide. This is lower than the total Los Angeles County canopy cover of 18%.

Canopy is not distributed equally throughout the city. Neighborhoods in the north and west region of the city have higher canopy cover, while much of the center of the city has low canopy coverage. These trends can be explained to a significant extent by land use patterns.

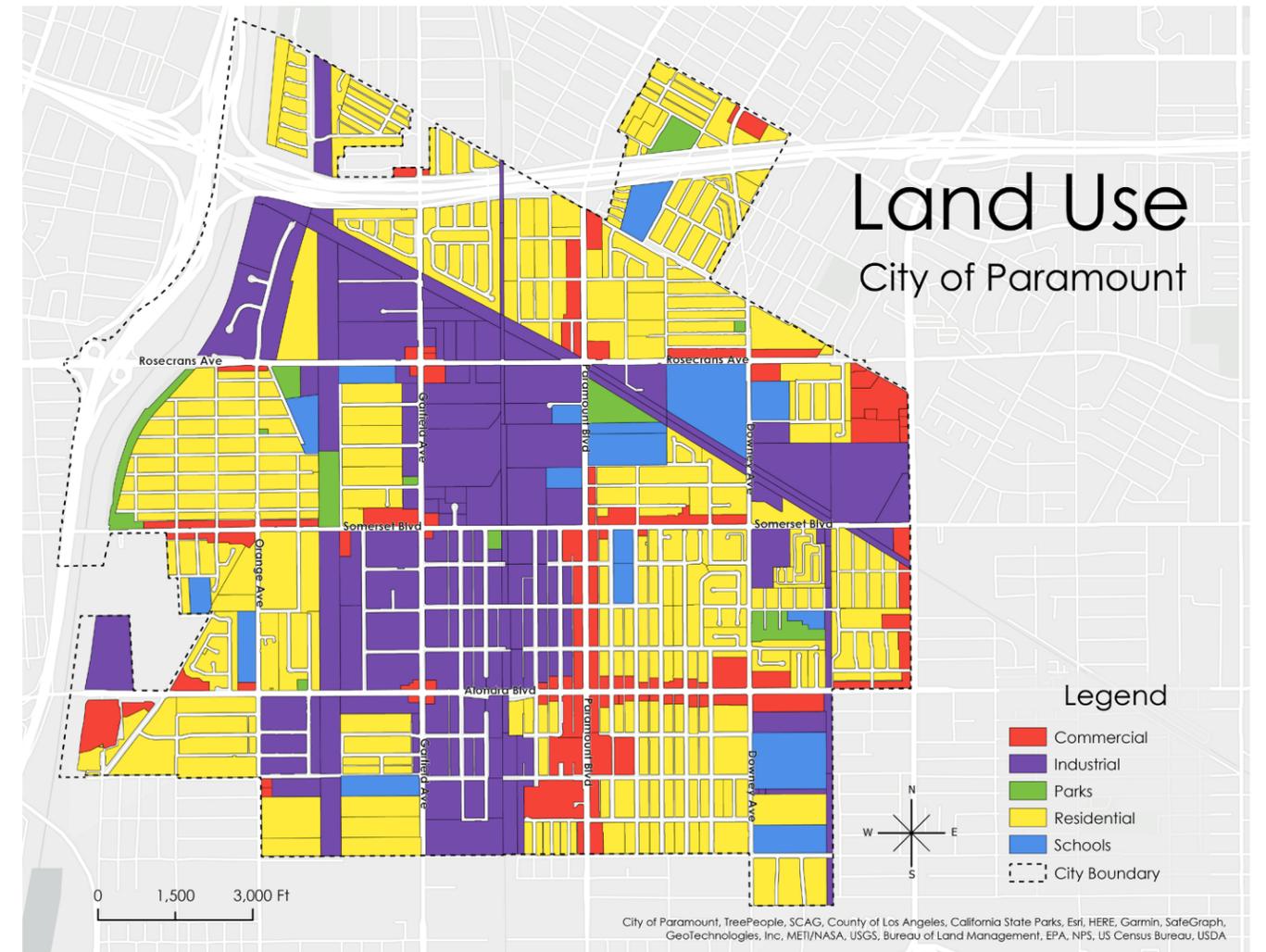
LAND USE

Land use is a useful way to organize urban forest management planning. For the purposes of this plan, land use in Paramount is classified into five categories: Parks, Schools, Residential, Commercial, and Industrial.

Comparing tree canopy and land use maps, Industrial zones account for the majority of areas with the lowest tree canopy, while Residential zones tend to have higher tree canopy. Some Parks stand out as having some of the highest tree canopy.



The citywide tree canopy cover in Paramount is 12% but there are substantial differences in tree canopy across the city.



Land use is an important factor in tree canopy cover.

RESIDENTIAL CANOPY

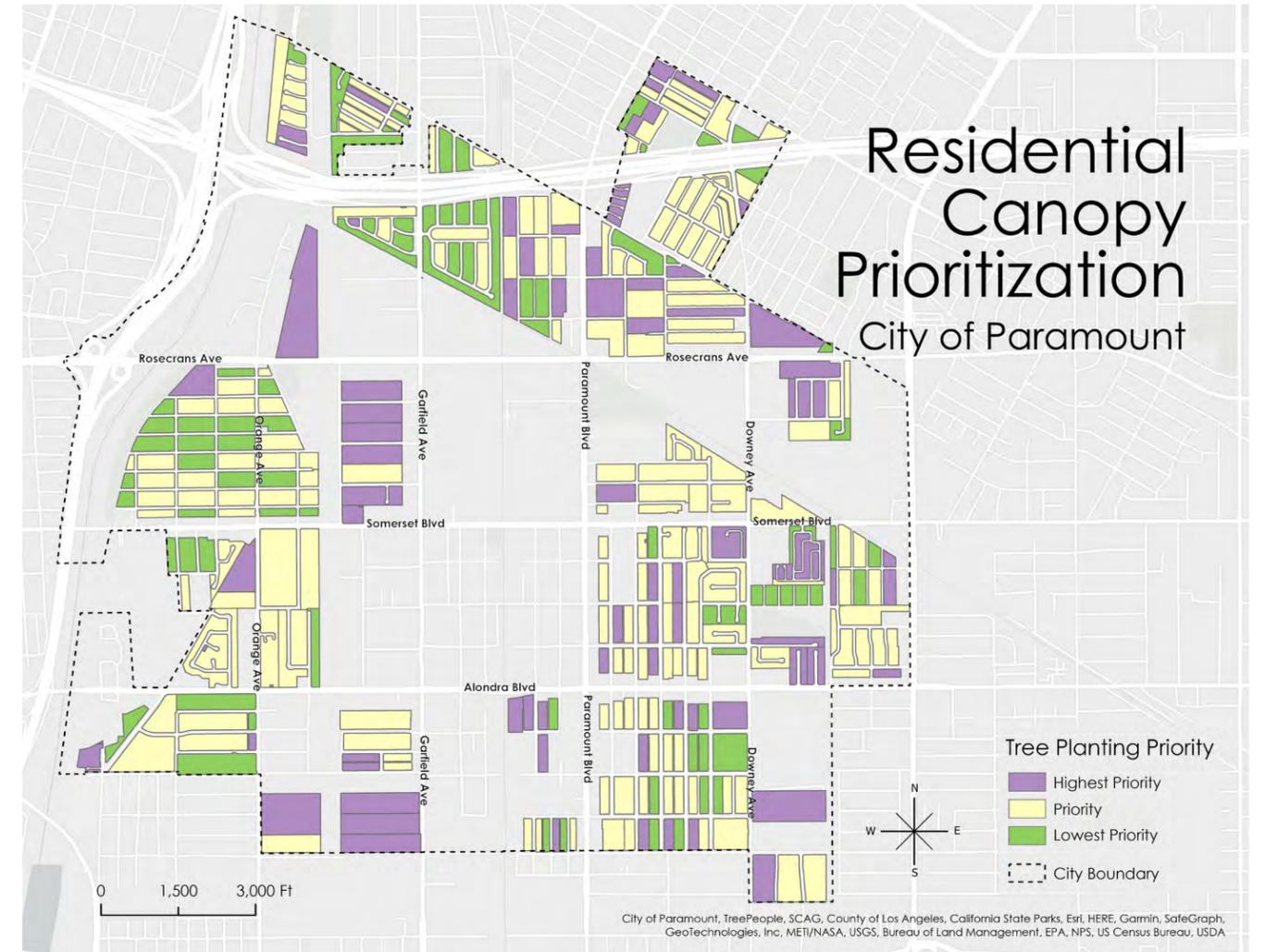
Residential is the largest land use in Paramount, so tree canopy in residential neighborhoods has a significant impact on canopy in the city as a whole. Currently, there is 16% canopy cover in residential neighborhoods. Trees in residential areas act as a buffer between traffic and neighboring uses, providing privacy and quiet. Being visible and accessible to residents, they can also improve mental health. Trees in residential districts can also help capture stormwater runoff from homes and driveways.

As residential neighborhoods are comprised of private property, increasing tree canopy in residential areas requires partnering with property owners. Providing information and resources to property owners can encourage them to increase tree canopy on private property.

Resources for community members should include a list of recommended tree species and tree planting how-to guides. In addition, providing free shade and fruit trees for residents will encourage tree planting on residential parcels.



Image: Fruit trees were distributed to residents at the Urban Forest Management Plan workshops



Highest priority neighborhoods should be planted first based on low existing canopy. Lowest priority neighborhoods already meet or exceed canopy goals.

PARK CANOPY

The City of Paramount has 12 public parks, comprising a total of 60.4 acres. These parks serve about 76% of Paramount residents within a 10 minute walk. Parks in Paramount have some of the highest levels of tree canopy in the City, but not all parks are equally forested. Canopy cover ranges from a high of 67% in Meadows Park to just 1% in Orange Avenue Splash Area. As parks tend to be already vegetated areas, they are some of the easiest places to plant new trees. They also have particular values as places for outdoor recreation and community gathering.

Existing parks with relatively lower tree canopy such as Salud Park and Pequeno Park, would be good candidates for initial tree planting initiatives. As Salud Park is located under the utility transmission corridor, there are restrictions as to the size of trees that can be planted and any tree planting planned for this park must be done in consultation with Southern California Edison (SCE). Planting typically smaller, native trees such as Western Redbud and Toyon can help fulfill these requirements. Pequeno park is the smallest park in Paramount and increasing canopy in this park to create an immersive green space will require only a few additional trees.



Image: Trees in Progress Park

Park	Size	Canopy	Residents within 10 minute walk
Salud Park	9.2 acres	4%	9,769
Pequeno Park	0.1 acres	15%	8,355
Dills Park	11.7 acres	18%	9,381
Paramount Park	15.2 acres	23%	8,654
Progress Park	9.5 acres	24%	6,647
Spane Park	4.2 acres	32%	6,530
Garfield Park	0.8 acres	35%	3,947
All-American Park	7.2 acres	40%	10,205
Village Park	1.5 acres	41%	2,573
Meadows Park	0.6 acres	66%	5,869
*Orange Avenue Splash Pad	0.3 acres	1%	7,558
*Carosmith Park	0.1 acres	21%	

*Due to their unique recreation uses these facilities are not included in the 30% canopy goal.

Half of included parks in Paramount have tree canopy meeting or exceeding goals already (green). Three parks are considered highest priority (purple) based on low existing canopy.

SCHOOL CANOPY

Schools in Paramount are run by the Paramount Unified School District (PUSD). There are 17 PUSD campuses within Paramount. The City of Paramount has a Joint Use Agreement with PUSD to use schoolyards as community recreation facilities outside of school hours. In addition, Paramount's schoolyards are particularly good opportunities to expand the urban forest because they are large extents of land with often low tree canopy and would have particular benefits for children's educational outcomes and overall well-being.

Green school yards not only help achieve urban forestry initiatives, but can lead to healthier, happier students. Children are more at risk from heat exposure than adults, which can impact their mental health, physical health, and ability to focus. Children are more likely to engage in active play on green schoolyards than on blacktop.

Schools are important locations for increasing tree canopy because they have landscaped areas that can accommodate trees with minimal modification. In addition, existing hardscape play areas can be depaved to accommodate more trees and create healthier play areas.



Image: Hardscape at Zamboni Middle School (Source: NSA Construction Group)

School	Type	Canopy
Roosevelt	Elementary	3%
Zamboni	Middle	4%
Paramount Park	Middle	7%
Paramount High - Senior	High School	7%
Keppel	Elementary	8%
Los Cerritos	Elementary	10%
Community Day School	Alternative	10%
Lincoln	Elementary	10%
Tanner	Elementary	11%
Jackson	Middle	11%
Gaines	Elementary	11%
Mokler	Elementary	12%
Jefferson	Elementary	13%
Alondra	Middle	13%
Wirtz	Elementary	14%
Paramount High - West	High School	15%

Three schools are highest priority (purple) for new tree plantings based on low existing canopy

Opportunities to Grow

Key Takeaways

- There is a lot of potential to increase tree canopy in Paramount, but it will require modifying existing paved areas
- More space can be created for the private urban forest by adjusting residential, commercial, and industrial zoning requirements
- Reallocating space in the public right-of-way from cars to trees creates space for more public trees, allows larger trees to be planted, and reduces conflict between trees and sidewalks

Expanding the urban forest in Paramount will require making more spaces for trees in the City. Existing infrastructure and policy constraints lead to a narrow definition of ‘right tree’ and a shortage of ‘right places.’ Squeezing more trees into a physical and regulatory landscape that had not been designed to accommodate them will result in a small and sparse urban forest. Fortunately, there are many opportunities for Paramount to modify policies and infrastructure to support a thriving urban forest.

Possible Canopy

In addition to measuring Existing Tree Canopy, the 2016 Los Angeles Tree Canopy Assessment identified Possible Tree Canopy. Possible Tree Canopy measures places where it is theoretically possible to plant trees, based on land use. Possible tree canopy is further split into two categories: Vegetated Possible Canopy and Hardscape Possible Canopy. Vegetation Possible Canopy measures the proportion of land that is currently permeable, but not planted with trees, encompassing grass, shrub, and bare soil land use classifications. Hardscape Possible Canopy measures the proportion of land that is currently paved, but is not developed with buildings or roads, encompassing the “other paved surfaces” land use classification. These analyses give insight into where opportunities exist to increase tree canopy in Paramount.

Land Use

There are opportunities to create space for the urban forest in different types of land use by changing the way we design and regulate space. The public right-of-way has traditionally been designed around the passage of cars, but reallocating street space can create more room for trees, and people. Zoning regulations shape how space on private property is designed, determining where space is (or is not) available for the urban forest on different land uses.

Vacant Sites

There are over 3,000 existing sites in Paramount that are available to be planted with new trees. Planting appropriate trees in these spaces based on the plantable area available will go a long way in growing the urban forest in Paramount and require minimal changes to the existing physical or regulatory landscape.

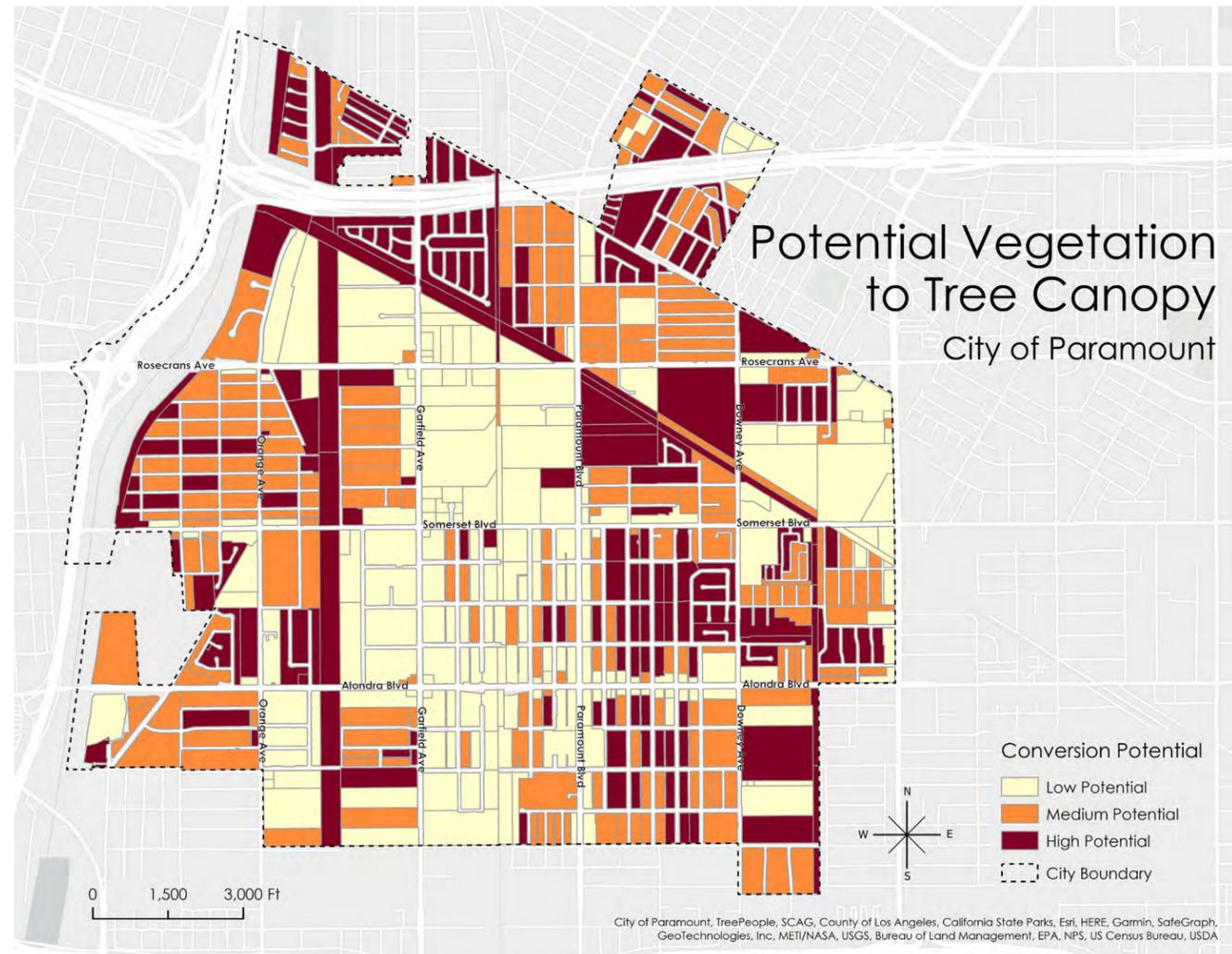


Image: Arbor Day 2018 (Source: City of Paramount)

POSSIBLE VEGETATION TO TREE CANOPY TRANSITION

Areas of Paramount already covered in vegetation, such as lawn or shrubs, are some of the most accessible areas to grow the urban forest. The most widespread opportunity is, of course, the lawn areas of residential parcels. But there are many others as well, including projects along the Los Angeles River, schoolyards, and utility corridors.

The banks of the levees along the LA River are currently covered in grass. Planting trees along this strip could provide valuable canopy cover for the existing path that runs along the river. This area is being considered by Metro as part of the proposed I-710 Corridor Bike Path project.



Paramount has a lot of land existing as lawns or open space that can be planted with trees, especially in residential yards and utility corridors.

Schools throughout Paramount provide an important opportunity to increase tree canopy. Many schools in Paramount include landscaped areas as well as recreation lawns and playing fields. While some areas of open grass need to be maintained to be used for sports, trees can be added to surround these spaces.

Under and along transmission wires in two utility easements that run through Paramount are a variety of uses, from industrial space, to a plant nursery, to a public park. However, many stretches remain vacant or underutilized. Converting these parcels to public space and planting trees, in line with standard of the utility company, could provide a tremendous opportunity to increase the public urban forest.

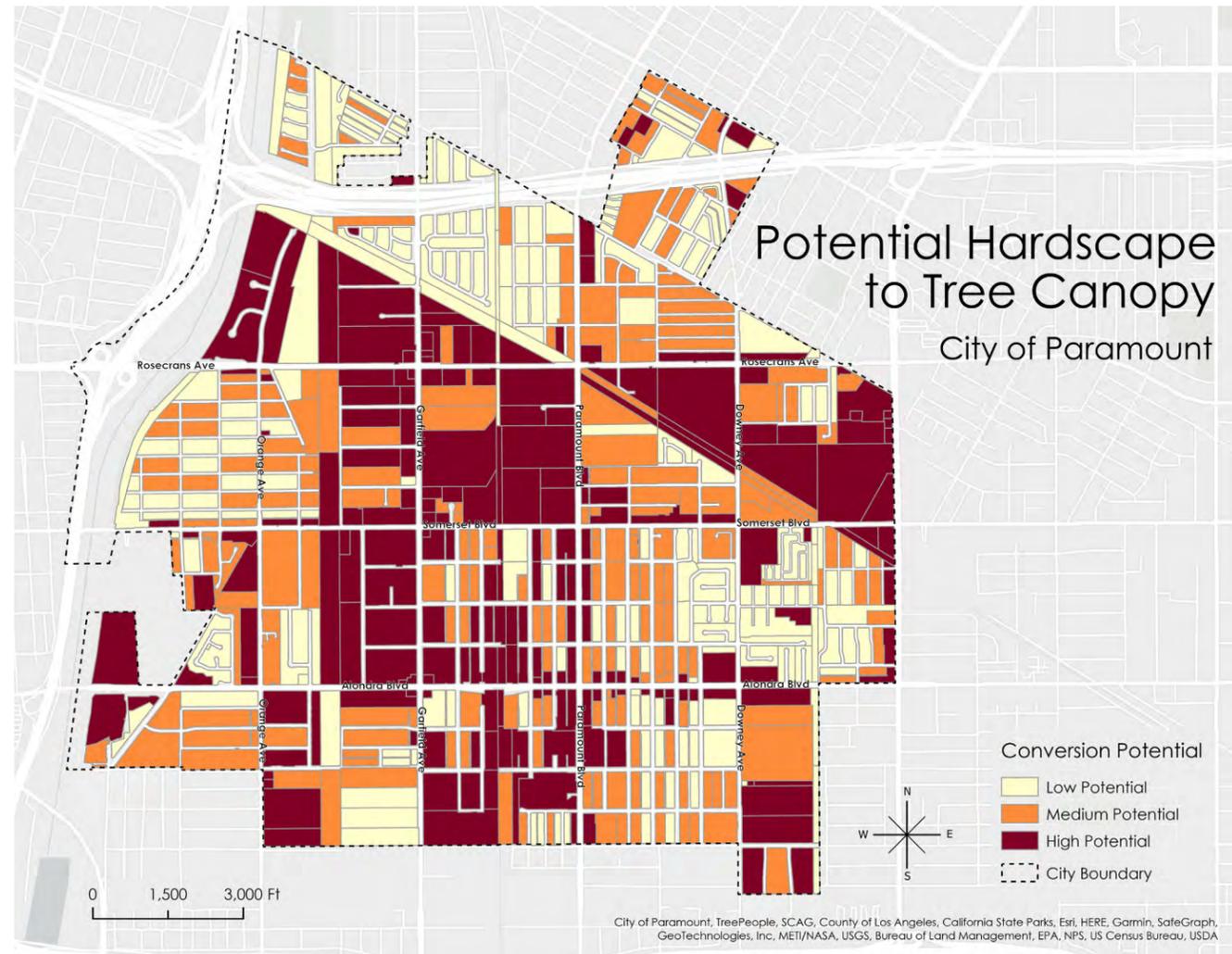


Image: Utility Corridor near Jefferson Street and Hayter Avenue

POSSIBLE HARDSCAPE TO TREE CANOPY TRANSITION

Paved areas (i.e., hardscapes) can be more difficult to add tree canopy to because these areas need to be modified before planting. However, given their extent and that they amplify urban heat, paved areas are great opportunities for canopy expansion and often most prevalent in areas the most in need of more trees. The map show parcels with differing

potentials for adding tree canopy by removing pavement, based on the proportion of the area that is currently hardscape, not including buildings or roads. As largely private land, tools such as zoning regulations and incentive programs may be the most effective ways to increase tree canopy in these areas.



Creating new spaces for trees is important for growing the urban forest. Removing pockets of pavement for trees is an opportunity of great potential especially in places with a lot of hardscape.

Parking lots have high potential to increase tree canopy. Parking lots are especially prevalent in commercial and industrial land uses, corresponding to areas of high potential on the map. Trees in commercial and industrial zones could provide screening between industrial uses and residential uses and shading of public right-of-way as well as bolster the well-being of those who work in these areas. It is important to note that while trees can provide air quality benefits, the capacity of trees is often insufficient in meaningfully mitigating air pollution from industrial operations or vehicle exhaust. Consequently, expanding tree canopy in industrial areas or along highways is not a substitute for more direct measures of mitigating air pollution.



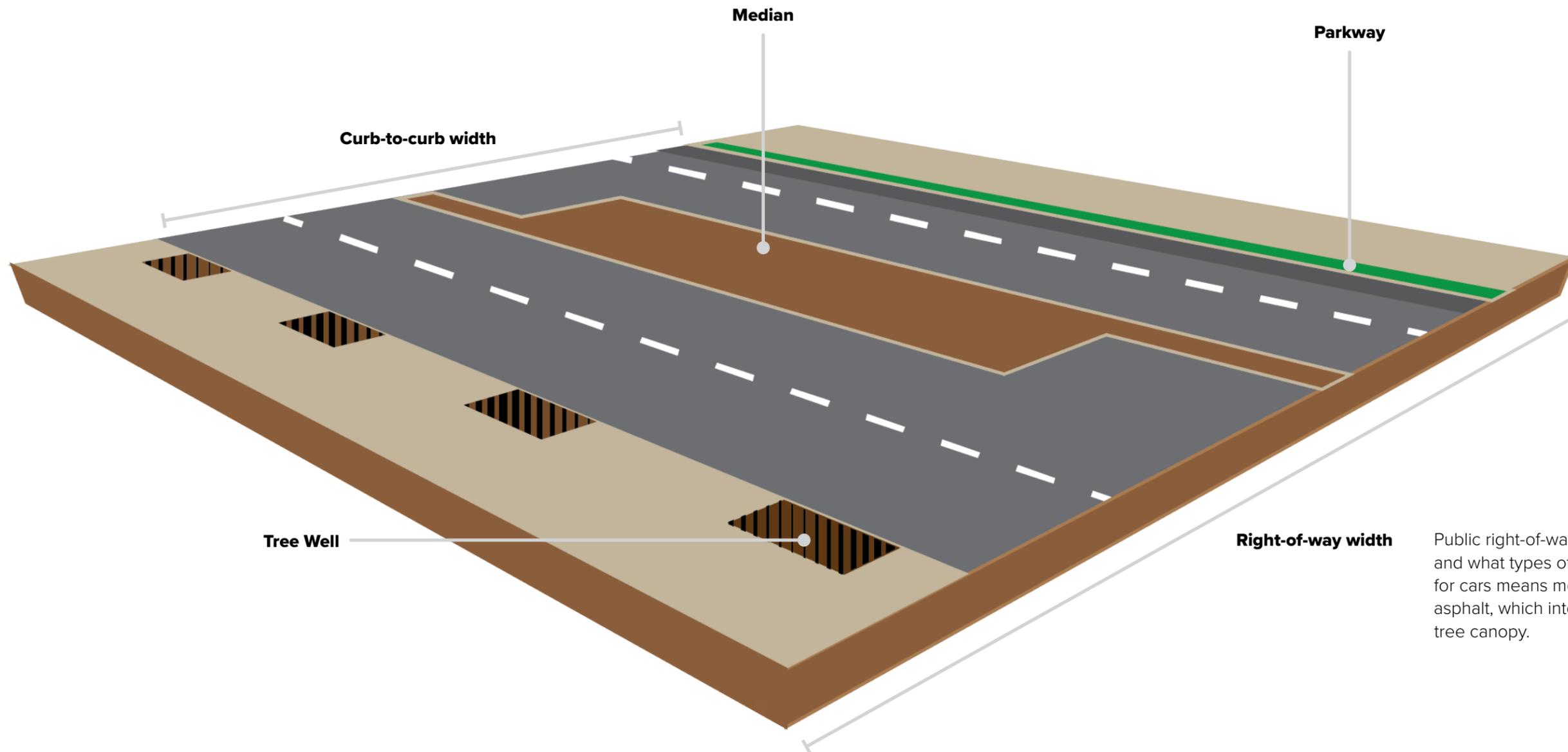
Image: Commercial center parking lot on Alondra Boulevard

PUBLIC RIGHT-OF-WAY

Public street trees are planted in the right-of-way. Trees are usually planted between the sidewalk and the street in a parkway or tree well, but can also be planted along center medians or in planting strips between sidewalks and private property. With the exception of medians, trees are usually planted in curb space rather than road space. Therefore, the space available for urban trees is the difference between the right-of-way width and the curb-to-curb (road) width, as illustrated in the diagram below.

More space for urban trees can be created by decreasing curb-to-curb width. Decreasing the curb-to-curb width can be accomplished by reducing the width or number of traffic lanes and parking lanes. Travel lane widths in urban areas are recommended to be 10 ft, but are in Paramount currently designed to be 12 ft wide. Reducing existing lane width from 12 feet to 10 feet would create 12 feet of additional space on major arterial roads and 8 feet of additional space on secondary arterial roads. Some of this space could be dedicated to creating plantable area for the urban forest.

Plantable space can be created in the public right-of-way by building parkways or constructing curb extensions, installing tree wells, and converting center turn lanes to medians. While these interventions may take away space for car travel, they will increase road safety and encourage multi-modal transportation, creating a right-of-way that supports a diversity of movement.



Public right-of-way design influences how many and what types of trees can be planted. More lanes for cars means more space must be dedicated to asphalt, which intensifies heat and reduces potential tree canopy.

Tree Planting Site Options & Costs

Filling the vacant sites available in Paramount is the most cost effective way to grow the urban forest, but it will not be nearly enough to reach the goal of 25% tree canopy in the right-of-way. Therefore, creating more plantable space in the right-of-way, especially in low canopy neighborhoods, will be necessary to reach canopy and equity goals. There are a number of ways plantable space can be created, as detailed in the table below.

Suitability for installing tree wells—cutouts in the sidewalk to plant trees—depends on the size of the sidewalk, as 5 ft of path must remain unobstructed for pedestrian use. Larger tree wells can support larger trees. As such, it is best to install tree wells as large as is appropriate for the size of the sidewalk.

Curb extensions are a great option where the existing sidewalk is too narrow to support trees. Planting spaces are constructed in the existing road, usually into an existing parking lane, or by converting the rightmost travel lane to a parking lane with curb extensions. The construction of curb extensions requires significantly more investment than tree wells. However, curb extensions can also have benefits beyond the urban forest such as a traffic calming measure to improve safety for all street users.

Similarly, center medians convert road space in the center median to landscaped space that can support tree canopy. Center medians are best suited for major arterial roads with an existing center turn lane, such as Pacific Boulevard. Medians also provide traffic calming benefits.

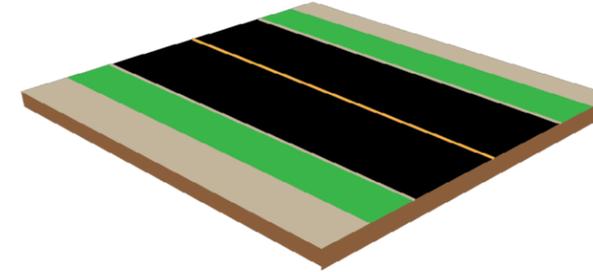
Finally, where more space cannot be created, it is worth analyzing whether existing plantable space is being used to the highest benefit. Existing planting sites that currently house palm trees, trees in poor condition, and trees that are significantly smaller than their planting size could feasibly support should be considered to be replaced with larger, more beneficial trees. Refer to the Tree Replacement and Interplanting Criteria page in the **Implementation** chapter for when this strategy is appropriate.

Tree Planting Site	Potential Locations	*Planting Cost Estimate
Vacant sites	See Vacant Sites Map	\$400
New tree wells	Industrial zones	\$1,400
Curb Extensions	Near schools	\$6,000-\$20,000 Per 6 ft x 20 ft
Medians	Already prevalent	\$15,000 to \$30,000 per 100 ft
Tree replacement	See Tree Replacement Criteria	\$700

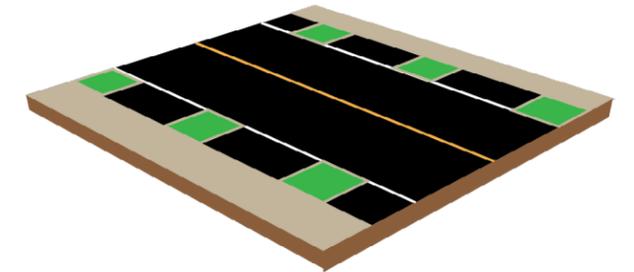
*Plant cost only, does not include establishment or maintenance care. Costs are highly variable.

Focusing on only the most cost effective sites will result in an inequitable urban forest that continues to leave some areas of Paramount with a lower than desired tree canopy.

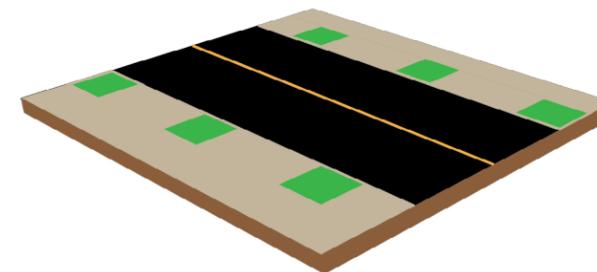
Creating More Plantable Space



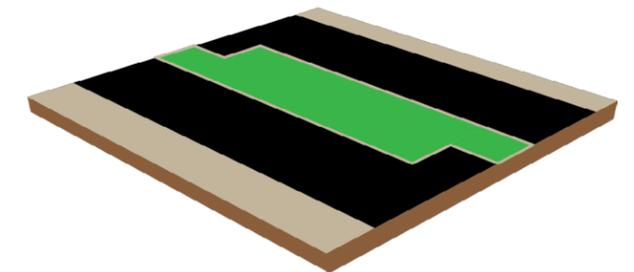
Parkways, where they exist, require the least site preparation to plant vacant sites.



Curb Extensions are suitable for when there are no existing parkways and the sidewalk is too narrow to install tree wells.



Tree Wells are best suited when there is no existing parkway and the sidewalk is at least 9 ft wide.



Medians are well suited for major arterials with center turn lanes.

RESIDENTIAL NEIGHBORHOODS

Residential neighborhoods are the largest land use within Paramount and so guiding tree planting on residential property will go a long way to increasing tree canopy in the City as a whole. Existing zoning standards can be adjusted with the urban forest in mind to create more space for trees on residential parcels.

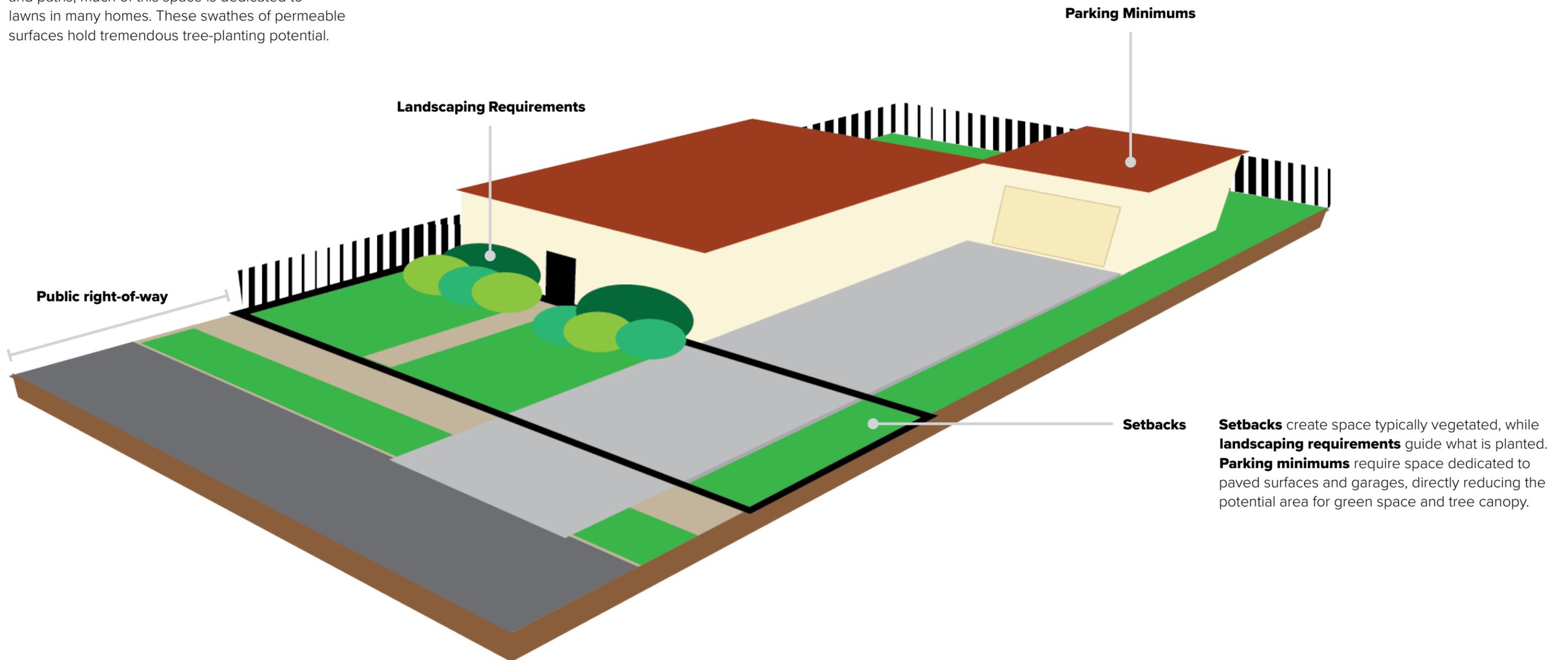
Setbacks: The required front setback on single-family residential parcels creates at least 1,000 square feet of open space in front of almost every single-family home in this zone. Aside from driveways and paths, much of this space is dedicated to lawns in many homes. These swathes of permeable surfaces hold tremendous tree-planting potential.

Trees in residential setbacks have many community benefits. Replacing or shading lawns with trees is an important water- saving strategy and trees' proximity to sidewalks and homes would enhance mobility and energy-saving benefits.

Outdoor Area: In addition to setbacks, multiple-family residential zones are required to have a common outdoor area and useable private outdoor space. These spaces can be an opportunity to grow tree canopy.

Landscaping Requirements: Requiring trees to be incorporated in residential landscaping is a valuable provision for promoting the private urban forest. There are existing requirements regarding drought-tolerant landscaping. These requirements could be expanded to be canopy-oriented by encouraging trees with large canopies to be planted in private yards for all residential densities.

Parking Minimums: Parking requirements increase the amount of impervious surfaces on a lot and reduce the amount of space available for trees. This is especially true for high-density housing where relatively more space must be dedicated to parking. Reducing parking minimums allows for more green space in residential neighborhoods.



Setbacks create space typically vegetated, while **landscaping requirements** guide what is planted. **Parking minimums** require space dedicated to paved surfaces and garages, directly reducing the potential area for green space and tree canopy.

COMMERCIAL NEIGHBORHOODS

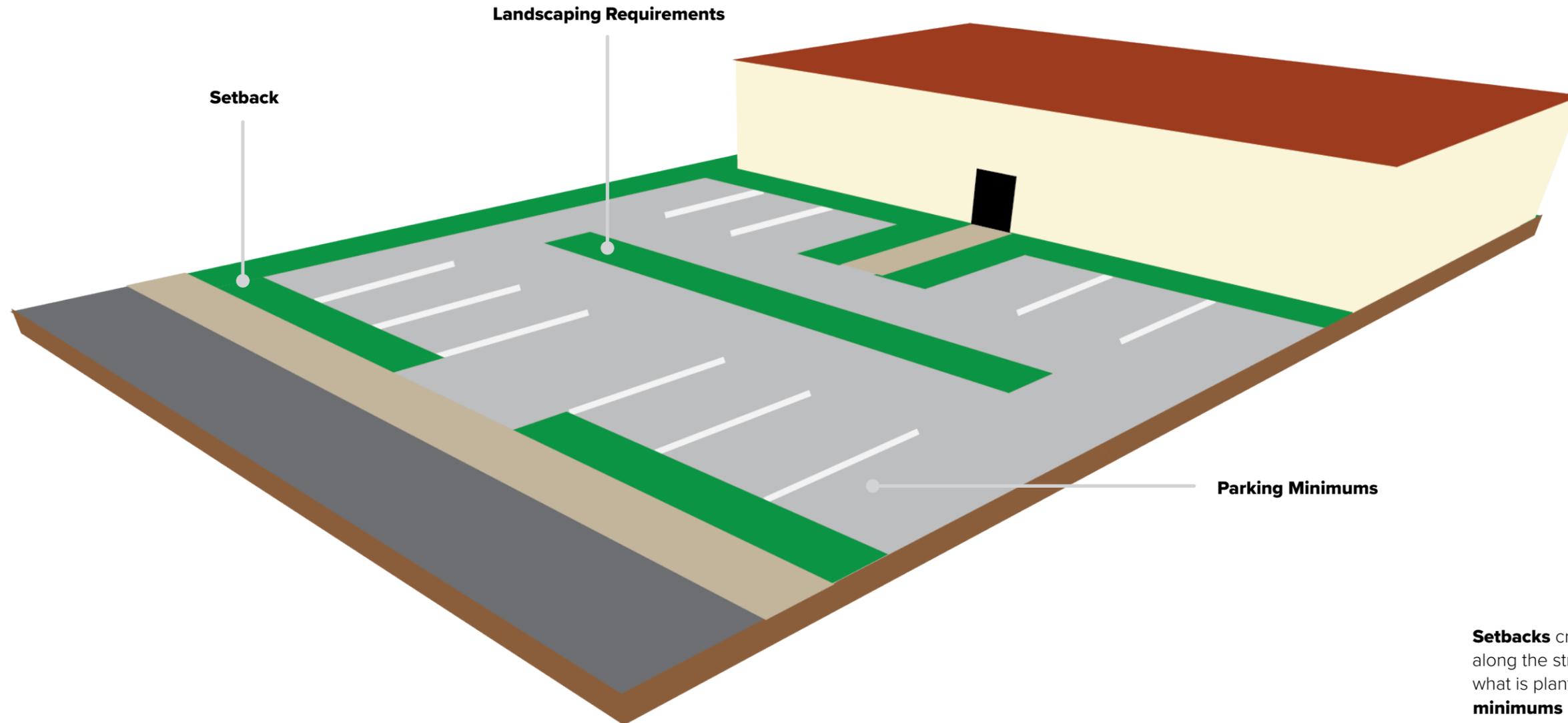
Commercial areas occupy a relatively small footprint in Paramount, but hold a lot of potential to increase tree canopy, especially in parking areas. These are also some of the most visible areas due to their location along prominent roads and the higher numbers of daily customers they attract.

Setbacks: Commercial developments in Paramount are required to have a 10 ft front setback. These setbacks are required to include trees in their landscaping. This makes room for the urban forest in commercial zones.

Parking Minimums: The zoning code stipulates minimum parking requirements for commercial developments depending on the size and use of the development. Minimum parking standards can increase the size of parking lots, competing with other uses of space, like landscaping. Relaxing off-site parking requirements can be paired with increasing landscaping requirements in order to create greener commercial districts.

Landscaping Requirements: Given the extent of parking lots in commercial districts, one way to provide tree canopy in these areas is to require shade trees throughout parking lots. Paramount already has parking lot tree requirements requiring one tree for every six parking spaces.

The benefit of both the setbacks and the landscaping requirement could be more fully realized by including details about the mature size of trees to be planted so that the maximum canopy benefit is achieved from the landscaped space. Additionally, enforcement of this standard would help ensure trees are replaced as they die, maintaining the canopy over longer timescales.



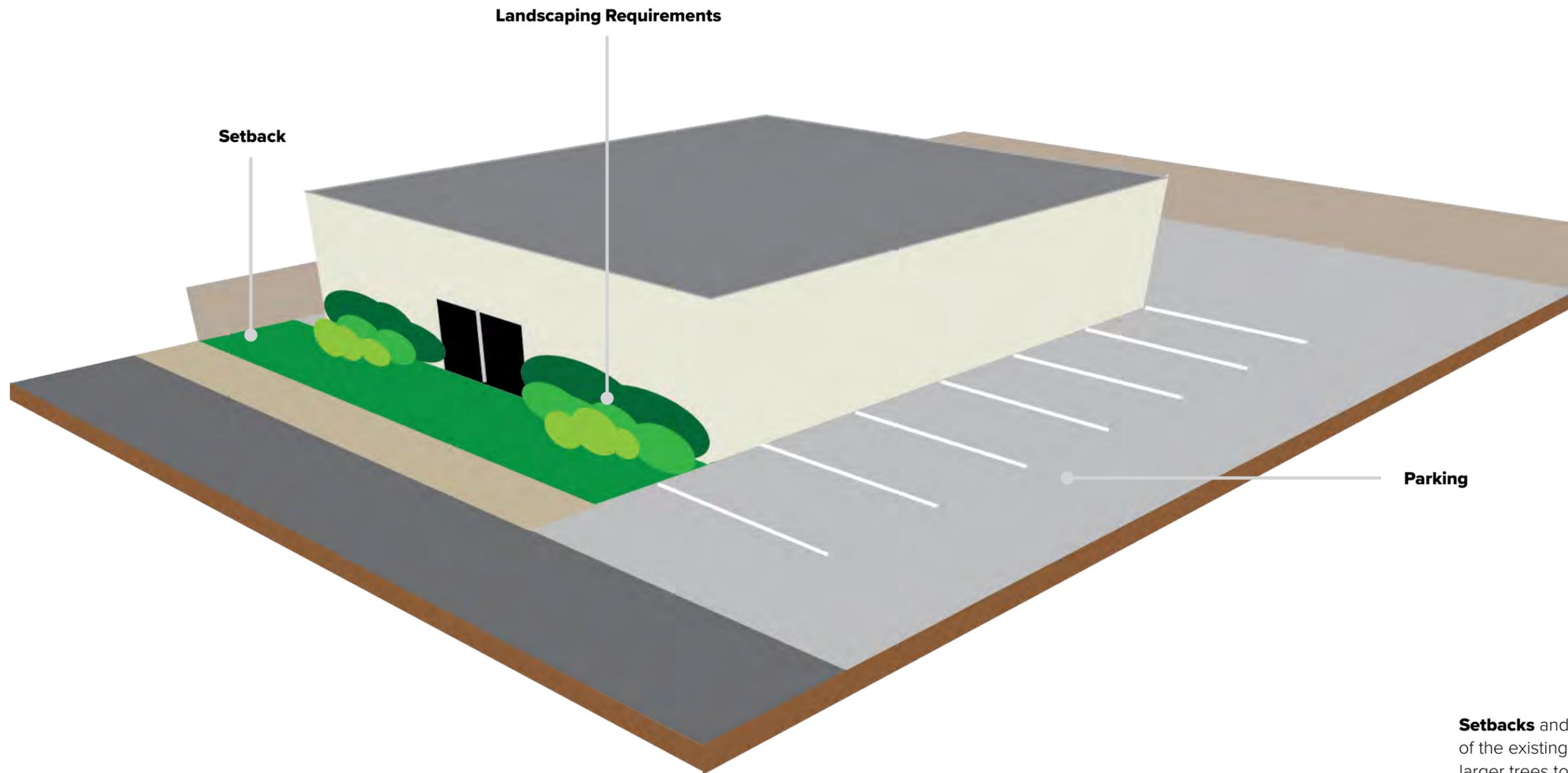
Setbacks create space to grow the urban forest along the street. **Landscaping requirements** guide what is planted throughout the parking lot. **Parking minimums** dictate how much of the lot needs to be dedicated to hardscape for cars.

INDUSTRIAL NEIGHBORHOODS

Industrial zones have the lowest levels of existing canopy and are the second largest land use after residential. Therefore, it is especially important to consider trees in patterns of development for this zone. Many industrial lots consist of large buildings and paved lots. Adding trees to industrial areas is not just important to expand tree canopy across the City as a whole, it is also locally important in thinking of the welfare of community members who work in these areas.

Setbacks: Industrial areas are required to have front (and sometimes side) setbacks from the right-of-way. The size of the setback depends on the length of the lot, with larger lots requiring longer setbacks. There are existing landscaping requirements for these setbacks. Setbacks are the main source of existing canopy in industrial zones.

Parking lots: Many industrial lots also have large parking lots with currently little tree cover. Industrial parking lots are required to have one tree for every six parking spaces. More guidance on the kinds of trees that fulfill this requirement can help direct the growth of the urban forest in industrial areas.



Setbacks and **parking lots** are the source of much of the existing urban forest in industrial lots. Requiring larger trees to fulfill zoning requirements could increase canopy.

Vacant Planting Sites

City of Paramount

Legend

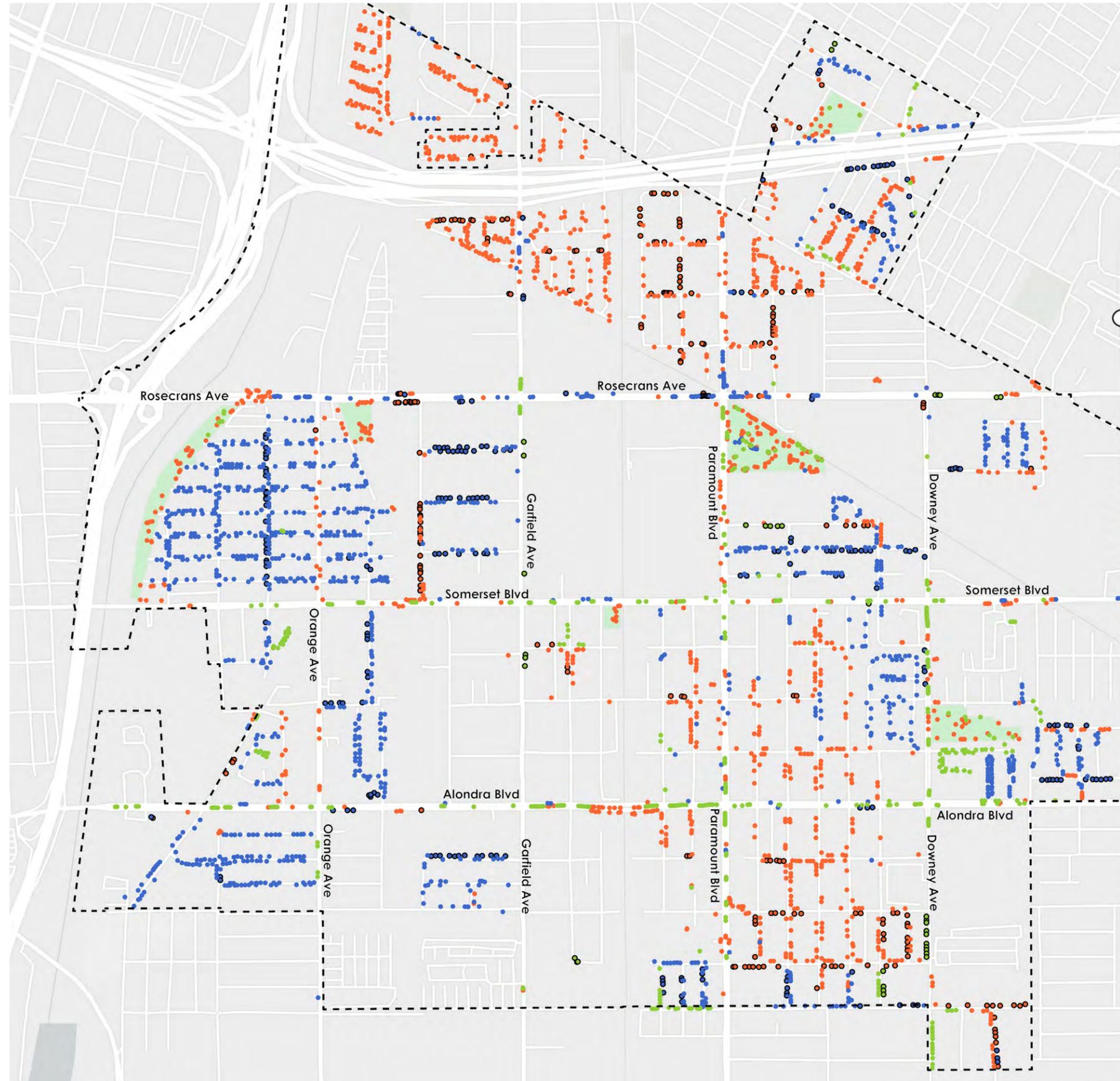
- ≤ 3' Vacant site
- 4' - 5' Vacant site
- ≥ 6' Vacant site
- Site with Overhead Utility
- City Boundary

Width	Total	Utility	No Utility
3' or less	533	36	497
4'	117	40	77
5'	1327	188	1139
6' or more	1586	212	1374

0 1,500 3,000 Ft



City of Paramount, TreePeople, SCAG, County of Los Angeles, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA



Goals & Strategies

Key Takeaways

- Citywide canopy goal is supported by goals for each land use based on community priorities and existing canopy
- Planting large trees will make it easier to achieve canopy goals with fewer planting spaces
- Strategies support canopy goals with specific operations and policy recommendations

The many opportunities for growth in Paramount's urban forest can be realized by setting ambitious but achievable goals. This plan lays out a set of goals for canopy cover by land use that come together to form a canopy cover goal for the City as a whole. This building block model of goal setting is used to better reflect community priorities, feasibility based on the existing forest, and alignment with City operations.

These goals are supported by strategies that lay out specific actions the City can take to increase canopy in each land use. Canopy goals are translated into tree planting guidance. Beyond urban forest expansion, these strategies also include provisions for caring for the urban forest and engaging partners to support the vision of the urban forest.

These strategies will be implemented over three phases. The first phase sets the foundation for the plan by making policy and operation adjustments to prepare for a larger forest. The second phase of the plan focuses on growing the urban forest through sustained tree planting and creation of plantable space. The third and final phase of the plan focuses on maintaining the planted trees so they grow large and healthy, and provide an abundant canopy for Paramount.

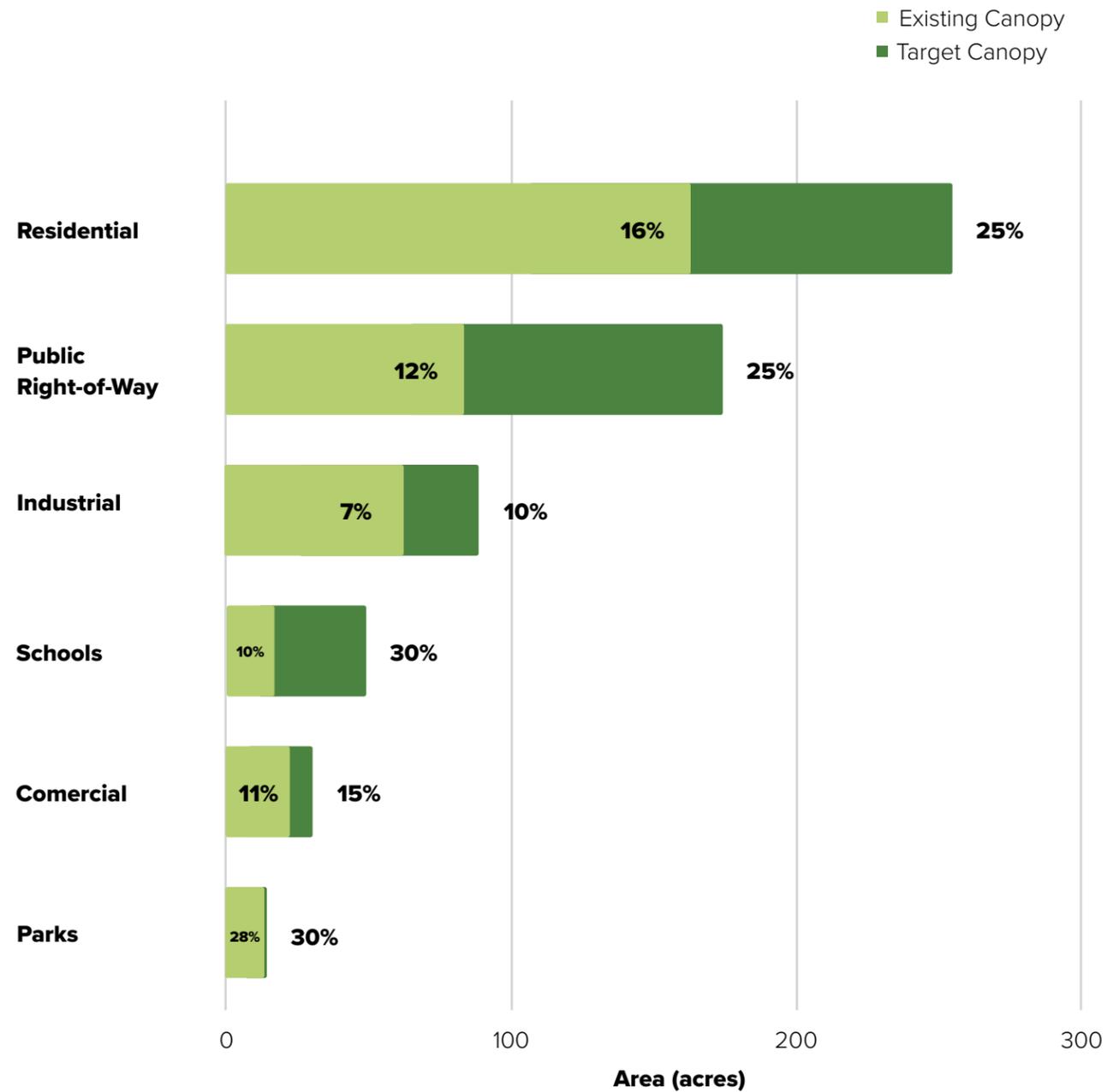


Image: Trees near Paramount Civic Center

Paramount's Future Forest

GOALS AND STRATEGIES

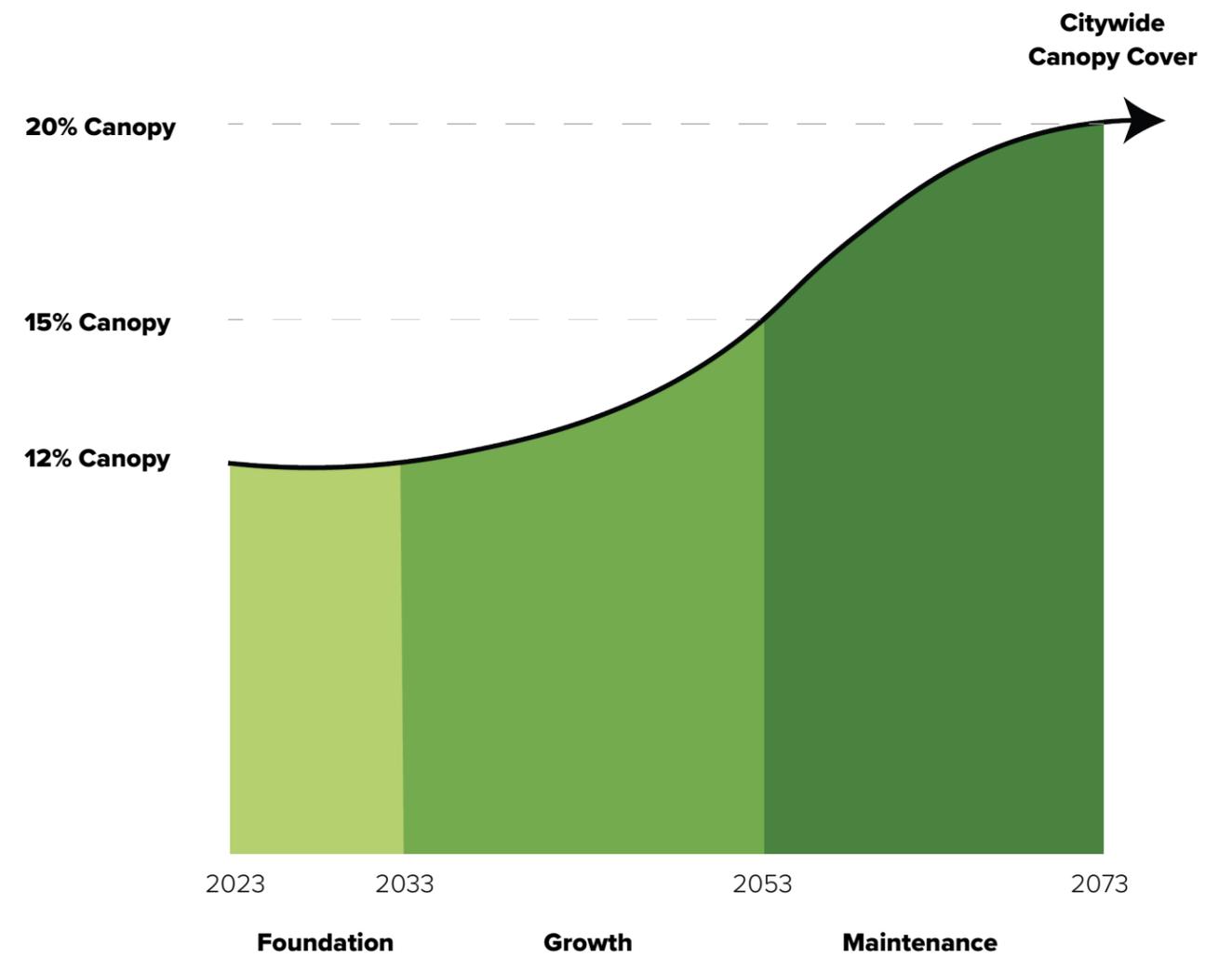
Paramount's canopy goals are set to be achievable yet **ambitious and meaningful**, focused on **where canopy is needed**, and grounded with **practical management strategies**.



Canopy targets by land use combine to achieve the citywide target in a way that integrates community priorities on where canopy is needed most.

20%
Tree Canopy
Cover Citywide

200
Added Acres of
Tree Canopy Cover

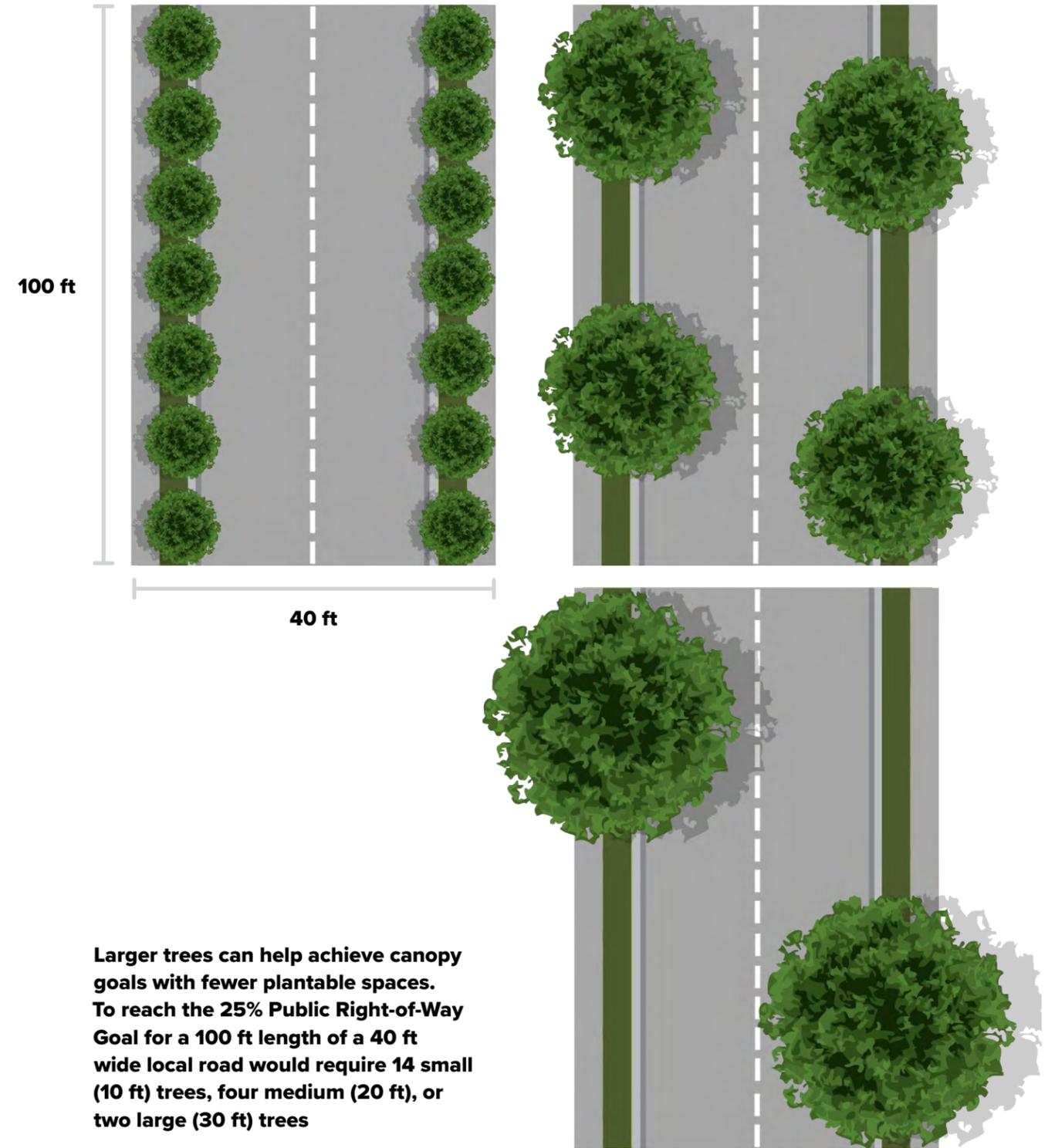
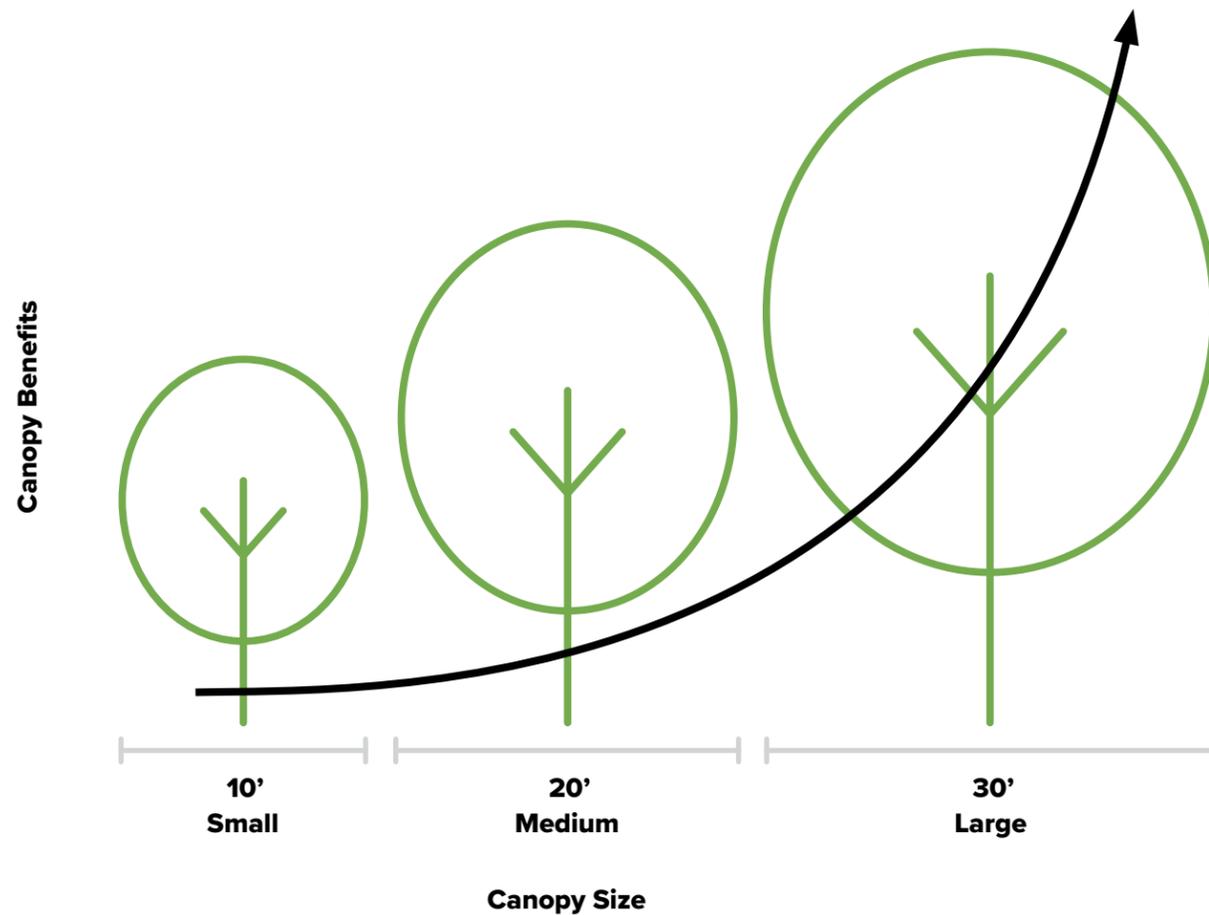


The pathway to realizing the future forest of Paramount is divided into three management phases of Foundation, Growth, and Maintenance.

The Importance of Counting Trees Planted and Large Trees for Realizing Canopy Goals

Canopy goals are powerful because they correspond closely with many benefits trees provide and communicate big picture objectives. However, canopy goals are difficult to measure from a human perspective, and they are not fully realized until decades after the initial tree planting. Achieving canopy goals in the long term is most practically accomplished with tree planting goals. Therefore, canopy goals and management strategies are translated into numbers of tree plantings for feasible implementation.

To realize canopy goals with a practical number of trees planted, it is critical to plant tree species that mature into large trees and create planting spaces that accommodate large trees. While planting large trees is not always possible due to planting space constraints, planting the largest trees appropriate for a given space will help ensure available tree planting spaces maximize canopy benefit.





Specific strategies for meeting tree canopy goals

Ten specific strategies have been identified to meet the tree canopy goals in alignment with the desires of the community as established in the Community Voices chapter. These ten strategies emphasize three types of actions: Plant, Preserve, and Partner. Importantly, consideration of equity is a cross-cutting theme to be incorporated into all strategies.

PLANT

Six of the ten strategies involve planting trees as planting more trees is essential to expanding Paramount's urban forest. Planting strategies are grouped by land use in order to give specific guidance depending on how the land is managed by different stakeholders and which policy tools are appropriate. Planting strategies are in order according to the priorities identified in the community surveys.

PROTECT

Protecting existing trees is essential to ensure young trees grow into healthy mature trees that generate the most benefits. Similarly, responsibility to protect existing trees depends on where a tree is planted. Trees on public land are maintained by Public Works and sub-contractors while trees on private land are the responsibility of private residents. Policies around removing and replacing trees each on public and private land is important to ensure the forest is maintained through time.

PARTNER

Partnering with other agencies and the community creates a shared mission to grow care for Paramount's urban forest that can shape projects from the regional scale to the personal. Working together to foster a culture of tree care throughout Paramount will help the urban forest thrive for years to come. Importantly, many government agencies have jurisdiction over land in Paramount where some of the greatest need and best opportunities for adding trees exists.

Plant	1. Provide green areas for recreation in parks and around schools
	2. Maximize shade in the public right-of-way
	3. Create immersive green neighborhoods for all residents
	4. Ensure industrial areas maintain beneficial canopies
	5. Create canopied commercial corridors
	6. Pursue opportunities to expand the urban forest
Protect	7. Conserve the existing public urban forest
	8. Conserve the existing private urban forest
Partner	9. Partner with agencies outside the City to coordinate tree planting
	10. Engage the community with the urban forest

PROVIDE GREEN AREAS FOR OUTDOOR RECREATION IN PARKS AND AROUND SCHOOLS	
<i>Target: 30% Tree canopy in parks and around schools</i> <i>Lead Agency: Public works, Paramount Unified School District</i>	
Promote cool routes to school	Plant trees at a frequency of one tree for every 30 feet along school property and along streets within 0.15 miles of schools
	Create curb bump-outs at intersections within 0.15 miles from schools to create room for trees and calm traffic, increasing road safety for children
	Prioritize greening in and around school with low existing tree canopy and in neighborhoods with low existing canopy: 1. Roosevelt Elementary School 2. Zamboni Middle School
Develop parks as immersive green spaces	Increase tree canopy in parks with low existing canopy: 1. Salud Park (within limitations outlined in the lease with SCE) 2. Pequeno Park
	Plant large sized trees in parks given relatively fewer infrastructure constraints
Work with Paramount Unified School Districts to develop green schoolyards	Encourage PUSD to plant trees around existing green play areas and use large canopied trees in line with the recommended tree list for landscaping
	Facilitate projects for PUSD to depave existing asphalt play areas and replace them with shaded green play areas through permitting and grant funding support

MAXIMIZE SHADE IN THE PUBLIC RIGHT-OF-WAY	
<i>Target: 25% canopy cover along the public-right-of way</i> <i>Lead Agency: Planning</i>	
Plant all existing vacant planting sites	Reference the vacant site analysis for location of vacant planting sites as of the 2023 tree inventory
	Plant vacant sites with trees from Street Tree Palette according to the size of the planting site
	Prioritize greening on blocks with low canopy, blocks with large available planting sites, around schools and in neighborhoods with low existing canopy (see canopy prioritization map)
Replace low-benefit trees with full canopied trees	Prioritize replacements in neighborhoods with low existing tree canopy and few available vacant planting sites
	Replace low-benefit trees, including palms and small trees, planted in large planting spaces large canopied trees that the space will accommodate Refer to the Tree Replacement and Interplanting Criteria
Install additional planting sites where existing planting sites are insufficient to meet the target	Install planting spaces such that there is room for 26 trees for every 650 ft residential block
	Tree wells should be as large as the existing sidewalk can accommodate Sidewalks must maintain 5 ft of unobstructed pedestrian access
	New planting strips should be designed to be a minimum of 5 ft wide
Prioritize canopy along multi-modal transit routes	Install tree wells and plant trees with large canopies near bus stops
	Prioritize filling vacant sites, replacing palms, and creating additional planting spaces along streets with existing or proposed bikeways in line with the Bellflower-Paramount Active Transportation Plan
Promote the survival of planted trees	Include three years of watering after planting by the City, subcontractor, or community-based organizations in contracts and cost calculations
	Engage with residents when new street trees are planted outside a residence to inform them what to expect from a healthy street tree and how to contact the City if the tree is experiencing any issues

CREATE IMMERSIVE GREEN NEIGHBORHOODS FOR ALL RESIDENTS	
<i>Target: 25% average canopy cover on residential parcels</i> <i>Lead Agencies: Planning, Public Works</i>	
Establish and enforce revised tree zoning requirements for new residential development and major renovations in Single-Family, Medium Density, and Multiple-Family Residential zones	Work towards one tree for every 1,250 sq ft of lot area for all residential zoning districts
	Require landscaping plans to include trees
	Offer density bonuses for developments that substantially exceed minimum tree requirements
	Require trees included in landscape plans to have a mature canopy size of at least 20 ft diameter or provide edible fruit Palm trees do not fulfill requirements
	Require trees to be at least 24" box size at time of planting
	Tree planting requirements are not affected by drought declarations
	Follow up with survival of required trees after 3 years Trees that have not survived establishment must be replaced
Give trees to residents for planting on private property	Give away shade and/or fruit trees in spring and fall at City events including: 1. Farmer's Market 2. Friday Night Paramount 3. Eco Friendly Fair
	Promote tree giveaways through town channels and local organizations to reach residents

ENSURE INDUSTRIAL AREAS MAINTAIN BENEFICIAL CANOPIES	
<i>Target: 10% canopy cover on industrial parcels</i> <i>Lead Agency: Planning</i>	
Require tree planting in the zoning code for new development and major renovations in Light and Heavy Manufacturing zones	Work towards one tree for every 3,000 sq ft of lot area
	Require one tree for every four parking spaces. Setback plantings cannot count towards parking lot trees. Parking lot trees can be counted towards total required trees
	Require one tree for every 30 linear ft of property frontage.
	Trees used to meet zoning requirements must have a mature canopy size of at least 20 ft diameter Palm trees do not fulfill requirements
	Require trees to be planted in a space large enough to accommodate their mature size, including tree wells
	Tree planting requirements are not affected by drought declarations
	Follow up with survival of required trees after 3 years Trees that have not survived establishment must be replaced
Encourage trees on existing industrial development	Work with the Paramount Chamber of Commerce to host workshops with local businesses about the benefits of tree planting
	Provide local businesses with resources to encourage tree planting, including tree benefits, tree care guidelines, and tree palette
Plant along the public right-of-way in industrial zones	Install tree wells in the sidewalks where feasible in industrial zones
	Prioritize streets where industrial zones are adjacent to residential zones

CREATE CANOPIED COMMERCIAL CORRIDORS	
<i>Target: 15% canopy cover along commercial corridors</i> <i>Lead Agency: Planning, Public Works</i>	
Require tree planting in the zoning code for new development and major renovations in General Commercial, Commercial Manufacturing and other commercial zones	Work towards one tree for every 2,000 sq ft of total area in commercial lots
	Require one tree for every 30 linear ft of property frontage
	Require one tree for every four parking spaces, not including required setback trees
	Require trees to be at least 24" box size at time of planting
	Require trees used to meet zoning requirements to have a mature canopy size of at least 20 ft diameter
	Palm trees do not fulfill requirements.
	Require trees be placed in planting strips or tree wells large enough to accommodate their mature size
	Tree planting requirements are not affected by drought declarations
Follow up with survival of required trees after 3 years. Trees that have not survived establishment must be replaced.	
Encourage trees on existing commercial development	Work with the Paramount Chamber of Commerce to host workshops with local business about the benefits of tree planting
	Provide local businesses with resources to encourage tree planting, including tree benefits, tree care guidelines, and Street Tree Palette
Plant along the public right-of-way in commercial corridors	Install tree wells as large as the sidewalk will accommodate at a density of one for every 50 linear ft of block length along commercial corridors if there is no existing parkway

PURSUE OPPORTUNITIES TO EXPAND THE URBAN FOREST	
<i>Target: 10% increase in the number of publicly managed planting sites by 2050</i> <i>Lead Agencies: Public Works, Planning, City Council</i>	
Include tree planting in capital projects	Review capital improvement plans for tree planting potential, including transportation improvements, school renovations, park upgrades, or landscape remodeling
Invest in new green spaces	Explore potential for new public green spaces including leveraging small spaces such as pocket parks and parklets
	Solicit and incorporate community feedback in the location and design of new green spaces
Retrofit right-of-ways	Add curb bump outs to parking lanes on streets without space for parkways or tree wells to create tree planting space
	Install or expand parkways during major road infrastructure projects such that parkways are at least five feet wide to accommodate large trees

PARTNER WITH AGENCIES OUTSIDE THE CITY TO COORDINATE TREE PLANTING	
<i>Target: City partners support and contribute to achieving tree canopy goals</i> <i>Lead Agencies: Public Works, City Council</i>	
Coordinate tree planting protocols on easements through the City	Work with SCE and LADWP to establish joint-use agreements or long term leases to leverage utility easements as public space Consult with neighboring communities who have completed or are undergoing such agreements such as Huntington Park (Veterans Park) and Florence-Firestone (92nd Street Linear Park)
	Work with SCE and LADWP to plant compatible tree canopy below transmission wires on utility easements in line with utility standards SCE secondary use policy requires trees be no greater than 15 ft in height
	Work with Union Pacific to plant trees along the railroad easement in line with the guidelines of this plan
Work with State agencies to coordinate tree planting on State managed land	Work with CalTrans to coordinate tree planting along the I-105 and I-710 freeways Prioritize trees that provide screening and privacy between the freeway and the city.
	Work with the California Department of Housing and Community Development to encourage tree planting in mobile home developments
Work with service providers to implement tree planting agreements	Include the price of planting and maintaining trees when creating contracts that include the provision of trees with third party service providers such as waste haulers or utility companies
	Provide guidance on tree care best management practices for third parties who perform tree maintenance including subcontracts and utility providers.
Work with agencies developing infrastructure projects in Paramount to include tree planting	Work with the Lower LA River Implementation Advisory Group to coordinate on projects identified by the Lower LA River Revitalization Plan within Paramount and advocate for tree planting to be a priority in these projects
	Work with Metro to ensure that trees consistent with the guidelines laid out in this plan are included in any proposed infrastructure projects including the proposed light rail and potential I-710 bikeway.

ENGAGE THE COMMUNITY WITH THE URBAN FOREST	
<i>Target: Engage with at least 100 residents annually</i> <i>Lead Agencies: Public Works</i>	
Make information about the urban forest publicly available	Create a page on the City website dedicated to trees and include the following information: <ul style="list-style-type: none"> • Urban Forestry Management Plan • Approved tree list • Tree care guidelines • Tree zoning requirements • Upcoming urban forestry events • Most recent completed tree inventory
Hold community tree planting events	When multiple trees are scheduled to be planted in public places such as parks, schools, and residential parkways, hold a community planting event and involve residents in tree planting
Engage in discussions about the urban forest at public events	Introduce the Urban Forest Management Plan at a public workshop
	Periodically solicit feedback from community members about the urban forest, both during UFMP revisions and between revisions
	Inform residents about tree care practices and available tree resources at public events such as the Farmer's Market and Friday Night Paramount.
Partner with Community-Based Organizations	Work with community based organizations to coordinate volunteer opportunities for tree planting, tree care, and community events

CONSERVE THE EXISTING PUBLIC URBAN FOREST	
<i>Target: No public tree needs to be removed before the end of its lifespan</i> <i>Lead Agency: Public Works</i>	
Adopt City policy around public tree removal criteria and replacement	Public street trees may be removed in cases of death, disease, excessive infrastructure damage, or substantial threat of damage
	Public street trees may not be removed in cases of unsubstantiated requests, litter, or personal preference Requests for street tree removals will be reviewed on a case-by-case basis by Public Works
	Replace each removed street tree with two new tree plantings At least one tree planting must be on the same block as the removed tree New trees are planted according to guidance outlined in this plan
Hire sufficient City staff dedicated to tree care to supplement sub-contractor services	City tree staff responds to requests for off-cycle tree inspections, remove reported dead trees, and plant replacement trees
	Train staff on proper tree care practices in line with ANSI A300 and International Society of Arboriculture (ISA) industry standards
Find the highest and best use for urban wood waste	Prioritize sending wood waste to vendors who reclaim, salvage, or upcycle wood waste into high quality, durable goods
	Prioritize purchasing reclaimed wood products, such as park benches
	Send wood waste that cannot be reclaimed to be recycled into bio products such as mulch, compost, or feedstock

CONSERVE THE EXISTING PRIVATE URBAN FOREST	
<i>Target: Residential development results in a net increase of tree canopy</i> <i>Lead Agency: Planning</i>	
Adopt City policy on the removal of trees on private property	Healthy trees removed during private development must be replaced by planting two replacement 24" box trees with a mature tree canopy of at least 20 ft and low water requirements
	In cases where planting replacement trees is deemed infeasible, an 'in-lieu' fee may be paid to the City, relative to the size of the tree removed, to cover the planting and establishment of additional public trees
Preserve trees during construction	Construction projects that will impact more than 500 sq ft of land must submit a Tree Plan to the City outlining what measures will be taken to protect existing trees during construction The Tree plan should include: <ul style="list-style-type: none"> • The location of trees • The Tree Protection Zone (the area of dripline of tree that is protective from intensive construction activity) for all trees to be preserved • Tree fencing • Erosion control • Tree pruning • Soil compaction mitigation • Irrigation • Tree maintenance schedule
	Tree plans should be approved and overseen by a certified arborist
	Any tree that dies as a result of construction must be replaced with two 36" box size trees
Support residents in caring for mature trees	Provide educational materials on the benefits of mature trees as well as tree care resources, such as professional arborist contact information
	Allow residents to request City tree care services for trees in the front setback, including inspection and pruning

Implementation

Key Takeaways

- Prioritizing planting trees early in the project will allow time for tree growth throughout the project
- Coordinating stakeholders will help achieve a common goal
- Funding will be required to implement strategies
- The plan is a living document that will change over time

The success of this plan hinges on the ability of the strategies to be implemented. Making the plan a reality will require coordination of people, time and money. Many partners will need to come together to enact different elements of the plan. A phased timeline must account for time for trees to grow to their full size by the canopy target date. Funding will need to be allocated to pay for planting new trees as well as the increased costs of maintaining a larger urban forest. Planning these logistics will enable smoother translations of strategy into action.

To guide tree planting implementation, resources are included in this plan advising on which trees should be planted where. The street tree map identifies the size of planting space along streets with public trees in Paramount, and where utility lines exist. These factors play a major role in determining which trees are suitable for given planting sites. The Street Tree Palette can then be used to identify trees that are suitable for each site. The Street Tree Palette is organized by required plantable space and contains relevant traits of each tree including mature size, water requirements, and representation in the existing urban forest. These two resources together can be used once planting sites have been identified to make decisions about how they should be filled.

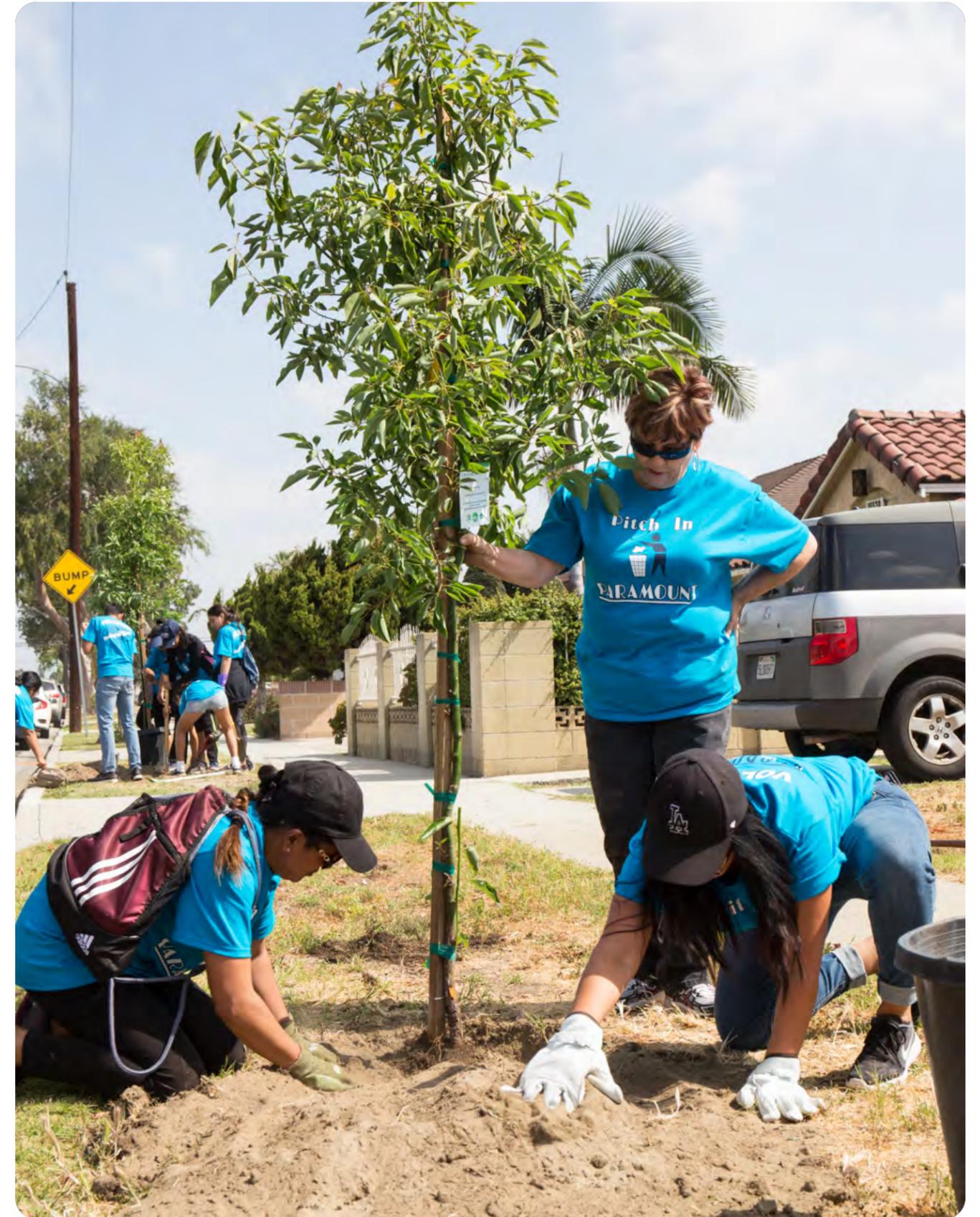


Image: Arbor Day 2018 (Source: City of Paramount)

Implementation Timeline

Trees take time to grow. The trees planted today will not reach their mature size for at least twenty years, a generation. As such, it is important to take the long view when planning for the urban forest. The timeline of this plan is structured to prioritize planting new trees in the first thirty years of the plan. By the end of this plan's lifespan in 2073, those trees will have reached their mature size. In the later years of this plan, emphasis will shift from expanding tree canopy to maintaining tree canopy. Annual tree plantings will still be important, because as trees die naturally they will need to be replaced; however, the scale of planting will decrease and careful maintenance of the expanded forest will be the priority.

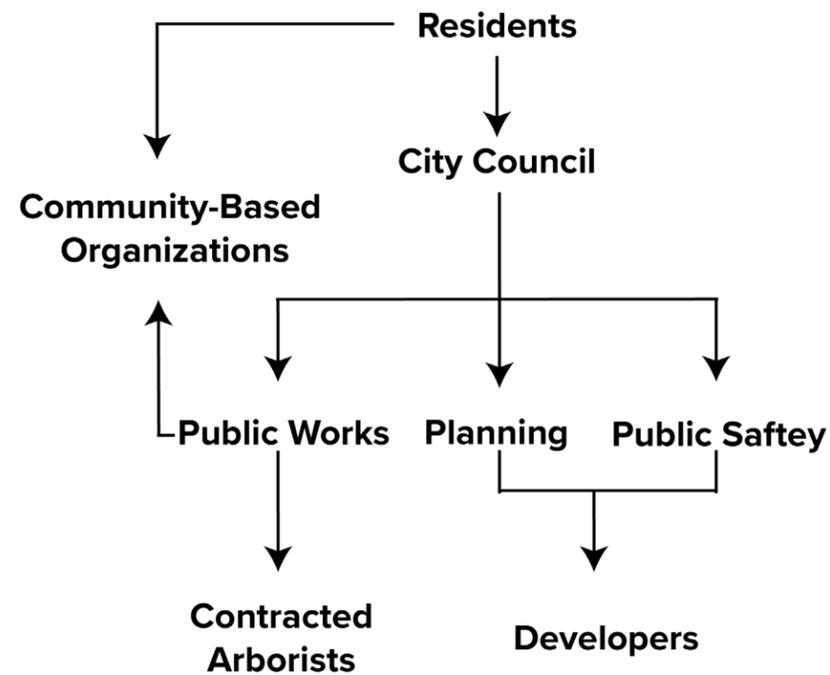
Capacity for the urban forest, both physical and human, will also take time to grow. There are not enough existing plantable sites to achieve the goals laid out in this plan. Therefore, infrastructure changes will need to be made to accommodate more trees. These projects will likely require greater staff time and funding. Coordinating major tree planting improvements with other capital projects or regional initiatives can help set in motion the creation of plantable space for trees down the line. Planning for plantable space today will allow for more tree plantings tomorrow, which will support a greater tree canopy in the future.



Phase	Years	Planting	Maintenance	Engagement
Establishment	2023-2032	Plant 400 trees/year Adjust zoning code to require more tree planting on new developments Create new places to grow trees	Adopt policy outline criteria for public tree removals Adopt policy outline criteria for private tree removals	Establish web page to host urban forest information Regular outreach at community events Give away 200 trees to residents per year
Expansion	2033-2052	Plant 400 trees/year Create new places to grow trees	Increase maintenance budget to accommodate care for more trees	Focused engagements as part of plan review Regular outreach at community events Give away 200 trees to residents per year
Maintenance	2053-2072	Plant 50 trees/year or as many as required to replace removed trees and keep vacant sites filled	Remove and replace trees as needed	Focused engagements as part of plan review Regular outreach at community events

Partners

Many partners must come together to make this plan a reality. City Council importantly sets necessary local policy and allocates funding. Departments across the City of Paramount must coordinate to carry out the strategies outlined in this plan. Residents must support, guide, and engage in urban forestry initiatives including incorporating more trees on residential land. Businesses and developers must incorporate trees on their properties, in their projects, and support the addition of more space for trees in industrial and commercial zones. Community-based organizations must be active and trusted in order to bridge local government and residents by amplifying community voices. Together, each role plays an important part in realizing a thriving urban forest.



Relationships between partners of the urban forest in Paramount

Partner	Responsibility
Public Works	Oversee street tree and park planting and maintenance Respond to requests for off-cycle inspections and pruning
Planning	Support implementation of tree zoning requirements Verify development landscaping and tree plans Update tree zoning requirements as needed over time
Public Safety	Enforce tree zoning regulations
City Council	Adopt UFMP Adopt tree zoning requirements Allocate funds for the urban forest Set urban greening as a priority for City operations
Arborist contractors	Perform routine grid pruning Perform routine inspections Provide tree care services as directed by Public Works
Residents	Care for trees on private property Care for trees on parkways adjacent to private property Support tree planting initiatives Participate in planting events and engagement
Developers	Comply with tree zoning requirements Seek to exceed tree zoning requirements where possible
Community-Based Organizations	Plant trees Engage community

Funding

Expanding the urban forest will require additional investment. Creating space for trees, planting trees, and maintaining those trees will all cost money. As the urban forest grows, so too must the budget allocated towards the urban forest.

There are three categories of costs associated with caring for the urban forest. The first is tree maintenance, which includes regular pruning as well as additional tree trimmings and tree removals. These costs will increase as the size of the forest as a whole increases because more trees will need to be maintained.

The next category is tree planting, which includes the cost of planting and staking a sapling, three years of watering during establishment, and creating space for trees through minor site modifications such as installing tree wells in sidewalks. Tree planting costs depend on the number of new trees planted in a given year. The numbers in the table to the right are estimates, as costs can vary considerably based on how trees are planted.

Finally, community engagement covers the cost of giving trees to residents as well as the staff time and materials needed to connect with residents about the importance of tree care and the urban forest. Community engagement costs do not depend on the size of the urban forest.

These three numbers can be combined to estimate the funding needs for the urban forest each year based on the size of the existing forest and the number of anticipated tree plantings. While a larger urban forest will require a larger budget, fortunately there are many grant resources available to help fund urban forestry.

Recommended Annual Budget				
Service	Unit Cost	2024 Quantity	Total Cost	Funding
Tree Maintenance (per tree per year)	\$115	7,100 trees	\$816,500	General Fund
Contracted Maintenance	\$70			
City Staff Time	\$37			
Supplies & Equipment	\$8			
Tree Planting (per tree)	\$1280	400 trees	\$512,000	General Fund, Grants
Tree Planting (tree+supplies+labor)	\$400			
Establishment	\$380			
Minor Site Modification (half of sites)	\$500			
Community Engagement (per year)	\$15,000	N/A	\$15,000	General Fund, Grants
Total			\$1,343,500	

Grants

FEDERAL

USDA U.S. Forest Service

- Administers federal funding related to urban and community forestry.

NON-PROFIT

Arbor Day Foundation

- Small grants for arbor day events and community-based organization tree planting events.

California ReLeaf

- Small grants for arbor day events and community-based organization tree planting events.

American Forests

- Small grants for arbor day events and community-based organization tree planting events

BUSINESS

Southern California Edison

Service Area Grants

- Provides grants for 501(c)3 organizations within the service area, including funding for climate resilience and adaptation measures

SoCalGas

Climate Grant

- Supports local planning efforts to prepare for/or recover from climate change risks

STATE

California Natural Resources Agency

Environmental Enhancement Mitigation Grant Program

- Aimed at mitigating impacts caused by new or modified transportation facilities including urban forestry projects that offset vehicular emissions of carbon dioxide

Urban Greening Program

- Aimed at reducing greenhouse gasses while also transforming the built environment into places that are more sustainable, enjoyable, and effective in creating healthy and vibrant communities.

California Department of Forestry and Fire Protection (CAL FIRE)

Urban and Community Forestry Program

- Planning and/or implementing projects for urban forest expansion and health with a focus on extreme heat, environmental, economic, and social benefits to underserved communities.

Office of Planning and Research

Extreme Heat Program

- Invests in efforts to reduce the impact of heat

California Strategic Growth Council

Transformative Climate Communities Program

- Funds ambitious measures to build climate adaptation and resilience through planning, research, capacity building, restoration, and sustainable infrastructure

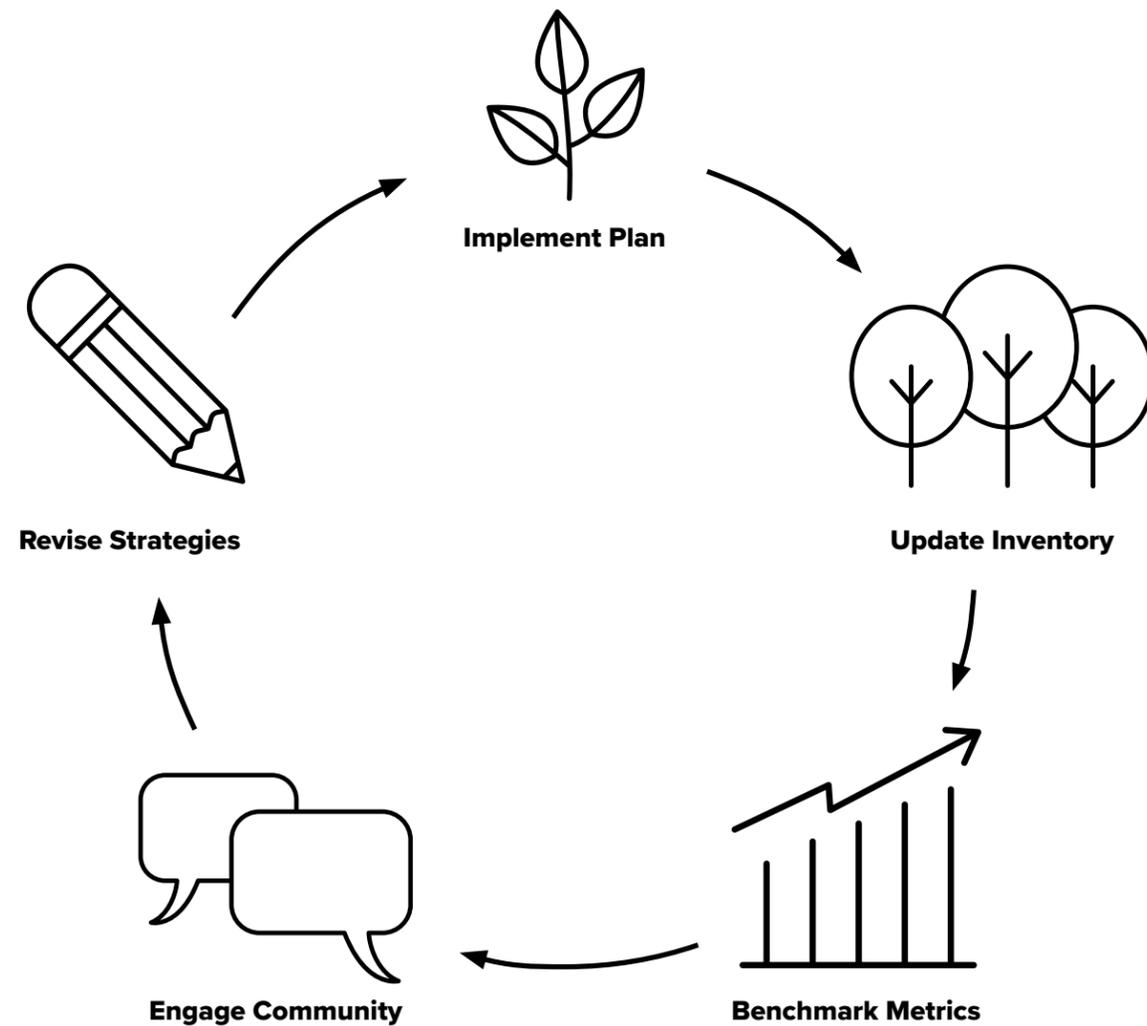
California State Parks

Statewide Local Parks Program

- Projects must develop or acquire and develop a new park, expand an existing park, or renovate an existing park

Plan Review

The plan will need to be periodically updated to remain relevant to Paramount’s circumstances and priorities. The plan should be reviewed and revised every 10 years. The review process should include benchmarking the progress of the urban forest through a comprehensive inventory of public trees and a canopy assessment based on the most recent available LiDAR data. The review process should also include meaningful public engagement that reflects the current priorities of community members regarding the urban forest to adjust the strategies of this plan.



The plan should be reviewed and revised with the steps outlined in the diagram every 10 years

Evaluation

Ensuring progress towards the goals will require periodic benchmarking to monitor the state of the urban forest. As goals are primarily reported as canopy extent, measuring tree canopy overtime, for the city as a whole as well as by land use will be an important marker of progress. The first detailed canopy measurement for LA County was conducted in 2016 and is included as the baseline metrics for this report. Subsequent canopy mapping is planned and can be used to benchmark City canopy, and further analysis of this data can benchmark City canopy by land use.

Additionally, it will be important to collect detailed information about the public urban forest through regular tree inventories. This information should be used to benchmark species diversity, tree size and tree health. This information can be used to adjust planting and maintenance practices as needed. Updated inventory should also be incorporated into other city plan updates including the Climate action Plan and the Environmental Justice Element of the General Plan

Finally, community priorities should continue to be surveyed. Unlike other metrics, there is no ‘goal’ to benchmark against. Rather, as the plan is revised, it should continue to reflect the changes in priorities of the community.

Metric	Baseline	Target	Data Source
Total Tree Canopy	12%	20%	Canopy Assessment
Tree Canopy by Land Use	Schools Parks Right-of-way Residential Industrial Commercial	30% 30% 25% 10% 15%	Canopy Assessment
Species Diversity	Most common species 9.7%	Most common species <10%	Tree Inventory
Tree Size	17% young trees	40% young trees	Tree Inventory
Tree Health	90% Good condition	=>90% Good condition	Tree Inventory
Community Priorities	-	-	Community Survey

Street Tree Planting Implementation Tools

STREET TREE PRIORITIZATION MAP

The Street Prioritization Map depicts which blocks are the highest priority to plant street trees based on criteria of existing canopy, planting size, distance from schools, and whether the block is in a high priority residential neighborhood. The map also shows vacant sites. It can be used to plan where planting initiatives should take place first.

STREET TREE REPLACEMENT AND INTERPLANTING CRITERIA

The Street Tree Replacement and Interplanting Criteria outlines when it makes sense to replace existing low-benefit trees with higher benefit tools. This is a useful strategy on blocks that are classified High Priority on the Street Tree Prioritization Map but lack vacant sites to fill with new trees.

STREET TREE PLANTING MAP

The Street Tree Planting Map illustrates the size of planting sites along the public right-of-way in Paramount. The map can be used in conjunction with the Street Tree Palette to determine what species are suitable for planting locations. It also illustrates the location of utility wires above planting spaces, where data is available. Sites located under utility wires should be planted with trees approved by Southern California Edison (SCE) as marked in the Street Tree Palette.

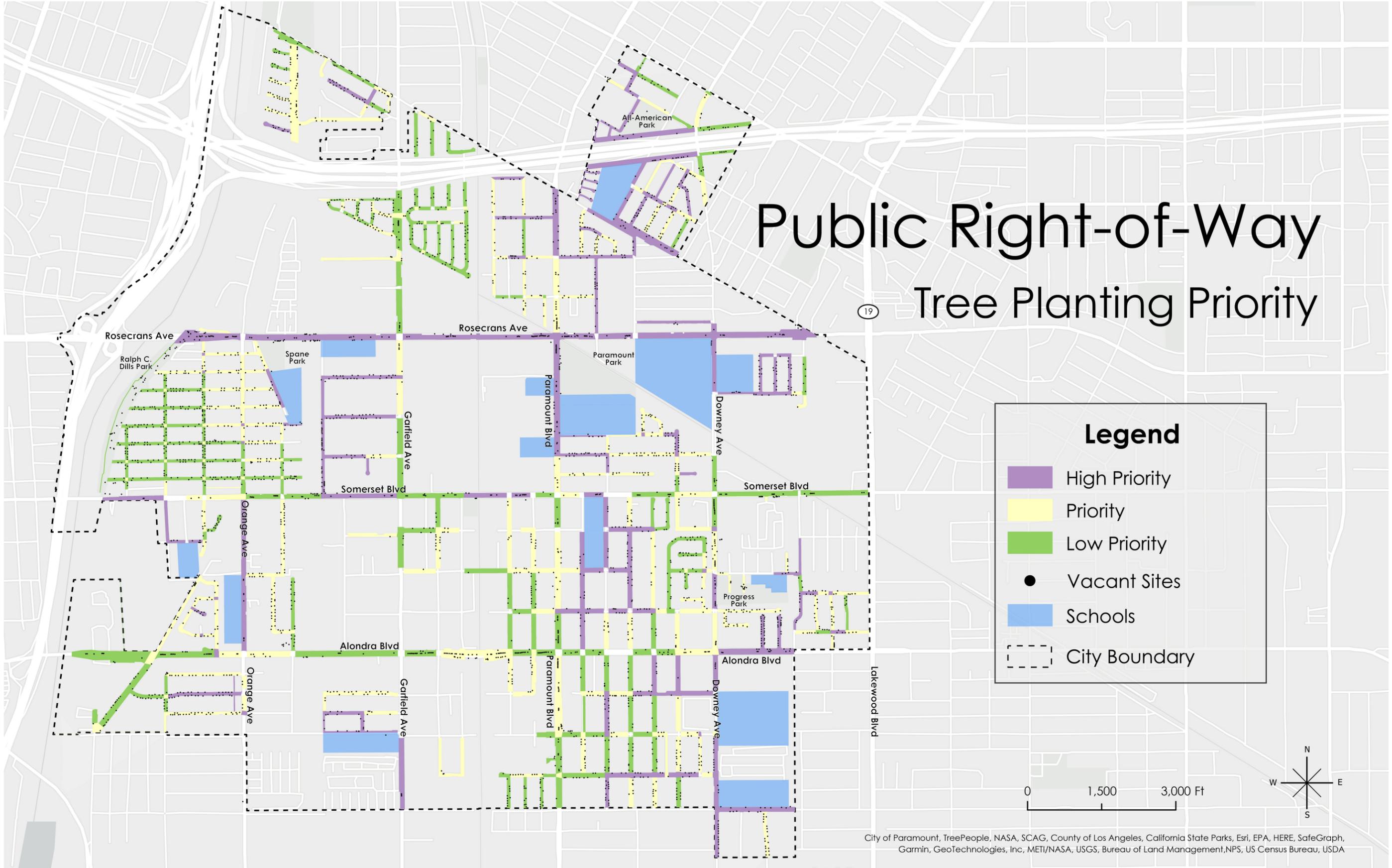
STREET TREE PALETTE

The Street Tree Palette is a list of recommended trees to plant along the public right-of-way in Paramount. Species are recommended based on suitability to Paramount climate, water requirements, and infrastructure compatibility, among other factors. The list is organized by recommended planting size for each tree. The list is color coded to match the planting sizes illustrated on the Street Tree Planting Map. Trees should be chosen corresponding to the plantable space on the site. Trees that require a larger plantable area than the site offers may damage infrastructure while trees that require a smaller plantable size for the site will not provide the most benefit the site can offer. For planting sizes where there are no native species or trees approved for under utility wires, trees from one planting size smaller may be chosen to meet these criteria.

The Street Tree Palette is intended to be a living guide to street tree species selection. Over time, the palette may be updated in response to knowledge shared by those planting and tending to Paramount's street trees and local nursery availability. While some major characteristics relevant for street tree management are included here, urban forest stewards may consider a broader range of characteristics when making case-by-case management decisions.



Public Right-of-Way Tree Planting Priority



Legend

- High Priority
- Priority
- Low Priority
- Vacant Sites
- Schools
- City Boundary

City of Paramount, TreePeople, NASA, SCAG, County of Los Angeles, California State Parks, Esri, EPA, HERE, SafeGraph, Garmin, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, NPS, US Census Bureau, USDA

Tree Replacement and Interplanting Criteria

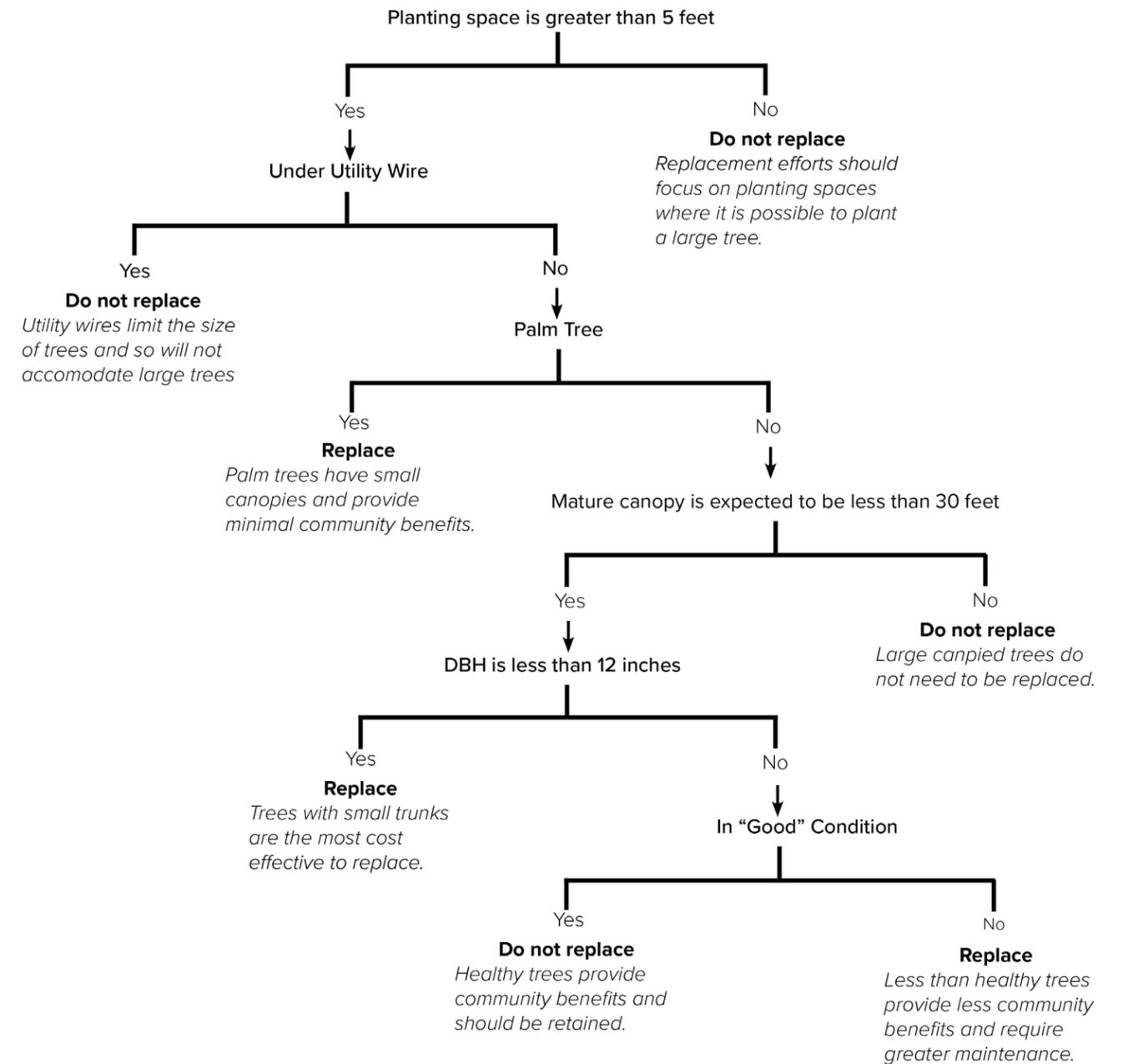
As there are not enough existing vacant planting spaces to plant the number of trees required to meet the canopy goal for the public right-of-way, there is opportunity to revisit sites that are underplanted.

This strategy is useful in cases where tree species with small canopies, including palms, are planted in spaces that could accommodate greater canopy. It should be used in situations where there are no existing vacant sites and in areas that are highest priority for more canopy.

One approach is to remove the small trees in order to plant species that will grow larger. While this may result in some short-term loss of canopy as the new tree grows, in the long-term it will result in a more canopied urban forest.

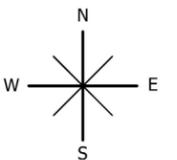
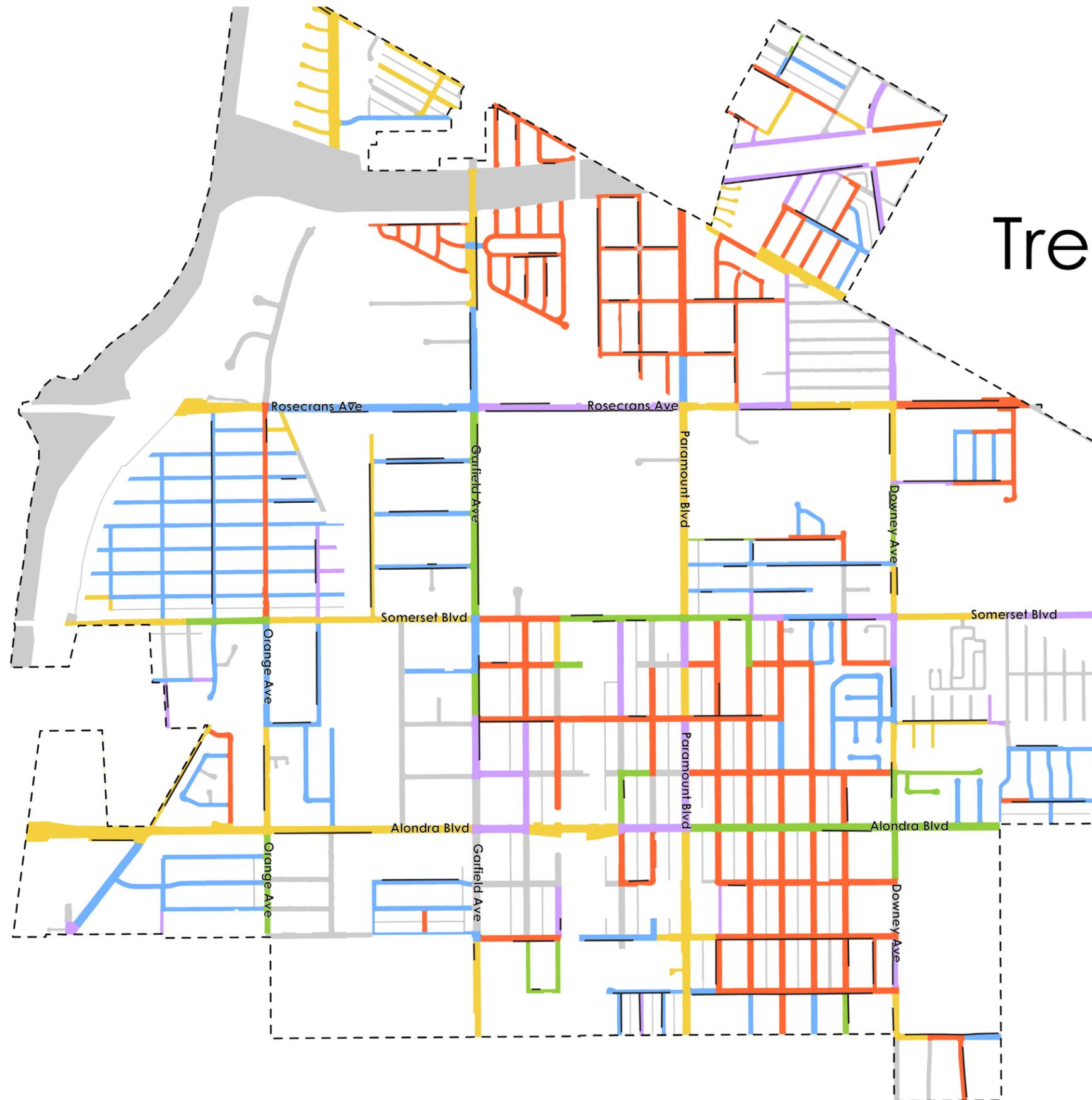
Trees should only be removed and replaced if they meet specific criteria as laid out in the diagram to the right. Only trees with small canopies planted in large spaces that have small trunks or are less than healthy should be considered for replacement.

Another opportunity is to plant additional trees in between small trees where they have been spaced at a distance larger than their smaller canopies require. This method applies to streets that have large parkways with small trees spaced far apart. In this scenario, there is no loss of canopy because the small existing trees remain planted, but additional trees are planted in the spaces between them.



Tree Planting Guide

Majority Parkway Sizes



City of Paramount, TreePeople, SCAG, County of Los Angeles, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

Street Tree Palette

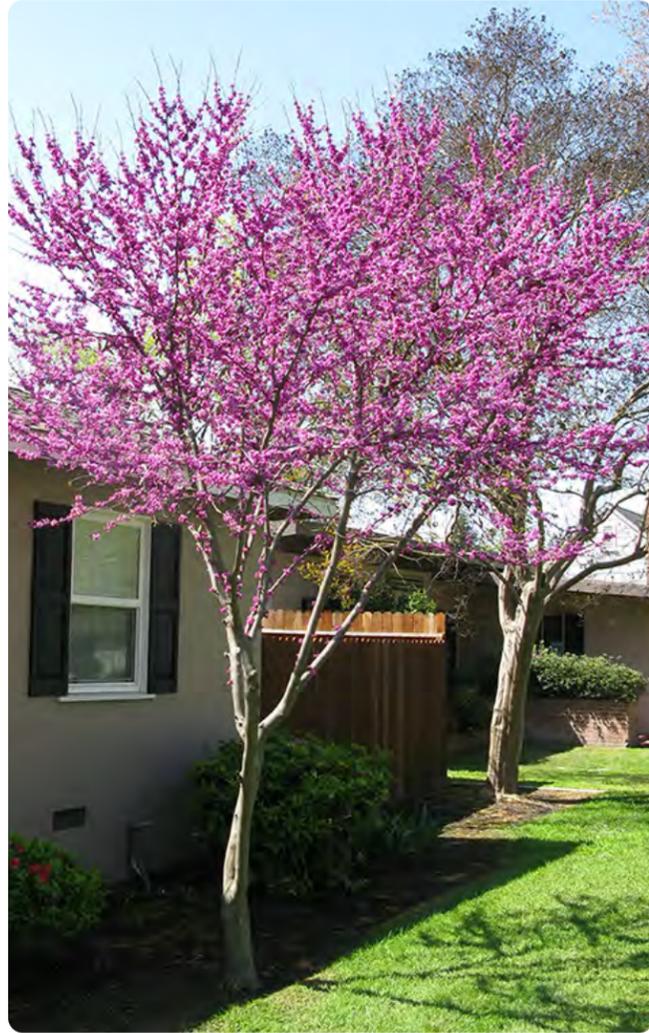
KEY	
Parkway Size	Growing area measured from curb to sidewalk. This minimum is up to the discretion of the city's street tree inspector.
SCE Approved Tree	Utility-friendly tree species recommended by Southern California Edison for Coastal, Valley, Mountain & Desert regions.
Evergreen, Deciduous, Semi-deciduous	<p>E - Evergreen. The tree has leaves year-round.</p> <p>D - Deciduous. All leaves lost in one season.</p> <p>S - Semi-deciduous. Most, but not all leaves lost.</p>
<p>Water: Ratings from WUCOLS IV (Water Use Classification of Landscape Species) LA Basin = Sunset Climate Zones 22-24 Valley/Inland = Sunset Climate Zones 18-21</p>	<p>VL - Very low. Trees should not need water other than natural rainfall. Prolonged drought may require a deep watering once or twice if severe wilting is exhibited.</p> <p>L - Low. One deep watering per summer month, or every other month in dry season if needed.</p> <p>M - Moderate. Two deep waterings per summer month. Perhaps one deep watering in spring and fall.</p> <p>H - High. One deep watering per week in summer months. One deep watering every other dry season month.</p> <p>VH - Very High. The soil needs to be kept moist. These trees naturally occur in riparian zones - stream or lake side.</p>
Root Damage Potential	These ratings obtained from the Cal Poly Web site: http://selectree.calpoly.edu . L = Low; M = Moderate; H = High
Allergy Potential	<p>These ratings (1-10) from Thomas Ogren's OPALS (Ogrens Plant Allergy Scale) System in Allergy Free Gardening. The increasing incidence of asthma and allergies in the Los Angeles area has prompted us to include this information. Some trees are now outlawed on school campuses because of their high allergy potential. In the flower, it is the male anther that produces pollen, the biggest allergy issue. Most flowers are complete, meaning they have both male and female parts. Some species, however, have flowers that are only male or female. These species have either separate male and female trees (dioecious - two houses), or they have those male-only and female-only flowers growing on the same tree (monoecious - one house, like corn), and yet others have separate male and female flowers and also some bisexual flowers. Over the years, male trees have been chosen for street trees and for campuses to avoid the mess of fruit drop from female trees. This has resulted in an increase in male trees, and therefore an increase in pollen.</p> <p>1 = lowest rating, least allergenic pollen. 10 = highest rating. These trees are usually wind-pollinated or have very fine pollen grains.</p> <p>f = female; m = male; b = bisexual, having both male and female flowers</p>

Images from SelectTree

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Cercis canadensis</i>	Eastern redbud	3	x		D	25-35	25-30	M	L	5	Pink flowers. Yellow fall color. 'Forest Pansy' has red-purple leaves.
<i>Cercis occidentalis</i>	Western redbud	3	x	x	D	15-25	10-25	L	L	5	Often multi-trunk. Magenta flowers, seed pods. Yellow fall color. Rounded leaves.
<i>Eriobotrya deflexa</i>	Bronze loquat	3	x		E	25-30	25-30	M	L	3	White fragrant flowers Dec-March. 5/8" non-edible fruit. Best with moist soil.
<i>Lagerstroemia indica and cultivars</i>	Crape myrtle	3	x		D	25	25	M	L	5	Orange fall color. Indian cultivars resist mildew, zones 22-24. Many flower colors.
<i>Chilopsis linearis 'Bubba'</i>	Bubba Desert Willow	3		x	D	20	10-15	VL	L		Heat and drought-resistant. Will endure climate change.
<i>Chionanthus retusus</i>	Chinese fringe tree	3			D	20	20	M	L	1 f 10 m	White, fringe flowers June-July. Males, larger flowers. Yellow fall color.
<i>Hymenosporum flavum</i>	Sweetshade	3			E	40	15-20	L	L	3	Needs well-drained soil, infrequent deep-watering; flowers in spring to early summer
<i>Melaleuca citrina (Callistemon citrinus)</i>	Lemon bottle brush	3			E	25	20	L	L	9	Red flowers attract humminbirds. Lemon-scented leaves.
<i>Tristaniopsis (Tristania) laurina</i>	Swamp myrtle, water gum	3			E	20-35	15-30	M	L	5	Slow grower. Yellow flowers. Narrow leaves. Shaggy bark. Prefers moist soil.



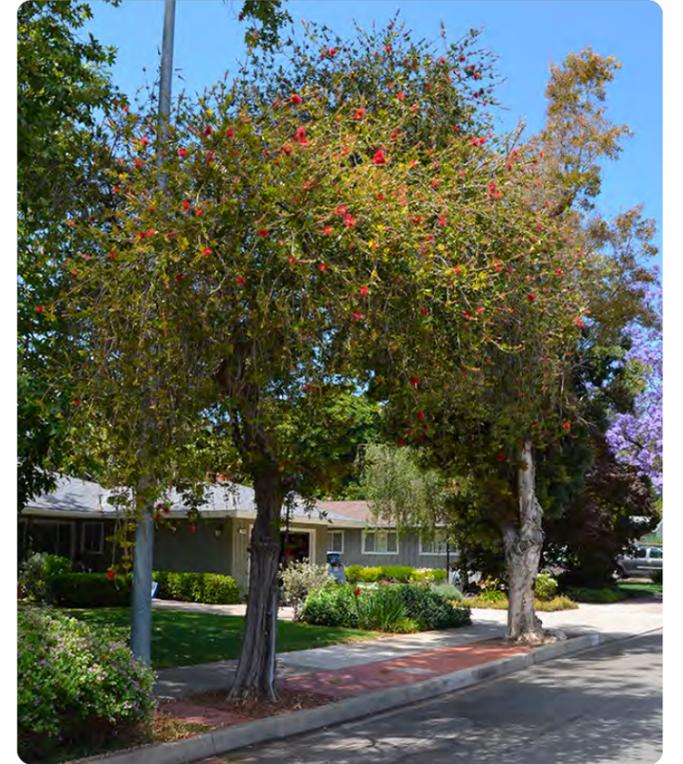
Crape Myrtle



Eastern Redbud



Bubba Desert Willow



Lemon bottlebrush



Bronze Loquat



Western Redbud



Water gum



Chinese fringe tree



Fraser's Photinia

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Bauhinia x blakeana</i>	Hong Kong orchid tree	4			S	20-40	20-25	M	L	4	Fragrant 5-6" pink flowers in bloom fall to spring! No fruit. Butterfly-shaped leaves.
<i>Bauhinia variegata</i> 'Candida'	White orchid tree	4			S	20-25	15-20	M	L	4	Semi-deciduous mid-winter. White, lightly fragrant flowers Jan- April.
<i>Cassia leptophylla</i>	Gold Medallion	4			S	20-30	15-20	L	L	6	Yellow flower clusters in July-Aug; 16" long, 1" thick seedpods.
<i>x Chitalpa tashkentensis</i>	Chitalpa	4			D	20-35	20-30	L	L	6	Large pink trumpet flowers. Stake for a few years. Aphids on new growth.
<i>Juniperus chinensis</i> 'Torulosa'	Hollywood Juniper	4			E	25	10-20	M	L		Irregular, twisted branches. Drought and heat-tolerant. Needs some additional maintenance.
<i>Lyonothamnus floribundus</i> ssp. <i>asplenifolius</i>	Santa Cruz island ironwood, Catalina	4		x	E	30-60	20-40	L	M	4	Red, peeling bark. White flowers. Needs excellent drainage. Great near the coast.
<i>Mariosousa heterophylla</i>	Palo Blanco	4			S	20	10-15	VL	L		Open and wispy small tree with lengthy needle-like leaf stalks.
<i>Melaleuca saligna</i> (<i>Callistemon salignus</i>)	White bottle brush	4			E	25	15	L	L	9	Peeling bark. Cream flowers attract hummingbirds. Dense canopy.
<i>Parkinsonia</i> 'Desert Museum'	Desert Museum palo verde	4		x	D	30	30	VL	L	6	Yellow flowers attract bees. Light airy canopy cover and smooth green bark. No turf irrigation.
<i>Podocarpus henkelii</i>	Long leaf yellow wood	4			E	25-50	15-20	M	L	1 f 9 m	Long, drooping linear leaves. Separate male and female trees. Red flaky bark.
<i>Podocarpus macrophyllus</i>	Yew pine	4			E	20-50	15-40	M	L	1 f 9 m	Like <i>Afrocarpus falcatus</i> , but wider, longer leaves held upright. Red edible fruits.
<i>Prosopis grandulosa</i> 'Maverick'	Thornless Honey Mesquite	4		x	D	35	25-35	VL	L		Fast growing with lacy bright green foliage. Drought-tolerant.
<i>Prunus ilicifolia</i> ssp. <i>lyonii</i>	Catalina cherry	4		x	E	25-35	20-30	VL	L	6	White spring flowers. Edible fruit can be a litter issue.
<i>Stenocarpus sinuatus</i>	Firewheel Tree	4			E	30	15	M	L		Vibrant red/crimson flowers in spring and early summer.
<i>Xylosma congesta</i>	Shiny Xylosma	4			E	25	10-20	L	L		Requires heavy initial pruning to become street tree.



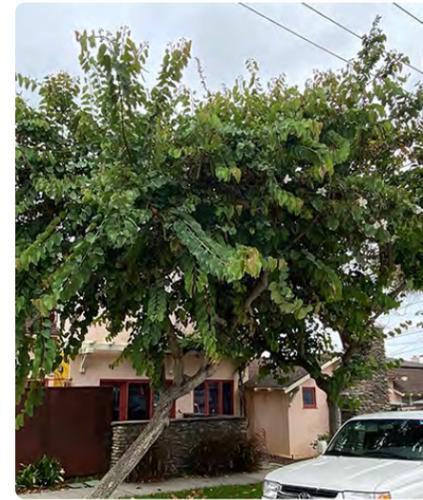
Palo Blanco



Hong Kong orchid tree



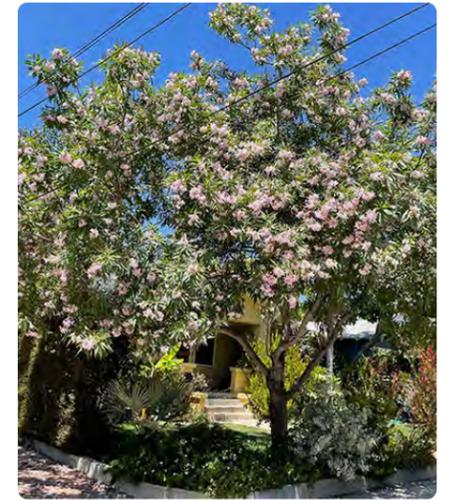
White bottlebrush



White orchid tree



Long-leafed yellow-wood



Chitalpa



Firewheel tree



Yew Pine



Gold medallion



Catalina Cherry



Shiny Xylosma



Hollywood juniper



Thornless Honey Mesquite



Desert Museum Palos Verde



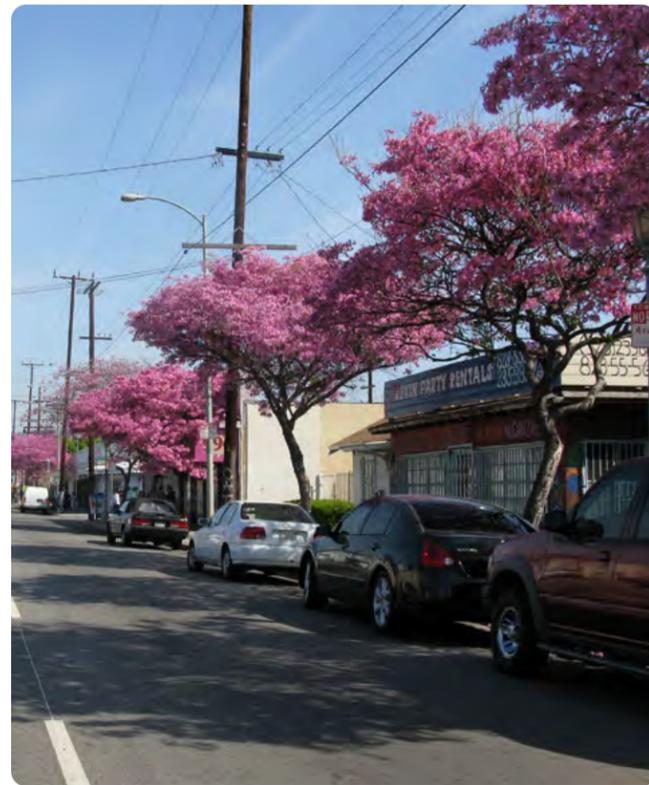
Santa Cruz island ironwood, Catalina

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Arbutus 'Marina'</i>	Marina strawberry tree	5	x		E	25-40	25-40	L	L	3	Red peeling bark. Red 1" round, edible fruit. White-pink bell-shaped flowers.
<i>Handroanthus impetiginosus (Tabebuia impetiginosa)</i>	Pink trumpet tree	5	x		D	30-50	30-40	M	M	5	Pink trumpet flowers in late winter/early spring before the leaves.
<i>Agonis flexuosa</i>	Peppermint tree	5			E	25-35	15-40	L	M	6	Weeping branches. 6" Peppermint scented leaves. White flowers in June.
<i>Bauhinia variegata (Bauhinia purpurea)</i>	Purple orchid tree	5			S	20-35	15-20	M	L	4	Semi-deciduous mid-winter. Lightly fragrant purple/pink flowers Jan-April.
<i>Celtis reticulata (C. laevigata var. reticulata)</i>	Western hackberry, netleaf hackberry	5			D	25-35	25-30	L	L	8	Needs lots of water to establish. Birds love fruits. Best in climate zones 18-21.
<i>Geijera parviflora</i>	Australian willow	5			E	40	25	L	L	6	Low maintenance. Deep roots. Pest-free. Drooping, willow-like, thick leaves.
<i>Ginkgo biloba (Male only)</i>	Ginkgo, maidenhair tree	5			D	35-80	20-60	M	M	7	Smog tolerant. Summer water till 10-20' tall. Yellow fall color. Long-lived.
<i>Laurus nobilis</i>	Sweet bay	5			E	40	30	L	M	2 f 9 m	Culinary. Multi-trunk. Scale, psyllids. 'Saratoga' -25' single trunk, psyllid-resist.
<i>Lophostemon confertus (Tristania conferta)</i>	Brisbane box	5			E	30-45	20-40	M	M	5	Red, peeling bark. White flowers. Not for windy areas. Smog tolerant.
<i>Macadamia integrifolia</i>	Smoothshell macadamia	5			E	25-30	15-20	M	M	3	White pendulous flowers. Edible nuts late fall to May. Best near the coast.
<i>Melaleuca linariifolia</i>	Flaxleaf paperbark	5			E	30	30	L	L	7	White flaky bark. Small white summer flowers. Small, narrow leaves.
<i>Melaleuca styphelioides</i>	Prickly paperbark	5			E	20-45	20-35	L	L	9	Spongy tan to brown peeling bark. White spring flowers. Stiff prickly tipped leaves.
<i>Melaleuca viminalis (Callistemon viminalis)</i>	Weeping bottle brush	5			E	25	20	L	L	9	Red flowers attract butterflies and hummingbirds. Pendulous branches.

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Metrosideros excelsus</i>	New Zealand Christmas tree	5			E	30	30	M	M	6	Red flowers May-July. White leaf underside. Aerial roots. Smog tolerant.
<i>Pistacia chinensis</i>	Chinese pistache	5			D	60	50	M	L	1 f 8 m	Scarlet & orange fall color. Round 1" to 1 1/2" fruit is red, then blue.
<i>Searsia (Rhus) lancea</i>	African sumac	5			E	30	30	L	L	7 f 10 m	Rough cinnamon bark. Heat/wind-tolerant. Suckers in youth. No pests.



Marina Strawberry Tree



Pink trumpet tree



Western Hackberry



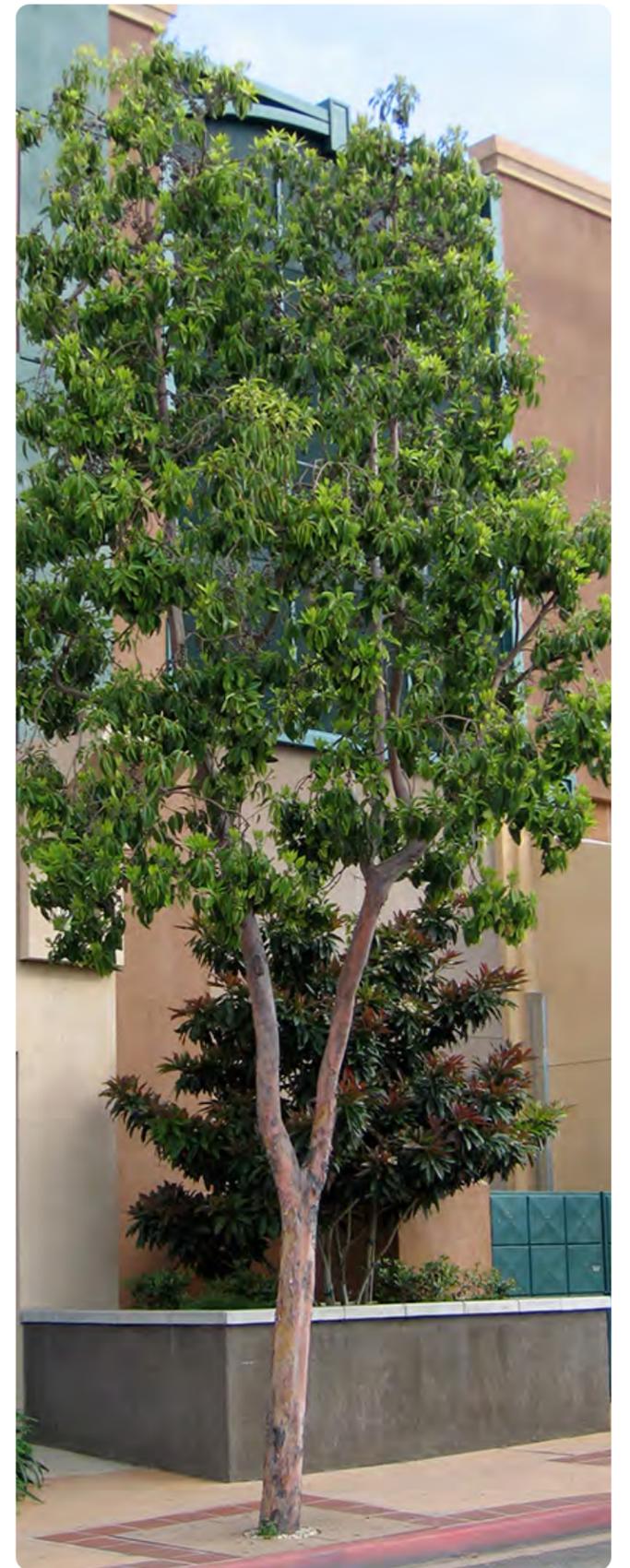
Peppermint tree



Chinese pistache



Australian willow



Brisbane Box



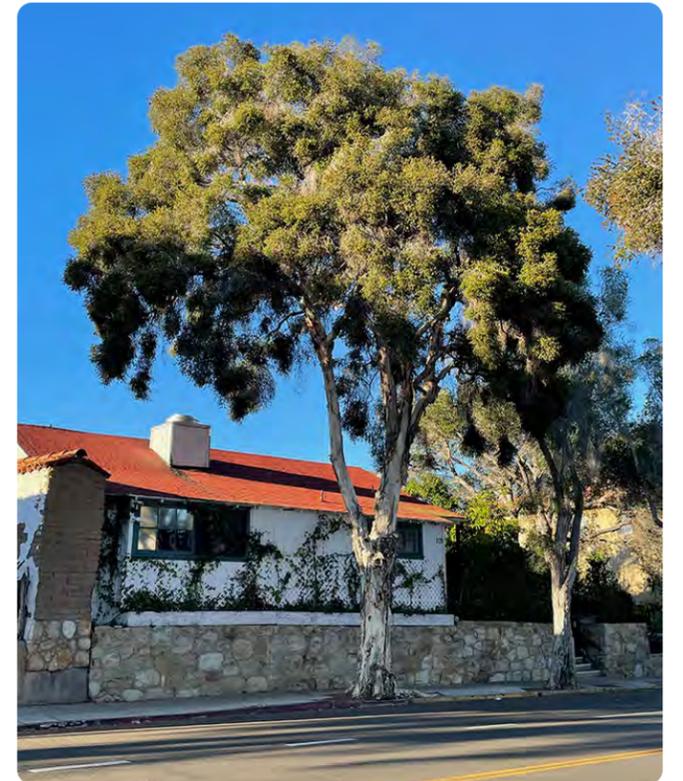
Sweet bay



Ginkgo



Flaxleaf paperbark



Prickly paperbark



Purple orchid tree



Smoothshell macadamia



African sumac



Weeping bottlebrush



New Zealand Christmas tree

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Chilopsis linearis</i>	Desert willow	6	x	x	D	15-40	15-40	VL	L	5	Long-blooming fragrant, pink trumpet flowers. Attracts hummingbirds.
<i>Jacaranda mimosifolia</i>	Jacaranda	6			D to S	25-40	25-40	M	L	4	Purple flowers April-Sept. Lots of leaf/flower litter. Poor bloom at coast.
<i>Brachychiton populneus</i>	Kurrajong Bottle Tree	6			E	50	25-35	L	M		Wide trunk that can hold lots of water. Drought-tolerant. Needs space.
<i>Gleditsia tricanthos</i> <i>var. inermis</i>	Thornless Locust	6			D	35-70	25-40	M	M	1 f 7 m	Leafs out in late spring; drops leaves early; produces light shade through feathery leaves.
<i>Koelruetaria bipinnata</i>	Chinese Flame	6			D	20-40	20-40	M	L	4	Bi-pinnately compound leaves. Bright yellow summer flowers. Bright orange seed pods in fall.
<i>Melaleuca (quinquenervia) viridiflora var. rubriflora</i>	Cajeput tree	6			E	20-40	15-30	L	L	7	White, spongy peeling bark. Summer-Fall white flowers. Weeping habit.
<i>Pistacia x 'Red Push'</i>	Pistache 'red push'	6			D	40	30-40	M	L		Drought-tolerant. New leaves have distinctive red color when emerging.
<i>Ulmus Parviflora</i>	Chinese Elm	6			S	40-60	50-70	M	M	8	Susceptible to root rot and aphids, scale and borers; one of the worst allergy offenders
<i>Casuarina cunninghamiana</i>	River She-Oak	7			E	70	30	L	L		Drought tolerant, fast growing tree requiring little maintenance.
<i>Hesperocyparis forbesii</i>	Tecate Cypress	7		x	E	25	15-20	VL	M		Low growing and drought and heat-tolerant.
<i>Pinus canariensis</i>	Canary Island pine	7			E	65-80	30-40	L	M	4	Smog tolerant. Tall narrow pine. 9"-12" weeping needles. 4"-9" cones.
<i>Afrocarpos falcatus (Podocarpus gracilior)</i>	African fern pine, fern pine	8			E	60	45	M	L	1 f 9 m	1"-2" narrow leaves, very little leaf litter. Pest/disease-free. Lawn watering ok.
<i>Brachychiton discolor</i>	Queensland Lacebark	8			D	70	30	L	M		Deep pink or red flowers, blue/green leaves. Needs space.
<i>Calocedrus decurrens</i>	Incense cedar	8		x	E	75-90	40	M	M	8	Columnar conifer. Fragrant leaves. Tolerant of heat and poor soils.

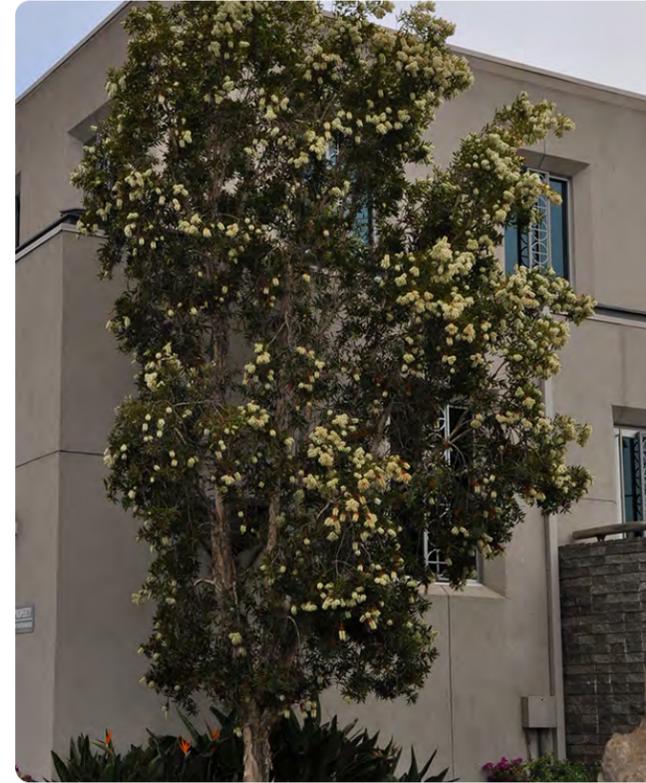
Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Pinus brutia</i> <i>var. eldarica</i>	Eldarica pine, Afghan pine, Mondell pine	8			E	65	30	VL	M	4	5"-6" dark green needles. For desert or coast. "Christmas tree" shape.
<i>Pinus halepensis</i>	Aleppo pine	8			E	30-65	45	L	M	4	Light green, 2½-4" soft needles. Poor soil and heat ok. Susceptible to mites.
<i>Pinus patula</i>	Jelescote pine, Mexican weeping pine	8			E	40-80	30-50	M	M	4	Graceful, weeping 12" needles. Can become chlorotic. Great at the coast.
<i>Quercus douglasii</i>	Blue Oak	8		x	D	70	40-50	VL	L		A slow growing native oak.
<i>Olea europaea</i>	Olive (fruitless only)	6-8			E	30	30	L	M	10	Grey-green linear leaves. Round to vase-shaped canopy. Swan Hill = no pollen.
<i>Quillaja saponaria</i>	Soapbark tree	6-8			E	25-60	10-35	L	L	4	White flowers, better with water. Bark is toxic if eaten. Weeping branches.
<i>Umbellularia californica</i>	California bay laurel, California laurel	6-8		x	E	25-75	20-60	L	M	8	Strong scented leaves ok for cooking. More shade/water needed inland.



Kurrajong Bottle Tree



Jacaranda



Cajeput tree



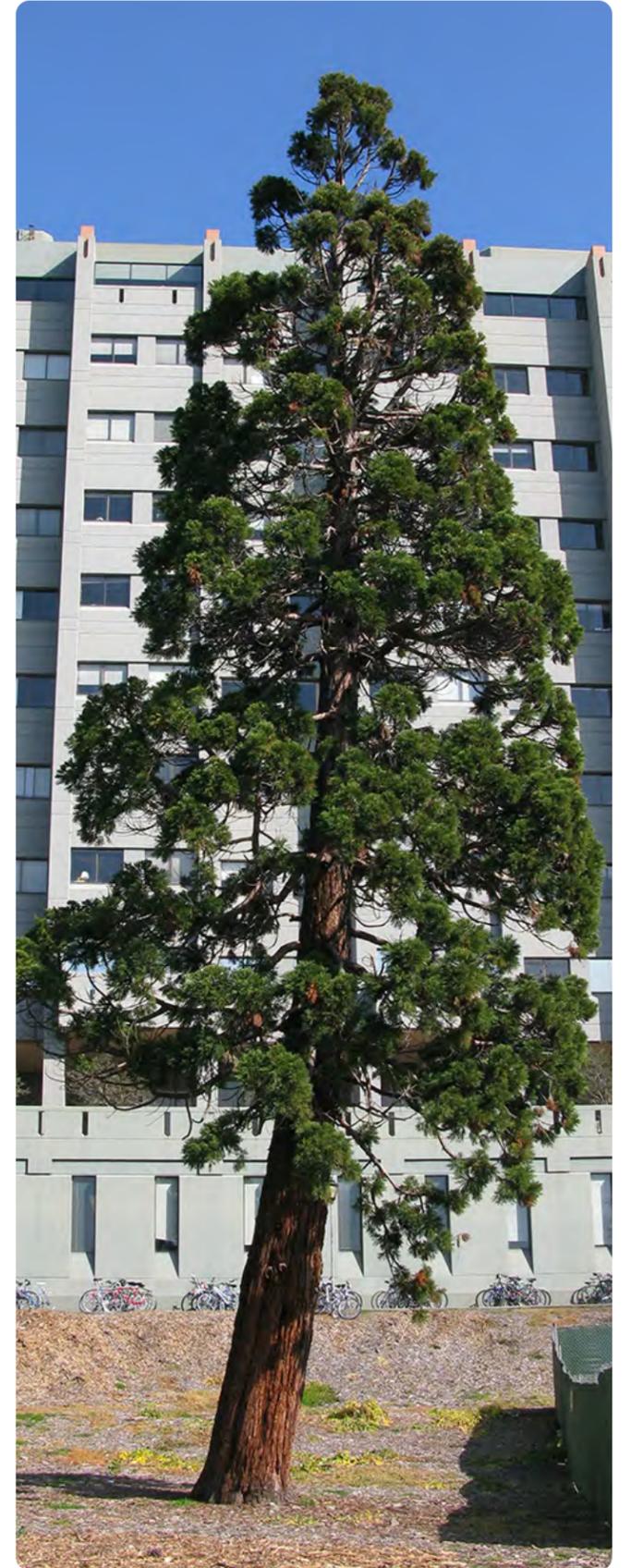
Soapbark Tree



Desert Willow



Olive tree



Incense cedar



Canary Island pine



Aleppo pine



Jejecote pine



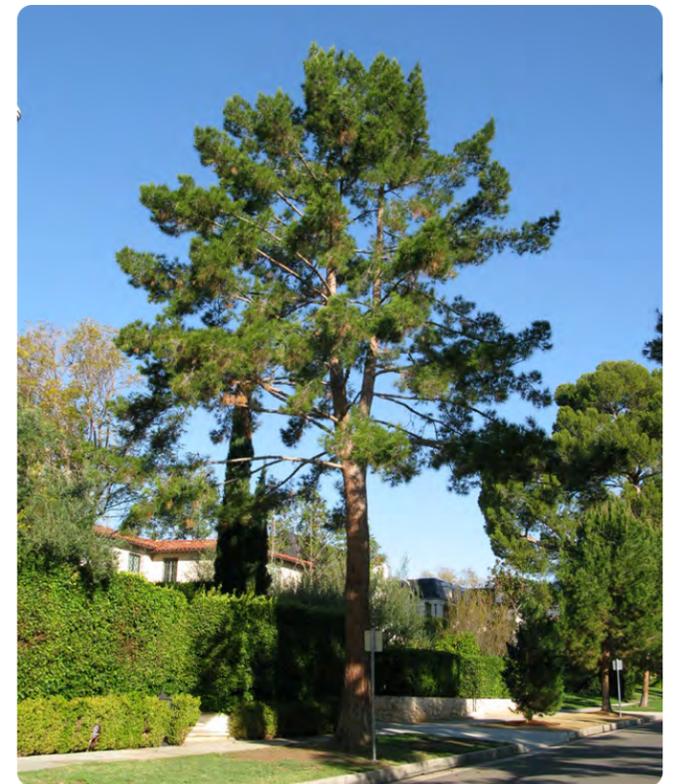
Chinese flame



African fern pine



California bay laurel



Mondell pine



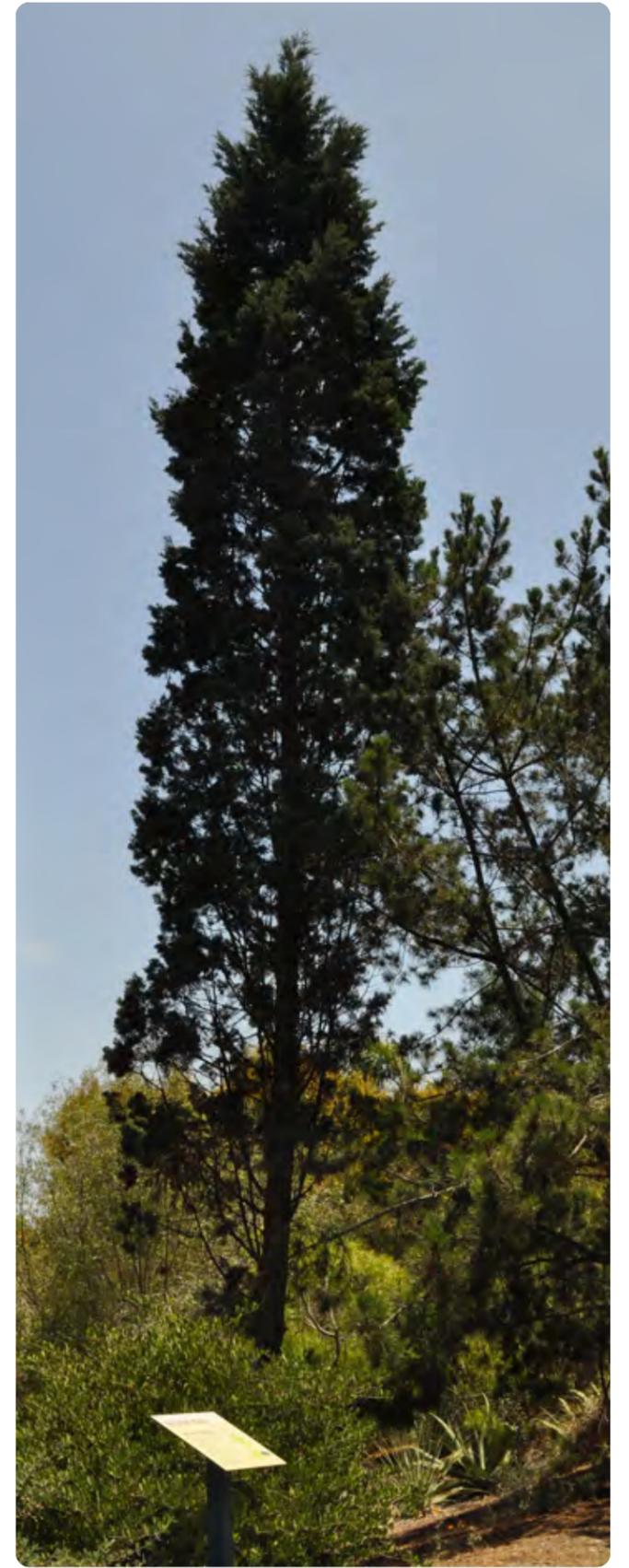
Thornless locust



Pistache 'red push'



Blue oak



Tecate Cypress



Chinese elm



River she-oak



Queensland Lacebark

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Mature Height (feet)	Spread (feet)	Water Use	Root Damage Potential	Allergy Potential	Notes
<i>Araucaria heterophylla</i> (<i>Araucaria excelsa</i>)	Norfolk Island pine, star pine	8+			E	100	60	M	M	8	Not a pine. Large and symmetrical. Cones fall apart as they mature.
<i>Cedrus atlantica</i>	Blue Atlas cedar	8+			E	40-60	30-40	M	M	2	Conifer. Stiff branches; short 2/5 to 1" stiff needles. 'Glauca' is a blue cultivar.
<i>Cedrus deodara</i>	Deodar cedar	8+			E	60-80	30-50	L	M	1 f 3 b 5 m	Conifer. Soft 1-2" needles. Drooping leader, low sweeping branches.
<i>Pinus pinea</i>	Italian stone pine	8+			E	40-80	30-50	L	M	4	Massive, broad-canopied tree. Great at the coast/valleys. Edible pine nuts.
<i>Quercus agrifolia</i>	Coast live oak	8+		x	E	20-70	30-85	VL	M-H	9	No lawn watering. The most widely used oak for southern CA.
<i>Tipuana tipu</i>	Tipu	8+			S	50	50	L	M	3	Yellow-orange flowers June-July. Fast. Early pruning needed. Best with heat.
<i>Alnus rhombifolia</i>	White Alder	10		x	D	80	30-50	H	H		Fast-growing, attractive shade tree. Not especially long lived. Needs water source.
<i>Dalbergia sissoo</i>	Rosewood	10			D	60	40	L	M		Drought and heat-tolerant, wide-spreading canopy.
<i>Liriodendron tulipifera</i>	Tulip	10			D	80	30-40	M	M		Tulip-shaped leaves and produces eye-catching yellow-green flowers. Needs lots of water.
<i>Magnolia grandiflora</i>	Southern Magnolia	10			E	80	30-50	M	H		Large, fragrant white flowers and glossy evergreen leaves.
<i>Platanus racemosa</i>	California Sycamore	10		x	D	80	20-50	M	M		Smooth, mottled bark and a spreading canopy, flourishing near water sources.
<i>Pinus torreyana</i>	Torrey pine	10		x	E	40-60	15-30	L	M	4	8"-13" dark gray-green needles. Open habit. OK coastal or high desert.
<i>Quercus engelmannii</i>	Engelmann Oak	10		x	D	70	80-120	VL	M	8	Most endangered of CA oaks; 2" oblong leaves are drought-deciduous; likes some water.
<i>Quercus fusiformis</i>	Escarpment Live Oak	10			E	50	20-40	M	M		Sturdy, wide-spreading tree with distinctive elongated acorns.
<i>Quercus suber</i>	Cork Oak	10			E	70	70	L	M		Broad-canopied tree with thick, corky bark.
<i>Quercus tomentella</i>	Island Oak	10		x	E	50	25-50	L	M		Native to Channel Islands. Prefers deep, moist soils but can tolerate a range of soil conditions.



White Alder



Blue atlas cedar



Southern magnolia



Tulip



Deodar cedar



Torrey Pine



Tipu



Coast live oak



Engelmann Oak



Rosewood



California Sycamore



Cork Oak



Italian stone pine



Escarpment Live Oak



Island Oak



Norfolk Island pine

Best Management Practices

PLANTING

Tree planting species selection and location should conform to the Street Tree Palette and the Street Tree Map included in this plan.

Materials: All trees should be at least 24" box size, or 15 gallon for grant funded projects, at time of planting. Trees may be staked with 2 in diameter untreated wood stakes with no cross braces. Tree ties should be tied in a figure eight to support the tree to the stakes. Mulch (untreated, 0.5 in-1 in size) should be applied to an area two times the diameter of the root ball with 2 in to 4 in depth. Linear root control barriers may be used for trees planted along the sidewalk, on the sidewalk facing side only. Root control barriers that encircle the tree should not be used. Mower guards should be used for trees surrounded by turf that requires regular mowing. Tree grates should be installed at grade where the sidewalk is less than 8 ft to reduce the risk of tripping.

Site Preparation: All debris, wood chips, pavement, concrete and rocks should be removed from the planting pit to a depth in line with the size of the root ball. In sites with turf grass, the turf must be kept at least one foot from the tree. In sites with unsuitable soils to facilitate healthy tree growth, alternative soils may need to be approved.

Planting: Dig a flat bottomed hole as deep as the root ball and two to three times the width. Remove the tree from the container and cut away any circling roots. Fill the hole with the original soil (unless alternative soils have been deemed necessary), gently packing and applying water throughout. Remove the nursery stakes and install stakes at the edges of the root ball, driven 2 ft into the ground and secured to the tree with two tree ties in a figure eight. Build a watering berm out of mulch 3 to 4 inches high at the edge of the root ball in areas without irrigation. Mulch around the root ball, staying at least 6 inches away from the trunk. Fill the berm with 15 to 20 gallons of water.

INSPECTIONS

Inspections should be performed every three years as part of the regular grid-pruning cycle. These regular inspections should be by Level 1: Limited Visual Assessments according to ISA standards. This level of assessment is conducted to identify high and extreme risk trees. Some elements that should be inspected in a routine Level 1 inspection include:

- Leaning Trees
- Root problems
- Multiple Trunks
- Decay
- Cracks in trunks or branches
- Weak, Broken or dead branches
- Pests

Trees that are flagged as high or extreme risk may be recommended for a follow-up Level 2: Basic Assessment and/or Level 3: Advanced Assessment inspection. A Level 2 inspection includes a more detailed account of tree condition including site factors, tree health, load factors, tree defects, and risk categorizations. Level 3 inspections are used to understand conditions of a tree that cannot be identified visually through specialized tests and is typically reserved only for high-value trees.

PRUNING

Pruning should be conducted routinely as part of the 3-year grid trimming cycle, as well as between cycles, as deemed necessary by inspection to mitigate tree risk or improve tree structure. The appropriate type of pruning based on the tree and intended goal should be employed in each situation. Trees should ideally be pruned during the fall and winter months. There are seven accepted methods of pruning trees, listed below. Each method is described in depth in the ANSI 3000 (Part 1) Pruning and ISA Best Management Practices Pruning standards (see Resources for more information).

Permitted Actions:

- Structural Pruning: Pruning for your trees
- Crown Cleaning: Recommended pruning for mature trees to remove dead, diseased and broken branches only
- Crown Thinning: Reducing crown density by removing no more than 25% of live foliage
- Crown Raising: Creating vertical clearance by selective removal of low branches
- Crown Restoration: Removal of branches, sprouts and stubs from topped trees
- Crown Reduction: Decreasing the height and spread of a tree
- Utility Pruning: Reducing growth near utility lines

Prohibited Actions:

- Excessive Pruning
- Topping
- Actions that could lead to the death of tree including cutting, pruning, over-watering, unauthorized relocation of a tree, or structurally modifying the ground within the dripline area of the tree

REMOVAL

Public trees should only be removed when there is a demonstrated need in line with local policy. Demonstrated needs may include death of the tree, presence of pests, excessive risk or damage posed by the tree, or an undesirable species (e.g. palm trees). Public trees should not be removed for litter, personal preference, or conflicts that may be solved through other feasible means.

Trees that are removed must be done so in a way that mitigates damage to neighboring trees. This includes considering if tree branches are intertwined and if roots are intertwined when removing stumps. Stumps should be removed by grinding the stump and the roots to at least 24 inches below ground and removed.

WOOD RECYCLING

Wood from removed public trees should be repurposed for their highest and best use, including habitat, art, durable products, or lumber. Wood not able to be repurposed should be converted into biomass such as mulch, compost, or feedstock. City capital projects should consider the use of urban wood to create a market for reclaimed lumber. More information on recommended urban wood uses and standards is available from the Urban, Salvaged or Reclaimed Woods Network.

RESOURCES

Detailed best management practices can be found in the ANSI 3000 standards which are industry consensus standards developed by the Tree Care Industry Association. Additionally, the International Society of Arborists publishes Best Management Practices manuals with industry standard guidance.



The Tree Care Industry Association and the International Society of Arboriculture publish industry standard tree care resources



Additional Information

Engagement Evaluation

In order to evaluate the effectiveness of the community engagement workshops, participant observation of the workshop and conversational interviews with the community members that attended were conducted. Overall, the workshops were very successful. Residents felt that they learned valuable information from the presentation and found completing the activity packets fun while also causing them to think carefully about their answers. The only critique on the activity packets was that the stickers were difficult to deal with logistically. Providing a tablet option at similar events in the future could address the issue.

Participants also expressed that they wished more community members were able to attend the workshops. The people that were interviewed believed that others would benefit from learning about the urban forest and how it could change in Paramount. The tree inventory data was important to collect before the workshop because residents appreciated the data and are excited that the inventory will help more trees to be planted. Hosting more events on these topics to allow community members to engage with one another and learn more about urban forestry in Paramount would be valuable. Strategies used in the development of previous Urban Forest Management Plans that could strengthen community engagement in the plan development process include the formation of a community advisory committee or neighborhood ambassador program that facilitates resident-led community engagement and education.



“Everybody’s communicating. You know the presentation itself was amazing, but the night was cool.”

“I appreciate that a lot of that groundwork had already been completed before.”

“How can we get more people to come?”

“I had no idea how involved trees were or how much I had not a clue.”

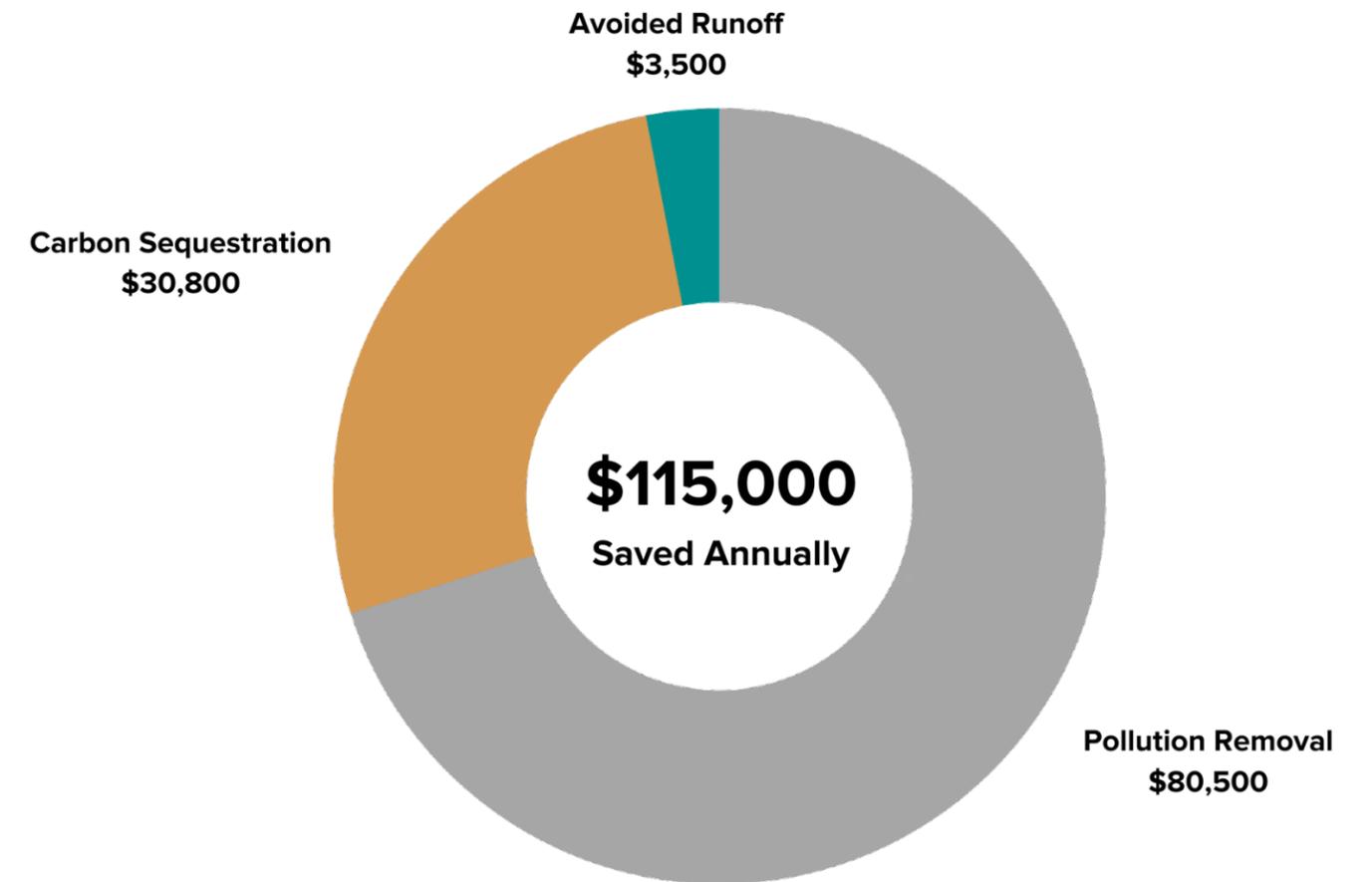
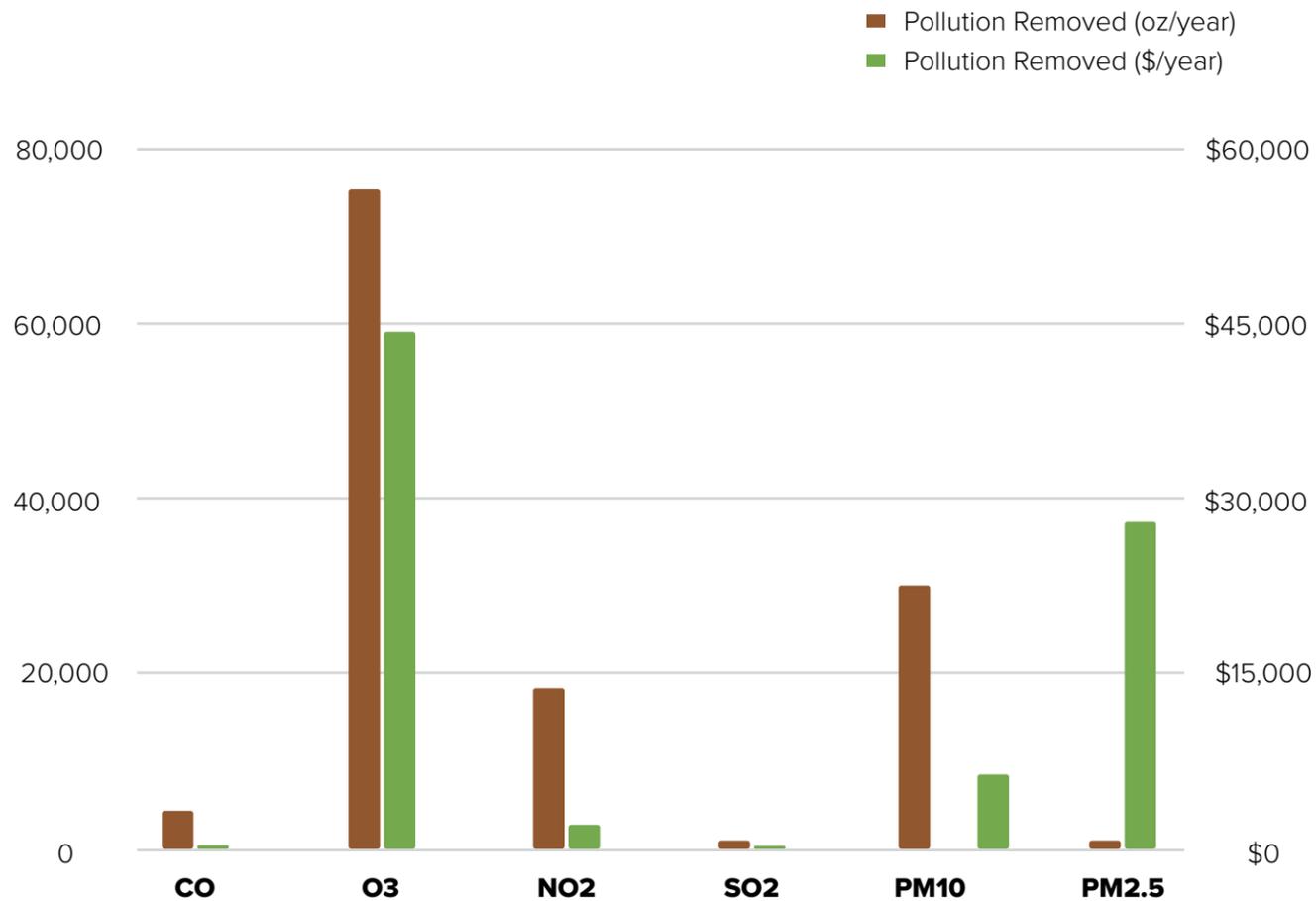
Quantified Ecosystem Services

Certain benefits of the urban forest can be quantified as both metrics and economic value. i-Tree Eco is an industry standard tool that uses tree inventory data to calculate ecosystem services and value to the community. i-Tree uses standard measures of ecosystem services, as well as a standard dollar value for these services and applies them to the urban forest based on the size and species of trees. Species and DBH are required variables, while several supplementary variables are available to provide additional information for the calculation. Based on the information available in the public tree inventory, species and DBH were used as inputs for the analysis. The results are a reflection of the inventory as a whole and does not account for or assess the distribution of trees throughout the community.

i-Tree quantifies the annual benefits of carbon sequestration, pollution removal, and avoided runoff. Together, these contribute to the overall “functional value” of the urban forest in Paramount, which is estimated at \$115,000 per year. Among these services, pollution removal is the most economically valuable, generating an annual value of \$80,500 and removing approximately 4.1 tons of pollutants per year. Carbon sequestration contributes an estimated value of \$30,800 in annual savings, with a gross annual sequestration of approximately 180.7 tons. Additionally, avoided runoff adds an additional estimated value of \$3,500 in annual savings, preventing the runoff of approximately 388.9 thousand gallons of water per year. Strategies to improve pollution removal by the urban forest include increasing the number of healthy trees, sustaining large trees, and using long-lived, low maintenance trees.

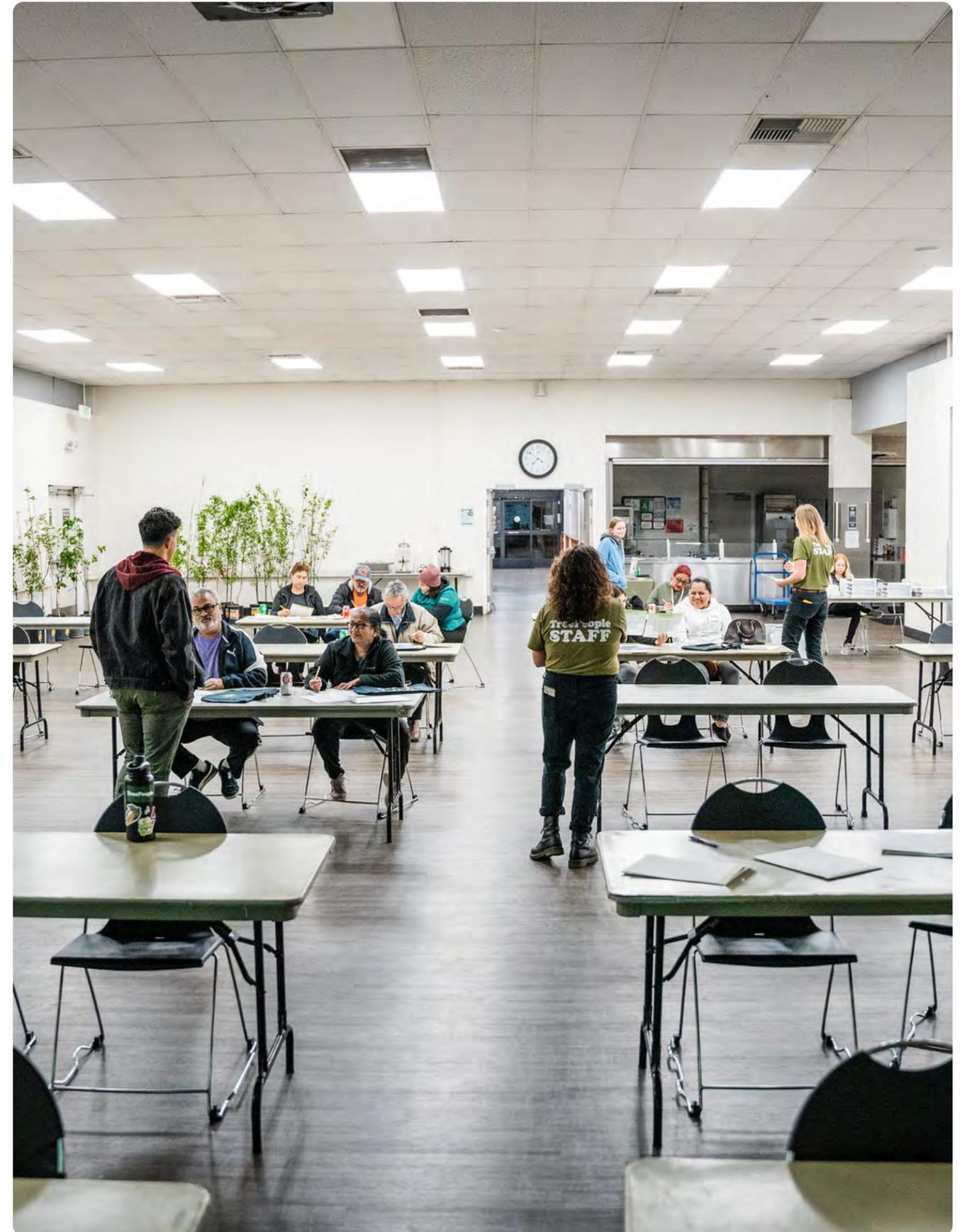
In addition, i-Tree provides an assessment of the replacement value associated with the urban forest, indicating the cost of replacing each tree with a comparable one. The estimated replacement value for Paramount’s urban forest stands at \$39.6 million. This significant figure underscores the significance of preserving the current urban forest and preventing the need for tree replacement. It also highlights the value of nurturing mature trees, as they are more costly to replace and offer greater benefits compared to their younger counterparts.

While not all benefits provided by the tree canopy can be quantified, they still hold significant value for the community. The economic estimation of these benefits is an understatement, as it fails to consider the social value attributed to trees.



Appendix

Yard Trees in Paramount





TreePeople

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