City of San Fernando

May 2024

Urban Forest Management Plan

TreePeople

Acknowledgements

Contents

Executive Summary

The urban forest provides many benefits to the community. Adopting an Urban Forest Management Plan to maintain and expand this community resource is one of San Fernando City Council's 2022–2027 Strategic Goals. **This plan is structured around nine benefits an urban forest provides 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 Outdoor Market. Through surveys, residents indicated that the benefits of Shading & Cooling, Outdoor Activity, and Climate Resilience were most important for the urban forest to provide. Community members ranked along Streets & Sidewalks, on School Property and in Public Parks as the areas of the city most in need of new trees. They expressed desire for children to learn about trees and to connect with nature, for canopied streets to aid mobility, and for beautification by way of trees. The highest concern among residents was Maintenance of trees, followed by Damage caused by trees.

The City of San Fernando's urban forest depends on the social history and ecological context that shape it. San Fernando was not historically forested. Rather, it had a grassland and flower field habitat composed primarily of perennial grasses and seasonal wildflowers. Trees became more prevalent in the landscape as they were important to the indigenous peoples that lived in the area who cultivated oak trees for acorns. The area was settled by Spanish missionaries and grew into a center for farming and trading and later into an urban city of industry and commerce.

San Fernando 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 the historic weather patterns by increasing temperatures and making precipitation more variable. Not everyone will feel the impacts of climate change equally, with vulnerablepopulations —which includes 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.

> **The City of San Fernando has an existing tree canopy of 19% 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. Canopy cover also varies significantly within land uses, leaving some neighborhoods and streets with lower canopy relative to others and making them higher priority areas for tree planting.

The City has a very diverse urban forest with almost 200 species. The forest has a good distribution of different sizes of trees. San Fernando's urban forest is mostly healthy, with 98% of trees in good or fair condition and less than 2% of trees in poor condition or dead.

There are many opportunities to plant new trees in San Fernando including on existing vacant sites in the public right-of-way, and by modifying existing vegetated and hardscape landscapes to accommodate more trees. Additionally, 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 (see next page) 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.

Tools are included to realize a thriving urban forest, including a Priority Map for street tree planting that identifies areas most in need of greater canopy, a Street Tree Map that categorizes available planting space by size on major streets, and a Street Tree Palette that recommends climate appropriate species categorized by size.

Key Takeaways by Chapter

COMMUNITY VOICES

- Shading & Cooling, Outdoor Activities, and Climate Resilience were the most desired benefits

- 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 would like to see more trees in San Fernando, including more fruit trees

CONTEXT

- The landscape of San Fernando has gone through many transitions from Indigenous managed oak woodlands to an urban city

- San Fernando has a subtropical, 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, young, and healthy

- Tree canopy varies considerably by land use

- There is 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 San Fernando, and 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

- More plantable spaces need to be added to the public right-of-way by allocating space from cars to trees

GOALS AND STRATEGIES

- 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
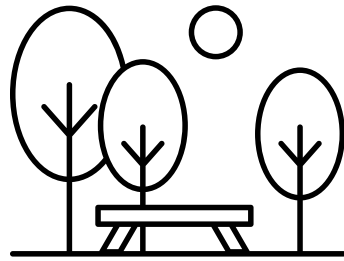
IMPLEMENTATION

- 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

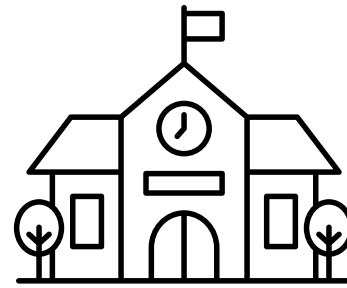- The plan is a living document that will change over time

Goals

30%

canopy citywide

40%

canopy in
public parks

30%

canopy in
school zones
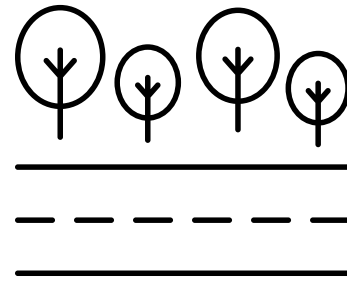
35%

canopy along
the right-of-way
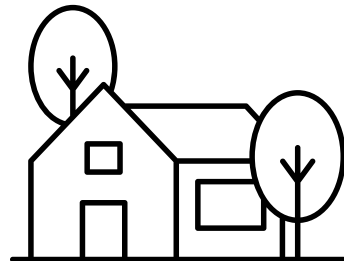
35%

canopy in residential
neighborhoods
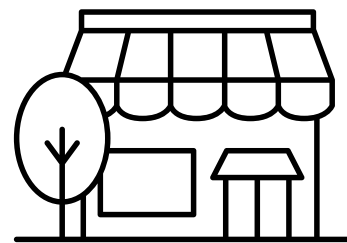
15%

canopy in
commercial districts
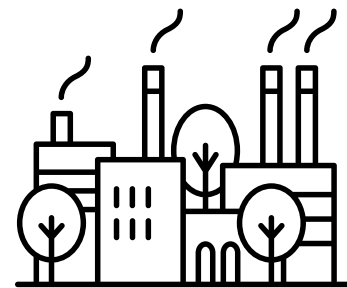
12%

canopy in
industrial zones

Strategies

Plant	1.	Maximize shade in the public right-of-way
	2.	Provide green areas for recreation in parks and around schools
	3.	Create canopied commercial corridors
	4.	Create immersive green neighborhoods for all residents
	5.	Ensure industrial areas maintain beneficial canopies
	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; providing cooling on hot days, promoting opportunities for outdoor recreation, and building resilience to a changing climate.

Image: Tree planting in San Fernando (Source: Adam Corey Thomas)

Image: Trees in Las Palmas Park

"I feel like it's very important to continue to have our youth get connected with nature."

"I want it to keep my city cooler and shadier as well as give more homes to native species."

Introduction

Trees on public land and private property collectively form the urban forest of San Fernando. 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, strengthening the City's urban forest is a city-wide Strategic Goal requiring a robust and agreed upon plan for managing the urban forest 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 San Fernando 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 San Fernando in the future. 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 San Fernando'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 San Fernando 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 San Fernando.

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 San Fernando'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 San Fernando.

To realize specific benefits, especially those important to the San Fernando 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 San Fernando community to prioritize which of the nine benefits were most relevant to them and where in 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. See the **Existing Forest** chapter.

Different ways to expand the urban forest in the context of San Fernando are explored. See the **Opportunities to Grow** chapter.

Plans for future action were created to move the existing forest to better support the benefits prioritized in community surveys. See the **Goals & Strategies** chapter.

Tools and guidance to carry out these strategies in San Fernando are provided. See the **Implementation** chapter.

Urban Forest Benefits
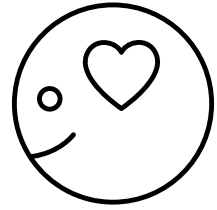
Mental Health
Provides immersive green spaces that are accessible to all residents
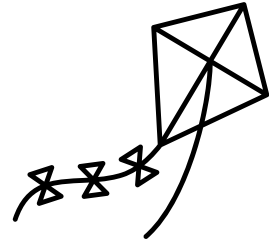
Outdoor Activity
Supports a wide array of recreation outdoors
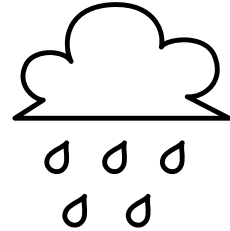
Stormwater Capture
Helps reduce flooding issues and creates additional water resources
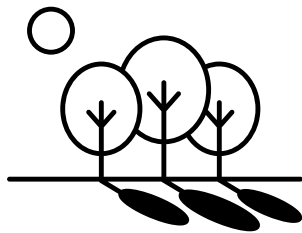
Shade and Cooling
Provides shade and cooler temperatures
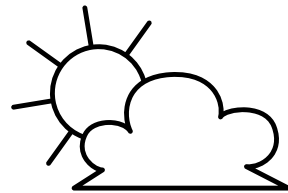
Climate Resilience
Thrives in a hotter, drier climate
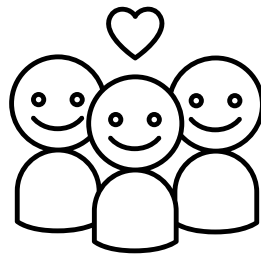
Social Cohesion
Encourages gatherings in spaces like public squares and parks
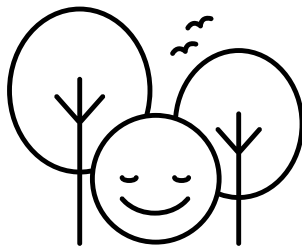
Privacy and Quiet
Provides screening to create privacy and filter noise
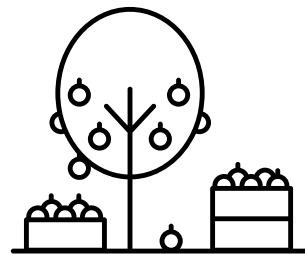
Food Forest
Provides culturally relevant fruits and nuts
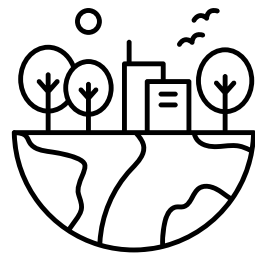
Biodiversity
Supports biodiversity and provides a wildlife habitat

Community Voices

Key Takeaways

- Shading & Cooling, Outdoor Activity, and Climate Resilience are the most desired benefits

- Streets & Sidewalks, School Property, and Public Parks are the highest priority planting locations

- Maintenance is the highest area of concern of the urban forest

- Community members would like to see more trees in San Fernando, including more fruit trees

"I think urban forestry is important especially with the hot seasons we have."

"I support any/all efforts to increase the canopy on public spaces (sidewalks) to incentivize walking and biking"

WORKSHOPS

Members of the San Fernando 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 were conducted in spring 2023 in English and Spanish and held at PUC Nueva Esperanza Charter Academy, IBEW 11 Union Hall, and Recreation Park. Workshops included an educational presentation on nine benefits of the urban forest as listed and described in the **Urban Forest Benefits** chapter, as well as a summary of San Fernando'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: San Fernando resident taking home a fruit tree (Source: Adam Corey Thomas)
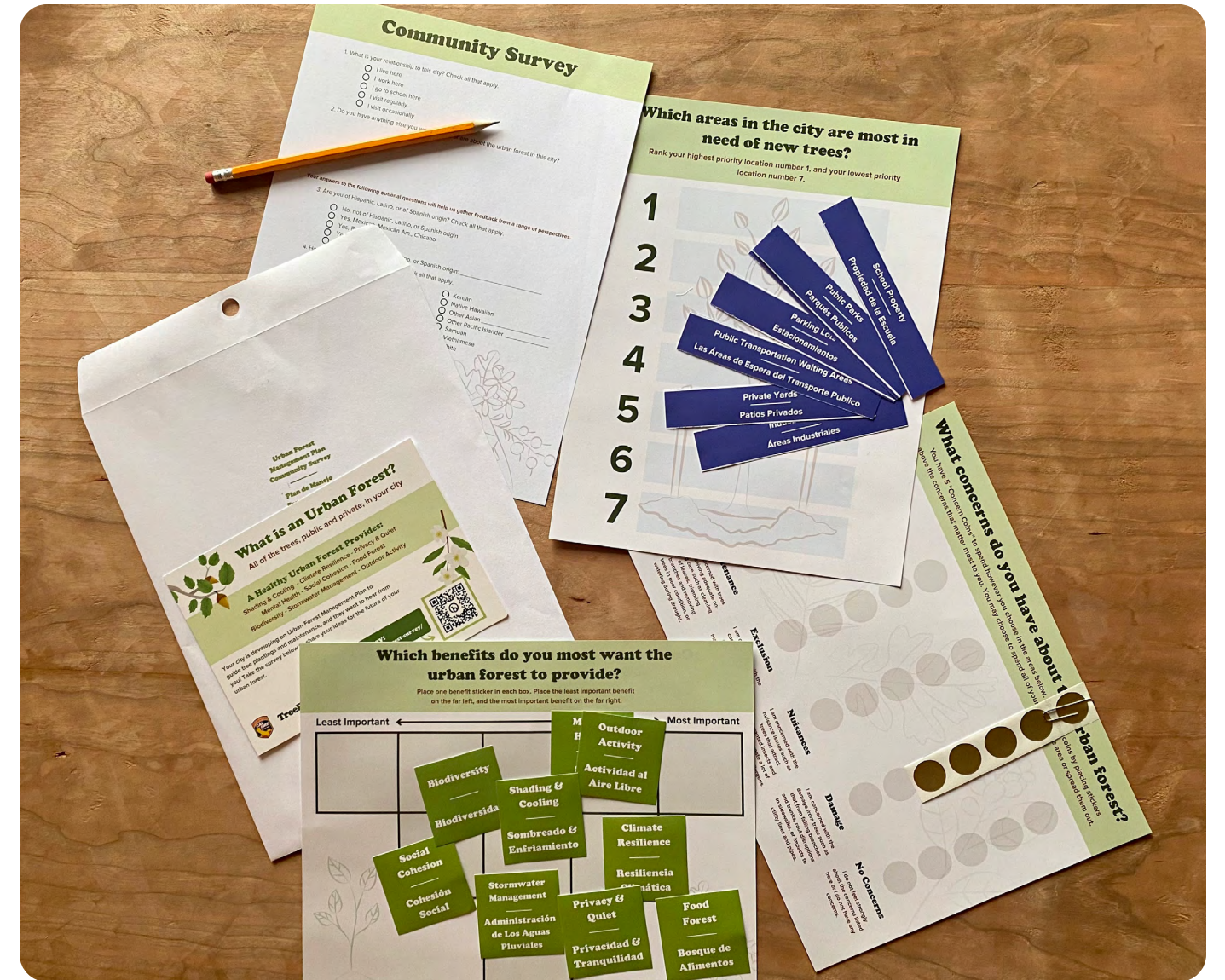
Image: Activity packets

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 Outdoor Market in April 2023. Participants were also given a free fruit tree in exchange for completing the survey at the Outdoor Market. Further, some community members completed the survey online, through a link distributed via the workshop take-home flier or through digital promotion.

In total, 104 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 **Urban Forest Benefits** chapter, from most to least important. The question was structured in a way that 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 they 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 had rated benefits performing lower overall as among the benefits most important to them.

Benefit	Top 3 Choice (% of participants)
Shading & Cooling	52%
Outdoor Activity	43%
Climate Resilience	41%
Mental Health	39%
Food Forest	31%
Stormwater Management	23%
Biodiversity	23%
Privacy & Quiet	19%
Social Cohesion	11%

Percent of participants with a benefit in their top three most important
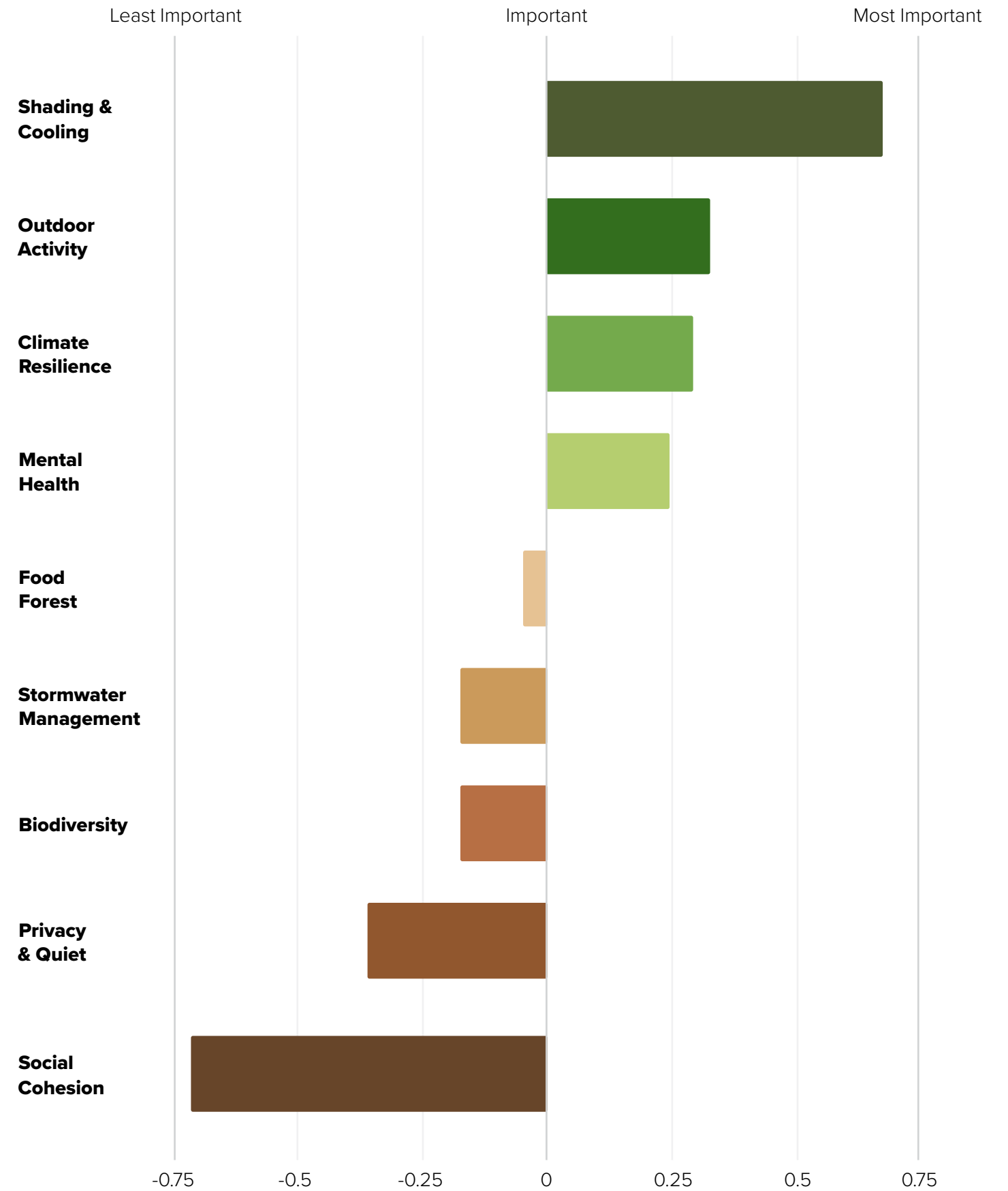
Overall community rankings for relative importance of benefits for the urban forest to provide

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

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

1	Streets and Sidewalks	
2	Schools	
3	Public Parks	
4	Public Transportation Waiting Areas	
5	Parking Lots	
6	Private Yards	
7	Industrial Areas	
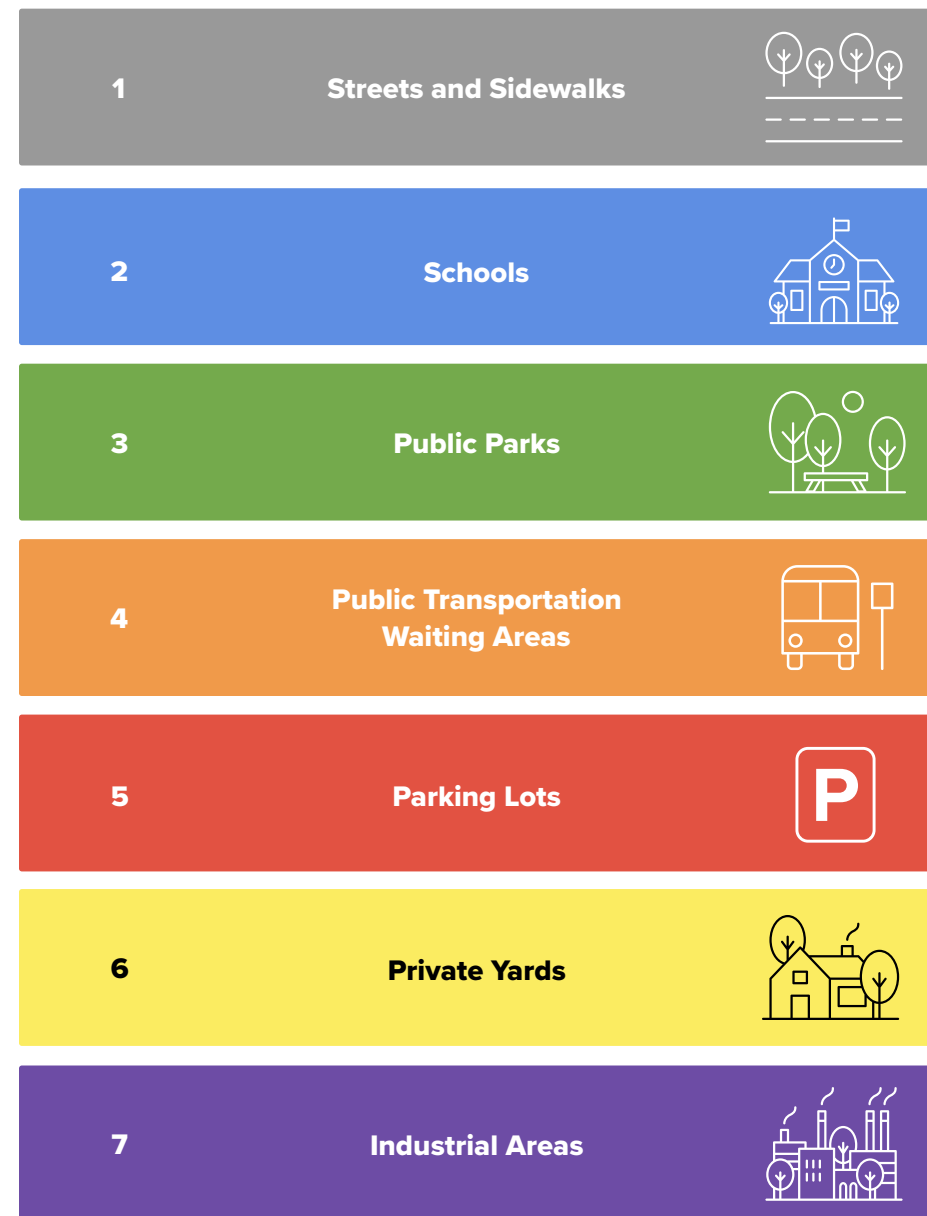
Overall ranking of priority locations to plant more trees and grow the tree canopy in community survey
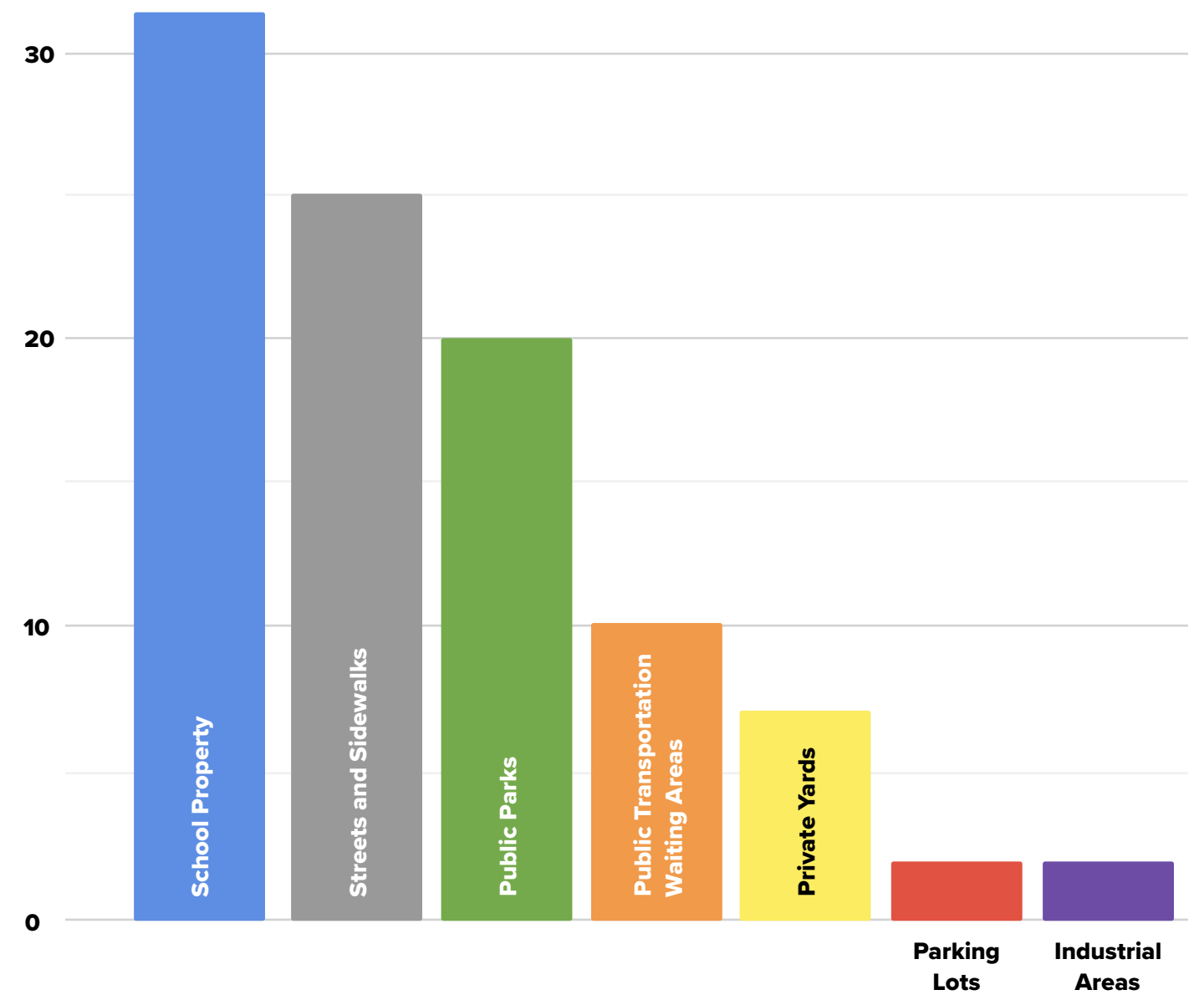
Number of participants that ranked each location as their top priority for planting more trees in community survey

Maintenance is the clear top concern with 26% of participants spending at least one concern coin in the category and 65% allocating 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 two- thirds of participants. The results indicate that ongoing care and repair is central to urban forest management in San Fernando.

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.

■ 2 or more concern coins ■ 1 concern coin ■ 0 concern coins

A majority of survey participants expressed concern for three of the four issues with nearly over 90% emphasizing maintenance of the urban forest as a concern.

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

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 104 completed surveys, 51 respondents provided written input in response to this prompt.

Thirteen comments voiced a desire 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, especially children

- Reinforcing concerns regarding the maintenance of city trees in support of tree survival as well as concerns over damage caused by trees to homes and sidewalks

- Advocating for more trees in the public right-of-way as well as more fruit trees

> "I like the idea of fruit trees that invite children to learn about trees & harvest from the trees."

> "We need much larger tree canopy."

> "I would like to see more trees in public areas and sidewalks to beautify the city."

Context

Key Takeaways

- The landscape of San Fernando has gone through many transitions from Indigenous managed oak woodlands to an urban city

- San Fernando has a warm, semi-arid climate that is projected to become hotter with climate change

- Environmental burdens are disproportionately felt by vulnerable populations in San Fernando

- State regulations affect resources for urban forestry and local regulations influence the land use available for tree planting

NATURAL HISTORY OF SAN FERNANDO

Natural history and past ecological relationships are important to acknowledge when managing the urban forest as it now becomes part of that story. While it is not present within San Fernando today, the historical ecosystem of San Fernando was grassland and flower fields, also known as California Prairie.

Prairie ecosystems in the region contained few trees and were primarily composed of forbs and perennial bunchgrasses. Common grassland plants include purple needlegrass, lupine, and California poppy. The prairie was home to a diversity of wildlife. It supported mammals such as the black-tailed hare, prong horned antelope and even grizzly bears as well as birds such as the western meadowlarks, horned larks, and California condors, alders and sycamores.

SOCIAL HISTORY OF SAN FERNANDO

San Fernando is on the ancestral lands of the Chumash, Tongva-Gabrielino, and Fernandeno Tataviam people, who have lived in the region for around 9,000 years. Indigenous people managed the local landscaped through intentional burning to foster growth of useful plants.

In 1797, Spanish colonizers established a mission in the area. The mission established agricultural fields that 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.

The land proved to be unsuitable for grazing in the long term due to the unpredictable climate. The mission was secularized in 1834, leading to a decline in population. In 1874 the City was founded near the old mission spurred by a land boom in Southern California and a railroad that was built through San Fernando connecting Bakersfield and Los Angeles. The deep wells of San Fernando provided a reliable water source allowing the City to remain independent as many surrounding communities were annexed into the City of Los Angeles in order to access imported water from the LA Aqueduct.

Image: West side of San Fernando Road north from Brand Boulevard (Source: San Fernando Valley Historical Society)

CLIMATE OF SAN FERNANDO

San Fernando is classified as having Dry-Summer Subtropical climate. It has dry, hot summers and mild, wet winters. San Fernando receives an average of 16 inches of rain annually, which primarily falls between the months of December and March.

The climate of San Fernando is important because it determines what kinds of trees can thrive here. Fortunately, due to the mild winters, many tree species can grow in San Fernando 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.

- Average Precipitation (inches)
- High Temperature
- Average Temperature
- Low Temperature

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

CLIMATE CHANGE RESILIENCE

Climate change is creating more extreme heat days for San Fernando. 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 feels cool to stand under but also reduces heat absorbed by hard surfaces. In addition to reflecting away heat, healthy trees cool the air through evapotranspiration. The extent of the cooling benefits of trees depends on the type of tree, their size, and their health as dependent on care and maintenance.

WATER NEEDS AND CHALLENGES

Established urban trees typically do not require extensive irrigation support as their deep roots access below ground water resources. In some cases, trees can even be a water-saving measure when they replace or shade high water demand 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.

The number of days above 90°F each year is expected to increase to 135 days before the end of the century
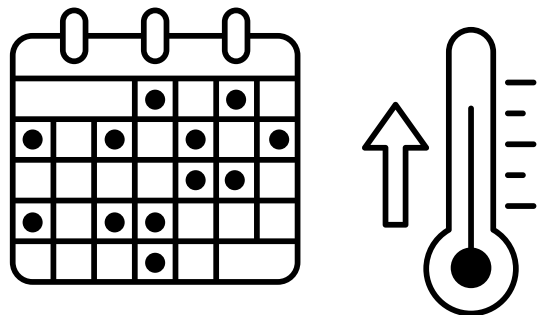
Shade from trees can cool surfaces 20°F-40°F compared to surrounding surfaces

The average high temperature is projected to increase up to 9°F by the end of the century

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

Mature Trees

Young Trees

weekly

Mulch
helps hold moisture in the soil

monthly

4 inches of soil moisture

12 to 18 inches of soil moisture

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

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 urban forest and its benefits reach all of the San Fernando community. To do so means focusing on growing trees in low canopy areas and not depending on communities with social vulnerabilities to overcome hurdles in order to have trees and their benefits where people live, work, and recreate.

Vulnerability of communities can 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 homeownership, 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
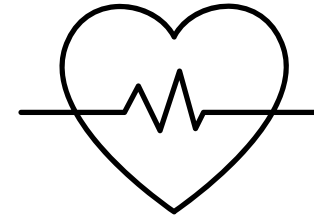
14% of residents report physical health not good
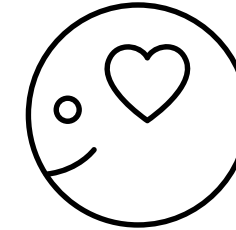
15% of residents report mental health not good
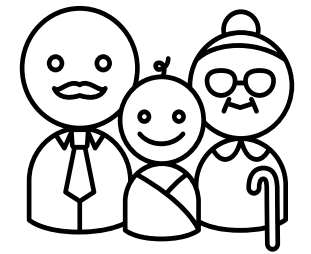
7% of residents are under 5 and 11% are over the age 65

Economic
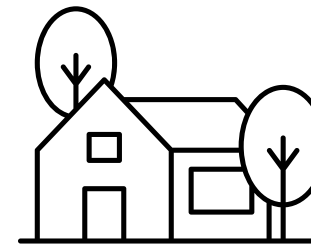
54% of residents are homeowners
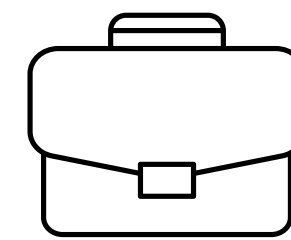
73% of residents are employed
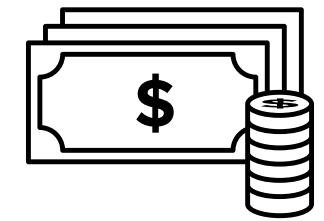
61% earn more than 200% of the Federal Poverty Level

Social
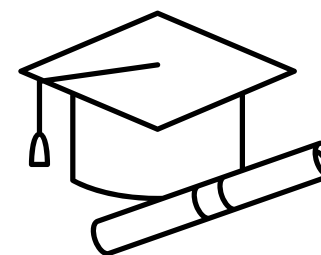
13% have a Bachelor's degree or higher
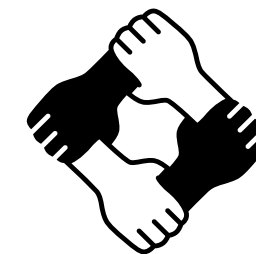
96% of residents identify as People of Color
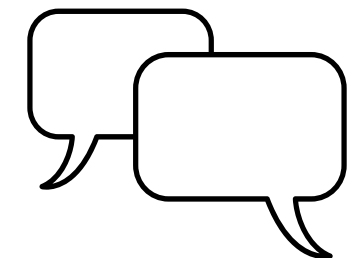
74% of residents report a language other than English spoken at home

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

Policies relevant to urban forest management in San Fernando

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.

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 CalFIRE, 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 tracts with the highest 25% CalEnviroScreen scores.

General Plan: The most recent San Fernando General Plan was adopted in 1987; However; a number of elements have since been updated including Land Use, Circulation, Housing, and Safety. Particularly relevant is the Safety element, which addresses climate hazards and environmental justice.

Corridors Specific Plan: The San Fernando Corridors Specific Plan is intended to guide economic development and revitalization along San Fernando Road, Truman Street, 1st Street, and Maclay Ave. The specific plan includes design guidelines, development standards, and capital improvements to direct land use planning and development along the corridors.

Municipal Code: The municipal code sets out the rules and regulations of the City. Of particular relevance to this plan is Chapter 98 Article 3: Comprehensive Tree Management Program, which lays out protections for public trees. The ordinance also stipulates that tree planting must conform to specific tree plans, a tree master plan, and/or to NCAA or ISA standards.

Zoning Code: The stated purpose of the zoning regulations is to group mutually compatible land uses and protect against the intrusion of incompatible land uses. In addition to designating uses, the zoning code establishes standards for the physical form of land-uses that have impacts on space available for the urban forest.

Environmental Justice Technical Report: The EJ technical report draft was published in 2021 and is intended to identify environmental justice communities and understand environmental burden in San Fernando in order to incorporate environmental justice goals and policies into the general plan.

Safe & Active Streets: The Safe and Active Streets Implementation plan draft was released in 2021 in order to identify near term projects to make streets safer and more active. The plan identifies priority street sections and offers a collection of strategies for each.

Calles Verdes: Calles Verdes is a tree planting program in partnership between the City of San Fernando, TreePeople, and the California Coastal Conservancy that aims to increase the city tree inventory over 10% in order to improve public health and climate resiliency.

Climate Action and Resilience Plan: This forthcoming plan is intended to establish a greenhouse gas inventory of emissions and vulnerability assessment as well as emissions reductions targets and adaptation strategies.

Park Opportunity Plan: This forthcoming plan will include a comprehensive inventory of existing and potential park spaces in the City of San Fernando, identify opportunities for future use, and prioritize identified spaces based on their potential for positive impact.

Existing Forest

Key Takeaways

- Tree canopy is most bountiful in parks and residential areas and most lacking in industrial and commercial areas

- Residential neighborhoods, parks, and schools are prioritized for trees planting based on existing tree canopy.

- The existing public urban forest is diverse, young, and moderately healthy

The urban forest of San Fernando 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 property parcels. To manage the urban forest, it is important to know the makeup of the existing urban forest. Two datasets are available that quantify San Fernando's urban forest: a public tree inventory and citywide tree canopy cover.

Public Tree Inventory An inventory of the public trees in San Fernando was conducted in 2023, inclusive of street trees and trees in 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 and presence or absence of overhead utilities. In addition, vacant tree planting sites were included.

Tree Canopy Cover The canopy assessment uses data from remote sensing to measure the extent of the forest canopy in San Fernando as a whole, including both the public and private forest. This is valuable in understanding how the benefits of trees are distributed throughout San Fernando.

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: Young tree in San Fernando (Source: Adam Corey Thomas)

Image: Tree Canopy Cover Data over San Fernando City Hall (Source: Maxar, LA County)

Public Trees in San Fernando

Weeping Fig on Workman Street

White Lead tree on Lazard Street

Sweetgum trees on Orange Grove Avenue

San Fernando's Public Trees

2023 Inventory

Legend

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

0   1,500   3,000 Ft

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

Characterizing San Fernando's existing public trees

TREE SPECIES AND THEIR ABUNDANCE

San Fernando has 6,019 public trees representing almost 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 tree from a single species. San Fernando's urban forest almost fulfills this criteria with American Sweetgum (Liquidambar styraciflua) making up the largest proportion of the existing forest at 10.2%.

San Fernando also has a high proportion of palm trees with Queen Palm and Mexican Fan Palm two of the ten most common species, together making up almost 15% of the urban forest. Palm trees provide relatively few community benefits and thus should be avoided for future plantings and replaced with large canopied trees over time.

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; measured about 4.5 ft above the ground) is a common measure that correlates with overall tree size. A healthy urban forest should have the highest proportion of small, young trees that will grow into larger trees replacing aging trees.

San Fernando has a good distribution of trees across sizes, and ages, with a high proportion of young trees. This is good news, as it indicates long term growth in the urban forest. However, this relies on the assumption that small trees will grow into large trees with expansive canopies. Trees with a small mature canopies, such as palm trees, will not replace large canopied trees. This can be addressed by planting tree species now that will grow into a large mature canopy size in the future and by caring for those trees across their life so they are long-lived.

San Fernando has a *diverse* urban forest
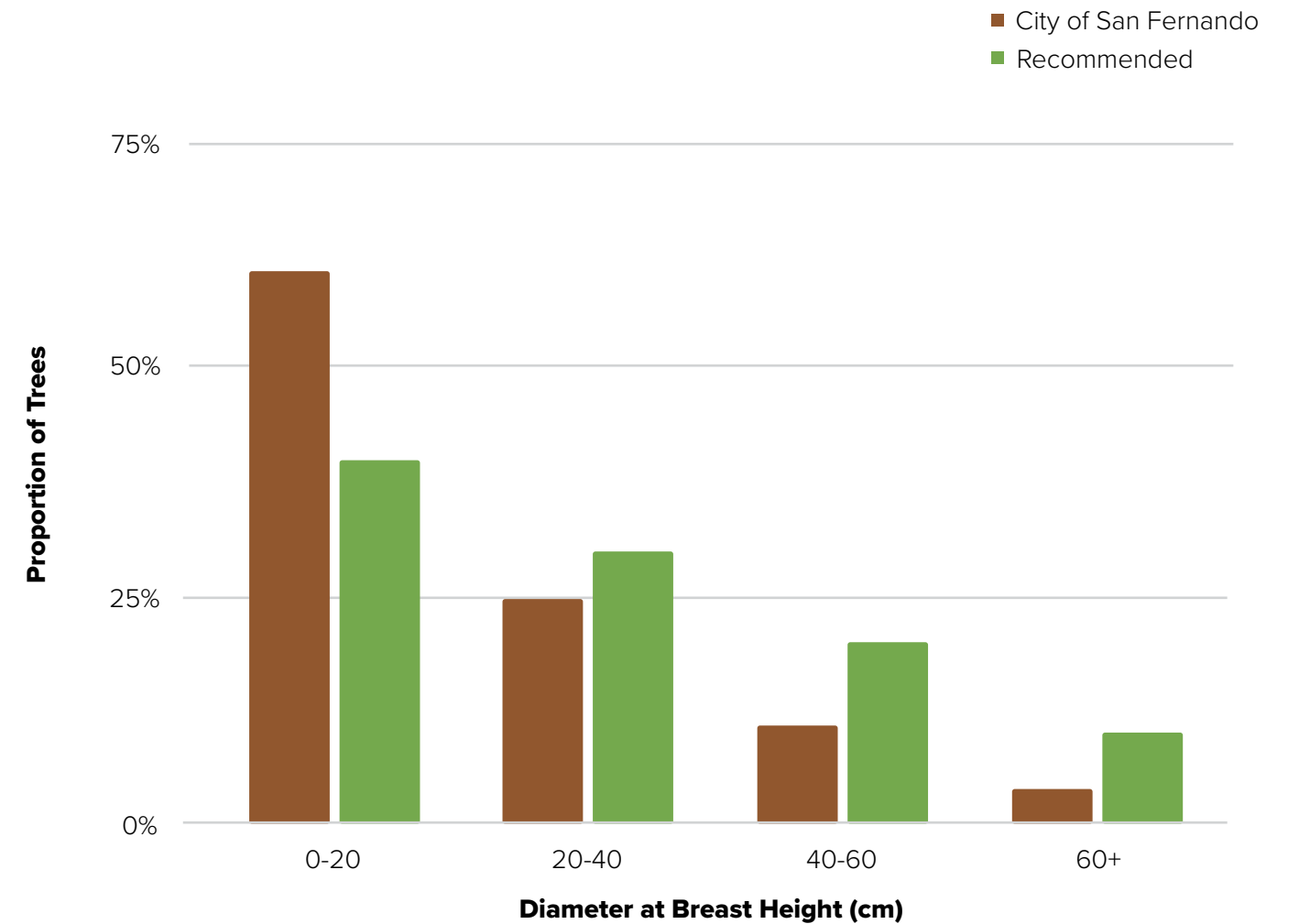
Caring for young trees so that they will *grow into large mature trees* is critical

TREE HEALTH

San Fernando has a moderately healthy urban forest. Less than 2% of trees were assessed as in "Dead" or "Poor" condition, and over 90% of trees were assessed as in "Good" or "Fair" condition, with 29% in "Good" condition and 69% in "Fair" condition. This indicates that the majority of trees in San Fernando require 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. The high proportion of trees in "Fair" rather than "Good" condition may be indicative of water- stressed trees. Watering trees during periods of extended drought can improve tree health.

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.
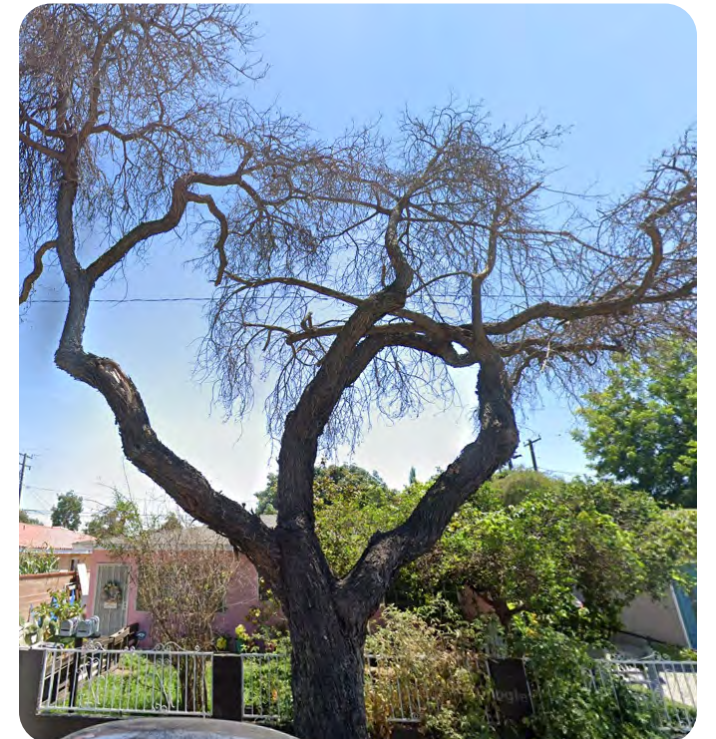
Dead trees should be removed, stump ground and replaced. *(Image source: Google Maps)*

San Fernando's public tree forest is *mostly healthy*

(Bar chart: Number of Trees by condition — Good ~1,700; Fair ~4,100; Poor ~75; Dead ~50)

Characterizing San Fernando's existing tree canopy cover

EXISTING CANOPY

Based on 2016 data, San Fernando has 19% tree canopy cover citywide. This is higher than the total Los Angeles County canopy cover of 18%.

Canopy is not distributed equally throughout the city. Neighborhoods in the northwest and southwest have high canopy cover, while much of the west, north, and center regions of the city have lower 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 is classified into five categories: Parks, Schools, Residential, Commercial, and Industrial.

Comparing tree canopy and land use maps, Industrial and Commercial areas account for the majority of areas with the lowest tree canopy, while Residential neighborhoods tend to have higher tree canopy.
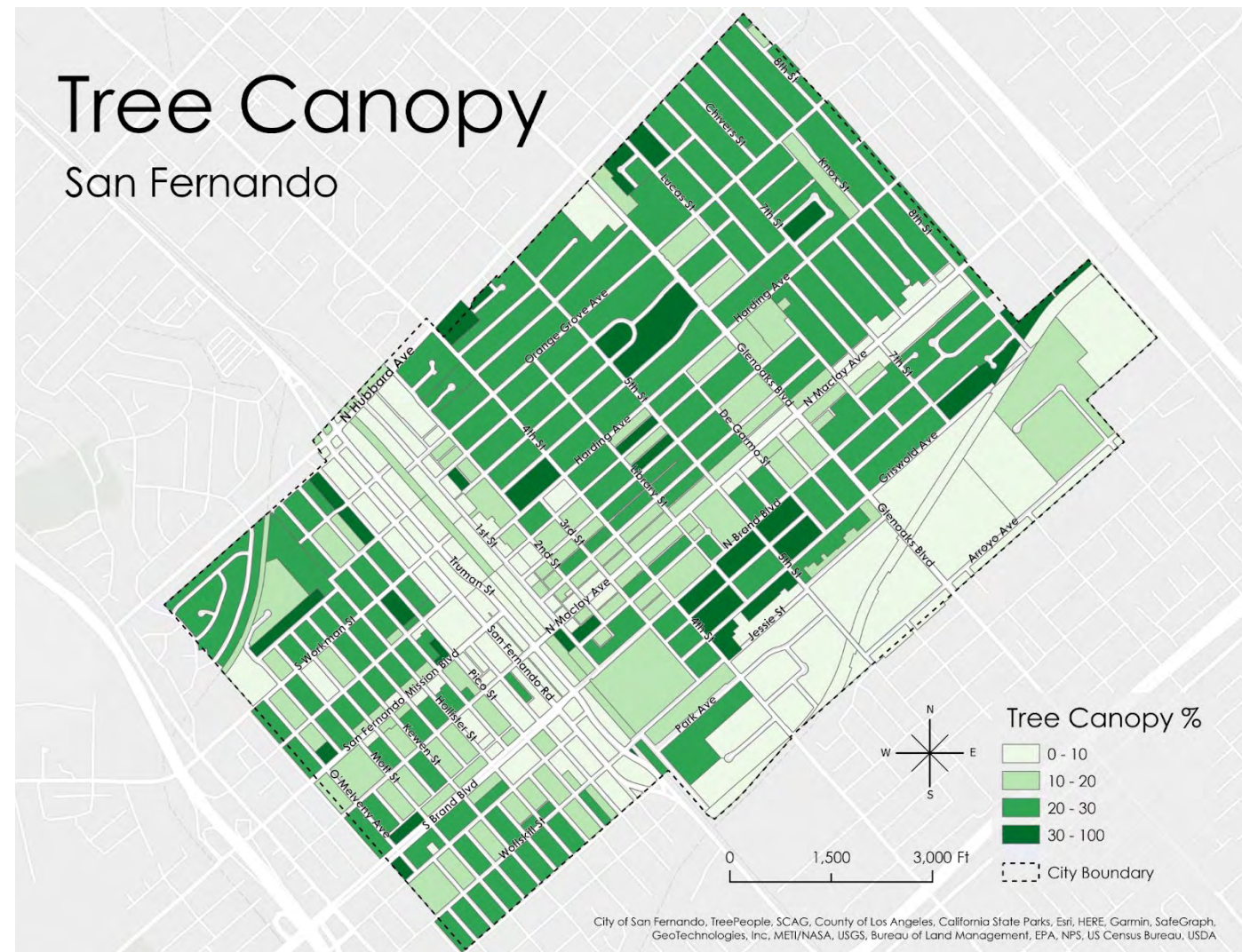
The citywide tree canopy cover in San Fernando is *19%* but there are substantial differences in tree canopy across the city.
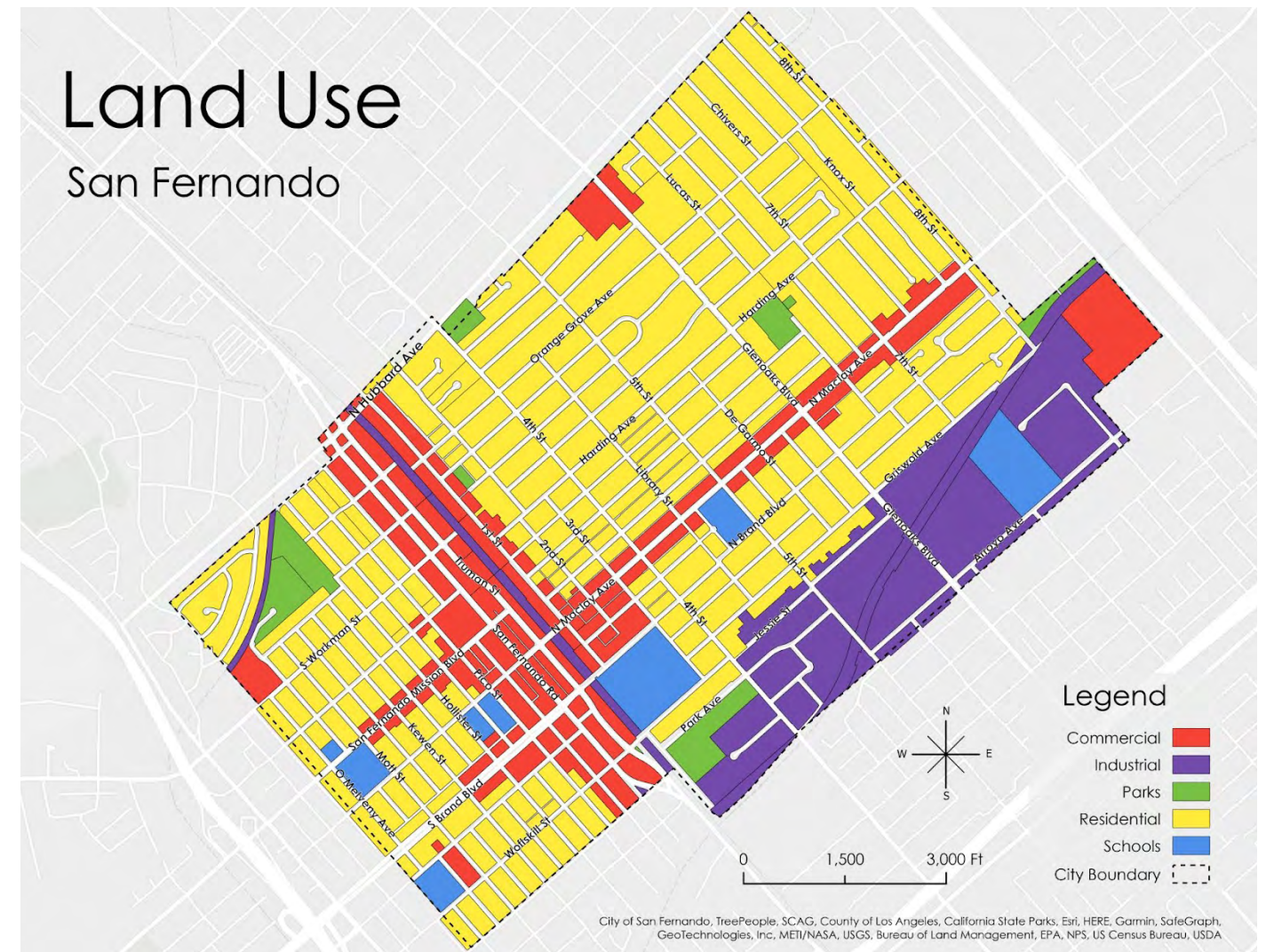
Land use is an important factor in tree canopy cover.

PUBLIC RIGHT-OF-WAY CANOPY

The public right-of-way is the second largest land use in San Fernando and by far the largest publicly managed land use. It consists of all the streets and sidewalks that connect the city. Currently, there is 16% 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.

Public Right-of-Way Tree Canopy

San Fernando

Tree Canopy %
- 0 - 10
- 10 - 15
- 15 - 25
- 25 - 100
- ● Bus Stops
- ⬚ City Boundary

City of San Fernando, TreePeople, NASA, SCAG, Metro
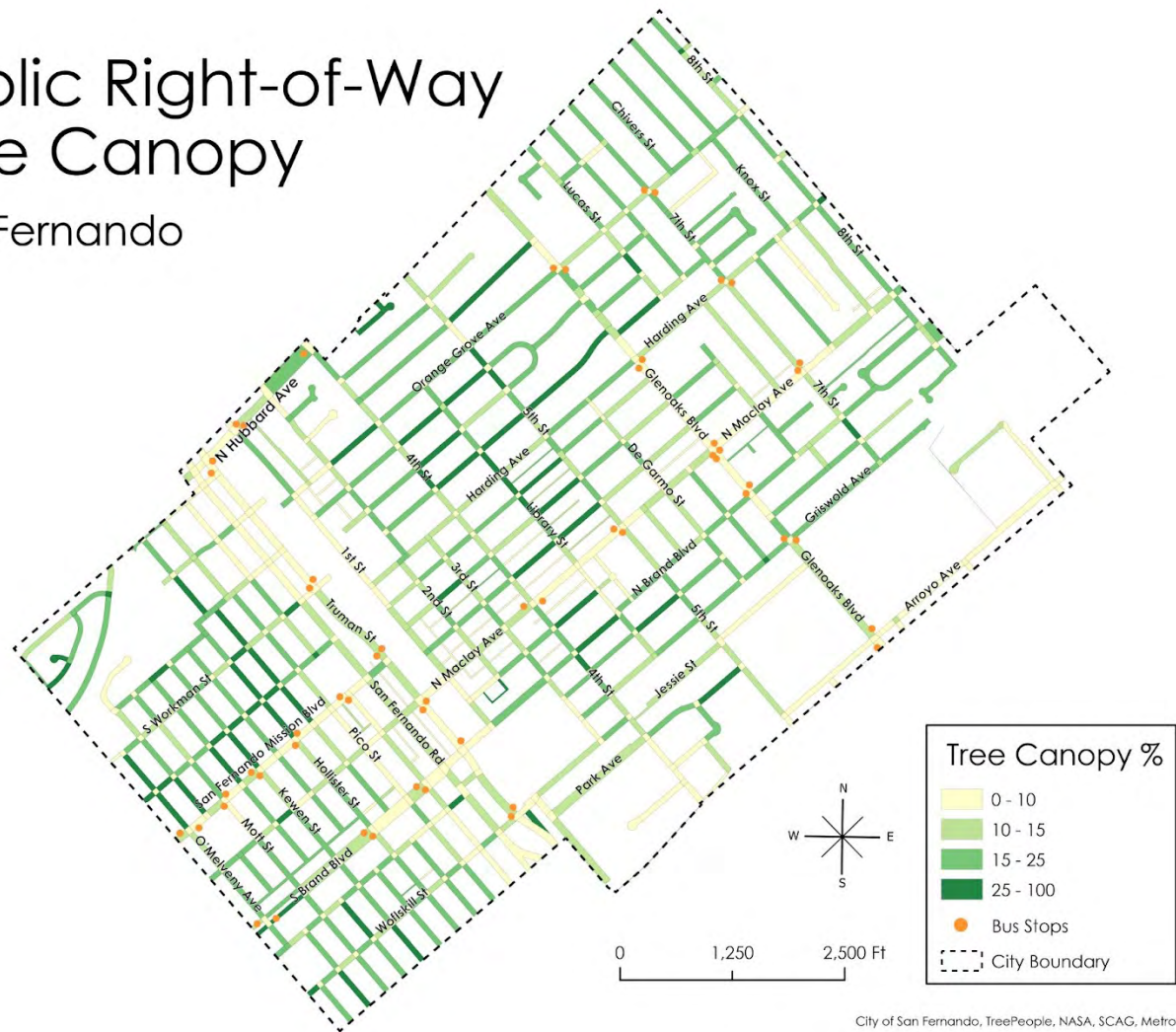
Residential neighborhoods in the southwest and center of town have the most densely canopied streets in town.

RESIDENTIAL CANOPY

Residential is the largest land use in San Fernando, so tree canopy in residential neighborhoods has a significant impact on canopy in the city as a whole. Currently, there is 23% 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, including trees, to property owners can encourage them to increase tree canopy on private property.

Residential Tree Canopy

San Fernando

Tree Planting Priority
- Highest Priority
- Priority
- Lowest Priority
- ⬚ City Boundary

City of San Fernando, 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
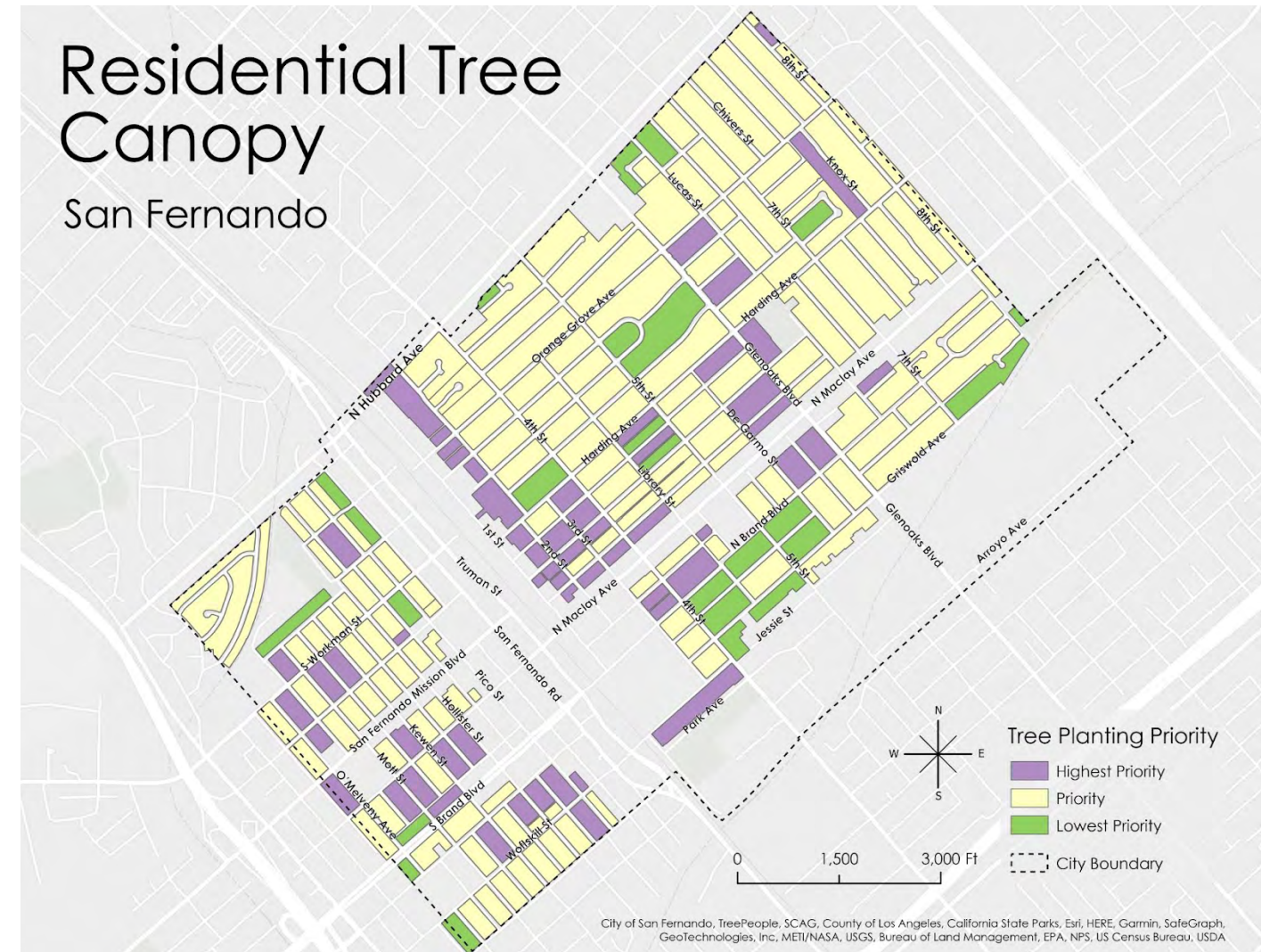
Highest priority neighborhoods (purple are determined by low existing canopy and should be planted first. Lowest priority neighborhoods already meet or exceed canopy goals.

PARK CANOPY

The City of San Fernando has seven public parks. Parks in San Fernando 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 45% in Rudy Ortega Sr. Park to 20% in Pioneer Park.

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 Pioneer Park, Las Palmas Park, and Recreation Park would be good candidates for initial tree planting initiatives. Tree canopy can be increased in parks by including

tree plantings as part of park renovation projects. The 2017 Parks and Recreation Master Plan outlines renovations to recreational facilities at Las Palmas Park, Laune Park, Pioneer Park, and Recreation Park, to which tree planting initiatives could be included.

In addition, the Parks and Recreation Master Plan recommends improving the trail network through San Fernando. Planning for tree canopy along these trails, such as the Pacoima Wash Bike Path currently in development, could be another valuable opportunity to increase the urban forest in recreation areas.

Park	Size (acres)	Canopy	Residents within 10 minute walk
Pioneer Park *828 Harding Avenue*	5.3	20%	7,673
Las Palmas Park *505 S Huntington Street*	7.7	24%	3,637
Recreation Park *208 Park Avenue*	10.7	26%	5,313
Layne Park *120 N Huntington Street*	0.83	31%	5,339
Cesar Chavez Memorial Park *Wolfskill Street and Truman Street*	0.44	31%	4,348
Rudy Ortega Sr. Park *2025 Fourth Street*	3.34	45%	8,147
Cindy Montañez Natural Park *801 8th Street*	3.18	38%	3,207
Kalisher Park* **Kalisher Park is not included in this analysis as it is currently undergoing development*			

Two Parks in San Fernando have tree canopy meeting or exceeding goals already (green).
Three parks are considered highest priority (purple) based on low existing canopy.

Image: Pepper trees in Cesar Chavez Memorial Park, San Fernando

SCHOOL CANOPY

Public schools in San Fernando are run by the Los Angeles Unified School District (LAUSD). There are 14 school campuses within San Fernando, of which 10 are run by LAUSD including charter schools, and three are private schools.

Many of these schools have predominantly asphalt play areas, though some also have grassy areas or playing fields. Most have very low tree canopy, with one-third of schools having less than 10% tree canopy.

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. 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.

Partnering with the school district to encourage and permit on-campus planting initiatives while prioritizing street tree planting near schools is recommended. In many cases, maintenance of trees on school property is handled by the school district. Maintenance responsibilities may be organized through partnership between the City, schools and, if applicable, any third party designated to plant or maintain trees on school property. Grants and local partnerships may also be effective strategies to green priority schools. TreePeople will begin planting trees at Vista del Valle Dual Language School in 2024 using funds from a Cal Fire grant.

Image: Tree Planting at San Fernando Elementary School (Source: Adam Corey Thomas)

School	Type	Canopy
Cesar Chavez Learning Academy	High	1%
Santa Rosa de Lima Catholic School*	K-8	6%
Vista del Valle Dual Language	Elementary	7%
Vaughn Next Century Learning Center	K-12	9%
Saint Ferdinand Catholic School*	K-8	10%
San Fernando Elementary	Elementary	12%
Gridley Elementary School	Elementary	14%
O'Melveny Elementary School	Elementary	16%
San Fernando Middle School/ San Fernando Institute for Applied Media	Middle	18%
Nueva Esperanza Charter Academy	Middle	19%
Morningside Elementary School	Elementary	20%
Glenoaks Christian School*	K-8	23%

*Private Schools

Three campuses 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 San Fernando 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 San Fernando 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 San Fernando to modify policies and infrastructure to support a thriving urban forest.

Image: Tree planting in San Fernando (Source: Adam Corey Thomas)

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 San Fernando.

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. Though policy changes will be required to meet the canopy goals, the longevity of the plan acknowledges that policy change may be incremental and made in accordance with evolving community needs.

Vacant Sites

There are 3,457 vacant sites in San Fernando that are available to be planted with new trees. Planting appropriate trees in these spaces is a start to growing the urban forest, but to significantly expand the forest more plantable space must be created.

POSSIBLE VEGETATION TO TREE CANOPY TRANSITION

Areas of San Fernando 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 the lawn areas of residential parcels. Providing resources and information to residents to encourage tree planting in private yards, paired with canopy zoning requirements for new developments can help increase tree canopy in these areas.

All the parks in San Fernando are classified as having high potential for more tree canopy. However, parks make up a relatively small fraction of land in San Fernando and thus alone are insufficient to meaningfully expand citywide canopy. Expanding park space would not only create space for the urban forest, but also provide space for outdoor recreation, one of the most desired benefits of the urban forest.

Many schools in San Fernando are classified as having high or medium potential for more tree canopy, and were ranked the second highest priority location for new trees by community members. Schools in San Fernando often 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.

Potential Vegetation to Tree Canopy
San Fernando

Conversion Potential
- Low Potential
- Medium Potential
- High Potential
- City Boundary

0   1,250   2,500 Ft

City of San Fernando, 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
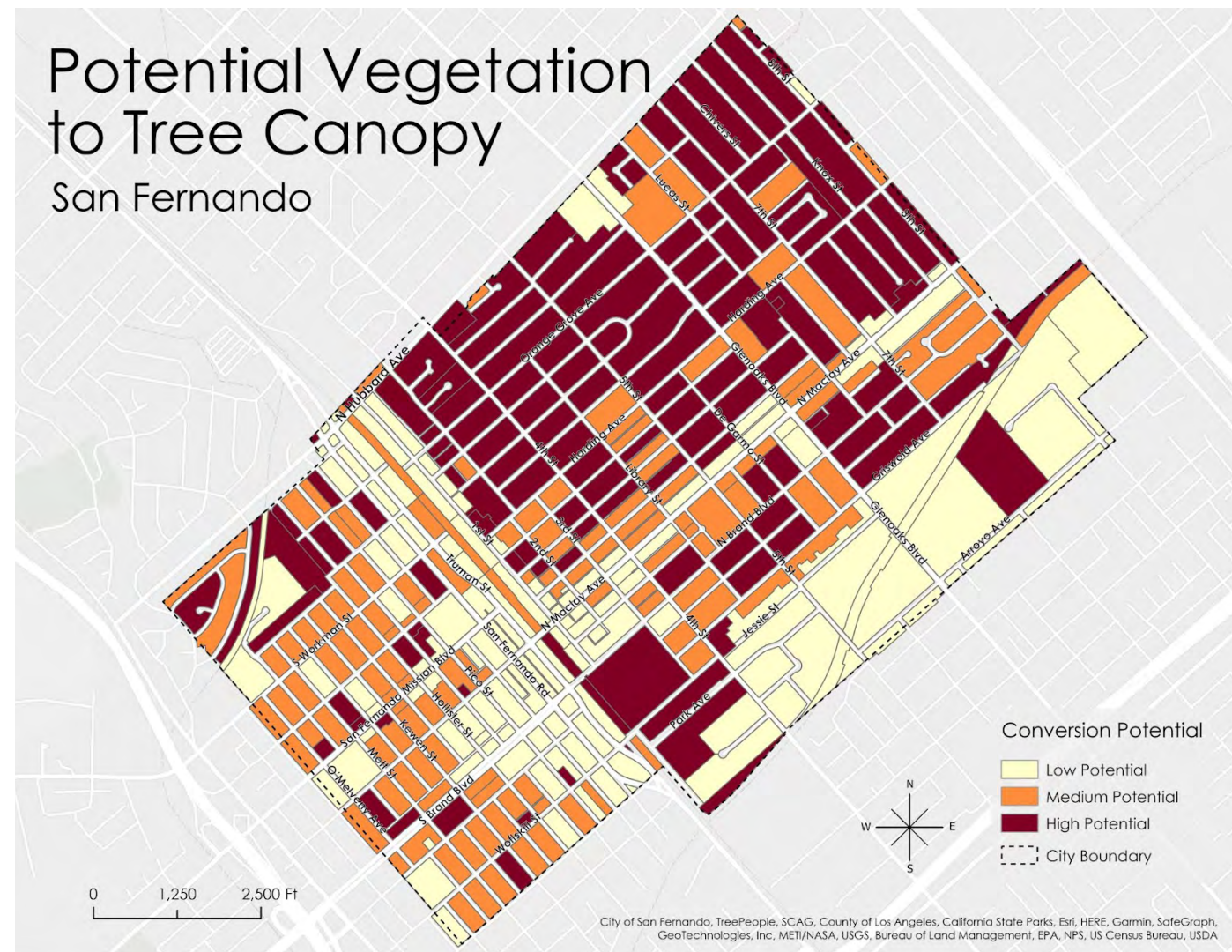
San Fernando has a lot of land existing as lawns or open space that can be planted with trees, especially in residential yards and schools

Image: Tree planting in San Fernando (Source: Adam Corey Thomas)

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 shows 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.

Blocks with high potential for adding tree canopy are primarily the industrial and commercial zones. Part of the reason for this is the prevalence of parking lots in these areas. Trees are important in these areas because they provide screening between 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.

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 in commercial and industrial zones pose opportunities to increase tree canopy on existing impervious surfaces

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 to the below.

More space for urban trees can be created by decreasing the curb-to-curb width, or installing medians. Decreasing the curb-to-curb width can be accomplished by reducing the width or number of traffic lanes and parking lanes. 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.

Median

Parkway

Curb-to-curb width

Tree Well

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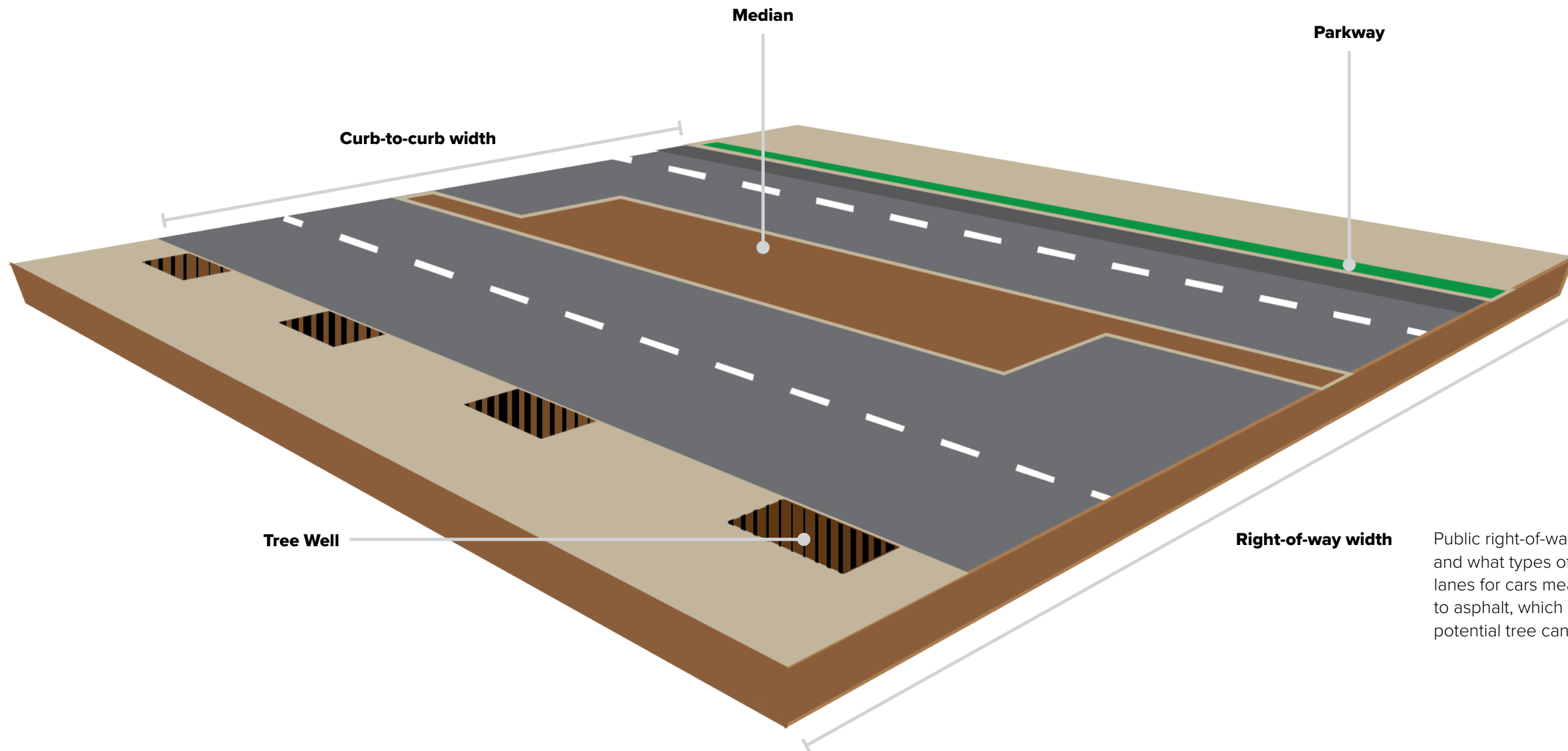
Public right-of-way design influences how many and what types of trees can be planted. More lanes for cars means more space must be dedicated to asphalt, which intensifies heat and reduces potential tree canopy.
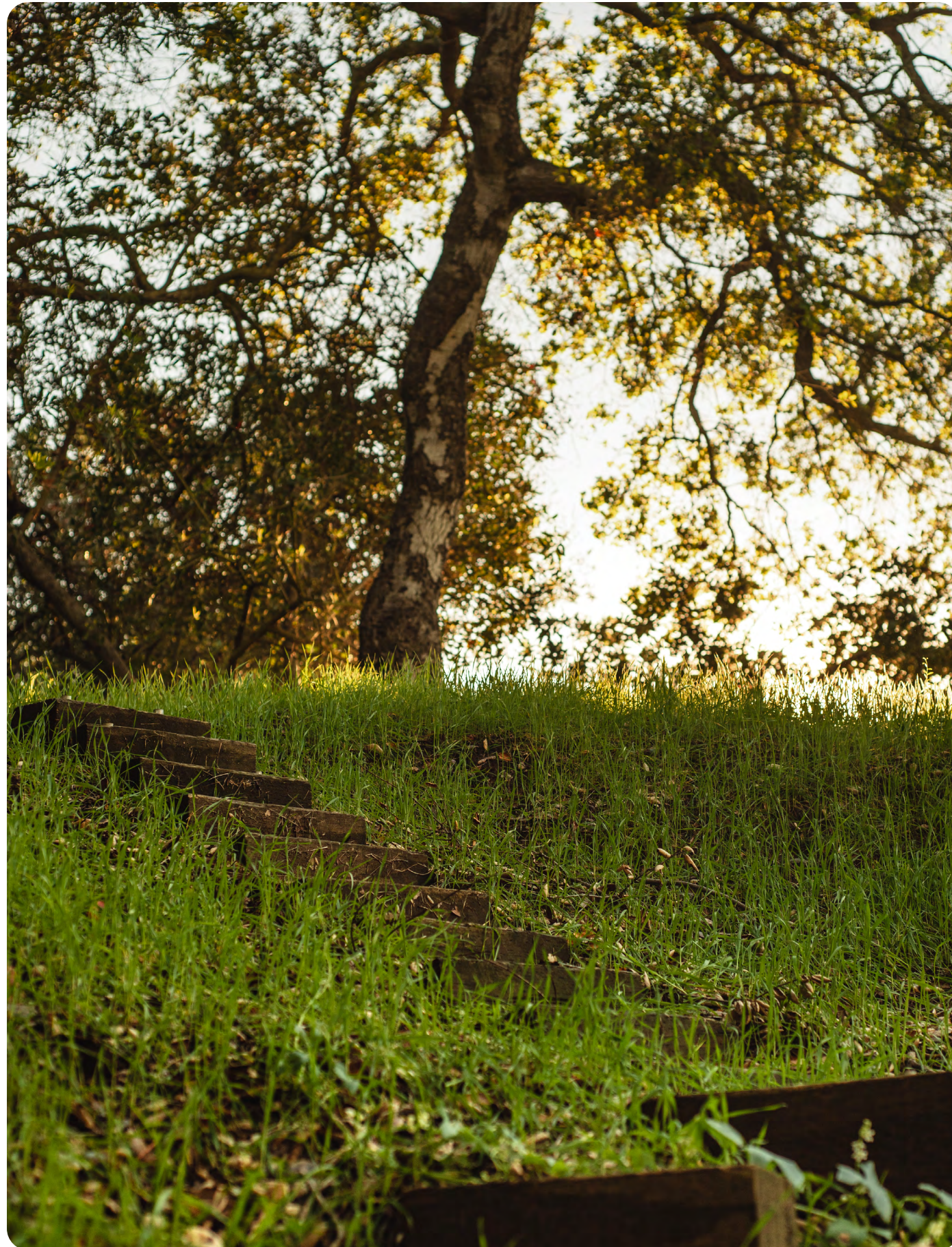
Tree Planting Site Options & Costs

Filling the vacant sites available in San Fernando is the most cost effective way to grow the urban forest, but it will not be enough to reach the goal of 35% tree canopy in the right-of-way. Almost all the existing vacant sites will be filled within the first year of proposed tree planting. 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 on the following page.

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 where a 4 ft minimum well width is possible.

Curb extensions are a great option where the existing curb is too narrow to support trees and a sidewalk. 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. 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/or trees that are significantly smaller than their planting size could feasibly support should be considered to be replaced with larger, more beneficial trees.

Tree Planting Site	Potential Locations	*Planting Cost Estimate
Vacant sites	See Tree Planting Priority Map	$400
New tree wells**	Arroyo Street Truman Street 1st Street	$1,400
Curb Extensions**	Near schools	$6,000-$20,000 Per 6 ft x 20 ft
Medians**	N. Maclay Avenue N. Brand Boulevard	$15,000 to $30,000 per 100 ft
Tree replacement	See Tree Replacement Criteria Residential Parkways San Fernando Road	$700

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

**Renderings of how new tree wells, curb extensions, and median improvements can be designed are included on the following page.

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

The streets listed in the table above should be complemented with the Tree Planting Priority Map to determine high priority blocks and vacant sites.

Creating More Plantable Space
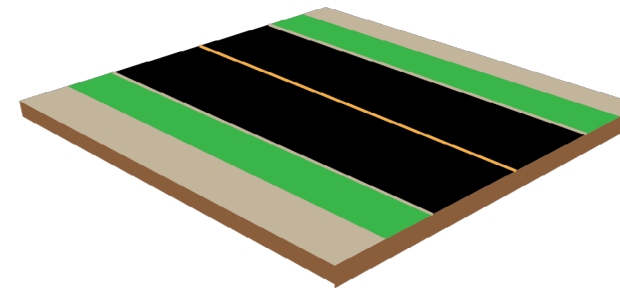
Parkways, where they exist, require the least site preparation to plant vacant sites.
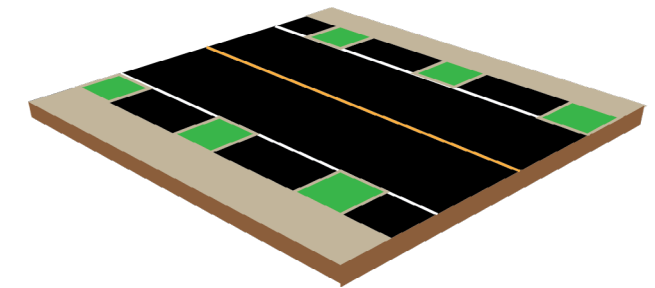
Curb Extensions are suitable for when there are no existing parkways and the sidewalk is too narrow to install tree wells.
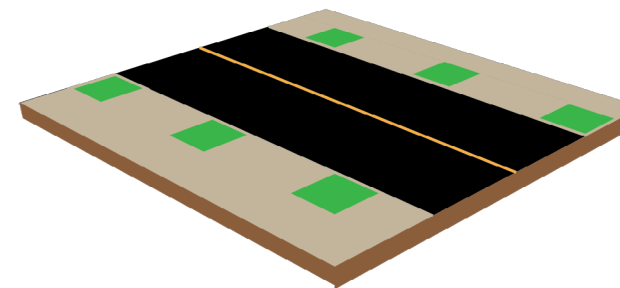
Tree Wells are best suited when there is no existing parkway and the sidewalk is at least 9 ft wide.
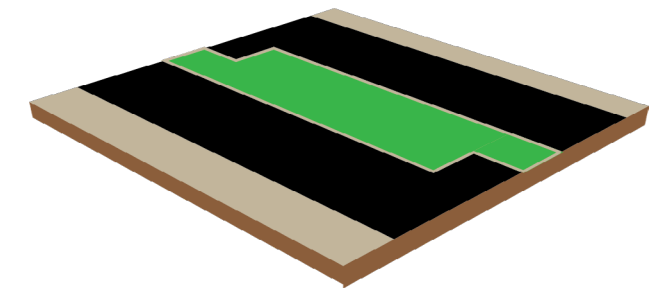
Medians are well suited for major arterials with center turn lanes.

RESIDENTIAL NEIGHBORHOODS

Residential neighborhoods are the largest land use within San Fernando 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.

Landscaping Requirements: Requiring trees to be incorporated in residential landscaping is a valuable provision for promoting the private urban forest. There are existing requirements requiring 50% of the front setback to be landscaped. 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.

Setbacks: The required front setback creates at least 1,000 square ft of open space in front of every residential parcel. 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.

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 or eliminating parking minimums allows for more green space in residential neighborhoods. Where parking minimums are required, adopting design standards requiring permeable pavers may support soil and root health for trees planted near parking spaces.

Parking Minimums

Landscaping Requirements

Public right-of-way

Setbacks

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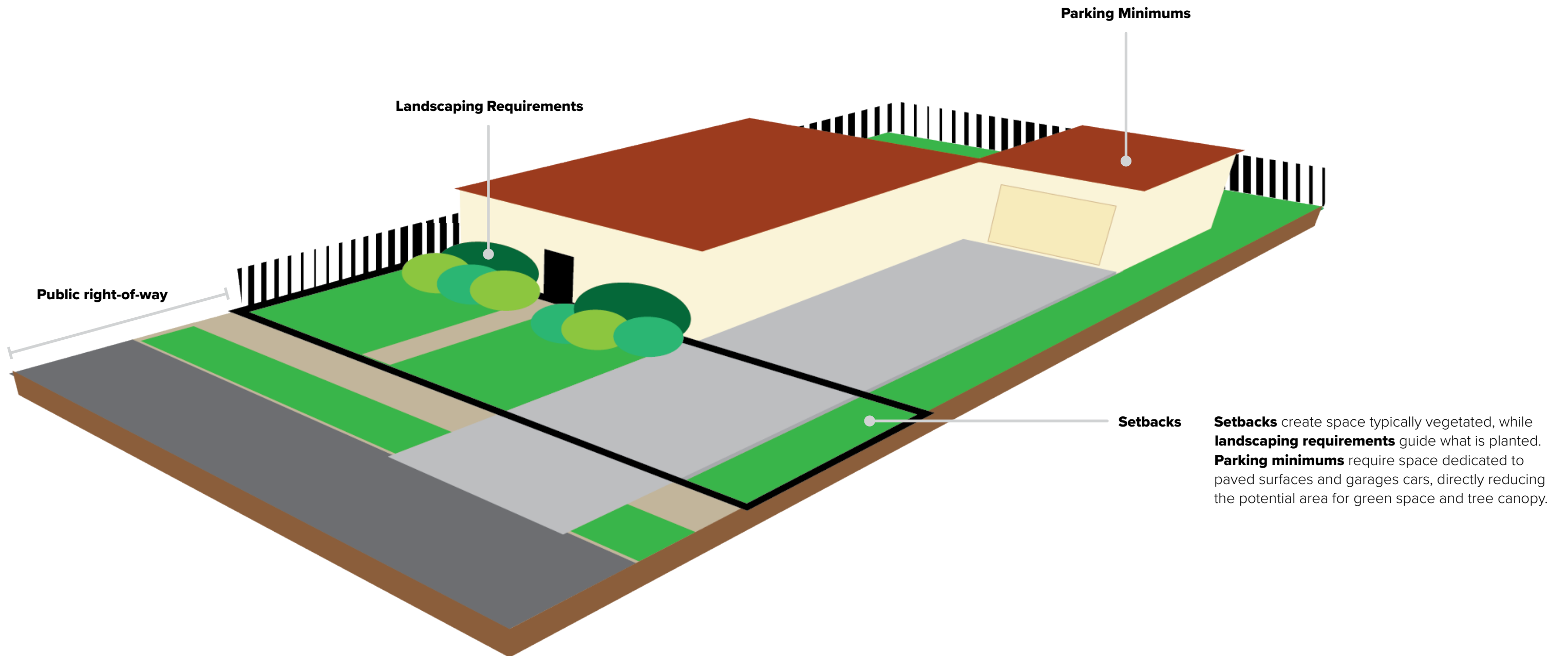
COMMERCIAL NEIGHBORHOODS

Commercial areas are the third largest land use in San Fernando and hold a lot of potential to increase tree canopy, especially in parking areas.

Setbacks: Commercial developments in San Fernando are required to have a 10 ft setbacks and off-street parking lots adjacent to the public right-of-way are required to have a 5 ft landscaped strip. This requirement 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. Where parking minimums are required, adopting design standards requiring permeable pavers may support soil and root health for trees planted near parking spaces.

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. The zoning code currently requires 2% of parking lot area to be landscaped, but does not require the inclusion of trees.

The benefit of both the setbacks and the landscaping could be more fully realized by specifically requiring trees, 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.

Landscaping Requirements
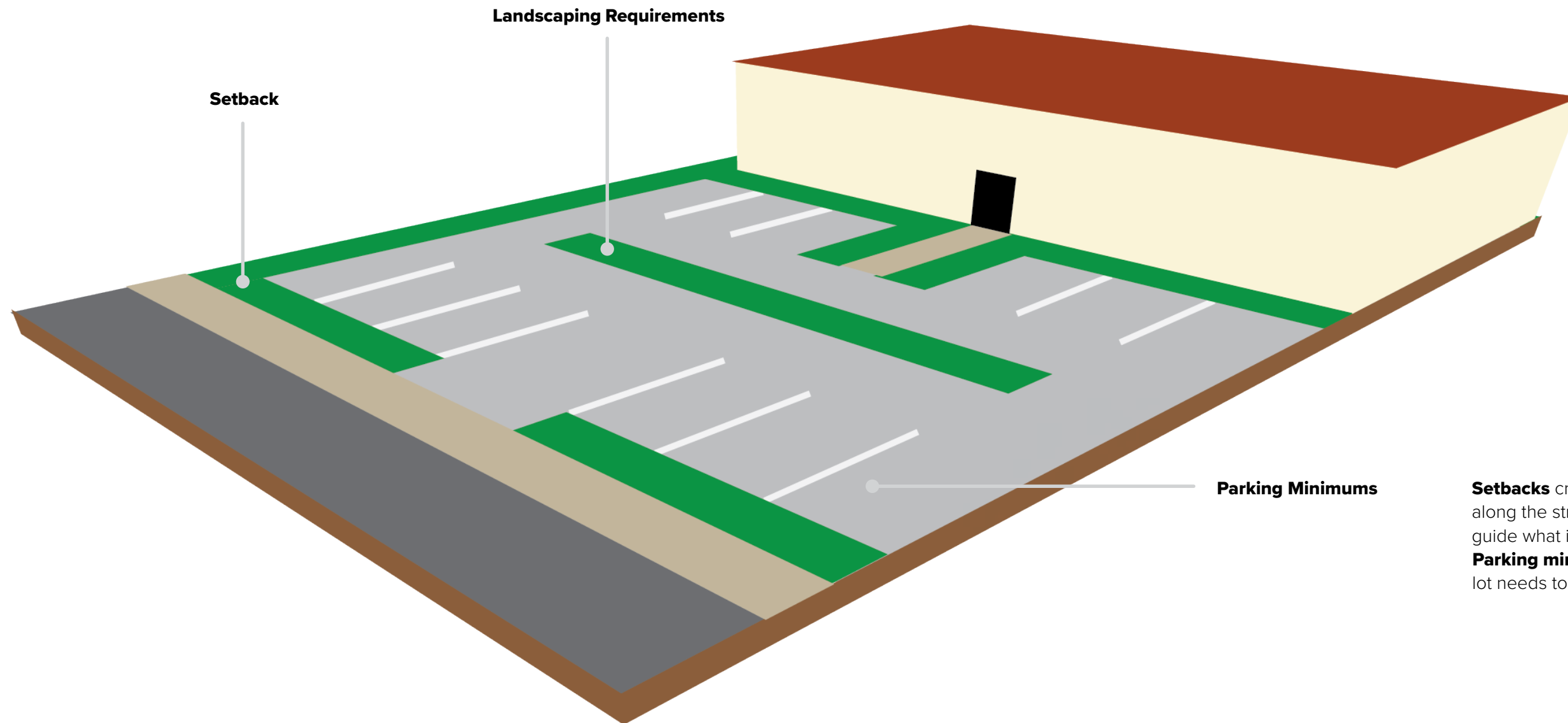
Setback

Parking Minimums

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. 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 laid out in Article 4 of the zoning code. Setbacks are the main source of existing canopy in industrial zones.

Parking lots: Many industrial lots also have large parking lots with currently little to no tree cover. Increasing tree cover requirements in these parking lots could help increase canopy in these under forested areas. Where parking minimums are required, adopting design standards requiring permeable pavers may support soil and root health for trees planted near parking spaces.

Landscaping Requirements
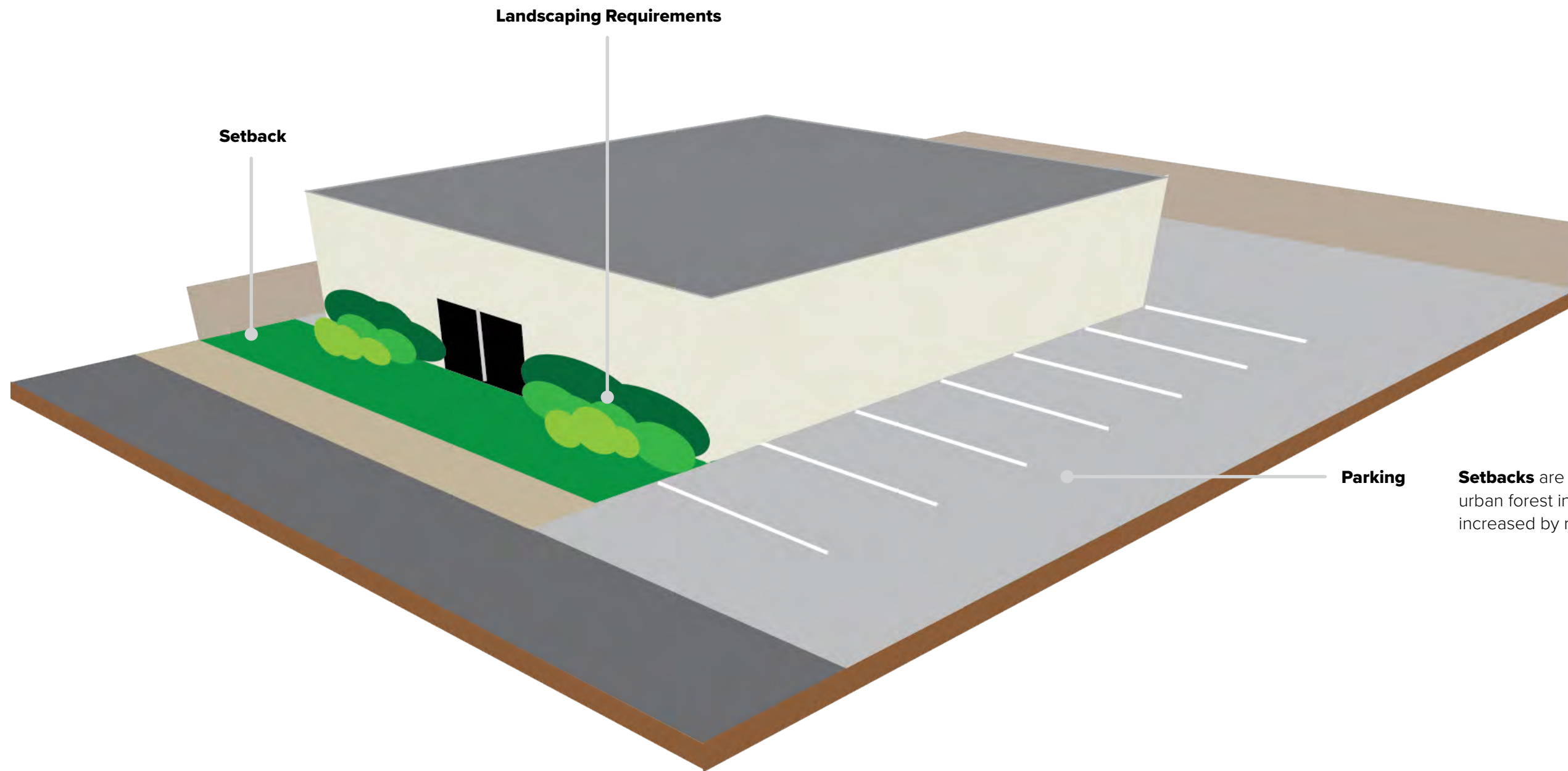
Setback

Parking

Setbacks are the source of much of the existing urban forest in industrial lots. Urban canopy could be increased by requiring **landscaping in parking lots.**

Vacant Planting Sites

San Fernando

Legend

- ● ≤ 3' Vacant site
- ● 4' - 5' Vacant site
- ● ≥ 6' Vacant site
- ○ Site with Stump or Dead Tree
- ⌐⌐ City Boundary
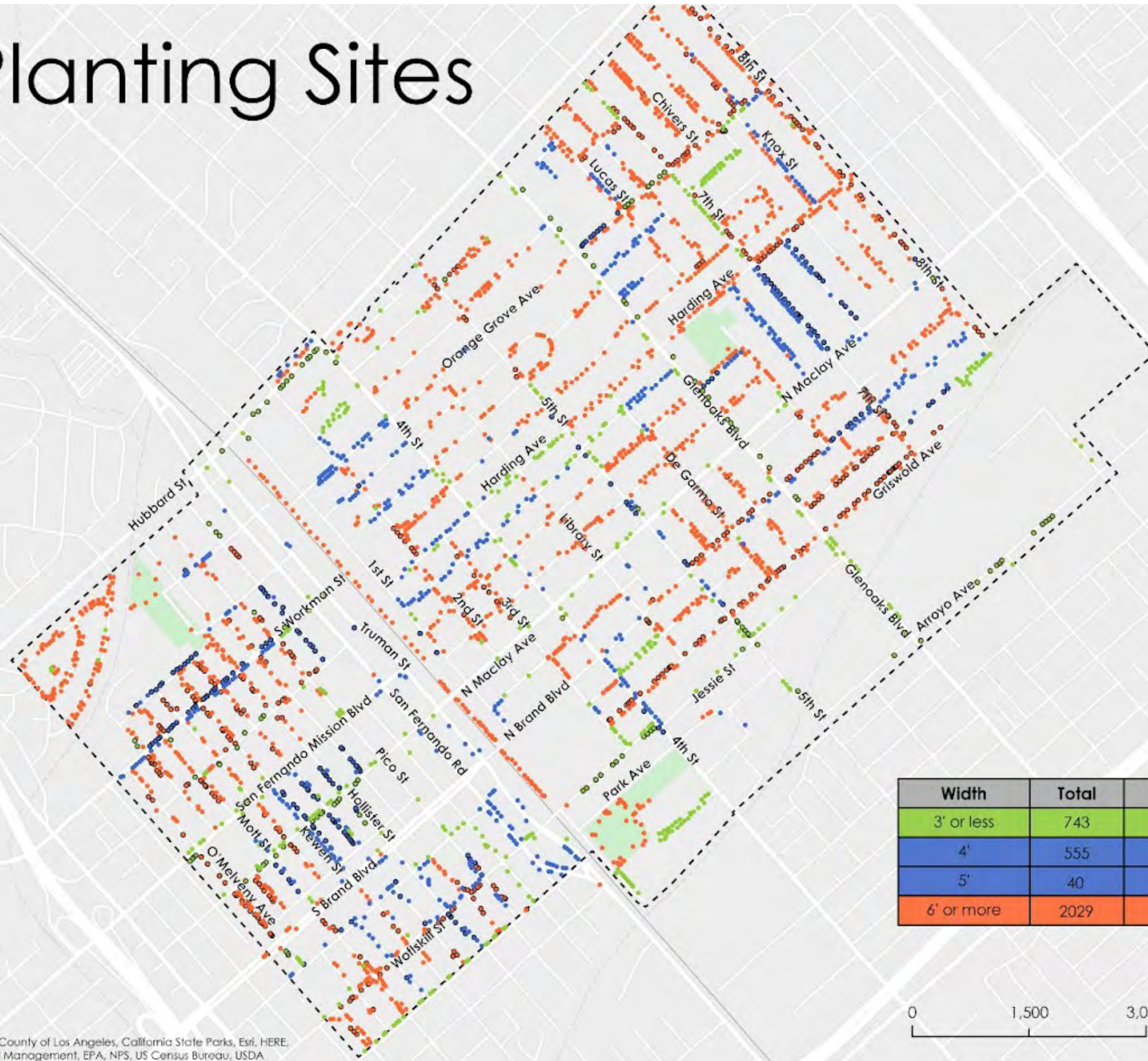
Width	Total	Utility	No Utility
3' or less	743	121	434
4'	555	182	561
5'	40	6	34
6' or more	2029	382	1647

City of San Fernando, TreePeople, SCAG, Esri Community Maps Contributors, 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

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Goals & Strategies

- 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 the San Fernando urban forest can be realized by setting ambitious but achievable goals. The canopy goals in this plan are consistent with the City Council's Strategic Goals through 2027, but also further specify targets for canopy cover by land use that come together to form a long-term 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 San Fernando.

Images: Top: fruit tree distribution; Bottom: tree care watering buckets (Source: Adam Corey Thomas)

San Fernando's Future Forest

GOALS AND STRATEGIES

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

Legend:
- Existing Canopy
- Target Canopy

Chart — Area (acres):

- **Residential**: 23% / 35%
- **Public Right-of-Way**: 16% / 35%
- **Commercial**: 9% / 15%
- **Industrial**: 7% / 12%
- **Schools**: 15% / 30%
- **Parks**: 29% / 40%

X-axis: Area (acres) — 0, 50, 100, 150, 200, 250
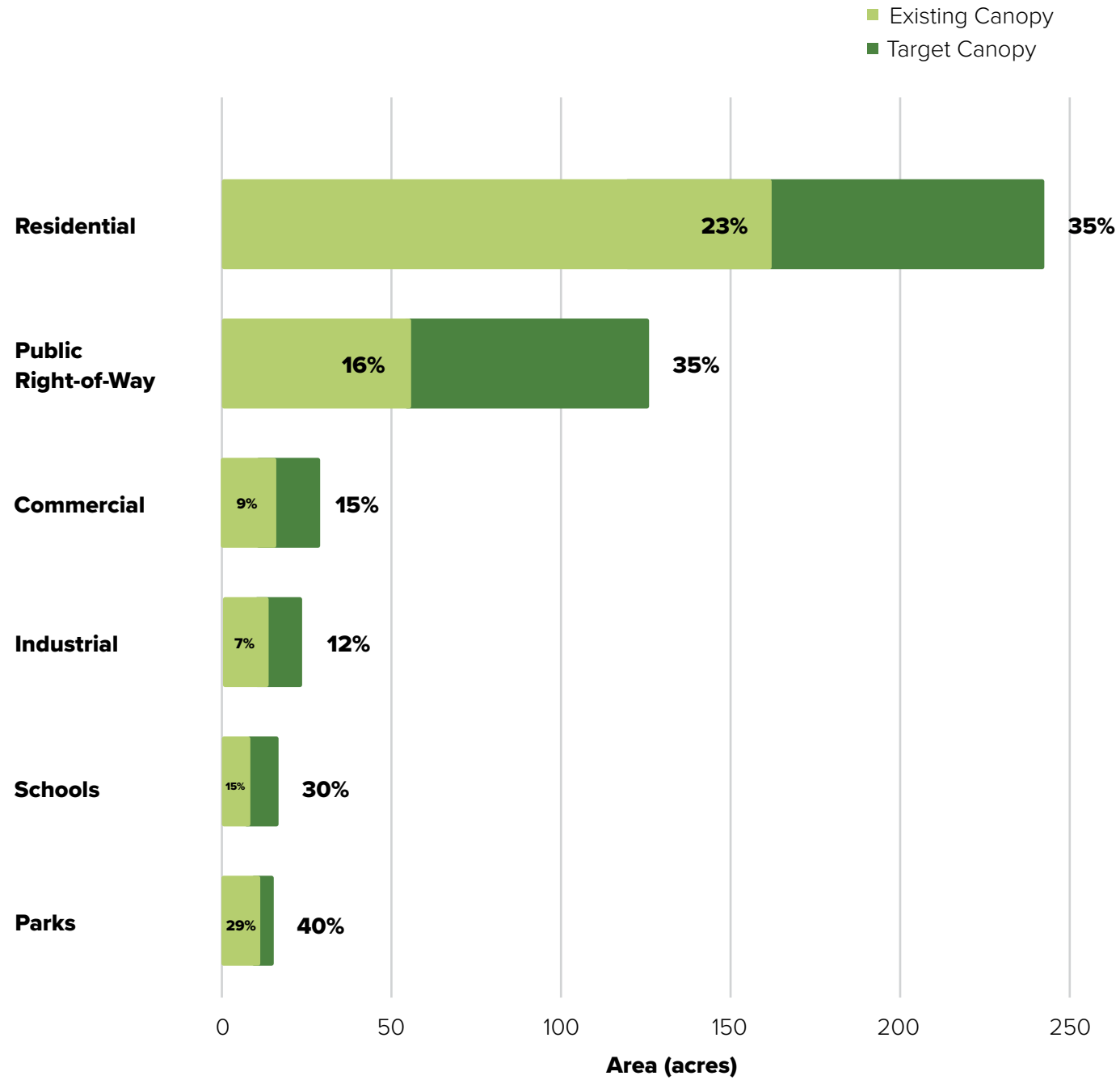
Bar length depicts how many acres of canopy cover is represented in each land use category.

Canopy targets by land use combine to achieve the citywide target in a way that integrates community priorities on where canopy is needed most.
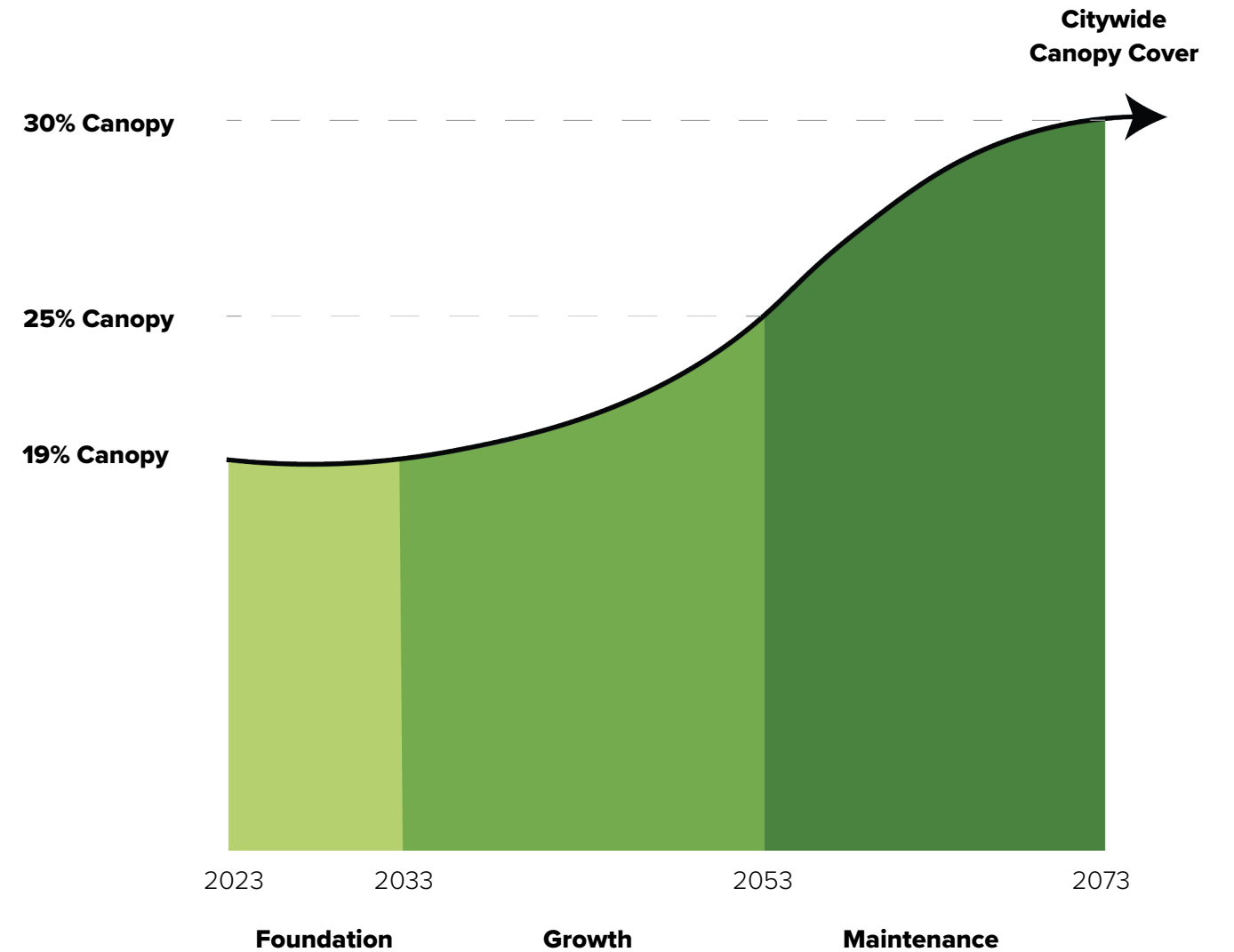
30%
Tree Canopy
Cover Citywide

185
Added Acres of
Tree Canopy Cover

Citywide Canopy Cover

- 30% Canopy
- 25% Canopy
- 19% Canopy

Timeline: 2023, 2033, 2053, 2073

Phases: Foundation, Growth, Maintenance

The pathway to realizing the future forest of San Fernando is divided into three management phases: 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.

The planting minimums recommended in the strategies are based on the average number of trees required to be planted in each land use to reach canopy targets. Each parcel is unique and meeting per parcel tree minimums may not always be feasible on some, while they may be exceeded on others. The policies adopted by the City should consider alternative planting options to ensure the required trees are planted in the same neighborhood when minimums cannot be met on a parcel, particularly one being renovated or redeveloped.

Canopy Benefits / Canopy Size

10' Small — 20' Medium — 30' Large

100 ft

40 ft

Larger trees can help achieve canopy goals with fewer plantable spaces. To reach the 25% Public Right-of-Way Goal for a 100 ft length of a 40 ft wide local road would require 14 small (10 ft) trees, four medium (20 ft), or two large (30 ft) trees

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 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, Protect, and Partner. Importantly, consideration of equity is a cross-cutting theme to be incorporated into all strategies.

Each strategy is accompanied by several recommended activities and policies for implementing the strategy. The activities will need to be further specified through the policymaking process to align and integrate with city-wide strategies, budgets, cycles, other ordinances, and staffing.

PLANT

Six of the ten strategies involve planting trees as planting more trees is essential to expanding the San Fernando urban forest. Planting strategies are grouped by land use in order to give specific guidance depending how the land is managed by different stakeholders and which policy tools are appropriate. Planting strategies are ordered 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 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 San Fernando's urban forest that can shape projects from the regional scale to the personal. Working together to foster a culture of tree care throughout San Fernando will help the urban forest thrive for years to come. Importantly, many government agencies have jurisdiction over land in San Fernando where some of the greatest need and best opportunities for adding trees exists.

Plant	1. Maximize shade in the public right-of-way
	2. Provide green areas for recreation in parks and around schools
	3. Create canopied commercial corridors
	4. Create immersive green neighborhoods for all residents
	5. Ensure industrial areas maintain beneficial canopies
	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

MAXIMIZE SHADE IN THE PUBLIC RIGHT-OF-WAY

Target: 35% canopy cover along the public-right-of way
Lead Agency: Public Works

Plant all existing vacant planting sites	Reference the Vacant Site Map for location of vacant planting sites as of the 2023 tree inventory to identify planting opportunities.
	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 Tree Planting Priority Map and Tree Planting Guide Map.
Replace low-benefit trees with full canopied trees	Identify trees that are under-serving the urban forest including: 1. Palm trees 2. Small canopied trees planted in large planting spaces with small DBH or in less than "Good" condition
	Prioritize replacements in neighborhoods with low existing tree canopy and few available vacant planting sites.
	Replace low-benefit trees with trees from Street Tree Palette according to the size of the planting site.
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 while maintaining 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 *this may involve collaboration with LA Metro*	Install tree wells and plant trees with large canopies near bus stops.
	Prioritize filling vacant sites, replacing low-benefit trees, and creating additional planting spaces along streets with bikeways in line with the Safe and Active Streets Plan as projects are developed.
Promote the survival of planted trees	Include three years of watering after planting by the City, sub-contractor, or community-based organizations in contracts and cost calculations. Install irrigation when possible for street trees planted in commercial and industrial zone.
	Engage with residents and business owners when new street trees are planted outside a residence or business to inform them what to expect from a healthy street tree and how to contact the City if the tree is experiencing any issues.

PROVIDE GREEN AREAS FOR OUTDOOR RECREATION IN PARKS AND AROUND SCHOOLS

Target: 40% Tree canopy in parks and 30% around schools
Lead Agency: Public works, Los Angeles Unified School District

Promote cool routes to school	Plant trees at a frequency of one tree for every 30 ft 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. Cesar Chavez Learning Academy 2. Vista del Valle Dual Language See Tree Planting Priority Map
Develop parks as immersive green spaces	Increase tree canopy in parks with lowest existing canopy: 1. Pioneer Park 2. Las Palmas Park 3. Recreation Park
	Plant large sized trees in parks given relatively fewer infrastructure constraints.
Work with Los Angeles Unified School Districts to develop green schoolyards	Encourage LAUSD 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 LAUSD to depave existing asphalt play areas and replace them with shaded green play areas through permitting and grant funding support.

ENSURE INDUSTRIAL AREAS MAINTAIN BENEFICIAL CANOPIES

Target: 12% canopy cover on industrial parcels
Lead Agency: Planning

Require tree planting in the zoning code for new development and major renovations in Limited Industrial and Light Industrial areas	Modify existing landscaping and tree planting requirements to require one tree for every 2,500 sq ft of lot area. Consider mechanisms for requiring trees to be planted in the same neighborhood when the minimum cannot be met on the parcel being renovated. Require one tree for every 30 linear ft of property frontage. Can be counted towards total required trees. 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.
	Trees used to meet zoning requirements must have a mature canopy size of at least 20 ft and be drought tolerant. 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 and require trees that have not survived establishment be replaced.
Encourage trees on existing industrial development	Work with The San Fernando City 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 Street Tree Palette.
Plant along the public right-of-way in industrial zones	Install tree wells and irrigation in the sidewalks where feasible in industrial zones.
	Prioritize streets where industrial zones are adjacent to residential zones.

CREATE CANOPIED COMMERCIAL CORRIDORS

Target: 15% canopy cover along commercial corridors
Lead Agency: Planning

Require tree planting in the zoning code for new development and major renovations in Limited Commercial, Commercial, and Service Commercial and Corridor Specific zones.	Modify existing landscaping and tree planting requirements to require one tree for every 2,000 sq ft of total area in commercial lots. Consider mechanisms for requiring trees to be planted in the same neighborhood when the minimum cannot be met on the parcel being renovated. Require one tree for every 30 linear ft of property frontage. Can be counted towards total tree requirement. Require one tree for every four parking spaces, not including required setback trees. Can be counted towards total tree requirement.
	Require trees to be at least 15 gallon size at time of planting. Larger gallon or box sizes should be considered if there is a high likelihood of damage during the establishment phase.
	Require trees used to meet zoning requirements to have a mature canopy size of at least 20 ft diameter and be drought tolerant. 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 San Fernando City Chamber of Commerce and San Fernando Mall Association 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 while maintaining a 5ft pedestrian pathway, at a density of one for every 50 linear ft of block length along commercial corridors if there is no existing parkway. Install irrigation where possible.

CREATE IMMERSIVE GREEN NEIGHBORHOODS FOR ALL RESIDENTS

Target: 35% average canopy cover on residential parcels
Lead Agencies: Planning, Public Works

Establish and enforce tree zoning requirements for new development and major renovations (defined as projects that require a Site Plan Review)	Require one tree for every 900 square ft of lot area for all residential zoning districts.
	Two trees may be substituted for one tree that reaches at least 30 ft in canopy diameter at maturity.
	Offer density bonuses for developments that substantially exceed minimum tree requirements.
	Require trees used to meet zoning requirements have a mature canopy size of at least 20 ft or provide edible fruit.
	Palm trees do not fulfill requirements.
	Require trees to be at least 15 gallon size at time of planting. Larger gallon or box sizes should be considered if there is a high likelihood of damage during the establishment phase.
	Tree planting requirements are not affected by drought declarations.
	The property owner shall sign a covenant to maintain the tree and replace it in 3 years if it dies. 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. Outdoor Market
	Promote tree giveaways through town channels and local organizations to reach residents.

PURSUE OPPORTUNITIES TO EXPAND THE URBAN FOREST

Target: 10% increase in the number of publicly managed planting sites by 2050
Lead Agencies: Public Works, Planning, City Council

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 4 ft wide to accommodate large trees.

Target: No public tree needs to be removed before the end of its lifespan *Lead Agency: Public Works*	
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 be removed in cases of declining health which will result in death within a year. Public street trees may be removed in cases of disease which cannot be treated successfully and/or strong potential that the pathogen could spread to other trees in the immediate vicinity. Public street trees may be removed in cases in which a tree has been determined through a Risk Assessment Report to be a high hazard because of its high potential for failure due to considerable dead or dying foliage, branches, roots, or trunk. Public street trees may be removed in cases in which a tree requires extensive root pruning because of excessive hardscape damage resulting in the severe reduction of its capacity to support itself, thereby creating a potential safety hazard. Public street trees may be removed in cases in which a tree is not a good candidate for relocation and has already gone through the established public process. A tree planted by a private party in the public right-of-way after City Council approval of the Master Plan may be subject to removal of the tree by the City. Public street trees may not be removed in cases of unsubstantiated requests, litter, or personal preference. Public street trees should be maintained whenever possible when replacing/repairing sidewalks in the public right-of-way. Requests for street tree removals will be reviewed on a case-by-base basis by Public Works.

Target: No public tree needs to be removed before the end of its lifespan *Lead Agency: Public Works*	
Adopt City policy around public tree removal criteria and replacement (cont.)	Replace each removed street tree with two new tree plantings and at least one tree planting must be on the same block as the removed tree. New trees should be planted according to guidance outlined in this plan.
Notify the Public in advance of necessary tree removals and replacements	Public Works regularly assess the health and safety of public trees to determine if trees pose a hazard and, therefore, require removal. A list of trees slated for removal is posted online at least 14 working days in advance of the scheduled removal on the City website. The tree will also have a notification posted 14 working days in advance of the scheduled removal. Concerned parties who believe a tree on the list should not be removed, may file an appeal with the City within the 14 working day period.
Hire sufficient City staff dedicated to tree care to supplement sub-contractor services	According to the best management practices, city tree staff respond to requests for off-cycle tree inspections, remove reported dead trees, plant replacement trees, and water street trees in industrial and commercial zones during prolonged dry conditions.
	Train tree 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	The City or any contracting partner shall prioritize sending wood waste to vendors who reclaim, salvage, or upcycle wood waste into high quality, durable goods.
	The City or any contracting partner shall prioritize sending wood waste to vendors who reclaim, salvage, or upcycle wood waste into high quality, durable goods.

CONSERVE THE EXISTING PRIVATE URBAN FOREST

Target: Residential development results in a net increase of tree canopy
Lead Agency: Planning

Adopt city policy on the removal and replacement of trees on private property during development	Planning Review shall be required for the removal or replacement of a mature tree from a protected trees list (the list to be developed.)
	Healthy trees removed during private development must be replaced by planting two replacement 15 gallon trees with a mature tree canopy of at least 20 ft and low water requirements. Larger gallon or box sizes should be considered if there is a high likelihood of damage during the establishment phase.
Expand the Heritage Tree Protection Policy (SFMC Chapter 98, Article II, Sec. 98–28) to apply to private trees	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. Infeasibility would include site constraints or hardships such as an underground utility line or a limited amount of space on the site such that planting replacement trees is impractical. Planning department approval will be required to designate a site as infeasible for replacement planting. 'In-lieu' payments may be placed into a public tree fund or the general fund and earmarked for the acquisition, installation, and maintenance of trees in the public right-of-way.
Preserve trees during construction	Removal of healthy heritage trees requires approval of the Planning Division and subject to the replacement policy. Removal is only considered upon submission of a certified arborist report.
	Encourage proactive program of designating heritage trees based on age, historical significance, size, location, or other similar significance.
	Create a database of heritage trees for monitoring tree status. See Appendix for example trees in San Fernando eligible for Heritage Tree status.
	Construction projects that will impact more than 1,200 sq ft of land must submit a Tree Protection Plan outlining what measures will be taken to protect existing trees during construction including: • The location, species, DBH, and condition of trees • The Tree Protection Zone for all trees to be preserved • Tree fencing (to be installed under dripline) • Erosion control • Tree pruning • Soil compaction mitigation • Irrigation • Tree maintenance schedule A Tree Root Plan will be required in the case of grading or excavation. Tree plans should be approved and overseen by a certified arborist.

CONSERVE THE EXISTING PRIVATE URBAN FOREST (CONT.)

Target: Residential development results in a net increase of tree canopy
Lead Agency: Planning

Support residents in caring for mature trees	Any tree that dies as a result of construction must be replaced with two 15 gallon size trees with a mature tree canopy of at least 20 ft and low water requirement. Larger gallon or box sizes should be considered if there is a high likelihood of damage during the establishment phase.
	Provide educational materials on the benefits of mature trees as well as tree care resources, such as professional arborist contact information.

PARTNER WITH AGENCIES OUTSIDE THE CITY TO COORDINATE TREE PLANTING

Target: City partners support and contribute to achieving tree canopy goals
Lead Agencies: Public Works, City Council

Coordinate tree planting protocols on easements through the City	Work with LADWP to establish joint-use agreements to leverage utility easements as public space.
	Work with LADWP to plant compatible tree canopy below transmission wires on utility easements in line with the standards and guidelines of this plan. See Street Tree Palette.
	Work with Union Pacific to plant trees along the railroad easement in line with the standards and guidelines of this plan.
Work with State agencies to coordinate tree planting on State managed land	Work with the California Department of Housing and Community Development to encourage tree planting in future 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 San Fernando to include tree planting	Tree judged to have died from improper maintenance performed by third parties must be replaced by that party.
	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 East San Fernando Valley Light Rail Transit Project.

ENGAGE THE COMMUNITY WITH THE URBAN FOREST

Target: Engage with at least 100 residents annually
Lead Agencies: Public Works

Make information about the urban forest publicly available	Create a page on the City website dedicated to trees and include the following information: • Urban Forestry Management Plan • Street Tree Palette • Tree care guidelines • Tree zoning requirements • Upcoming urban forest 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 and local businesses about tree care practices, street tree watering needs, and available tree resources at public events such as the Outdoor Market.
Partner with Community-Based Organizations	Work with community based organizations to coordinate volunteer opportunities for tree planting, tree care, and community events.

Implementation

- 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 Tree Planting Priority Map and the Tree Planting Guide identify the size of planting space along streets with public trees in San Fernando, vacant sites, and where utility lines exist. These factors play a major role in determining which trees are suitable for given planting sites. The Street Tree Pallette 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 three resources together can be used once planting sites have been identified to make decisions about how they should be filled.

Image: Calles Verde tree planting in San Fernando Source: Adam Corey Thomas)

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. Then, 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 nearly 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, specialized staff, 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 250 trees per year Adjust zoning code to require tree planting on new developments Create new places to grow trees	Review and update policy outline criteria for public tree removals Adopt policy outline criteria for private tree removals **Provide adequate care to maintain trees in good condition.** Maintain trees according to Best Management Practices*	Establish web page to host urban forest information Regular outreach at community events Give away 200 trees to residents per year Water trees during extended periods of dryness.
Expansion	2033–2052	Plant 250 trees per year Create new places to plant trees	Increase maintenance budget to accommodate care and watering for more trees Establish membership with LARIAC to remotely monitor compliance with tree policies	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 per year or as many as required to replace removed trees and keep vacant sites filled	Remove, replace and maintain trees as needed	Focused engagements as part of plan review Regular outreach at community events

*See p. 99 for Best Management Practices.

During the first decade of the plan, it will be critical to build the foundations and policy landscape upon which the urban forest can be expanded and maintained. Zoning and policy changes can take time to adopt but will ensure trees are planted and maintained across different land uses in the city, and so should be initiated early in the establishment phase. During the early stages of adopting new policies, the city may want to maintain momentum towards planting goals by focusing on methods the city is already implementing, such as planting in vacant sites, to allow capacity for adopting policy.

The City may consider prioritizing planting street trees in residential neighborhoods while budgets and staff capacity are expanded to water trees in commercial and industrial zones. In the early years of the plan, the city should also establish internal protocols for tracking planting progress so that the budget can be increased accordingly with maintenance staff workloads.

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 San Fernando 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 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.
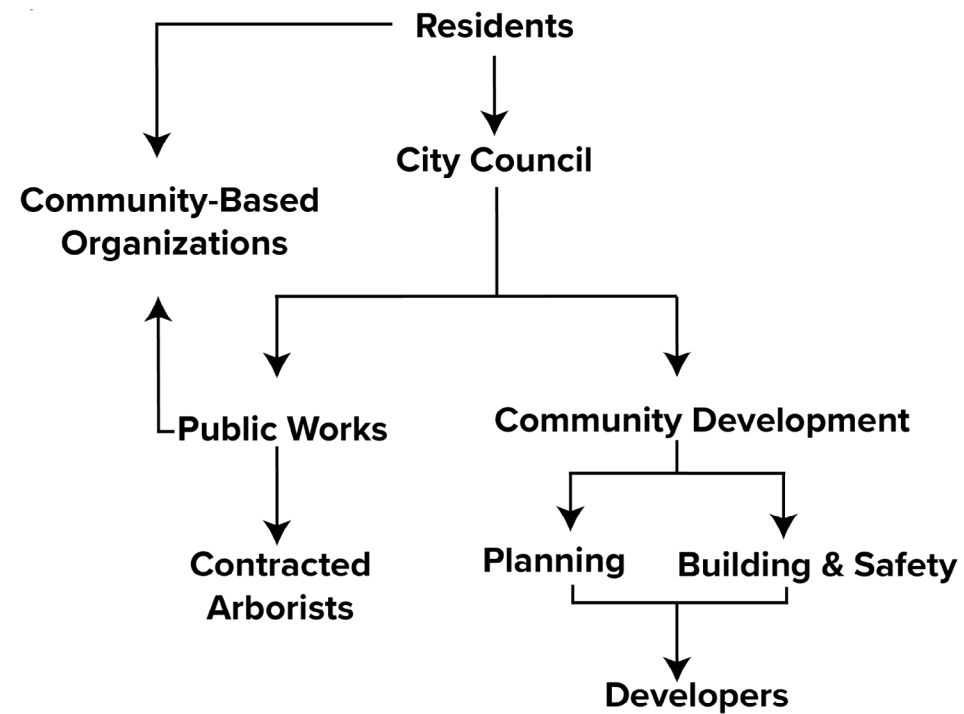
Relationships between partners of the urban forest in San Fernando

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 plans Update tree zoning requirements as needed over time
Building and 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	Plant and 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 and the number of staff or contractors hired will increase as the size of the forest as a whole increases because more trees will need to be maintained. The city may also consider hiring a staff arborist to to oversee the stewardship of the urban forest as a city infrastructure need and a community resource. An arborist would provide expertise on tree protection plans, city progress towards UFMP goals, and tree removal requests.

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) Contracted Maintenance City Staff Time Supplies & Equipment	$112* $77 $31 $4	6,019 trees	$674,128	*General Fund*
Tree Planting (per tree) Tree Planting (tree+supplies+labor) Establishment Minor Site Modification (half of sites)	$1280 $400 $380 $500	250 trees	$320,000	*General Fund, Grants*
Community Engagement (per year)	$10,000		$10,000	*General Fund, Grants*
Total		$1,004,128		

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

Grants

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

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 is a living document that will need to be periodically updated to remain relevant to San Fernando's circumstances and priorities. The plan is required to be reviewed and revised every 10 years.

However, as activities are unlikely to be uniform across years, progress should be reviewed every 5 years to adjust work plans accordingly. The plan can be reviewed and referenced to adjust work plans more frequently if deemed necessary.

Benchmarking the progress of the urban forest should include a comprehensive inventory of public trees and a canopy assessment based on the most recent available LiDAR data. The 10 year 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.

Implement Plan

Update Inventory

Benchmark Metrics

Engage Community

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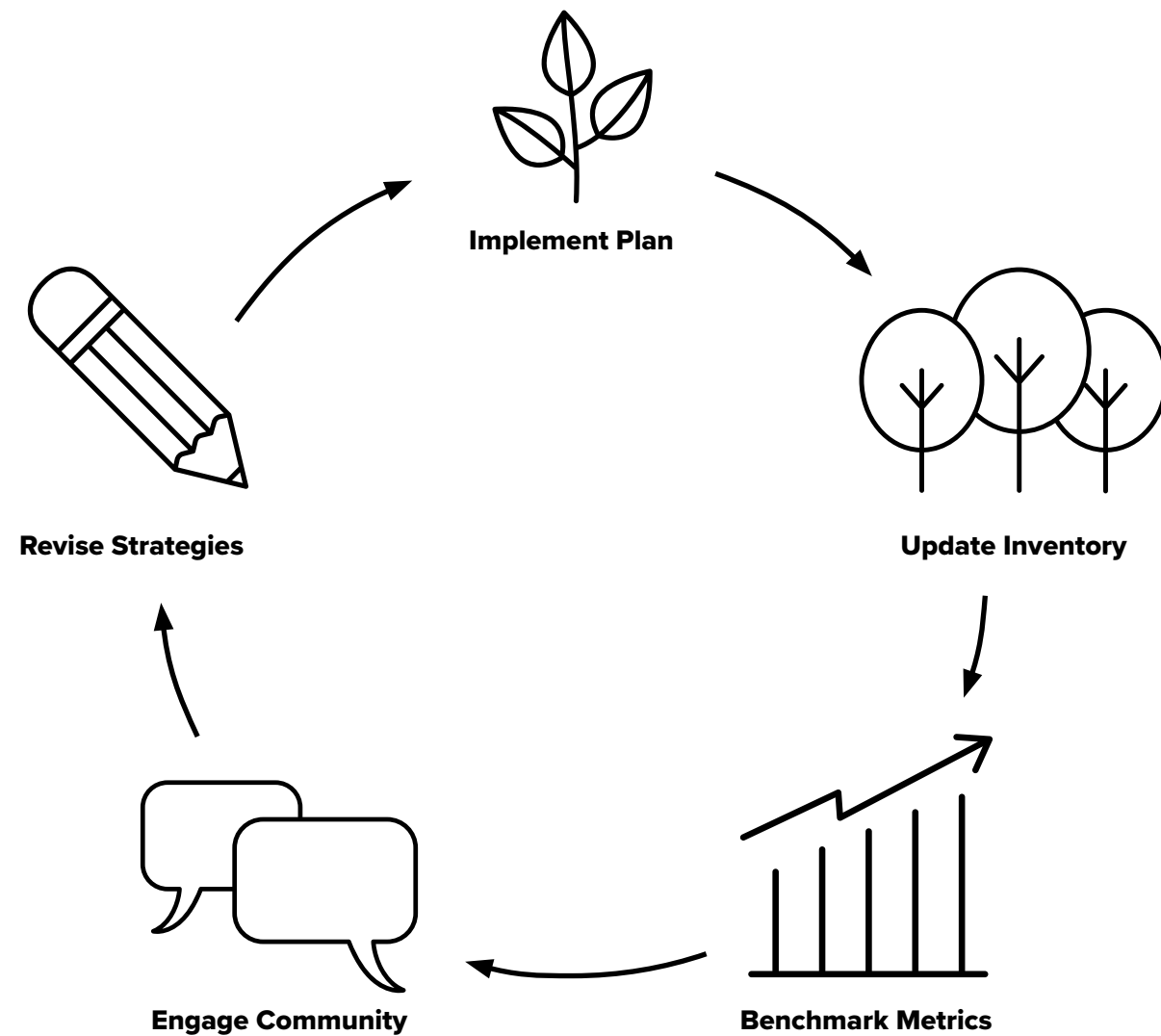
The plan should be reviewed and revised with the steps outlined in the diagram every *10 years*

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 over time for the town 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.

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	19%	30%	Canopy Assessment
Tree Canopy by Land Use	Schools Parks Right-of-Way Residential Industrial Commercial	30% 40% 35% 35% 12% 15%	Canopy Assessment
Species Diversity	Most common species 10.1%	Most common species <10%	Tree Inventory
Tree Size		40% young trees	Tree Inventory
Tree Health	90% Good or Fair condition	=>90% Good or Fair condition	Tree Inventory
Community Priorities	-	-	Community Survey

Best Management Practices

Maintenance and planting of public trees should adhere to the following practices. It is highly encouraged that private landowners also care for trees on their property according to these practices, and zoning rules should be crafted in consideration of these 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 15 gallons at time of planting. If there is high potential for damage to the tree during the establishment phase and the space can accommodate a 4–6 ft planting hole, a 24 in box size tree should be considered to support early survivability. 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, 0.5–1 in size) should be applied to an area two times the diameter of the root ball with 2–4 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.

MAINTENANCE AND WATERING

In the first 3–5 years young trees need light watering in the absence of adequate rainfall. When planting new trees, the city should budget and plan for three years of watering to be completed by the City, sub-contractor, or community-based organizations. The city should also plan and budget to water street trees planted in industrial and commercial areas once per month during prolonged dry periods. Installing irrigation systems for trees in commercial and industrial areas is recommended when feasible.

INSPECTIONS

Inspections should be performed every three years as part of the regular grid-pruning cycle. The City may consider designating species known to cause more frequent damage or nuisances to an alternate shorter grid pruning cycle if needed. These regular inspections should 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 can not be identified visually through specialized tests and is typically reserved only for high-value trees.

PRUNING

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, when they are dormant. There are seven accepted methods of pruning trees, listed here. Each method is described in depth in the ANSI 3000 (Part 1) Pruning and ISA Best Management Practices Pruning standards (see Resources chapter for more information).

Pruning should be carried out as needed, regardless of the time that has lapsed between the last pruning event. Deciduous trees should be pruned when they are dormant. No specimens, with the exception of native oaks and certain fruit trees, should be pruned in the summertime. If pruning must occur during the summer for whatever reason, only specimens scheduled for crown raises, rather than crown thins/cleans, should be scheduled.

In all cases, no more than 25% of the living volume (this excludes dead, broken, or blighted tissues) shall be removed during a single pruning event. Discretion should be exercised on the necessity of a pruning event on the ground. When pruning is deemed necessary, remove only enough volume to achieve the specified objective (i.e. pedestrian/vehicle clearance, training prune, utility clearance, hazard mitigation).

Grid Trim Cycle: Pruning should be conducted routinely as part of the three-year grid trimming cycle, as well as between prunings as deemed necessary by inspection to mitigate tree risk or improve tree structure. A three-year cycle is within industry standards and is considered sufficient for protecting the health of trees while also maintaining tree condition to avoid nuisances and damage to resident property.

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 the 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 in soil depth 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.

SAN FERNANDO GRID CYCLE MAP
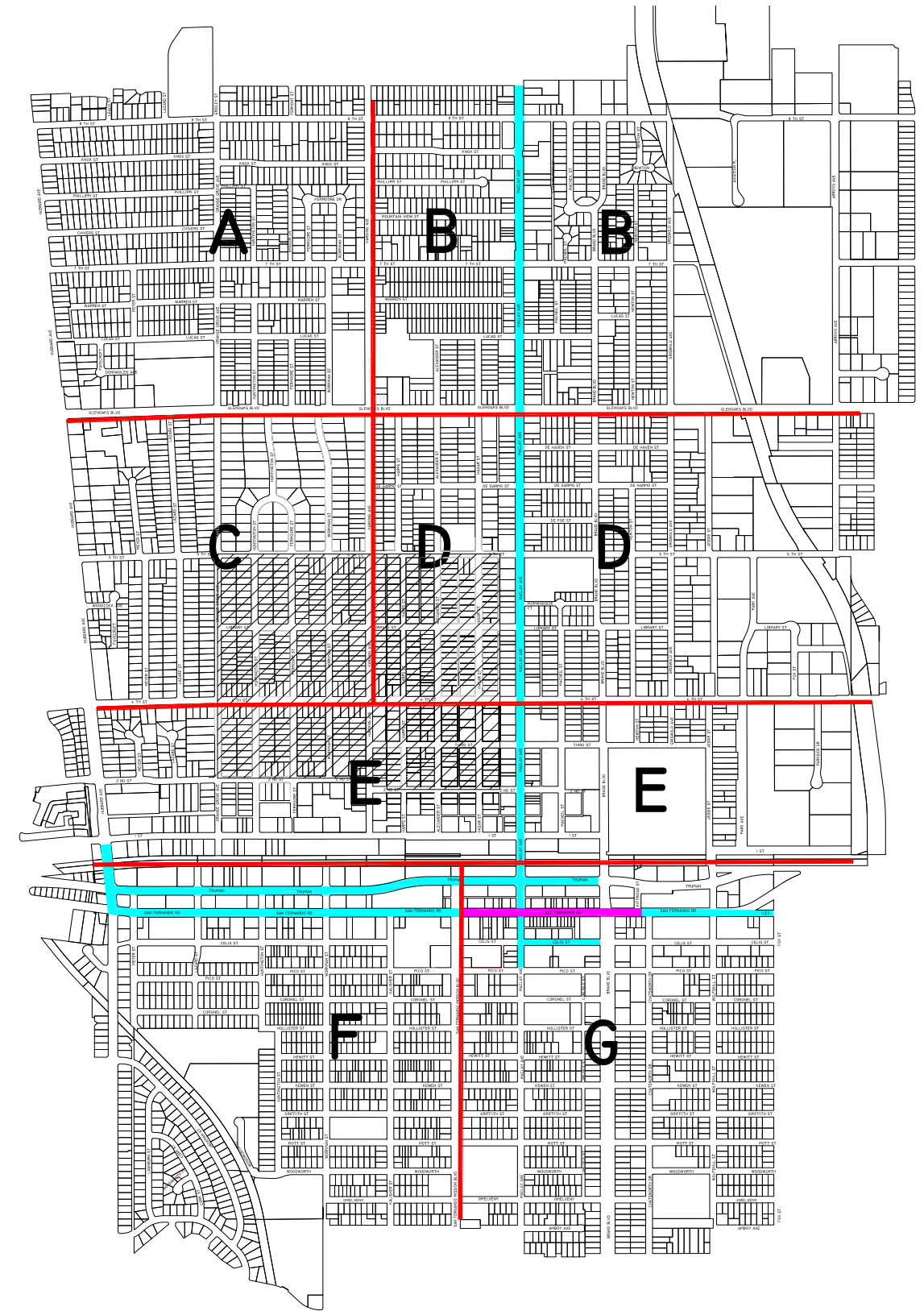
The Tree Care Industry Association and the International Society of Arboriculture publish industry standard tree care resources

Street Tree Planting Implementation Tools

TREE PLANTINGPRIORITY MAP

The Public Right-of-Way Tree Planting Priority Map depicts which blocks are the highest priority to plant street trees based on four equally weighted criteria: less than 10% canopy cover in the right-of way, within 0.15 miles of a school, located in a high priority residential neighborhood with low canopy, and large average planting sizes to accommodate larger canopied trees. The map also shows vacant sites. It can be used to plan where planting initiatives should take place first.

TREE PLANTING GUIDE MAP

The Tree Planting Guide Map illustrates the size of planting sites along the public right-of-way in San Fernando. 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 San Fernando. Species are recommended based on suitability to San Fernando 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 Tree Planting Guide Map. Trees should be chosen corresponding to the plantable space of the site. Trees that require a larger plantable area than the site offers may damage infrastructure, including sidewalks, while trees that require a smaller plantable size for the site will not provide the most benefit the site can offer. The root damage potential column should also be considered when selecting trees that will be surrounded by pavement. For planting sizes where there are no native species or trees approved for 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 the City'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.

The City may consider adapting the information included in the palette to create shareable policy aides and tools.

Public Right-of-Way

Tree Planting Priority

Legend

- High Priority
- Priority
- Low Priority
- ● Vacant Sites
- Schools
- City Boundary
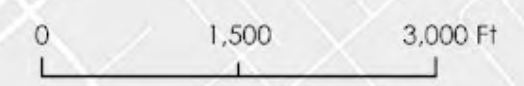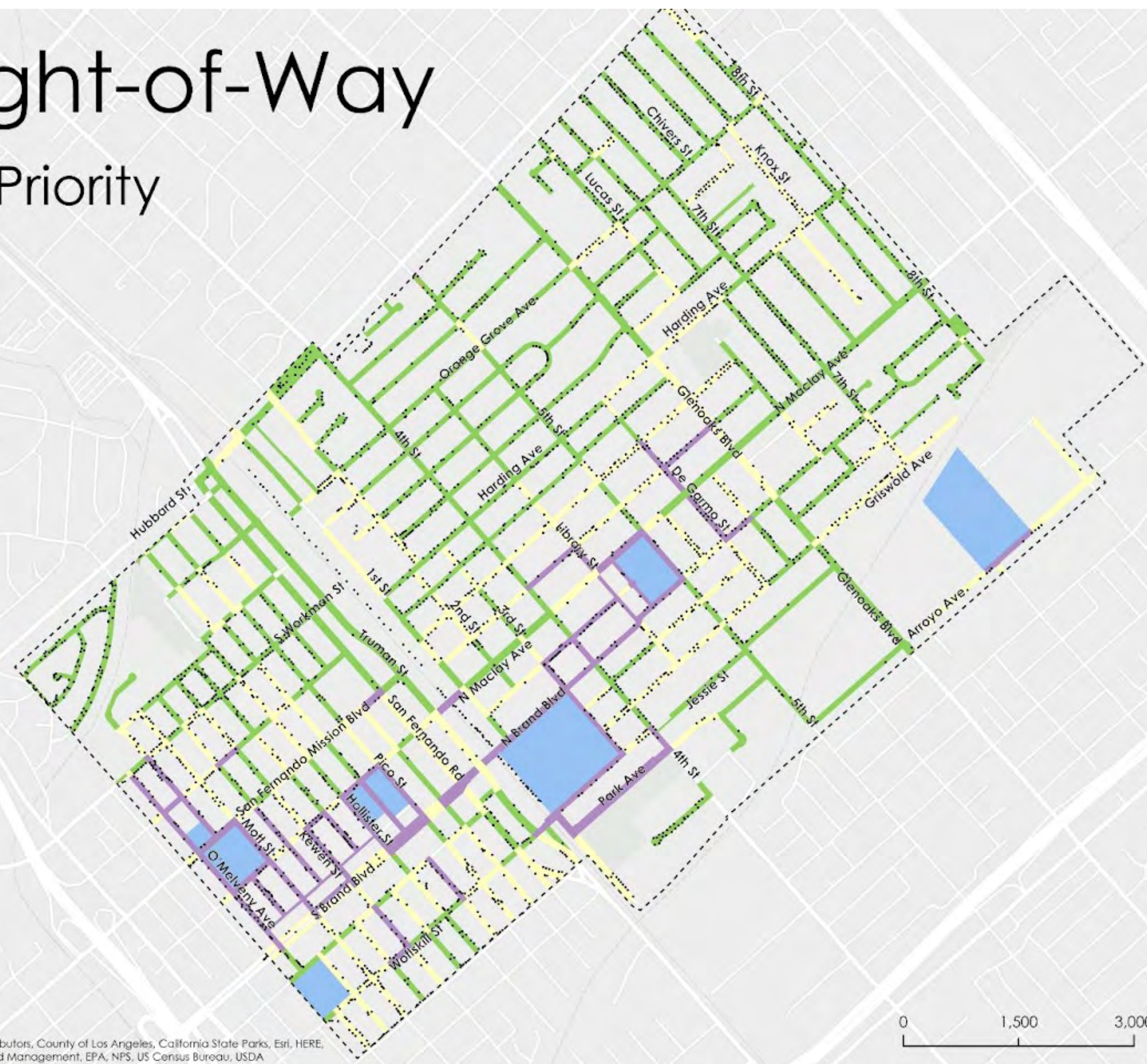
City of San Fernando, TreePeople, NASA, SCAG, Esri Community Maps Contributors, County of Los Angeles, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc. METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

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Tree Planting Guide

San Fernando
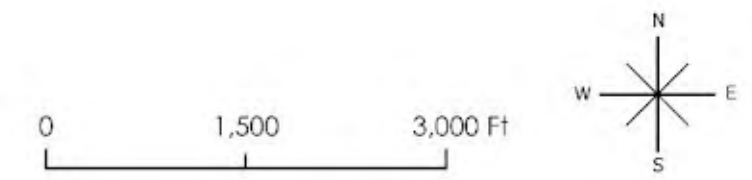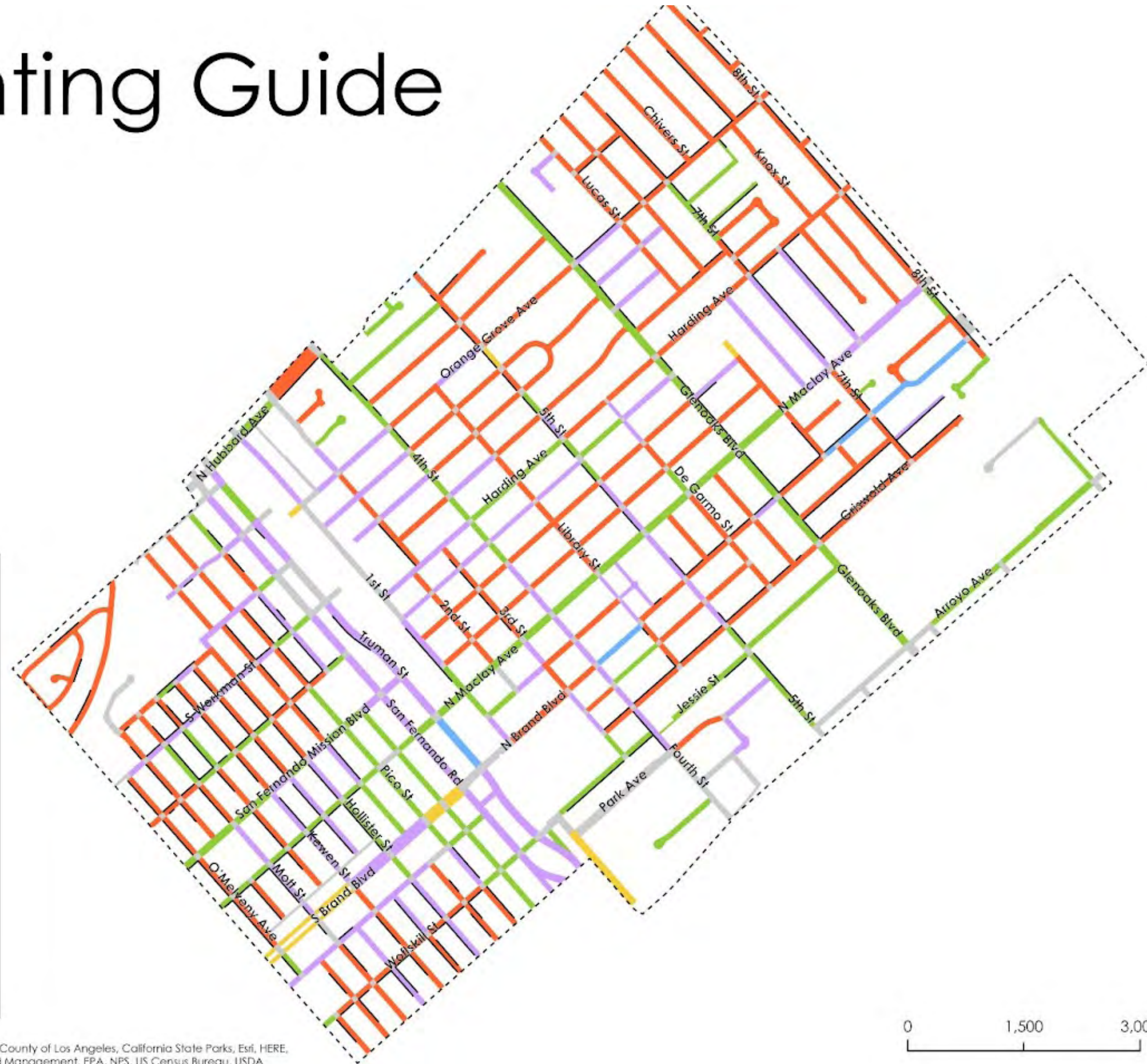
Legend

- ≤ 3' Planting Size
- 4' Planting Size
- 5' Planting Size
- 6' - 8' Planting Size
- > 8' Planting Size
- No Data
- Overhead Utilities
- City Boundary

City of San Fernando, TreePeople, SCAG, Esri Community Maps Contributors, 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

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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 planting 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.

Planting space is greater than 5 feet

Yes → Under Utility Wire

No → **Do not replace**
Replacement efforts should focus on planting spaces where it is possible to plant a large tree.

Under Utility Wire

Yes → **Do not replace**
Utility wires limit the size of trees and so will not accomodate large trees

No → Palm Tree

Palm Tree

Yes → **Replace**
Palm trees have small canopies and provide minimal community benefits.

No → Mature canopy is expected to be less than 30 feet

Mature canopy is expected to be less than 30 feet

Yes → DBH is less than 12 inches

No → **Do not replace**
Large canpied trees do not need to be replaced.

DBH is less than 12 inches

Yes → **Replace**
Trees with small trunks are the most cost effective to replace.

No → In "Good" Condition

In "Good" Condition

Yes → **Do not replace**
Healthy trees provide community benefits and should be retained.

No → **Replace**
Less than healthy trees provide less community benefits and require greater maintenance.

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	**E** - Evergreen. The tree has leaves year-round. **D** - Deciduous. All leaves lost in one season. **S** - Semi-deciduous. Most, but not all leaves lost.
Spacing	Distance from tree to tree, measured from center of trunk to the next trunk center.
Sunset Climate Zone	From the Sunset Western Garden Book. Zone 24 is the immediate coast, zones 21-23 are the L.A. Basin, zones 18-20 are the Valley.
Sun	S = full sun; P = part sun/part shade; Sh = shade
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**	**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. **L** - Low. One deep watering per summer month, or every other month in dry season if needed. **M** - Moderate. Two deep waterings per summer month. Perhaps one deep watering in spring and fall. **H** - High. One deep watering per week in summer months. One deep watering every other dry season month. **VH** - Very High. The soil needs to be kept moist. These trees naturally occur in riparian zones - stream or lake side.
Soil	C = Clay; L = Loam; S = Sand; WD = Well drained
Root Damage Potential:	These ratings obtained from the Cal Poly Web site: http://selectree.calpoly.edu. L = Low; M = Moderate; H = High
Allergy Potential	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. 1 = lowest rating, least allergenic pollen. If separate male and female trees, these will be the female trees. 10 = highest rating. These trees are usually wind-pollinated or have very fine pollen grains. If separate male and female trees, these will be the males. f = female; m = male; b = bisexual, having both male and female flowers
Growth Rate	S = Slow - up to 12 in/year; M = Moderate - 24 in/year; F = Fast - 36 in/year; VF = Very fast - more than 36 inyear

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Height x Width (feet)	Spacing (feet)	Sunset Climate Zone	Sun	Water- LA Basin	Water - Valley/ Inland	Soil	Root Damage Potential	Allergy Potential (Low 1 - High 10)	Growth Rate	Existing Percentage in Urban Forest	Notes	Vacant Planting Sites
Cercis canadensis	Eastern redbud	3	x		D	25–35 x 25–35	25–30	18–20	S–P	M	M	C,L,S	L	5	F	0.1%	Pink flowers. Yellow fall color. 'Forest Pansy' has red-purple leaves.	
Cercis occidentalis	Western redbud	3	x	x	D	15–25 x 10–25	25–30	18–24	S–P	L	L	C,L,S	L	5	M–F	0.1%	Often multi-trunk. Magenta flowers, seed pods. Yellow fall color. Rounded leaves.	
Eriobotrya deflexa	Bronze loquat	3	x		E	25-30 x 25-30	25–30	18–24	S–P	M	M	C,L,S	L	3	F	0.3%	White fragrant flowers Dec–March. ⅝ in non-edible fruit. Best with moist soil.	
Lagerstroemia indica and cultivars	Crape myrtle	3	x		D	25 x 25	25–30	18–21	S	M	M	C,L,S	L	5	M	6.9%	Orange fall color. Indian cultivars resist mildew, zones 22–24. Many flower colors.	
Rhapiolepis x 'Montic,' or 'Magnificent'	Majestic Beauty Indian hawthorne	3	x		E	15–25 x 8–10	15–20	18–24	S–P	M	M	WD C,L,S	L	4	M	0.2%	A large shrub with pink flowers. Issues of fire blight, aphids and root rot.	533
Chionanthus retusus	Chinese fringe tree	3			D	20 x 20	25–30	18–24	S	M	M	C,L	L	1 f 10 m	M	0.1%	White, fringe flowers June–July. Males, larger flowers. Yellow fall color.	
Melaleuca citrina (Callistemon citrinus)	Lemon bottle brush	3			E	25 x 20	25	18–24	S–P	L	L	C,L,S	L	9	F	0.8%	Red flowers attract hummingbirds. Lemon-scented leaves.	
Photinia x fraseri	Photinia, Fraser's photinia	3			E	10–15 x 12–20	25–30	18–24	S	M	M	C,L,S	L	4	M–F	0%	White spring flowers. Red new leaves. No berries. Susceptible to aphids.	
Tristaniopsis (Tristania) laurina	Swamp myrtle, water gum	3			E	20–35 x 15–30	20–25	19–24	S–P	M	M	C,L,S	L	5	S	0.4%	Slow grower. Yellow flowers. Narrow leaves. Shaggy bark. Prefers moist soil.	

Crape Myrtle

Bronze Loquat

Western Redbud

Lemon Bottlebrush

Fraser's Photinia

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Height x Width (feet)	Spacing (feet)	Sunset Climate Zone	Sun	Water-LA Basin	Water - Valley/ Inland	Soil	Root Damage Potential	Allergy Potential (Low 1 - High 10)	Growth Rate	Existing Percentage in Urban Forest	Notes	Vacant Planting Sites
Bauhinia x blakeana	Hong Kong orchid tree	4			S	20–40 x 20–25	20	19,21 23,24	S–P	M	M	WD L,S	L	4	S–M	0%	Fragrant 5–6 in pink flowers in bloom fall to spring! No fruit. Butterfly-shaped leaves.	
Bauhinia variegata 'Candida'	White orchid tree	4			S	20–25 x 15–20	25–30	18–24	S–P	M	M	L,S	L	4	S–M	0%	Semi-deciduous mid-winter. White, lightly fragrant flowers Jan-April.	
Cupaniopsis anacardioides	Carrotwood	4			S	25x25	25 – 30	16–24	S–P	M	M	C,L,S	M	4	M	0.1%	Tolerates hot and dry winds. White winter flowers.	
x Chitalpa tashkentensis	Chitalpa	4			D	20–35 x 20–30	25–30	18–24	S–P	L	L	L,S	L	6	F	0.1%	Large pink trumpet flowers. Stake for a few years. Aphids on new growth.	
Koelreuteria paniculata	Goldenrain	4			D	25 x 15–25	25–30	2–24	S–P	M	M	C,L,S	L	6	M	0%	Showy yellow summer flowers.	117
Lyonothamnus floribundus ssp. asplenifolius	Santa Cruz island ironwood, Catalina	4	x		E	30–60 x 20–40	30–35	19–24	S–P	L	L	WD L,S	M	4	M	0%	Red, peeling bark. White flowers. Needs excellent drainage. Great near the coast.	
Melaleuca saligna (Callistemon salignus)	White bottle brush	4			E	25 x 15	25–30	18–24	S–P	L	?	C,L,S	L	9	F	0%	Peeling bark. Cream flowers attract hummingbirds. Dense canopy.	
Parkinsonia 'Desert Museum'	Desert Museum palo verde	4	x		D	30 x 30	25–30	18–24	S	VL	L	WD L,S	L	6	F	0%	Yellow flowers attract bees. Light, airy canopy cover and smooth green bark.	
Podocarpus henkelii	Long leaf yellow wood	4			E	25–50 x 15–20	25	18–24	S–P	M	M	WD C,L,S	L	1 f 9 m	S–F	0%	Long, drooping linear leaves. Separate male and female trees. Red flaky bark.	
Podocarpus macrophyllus	Yew pine	4			E	20–50 x 15–40	25–30	18–24	P	M	M	C,L,S	L	1 f 9 m	M	0.1%	Like Afrocapus falcatus, but wider, longer leaves held upright. Red edible fruits.	
Prunus ilicifolia ssp. lyonii	Catalina cherry	4		x	E	25–35 x 20–30	30–35	18–24	S–P	VL	VL	C,L,S	L	6	M	0%	White spring flowers. Edible fruit can be a litter issue.	

Long Leafed Yellow-wood

Hong Kong Orchid Tree

Yew Pine

Desert Museum Palos Verde

Catalina/Santa Cruz Island Ironwood

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Height x Width (feet)	Spacing (feet)	Sunset Climate Zone	Sun	Water- LA Basin	Water - Valley/ Inland	Soil	Root Damage Potential	Allergy Potential (Low 1 - High 10)	Growth Rate	Existing Percentage in Urban Forest	Notes	Vacant Planting Sites
Arbutus 'Marina'	Marina strawberry tree	5	x		E	25–40 x 25–40	35–40	18–24	S–P	L	M	C,L,S	L	3	S–M	0%	Red peeling bark. Red 1 in round, edible fruit. White-pink bell-shaped flowers.	
Bauhinia variegata (Bauhinia purpurea)	Purple orchid tree	5			S	20–35 x 15–20	25–30	18–24	S–P	M	M	WD L,S	L	4	S–M	0.3%	Semi-deciduous mid-winter. Lightly fragrant purple/pink flowers Jan–April.	
Celtis reticulata (C. laevigata var. reticulata)	Western hackberry, netleaf hackberry	5			D	25–35 x 25–30	25–30	18–24	S	L	VL	L,S	L	8	M	0%	Needs lots of water to establish. Birds love fruits. Best in climate zones 18–21.	
Fraxinus angustifolia (oxycarpa) 'Raywood'	Raywood ash	5			D	35–50 x 20–30	30–35	18–24	S–P	M	M	C,L,S	M	1	M	0%	Seedless and smog tolerant. Purple-red fall color. Small leaflets give a refined look.	
Geijera parviflora	Australian willow	5			E	40 x 25	30–35	18–24	S	L	M	WD C,L,S	L	6	M–F	4.3%	Low maintenance. Deep roots. Pest-free. Drooping, willow-like, thick leaves.	
Ginkgo biloba (Male only)	Ginkgo, maidenhair tree	5			D	35–80 x 20–60	30–35	18–24	S–P	M	M	C,L,S	M	7	S–M	0%	Smog tolerant. Summer water till 10–20' tall. Yellow fall color. Long-lived.	
Laurus nobilis	Sweet bay	5			E	40 x 30	25–30	18–24	S–P	L	L	C,L,S	M	2 f 9 m	S–M	0.1%	Culinary. Multi-trunk. Scale, psyllids. 'Saratoga' -25' single trunk, psyllid-resist.	1327
Lophostemon confertus (Tristania conferta)	Brisbane box	5			E	30–45 x 20–40	30–35	19–24	S–P	M	M	C,L,S	M	5	M–F	6.6%	Red, peeling bark. White flowers. Not for windy areas. Smog-tolerant.	
Macadamia integrifolia	Smoothshell macadamia	5			E	25-30 x 15-20	30–35	19–24	S	M	M	L,S	M	3	M	0%	White pendulous flowers. Edible nuts late fall to May. Best near the coast.	
Melaleuca linariifolia	Flaxleaf paperbark	5			E	30 x 30	30–35	18–23	S–P	L	L	C,L,S	L	7	F	0.1%	White flaky bark. Small white summer flowers. Small, narrow leaves.	
Melaleuca styphelioides	Prickly paperbark	5			E	20–45 x 20–35	25	18–24	S–P	L	M	C,L,S	L	9	F	0%	Spongy tan to brown peeling bark. White spring flowers. Stiff prickly tipped leaves.	
Melaleuca viminalis (Callistemon viminalis)	Weeping bottle brush	5			E	25 x 20	25–30	14–24	S–P	L	M	C,L,S	L	9	F	0.1%	Red flowers attract butterflies and hummingbirds. Pendulous branches.	
Pistacia chinensis	Chinese pistache	5			D	60 x 50	35–40	18–23	S	M	M	WD C,L,S	L	1 f 8 m	M	0.4%	Scarlet & orange fall color. Round 1–1 ½ in fruit is red, then blue.	
Searsia (Rhus) lancea	African sumac	5			E	30 x 30	30–35	18–24	S–P	L	L	C,L,S	L	7 f 10 m	M	0%	Rough cinnamon bark. Heat/wind-tolerant. Suckers in youth. No pests.	

Brisbane Box

Marina Strawberry Tree

New Zealand Christmas Tree

Raywood Ash

African Sumac

Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Height x Width (feet)	Spacing (feet)	Sunset Climate Zone	Sun	Water- LA Basin	Water - Valley/ Inland	Soil	Root Damage Potential	Allergy Potential (Low 1 - High 10)	Growth Rate	Existing Percentage in Urban Forest	Notes	Vacant Planting Sites
Chilopsis linearis	Desert willow	6	x	x	D	15–40 x 15–40	30–35	18–23	S	VL	L	WD L,S	L	5	M–F	0%	Long-blooming fragrant, pink trumpet flowers. Attracts hummingbirds.	
Jacaranda mimosifolia	Jacaranda	6	x		D to S	25–40 x 25–40	35–40	18–24	S	M	M	L,S	L	4	M	2.2%	Purple flowers April–Sept. Lots of leaf/flower litter. Poor bloom at coast.	
Pinus canariensis	Canary Island pine	7			E	65–80 x 30–40	35–40	18–24	S–P	L	M	L,S	M	4	F	10.0%	Smog tolerant. Tall narrow pine. 9–12 in weeping needles. 4–9 in cones.	
Afrocarpos falcatus (Podocarpus gracilior)	African fern pine, fern pine	8			E	60 x 45	30–35	18–24	S–P	M	M	C,L,S	L	1 f 9 m	S–M	4.4%	1–2 in narrow leaves, very little leaf litter. Pest/disease-free. Lawn watering ok.	
Calocedrus decurrens	Incense cedar	8		x	E	75–90 x 40	30–35	18–24	S–P	M	M	C,L,S	M	8	S-M	0.1%	Columnar conifer. Fragrant leaves. Tolerant of heat and poor soils.	
Pinus brutia var. eldarica	Eldarica pine, Afghan pine, Mondell pine	8			E	65 x 30	35–40	18–24	S–P	VL	L	C,L,S	M	4	F	0%	5–6 in dark green needles. For desert or coast. "Christmas tree" shape.	837
Pinus halepensis	Aleppo pine	8			E	30–65 x 45	35–40	18–24	S–P	L	L	C,L,S	M	4	M–F	0.7%	Light green, 2 ½–4 in soft needles. Poor soil and heat ok. Susceptible to mites.	
Pinus patula	Jelecote pine, Mexican weeping pine	8			E	40–80 x 30–50	35–40	18–24	S–P	M	M	L,S	M	4	F– VF	0%	Graceful, weeping 12 in needles. Can become chlorotic. Great at the coast.	
Olea europaea	Olive (fruitless only)	6–8			E	30 x 30	25–30	18–24	S	L	L	WD C,L,S	M	10	M	0.2%	Grey-green linear leaves. Round to vase-shaped canopy. Swan Hill = no pollen.	
Quillaja saponaria	Soabark tree	6–8			E	25–60 x 10–35	30–35	18–24	S–P	L	?	WD C,L,S	L	4	S	0%	White flowers, better with water. Bark is toxic if eaten. Weeping branches.	
Umbellularia californica	California bay laurel, California laurel	6–8		x	E	25–75 x 20–60	35–40	18–24	P– Sh	L	M	C,L,S	M	8	S–M	0.4%	Strong scented leaves ok for cooking. Moreshade/water needed inland.	

Canary Island Pine

Jacaranda

Soapbark Tree

California Bay Laurel

Desert Willow

Incense Cedar

| Scientific Name	Common Name	Parkway Size (feet)	SCE Approved Tree	California Native	Evergreen, Deciduous, Semi	Height x Width (feet)	Spacing (feet)	Sunset Climate Zone	Sun	Water- LA Basin	Water - Valley/ Inland	Soil	Root Damage Potential	Allergy Potential (Low 1 - High 10)	Growth Rate	Existing Percentage in Urban Forest	Notes	Vacant Planting Sites
Cedrus atlantica	Blue Atlas cedar	8+			E		35–40	18–23	S–P	M	M	C,L,S	M	2	S-M	0.2%	Conifer. Stiff branches; short ⅖–1 in stiff needles. 'Glauca' is a blue cultivar.	
Cedrus deodara	Deodar cedar	8+			E		35–40	18–24	S–P	L	M	C,L,S	M	1f, 3b 5m	F	0.1%	Conifer. Soft 1–2 in needles. Drooping leader, low sweeping branches.	
Cedrus libani	Cedar of Lebanon	8+			E		35–40	18–24	S–P	L	M	C,L,S	L	2	S	0%	Conifer. Irregular crown with long branches and short ¼–1 ¼ in needles.	
Cinnamomum camphora	Camphor	8+			E		35–40	18–24	S–P	M	M	WD C,L,S	H	8	M	3.1%	Camphor scented leaves. Massive tree. Susceptible to Fusarium dieback.	749
Pinus pinea	Italian stone pine	8+			E		35–40	18–24	S–P	L	L	L,S	M	4	M-F	0.2%	Massive, broad-canopied tree. Great at the coast/valleys. Edible pine nuts.	
Quercus agrifolia	Coast live oak	8+	x		E		35–40	18–24	S–P	VL	L	WD C,L,S	M–H	9	M	0.6%	No lawn watering. The most widely used oak for southern CA.	
Tipuana tipu	Tipu	8+			S		35–40	18–24	S–P	L	M	C,L,S	M	3	M-F	0.6%	Yellow-orange flowers June-July. Fast. Early pruning needed. Best with heat.	
Pinus torreyana	Torrey pine	10	x		E		35–40	18–24	S–P	L	M	C,L,S	M	4	F	0%	8–13 in dark gray-green needles. Open habit. OK coastal or high desert.	

Italian stone pine

Torrey Pine

Coastal live oak

Tipu
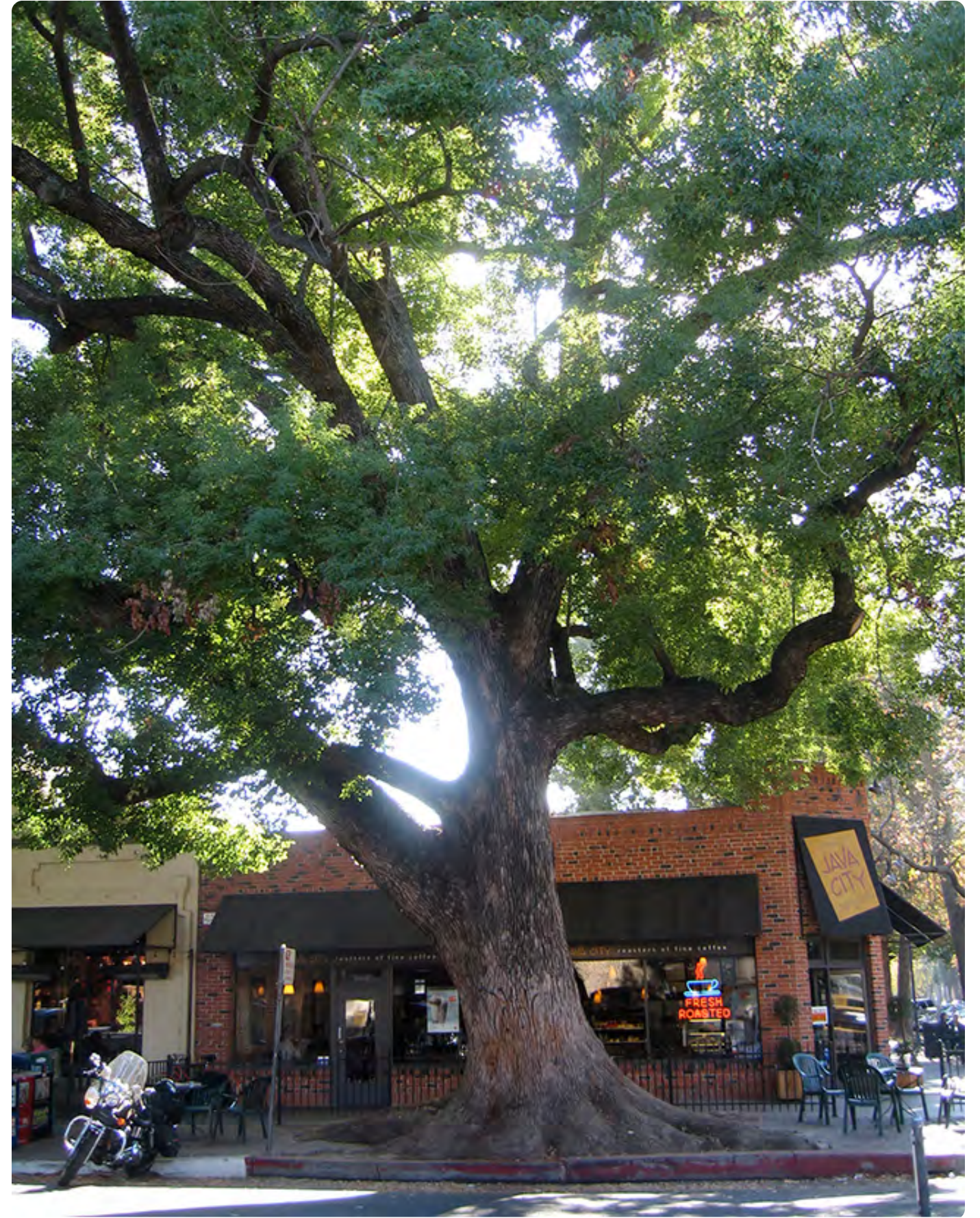
Camphor

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. TreePeople's presence in San Fernando was also clear throughout the workshops, with many participants mentioning that they'd attended past events or followed them on social media. This likely helped to contribute to the workshop's success.

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 San Fernando. 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 San Fernando 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.

"It was really informative ..a lot of people don't know much of the urban forest. And it was nice that it was translated in both English and Spanish."

"When it comes to information, a little bit more in depth on how one as a resident could be more involved."

"I see a lot of like minded people."

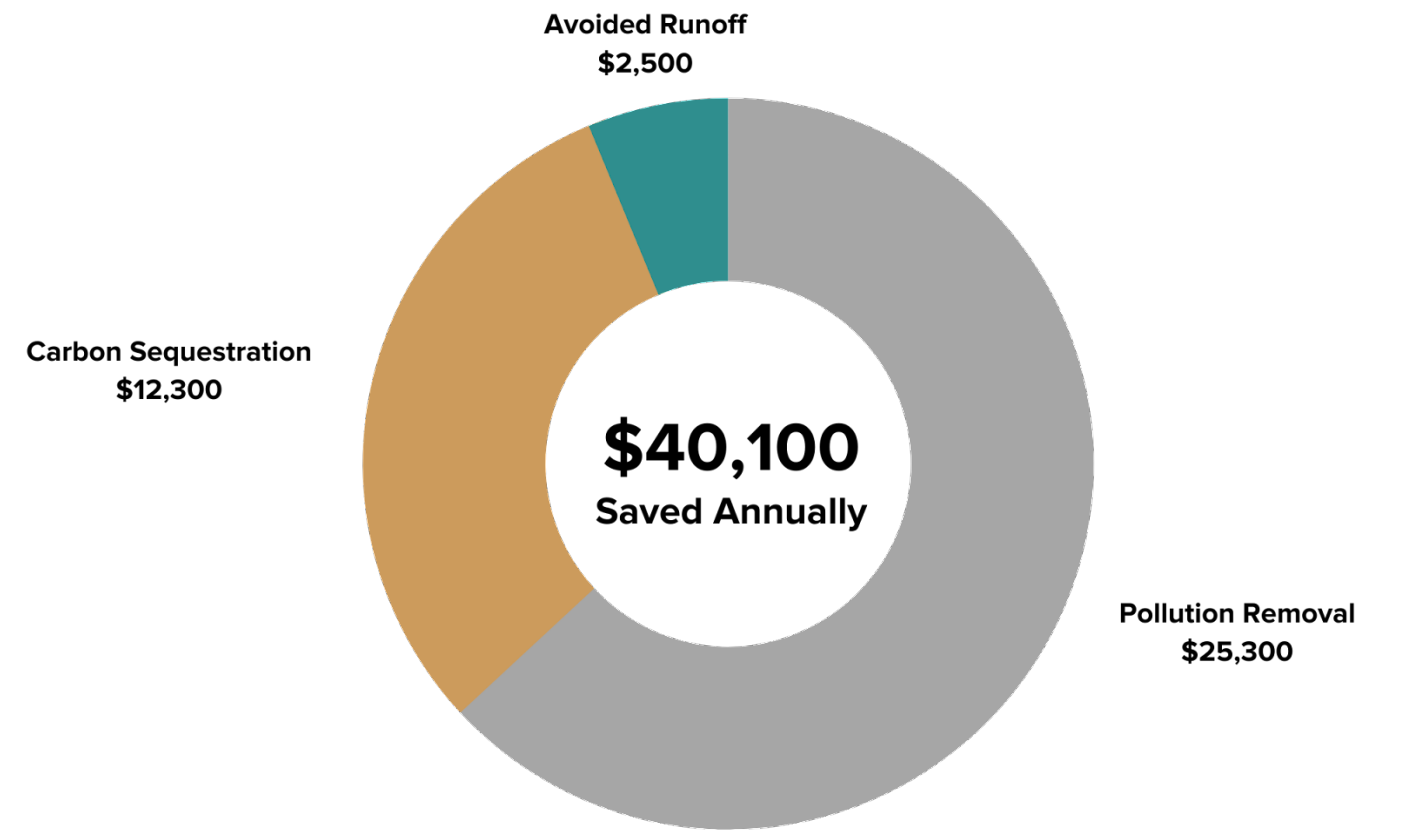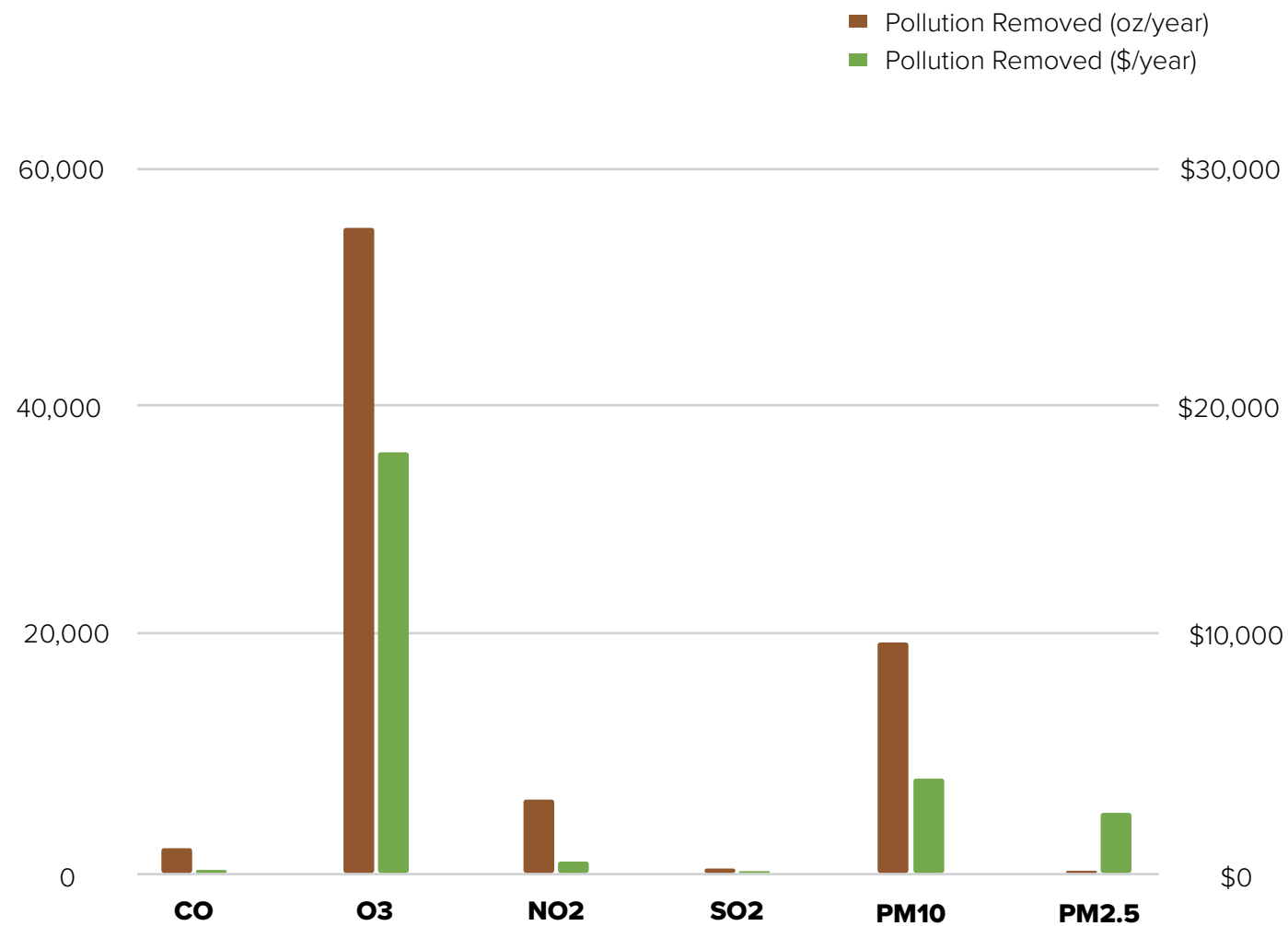"I felt that, at this point, like everything has to be done."

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 San Fernando, which is estimated at $40,100 per year. Among these services, pollution removal is the most economically valuable, generating an annual value of $25,300 and removing approximately 2.6 tons of pollutants per year. Carbon sequestration contributes an estimated value of $12,300 in annual savings, with a gross annual sequestration of approximately 72.1 tons. Additionally, avoided runoff adds an additional estimated value of $2,500 in annual savings, preventing the runoff of approximately 283.5 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 San Fernando's urban forest stands at $18.6 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.

- Pollution Removed (oz/year)
- Pollution Removed ($/year)

Avoided Runoff
$2,500

Carbon Sequestration
$12,300

$40,100
Saved Annually

Pollution Removal
$25,300

Appendix

Yard Trees in San Fernando

Example Trees for Heritage Tree Status in San Fernando

TreePeople