#### ROOM TO GROW

A COMMUNITY FOREST MANAGEMENT PLAN FOR LOS ANGELES COUNTY





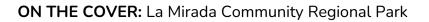






## Table of Contents

LAND ACKNOWLEDGEMENT6	4. WORKFORCE AND ECONOMIC OPPORTUNITIES	94
ACKNOWLEDGEMENTS8	4.1 Tree Maintenance Providers	
INTRODUCTION10	4.2 Local Nurseries	102
	4.3 Tree Debris Reuse	105
1. EQUITABLE TREE CANOPY28	5. COMMITMENT TO FUNDING	
1.1 Equitable Canopy Cover36	AND PARTNERSHIPS	110
1.2 Trees on Private Property50	5.1 County Commitment to Funding	113
2. REGIONAL COMMUNITY FOREST56	5.2 Local Agency and Community Leader Partnerships	115
2.1 Biodiversity58		
2.2 Wildfire62	PRIORITIZATION PLAN	118
2.3 Invasive Species that Impact Trees	IMPLEMENTATION PLAN	120
	MONITORING PLAN	126
3. COUNTY TREE MANAGEMENT76	REFERENCES	130
3.1 Street Trees and Trees in the Right-of-Way81		
3.2 Park Trees85		
3.3 Other County Managed Trees89		





# ROMMON COMMON CO

# COMMUNITY FOREST

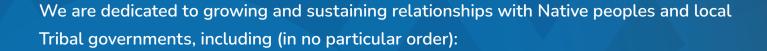
MANAGEMENT PLAN

for

LOS ANGELES COUNTY

# ACKNOWLEDGEMENT

he County of Los Angeles recognizes that we occupy land originally and still inhabited and cared for by the Tongva, Tataviam, Serrano, Kizh, and Chumash Peoples. We honor and pay respect to their elders and descendants — past, present, and emerging — as they continue their stewardship of these lands and waters. We acknowledge that settler colonization resulted in land seizure, disease, subjugation, slavery, relocation, broken promises, genocide, and multigenerational trauma. This acknowledgment demonstrates our responsibility and commitment to truth, healing, and reconciliation and to elevating the stories, culture, and community of the original inhabitants of Los Angeles County. We are grateful to have the opportunity to live and work on these ancestral lands.



- Fernandeño Tataviam Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrieleño Band of Mission Indians Kizh Nation
- San Manuel Band of Mission Indians
- San Fernando Band of Mission Indians

To learn more about the First Peoples of Los Angeles County, please visit the Los Angeles City/County Native American Indian Commission website at lanaic.lacounty.gov.



# Acknowledgements

#### **Subject Matter Experts**

Carlos Campero, Los Angeles Conservation Corps / Connie Chung, HR&A Advisors, Inc. / Shasta Gaughen, Pala Tribe / Tom Gillespie, UCLA / Deborah Halberstadt, California Department of Insurance / Dustin Herrmann, TreePeople / Daniel Knapp, Long Beach Conservation Corps / Drew Ready, Council for Watershed Health / Antonio Sanchez, Santa Monica Mountains Fund / Vivek Shandas, PhD / Kat Superfisky, Grown in LA / Matthew Teutimez, KIZH Nation - Gabrieleno Band Of Mission Indians / Gabriel Varela, Climate Resolve

#### **Community Engagement Partners**

Active San Gabriel Valley (Active SGV) / Amigos de los Rios / Climate Resolve / Community Services Unlimited (CSU) / Conservation Corps of Long Beach (CCLB) / CultivaLA / Koreatown Youth Community Center (KYCC) / Los Angeles Neighborhood Land Trust (LANLT) / Las Virgenes Homeowners Federation (Las Virgenes HF) / Northeast Trees (NET) / Pacoima Beautiful / Strategic Actions for a Just Economy (SAJE) / The Santa Monica Mountains Fund (SaMoFund) / Strenth Based Community Change (SBCC) / Strategic Concepts in Organizing and Policy Education (SCOPE) / South LA Tree Coalition / Sustainable Torrance and Normandie Development (STAND) / Streets for All / Tree People / West Athens/Westmont Task Force (West Athens/Westmont TF)

#### **Community Engagement**

MIG

Community engagement for this project was supported by Accelerate Resilience Los Angeles (ARLA)

Funding for this Proposition 40 grant project has been provided through the California Department of Forestry and Fire Protection (CAL FIRE) Urban and Community Forestry Program.











# Introduction 10

### What is a Community Forest Management Plan?

his Community Forest Management Plan (CFMP) is an actionable, long-term strategy to manage trees in the unincorporated communities of Los Angeles (LA) County. It also provides information, analyses, and guidance relevant to the entire LA region so that everyone can share the benefits of trees today and for generations to come. CFMPs are sometimes referred to as Urban Forest Management Plans, or UFMPs. LA County is using the term "community" rather than "urban" to reflect the diverse array of community types across LA County, with some communities identifying as urban and others as rural. In this CFMP, "community forest" is defined as the collection of all trees in our communities, including along streets, between buildings, in parks, and around all of the places we live, work, and play. The CFMP covers all parts of managing our community forest, including tree planting and establishment, tree maintenance, tree protection and preservation, and community engagement and education. The CFMP does not include naturally forested areas, such as state and federal forests, or other natural areas.

#### **Benefits of Trees**



#### **SEQUESTERING CARBON**

A single mature tree may take about 50 pounds of carbon dioxide per year, equivalent to the CO2 emissions from driving a car about 50 miles.



#### **SAVING ENERGY**

Shade trees can lower air conditioning costs, which in turn lowers carbon emissions.



#### **CLEANER AIR**

Trees absorb pollutants and filter particulates out of the air by trapping them on their leaves and bark.



#### **BEAUTY**

Trees add character to our communities with their colors, flowers, textures, and shapes.



#### CONNECTING WITH NEIGHBORS

Trees can encourage civic pride while tree plantings provide opportunities for community involvement.



#### **SHADE AND COOLING**

Trees provide not only shade but also cooling due to evapotranspiration from leaves.



#### **FRESH FOOD**

Trees provide food in the form of fruits and nuts.



#### **WILDLIFE HABITAT**

Trees support the lives of many wildlife and insect species and provide them with food, shelter, and nesting sites.



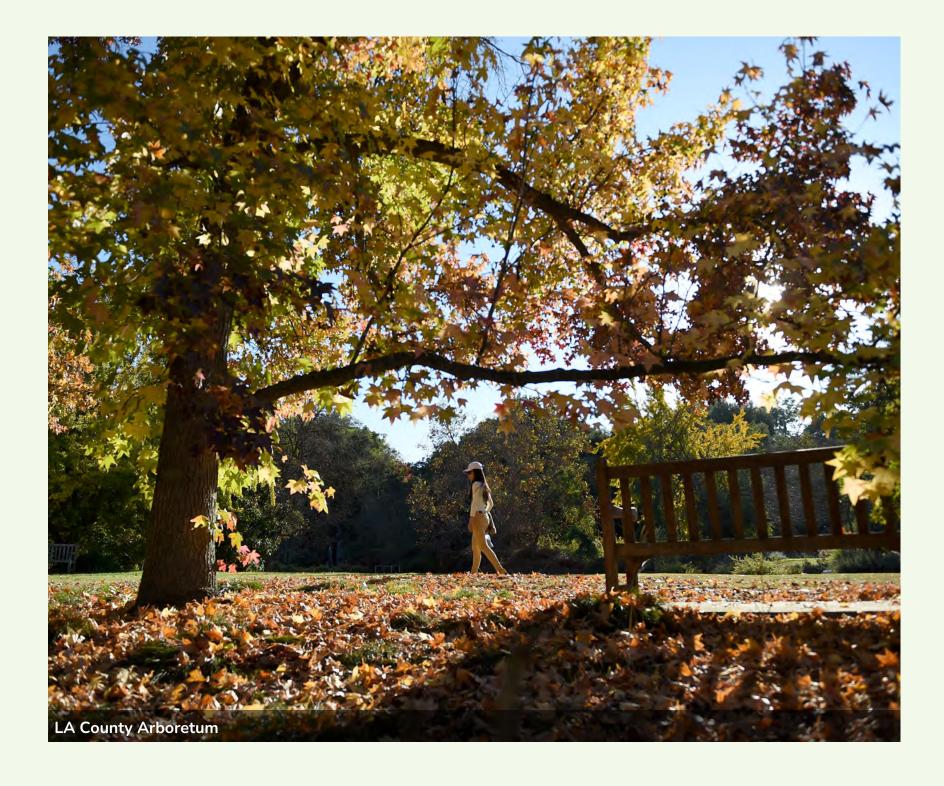
#### **HEALTHIER COMMUNITIES**

Trees improve mental and physical health and wellbeing in many ways, including by decreasing respiratory illnesses, calming traffic, and encouraging outdoor recreation.



#### **RAINWATER CAPTURE**

Trees capture rainfall, recharging groundwater supplies and helping prevent stormwater from carrying pollutants to the ocean.



# Why the County Needs a Community Forest Management Plan

#### Our community forest is part of our infrastructure.

Like power lines or transportation systems, trees provide vital services that all of us rely on.

Unlike traditional infrastructure, trees offer a wide variety of benefits – everything from shade and cooling to mental and physical health improvements to biodiversity and food production and much more.

Much like trees themselves, the investments we make in trees today will grow over time, as mature trees provide more benefits than the resources needed to manage them.<sup>1</sup>

<sup>1</sup> Lindenmayer and Laurance, 2016

#### Challenges

To realize the full potential of our community forest, LA County (County) must address interrelated challenges, including the following:

- 1 / Equity and Access. Equity acknowledges that each person has a unique background and circumstances and starts from a different place. It refers to the idea that differences matter, and that systems must be balanced to distribute resources and opportunities needed to reach equal outcomes by treating everyone justly according to their circumstances. Not everyone in LA County has equal access to the benefits of trees, to opportunities related to community forest management, or to decision-making and representation related to planning and caring for trees. When it comes to our community forest, we must consider the past and present legacy of inequity, including tree-related inequity, inherited by some in LA County, such as Native communities and local Tribal governments, and communities of people who have faced concentrated disadvantages. We must also consider the legacy of equity we would like to leave for future generations; caring for our community forest is a long-term commitment that can help address past harms, setting the course for an equitable and sustainable community forest for the future.
- **2 / Climate Resilience.** We can already feel the impacts of climate change in our communities, including extreme heat and drought, extreme precipitation and flooding, increased wildfire risk, and sea level rise. Just like people, the trees in our community forest are vulnerable to these threats. We may lose many of the trees in our communities if we do not prepare our community forest to be resilient to the impacts of climate change. At the same time, a properly managed community forest can help increase resiliency of our communities against some of the risks associated with climate change by providing benefits such as shade and cooling, stormwater management, and more.
- 3 / Regional Coordination. LA County is large and complex, spanning 4,751 square miles, and includes a patchwork of dozens of unincorporated areas and 88 incorporated cities. The unincorporated areas and cities within LA County each have different opportunities and challenges, including different forms of governmental authority, varying impacts from climate hazards, different forms of infrastructure, and diverse demographics. However, the community forest is a regional resource that we all share; decisionmakers at all levels can impact our shared community forest. Because of this, community forest management requires a regional approach, with all community forest managers and decisionmakers working together to manage and grow our community forest.



#### Goals

To address these challenges, this CFMP identifies five crosscutting goals that intersect with the interrelated challenges of equity, climate resilience, and regional coordination. Created in partnership with LA County departments, community leaders, technical experts, and LA County residents, these broad and aspirational goals make up our shared vision for the future of our community forest in LA County.

1

#### **Equitable Tree Canopy**

A community forest that ensures equitable access to the benefits of trees for all County residents. 2

#### Regional Community Forest

A community forest that is collaboratively managed across jurisdictions to support biodiversity and protect against regional threats.

#### **County Tree Management**

A County managed community forest that is maintained with best practices and expanded for social, cultural, and ecological benefits.

#### Workforce and Economic **Opportunities**

A community forest that provides economic opportunities and is supported by a skilled local workforce.

#### **Commitment** to Funding and **Partnerships**

A community forest that is supported by creative, long-term funding and collaborative partnerships.





#### How to Use this Community Forest Management Plan

The community forest is for everyone, and so is the CFMP.

Here are some ways that different interested parties can use this CFMP to help achieve our shared vision for the community forest:



#### To promote transparency and accountability:

To promote transparency and accountability:
This CFMP sets forward the County's plan for actions related to the community forest, including timeframes and pertinent departments. This will help **County departments**<sup>2</sup> work collaboratively and efficiently on shared priorities, and it will empower community forest **advocates** to track the County's progress towards commitments.

#### To an Alt

#### To seek and secure funding:

Although the County already dedicates resources to community forest

management activities, most of the actions identified in this CFMP will require new and creative sources of funding. County departments, community-based organizations, non-profits, local Tribal governments, advocates, academics, and others can use the data, analyses, prioritizations, and frameworks of this CFMP as a strong foundation to pursue grants and other funding opportunities for community forest management.



#### To support regional best practices:

The County has direct control over actions it can take in its unincorporated areas, but data and best practices provided in this CFMP are intended to

be regionally applicable. This means that **cities**, local agencies, and other tree managers can use this CFMP as a resource, selecting components that work best for them based on their needs and priorities. This will help build capacity for local governments to support trees and improve regional consistency in tree management practices.



#### To educate, engage, and inspire:

We all have a role to play in our community forest. **Anyone** in LA

County and beyond can use this CFMP to engage in the community forest, whether they are looking for informational resources about how to plant and care for trees, career opportunities in urban forestry, ways to become an advocate for trees in their community, or much more.

2 Bolded entities in this section indicate the groups, organizations, or people involved with each CFMP use.



66 The real history of the land, now known as the County of Los Angeles, centers the Tongva, Tataviam, Serrano, Kizh, and Chumash Peoples and begins long before Spanish settlers arrived. The Tribes in this area thrived because of their unique relationship with the land and their stewardship approach to land conservation.

> - From "We Are Still Here: A Report on Past, Present, and Ongoing Harms Against Local Tribes"



#### Our Local Roots

County has been inhabited and cared for by the Tongva, Tataviam, Serrano, Kizh, and Chumash people, who still live here and steward the land today. In 1781, before Los Angeles County became a jurisdiction, a multi-ethnic group of settlers with mixed ancestry arrived in the area from Mexico to establish the City of Los Angeles on behalf of Spain. These settlers immediately seized the land, resources, and lives of the native population. Once Mexico won its independence from Spain in 1821, Los Angeles became a part of Mexico. Following the Mexican-American War

in 1848, it became part of United States territory. At that time, laws discriminating against African Americans also applied to Latino and Asian populations, both present and arriving.

LA County experienced a development boom in the 1900s, with land development and urbanization spreading throughout the region.<sup>3</sup> While this spurred enormous economic development for some, land development is also a leading driver of tree removal and canopy loss in urban landscapes.4 The ranges of historic native tree species in the LA region, like the coast live oak, valley oak, southern California black walnut, toyon, and blue elderberry, have drastically decreased since the development boom, along with the presence of water features, such as rivers, lakes, streams, wetlands, and ponds, that support many of our native riparian tree species. 5 Enabling this boom was the Statesponsored program of displacement of Native California Tribes from their ancestral lands, which resulted in the present-day reality that most local Tribes do not hold titles to land in the County and are therefore not able to steward those lands according to traditional practices.6







East Los Angeles Library presents Mariachi Arcoiris during Hispanic Heritage Month PHOTO: MAYRA B. VASQUEZ



Today, LA County is the most populous county in the United States, and one of the most culturally and geographically diverse. Home to 10 million people who comprise 25% of California's total population, with over 200 languages spoken by residents, LA County encompasses over 4,000 square miles organized into 88 incorporated cities, dozens of unincorporated areas, and the Santa Catalina and San Clemente islands.

It's not only its size and social and cultural diversity that make LA County unique, but also its ecological and biological diversity. The County features coastal wetlands and beaches, oak woodlands, sage scrub, desert, and mountain-top pine forests ecosystems.<sup>7</sup> The LA region is home to more than 4,000 species of plants and animals and is within one of Conservation International's Global Biodiversity Hotspots, a region with the largest number of threatened and endangered plants and animals facing extinction in the continental United States. While many ecosystem types in the County do not naturally support a great

number or variety of trees, such as desert and sage scrub ecosystems, trees play an important role in local species diversity. For example, the LA region's coast live oak (Quercus agrifolia) tree is the host for dozens of species of moths and butterflies, which in turn support populations of birds, reptiles, and mammals.<sup>8</sup>

LA County continues to experience growth and the social, ecological, and cultural challenges and opportunities that come with that growth. The opportunity is here to do things differently – to plan development to protect and expand our community forest, to integrate cultural and ecological knowledge with history that is unique to this place and its original inhabitants, and to ensure that all LA County residents share the benefits of trees in our communities today and for future generations.



<sup>3</sup> Lopata, 2018

<sup>4</sup> Willis et al. 2023

<sup>5</sup> The LA Landscape History Project, 2023

<sup>6</sup> County of Los Angeles, et al., 2023

<sup>7</sup> UCANR, 2024; Los Angeles County, 2021

<sup>8</sup> UCLA, 2019

#### Community Forest Management Plan Development Process

This CFMP is funded by a grant from the California Department of Forestry and Fire Protection (CAL FIRE) Urban and Community Forestry Grants Program, and is a collaborative project between LA County, LA County residents, the City of Los Angeles, and partners such as technical and community experts, non-profits and community-based organizations, and regional interested and affected parties. The CFMP Public Comment Draft was open for public comment for one month starting April 8th, 2024.

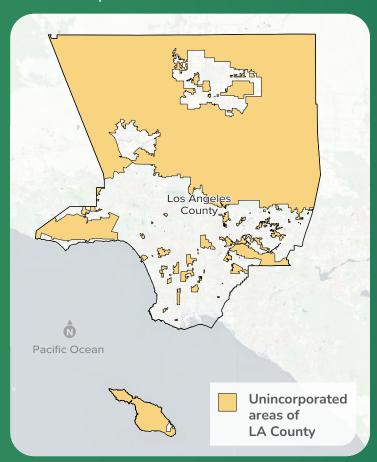






#### Los Angeles County **CFMP Boundaries**

The community forest includes all of the trees that are cared for or managed by people, on both public and private land, in the built environment. It does not include natural areas such as forests and deserts. LA County has direct control over certain tree management activities in unincorporated areas of the County, and it has indirect control or influence in the incorporated areas.



#### Organizing **CFMP Elements**

#### **Chapters**

The CFMP is organized into five thematic chapters, each with its own guiding goal statement.

#### **Actions**

Each chapter contains a set of actions to drive progress towards the chapter goal.

#### **Additional Resources**

Visit the CFMP website for additional resources, including informational resources related to trees. a canopy cover map viewer tool, technical appendices for data and analyses, stakeholder engagement summaries, and more.

#### **Targets**

The CFMP contains five trackable, actionable, and meaningful targets.

#### Implementation and **Monitoring Plan**

The CFMP includes an implementation plan that summarizes early priorities, responsibilities, and timelines, and a monitoring plan that details how the County will track progress on and update the CFMP.



#### **Our Community Engagement Process**

o support the development of this CFMP, LA County partnered together with the City of Los Angeles (City) on a regional community engagement and outreach campaign. Together, LA County and the City hosted over 50 neighborhood workshops, including 22 in-person workshops and 7 virtual workshops for unincorporated LA County communities, attended by nearly 800 residents. Workshops were hosted in partnership with 22 local community-based organizations that promoted, organized, and helped facilitate the events. LA County and the City also developed a shared community questionnaire to gather feedback from residents about their priorities related to trees, which was completed by nearly 2,500 residents across the region. Thanks in large part to our partner community-based organizations, the community questionnaire was completed by people of all ages and ethnicities, by renters and homeowners, and by people responding in multiple languages, including Spanish, Chinese, and Armenian. A summary of all engagement

activities, including a summary of each County workshop and the full questionnaire data set, can be found on the Community Engagement Results link on the resource page of the CFMP website.

While every community is different and has its own priorities related to community forest management, common themes that emerged through the engagement process inform many of the actions in this CFMP. For example, many residents emphasized the importance of the shade, cooling, and air quality benefits of trees in their communities. Residents also expressed a need for more resources to support community forest management, including both informational resources and financial resources. Across the region, residents shared personal stories of why trees matter to them and how they envision the future of their community forest. Stories and feedback from residents who participated in the neighborhood workshops and the community questionnaire are shared at the end of each relevant chapter.





#### Goal 1

#### A community forest that ensures equitable access to the benefits of trees for all County residents.

rees provide many valuable benefits to our communities, from shade and cooling to stormwater management to improved mental and physical health. Because canopy cover varies dramatically across communities, sometimes over just a few blocks, LA County residents do not have equal access to these benefits. Redlining and other discriminatory policies and tactics including racially restrictive covenants, "urban renewal," and the siting of polluting industries have contributed to disinvestment in critical infrastructure in certain communities, including trees. Today, communities impacted by these policies, which are disproportionately communities of color, face concentrated disadvantages, including higher urban heat, poor air quality, and reduced access to trees, nature, and biodiversity. Additionally, due to factors

like climate change and development, LA County's tree canopy is decreasing over time. More research is needed to understand the extent and distribution of the decline.

The inequitable distribution of trees widens disparities in health outcomes, economic impacts, and community well-being. University of California Davis researchers found that on extreme heat days, the poorest 10% of neighborhoods were 4°Fahrenheit hotter than the richest 10% of neighborhoods in Los Angeles at night, likely due partly to differences in vegetation such as tree canopy variation.<sup>9</sup>



<sup>9</sup> Dialesandro et al., 2021

Another 2021 study found that areas within LA County that had lower densities of trees and greenspace experienced increased numbers of asthmarelated emergency room visits and deaths.<sup>10</sup> The County is committed to increasing equitable access to trees to help address these persistent challenges. Making progress towards canopy cover equity will require investing first in communities with the highest canopy need, pursuing creative opportunities to make space for trees in those communities. preserving existing mature trees, and implementing programs and policies to offset costs and burdens related to trees for residents on private property. Through this CFMP, LA County will focus its efforts on building a healthy community forest that benefits all LA County residents.

Descanso Gardens PHOTO: MAYRA B. VASQUEZ

<sup>10</sup> Kim and Ahn, 2021





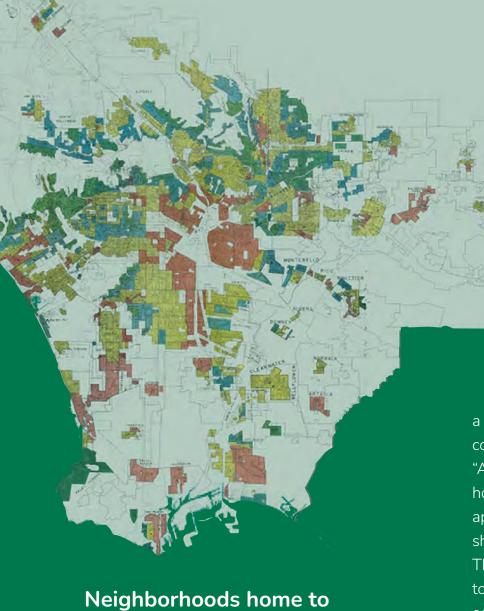
Canopy cover refers to the layer of leaves, branches, and stems that cover the ground when viewed from above.

Conducting a canopy cover assessment offers insights into the community's overall canopy, its geographic distribution, and the potential for establishing additional canopy cover.

Canopy cover percentage is a widely used metric for evaluating canopy cover distribution within a region.

$$\frac{\text{Canopy}}{\text{Cover (\%)}} = \left(\frac{\text{Canopy Area}}{\text{Total Land Area}}\right) \times 100$$





### ENVIRONMENTAL JUSTICE AND TREE CANOPY EQUITY

The Legacy of Redlining

In 1935, the United States Congress created a new organization called the Homeowners' Loan Corporation (HOLC), meant to assist Americans struggling to pay their mortgages during the Great Depression. To guide mortgage lenders and realtors, the HOLC created a series of maps and a color-coded grading system to assess the "desirability" of residential communities. Communities were ranked from most desirable and secure, "A" (green), to least desirable and hazardous, "D" (red).<sup>11</sup> Neighborhoods home to communities of racial and ethnic minorities were more likely to be appraised as risky or hazardous (codes C and D). Areas ranked as "D" were shaded red on the HOLC maps – this is the origin of the term "redlining." This federal policy, which explicitly used the race of an area's occupants to determine the perceived long-term value of that area, directly impacted economic opportunities for people of color.<sup>12</sup> Today, neighborhoods that were historically redlined, many of which are still home to communities of color, face higher levels of pollution burden and fewer economic and environmental resources, including reduced access to canopy cover.<sup>13</sup>

communities of racial and ethnic minorities were more likely to be appraised as risky – and shaded red on the HOLC maps – this is the origin of the term "redlining."

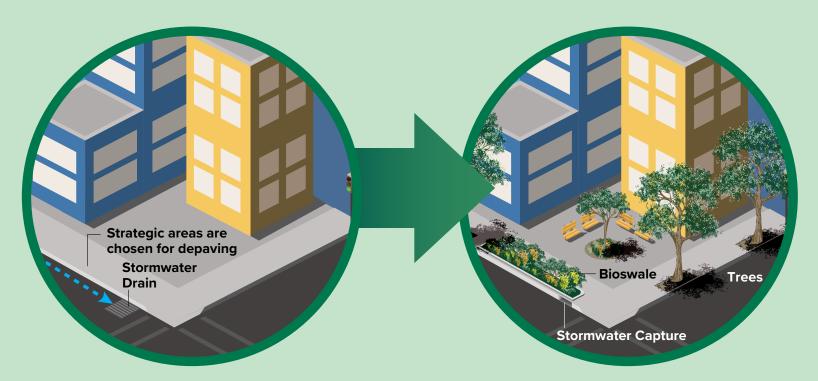
<sup>11</sup> Appel, et al. 2016

l2 Rothstein, 2017

<sup>13</sup> Estien et al., 2024, Locke et al., 20211

#### The Role of Depaving

Due to this history of redlining and other discriminatory policies and practices, the communities in LA County that need trees the most often have the least amount of potential green space available for them in places such as parkways, sidewalk planter strips, and medians. One way to break this cycle is to break ground – literally. We can create more green spaces by removing paved areas such as asphalt and concrete and replacing them with soil and growing space for trees and other plants. This process, called "depaving," can help increase canopy cover in high need areas. While depaving is not the only way to create more green space and may not be the right solution for every situation, it can be an important way to make space for trees and plants while providing multiple additional benefits, including reduced heat retention and increased stormwater infiltration.



#### **Before Depaving**

Pavement absorbs heat and prevents stormwater from infiltrating into the ground.

#### **After Depaying**

Less paving and more shade leads to cooler streets, and permeable areas allow stormwater to infiltrate into the ground.





#### Soil Health

Low quality and contaminated soil presents multiple challenges for tree growth and longevity. Working with contaminated soil, such as digging in the soil to plant trees, can expose people to dangerous pollutants, but safely remediating contaminated, compacted, and degraded soil is time consuming and expensive. Many places in LA County suffer from contaminated soil, such as Vernon, where a battery recycling plant operated by Exide Technologies contaminated the local soil and water table with lead, arsenic. and other pollutants. Even more places have degraded and compacted soils, making it difficult to establish and maintain trees in places that need them most. To increase canopy cover in high need communities, depaying must often be combined with investments in healthy soil, including green infrastructure to increase water movement through soil, soil amendment with mulch or other organic material, and the addition of new healthy soil.



#### ANTI-RACISM, DIVERSITY, AND INCLUSION (ARDI) INITIATIVE

On July 21, 2020, the LA County Board of Supervisors (Board) unanimously adopted a motion to establish an Anti-Racist County Policy Agenda, signifying a crucial step towards addressing racism as a pressing public health concern. The Board issued comprehensive directives, including the development of a strategic plan and policy platform, and the establishment of the Anti-Racism, Diversity, and Inclusion (ARDI) initiative within the Chief Executive Office (CEO). ARDI's vision statement is "Los Angeles County is a place where all residents are healthy, experience justice, and thrive." The initiative aims to challenge the status quo and proactively promote a more equitable and inclusive LA County, striving towards a fairer and more just society for all residents.

Drawing from LA County's Racial Equity Strategic Plan (RESP), this CFMP approaches all action through the lens of equity, and will contribute to LA County's ongoing and concurrent efforts to create an enabling environment to achieve the life course outcomes identified in the RESP. Actions in the CFMP will equitably expand access to the benefits of our community forest, including shade and cooling, mental and physical health benefits, biodiversity, food production, and workforce development opportunities.

#### 1.1 Equitable Canopy Cover

LA County has a canopy cover of approximately 15.9%. However, canopy cover in LA County is not equally distributed. In the unincorporated areas, canopy cover varies widely from community to community, from a low of 1% in Hi Vista to a high of 58% in East Covina.

Much of this variation is due to the diverse ecological conditions of LA County, which spans mountains, beaches, and deserts, but some of the variation is due to development patterns. County communities range from densely urbanized to suburban to rural areas. Variations also result from past and present discrimination, such as in communities impacted by the legacy of redlining and other discriminatory policies. That is why it is important to consider not only overall canopy cover for the County but also canopy cover for each individual community.



Community Canopy Cover\*

**15**%

100% of unincorporated County residents live in areas with canopy cover of 15% or greater.

**County Canopy Cover\*** 

**20**%

All unincorporated County communities combined have at least 20% canopy cover.



**Community Canopy Cover** 

**37**%

of all unincorporated County residents live in areas with canopy cover of 15% or greater.

**County Canopy Cover** 

**15.9**%

All unincorporated County communities combined have 15.9% canopy cover.

### **Deep Dive into Land Cover**

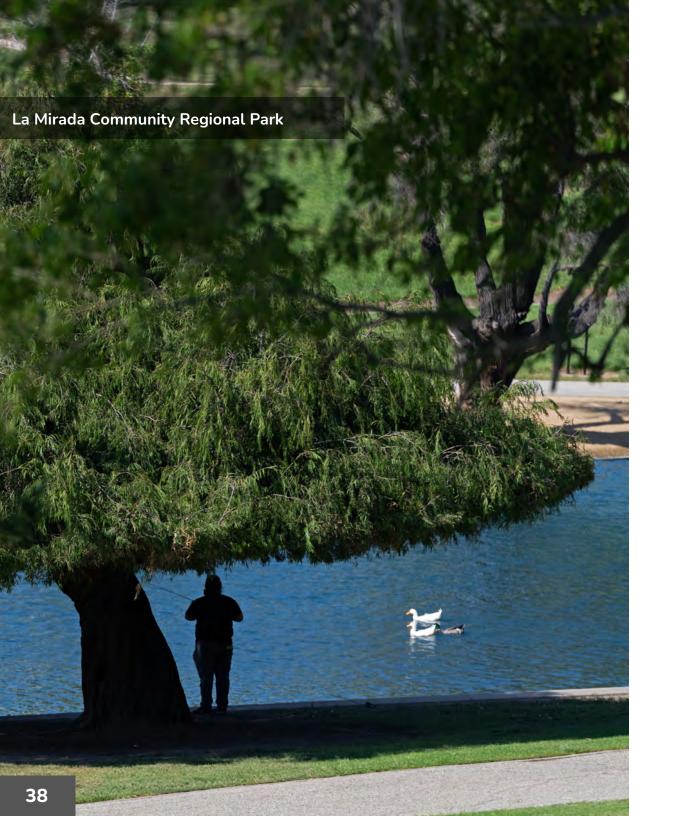
LA County developed a new land cover dataset using 2020 imagery provided by the Los Angeles Regional Imagery Acquisition Consortium (LARIAC). Covering the entire County, this dataset includes information for tree canopy, impervious surfaces such as pavement and roofs; medium vegetation such as shrubs; low vegetation such as grass; bare earth; and water. The dataset spans all 88 incorporated cities and 121 unincorporated areas, encompassing public and private properties, open spaces, and natural resource areas.

### **Online Resource**

This dataset is publicly accessible through the LA County Enterprise GIS Hub and is available for exploration and download by cities, regional partners, and interested parties. It can serve as a regional resource for informed decision making and collaborative efforts with applications not only for community forest management, but for many other types of planning and policies related to local land use and community needs.







To support canopy equity for all LA County residents, the County is setting a bold target to provide access to at least 15% canopy cover for all unincorporated County residents. This target is informed by the adjusted canopy cover analysis conducted as part of this CFMP and considers ecological and developmental conditions across the County. The target applies specifically to the County managed community forest. It does not apply to natural areas such as natural forests and deserts, or to places where expanding the community forest is not feasible, such as airports. To account for this, this CFMP uses an "adjusted" canopy cover, which excludes these zones from the analysis to focus on the human experience of the community forest and emphasize equitable canopy cover access. The County is also setting a target to achieve at least 20% canopy cover for all unincorporated areas combined. This target is based on unadjusted, or "raw" canopy cover, to represent the full regional impact of the community forest.

### Community canopy cover explained

This CFMP uses an "adjusted" canopy cover to focus on the places where people interact with the community forest. The "adjusted" canopy cover includes some zoning types and excludes others.

Included – Community-focused

Excluded – Not Community-focused

**Parks** 



Right-of-Way



Open Space



**Agriculture** 



Commercial



Residential



Manufacturing



Aircraft and Heavy Manufacturing

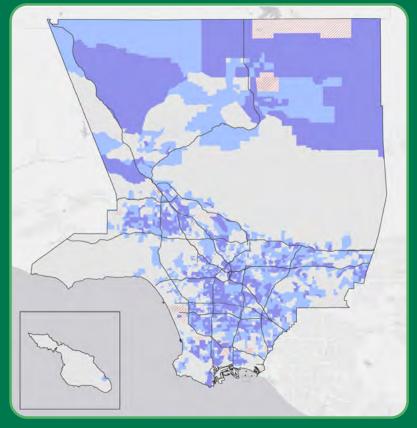




The adjusted canopy cover analysis shows that 37% of people in unincorporated communities in LA County, representing 50 of 120 communities, have access to 15% canopy cover. To determine which of these communities have the highest canopy need and should be prioritized for community forest investments, the adjusted canopy cover is combined with an additional factor. the "social sensitivity index," or SSI. The SSI is a measure of social, economic, and cultural factors that influence susceptibility to climate hazards like extreme heat. These factors. such as age, occupation, health, income, and access to information, vary widely across LA County. Together, the adjusted canopy cover percentage and the SSI determine whether the overall "canopy need" for each unincorporated community is low, medium, or high. The canopy cover targets and the canopy need prioritization can guide LA County's investments in tree planting, management, and preservation to achieve the vision of an equitable community forest.

### Social Sensitivity in LA County

The Los Angeles County Climate Vulnerability Assessment (CVA), released in October 2021, provides a social sensitivity index (SSI) that considers social factors that increases a person's susceptibility to climate hazards. An updated version of the SSI, released in 2024, is used in the canopy need prioritization of this CFMP.



Social Sensitivity Level

### **Unincorporated Community Profiles Snapshot**

This CFMP uses the adjusted canopy coverage, the social sensitivity index, and other data to create a detailed Community Canopy Profile for each unincorporated community in LA County. See the Community Canopy Profiles link on the resource page of the CFMP website for the complete booklet of Community Canopy Profiles. In the following pages we highlight five of these profiles to offer a range of insights into diverse communities, canopy conditions, and development types. Cities in LA County, which are not included in the Community Canopy Profile booklet, can recreate this analysis using the data available on the LA County Enterprise GIS Hub. See the Community Canopy Profiles link on the resource page of the CFMP website for more information on this methodology.

### **Canopy Need Classification**

Canopy level was assessed using adjusted canopy cover values, while social sensitivity level was determined through the aggregation of CVA data at the census level to the unincorporated community level.

High

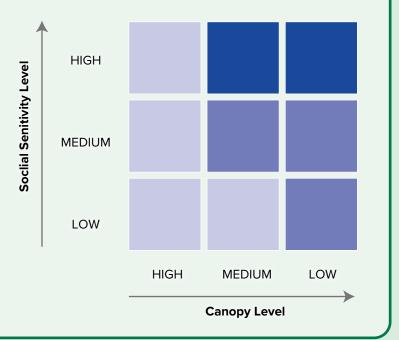
Canopy need is classified as high sensitivity and either low or medium canopy level.

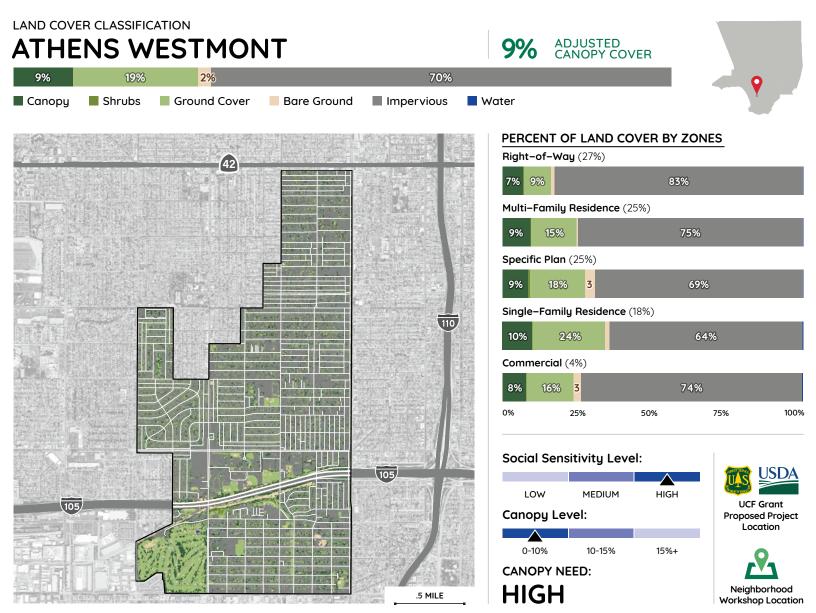
Medium

Canopy need occurs with medium sensitivity and low or medium canopy level, or with low sensitivity and low canopy level.

Low

Canopy need is represented as any combination of sensitivity and high canopy level or low sensitivity and medium canopy level.



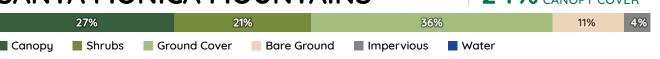


Note: Percentages less than 2% are unlabeled.

Athens-Westmont is located in south LA County. It has a high social sensitivity level and low canopy level, and about 70% of its area is made up of impervious surfaces. Increasing canopy cover in this community will require investments in depaying, tree planting, and establishment care.

### SANTA MONICA MOUNTAINS

24% ADJUSTED CANOPY COVER



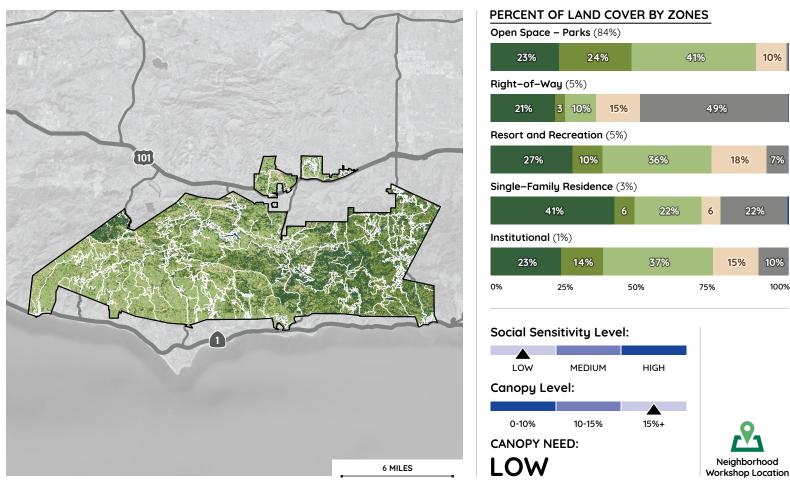


18%

22%

100%

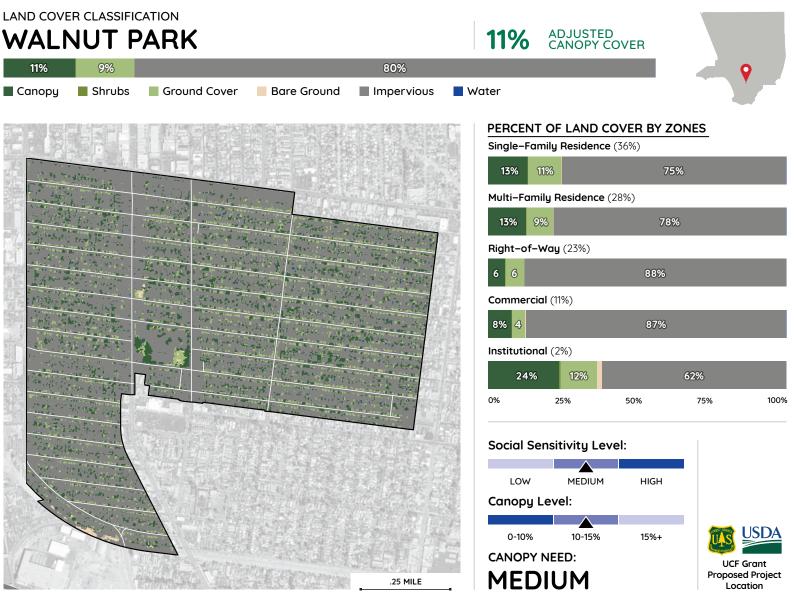
10%



Note: Percentages less than 2% are unlabeled.

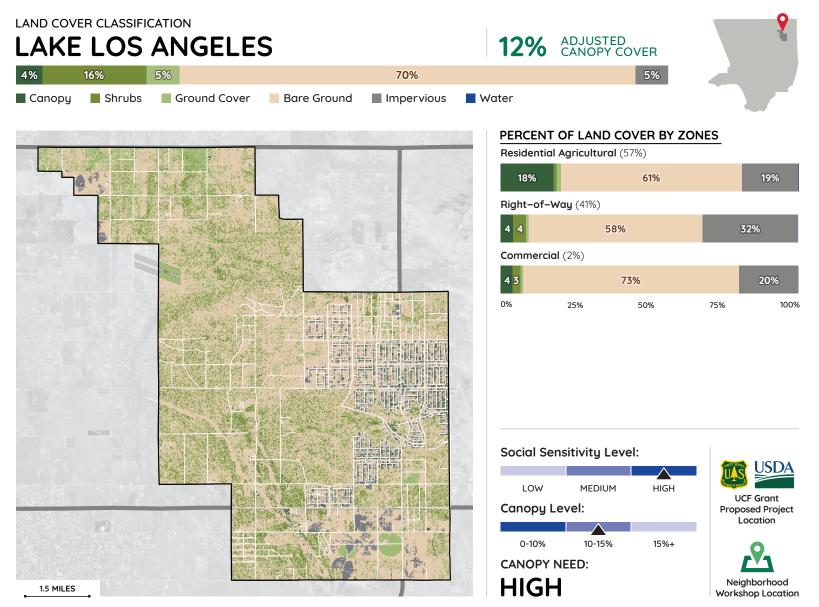
Communities within the Santa Monica Mountains contain a vast array of native trees, plants, and wildlife that support biodiversity. These communities also exist in the Wildland Urban Interface, where land and vegetation management must consider the risks from wildfire.





Note: Percentages less than 2% are unlabeled.

Walnut Park is located in south LA County. 64% of the community is zoned for single and multi-family residence use, emphasizing the need to educate property owners on proper tree care and maintenance, and provide incentive programs for free trees.



Note: Percentages less than 2% are unlabeled.

Lake Los Angeles is a desert community that experiences extreme heat during summer months. Increasing canopy cover, and the associated shaded and cooling benefits, can support long-term climate resilience in this community.



Canopy

### **EAST LOS ANGELES**

2%

Ground Cover

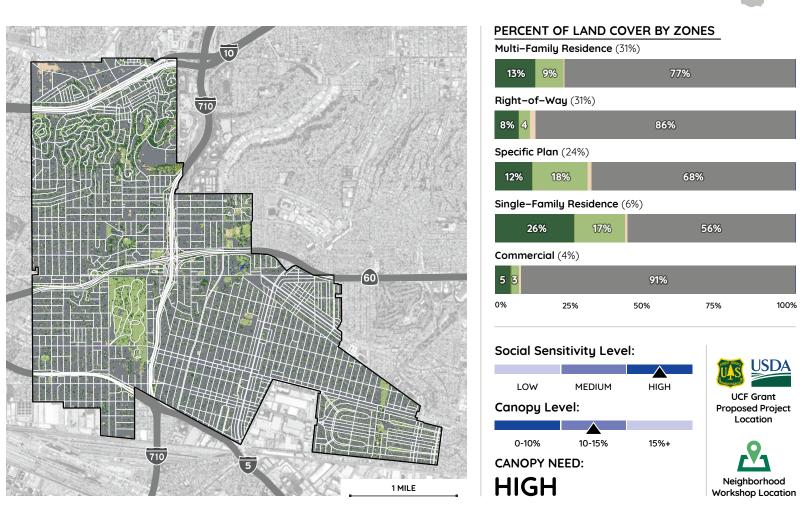
Bare Ground

10%

Shrubs

12% ADJUSTED CANOPY COVER





76%

Water

Impervious

Note: Percentages less than 2% are unlabeled.

East Los Angeles is located just east of downtown Los Angeles. Four freeways run throughout this community. This contributes to a high social sensitivity level and underscores the need for increased tree canopy cover and additional interventions to contribute to cleaner air.





### астіон **1.1а**

### Explore innovative strategies for tree planting site opportunities.

**Lead Department:** Chief Sustainability Office (CSO)

Partner Departments: Public Works (PW), Department of Parks and Recreation (DPR), Department of Public Health (DPH), Department of Regional Planning (DRP)

### Why it matters:

Bringing the benefits of trees into communities that need them is not always as simple as planting more trees in those areas. Often communities with the highest need for trees have the least amount of available space and healthy soil. To achieve LA County's ambitious canopy cover targets for unincorporated communities, LA County will need to deploy creative site-design strategies to enlarge and improve existing planting spaces and create new planting opportunities across a variety of land use types, from County managed public rights-of-way to school campuses to private property. LA County will also work in collaboration with the City of Los Angeles to develop these strategies to achieve shared goals for tree equity.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	Work with Accelerate Resilience Los Angeles (ARLA) to complete an assessment identifying early opportunities for depaving projects in multiple high canopy need communities, including on public and private property.
	<ul> <li>Perform a right-of-way alternative site design assessment for depaving opportunities to make space for large stature trees.</li> <li>Identify priority tree planting projects that include tree well expansion and creation, green infrastructure interventions, and soil restoration opportunities.</li> </ul>
	• Secure funding to implement one or more priority tree planting projects that require depaving, tree well creation, green infrastructure, soil restoration, and other innovative strategies to increase canopy cover in high canopy need communities.
Looking ahead (5+ years)	<ul> <li>Comprehensively assess all communities for depaving potential, including a focus on increased understanding of school project opportunities.</li> <li>Continue to secure funding for implementation of tree planting projects that require depaving, tree well creation, and other innovative strategies to increase canopy cover in high canopy need communities.</li> </ul>



### Prioritize park and street tree resources for high canopy need communities.

Lead Departments: Public Works (PW), Department of Parks and Recreation (DPR)

Partner Departments: Department of Public Health (DPH), Internal Services Department (ISD), Department of Economic Opportunity (DEO), Chief Sustainability Office (CSO)

### Why it matters:

Park and street trees are some of the most valuable trees in our communities. They are a part of our publicly managed natural infrastructure, which provides benefits that serve the needs of our communities. Some communities have a higher need for investments in park and street trees than others, whether due to low canopy, high climate vulnerability, high park need, high pollution burden, minimal room for trees on private property, or, in many cases, some combination of these factors. Investment in protecting, maintaining, and expanding our County managed street and park trees is an important part of achieving tree canopy equity in LA County.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Direct existing funding for street and park tree planting, establishment care, maintenance, and preservation, including recently awarded Inflation Reduction Act funding, to high canopy need unincorporated County communities identified in this CFMP.</li> </ul>
	<ul> <li>Expand community engagement, education, and workforce development activities in high canopy need unincorporated County communities, including with recently awarded Inflation Reduction Act funding.</li> </ul>
	<ul> <li>Partner with community-based organizations to apply for grant funding, collaborate on tree management activities, and increase community engagement related to park and street tree resources.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Secure and spend additional funding for park and street tree planting, establishment care, maintenance, and preservation in high canopy need unincorporated County communities.</li> </ul>
	<ul> <li>Reprioritize new investments in unincorporated communities in need of park and street tree resources as necessary based on changing conditions.</li> </ul>



### 1.2 Trees on Private Property

Public spaces such as parks, schools, sidewalks, and medians are crucial to our community forest, but private property makes up 65% of all land in LA County.14 Because of this, many opportunities for protecting and expanding our community forest occur on private property, such as the landscaping around homes and businesses. This means that community residents, property owners, management companies, and renters have an important role to play in creating equitable canopy cover. When residents plant, maintain, and protect trees on private property, they can enjoy the benefits of trees for themselves while also contributing to canopy cover in their communities for generations to come. While some residents may not want trees on their properties, other residents may want trees but face barriers to planting and managing them. Some common barriers include:

**Information** – Residents need information about which species to plant including how to support biodiversity using native trees, how and where to plant trees, when to plant trees, how to establish trees, and how to care for and maintain trees.

**Ability** – Residents may not have the physical ability to plant and care for trees on their property.

**Costs** – Residents may be concerned about the cost of purchasing, planting, watering, and maintaining trees. They may also be concerned about the risk of costly damage to infrastructure, such as underground pipes.

**Space** – Residents may not have enough space for trees.

**Competing uses** – Residents may not want to plant trees due to competing priorities for outdoor spaces or because other uses would be negatively impacted by trees or tree shade, such as solar panels.

**Permission** – Residents may not have permission to plant trees on the properties where they live or work, or they may not know if they have permission. This is especially relevant for residents who are renters and residents of properties with restrictive homeowner association rules.

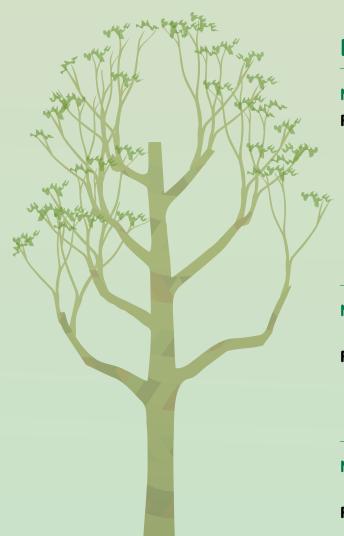
<sup>14</sup> Dudek Analysis, 2022

### Do Not Top Trees

### Tree "topping"

Tree "topping," also known as tree heading, hat-racking, or rounding over, is the practice of indiscriminately removing branches in the top portion of a tree to limit its size. Tree topping is a harmful tree management practice. Topping often results in the loss of 50-100% of the tree's crown, limiting the tree's ability to use its leaves to make new energy.

Topping a tree can deplete its stored resources and result in tree stress and decline. Topped trees are also vulnerable to decay, pests, disease, and sun scalding. After topping, trees respond by growing rapidly, sending out many new branches. These branches tend to be weakly attached and lead to the need for additional long-term maintenance.



### **Dispelling Pruning Myths:**

Myth: Pruning improves tree health.

Fact: Pruning is necessary to protect infrastructure and maintain trees safely, but it does not increase the health of a tree. Trees use leaves to create energy, and pruning removes leaves from the tree. Further, when a pruning cut is made, the tree must use resources to close the wound.

**Myth:** Trees require yearly pruning or a "spring cleaning."

**Fact:** Trees should be pruned as needed to make trees safer for people and reduce conflicts with homes, buildings, and utility lines.

**Myth:** Tree topping is a low-cost way to maintain trees.

**Fact:** Topped trees are usually less healthy than properly maintained trees, and this can make them more costly to maintain long-term.



# Tradeoffs Associated with Increasing Canopy Cover

Access to canopy cover can be instrumental for the health and wellbeing of our communities.

### But how much canopy cover is enough?

Average urban canopy cover across the United States is just under 40%, however, one size does not fit all. For example, communities in naturally forested areas with moderate year-round temperatures have higher potential for canopy cover than communities in grassland areas, which in turn have higher canopy cover potential than communities in arid deserts with extreme temperatures.

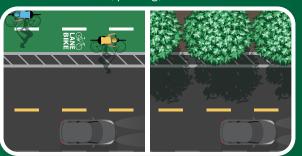
### What influences canopy cover potential?

Canopy cover potential is also influenced by development patterns. Highly urbanized areas have fewer opportunities for increasing canopy cover than less densely populated areas.

### **Canopy Cover Tradeoffs**

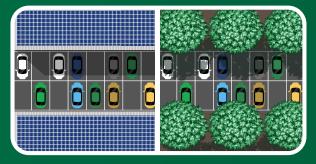
#### **Space Use Tradeoffs**

Includes: bike lanes, parking, wheelchair/ stroller access



#### Resource Use Tradeoffs

Includes: watering demand, shading of solar panels



#### **Cost Tradeoffs**

Includes: costs of maintaining trees and costs of other infrastructure needs, such as sidewalk repairs.







### Explore and pilot programs for assisting residents with the costs and maintenance of private trees.

Lead Departments: Chief Sustainability Office (CSO), Department of Public Health (DPH)

Partner Departments: Public Works (PW)

### Why it matters:

LA County residents often take on the work of purchasing, planting, watering, and maintaining trees that support the community forest in their neighborhoods and on private property. However, many residents lack the financial and informational resources, or in the case of renters, the decision-making power needed to undertake these activities.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Pilot a program to provide free trees and information on how to plant and care for trees to residents of unincorporated County communities.</li> <li>Partner with the City of Los Angeles to develop and deploy strategies to provide communities with information in different languages about community forest management, including how to properly plant, care for, and prune trees and who to contact for various tree-related inquiries, such as through a resource hub or other centralized service.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Explore opportunities for funding to incentivize residential tree care such as planting, watering, maintenance, removal, and addressing infrastructure conflicts.</li> <li>Explore opportunities to provide education on community forest management best practices to providers of private tree care.</li> <li>Explore opportunities to incentivize landowners to plant and maintain trees on rental properties without passing through costs to renters.</li> <li>Establish a permanent program to provide free trees to residents across the County.</li> </ul>

### WHAT WE HEARD

### **Community feedback**

Me gustaría mucho que nos enseñaran a plantar y cuidar de los árboles y nos dieran árboles para plantar en nuestra casa.

As a renter, it is difficult to make property decisions or changes, but I'd like to see better care of the trees on the property.

The costs associated with the maintenance of trees is a significant barrier for many residents. Communities across Los
Angeles are in desperate
need of increased tree cover,
especially in lower income
neighborhoods. Trees should
not just be for the rich.

I'm shocked that school kids are expected to play outside in the sun, on hot school playgrounds, when there are NO trees or shade cover.

The desert needs trees too.

### Data spotlight

44%

of renters expressed a need to educate their landlord or property owner on how to care for trees in their yard.

79%

of respondents said shade and cooling are benefits of trees that matter most to them.





### Goal 2

A community forest that is collaboratively managed across jurisdictions to support biodiversity and protect against regional threats.

he community forest may be made up of individual trees located in and managed by different jurisdictions, but much like a natural forest, the community forest functions as a cohesive regional unit without regard for jurisdiction. For example, an invasive pest in one neighborhood can have an impact on other trees miles down the road. When wildfires occur, how trees and the Wildland Urban Interface (WUI) are managed by one city will impact the one next door.

The network of trees also has regional benefits,

such as supporting a

vast and biodiverse web of life, from insects to birds to mammals. Because of this, managing trees regionally requires coordination between the various agencies and municipalities across LA County that work with trees. It also means we all share in the responsibility to care for trees, including trees in front and back yards, parking lots, shopping centers, and on publicly and privately managed land. Regional community forest management is vital to maximize the benefits and reduce the potential hazards of trees across LA County.

### 2.1 Biodiversity

The community forest is an ecosystem where the diversity of trees supports an even greater diversity of other plants, animals, and fungi. Within LA County there are more than 4,000 species of plants and animals, many dependent on resources provided by the community forest. A complex web of interactions exists within this world hidden in plain sight. Small organisms burrow in wood, reside in fallen leaves, and subsist on sugars and other nutrients provided by trees. Predatory insects, birds, amphibians, and mammals, feed on these organisms, and are also dependent on trees for shelter and a place to raise their young. Trees in community forests provide a habitat for migratory species and pollinators, often serving as the biodiversity hubs of community areas. 15 When communities lack adequate canopy cover or diverse tree species, such as in historically redlined communities, the impact on wildlife diversity and on opportunities to connect with nature can be significant.

Not all trees provide the same benefits to local wildlife. Some tree species, such as the coast live oak (Quercus agrifolia), western sycamore (Platanus racemosa), and elderberry (Sambucus spp.) have existed in Los Angeles' hills and valleys for thousands of years. They have developed cascades of ecological functions with local insects, birds, mammals, and microorganisms. Some native trees can host

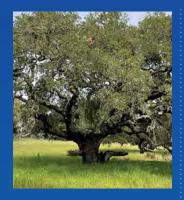
numerous insect species, which in turn feed birds and other predators, than introduced tree species. <sup>16</sup> In addition to species, location matters for the ecosystem impact of a tree. Trees or groups of trees can serve as steppingstones and corridors for plants to spread and animals to move between fragmented patches of green spaces such as parks and natural areas. Thoughtful species selection, protection, and planning of our community forest can help support equitable biodiversity throughout the entire LA region.

The County recognizes the importance of protecting California's native trees to preserve and enhance biodiversity. The Department of Regional Planning (DRP) has ordinances, plans, and programs in place to protect certain trees within County managed areas on both public and private land. Two important policies that protect native trees, and therefore biodiversity, are the Oak Tree Ordinance and the Significant Ecological Areas Program. The Oak Tree Ordinance protects all oak tree above a certain size throughout unincorporated LA County, on both public and private land. The Significant Ecological Areas Program designates and protects areas within LA County with irreplaceable biological resources. This includes protections for various native tree species within the SEAs, including Joshua trees, juniper trees, riparian trees, coniferous trees, and upland hardwood trees. For more information about these policies, see the County's Tree Protection Regulations link on the resource page of the CFMP website.

<sup>15</sup> UNECE, 2022

<sup>16</sup> Tallamy, 2022; Milman, 2022

### Selected Native Tree Species of LA County



Coast Oak Live Quercus agrifolia

The Coast live oak is a keystone species throughout California. It is sometimes referred to as a "terrestrial coral reef" because of the vast amount of life that depends on it. It is naturally found on hillsides and near creeks. The Coast live oak is a great park tree, and can also be a great street tree in certain conditions.



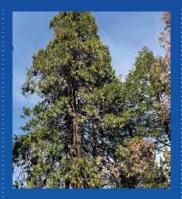
California Sycamore
Platanus racemosa

The California
Sycamore is a riparian
tree, meaning it
survives best close to
creeks and other
sources of freshwater.
In LA County,
Sycamores are often
found in parks. The
California Sycamore is
an important host
plant for the Western
Tiger Swallowtail
butterfly.



Modesto ash
Fraxinus velutina

The Modesto Ash is often found in the sandy soils of desert riparian areas. However, it tolerates a wide range of soil types, from very alkaline to acidic, allowing it to grow in harsh conditions. It can be a good choice to provide cooling shade over a house or sidewalk.



Incense Cedar
Calocedrus decurrens

The native range of the Incense Cedar spans from Baja California to Northwestern Oregon. Its common name derives from the aroma of its wood or crushed leaves, which acts as a natural insect repellent. The Incense Cedar is a slow growing tree that can live over 500 years.



**Toyon**Heteromeles arbutifolia

The Toyon is found in chaparral and woodland plant communities from Baja California to Southwestern Oregon. Toyon is also called "Christmas berry" because of the bright red berries it produces in winter, which attract a variety of wildlife, including cedar waxwings. It is a small tree or shrub that makes a great addition to a native garden.

Photos courtesy of "SelecTree. UFEI. 1995-2024. Cal Poly State University, San Luis Obispo. Accessed on Mar 27, 2024."







### Develop, update, and implement policies that support biodiversity through the preservation, protection, and expansion of tree canopy.

Lead Department: Department of Regional Planning (DRP)

**Partner Departments:** Chief Sustainability Office (CSO), Department of Public Health (DPH), Department of Parks and Recreation (DPR), Agricultural Commissioner/Weights and Measures (ACWM), and Los Angeles County Fire Department (LACoFD)

### Why it matters:

The community forest provides habitat and supports biodiversity across our urban ecosystem. Accordingly, LA County has plans, policies, programs, and ordinances to protect trees, especially trees with high biodiversity value such as oaks and other native species. Existing plans and ordinances require periodic review to ensure they are aligned with changing priorities and conditions, and new policies and programs can respond to gaps in tree protection and preservation needs. Plans, policies, and ordinances must be equitable, effective, easily understood, and enforceable to support LA County's community forest goals on public and private property.

TIMEFRAME	ACTION ITEMS
First steps (1–5 years)	<ul> <li>Develop a community education, outreach, and engagement program to increase public awareness of trees and biodiversity through the development of community science initiatives and a native "tree stewards" program.</li> <li>Update the County Oak Tree Ordinance, in partnership with local Tribes, to improve effectiveness in tree protection and administration.</li> </ul>
	<ul> <li>Assess the need to develop a local western Joshua tree conservation program, including a conservation plan, identification of mitigation areas, and a LA County protection ordinance, after the California Department of Fish and Wildlife finalizes the state level western Joshua tree conservation plan.</li> <li>Explore the development of a biodiversity target for this CFMP.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Explore developing a regional habitat connectivity plan that aligns with existing efforts and leverages the community forest.</li> <li>Explore developing an Oak Woodlands Ordinance based on the Oak Woodlands Conservation Management Plan.</li> <li>Explore opportunities for a tree protection program, including an incentive-based approach, that is applicable to private property.</li> <li>In partnership with the City of Los Angeles, explore establishing a countywide mitigation land banking program to conserve land, trees, and other natural resources.</li> </ul>



### 2.2 Wildfire

California's natural environment has evolved with fire, and many of California's ecosystems depend on and are adapted to it. Some native plants, including Ceanothus species, have seeds that can germinate only after exposure to the intense heat of fire or chemical components found in smoke and ash—they even produce flammable resins on their leaves that help fuel fires. <sup>17</sup> For thousands of years, California Native American Tribes have managed the land with controlled burns, and they continue to hold important knowledge about these practices today. <sup>18</sup>

Climate impacts like drought, extreme heat, and new tree pests and diseases can increase wildfire risk. In addition, accumulation of vegetation in forested areas, due to historical broad fire suppression, combined with higher levels of human ignitions in chaparrals, increase the risk of more frequent, extreme, and dangerous wildfires. Our region already has a significant history of large, damaging wildfires and, as development continues to expand farther into wildland areas, more buildings and people are in areas at risk of wildfire. These factors combine to create a greater need for wildfire resilience planning at a regional scale.

The Los Angeles County Fire Department (LACoFD) is the responsible agency for fire protection, suppression, and

management in the unincorporated areas of LA County, as well as several incorporated cities that contract with LACoFD. LA County also contains lands where the responsibility for fire protection lies with federal or state agencies, like the Angeles National Forest, State parks, as well as several Local Responsibility Area jurisdictions (e.g., incorporated cities). LACoFD works collaboratively to reduce wildfire risk to communities and manage Wildland Urban Interface (WUI) and Fire Hazard Severity Zones (FHSZ) areas.

This CFMP does not cover wildlands and the trees associated with those natural areas. However, trees in the WUI that are planted, cared for, and managed by people are a part of the community forest and included in the scope of this CFMP. Although any tree can burn in extreme fire conditions, flammability is influenced by factors such as tree species, branch size, leaf size, and leaf shape. Residents in WUI areas can reduce fire risk by selecting fire resistant trees, maintaining trees appropriately, and keeping trees sufficiently watered. Residents can also help by planting and maintaining drought-tolerant, fire-resistant vegetation that is properly spaced between structures and natural vegetation, called a fuel modification zone, to decrease wildfire threat.

<sup>17</sup> Project Learning Tree, 1999

<sup>18</sup> Keeley, 2002



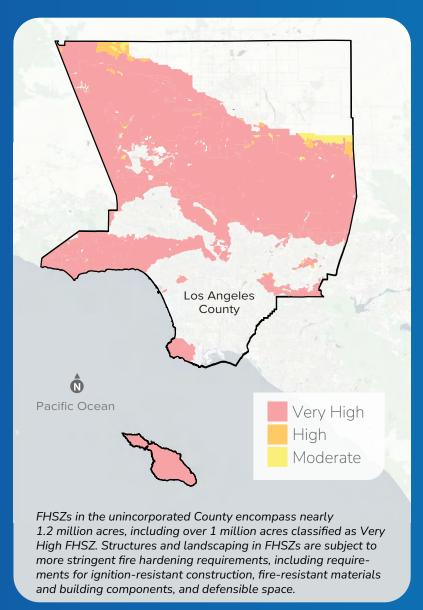


### Fire Hazard and the Wildland Urban Interface:

The Wildland Urban Interface (WUI) is the geographic area where urban development abuts undeveloped wildland vegetation. WUI areas where development intermingles with undeveloped wildlands are also known as "Wildland Urban Intermix," and large natural areas such as open space parks that are surrounded on all sides by development are known as "Wildland Urban Interior." Because of their proximity to wildland areas and associated vegetation, WUI areas are often located within Fire Hazard Severity Zones (FHSZ), the areas of LA County at the greatest risk of wildfire. FHSZs are classified as Very High, High, or Moderate risk, based on terrain, vegetation, climate, and other environmental conditions. In LA County, 19% of residents live within a Very High FHSZ, and an additional 31% live within a half a mile of a Very High FHSZ. Additionally, an estimated 1.2 million new homes are anticipated to be constructed in the highest wildfire risk areas of California by 2050, including many in the County. 19 Wildfires in the WUI can be particularly destructive and impact WUI communities on multiple levels, including loss of life and property, displacement, health impacts, air and water quality impacts, and other environmental concerns. LA County is one of the highest risk areas in the country for devastating WUI fires.

#### 19 Mann et al., 2014

### Fire Hazard Severity Zone



SOURCE: CAL FIRE Fire Hazard Severity Zones (FHSZRA\_23\_3), CAL FIRE State Responsibility Areas (SRA22\_2)









# Develop and distribute wildfire risk mitigation educational materials and implement communications strategies for wildland-urban interface communities and adjacent open space areas.

Lead Departments: Los Angeles County Fire Department (LACoFD),

Partner Departments: Chief Sustainability Office (CSO), Department of Regional Planning (DRP)

### Why it matters:

Trees and other vegetation types that are appropriately selected, sited, and maintained can mitigate hazardous wildfire conditions in the wildland-urban interface (WUI), limiting risk to people and property. As the risk of wildfire increases due to climate change, LA County can use existing guidelines, programs, and educational materials on wildfire risk mitigation to engage and educate residents in WUI communities and enhance resilience.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Coordinate with community partners to distribute locally relevant wildfire risk mitigation materials, including appropriate tree species selection and tree planting, maintenance, and spacing guidelines, and develop new materials as needed.</li> <li>Continue to work with community partners, such as Fire Safe Councils, to enhance community outreach and education around wildfire risk mitigation.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Continue to expand tree and defensible space inspection efforts in WUI areas.</li> <li>Seek partnerships with academia or research organizations to evaluate tree survival, infrastructure impacts, and other outcomes by tree species, siting, and management practices following wildfire events.</li> </ul>



# What is an invasive species?

A non-native species that can cause harm to the environment, socioeconomic systems, or human health. The species can be a plant, animal, pest, or other microorganism.

# 2.3 Invasive Species that Impact Trees

California acquires approximately six new invasive species every year. <sup>20</sup> While not all invasive species result in destructive losses to community forests, environmental conditions that are worsened by the effects of climate change, such as drought, extreme heat, fire, or heavy rains, can create ideal opportunities for invasive species to impact susceptible trees and cause more damage. As temperatures rise in LA County, invasive species that typically live in warmer climates can expand their ranges and spread rapidly, as their new habitats lack the natural predators that normally keep their populations in check.

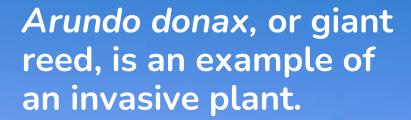
Certain invasive pests and plant pathogens are hard to see and can "hitchhike" easily between public and private property, or across city and County boundaries. Common activities such as sharing tree fruit, transporting firewood, and disposing of green waste can all inadvertently spread invasive species. There are several strategies to minimize the threat of invasive species to our community forests:

• Tree species diversity – A community forest with high tree species diversity offers more resiliency to threats from invasive pests. Research indicates that the community forest should be comprised of no more than 5% of any one tree species to be resilient against invasive threats.<sup>21</sup>

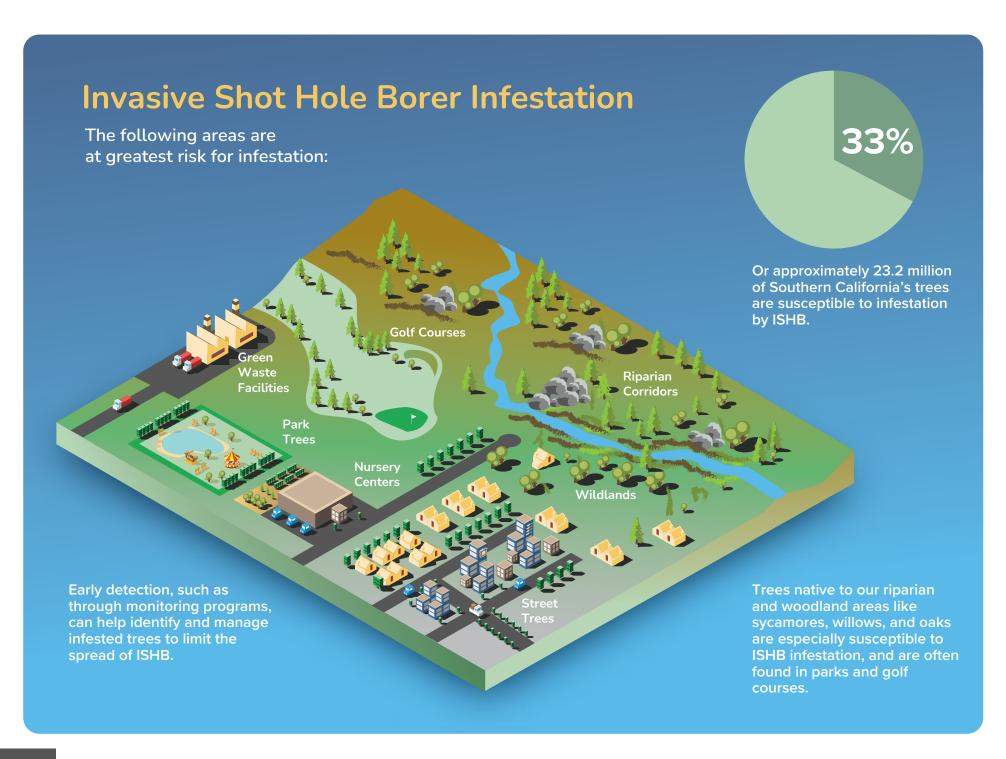
<sup>20</sup> Project Learning Tree, 1999

<sup>21</sup> Keeley, 2002

- Early detection The earlier a new pest is detected, the better the chance its spread can be controlled. Early detection requires regular monitoring, trapping, and identification, which is often performed by specialized professionals. But early detection also depends on community members to identify signs of a new infestation, such as a homeowner noticing a sick-looking orange tree, a utility worker clearing diseased or dying tree limbs from power lines, or a landscaper noticing signs of an infestation while performing tree care work on private property.
- Rapid response When a new infestation is detected, it is important to act quickly. Pest management response in the LA region operates differently depending on the severity of the pest. Pest quarantines are coordinated through federal, state, and County partnership. Other management options, such as chemical treatments or tree removal, are used only if these management approaches are proven to control the pest. There can be hurdles to acting quickly, however. For example, permits from multiple agencies may be required before deploying traps, entering public or private properties, or removing trees.







## Invasive Species in the County ISHB and GSOB

Invasive shothole borer (ISHB) and gold spotted oak borer (GSOB) are two invasive tree pests detected in the LA region around 2010 that present significant threats to the region's trees.

- **ISHB:** While some invasive pests impact just a single type of tree or only a handful of species, ISHB can infest more than 200 tree species, including nearly 20 locally native species. More than 23 million (30%) of Southern California's trees are susceptible to infestation by ISHB.<sup>22</sup>
- **GSOB:** Since its introduction in 2004 in San Diego County, GSOB has killed tens of thousands of oak trees in Southern California.<sup>23</sup> Most likely introduced to the area from a bundle of infested firewood, GSOB infests California native coast live oak, canyon live oak, and California black oak trees. Widespread oak loss is detrimental to natural areas and wildlife that rely on oaks for habitat and food sources.



## The Bad Beetle Project:

Interested in protecting trees and natural areas in the region? Community members can be a part of the Bad Beetle Project with the Santa Monica Mountains Resource Conservation District. Volunteers can receive training in how to identify invasive beetles, how to identify susceptible trees, and how to capture observations on the digital community science program iNaturalist. Visit http://rcdmm.org for more details.

<sup>22</sup> McPherson et al. 2017

<sup>23</sup> University of California Riverside Center for Invasive Species Research. 2013

# **2.3**

# Collaborate with partners, including the City of Los Angeles, other cities, regulatory agencies, local universities, subject matter experts, and others on a coordinated regionwide response to invasive threats.

**Lead Departments:** Agricultural Commission/Weights and Measures (ACWM), Los Angeles County Fire Department (LACoFD) **Partner Departments:** Public Works (PW), Department of Parks and Recreation (DPR), Chief Sustainability Office (CSO), Department of Regional Planning (DRP)

### Why it matters:

Invasive pests, pathogens, and plants that threaten our community forest can spread rapidly throughout LA County and beyond, regardless of jurisdiction. A coordinated effort among regional partners to develop a shared approach to manage and respond to invasive tree pests will support consistent application of best management practices, clear lines of communication for early identification and response, and opportunities for knowledge and resource sharing. Many programs and resources exist in LA County that can be leveraged to support this effort and reduce potential canopy loss.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Form and convene a tree-related invasive threats working group comprised of regional partner representatives.</li> <li>Pursue funding to address County managed tree removal needs related to invasive shothole borer and gold spotted oak borer, including staffing and replacement tree planting and establishment.</li> <li>Offer educational workshops on invasive threats for communities in high infestation risk areas.</li> <li>Develop and implement communication and engagement strategies, including community science initiatives, using existing informational materials on tree-related invasive threats.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Explore the development of a "firewood ordinance" to reduce the spread of invasive pests through the movement of firewood.</li> <li>Explore developing green waste best management practices to reduce the spread of pests from green waste reuse and disposal.</li> <li>Partner with the City of Los Angeles, academia, research organizations, and others to identify high, medium, and low pest risk impact areas in LA County, and coordinate with local municipalities on the most relevant integrated pest management practices for high-risk pest impacts.</li> </ul>

#### 2.4 Regional Coordination

Regional issues like biodiversity, wildfire, and invasive pest management require a multi-jurisdictional approach. The County spans over 2 million acres, with 186 different public and private agencies owning or managing the 920,716 acres of public land within the region. Each agency makes decisions and creates policies that impact the community forest, and it can be difficult for residents to know which entity has control over different decisions related to the community forest. Aligning engagement and education strategies will help reduce confusion and improve accountability, communication, and transparency, while aligning technical resources such as research capacity and best practices will improve sustainability across our interconnected regional community forest. Collaboration among landowners also promotes inclusivity and empowers local communities to participate in decision-making related to the regional community forestry. Some of the main public decision-making landowners and the land types they manage in the County include:

- **Federal:** Manages public land such as the Angeles National Forest and desert lands in Antelope Valley.
- **State:** Manages land types including beaches, reserves, historic sites, and parks.

- **County:** Manages unincorporated areas including open spaces such as parks, beaches, golf courses, and others.
- **Cities:** 88 incorporated cities manage land within their own jurisdictional boundaries across LA County.
- **Special Districts:** Special districts include police, fire, school, water, and resource conservation districts, each of which manage different land and facility types and have different roles and responsibilities.

Additionally, many non-profit organizations manage land in the County, including conserving and managing various natural open spaces and park sites. Electric utilities also manage land in the County are responsible for tree maintenance around power lines across their service territories. Additionally, there are thousands of private landowners in the County that make decisions about trees. While most local Tribes in LA County do not hold title to their ancestral lands due to a legacy of violent displacement, the County and other decision-makers should consult local Tribal governments on decisions related to land management, including community forest management.



## **2.4**

## Establish a regional framework to support trees across jurisdictions.

Lead Departments: Chief Sustainability Office (CSO), Department of Public Health (DPH)

Partner Departments: Department of Regional Planning (DRP), Public Works (PW),

Department of Parks and Recreation (DPR), Agricultural Commissioner/Weights and Measures (ACWM),

Los Angeles County Fire Department (LACoFD)

#### Why it matters:

LA County is a patchwork of incorporated cities and unincorporated communities that spans over 4,000 square miles. For those who live and work across LA County, it can be difficult to know which regulations apply and which resources are available from place to place. LA County can help establish a regional framework that facilitates the standardization of policies and practices and simplifies access to tree-related resources.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Work with cities, Councils of Government, Tribes, and other local agencies to identify resources, information, and communications needs for meeting shared priorities.</li> <li>Provide technical assistance to cities and other local agencies to support the development and adoption of regionally consistent community forest management plans and policies.</li> <li>In partnership with the City of Los Angeles, support the development and implementation of regional community forest communications and messaging strategies.</li> <li>Advocate for improved tree management and maintenance practices around utility infrastructure.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Partner with the City of Los Angeles, academia, nonprofits, and research organizations to address regionally relevant community forest data gaps, such as information about climate appropriate tree species selection, infrastructure conflict reduction, air quality, heat, other health impacts, and more.</li> </ul>

## WHAT WE HEARD

#### Community feedback

Many neighbors do not know how to take care of trees or trim them.

They are fire hazards!

Every time I see a heritage oak (Coast or live) I am awed by how it's the perfect 'apartment building' for our native wildlife.

Many citrus trees in the area are being affected by citrus greening and other pests.

I've seen many of the mature trees in my neighborhood cut down because they were on private property. We need rules protecting private trees.

Se necesitan sembrar los arboles con intencion y cuidarlos bien especialmente cuando esten vunerables a los plagas.

It's difficult to know who is responsible for what spaces and what we can do as renters and the public to support tree care.

#### Data spotlight

63%

of respondents said habitat for wildlife is a benefit of trees that matters most to them.



# County Tree Management

**76** 

#### Goal 3

A County managed community forest that is maintained with best practices and expanded for social, cultural, and ecological benefits.

A County is committed to leading by example when it comes to the trees it most directly controls – County managed trees on County-owned property. These trees represent a sizable proportion of the County's overall tree canopy, and their impact is particularly important in neighborhoods with high canopy need. Since County managed trees can be found across many communities, LA County departments have an important role to play in both improving tree equity and maintaining the health of the community forest.

The two departments responsible for the most County managed trees are Public Works (PW), which manages trees in County rights-of-ways, and the Department of Parks and Recreation

(DPR), which manages trees in County parks. Other LA County departments that also manage trees include the Internal Services Department (ISD), Department of Beaches and Harbors (DBH), and County Libraries (Libraries). All LA County departments that manage trees should select, plant, establish, and maintain their trees according to industry best management practices as shown in Table 3-1. Each department also has unique opportunities and challenges when it comes to managing trees. This CFMP provides a detailed look at LA County's largest tree inventories: the street trees managed by PW and the park trees managed by DPR. It also explores the role of ISD, DBH, and Libraries in managing LA County's trees.

Table 3-1. Tree Life-Cycle Management Activities

MANAGEMENT ACTION	DESCRIPTION	RECOMMENDED PRACTICE
Nursery Selection	The process of inspecting trees before selecting them at a nursery to ensure that trees are healthy, free of pests and diseases, and have solid root formation.	Have an arborist on staff or a consulting arborist inspect trees at the nursery to ensure trees meet specifications before they are purchased and delivered to the project site.
Planting	The process of planting a young tree and the beginning of a long life in the ground. Practices done at this stage will have an impact on the rest of the tree's life.	Ensure that the species selected has growth and survival traits that match specific site conditions, including available sunlight, water accessibility, and surrounding infrastructure. To prep site, dig a hole the depth of the root ball and twice the width, allowing the root ball to settle 2 inches above grade. Stake the tree in a manner that still allows tree to movement in the wind.
Establishment Care	Providing supplemental watering and care for at least 3 years after planting.	Provide weekly supplemental watering for the first three years after planting, and remove weeds, add mulch, and fix stakes and ties as necessary. Consider additional watering in years 4 and 5 after planting if those years have low rainfall.
Young Tree Pruning	The practice of selectively pruning branches to remove structural defects and poor branch attachments, and to encourage the development of a strong central leader on newly planted trees.	Perform young tree pruning approximately three years after planting and continue pruning as needed until the tree develops appropriate structure for the species.
Mature Tree Pruning	The practice of regularly pruning mature trees to clear dead, dying, and damaged branches. Trees may also be pruned at this stage to maintain safety and accessibility in the right-of-way.  Perform tree pruning every 5-7 years to follow arboricultur management practices for a safe community forest.	
Removal and Replacement	Removal of trees for a variety of reasons, including infestation with pests or disease, posing a hazard to surrounding people or property, or natural end of life of the tree. When a tree is removed, it should be replaced.	Remove trees identified for removal in a time frame consistent with the tree's level of risk and condition. Replace the removed tree with the tree(s) needed to recover and increase lost canopy over time, prioritizing native trees and large trees wherever feasible. Consider alternative site design and depaving opportunities when planting replacement tree(s) to maximize the size of the planting location.
End of Life Repurposing	The repurposing of tree debris to create a new product such as lumber, mulch, or compost.	Identify opportunities for trees to have a 'second life' after removal, whether as mulch, urban wood, compost, or other means that reduces the release of carbon from decaying wood and diverts waste from landfills.

#### Tree Management

The Department of Regional Planning (DRP), the LA County Fire Department (LACoFD), and Agricultural Commissioner/Weights and Measures (ACWM) do not maintain their own trees, but they each have a critical role to play in the regional management of LA County's community forest. The roles of these departments, including tree protection, wildfire protection, and invasive pest management, are covered in Chapter 2. Additionally, the Policies for Livable, Active Communities and Environments (PLACE) program of the Department of Public Health (DPH) supports policy changes for a healthier built environment, including through community forest planning interventions. For this reason, DPH is a lead or partner department on many actions in the CFMP.



#### **Our Street Trees**



#### **Mature Tree Pruning**

Roughly **95**% of all tree work is scheduled, and **5**% is reactive, initiated by on-demand requests. Palm species are pruned every two years, fast growing species every three years, and slow growing species every six years, which meets arboriculture best management practices for tree pruning for municipal tree inventories.

#### **Tree Inventory**

Public Works-managed trees store the amount of carbon equivalent to the emissions from 63,000 automobiles in one year.

Street trees help slow and store nearly 7 million gallons of stormwater, reducing the amount of polluted water that reaches streams and the ocean.

The three most common species in the street tree inventory are crape myrtle, coast live oak, and sweetgum.

#### **Trees Managed**

Public Works manages over **170,000** trees throughout LA County's unincorporated public rights-of-way, including streets, parkways, and medians.

#### **Funding**

The Fiscal Year 2022/2023 budget is **\$22.86 million**, the equivalent of **\$134** per tree.



## 3.1 Street Trees and Trees in the Right-of-Way

When you're walking to the bus stop, driving to work, or sitting on your front porch, you're likely to encounter street trees. Street trees, or right-of-way trees, are publicly managed trees along roads, sidewalks, and medians. Street trees can improve the pedestrian experience by providing cooling, traffic calming, and natural beauty along walking routes to schools, at transportation stops, and along commercial corridors. They also serve as corridors for birds and other wildlife to move across the County from one natural area to another. Street trees in residential neighborhoods can shade houses and apartments, lowering indoor

temperatures and reducing the need for expensive and energy intensive air conditioning. The need for street trees is highest in the disadvantaged communities that have low canopy cover due to a legacy of disinvestment.

County street trees are managed by the Public Works (PW) Road Maintenance Division. PW tracks its inventory of street trees using a metric called the "stocking rate." The stocking rate is calculated by dividing the number of trees planted by the total number of spaces available for trees. A 100% stocking rate would mean that all available right-of-way spaces are planted with trees. The current PW street tree stocking rate is 85%.

LA County is setting a target to achieve a street tree stocking rate of 95%. This would represent a significant investment in the expansion of LA County's street tree inventory, adding 20,000 new street trees across unincorporated communities. However, stocking rate alone does not tell the whole story because it does not







include a measure of canopy cover size or tree species diversity. Therefore, an increase in stocking rate must work together with several other strategies, including the maintenance and protection of mature trees and the planting of large-stature tree species. Large mature trees provide significantly more canopy cover than new young trees, and large stature tree species that have wide canopies at maturity provide more benefits than small stature trees. Planning for and planting largestature trees, in many cases, requires alternative site design and depaying to provide adequate growing space. Alternative site design and depaving also provide opportunities to incorporate green infrastructure to capture stormwater. LA County will prioritize investments in street tree planting and management for communities with the highest canopy need.

In addition to increasing its stocking rate and associated strategies, LA County can pursue a more equitable street tree canopy by increasing its establishment care period. The establishment care period is the amount of time for which newly planted trees receive regular supplemental watering from PW, which is currently a minimum of 90 days, but can be longer depending on the source of funding. Once the establishment care period ends, the responsibility of providing supplemental water falls on the adjacent property owner or resident until the tree is fully established, which is at least three years after planting. This is a significant burden for many LA County

residents, and often results in rejection of new street trees by adjacent residents or the death of street trees that are not adequately watered. An establishment care period of at least three years from the time of planting gives new trees time to establish their roots so that they require much less frequent or even no supplemental watering to establish in the landscape. By increasing the establishment care period to at least three years, LA County can take the watering burden off residents and support a more equitable distribution of street trees in unincorporated communities.

PW will need significant funding to make progress towards its stocking rate target and associated strategies, and to increase its establishment warranty period. Currently, management of the street tree inventory is funded through the California gas tax. As California pursues its climate goals, proceeds from the gas tax are expected to decrease over time.

Table 3-2 displays the projected funding need required to increase the PW street tree program by an additional 20,000 trees over forty years, with the additional trees being planted and established over the first twenty years. The budget projection includes estimated future expenses to achieve arboriculture best management practices and assumes an annual 3% budget increase. This analysis shows that adding 20,000 trees to the PW inventory will cause the funding need to exceed the projected budget over the first twenty years, primarily due to costs associated with planting and establishing new trees. A significant new investment will be required to meet the stocking rate target over the first twenty years. The analysis shows that at year 30 and beyond, the funding need will begin to stabilize as the newly planted trees will require less establishment care, and the projected budget will exceed the projected need.

Table 3-2. PW Budget Projections for Adding 20,000 Trees

	YEAR 1	YEAR 10	YEAR 20	YEAR 30	YEAR 40
Projected Need	\$24,330,000	\$45,810,000	\$44,950,000	\$41,640,000	\$43,790,000
Projected Budget	\$22,860,000	\$29,030,000	\$35,890,000	\$42,750,000	\$49,610,000
Budget Gap	-\$1,470,000	-\$16,780,000	-\$9,060,000	\$1,100,000	\$5,820,000



## ACTION **3.1**

## Equitably expand the County street tree canopy with a focus on improving its resilience and enhancing its biodiversity, shade, and stormwater management benefits.

**Lead Departments:** Public Works (PW)

Partner Departments: Chief Sustainability Office (CSO), Department of Public Health (DPH),

Department of Economic Opportunity (DEO)

#### Why it matters:

County managed street trees provide a variety of benefits to LA County residents. These benefits can increase with more trees and canopy cover. By increasing its stocking rate, with a focus on prioritizing large stature trees and communities with the highest canopy need, PW can expand the tree canopy it manages and the benefits it provides, including biodiversity and access to nature, shade and cooling, and stormwater management.

TIMEFRAME	ACTION ITEMS		
First steps (1 – 5 years)	<ul> <li>Pursue funding to expand the street tree inventory, maximizing opportunities for large stature trees and associated depaving and green infrastructure interventions.</li> <li>Pursue funding to expand the establishment care period to at least three years.</li> <li>Increase staff capacity to employ current best management practices in all tree planting, care, and maintenance activities, supported by adequate training and equipment.</li> </ul>		
	<ul> <li>Work with CSO and DPH to enhance community outreach and engagement around street tree planting and maintenance.</li> <li>Align street tree species selection with CFMP species list recommendations.</li> <li>Explore opportunities to integrate CFMP workforce development actions in County pipeline programs to meet the County's workforce needs of PW, while expanding career pathways and promotional opportunities for priority populations and youth.</li> </ul>		
Looking ahead (5+ years)	<ul> <li>Secure permanent funding mechanisms to support ongoing maintenance of the existing street tree canopy and to continue to expand the street tree inventory.</li> <li>Partner with the City of Los Angeles on establishing a formalized tree risk assessment program for street trees.</li> </ul>		

#### 3.2 Park Trees

Parks play a unique and critical role in our community forest. Public parks are some of the most well-used and well-loved spaces for recreation and respite in LA County, offering opportunities for residents across the region to experience and engage with trees and green spaces. Unlike street trees, which must compete with paving and other infrastructure priorities for space, park trees often have plenty of space to grow. This means that parks offer some of our most important opportunities for large stature trees that provide lots of value but may not easily fit into more densely developed locations. Because parks include not only trees but other kinds of green spaces and bodies of water, they can serve as important habitat hubs for the many types of wildlife that require large and complex ecosystems to thrive.

DPR operates a network of over 70,000 acres of parkland, including 183 parks and more than 200 miles of multi-use trails for hiking, biking, and horseback riding. DPR's equity and planning efforts are guided by the Parks Needs Assessment (PNA), released in 2016, and the Park Needs Assessment Plus (PNA+), released in 2022. Together, these two comprehensive reports assessed the need for local and regional parks and open spaces across LA County and identified the most park-poor and tree-poor communities to inform planning, decision-making, and resource allocation for parks and recreation.

Historically, County park tree management is concentrated in the Regional Agency by the Tree Maintenance Section led by a tree district superintendent.







## Our Park Trees

Trees Managed DPR actively manages 116,000 trees in parks throughout the County. Approximately 107,000 additional trees exist in County open space that are not actively managed.

**Funding** 

DPR FY22/23 tree management budget is \$2.5 million.

**Staffing** 

The four DPR field agencies share one tree crew and contract out the remaining maintenance work (up to their funding limit) that cannot be completed by the limited DPR staff. The tree crew has 12 staff, four of which are ISA Certified Arborists. DPR's Planning and Development agency also have ISA Certified Arborists on staff.

Tree Inventory\*

Park trees store the amount of carbon equivalent to the emissions from 54,800 automobiles in one year. Park trees help slow and store 5.3 million gallons of stormwater, helping reduce the amount of polluted water from reaching streams and the ocean.

Mature Tree Pruning

About 93% of tree pruning is performed on a reactive cycle and 7% of tree pruning is performed on a regular pruning schedule.

<sup>\*</sup> Environmental values only provided for actively managed trees with complete tree data

An analysis of DPR's budget, combined with information from staff about tree management activities and costs, and in comparison to urban forest management standards shows that DPR is severely underfunded for tree management. DPR has made requests for budget increases the last several years to address this need that to date have not been met. Due to this constrained budget, DPR is limited to reactively managing high-risk trees and trees that have already fallen. The current program is unable to proactively manage its tree inventory to keep trees healthy and safe, and it is unable to systematically plant new trees when old ones die or are removed. This problem compounds over time, as the proportion of new young trees decreases and more trees in the DPR inventory reach the end of their lifespan and begin to deteriorate. Because of this, the DPR tree inventory faces a recorded average net loss of approximately 650 trees every year; however, it is likely additional trees require removal.

To support County park trees in their role as a critical part of our community forest, LA County is setting a target to achieve no net loss of trees in County parks. DPR can pursue several strategies to support this target. These include increasing staff capacity of the tree maintenance section and consider additional positions such as an Urban Forester, establishment and funding of a tree maintenance cycle that meets arboriculture best management practices, and establishment and funding of a tree planting program that replaces removed trees at a sustainable ratio, meaning that more than one tree is planted for each tree that is removed. These strategies are contingent on securing substantial and ongoing budget investments in tree management at DPR. Once no net loss of trees is achieved at County parks, a target for expansion of the County Park tree inventory can be identified and pursued. Table 3-3 below reflects the budget needs of DPR over the next 40 years to achieve best management practices and a target of no net loss of trees.

Table 3-3. DPR Budget Projections for Achieving No Net Loss of Trees and BMP's

	YEAR 1	YEAR 10	YEAR 20	YEAR 30	YEAR 40
Projected Need	\$9,568,000	\$14,777,000	\$14,782,000	\$15,485,000	\$16,106,000
Projected Budget	\$2,500,000	\$3,175,000	\$3,925,000	\$4,675,000	\$5,425,000
Budget Gap	-\$7,068,000	-\$11,602,000	-\$10,857,000	-\$10,810,000	-\$10,681,000





## Manage County park trees using current best management practices and support park trees as a resource for health, biodiversity, and resilience.

Lead Departments: Department of Parks and Recreation (DPR)

Partner Departments: Chief Sustainability Office (CSO), Department of Public Health (DPH), Department of Economic Opportunity (DEO)

#### Why it matters:

County parks host thousands of trees that are critical to the overall community forest. These trees provide benefits to people and wildlife alike, but they must be properly maintained to maximize their benefits and reduce potential risks and hazards. Investing in park trees will help ensure that all residents enjoy the benefits of park trees today and for the future, while increasing the safety of trees in County parks.

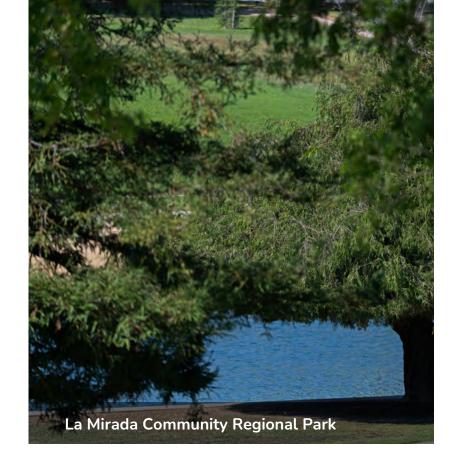
TIMEFRAME	ACTION ITEMS		
First steps (1 – 5 years)	<ul> <li>Continue to pursue funding to address deferred tree maintenance, tree planting, and establishment care practices for trees in County parks.</li> <li>Explore options for increasing park tree management capacity by increasing dedicated staff and budget.</li> <li>Implement County park priorities related to trees identified in the Parks Needs Assessment and Parks Needs Assessment Plus, such as development of new parks and planting of additional trees in parks in high need communities.</li> <li>Employ current arboriculture best management practices in all tree planting, care, and maintenance activities, supported by adequate staffing, training, and equipment.</li> <li>Explore opportunities to integrate CFMP workforce development actions in County pipeline programs to meet the County's workforce needs of DPR, while expanding career pathways and promotional opportunities for priority populations and youth.</li> </ul>		
Looking ahead (5+ years)	<ul> <li>Explore and secure permanent funding mechanisms to support ongoing maintenance of both the existing and an expanded park tree inventory.</li> <li>Collaborate with the City of Los Angeles on establishing a formalized tree risk assessment program for park trees.</li> </ul>		

## 3.3 Other County Managed Trees

While right-of-way and park trees represent LA County's largest tree portfolios, several other departments at the County are also involved in tree management. Internal Services Department (ISD) and the Department of Beaches and Harbors (DBH) have significant numbers of trees under their jurisdiction, and LA County Libraries (Libraries) often have trees on their property. Because these departments have different missions, roles, and responsibilities than PW and DPR, they also have unique tree challenges, as well as unique tree opportunities.

Internal Services Department: ISD provides custodial and landscape services for 150 LA County facilities, including management of nearly 7,000 trees. Many of these facilities are office buildings for LA County departments. Many facilities ISD manages have large areas of landscaping associated with them, and they are spread throughout LA County in unincorporated areas and incorporated cities.

**Department of Beaches and Harbors:** DBH manages and operates 30 miles of noncontiguous coastline from northern Malibu to San Pedro. Tree management within DBH is focused on unincorporated Marina del Rey, a coastal community with 800 acres of land and water.



State and federal regulations play a significant role in tree management in Marina del Rey because of its location along key migratory bird routes. Under these regulations, tree management decisions are focused on priorities related to habitat protection and biodiversity. For example, DBH focuses on maintaining but not increasing existing canopy cover because an increased canopy can create more nesting areas for predatory birds, which could negatively impact protected bird species during the breeding and nesting season.





**County Libraries:** There are 84 community-based LA County library outlets, serving all unincorporated areas and 51 of the 88 incorporated cities. Libraries are community hubs where people spend time, meet, and gather. Many libraries feature gardens or other landscaping on their property, including trees.

ISD, DBH, and Libraries manage trees that are important parts of our community forest and they have unique opportunities to provide even more benefits to LA County communities. For example, ISD, DBH, and Libraries facilities all present opportunities to pilot landscaping projects that prioritize not only native trees, but also native plants that support our local ecosystem. This can expand equitable access to nature and wildlife for residents across LA County and provide opportunities for partnerships with local Tribes for planning, maintenance, and harvesting of culturally significant materials. ISD and Libraries facilities are also potential candidates to pilot the planting of fruit trees on public property, supported by partnerships with community organizations to manage and steward the fruit trees.

Because tree management is a relatively small proportion of the missions of these departments compared to PW and DPR, they face additional challenges. ISD, DBH, and Libraries do not have dedicated tree budgets, and they lack in-house arborists and tree specialists. While DBH has established maintenance contracts with consulting arborists to manage its trees and a well-established tree management program, ISD and Libraries have maintenance contracts that vary from facility to facility, and tree management is typically addressed on an as-needed basis.

#### **Fruit Trees:**

People across the County value fruit trees for their social, cultural, and ecological significance. With proper care, many different types of fruit trees thrive in our region, including citrus, avocados, and pomegranates. During the engagement process for this CFMP, many County residents shared personal stories about the importance of fruit trees in their lives. Fruit trees can be particularly valuable in areas of LA County that lack access to fresh fruit and other nutritious foods, known as "food deserts." Fruit trees require extra care to maximize their benefits to the community while minimizing potential issues such as pests and litter from excess fruit. However, with proper planning, community residents and community organizations can be partners in the stewardship and maintenance of fruit trees on public property.





## Strengthen tree management resources for ISD, DBH, and Libraries, and pilot strategies to use the community forest as a food and cultural resource.

Lead Departments: Internal Services Department (ISD), Department of Beaches and Harbors (DBH), and Libraries Partner Departments: Chief Sustainability Office (CSO)

#### Why it matters:

The trees managed by the Internal Services Department (ISD), Department of Beaches Harbors (DBH), and County Libraries (Libraries) are not only an important LA County resource but also an opportunity to more closely connect people, culture, and nature. Current monitoring and management practices vary across these departments. There are innovative strategies that can be piloted at sites that have close touch points with the community, including stewarding fruit trees and partnerships with local Tribes. Thoughtful management of these trees and piloting new programs with the community could significantly expand the benefits these trees provide.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Inventory all trees managed by DBH, ISD, and Libraries.</li> <li>Develop department-specific tree management plans, including pruning cycles and sequential planting plans, for ISD and Libraries.</li> <li>Plan and implement native tree and landscaping projects at LA County facilities, including through partnerships with Tribes, that can include educational materials and interpretive signage or access for harvest and gathering of native plant materials.</li> <li>Explore ways to secure access to an arborist for ISD and Libraries through contracting, sharing resources with other departments, or other mechanism.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Pilot a publicly accessible fruit tree program at an LA County facility, considering sites such as libraries, museums, community gardens, and community centers, in partnership with a local community group to steward the trees.</li> <li>Expand native tree and landscape design and practice to additional County managed facilities.</li> </ul>

## WHAT WE HEARD

#### **Community feedback**

I think it is crucial to plant more native street trees, as they provide many benefits for people and animals.

Parks should be a place full of trees where one could go after a long day and enjoy the shade, good air, and have a nice walk. There is community-wide demand for more trees along streets and sidewalks to encourage walking, especially among seniors, by providing shade and a more pleasant walking environment.

Why can't we have fruit and nut trees in public spaces?

Que los arboles que ponen sean de los frutales.

#### Data spotlight

Of the survey respondents who live in unincorporated LA County are satisfied or very satisfied with street trees.

64%

Of the survey respondents who live in unincorporated LA County are satisfied or very satisfied with park trees.

Unincorporated County residents were least satisfied by the number of street and park trees in their neighborhood.





#### Goal 4

A community forest that provides economic opportunities and is supported by a skilled local workforce.

sustainable community forest requires a skilled and knowledgeable workforce that can manage and care for trees throughout their lifecycle. Careers can focus on seedlings and planting, like a nursery technician job; maintenance and care, like a tree care specialist role; reclaimed wood, such as a woodworker; or professional and technical roles such as planning, research, grant writing, and much more. All these types of work and workers, which make up the "urban forest economy," require different sets of skills, education, and training.

Equitably expanding the urban forest economy in LA County requires strengthening career pathways for tree maintenance providers, increasing local nursery capacity, and growing the emerging sector of urban

wood reuse within the LA region. With thoughtful planning and investment, the County can promote equitable access to these career and economic opportunities, especially for youth and for populations that are marginalized and underserved. LA County can leverage existing programs; partner with educational institutions, community-based organizations, and private industry; and expand or create new programs to meet existing and future workforce and economic development gaps. Through these strategies, LA County can build an equitable urban forest workforce, tapping the potential of its diverse population while strengthening its economy, providing life-changing opportunities for residents, and building a more resilient community forest.

## What is an Arborist?

A Certified Arborist is a professional who has been recognized by the International Society of Arboriculture (ISA) as possessing the ability to provide for or supervise the management of trees and other woody plants in residential, commercial, and public landscapes. In 2020, there were an estimated 10,100 employees in California in the "Tree Trimming and Pruning" occupation, which includes arborists as well as tree surgeons and tree trimmers. The job market for these occupations is expected to grow quickly, by 14% between 2020 and 2030.24

24 DEO, 2024









#### **Place-Based** Perspective

#### Valuing Tribal Knowledge in the Workforce Development Pipeline

Local Tribes have been stewards of this land for thousands of years, accumulating generations upon generations of ecological and geographical knowledge of what is now LA County. Yet Tribal knowledge is often overlooked or ignored in formal landscape management, including in LA County policies and practices. To disregard this knowledge, sometimes known as Traditional Ecological Knowledge (TEK), is not only a failure of representation, but also a missed opportunity to improve the landscape practices of our workforce, including for the community forest. The knowledge held by local Tribes touches every aspect of community forest management and can inform the urban forest workforce of tomorrow. Valuing Tribal knowledge includes recognition and compensation for expertise, such as through formal partnership with Tribes for training, skills building, knowledge sharing, and career opportunities.

#### 4.1 Tree Maintenance Providers

Tree maintenance is a field that is quickly growing, and providers perform a wide variety of jobs that support a healthy community forest. Their services include seed collection and propagation, tree planting and watering, young tree structural pruning, watering, weed control, health monitoring, mature tree pruning, tree debris abatement, tree removal, and end of lifecycle urban lumber harvesting. Each of these maintenance practices requires specialized skills, knowledge of tree biology and horticulture, use of specialized equipment, and familiarity with emergency and safety protocols.

One of the most well-established workforce development pathways for tree maintenance providers is through conservation corps programs. LA County is home to multiple conservation corps programs, where members can receive workforce training in areas such as tree planting and establishment care, wildfire prevention and recovery, pest and disease control, forest health management, and riparian restoration. Conservation corps programs also provide wraparound services to support personal and career development, work ethic development, and community service and volunteerism, which are especially valuable for

youth and marginalized populations who lack access to such career-supporting resources.<sup>25</sup>

In addition to joining conservation corps, aspiring tree maintenance providers can also seek out academic opportunities. Some programs, like the University of California Los Angeles Extension Program, provide handson training focused on tree identification, evaluation of tree hazards, and proper tree care, maintenance, protection, selection, and planting. Community colleges in LA County also offer certification programs.

The goal of these training and workforce development programs is to prepare participants for careers in urban forestry. As such, it's important to ensure private and public sector tree care and maintenance organizations are connected with workforce development programs. These organizations can provide valuable insights into the skills and qualifications they are looking for in candidates, as well as information about current and future job availability.

<sup>25</sup> California Conservation Corps, 2024; Fernandeño Tataviam Band of Mission Indians, 2024

While there are many workforce development opportunities available for tree maintenance providers, the pipeline has several important gaps. Most current workforce development programs lack training in mature tree maintenance and tree removal. which are areas of tree maintenance that rely on large equipment and specialized skills. Academic programs specific to the urban forest workforce are limited within LA County and often lack handson training experience. People who could benefit most from career opportunities in urban forestry, such as youth and marginalized populations, are often not aware of these opportunities, and opportunities are limited in certain geographic areas of LA County, such as in desert communities.

#### **Urban Forest Managers**

Urban forest managers, planners, and specialty practitioners provide guidance for overall urban forest management, including considerations of regional needs and current and future climate conditions. Urban forest managers implement tree management programs or plans and seek opportunities and funding to meet urban forestry goals. Professionals contribute to urban forest management in a variety of ways, such as researching forest related sciences which influence planning, using mapping and GIS technologies to analyze urban forestry data, and fostering collaboration among various entities around issues such as community engagement and regional management of urban forest sustainability.

#### **Spotlight on LA County Careers**

The LA County's Agricultural Commissioner/Weights and Measures (ACWM) and the Los Angeles County Fire Department (LACoFD) are LA County departments with highly skilled public sector career opportunities that involve hands-on outdoor work in urban forestry. ACWM coordinates with state and federal entities to address large scale invasive tree pest issues throughout the region. ACWM employees also perform services such as nursery stock inspections and monitor imports and exports for LA County plants. LACoFD performs urban forest management activities including vegetation management, oversight, and enforcement; natural resource planning compliance, monitoring, and implementation; and a variety of forestry operations such as native tree production and distribution, conservation education, fire prevention, hazard assessment, pest assessment and control, and tree planting and maintenance.



#### Career Roles for Arborists

There are currently an estimated 54,500 arborists in the United States, including 5,830 in California. The job market for arborists is expected to grow by 14% between 2020 and 2030.

#### Leadership

- Municipal Department Director
- Tree Company Owner

#### Supervisory

- Nursery Manager
- Municipal Arborist
- Registered Consulting Arborist
- Tree Care Foreman

#### Journey-Level

- Tree Risk Assessor
- Urban Planner
- Pest and Pathogen
   Specialist
- Landscape Architect
- Tree Climber
- Lumber Miller
- Forester
- Tree Care Consultant
- Urban Forestry Consultant

#### **Technician**

- Groundsman
- Nursery Worker
- Tree Inventory Technician
- Habitat Restoration
   Technician
- Consulting Utility Forester
- Landscape Technician



## Leverage existing and new County workforce pipeline programs to support the expansion and development of urban forestry workforce opportunities.

**Lead Departments:** Department of Economic Opportunity (DEO)

Partner Departments: Chief Sustainability Office (CSO), Department of Parks and Recreation (DPR), Public Works (PW)

#### Why it matters:

An expansive workforce with a range of entry-level and highly skilled tree maintenance providers is needed more than ever as LA County works to enhance and prioritize community forest management. In particular, the need for skilled tree maintenance providers is quickly growing all throughout the state. A workforce assessment will help to build and strengthen career pathways by identifying opportunities to leverage existing programs and fill gaps with new programs to serve the growing urban forestry workforce needs of the region.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Create and implement workforce training programs focused on urban forestry supported by funding awarded from the Inflation Reduction Act.</li> <li>Conduct an urban forestry workforce needs assessment to identify the current and projected demand for urban forestry workers, the existing skills and qualifications of the workforce, and gaps and barriers to entry and retention, and to assess community college, vocational training, and certification needs.</li> <li>Engage employers and other interested parties to validate and prioritize workforce needs and opportunities.</li> <li>Refer jobseekers interested in urban forestry to LA County's America's Job Centers of California (AJCCs) for workforce development and training services and other supportive wraparound services.</li> <li>Partner with the City of Los Angeles, local institutions, industry associations, and others to develop a set of region-serving urban forestry education and training programs.</li> <li>Explore opportunities to connect workforce programs with youth, including through mentorship opportunities.</li> </ul>
Looking ahead (5+ years)	Support the development of workforce programs to serve the needs of LA County's desert communities.





**Growing Experience Urban Farm,** 

Carmelitos Public Housing

102

## 4.2 Local Nurseries

Many trees in our community forest begin their lives as seeds in a nursery, and care given during the nursery stage can affect a tree for the rest of its life. A thriving local nursery system is not only critical for the health and biodiversity of the community forest, but also as an opportunity for local economic development. There are dozens of private-sector wholesale nurseries in LA County, as well as many retail nurseries and several non-profit nurseries. LA County also manages several tree nurseries, including four nurseries managed by the LA County Fire Department, one managed by the LA County Sheriff's Department, and one managed by the Department of Parks and Recreation. Despite the availability of these private, non-profit, and public local nurseries, LA County faces several challenges to sourcing its trees locally. Current LA County nursery procurement policies sometimes present barriers to contracting with local private and non-profit nurseries, and there is limited capacity at these nurseries to supply native and climate appropriate trees

WORKFORCE AND ECONOMIC OPPORTUNITIES

Room to Grow: Community Forest Management Plan

of the species, amount, quality, and size to meet LA County's demand. Although there are County-owned and County managed public nurseries, they often rely on grant funding or donations and are understaffed, making them either partially functional or temporarily nonfunctional. While the County prioritizes procuring trees from local businesses and its own nurseries, it is not always possible to procure enough native and climate appropriate trees locally because of these constraints. Therefore, County departments frequently purchase trees from businesses located outside of LA County.

To support and expand the capacity of our local nursery system, LA County is setting a target to source 100% of trees the County purchases from nurseries located within LA County, including County managed nurseries, private nurseries, and non-profit nurseries. Leveraging LA County's unique large-scale operational capacity and high tree demand in support of this target will strengthen the supply of locally sourced native and climate appropriate trees not only for LA County use, but also for other treepurchasing partners in our region, while also supporting the creation of nursery jobs, training opportunities, and business opportunities.

## The Tribal Nursery and Tree Planting Project

The Tribal Nursery and Tree Planting Project, funded by the United States Department of Agriculture (USDA) through the Inflation Reduction Act, will focus on engaging marginalized communities and Tribal Citizens in a robust tree planting program. The program will be informed by Traditional Ecological Knowledge (TEK) to establish Tribal nurseries focused on growing and planting culturally significant native trees. This program will address communal greening and cooling needs in disadvantaged communities by increasing the tree canopy in Northwest Los Angeles, a region that is home to nearly 2 million residents, while promoting cultural and climate resilience, supporting medicinal and ceremonial native plant use, and empowering Tribal disadvantaged communities. With TEK at the core of its activities, the project will emphasize equity, sustainability, historical importance of native trees in cultural practices, and practical workforce development outcomes for marginalized youth, with an emphasis on Tribal Citizens. The California State University Northridge (CSUN) leads this project, in close collaboration with Fernandeño Tataviam Band of Mission Indians, Tataviam Land Conservancy, and Univ. Nacional Autónoma de México.



## Leverage public and private nurseries to grow a sustainable, locally-grown supply of native and climate appropriate tree species.

Lead Departments: Department of Economic Opportunity (DEO), Los Angeles County Fire Department (LACoFD)

Partner Departments: Chief Sustainability Office (CSO), Public Works (PW), Department of Parks and Recreation (DPR),
Department of Regional Planning (DRP), Agricultural Commissioner/ Weights and Measures (ACWM),

#### Why it matters:

County managed and local private and non-profit nurseries are important resources for providing locally sourced, high-quality, native, and climate adapted trees. Nurseries are also a key part of the urban forest economy and can serve as a training ground for workers building skills related to seed collection, tree propagation, selection, establishment care, and more. Because the local supply of native and climate adapted trees is currently limited, investments in increasing the capacity of nurseries in LA County, including County managed nurseries, will help the economic value of trees accrue locally while supporting dependable and high-quality sources of high-demand trees.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Perform an assessment of County purchased trees to establish a baseline for what proportion of County trees are purchased locally across departments.</li> <li>Perform an assessment of private and non-profit nurseries and create a directory to distribute upcoming bid proposals, educational information, and other resources.</li> <li>Explore procurement goals for LA County departments to expand sourcing of trees from private local nurseries and County-owned nurseries.</li> <li>Perform an assessment of County managed nursery operations including funding, staffing, capacity, opportunities, and challenges.</li> <li>Refer qualified nursery employers to the County's AJCCs for services that include 1:1 consultation, subsidized wage programs, talent recruitment, upskilling, tax credits, and layoff aversion assistance.</li> <li>Refer qualified community forest-related businesses to DEO's Office of Small Business for services that include individualized assistance for small businesses, business certifications, and support in competing for government contracts.</li> </ul>
Looking ahead	Support expanding the capacity of LA County nurseries by leveraging public nurseries for workforce development, internship, and training opportunities.
(5+ years)	• Explore nursery workforce development partnerships with other public and non-profit nurseries, including the City of Los Angeles.

#### 4.3 Tree Debris Reuse

Thousands of trees are removed on County managed land each year due to normal maintenance needs of the community forest, and even more tree debris is created during regular maintenance and pruning. Different methods of dealing with dead trees and tree debris can provide innovative economic opportunities.

Today, LA County mainly transforms tree debris from the trees it removes and prunes into wood chips, which is often used as mulch but is sometimes disposed of in a landfill. When wood waste is hauled to a landfill, it not only loses its potential as a bioresource and incurs costs from landfill fees, but also produces additional greenhouse gas emissions during transportation and decomposition. We can decrease emissions, save money, improve soil structure, and help create a circular economy for tree maintenance debris when we divert tree debris away from landfills and towards beneficial uses.

Mulch is one of these beneficial uses since it is an economically and ecologically valuable resource for community forest management and other landscaping practices. Proper application of mulch helps retain soil moisture, decrease weeds, and rebuild soil structure as it decays. Wood chips can also be combined with other organic material to create compost, another valuable



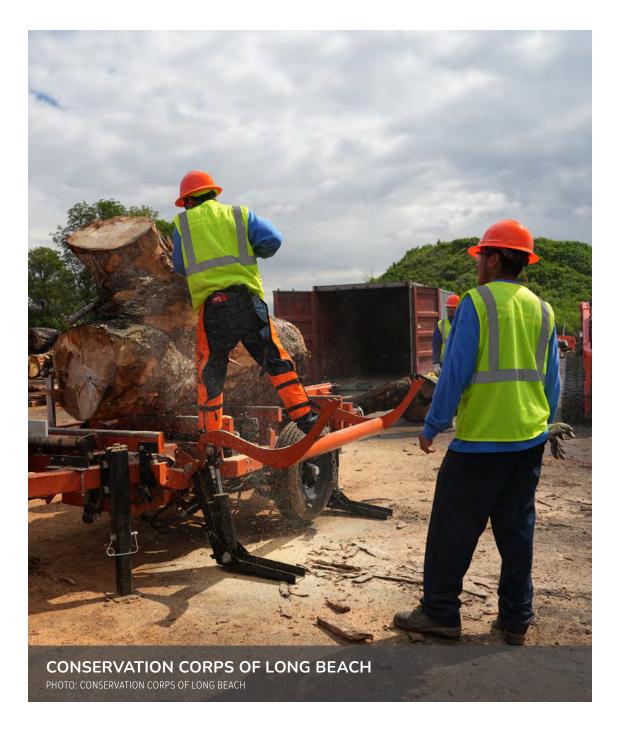
product which contributes to more fertile soil for trees and other plants when used appropriately. Wood from the community forest can also be turned into new wood products. Transforming community forest debris into usable wood is one of the most sustainable options for urban wood reuse, as stored carbon stays in the wood and is not released through decay. At least one statewide tree company and three independent mills operate urban wood reuse programs in LA County, and there is potential to expand local economic opportunities related to urban wood reuse.



#### **Urban Wood Utilization**

Tree debris is often made into firewood or chipped and brought to the landfill. However, removed trees can have a second life as a useful wood product.





# Conservation Corps of Long Beach Urban Lumber Program

The Conservation Corps of Long Beach (CCLB) Urban Lumber Program, made possible by a \$1 million grant from CALFIRE, is a collaboration between CCLB. the City of Long Beach Department of Public Works, and West Coast Arborists. This multifaceted project included the development of an urban lumber salvage and reuse apprenticeship training program, which offers industry-recognized job training to young adults while using urban wood biomass for social enterprises. As a result of this project, CCLB's Urban Lumber Yard and Mill was established, a hub for urban forestry activities and home to CCLB's partnership with West Coast Arborists.



## Pursue opportunities to reuse urban wood to maximize carbon sequestration and support the green economy.

Lead Departments: Department of Parks and Recreation (DPR), Public Works (PW)

Partner Departments: Chief Sustainability Office (CSO), Department of Regional Planning (DRP), Agricultural Commissioner/Weights and Measures (ACWM), Department of Economic Opportunity (DEO), Arts and Culture

#### Why it matters:

Rather than being sent to landfills, removed trees and tree debris can be used as mulch, in compost, or even turned into a new wood product to reduce carbon emissions and support green industries in LA County. Identifying and piloting innovative opportunities to reuse urban wood would strengthen this sector of the green economy and further extend the benefits of trees.

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Decrease County wood waste sent to landfills by developing a tree debris re-use program for mulch and compost, including identifying local business or community partners.</li> <li>Assess potential partners for urban wood reuse programs, such as local sawmills, woodworkers, furniture makers, makers of musical instruments, architects, builders, landscapers, environmental groups, community organizations, and social enterprises.</li> </ul>
Looking ahead (5+ years)	Explore the development of an LA County urban wood reuse pilot program or partnerships.

# WHAT WE HEARD

**Community feedback** 

I think young high school and middle school kids should be participating in tree care programs.

Use local seed collections for planting of new trees in the community.

Restoring native habitats and working with local nurseries like the Hahamonga Nursery are super important to my community!

The community is advocating for increased funding for green jobs, highlighting a collective interest in creating employment opportunities that are not only economically beneficial but also environmentally sustainable.

When trees fall or die, they should be harvested for lumber, not just firewood/mulch!





### Goal 5

A community forest that is supported by creative, long-term funding and collaborative partnerships.

he County has identified a series of bold goals and actions in this CFMP. Progress towards these goals will require collaboration between partners across LA County, including a commitment to working together to secure sufficient and ongoing sources of funding for community forest management. LA County can lead by example by piloting innovative approaches to budgeting for trees and by investing resources that reflect our commitment to the community forest. Looking beyond its own community forest management activities, LA County must also work together with public

agencies and local government partners, including the 88 cities, the councils of government, local California Native American Tribes, and regional agencies such as Metro, Southern California Association of Governments, and local utilities. Additionally, LA County must raise up and bring together our diverse landscape of local leaders, including from environmental groups, community organizations, advocacy organizations, nonprofits, academia, business, faith groups, and many others. We all have a stake in the health and resilience of our shared community forest, and we all have a role to play in working together to achieve our common goals.

# This CFMP is just a start

While many action items identified in this CFMP are not yet funded and will require significant investments, the CFMP is already working to help LA County secure additional funding for its community forest management goals. In 2023, LA County was awarded an \$8 million U.S. Forest **Service Urban and Community** Forestry grant with funding from the Inflation Reduction Act to support "early action" implementation of this CFMP. This \$8 million grant will allow LA County to plant, establish, and maintain park and street trees in high canopy need locations, create an urban forestry workforce development program, and perform community engagement and education activities. LA County and its partners can use the actions and priorities identified in this CFMP to continue to pursue additional sources of state and federal funding.





## **5.1 County Commitment to Funding**

LA County dedicates significant funding to managing its community forest, but it still has many unmet funding needs. Street and park tree management, along with activities like tree preservation, invasive pest management, and community engagement, are all in need of increased investment. On the other hand, there are costs associated with inaction that are often overlooked. For example, pruning a tree may cost less than repairing or replacing a structure or vehicle damaged by a fallen limb from an unmaintained tree. It is also important to remember that community forest management has not only costs, but also numerous benefits. Some benefits of trees are relatively easy to quantify, such as energy savings for a household shaded by a tree. Other benefits require more complex analysis, such as the impact of trees on public health and local biodiversity. Still other benefits have a high value but are impossible to quantify, such as the cultural and social value of trees. Acknowledging and in some cases quantifying the opportunity cost can help reframe the conversation around the

funding of the community forest as critical infrastructure.

Examples of frameworks for this type of holistic planning include cost-effectiveness/ cost benefit analyses, ecosystem services valuation, climate and carbon budgeting, health, environmental, and equity impact assessments, and life cycle assessments. In addition to helping LA County prioritize equitable funding decisions for community forest management, these holistic approaches will also allow LA County to explore creative ways to leverage existing sources of funding to meet community forest needs and to consider novel financing solutions such as innovative insurance strategies and dedicated sustainability funds. As the County pursues these opportunities, it can provide lessons learned and best practices for other decisionmakers in our region, including local agency partners and community leaders, to inform their own decision-making about community forestry budgeting and prioritization.





## Advance innovative funding solutions to support the County's community forestry management needs.

Lead Departments: Chief Sustainability Office (CSO)

Partner Departments: Chief Executive Office (CEO), Department of Public Health (DPH),

Department of Parks and Recreation (DPR), Public Works.(PW)

#### Why it matters:

The County can lead by example in seeking creative funding solutions, making innovative investments, and prioritizing the benefits LA County can lead by example in seeking creative funding solutions, making innovative investments, and prioritizing the benefits of our community forest. Not only does LA County manage a significant portfolio of trees, including street and park trees, LA County also has an important role to play in regional tree management. LA County should manage and invest in trees as critical infrastructure needed for safe, healthy, and livable communities and as a legacy of equity for future generations.

#### What we'll do and when we'll do it:

TIMEFRAME	ACTION ITEMS					
First steps (1 – 5 years)	<ul> <li>Explore incorporating holistic planning tools and frameworks into decision-making processes related to community forest management.</li> <li>Incorporate community climate mitigation and adaptation benefits into County climate budgeting efforts.</li> <li>Explore creative financing and budgeting mechanisms with the potential to support community forest investments as well as other multi-benefit climate resilience infrastructure needs.</li> <li>Identify and develop strategies for leveraging existing County funding streams to support community forest management.</li> <li>In partnership with the City of Los Angeles, explore the development of a countywide sustainability fund that allows direct financing of strategies such as community forest management.</li> </ul>					
Looking ahead (5+ years)	<ul> <li>Pilot one or more innovative investment strategies in support of the community forest and other multi-benefit climate resilient infrastructure.</li> </ul>					

### 5.2 Local Agency and Community Leader Partnerships

Our community forest is influenced and controlled by an array of entities both inside and outside LA County, from school districts to cities to the federal government. Outside of public agencies, local Tribes, community-based organizations, academic and research institutions, and others bring valuable expertise and perspective on the community forest. All of these groups play an important role in the future of the community forest, and their partnership and collaboration will be critical to achieving the ambitious goals of the CFMP.

By working together, LA County and partners can pursue collaborative funding opportunities with regional reach and impact, such as a countywide funding measure to support community forest management. We can also work

together to create and share frameworks and resources that have regional relevance. For example, we can create consistent messaging and educational materials related to community forestry and collaborate on best practices for developing a regional urban forest workforce pipeline. We can also work to reduce "engagement fatigue" — something that occurs when residents are repeatedly asked for similar feedback through multiple uncoordinated engagement efforts — by creating clear channels of communication between the many partners all working towards an equitable community forest across LA County. Collaboration across entities is also crucial to identify gaps and ensure that resources are equitably distributed.

#### **City/County CFMP Partnership:**

The City of Los Angeles (City) is one of LA County's most important partners in community forest management. The County and City worked together on a joint stakeholder engagement campaign to support this CFMP and the City's Urban Forest Management Plan (UFMP), which is anticipated to be finalized in 2025. This allowed LA County and City to hear from residents across the region about their values, priorities, and needs related to trees in their communities. LA County and City will continue to collaborate closely on shared priorities for implementation. Throughout this CFMP, the City is identified as a key partner for action items with regional implications, including action items related to invasive pests, workforce development, nursery capacity, funding opportunities, and more.





# Collaborate with regional partners to pursue funding and develop regionally consistent implementation and engagement strategies for the community forest.

Lead Departments: Chief Sustainability Office (CSO)

Partner Departments: Public Works (PW), Department of Parks and Recreation (DPR),

Department of Public Health (DPH), Department of Regional Planning (DRP)

#### Why it matters:

The community forest is a resource we all share, and it requires coordination across partner organizations who share a similar vision to support, protect, and expand the community forest on public and private property. Working collaboratively to set priorities, develop programs, and create innovative new funding sources to support the community forest will better position LA County and the region to respond to climate threats, build resiliency, and improve community forest equity.

#### What we'll do and when we'll do it:

TIMEFRAME	ACTION ITEMS
First steps (1 – 5 years)	<ul> <li>Collaborate with the cohort of regional Inflation Reduction Act community and urban forestry grant program awardees and other relevant interested parties to align tree management implementation efforts and share best practices for equitable engagement.</li> <li>In partnership with the City of Los Angeles, convene agency and community leaders to explore the possibility of a countywide funding measure that can support community forest management and other multi-benefit climate resilience strategies.</li> <li>Partner with agency, Tribal, and community leaders to seek state and federal funding to advance community forest equity and shared community forest priorities.</li> </ul>
Looking ahead (5+ years)	<ul> <li>Pilot the implementation of community forest management activities, including planting, maintenance, preservation, and engagement, funded through collaborative partnerships between local agencies, and between agency and community partners.</li> </ul>

# WHAT WE HEARD

## **Community feedback**

I feel the City and County should allocate more resources to the planting and maintenance of trees.

There need to be louder opportunities for neighbors to engage with each other in our own neighborhoods!

Where are the monetary resources for us?

My vision for the ideal urban forest would be for people to be knowledgeable of the importance of trees. It would help people know their role, and eventually they could take action to care for trees and the environment as a whole.

Larger mobilization efforts and more money are greatly needed.

#### Data spotlight

The majority of respondents want the County and City to focus services on tree planting (63%), care for new trees (63%), mature tree care (59%), and protecting street and park trees (57%).





he CFMP contains 5 goals that describe the County's vision for the future of our community forest and 15 actions that provide a roadmap for how the County will make progress towards that vision. Each action includes information about which County departments will lead and support implementation, a set of "first-step" action items that the County can begin implementing over the next five years, and a set of "looking ahead" action items that describe the County's longer-term plans for implementation. Many actions will require additional planning, funding, and coordination before the County is able to begin implementation, while others are ready to begin implementation right away. Because of their important implications for equity, climate resilience, and regional coordination, the County will prioritize the following six actions for the first year after adoption of the CFMP.

**Action 1.1a:** Explore innovative strategies for tree planting site opportunities.

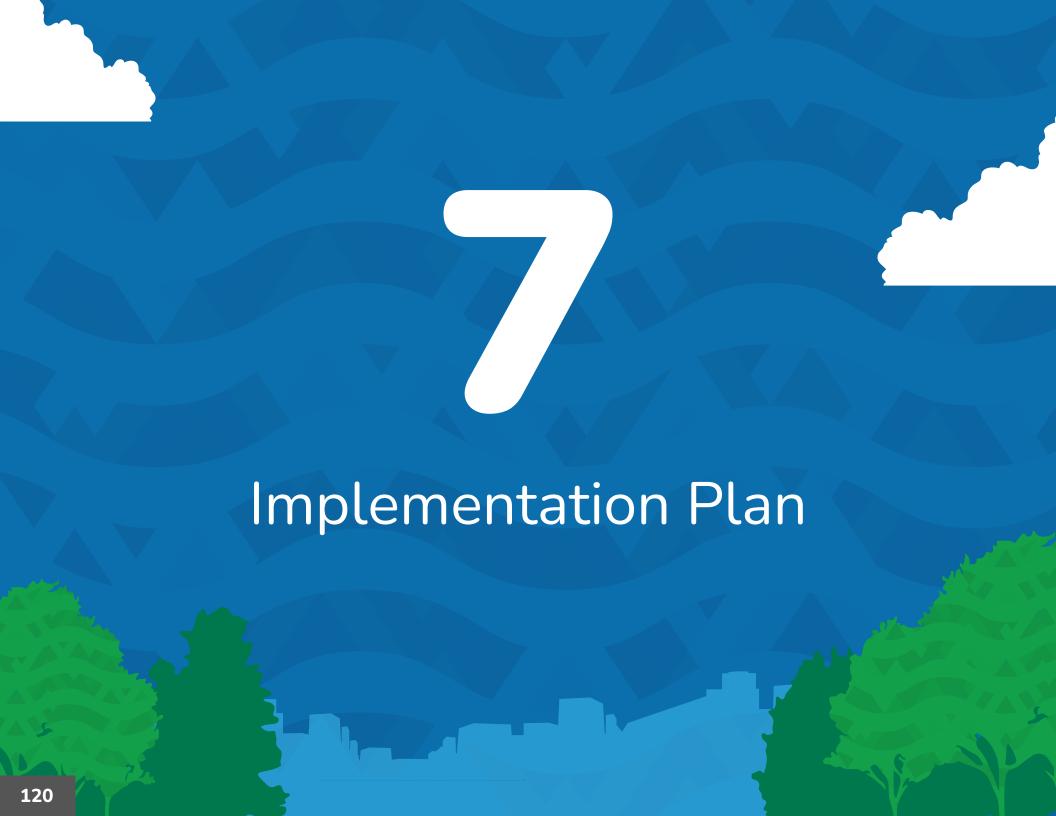
**Action 2.1:** Develop, update, and implement policies that support biodiversity through the preservation, protection, and expansion of tree canopy.

**Action 2.3:** Collaborate with partners, including the City of Los Angeles, cities, regulatory agencies, local universities, subject matter experts, and others on a coordinated regionwide response to invasive threats.

**Action 4.1:** Leverage existing and new County workforce pipeline programs to support expansion and development of urban forestry workforce opportunities.

**Action 5.2:** Collaborate with regional partners to pursue funding and develop regionally consistent implementation and engagement for the community forest.





While implementation of "first-step" action items, including for priority actions, can begin over the next five years, many of the "first-step" action items may take longer than five years to be completed, and there are also ongoing actions which should continue in perpetuity. Implementation of the CFMP is contingent upon securing sufficient and ongoing sources of funding.

ACTION NUMBER	YEAR 1 PRIORITY	ACTION	LEAD	FIRST STEPS
1.1a	Yes	Explore innovative strategies for tree planting site opportunities.	cso	Complete an assessment identifying early opportunities for depaving projects in multiple high canopy need communities.  Perform a right-of-way alternative site design assessment for depaving opportunities to make space for large stature trees.  Identify priority tree planting projects.
				Secure funding to implement priority tree planting projects.
		Prioritize park and street tree resources for high canopy need communities.	PW, DPR	Direct existing street and park tree funding to high need communities.
1.1b				Expand community engagement, education, and workforce development activities in high canopy need County communities.
				Partner with CBOs on grant applications, tree management, and community engagement.
1.2		Explore and pilot programs	CSO, DPH	Pilot a program to provide free tress to unincorporated County communities.
		for assisting residents with the costs and maintenance of private trees.		Partner with LA City on strategies to provide communities with information about community forest management, such as through a resource hub or other centralized service.
	Yes	Develop, update, and implement policies that support biodiversity through the preservation, protection, and expansion of tree canopy.	DRP	Develop a community education, outreach, and engagement program to increase public awareness of trees and biodiversity.
24				Update the County Oak Tree Ordinance.
2.1				Assess the need to develop a local western Joshua tree conservation program.
				Explore the development of a biodiversity target for this CFMP.
2.2		Develop and distribute wildfire risk mitigation educational	LACoFD	Coordinate with community partners to distribute locally relevant wildfire risk mitigation materials.
		materials and implement communications strategies for wildland-urban interface communities and adjacent open space areas.		Continue to work with community partners to enhance community outreach and education around wildfire risk mitigation.

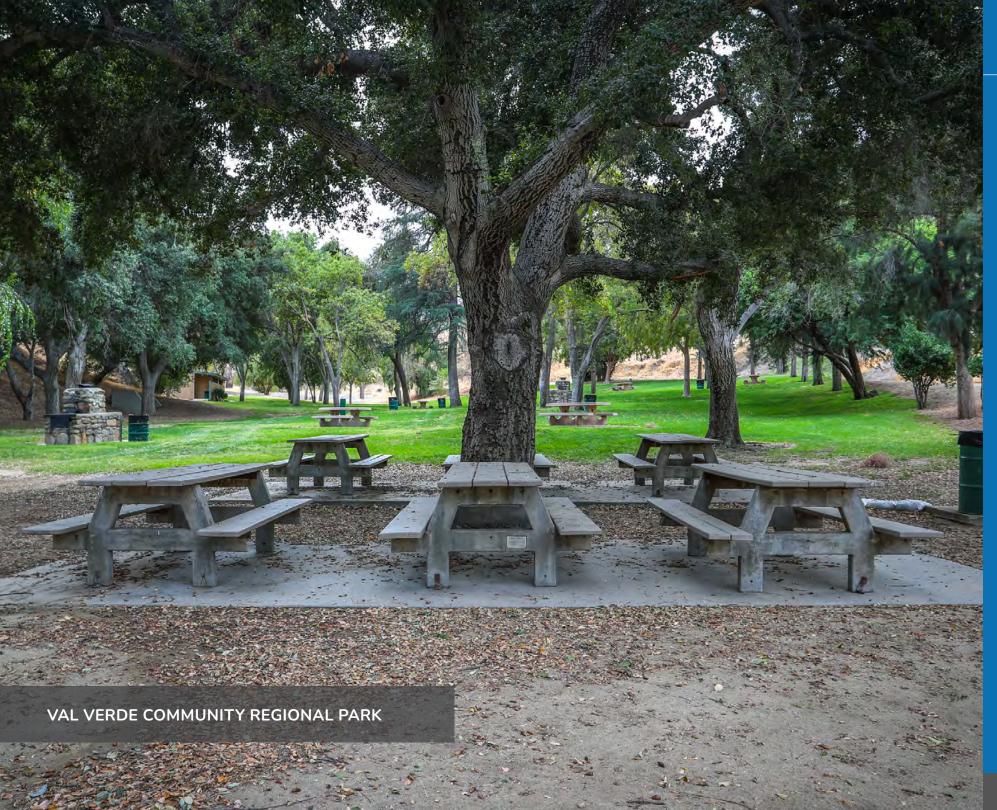
ACTION NUMBER	YEAR 1 PRIORITY	ACTION	LEAD	FIRST STEPS
	Yes	Collaborate with partners, including the City of Los Angeles, other cities, regulatory agencies, local universities, subject matter experts, and others on a coordinated regionwide response to invasive threats.	ACWM, LACoFD	Form and convene a tree-related invasive threats working group comprised of regional partner representatives.
				Pursue funding to address tree removals from ISHB and GSOB.
2.3				Offer educational workshops on invasive threats for communities in high infestation risk areas.
				Develop and implement communication and engagement strategies using existing informational materials on tree-related invasive threats.
2.4		Establish a regional framework to support trees across jurisdictions.	CSO, DPH	Work with regional partners to identify resources, information, and communications needs for meeting shared priorities
				Provide technical assistance to cities and local agencies to support regionally consistent community forest management policies
				Partner with LA City to develop and implement regional community forest communications and messaging strategies.
				Advocate for improved tree management and maintenance practices around utility infrastructure.
		Equitably expand the County street tree canopy with a focus on improving its resilience and enhancing its biodiversity, shade, and stormwater management benefits.	PW	Pursue funding to expand the street tree inventory.
				Pursue funding to expand establishment care to at least three years.
3.1				Increase staff capacity to employ current best management practices in all tree planting, care, and maintenance activities.
				Work with CSO and DPH to enhance community outreach and engagement around street tree planting and maintenance.
				Align street tree species selection with CFMP species list recommendations.
				Explore opportunities to integrate CFMP workforce development actions in County pipeline programs to meet the County's workforce needs of PW, while expanding career pathways and promotional opportunities for priority populations and youth.

ACTION NUMBER	YEAR 1 PRIORITY	ACTION	LEAD	FIRST STEPS
		Manage County park trees using current best management practices and support park trees as a resource for health, biodiversity, and resilience.	DPR	Continue to pursue funding to address deferred tree maintenance, planting, and establishment care.
				Explore options for increasing park tree management capacity by increasing dedicated staff and budget.
3.2				Implement County park priorities related to trees identified in the Parks Needs Assessment and Parks Needs Assessment Plus.
				Employ current arboriculture best management practices in all tree planting, care, and maintenance activities.
				Explore opportunities to integrate CFMP workforce development actions in County pipeline programs to meet the County's workforce needs of DPR, while expanding career pathways and promotional opportunities for priority populations and youth.
3.3	res Lib to	Strengthen tree management resources for ISD, DBH, and Libraries, and pilot strategies to use the community forest as a food and cultural resource.  Leverage existing and new County workforce pipeline programs to support the expansion and development of urban forestry workforce opportunities.	ISD, DBH, Libraries	Inventory all trees managed by DBH, ISD, and Libraries.
				Develop department-specific tree management plans for ISD and Libraries.
				Plan and implement native tree and landscaping projects at LA County facilities.
				Explore ways to secure access to an arborist for ISD and Libraries.
				Create and implement urban forestry workforce training programs.
	Yes			Conduct an urban forestry workforce needs assessment.
4.1				Engage employers and other interested parties to prioritize workforce needs and opportunities.
				Refer jobseekers interested in urban forestry to LA County's America's Job Centers of California.
				Partner with LA City and others to develop a set of region-serving urban forestry education and training programs.
				Explore opportunities to connect workforce programs with youth, including through mentorship opportunities.



ACTION NUMBER	YEAR 1 PRIORITY	ACTION	LEAD	FIRST STEPS
		Leverage public and private nurseries to grow a sustainable, locally-grown	DEO, LACoFD	Perform an assessment of County-purchased trees to establish a baseline for what proportion of County trees are purchased locally.
				Perform an assessment of private and non-profit nurseries and create a directory.
4.2				Explore procurement goals for LA County to expand sourcing trees from local and County-owned nurseries.
7.2		supply of native and climate		Perform an assessment of County managed nursery operations.
		appropriate tree species.		Refer qualified community forest-related businesses to DEO's Office of Small Business for services that include individualized assistance for small businesses, business certifications, and support in competing for government contracts
				Refer qualified nursery employers to the County's AJCC for services.
4.3		Pursue opportunities to reuse urban wood to maximize	DPR, PW	Decrease County wood waste sent to landfills by developing a tree debris re-use program for mulch and compost.
		carbon sequestration and support the green economy.		Assess potential partners for urban wood reuse programs.
5.1		Advance innovative funding solutions to support the County's community forestry management needs.	cso	Explore incorporating holistic planning tools and frameworks into decision-making processes related to community forest management.
				Incorporate community climate mitigation and adaptation benefits into County climate budgeting efforts.
				Explore creative financing and budgeting mechanisms with the potential to support community forest investments.
				Identify and develop strategies for leveraging existing County funding streams to support community forest management.
				Partner with LA City to explore developing a Countywide sustainability fund to finance community forest management.
5.2	Yes	Collaborate with regional partners to pursue funding and develop regionally consistent implementation and engagement strategies for the community forest.	cso	Collaborate with IRA grant awardees to align implementation and share best practices for equitable engagement.
				Partner with LA City to explore the possibility of a Countywide funding measure to support community forest management.
				Partner with agency, Tribal, and community leaders to seek state and federal funding to advance community forest equity.







he CFMP is a guiding document for the County to implement actionable steps towards creating a sustainable and equitable community forest. The information, analysis, and data contained in the CFMP reflect the current conditions of the community forest in LA County and its management in a specific moment in time. The realities of the community forest and what is required to effectively manage it will change over time, especially as the County progresses in implementing the CFMP. Because of this, the CFMP is a living document that will be reviewed and updated periodically to meet the changing conditions and priorities of the County. The County will use the following plan to monitor the state of the CFMP and adjust priorities as needed:

**Annually:** Review progress towards completion of priority action items and adjust prioritization as needed.

**5 Years After Adoption:** Update actions and action items as needed to reflect progress and respond to changing conditions in the County.

**10 Years After Adoption:** Update the CFMP document, actions, and action items as needed to include most current data and analyses, reflect progress, and respond to changing conditions in the County.





Additionally, the County will monitor and share progress by measuring changes to the targets identified in the CFMP. The CFMP targets are not intended to be comprehensive; instead, the targets are key indicators of progress that are meaningful, trackable, and transparent. As the County implements the CFMP and updates it as described in this monitoring plan, additional targets may be identified and added to the plan. For example, Action 2.1 includes a "short-term" action item to explore the creation of a CFMP target that will help the County track progress towards its biodiversity goal. A summary of the CFMP targets and their current baseline condition is below.

#### **Tree Canopy Equity Target**

County Target\*: Achieve at least 20% canopy cover for all unincorporated areas combined

**Current/Baseline:** 15.9%

**Community Target\*:** Achieve at least 15% canopy cover for each unincorporated community separately

**Current/Baseline:** 37% of residents live in an area with 15% canopy cover

#### **Street Tree Target**

County Target\*: Achieve a 95% stocking rate

**Current/Baseline:** 85% stocking rate

#### Park Tree Target

**County Target\*:** Achieve no net loss of park trees

Current/Baseline: Net loss of 650 park trees a year

#### **Local Tree Supply Target**

**County Target\*:** Source 100% of County trees from local nurseries

**Current/Baseline:** Calculation of baseline is included as a "first-step" action item

\* Based on 50-year projection





- Appel, I. and Nickerson, J. 2016, Oct. 15. Pockets of Poverty: The Long-Term Effects of Redlining. Available at SSRN: https://ssrn.com/abstract=2852856 or http://dx.doi.org/10.2139/ssrn.2852856
- Beck, G. K. Zimmerman, J.D. Schardt, J. Stone, R.R. Lukens, S. Reichard, J. Randall, A.A. Cangelosi, D. Cooper, and J.P. Thompson. 2006. Invasive Species Defined in a Policy Context: Recommendations from the Federal Invasive Species Advisory Committee.

  Invasive Plant Science and Management 1(4):414-421.
- California Conservation Corps (CCC). 2024. https://ccc.ca.gov/.
- California Protected Areas Database (CPAD). 2022. GreenInfo Network. July 2022. https://www.calands.org/cpad/
- County of Los Angeles. 2021. "County of Los Angeles Enterprise GIS." County Of Los Angeles Enterprise GIS, egis-lacounty.hub.arcgis.com/.
- County of Los Angeles, et al. 2023, Jan. "WE

  ARE STILL HERE.' A REPORT ON PAST,

  PRESENT, AND ONGOING HARMS AGAINST

  LOCAL TRIBES." Lacounty.Gov, Avid Core,

  file.lacounty.gov/SDSInter/lac/1137966\_

  AREPORTONHARMSCountyofLosAngeles.pdf.

- Department of Economic Opportunity (DEO). 2024. "Urban Forestry Occupations and Growth Projections List." O\*NET OnLine, www.onetonline.org/link/summary/37-3013.00.
- Dialesandro, J., et al. 2021, Jan. 22. "Dimensions of thermal inequity: Neighborhood Social Demographics and urban heat in the southwestern U.S." International Journal of Environmental Research and Public Health, vol. 18, no. 3, p. 941, https://doi.org/10.3390/ijerph18030941.
- Fernandeño Tataviam Band of Mission Indians. 2024. Jan. "FTBMI – Home." Tataviam.us, www.tataviam-nsn.us/.
- i-Tree. 2023. I-Tree Eco (version 6.0.32) [Computer software]. https://www.itreetools.org/i-tree-tools-download.
- Keeley, J. E. Mar. 2002. "Native American impacts on fire regimes of the California Coastal Ranges." Journal of Biogeography, vol. 29, no. 3, pp. 303–320, https://doi.org/10.1046/j.1365-2699.2002.00676.x.
- Kim, D. and Ahn, Y. 2021, Mar. 27. "The contribution of neighborhood tree and greenspace to asthma emergency room visits: An application of Advanced Spatial Data in Los Angeles County." International Journal of Environmental Research and Public Health, vol. 18, no. 7, p. 3487, https://doi. org/10.3390/ijerph18073487.



- Lee, S. J. et al. 2017, May. "Increased home size and hardscape decreases urban forest cover in Los Angeles County's single-family residential neighborhoods." Urban Forestry & Urban Greening, vol. 24, pp. 222–235, https://doi.org/10.1016/j.ufug.2017.03.004.
- Lindenmayer, D. B., and Laurance, W. F. 2016, July 7. "The ecology, distribution, conservation and management of large old trees." Biological Reviews, vol. 92, no. 3, pp. 1434–1458, https://doi.org/10.1111/brv.12290.
- Lopata, Jason. 2018, Apr. 23. "L.A. Urbanized: The Making of Los Angeles as a Global City." Urbanize LA, la.urbanize. city/post/la-urbanized-making-los-angeles-global-city.
- Los Angeles County. 2021. LA County Climate Vulnerability Assessment; LA-County-CVA-Executive-Summary-English.pdf (lacounty.gov)
- Los Angeles County Department of Public Works. 2023. Street Tree Inventory.
- Los Angeles County Department of Parks and Recreation. 2023. Park Tree Inventory.
- Mann, M. L., Berck, P., Moritz, M. A., Batllori, E., Baldwin, J. G., Gately, C. K., Cameron, D. R. 2014. Modeling residential development in California from 2000 to 2050: Integrating wildfire risk, wildland and agricultural encroachment. Land Use Policy, Volume 41, https://doi.org/10.1016/j.landusepol.2014.06.020.

- McPherson, G., Q. Xiao, N.S. van Doorn, J. de Goeded, J. Bjorkmand, A. Hollanderd, R.M. Boyntond, J.F. Quinnd, and J.H. Thorned. 2017. "The structure, function and value of urban forests in California communities." Urban Forestry & Urban Greening 28:43-53
- Milman, O. 2022. The Insect Crisis: The Fall of the Tiny Empires That Run the World. W. W. Norton & Company.
- Project Learning Tree. 1999, Aug. "Learning to Live with Fire." Fire.ca.Gov, www.fire.ca.gov/what-we-do/-/media/calfire-website/about/communications/live\_w\_fire.pdf.
- Rothstein, R. 2017. The Color of Law: A Forgotten History of How Our Government Segregated America (Liveright). Sutherland, William J., et al. 2014, Jan. "A horizon scan of Global Conservation Issues for 2014." Trends in Ecology & December 2014. Trends in Ecology & December 2014. The Ecology & December 20
- Tallamy, D. W. 2022. The Nature of Oaks: The Rich Ecology of Our Most Essential Native Trees. Timber Press.
- UCANR (University of California, Agriculture and Natural Resources). 2024. "Home Page." UCANR.Edu, Division of Agriculture and Natural Resources, University of California, ucanr.edu/.
- UCANR (University of California, Agriculture and Natural Resources). 2024. https://ucanr.edu/sites/gsobinfo/About\_GSOB/Distribution/

- UCRCISR (University of California, Riverside Center for Invasive Species Research). 2013. https://cisr.ucr.edu/invasive-species/goldspotted-oak-borer
- UCLA. 2019. "Biodiversity Atlas of LA." UCLA | Sustainable LA Grand Challenge, sustainablela.ucla.edu/research-portal/project/biodiversity-atlas-la.
- UNECE (United Nations Economic Commission for Europe). 2022, Dec. 16. "Urban Trees Support Global Biodiversity and Sustainable Societies." UNECE.Org, UN ECOSOC, unece.org/climate-change/press/urban-trees-support-global-biodiversity-and-sustainable-societies.
- Willis, E., et al. 2023, Oct. 2. Greening Development:
  Reducing Urban Tree Canopy Loss through
  Incentives, https://doi.org/10.20944/
  preprints202310.0030.v1.

