



CITY OF SANTA MARIA

Urban Forest Management Plan

Prepared by

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Attachment A



VISION

Santa Maria's urban forest is a valued city asset that provides a resilient, diverse tree canopy that contributes to long-term environmental benefits, enhanced neighborhood character, appealing business corridors, and healthy and equitable communities that are connected to nature.



TABLE OF CONTENTS

VISION	II	4 STRATEGIC PLAN.....	77
1 INTRODUCTION.....	2	5 IMPLEMENTATION PLAN.....	89
1.1 Why the City Needs a UFMP	2	6 MONITORING PLAN.....	99
1.2 Developing the Santa Maria Urban Forest Management Plan.....	11	7 ACKNOWLEDGEMENTS	107
1.3 Key Findings	13	8 REFERENCES.....	109
2 COMMUNITY ENGAGEMENT	17		
2.1 Working Group	18	FIGURES	
2.2 Public Survey	18	1. The Benefits of Trees	4
3 STATUS OF THE URBAN FOREST	23	2. Urban Heat Island Effect	5
3.1 Canopy Cover.....	24	3. Right Tree, Right Place	6
3.1.1 Increasing Canopy Cover.....	26	4. Tree Spacing.....	8
3.1.2 Canopy Equity	29	5. Water Wise Landscaping with Trees.....	9
3.1.3 Canopy Cover by Land Use Type	33	6. City of Santa Maria Canopy Cover	25
3.2 City-Managed Tree Inventory.....	35	7. Trees Needed to Meet Canopy Goals	27
3.2.1 Sustainability Indicators	35	8. Annual Tree Planting Over 40 Years to Meet Canopy Goals	28
3.2.2 Environmental Services/Economic Benefits	38	9. CalEnviroScreen 4.0.....	30
3.3 Tree Planting Priority and Opportunity Areas	40	10. Tree Canopy Cover by CalEnviroScreen Range	31
3.4 Recommended Tree Species.....	41	11. Race/Ethnicity by Canopy Cover	32
3.5 Urban Forest Management	41	12. Canopy Cover by Land Use Type	34
3.5.1 Organizational Structure	42	13. Age Distribution.....	37
3.5.2 Staffing and Contractors	44	14. Tree Planting Priority and Opportunity Areas.....	40
3.5.3 Budget and Funding.....	46	15. Organizational Structure of Tree Management in Santa Maria.....	42
3.5.4 Annual Service Data	53		
3.5.5 Management Practices.....	59		
3.5.6 Policies, Ordinances, Planting Guidelines	59		
3.6 City Planning Documents	71		



16. Distribution of Tree Maintenance Budget	
Funding Sources.....	49
17. Forestry Budget	52
18. Average Budget Per Public Tree	52
19. Tree Service Activities.....	56
20. Work Records	57

TABLES

1. Santa Maria's Urban Forest Management Plan	
Working Group Members (Urban Forest	
Advisory Committee)	18
2. Survey Respondents Who Live/Work in the	
City of Santa Maria	20
3. Demographics of Survey Respondents	
Compared to Demographics of the City of	
Santa Maria	20
4. Summary of Online Survey Responses.....	21
5. Age Distribution	36
6. Annual Environmental Services and Benefits	39
7. Tree Inventory Financial Value	39
8. Stakeholder Interviews	43
9. 25 City of Santa Maria Tree-Related	
In-House Staff Positions	45
10a. Santa Maria Tree Management Operating	
Budget (Contractor Services).....	46
10b. Santa Maria Annual Tree Management Operating	
Budget (Contractor + In-House Services).....	46
11. Santa Maria Annual Tree Management Budget	
by In-House vs. Contracted Work.....	47

12. Comparison of Municipal Urban Forest	
Management Funding.....	50
13. Comparison of Municipal Urban Forest	
Management Staffing	51
14. Tree Services Performed by Santa Maria	54
15. Policy and Ordinance Review.....	60
16. City Planning Documents	72
17. Results of the Vibrant Cities Lab Assessment.....	99



College Drive, Santa Maria, California



ACRONYMS

CAL FIRE	California Department of Forestry and Fire Protection
CES	CalEnviroScreen
City	City of Santa Maria
FTE	full-time equivalent
ISA	International Society of Arboriculture
MWEL0	Model Water Efficient Landscape Ordinance
PPS	Priority Planting Score
UFMP	Urban Forest Management Plan



1. INTRODUCTION



1.1 Why the City Needs a UFMP

In 2017, the City of Santa Maria (City) was awarded a California Department of Forestry and Fire Protection (CAL FIRE) grant to complete an inventory of the City's trees and plant over 500 trees in the City, and in 2021 the City was awarded an additional CAL FIRE grant to complete an Urban Forest Management Plan (UFMP) and plant an additional 235 trees. This UFMP has been developed to guide tree planting and maintenance in the City over the next 40 years, provides guidance for updating the City's tree ordinance, and provides goals, strategies, and actions for achieving the shared vision for Santa Maria's urban forest. This UFMP provides a comprehensive, fiscally sustainable, and cohesive City-wide approach to tree care and planting on both public and private property, provides recommended updates to the City's tree ordinance, and provides guidance for sustainably managing the City's urban forest and creating a more equitable City.

Santa Maria has been a designated Tree City USA since 1991 and holds an annual Arbor Day celebration, demonstrating the City's long-term commitment to urban forestry. Tree City USA requirements include maintaining a tree board or department, having a community tree ordinance, spending at least \$2 per capita on urban forestry, and celebrating

Arbor Day (Arbor Day Foundation, 2022). For Arbor Day 2023, the City, with the support of its Urban Forest Advisory Committee, planted 10 trees in a City park.

Santa Maria has experienced many tree and infrastructure conflicts over the years, which have led to liabilities and nuisances to the public, and expenditures to remove trees and repair damaged infrastructure. Planning and caring for the City's urban forest allows for proper tree maintenance, spacing, and avoidance of potential conflicts, allowing trees to mature without damaging infrastructure. Trees that are allowed to grow to their full potential and complete a full life cycle provide more environmental services and benefits to the community.



All recommendations in this UFMP are guided by the American National Standards Institute (ANSI), International Society of Arboriculture Best Management Practices, scientifically supported research, and industry standards.

WHY TREES?



1.2 Why Trees?

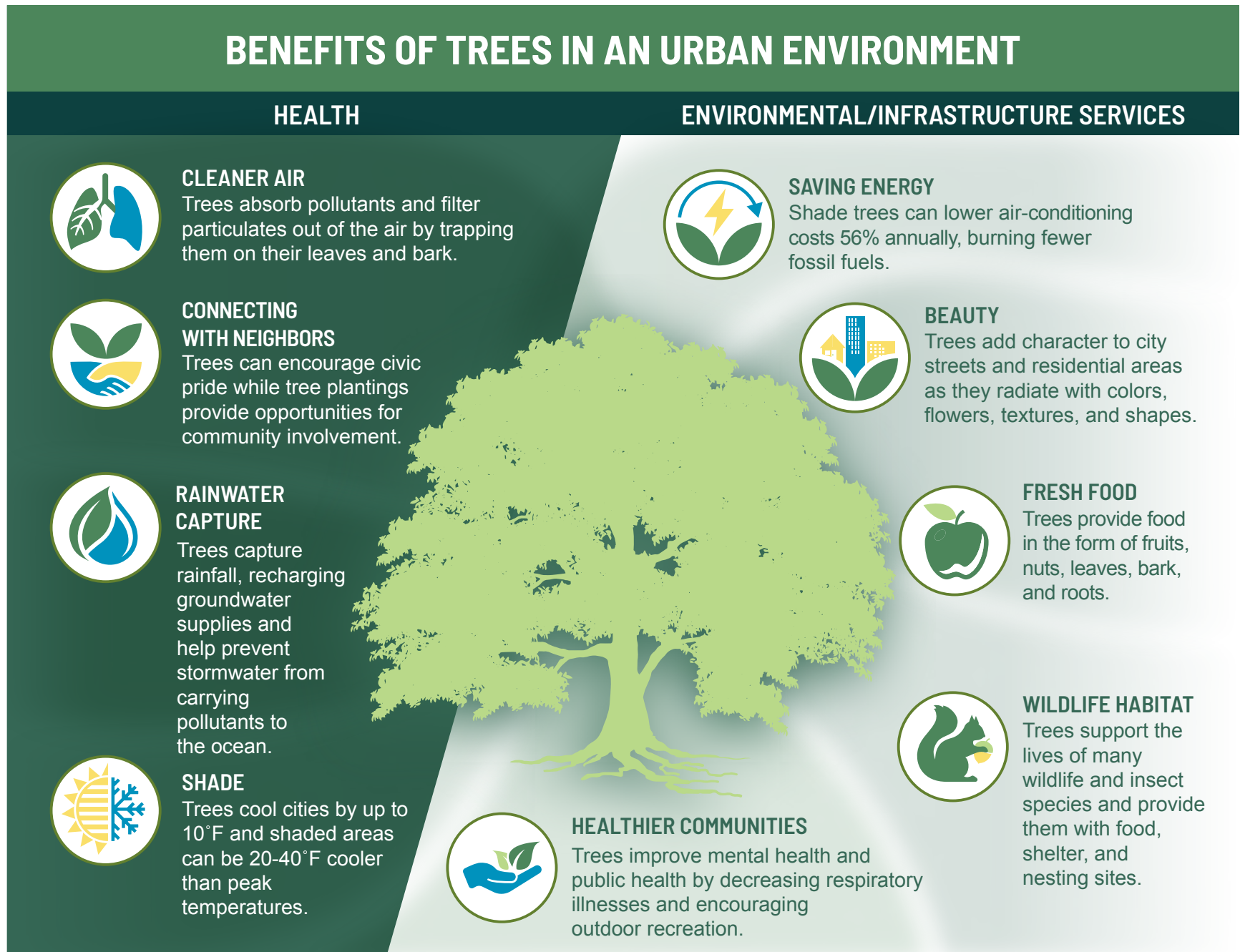
Environmental stressors continue to impact the day-to-day activities of communities across California's landscape. Extreme heat, drought, longer fire seasons, increasing levels of air pollutants, and severe flooding events expose many residents to a variety of climate and health risks. Many of these existing and projected environmental conditions are already impacting Santa Maria. One effective mitigation strategy to help alleviate these risks is to have a well-managed sustainable urban forest. A functioning urban forest provides multi-benefit solutions to environmental issues that result in a safer, more resilient city. Santa Maria's UFMP provides the framework for effective tree management and policies that positions the City to understand the value of the urban forest while pursuing a sustainable environment. Additionally, placemaking is the practice of creating places that are focused on greater community engagement, enhancing and activating the public realm, promoting better health, or otherwise improving the quality of life. Trees play a critical role in placemaking and provide many co-benefits. A properly maintained urban forest contributes to a more resilient future and increased quality of life for existing and future generations of Santa Maria resident.



BENEFITS OF TREES

The UFMP provides guidance for sustainably managing the City's urban forest and creating a more equitable City. Trees and associated vegetation in urban areas provide environmental, social, and economic benefits to communities (see Figure 1. Benefits of Trees). Through equitable distribution of the City's green infrastructure, the City can take positive steps toward creating a more equitable Santa Maria. The guiding principles, goals and strategies included in the Strategic Plan of the UFMP (Section 4) reflect the core values of the City, key stakeholders, and community members who contributed to plan development. These strategies will ensure the community will have access to the benefits of an enhanced urban forest.

Figure 1. The Benefits of Trees



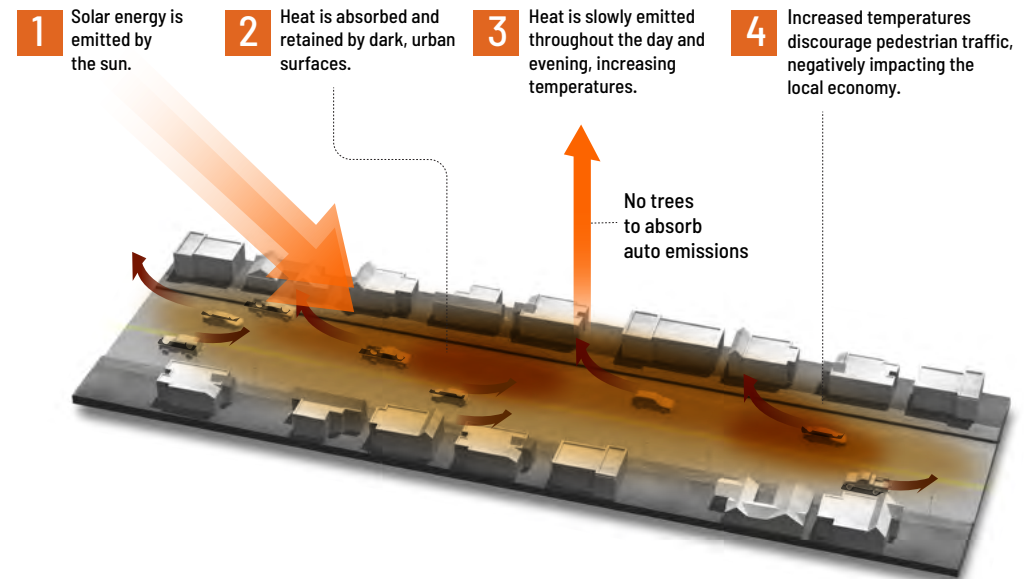


URBAN HEAT

As temperatures increase, heat is absorbed and re-emitted by buildings, roads, and other hardscape in urban settings. This occurrence, known as the “urban heat island effect,” results in urbanized areas experiencing higher temperatures relative to surrounding natural or rural areas. Elevated temperatures in urban areas contribute to compromised human health and comfort, which can result in heat-related illness and heat-related deaths (EPA 2020). Currently, extreme heat causes more deaths than any other weather-related hazard, with particularly vulnerable groups consisting of the elderly, unhoused populations, and those with pre-existing conditions (Sherman 2020). Tree canopies reduce the urban heat island effect (see Figure 2) by lowering surface and air temperatures through shade and evapotranspiration (Loughner et al. 2012). Surface temperatures may be 20°F to 45°F (11°F to 25°C) cooler under the shade of a tree than areas with no tree cover (EPA 2019). Further, on a sunny day, hardscape surfaces, such as asphalt, concrete, or roofs, can reach temperatures that are 50°F to 90°F hotter than the surrounding air temperature (EPA 2021).

HOW TREES HELP NEGATE THE URBAN HEAT ISLAND EFFECT

NO TREES OR GREENERY



WITH TREES AND GREENERY

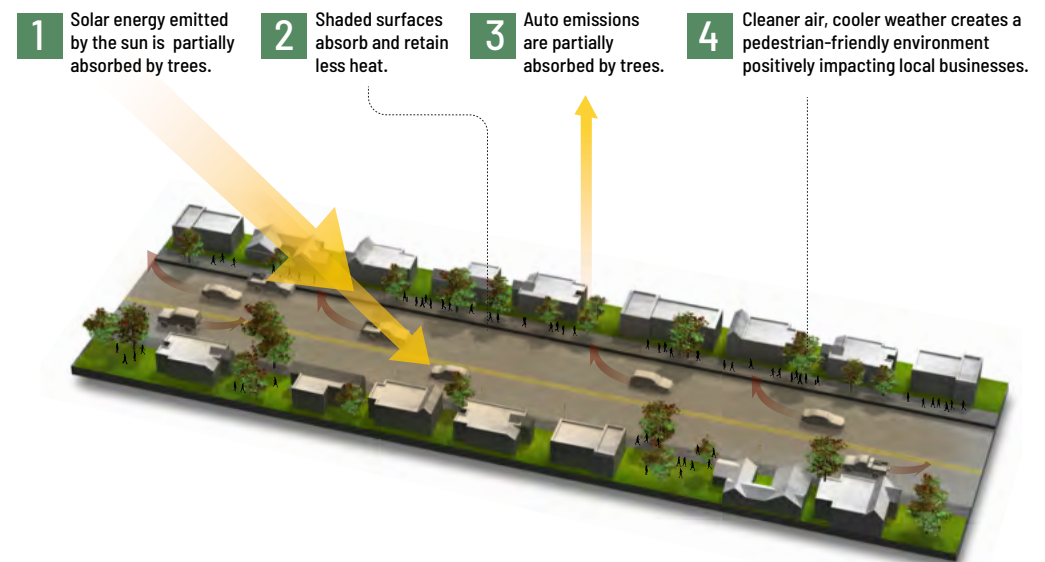


Figure 2. Urban Heat Island Effect



RIGHT TREE, RIGHT PLACE

The urban forestry concept known as “right tree, right place” considers that tree selection should be matched to the growing conditions. Consideration must be given to tree species and size, planter size, potential conflicts (e.g., utilities, sidewalks, or other infrastructure), climate resilience, and desired outcome of a tree planting (e.g., shade, privacy screening, noise buffering, aesthetics, food, etc). Figure 3 provides a depiction of the tree size relative to planter size and the resulting shade provided by the tree. Further, Figure 4a and 4b provides tree spacing guidelines for residential yard trees and street trees. Ensuring that trees are able to grow to their full potential is essential to a sustainable urban forest.

Figure 3. Right Tree, Right Place

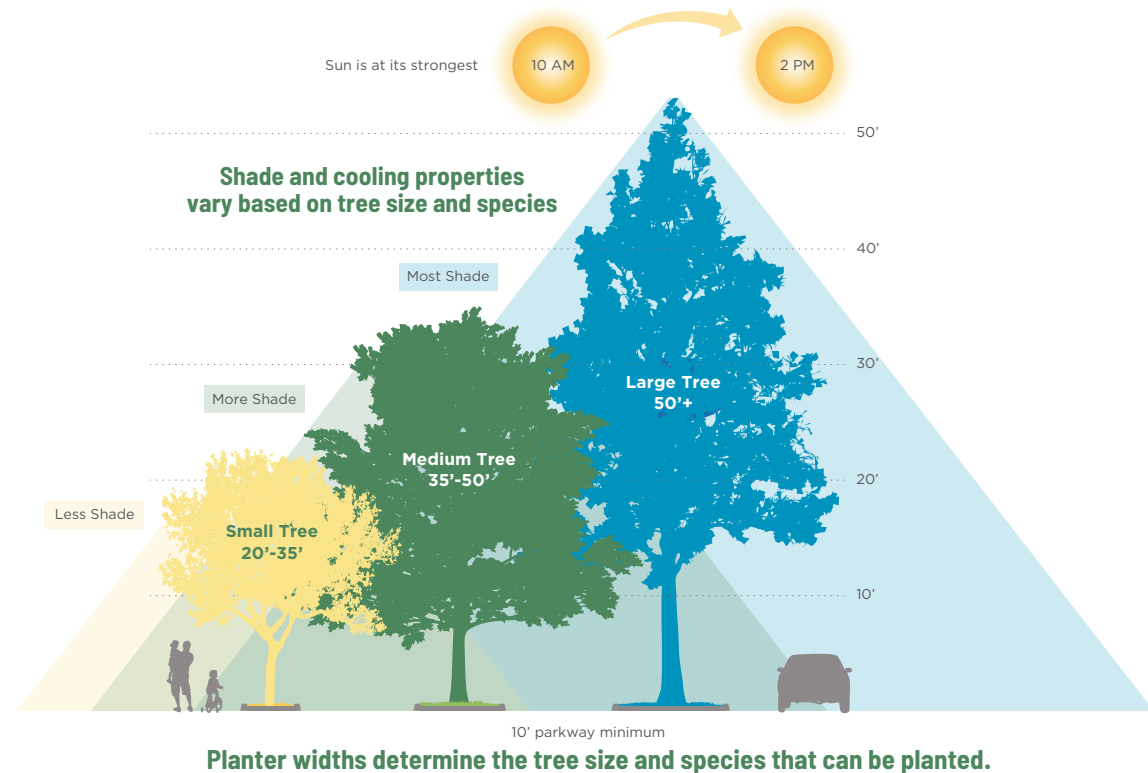


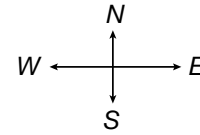
Figure 4a. Tree Spacing for Residential Yard Trees

Spacing Guidelines for Residential Yard Trees

Knowing the type of soil, water needs, and eventual size of the tree will help you select the best tree for your yard.

If you plant more than one tree, make sure they are sited far enough apart to allow full growth of both trees. Trees should be placed 12 to 30 feet apart depending on their ultimate size

Plant at least 8 feet from sidewalks and driveways, 15 feet from home foundations and swimming pools, and 6 feet from fences.



Deciduous trees (trees that lose their leaves) will help cool your home in the summer and allow the sun to warm it in the winter.

Planting the right tree on the South, West, and East side of your home allows trees to shade your home and lower energy costs.



Residence is shaded from the harsh summer sun.

Site your tree where the tree can grow to its full size.

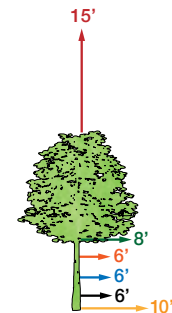
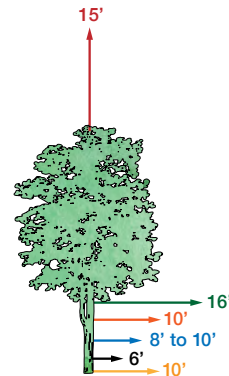
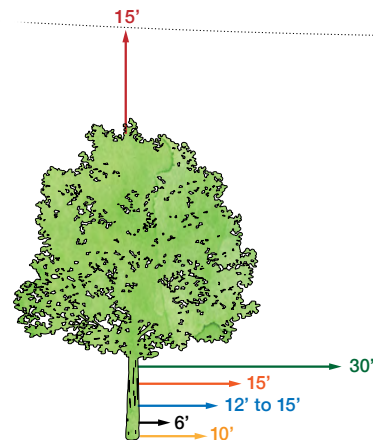
Spacing requirements by tree size

Large 45' tall and higher

Medium 25' to 45'

Small Up to 25'

- Spacing from other trees
- Spacing from building foundations
- Spacing from sidewalks, curbs and driveways
- Spacing from limbs to overhead wires
- Spacing from trunk at maturity to in-ground electrical lines
- Spacing from trunk at maturity to in-ground gas lines

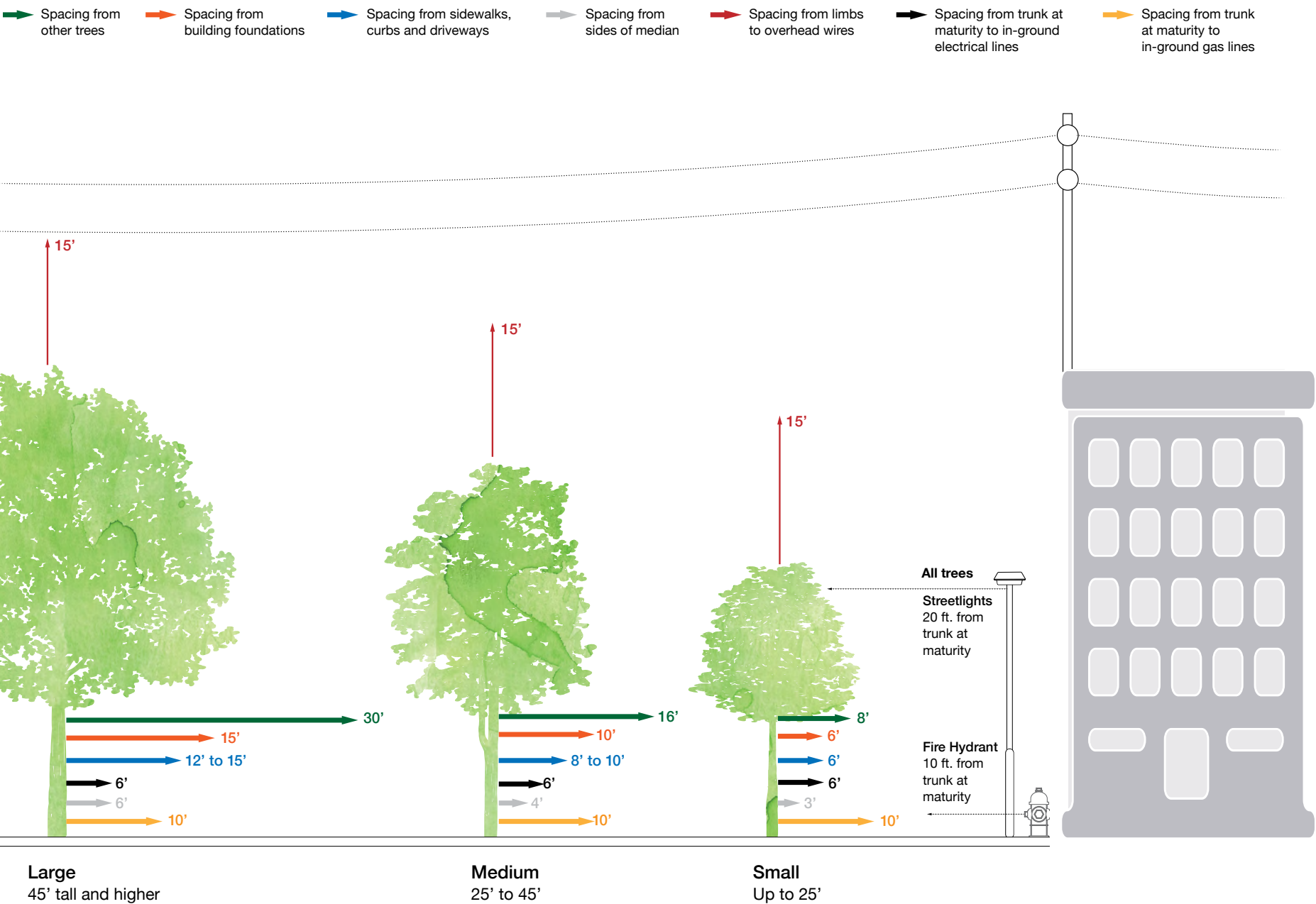


**BEFORE
YOU DIG
CALL 811**

Source: Sacramento Tree Foundation

Figure 4b. Tree Spacing for Street Trees

Spacing Guidelines for Street Trees





WATER WISE LANDSCAPING WITH TREES

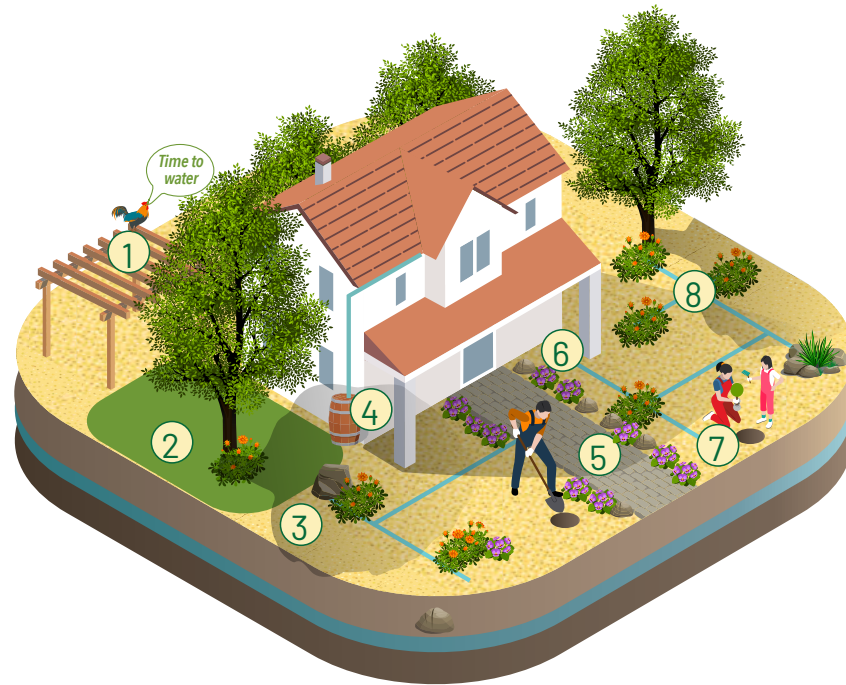
Include trees in water efficient landscaping.

Trees and water are both precious resources. Water efficient landscaping should include trees! Newly planted drought tolerant trees only require 15 gallons of water per week for the first 3 years! Figure 5 provides guidance for water efficient landscaping with trees.

ADDITIONAL RESOURCES:

<https://www.treesaregood.org/>

Figure 5. Water Wise Landscaping with Trees



- 1 Water early in the morning or after sunset – this is when plants and trees take up the most water, and also reduces water lost to evaporation.
- 2 Avoid planting groundcovers that have high water needs, such as grass/turf.
- 3 Bark chips, rocks, mulch, decomposed granite, or sand provide attractive, water-wise alternatives to turf. Mulch reduces water evaporation when placed around plants.
- 4 Conserve, capture, and recycle water. Collect rainwater with the use of rain barrels, place buckets in the shower/sink to collect water as you wait for it to warm.
- 5 Porous pavers or gravel paths allow water to percolate back into the ground and prevent runoff.
- 6 Drip irrigation – use in-line drip tubing in parallel rows for turf and plants, and in-line drip tubing rings for trees.
- 7 Plant regionally appropriate tree species that are climate adapted and anticipated to thrive in Santa Maria. Check out Santa Maria's Recommended Species List in Appendix D.
- 8 Reference the Water Use Classification of Landscape Species (WUCOLS) database for information and guidance on irrigation needs of landscape plants in our region.



WHAT HAS BEEN DONE, WHAT IS PLANNED



WHAT HAS BEEN DONE

- The 5-year pruning cycle has been updated to an arborist-review-based pruning cycle
- The 25% reactive pruning method has been changed to a completely proactive method
- The 100% reactive root pruning method has been reduced to a 60% proactive method
- 10-foot-wide planting areas are the minimum for all street trees
- Root barriers are required along curbs and sidewalks when trees are closer than 7 feet



WHAT IS PLANNED

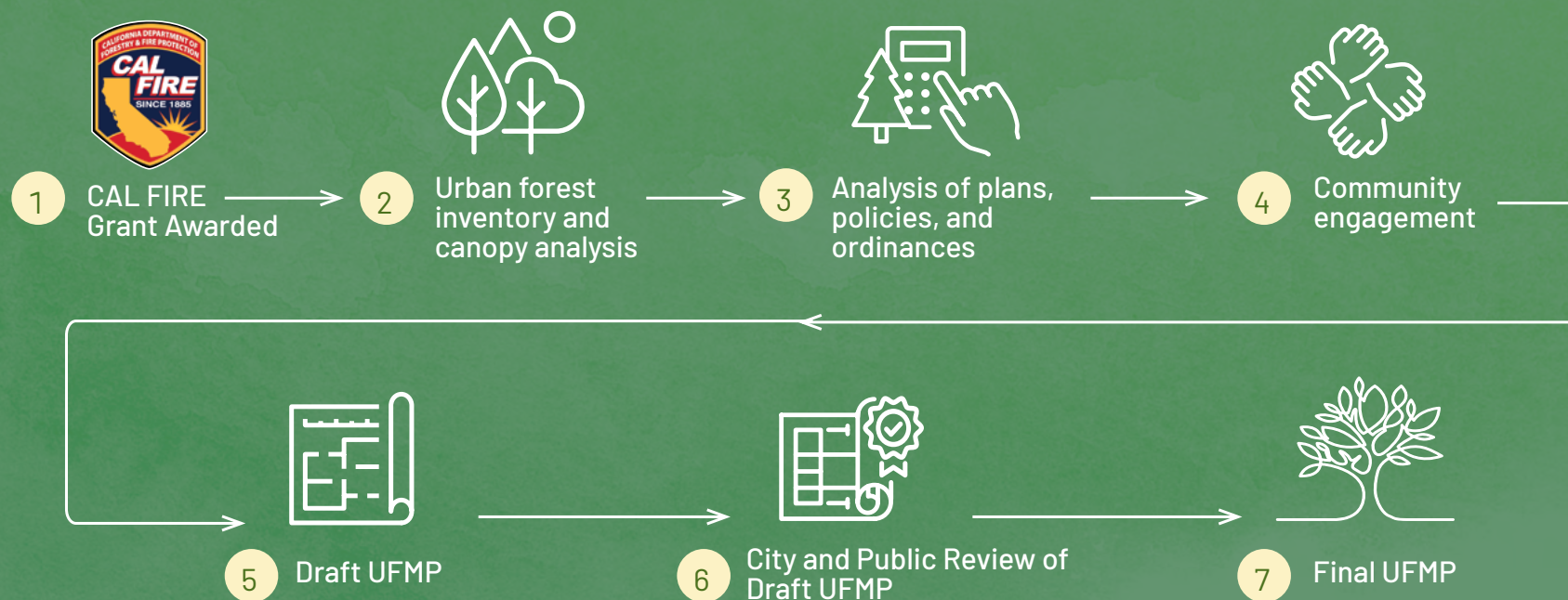
- Establish minimum standards/requirements for tree care and maintenance
- Update the Municipal Code
- Increase tree planting to increase canopy
- Increase community outreach and education



1.3 DEVELOPING THE SANTA MARIA URBAN FOREST MANAGEMENT PLAN

In 2021, the City was awarded a grant from the CAL FIRE Prop 68 Urban and Community Forestry Grant Fund to complete the Santa Maria UFMP. The City's Recreation and Parks Department is the main City entity that is responsible for overseeing the UFMP's development and implementation. City staff provided key insights into City practices, standards, and

plans, and provided operational information and data sets for analysis of the existing urban forestry program. The following sections present key findings of the urban forest analysis and describes the process taken in developing the UFMP.





Coast live oak (*Quercus agrifolia*) Veteran's Memorial Hall, Santa Maria, CA



1.4 KEY FINDINGS

COMMUNITY ENGAGEMENT

A public survey was used to gather community input via an online platform and paper surveys distributed at community events. Additionally, a Working Group, consisting of the City's Urban Forest Advisory Committee, met six times throughout the UFMP development process. City staff, community members, and the Working Group/Urban Forest Advisory Committee assisted with creating a vision and strategic plan for the urban forest. The community engagement process revealed that community members who were engaged during the UFMP process highly value trees and recognize a need for improved tree management by both the City and private property owners. Community members desire to play a role in growing and managing the urban forest, such as through volunteer events or planting trees on their private property.



Volunteers with the Urban Forest Advisory Committee planting Coast live oak trees (*Quercus agrifolia*) in Santa Maria, CA.



94% of respondents view trees as more important than or equally as important as other City-maintained infrastructure

CANOPY COVER

A City-wide canopy cover assessment and canopy change analysis was conducted using United States Department of Agriculture (USDA) Forest Service urban tree canopy data from 2012 and 2018. Santa Maria's City-wide canopy cover as of 2018 is low (5.5%), but has increased slightly since 2012 (5.3%). Approximately 1,000 trees per year will need to be planted to reach the City's canopy cover goal of 20%. Tree planting on public and private property will be needed to reach this goal.

Santa Maria will need to add trees on public and private property to reach its canopy cover goals. Over the next 40 years the City will need to plant:



1,063 trees per year = 20% canopy cover

696 trees per year = 15% canopy cover

330 trees per year = 10% canopy cover



Southern Live Oak (*Quercus virginiana*), West Fesler Street, Santa Maria, CA



CITY-MANAGED TREE INVENTORY

The City's tree inventory was analyzed against sustainability indicators based on urban forestry research to ensure Santa Maria's urban forest is well-suited for the future. i-Tree Eco, a software tool developed by the USDA Forest Service, was used to analyze tree inventory records to determine the values of the environmental services provided by the City's trees. Nearly 50% of the City's tree inventory is considered young, indicating a relatively newly planted urban forest. Previous tree planting, maintenance, and preservation practices in the City led to frequent tree removal, resulting in fewer middle-aged and mature trees. The City has a species diverse tree inventory; this UFMP will help to ensure appropriate species for Santa Maria's climate are being planted.



Olive tree (*Olea europaea*)
Courthouse (East Cook Street), Santa Maria, CA



26,465
city-managed trees

50% young trees



- 3,362,494 gallons of stormwater/ rainwater captured annually
- 13.6 tons of air pollution removed annually
- 270.4 tons of CO₂ sequestered annually

URBAN FOREST MANAGEMENT

Interviews were conducted with City staff to obtain information regarding City tree management. Data was collected and reviewed, including annual budgets, staffing levels, and tree services performed by the City, as well as tree management practices. Urban forest management in the City has improved in recent years. Additional staff and funding are needed to sustainably maintain Santa Maria's urban forest and reach urban forestry goals. The City spends \$37 per tree annually, which is considered low to medium when compared to other cities.



**Santa Maria
spends \$37 per
tree annually on
tree management
and maintenance**

CITY PLANNING

Policies, ordinances, and planting standards/guidelines were reviewed against ISA and ANSI standards and best management practices. Existing planning documents were evaluated for goals and policies that represent strengths, weaknesses, opportunities, and threats related to the urban forest. The City's broader planning objectives support increased tree planting and tree preservation and recognize the importance of trees to the quality of life in Santa Maria. The City's tree ordinance is in need of an update to align with the City's urban forestry goals.



Callery Pear (*Pyrus calleryana*) Paden Street, Santa Maria, CA



2. COMMUNITY ENGAGEMENT



2.1 WORKING GROUP

The City's UFMP Working Group was formed to bring together key personnel and stakeholders to help advise the UFMP's development process. The Working Group consisted of City staff from the Recreation and Parks Department and the City's existing Urban Forest Advisory Committee, a group of individuals who meet monthly to enhance the City's urban forestry program.. Five working group meetings were held between September 2022 and July 2023, facilitated by Dudek. During the working group meetings, members were guided through a series of brainstorming exercises to generate a draft UFMP vision statement; develop the guiding principles, goals, and strategies of the UFMP; and review

and provide feedback on the draft UFMP. Table 1 provides a summary of key insights and major themes that emerged during Working Group meetings.

2.2 PUBLIC SURVEY

An online survey in English and Spanish was created to identify the public's perception and understanding of the City's trees and to offer a space for public feedback as the City developed its UFMP. The 24-question survey was open between August 30, 2022, and March 1, 2023, and was distributed through various City social media outlets, e-newsletters, canvassing at local businesses, community

TABLE 1. WORKING GROUP

TOPIC	WORKING GROUP INSIGHT
Vision and Guiding Principles	• The urban forest as a valued City asset • Desire for a full and connected canopy cover • Trees influence neighborhood and community character • A community that is connected to nature • A supportive community • Maintaining a small-town feel • Ongoing community outreach and education is needed • Economic benefits of trees should be highlighted • Healthy, equitable and active communities



TABLE 1. WORKING GROUP

TOPIC	WORKING GROUP INSIGHT
Community Outreach	• BMPs for pruning, tree care, watering and establishment care are needed for landscape professionals and community members • Information on how to find an arborist and tree professionals • Important to communicate the benefits of trees to the community, apartment building managers, and business owners • Outreach needs to appeal to a multilingual community and all ages • Outreach to both renters and property owners • Maintain a volunteer based urban forest advisory committee • Consider a youth program for tree planting, maintenance, and education
Tree Management	• The City and community members need to work together to care for trees • Partnerships are needed to increase tree planting and tree establishment care • Standards to preserve and expand canopy cover are needed

events, the Santa Maria Urban Forest Advisory Committee/ Working Group, and communications sent by City staff. In total, 246 survey responses were recorded.

Of the respondents, 91% live/work in Santa Maria and 9% do not live/work in Santa Maria (see Table 2). The demographics of survey respondents compared to the demographics of the City are shown in Table 3. Survey respondents skew older (above 65), higher educated (bachelor's degree or higher), and non-Hispanic, when compared to the demographics of Santa

Maria. Additional outreach to engage community members in urban forest stewardship is encouraged, particularly amongst Hispanic/Latinx, Spanish speaking, and community members with less than a bachelor's degree, which could include youth outreach. Table 4 includes a summary of survey responses and emerging themes. A full summary of responses to survey questions is included in Appendix A.

TABLE 2. SURVEY RESPONDENTS WHO LIVE/WORK IN THE CITY OF SANTA MARIA

LIVE/WORK IN SANTA MARIA?	ENGLISH	SPANISH	TOTAL RESPONSES	TOTAL %
Yes	218	6	224	91%
No	19	2	21	9%

TABLE 3. DEMOGRAPHICS OF SURVEY RESPONDENTS COMPARED TO DEMOGRAPHICS OF THE CITY OF SANTA MARIA

CATEGORY	DEMOGRAPHICS OF SURVEY RESPONDENTS		U.S. CENSUS DEMOGRAPHICS CITY OF SANTA MARIA 2022	
Age	65 or older	19%	65 or older	10%
Housing Status	Homeowner	53%	Homeowner	50.4%
Race	White	55%	White	59%
Education	Bachelor's degree or higher	50%	Bachelor's degree or higher	13%
Ethnicity	Hispanic, Latino/a/x	47%	Hispanic, Latino/a/x	77%



TABLE 4. SUMMARY OF ONLINE SURVEY RESPONSES

TOPIC	RESPONSES
Communication and marketing of the urban forest program	33% of respondents learned about the survey through social media and 22% through email. 95% of respondents think the best way for the City to communicate about tree management and the UFMP is through email or social media.
Views of trees as a city asset	94% of respondents view trees as more important than or equally as important as other City-maintained infrastructure. 59% of respondents think the City's trees are in good or excellent condition, 41% think the City's trees are in fair or poor condition. 99% of respondents believe trees are a benefit to their community.
Goals of the Urban Forest Management Plan	75% of respondents believe one of the goals of the UFMP should prioritize maintaining the existing trees. Other goals that respondents were in support of include removing dead/hazardous trees, replacing removed trees, increasing the number of trees planted annually, and planting new species to increase species diversity. The top two places where people would like to see more trees in the City are in parks and open spaces and shopping/commercial areas.
Infrastructure conflicts	58% of respondents have observed damage to a street or sidewalk caused by trees in their neighborhood. 51% of respondents identified damage to sewer pipes, sidewalks, or driveways as a top reason they would not want to have a tree on their property.

TABLE 4. SUMMARY OF ONLINE SURVEY RESPONSES

TOPIC	RESPONSES
Opinions on tree protection ordinances	85% of respondents are at least somewhat in support of tree protection on private property.
Outreach campaigns to strengthen the urban forest	Improving the environment (providing wildlife habitat, improving air quality, and storing greenhouse gases) is the benefit of trees that respondents value the most. The top activities that respondents would be willing to participate in to support the urban forest include volunteering at a community tree planting event and planting a tree on their private property. Respondents indicated the best way the City could help a community member plant/care for a tree in their yard is through financial support, as well as providing educational materials such as “how-to” information on planting, watering, and trimming.



Volunteers with the Urban Forest Advisory Committee planting Coast live oak trees (*Quercus agrifolia*) in Santa Maria.



3. STATUS OF THE URBAN FOREST



3.1 CANOPY COVER

Canopy cover refers to the layer of leaves, branches, and stems that provide tree coverage of the ground when viewed from above. The urban tree canopy provides multiple environmental services and economic value to the surrounding community. A robust tree canopy that is equitably distributed helps to create a healthier, more resilient community, and the environmental benefits and services received from the urban forest increase as tree canopy increases (Clark et al. 1997). Likewise, low canopy cover can result in increased vulnerability to pollution, extreme heat, and associated health issues. Residents who live beneath dense tree canopy experience greater tree benefits than residents who live in areas of low tree canopy. For example, low canopy cover may be an indicator of a community's vulnerability to pollution, extreme heat, and associated potential health issues (Wolf et al. 2020). Trees contribute to cleaner, healthier air in urban environments through direct pollution removal (e.g., uptake via leaf stomata or intercepting airborne particles); air temperature

reductions (e.g., transpiration); and reduction of urban heat islands, building energy consumption, and consequent energy emissions (e.g., temperature reductions provided by tree shade). These community enhancements provided by tree canopy cover improve the quality of life for residents and businesses.

A citywide canopy cover assessment and canopy change analysis was conducted for Santa Maria using freely available U.S. Forest Service canopy data from 2018 and purchased imagery from 2012. Detailed results from the canopy cover analysis are included in Appendix B.

Figure 6 depicts the results of the canopy cover assessment. The canopy cover assessment revealed that Santa Maria has an existing canopy cover of approximately 5.5% (as of 2018 U.S. Forest Service canopy imagery). This is increased from a canopy cover of approximately 5.3% in 2012.

Tree inventory and canopy cover application analysis and visualizations were created using R (v4.2.1; R Core Team, 2022) in RStudio (v6.0.421; Posit Team, 2023) using the packages tidyverse (v1.3.1; Wickham et al., 2019), ggplot2 (v3.3.6; Wickham, 2016), patchwork (v1.1.1; Pedersen, 2020), ggtext (v0.1.2; Wilke & Wiernik, 2022), scales (v1.2.0; Wickham & Seidel, 2022), units (v0.8-0; Pebesma & Mailund, 2016), sf (v1.0-9; Pebesma, 2018), and tmap (v3.3-3; Tennekes, 2018).



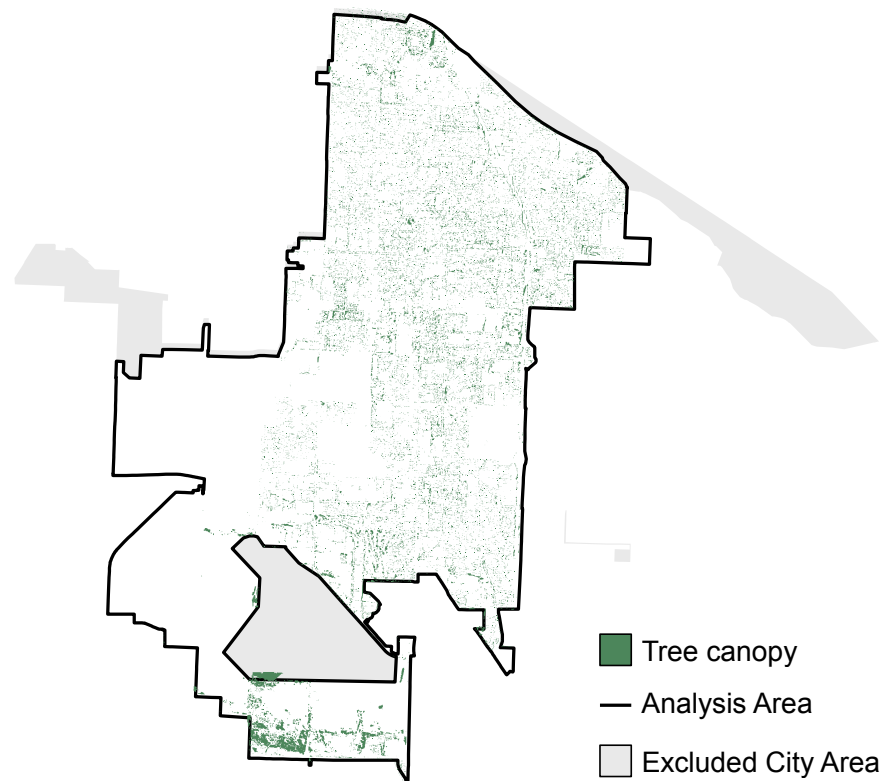
3.1.1 Increasing Canopy Cover

Santa Maria has set a goal of increasing canopy cover, as 5.3% is relatively low. For comparison, nearby jurisdictions with comparable climate and historical development patterns, such as the Cities of Lompoc and San Luis Obispo, have canopy covers of 15%–24% in the majority of their city boundaries (USFS 2018). The number of trees needed to increase canopy cover is shown in Figure 7. Figure 8 shows the number of trees that should be planted annually. These calculations assume a mix of trees with canopy spreads ranging from 20-foot- to 75-foot-diameter canopies. The combination of tree sizes is based on the existing planter sizes found throughout Santa Maria.

Historically, up to 40% canopy cover was considered a realistic goal for urban areas. With advancements in urban forestry research, it has been found that a realistic canopy cover goal must consider the environmental conditions and historical canopy cover of the region. For example, forested areas have the potential for a canopy cover of approximately 38%, grasslands have the potential for approximately 23% canopy cover, and

Figure 6. Canopy Cover Assessment

City of Santa Maria - Canopy Cover 2018



5.5% canopy cover City-wide

3. STATUS OF THE URBAN FOREST

desert areas have potential for approximately 15% canopy cover (Nowak & Greenfield, 2018). Agricultural land globally has at least a 10% tree cover, which has increased by 2% over the previous ten years (Zomer 2016). Santa Maria, with its unique mix of agricultural and urban land uses, has set a canopy cover goal of 20% to be achieved by planting 1,063 trees per year over a 40-year time frame. Achieving 20% canopy cover will require coordination with other large landowners and private property owners, preserving the existing canopy, and planting new trees wherever feasible.



Blue Gum (*Eucalyptus globulus*) canopy, East Donavon Road, Santa Maria, CA



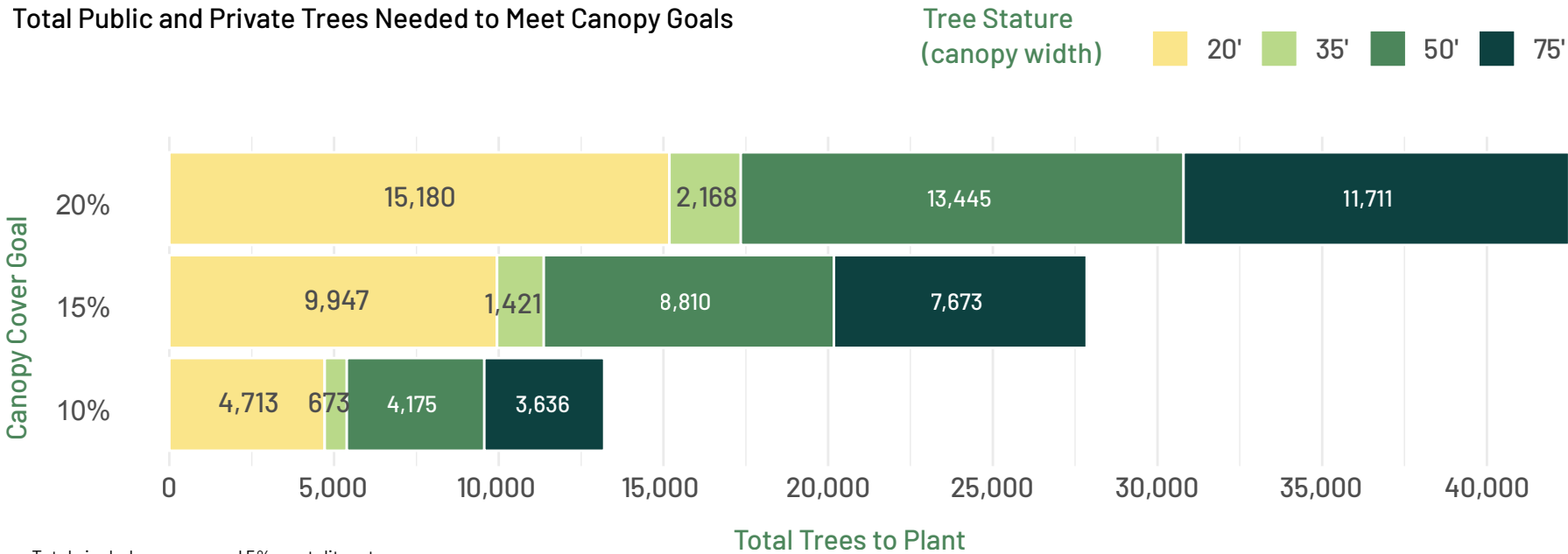
Santa Maria has set a canopy cover goal of 20% to be achieved by planting 1,063 trees per year over a 40-year time frame.



Figure 7. Trees Needed to Meet Canopy Goals

City of Santa Maria - Canopy Increase Analysis

Total Public and Private Trees Needed to Meet Canopy Goals

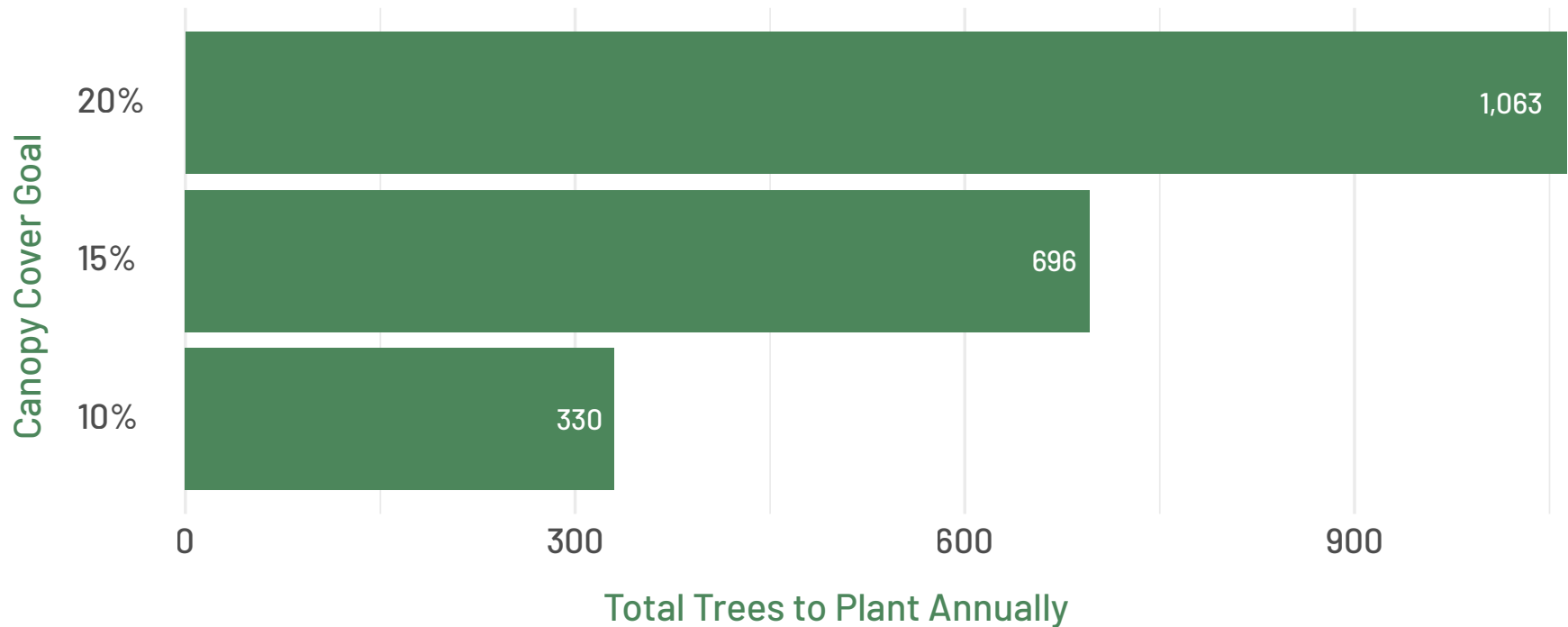


Totals include an assumed 5% mortality rate.

Figure 8. Annual Tree Planting Over 40 Years to Meet Canopy Goals

City of Santa Maria - Canopy Increase Analysis

Annual Public and Private Tree Planting Over 40 Years to Meet Canopy Goals



Totals include an assumed 5% mortality rate.

Note: Full canopy increase occurs over 20-to-40-year timeframe from planting dates and is dependent on species growth rates, weather, initial watering and care, and more.



3.1.2 Canopy Equity

The California Environmental Protection Agency's CalEnviroScreen (CES) 4.0 online tool identifies California communities that are disproportionately burdened by pollution and have a higher vulnerability to the health effects of pollution (OEHHA 2018). The tool uses indicators of exposure, environmental effects, sensitive population, and socioeconomic factors to assess the cumulative impact of pollution burden, health conditions, and socioeconomic stressors on California communities. Each census tract is given a CES score ranging from 0 to 100, which identifies that community's pollution burden and vulnerability. The scores are then categorized into CES percentiles, which identifies inequities associated with pollution throughout the state. CES percentiles from 1%–9% indicate the least vulnerable and CES percentiles from 91%–100% indicate the most vulnerable communities in California (OEHHA 2021).

Figure 9 shows a map of the CES percentiles for census tracts within the canopy cover analysis area. Figure 10 depicts the tree canopy cover percent by CES percentile range. As shown, census tracts with the least vulnerability to pollution (0%–9% CES range) have a much higher canopy cover (17%) than the rest of the City. Census tracts with the

highest vulnerability to pollution in Santa Maria (70%–79% CES range) have a lower canopy cover (approximately 2%) than the Citywide canopy average. The California Environmental Protection Agency designates all census tracts with CES percentiles above 75% as a disadvantaged community, meaning that their pollution burden and vulnerability is severe. These communities are targeted for investments from the California Cap-and-Trade Program (OEHHA 2022). Planting trees in targeted areas of the City that have a higher vulnerability to pollution and health effects of pollution can be a powerful tool toward creating a more equitable Santa Maria.

Figure 11 displays the percentages of different racial/ethnic groups represented Citywide and within census tracts with different canopy cover levels. As shown, areas with highest canopy cover percentage (15%–19.9%) have a higher proportion of white population (63.3%). Conversely, areas with lower canopy cover have a higher proportion



The areas of the city that are most vulnerable to pollution have a lower canopy cover (approximately 2%) compared to the average City-wide canopy cover (approximately 5.5%).

Figure 9. CalEnviroScreen 4.0

City of Santa Maria - Census Tracts CalEnviroScreen 4.0 Percentiles

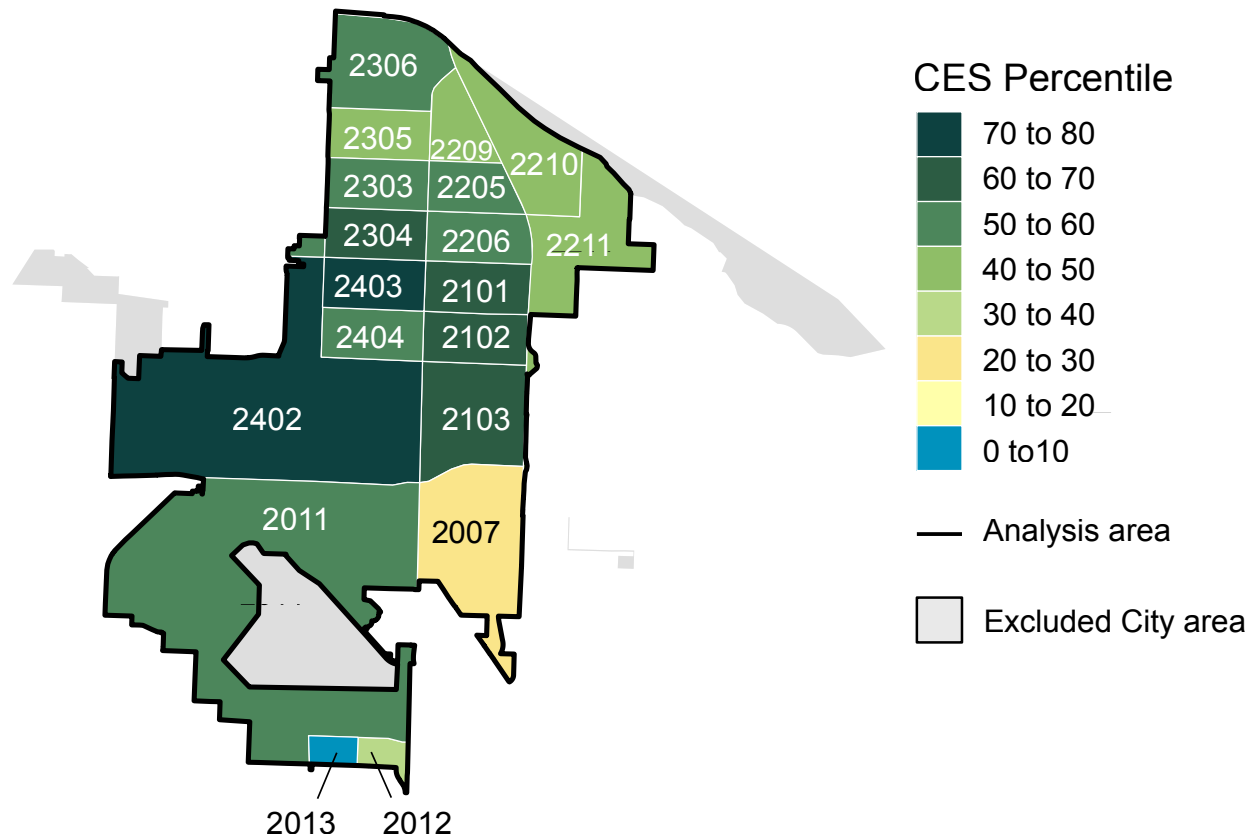




Figure 10. Tree Canopy Cover by CalEnviroScreen Range

City of Santa Maria - Census Tracts

Tree Canopy Cover Percent by CES Range

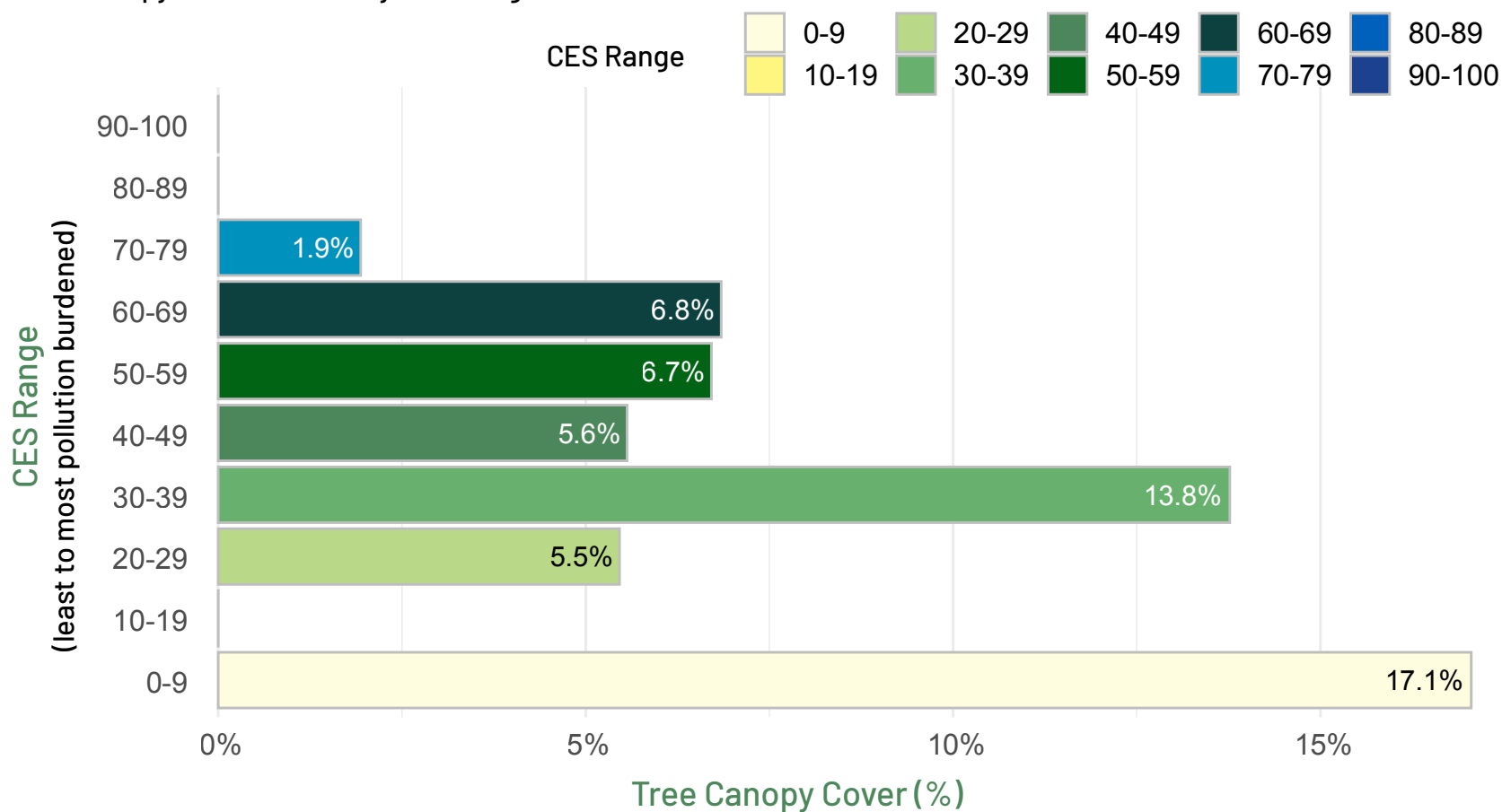
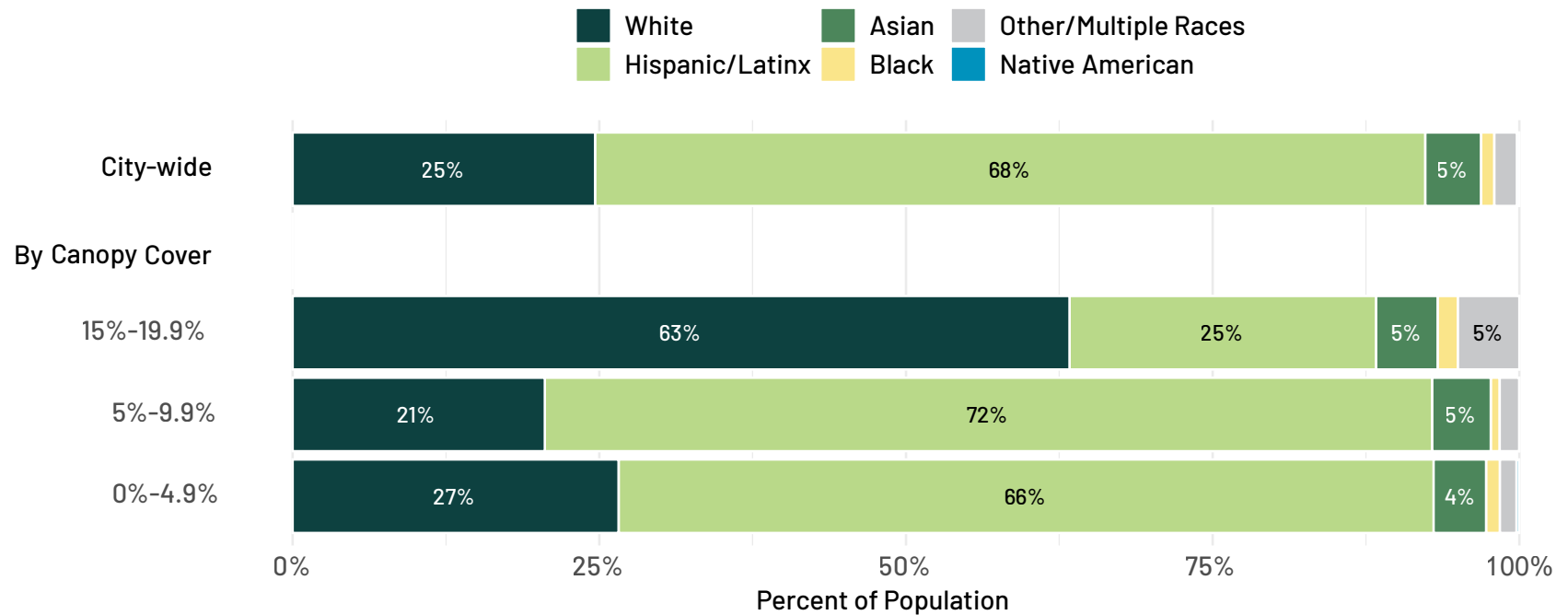


Figure 11. Race/Ethnicity by Canopy Cover

City of Santa Maria - Canopy Cover

Distribution of Race/Ethnicity by Canopy Cover of Census Tract



Percentages less than 2% are unlabeled.



3.1.3 Canopy Cover by Land Use Type

Land use type is an important component of canopy cover analysis, as different land use types have higher potential to support increased canopy cover. For example, parks generally present opportunities for planting large trees, which can greatly contribute to increasing canopy and provide greater environmental benefits than multiple small trees. Likewise, residential land uses present opportunities to increase canopy cover through tree planting on private property. Examples of ways this can be accomplished include educational campaigns, tree giveaway programs, or street tree plantings in the right-of-way.

As shown in Figure 12, planned development residential uses have seen the greatest increase in canopy cover, as trees are planted within these areas as a part of development requirements. Land uses with the most canopy cover include open space (10.9%), planned development – residential medium density (8.4%), and public space (7.6%). High canopy cover in public space contributes to community character and placemaking. Ensuring new trees are planted along with downtown revitalization is critical to maintaining and increasing canopy cover in public space.

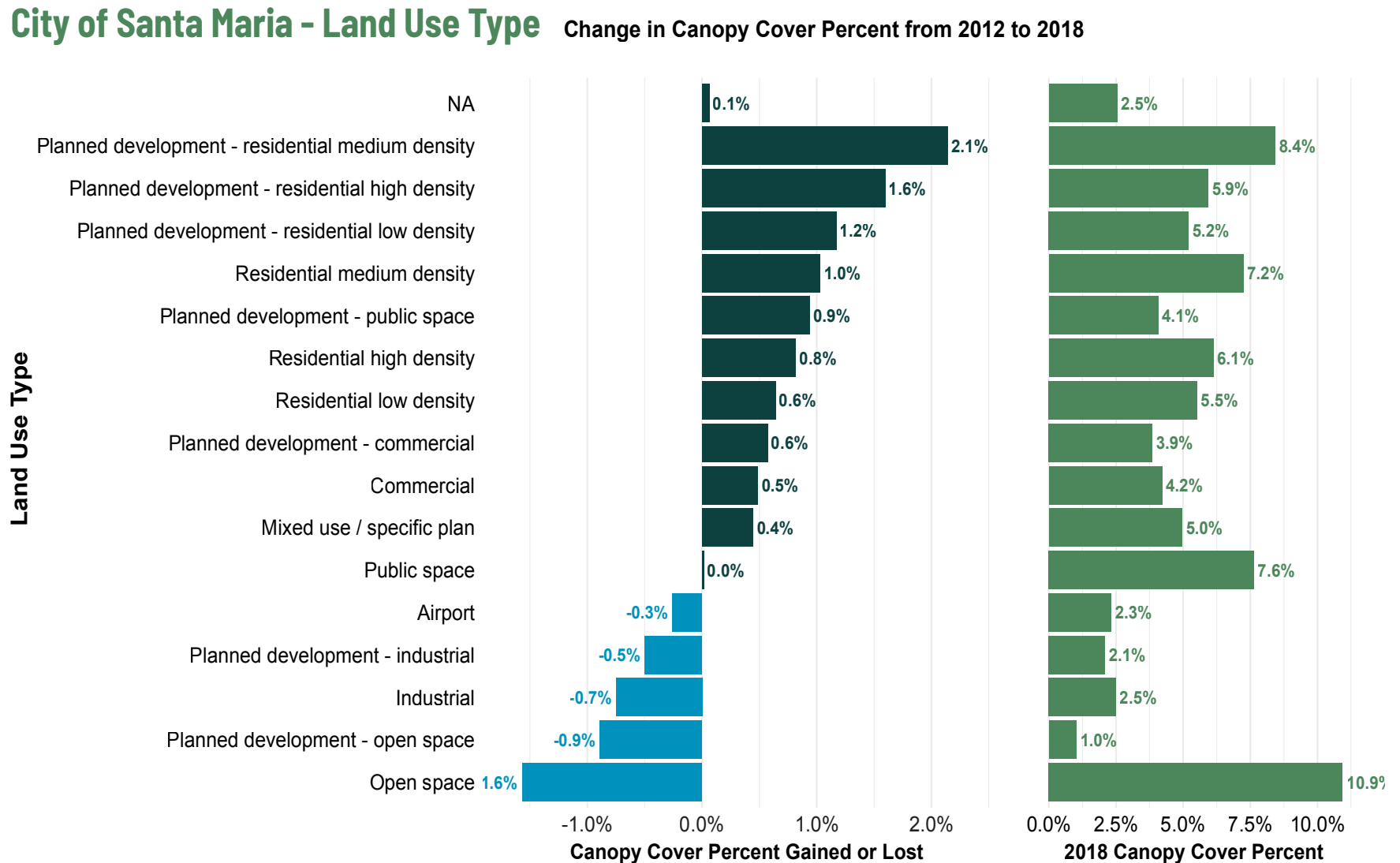
Industrial and commercial uses have notably lower canopy cover than the Citywide average. This is typical of most

cities but also presents opportunities for increasing canopy in these areas. The City requires trees to be planted in commercial and industrial development; however, tree care, pruning, and maintenance is conducted by private property owners and there is no ongoing monitoring by the City.



Coast redwoods (*Sequoia sempervirens*), Tunnel Park, Santa Maria, CA

Figure 12. Canopy Cover by Land Use Type





Santa Maria has 26,465 City-managed trees.

The tree inventory identified 4,605 vacant tree planting sites, and an additional 4,523 “potential” tree planting sites. These represent opportunities for additional tree plantings.

3.2 City-Managed Tree Inventory

Santa Maria’s tree inventory was first completed in 2002 and updated in 2017. The inventory includes 35,605 data points, including 26,465 City-managed trees, as well as vacant sites (8,962), stump sites (167), and not City planted/maintained trees (11). The inventory is updated daily or weekly as work is performed. The City’s stocking rate is 74%. The City’s tree inventory was analyzed using i-Tree, a peer-reviewed software suite developed by USDA Forest Service that provides urban and rural forestry analysis and benefits assessment tools. This analysis utilized the iTree-Eco tool which provides urban forest and individual tree analyses including functional analyses, structure and composition analyses, forecasting modeling, and management information (USDA 2023).

Appendix C-1 and C-2 contain the full analysis of the tree inventory and key highlights are presented below.

3.2.1 Sustainability Indicators

Cities with tree inventories that lack species diversity and age diversity may be more susceptible to invasive pests, pathogens, or significant weather events, because biological diversity is often regarded as the basis for ecological stability (Tilman and Downing 1994). While not all introduced invasive species result in destructive losses to urban forests, an important strategy to increase resiliency to threats is to foster a diverse urban forest.

3. STATUS OF THE URBAN FOREST

Generally, a city's tree inventory should contain no more than 10% of any one species, 20% of any one genus, or 30% of any one family (Miller and Miller 1991; Richards 1993; Ball 2007). A more stringent limitation of 5% of any one species and 10% of any one genus is commonly used to provide additional protection of the tree inventory (Ball et al. 2007). The City's inventory contains 26,465 individual trees, comprised of 144 genera and 259 species. Currently, eight (8) of the top 10 species fall within the 5% recommendation (Queen palm [Syagrus romanzoffianum] and Callery pear [Pyrus calleryana] slightly exceed the 5% recommendation), and the top 10 genera fall within the 10% recommendation (see Appendix C for further details). As the City continues to plant new trees, it should consider planting trees outside of these species that are overrepresented in the inventory. Section 3.4 provides a recommended species palette that considers this.

The age distribution of Santa Maria's tree inventory can be estimated by examining trees' diameters at standard height. Santa Maria's diameter at standard height distribution is shown in Table 5 and Figure 13. Based on urban forestry research (Richards 1983), an urban forest consisting of 40% immature trees, 30% young trees, 20% middle-aged trees, and 10% mature trees would represent a sustainable age distribution. Santa Maria's tree inventory has a notably higher percentage of young trees (49%) than the recommended sustainability metric (30%). However, this can be attributed

to the increase in tree planting that has occurred in the City more recently, representing a growing urban forest. The percentage of middle-aged trees (5.2%) is also notably lower than the recommended 20%, which can be attributed to a lack of tree preservation as the City has developed. Additionally, many large species trees were previously planted in small planters, resulting in tree removal as infrastructure conflicts have arisen.

TABLE 5. AGE DISTRIBUTION

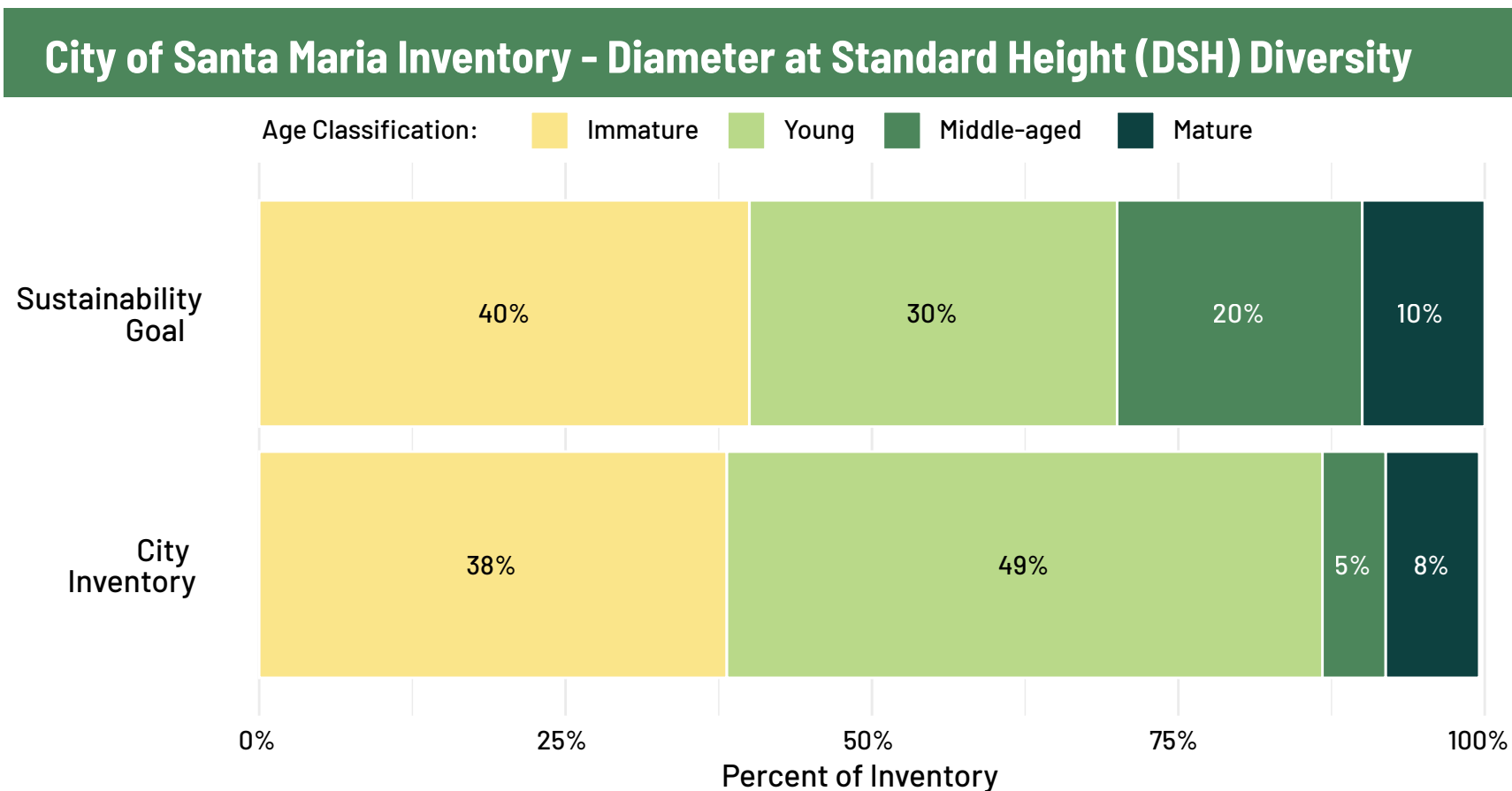
AGE CATEGORY	DSH (INCHES)	RECOMMENDED PERCENTAGE OF TREE INVENTORY	PERCENTAGE OF TREE INVENTORY
Immature	0-6	40%	38%
Young	7-18	30%	49%
Middle-Aged	19-24	20%	5.2%
Mature	25+	10%	7.6%

Source: City of Santa Maria Tree Inventory; Richards 1983

Note: DSH = diameter at standard height.



Figure 13. Age Distribution



Immature: less than 6" DSH, *Young:* 6" - 18" DSH, *Middle-aged:* 18" - 24" DSH, *Mature:* greater than 24" DSH
Percentages less than 1% are unlabeled.

3.2.2 Environmental Services/Economic Benefits

Santa Maria's tree inventory provides the annual environmental services and benefits shown in Table 6. Santa Maria's tree inventory has the financial value shown in Table 7. i-Tree Eco was used to analyze tree inventory records to determine the values of the environmental services provided by the City's trees. In addition to these environmental services, Santa Maria's inventory increases property values; provides shade, food, and habitat for wildlife; reduces urban heat islands; and increases public health outcomes. These services contribute directly to the community members' quality of life, and discussing their merits is one method to encourage residents and business owners to participate in urban forest programs.

Santa Maria's urban forest removes 13.6 tons of air pollution annually, including ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, and particulate matter < 2.5 micrometers. It also produces 721 tons of oxygen annually.



Pines (*pinus* spp.), Jones Street, Santa Maria, CA



TABLE 6. ANNUAL ENVIRONMENTAL SERVICES AND BENEFITS

SERVICE	ANNUAL ENVIRONMENTAL BENEFIT	ANNUAL ENVIRONMENTAL IMPACT	ANNUAL ECONOMIC VALUE
Carbon Sequestration (Carbon dioxide removed from air by trees)	270.4 tons	The carbon removed from the City's air by the urban forest is equivalent to annual emission from 200 automobiles.	\$46,100
Avoided Runoff	3,362,494 gallons	This benefit is equivalent to the average annual water usage of 31 American homes.	\$30,000

Sources: City of Santa Maria Tree Inventory and i-Tree Analysis (USFS 2023).

TABLE 7. TREE INVENTORY FINANCIAL VALUE

VALUE	DESCRIPTION	ASSET AMOUNT	PER-TREE VALUE
Carbon Storage	270.4 tons	The carbon removed from the City's air by the urban forest is equivalent to annual emission from 200 automobiles.	\$46,100
Structural	Tree replacement cost	\$99,900,000	\$3,775
Functional*	Value based on the services trees perform	\$76,1000	\$2.88

*There are additional environmental services that Santa Maria's inventory performs, including oxygen production and pollution removal. i-Tree's model was not able to estimate the value of these services. It is likely that the functional value of the trees is greater than represented in Table 7.

Sources: City of Santa Maria Tree Inventory and i-Tree Analysis (USFS 2020).

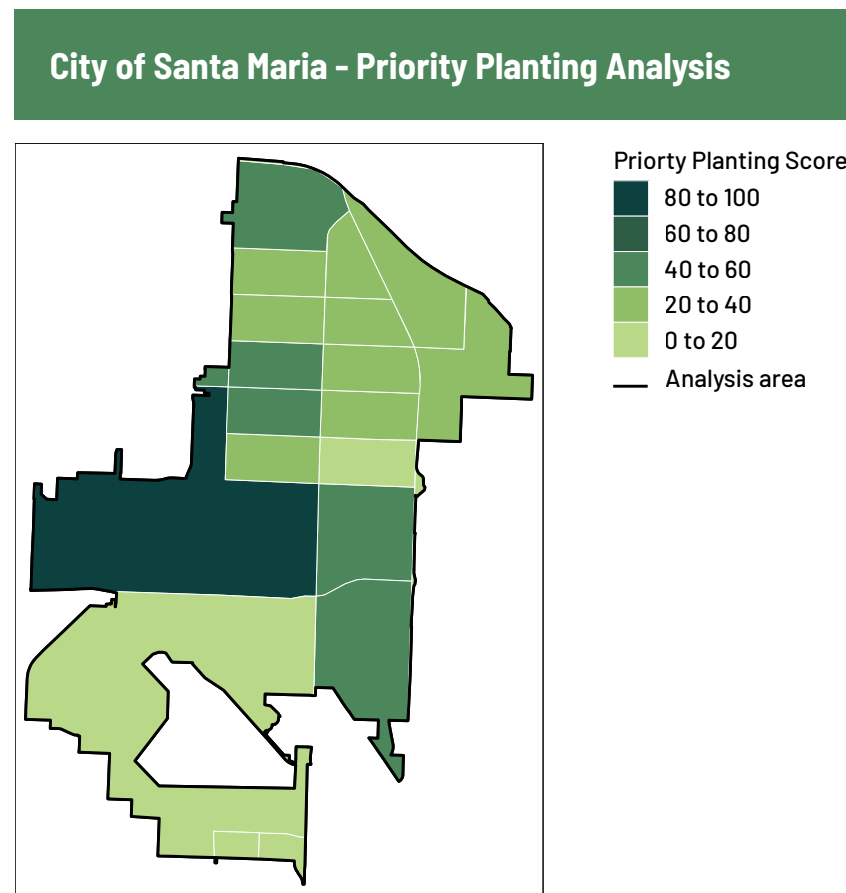
3.3 TREE PLANTING PRIORITY AND OPPORTUNITY AREAS

The Priority Planting Score (PPS) prioritizes where the City should focus tree planting efforts by census tract for a more equitably distributed canopy cover, presented in Figure 14. The study area for developing the PPS was limited to the canopy analysis study area. A higher PPS indicates a higher priority for focused tree planting efforts. PPS considers current canopy cover, distribution of land use type, total recorded City-managed vacant planting sites, pollution burden and equity, and relative population and acreage.

The PPS multiplies a canopy gap index by a priority equity index for each census tract to calculate the relative tree planting needs within the study area. A canopy goal is calculated for each census tract based on the current canopy, as well as distribution of land use types and vacant planting sites relative to other census tracts. The canopy gap index is then calculated based on the difference between the current canopy and the goal for each census tract. The canopy gap index is a number between 0 and 100, with a higher number indicating a greater gap between the current canopy cover and the goal. A priority equity index is calculated for each census tract based on CES, an equity-focused metric of pollution vulnerability and burden, and relative population and

acreage sizes. The priority equity index is a number between 0 and 1, with a higher number indicating a higher need for trees based on equity metrics.

Figure 14. Priority Planting Analysis





3.4 RECOMMENDED TREE SPECIES

The City currently uses a recommended species list developed by the Department of Recreation and Parks. The current list is out of date and the development arborist has allowed additional trees to be used with their review and approval. As a result, tree selection varies by project, which can impact sustainability goals. Furthermore, given anticipated temperature increases, extended drought periods, and state-mandated water restrictions, it is important to review the species planted in the urban landscape to ensure that trees are expected to thrive for the next 50 years. To accomplish this, the current City-recommended species list was reviewed against several factors including: tree inventory data, including existing tree health ratings by species; Water Use Classification of Landscape Species (WUCOLS); research on the suitability of street tree species given anticipated climate conditions (McBride, J.R., and Lacan 2018); a comparison of City tree inventories with anticipated future annual temperatures of Santa Maria; and discussions with City staff on existing tree health and performance.

Appendix D provides an updated recommended species list for use by all city departments. The list considers the following:

- A preference for trees that are rated as very low or low by the Water Use Classification of Landscape Species

- Adaptation to future heat and drought conditions
- Inclusion of well-adapted local and regionally native species
- Diverse planting size requirements to allow for various tree planting locations to encourage a “right tree, right place” philosophy of tree selection and planting
- A diversity of species to achieve species diversity standards
- Options to reflect existing neighborhood character

3.5 URBAN FOREST MANAGEMENT

One of the tenets of urban forest sustainability is that urban forests require human intervention (Clark et al. 1997). The urban forest of Santa Maria is comprised primarily of planted trees, as well as naturally occurring trees along riparian corridors and open space areas. Trees in the urban environment need supplemental watering to establish roots. As they grow and develop a canopy, the limbs and branches need pruning to increase safety and limit conflict with infrastructure. When trees die, they require removal and replacement, to complete the life cycle and start anew.

The following sections outline the management practices of the City and provide an analysis based on current research, International Society of Arboriculture (ISA) and American National Standards Institute best management practices, interviews with City staff, and community feedback.

3.5.1 Organizational Structure

Figure 15 depicts the organizational structure of the various offices, departments, divisions, and commissions/committees that are involved in tree management in Santa Maria.

Figure 15. Organizational Structure





CITY INTERVIEWS

Between September and November 2022, Dudek conducted interviews with City staff, elected officials, commissioners, and community members to better understand urban forest management in the City. Interviews were conducted virtually via Zoom. Eight individuals were interviewed, interviewees are shown in Table 8. The interviews explored the role each

stakeholder had in influencing City tree management, clarified internal City procedures, and informed areas where the City could improve management of the urban forest. Major themes shared during the interviews are included in Appendix E.

TABLE 8. STAKEHOLDER INTERVIEWS

DEPARTMENT	TITLE	INTERVIEWEE
Recreation and Parks	Director	Alex Posada
Recreation and Parks	Urban Forest Supervisor	Scott Christian
Recreation and Parks	Commissioner	Ann Batterson
Recreation and Parks; Downtown Revitalization Committee	Commissioner; Committee Member	Rebecca Carey
Recreation and Parks	Assistant Director	Brett Fulgoni
Community Development, Planning Division	Senior Planner	Carol Ziesenhenné
Community Development, Planning Division	Commissioner	Robert Dickerson
Recreation and Parks	Parks Operation Manager	Casey Stone
City Attorney's Office	City Attorney	Thomas Watson
Community Member	Landscape Architect	Kevin Small

The following sections outline the management practices of the City and provide an analysis based on current research, International Society of Arboriculture (ISA) and American National Standards Institute best management practices, interviews with City staff, and community feedback.

3.5.2 Staffing and Contractors

The City uses a combination of in-house staff from the Recreation and Parks Department and external contractors to implement tree maintenance Citywide. Collectively, in-house staff oversee all City tree maintenance carried out by in-house staff and contractors. In-house staff include a parks operations manager, urban forest supervisor, urban forest technician, and laborer, two of whom are ISA Certified Arborists.

Full-time equivalents (FTEs) represent the percentage of staff time for staff who are involved with the municipal tree management program based on a 40-hour work week. The total number of in-house FTEs involved with tree management for Santa Maria is 1.75 (Table 9). Staff who spend the most time dedicated to tree-related work include the urban forest supervisor (40% of time) and the urban forest technician (100% of time).

Staff who are responsible for overseeing tree maintenance and care maintain the following credentials:

- ISA Certified Arborist
- ISA Certified Municipal Specialist
- ISA Advanced Credential (Tree Risk Assessment Qualification)

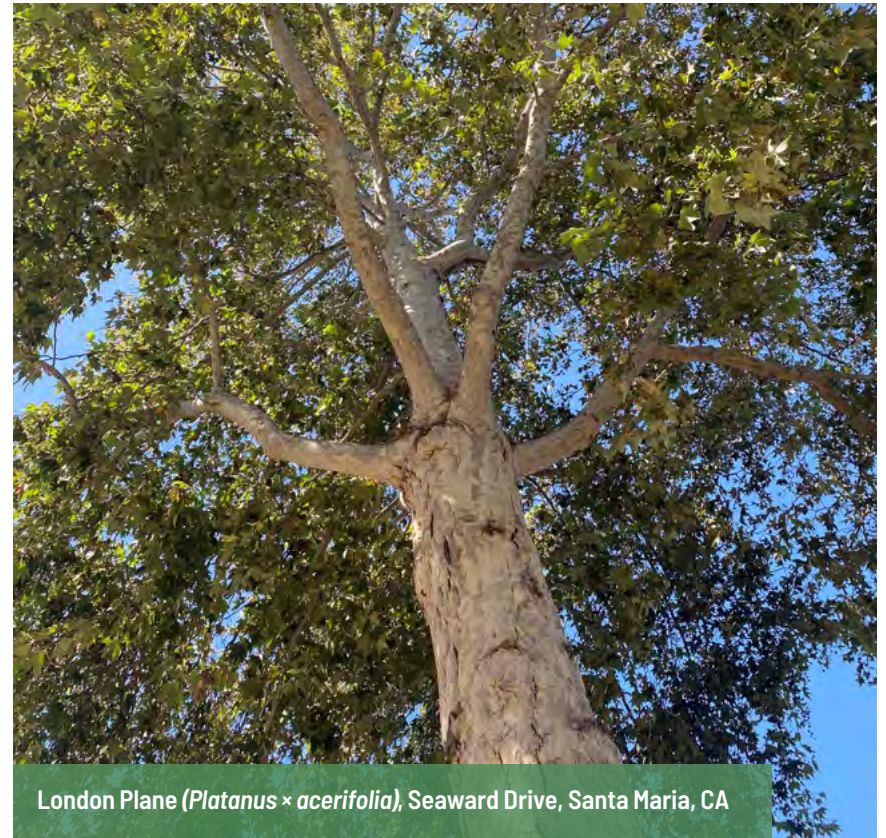




TABLE 9. CITY OF SANTA MARIA TREE-RELATED IN-HOUSE STAFF POSITIONS

TYPE	NUMBER OF POSITIONS	NUMBER OF FTES
Operations Manager	1	0.1
Urban Forest Supervisor	1	0.4
Urban Forest Technician	1	1
Laborer	1	0.25
Total	4	1.75



Jim May Park, Santa Maria, CA

3.5.3 Budget and Funding

City of Santa Maria annual budget related to tree management for fiscal years 2020/2021 through 2023/2024 is shown in Table 10a and 10b. Table 11 further provides the breakdown of Santa Maria's annual budget (2020/2021 through 2023/2024) that is attributed to in-house and contract employees, and calculates the per tree spending on Santa Maria's trees.

TABLE 10A. SANTA MARIA TREE MANAGEMENT OPERATING BUDGET (CONTRACTOR SERVICES)

BUDGET LINE ITEM	FY 20/21	FY 21/22	FY 23/24
Street Tree Care	\$350,000	\$400,000	\$500,000
Park Tree Care and Planting	\$50,000	\$150,000	\$75,000
Street Tree Planting	\$0	\$0	\$50,000
Grant Funded Planting	\$0	\$0	\$40,650
Total Tree Budget	\$400,000	\$550,000	\$665,650

TABLE 10B. SANTA MARIA ANNUAL TREE MANAGEMENT OPERATING BUDGET (CONTRACTOR + IN-HOUSE SERVICES)

BUDGET LINE ITEM	FY 20/21	FY 21/22	FY 23/24
Street Tree Care	\$373,845	\$384,050	\$538,820
Park Tree Care and Planting	\$54,835	\$165,950	\$88,000
Tree Planting	\$10,000	\$58,500	\$113,650
Grant Funded Planting	\$0	\$0	\$40,650
Total Tree Budget	\$438,680	\$608,500	\$781,120



TABLE 11. SANTA MARIA ANNUAL TREE MANAGEMENT BUDGET DISTRIBUTION (CONTRACTOR + IN HOUSE SERVICES)

BUDGET LINE ITEM	FY 20/21	FY 20/21	FY 21/22	FY 21/22	FY 22/23	FY 22/23
	Contractor Services	In-House Services	Contractor Services	In-House Services	Contractor Services	In-House Services
Tree planting	\$0	\$10,000	\$28,500	\$30,000	\$73,650	\$40,000
Tree watering	\$0	\$2,000	\$3,000	\$6,000	\$27,000	\$8,000
Tree pest management	\$0	\$1,000	\$0	\$800	\$0	\$0
Tree pruning	\$340,000	\$19,280	\$400,500	\$18,000	\$490,000	\$55,160
Tree removal	\$50,000	\$4,400	\$95,000	\$1,700	\$41,500	\$9,960
Stump removal	\$10,000	\$0	\$23,000	\$0	\$13,500	\$8,000
Storm cleanup	\$0	\$2,000	\$0	\$2,000	\$5,000	\$10,000
Total Services Budget	\$400,000	\$38,680	\$550,000	\$58,500	\$650,000	\$131,120
Total Contractor + In-House Services Budget	\$438,680		\$608,500		\$781,120	

3. STATUS OF THE URBAN FOREST

TABLE 11. SANTA MARIA ANNUAL TREE MANAGEMENT BUDGET DISTRIBUTION (CONTRACTOR + IN HOUSE SERVICES)

BUDGET LINE ITEM	FY 20/21	FY 20/21	FY 21/22	FY 21/22	FY 22/23	FY 22/23
Staff Salaries*						
Operations Manager	N/A	N/A	N/A	N/A	N/A	\$16,800
Urban Forest Supervisor	N/A	N/A	N/A	N/A	N/A	\$66,080
Urban Forest Technician	N/A	N/A	N/A	N/A	N/A	\$102,200
Laborer	N/A	N/A	N/A	N/A	N/A	\$14,700
Total Salary Budget	N/A	N/A	N/A	N/A	N/A	\$199,780
Total (Services + Salary Budget)	N/A		N/A		\$980,900	
Per Tree Spending	N/A		N/A		\$37	

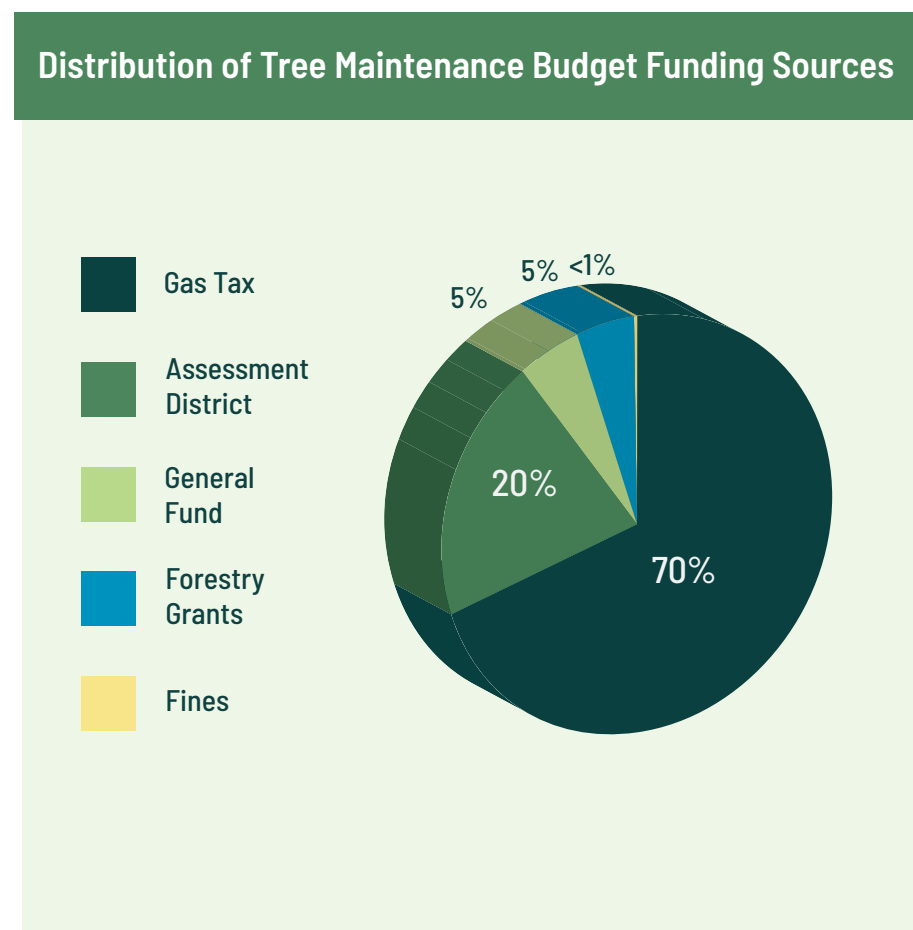
Note: FY = fiscal year; N/A = not applicable.

*Annual staff salaries are calculated based on the percentage of time overseeing tree maintenance.



Figure 16 depicts the tree maintenance funding sources that contribute to the City's urban forest budget and the percentage of the total budget provided by each.

Figure 16. Distribution of Tree Maintenance Budget Funding Sources



Southern live oak (*Quercus virginiana*) City Hall (Cook St.), Santa Maria, CA

COMPARISON TO OTHER MUNICIPALITIES

Table 12 presents a comparison of the City's budget and per-tree spending with other cities. Populations and tree inventory sizes vary across these comparison cities. The City's per-tree spending of \$37 is lower than that of comparison cities (\$44.85) in the Hauer and Peterson study (2016). However, the City's per tree budget is in line with the average across the United States and Western United States (see Figures 17 and 18).

Table 13 compares the City's tree management FTEs to other cities of comparable sizes. The City's 1.75 FTEs is lower than the average (2.6 FTEs) reported by 87 cities in the Hauer and Peterson (2016) study. When considering the number of FTEs per 10,000 trees, the City's 0.7 FTEs per 10,000 trees is also lower than comparison cities, reflecting a need for additional staff to sustainably manage the urban forest. Further, if staff numbers stay the same but all vacant tree planting sites are planted, the total number of City-managed trees would be 35,594, which would result in a per tree spending of \$27.

TABLE 12. COMPARISON OF MUNICIPAL URBAN FOREST MANAGEMENT FUNDING

CALIFORNIA CITY	POPULATION	TREE BUDGET	NUMBER OF PUBLICLY MANAGED TREES	TREE BUDGET ALLOCATION PER TREE
Oxnard	208,154	\$374,641	48,806	\$7.67
Redding	95,542	\$293,111	20,600	\$14.23
Temecula	115,202	\$571,970	30,715	\$18.62
Santa Maria	109,711	\$743,631	26,465	\$37
Hauer and Peterson 2016 Survey Respondents (n = 78)	100,00–249,999	\$1,368,607	73,723	\$44.85
Chico	130,178	\$2,287,403	34,874	\$65.59
Rancho Cordova	73,147	\$329,000	3,910	\$84.14



TABLE 13. COMPARISON OF MUNICIPAL URBAN FOREST MANAGEMENT STAFFING

CALIFORNIA CITY	POPULATION	NUMBER OF PUBLICLY MANAGED TREES	NUMBER OF FTES RELATED TO TREE MANAGEMENT	FTES PER 10,000 TREES
Temecula	115,202	30,715	0.40	0.13
Santa Maria	109,711	26,465	1.75	0.7
Oxnard	208,154	48,806	4.57	0.9
San Luis Obispo	48,341	12,455	1	0.8
Redding	95,542	20,600	2.58	1.2
Hauer and Peterson 2016 Survey Respondents (n=87)	100,00–249,999	73,723	11.8	1.6
Chico	130,178	34,874	9.25	2.6



Southern live oak (*Quercus virginiana*) Chapel Street, Santa Maria, CA

3. STATUS OF THE URBAN FOREST

Figures 17 and 18 provide comparisons of Santa Maria's tree budget to national averages. As shown, Santa Maria's tree budget is slightly less than the national average but more than the average spending on trees for municipalities the western United States.

Figure 17 - Forestry Budget

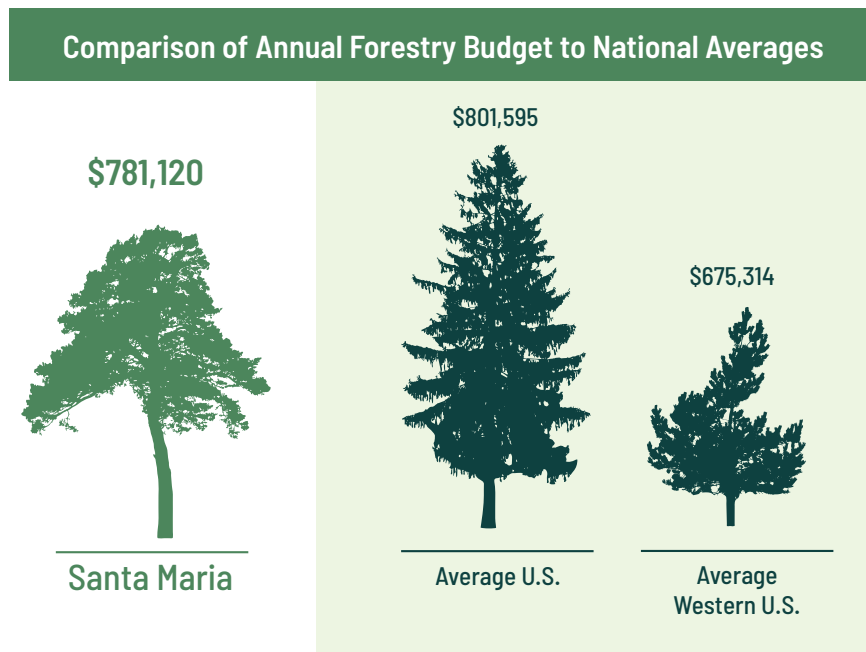
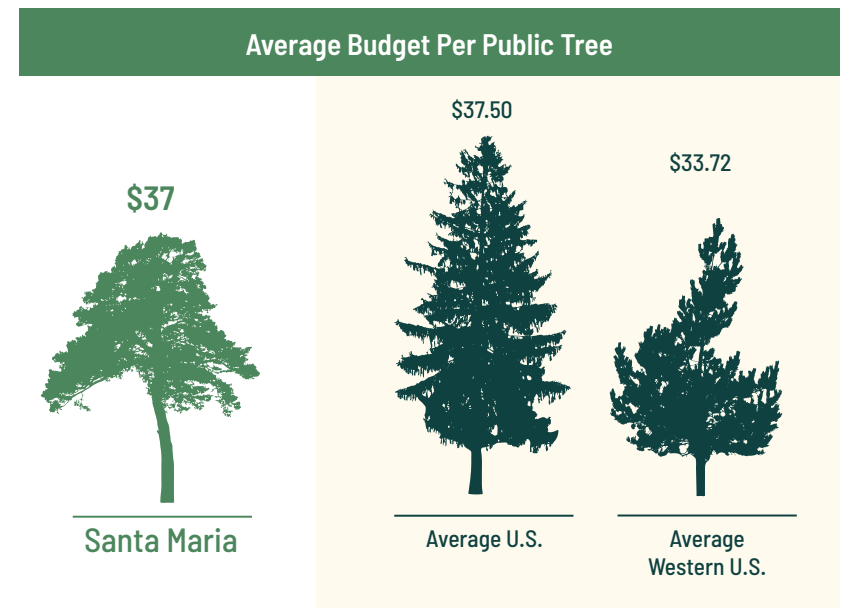


Figure 18 - Average Budget Per Public Tree





Top reasons trees are removed in Santa Maria include the following:

1. Declining or dead
2. Damage to sidewalks
3. Age
4. Development
5. Storm damage

3.5.4 Annual Service Data

The Recreation and Parks Department staff and contracted staff participate in tree management and maintenance in a variety of ways throughout the City. Table 14 presents the services and activities performed by City and contract staff and identifies strengths as well as opportunities for improvement, based on staff interviews and review of management activities. Figure 19 depicts the breakdown of tree service activities typically performed in a fiscal year and Figure 20 shows the tree-related work records from 2017–2022.



Poorly pruned tree in a residential yard. Carlotti Drive, Santa Maria, CA

TABLE 14. REVIEW OF TREE SERVICES PERFORMED BY SANTA MARIA

TREE PLANTING	ESTABLISHMENT CARE	TREE INSPECTIONS	TREE PRUNING	TREE REMOVAL	URBAN WOOD REUSE
There is no formal tree planting program. Most trees are planted by resident request or replacements of removed trees.	Newly planted trees are monitored once per year for 5 years.	Santa Maria has certified arborists, Tree Risk Assessment Qualified (TRAQ) arborists, and a pest control adviser (PCA) who conduct tree inspections.	3,281 trees were pruned in FY 22/23 3,655 trees were pruned in FY 21/22	278 trees were removed in FY 22/23 443 trees were removed in FY 21/22	The City does not have a formal urban wood reuse program.
Trees are purchased from nurseries in San Luis Obispo County.	Formative care is provided for newly planted trees for 5 years after tree planting.	City-managed trees are inspected by an arborist on a 4-year cycle to determine management needs.	The City's inventoried trees are on a 4-year arborist review cycle to determine pruning needs. No pruning is automatically conducted. Pruning is 90% systematic and	The City does not have a tree risk management policy. Coordination with the City's emergency services is needed following storms, fire, or other emergencies that may affect trees.	Many tree and sidewalk conflicts occur throughout the City, as a result of a history of large trees being planted in small planters throughout the City. Opportunities exist to explore creative solutions to sidewalk conflicts, rather than tree removal (see Appendix F). Further, Appendix G provides soil volume recommendations for street trees.
Trees are planted by the Urban Forest Advisory Committee and other volunteer efforts. There were 10 trees planted by the Urban Forest Advisory Committee for Arbor Day 2023.	Stake management and young tree management is an issue in new development areas. Education and outreach for residents regarding establishment care is needed.	A PCA conducts annual reviews of the City tree inventory to identify disease and pest issues, allowing the City to prioritize and deal with the significant concerns	Risk assessments and arborists reports are completed occasionally, as well as nesting bird surveys.	Declining or dead trees are the top reason for tree removal, followed by damage to sidewalk.	Ad hoc urban wood reuse occurs as residents or staff voluntarily recycle wood into wood products.



TABLE 14. REVIEW OF TREE SERVICES PERFORMED BY SANTA MARIA

TREE RISK	INFRASTRUCTURE CONFLICTS	WATERING	TREE RESPONSIBILITY	COMMUNITY OUTREACH
ISA Tree Risk Assessment best management practices are implemented and the City has (TRAQ) Arborists on staff.	There is currently no system, policy, or planning document that regulates which species are planted along sidewalks/parkway strips.	The City does not have a formal watering program for trees.	The City is responsible for right-of-way trees (trees within 10 feet of sidewalk)	The City provides technical assistance and information to private property owners on an as-requested basis through the City's urban forestry webpage
The City does not have a tree risk management policy. Coordination with the City's emergency services is needed following storms, fire, or other emergencies that may affect	Many tree and sidewalk conflicts occur throughout the City, as a result of a history of large trees being planted in small planters throughout the City. Opportunities exist to explore creative solutions to sidewalk conflicts, rather than tree removal (see Appendix F). Further, Appendix G provides soil volume recommendations for street trees.	Trees have been planted in traditionally irrigated landscapes; however, as the City progresses toward drought-tolerant landscaping, a plan for maintaining tree irrigation is needed.	The City asks private property owners to water newly planted trees in the right-of-way and the City is responsible for tree maintenance (e.g., pruning). Watering by private property owners is not consistently implemented or enforced.	The City hosts Arbor Day events such as "how to plant a tree" and "how to manage tree staking" educational tutorials for the public.
Regular inspection and removal are conducted. Inspections occur in response to citizen complaints, as part of routine maintenance, and after windshield surveys.	The City has made 10 × 10 foot planters a minimum requirement for new development to future reduce sidewalk conflicts.	The City asks private property owners to water newly planted street trees, which has been inconsistently implemented.	Information providing clarification regarding tree responsibility is needed.	Updates to the City's urban forestry website and educational/ outreach materials are needed.

Figure 19 - Tree Service Activities

City of Santa Maria - Tree Service Activities

Fiscal Year 2022/2023

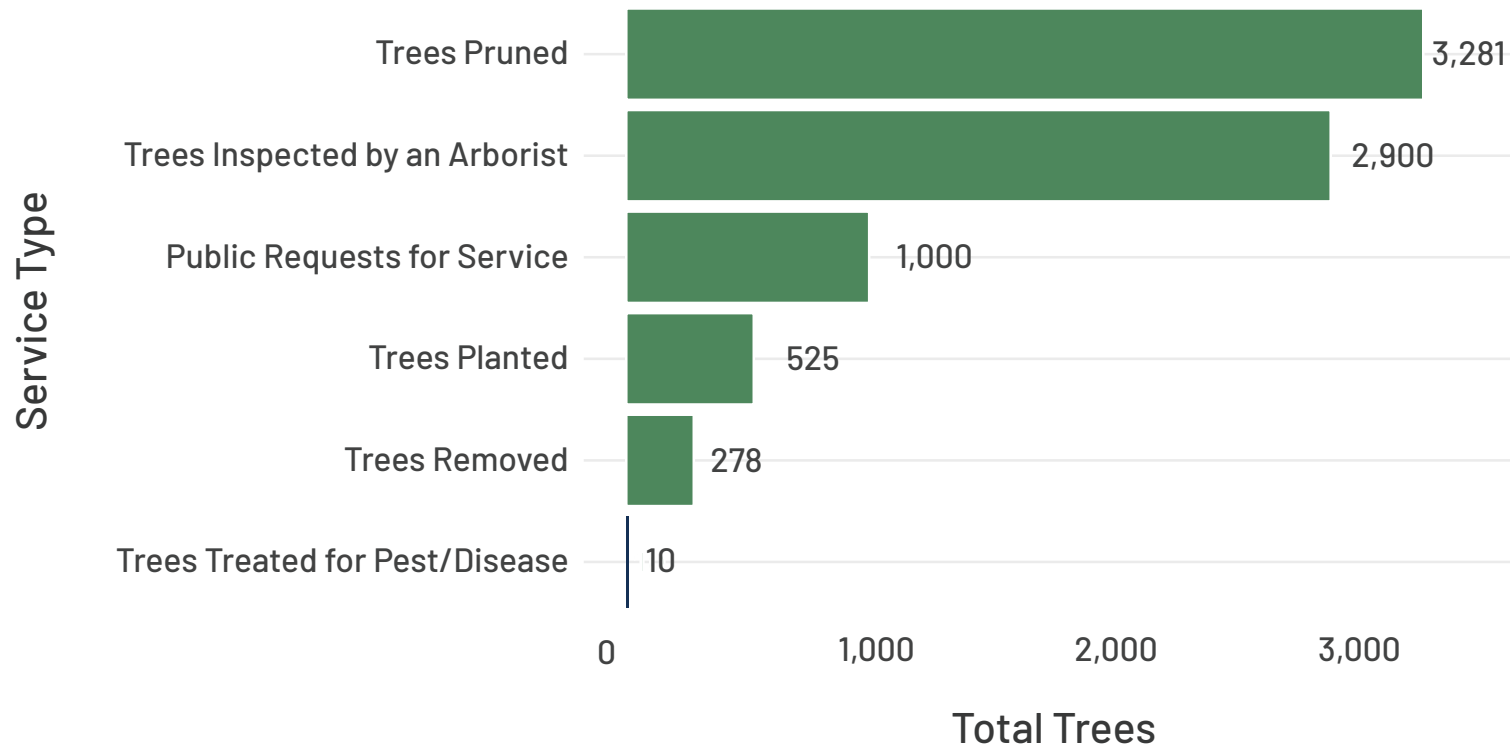
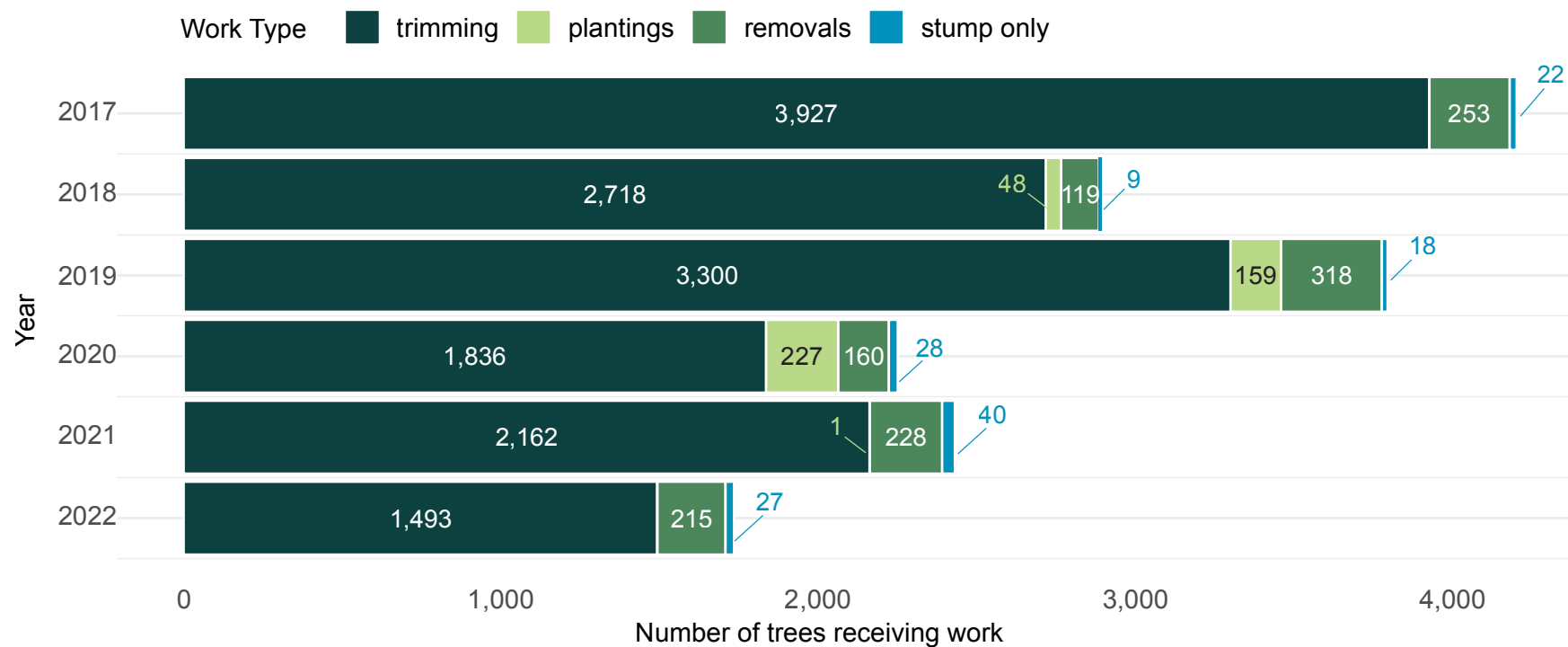




Figure 20 - Work Records

City of Santa Maria work records

Total annual work records by type (Jan 2017 - Oct 2022)





Monterey Pine (*Pinus radiata*), Seaward Drive, Santa Maria, CA



3.5.5 Management Practices

A Field Guide was developed as a companion document to the UFMP, which includes the City defined best management practices (BMPs) for tree planting, maintenance care, preservation and other related City practices. The BMP's for the Field Guide are based on arboriculture and urban forestry standards developed by the International Society of Arboriculture (ISA), American National Standards Institute (ANSI), Urban Tree Foundation, and experience of the consultant team. The Field Guide is provided so City BMPs are clear and consistently applied by all staff, contractors, and others who interact with trees in Santa Maria.

3.5.6 Policies, Ordinances, Planting Guidelines

As part of the UFMP process, existing policies, ordinances, and planting guidelines were reviewed. Discussion and suggested updates to existing policies and ordinances are detailed in Table 15. The policy/ordinance section numbering and current standards shown in Table 15 are pulled directly from existing City documents and the existing municipal code, and are intended to reflect section numbering therein. A redline version of the tree ordinance (Chapter 8-8 of the municipal code) has been prepared to accompany this UFMP based on the recommendations presented below.



Street trees on Orange Street, Santa Maria, CA

TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Landscape & Irrigation Standards (Identical content found in Tree Planting Guidelines document)	Owner/Developer Requirements	The Developer will replace any stressed tree/plant material within 30 days	30 days can be a short period for many trees to show signs of stress. Recommended to update to 90 days, as this would provide more of a safeguard for tree failure due to transplant stress
		N/A	It would be beneficial for this document to include a tree protection plan and standard details for tree protection.
	Trees	N/A	Include guidance for “right tree, right place” principal, encouraging landscapers and developers to consider environmental conditions such as light availability, watering schedule, and presence of surrounding infrastructure when choosing tree species.
		Trees shall be placed at the same elevations that existed in their containers	ISA best management practices guide recommends tree trunk flares be 0–2 inches above the soil grade. When the trunk flare is buried, the tree has a higher susceptibility to basal rot and draught. It is common for trees to come from nurseries with their trunk flare at a sub-optimal elevation. It may be necessary to remove excess soil to ensure that the trunk flare is not buried.
	Staking and Tying	Tying: Plastic, heavy-duty tree ties 1” wide shall be used in accordance with the above staking information.	Include information: Ties should be moderately elastic and loosely fitted. When young trees are bound too tightly, they may not develop the sufficient trunk taper necessary to support their own weight as they mature. Original nursery stakes and ties should be removed at planting.
Planting Specifications	Root ball	N/A	At least two primary roots should be present 1–3 inches below soil surface
	Fertilizer Tabs	21 grams, 20-10-5	First season fertilizer, if used at all, should be a slow-release nitrogen fertilizer in the plant pit.



TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Maintenance Requirements for Landscape Contractors	Fertilizers	The Contractor shall purchase and apply the following fertilizers at the application rates within the time period specified.	Mandatory annual fertilizer application is uncommon and not recommended for municipalities. Overuse of fertilizer may not benefit the tree and may have negative effects on the tree and the surrounding environment. Additionally, no fertilizer should be applied in the first year after planting. Fertilization should follow model the State of California water efficient landscape ordinance (MWEL0) soils test recommendations.
	Pruning	N/A	Include that pruning must adhere to ANSI -A300 and ISA standards, and no pruning shall be conducted by the contractor other than removing broken stems. Include information about reduction cuts.
Tree Preservation Notes	9	The Contractor is required to water, fertilize and attend to other maintenance needs of existing trees to maintain healthy growth throughout the construction period.	Inform reader that further details can be found in the Maintenance Requirements for Landscape Contractors document.
	10	If trees are being relocated, the relocation of existing trees shall occur under the observation and direction of a certified arborist approved by the City of Santa Maria.	If trees are being relocated, the removal and relocation of existing trees shall occur under the observation and direction of a certified arborist approved by the City of Santa Maria.
Santa Maria Municipal Code	8-8: Urban Forestry	Increase long term forest stability with continued specie and age diversity plantings.	Typo: correct specie to species. Typo appears several times throughout the document.
	8-8.02 Definitions	N/A	Add: (x) "Drip Line" means the circumferential area directly below the tree's canopy. This area is considered where the majority of the tree's roots exist.

TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	8-8.05. Nuisances: Designated	(c) Any tree, shrub, vine, or flower that is deemed harmful or potentially harmful on oral or other contact by a person as determined by the Director of Recreation and Parks or an authorized representative.	May be beneficial for the City to have a consistent resource or list of species deemed harmful.
		N/A	Add: (i) Any tree, shrub, vine, or flower recognized as an invasive species by the U.S. Department of Agriculture or the California Invasive Plant Council.
	8-8.08. Construction Work: Protection measures	Plans submitted to the City for the construction, repair or alteration of any building, house or structure shall include provisions for sufficient guards or protectors to prevent injury to any existing publicly owned trees, shrubs, flowers, or vines.	Only mentions necessity for protections in plans. Does not specify that stated protections must take place on the construction site for City-owned and City-conditioned trees. Suggested modification: Sufficient guards, buffer areas, and protectors shall be used during construction, repair, or alteration of any building, house, or structure to prevent injury to any existing publicly owned or conditioned trees, shrubs, flowers, or vines. Such protections should be included in plans submitted to the City. Plans for protection shall be approved by the Director of Recreation and Parks 10 days prior to the issuance of permit to proceed.
		N/A	It may be effective to include an expansion of this section, giving specifics on what constitutes sufficient guards and barriers.
	8-8.09.	Pay to the City the City's cost of replacing the removed tree, as provided by Section 8-8.10.	Clarification is needed regarding fees collected for tree removal permits and fines and what such payments go toward, such as easement funds, tree planting funds, etc.



TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	8-8.10. Recovery of Damages	(c) Where injury has occurred to the tree, shrub, flower or vine during the erection, repair, construction, or alteration of any building, house or structure, or by truck and/or car accident, house moving or by acts of vandalism, the offending party or insurance company shall not be released from liability until the Director of Recreation and Parks or his authorized representative determines that the tree has fully recovered.	Add to the end of paragraph: If the Director of Recreation and Parks determines that the tree will not be able to recover, the injury will be considered equally to a removal and replacement trees shall be required.
	8-8.14. Replacement Trees.	Section 8-8.14. Replacement Trees.	Redundant with Section 8.8.10. Consider consolidating into one section.
	8-8.15 Planting of New Trees	Tree replacement shall be required if the tree dies during the establishment period. A new establishment period will be determined at the time of replanting	Clarify responsible party for replacement.
		(c) All pruning of public trees shall be in accordance with current pruning specifications of the City Parks Division. (Ord. 95-17, eff. 02/01/96)	Include reference to graphics in appendices.

TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	8-8.16. Topping Prohibited.	It shall be unlawful to top or sub trees.	It may be beneficial to include that topping a tree will be regarded by the City equally to removing a tree. "Effective removal" approach. Consider adopted a sliding scale, ranging from "damaged" to "destroyed."
		(c) All pruning of public trees shall be in accordance with current pruning specifications of the City Parks Division. (Ord. 95-17, eff. 02/01/96))	Reader should be guided where to find such specifications. The specifications shall be based on ANSI 300 standards and ISA Best Management practices and will be available on the Urban Forest page of the City website.
	8-8.17 Tree Root Pruning	Efforts shall be made to preserve existing trees where Practical. At times, removal and replacement of a tree is superior to preservation of a tree, and will be determined at the Director of Recreation and Parks' discretion	This statement seems to be independent of root pruning. Consider including in the removal sections instead.
	8-8.19. Historic or Heritage Trees	To be considered as a Heritage Tree the determination that the tree is over 50 years old, or be a species that is not common to the California coastal zone and has reached a remarkable height, or it can be documented that the tree played a pivotal role in the development of the City.	Age is a difficult metric because planting records, maintenance records, or photo evidence are required. Many municipalities choose to protect trees based on their diameter at standard height.
		This designation shall have no other requirements/	Age is a difficult metric because planting records, maintenance records, or photo evidence are required. Many municipalities choose to protect trees based on their diameter at standard height.



TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	Appendix Illustration A	Image	Recommended that "topping cut" is included in the image in the same way "stub cut" is included. Include that branches must be cut at branch union as stated by ISA and ANSI standards.
	11-5 Subdivision Design 11-5.09. Street Tree Easements.	A ten (10) foot wide City tree planting easement is required adjacent to all public streets, measured from the back of sidewalks that parallel the travelway. Arterial streets, certain collector streets, and areas where sidewalks meander shall not have a ten (10) foot wide tree planting easement. Instead, these areas will require landscape easements required per the General Plan and Title 12 of the Municipal Code. (Ord. 94-29, eff. 12/15/94)	10-foot-wide tree planting easements are required in all new development in Santa Maria, creating positive opportunities for street tree plantings.
	8-8.17 Tree Root Pruning	Efforts shall be made to preserve existing trees where Practical. At times, removal and replacement of a tree is superior to preservation of a tree, and will be determined at the Director of Recreation and Parks' discretion	This statement seems to be independent of root pruning. Consider including in the removal sections instead.
	12-32 Off-street parking and loading 12-32.19. Landscaping	In all districts, excluding the R-1 district, all open parking areas shall be landscaped except those areas specifically used for vehicle parking. Landscaping shall include trees, shrubbery and ground cover. The landscape areas shall be provided with permanent sprinkler systems. Landscaping plans for commercial parking areas shall be approved by the Zoning Administrator.	Consider establishing a minimum tree planting requirement or canopy cover goal for the required landscaping in parking areas.
		a) All areas not specifically used for vehicle parking or access shall be landscaped with trees, shrubbery and living ground cover. (b) Parking shall be provided at the side or rear of the proposed structures when practicable. Parking lots fronting streets shall be landscaped to soften the visual impact of the parking lot from the street. (c) Carports shall be located behind or to the side of multidwelling complexes where practical. Carport areas shall be screened from view of streets and highways by landscaping or fencing.	

TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	12.33 Commercial and Industrial Performance Standards	a) The parking requirements as set forth in this section are as prescribed by present City standards. The landscaping requirements for parking lots are intended to screen and soften the visual exposure of black asphalt and cars, and to create continuity between parking facilities and the businesses served.	(1) Consider establishing a minimum tree planting requirement or canopy cover goal for the required landscaping in parking areas.
	12-33.208 Parking	(b) The typical parking lot landscaping (Figure 4, following page) shall serve as a guide in the development of parking lot landscape design.	
		(1) All areas not specifically used for vehicle parking or access shall be landscaped with trees, shrubbery and ground cover. Trees at least equal in number to one (1) per each twelve (12) parking stalls or fraction thereof shall be provided in all parking areas. Minimum size shall be fifteen (15) gallons.	
		(4) Landscape plans for commercial parking areas shall be approved by the Zoning Administrator. (Prior Code § 10-98.1(e))	
		(a) Plant materials shall be appropriate for the slope, soils, proposed use, and exposure (sun/shade) of the specific site. Plant materials including turf shall be water conserving species or varieties capable of surviving on minimal irrigation once established.	Suggested addition to accentuate standard (g): In order to encourage biodiversity and minimal water use, plants native to the Santa Barbara County region should be prioritized.
	Chapter 12.44 Landscape Standards	(b) Passive and/or active solar access, for all proposed structures, as well as any adjacent existing structures, shall be considered in the placement of trees and selection of species.	Provide guidance to the community regarding passive and active solar access. The Arbor Day Foundation's "How to Plant Trees to Conserve Energy for Summer Shade" guidance can be used for energy savings and heat reduction (Arbor Day Foundation 2023).
	12-44.04	(c) Mowed turf shall not be used in narrow planters, raised beds, and other relatively small planters. However, it may be used when it serves as a landscape ground cover in a functional active recreation area, a retardation basin, a pedestrian accessway, a parkway, a front yard of a residence, or a highly visible planter area adjacent to the street.	Many Californian municipalities have shifted away from the use of turfgrass due to long-term patterns of extreme drought. Even turfgrasses labeled as water conserving require inefficient broadcast watering. The City of Santa Maria discourages turfgrass other than recreational purposes. MWEL0 requirements and restrictions should be followed.



TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	Chapter 12.44 Landscape Standards 12-44.04	(k) When building and boundary walls are adjacent to planters, a minimum of one 15-gallon size tree per thirty (30) linear feet of wall shall be provided.	Add guidelines for planting distance from walls to avoid future conflicts. See Figure 4 of this UFMP.
		(l) Parking areas shall be screened, softened and shaded by conformance to the following requirements: (1) A minimum of one 15-gallon tree shall be provided per six (6) parking spaces . Trees in planters adjacent to the parking area, as required by other sections of this ordinance, may be utilized to meet this requirement. (2) Parking areas shall be adequately landscaped to prevent large, uninterrupted expanses of paving. A minimum of two-hundred (200) square feet of planter areas shall be provided within the parking area per twenty (20) parking spaces. (3) When the planter also serves as vehicular “overhang” area, a minimum width of four (4) feet of planting area per single row of parking and a minimum width of seven (7) feet of planting area per double row of parking shall be provided, unless more is required per other sections of Title 12, (i.e. setbacks). (4) Three (3) foot high screening shall be provided using berms, shrubs, or a combination thereof, to screen parking areas from public streets. This does not preclude the use of trees in such areas as long as trees are planted a minimum of ten (10) feet from any driveway approach to avoid sight obstructions. (5) Special consideration shall be given to the placement of trees and shrubs in parking lot planters to maintain safe distances from vehicular travel ways, driveways, and walkways for proper visibility.	Consider revising this section as follows to set minimum tree planting requirements for parking lots such that potential conflicts are reduced and progress toward increasing canopy cover can be achieved. (1) consider setting a minimum 20% canopy cover target for parking lots. Rather than a number of trees per parking spaces, a canopy cover target for the entire parking lot (e.g., 20% parking lot shading) can help to prioritize the planting of large trees, as well as ensure progress toward the City’s canopy cover goals. This should be calculated based on the species planted and potential canopy spread within a certain timeframe (typically 15 years). (2) The City’s minimum 10-foot planter width helps to ensure adequate space for trees. Prioritize fewer large planters over multiple small planters when meeting the parking lot landscaping requirements. (3) clarify whether trees are intended to be planted in this size planter (4) Consider modifying to further encourage the use of trees in screening. Consult with Public Works and Engineering to determine the best approach for avoiding sight obstructions.

TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	Chapter 12.44 Landscape Standards 12-44.04	(6) When selecting trees to be used in parking lot areas, the species chosen should be water conserving, low maintenance, litter-free, evergreen, and deep rooted. Whenever possible, trees species providing a shade canopy are encouraged to aid in reducing the amount of reflected heat in parking lot areas.	(5) Provide guidance for tree planting to maintain safety and line of sight within drive aisles. (6) A parking lot shade requirement/ canopy cover target would help to achieve this, as well as choosing species from the Recommended Species List included as Appendix D of this UFMP. (7) Add clause to maximize the stormwater retention capabilities of trees in parking lots: Planter areas should be designed to encourage onsite stormwater retention. Wherever possible, soil level for planter areas should be below grade. All planters surrounded by curbs shall have curb-cuts of at least 18" in width and placed every 3 to 15 feet of linear curb space to allow for and encourage stormwater infiltration into planter areas. Trees should be planted in stable, at grade areas separate from the stormwater aspects of the landscaping. Trees shall only be planted in stormwater basins with review and approval by the Director of Recreation and Parks.
		(m) Storm water basins and features, when required, must be incorporated into the landscape scheme of a proposed project. The following requirements are intended to accomplish this objective:	Revise this section to preclude planting of trees in stormwater basins without prior approval by the Director of Recreation and Parks. Bioswales and other stormwater basins may not have the correct conditions to support trees.



TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	Chapter 12.44 Landscape Standards 12-44.04	(n) The location, size and species of all existing trees in excess of six (6) inches in diameter and any existing street trees, shall be indicated on landscape plans submitted to the City. Existing trees shall be retained unless the finding can be made by the City Parks Department staff that the preservation of the tree presents a hazard to the health, safety and general welfare of the public or cannot be reasonably accommodated by the proposed development.	This section reads like a tree protection ordinance. It is unclear if this protection applies to all trees or only trees in newly proposed landscape areas. Consider moving this to Chapter 8-8, revised as necessary, as part of the tree protection ordinance. (2) revise such that this should apply to the 25% of the potential canopy at tree maturity 3) Considering revising this such that a replacement ratio based on species and potential tree size is used to determine the tree replacement requirement. Also revise such that approval is provided by the Recreation and Parks Director.
		(1) The grades around existing trees designated to remain shall not be altered more than three (3) inches within the area from the trunk to the canopy dripline.	
		(2) Pavement within the canopy dripline of existing trees should not exceed twenty-five percent (25%) of the area of the canopy.	
		(3) Existing trees that are approved for removal shall be replaced by suitable species sized as follows or as approved by the Zoning Administrator:	
		Size of Tree Removed 6" to 8" trunk diameter (at 4' 6" height) Replace With Two 24" box size trees (3" to 5" trunk diameter) Size of Tree Removed 9" to 12" trunk diameter (at 4' 6" height) Replace With Four 24" box size trees (3" to 5" trunk diameter) Size of Tree Removed 12"+ trunk diameter (at 4' 6" height) Replace With Six 24" box size trees (3" to 5" trunk diameter)	

TABLE 15. POLICY AND ORDINANCE REVIEW

DOCUMENT	SECTION	CURRENT STANDARD	RECOMMENDATION
Santa Maria Municipal Code	Chapter 12.44 Landscape Standards 12-44.04	(u) ...The minimum proportion of open space to gross site areas shall be in conformance with the requirements specified in other sections, but in no case shall the planted area be less than fifteen percent (15%) of the site area in commercial and manufacturing districts and twenty-percent (20%) of the site area in multi-family residential districts.	Although it is clearly stated that these are minimums, City might want to consider increasing minimums to work towards the City's canopy cover goals. Also, it may be beneficial to include requirements for how much of planted space should be trees vs. other types of vegetation.
	12-44.06	Submittal Requirements	Similar to the requirements in Section 8-8.08 of the municipal code, It is recommended that a tree protection plan is included with the Landscape Documentation Package. In both situations, the following should be included: • Number and location of trees on site to be preserved • Size metrics for tree (height, diameter at breast height) • Tree protection zones: fenced area surrounding tree within which no grade changes, compaction, or other construction activities may take place



3.6 City Planning Documents

A review of existing planning efforts for Santa Maria was conducted to identify goals or policies related to trees and ensure alignment across City planning documents. Table 16 depicts existing goals or policies related to trees. A review of existing major planning efforts for Santa Maria was conducted to identify goals or policies related to trees and ensure alignment across City planning documents. Table 16 depicts existing goals or policies related to trees from the General Plan and the Downtown Multimodal Streetscape Concept Plan. The table identifies the document reviewed, section and goal, policy, or action that relates to trees, the urban forest concept aligned with said goal, policy, or action, and whether it represents a strength, weakness, opportunity, or threat (SWOT) for the urban forest.



Southern live oak (*Quercus virginiana*), City Hall, Cook Street, Santa Maria, CA

TABLE 16. CITY PLANNING DOCUMENTS

GENERAL PLAN			
The Santa Maria General Plan serves as a blueprint for the physical development of the City. Based on California Government Code Section 65300, the General Plan includes a Land Use Element, Circulation Element, Noise Element, Safety Element, Resource Management Element, Housing Element, and Economic Development Element. The General Plan is currently being updated, with the updated version anticipated to be completed in early 2024. The current edition of the General Plan has been reviewed for purposes of the UFMP. However, future updates to the UFMP should consider the updated 2040 General Plan when it becomes available.			
Section	Goal/Policy/Action	Urban Forest Concept Supported	SWOT
Land Use Element	OBJECTIVE L.U.9b Enhance the character of existing residential neighborhoods through the use of high-quality land use and development standards, street trees, neighborhood parks, other amenities, and code enforcement.	Placemaking Aesthetics Quality of life	Strength Trees play an important role in placemaking and enhancing neighborhood character. The UFMP supports this objective.
Circulation Element	OBJECTIVE C.4.a Compatible Transportation System Develop a transportation system that provides adequate facilities for heavy vehicle traffic and reduces the impact of such traffic on local circulation and residential environments. IMPLEMENTATION PROGRAMS 1. As part of the site plan review process, the City shall require developers to locate noise-sensitive land uses away from heavily-traveled roadways through the provision of landscape buffers, walls, and setbacks between such uses and the roadways.	Safety Quality of life	Opportunity Implementation of Objective C.4.a calls for provisioning of landscape buffers along heavily traveled roadways. Consider revising such that trees are a requirement within landscape buffers.



TABLE 16. CITY PLANNING DOCUMENTS

GENERAL PLAN			
Section	Goal/Policy/Action	Urban Forest Concept Supported	SWOT
Resources Management Element	Objective 2.1.j - Streets, pedestrian paths and bikeways. Encourage the design of streets, pedestrian paths, and bike paths so that they are small and spatially defined by buildings, trees and lighting and discourages high speed traffic.	Placemaking Aesthetics Quality of life	Opportunity Objective 2.1.j encourages active transportation routes that are defined by trees and other infrastructure. Consider a requirement for a minimum number of trees along active transportation routes to achieve City canopy cover goals of at least 20% in design of active transportation routes to create safer, more appealing routes. Active transportation routes present opportunities to target a higher canopy cover percentage to offset lower canopy areas of the City. Additionally, shade provided by trees creates more appealing, safer, and higher use active transportation routes (Wolf 2010; Langenheim 2020). The City should identify tree planting opportunities along active transportation routes throughout the City.
Resources Management Element	Objective 3.1.d - Greenbelt. Provide a greenbelt around the corporate City Limits to function as a buffer between agriculture and urban uses. The greenbelt would vary in width, be landscaped (forested) and provide a multiple use trail throughout.	Quality of life	Opportunity Objective 3.1.d calls for a greenbelt around the City, which provides opportunities for tree planting, and, notably, opportunities for large trees. Collaboration across City departments is needed to achieve this objective. Tree planting within greenbelts should be planned in coordination with the Recreation and Parks Director and Urban Forest Manager.

TABLE 16. CITY PLANNING DOCUMENTS

GENERAL PLAN			
Section	Goal/Policy/Action	Urban Forest Concept Supported	SWOT
Resources Management Element	Implementation Programs: Biological Resources 1. Draft and adopt an ordinance establishing the means to preserve “locally important” trees and identified plant and animal habitats. 2. Designate portions of the Santa Maria River, Orcutt Creek and other waterways as greenbelt areas whereby riparian habitats may be preserved. 5. Require street trees to be incorporated into the design and plans of new developments. 6. Preserve and maintain existing trees along and in public streets and parking lots. 7. Enforce the tree replacement standards contained in Chapter 44 of Title 12 of the Municipal Code. 8. Provide incentives to residents and businesses to plant “clean” trees which support the Biomass Pollution Shed Program. 9. Enforce the existing ordinance that requires developers of new buildings to plant trees and shrubs to improve energy efficiency and to preserve existing trees on building sites. 10. Require all new residential development to be annexed into a City Lighting and Landscape Maintenance District to ensure the continued maintenance of landscaping that benefits the public and the environment. 11. Require as conditions of development, where appropriate, the dedication and improvement of greenbelt rights-of-way. Accomplishments to Date: 1. In 1993, the City revised its landscape standards contained in Chapter 44 of Title 12 of the Municipal Code. 2. In 1995, a revised street tree ordinance was adopted. Anticipated Results: 1. Adoption of a preservation ordinance for locally important trees and habitats. 2. Expansion of the Santa Maria Urban Forest. 3. Establishment of greenbelt areas in the City, and in the unincorporated areas surrounding the City.	Tree protection/preservation Wildlife habitat	Strength/Opportunity 1. An ordinance to support identification and protection of “locally important” trees is in line with the goals of the UFMP. Consider how “locally important” trees differ from Heritage Trees. Designation of such trees should consider trees of a certain size, species, age, etc. 2. Similar to the discussion above, identifying opportunities for greenbelts supports new tree plantings and tree preservation. Establishment of greenbelts must be coordination across City departments and stakeholders. 5. Requirements for inclusion of street trees in the design of new developments are currently in place. 6 & 7. These implementation programs support preservation of existing trees and replacement of trees removed. Any updates to the municipal code regarding tree preservation and replacement should be reflected here. 8. Consider incentive programs for residents to encourage tree plantings. Options may include a free tree giveaway program, tree watering and maintenance support (financial or educational), tax credits, etc.



TABLE 16. CITY PLANNING DOCUMENTS

MULTIMODAL STREETSCAPE CONCEPT PLAN

Downtown Multimodal Streetscape Concept Plan

The Downtown Multimodal Streetscape Concept Plan (DMSCP) intends to create a technically, financially, and politically feasible concept for downtown roadways, building on the vision of “livable streets” outlined in the California Department of Transportation Main Street, California Guide. The plan aims to enhance downtown streets as multimodal corridors that increase access and connections for all user types to key destinations throughout downtown and the surrounding neighborhoods.

Section	Goal/Policy/Action	Urban Forest Concept Supported	SWOT
Opportunities and Constraints	Opportunities and Constraints Assessment	Placemaking	Opportunity Objective 2.1.j encourages active transportation routes that are defined by trees and other infrastructure. Consider a requirement for a minimum number of trees along active transportation routes to achieve City canopy cover goals of at least 20% in design of active transportation routes to create safer, more appealing routes. Active transportation routes present opportunities to target a higher canopy cover percentage to offset lower canopy areas of the City. Additionally, shade provided by trees creates more appealing, safer, and higher use active transportation routes (Wolf 2010; Langenheim 2020). The City should identify tree planting opportunities along active transportation routes throughout the City.
Community Engagement	Pop-Up Events	Placemaking	Opportunity Based on feedback received during development of the DMSCP, community members highly value trees in the downtown area and outdoor public spaces. Improvements to the downtown area present opportunities for tree planting to improve the aesthetics and placemaking efforts of downtown, while also providing many co-benefits to the downtown area and community.

TABLE 16. CITY PLANNING DOCUMENTS

GENERAL PLAN			
Downtown Multimodal Streetscape Concept Plan			
Section	Goal/Policy/Action	Urban Forest Concept Supported	SWOT
Recommended Streetscape Concept Plan	Recommended Streetscape Concept Plan – Main Street and Broadway	Placemaking Safety Aesthetics	Strength/Opportunity Street trees are included in the proposed street design concepts and noted for their contributions, including aesthetics, shade, character, and scale, as well as traffic calming effects. It is noted that the inclusion of curb extensions would allow for additional street trees to be planted. The City's minimum 10-foot planter width, coupled with curb extensions, will allow for tree planting in downtown streetscape improvements.



Jeffrey Pine (*Pinus jeffreyi*) Bradley Road, Santa Maria, CA



4. STRATEGIC PLAN



VISION

Santa Maria’s urban forest is a valued city asset that provides a resilient, diverse tree canopy that contributes to long-term environmental benefits, enhanced neighborhood character, appealing business corridors, and healthy and equitable communities that are connected to nature.

STRATEGIC PLAN

NO.	GUIDING PRINCIPLE	STRATEGY
1	A resilient urban forest	Santa Maria will maintain a diverse urban forest that is climate-ready and resilient to pests and diseases.
2	Healthy communities with enhanced neighborhood character	The urban forest will provide Santa Maria’s communities with mental and physical health benefits, urban beautification, and a connection to nature.
3	A valued city asset	The urban forest will provide financial benefits to the City, and the City will provide adequate financial investment and staffing to sustainably manage the urban forest.
4	A community that appreciates trees	Engage Santa Maria’s community members in urban forest stewardship through educational and outreach efforts, so community members are aware of the benefits of trees, feel connected to nature in daily life in both urban and rural settings, and value trees on public and private property.
5	Plan for trees	Trees will be included early in the planning process and provided adequate growing conditions to ensure mature, healthy trees.
6	Equitable and robust canopy	Santa Maria’s canopy cover will be increased to 20% city-wide and will be equitably distributed.
7	Urban trees as a “forest”	Santa Maria’s urban forest is recognized for its broad ecosystem benefits and cared for as a whole rather than simply as individual trees.
8	Risk reduction for the public and the City	Santa Maria’s urban forest and associated infrastructure will be maintained to reduce risk, and responsibility will be clearly delineated.



GUIDING PRINCIPLE #1: A RESILIENT URBAN FOREST

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Santa Maria will maintain a diverse urban forest that is climate-ready and resilient to pests and diseases.	1a	Develop guidelines for pruning during the appropriate season for the subject species.	Short
	1b	Ensure species diversity in development projects and landscape plans. Require review of tree planting palette by a certified arborist.	Short
	1c	Adopt the Recommended Tree Species list developed as part of this UFMP and ensure its broad use across the City by all departments.	Short
	1d	Encourage the use of native species when appropriate for benefits that include drought tolerance, disease resistance, and habitat for wildlife.	Ongoing
	1e	When planting new trees, ensure tree species are selected in consideration of "right tree, right place" concept to ensure trees are able to grow to maturity, including tree planting and spacing requirements, planter size requirements, and water requirements.	Short
	1f	Explore opportunities to manage trees throughout their entire life-cycle, from growing saplings, to tree planting, maintenance, removal and wood reuse. Consider developing a program(s) that supports this action, such as a City nursery or urban wood reuse program.	Medium

GUIDING PRINCIPLE #2: HEALTHY COMMUNITIES WITH ENHANCED NEIGHBORHOOD CHARACTER

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
The urban forest will provide Santa Maria's communities with mental and physical health benefits, urban beautification, and a connection to nature.	2a	Implement General Plan Objective 2.1j by identifying streets and active transportation routes where trees can be added. Develop a long-term planting strategy to achieve at least 20% canopy cover along active transportation routes.	Medium / Long
	2b	Identify opportunities for new active transportation routes and plan for trees as routes are developed.	Medium
	2c	Continue to identify new street tree planting locations (including front yard right-of-way trees) and explore incentives to encourage community members to plant front yard trees, to achieve tree lined neighborhood streets.	Short
	2d	Develop a watering program for trees planted in front yard ROW to assist private property owners with the responsibility and/or costs.	Short
	2e	Identify routes to schools, parks, and other neighborhood amenities where trees can be planted to increase shade, safety, and usability of such routes.	Medium

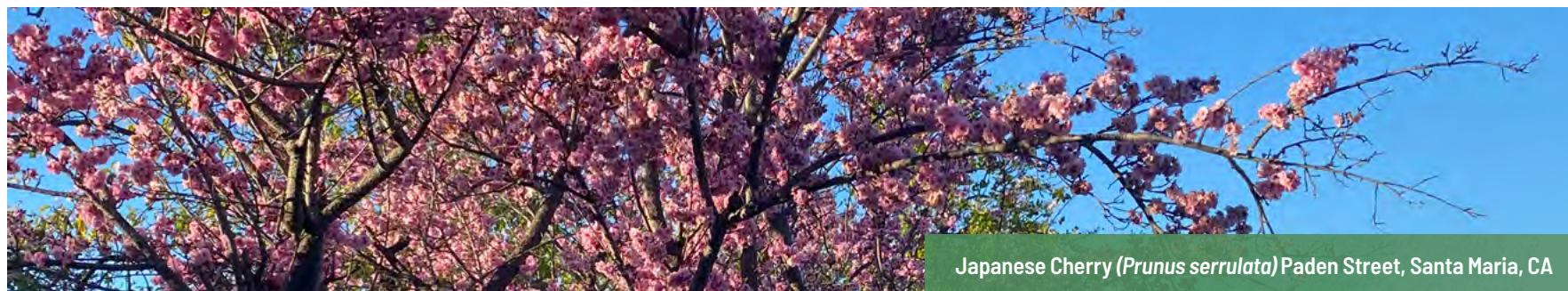


California Buckeye (*Aesculus californicus*) East Donovan Road, Santa Maria, CA



GUIDING PRINCIPLE #3: A VALUED CITY ASSET

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
The urban forest will provide financial benefits to the City, and the City will provide adequate financial investment and staffing to sustainably manage the urban forest.	3a	Identify tree planting opportunities in commercial land uses to enhance commercial corridors and encourage profitable business corridors.	Medium
	3b	Develop a mechanism to ensure consistent funding for trees across City departments. Some options may include: fees, assessments, or taxes (e.g., development impact fees, bonds, special districts, etc.) as well as grant funding (see Appendix I for potential funding mechanisms).	Short
	3c	Establish requirements for permits for tree removal on both public and private property. Requires a commitment by the City for staff time.	Short
	3d	Pursue grant funding to develop an urban wood reuse program	Medium
	3e	Add a fee to the City's Development Impact Fees that requires new development to contribute to the urban forestry program to fund new tree plantings and tree care.	Short
	3f	Update the City's tree ordinance to require payments directly to the urban forestry program for tree removal permits and fines.	Short
	3g	Encouraging the use of native species that are drought tolerant and disease resistant.	Ongoing



Japanese Cherry (*Prunus serrulata*) Paden Street, Santa Maria, CA

GUIDING PRINCIPLE #4: A COMMUNITY THAT APPRECIATES TREES

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Engage Santa Maria's community members in urban forest stewardship through educational and outreach efforts, so community members are aware of the benefits of trees, feel connected to nature in daily life in both urban and rural settings, and value trees on public and private property.	4a	Conduct educational outreach and engagement throughout the community to increase the public's appreciation for trees and knowledge of tree benefits.	Ongoing
	4b	Establish new community outreach programs, such as "adopt a tree" or tree giveaway programs.	Medium
	4c	Maintain an ongoing volunteer-based Urban Forest Advisory Committee who provides oversight to the community outreach efforts and innovative ideas for trees.	Ongoing
	4d	Pursue partnerships with the Santa Maria-Bonita school district and conduct educational outreach/activities with elementary and high school students.	Short
	4e	Develop educational materials that are bilingual, interpretive, and highly graphic based for outreach to children and families.	Short
	4f	Engage non-profit organizations, community groups, service organizations, and volunteer groups in tree planting and tree care events.	Ongoing
	4g	Utilize Santa Maria's City newsletter and other media news outlets to engage the community.	Short / Ongoing
	4h	Engage the Chamber of Commerce in the importance of trees by informing them of the urban forest's financial value.	Short / Ongoing
	4i	Update city website and public facing resources to provide easily accessible educational materials and clear processes for requesting a tree, tree removal permits, requesting tree maintenance, and other tree related services and policies.	Short
	4j	Explore opportunities to connect people with the food trees provide. For example, by planting fruit trees in communal spaces (e.g., community gardens or parks), celebrating existing fruit trees, or establishing a program for fruit sharing.	Medium



GUIDING PRINCIPLE #5: PLAN FOR TREES

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Trees will be included early in the planning process and provided adequate growing conditions to ensure mature, healthy trees.	5a	Update the Municipal Code according to recommendations made in this UFMP.	Short
	5b.	Explore creative solutions to preserve trees that are in conflict with existing infrastructure, rather than tree removal, as provided in Appendix F, Sidewalk Solutions.	Short
	5c	Ensure collaboration across City divisions/departments that deal with trees and/or planning for new tree plantings. Establish a system for review and approval of all landscape plans and tree planting requirements/standards by the Director of Recreation and Parks (or appointee) and a certified arborist.	Short / Ongoing
	5d	Adopt the Field Guide (prepared as a companion document to this UFMP) as city-wide standards for trees, including best practices for nursery selection, species selection, tree planting, establishment care, pruning, spacing, planter size that are used by all City departments. Annually review the Field Guide and update to reflect current best management practices.	Short
	5e	Encourage the use of trees in water-wise landscaping and establish a system for irrigating trees.	Medium
	5f	Seek opportunities to implement General Plan Objective C.4.a by identifying roadways where trees can be implemented in landscape buffers between heavily traveled roads.	Medium
	5g	Collaborate across City departments to implement General Plan Objective 3.1 by establishing a greenbelt around the City and identifying tree planting opportunities.	Long

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Trees will be included early in the planning process and provided adequate growing conditions to ensure mature, healthy trees.	5h	Ensure trees are included in the planning process as the Downtown Multimodal Streetscape Concept Plan is implemented.	Ongoing
	5i	Modify the development plan review process to require submittal of an arborist report for all trees proposed for removal and protection, and review of the proposed landscape plan by a third party certified arborist. Landscape plans must identify tree species, planter size.	Short
	5j	Establish a minimum canopy cover requirement for new development and redevelopment projects to be achieved through new tree plantings and maintaining existing trees. Canopy targets may be achieved over a given time period and vary by land use type (e.g., 15-20% canopy cover in residential land uses; 10-15% canopy cover in commercial and public land uses; 5-10% canopy cover in industrial and agricultural land uses; 20% canopy cover in parking lots).	Short





GUIDING PRINCIPLE #6: EQUITABLE AND ROBUST CANOPY

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Santa Maria's canopy cover will be increased to 20% city-wide and will be equitably distributed.	6a	Achieve a City-wide canopy cover of 20% by planting approximately 1,000 trees per year on public and private property over the next 40 years.	Long
	6b	Ensure existing trees are maintained and protected by enforcing the tree protection ordinance and exploring alternative solutions to tree removal.	Short
	6c	Fill all readily available vacant planting sites (4,605 sites including vacant sites or stumps) by 2030. Prioritize filling vacant planting sites in areas lacking tree canopy based on Exhibit 14 of the UFMP.	Medium
	6d	Explore opportunities to plant trees in public spaces to create tree dense gathering spaces.	Short / Ongoing
	6e	Prioritize planting new trees in areas lacking canopy, as depicted in Exhibit 14 Tree Planting Priority and Opportunity Areas.	Ongoing
	6f	Provide guidance on pruning best practices are followed by providing educational materials on proper pruning practices to tree trimmers, contractors and private property owners to avoid tree topping and extensive canopy reduction pruning.	Short
	6g	Develop a system to monitor tree plantings and measure progress toward canopy cover goals. Consider an annual "state of the tree union" presentation, combined with Arbor Day or a fiscal year end to City Council.	Short / Ongoing
	6h	Utilize the canopy analysis conducted as part of this UFMP (Appendix B) to prioritize park and school locations to increase canopy cover with new tree plantings.	Short

GUIDING PRINCIPLE #7: URBAN TREES AS A “FOREST”

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Santa Maria’s urban forest is recognized for its broad ecosystem benefits and cared for as a whole rather than individual trees.	7a	Develop a heritage tree program to celebrate historic, large, interesting, or rare trees. Create an interactive map of heritage trees. Consider making this a standalone map that is added to the urban forestry website, and/or adding this to the existing “Historical Landmarks and Objects of Historical Merit” storymap.	Medium
	7b	Identify locations, such as greenbelts, open space/parks, and riparian areas, where tree species may be selected in consideration of the habitat they provide for wildlife. Seek opportunities to Plant trees with companion plants, encouraging the use of native plants or ones with similar water requirements. For example, wintering monarchs require pocket groves with protection from the wind; birds/raptors require larger trees for nesting and hunting perches above grass- and shrublands. Consult a City-qualified biologist and arborist when making tree species selections for wildlife habitat.	Ongoing
	7c	Consider working with local experts and organizations to create and maintain a city-managed grove for monarch wintering habitat. Consult with biologists/monarch experts on tree selection and habitat creation, such as the Xerces Society and utilize the latest science and research.	Long
	7d	Develop procedures to ensure the enforcement of the Migratory Bird Treaty Act so pruning or removal of trees is conducted outside of bird nesting season to protect avian species that are likely to occur in Santa Maria.	Short



GUIDING PRINCIPLE #8: RISK REDUCTION FOR THE PUBLIC AND THE CITY

STRATEGY	NUMBER	ACTIONS	TIMEFRAME
Santa Maria's urban forest and associated infrastructure will be maintained to reduce risk, and responsibility will be clearly delineated.	8a	Maintain existing trees on a 4-year assessment cycle, where trees are inspected by an ISA certified arborist to determine maintenance needs.	Ongoing
	8b	Update planting standards, specifications, and drawings to reflect ISA and ANSI standard practices by adopting the Field Guide developed as a companion document to this UFMP.	Short
	8c	Update tree condition ratings as work is performed on City trees.	Ongoing
	8d	Continue to enforce the City's requirement for 10-foot planting easements in all new subdivisions and consider expanding this requirement to all new development and redevelopment throughout the City.	Short / Ongoing
	8e	Develop a system for the public and City staff to report tree and infrastructure conflicts and prioritize trip and fall hazards or other public hazards for repair. Clearly define responsibility for repairs. Utilize Appendix F, Sidewalk Solutions, to identify potential sidewalk repair solutions.	Short
	8f	Develop a system for coordinating tree cleanup efforts with the City's emergency services following storm, fire, wind, or other events that affect trees.	Short
	8g	Conduct field inspections of all vacant planting sites and "potential" planting sites identified in the tree inventory (4,605 vacant sites or stumps and 4,523 "potential" sites) to verify tree planting opportunities and identify site preparation needs (such as hardscape removal).	Medium



Coast Live Oak (*Quercus agrifolia*), Santa Maria, CA



5. IMPLEMENTATION PLAN



IMMEDIATE ACTIONS: YEAR 1	
No.	Action
1c.	Adopt the Recommended Tree Species list developed as part of this UFMP and ensure its broad use across the City by all departments.
3f.	Update the City's tree ordinance to require payments directly to the urban forestry program for tree removal permits and fines.
4e.	Develop educational materials that are bilingual, interpretive, and highly graphic based for outreach to children and families.
4i.	Update city website and public facing resources to provide educational materials and clear processes for requesting a tree, tree removal permits, requesting tree maintenance, and other tree related services and policies.
5d.	Adopt the Field Guide (prepared as a companion document to this UFMP) as city-wide standards for trees, including best practices for nursery selection, species selection, tree planting, establishment care, pruning, spacing, planter size that are used by all City departments. Annually review the Field Guide and update to reflect current best management practices.
5a.	Update the Municipal Code according to recommendations made in this UFMP.
5i.	Modify the development plan review process to require submittal of an arborist report for all trees proposed for removal and protection, and review of the proposed landscape plan by a third party certified arborist. Landscape plans must identify tree species, planter size



IMMEDIATE ACTIONS: YEAR 1

No.	Action
5j.	Establish a minimum canopy cover requirement for new development and redevelopment projects to be achieved through new tree plantings and maintaining existing trees. Canopy targets should be based on potential tree canopy that would be achieved over time and based on total canopy capacity area (e.g., total parcel or lot size). Targets may vary by land use type (e.g., 15-20% canopy cover in residential land uses; 10-15% canopy cover in commercial and public land uses; 5-10% canopy cover in industrial and agricultural land uses; 20% canopy cover in parking lots).
6b.	Ensure existing trees are maintained and protected by enforcing the tree protection ordinance and exploring alternative solutions to tree removal.
6e.	Prioritize planting new trees in areas lacking canopy, as depicted in Exhibit 14 Tree Planting Priority and Opportunity Areas.
6f.	Provide guidance on pruning best practices to tree trimmers, contractors, and private property owners to avoid tree topping and extensive canopy reduction pruning.
6h.	Utilize the canopy analysis conducted as part of this UFMP (Appendix B) to prioritize park and school locations to increase canopy cover with new tree plantings.
8a.	Maintain existing trees on a 4-year assessment cycle, where trees are inspected by an ISA certified arborist to determine maintenance needs.
8b.	Update planting standards, specifications, and drawings to reflect ISA and ANSI standard practices by adopting the Field Guide developed as a companion document to this UFMP.
8d.	Continue to enforce the City's requirement for 10-foot planting easements in all new subdivisions and consider expanding this requirement to all new development and redevelopment throughout the City.

IMMEDIATE ACTIONS: YEAR 1	
No.	Action
5c.	Ensure collaboration across City divisions/departments that deal with trees and/or planning for new tree plantings. Establish a system for review and approval of all landscape plans and tree planting requirements/standards by the Director of Recreation and Parks (or appointee) and a certified arborist.
4h.	Engage the Chamber of Commerce in the importance of trees by informing them of the urban forest's financial value.
4c.	Maintain an ongoing volunteer-based Urban Forest Advisory Committee who provides oversight to the community outreach efforts and innovative ideas for trees.
4f.	Engage non-profit organizations, community groups, service organizations, and volunteer groups in tree planting and tree care events.



SHORT TERM ACTIONS: 1-5 YEARS

No.	Action
1a.	Develop guidelines for pruning during the appropriate season for the subject species.
1b.	Ensure species diversity in development projects and landscape plans. Require review of tree planting palette in proposed landscape plan by a certified arborist.
1d.	Encourage the use of native species when appropriate for benefits that include drought tolerance, disease resistance, and habitat for wildlife.
1e.	When planting new trees, ensure tree species are selected in consideration of "right tree, right place" concept to ensure trees are able to grow to maturity, including tree planting and spacing requirements, planter size requirements, and water requirements.
2c.	Continue to identify new street tree planting locations (including front yard right-of-way trees) and explore incentives to encourage community members to plant front yard trees, to achieve tree lined neighborhood streets.
2d.	Develop a watering program for trees planted in front yard ROW to assist private property owners with the responsibility and/or costs.
3b.	Develop a mechanism to ensure consistent funding for trees across City departments. Some options may include: fees, assessments, or taxes (e.g., development impact fees, bonds, special districts, etc.) as well as grant funding (see Appendix I for potential funding mechanisms).
3c.	Establish requirements for permits for tree removal on both public and private property. Requires a commitment by the City for staff time.
3e.	Add a fee to the City's Development Impact Fees that requires new development to contribute to the urban forestry program to fund new tree plantings and tree care.

SHORT TERM ACTIONS: 1-5 YEARS	
No.	Action
4a.	Conduct educational outreach and engagement throughout the community to increase the public's appreciation for trees and knowledge of tree benefits
4d.	Pursue partnerships with the Santa Maria-Bonita school district and conduct educational outreach/activities with elementary and high school students.
4g.	Utilize Santa Maria's City newsletter and other media news outlets to engage the community.
5b.	Explore creative solutions to preserve trees that are in conflict with existing infrastructure, rather than tree removal, as provided in Appendix F, Sidewalk Solutions.
6d.	Explore opportunities to plant trees in public spaces to create tree dense gathering spaces.
6g.	Develop a system to monitor tree plantings and measure progress toward canopy cover goals. Consider an annual "state of the tree union" presentation, combined with Arbor Day or a fiscal year end to City Council.
7d.	Develop procedures to ensure the enforcement of the Migratory Bird Treaty Act so pruning or removal of trees is conducted outside of bird nesting season to protect avian species that are likely to occur in Santa Maria.
8c.	Update tree condition ratings as work is performed on City trees.



SHORT TERM ACTIONS: 1-5 YEARS

No.	Action
8e.	Develop a system for the public and City staff to report tree and infrastructure conflicts and prioritize trip and fall hazards or other public hazards for repair. Clearly define responsibility for repairs. Utilize Appendix F, Sidewalk Solutions, to identify potential sidewalk repair solutions.
8f.	Develop a system for coordinating tree cleanup efforts with the City's emergency services following storm, fire, wind, or other events that affect trees.
5h.	Ensure trees are included in the planning process as the Downtown Multimodal Streetscape Concept Plan is implemented.
7b.	Identify locations, such as greenbelts, open space/parks, and riparian areas, where tree species may be selected in consideration of the habitat they provide for wildlife. Seek opportunities to plant trees with companion plants to further create wildlife habitat and provide ecosystem benefits. For example, wintering monarchs require pocket groves with protection from the wind; birds/raptors require larger trees for nesting and hunting perches above grass- and shrublands. Consult a City-qualified biologist and arborist when making tree species selections for wildlife habitat.

MEDIUM TERM ACTIONS: 5-10 YEARS	
No.	Action
1f.	Explore opportunities to manage trees throughout their entire life-cycle, from growing saplings, to tree planting, maintenance, removal and wood reuse. Consider developing a program(s) that supports this action, such as a City nursery or urban wood reuse program.
2a.	Implement General Plan Objective 2.1j by identifying streets and active transportation routes where trees can be added. Develop a long-term planting strategy to achieve at least 20% canopy cover along active transportation routes.
2b.	Identify opportunities for new active transportation routes and plan for trees as routes are developed.
2e.	Identify routes to schools, parks, and other neighborhood amenities where trees can be planted to increase shade, safety, and usability of such routes.
3a.	Identify tree planting opportunities in commercial land uses to enhance commercial corridors and encourage profitable business corridors.
3d.	Pursue grant funding to develop an urban wood reuse program.
4b.	Establish new community outreach programs, such as “adopt a tree” or tree giveaway programs.
4j.	Explore opportunities to connect people with the food trees provide. For example, by planting fruit trees in communal spaces (e.g., community gardens or parks), celebrating existing fruit trees, or establishing a program for fruit sharing.



MEDIUM TERM ACTIONS: 5-10 YEARS

No.	Action
5e.	Encourage the use of trees in water-wise landscaping and establish a system for irrigating trees.
5f.	Seek opportunities to implement General Plan Objective C.4.a by identifying roadways where trees can be implemented in landscape buffers between heavily traveled roads.
6c.	Fill all readily available vacant planting sites (4,605 sites including vacant sites or stumps) by 2030. Prioritize filling vacant planting sites in areas lacking tree canopy based on Exhibit 14 of the UFMP.
7a.	Develop a heritage tree program to celebrate historic, large, interesting, or rare trees. Create an interactive map of heritage trees. Consider making this a standalone map that is added to the urban forestry website, and/or adding this to the existing “Historical Landmarks and Objects of Historical Merit” storymap.
8g.	Conduct field inspections of all vacant planting sites and “potential” planting sites identified in the tree inventory (4,605 vacant sites or stumps and 4,523 “potential” sites) to verify tree planting opportunities and identify site preparation needs (such as hardscape removal).

LONG TERM ACTIONS: 10+ YEARS	
No.	Action
5g.	Collaborate across City departments to implement General Plan Objective 3.1 by establishing a greenbelt around the City and identifying tree planting opportunities.
6a.	Achieve a City-wide canopy cover of 20% by planting approximately 1,000 trees per year on public and private property over the next 40 years.
7c.	Consider working with local experts and organizations to create and maintain a city-managed grove for monarch wintering habitat. Consult with biologists/monarch experts on tree selection and habitat creation, such as the Xerces Society and utilize the latest science and research.



6. MONITORING PLAN



6.1 Vibrant Cities Lab Assessment

The City can use the Vibrant Cities Lab Community Assessment and Goal-Setting Tool to monitor the success of implementation of the UFMP. The tool is used as an assessment to define the City's current state and what the City would like to achieve. The user decides what the City's current state of the metric is and then sets the goal metric. Each metric is assigned a point value and the City is assigned a "Total Current Score" and a "Gap Score," which represents the difference between the current state and the desired goal. A city that has a gap score between 20 and 40 is not far from achieving the goals of its urban forest program. Conversely, gap scores of 40 or more indicate that a City is still implementing programs and policies to close the gap and develop a sustainable urban forest.

Santa Maria's first assessment was conducted on March 9, 2023, by the urban forest supervisor and the consultant team. Table 17 reflects the results from the first assessment, which set the baseline for the City's Total Current Score at its pre-UFMP metrics.

Based on the first assessment, the City has a current rating of 21, with a gap score of 71. The Vibrant Cities Lab Community Assessment and Goal Setting Tool should be

retaken each year to track, measure, and highlight progress. The assessment can also be used to demonstrate successes and justify additional funding asks to City Council. Since the City first took the assessment, several of the responses that had significant gaps have already been achieved.



**Santa Maria's Vibrant
Cities Lab Assessment:**
Score of 21
Gap score of 71



TABLE 17. TREE CANOPY GOAL SUMMARY (1 OF 5)

CATEGORY	CURRENT RATING		GOAL RATING		GAP
Canopy cover	The existing canopy cover for entire municipality is <50% of the desired canopy.	-1	The existing canopy is >75%-100% of desired – at individual neighborhood level as well as overall municipality	4	5
Inventory	Complete or sample-based inventory of publicly owned trees.	1	Systematic comprehensive inventory system of entire urban forest – with information tailored to users and supported by mapping in municipality-wide GIS system. Provides for change analysis.	4	3
Assessment methodology	Low-resolution and/or point-based sampling of canopy cover using aerial photographs or satellite imagery, for example i-Tree Canopy.	2	As described for “Better” rating – and all utilized effectively to drive urban forest and green infrastructure policy and practice municipality-wide and at neighborhood or smaller management level.	4	2
Publicly owned trees	Complete tree inventory that includes detailed tree condition ratings.	2	Complete GIS tree inventory that includes detailed tree condition and risk ratings.	4	2
Publicly owned natural areas	No information.	-1	Level and type of public use documented.	2	3
Private property trees	No information.	-1	Bottom-up sample based assessment, as well as detailed UTC analysis of entire urban forest, including private property, integrated into municipality-wide [multi-agency] GIS system. LIDAR and hyper-spectral imaging most helpful.	4	5
Relative performance index by species	Half of the six most common species have higher RPI scores than the average of all species in the community. (>1.)	2	All six most common species have higher RPI scores than the average of all species in the community. (>1.)	4	2

TABLE 17. TREE CANOPY GOAL SUMMARY (2 OF 5)

CATEGORY	CURRENT RATING		GOAL RATING		GAP
Use of native vegetation	Voluntary use of native species on publicly and privately owned lands; invasive species are recognized.	1	Use of native species is encouraged on a project-appropriate basis in all areas; invasive species are recognized and discouraged on public and private lands.	2	1
Align municipal departments	Informal teams among departments and agencies communicate regularly and collaborate on a project-specific basis.	2	Municipal policy implemented by formal interdepartmental/interagency working teams on all municipal projects.	4	2
Engage residents in planning and implementation	Little or no citizen involvement or neighborhood action.	-1	Many active neighborhood groups engaged in advancing urban forest goals, but with little or no overall coordination with municipality or its partnering NGOs.	2	3
Environmental equity	Planting and outreach includes attention to low canopy neighborhoods or areas.	1	Equitable planting and outreach at the neighborhood level is guided by strong resident involvement in low canopy/high need areas. Residents participate actively in identifying needs for their neighborhoods, planning, implementation and monitoring.	4	3
Trees acknowledged as vital community resource	Little or no citizen involvement or neighborhood action.	-1	Many active neighborhood groups engaged in advancing urban forest goals, but with little or no overall coordination with municipality or its partnering NGOs.	2	3
Engage large private landowners and institutions	Large private landholders are generally uninformed about urban forest issues and opportunities.	-1	Municipality educates landowners, provides technical assistance, sets goals and provides incentives for managing resources in accordance with plan.	1	2



TABLE 17. TREE CANOPY GOAL SUMMARY (3 OF 5)

CATEGORY	CURRENT RATING		GOAL RATING		GAP
All utilities work with municipality, employ BMPS	Utilities employ best management practices, recognize potential municipal conflicts, and reach out to urban forest managers on an ad hoc basis – and vice versa.	2	Utilities are included in informal municipal teams that communicate regularly and collaborate on a project-specific basis.	3	1
Green industry embraces goals, high standards	Some cooperation among green industry as well as general awareness and acceptance of municipality-wide goals and objectives.	1	Shared vision and goals and extensive committed partnerships in place. Solid adherence to high professional standards, and commitment to credentialing and continuing education.	4	3
Develop Urban Forest Management Plan	No urban forest management plan.	-1	New or recent urban forest and green infrastructure management plan which targets public and private tree planting and protection based on assessment of anticipated benefits – and assures these benefits are distributed equitably among neighborhoods.	4	5
Cooperative planning with other municipalities	Some neighboring municipalities and regional agencies share similar urban forest policies and plans.	1	Some urban forest planning and cooperation across municipalities and regional agencies.	2	1
Forestry plan integrated into other municipal plans	Urban forestry planning team presents plan to other agencies, encouraging them to consider how forestry might help achieve their objectives.	1	All agencies whose goals are served by urban forestry practices, participate in creation of forestry plan, and commit to designated roles and responsibilities.	4	3
Urban forestry program capacity	Team has capacity in terms of trained staff and equipment to achieve many of the goals of the urban forest management plan.	2	Team has no and will in the future to achieve all goals of the urban forest management plan, to maintain the resource over time, and adapt management as circumstances change.	4	2

TABLE 17. TREE CANOPY GOAL SUMMARY (4 OF 5)

CATEGORY	CURRENT RATING		GOAL RATING		GAP
Municipality-wide urban forestry funding	Funding sufficient for some proactive management based on urban forest management plan.	2	Sustained, long-term funding from multiple municipal, regional and/or state agencies, along with private sources to implement a comprehensive urban forest management plan, and provide for maintenance and adaptive management as circumstances change.	4	2
Growing site suitability	Appropriate tree species are considered in site selection.	2	All trees planted in sites with adequate soil quality and quantity, and with sufficient growing space and overall site conditions to achieve their genetic potential and thus provide maximum ecosystem services. Where growing conditions are poor, guidance provided on how to improve soil volume, quality, other factors	4	2
Tree establishment and maintenance	Planting and post-planting care and maintenance protocols in place.	2	Comprehensive tree establishment plan provides concrete guidance on most of the following criteria: site selection, size, age class, diversity of species, native plant choice; planting protocols [e.g. minimum soil volumes, soil conditions]; young tree care, including region appropriate irrigation requirements. Includes provisions and funding for maintenance.	4	2
Management of publicly-owned natural areas	Only reactive management to facilitate public use, e.g. hazard abatement, trail maintenance.	1	Management plan for each publicly owned natural area focused on sustaining and, where possible, improving overall ecological integrity (i.e., structure and function) – while facilitating appropriate public use.	4	3



TABLE 17. TREE CANOPY GOAL SUMMARY (5 OF 5)

CATEGORY	CURRENT RATING		GOAL RATING		GAP
Policies that foster good urban forestry on private lands	No tree protection ordinance, or one that's weak and rarely enforced.	-1	Strong tree protection ordinance focused on maintaining mature trees with effective procedures.	1	2
Tree protection policy and enforcement	Policies in place to protect public trees and employ industry best management practices, but rare or inconsistent enforcement.	1	Policies include construction standards for on-site tree protection, establishment and maintenance. Conforms to and references ANSI Standards for arboricultural practices (A300), safety (Z133), and nursery stock (Z60.1), as well as applicable ISA BMPs.	3	2
Monitoring	Monitoring on a regular basis with rotating schedule for each area. Monitors are professionals or volunteers trained to collect specific data required by municipality. Multi-year data available for trend analyses.	2	Monitoring on a regular basis with rotating schedule for each area. Monitors are professionals or volunteers trained to collect specific data required by municipality. Multi-year data available for trend analyses.	2	0
Tree risk management	Citizens and city staff report tree safety issues to the forestry department or manager (e.g. 3-1-1 system, online form, etc.). System tracks the time between damage report and mitigation action.	1	Includes "better" but with TRAQ-qualified contractors on city projects. Educate tree care companies and public about importance of TRAQ qualifications.	4	3
Urban wood and green waste utilization	While most green waste does not go to landfill, uses are limited to chips or mulch.	1	The majority of green waste is reused or recycled – for energy, products, and other purposes beyond chips or mulch.	2	1



FINAL SCORE - COMMUNITY ASSESSMENT & GOAL-SETTING:

SECTION	CURRENT	GOAL
Measure Your Current Tree Canopy and Set Goals	-1	4
Urban Forest Inventory & Assessment	3	8
Know What's Happening to Trees in Your Community	0	10
Urban Forest Characteristics	3	6
Engaging Peers & Residents in Process	1	14
Creating Essential, Effective Public/Private Partnerships	2	8
Resources Management: Planning	1	10
Resources Management: Implementation	7	21
Resource Management: Monitoring and Maintenance	5	11
	TOTAL CURRENT 21	TOTAL GOAL 92
		SCORE GAP 71



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Trees of Santa Maria



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8. REFERENCES



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Australian Bottlebrush (*Melaleuca citrina*), Cypress Street, Santa Maria, CA



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