



Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE
FROM: John Ristow
SUBJECT: COMMUNITY FOREST MANAGEMENT PLAN
DATE: September 15, 2021

Approved

Date

9/24/21

RECOMMENDATION

Accept the Community Forest Management Plan (CFMP) and refer the Plan for full City Council consideration.

OUTCOME

Receive input from the Transportation and Environment Committee on the CFMP, and referral of the Plan to City Council

BACKGROUND

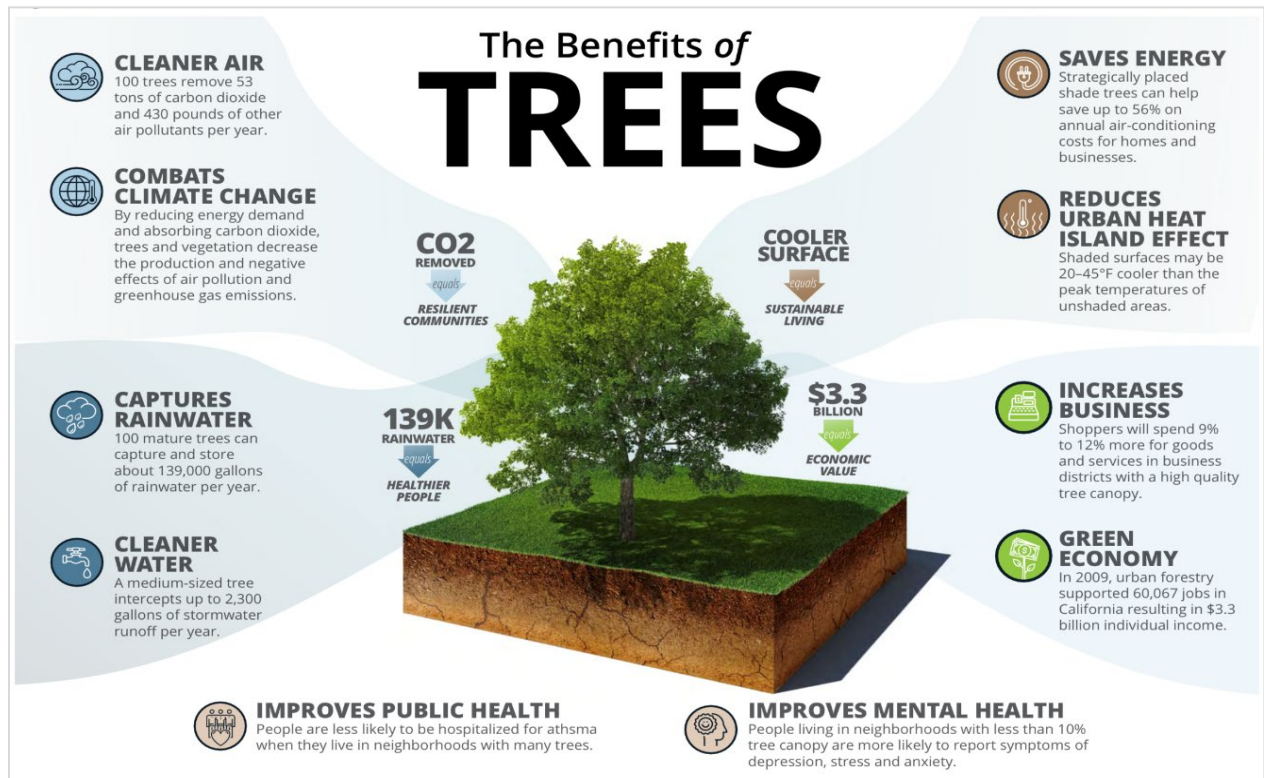
What is the Community Forest?

Urban forest is an arboriculture term used to describe the collection of trees and other vegetation found within a built urban environment. The CFMP uses the term *community forest* to be inclusive of San José's diverse neighborhood landscape (urban, suburban and rural), and recognizes the connected relationship between people and trees, which are mutually dependent on each other to thrive. The term community forest recognizes that the benefits provided by trees are shared by everyone who lives and works under their canopies, who in turn have a shared responsibility to protect and preserve the trees. The concept of a community forest allows us to think holistically about trees within the City, quantify their benefits, and manage these natural resources for the enjoyment of present and future generations.

San José's community forest is a vital component of the city's assets and infrastructure. Like the pipes that deliver water to our faucets, trees support the function of the city and provide many environmental services to the city and its residents, which are correlated with mental and physical health, and economic benefits. Unlike most assets that depreciate over time, the value of trees increases as they age and grow larger. These benefits, as displayed in Figure 1, can help us appreciate the value trees bring to our everyday life. Understanding how a tree performs these

functions highlights the importance of maintenance practices and management decisions to support large and healthy trees that are appropriate for their planting locations.

Figure 1 – The Benefits of Trees Infographic



Graphic created by Dudek based on information from U.S. Forest Service, University of Washington, Public Mental Health, Environmental Protection Agency, and CAL FIRE

While trees in a natural forest setting have the necessary resources to grow and regenerate without supplemental intervention from people, a human-created community forest is frequently planted in a setting that is distinguished by paved surfaces and compromised soils that does not support the natural growth and regeneration of trees. San José's community forest will require human intervention to maintain its health and safety in the built environment.

Why Develop the CFMP?

The Department of Transportation (DOT) actively pursues grant funds for projects and initiatives that support Citywide, Transportation City Service Area, and department goals. The CFMP complements and supports the following City policy goals and plans:

- **Envision San José 2040 General Plan** – specifically areas pertaining to Streetscapes for People; Measurable Sustainability/Environmental Stewardship; Life Amidst Abundant Resources; Design for a Healthful Community and Urban Villages.
- **Climate Smart San José** –promotes sustainability and the need for thoughtful urban design for the betterment of the community.

- **Green Stormwater Infrastructure (GSI) Plan** – a multidisciplinary approach of GSI uses including soils, plants and pervious surfaces to capture, treat, infiltrate, and/or use stormwater runoff.

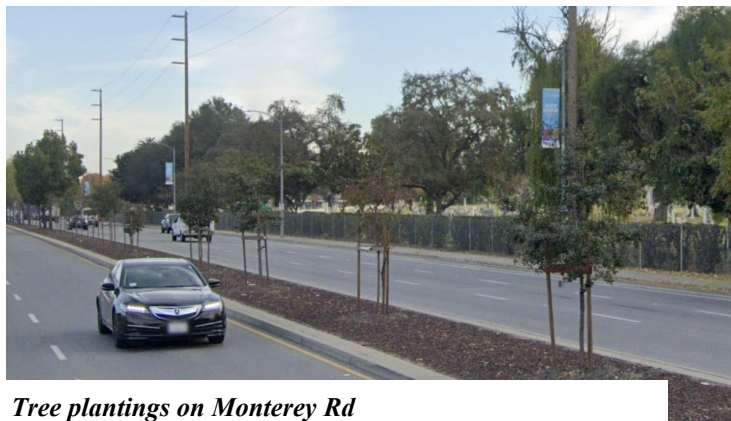
In FY 2016-2017, DOT applied for a California Climate Investments grant from the California Department of Forestry and Fire Protection (CAL FIRE) Urban and Community Forestry Program to complete a CFMP. Execution of the grant with CAL FIRE was finalized in Fall 2017. The purpose of the CFMP is to provide the City with an independent analysis of its tree programs, the current state of the community forest, and opportunities for improvement. The CFMP makes recommendations that would protect, enhance and grow the community forest – including recommendations on staffing and program funding, and include updates for effective tree maintenance procedures.



Trees provide many benefits to their communities

In early 2018, DOT began planning the tree planting project and early stages of the database development work which were also part of the CAL FIRE grant. In 2019, DOT focused efforts on preparing the Request for Proposal (RFP) for the CFMP consultant and an RFP for the tree inventory work. Dudek was selected in May 2019 to develop the CFMP. Dudek is a California-based consulting agency and has a diverse urban forestry practice with experience in a variety of urban and wildland forestry specialties. Dudek is well-versed in urban forest master plan development, having completed similar projects in recent years, including for the cities of Downey, Los Angeles, and Irvine.

The CFMP development process included the completion of a third-party (Dudek) strengths, weaknesses, opportunities and threats (SWOT) analysis of all aspects of the City's current tree programs, departmental policies and procedures, and ordinances, to identify opportunities for improvement. The process included a canopy study, analysis of potential funding options for the City's tree programs, development of a new tree management database, and the planting of over 200 trees in disadvantaged communities, as defined by the California Environmental Protection Agency (CAL EPA). CAL EPA identifies disadvantaged communities based on environmental, health and socio-economic data. A tree inventory was to be completed for City managed facilities, such as parks and community centers, and the existing street tree inventory was to be updated but the tree inventory work was not completed as part of the CFMP project. Staff was prepared to go out to bid for the inventory work,



Tree plantings on Monterey Rd

but due to the COVID-19 pandemic, City procurement efforts were prioritized to focus on essential services and provide community services in response to the pandemic.

Although much of the focus of this plan and the staff facilitating this work is on street and public right-of-way trees, the majority of trees within the community forest of the City of San José are not street trees. It is estimated that there are over 1.2 million trees on private property, wholly under the maintenance responsibility and supervision of the respective property owner or non-City entity. There are also an estimated 233,000 street trees maintained by property owners, 37,000 street trees maintained by DOT, and 30,500 trees maintained by either the City's Department of Parks, Recreation, and Neighborhood Services (PRNS) or Department of Public Works (DPW). Additionally, there are an estimated 70,000 trees along trails and in undeveloped park areas. Furthermore, the Department of Planning, Building and Code Enforcement (PBCE) manages a system of practices and policies that impact private property trees throughout the city at every stage of their life-cycle. Although DOT is the most public facing City department managing urban forestry, a resilient urban forest would benefit from the alignment and participation of the community.

It is important to note that for several generations, property owners in San José have been responsible for street tree and sidewalk maintenance adjacent to their property per the City's municipal code. The City's street tree program has been primarily administrative, regulatory, and enforcement-based, where permits are required and issued for tree-related activities. Enforcement action is taken when staff is aware the municipal code has not been followed, such as in instances of illegal removals and pruning. While property owners have always had primary maintenance responsibility, DOT previously had a crew of maintenance workers who would provide occasional supplemental support by performing minor work like clearance for street signs, traffic signals and streetlights. This "tree crew" would also take on clearance pruning for pavement work or remove trees that were in poor health. In 2008, as a result of extreme budget shortfalls, the DOT's tree crews were eliminated, and street tree maintenance and care placed solely on the property owner.

ANALYSIS

Upon execution of the grant agreement with CAL FIRE (October 2017) and the commencement of the tree planting project, DOT proceeded with the early stages of the database development work. This was an early priority and its completion needed to precede the tree inventory in order to ensure the usability and adequate storage of these robust datasets. Designing a new database was challenging as the previous database did not have the ability to properly track the individual tree asset traits and condition, so this feature had to be designed and built by DOT's information technology staff.

Once progress was made in developing the database, the DOT arborist team focused its efforts on preparing the RFPs for both the CFMP consultant and the tree inventory work in early 2019. In the fall of 2019, Dudek was awarded the contract to develop the CFMP, which was to include a thorough analysis of current City management practices, policies, ordinances, and funding to

understand the deficiencies and strengths of the City's community forest management program. The analysis of current practices was initially informed by reviewing City planning documents, including the Tree Policy Manual, Envision San José 2040 General Plan, and Climate Smart San José. It also included an analysis of City permit practices, tree ordinances, standard details, and annual service data and budget levels.

Understanding the effectiveness of the community forest management program was further informed by interviews with City staff, elected officials, and the city's nonprofit tree-planting partner, Our City Forest (OCF). These initial interviews explored the roles and responsibilities of each stakeholder with respect to influencing and supporting city tree management, clarified internal City procedures, and informed areas where the City could improve management of the community forest.

In addition to the department interviews, input from residents and stakeholders helped to inform the analysis of City management practices and the development of guiding principles, goals, and objectives to reflect the values and priorities of the City and residents.

CFMP Contents

The CFMP consists of the following sections:

- Part 1: Analysis of the San José Community Forest Program
- Part 2: Strategic Work Plan
- Part 3: Tree Policy & Best Management Practices Manual

The intention of this work is to analyze and summarize current conditions and practices, highlighting challenges and obstacles to desired outcomes. This analysis is synthesized and focused into recommendations to improve those conditions, and ultimately establish relatively uniform best practices and policies across the administrative, enforcement, and tree-planting functions and with stakeholders throughout the City.

Part 1: Analysis of the San José Community Forest Program

This analysis represents a strengths, weaknesses, opportunities, and threats (SWOT) analysis. The SWOT analysis is a detailed examination of the entire breadth of the community forest management program to understand the strengths and weaknesses of current City practices and determine the avenues by which the City could improve in these areas. The City's procedures and results are measured against urban forest sustainability metrics, comparison with other cities known to have exceptional community forest management programs, standards of the International Society of Arboriculture and American National Standards Institute, and consultant team experience. The analysis includes recommendations to align the various departmental policies and procedures because residents often expressed confusion or lack of clarity on which City department handles various tree issues.

Key Findings

1. Immediate action must be taken to reverse the trend of declining canopy cover:

Based on a review of spatial imagery analysis conducted by the U.S. Forest Service in 2012 and 2018 across California, canopy cover in San José decreased from 15.36% to 13.54% during this time period.

The 1.82% reduction is equivalent to losing 1,728 acres or 2.7 square miles of tree canopy cover. As shown in Table 1, all Council Districts experienced a decline in canopy cover.

Table 1 – Canopy Cover by Council District

CD	2012 Canopy Cover	2018 Canopy Cover	Change
1	18.75 %	15.50 %	- 3.16 %
2	13.61 %	12.29 %	- 1.22 %
3	13.25 %	12.27 %	- 0.98 %
4	12.19 %	10.62 %	- 1.58 %
5	15.81 %	12.64 %	- 3.17 %
6	21.36 %	19.46 %	- 1.90 %
7	12.06 %	11.02 %	- 1.04 %
8	12.86 %	12.67 %	- 0.19 %
9	16.92 %	14.18 %	- 2.74 %
10	20.43 %	17.14 %	- 3.30 %

This downward trend in canopy cover will most likely continue if funding and management of the community forest continues at current levels. Many factors contribute to this significant decline including climate change, tree removal for development, and not enough new trees being planted. It is important to note that, while losing canopy cover happens as soon as a tree is removed, replacing lost canopy takes 30–40 years. Delay in taking action to reverse the trend will begin to multiply the scale, cost, and time it will take to achieve an adequate level of tree canopy cover in San José. Approximately 40,000 35-foot canopy spread trees would need to be planted to recover 1% of lost canopy cover, making the prioritization or retaining existing mature trees where possible the most cost effective and efficient way to maintain canopy cover. Based on a report by Leahy from American Forests, a realistic baseline canopy cover target for an urban city is 20%.

- Limited financial and human resources to manage the community forest:** The City's Community Forest Program budget of approximately \$4 million would need to be increased by an additional \$20–\$24 million annually, to manage all trees in the public realm at a sustainable level – parks, city facilities, and streets. This would fund a tree planting campaign to replace lost canopy, establishment care for newly planted trees, and pruning trees on a five to seven-year cycle. Currently, for most street trees, this cost is largely passed on to private property owners who are estimated to spend approximately \$912 every five years to maintain the tree and sidewalk adjacent their property.
- The City must complete an inventory of all public space street and park trees:** The City last completed a street tree inventory in 2014 and does not have current information on the condition of trees in the public space. The prior inventory provides some data to inform management decisions but lacks key information on the health and safety condition of street trees. There is no inventory data available for parks and other City facility trees. Current inventory information is vital to understand what species are in decline and contributing to

the loss of citywide canopy cover as well as to inform the appropriate management actions to preserve the health and safety of trees in the public space.

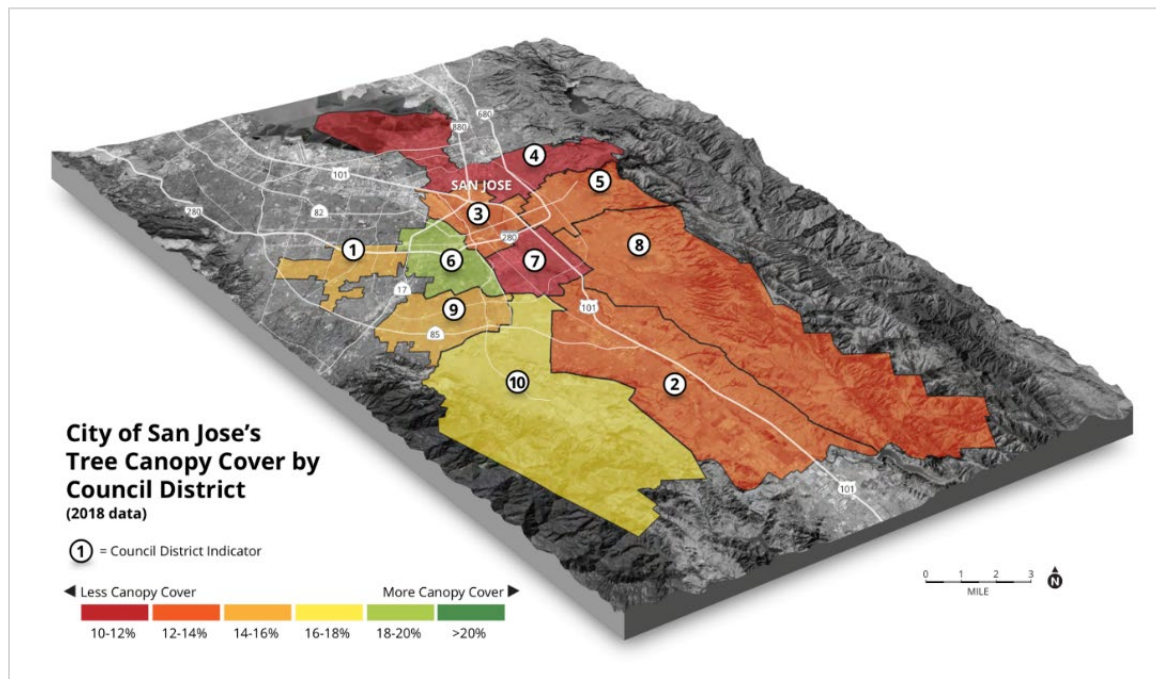
Funding has been identified to complete the inventory for City parks, libraries, and community center; this inventory will be completed in FY 2021-2022. DOT will continue to seek opportunities to complete and update the street tree inventory and to conduct an inventory for City facilities.



San Jose Municipal Rose Garden

4. **Economically disadvantaged communities have fewer trees than higher income communities:** The top ten most economically disadvantaged census tracts in San José have an average tree canopy cover of 12.04%, with 70% having a canopy cover of 10% or less. Conversely, the top ten most economically advantaged census tracts have an average canopy cover of 16.87%, with 50% having a canopy cover of 18% or higher. While canopy cover is low for almost all census tracts, disadvantaged communities in San José experience the lowest totals of canopy cover and increased vulnerability to pollution, extreme heat, and potential health issues when compared to other areas. Figure 2 displays the canopy cover by Council District based on the U.S. Forest Service 2018 analysis.

Figure 2 – Canopy Cover by Council District



Graphic created by Dudek based on information the U.S. Forest Service

5. **Current urban infill and development practices limit the space for trees:** Current development practices favor maximizing the size of building footprints with minimal consideration for street trees. Space that could be made available to a street tree is either unavailable or greatly reduced, resulting in locations where trees are not planted or planted with a small tree that has lower community benefit. Without trees to shade and cool sidewalks on hot days, the walkable nature of these neighborhoods will be reduced.
6. **The City and Our City Forest need to strengthen their partnership:** Since 1994, OCF has been the main conduit for the City to provide many community forest program functions like community engagement and education, tree planting, establishment care, operating a community nursery, and volunteer training, while also building financial support for these services through state and federal grant funds. OCF has implemented many new and replacement tree plantings throughout San José. In addition to funding provided by the City, OCF has been successful in receiving both state and federal grants to benefit the City's urban forest, including efforts that are in addition to the partnership with the City.

In the agreements with OCF, it would be beneficial to include an outline of the strategies and processes through which they will continue to collaborate toward the betterment of the community forest. The process of realignment will help the City and OCF leverage their expertise and shared resources in a way that will benefit both programs, the residents and businesses of San José, and expansion of the community forest. For example, it may be advantageous for the City and OCF to collaborate on a joint grant submittal for tree planting funds which could lead to larger grant awards.



Resident receiving a free tree and planting assistance from OCF

7. **City staff are reliant on DOT arborists for support:** DOT is the only City department with arborists on staff, one City Arborist and two Assistant Arborists, qualified to make decisions about the health and safety condition of a tree, how development will impact tree health, and whether tree removal is appropriate on both public and private land. Frequently, PBCE, PRNS and DPW staff will seek assistance from DOT arborists to support City functions that are outside the scope of DOT. While DOT will generally try and provide the requested support, it does so at the expense of its main responsibilities and without receiving additional funding for this support. Whether arborist services are consolidated and adequately funded in one division, or if the relevant departments determine that hiring their own arborist staff is appropriate, more capacity within the City is needed with respect to urban forestry.

8. Parks are a valued community space that receives minimal funding for tree

management: Parks are one of the City assets residents most value. They are a favorite location for elected officials to host community volunteer events and other activities. Despite the high value of City parks, PRNS receives no funding to plant or maintain trees and only \$150,000 annually to manage an estimated 30,000 trees, which is used entirely to respond to tree failure or emergency safety issues. The lack of funding prohibits PRNS staff from conducting annual tree inspections and maintaining a five- to seven-year pruning cycle that is critical to maintain the safety of park trees.

Part 2: Strategic Work Plan

The second section of the CFMP is the long-term strategy to advance the City toward a sustainable urban forest. As a preliminary step, City staff and the consultant collaborated in the drafting of the following vision statement:

“The City of San José Community Forest is a testament to our history and honors our diversity while striving to cultivate the equitable values we hold true towards building a strong and resilient landscape and community forest.”

The vision statement is further segmented into guiding principles that reflect the specific tree values City staff and residents hold, providing an equitable quality of life for all San José residents and identifying the priority areas towards which City resources should be directed. The guiding principles provide the reasoning for the steps outlined in the strategies and objectives. The goals represent the intended CFMP outcomes. The objectives are the specific actions it will take to reach the goals. The CFMP is a living document that will require regular review and updating as the current environmental and economic conditions change over the 40-year CFMP timeframe. To ensure the City can adapt to the changing conditions, staff are assigned responsibility for implementing objectives and completing goals.

The strategies for establishing a sustainable Community Forest are focused in the following program areas:

1. **Streamline the Governance Structure:** The division of tree management by land use type is an extension of the defined department roles and responsibilities. With PBCE, DOT, PRNS and DPW all maintaining various levels of enforcement and maintenance roles, the current system is too decentralized and insufficiently resourced to ensure that tree canopy preservation is appropriately prioritized. With only one arborist in the City reporting through the DOT management structure this issue is exacerbated. It is important to explore the potential benefits of alternative management structures, and whether this may improve City efficiency and ultimately, lead toward a safer and healthier community forest. This evaluation would include consideration of expanded collaboration between departments involved in the community forest.
2. **Ensure Community Forest Sustainability:** The purpose of these strategies is to balance objectives pertaining to tree species diversity, wildlife habitat and the interface with the

urban environment, resiliency in the face of drought and climate change, and the planting of sufficient trees to reach 20% canopy cover – citywide - by 2051. Critically embedded in this area is the development of a dashboard of community forest sustainability indicators, implementing the practice of annually updating these dashboard statistics by regularly collecting tree inventory data, and reporting on the status of the community forest to the City Council, residents, and other stakeholders.

3. **Support Diversity, Equity, and Inclusion:** As Key Finding #4 illustrates, tree canopy cover is low for nearly all San José census tracts but is especially low in economically disadvantaged communities. Strategies incorporate a series of objectives ranging from the engagement and education of community members and organizations, to the formation of a Community Forest Advisory Committee, to prioritizing the expansion of tree canopy in these communities leading to canopy cover equitably. Additionally, the Office of Racial Equity will provide support and guidance so that equity is considered in a meaningful and productive manner.
4. **Funding the Community Forest:** Key Finding #2 highlights the severe funding needs of the City’s urban forestry program. Strategies contain a series of objectives pertaining to the proper funding and maintenance and appropriate management responsibilities of trees in the City rights-of-way, at parks, and at all City facilities. Objectives also include an exploration of incentive programs and policies that may lead to the preservation and expansion of the street tree canopy by relieving some – or all – of the maintenance responsibility from property owners citywide. Figure 3 highlights a potential loss in canopy cover over the next 20 years if the downward trend of tree canopy continues.

Figure 3 – Potential loss in canopy cover



Dudek analysis of U.S. Forest Services 2018 canopy cover data

5. **Efficient and Effective Tree Management:** Strategy objectives are centered on making data-driven tree planting and management decisions, which will require a completed tree

inventory and a regular process for updating the inventory. Staff must also use this data and knowledge to ensure that City tree management activities and design standards reflect the conditions and needs of the community forest. Strategies also emphasize the importance of education and ensuring that community members and property owners understand their respective roles in growing and maintaining the community forest.

6. **Standardize and Improve Planning and Development:** Strategy objectives focus on leveraging planning and development processes to increase and improve the community forest by protecting and preserving mature trees while seeking planting opportunities. By examining and modifying policies at all phases of the development and maintenance lifecycle, the City can help ensure the proper incentives exist to protect the health and sustainability of the community forest.

The full workplan in the CFMP is provided separately as Attachment B for the convenience of the City Council and public.

Part 3: Tree Policy & Best Management Practices Manual

The final section of the CFMP is a completed update of the City Tree Policy and Best Practices Manual, which includes all tree-related ordinances, policies, maintenance practices, landscape practices, and standard details. The intent of this section is to provide clarity for City staff, contractors, and residents on the expected standards for tree planting, watering, tree staking, pruning, irrigation installation, and other physical actions that impact trees. It also provides clarity and updates when needed to existing permit processes and internal practices and makes recommendations for updating ordinances. Other practices such as modifying ordinances and policies will require additional consideration and approval of the City Council before they are put into effect and implemented.

Outreach and Engagement

Originally, resident and stakeholder engagement were planned to occur both online and in-person. However, shortly before the beginning of in-person community meetings, restrictions on gatherings in response to the COVID-19 pandemic were implemented. This led to a pivot from in-person meetings to an online meeting format. DOT staff held four online community meetings in July 2020 and provided American Sign Language and Spanish translation services at respective meetings. OCF staff participated in each of these meetings by presenting content and answering resident and stakeholder questions. Vietnamese translation was also planned for one of the meetings, but the meeting was subsequently cancelled due to lack of attendance. In total, 56 participants attended the online meetings.

To reach a larger audience of residents unable to attend the online meetings, DOT implemented a social media campaign and online survey. The social media campaign and online survey was successful in increasing the number of participants and resulted in over 188,000 impressions or views of social media posts, over 2,000 completed surveys, and nearly 1,100 replies or comments to social media posts.

OCF has provided significant input to both Dudek and DOT on the CFMP in the form of written comments and feedback as well as direct meetings with Dudek. Additionally, DOT has communicated with other traditional partners such as the Santa Clara Valley Open Space Authority and the Audubon Society, and reached out to organizations not traditionally tied to urban forestry matters including those associated with the Sí Se Puede Collective, including SOMOS Mayfair, Grail Family Services, Amigos de Guadalupe, School of Arts and Culture, and Veggielution, as well as the American Association of Retired Persons (AARP), SPUR, and others via staff briefings or inclusion on the email distribution list of approximately 200 individuals and organizations. The goals of these meetings were to inform the community about the contents of the plan, refine the analysis of San José's CFMP program, including the Strategic Plan, and ensure open lines of dialog moving forward. It is important to note that the CFMP is a living document and represents the first step in a multi-year process that will require ongoing engagement with the community and stakeholders to achieve the aggressive goals and priorities set forward in the plan.

The focus thus far has been on drafting the document and ensuring a thorough analysis of the current management practices was conducted. As part of this process, the CFMP includes recommendations for improving City programs, prioritizing canopy cover in disadvantaged communities, adequately funding the community forest programs, and continuing and strengthening the partnership with OCF.

The refinement and implementation of the work plan will benefit from additional engagement with local community-based organizations, community leaders, and other external stakeholders who engage with residents and have a shared interest in the San José community forest. The inclusion of these organizations and leaders will further support the City's efforts to reach all demographic and geographic segments of the City by having a trusted community voice directly communicating with their constituency. To that end, the strategic work plan calls for both an annual update to the Transportation and Environment Committee, as well as the formation of a Community Forest Advisory Committee consisting of City staff and external stakeholders with diverse perspectives to guide the implementation of the CFMP. As the granting agency, CAL FIRE also supports moving forward with the adoption of the CFMP and ensuring sufficient ongoing community engagement in the implementation of work plan efforts.

Next Steps

Staff are already taking steps to accomplish the goals set forth in the CFMP. The 2021-2022 Adopted Budget includes \$120,000 in funding to collect tree inventory data for between 25,000 – 30,000 trees at parks, libraries, and community centers. Future inventory work will focus on updating the street trees data as funding allows.

The 2021-2022 Adopted Budget also includes \$210,000 to plant at least 250 trees in City-owned park strips along neighborhood streets in East San José. Staff is also evaluating options for budgetary action in the current fiscal year to allocate available Traffic Capital Funding for the kick-starting of these efforts. Actions may include the request to add a temporary Assistant Arborist position to act as point person for the early stages of the work plan implementation and

perform a review of policies and procedures that may be able to be modified quickly. This position will also help establish and serve as a lead point of contact for the Community Forest Advisory Committee to help guide and prioritize the implementation of the work plan. Staff is targeting formation of the committee by the end of June 2022. Establishing a complete and accurate tree inventory is also an immediate priority, and DOT will leverage the existing procurement process to maximize these activities beyond the PRNS inventory with available funds.

If the CFMP is approved by the City Council, DOT and PRNS will use the FY 2022-2023 budget process to highlight needs which may include further tree planting activities and resources to provide increased maintenance for trees in the City right-of-way and at City parks, libraries, and community centers. Staff will also commence the process that will result in added urban forestry capacity to the City by consolidating tree maintenance and management activities in one department, or preparing a collaborative proposal to ensure needs are met within each department. Some elements in the workplan will take many years and many more resources to accomplish, so the development of a roadmap that is updated regularly will be critical in the creation of lasting and positive change.

CONCLUSION

The CFMP is a first step in the reimagination of tree management and policies within the City of San José. The CFMP will focus staff and community efforts on strategies that would improve current management of the existing community forest and ultimately protect, enhance and grow San José's tree canopy.

COORDINATION

This memorandum has been coordinated with the City Manager's Budget Office, the City Attorney's Office, and the Departments of Parks, Recreation, and Neighborhood Services, Planning, Building, and Code Enforcement, and Public Works.

/s/

JOHN RISTOW
Director of Transportation

For questions, please contact Eric Hon, Division Manager, (408) 794-1987.

Attachments: Community Forest Management Plan
Strategic Work Plan