



COUNCIL AGENDA: 1/10/2023  
ITEM: 3.3  
FILE NO: 23-016

# Memorandum

**TO:** HONORABLE MAYOR AND  
CITY COUNCIL

**FROM:** Toni J. Taber, CMC  
City Clerk

**SUBJECT:** SEE BELOW

**DATE:** January 10, 2023

---

**SUBJECT: Collection and Use of Tree-Related In-Lieu Fees, Enforcement of Tree-Planting Conditions on Development, and the Cost of Tree Planting Audit Report**

### **Recommendation**

As recommended by the Transportation and Environment Committee meeting on December 5, 2022, accept the report of the collection and use of tree-related in-lieu fees, enforcement of tree-planting conditions on development and the cost of tree planting audit.

CEQA: Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action. (City Auditor)

[Transportation and Environment Committee referral 12/5/2022 - Item (d)1]



**Office of the City Auditor**

---

**Report to the City Council  
City of San José**

---

**TREE REMOVALS AND  
REPLACEMENTS: THE CITY  
CAN IMPROVE PROCESSES  
TO PROTECT AND GROW  
THE COMMUNITY FOREST**

---

**Report 22-08  
November 2022**

**This page was intentionally left blank**

November 28, 2022

Honorable Mayor and Members  
Of the City Council  
200 East Santa Clara Street  
San José, CA 95113

## **Tree Removals and Replacements: The City Can Improve Processes to Protect and Grow the Community Forest**

San José's community forest comprises roughly 1.6 million trees located on private property and public spaces. Between 2012 and 2018, the City experienced a decline in tree canopy cover. The City adopted a Community Forest Management Plan in early 2022 in the effort to grow and maintain the community forest.

In San José, property owners must obtain permits to remove trees over a certain size on single-family properties. Removing any tree on some property types, like multi-family or commercial properties, requires a permit. Applicants must plant or pay for replacement trees for each tree removed. The Departments of Planning, Building and Code Enforcement (PBCE) and Transportation (DOT) oversee different parts of this process.

The objectives of the audit were to review a) how and whether the City is collecting tree-related mitigation fees from developers, b) how and whether the City is enforcing tree-planting conditions on development, c) how the City is spending tree mitigation funds, and d) how the City can most cost-effectively plant more trees. This audit was requested by the City Council.

**Finding 1: Private Property Tree Removal Permitting Requires Better Resources and Improved Processes.** The City requires that applicants plant replacements for trees that they remove, per the City's replacement ratios. However, planners are not consistently applying the City's standard replacement ratios when approving tree removals or development permits. We found:

- In our sample of 34 permits, we noted errors on nearly 1/3, resulting in 142 fewer trees planted, or the equivalent of \$110,050 in in-lieu fees.
- Currently, planners do not receive standard training, nor have instructions on how to apply the City's replacement ratios or make technical decisions around trees.
- The tree removal permit fee does not align with the current review process. For a sample of projects, the average time to review a live tree removal was longer than the permit fee recovers.

### **RECOMMENDATIONS:**

To ensure that tree removal processes are consistently followed and updated, PBCE should:

- Develop procedures on tree removal permit processing
- Provide planners with technical guidance about trees or provide further access to certified arborists as needed
- Review the live tree removal fee and associated process.

**Finding 2: The City Can Better Ensure Replacement Trees are Planted and Regrowing the Canopy.** The purpose of the City’s replacement ratio is to regrow the canopy after a tree is removed. When an applicant removes a tree, the City prefers that the applicant plant the replacement tree on their property. We found:

- The City does not verify that applicants planted required replacement trees on their property. The City has two methods to verify tree plantings, depending on the type of permit, but staff do not perform either routinely.
- Additionally, the City determines the replacement ratio based on the number of trees removed without accounting for the size of the canopy lost. The City also does not provide guidelines for tree species suitable for planting.

**RECOMMENDATIONS:**

To ensure replacement trees are planted to regrow the canopy, PBCE should:

- Develop procedures to enforce tree planting requirements
- Revise the tree replacement policy to incorporate canopy size and optimal species for replacements
- Provide applicants with guidance for appropriate tree selection

**Finding 3: DOT Has Not Been Spending In-Lieu Fee Revenues Timely.** The City collects in-lieu fees when applicants remove a tree and do not have room to plant a new tree on their property. DOT staff then use the in-lieu fee revenues to plant trees on the applicant’s behalf. We found:

- DOT has spent only a small portion of the in-lieu fees collected. Between FY 2018-19 and FY 2021-22, the City collected over \$1.5 million in in-lieu fees. By the end of FY 2021-22, staff had spent \$88,000 (about 6 percent).
- Though staff used fee revenues on planting and watering costs, DOT staff should improve how they track in-lieu fee spending.
- Staff also do not have clear guidelines on where or how to spend in-lieu fee revenues, and DOT does not regularly review information about where fees were collected during the fiscal year.

**RECOMMENDATIONS:**

To better spend in-lieu fees, DOT should:

- Identify planting locations or uses for accumulated fees
- Create guidelines for how fees should be spent
- Regularly review information on fee collection

**Finding 4: DOT Should Evaluate Costs and Establish Metrics for the Community Forest Program’s Objectives.** The City has identified numerous objectives for the community forest program. These include planting 2,000 trees per year, achieving a 20 percent canopy cover by 2051, and prioritizing tree planting in designated areas of need. We found:

- There are several approaches to meet the community forest objectives, including City-funded and directed plantings or engaging private property owners in planting efforts.
- Costs may include the cost of procuring and planting the tree, site preparation, traffic safety measures, watering during the establishment, and future maintenance. Each strategy has different costs to the City and may be more or less effective in meeting a particular goal of the tree planting program.

**RECOMMENDATIONS:**

To measure how the City is meeting community forest objectives, DOT should:

- Develop metrics and work with PBCE on necessary data collection to measure progress toward the City’s tree planting objectives

- However, the City does not currently have metrics to measure the cost-effectiveness of these approaches, or how well they will help meet objectives.

→ Work with the Community Forest Advisory Committee to develop an outreach plan around the value of trees in the community

This report has 10 recommendations. We plan to present this report at the December 5, 2022 meeting of the Transportation and Environment Committee of the City Council. We would like to thank the Departments of Transportation; Planning, Building, and Code Enforcement; and Public Works, along with the City Attorney’s Office and the City Manager’s Budget Office, for their time and insight during the audit process. The Administration has reviewed the information in this report, and their response is shown on the yellow pages.

Respectfully submitted,



Joe Rois  
City Auditor

Audit staff: Alison Pauly  
Michael O’Connell Jr.  
William McClain (Stanford in Government fellow)

cc:	Jennifer Maguire	Rob Lloyd	John Ristow	Matt Cano
	Nora Frimann	Jim Shannon	Laura Wells	Russell Hansen
	Lee Wilcox	Rick Scott	Eric Hon	J Guevara
	Nara Baker	Sylvia Do	David Keyon	Chris Petak
	Sam Yung	Aaron Yu	Cameron Day	
	Kevin Fisher	John Tu	Chris Burton	

This report is also available online at [www.sanjoseca.gov/audits](http://www.sanjoseca.gov/audits)

**This page was intentionally left blank**

# Table of Contents

<b>Cover Letter .....</b>	<b>3</b>
<b>Background .....</b>	<b>9</b>
<b>Finding 1</b>	
<b>Private Property Tree Removal Permitting Requires Better Resources and Improved Processes.....</b>	<b>17</b>
Planners Are Not Consistently Applying the City’s Replacement Ratio .....	17
The Live Tree Removal Fee Does Not Align With the Current Process.....	21
<b>Finding 2</b>	
<b>The City Can Better Ensure Replacement Trees are Planted and Regrowing the Canopy .....</b>	<b>25</b>
The City Does Not Verify That Replacement Trees Are Planted on Private Property.....	25
The City Should Revise Replacement Ratio and Species Guidelines .....	27
<b>Finding 3</b>	
<b>DOT Has Not Been Spending In-Lieu Fee Revenues Timely.....</b>	<b>33</b>
DOT Has Spent a Small Portion of Total In-Lieu Fees Collected.....	33
Clear Guidelines and Timely Information Would Help DOT Staff Program In-Lieu Fees .....	35
<b>Finding 4</b>	
<b>DOT Should Evaluate Costs and Establish Metrics for the Community Forest Program’s Objectives .....</b>	<b>39</b>
The City Has Numerous Objectives for the Community Forest.....	39
There Are a Variety of Approaches to Meet CFMP Objectives, Each With Different Costs and Benefits.....	41
City Needs Better Data and Metrics to Evaluate the Costs of Planting Approaches and Their Effectiveness in Meeting Objectives .....	45
<b>Conclusion.....</b>	<b>49</b>
<b>Appendix A</b>	
<b>Audit Objective, Scope, and Methodology .....</b>	<b>A-1</b>
<b>Appendix B</b>	
<b>Tree Canopy Coverage, Collected In-Lieu Fees, and Illegal Tree Removal Complaints.....</b>	<b>B-1</b>
<b>Administration’s Response.....</b>	<b>yellow pages</b>



## **Table of Exhibits**

<b>Exhibit 1: Private Property Tree Replacement Process.....</b>	<b>11</b>
<b>Exhibit 2: Street Trees in West San José .....</b>	<b>14</b>
<b>Exhibit 3: Tree Replacement Ratios .....</b>	<b>19</b>
<b>Exhibit 4: Trees of Varying Circumferences .....</b>	<b>19</b>
<b>Exhibit 5: Planning Tree Removal Permit Fees Vary on Tree Condition and Suitability .....</b>	<b>22</b>
<b>Exhibit 6: Trunk Size Does Not Correspond to Canopy Area.....</b>	<b>28</b>
<b>Exhibit 7: Tree In-Lieu Fee Balances Have Grown .....</b>	<b>34</b>
<b>Exhibit 8: Collected In-Lieu Fees Vary by District .....</b>	<b>36</b>

# Background

There are roughly 1.6 million trees located on private property, public spaces, and public rights-of-way throughout San José's 181 square mile footprint. These trees constitute the community forest. Most of the community forest is on private property, and 70 percent is on single- and multi-family residential lots. About 300,000 trees are on public spaces or rights-of-way. This includes approximately 270,000 street trees, the vast majority of which are maintained by private property owners.

Trees provide a broad range of benefits to the community, including cleaner air and water, absorption of carbon dioxide, reduced energy needs, and lower temperatures. The latest data from 2018 showed that San José's tree canopy covered 13.5 percent of the city. This is a reduction from 2012, when the canopy covered 15.4 percent of the city. The City is working to grow the canopy and develop the community forest.

## Community Forest Management Plan and City Council Direction

In February 2022, the City Council approved a Community Forest Management Plan (CFMP)<sup>1</sup> for the City. The CFMP is a comprehensive study of the City's community forest. The City's Department of Transportation (DOT) oversaw the creation of the CFMP and is leading its implementation.

The CFMP contains a large volume of information about the City's tree-related processes and current state of the tree canopy. This includes:

- The equity of the City's canopy cover. Some parts of San José have a higher canopy cover than other parts of the city. Underserved communities tend to have lower canopy cover.<sup>2</sup> For a map of the canopy cover by Council district, see Appendix B.
- A description of the departments involved in overseeing, managing, and regulating trees in the City, and their responsibilities.
- The species of trees in the city's canopy and the health of those trees.
- Potential funding sources for the community forest program.
- Regulations around tree permitting.

In addition to an analysis of the community forest, the CFMP included eight findings and a strategic workplan. The workplan includes several goals, including ensuring

---

<sup>1</sup> For more information and to read the CFMP, visit: <https://www.sanjoseca.gov/your-government/departments-offices/transportation/landscaping/trees/community-forest-management-plan>.

<sup>2</sup> The CFMP notes: *this discrepancy is due to identifiable systemic injustices that are related to race and other socioeconomic factors.*

community forest sustainability; supporting diversity, equity, and inclusion; and standardizing and improving planning and development.

Lastly, the CFMP includes a tree policy and best practices manual. This includes relevant ordinances and policies. It is intended to provide information to City staff and residents about tree planting and maintenance.

More information about the objectives and implementation of the CFMP is in Finding 4.

### *City Council Direction and Audit Request*

When the City Council adopted the CFMP on February 8, 2022, they directed staff to identify budget needs, explore options for street tree management and liability, and outreach to potential corporate partners for investment in tree projects.

Additionally, the City Council requested that this office conduct an audit to review:

- a. *how and whether the city is collecting tree-related mitigation fees from developers,*
- b. *how and whether the city is enforcing tree-planting conditions on development,*
- c. *how the city is spending tree mitigation funds, and*
- d. *how the city can most cost-effectively plant more trees.*

As a result, this audit focuses on private tree removals, replacements, fees collected in-lieu of planting onsite replacement trees in the development process, and the cost-effectiveness of approaches to tree planting.

### **Overview of the Private Property Tree Removal and Replacement Process**

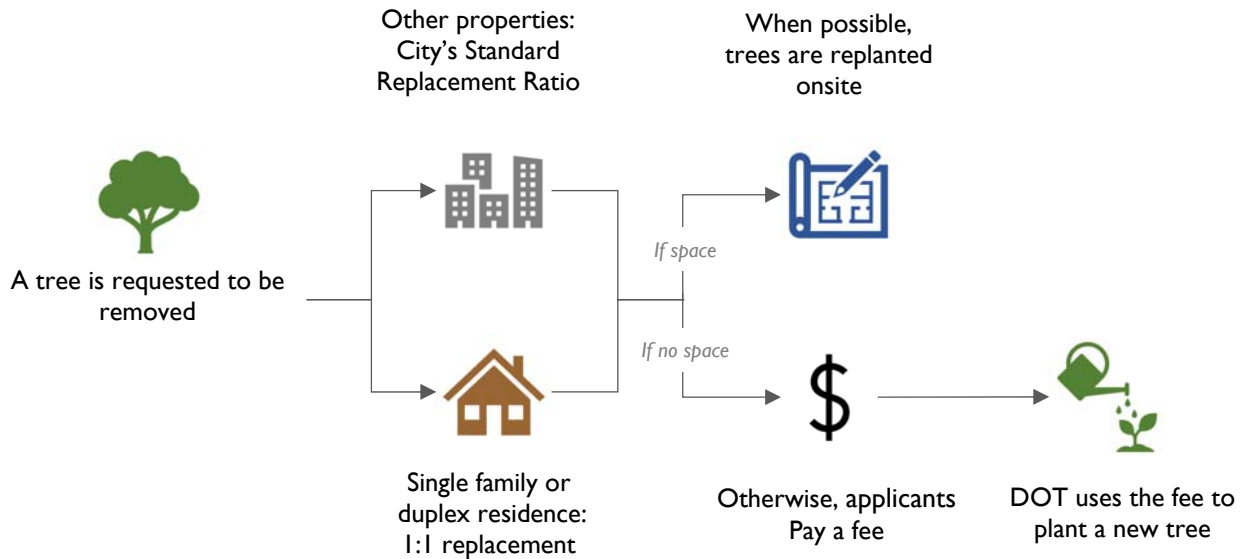
One component of maintaining and growing a healthy community forest is the management of tree removals from private property and enforcement of replacement requirements. In San José, removing a tree from private property often requires a permit.

The Planning Division of the City's Department of Planning, Building and Code Enforcement (PBCE) processes permits to remove private trees. When the City approves a permit to remove a tree, the City also requires that the applicant plant a certain number of trees as replacements. The standard replacement ratio takes into consideration the size and species of the removed tree, and varies by property type.

The City prefers applicants plant replacement trees on the same property. If that is not feasible, then an applicant can pay an in-lieu fee. DOT then uses that fee to

plant a tree. Currently, Planning does not count street trees<sup>3</sup> that developers must plant per City requirements as replacement trees.

### Exhibit I: Private Property Tree Replacement Process



Source: Auditor analysis of tree removal and replacement process

Note: The City's standard replacement ratio, discussed further in Finding I, ranges from 1 replacement tree per tree removed to 5 replacement trees per tree removed. The size and species of the tree factor into the replacement ratio.

If a property owner removes a tree without a permit, Code Enforcement staff can investigate. This is a complaint-based system, so it relies on neighbors or other residents reporting the illegal tree removal. If Code Enforcement determines that the tree was removed illegally, the property owner will have to pay a fine and apply for a tree removal permit. Higher tree replacement ratios could be required.

### Processing Applications for Tree Removals

The City requires permits to remove a tree on private property if:

- The tree is ordinance-sized, meaning it is over 12 inches in diameter or 38 inches in circumference at 4 ½ feet above the ground, either alive or dead; or
- Any tree that is on a multi-family, commercial, industrial, or mixed-use property or in a common area; or

<sup>3</sup> Street trees are any trees planted along streets or in sidewalks, park strips, and planting easements. Removing street trees is a separate process than what is covered in this audit and is handled by DOT staff. If a property owner wishes to remove a street tree adjacent to their property, they email DOT for a permit. If a street tree conflicts with a new building construction or other development, DOT staff are consulted on options and replacements.

## Audit of Tree Removals and Replacements

---

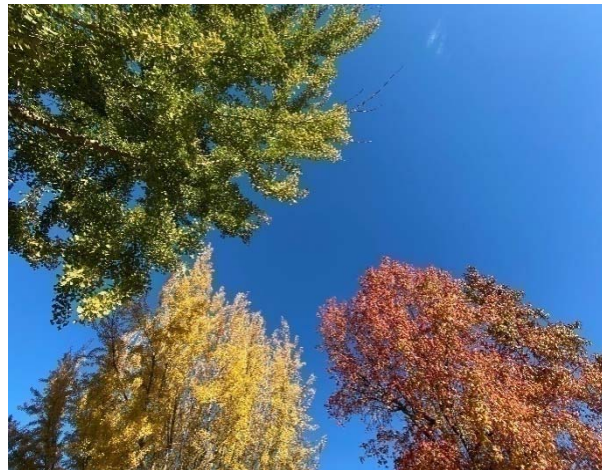
- The tree is designated by the City as a heritage tree. At the time of the audit, the City's Heritage Tree List identifies more than 600 trees with special significance to the community because of their size, history, unusual species, or unique quality.

To approve a private property tree removal, the City must find that the applicant has a reason supported by the Municipal Code. Allowable reasons for tree removals include:

- The tree is of an unsuitable species for a single-family property. A species is unsuitable if it is invasive or susceptible to disease. Trees of these species do not need another justification to be removed. Unsuitable species include eucalyptus, liquidambar, and tree of heaven, among others.
- The tree is within five feet of underground utilities or a building's foundation.
- The tree is dead or severely diseased.
- The location of the tree conflicts with a proposed development, such as the construction of a new building or an addition to an existing building.

Planners receive the permit applications, review the reasons for removal, and either approve or deny the request. If the reason for removal is that the trees interfere with a new building or building addition, Planning staff report that they consider whether there is a feasible alternative to change the plans and preserve the tree. For larger developments, staff report that it is usually difficult to find alternatives.

Planning staff then determine how many trees the applicant must replant. The larger the removed tree, the more replacement trees required. The lowest ratio is one replacement tree for one tree removed. The highest ratio, for a large native tree, is five replacement trees for one tree removed. The replacement ratios are discussed further in Findings 1 and 2.



Once Planning staff approve the permit, applicants for tree removal permits can remove the tree. The permit typically requires applicants to replant trees within 30 days. If the tree removal was part of a development, then applicants are

expected to wait until they file their application for a building permit or a grading permit to remove the tree.

#### *Tree Removals a During Development Project*

If the tree is removed because of building development, Planning staff may process the tree removal within the overall development permit. If this is the case, the development permit may include language regarding preservation of existing trees. Applicants may have to submit landscape plans detailing all the new trees to be planted.

Development projects can have high replacement requirements because the City requires replacements for even relatively small trees on some property types. For example, 16 major developments that recently received Planning approval are planning to plant or paid in-lieu fees for 1,824 new trees. This was more than the standard replacement requirement for the 525 trees that the developments removed.

#### *Tree Replacement In-Lieu Fees*

If an applicant does not have space to plant a new tree on their property, they can pay an in-lieu fee to the City. The current fee amount is \$775. The City expects this fee will cover the cost of planting a tree along with three years of watering and maintenance.

### **Tree Planting and Maintenance**

The City works with a nonprofit and outside contractors to plant and maintain trees in public spaces. Residents and property owners have responsibility for the maintenance of street trees along the park strip adjacent to their property. DOT manages the planting and maintenance of trees in most public spaces. Parks, Recreation and Neighborhood Services manages trees in parks, libraries, community centers, and at City Hall. Public Works manages trees on corporation yards and fire station grounds. Funding for these programs comes from a mix of sources, including capital funds and the General Fund.

#### *Scale and Cost of Planting*

Following the approval of the CFMP, DOT increased the goal of tree planting. The City has been planting a few hundred trees a year. The goal starting in FY 2022-23 is to plant 2,000 trees a year. In the FY 2022-23 budget, DOT added more staff and funding to support the implementation of the CFMP. For more information on staffing and funding changes, see Finding 4.

In the past, DOT has worked primarily with the nonprofit Our City Forest for planting projects and maintenance. Due to the increased scale of planting, in November 2022, the City Council approved DOT to hire private contractors to

assist with tree planting. The agreements total \$2.5 million and are intended to cover the cost of planting 2,000 trees. The City has also contracted to complete a tree inventory. DOT expects that the inventory for street trees will include potential sites where new street trees could be planted. This will help address a key issue that staff identified to increase the scale of planting: finding new places to plant trees.

Under the current agreement with Our City Forest, the organization charges the City \$660 to plant a new 15-gallon tree<sup>4</sup> and maintain it for three years. There are some discounts if trees are planted in parks, schools, or open spaces.

### Exhibit 2: Street Trees in West San José



Source: Auditor photograph

### Staffing and Responsibilities

Several divisions and departments in the City share responsibility for overseeing the removal, replacement, planting, and monitoring of trees in the community forest.

- The City Arborist works for the **Department of Transportation**. The City Arborist's team oversees tree planting and maintenance for public trees, excluding parks. DOT actively manages 37,000 trees and regulates the remaining 233,000 privately maintained street trees. DOT oversees

---

<sup>4</sup> A tree in a 15-gallon container is the size most commonly used for planting, per DOT.

the removal and replacement of street trees. DOT staff also maintain trees in the public right-of-way, and some trees in special districts.

The City's arborist team provides input and guidance for staff in other departments regarding tree-related issues. DOT staff use the in-lieu fee revenues to plant trees and are currently leading the implementation of the City's Community Forest Management Plan.

- The **Planning** Division of PBCE processes applications for private property tree removals. This includes evaluating reasons for tree removals and calculating the replacement ratio. Planners check that onsite trees are included on proposed landscape plans and collect in-lieu fees. The cost of planners' time in this process is intended to be recovered by fees charged to applicants.
- The **Code Enforcement** Division of PBCE responds to complaints about illegal private property tree removals from the public.
- The Department of **Parks, Recreation and Neighborhood Services** handles trees in the City's parks, community centers, and library and City Hall grounds. Staff estimate that this is roughly 30,000 trees.
- **Public Works** manages landscaping for public projects and reviews the impacts of private developments on public infrastructure. In some cases, locations of proposed trees or street trees may interfere with public utilities. Public Works and DOT staff would work with applicants to resolve those issues. Additionally, the Public Works maintenance division manages trees on the City's corporation yards and fire station grounds.

Property owners also have a great deal of responsibility regarding the community forest. For trees on private property, owners handle the planting, care, and maintenance. For street trees adjacent to private property, property owners handle the care and maintenance. This involves watering street trees, ensuring they are sufficiently pruned, and submitting permits to remove the trees if they become diseased. If the street trees cause damage to a sidewalk, property owners must pay to make repairs. Following the direction of the City Council, at the time of the audit City staff were exploring options that would relieve property owners from the liability for sidewalk repairs in some circumstances.



**This page was intentionally left blank**

# Finding I Private Property Tree Removal Permitting Requires Better Resources and Improved Processes

## Summary

The City requires that applicants plant replacements for trees that they remove, per the City's replacement ratios. However, Planners are not consistently applying the City's standard replacement ratios when approving tree removal or development permits. In our limited sample of 34 permits, we noted errors on nearly 1/3, resulting in 142 fewer trees planted, or the equivalent of \$110,050 in in-lieu fees. Currently, planners do not receive standard training to process tree removals. Planners also do not have instructions for applying replacement ratios and making technical decisions about trees. Lastly, the tree removal permit fee does not align with the current review process. For a sample of projects, the average time to review a live tree removal application was longer than the permit fee recovers. We recommend that PBCE develop procedures for processing private property tree removals, provide technical guidance to planners about trees or provide further access to certified arborists, and ensure permitting fees align with the work performed.

---

### Planners Are Not Consistently Applying the City's Replacement Ratio

For all permitted tree removals, applicants must plant replacement trees per the City's replacement ratios. The objective of the City's standard tree replacement ratio is to offset the removal of canopy coverage. However, planners are not consistently ensuring that permits require the right number of replacement trees.

### Planners Sometimes Required Fewer Trees Than the City's Standard Replacement Ratio

The City has developed ratios for how many replacements an applicant must plant when they remove a tree. Management reports that planners should use the City's standard replacement ratios to determine how many replacement trees an applicant must plant. However, this was not always the case. As a result, within our limited sample,<sup>5</sup> we estimate that 142 fewer trees were planted

Nearly 1/3 of reviewed permits had **errors**



**142 fewer trees planted, or \$110,050 less in in-lieu fees**

---

<sup>5</sup> We took a limited, judgmental sample of development permits (17 total) and tree removal permits (17 total) submitted between July 1, 2018 and December 31, 2021. The purpose of the sample was to review the controls over determining the number of trees removed and required replacements. Because the sample was limited and risk-based, we cannot extrapolate the results to the full population of permits with tree removals. As discussed in Finding 4, the City does not

throughout the city, the equivalent of \$110,050 in in-lieu fees for off-site tree replacement.

Of 17 tree removal permits reviewed, planners did not apply the standard replacement ratio correctly for eight permits. A replacement ratio was applied, but the ratio was not what it should have been.

In one example, five ordinance-sized trees were removed from a non-residential property. The standard replacement requirements for these five trees should have been assessed at 23 trees. However, the replacement conditions in the permit only called for the collection of in-lieu fees for five replacement trees, less than a quarter of what should have been required.

There were also errors on two of 17 development permits reviewed. For one of these projects, the planner incorrectly calculated the required replacement trees and did not charge the in-lieu fee (which was lower than it should have been) to the applicant. As a result, the City did not collect in-lieu fees for 52 off-site replacement trees, or \$40,300.

### *City's Standard Replacement Ratio*

The standard ratio of replacements to removals depends on the species, size, and location of the removed tree. Per the San José Municipal Code, any tree with a trunk measuring 38-inches in circumference or greater at 4.5 feet above the ground is considered ordinance-sized. On single-family lots, permits are required to remove an ordinance-sized tree. On some other property types, replacements are required even when trees smaller than the ordinance size are removed. The replacement ratio for an ordinance-sized tree is also dependent on whether the tree species is native.

The City permits single-family residential properties to replace trees at a one-to-one ratio. Tree removals at all other property types are subject to standard replacement ratios, as shown the following table.

---

track data on tree removals well which restricted our sample size. Additionally, some permits did not have accompanying documentation that was readily available to the audit team for review.

**Exhibit 3: Tree Replacement Ratios**

Circumference of Tree to be Removed	Single-Family/Duplex Property (any species)	Standard Ratio for All Other Property Types		
		Native Species	Non-Native Species	Orchard
38 inches or more	1:1	5:1	4:1	3:1
19 up to 38 inches	None	3:1	2:1	none
Less than 19 inches	None	1:1	1:1	none

Source: Planning Division global permit conditions template

Note: Ratios show number of replacement trees for every one tree removed (e.g., 3:1 means three replacements). Tree replacements are for 15-gallon trees, but one 24-inch box tree can be substituted for two 15-gallon trees.

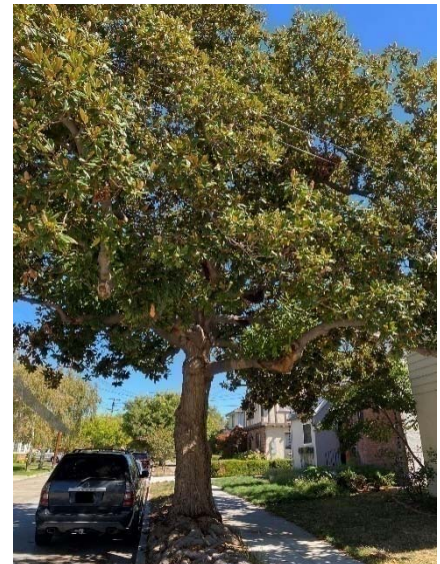
**Exhibit 4: Trees of Varying Circumferences**



Circumference: 9 inches  
Source: Auditor photographs



Circumference: 38 inches



Circumference: 94 inches

**Standard Training and Further Guidance Can Improve the Tree Removal Process**

There is not standard training provided to planners for reviewing tree removal permits, and available resources are not consistently used. Planning supervisors provide some guidance and oversight to planners processing tree removal permits, such as reviewing draft comment letters and permits. However, our sample indicated that this oversight has not been sufficient to catch errors in tree replacement ratio.

To review applications and process tree removal permits, planners receive on-the-job training. Planning staff report that new planners start off reviewing tree removal permits to familiarize themselves with the permit review process.

To draft a new tree removal permit, staff report using recently approved permits as examples. Only one planner reported using a process checklist for reviewing tree removal permit applications, though management reports this is an internal resource. This checklist does not include guidance on how to apply the City's standard replacement ratios. There are templates for other documents, such as mailing notices and development permits.

### **Planning Staff Do Not Have Tree-Related Technical Expertise**

The City's planners review land use entitlements, including development projects and other permits, for conformance with the City's policies and ordinances. As such, planners are not expected to have technical expertise relating to trees.

Per Planning staff, there are several points in a permit review process where more technical expertise may be needed.

- Determining whether the tree is alive, dead, or "unsuitable" per the City's Municipal Code definition;
- Identifying tree species;
- Assessing the health of a tree;
- Determining whether an existing tree will impact a building's structure; and
- Determining whether there are alternate means of saving a tree that may be in failing health or posing safety concerns. Per Planning staff, this is the area where expertise is most needed.

To make these determinations now, planners generally rely on certified arborist reports submitted by an applicant. If a certified arborist report is not required in the application, staff compare photos submitted by the applicant to Google Image searches to identify tree species. If the planner still has questions, they will then require the permit applicant to provide an arborist report. For other technical determinations, staff may reach out to the City's arborist team in DOT. Not every project may need technical expertise beyond submitted arborist reports or information provided by applicants.

Planning could provide technical materials to staff to help them make technical decisions. For example, Planning could direct staff where to research tree species and provide a list of which tree species are native.

Another option would be to contract with an arborist or fund an additional arborist position.<sup>6</sup> Planning does not currently have an arborist on staff and does not maintain a contract with an on-call arborist. The City's arborist team in DOT has provided support as needed to review permits in the past, but DOT reports having limited capacity to take on more. To assist in the permit review process, both Saratoga and Cupertino report contracting with arborists. In Sacramento, city arborists in Public Works provide input on tree removal applications.

**Recommendations:**

- #1 To ensure consistency in processing permits for tree removals, the Department of Planning, Building and Code Enforcement should:**
- a. **Develop procedures and related training for staff on how to process permits for tree removals, including how to apply the City's standard replacement ratios; and**
  - b. **Develop procedures for supervisors to review permits with tree removals to ensure that replacements are required per standard ratios.**
- #2 To support planners' decisions regarding technical issues relating to trees, the Department of Planning, Building and Code Enforcement should:**
- a. **Create guidance for how decisions regarding the health of a tree and whether the tree is native should be made, or**
  - b. **Provide planners with further access to certified arborists as needed, either through contractors or City arborist position(s).**

---

**The Live Tree Removal Fee Does Not Align With the Current Process**

The City intends for tree removal permit fees to recover the costs for the work to review and process a permit application. Despite this, the process to review a live tree removal application appears to be longer than what the fee covers.

A sample review of 24 tree removal permits processed between 2019 and 2022 indicated the median time to remove a tree removal permit was nine hours.<sup>7</sup> This included a median of just over four hours in review, two hours conducting

---

<sup>6</sup> The CFMP workplan calls for all private property tree removal applications to be reviewed by a City arborist or third-party arborist.

<sup>7</sup> This sample included single-family, multi-family, and non-residential properties with between 1 and 33 trees removed on the permit. The median number of trees removed per permit was 2.

outreach for potential public hearings, and just under three hours of other/administrative time.

However, the live tree removal permit fee is set to recover the cost of only 6.5 hours of review time for a single family or duplex property. It recovers 7.5 hours for all other property types.

The process includes an initial review of the permit application for completeness by Planning staff. Once staff accept a tree removal permit application, the permit is assigned to a planner for review. Planners look at applications to verify the trees being removed meet the necessary criteria for removal under the City’s Municipal Code. Tree removal permits can be processed as live, dead, or unsuitable. Each application type is defined in the Municipal Code, and the reviews—and associated fees—for each type of fee vary.

**Exhibit 5: Planning Tree Removal Permit Fees Vary on Tree Condition and Suitability**

Permit Type	Base Fee	Additional Tree Fee
Live Tree		
Single Family or Duplex	\$2,335	
All other properties	\$2,695	
Dead Tree	\$268 (one tree)	\$33 per additional tree
Unsuitable Tree	\$268 (one tree)	\$33 per additional tree
Heritage Tree	\$11,906	--

Source: San José Planning Fee Schedule, effective August 2022. Fee includes tree removal permit fee and the Citywide planning fee of 11.97 percent.

If the City updates the single-family live tree removal permit fee to cover 9 hours, the fee would go up to about \$3,230. If the City had based all live tree removal fees from July 2020 to September 2022 on nine hours of work, Planning would have billed an additional \$87,000.

PBCE staff report that it has been many years since the workflow underlying the live tree removal permit fee was reviewed. The process has since changed. For example, a director’s hearing is no longer required for all live tree removal permits.<sup>8</sup> Additionally, the process included a site visit to the tree, which is not currently being done.

Our review of dead and unsuitable tree removal permits showed that the fee aligned roughly with the average time to complete the review.

---

<sup>8</sup> In 2018, the City passed an ordinance that revised and added provisions for private property tree removals, adjusted the definition of an ordinance-sized tree based on stem size at standard height, and amended the requirement for a director’s hearing. The ordinance also expanded the definition of an “unsuitable” tree to include trees that create an imminently hazardous conditions and certain trees on land use types beyond single-family lots.

## **The City Intends to Update the Tree Removal Permitting Process and Associated Fee**

PBCE reports that they intend to review the cost recovery and fee calculations of the tree removal fees (along with other Planning fees). Given past changes to streamline the process that the fee calculation does not account for, and proposed future changes, this review is warranted. Because the fee is meant to recover the cost of staff's time to issue a permit, changes to the process should affect the fee.

The CFMP's workplan contains several objectives that would impact the current tree removal and permit review process.

- Remove the “unsuitable” tree definition.<sup>9</sup> Between 2018 and 2022, over 70 percent of all tree removal permits were classified as “unsuitable trees.” Unsuitable tree removal applications take less time to review. Removing the “unsuitable tree” definition may increase the number of live tree removal applications. This could impact the permit review process, as trees which would have qualified as an unsuitable tree would have to go through the longer live tree removal review process.
- Require private property tree removal applications to be reviewed by a City arborist or third-party arborist. Currently, arborist reviews of permit applications are provided by the City's arborist team in DOT if a planner requests one.
- Update the approval process for all development projects to require an arborist report with permit application materials.
- Require all arborist reports submitted with private property development applications be reviewed and verified by a City arborist as a condition of the permit approval process.

### *Benchmarking*

Other municipalities have support for planning staff or residents for the permit review process. For example, Saratoga maintains a contracted third-party arborist to assist the city arborist in the permit review process.

Fremont requires residents to contract with a city-approved tree service provider who will complete the tree removal application for the property owner. This applies to street tree and protected tree removals. Staff in Fremont report that this helped reduce the hours of review and communication with the permit applicants, significantly shortening the turnaround time for a tree removal permit.

---

<sup>9</sup> The CFMP suggests removing the “unsuitable tree” definition due to concerns that live trees are being removed unnecessarily. Trees may be removed solely because the tree is close to a building or infrastructure without evidence that the tree will eventually cause any damage.



Fremont's private property tree protections cover a smaller subset of the trees than are protected in San José.

**Recommendation:**

**#3** To ensure that fees are appropriately aligned with work performed, the Department of Planning, Building and Code Enforcement should review the process associated with a live tree removal permit and update the permit fee accordingly.

## **Finding 2    The City Can Better Ensure Replacement Trees are Planted and Regrowing the Canopy**

### **Summary**

The purpose of the City's replacement ratio is to regrow the canopy after a tree is removed. When an applicant removes a tree, the City prefers that the applicant plant the replacement tree on their property. However, the City does not verify that applicants plant required replacement trees. Additionally, the City determines the replacement ratio based on the number of trees removed without accounting for the size of the canopy lost. Lastly, the City does not provide guidelines for what tree species applicants should plant. We recommend that PBCE develop procedures to ensure that applicants plant replacement trees. We also recommend the City should revise the tree canopy replacement policy to incorporate canopy size and optimal species for replacements and provide permit applicants with guidance for appropriate tree selection.

---

### **The City Does Not Verify That Replacement Trees Are Planted on Private Property**

As discussed in Finding 1, when an applicant removes a tree in San José, they must plant a specified number of replacement trees to offset the lost canopy. The City prefers that applicants plant these replacement trees on the same property. However, Planning staff do not verify that applicants plant the required replacement trees.<sup>10</sup>

### **The City Has Methods to Verify Tree Plantings, Though Neither Routinely Occurs**

The City has two methods to verify that permit applicants planted replacement trees:<sup>11</sup>

- Collecting photos or receipts from the applicant documenting replacement trees are planted, or

---

<sup>10</sup> Tree removals and replacements are generally not considered mitigations under the California Environmental Quality Act (CEQA). As such, CEQA documents such as Environmental Impact Reports (EIRs) may mention the tree removals cited in the entitlement process, but staff on the environmental review (CEQA) team do not generally monitor tree removals and replacements as part of required Mitigation Monitoring/Reporting. There are some exceptions, such as when trees are removed in a protected zone.

<sup>11</sup> Site visits could also ensure that replacement trees are planted according to permit requirements. City staff do not have a process to conduct site visits and stated that such visits would be impractical because of the amount of time required. This is a practice in some smaller Bay Area jurisdictions to ensure onsite replacement trees have been planted before closing out the project, including Palo Alto, Saratoga, and Fremont.

- Collecting certificates of landscape and irrigation installation from the applicant prior to issuing certificates of occupancy.

Neither of these are regularly required by staff. Though establishing new processes to complete these checks would help ensure replacement trees are planted, it would likely have an impact on the overall time staff spent on a project. This may impact fees and cost recovery.

### *Collecting Photos or Receipts for Tree Removals*

For tree removal permits, applicants are required to submit photographs of planted trees, or receipts, as part of the permit conditions. Permits state:

*The applicant shall provide appropriate evidence such as, but not limited to, photographs and/or receipts to the Planning Project Manager of the replacement trees within 60 days of removal of the trees, to verify compliance with the mitigation requirements. Such evidence should be sent to the Planning Project Manager [...]*

However, there is no follow-up mechanism to ensure this happens. There is also no enforcement tool if an applicant does not comply. Per Planning staff, this is because under the current process, the permit is not revisited once it is approved. As a result, Planners estimate that less than half of all Tree Removal permit applicants fulfill this requirement. Some planners reported that they had never received photographs for the permits they processed.

Of six tree removal permit locations that we visited, five clearly had replacements planted as required. One location did not have the replacement trees planted as stipulated in the permit conditions.

### *Checking Landscape Plans on Development Permits*

For tree removals on development permit applications submitted that have landscape plans, the City has a different method to check for tree replacements.

Under the City's Water Efficient Landscape Ordinance (WELO), applicants are required to submit a certificate of substantial completion of landscape and irrigation installation.<sup>12</sup> Landscape plans show the location of proposed trees, including replacement trees. The ordinance requires applicants submit the certificate of substantial completion before PBCE's Building Division gives the final approval through a certificate of occupancy.<sup>13</sup>

---

<sup>12</sup> See Municipal Code Section 15.11.1050.

<sup>13</sup> The State's Model Water Efficient Landscape Ordinance, which the City's ordinance replaces, includes language that local agencies should be collecting and reviewing these certificates.

---

City staff are not currently collecting certificates of landscape and irrigation installation. Checking that the landscapes have been certified as installed would allow the City to verify that replacement trees were planted.

**Recommendations:**

**#4 To verify that trees have been replaced due to individual tree removals, the Department of Planning, Building and Code Enforcement should ensure applicants are complying with tree removal permit conditions to submit photographs or receipts of planted replacement trees. To facilitate this, Planning staff should:**

- a. Create a follow-up process for Planning staff to review whether evidence has been submitted and issue reminders, and
- b. If the evidence has not been submitted within the specified time frame, assess a fine or the off-site tree replacement fee.

**#5 To verify that trees are planted according to replacement requirements for development permits, the Department of Planning, Building and Code Enforcement should develop a process for staff to collect a certification of substantial completion of landscape and irrigation installation prior to the issuance of a certificate of occupancy, as described in the Municipal Code.**

---

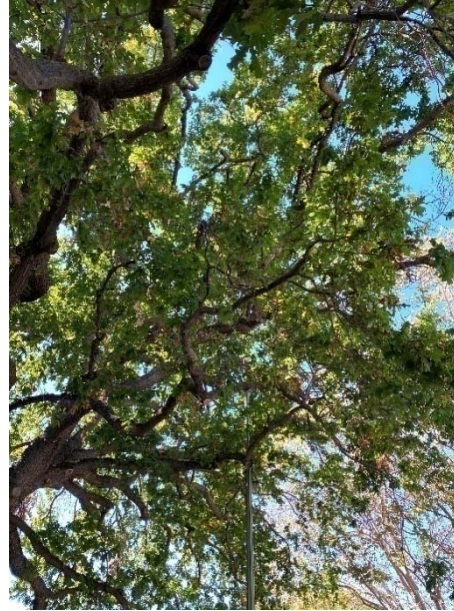
**The City Should Revise Replacement Ratio and Species Guidelines**

The City bases its current replacement ratio on the tree's size, native/non-native designation, and property type location. However, the City provides limited guidance on what replacement species to plant. The replacement ratio and species of replacements may both impact the City's ability to regrow the tree canopy after tree removals.

**The Current Replacement Ratio Does Not Capture Loss of Canopy Size**

The State of California encourages a policy of no net loss of canopy. To facilitate this goal, the State recommends replacement requirements which target the loss of canopy coverage. This recommendation was also offered in a memo from the Mayor and four Councilmembers in January 2022.

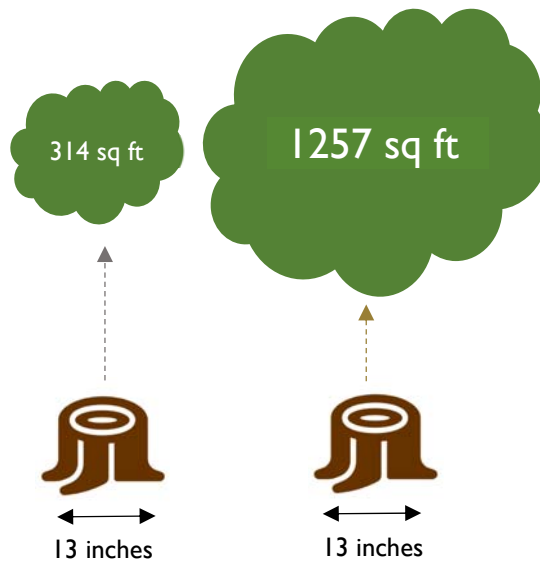
The City's current replacement requirements vary depending on the size of the tree being removed and whether the tree is a native species. For example, removing a native tree greater than 38-inches in circumference would require more replacement trees than removing a non-native tree, or a native tree with a smaller trunk. While this model of tree replacement captures the number of trees removed, it does not factor in the size of the lost canopy. The ratio has been used since at least the mid-2000s, and staff were unclear on the ratio's origin.



*Tree Canopies Can Vary Significantly Across Species*

The size of a tree's canopy can vary significantly, even if the trunk is the same diameter. For example, on the City's map of street trees, there are two street trees with 13-inch trunk diameter. One, a honey locust tree, has a canopy diameter of 20 feet. The other, a London planetree, has a canopy diameter of 40 feet. If a tree's canopy is roughly circular, a canopy diameter twice as large results in four times the amount of shade.

**Exhibit 6: Trunk Size Does Not Correspond to Canopy Area**



Source: Auditor analysis of the City's Tree Map data and approximation of the canopy areas for canopies of 20 feet and 40 feet using the formula  $area = \pi r^2$

### *Considering Canopy Size in Replacement Requirements*

There is no industry standard for calculating tree replacement requirements. However, to achieve the goals of no net canopy loss, the Cal Fire State Urban Forester recommends replacing trees by canopy size in line with a no net canopy loss policy. Such a policy considers the canopy of the removed tree and requires replacement trees that should, in a specified timeframe, grow to provide the same benefit to the community as the tree being removed.

To implement such a policy, one suggestion from the Cal Fire State Urban Forester is to group tree species by canopy size rather than relying on each tree's canopy measurements. If an applicant removes a tree of a species in the large canopy category, like an oak tree, they would have to replant a certain number of large canopy trees.

Palo Alto requires replacement trees based on the size of the canopy at removal with the goal to replace the lost canopy within 10 years. To help applicants select trees, the city of Palo Alto directs applicants to publicly available online resources.<sup>14</sup>

### *CFMP Objectives*

San José's Community Forest Management Plan includes two objectives that target canopy loss during development:

- *All development projects will provide site plans that result in 100 percent canopy cover over adjacent sidewalks within a 15-year timeframe.*
- *Update the tree replacement policy for single-family and duplex lots to state that the property must maintain or achieve 35 percent canopy cover over a 15-year timeframe.*

Unlike a policy that would apply to all property types, the first objective only applies to sidewalk cover and the second refers to single-family and duplex lots.

### **The City Provides Limited Guidance on What Species Applicants Should Plant**

Some trees are more water intensive and less suited to prolonged droughts and warm climates. As an example, Coastal Redwood is a species rated as a high-water use species by the Water Use Classification of Landscape Species.<sup>15</sup>

<sup>14</sup> SelecTree and UrbanTreeKey are publicly available online resources provided by California Polytechnic State University which helps users identify and select trees based on traits including height, canopy size, and water usage. See: <https://selecttree.calpoly.edu/> and <https://urbantreekey.calpoly.edu/>.

<sup>15</sup> The Water Use Classification of Landscape Species (WUCOLS) provides evaluations of the irrigation water needs, along with guidance for selection and care, for thousands of plant groups used in California landscapes. The latest WUCOLS publication was supported by the State of California, the University of California, and other organizations and agencies. More information can be found at: <https://ccuh.ucdavis.edu/wucols>.

Currently, the City does not require that tree removal permit applicants plant more drought-tolerant species when replacing trees.<sup>16</sup>

The City designates some tree species as unsuitable for single-family and duplex lots because the species is invasive or is susceptible to disease. However, the City does not limit the planting of unsuitable species as replacement trees for all applicants. Unsuitable species include:

- Eucalyptus
- Liquidambar
- Pine
- Tree of heaven
- Tulip tree, and
- Palm Trees (unless in the Palm Haven conservation area)

By planting trees of unsuitable species or trees not well adapted for the city's climate, more replacement trees could be at risk of failure. Developing a list of well-adapted species could go in tandem with further guidance about species' canopy sizes.

The City's General Plan has several policies to further guide developers and residents about tree species selection. These include planting native tree species and avoiding the planting of invasive species. Per the CFMP, the General Plan policies would be supported by: *“further guidance in the form of a recommended tree species and prohibited tree species list and providing guidelines for selecting an appropriate species based on the planting location.”* The CFMP workplan includes an objective to prioritize planting of trees rated as low-water users.

### **Recommendation:**

- #6 To sufficiently recuperate lost canopy due to tree removals, Planning, Building and Code Enforcement, in coordination with the Department of Transportation, should:**
- a. Review the tree replacement ratio to determine if it is appropriately meeting the goals of the community forest program,**
  - b. Revise the tree replacement policy to include considerations for canopy size and optimal species of replacement trees, and**

---

<sup>16</sup> The City's Water Efficient Landscape Ordinance (WELO) landscape design criteria prohibits the planting of plant species that require a large amount of irrigation in summer months, and the planting of invasive species. However, landscape designs are not required for every permit that may have a tree removal.

- c. **Provide permit applicants with guidance for appropriate tree selection to meet the replacement policy requirements and to best ensure tree survival.**



**This page was intentionally left blank**

## Finding 3 DOT Has Not Been Spending In-Lieu Fee Revenues Timely

### Summary

The City collects in-lieu fees when applicants remove a tree and do not have room to plant a new tree on their property. Between FY 2018-19 and FY 2021-22, the City collected over \$1.5 million in in-lieu fees. However, DOT has spent only a small portion of the revenues. By the end of FY 2021-22, staff had spent \$88,000, leaving about \$1.45 million unspent. Though staff used fee revenues on planting and watering costs, DOT staff should improve how they track in-lieu fee spending. Additionally, DOT staff do not regularly review information about where fees were collected during the fiscal year, and do not have clear guidelines on where or how to spend in-lieu fee revenues. We recommend that DOT identify locations or uses for in-lieu fee revenues, create guidelines to govern the spending of in-lieu fees, and review data regularly to stay up to date on information about fee collection.

---

### DOT Has Spent a Small Portion of Total In-Lieu Fees Collected

As discussed in Finding 2, when an applicant removes a tree, the City's preference is that the applicant replaces the tree on their property. If there isn't room on the property for a new tree, then the City charges an in-lieu fee. The purpose of the fee is for the City to replant the tree somewhere else. However, DOT has only used a small portion of the in-lieu fees collected in recent years.

### The City Has Spent 6 Percent of \$1.5 Million Collected in In-Lieu Fees

Planners collect an in-lieu fee during their permit review process.<sup>17</sup> At the time of the audit, the fee was \$775 and was expected to cover the cost of planting a tree and three years of establishment care. Fiscal staff in PBCE track the fee and transfer all revenues collected to DOT. Staff report that this transfer generally happens once a year around June.

Since FY 2018-19, staff in DOT's tree services team have been responsible for programming the in-lieu fee funds. Between FY 2019-20 and FY 2021-22,<sup>18</sup> staff appear to have used the in-lieu fee revenues on five projects for planting and/or maintenance, totaling \$88,000. This was about 6 percent of the total

**\$88,000** of the total **\$1.5 million** in-lieu fee revenues had been spent between FY 2019-20 and 2021-22.

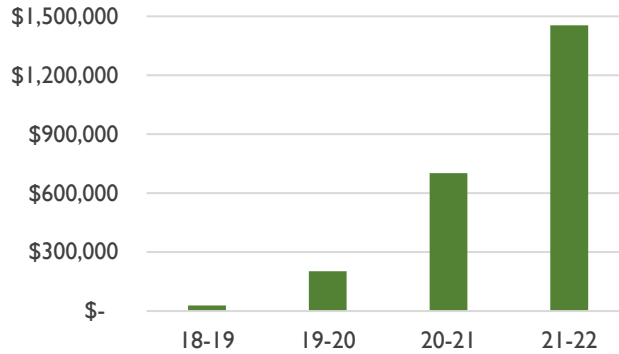
---

<sup>17</sup> In 2018, following an audit by this office of Our City Forest, the City revised how it charged the tree replacement in-lieu fee. Previously, fees were paid by an applicant directly to Our City Forest. Applicants then gave the City a receipt to prove the payment. Since 2018, the fee has been collected directly by the City.

<sup>18</sup> Funds were collected in FY 2018-19, but no fee revenues were spent until FY 2019-20.

collected. Meanwhile, the balance of monies grew to \$1.45 million. At the current in-lieu fee rate, this equates to the cost of planting and maintaining almost 2,000 trees.

**Exhibit 7: Tree In-Lieu Fee Balances Have Grown**



Source: Auditor analysis of FMS and AMANDA fee records. Data indicates cumulative in-lieu fees collected less in-lieu fee spending by the end of each fiscal year.

**DOT Has Not Been Accurately Tracking What Projects Were Funded By In-Lieu Fees**

DOT keeps records of what tree planting projects they intended to fund through in-lieu fees. The intended projects, however, do not align with actual spending.

For some planting projects, DOT stated that funding should have come from in-lieu fees. However, the City’s financial records do not show that staff spent in-lieu fee revenues on those projects. Per DOT, staff charged the costs to the incorrect account codes. Staff had intended to use around \$375,000 to plant 472 trees over the last several years. Those trees were planted but using other funding sources.

For another planting project, DOT stated that staff meant to use funding other than in-lieu fees. However, financial records suggest that staff did use in-lieu fees for that project.

It does not appear that in-lieu fees were used on anything except tree planting and water costs. Even so, by not using the in-lieu fees as intended, DOT was not effectively using available revenue.

---

**Clear Guidelines and Timely Information Would Help DOT Staff Program In-Lieu Fees**

The City collects in-lieu fees to plant new trees. However, staff do not regularly review information about fee collections to plan for upcoming plantings. Additionally, DOT does not have clear guidelines for how to spend in-lieu fees.

**DOT Does Not Have Timely Information on Where and When Fees Are Collected**

DOT staff report that they intend to plant a tree within a year of fee collection. Due to the timing of fee transfers, this could be difficult. Currently, PBCE does not transfer in lieu fee revenues to DOT until the end of the fiscal year. Because of this, if an applicant pays a fee in July, it may not be available for spending for at least one year.

Though the City's permitting system, AMANDA, has information about in-lieu fee collections and locations, DOT does not regularly access this information. As a result, DOT staff can be largely unaware of the total fee collections until PBCE staff transfer the fees at the end of the fiscal year.

This hinders staff's ability to identify projects or uses of fees timely. Because the fees are transferred and appropriated infrequently, it could be many months between when planners collect a fee and when DOT staff learn about that fee. While DOT still must wait for revenues to be appropriated at the end of the fiscal year, arborist staff could use those intervening months to determine planting sites to use the fees as soon as they become available.

In AMANDA, it is possible to run a report showing all the fees collected for a certain period of time. Additionally, PBCE keeps a list of all permits that had in-lieu fees and updates it regularly.

**Current Approach Lacks Clarity**

Because there have been so few projects funded by in-lieu fees, it isn't clear that there is a standard of where geographically to plant trees with the funding. Staff has suggested that one approach could be to plant trees within ¼ to ½ mile of the tree removal site but have not implemented this in practice.

However, by planting replacement trees only near where trees were removed, the City could be continuing the current tree canopy inequity identified in the CFMP. This is because fee revenues are distributed unevenly across the city. Where fees were collected may not align with where new trees are most needed. DOT staff have also pointed out that equity is a potential concern with this approach.

In some council districts, there have been few or no revenues collected from in-lieu fees. Some of these council districts also have low tree canopy coverage. For example, District 7 has no accumulated fees and one of the lowest canopy

coverages. Districts 5 and 8 also have seen few revenues and have relatively low canopy coverage. On the other hand, District 6 has seen significant in-lieu fee revenues and has the highest canopy coverage. See Appendix B for a map of canopy coverage across the city.

**Exhibit 8: Collected In-Lieu Fees Vary by District**

Council District	Number of Permits	Collected In-lieu fee totals	Canopy Coverage
1	3	\$5,385.00	16%
2	6	\$470,678.00	12%
3	3	\$417,485.00	12%
4	7	\$201,405.00	11%
5	1	\$775.00	13%
6	9	\$409,830.00	19%
7	0	\$0.00	11%
8	1	\$1,510.00	13%
9	2	\$32,485.00	14%
10	2	\$3,100.00	17%

Source: Auditor analysis of AMANDA fee record data from February 2019 – June 2022 and City of San José Community Forest Management Plan.

Note: Council Districts show 2011 boundaries as those were used for the canopy coverage analysis in the Community Forest Management Plan.

**Guidelines Would Clarify Purpose and Uses of In-Lieu Fees**

With \$1.45 million available to fund projects, the City should be clear on allowable uses of those revenues. Currently, DOT uses the revenues only to plant and maintain trees on City-owned land. DOT plants trees where they have available planting sites, and prefers to plant in the fall and winter. Clarifying whether there is a geographic relationship between the planting site and the removal site, and when staff should use a fee, would help standardize current practices.

Additionally, the guidelines could include uses of in-lieu fees beyond the current program. One possible use of in-lieu fee revenues is to incentivize private property owners to plant trees. DOT has been exploring this possibility. Much of the land in San José is private property. Allowing the City to use funds to plant on private property would increase the available planting sites. Using in-lieu fee revenues in this way is discussed further in Finding 4.

Per the State Urban Forester, Palo Alto uses in-lieu fees to help pay for the trees that property owners’ plant. Fremont reports that staff spend in-lieu fees on any activities that benefit the urban forest, including using in-lieu fee revenues to match

grant funding from Cal Fire This could potentially encompass a broader range of expenses than just planting and establishment (DOT's current uses). In Sacramento, fees can be used to purchase land on which new trees would be planted.

**Recommendation:**

- #7 To ensure that in-lieu fees are spent in timely and appropriately, the Department of Transportation should:**
- a. Identify locations or uses for unspent in-lieu fee revenues that have accumulated since 2018,**
  - b. Develop a set of procedures to ensure that plantings are accurately charged to the in-lieu fee appropriation,**
  - c. Develop a set of criteria/policy that dictates how and when in-lieu fees should be used on plantings, and**
  - d. Regularly review data from AMANDA to determine new in-lieu fees that were collected.**

**This page was intentionally left blank**

## **Finding 4     DOT Should Evaluate Costs and Establish Metrics for the Community Forest Program’s Objectives**

### **Summary**

The City has identified numerous objectives for the community forest. These include planting 2,000 trees per year, achieving a 20 percent canopy cover by 2051, and prioritizing tree planting in designated areas of need. There are a variety of approaches to meet these objectives, including City-funded and directed plantings or engaging private property owners in planting efforts. Costs may include the cost of procuring and planting the tree, site preparation, traffic safety measures, watering during the establishment, and future maintenance. Each strategy has different costs to the City and may be more or less effective in meeting a particular goal of the tree planting program. However, the City does not currently have metrics to measure the cost-effectiveness of these approaches, or how well they will help meet objectives. To best measure how the City is reaching its objectives, and to track how to cost-effectively accomplish those, staff should develop metrics for the different elements of the planting program. It should also identify and begin collecting the data necessary to track progress.

---

### **The City Has Numerous Objectives for the Community Forest**

As mentioned in the Background, the City has a Community Forest Management Plan. The CFMP was approved by the City Council in February 2022.

The CFMP includes analysis of the San José community forest program, a strategic workplan, and a tree policy and best management practices manual. It includes eight key findings. These related to the declining canopy cover, the inequity of the canopy across the city, and limited resources to manage the community forest, among others.

In the CFMP workplan, there are 15 strategies and 67 objectives. They cover a range of topics. Among the objectives are:

- *Achieve 20 percent Citywide canopy cover by 2051.*
- *Annually plant 2,000 new trees on both public and private property. Total will not include trees that are required as replacement for a removed tree.*



## Audit of Tree Removals and Replacements

---

- *Prioritize tree planting activities in census tracts with low CalEnviroscreen scores and tree canopy cover or designated as areas of need by the San José equity atlas.*<sup>19</sup>

These objectives create a multi-faceted approach to growing the community forest. When accepting the CFMP, the City Council put forward additional action items for staff. These included developing budget estimates for accomplishing certain workplan objectives, researching the cost of the City assuming responsibility for street tree maintenance, and pursuing additional funding sources.

City staff have already begun making changes to the community forest program in response to the CFMP and Council direction.

- DOT has contracted to complete a tree inventory for public spaces, including parks. This addresses one of the CFMP's findings.
- DOT is in the process of putting together a Community Forest Advisory Committee. This was an objective in the CFMP workplan.
- DOT is working to increase the scale of tree planting with the target of 2,000 new trees a year, an objective in the CFMP workplan. To accomplish this, DOT is working through a procurement process to hire additional contractors.
- The FY 2022-23 Adopted Operating Budget included five new positions in the DOT to support the City Arborist's team. These include a program manager to manage the urban forest, two assistant arborists, and two associate construction inspectors. The staff will be overseeing tree planting, working with the advisory committee, and managing City trees. The Adopted Operating Budget also added an assistant arborist position in the Parks, Recreation and Neighborhood Services (PRNS) Department for tree pruning within the City's parks.
- The Adopted Operating Budget also included \$489,000 in one-time<sup>20</sup> and \$1.4 million in ongoing funding in the DOT and \$895,000 in PRNS to support the community forest program. Ongoing funding is to prune public street trees and trees in City parks on a 12-year cycle and for DOT to plant 1,000 trees per year.

City staff report that further work on the CFMP objectives will continue, and that the objectives provide a roadmap for future work on the community forest.

---

<sup>19</sup> The CalEnviroscreen is a mapping tool developed by the California Office of Environmental Health Hazard Assessment. It "helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects." For more information, see: <https://oehha.ca.gov/calenviroscreen>.

<sup>20</sup> One-time funding is to position the City to leverage the State's CalFire grant opportunities by obtaining up to \$1.1 million to plant as many as 1,000 additional trees, partially fund an update of the street tree inventory, and acquire three new vehicles and computer equipment.

---

## There Are a Variety of Approaches to Meet CFMP Objectives, Each With Different Costs and Benefits

The City can use several approaches to accomplish the objectives in the CFMP. Each approach has varying costs and offers different benefits.

One objective of this audit was to determine how the City can most cost-effectively plant trees. Different approaches could cost less, but also be less effective in meeting particular objectives. For example, the most cost-effective way of planting 2,000 trees may not address the City's equity goals.

- **City-funded planting, establishment, and maintenance.** One approach is for the City to entirely fund and control the planting, establishment, and maintenance for a new tree. Staff currently use this approach for planting projects on City property.

If the City controls all aspects of the project, staff must first identify where new trees should be planted. Staff then contract a company or nonprofit to plant the tree. Staff prefer that the same organization also provides three years of watering and maintenance. For many sites, staff report that there is not nearby irrigation. In such cases, contractors regularly drive a water truck to the planting sites to water the tree. Maintenance can include refreshing the wood mulch and adjusting and removing stakes for the tree. The City has often used the nonprofit Our City Forest (OCF) for these projects in recent years.

*Costs:* This approach requires the City to pay for the entire cost of planting, watering, and maintaining a tree. Unlike other approaches, none of these costs are shared with other organizations or property owners.

OCF currently charges **\$660** per tree, including planting and watering and maintenance for three years. The costs can be higher if the planting project is more complicated. For one project, the City used a separate contractor for the planting because they report that the project was on a heavily trafficked street and required lane closures. The cost per tree is estimated at over **\$1,000** per tree when including three years of establishment and maintenance.

Factors such as the size of the tree, location of the planting site, site preparation (such as removing concrete), and watering needs all affect the overall cost.

*Benefits:* Despite the cost, this approach has significant benefits. When the City is in control of the location, number, and maintenance of the trees, staff report that they can better ensure that trees survive or are replaced.

The City can look for opportunities to plant in bulk, such as a pocket forest. Staff report that planting trees close together can use existing vacant land

more effectively. From an equity perspective, since the City is choosing sites and paying for all costs, staff can prioritize sites in lower canopy areas.

- **Engaging private property owners in planting efforts.** Per the CFMP, 94 percent of the City's 2.1 million planting sites are on private property. Staff also report that the available public space for tree planting is becoming limited.

As such, encouraging private property owners to plant trees is a key planting approach. This could include trees on private property, such as front yards, as well as street trees. Because private property owners are responsible for the street trees adjacent to their property, it is important to engage and encourage property owners to plant trees in their park strips.

*Benefits:* When property owners water and care for their trees, this relieves the City of the cost of maintenance and frees up those City funds to plant additional trees. In locations where irrigation is provided by the property owner, the overall cost is reduced. Per the agreement with OCF, establishment costs account for \$450 of the \$660 total cost of a new tree.

*Drawbacks:* The lower costs are a benefit of this approach. However, the City does not have the ability to control the care of the trees during the critical first few years. If the property owners do not properly water or maintain the trees, the trees may fail. Additionally, this approach relies on property owners being willing to have new trees and care for them. Staff report that some property owners are reluctant to have new street trees adjacent to their property. One contributing factor is that property owners are responsible for repairs if street trees damage sidewalks.

### *Partnerships with Outside Organizations*

The City can strengthen and expand partnerships with outside organizations, including nonprofits, regarding tree planting. In the past, the City has worked with OCF. OCF's approach is to work with property owners to plant trees and establish agreements to ensure they care for the trees. OCF reports that this entails a degree of outreach and monitoring.

If the City leverages its relationships with community groups and nonprofits going forward, the City could help fund outreach and monitoring in addition to the cost of the tree planting itself. Around California, local nonprofits work with property owners to plant trees. In some cases, nonprofits provide trees to property owners free of charge. In San José, residents in some neighborhoods may be eligible for a discounted or free tree through Our City Forest. As noted later, the City has a street tree rebate program for all residents for FY22-23.

Furthering these partnerships would be in line with the City's Envision 2040 General Plan, which includes the action item:

*Expand the City's existing partnership with Our City Forest, and develop new partnerships with other non-profits, businesses, other agencies and the community, to maximize available resources to maintain and expand the Community Forest.*

Tracking data relating to the trees planted through nonprofit partnerships, as well as through other methods, is discussed later in this finding. Additionally, as noted in the CFMP, strengthened partnerships include clearly defined parameters and expected deliverables that align with the CFMP's goals.

#### *Collaborations with the Private Sector*

Collaborations with the private sector could be another fruitful approach. For a recent planting, a company donated the funds to cover the cost of the trees and a team from the company volunteered to help with the planting and maintenance. Exploring more such opportunities can help the City share the costs and labor associated with planting new trees.

#### *Financial Assistance for Property Owners*

Another option is for the City to fund the planting of new trees by residents. One potential funding source is tree replacement in-lieu fee funds. If a private property owner wishes to plant a tree, funds could be made available from the in-lieu fee program to help with the costs. By providing funding or free trees to private property owners to plant and maintain trees, the City may be able to encourage growth of the canopy in underserved areas.

Other California cities provide free street trees to residents. San Diego provides trees to residents who agree to water and maintain them. Long Beach and Anaheim have similar programs for eligible residents.<sup>21</sup> For FY 2022-23, San José has a street tree rebate program. Trees must be planted in the park strip, and the maximum \$100 rebate can only cover planting costs. Staff report that the program was only funded on a one-time basis for the fiscal year.

Fremont has a cost-sharing program for street tree maintenance and sidewalk repairs. San Francisco fully funds the maintenance of street trees and related sidewalk repairs.

- **Outreach to preserve mature trees.** The City has an objective to reach 20 percent canopy cover by 2051. Preserving existing trees would help the City accomplish this objective. As noted in the Background, the city experienced a loss in canopy from 2012 (15.4 percent coverage) to 2018 (13.5 percent).

<sup>21</sup> The CFMP suggests the City develop a residential shade tree distribution program in partnership with a utility, corporation, or community benefit stakeholder, to provide free trees to be planted on private property.

Outreach and education would allow the City to communicate to property owners the importance of preserving trees. The CFMP has several objectives relating to educating the community. These include:

- Regarding maintenance, an objective is to educate community members about the responsibility to maintain trees adjacent to their property.
- Also regarding maintenance, another objective is to educate private property owners about how to properly prune trees.
- With respect to diversity, equity, and inclusion, an objective is to develop outreach and education programs about the value of trees that would focus on harder-to-reach populations.

Additionally, the CFMP has objectives to maintain a website as a resource for community members and to have all CFMP program materials available in the top five non-English languages spoken in San José.

The City does not currently conduct outreach or education about tree preservation, removals, or the penalties for illegal tree removals, beyond information available on the website.

For several years, DOT has had a capital asset allocation for:

*[T]he City's efforts to partner with local entities on projects and programs to educate the public about the value of the City's urban forest, engaging them in efforts to increase the number of trees planted and ensure the health and longevity of those trees, and supports associated tree planting.*

DOT reports that although these funds have recently been used to plant and establish trees, staff are working on outreach and education activities. Staff report also planning to use the funds going forward on the establishment costs for projects whose original funding source did not cover those services.

The costs associated with this approach will depend on how the City moves forward with implementation. Regardless, preserving mature trees is a way the City could protect the canopy.

### *Outreach to Prevent Cutting Trees Illegally*

If no one files a complaint, illegal tree removals result in the loss of an existing tree without the requirement to replace a new one. This can

impact the City’s goal to grow the canopy, but as noted, the City does not conduct outreach on illegal tree removals and the complaint process.<sup>22</sup>

Between January 2012 and October 2022, there were 295 Code Enforcement complaint cases regarding illegal tree cuttings—a median of 27 cases per year. As shown in Appendix B, these complaints were not evenly distributed across the City.



District 5 saw one of the largest losses in canopy across any district in the city between 2012 and 2018—over 3 percent. However, there were only five total complaints during that time (using the former 2011 district boundaries). By comparison, District 6 received 58 complaints.

Including information about illegal tree cutting complaints along with the benefits of tree preservation would be helpful as DOT develops outreach strategies in accordance with the CFMP’s objectives regarding tree canopy and education.

City staff report that all of these approaches will be considered when expanding the scale of tree planting. Additionally, staff are exploring regional approaches. Santa Clara County staff report working to plant trees in San José, partnering with OCF for outreach and planting, and undertaking canopy studies to measure growth or decline.

---

### **City Needs Better Data and Metrics to Evaluate the Costs of Planting Approaches and Their Effectiveness in Meeting Objectives**

As the City invests more resources into the community forest, it is important that staff track outcomes and spend funds on the planting approaches that meet the City’s objectives most cost-effectively. Currently, the City’s data relating to tree planting is limited, and data on tree removals and replacements is incomplete and not readily accessible. Better data, along with established performance metrics, would help staff determine the most cost-effective ways to meet the objectives in the CFMP.

#### **Data on Tree Planting Program and Related Metrics Are Limited**

---

<sup>22</sup> The City prohibits property owners from cutting down trees that are protected by the City’s Municipal Code. This includes trees that may be in a backyard or private space. A property owner has to get a permit from the City to cut down ordinance-sized trees, even if that tree is dead.

Currently, DOT staff track the general location of tree plantings and the associated costs of planting and establishment. This data does not include the staff costs that went into finding the site and arranging the planting.

Data on the number of trees removed and required replacements is incomplete and not readily accessible. Some of this data is available in AMANDA, but the fields are not consistent between project types, are not always filled out, and do not cover smaller trees that may have been removed. As a result, it is difficult to get a complete picture of removals and replacements in the Planning process.

To measure how the City is meeting objectives such as reaching 20 percent canopy cover, increasing the equity of the canopy, and planting 2,000 trees per year, as well as the results of the increased funding, staff should track data such as:

- Trees removed and replaced during the Planning process, and the location of these projects and replacement plantings
- Total trees planted per year by any means and associated costs
- Number, location, and costs of trees planted by the City via a contractor
- Number, location, and costs of trees funded by the City through a partnership or grant program
- Costs of outreach strategies and successful tree plantings due to outreach, as applicable

For each of the planting and outreach approaches, tracking the outcome of the trees through the establishment period will enable the City to evaluate the cost effectiveness of the approaches in meeting objectives. Creating such metrics is in line with the City's Envision 2040 General Plan, which includes the action item:

*Develop performance measures for tree planting and canopy coverage which measure the City's success in achieving the Community Forest goals. These performance measures should inform tree planting goals for the years between 2022 (the horizon year for the Green Vision) and 2040.*

Building out the data relating to tree planting can also help the City work towards three other CFMP workplan objectives:

- *Create a dashboard of community forest sustainability indicators and annually update dashboard statistics based on the most recent City tree inventory data.*
- *Evaluate and adjust the annual tree planting goal every 5 years to ensure the City is progressing towards canopy cover goals.*
- *Annually update the Transportation and Environment Committee on the status of the community forest and report on the progress of achieving CFMP goals. Invite stakeholders to attend and provide an opportunity for input on setting priorities for the community forest management program.*

**Recommendations**

- #8** The Department of Transportation should create metrics to measure progress towards the City's tree planting objectives, such as the number of tree removals, tree replacements, planting efforts, and cost-effectiveness of different planting approaches.
- #9** To assist in measuring changes to the city's tree canopy, Planning, Building and Code Enforcement should revise what data is tracked about tree removals and replacements in AMANDA and provide training to staff on how to accurately complete the fields. This should be done in coordination with the Department of Transportation's development of metrics around the City's tree planting objectives.
- #10** To ensure the City is able to increase the scale of tree planting and grow the canopy effectively, the Department of Transportation should work with the Community Forest Advisory Committee to develop an outreach plan, including metrics to determine success of the outreach program



**This page was intentionally left blank**

# Conclusion

Trees provide a range of benefits to residents, property owners, and visitors to San José. To preserve the tree canopy, the City regulates private property tree removals and requires the planting of replacement trees. Planners are not consistently requiring the correct number of replacement trees. To improve the review of tree removal permits, planners should be provided standard training and technical guidance or further arborist support.

The City prefers that applicants plant replacement trees on their property. However, the City does not check that the applicants planted the trees. Additionally, the current replacement ratio does not account for the size of the removed tree's canopy. When an applicant cannot plant the tree on their property, they pay the City a fee to fund the planting of replacement trees elsewhere. Staff have only used a small portion of these fee revenues, and do not have clear guidance on how the revenues should be spent.

As the City works to grow and maintain the tree canopy, in accordance with the Community Forest Management Plan, there are several possible approaches to tree planting. The cost effectiveness of each approach depends on the City's objective. Staff should develop metrics and related data to monitor progress, outcomes, and cost effectiveness.

## RECOMMENDATIONS

### **Finding 1: Private Property Tree Removal Permitting Requires Better Resources and Improved Processes**

Recommendation #1: To ensure consistency in processing permits for tree removals, the Department of Planning, Building and Code Enforcement should:

- a. Develop procedures and related training for staff on how to process permits for tree removals, including how to apply the City's standard replacement ratios; and
- b. Develop procedures for supervisors to review permits with tree removals to ensure that replacements are required per standard ratios.

Recommendation #2: To support planners' decisions regarding technical issues relating to trees, the Department of Planning, Building and Code Enforcement should:

- a. Create guidance for how decisions regarding the health of a tree and whether the tree is native should be made, or
- b. Provide planners with further access to certified arborists as needed, either through contractors or City arborist position(s).

Recommendation #3: To ensure that fees are appropriately aligned with work performed, the Department of Planning, Building and Code Enforcement should review the process associated with a live tree removal permit and update the permit fee accordingly.

### **Finding 2: The City Can Better Ensure Replacement Trees Are Planted and Regrowing the Canopy**

Recommendation #4: To verify that trees have been replaced due to individual tree removals, the Department of Planning, Building and Code Enforcement should ensure applicants are complying with tree removal permit conditions to submit photographs or receipts of planted replacement trees. To facilitate this, Planning staff should:

- a. Create a follow-up process for Planning staff to review whether evidence has been submitted and issue reminders, and
- b. If the evidence has not been submitted within the specified time frame, assess a fine or the off-site tree replacement fee.

Recommendation #5: To verify that trees are planted according to replacement requirements for development permits, the Department of Planning, Building and Code Enforcement should develop a process for staff to collect a certification of substantial completion of landscape and irrigation installation prior to the issuance of a certificate of occupancy, as described in the Municipal Code.

Recommendation #6: To sufficiently recuperate lost canopy due to tree removals, Planning, Building and Code Enforcement, in coordination with the Department of Transportation, should:

- a. Review the tree replacement ratio to determine if it is appropriately meeting the goals of the community forest program,
- b. Revise the tree replacement policy to include considerations for canopy size and optimal species of replacement trees, and
- c. Provide permit applicants with guidance for appropriate tree selection to meet the replacement policy requirements and to best ensure tree survival.

### **Finding 3: DOT Has Not Been Spending In-Lieu Fee Revenues Timely**

Recommendation #7: To ensure that in-lieu fees are spent timely and appropriately, the Department of Transportation should:

- a. Identify locations or uses for unspent in-lieu fee revenues that have accumulated since 2018,
- b. Develop a set of procedures to ensure that plantings are accurately charged to the in-lieu fee appropriation,
- c. Develop a set of criteria/policy that dictates how and when in-lieu fees should be used on plantings, and
- d. Regularly review data from AMANDA to determine new in-lieu fees that were collected.

**Finding 4: DOT Should Evaluate Costs and Establish Metrics for the Community Forest Program’s Objectives**

Recommendation #8: The Department of Transportation should create metrics to measure progress towards the City’s tree planting objectives, such as the number of tree removals, tree replacements, planting efforts, and cost-effectiveness of different planting approaches.

Recommendation #9: To assist in measuring changes to the city’s tree canopy, Planning, Building and Code Enforcement should revise what data is tracked about tree removals and replacements in AMANDA and provide training to staff on how to accurately complete the fields. This should be done in coordination with the Department of Transportation’s development of metrics around the City’s tree planting objectives.

Recommendation #10: To ensure the City is able to increase the scale of tree planting and grow the canopy effectively, the Department of Transportation should work with the Community Forest Advisory Committee to develop an outreach plan, including metrics to determine success of the outreach program.

**This page was intentionally left blank**

# APPENDIX A

## Audit Objective, Scope, and Methodology

The mission of the City Auditor's Office is to independently assess and report on City operations and services. The audit function is an essential element of San José's public accountability, and our audits provide the City Council, City management, and the general public with independent and objective information regarding the economy, efficiency, effectiveness, and equity of City operations and services.

In accordance with the City Auditor's Fiscal Year (FY) 2022-23 Work Plan, we have completed an audit of tree-related mitigation funds and cost-effectiveness of tree planting efforts. The audit was conducted in response to a request by the Mayor and multiple members of the City Council.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The objective of this audit was to review:

- a. how and whether the City is collecting tree-related mitigation fees from developers,
- b. how and whether the City is enforcing tree-planting conditions on development,
- c. how the City is spending tree mitigation funds, and
- d. how the City can most cost-effectively plant more trees.

To meet our audit objectives and understand relevant management controls, we did the following:

- Reviewed the Community Forest Management Plan, and other relevant City policy documents for identified performance metrics or goals for the community forest. These documents included:
  - Envision San José 2040 General Plan
  - Climate Smart San José
  - The San José City Roadmap FY2021-22, as approved by the City Council.
- Reviewed the Municipal Code sections 13.28, 13.32, 15.11, and 20.100 to understand tree removal and replacement requirements and the City's Water Efficient Landscape Ordinance.
- Interviewed staff to understand the tree removal and replacement process. This included staff from:
  - Planning, Building and Code Enforcement (PBCE) about the tree permitting process, collection of in-lieu fees and enforcement of replacement requirements
  - The Department of Transportation (DOT) regarding their role managing street trees and overseeing the in-lieu tree planting program,
  - The Department of Public Works regarding their role with regards to trees and public infrastructure, and
  - The City Attorney's office regarding the programming and expenditure of in-lieu fees to achieve community forestry goals.

- Analyzed information from the City’s Financial Management System (FMS) regarding the transfer, appropriation, and expenditure of tree replacement in-lieu fees.
- Reviewed information kept by staff in PBCE and DOT regarding in-lieu fee collection and spending to understand the usage of in-lieu fees.
- Reviewed information kept by DOT to understand costs associated with tree planting including the number of trees, expenses, date, and which organization/contractor planted the trees.
- Analyzed project files from the City’s AMANDA permitting system to understand:
  - The organization of information about tree removals,
  - The internal City review process for approving or denying tree removal permits,
  - Geographic location of collected in-lieu fees, and
  - The overall reliability of data relating to tree removals in the system.
- Selected a judgmental sample of permits with tree removals with an in-date range between July 1, 2018, and December 31, 2021. The sample included tree removal permits and development permits with tree removals, and was selected based on the number of trees removed and availability of information. We reviewed the sample in order to:
  - Assess the completeness of permit findings and the inclusion of the requisite tree replacement conditions.
  - Assess the consistency of the application of the City’s standard replacement ratio.
  - Review whether in-lieu fees were charged as appropriate.
- Reviewed permits for projects categorized by the Office of Economic Development as major developments that were in the pre-construction phase as of April 2022 to understand the impact on canopy loss due to tree removals and required replacements for recent development projects.
- Selected a judgmental sample of tree removal permits with an in-date range between July 24, 2018 and April 2, 2022 to assess the average length of time in review for tree removal permits.
- Based on the availability of documentation, identified a set of tree removal projects to conduct site visits to review whether onsite trees were planted.
- Reviewed the fee calculation of tree removal permit fees and associated workflows.
- Reviewed Code Enforcement complaints for tree removals between 2012 and 2022. Geographic information was used to assess the distribution of complaints throughout the city.
- Interviewed staff from the nonprofit Our City Forest to understand their partnership with the City and approach to tree planting in the community.
- Benchmarked to other jurisdiction to understand how the City’s community forestry program compared to peers, including the cities of San Diego, Oakland, Cupertino, Saratoga, and Fremont, Palo Alto, Sacramento, San Francisco, and the County of Santa Clara.

We would like to thank the Departments of Transportation; Planning, Building and Code Enforcement; and Public Works, along with the City Attorney's Office and the City Manager's Budget Office, for their time and insight during the audit process.

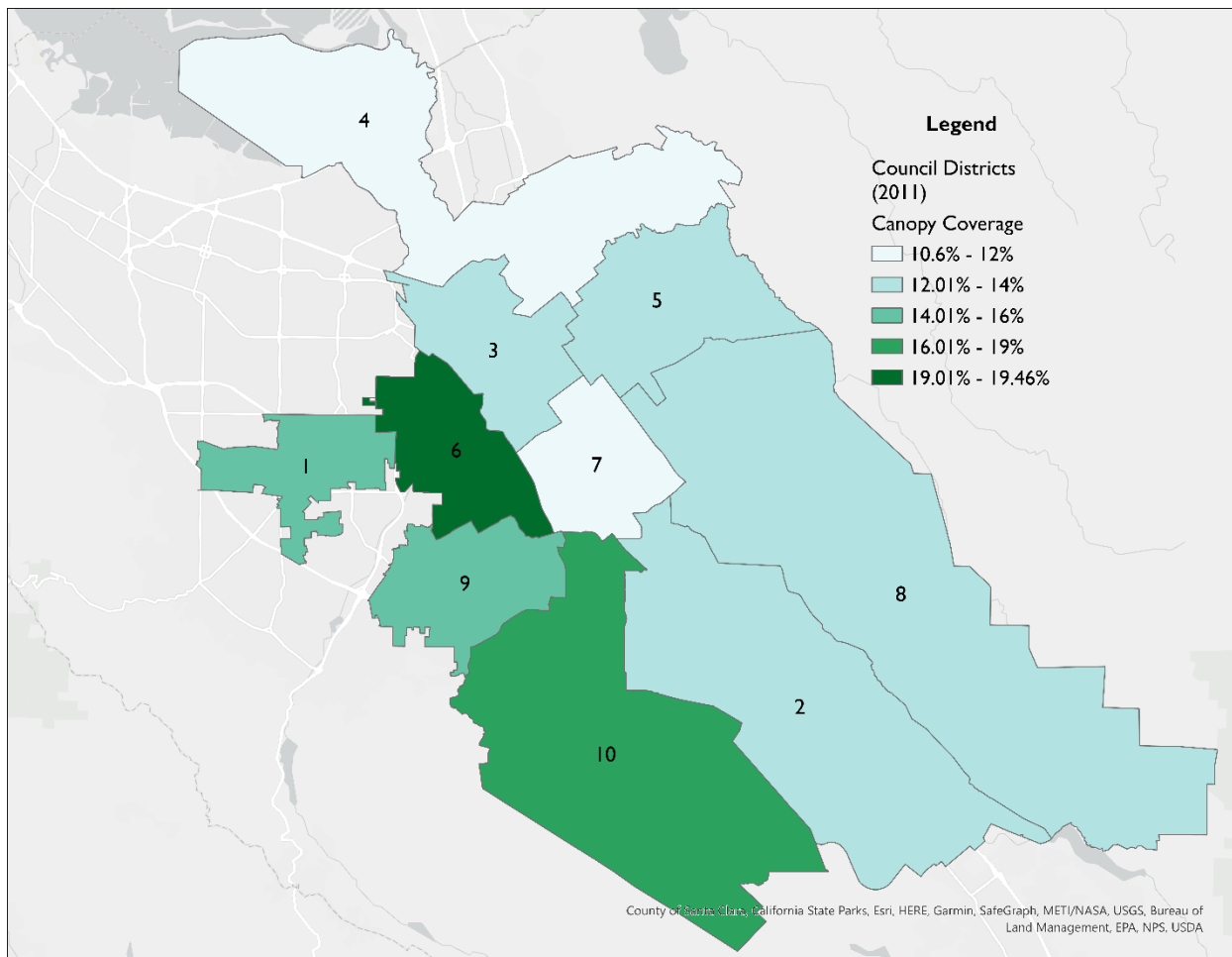


**This page was intentionally left blank**

## APPENDIX B

### Tree Canopy Coverage, Collected In-Lieu Fees, and Illegal Tree Cutting Complaints

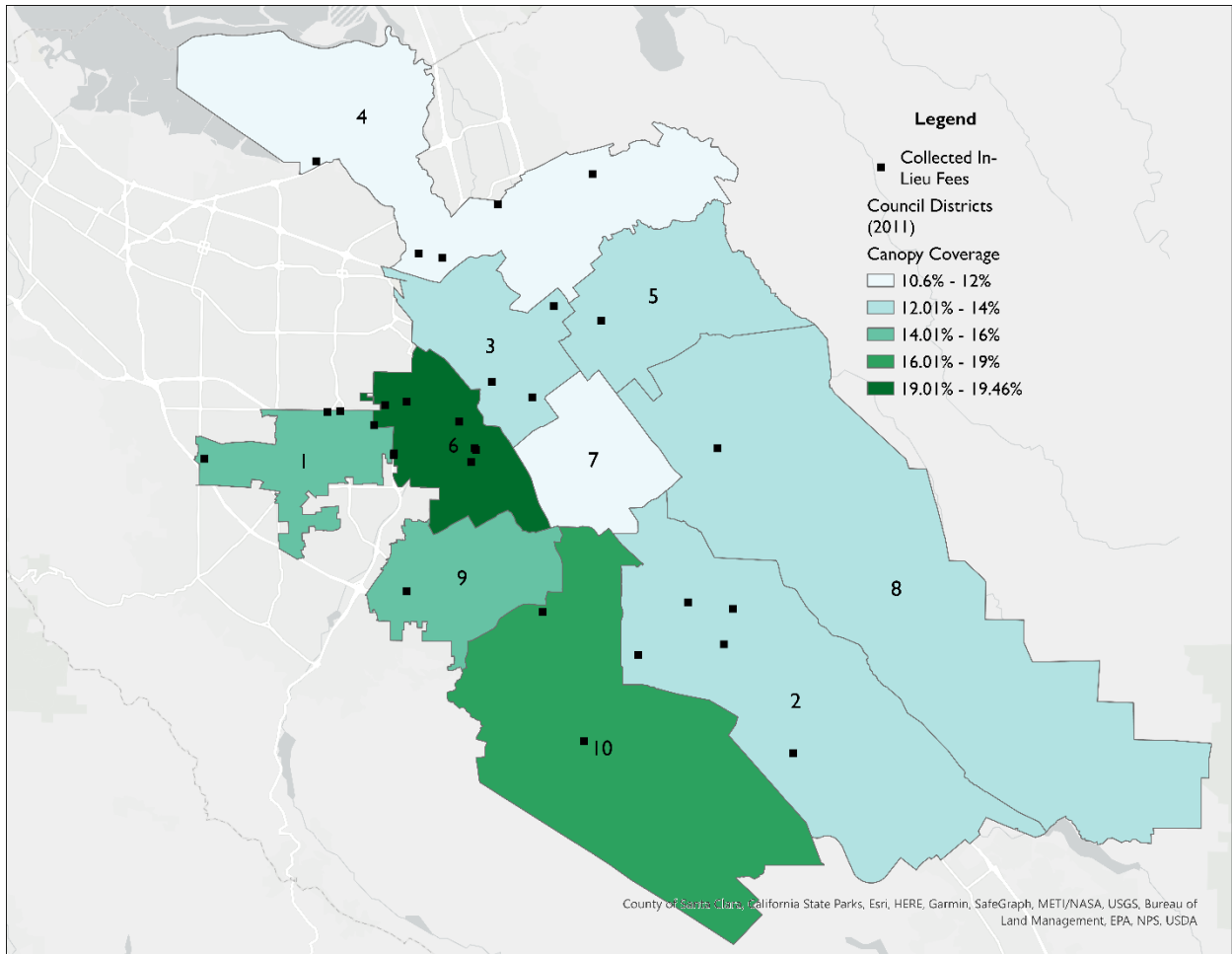
2018 Canopy Coverage by Council District



Source: Auditor analysis of Community Forest Management Plan canopy data.

Note: 2011 Council Districts are shown as those were the boundaries used for canopy analysis in the CFMP.

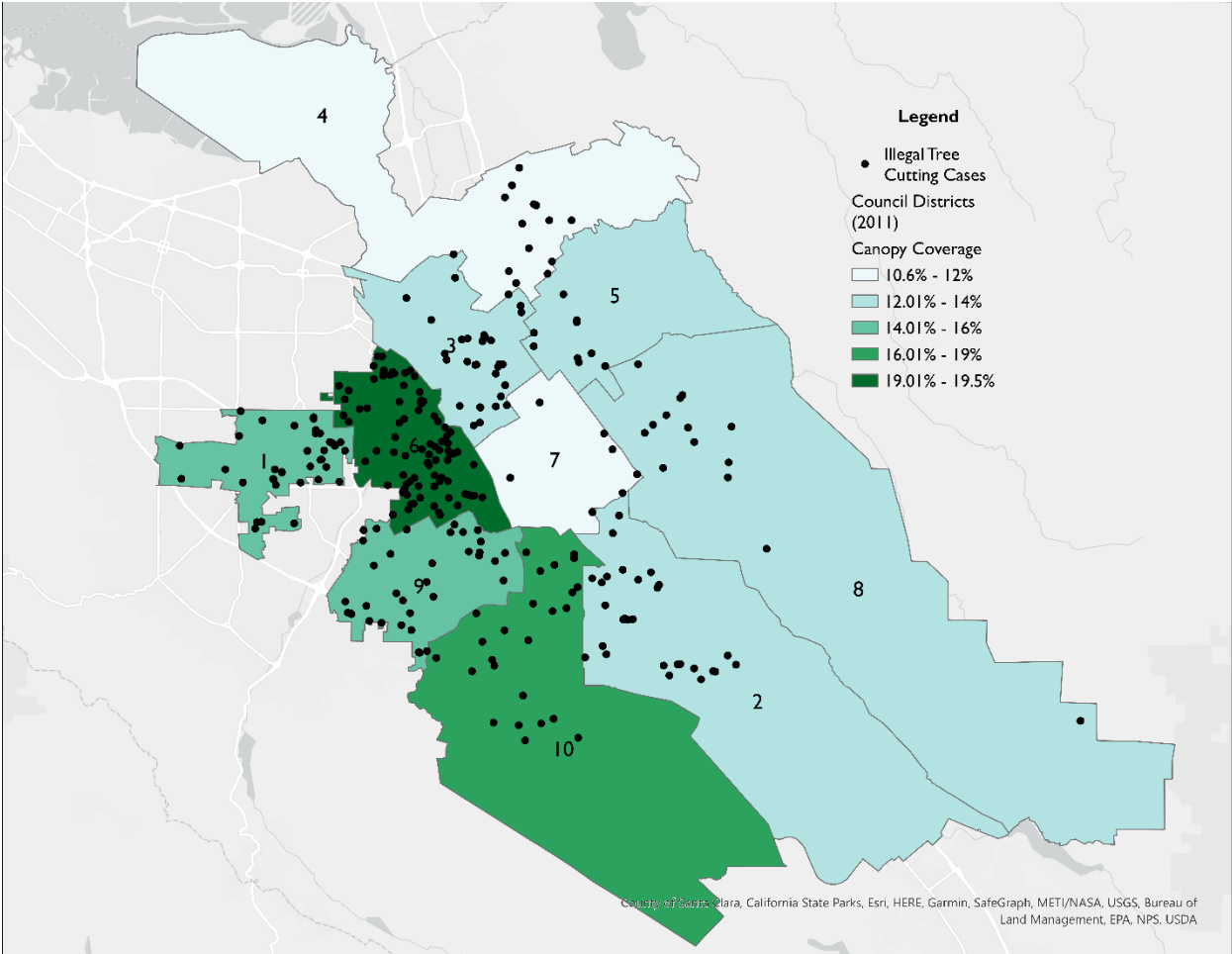
### Collected In-Lieu Fees and 2018 Canopy Coverage (February 2019 – April 2022)



Source: Auditor analysis of Community Forest Management Plan canopy data and AMANDA records on offsite tree replacement in-lieu fees paid between February 2019 to April 2022.

Note: 2011 Council Districts are shown as those were the boundaries used for canopy analysis in the CFMP. In some cases, multiple fees were collected at the same address. No in-lieu fees were collected for the off-site tree replacement fee prior to February 2019.

# Illegal Tree Cutting Code Enforcement Cases and 2018 Canopy Coverage (January 2012 – October 2022)



Source: Auditor analysis of Community Forest Management Plan canopy data and Code Enforcement complaint data from January 2012 to October 2022. Includes Code Enforcement cases classified emergency and non-emergency priorities for all tree cutting complaints.

Note: 2011 Council Districts are shown as those were the boundaries used for canopy analysis in the CFMP.

**This page was intentionally left blank**

**TO:** Joseph Rois, City Auditor

**FROM:** Chris Burton  
John Ristow

**SUBJECT: RESPONSE TO THE AUDIT OF  
TREE REMOVALS AND  
REPLACEMENTS**

**DATE:** November 22, 2022

Approved



Date

November 22, 2022

The Administration has reviewed the *Audit of Tree Removals and Replacements* and is in agreement with the four (4) findings and ten (10) recommendations identified in the report. This memorandum captures the Administration response to each recommendation.

## **BACKGROUND**

In February 2022, Council approved a Community Forest Management Plan (CFMP) that is focused on protecting, enhancing, and growing the City's tree canopy. Council also directed the City Auditor to evaluate the collection and use of tree-related in-lieu fees from developers, the enforcement of tree-planting conditions on developments, and how the City can more cost-effectively plant more trees. As part of the FY 2022-2023 Adopted Operating Budget, Council approved a significant level of ongoing funding in both the Transportation and the Parks, Recreation and Neighborhood Services Departments for maintenance of trees within parks, along trails, around civic facilities, and City street trees; and for parks tree replacement plantings and the planting and establishment of 1,000 street trees annually.

## **RECOMMENDATIONS AND ADMINISTRATION RESPONSES**

**Recommendation #1: To ensure consistency in processing permits for tree removals, the Department of Planning, Building and Code Enforcement should:**

- a. Develop procedures and related training for staff on how to process permits for tree removals, including how to apply the City's standard replacement ratios; and**
- b. Develop procedures for supervisors to review permits with tree removals to ensure that tree replacements are required per standard ratios.**

**Administration Response:** The Administration agrees with this recommendation.

**Green** – Planning, Building and Code Enforcement (PBCE) is creating a Tree Removal Process and Policy that will provide more details and procedures for the intake and review of tree removals on private property for both stand-alone Tree Removal applications and tree removal requests as part of a Development Permit. Within all tree removal approvals, it would specifically detail the replacement ratio per the City’s standard replacement ratio and how the project would meet those obligations. The supervisor conducting the review of these permits would verify the replacement ratio and fees prior to finalization of the approvals. Once the Tree Removal Process and Policy is finalized, supervisors will provide training to existing staff and ensure the document is available for future trainings and onboarding of new staff.

**Target Completion Date:** June 30, 2023

**Recommendation #2: To support planner’s decisions regarding technical issues relating to trees, the Department of Planning, Building and Code Enforcement should:**

- a. Create guidance for how decisions regarding the health of a tree and whether the tree is native should be made, or**
- b. Provide planners with further access to certified arborists as needed, either through contractors or City arborist position(s).**

**Administration Response:** The Administration agrees with this recommendation.

**Green** – As part of the update to the Tree Removal Process and Policy, PBCE will coordinate with the City Arborist team in the Department of Transportation (DOT) to include common practices for evaluating the health of tree(s) and instructions on how to review reports provided by certified arborists. The policy will also include resources on identifying native trees. If the updates and additional resources are not sufficient, PBCE would coordinate with the City Arborist team for additional resources and assistance and/or explore contractual arborist support.

**Target Completion Date:** June 30, 2023

**Recommendation #3: To ensure that fees are appropriately aligned with work performed, the Department of Planning, Building, and Code Enforcement should review the process associated with a live tree removal permit and update the permit fee accordingly.**

**Administration Response:** The Administration agrees with this recommendation.

**Green** – PBCE will conduct an analysis of the hours allocated for live tree removal applications to determine if an update to the fees is needed. Updates to the fees would be considered as part of the FY 2023-2024 City Proposed Budget development process.

**Target Completion Date:** June 30, 2023

**Recommendation #4:** To verify that trees have been replaced due to individual tree removals, the Department of Planning, Building and Code Enforcement should ensure applicants are complying with tree removal permit conditions to submit photographs of planted replacement trees. To facilitate this, Planning staff should:

- a. Create a follow-up process for Planning staff to review whether evidence has been submitted and issue reminders; and
- b. If the evidence has not been submitted within the specified time frame, assess a fine or the off-site tree replacement fee.

**Recommendation #5:** To verify that trees are planted according to replacement requirements for development permits, the Department of Planning, Building and Code Enforcement should develop a process for staff to collect a certification of substantial completion of landscape and irrigation installation prior to the issuance of a certificate of occupancy, as described in the Municipal Code.

**Administration Response:** The Administration agrees with this recommendation.

**Green** – PBCE is working to automate its permit system to require additional recordation input after a permit is issued and to allow permittees to submit verification that trees have been planted or fees paid on [www.sjpermits.org](http://www.sjpermits.org) or with an email to their Project Manager. The verification, including photos, would be uploaded to PBCE's permitting system record (AMANDA). This will allow for a single source verification on PBCE's permit system that replacement trees have been planted or in-lieu fees paid. PBCE would run bi-annual reports to follow up with staff and permittees for projects that have not fulfilled this condition. Staff will update the permit condition language to reflect this process and additionally include language if trees are not replaced, a replacement fee would be assessed. For development permits, the planner doing the conformance review will not sign off until the verification of a signed landscape and irrigation plan is provided.

**Target Completion Date:** June 30, 2023

**Recommendation #6:** To sufficiently recuperate lost canopy due to tree removals, Planning, Building and Code Enforcement, in coordination with the Department of Transportation, should:

- a. Review the tree replacement ratio to determine if it is appropriately meeting the goals of the community forest program;
- b. Revise the tree replacement policy to include considerations for canopy size and optimal species of replacement trees; and
- c. Provide permit applicants with guidance for appropriate tree selection to meet the replacement policy requirements and to best ensure tree survival.



**Administration Response:** The Administration agrees with this recommendation.

**Green** – PBCE, in coordination with DOT, will review the tree replacement ratio policy to determine if it is appropriately meeting the goals of the community forest program. The review will take into consideration canopy size and replacement ratios, as well as optimal species of replacement trees that maximize survival rates. This process will require outreach to development partners to determine the feasibility of replacement trees and input from the Community Forest Advisory Committee (CFAC).

Staff will initiate this effort in 2023; however, given the complexity of this effort and outreach with development partners and the advisory committee, staff anticipates that a draft of the updated tree replacement policy would not be developed until early 2024, with a target of final adoption by the end of FY 2023-2024. Upon completion of this process, guidance for appropriate tree selection will also be developed and provided to permit applicants.

**Target Completion Date:** June 30, 2024

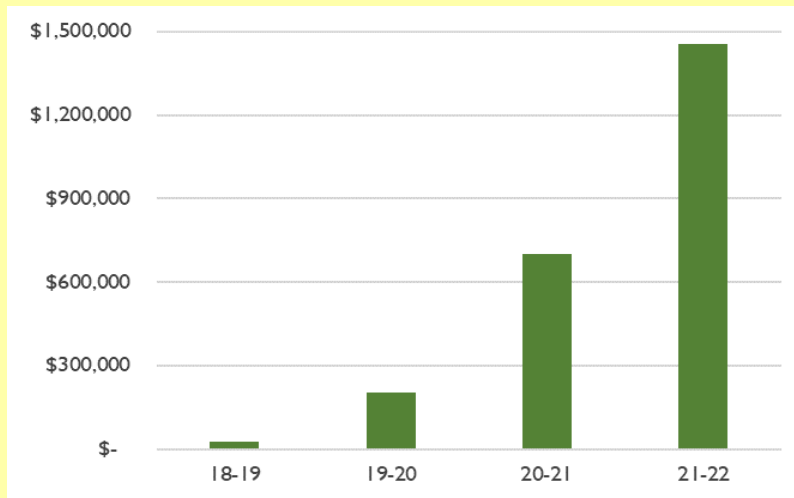
**Recommendation #7: To ensure that in-lieu fees are spent timely and appropriately, the Department of Transportation should:**

- a. Identify locations or uses for unspent in-lieu fee revenues that have accumulated since 2018;**
- b. Develop a set of procedures to ensure that plantings are accurately charged to the in-lieu fee appropriation;**
- c. Develop a set of criteria/policy that dictates how and when in-lieu fees should be used on plantings; and**
- d. Regularly review data from AMANDA to determine new in-lieu fees that were collected.**

**Administration Response:** The Administration agrees with this recommendation.

DOT has been responsible for programming in-lieu fee funds since FY 2018-2019. When this change occurred, neither PBCE nor DOT projected the scale to reach the current level. The accelerated accumulation of funds is highlighted in the audit report and shown in Figure 1.

**Figure 1: Tree In-Lieu Fee Balances Have Grown**



This influx of funds, along with the impacts of the COVID-19 pandemic on the citywide procurement prioritization process, created a backlog. Planting partners and available landscape contractors were unable to meet the City’s new level of demand coupled with internal DOT arborist staff resources being insufficient to manage the scale of planting activities required.

**Green** – The Administration recently executed tree planting and establishment purchase orders with two landscape companies for up to a combined \$2.5 million. These purchase orders, in addition to partnerships with Our City Forest (OCF) and the San José Conservation Corps (SJCC), and other efforts, will expend the accumulated fees. This important, long-term capacity-building is vital to building the City’s foundation delivering on the CFMP goals and for utilization of received fees.

Preliminarily, staff identified locations for the planting of 700 trees and will continue the work of identifying viable locations throughout the year. Two Assistant Arborists added in the FY 2022-2023 budget have been hired, one of which has the responsibility to lead planting activities. Staff developed accounting procedures to ensure that plantings are accurately charged to correct in-lieu fee appropriation and added fiscal oversight to assist. Staff will develop in-lieu fee criteria for how funds will be used by the end of FY 2022-2023. Staff will also begin reviewing AMANDA data quarterly in order to initiate advance planning efforts for future PBCE transfers of in-lieu fee funds.

**Target Completion Date:** a) June 30, 2023; b) Completed; c) June 30, 2023; d) March 31, 2023

**Recommendation #8:** The Department of Transportation should create metrics to measure progress towards the City’s tree planting objectives, such as the number of tree removals, tree replacements, planting efforts, and cost-effectiveness of different planting approaches.

**Administration Response:** The Administration agrees with this recommendation.

**Green** – After the adoption of the CFMP, the City Council approved \$4.6 million in funding for an enhanced urban forestry program for both DOT and PRNS with increased duties and responsibilities. As a result, the core services of DOT and PRNS with respect to forestry are growing and new metrics will be developed and tracked. Tree removals and replacements will be tracked to ensure an accurate net count of trees. Further, as the first large planting purchase order is awarded and executed, DOT will track performance data for contracted and partner work.

DOT will incorporate proposed initial metrics during the FY 2023-2024 City Proposed Operating Budget process. After a year of performance data and in consultation with the CFAC, DOT will return with any needed further adjustments to its core service metrics during the 2024-25 City Proposed Operating Budget process.

**Target Completion Date:** June 30, 2023

**Recommendation #9: To assist in measuring changes to the city’s tree canopy, Planning, Building and Code Enforcement should revise what data is tracked about tree removals and replacements in AMANDA and provide training to staff on how to accurately complete the fields. This should be done in coordination with the Department of Transportation’s development of metrics around the City’s tree planting objectives.**

**Administration Response:** The Administration agrees with this recommendation.

**Green** – PBCE is automating the process in AMANDA to track tree replacement verification in conjunction with updating the permit condition language.

**Target Completion Date:** June 30, 2023

**Recommendation #10: To ensure the City is able to increase the scale of tree planting and grow the canopy effectively, the Department of Transportation should work with the Community Forest Advisory Committee to develop an outreach plan, including metrics to determine success of the outreach program.**

**Administration Response:** The Administration agrees with this recommendation.

**Green** – The first CFAC meeting with eight partners (government agencies, non-profit partners, City staff) was held on November 16, 2022, where the process to appoint two residents as at-large members was determined. This is consistent with the Administration’s want for more community voices in City boards and commissions, as well as the recent Charter Review Commission recommendations. Staff will work to fill the remaining two seats by January of

2023. One of the tasks of the CFAC will be to address and work with City staff on the resolution of recommendations in this audit. Staff will collaborate with the CFAC and develop an outreach plan with metrics by December of 2023. To augment City outreach efforts, DOT staff will also apply for the Open Space Authority's (OSA) Urban Grant program in 2023. Staff initiated the application process by submitting a conceptual proposal in November 2022.

**Target Completion Date:** December 31, 2023

### **COORDINATION**

This memorandum has been coordinated with the City Attorney's Office and the City Manager's Budget Office.

### **CONCLUSION**

The Administration thanks the City Auditor and his staff for the recent audit of Tree Removals and Replacements. The audit report contains 10 recommendations that are intended to improve the process, procedures, and data tracking associated with issuing permits for the removal of live trees on private property, ensure the tree replacement policy sufficiently recuperates lost canopy and that appropriate fees are collected, improve staff's ability to plan for and use collected in-lieu fee funds, and develop metrics to measure progress towards meeting objectives, including metrics to determine success of outreach programs. Many of the audit recommendations are consistent with, and complimentary to, elements in the CFMP Strategic Workplan. The Administration looks forward to advancing the City's urban forest management through the improvements identified.

/s/

CHRIS BURTON  
Director of Planning, Building  
and Code Enforcement

/s/

JOHN RISTOW  
Director of Transportation

For questions, please contact Robert Manford, PBCE Deputy Director, at [robert.manford@sanjoseca.gov](mailto:robert.manford@sanjoseca.gov); or Rick Scott, DOT Deputy Director, at [rick.scott@sanjoseca.gov](mailto:rick.scott@sanjoseca.gov).