



John Ristow
Director of Transportation

Rick Scott
Deputy Director

Russell Hansen
City Arborist

Ryan Allen
Dudek

Honorable Mayor and City Council
January 25, 2022

The Benefits of **TREES**



CLEANER AIR

100 trees remove 53 tons of carbon dioxide and 430 pounds of other air pollutants per year.



COMBATS CLIMATE CHANGE

By reducing energy demand and absorbing carbon dioxide, trees and vegetation decrease the production and negative effects of air pollution and greenhouse gas emissions.

**CO2
REMOVED**

↓ equals ↓

**RESILIENT
COMMUNITIES**

**COOLER
SURFACE**

↓ equals ↓

**SUSTAINABLE
LIVING**



SAVES ENERGY

Strategically placed shade trees can help save up to 56% on annual air-conditioning costs for homes and businesses.



REDUCES URBAN HEAT ISLAND EFFECT

Shaded surfaces may be 20–45°F cooler than the peak temperatures of unshaded areas.



CAPTURES RAINWATER

100 mature trees can capture and store about 139,000 gallons of rainwater per year.

**139K
RAINWATER**

↓ equals ↓

**HEALTHIER
PEOPLE**

**\$3.3
BILLION**

↓ equals ↓

**ECONOMIC
VALUE**



INCREASES BUSINESS

Shoppers will spend 9% to 12% more for goods and services in business districts with a high quality tree canopy.



CLEANER WATER

A medium-sized tree intercepts up to 2,300 gallons of stormwater runoff per year.



GREEN ECONOMY

In 2009, urban forestry supported 60,067 jobs in California resulting in \$3.3 billion individual income.



IMPROVES PUBLIC HEALTH

People are less likely to be hospitalized for asthma when they live in neighborhoods with many trees.



IMPROVES MENTAL HEALTH

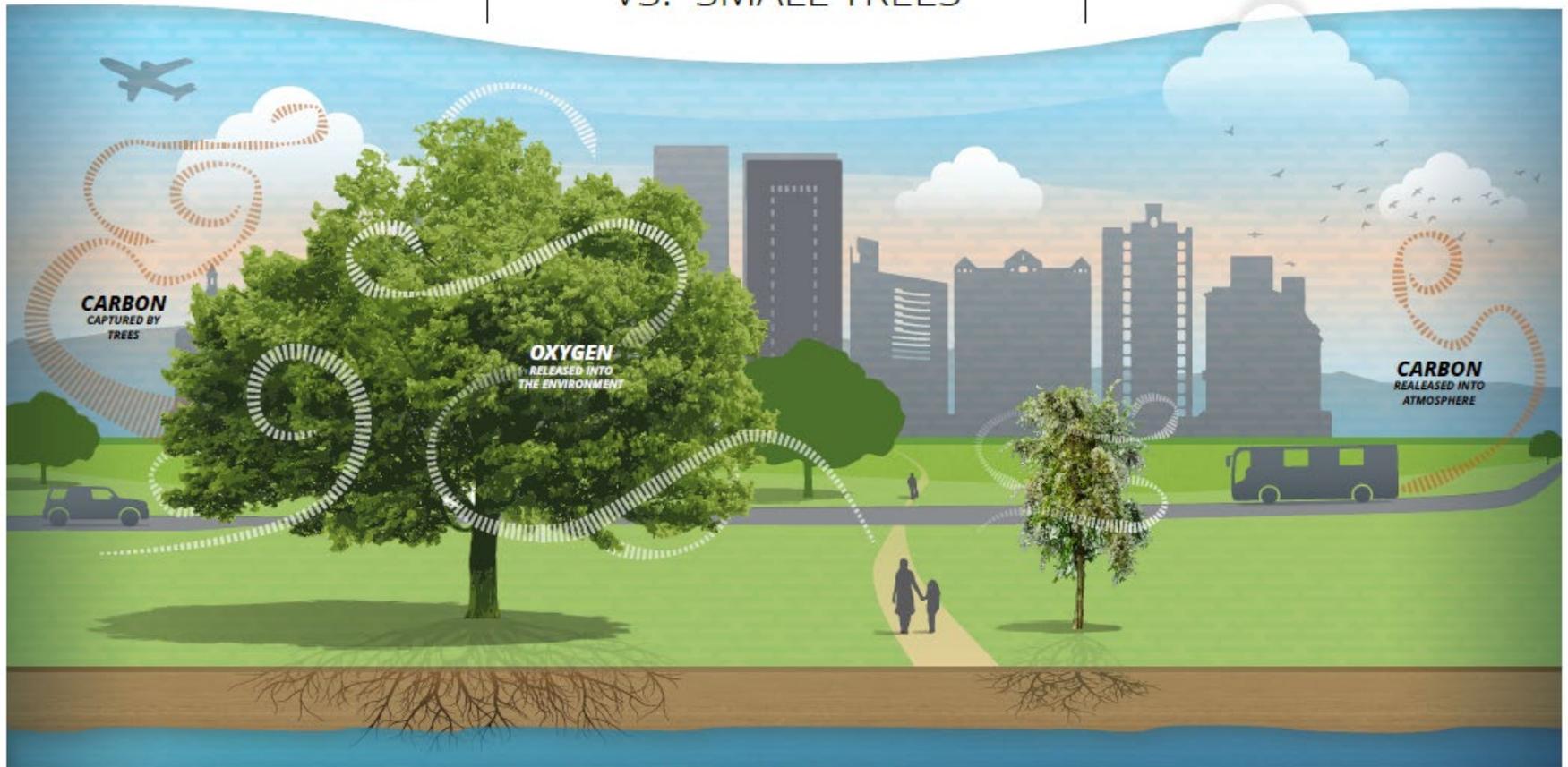
People living in neighborhoods with less than 10% tree canopy are more likely to report symptoms of depression, stress and anxiety.



We analyzed the top 10 species in San José and categorized them by large, medium, and small stature trees. We sampled from 100 of each species and then determined how their environmental benefits compare:

THE BENEFITS OF **LARGE TREES** VS. SMALL TREES

5.5X MORE
STRUCTURAL
VALUE



Large trees provide more benefits than small trees:

4X MORE
CARBON
SEQUESTERED

4X GREATER
ENVIRONMENTAL
BENEFIT VALUE

5X MORE
STORMWATER
AVOIDANCE

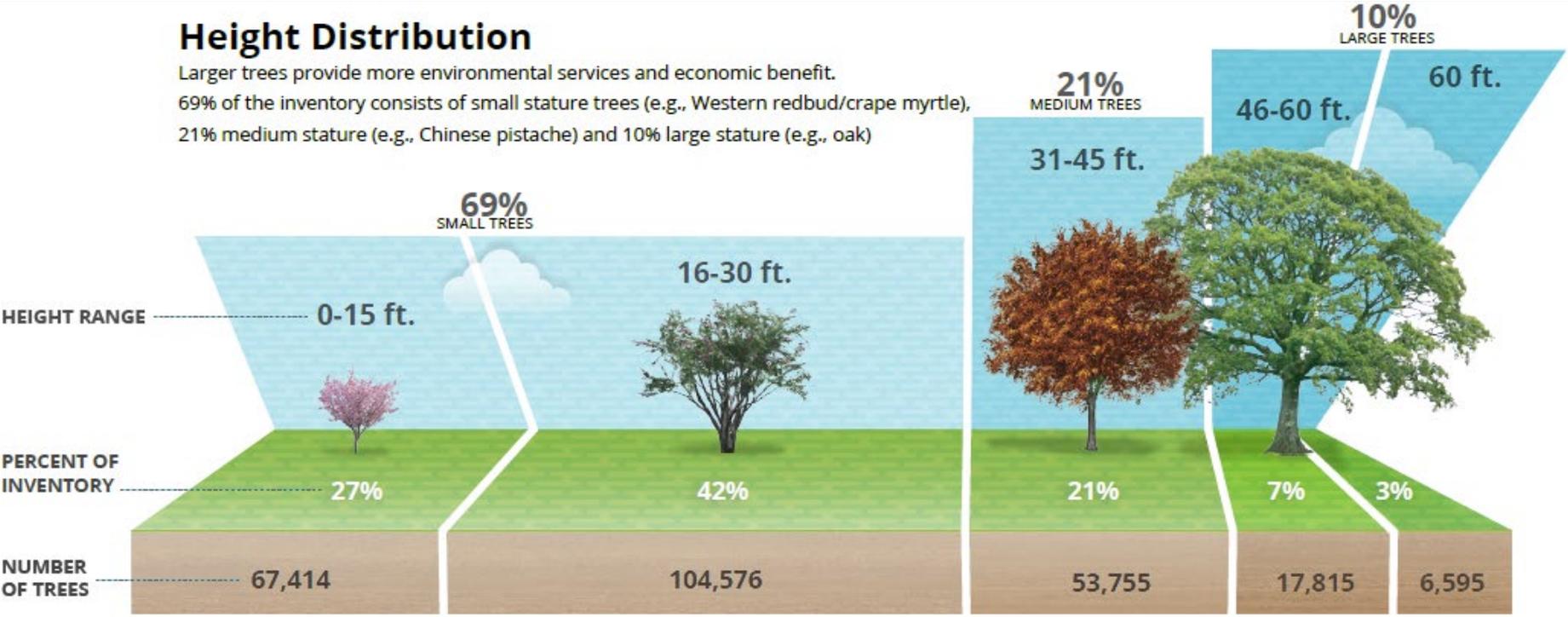
6X MORE
SHADE
PROVIDED

7X MORE
CARBON
STORAGE

San José - Street Tree Canopy

Height Distribution

Larger trees provide more environmental services and economic benefit. 69% of the inventory consists of small stature trees (e.g., Western redbud/crape myrtle), 21% medium stature (e.g., Chinese pistache) and 10% large stature (e.g., oak)



Community Forest Management Plan

Initiated by the City

- Funded through a CalFire Climate Investment Grant
- Supplemented with Staff time

Plan Contents;

- 3rd party analysis of the City's tree programs
- Strategic Workplan
- Tree Policy & Best Management Practices Manual Update

Complements and supports City Policy and Goals

- Envision San José 2040 General Plan
- Climate Smart San José
- Green Stormwater Infrastructure Plan
- Current iteration is "biggest step San José has taken for urban forestry" - CalFire

Grant Project Description

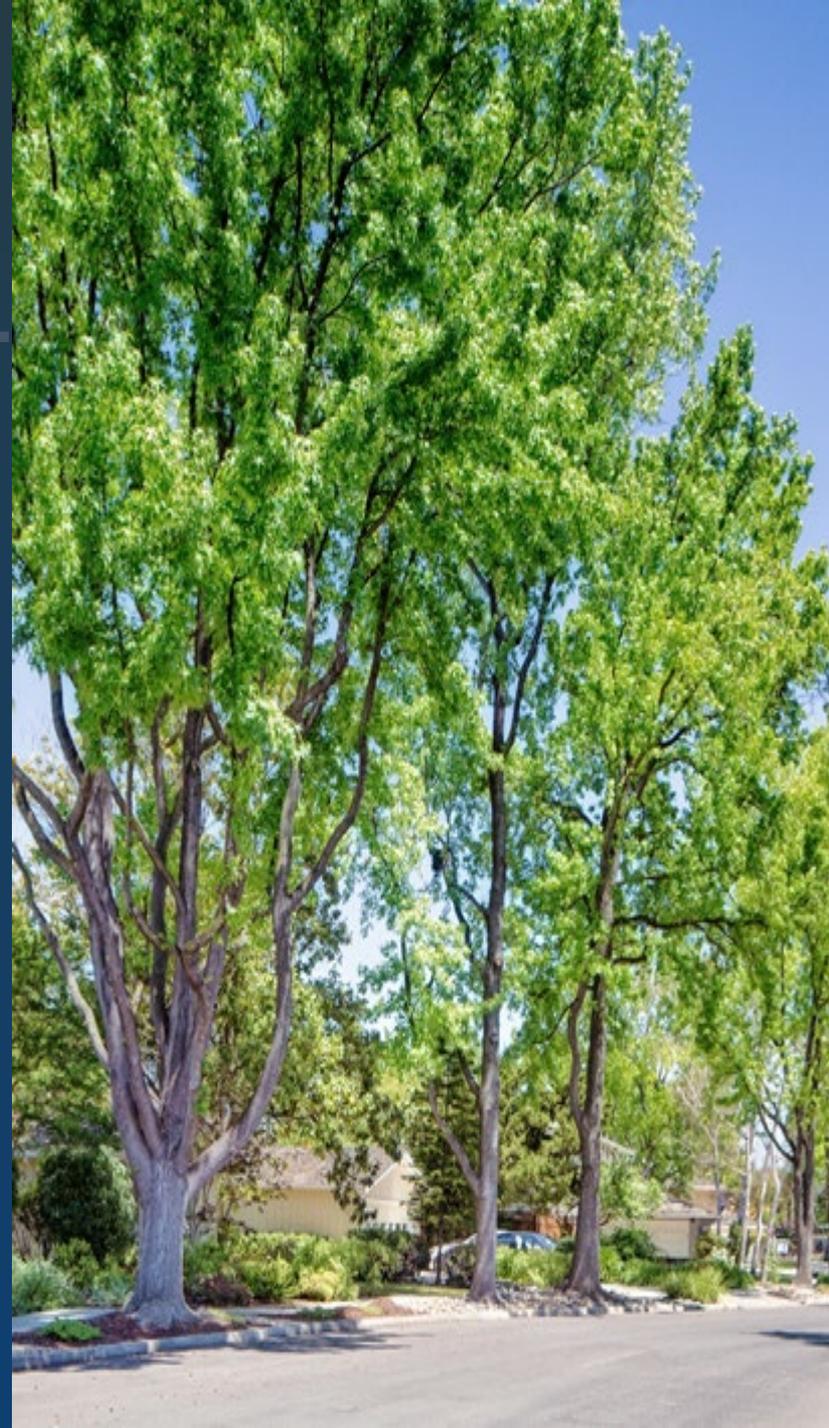
Key Report Deliverables

- SWOT analysis of entire CSJ Tree Program
- Update Tree Policy & Best Management Practices Manual

Other Project Deliverables

- Plant 200 trees in disadvantaged communities
- Develop tree management database
- Update tree inventory for City maintained trees*

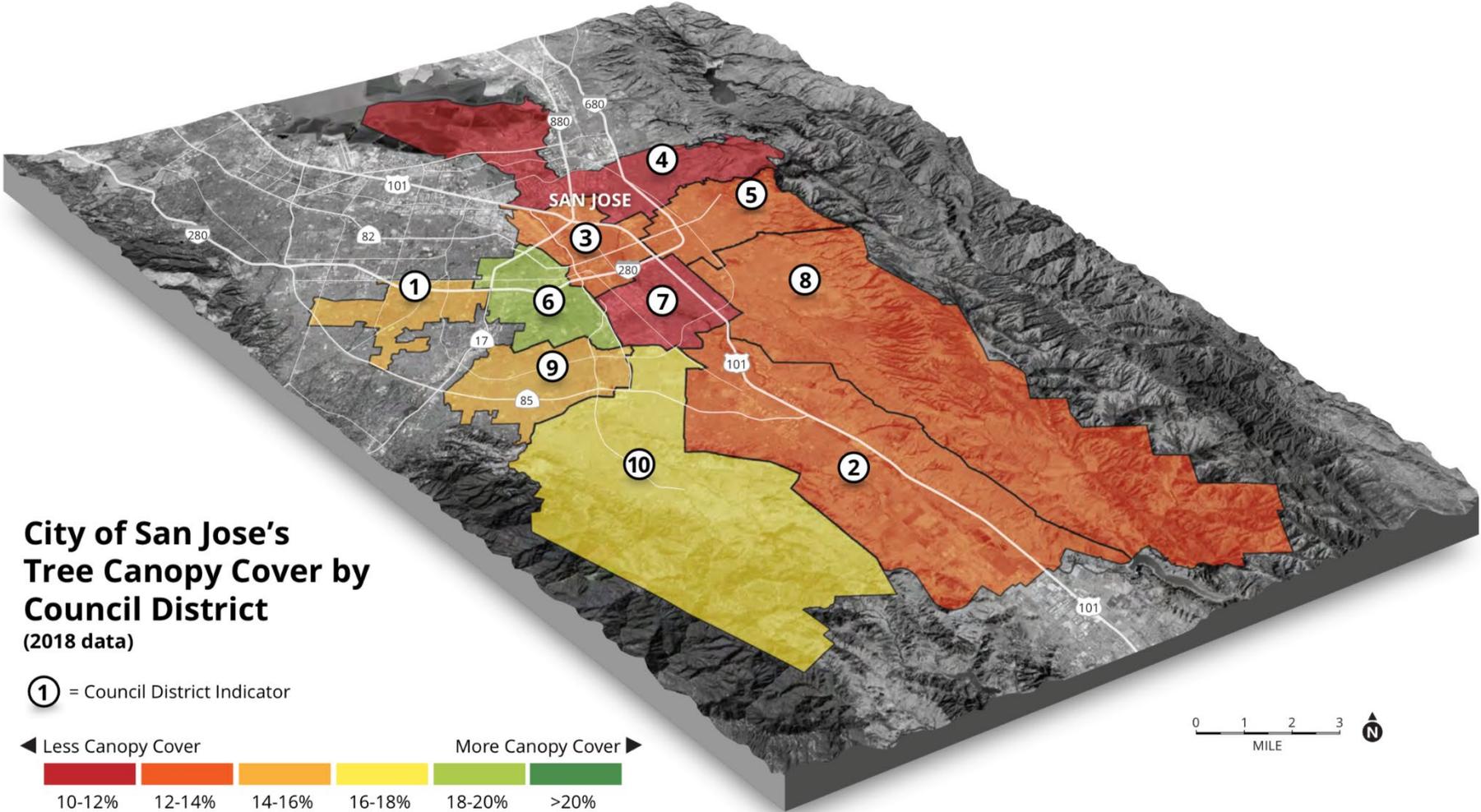
* *Denotes in progress*



Key Findings

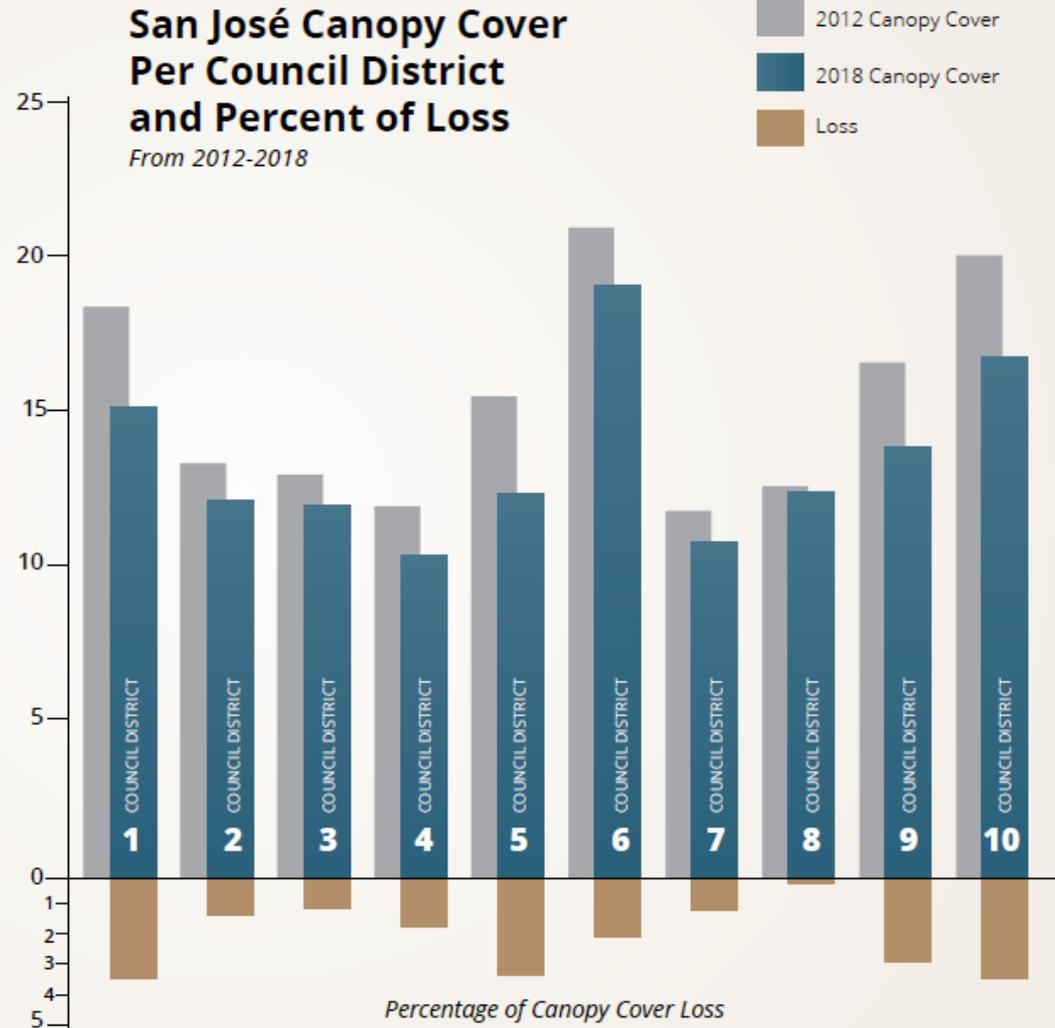
- Tree canopy cover declined from 15.3% to 13.5% - (2012 to 2018)
- Economically disadvantaged communities have fewer trees and increased vulnerability to environmental and health impacts
- "Tree" staffing and maintenance is underfunded and very low compared to equivalent cities
- Urban infill and development practices limit space for tree canopy growth
- Opportunities for City and Our City Forest to strengthen and expand its partnership
- Complete inventory for public space and street trees is needed

Canopy Cover by Council District



Canopy Loss by Council District

Area	2012 Canopy Cover	2018 Canopy Cover	Change
San José	15.36%	13.54%	-1.82%
Council District			
1	18.75%	15.50%	-3.26%
2	13.61%	12.39%	-1.22%
3	13.25%	12.27%	-0.98%
4	12.19%	10.62%	-1.58%
5	15.81%	12.64%	-3.17%
6	21.36%	19.46%	-1.90%
7	12.06%	11.02%	-1.04%
8	12.86%	12.67%	-0.19%
9	16.92%	14.18%	-2.74%
10	20.43%	17.14%	-3.30%



Strategic Workplan

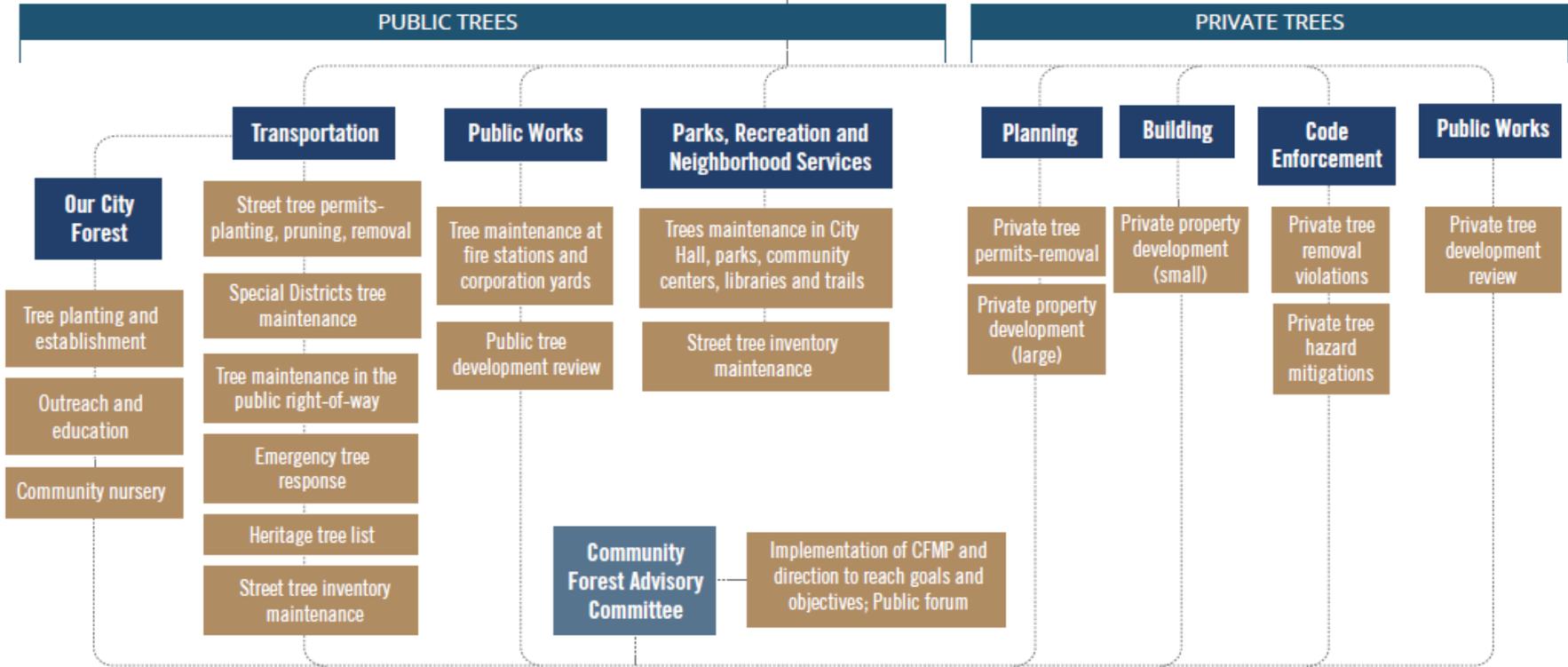
Identifies strategies and objectives for improvement

- Streamline the Governance Structure
- Ensure Community Forest Sustainability
- Support Diversity, Equity and Inclusion
- Funding the Community Forest
- Efficient and Effective Management
- Standardize and Improve Planning and Development

Streamline Governance Structure



- City of San José Departments
- Responsibilities/Activities
- Recommendations



Our City Forest

Founded in 1994 to advance Urban Forestry in San José

- Obtained over \$15 million in urban forest grants
- Leveraged \$25 million in volunteer time
- Educated over 40,000 elementary and middle students
- Planted over 80,000 trees and shrubs citywide
- Operates a community nursery

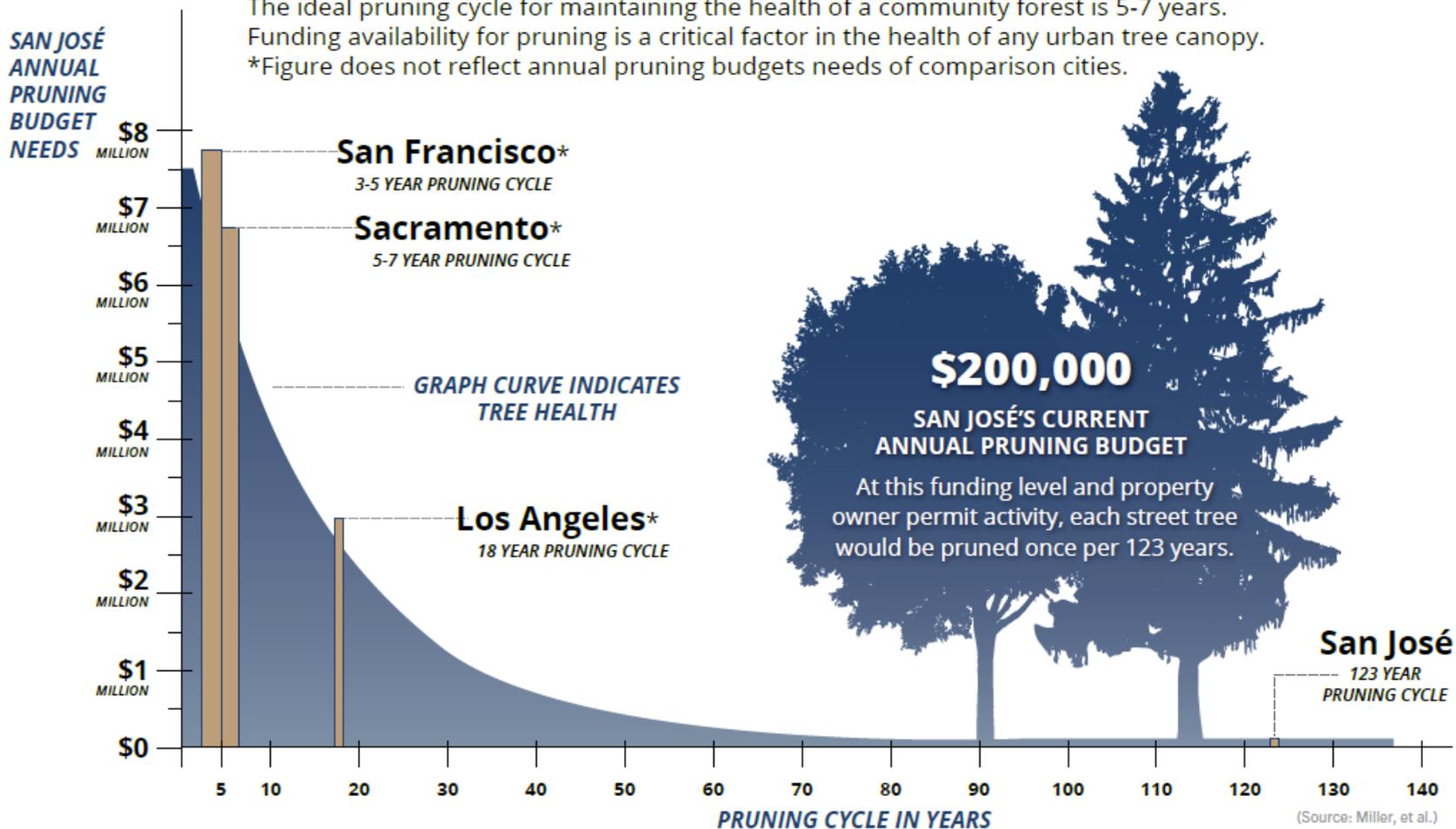


Sustainability Through Maintenance

Pruning Cycles Affect the Health of Community Forests

The ideal pruning cycle for maintaining the health of a community forest is 5-7 years. Funding availability for pruning is a critical factor in the health of any urban tree canopy.

*Figure does not reflect annual pruning budgets needs of comparison cities.



Maintenance Funding Needs

	Street Trees (City of San Jose Maintained)			Parks Trees (City of San Jose Maintained)			Street Trees (Property Owner Maintained)			All Public Trees (City of San Jose Maintained)		
	Budget Needed	Current Funding	Funding Deficit	Budget Needed	Current Funding	Funding Deficit	Budget Needed	Current Funding	Funding Deficit	Budget Needed	Current Funding	Funding Deficit
Maintenance Services												
Inspection/Inventory	\$17,182	\$0	\$17,182	\$26,400	\$0	\$26,400	\$246,484	\$0	\$246,484	\$290,066	\$0	\$290,066
Pruning (5-7 year cycle)	\$555,750	\$45,000	\$510,750	\$762,750	\$40,000	\$722,750	\$6,815,250	\$20,000	\$6,795,250	\$8,133,750	\$105,000	\$8,028,750
Removals (as needed)	\$380,000	\$27,600	\$352,400	\$600,000	\$110,000	\$490,000	\$4,660,000	\$20,000	\$4,640,000	\$5,640,000	\$157,600	\$5,482,400
Replacement Planting	\$294,500	\$0	\$294,500	\$315,000	\$0	\$315,000	\$2,446,500	\$10,000	\$2,436,500	\$3,056,000	\$10,000	\$3,046,000
Emergency Services	\$57,000	\$47,400	\$9,600	\$108,000	\$0	\$108,000	\$559,200	\$30,000	\$529,200	\$724,200	\$77,400	\$646,800
Subtotal	\$1,304,432	\$120,000	\$1,184,432	\$1,812,150	\$150,000	\$1,662,150	\$14,727,434	\$80,000	\$14,647,434	\$17,844,016	\$350,000	\$17,494,016
Staffing	\$660,000	\$300,000	\$360,000	\$480,000	\$0	\$480,000	\$1,290,000	\$0	\$1,290,000	\$2,430,000	\$0	\$2,430,000
	Street Tree (CSJ) Deficit		\$1,544,432	Parks Tree Deficit		\$2,142,150	Street Tree (PO) Deficit		\$15,937,434	Total Deficit		\$19,924,016

Funding \$4 million scenario vs. \$20 million scenario

Tree Planting Required to Grow Canopy

Number of trees needed to plant annually for 30 years to achieve canopy cover

Total Canopy	Total Number of Trees by Canopy Spread			
	22.75 ft Diameter	35 ft Diameter	50 ft Diameter	75 ft Diameter
14%	1,560	659	323	143
16%	8,369	3,532	1,731	769
18%	15,177	6,405	3,139	1,395
20%	21,985	9,278	4,547	2,020
25%	39,005	16,462	8,067	3,584
30%	56,026	23,645	11,588	5,149

Cost to plant/establish a tree*

Tree Planting

- \$150 per tree (Park locations, 6 or more trees)
- \$175 per tree (Park locations, 5 or fewer trees)
- \$210 per tree (Street tree)

3-year Tree Establishment (Watering and Pruning)

- \$275 per tree (Park locations and Low traffic street tree, 20 or more trees)
- \$550 per tree (Park locations and Low traffic street tree, 19 or fewer trees)
- \$825 per tree (High Traffic street tree w/lane closures)

Total Tree Planting with 3-years of Establishment

- \$425-\$725 per tree (Park locations)
- \$485-1035 per tree (Street locations)

* *Source: OCF Master Fee Pricing Document FY 20-21*

Outreach Efforts

NOSOTROS LOS ÁRBOLES

La ciudad de San José ama nuestros árboles,

¿TÚ LOS AMAS?

Opina sobre la mejor manera de gestionar
el bosque comunitario de San José.

¡Haz nuestra encuesta hoy!



www.sanjosecfmp.com

- Website - sanjosecfmp.com
- In-person meetings March 2020 (cancelled)
- 4 Virtual meetings Summer 2020
- Website Survey (2,000 responses)
- Social Media Surveys (1,100 responses, 188,000 impressions)
- Meetings with key stakeholders - Our City Forest, ¡Sí Se Puede!, Open Space Authority, AARP, Audubon Society, California Native Plant Society, SPUR, League of Women Voters, Valley Water
- Post T & E conversations with Sen. Cortese's office, Santa Clara County Parks, County Office of Education, PG&E, and Coalition to Advance Urban Forestry (twice)

Roadmap: Protect, Preserve, Plant



2022-24



2024 +

Strategies	Key Objectives		
Streamline the Governance Structure	Include trees in the beginning of the design and planning process	Evaluate and consolidate tree responsibilities or ensure sufficient org capacity	Provide an arborist review of all Planning Division tree responsibilities
Ensure Community Forest Sustainability	Tree planting activities will promote a sustainable urban forest (biodiversity, fit, dashboard)	Ensure trees are adapted to climate change and support local habitat and wildlife.	Increase tree canopy cover across all census tracts and neighborhoods - 20% by 2051
Support Diversity, Equity, and Inclusion	Diverse stakeholders participate in guiding the development of the community forest program	Prioritize increasing canopy cover in disadvantaged communities.	
Fund the Community Forest	Develop a plan to annually provide funding to the community forest program	Fund community forest management activities at a level to meet best management practices as defined by the City.	
Efficient and Effective Tree Management	Maintain current information on the community forest to ensure management decisions are based on the best available data.	Ensure all City tree management activities and design standards reflect the most current understanding of community forest sustainability.	Community members and private property owners will understand their role in growing and maintaining the community forest.
Standardize and Improve Planning and Development	Protect and preserve mature trees	City planning and development will contribute to increasing tree canopy cover.	

Next Steps – thru June 2022



- Plan and plant over 250 trees in East San Jose (funded in FY 21-22)
- Finalize procurements for PRNS inventory and establish master agreement to update street tree inventory
- Add Assistant Arborist to support early workplan efforts, including CFAC and review of policies/procedures
- Form Community Forest Advisory Committee (CFAC)
- Evaluate funding options to expedite workplan items including CalFire Grant (application in July)
- Use FY 22-23 budget process to seek increased funding for City of San Jose maintained trees



John Ristow
Director of Transportation

Rick Scott
Deputy Director

Russell Hansen
City Arborist

Ryan Allen
Dudek

Honorable Mayor and City Council
January 25, 2022