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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.



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.



CLEANER WATER

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

CO₂
REMOVED

↓ equals ↓

RESILIENT
COMMUNITIES

COOLER
SURFACE

↓ equals ↓

SUSTAINABLE
LIVING

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.



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.



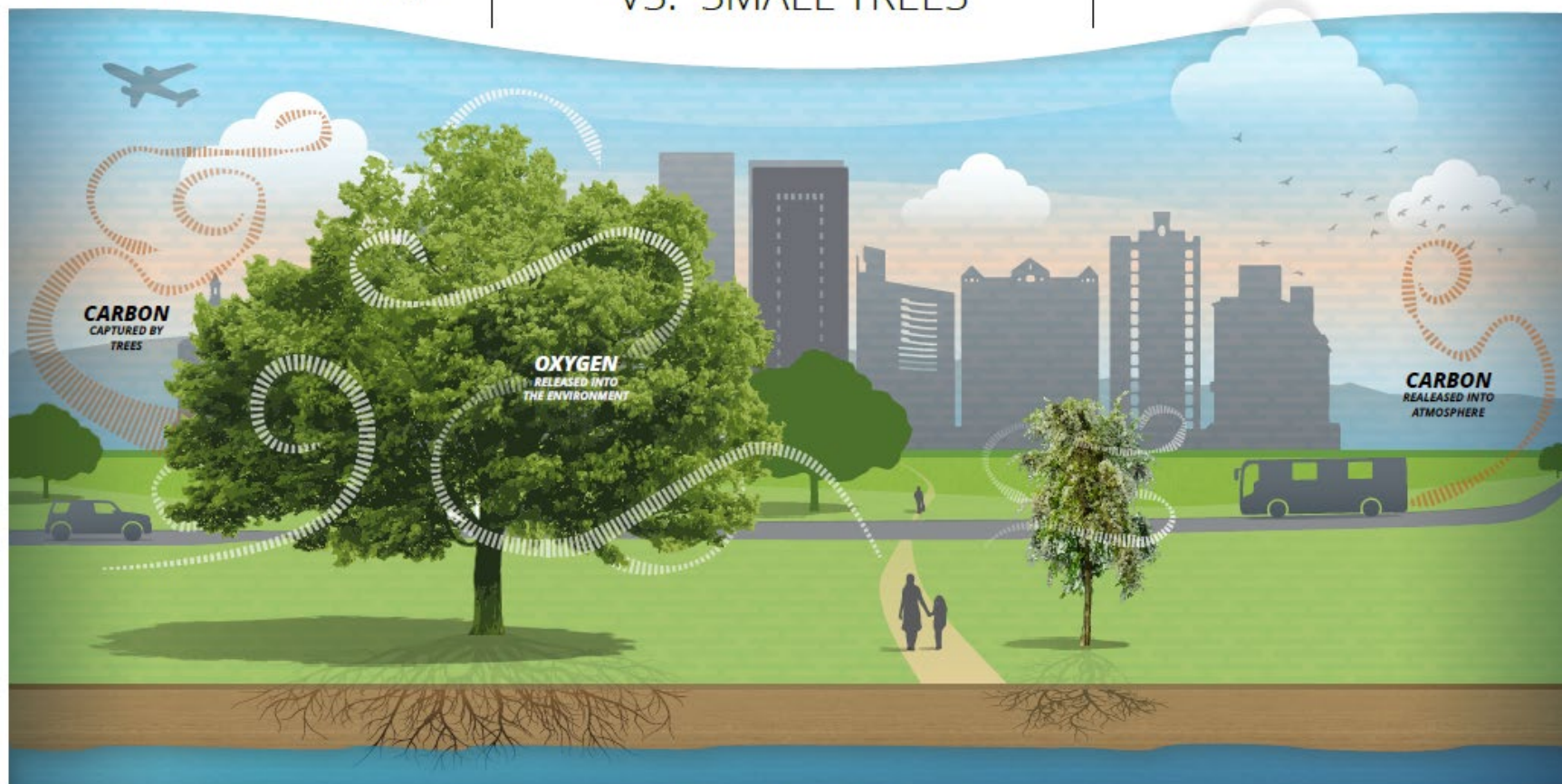
IMPROVES MENTAL HEALTH

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

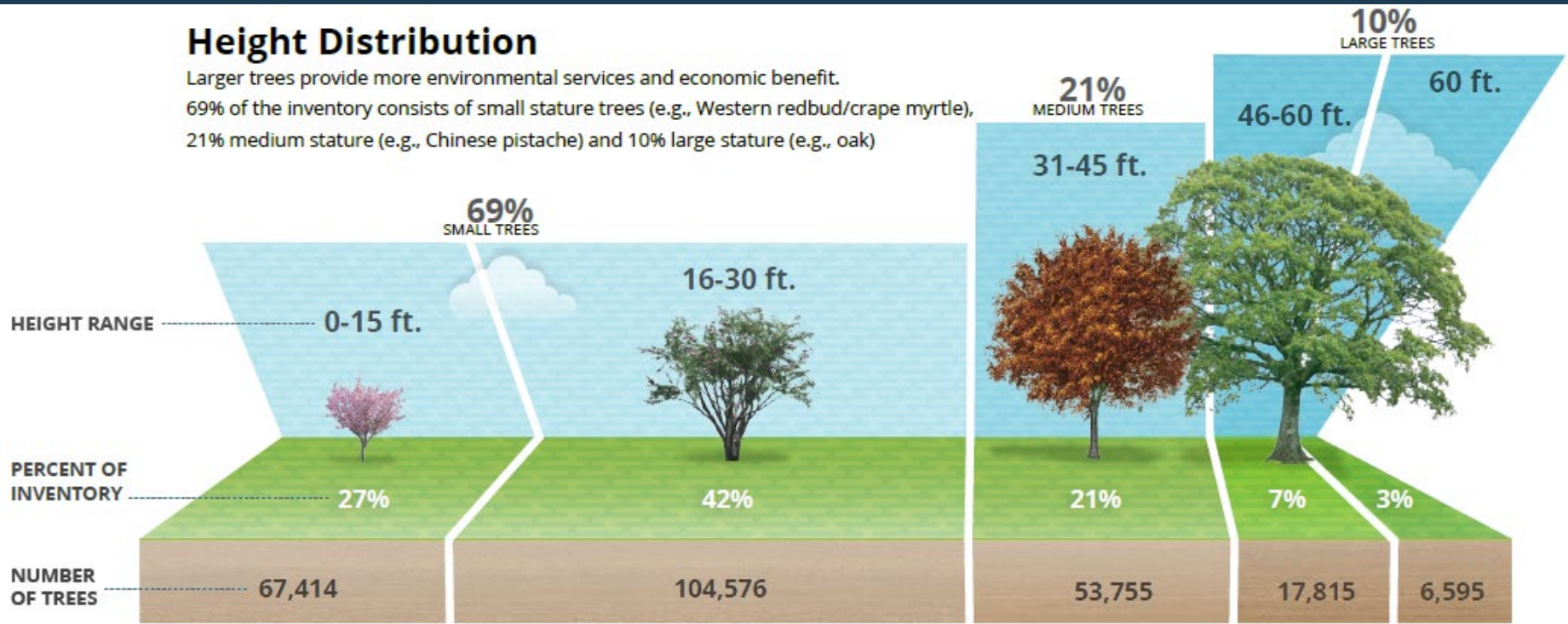
San Jose - Street Tree Canopy

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

Complements and supports City Policy and Goals

- Envision San Jose 2040 General Plan
- Climate Smart San Jose
- Green Stormwater Infrastructure Plan

Funded through a CalFire Climate Investment Grant

Consists of

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

Project Description

3-4 year effort

Key Deliverables

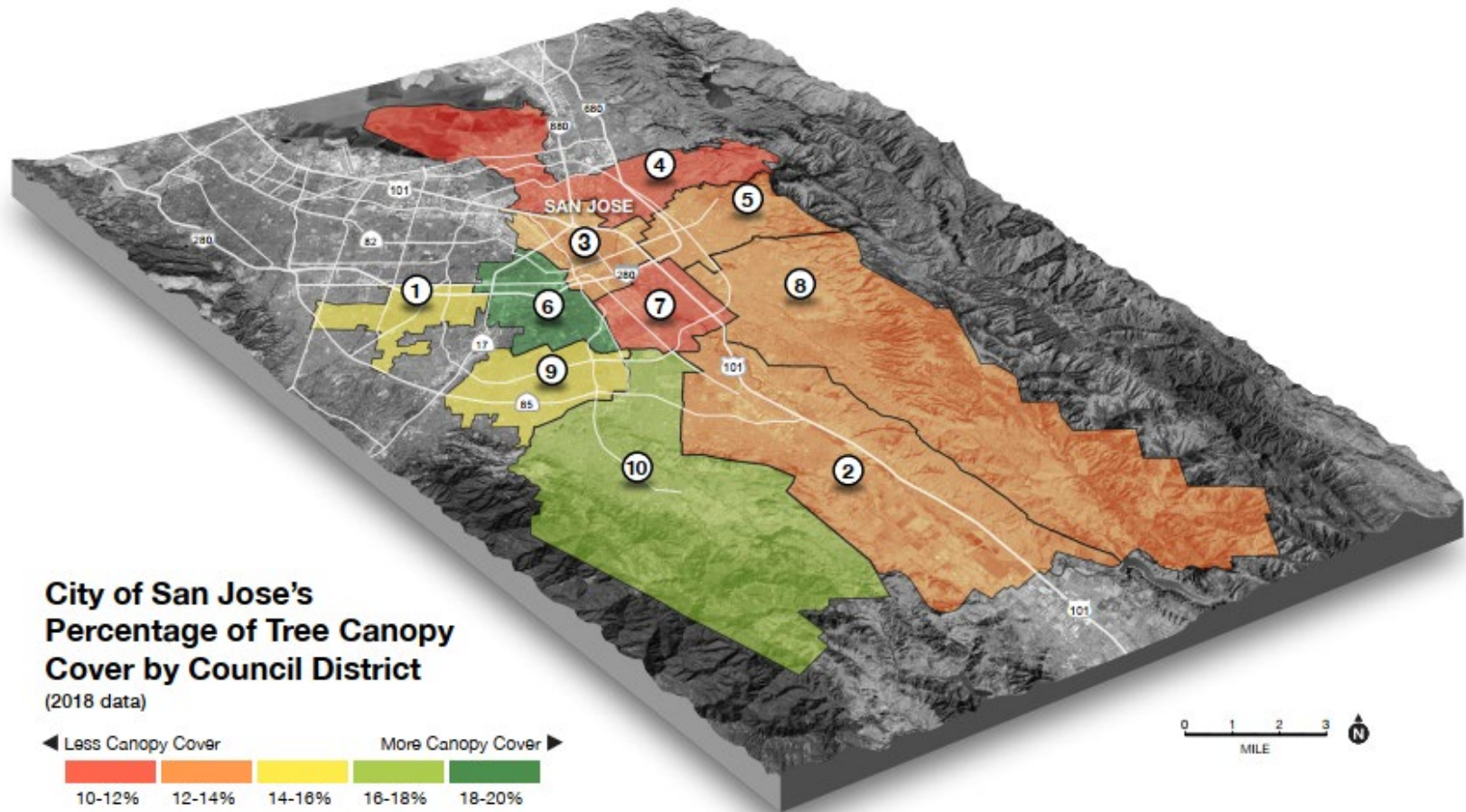
- SWOT analysis of entire CSJ Tree Program
- Plant 200 trees in disadvantaged communities
- Develop tree management database
- Complete tree inventory for City maintained trees
- Update Tree Policy & Best Management Practices Manual



Key Findings

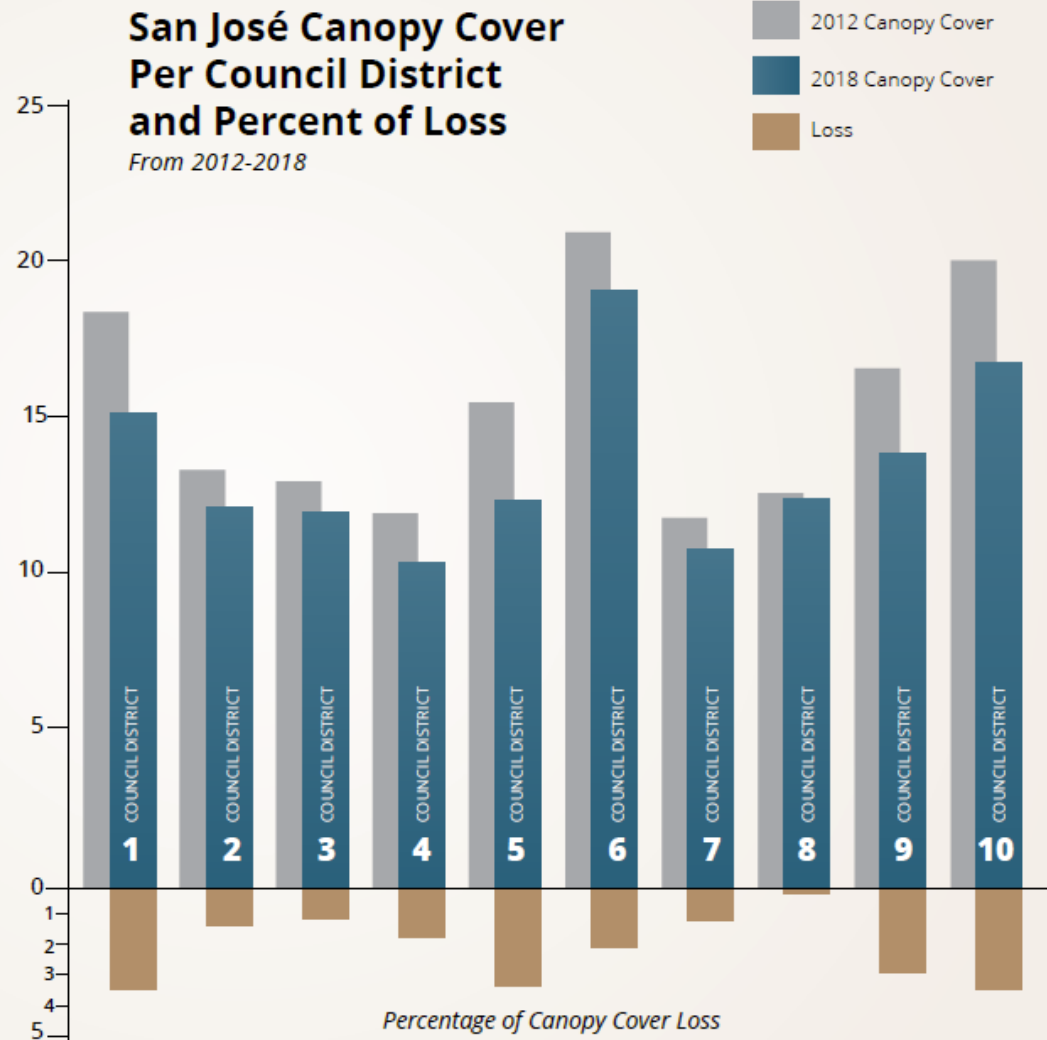
- Tree canopy cover declined from 15.3% to 13.5% - (2012 to 2018)
- Economically disadvantaged communities have fewer trees and increased vulnerability to environmental and health impacts
- "Tree" staffing and maintenance is underfunded and very low compared to equivalent cities
- Urban infill and development practices limit space for trees
- 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

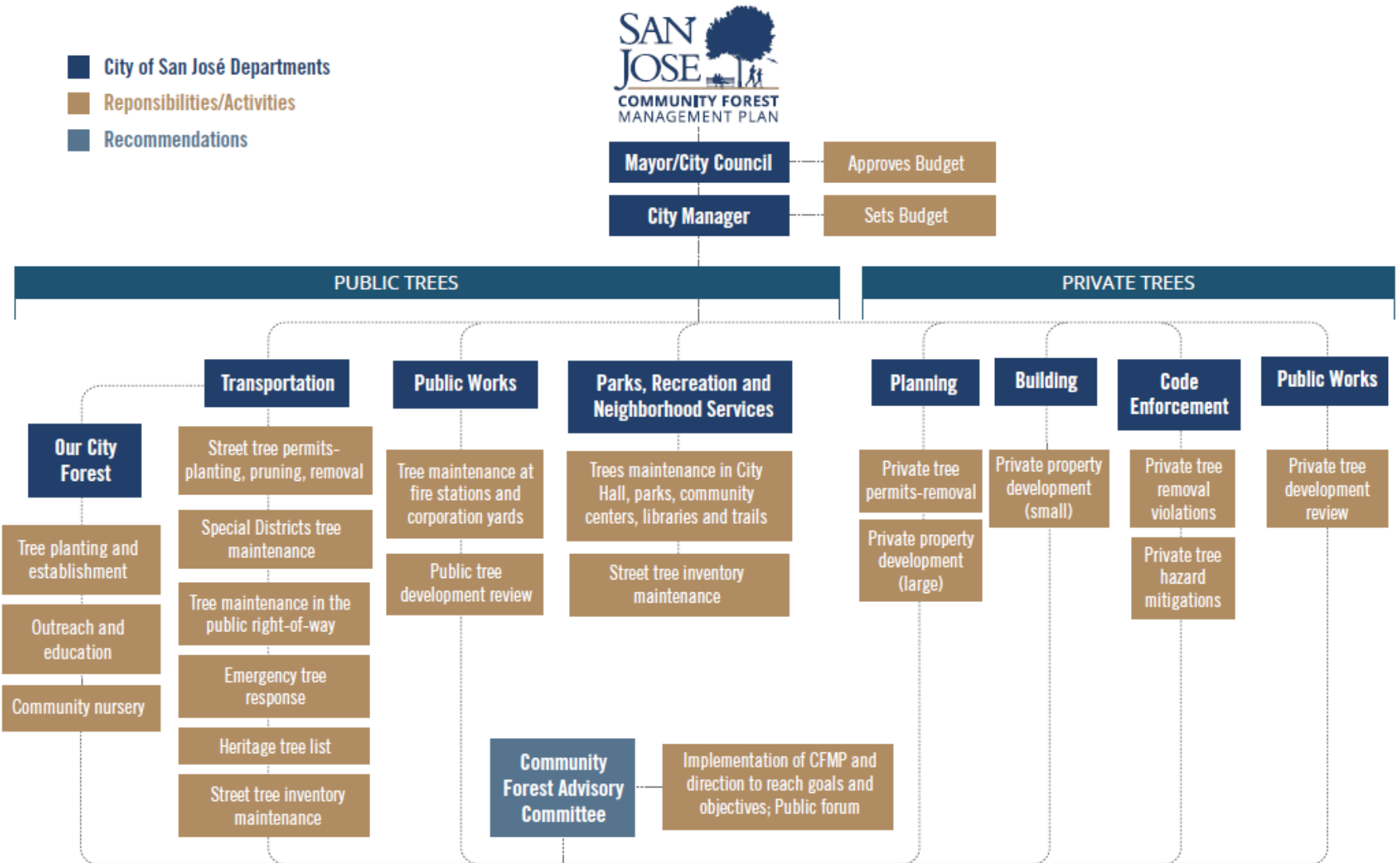
Identifies strategies and objectives for improvement

- 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 Jose

- 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

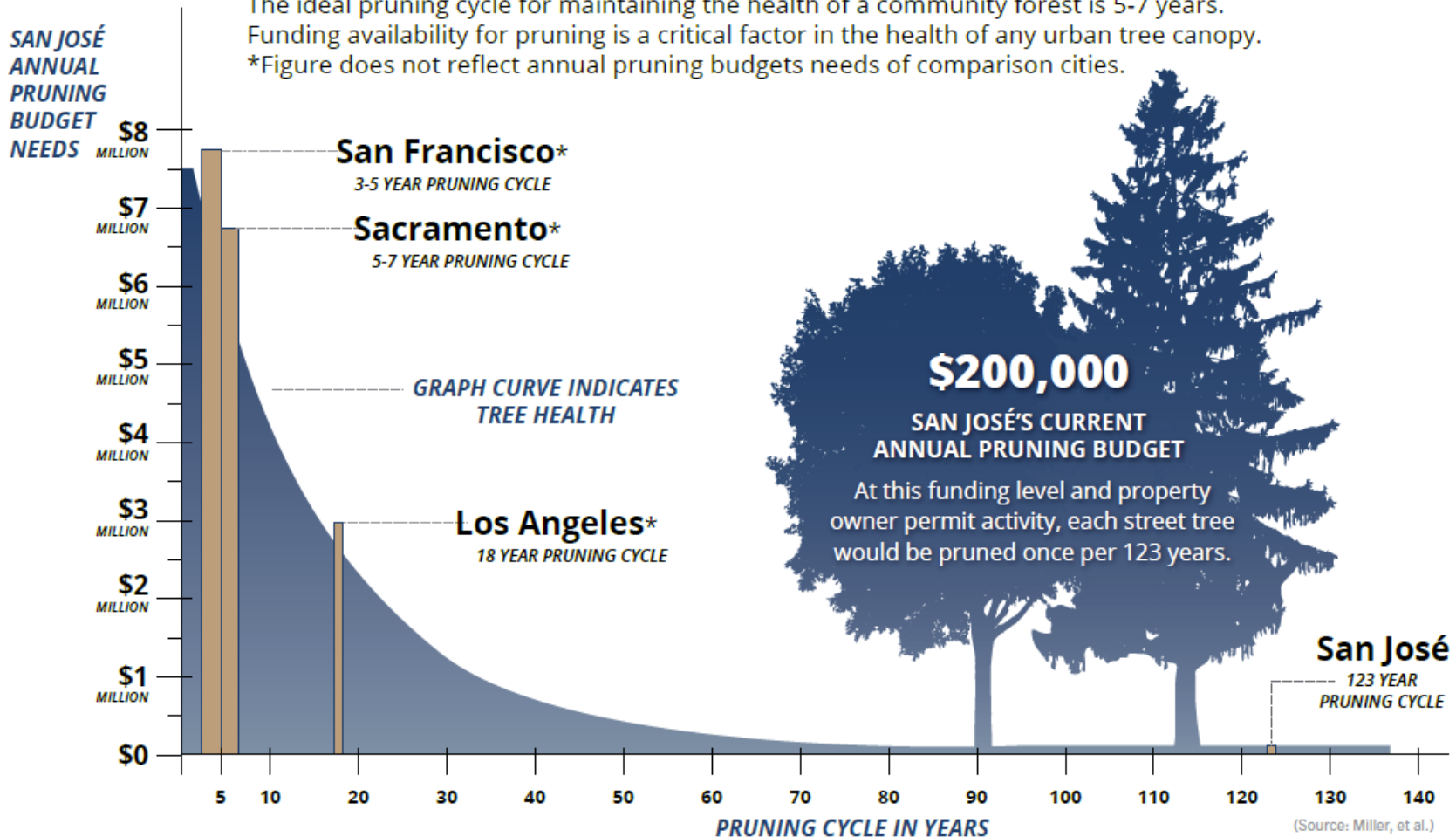


Sustainability Through Maintenance

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.



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 ²	35 ft ²	50 ft ²	75 ft ²
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

Maintenance Funding Needs

Annual Funds needed to achieve a 5-7 pruning cycle

	Street Trees (270,000 Total)		Park Trees (30,000 Total)		All Public Space Trees (300,000)	
	Budget	Trees Trimmed	Budget	Trees Trimmed	Budget	Trees Trimmed
To Achieve 5- to 7-Year Cycle	\$6,750,000	54,000	\$750,000	6,000	\$7,500,000	60,000
Current Estimates	\$200,000	1,945	\$65,000	20	\$265,000	1,965
Gap To Sustainable Management	\$6,550,000	52,055	\$685,000	5,580	\$7,235,000	58,035



Outreach Efforts

- 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, Si Se Puede, Open Space Authority, AARP, Audubon Society, California Native Plant Society, SPUR

Preliminary Community Forest Roadmap



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 further leverage funds to update street tree inventory
- Form Community Forest Advisory Committee (CFAC)
- Add Assistant Arborist to support early workplan efforts, including CFAC and review of policies/procedures
- Evaluate funding options to expedite workplan items
- Use FY 22-23 budget process to seek increased funding for City of San Jose maintained trees