Item: VI-B

DUDEK

CITY OF NEWPORT BEACH

Urban Forest Analysis (Corona Del Mar) and Canopy Cover Analysis (Citywide)

JUNE 2025

Parks, Beaches & Recreation Commission Meeting

OCTOBER 7,2025

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Urban Forest Analysis

Project Background

1) Conduct an updated inventory of 3,353 tree sites within the Corona del Mar neighborhood.

2) Compare the inventory data to urban forest sustainability indicators.

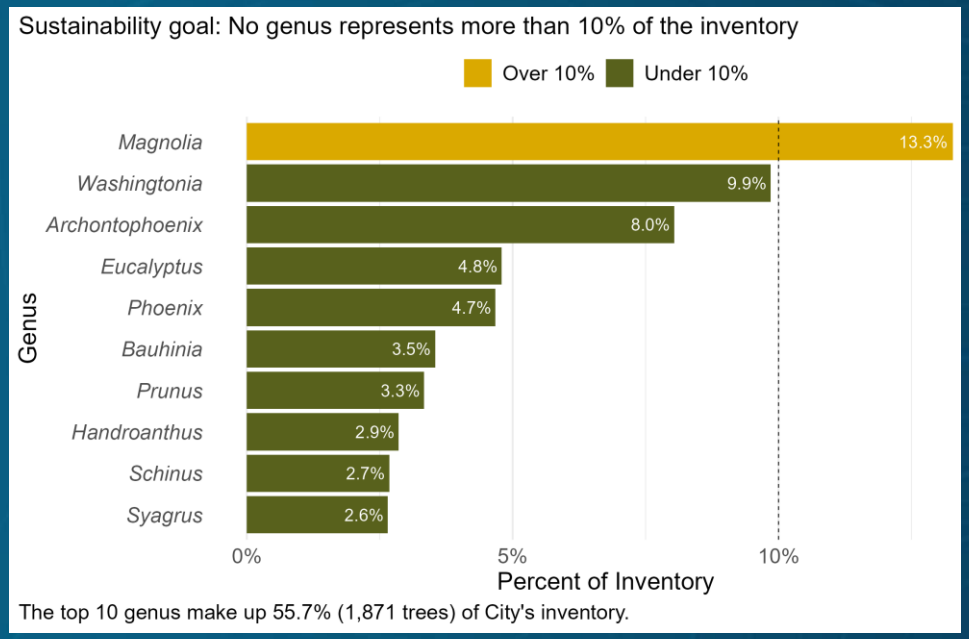
3) Assess risks to pests and diseases.

4) Determine tree maintenance needs.

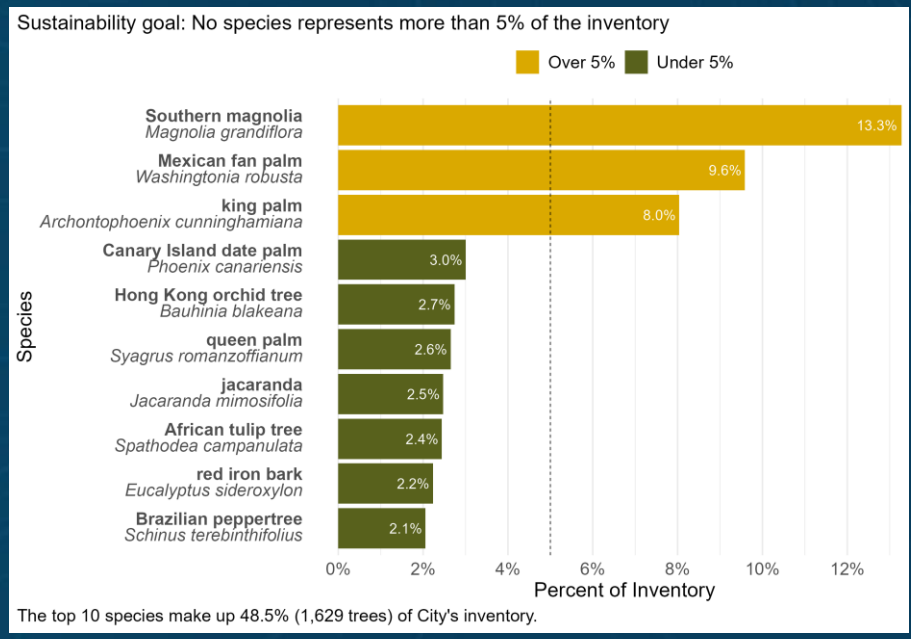
5) Provide management recommendations.

Sustainability Indicators – Species Diversity

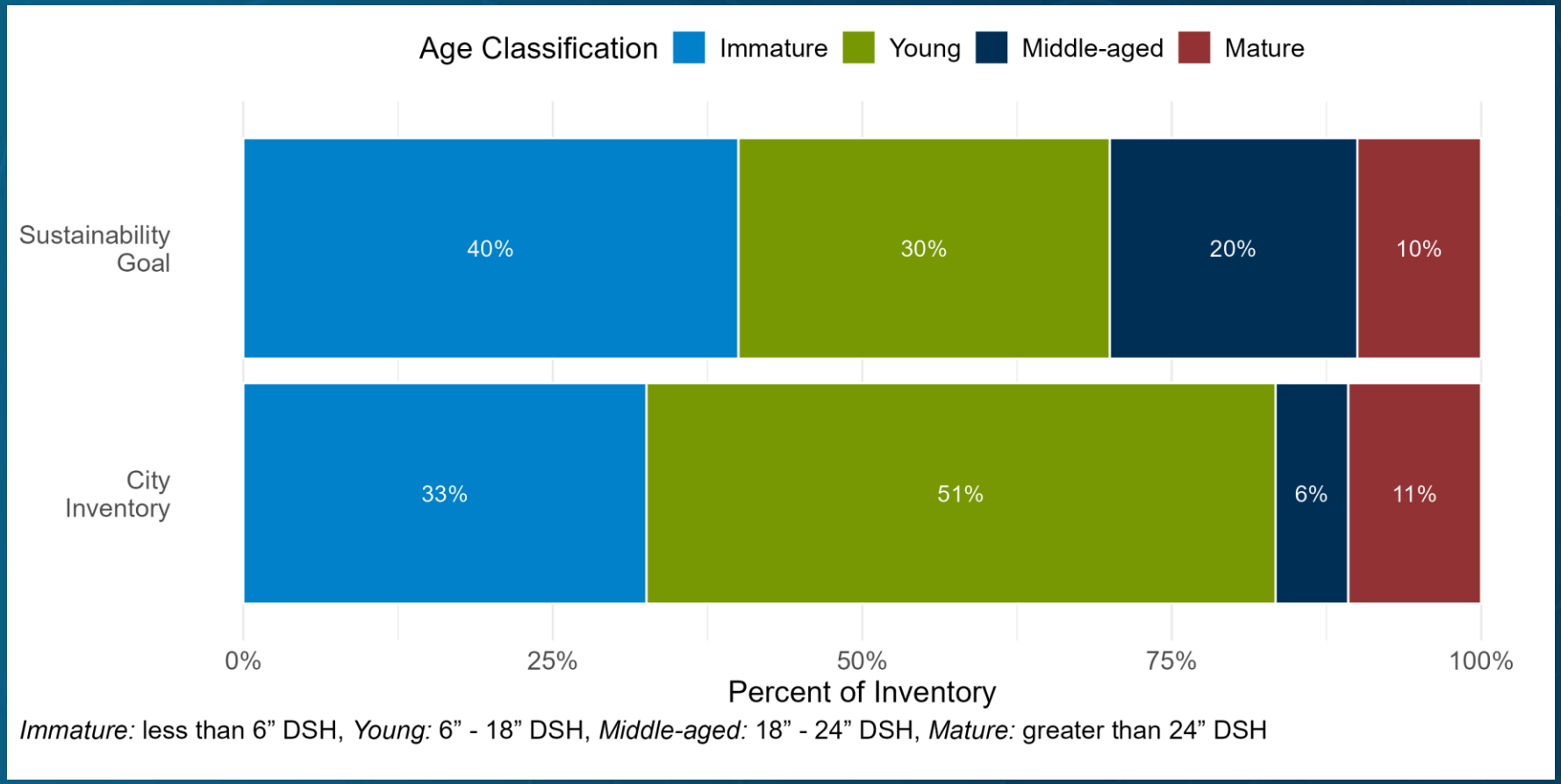
Genus Diversity (106)



Species Diversity (164)



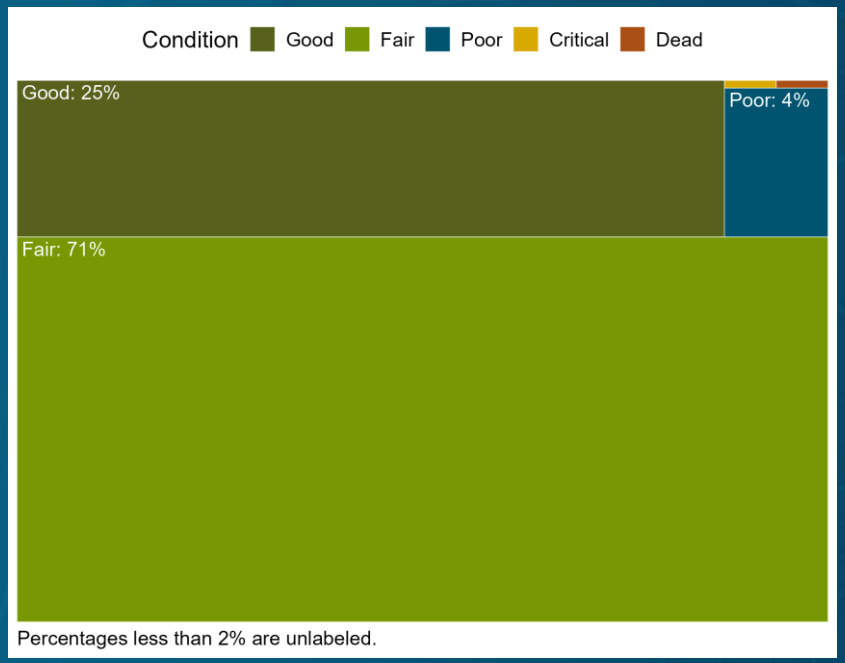
Sustainability Indicators – Age Diversity



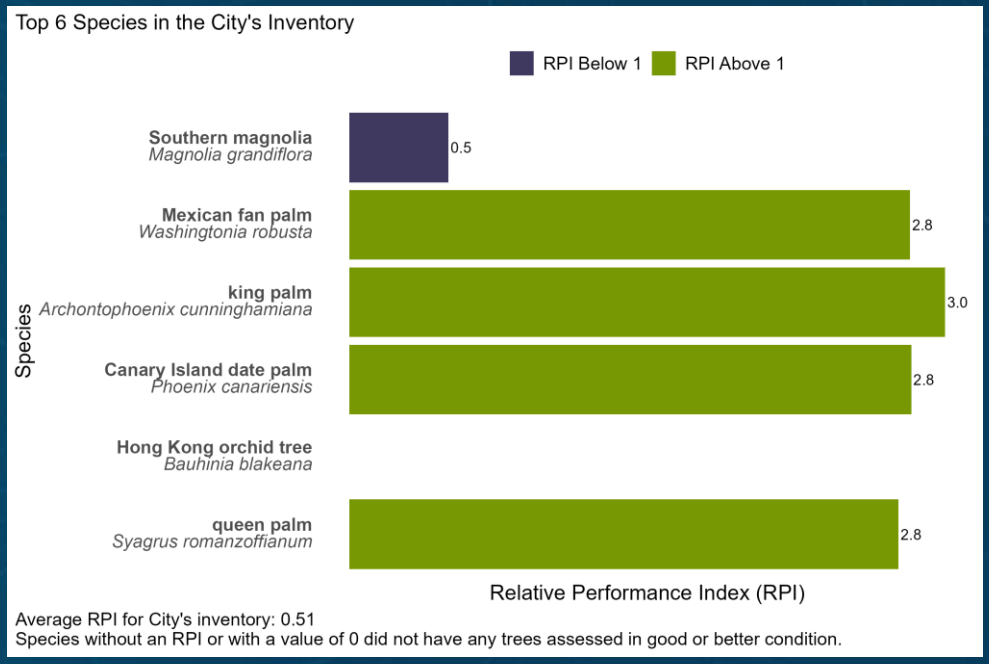
Immature: less than 6” DSH, *Young:* 6” - 18” DSH, *Middle-aged:* 18” - 24” DSH, *Mature:* greater than 24” DSH

Sustainability Indicators – Condition

Inventory Condition

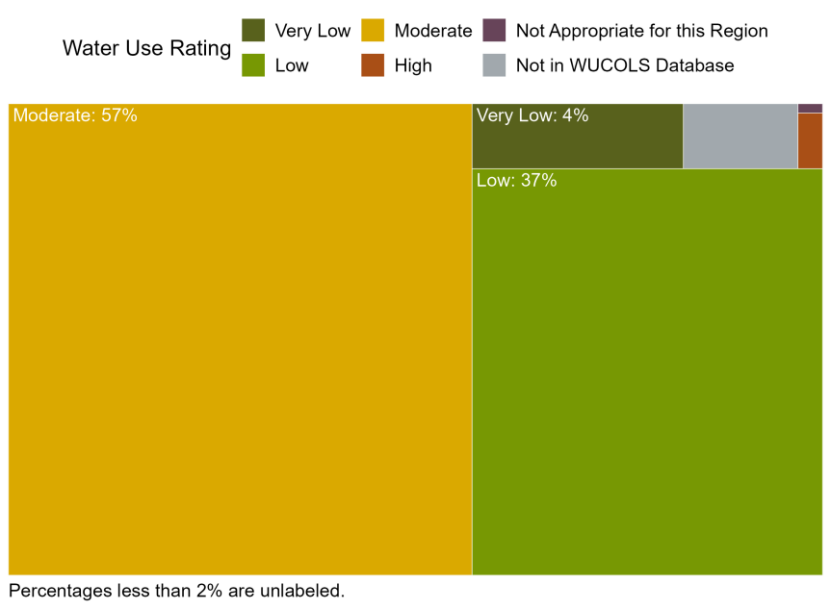


Rating Against Inventory

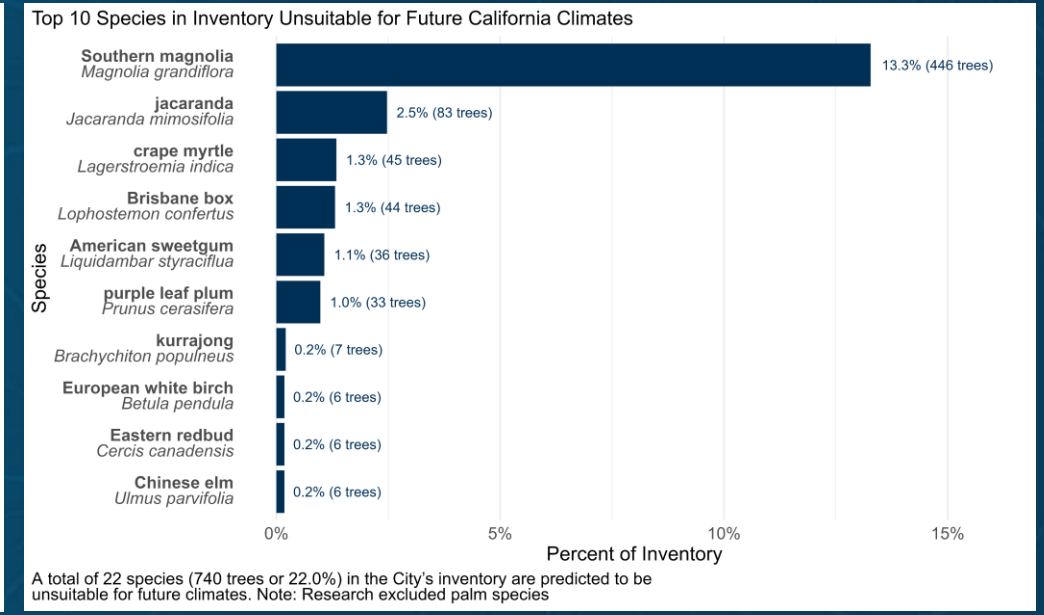


Sustainability Indicators – Climate Resiliency

Water Use Rating



Suitability for Future Climate



Pest and Disease Vulnerability

- South American Palm Weevil
  - Palms are 28% of CDM inventory
  - 93% of that population is vulnerable
  - Best control methods still not known
- Other potential pest and diseases common to Southern Ca.
- Monitor high risk species like Canary Island date palm, *Ficus spp., Eucalyptus spp.*

CDM Inventory Recommendations

- 233 Vacant Planting Sites
- 276 Structural Prune
- 20 for elevated risk assessment
- 28 Removals
- Overall trees in a safe and healthy (96% fair or good) condition
- Monitoring Plan for Magnolia Trees

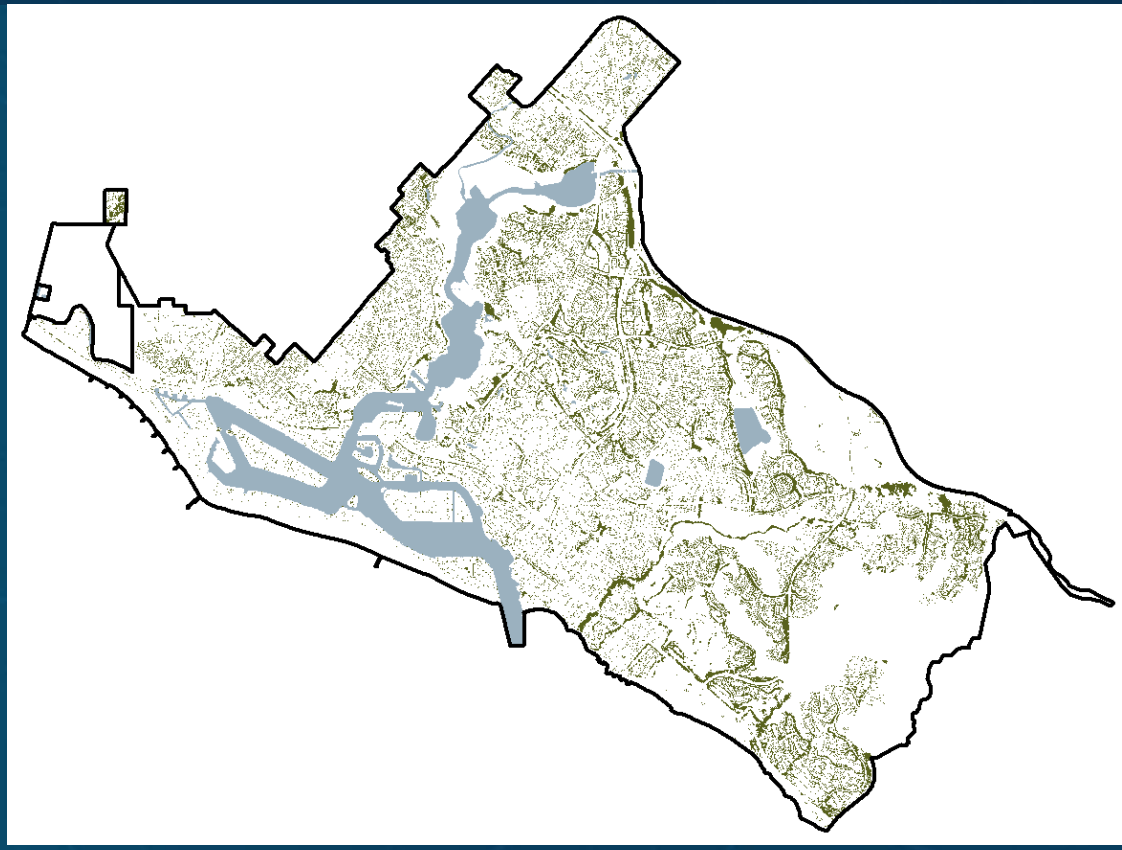
Canopy Cover Analysis

Project Background

1) Conduct a City-wide canopy cover analysis.
2) Summarize results by census tracts, zoning types, and parks.
3) Set baseline for long-term planning.
4) Provide recommendations.

Canopy Cover Analysis

- 2024 NAIP Imagery with .6 meter resolution.
- Machine learning classification:
  - Tree canopy
  - Vegetation
  - Bare earth
  - Impervious surfaces
  - Water

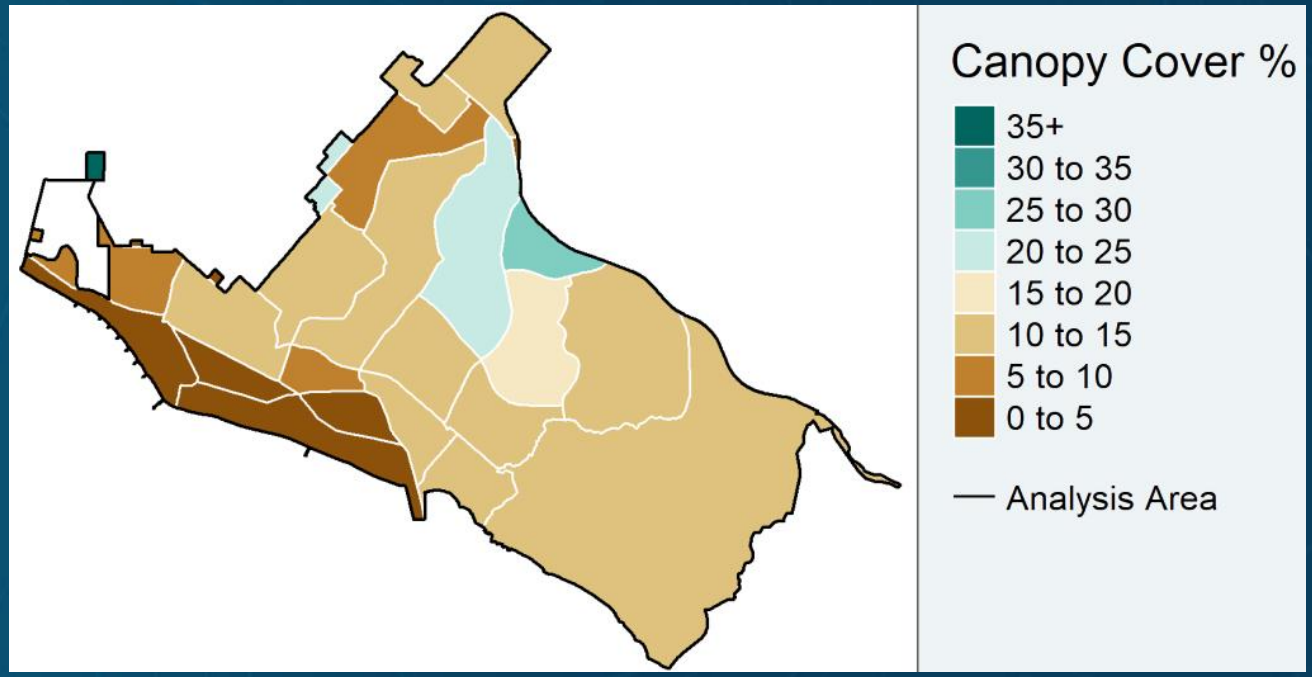


Canopy Cover Analysis

Land Cover Class	Acres	Percent
Tree canopy	2,159	13%
Low to medium vegetation	4,885	29%
Bare earth/non-photosynthetic vegetation	687	4%
Impervious	7,592	46%
Water	1,329	8%

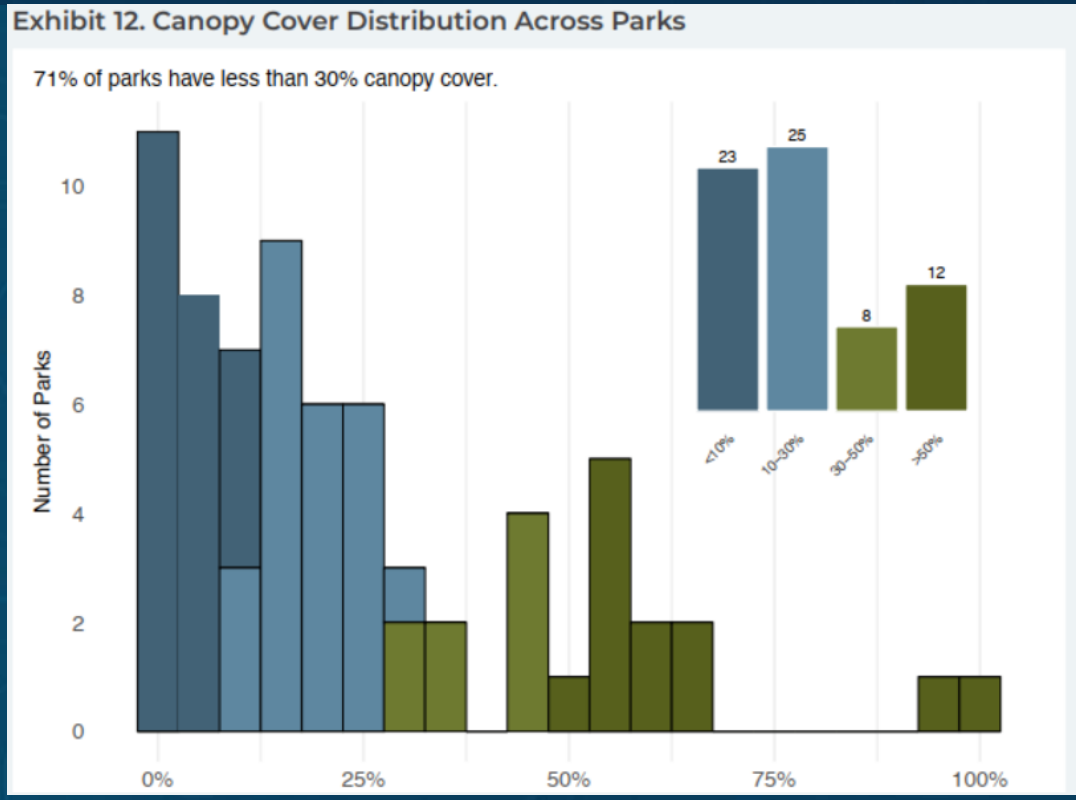
Canopy Cover Analysis – Census Tracts

- Coastal zone and Newport Preserve are lowest 9 (2% - 7%).
- Relatively equal distribution throughout rest of the City.



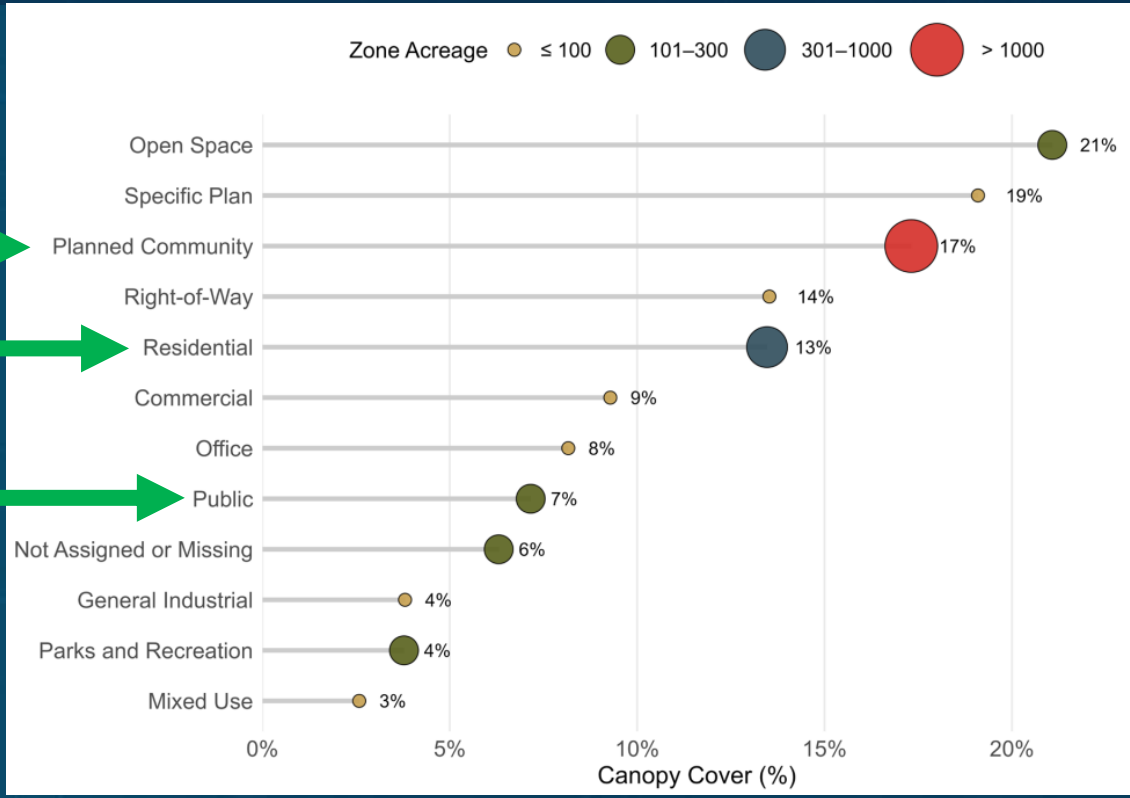
Canopy Cover Analysis – Parks

- 24% average across all parks.
- Only 6% of City canopy.
- Park use limits canopy potential.
- Canopy data for each park.



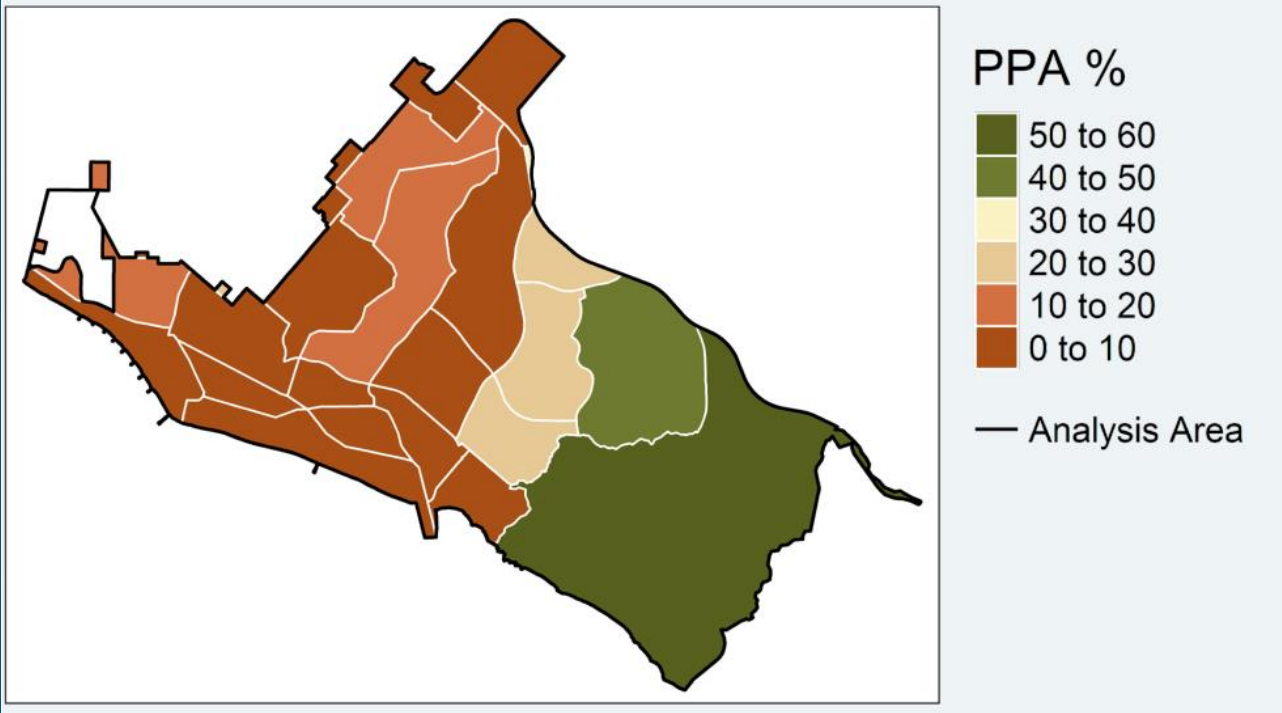
Canopy Cover Analysis – Zoning Types

- Planned community, residential, and public zone types likely offer best opportunities for tree planting based on canopy levels and total acreage.

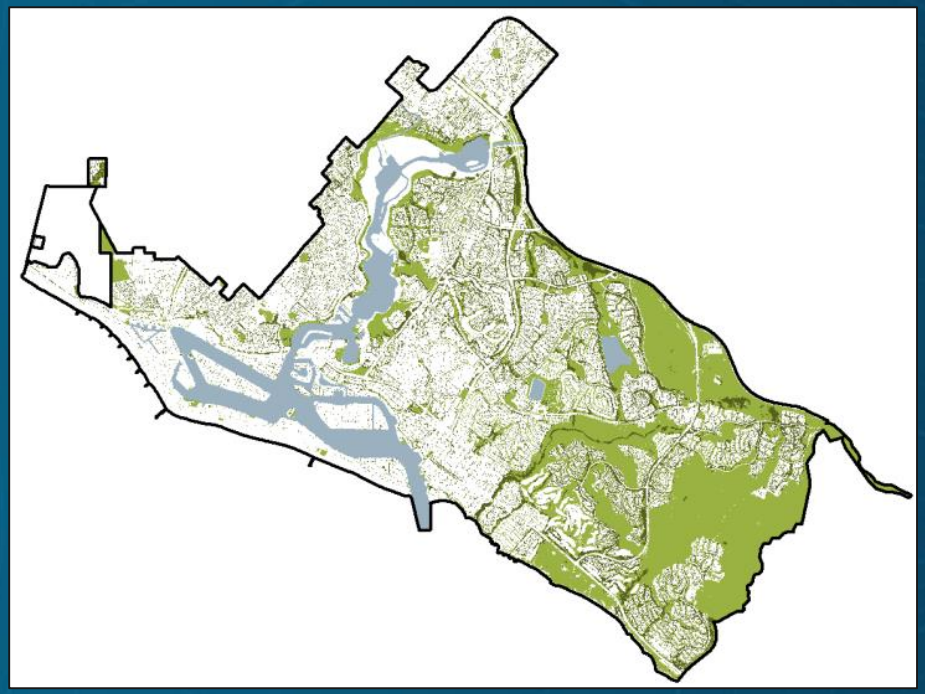


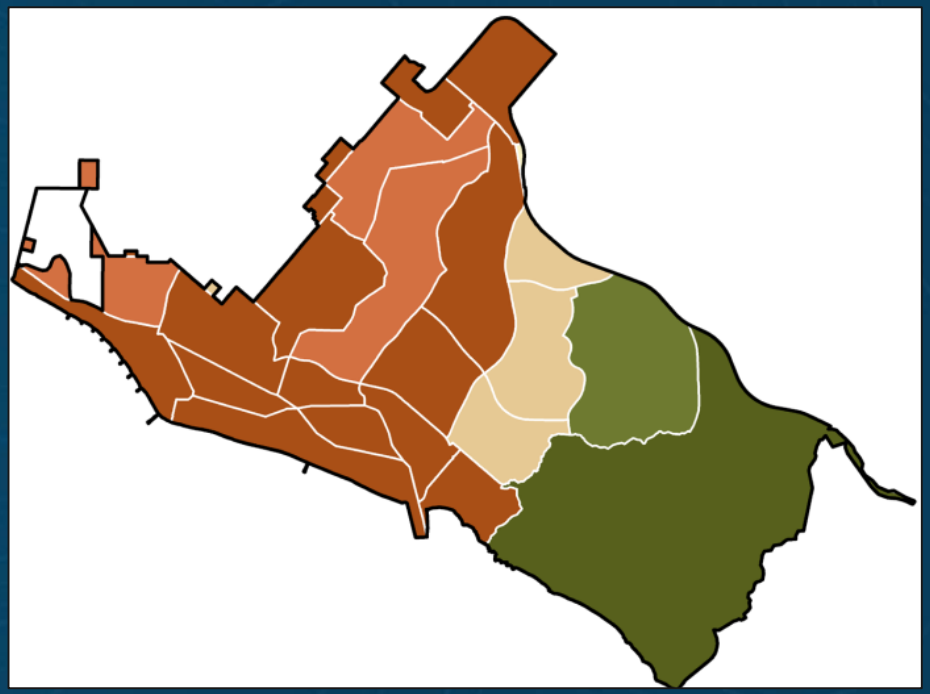
Canopy Cover Analysis – Possible Planting Area

- Western portion of city is developed, dense, water restrictions.
- East is open space, large lots, low density.
- Must make space for trees to increase canopy cover.



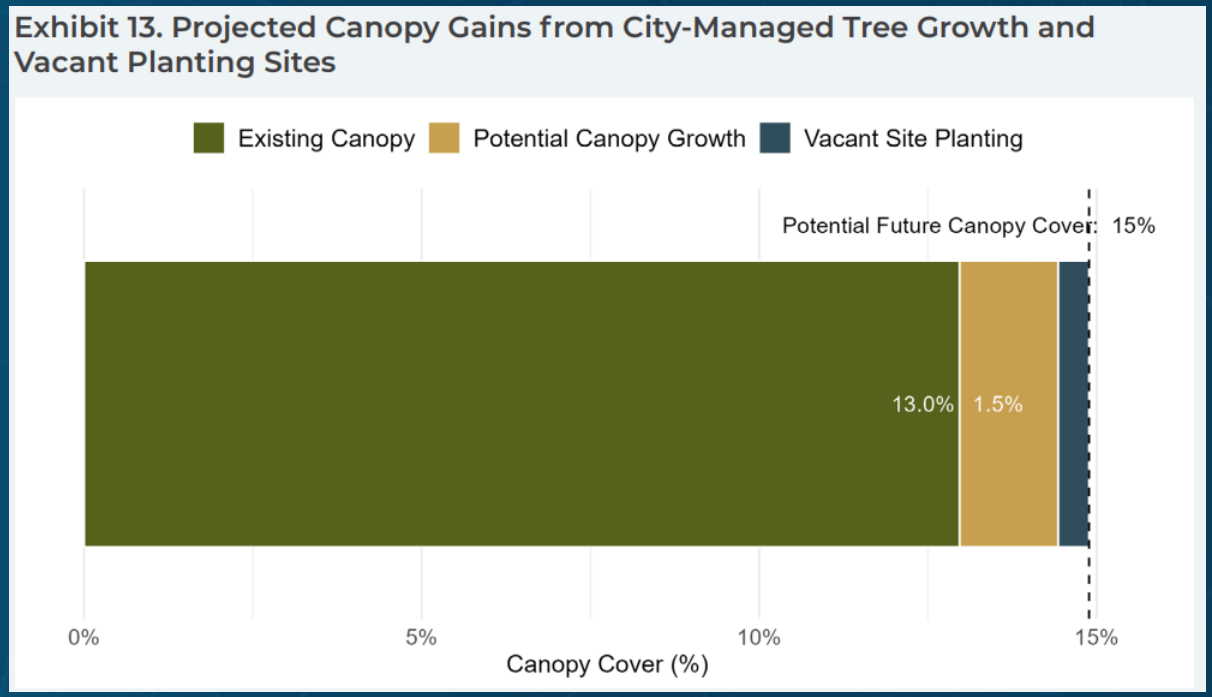
Canopy Cover Analysis – Possible Planting Area





Canopy Cover Analysis – Goal Setting

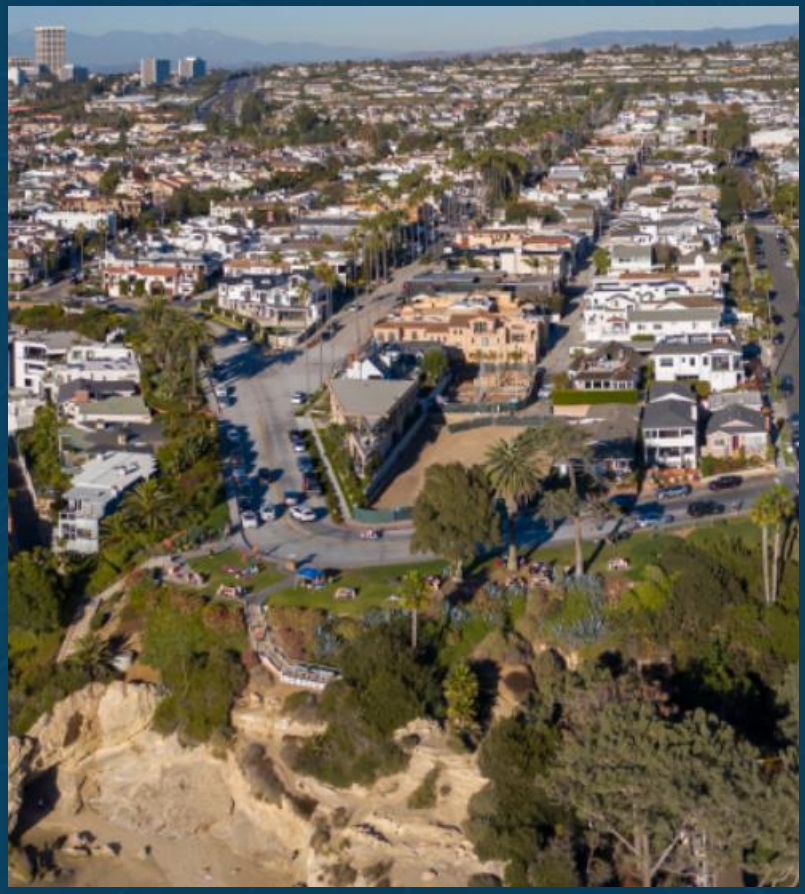
- 15% is likely with known data.
- Other factors:
  - Private property growth/loss
  - CIP's
  - Development



Recommendations

City-Wide Recommendations

- Take steps towards establishing a city-wide canopy cover target and align urban forestry efforts.
- Consider a private property tree protection ordinance.
- Refine data to create a planting strategy.
- Develop partnerships to support urban forestry goals.



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Thank you!

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