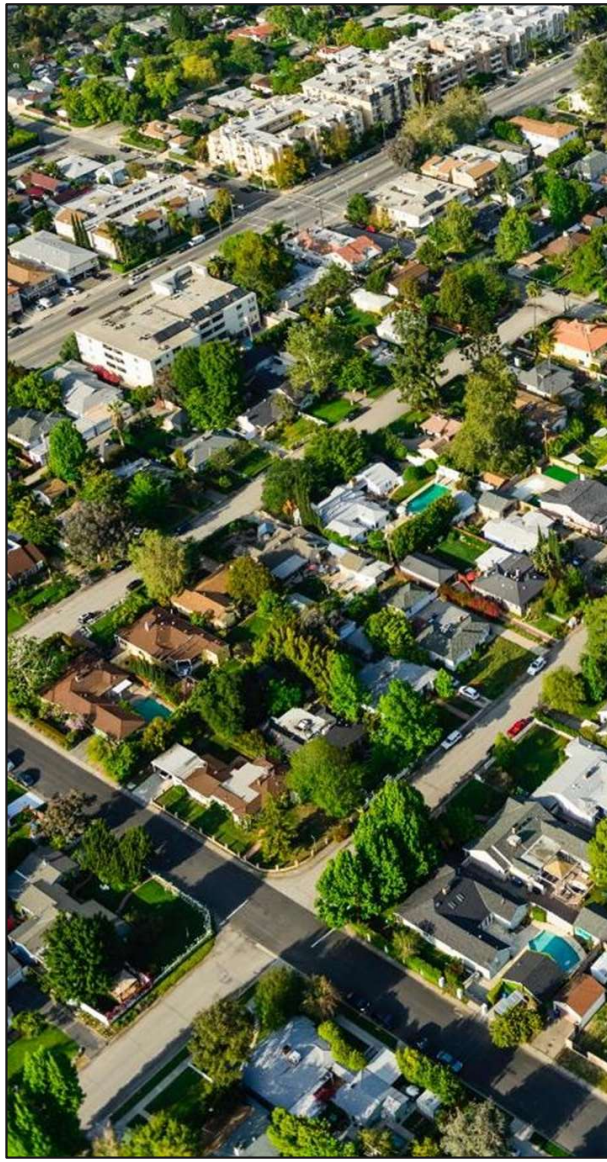
DUDEK

Canopy Cover Approache

Canopy Cover

Canopy cover refers to all the leaves and branches of a tree that cover an area when viewed from above.

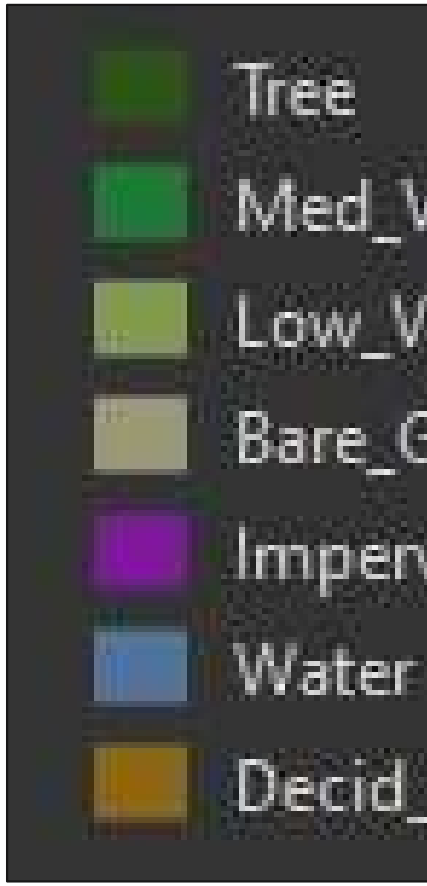


Canopy Cover

PROCESS

- Analyzes aerial imagery to create a land cover classification product for the defined study area.
- Use the land cover classification to develop strategic actions for urban forest planning.

LAND COVER



Canopy Cover Approaches

U.S. FOREST SERVICE

- 2018 NAIP 4 band imagery
- 60-cm spatial resolution
- LIDAR

PROS

- High quality cla
- Free

CONS

- Not known if it produced again
- Only canopy da

Canopy Cover Approaches

NAIP 4 BAND IMAGERY

- Typically 1m or better resolution
- Detects chlorophyll to separate vegetation from buildings, roads, etc.
- Machine learning process
- Verification process

PROS

- Free
- Multiple years change analy
- Full land cove

CONS

- Less accurate
- Variation in ir

Canopy Cover Approaches

NAIP 4 BAND IMAGERY + LIDAR

- Typically 1m or better resolution
- Detects chlorophyll to separate vegetation from buildings, roads, etc.
- **Height information** to separate tree/shrub/grass
- Machine learning process
- Verification process

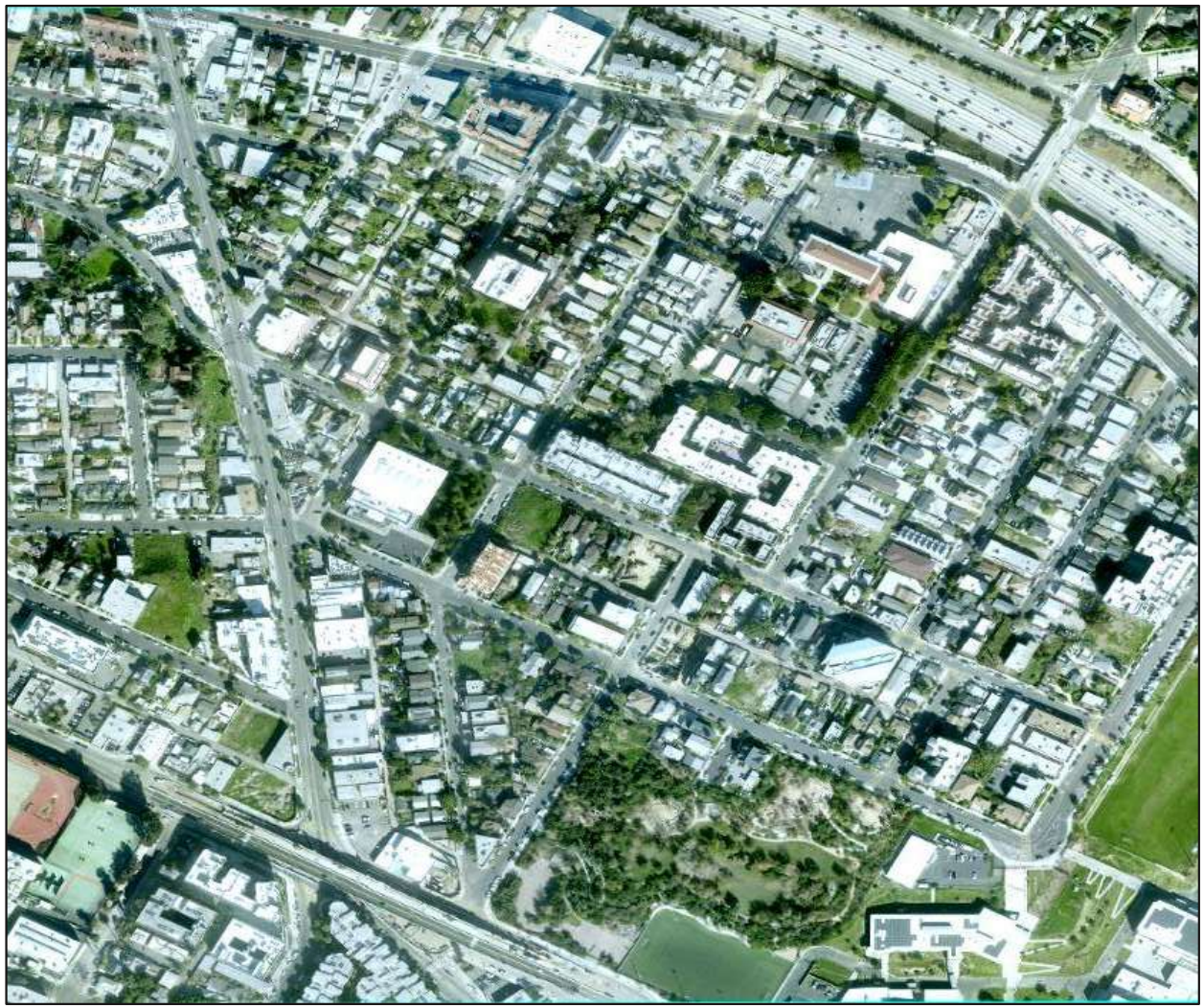
PROS

- Highest quali
- Sometimes fr
- Imagery/LiDA purchased

CONS

- More time/co

Canopy Cover Approaches



Canopy Cover Approaches

36% Canopy Cover

City of Chico Incorporated Area

Analysis Area

Land Cover

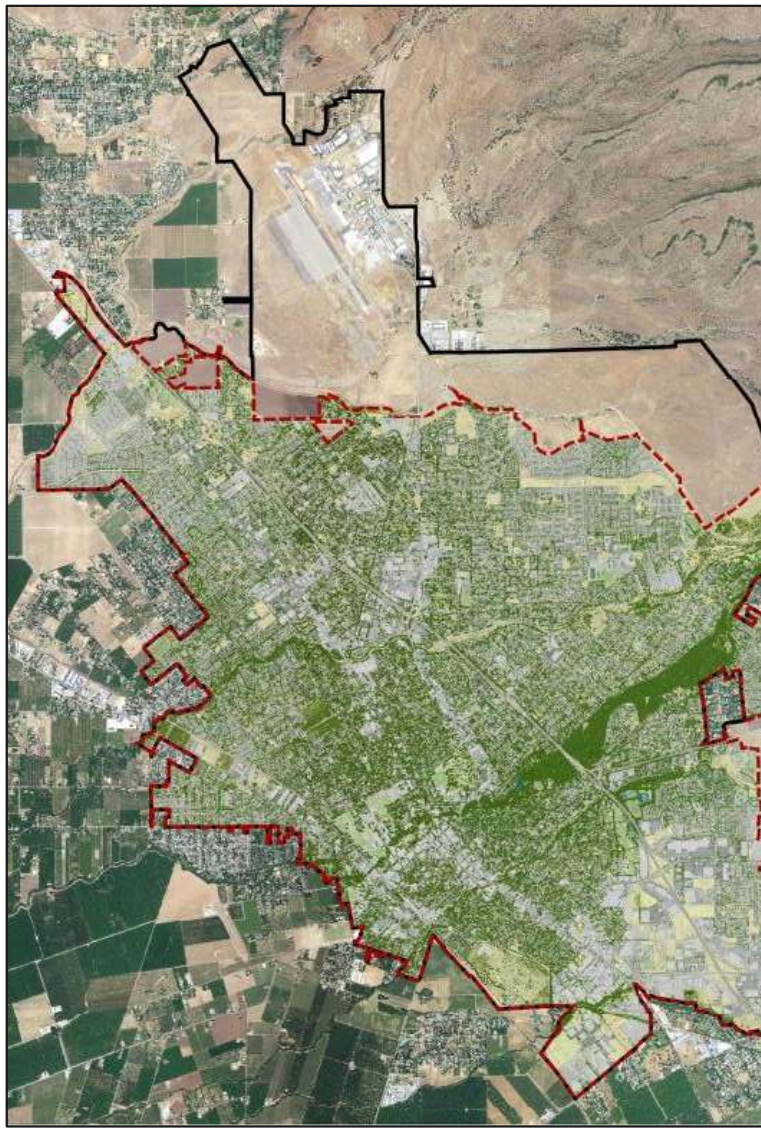
Impervious Surface (41%)

Bare Ground/Dead Vegetation (17%)

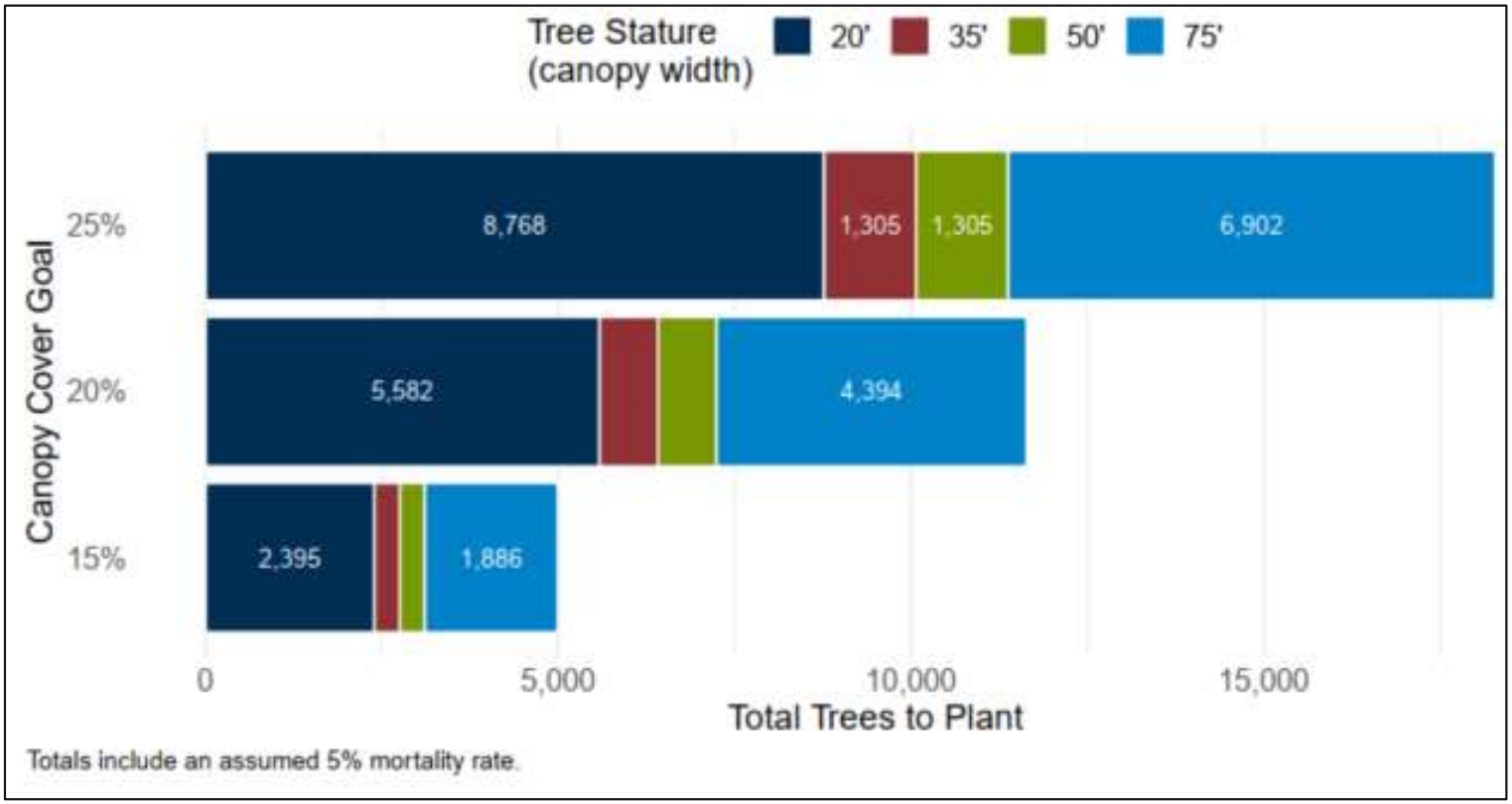
Low/Medium Height Vegetation (5%)

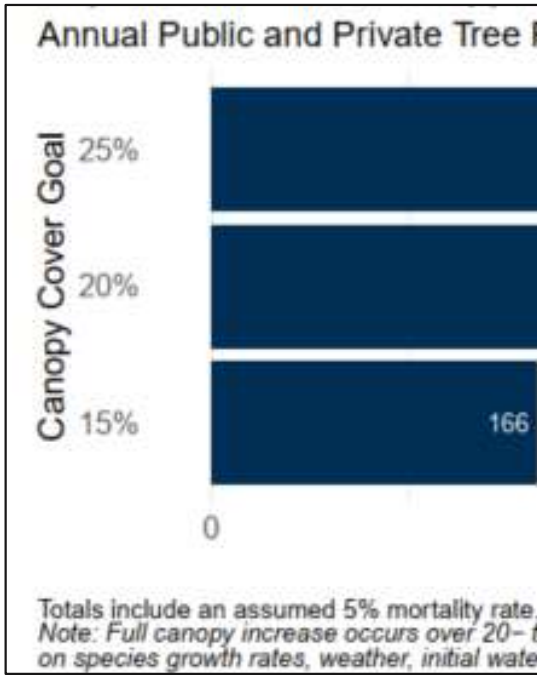
Tree Canopy (36%)

Water (<1%)



Canopy Cover Approaches





Canopy Cover Approaches

1% Increase From 2005 to 2020

City of Chico

Analysis Area

Neighbohood Boundary

Percent Change in Canopy from 2005-2020

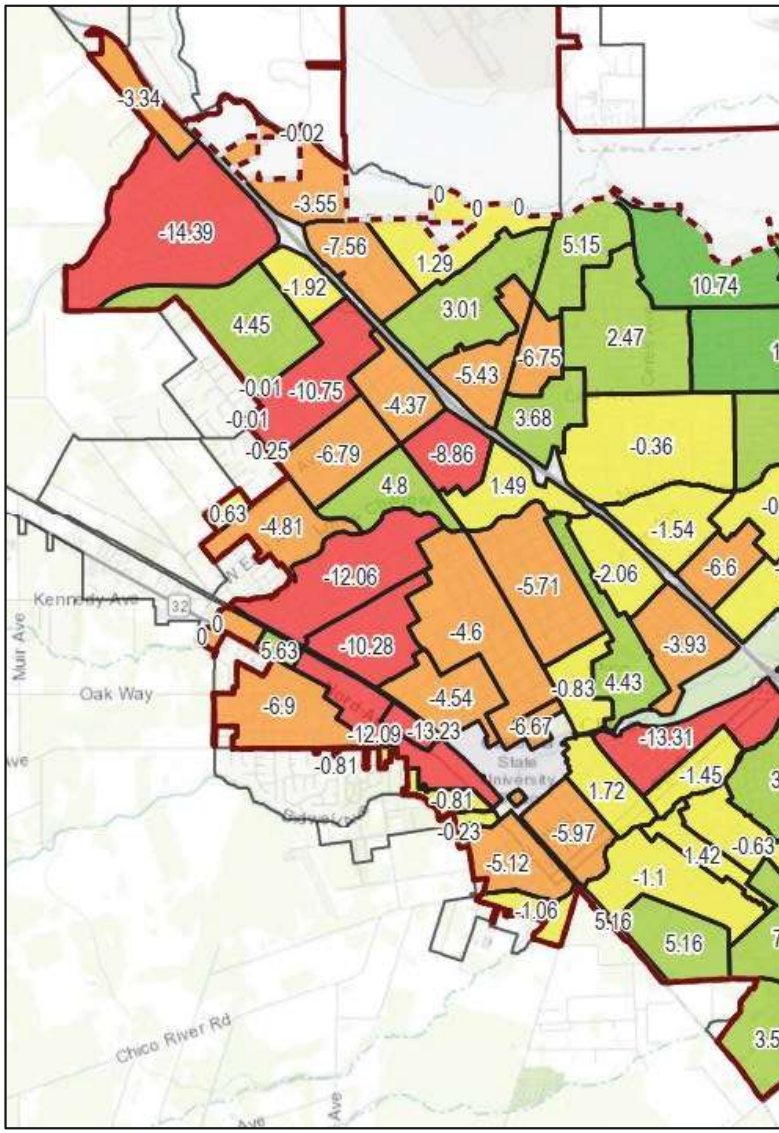
-14.39 to -8.86

-8.85 to -3.30

-3.29 to 1.72

1.72 to 8.53

8.53 to 21.77



Canopy Cover Approaches

Homes/Neighborhoods have EXCELLENT canopy cover

Land Use
Parks
Rural Residential
Multi-Family Resi
Single Family

Priority tree planting locations

Land Use
Rights-of-Way
Commercial
Retail
Industrial

Canopy Cover Approaches

In Chico, development had a positive and Negative impact on canopy cover

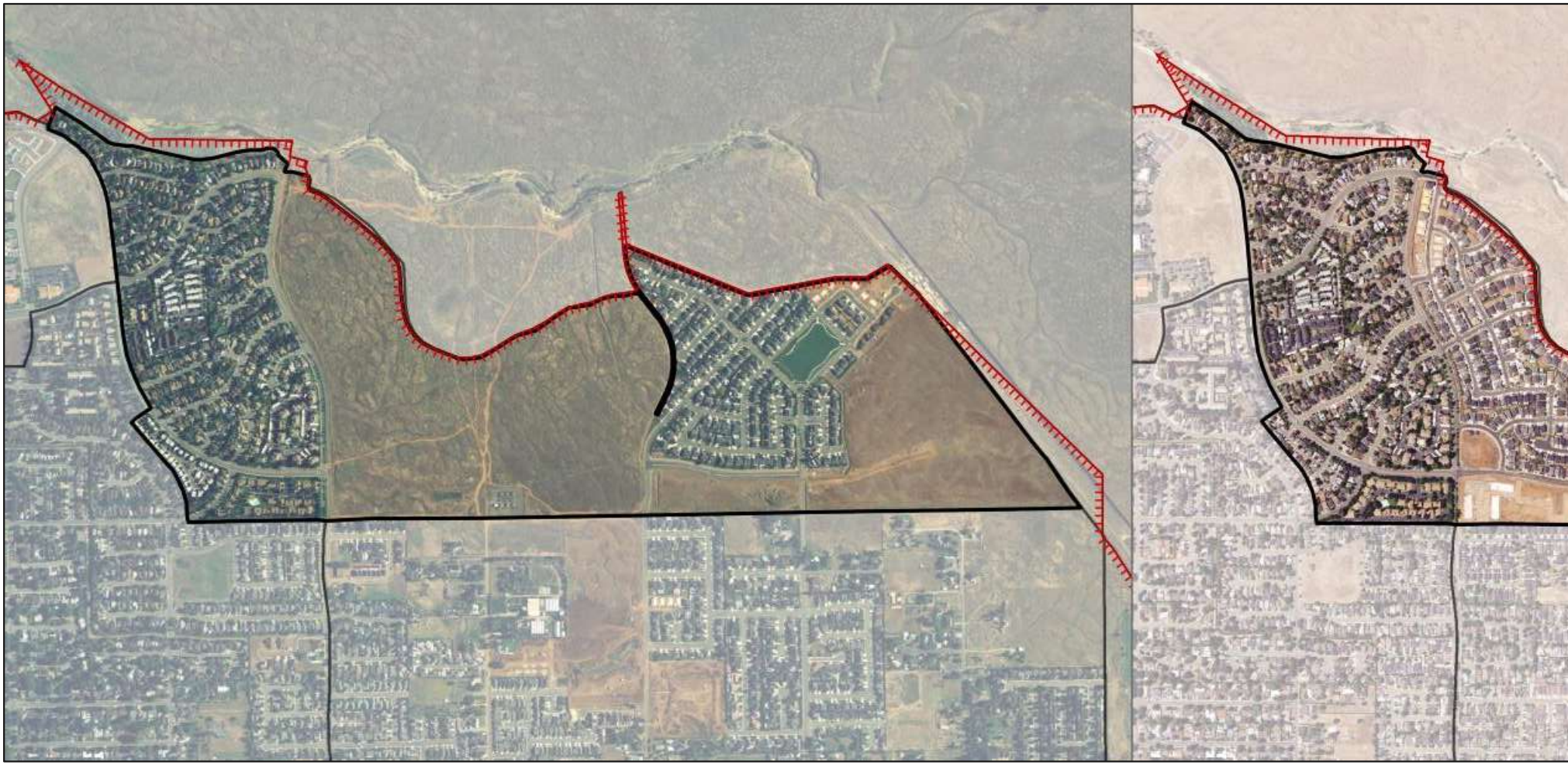
Land Cover	2005
Tree	35%
Shrub/Grass	14%
Impervious Surfaces	33%
Bare Ground	17%
Water	.4%

Canopy Cover Approaches

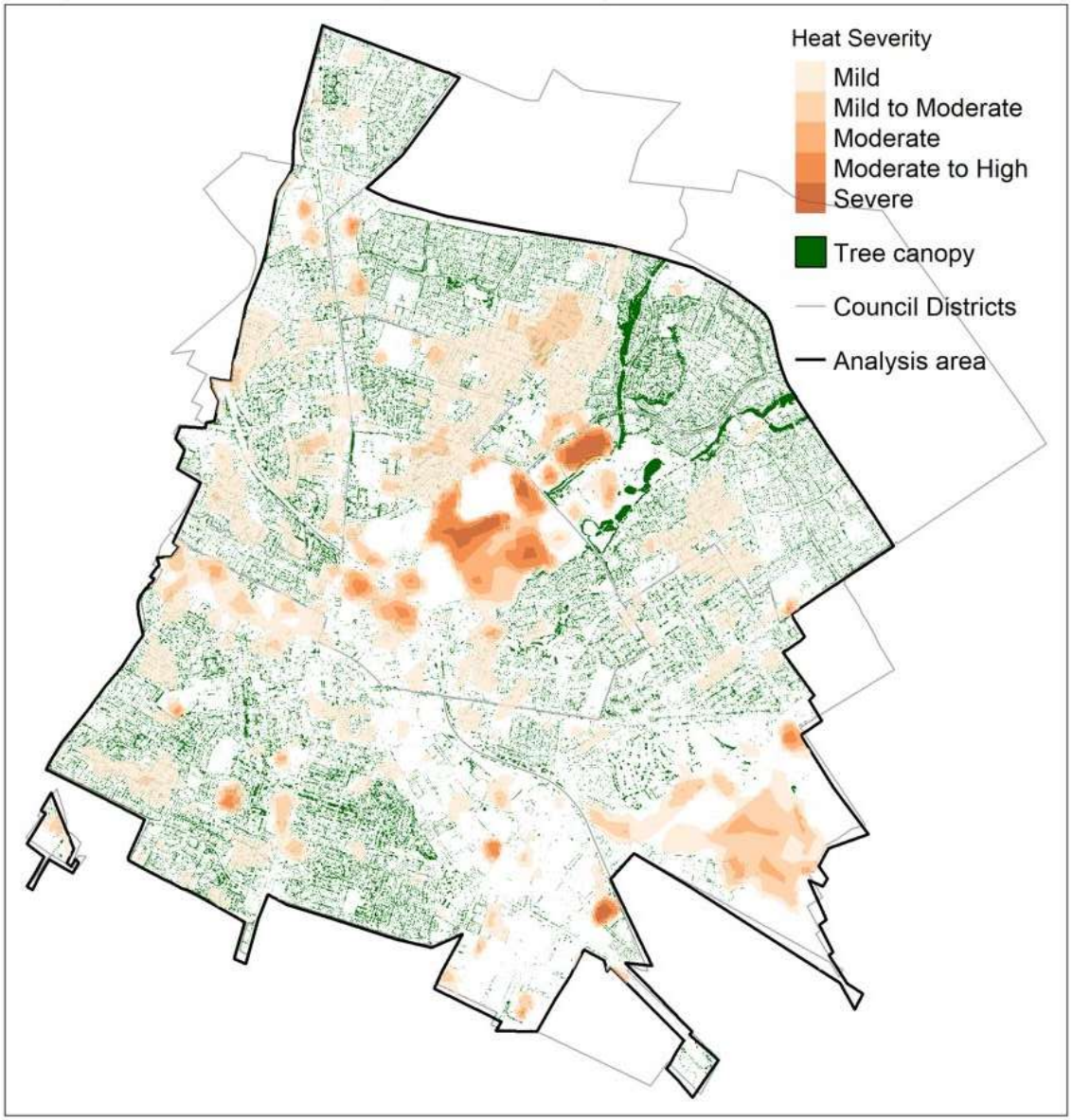
14% Decrease

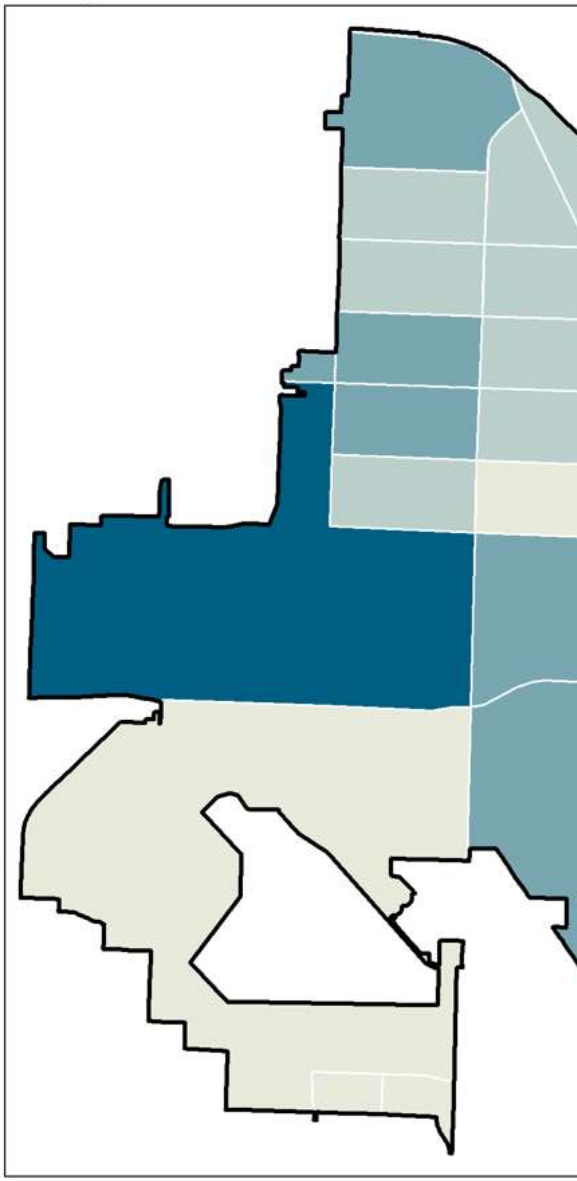
Canopy Cover Approaches

11% Increase

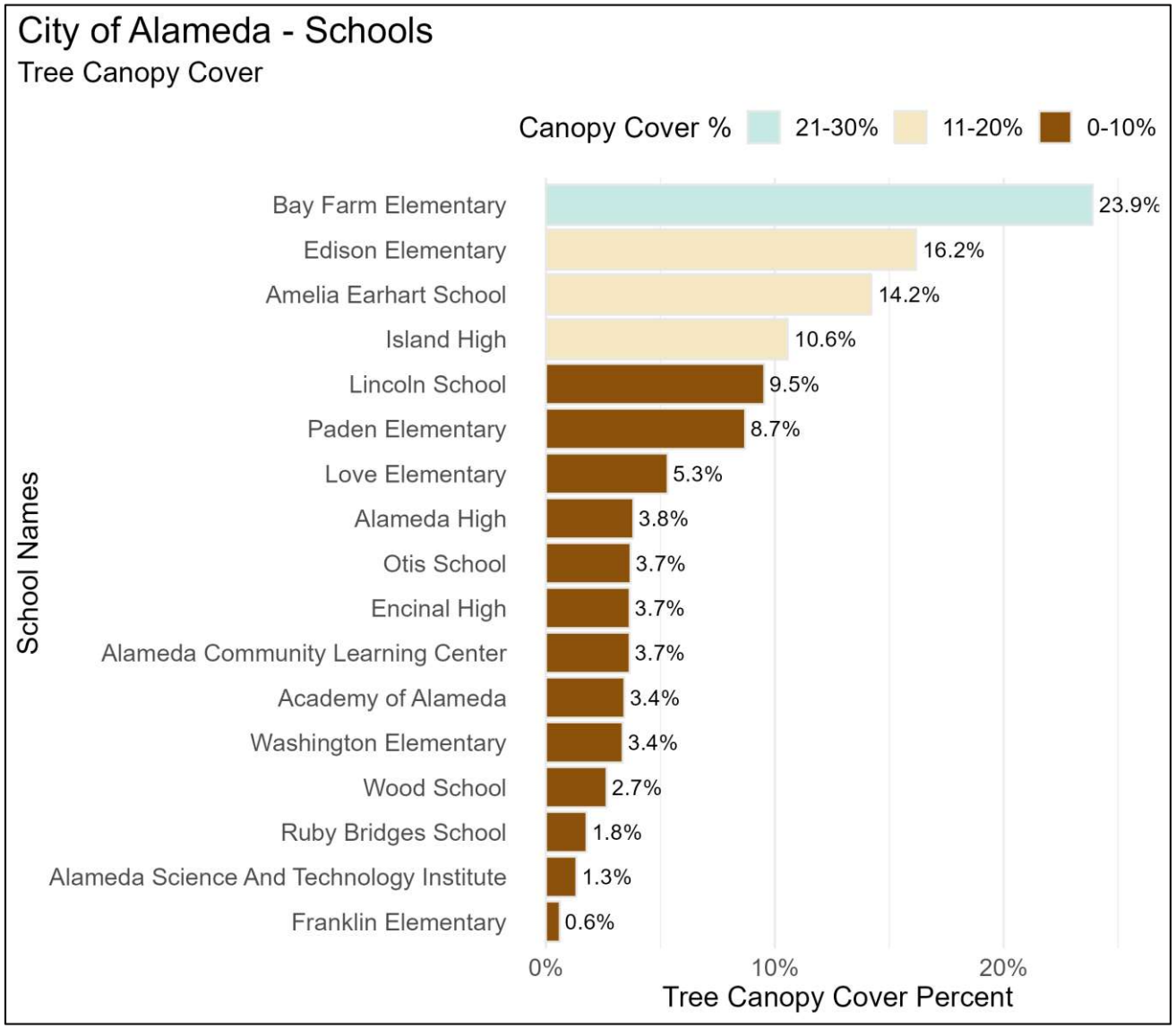


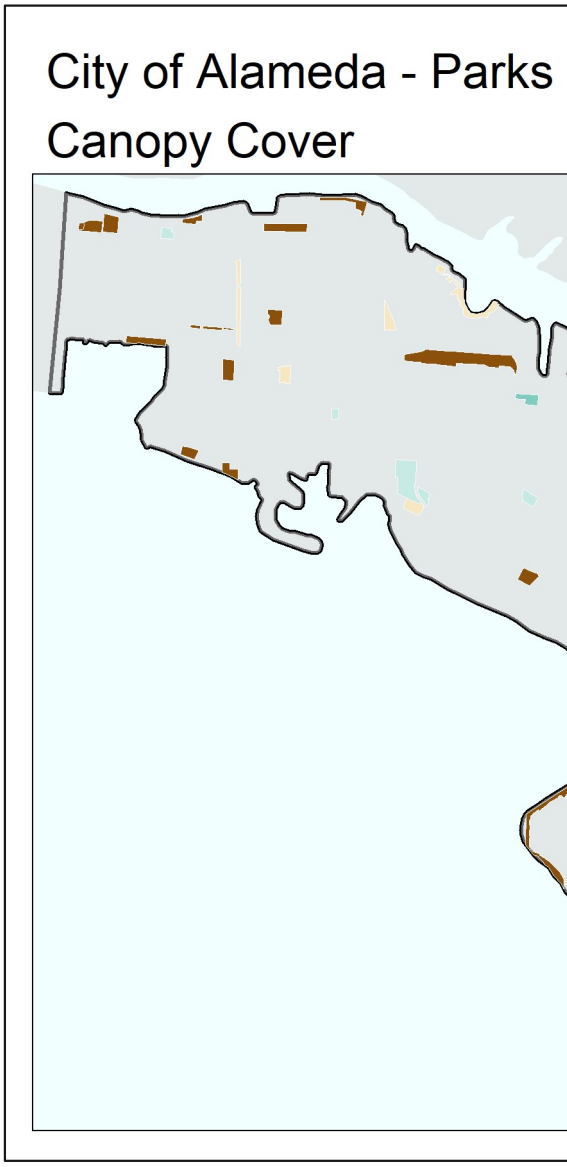
Canopy Cover Approaches





Canopy Cover Approaches





Thank You

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