



Urban Forestry as a Nature Based Climate Solution

Westminster, Colorado

Sponsoring Department: City Manager's Office—Sustainability Office

MENV Graduate Consultant: Logan Johnson

Overview

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Project Goals and Objectives

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Urban Forest Analysis

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Findings and Next Steps



Project Partners

NATURE-BASED
CLIMATE SOLUTIONS

USDN

urban sustainability
directors network



Project Goals



1

Bolster current tree planting initiatives and urban forestry practices



2

Improve understanding of tree canopy value and presence



3

Identify opportunities to address inequities in urban tree canopy cover

Deliverables



Identification of management best-practices

Written report on initial findings of current socio-economic and related equity considerations



Geo-Spatial Analysis of UTC and Equity

GIS and public tools to visually represent current UTC and addressing inequities



Recommendations for future planting initiatives

Culmination of results from analysis and best management practices for consideration



WESTMINSTER

UDI URBAN DRAWDOWN INITIATIVE
Building Carbon-Ready Communities

COLORADO TREE COALITION

TREES FOR COMMUNITY RESILIENCE

COLORADO FRONT RANGE URBAN FORESTRY EXPANSION STRATEGY

JULY 2021

SUMMARY



WESTMINSTER

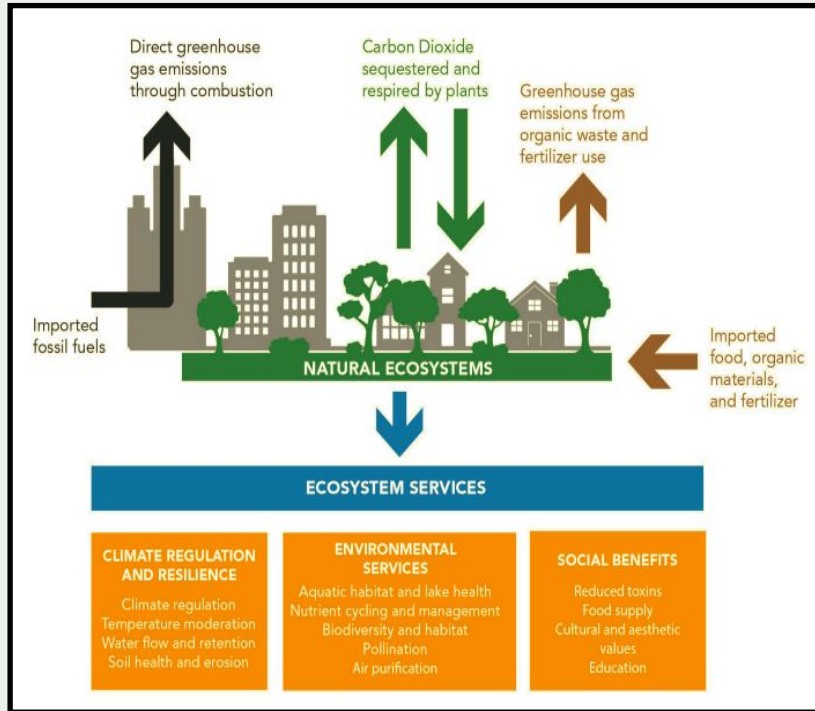
SUSTAINABILITY PLAN

MAY 2021

Climate Action and Urban Forests

- Cross pollination through coalitions
- Front Range Urban Forestry Strategic Plan
 - Curation of equitable urban forestry initiatives and capacity
- Needs for Westminster and other communities:
 - Capacity
 - Funding
 - Community vision/Mission
- Intersecting city plans and goals

Nature-based Solutions (NbS)



The International Union of Conservation of Nature defines the concept of NbS as, **“actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”** (Cohen-Shacham et.al., 2016).

Benefits of Urban Forests



Carbon Sequestration

Economic valuation of stored carbon in biomass (trees)



Avoided Stormwater Runoff

Urban tree canopies assisting with retention of stormwater runoff



Social and Health Benefits

Less heat related illnesses, increase in air quality,



Biodiversity and Resilience

Support of more wildlife and resilience



Key Findings and Takeaways

Project Findings

% Overall Tree Canopy Cover

12.4%

Overall Tree Equity Score

77

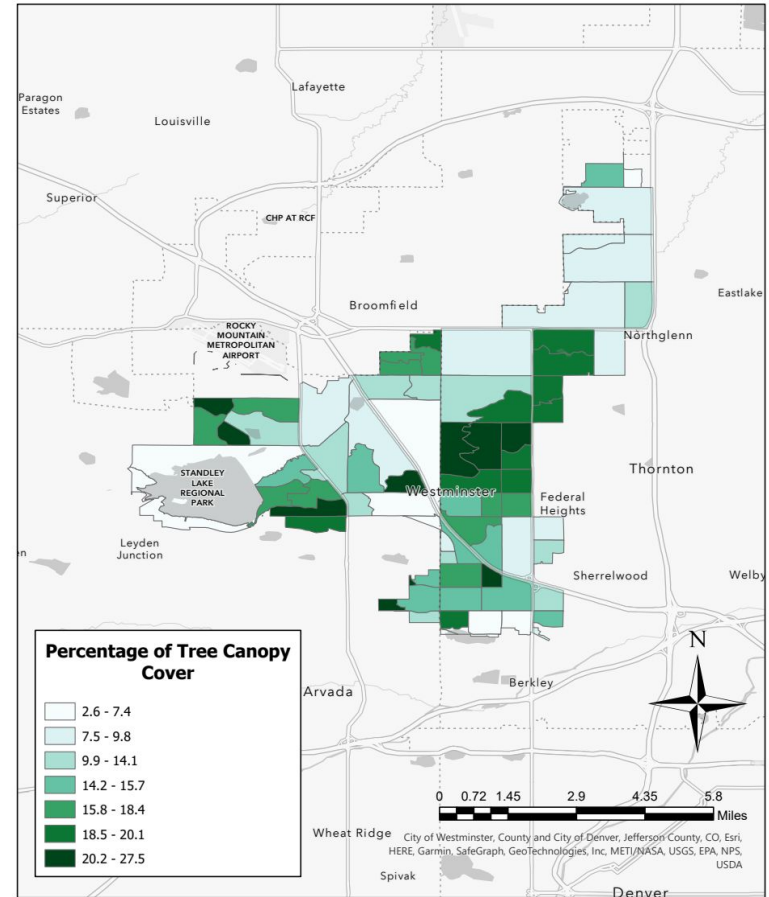
Carbon Storage Value

\$4,707,210

**Avoided Runoff
\$/Year**

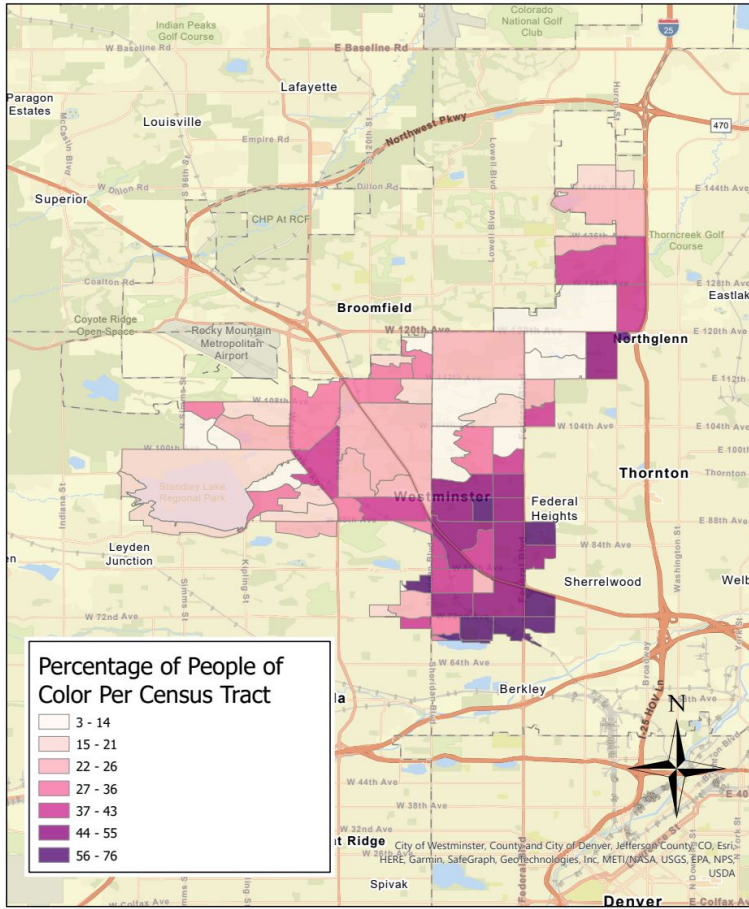
\$66,151

Percentage of Tree Canopy Cover Per Census Tract

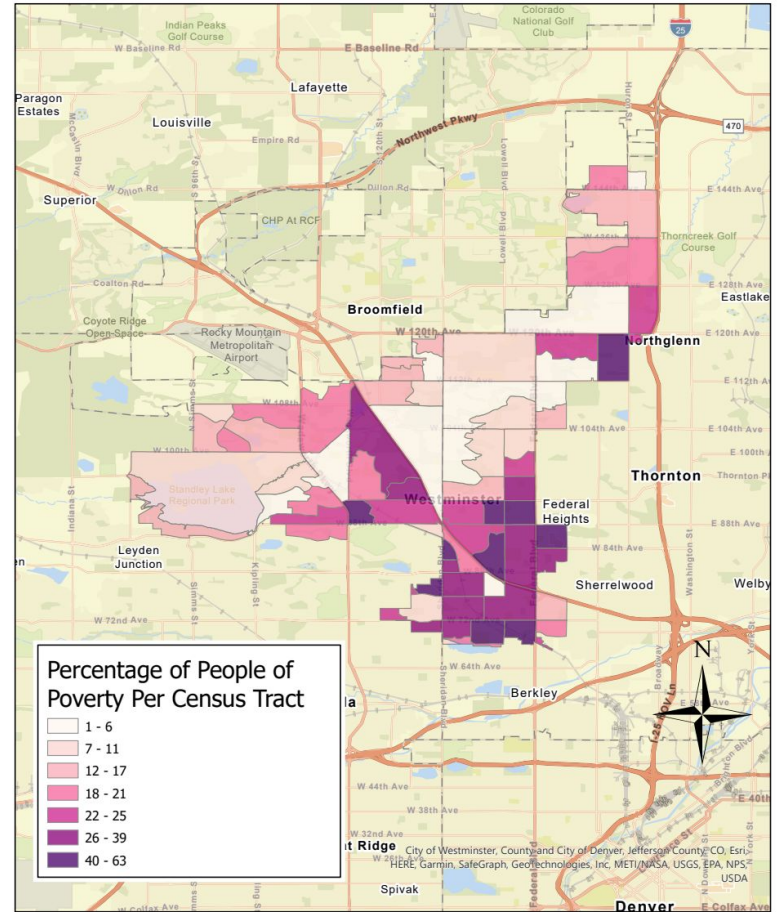


Social Equity Maps

Percentage of People of Color Per Census Tract

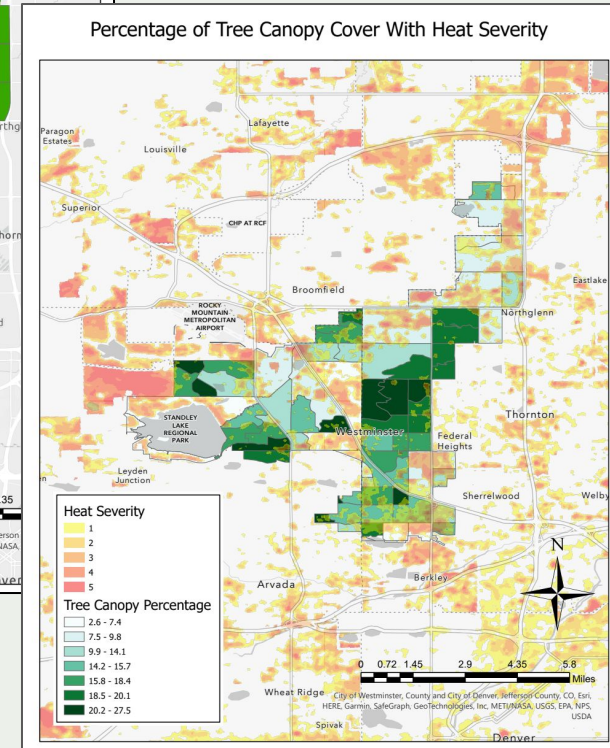
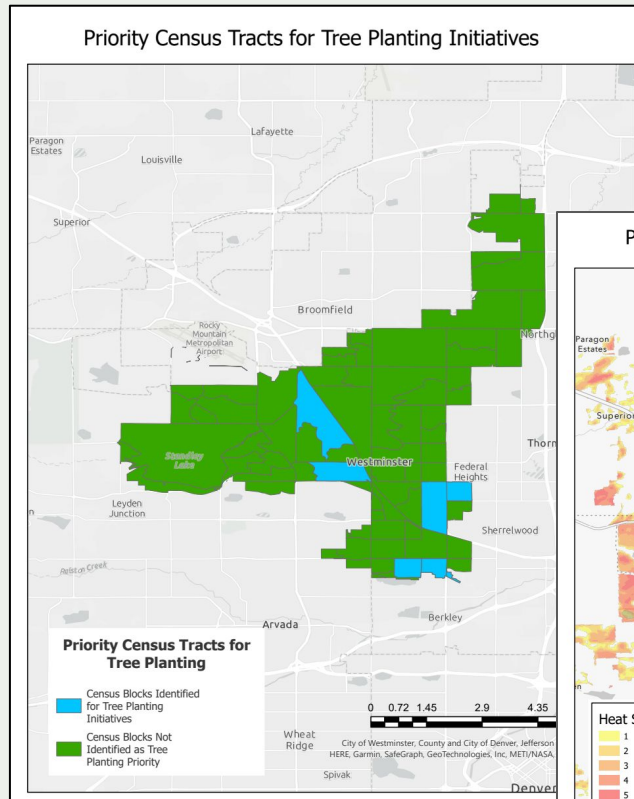


Percentage of People of Poverty Per Census Tract



Findings & Results

- Identified **6 census tracts** in which the city could focus their tree planting initiatives to address inequities in tree canopy gaps
- **Variables for Future Considerations**
 - Assessing plantable areas
 - Impervious surfaces
- Assist in indicating possible community engagement and outreach for future tree planting initiatives.



Summary



These findings will help to inform the Urban Forest Management Plan and prioritize tree planting initiatives



Actionable findings to work towards climate resilience, building equitable urban tree canopies, exploration complementing NbSs



Grant opportunities and community engagement opportunities to further grow tree planting initiatives





Thanks!

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Questions? Please contact:

Logan Johnson – lojo8929@colorado.edu
Bridger Tomlin –

CREDITS:

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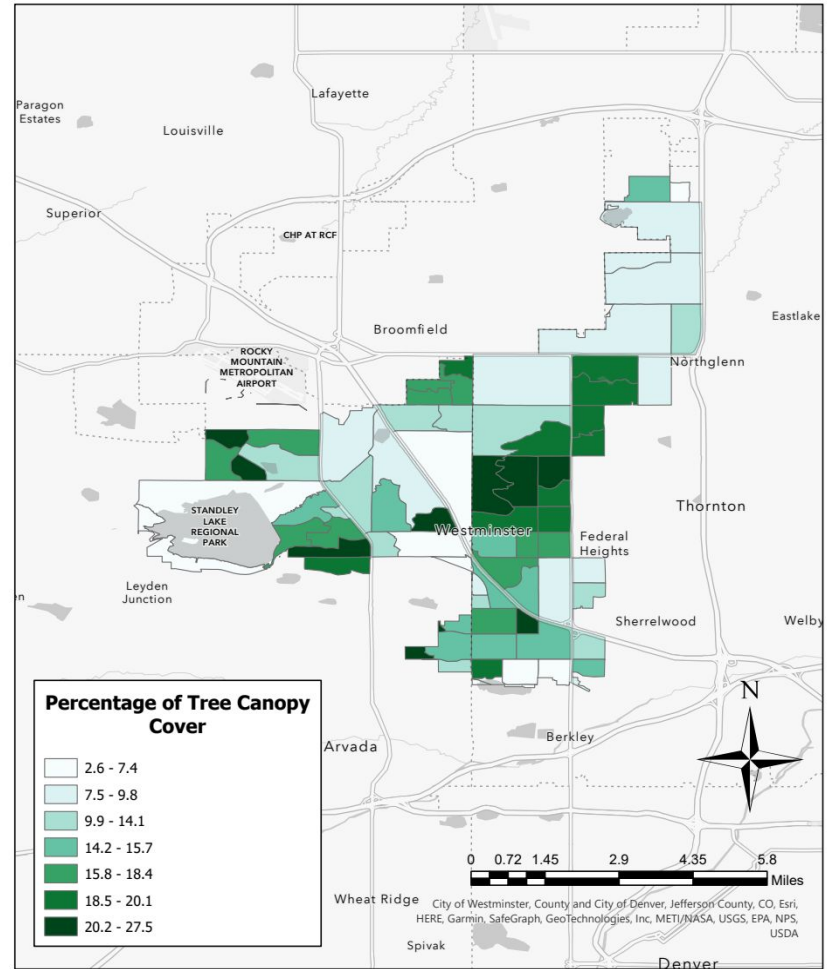
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Percentage of Tree Canopy Cover Per Census Tract

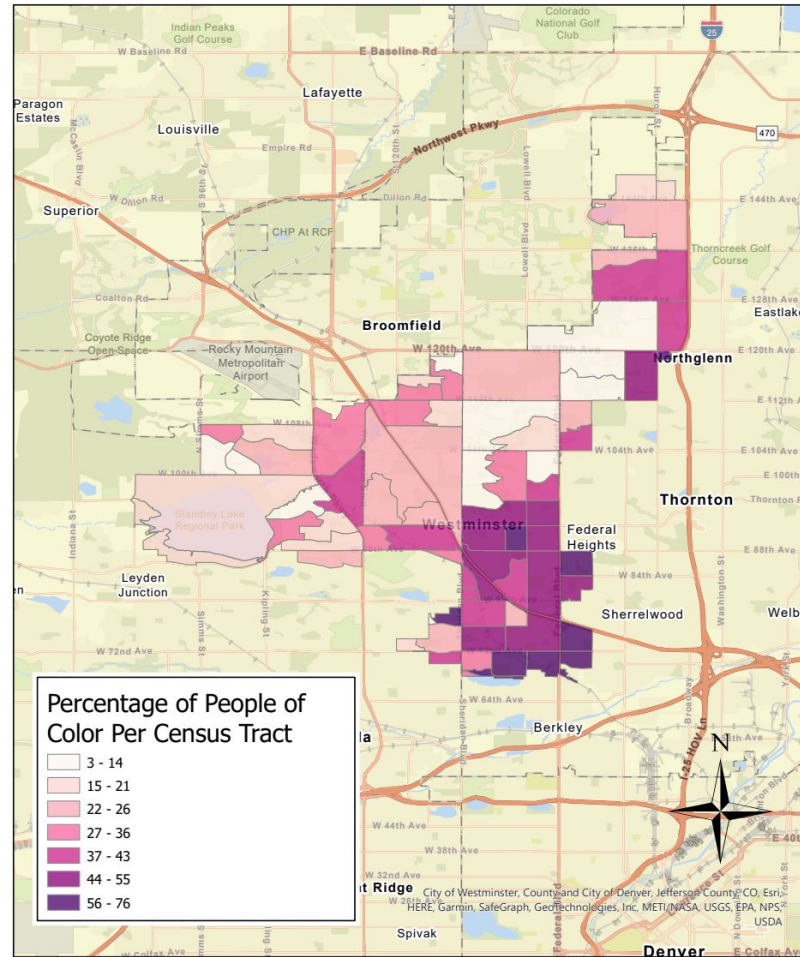
- Canopy cover ranging anywhere between 2 and 27%
- Darker colors indicate more canopy cover and lighter ones indicate less canopy cover

Percentage of Tree Canopy Cover Per Census Tract



Social Equity Maps

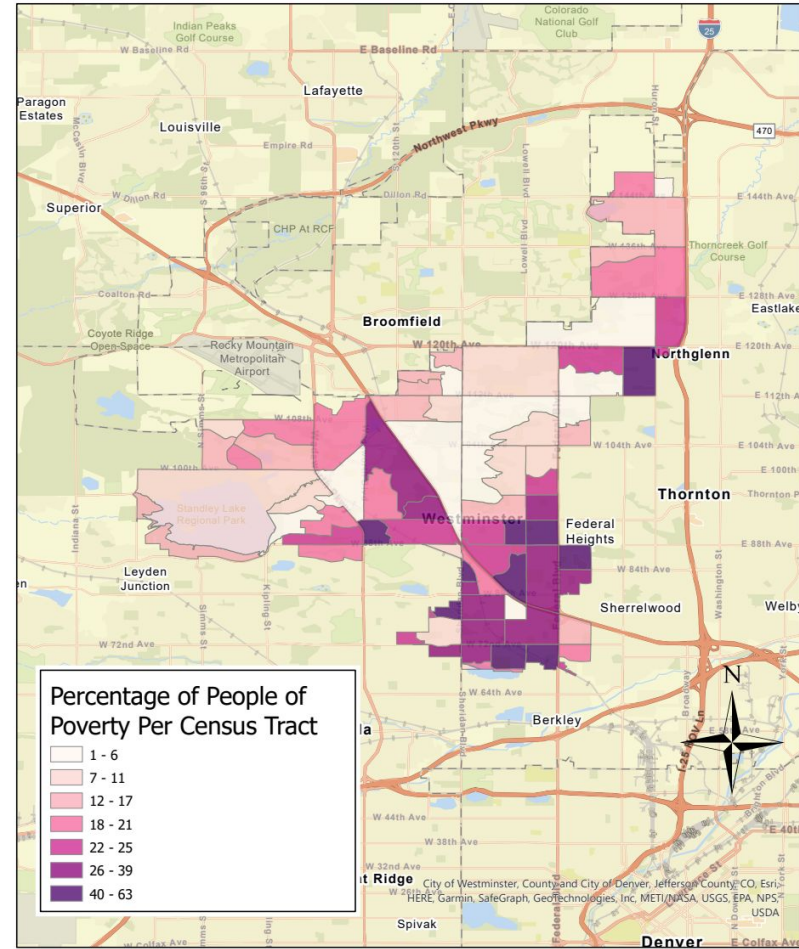
Percentage of People of Color Per Census Tract



Social Equity Maps

- People in “Poverty” defined people with income less than 200% of federal poverty level
- 2014-2018 U.S. Census Data

Percentage of People of Poverty Per Census Tract



Urban Heat Island Severity

