



COUNCIL STAFF REPORT

CITY COUNCIL of SALT LAKE CITY

TO: City Council Members

FROM: Nick Tarbet

DATE: September 7, 2021

RE: Urban Forest Action Plan and associated
Zoning Amendment Update

PROJECT TIMELINE:

Briefing: September 7, 2021

Set Date: N/A

Public Hearing: N/A

Potential Action: N/A

ISSUE AT-A-GLANCE

The Council will receive a briefing about the Urban Forest Action Plan and associated zoning amendment.

The Planning Division is developing an Urban Forest Action Plan (an element plan) in tandem with a zoning code amendment (*Attachment A*) related to the regulation of trees on private lands and within public streets. Planning is collaborating closely with Urban Forestry on this effort, along with Sustainability, Public Utilities, and other relevant City departments.

The primary goal of the action plan is to develop a strategic plan to preserve (or maintain) and expand the urban forest. By increasing the number, health, growing conditions, and longevity of trees in the urban landscape, the Urban Forest Action Plan and tree-related ordinance amendment will contribute to Salt Lake City's resilience ecologically, economically, and socially. In addition, the Action Plan will develop realistic and ambitious objectives and actions to align the management and preservation of the City's living infrastructure (or Urban Forest system) with its strategic directives for sustainability and equity. (*Transmittal Letter, page 12*)

According to the transmittal letter, the anticipated outcomes include:

1. Alignment of Salt Lake City's Urban Forest ordinance, policies, and practices with City goals for sustainability and equity.
2. Establishment of a prioritized approach to urban forest distribution and maintenance to redress specific, persistent adverse public health impacts resulting from environmental racism.



Since this is similar to a master plan, the Administration is following the Council adopted resolution outlining the policy and objectives for preparing masterplans ([Resolution 14 of 2021](#)). The resolution states the “*City Council policy input to be included early in the process so that such input can be incorporated into broad community outreach efforts.*” This check-in is meant to give fulfillment that goal and give the Council opportunity to review and provide feedback on the public engagement process.

This is just a check-in briefing. Council action is not needed at this time.

Policy Questions

1. The scope for the proposed plan states “The Urban Forest Action Plan and zoning ordinance amendment regulating trees on private lands and within public streets...” (*Transmittal Letter, page 11*)
 - **The Council may wish to ask why type of regulations are being considered for private property.**
 - **The Council may wish to ask if the proposed text amendment would apply to existing trees or only newly planted trees on private property.**
 - **If the text amendment would apply to existing trees, does the Administration plan to reach out to all City residents to make them aware of the proposal?**
2. Pages 18 and 29 of the transmittal letter outline the stakeholder meetings that will help provide guidance on the development of the plan. These stakeholders include:
 - Parks, Natural Lands, Urban Forestry & Trails Advisory Board (PNUT)
 - Stormwater/Water Quality
 - Sustainable Infrastructure group
 - Water Conservation
 - Rocky Mountain Power
 - Other underground utility providers
 - Relevant Business Improvement District or Chamber of Commerce Representatives
 - Relevant Community Councils (in areas lacking adequate street trees)
 - Developers
 - Designers and Engineers
 - **Does the Council have any other names or stakeholders they think should be included in that group?**

Next Steps

Page four of the transmittal letter outlines the next steps for the project:

1. Brief Council on Plan (consistent with Resolution 14 of 2020)
2. Meet with focus groups (designers, engineers, developers)
3. Meet with Community Councils/neighborhood groups located where additional street trees are recommended
4. Complete chapter 5 –Strategies for Salt Lake City’s Urban Forest (in process)
5. Complete Draft Street and Private Lands Trees Zoning Code Amendment (in process)
6. Complete stakeholder review of all draft chapters (in process)

7. Planning Commission (PC) work session on Draft Urban Forest Action Plan and Zoning Code Amendment
8. Citywide survey and targeted public outreach
9. Present Plan and Text Amendment to PC in December 2021 or January 2022 for adoption
10. Transmit to City Council in early 2022



MEMORANDUM

PLANNING DIVISION
DEPARTMENT *of* COMMUNITY *and* NEIGHBORHOODS

To: Mayor Erin Mendenhall

Cc: Lisa Shaeffer, Chief Administrative Officer; Blake Thomas, Director Department of Community and Neighborhoods; Jennifer McGrath, Deputy Director Department of Community and Neighborhoods; Michaela Oktay, Deputy Planning Director.

From: Nick Norris, Planning Director

Date: November 19, 2020

Re: Zoning amendment related to the regulation of trees on private lands and within public streets

The Planning Division is requesting that you initiate a petition to update zoning regulations related to street trees and trees on private land. Currently, the ordinance is vague regarding the requirement for street trees to be provided during development and redevelopment. The Planning Division has identified the need to update the existing tree regulations to align with Salt Lake City's sustainability, equity, and urban design goals.

The zoning ordinance regulates trees on private property in several ways:

- Protects existing specimen trees from removal during development or redevelopment (with some exceptions);
- As buffering requirements between zoning districts and to reduce impacts between incompatible land uses;
- Within parking lots over a certain size; and
- As part of a buffer adjacent to interstates.

The Planning Division will study and make recommendations for potential changes to the City's land use ordinances related to:

1. Zoning districts where increasing the number of trees on both private and public lands will mitigate environmental impacts of air and stormwater pollution and urban heat island effect, while also promoting energy conservation.
2. Salt Lake City neighborhoods to redress inequities in the distribution of trees on public lands, and identifying which zoning districts would benefit most from additional trees based on correlations between the number of existing trees and public health criteria (for example, rates of respiratory and heat-induced disease) and the nature of the surrounding land uses.
3. District or neighborhood-specific tree requirements in City-owned rights-of-way based on urban design criteria that may include new tree size, scale, and spacing requirements.

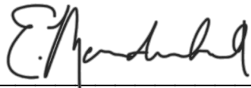
The process and proposal will be coordinated with applicable city departments, most notably Urban Forestry, Public Utilities, Engineering, and Sustainability. Planning will address issues identified by other City Departments and Divisions, such as potential conflicts with utilities and the need to address water quality concerns.

The community will have opportunities to provide input through expanded public engagement, particularly within neighborhoods where trees are sparse or when next to land uses that create impacts that could be mitigated by trees.

Please contact Laura Bandara at (385) 226-3117 or laura.bandara@slcgov.com if you have any questions.

Thank you.

Concurrence to initiate the zoning text amendment petition as noted above.



Erin Mendenhall, Mayor

01/21/2021

Date

September 7, 2021



URBAN FOREST ACTION PLAN

PROJECT OVERVIEW

PLAN SALT LAKE (2015)

GUIDING PRINCIPLE 8: BEAUTIFUL CITY

“Salt Lake City residents and visitors recognize our green network, including our urban forest, parks, and street trees, as one of our greatest assets....

We recognize that this green network contributes to a healthy and beautiful City, and we will continue to make its maintenance and expansion a priority.” – Plan Salt Lake

The Urban Forest Action Plan will recommend **goals, objectives, and actions** to implement this vision.

ACTION PLAN PRINCIPLES

- The urban forest is a public good.
- Value the urban forest as public infrastructure.
- Plan to maximize the urban forest's ROI.
- Distribute urban forest benefits equitably.



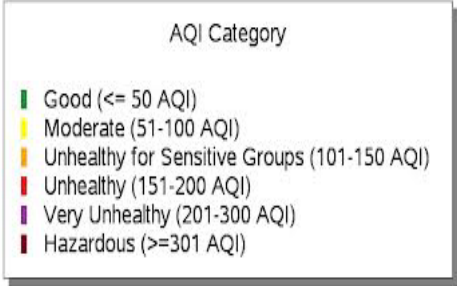
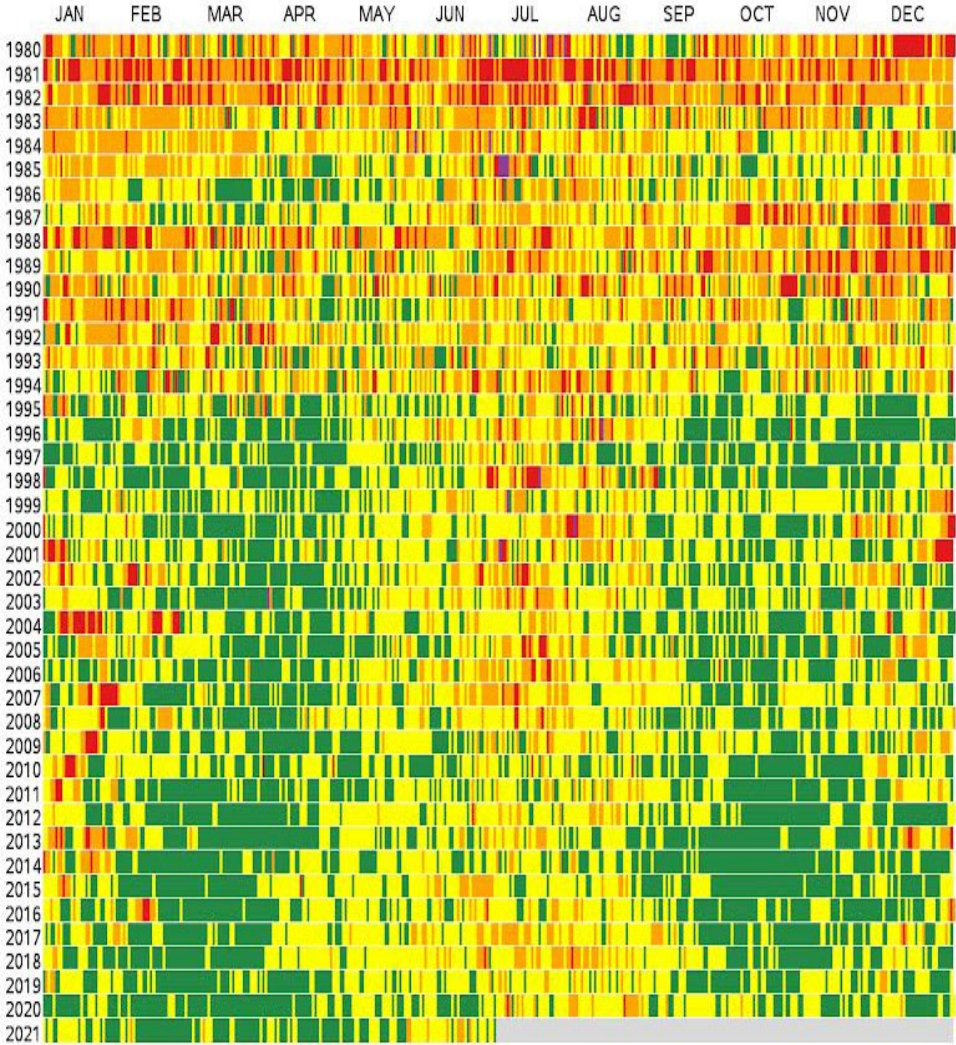
URBAN FOREST BENEFITS

URBAN FOREST BENEFITS

1. MITIGATES ADVERSE ENVIRONMENTAL IMPACTS

- Trees **reduce air pollution** through the **uptake of ozone**, CO₂, nitrogen dioxide, sulfur dioxide, and particulate matter (PM) including PM₁₀ and PM_{2.5}.
- Urban forests **slow stormwater flows** and reduce peak discharge by holding water in the canopy and root system and **filter pollutants** from stormwater, improving water quality and contributing to healthier waterways.

SLC AIR QUALITY TRENDS 1980 - 2021



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>
Generated: July 24, 2021

URBAN FOREST BENEFITS

2. MITIGATES IMPACTS OF URBAN HEAT ISLAND EFFECTS

- The shade and evapotranspiration properties of trees can **reduce peak summer** temperatures between 2 – 9 degrees F.

3. REDUCES ENERGY CONSUMPTION

- A study of street trees in Sacramento, California, found that trees placed around buildings to shade windows yielded between **7% and 47% energy savings**.

URBAN FOREST BENEFITS

4. PROMOTES ACTIVE TRANSPORTATION + SAFETY

- Street trees increase the number of **people walking and biking**.
- Drivers **reduce speeds** when more pedestrians are present.

5. IMPROVES PHYSICAL + MENTAL HEALTH OUTCOMES

- Walking through areas with trees and other vegetation has been demonstrated to **reduce anxiety, stress, depression, and aggression**.
- Trees **improve school performance** and worker productivity.

URBAN FOREST BENEFITS



A healthy urban forest improves livability + urban design in business districts.

ANTICIPATED RECOMMENDATIONS

1. Ensure effective protection of the urban forest as a public good through land use policy and land management practice.
2. Value the urban forest for the entire range of ecosystem and quality-of-life benefits it provides.
3. Provide solutions in the right-of-way that will accommodate trees, access, and utilities where they compete for the same space.
4. Provide guidance on urban forest priorities and preservation to project reviewers and inspectors.

ANTICIPATED OUTCOMES

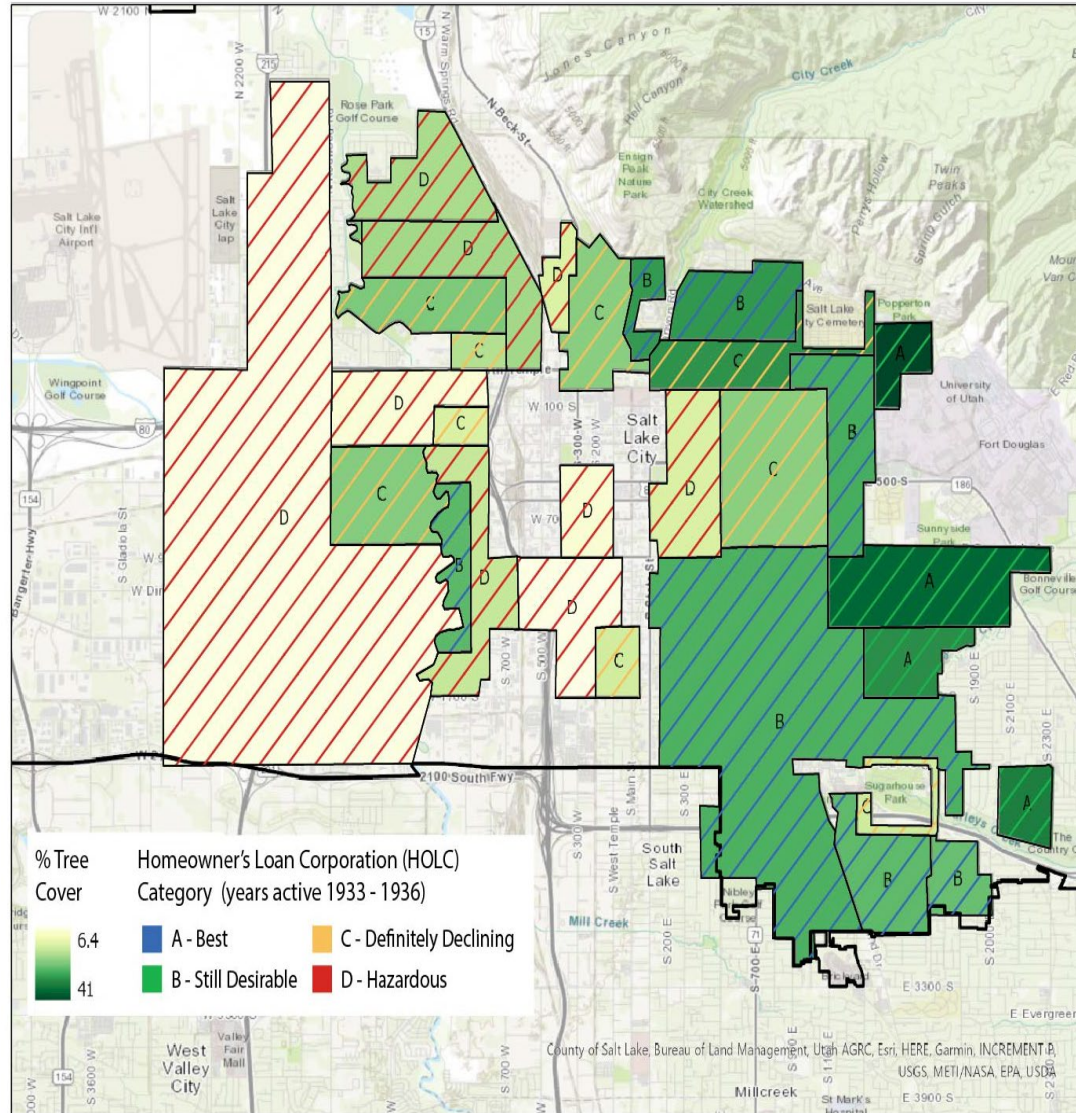
SLC'S URBAN FOREST = SLC'S GOALS

- Policy
 - Ordinance
 - Practice
- Growth
 - Environment
 - Community



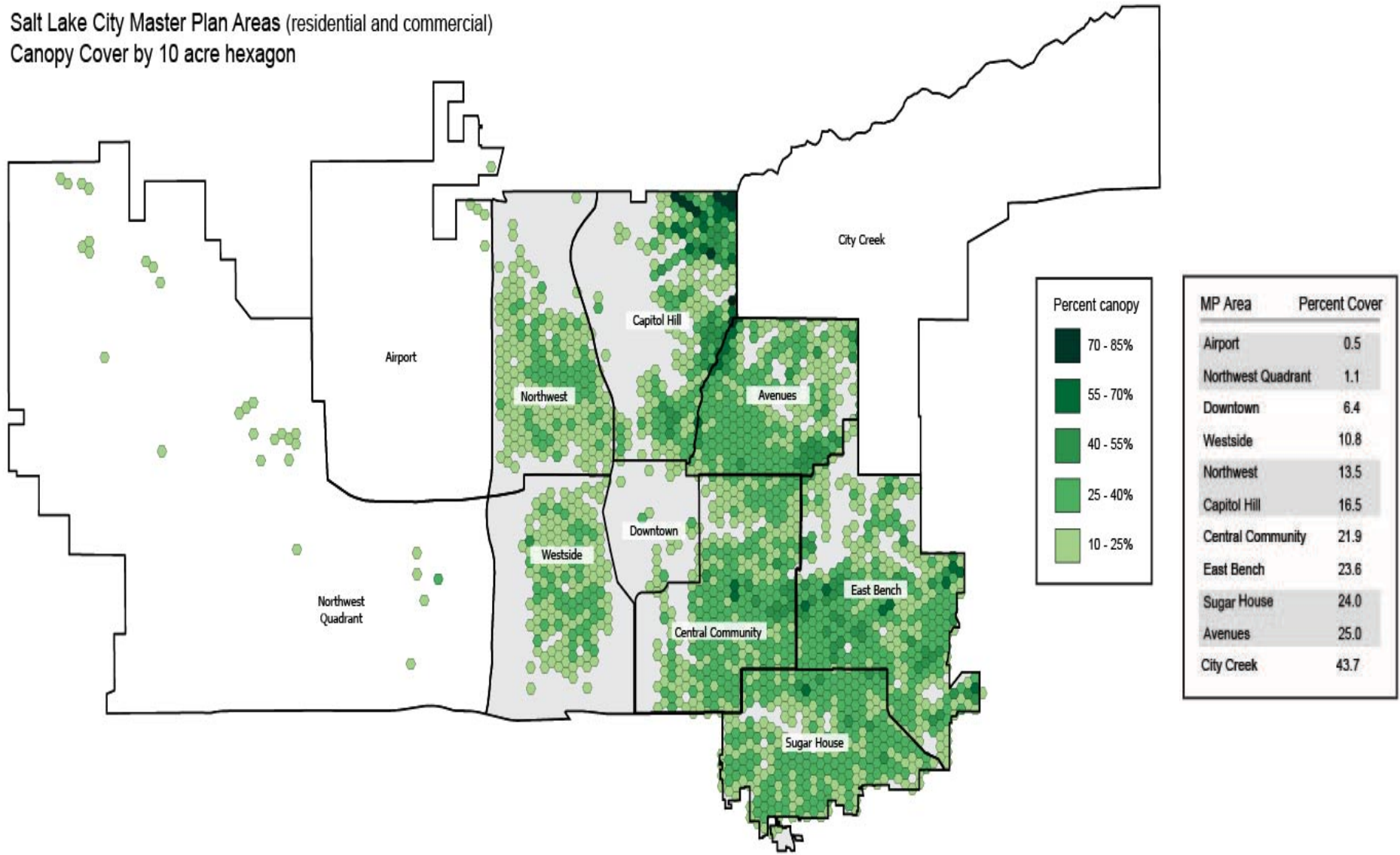
ANALYSIS

REDLINING ANALYSIS



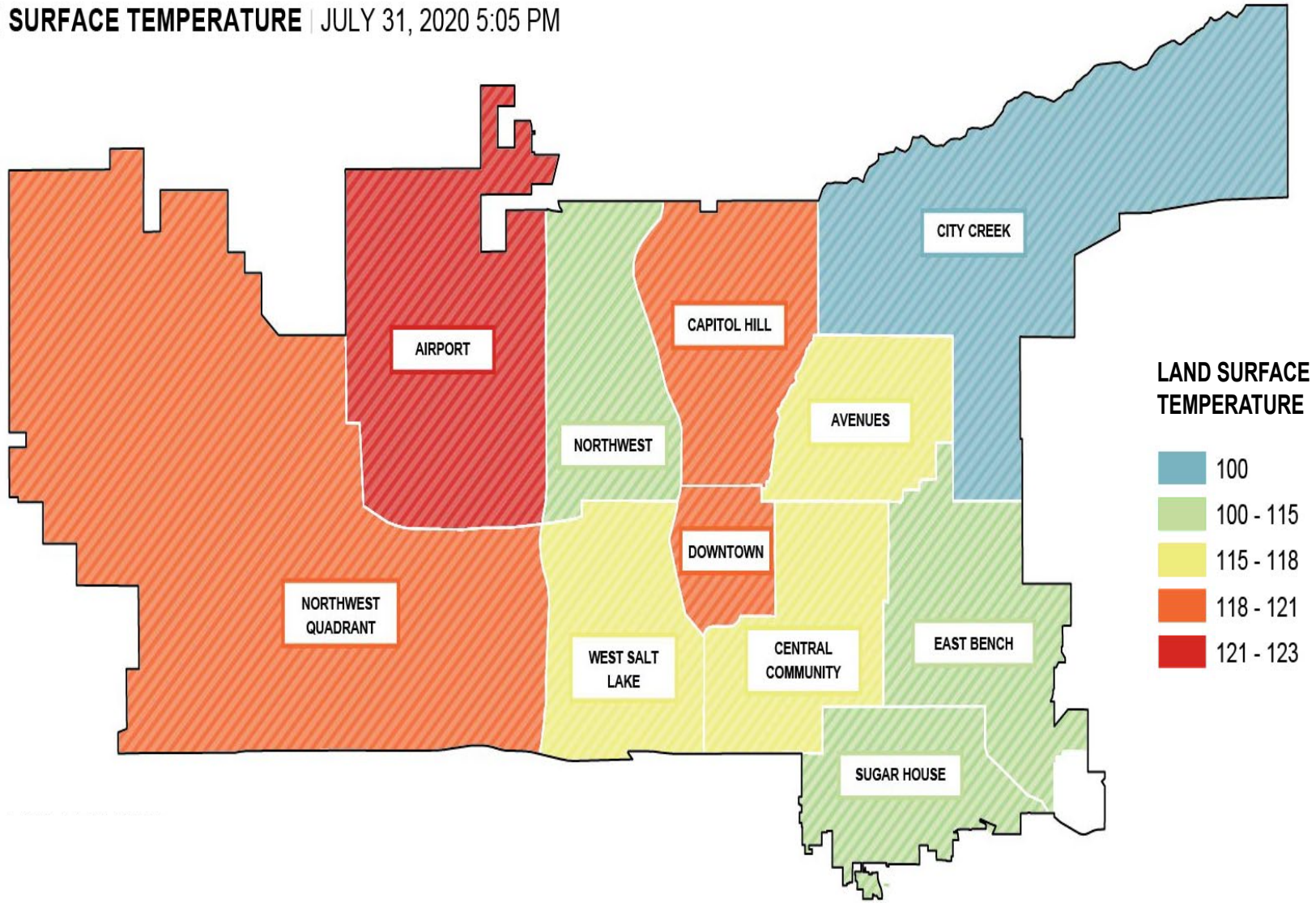
CANOPY ANALYSIS (2014 EPA DATA)

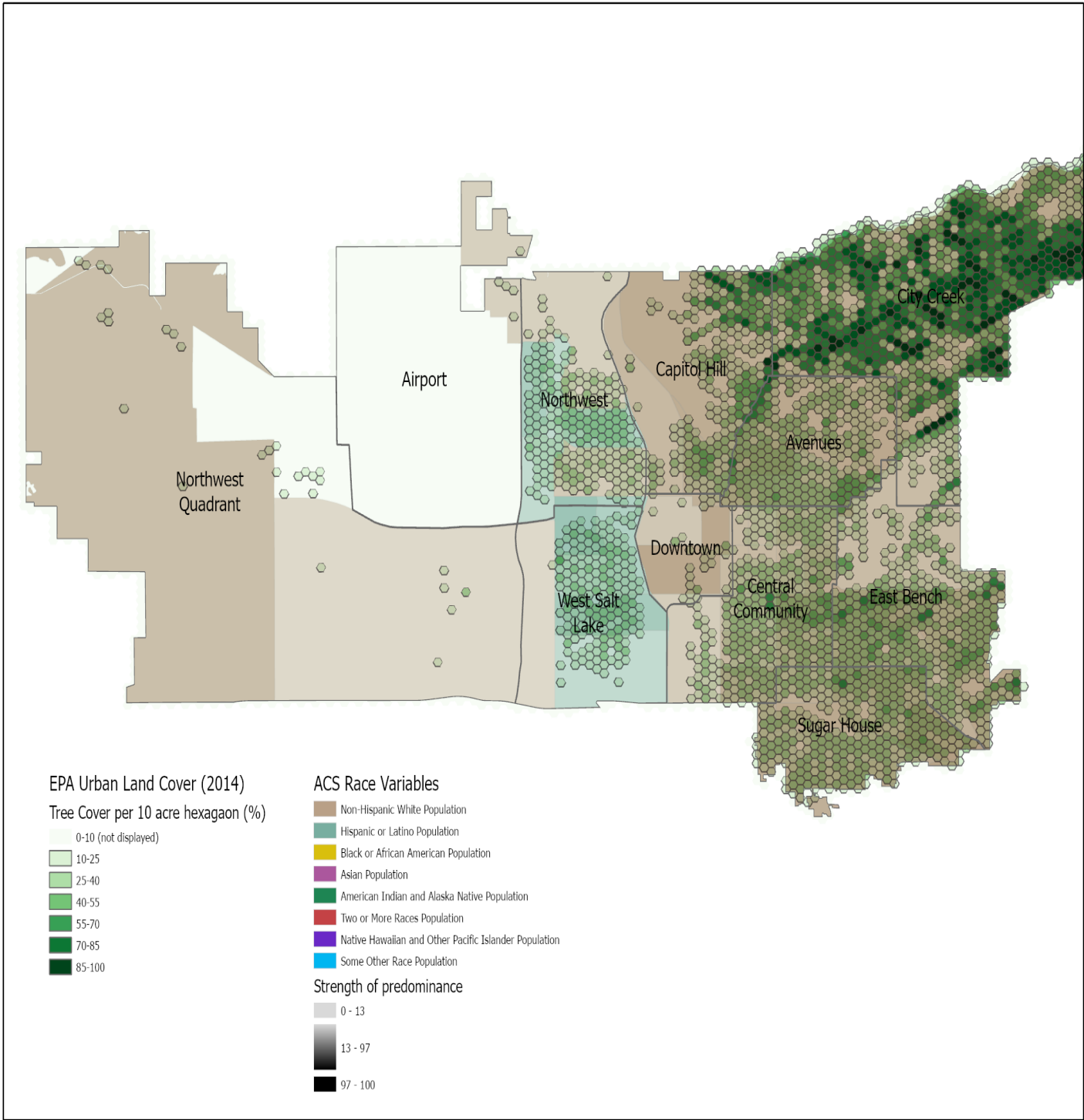
Salt Lake City Master Plan Areas (residential and commercial)
Canopy Cover by 10 acre hexagon

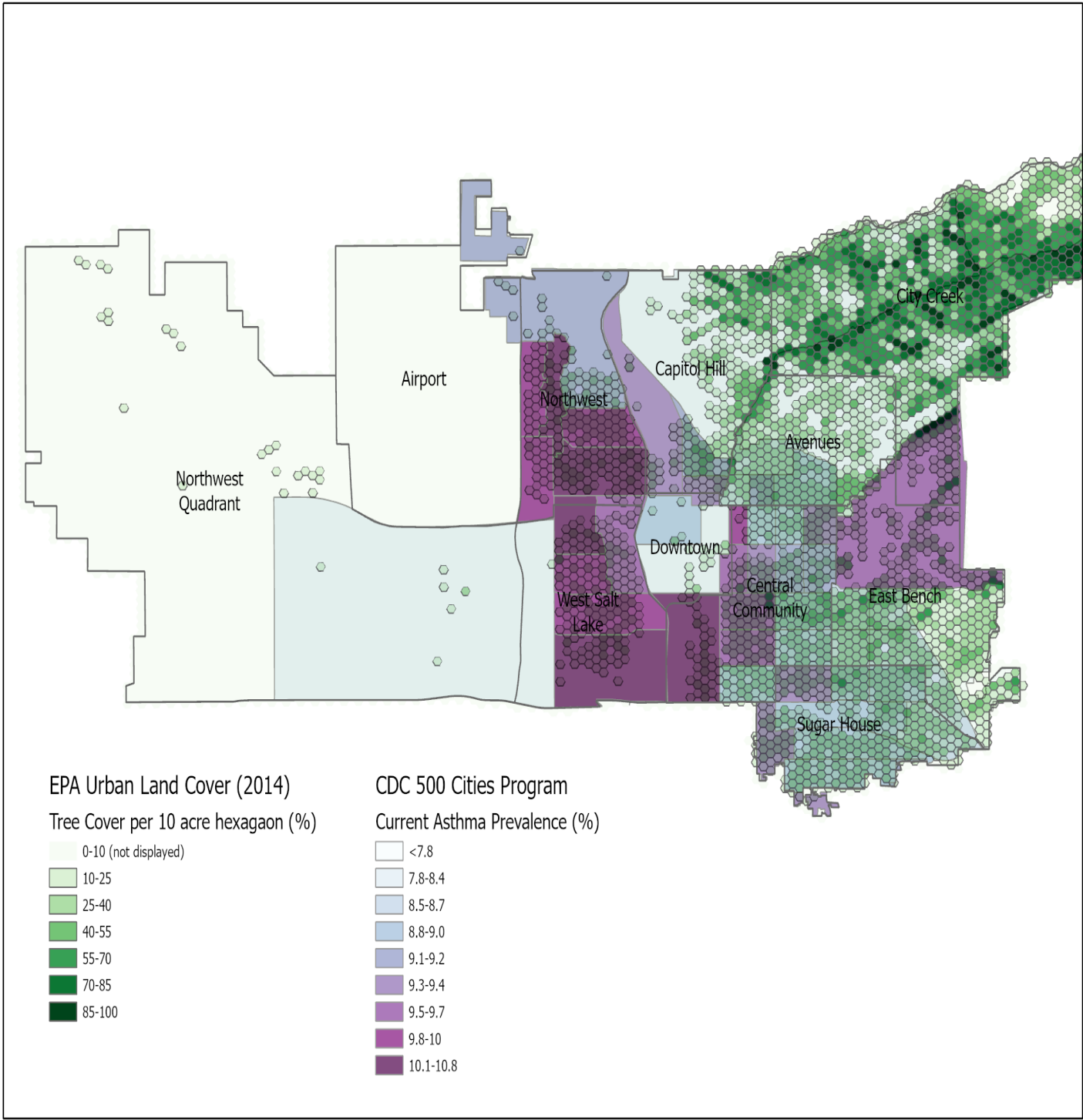


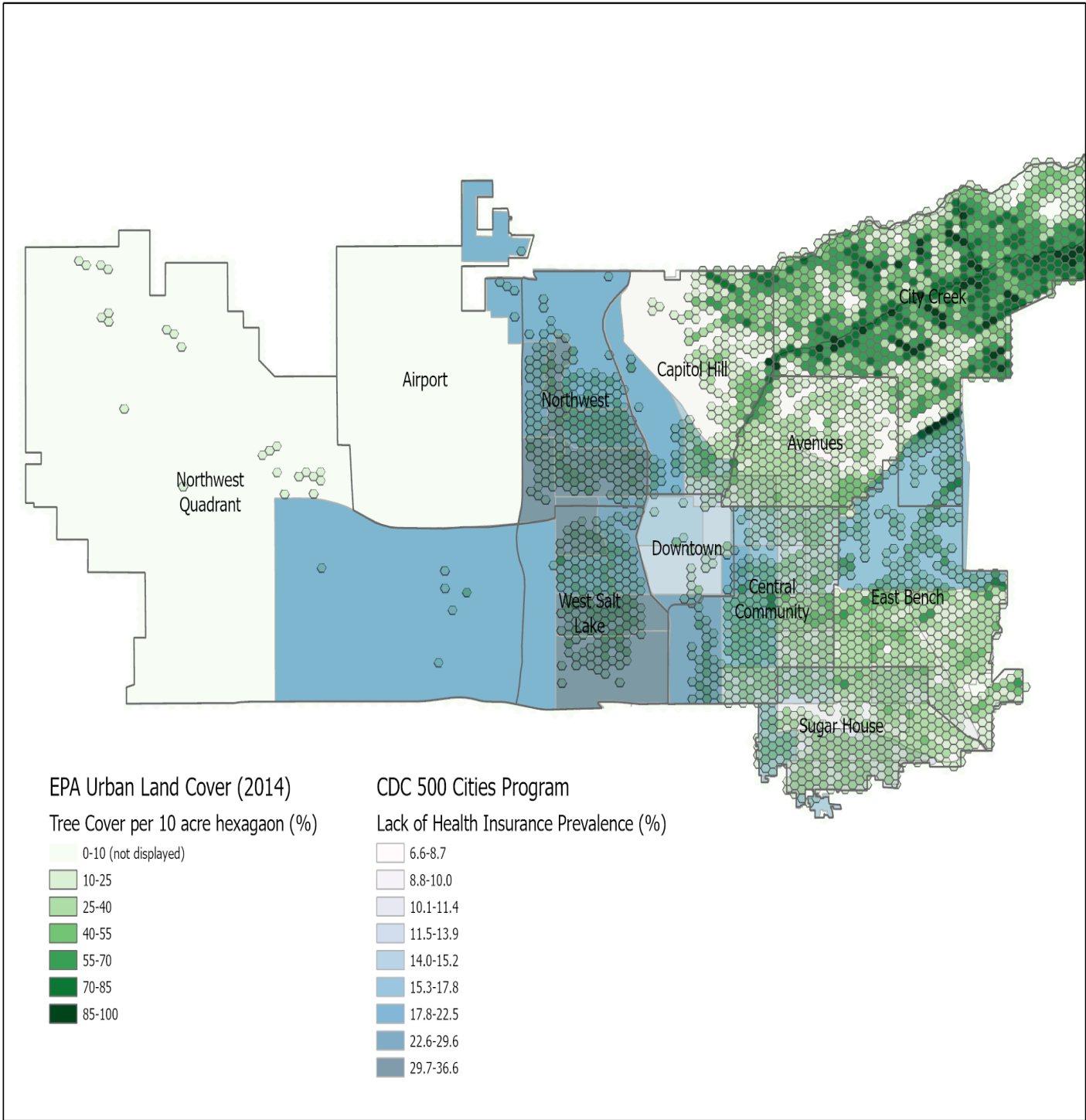
SURFACE TEMPERATURE ANALYSIS

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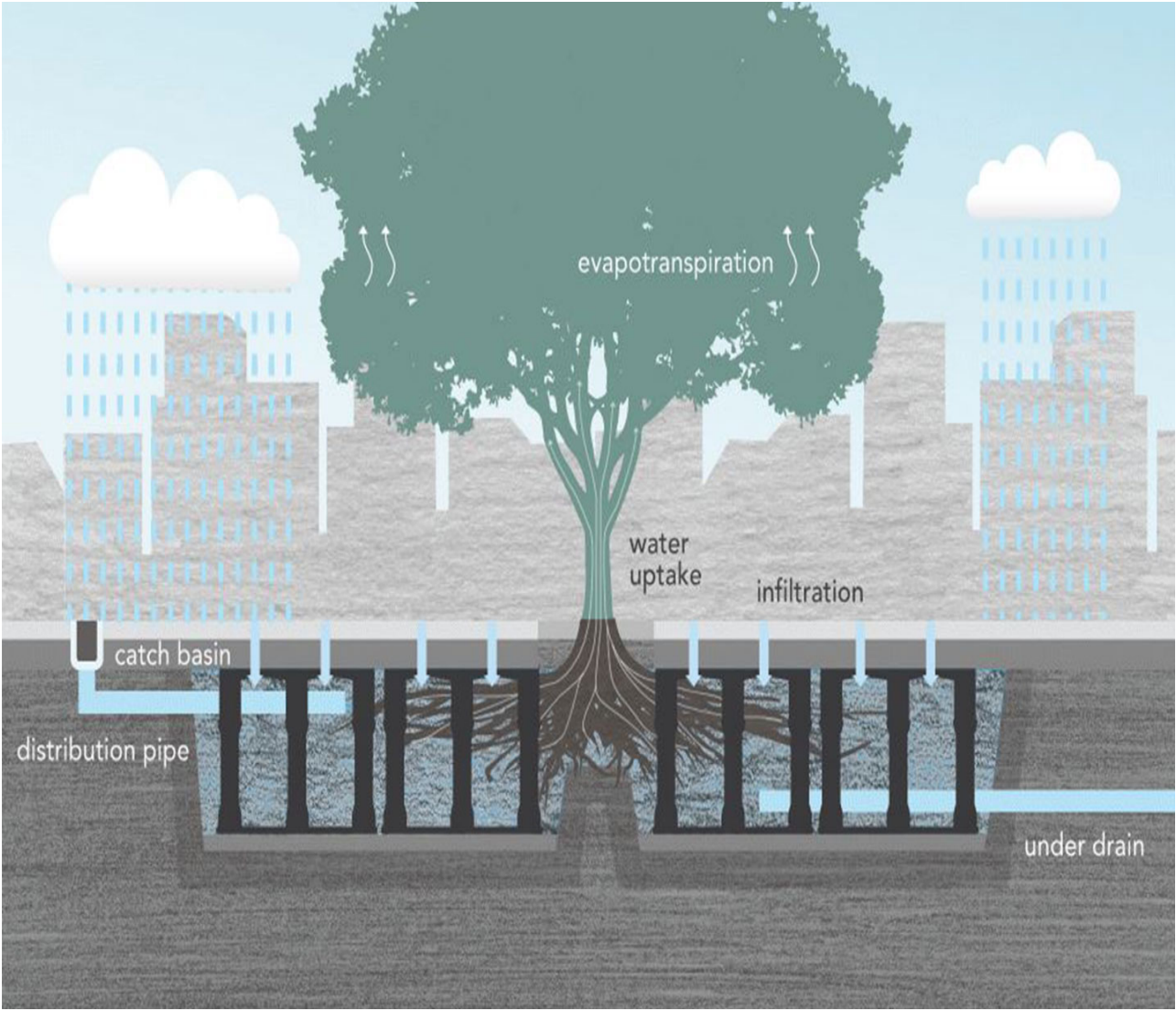






EXAMPLE SOLUTION

SUSPENDED PAVEMENT TECHNOLOGY



SUSPENDED PAVEMENT TECHNOLOGY



Laura Bandara // Urban Designer



ERIN MENDENHALL
Mayor



DEPARTMENT of COMMUNITY
and NEIGHBORHOODS
Blake Thomas
Director

CITY COUNCIL TRANSMITTAL


Lisa Shaffer (Aug 20, 2021 12:55 MDT)

Lisa Shaffer, Chief Administrative Officer

Date Received: 08/20/2021

Date sent to Council: 08/20/2021

TO: Salt Lake City Council
Amy Fowler, Chair

DATE: August 18, 2021

FROM: Blake Thomas, Director, Department of Community & Neighborhoods



SUBJECT: Urban Forest Action Plan and associated Zoning Amendment

STAFF CONTACT: Laura Bandara, Urban Designer, laura.bandara@slcgov.com,

DOCUMENT TYPE: Information Item

RECOMMENDATION: Review

BUDGET IMPACT: None

BACKGROUND

The Planning Division is developing an Urban Forest Action Plan (an element plan) in tandem with a zoning code amendment related to the regulation of trees on private lands and within public streets. Planning is collaborating closely with Urban Forestry on this effort, along with Sustainability, Public Utilities, and other relevant City departments.

Anticipated Outcomes:

1. Alignment of Salt Lake City's Urban Forest ordinance, policies, and practices with City goals for sustainability and equity.
2. Establishment of a prioritized approach to urban forest distribution and maintenance to redress specific, persistent adverse public health impacts resulting from environmental racism.

The urban forest is a modified natural system that is a public good and has long term value similar to constructed systems like public utilities and streets. The urban forest provides a wide range of benefits, including:

- Mitigation of adverse environmental impacts;
- Reduction of energy consumption;
- Improvement in public health outcomes; and
- Urban design improvement in neighborhoods and business districts.

The urban forest plays a critical role in reducing the environmental impacts resulting from Salt Lake City's rapid development and population growth. The interrelated imperatives of climate change adaptation and sustainable approaches to urban design and planning requires a reassessment of existing policies and practices. Further, the pace of development in Salt Lake City has increased competition for public land in the right-of-way, and trees have often been the first sacrificed to accommodate other types of infrastructure. The Plan can help establish criteria for decision making regarding the competition for space on city streets.

To ensure the Urban Forest's benefits are distributed equitably across the city, Salt Lake City needs to plan for the health and expansion of the urban forest. Salt Lake City should develop and implement clear policy directives to:

- ensure effective protection of the urban forest as a public good through land use policy and land management practice;
- codify the City's commitment to sustainable infrastructure;
- value the urban forest for the entire range of ecosystem and quality-of-life benefits it provides;
- provide solutions in the right-of-way that will accommodate trees, access, and utilities where they compete for the same space; and
- provide guidance on urban forest priorities and preservation to project reviewers and inspectors.

The Urban Forest Action Planning process began in 2019, but was suspended due to high-priority, previously funded projects within the Department of Community and Neighborhoods, and further delayed due to the emergency created by the COVID-19 pandemic. Planning resumed work on the Plan in late 2020 and anticipates completion in 2021.

Please contact Laura Bandara at (385) 226-3117 or laura.bandara@slcgov.com if you have any questions. We are happy to provide a briefing at your request.

STEERING COMMITTEES

An internal City working group and a Technical Advisory Committee (TAC) have been established to provide guidance on the deliverables of the plan as it is developed. The TAC consists of people within and outside of the city government.

Technical Advisory Committee Representatives

SLC CORPORATION	NON-PROFIT/PROFESSIONAL	ACADEMIC (U OF U)
Development Review	TreeUtah	Urban Ecology
Economic Development	ReLeaf	Atmospheric Sciences
Golf	Utah ASLA	Mechanical Engineering
Water Conservation (PU)	Utah Society for Environmental	
Streets	Education (USEE)	
	University Neighborhood	
	Partners (UNP)	
	Hawk Watch	
	The Nature Conservancy	

Working Group Committee Representatives (Internal to Salt Lake City)

Engineering	RDA
HAND	Sustainability
Transportation	Parks/Public Lands
Public Utilities	Urban Forestry
(water quality)	

***bold text** indicates project team member

PROGRESS TO DATE

Work completed 2019:

- Completed revised work plan with stakeholder input
- Briefed Public Services, Public Utilities, Sustainability Department, and SLC Sustainable Infrastructure Committee
- Briefed Working Group and Technical Advisory Committee (TAC)
- Created goals and objectives with Project Team (Public Utilities, Sustainability, Urban Forestry)
- Public Engagement:
 - tabled at 3 community events in 2019 (Poplar Grove, Sugarhouse, Liberty Park Farmers Market)
 - Summer Planning Series walking tour – August 2019
 - Collaborated with [SLC TV on promo created for Summer Planning Series](#)
- Chapter 1 completed and reviewed by Working Group

Work completed 2020:

- Initiated petition for zoning code amendment
- Chapter 2 completed and reviewed by Working Group
- Chapter 4 GIS analysis
 - canopy map completed
 - data sources identified

Work completed 2021:

- Briefed administration on Urban Forest Action Plan
- Chapter 2 reviewed by TAC
- Chapter 3 completed and reviewed by Working Group and TAC
- Chapter 4 completed and reviewed by Working Group
- GIS analysis
 - redlining/canopy cover correlation completed
 - public utilities/tree location conflict analysis completed
 - costs of LIDAR and UAV Thermal Imaging analysis identified
- Briefed DA Downtown Development Committee on Urban Forest Action Plan and requested participation in fall downtown urban forest goal setting workshop

Goals achieved:

- Collaborated with Transportation, Urban Forestry, and members of SLC Sustainable Infrastructure Committee to create and implement changes to parking policy to preserve adequate soil volumes for trees in park strips
- Led Urban Design strategies on Street Typologies Design Guide to include trees as environmental impact mitigation and placemaking strategy

NEXT STEPS

1. Brief Council on Plan (consistent with Resolution 14 of 2020)
2. Meet with focus groups (designers, engineers, developers)
3. Meet with Community Councils/neighborhood groups located where additional street trees are recommended
4. Complete chapter 5 –Strategies for Salt Lake City’s Urban Forest (in process)
5. Complete Draft Street and Private Lands Trees Zoning Code Amendment (in process)
6. Complete stakeholder review of all draft chapters (in process)
7. Planning Commission (PC) work session on Draft Urban Forest Action Plan and Zoning Code Amendment
8. Citywide survey and targeted public outreach
9. Present Plan and Text Amendment to PC in December 2021 or January 2022 for adoption
10. Transmit to City Council in early 2022

EXHIBITS

A. Planning Preparation

1. Scope and Work Plan
2. Project Budget
3. Timeline
4. Potential Barriers to Scope, Budget, and Timeline

B. Existing Conditions

5. [Link to Existing Plans](#)
6. [Link to Trends Analysis](#)

C. Public Engagement

7. *Draft* Public Engagement Calendar (approximate dates)
8. UFAP Vision Statement
 - a) [Link to Summer Planning Series 2019: Seeing the Urban Forest for the Trees](#) (SLC TV promo)
9. *Draft* Metrics

A. Planning Preparation

1. Scope and Work Plan

*DRAFT WORK PLAN: Urban Forest Action Plan and Zoning Ordinance Amendment
Related to the Regulation of Trees on Private Lands and Within Public Streets*

Overview

Salt Lake City's urban forest is a critical asset and a living infrastructure system that is currently underutilized. Urban forests are a public good. When planned and managed effectively, they are a vital component of a resilient city and make significant, quantifiable contributions to communities' public, economic, and environmental health. A large body of research supports the benefits provided by urban forests.

A strategic plan is needed to harness the benefits trees provide to cities and implement the Plan Salt Lake vision for Guiding Principle 8: Beautiful City. **The Planning Division is developing an Urban Forest Action Plan in tandem with an amendment to Salt Lake City's zoning ordinance related to the regulation of trees on private lands and within public streets.**

Through collaboration with multiple departments and divisions, Planning will assess and evaluate opportunities to increase tree canopy citywide. The Plan will prioritize these opportunities based on sustainability, urban forestry, urban design, land use, economic development, and social and environmental equity criteria.

An increase in canopy coverage, appropriate street tree selection, and emphasis on the health of the urban forest can support a wide range of Salt Lake City's economic, environmental, public health, social, and urban design goals, including improvements to:

- Air quality;
- Water quality;
- Energy conservation;
- Mental and physical health;
- School performance;
- Business performance;
- Environmental equity;
- Walkability;
- Active transportation routes;
- Traffic calming;
- Streetscapes;
- Urban design identity; and
- The number and quality of human-scale places in the public realm.

These improvements are briefly summarized below. For detailed information and supporting studies, see the [Vibrant Cities Lab](#), a joint project of the US Forest Service, American Forests, and the National Association of Regional Councils.

Urban Forest Benefits to the Public¹

Environmental Benefits

Trees mitigate urban heat island effects created by heat-absorbing surfaces (such as asphalt) by lowering surface and ambient temperatures. The shade and evapotranspiration properties of trees can reduce peak summer temperatures between 2 – 9 degrees Fahrenheit. A study of Salt Lake City parks found that high tree cover reduced daytime temperatures by several degrees Fahrenheit compared to adjacent neighborhoods (Gomez-Navarro et al. In review)

Trees can reduce air pollution through the uptake of ozone, carbon dioxide, nitrogen dioxide, sulfur dioxide, and particulate matter (PM₁₀, airborne, inhalable particles smaller than 10 micrometers, or 1/10 the width of a single strand of a human hair). Notably, a well-designed urban forest can play a critical role in emissions reductions by making active transportation and public transit more comfortable and attractive options.

Urban forests slow stormwater flows and reduce flooding during storms by holding water in the canopy and root system, thereby contributing to a healthier hydrologic system and aquatic ecology. Trees also filter pollutants from water, including nitrogen and phosphorus (typically found in fertilizer and pet waste).

Shade trees reduce the energy consumption of commercial and residential buildings. According to the Lawrence Berkeley Lab Heat Island Group estimates, "each one-degree Fahrenheit increase in peak summertime temperature leads to an increase in peak demand of 225 megawatts." Increased demand results in an annual cost to ratepayers of \$100 million (Center for Neighborhood Technology, 2010).

Public Health Benefits

Numerous studies demonstrate the connection between the ability to experience nature and improved mental and physical health. Urban forests reduce the incidence of respiratory disease, cardiovascular disease, and skin cancer.

Walking in areas with trees and other vegetation and even viewing green places through windows has been demonstrated to reduce anxiety, stress, depression, and aggression.

¹ Except where otherwise noted, all information in this section derives from the [Vibrant Cities Lab](#), a joint project of the US Forest Service, American Forests, and the National Association of Regional Councils.

Trees and vegetated spaces in cities improve school performance and reduce ADHD symptoms.

Economic Benefits

Tree-lined streets increase retail sales and attract customers from further away. Studies have also demonstrated that trees and plants boost employee productivity and job satisfaction. Urban trees also have a well-known impact on increases in property values.

Additionally, the shade cast by trees can preserve asphalt street surfaces and decrease the rate of resurfacing, thereby creating savings for municipalities.

Social Impacts and Environmental Equity

Trees have considerable impacts on neighborhoods by creating inviting gathering places and providing more opportunities for neighbors to socialize and build community. Studies demonstrate an association between the number of trees and community cohesion in urban neighborhoods.

Careful planning of the urban forest is needed to ensure an equitable distribution of its benefits. Numerous studies have shown that lower-income, historically marginalized groups and renters tend to live in urban areas with the fewest street trees in public rights of way. This inequitable distribution results in more significant cooling benefits of urban trees in wealthier neighborhoods (Litvak et al., 2017). Salt Lake City also follows this national trend (Salt Lake City Tree Equity Score, treeequityscore.org).

Transportation Benefits

The effective use of trees in streetscape design results in traffic calming, reduces collision risks and creates an inviting environment for walking and biking. Tree canopy provides shade for pedestrians and cyclists during the hot summer months. Pairing shade with increased aesthetic appeal encourages sidewalk use, thus making active transportation more attractive physically and mentally. In this way, trees promote and enhance active transportation and recreation activities. Public transit's appeal (and equity) can also be enhanced when trees are planted near bus and rail stops.

Trees create a visual and physical barrier between pedestrians and vehicles. Trees can calm traffic when used in streetscape design to create the perception of a narrowed street, increasing pedestrian safety.

Urban Design Benefits

Street trees and urban forests make vital contributions to the urban design identity of neighborhoods and business districts. In Salt Lake City, Planning can develop design guidelines for urban forest streetscapes intended to increase the number and quality of

human-scale spaces in our large public rights-of-way. By creating attractive, pedestrian-scaled places in the City using street trees, we can foster community through creating sites that encourage positive interactions between residents.

Urban Forest Action Plan Purpose

The Urban Forest Action Plan represents an initial step to full implementation of the vision established in *Plan Salt Lake's Guiding Principle 8: Beautiful City*:

Salt Lake City residents and visitors recognize our green network, including our urban forest, parks, and street trees, as one of our greatest assets. Our green network plays an important role in shaping our streetscapes and urban form.

It enhances the livability of the City, improving air and water quality while providing shade, buffering noises, and enhancing walkability and streetscapes citywide. We recognize that this green network contributes to a healthy and beautiful city. *We will continue to make its maintenance and expansion a priority.* (Plan Salt Lake, 2015, p. 31)

The primary goal of the Urban Forest Action Plan is to develop a strategic plan to preserve (or maintain) and expand the urban forest. The action plan provides a comprehensive approach to the urban forest as a living infrastructure system. Action plans take a holistic view of an issue to address interconnected challenges, develop priorities, find solutions and build a long-term plan of action. Policymakers, planners, and community members create and implement action plans to unite various community stakeholders, nonprofit organizations, private interests, institutions, and governmental agencies around a shared cause.

The proposed Urban Forest Action Plan and zoning ordinance amendment regulating trees on private lands and within public streets are based on the need for strategic planning to address Salt Lake City resilience (especially emissions reduction, water quality, public health, and urban heat island impacts), equity, and urban design goals. An increase in the number of trees in our City, along with more robust preservation of existing trees, can contribute to our ability to adapt to and mitigate the adverse environmental impacts exacerbated by climate change.

The numerous potential benefits of growing the urban forest are paired with significant existing opportunities in Salt Lake City. A recent Urban Forestry resource analysis estimates there are currently more than 20,000 vacant tree planting sites in city-owned park strips. This number is in addition to unquantified planting areas within parks and golf courses.

Planning will integrate aspects of this Action Plan and ordinance update with ongoing planning and assessment efforts in Transportation, Sustainability, and Public Utilities. Data gathered, including examples of urban forests in arid climates and standards created through this planning process, may be integrated into or influenced by the:

- Complete Streets Ordinance and Street Typologies (led by the Transportation Division);
- Sustainable Code Review (led by the Sustainability Department);
- Stormwater Master Plan (Public Utilities Division);
- Transportation Master Plan; and
- Parks Master Plan.

The ordinance amendment process will develop criteria for trees based on:

1. environmental impact mitigation (air and water quality);
2. public health impact mitigation (respiratory and heat-related diseases);
3. creating an equitable distribution of public trees in residential and mixed-use zoning districts; and
4. scale and form according to street and neighborhood characteristics (right-of-way dimensions, building heights, and dimensions of existing and proposed park strips and medians, among others).

The Plan will evaluate best management practices, including urban forest policy and oversight, air quality, and water quality goals. The Plan will also develop strategies to anticipate and resolve underground utility conflicts with tree root zones and implement appropriate pavement treatments. The Plan will identify and prioritize opportunities for Salt Lake City to:

1. reduce the urban heat island effect,
2. manage stormwater flows,
3. improve water quality,
4. mitigate air pollution at busy intersections,
5. enhance active transportation routes,
6. reduce building energy consumption,
7. enhance urban design identity in neighborhoods and business districts, and
8. create a more equitable distribution of urban forest canopy in residential areas.

Plan Goals

The primary goal of the action plan is to develop a strategic plan to preserve (or maintain) and expand the urban forest. By increasing the number, health, growing conditions, and

longevity of trees in the urban landscape, the Urban Forest Action Plan and tree-related ordinance amendment will contribute to Salt Lake City's resilience ecologically, economically, and socially. In addition, the Action Plan will develop realistic and ambitious objectives and actions to align the management and preservation of the City's living infrastructure (or Urban Forest system) with its strategic directives for sustainability and equity.

Anticipated Outcomes

- A defined strategy with goals, objectives, actions, timelines and priority areas for increased canopy cover outlined in the Action Plan;
- A revision to tree-related regulations in the city code aimed toward achieving goals set out in the Plan;
- Prioritized action steps to create and implement proposed plans, policies, practices, and future ordinance revisions to:
 - Manage the urban forest as public infrastructure,
 - increase canopy cover and number of trees,
 - effectively enforce tree protection measures,
 - implement tree-related urban design goals on City-owned land,
 - along with recommended actions to increase canopy cover on private property;
- An increase in the number and longevity of trees in public rights-of-way, parks, and golf courses (where appropriate); and
- The regular assessment of canopy cover, tree stocking goals, and other environmental benefit metrics related to the urban forest.

Coordination

The Urban Forest Action Plan and amendments to tree-related ordinances will impact all City departments and divisions managing systems and assets in public rights-of-way and parks and golf courses. Planning will involve them as critical team members and stakeholders to integrate their land use and management needs into any proposed changes. It is anticipated that working group members will take an active and engaged role in the process.

Public Engagement

Planning will develop a public outreach campaign with the civic engagement team and Urban Forestry. Early engagement will include tabling at community events, a Summer Planning Series walking tour, and an SLCTv segment. During the public comment period, Planning will host a webinar related to the urban forest and land use that includes live and asynchronous polling. The webinar will be recorded for inclusion with traditional online open house materials. Planning

and Urban Forestry will conduct additional outreach with community councils and nonprofit organizations working in areas that benefit most from additional trees.

Public engagement efforts will also include outreach to designers and developers via the Urban Land Institute’s Utah Chapter, the ASLA Utah Chapter, the AIA Utah’s Urban Design Committee, and/or local chambers of commerce. The project team will develop focus groups to provide specialized input.

Project Team

The Planning Division will lead the action plan, with guidance from Urban Forestry and supported by Sustainability and Public Utilities. Project team members will participate in working group meetings and provide specialized technical information to the Plan.

Groups and Committees

The team will establish an internal City Working Group, along with a Technical Committee.

The Working Group will consist of representatives from City divisions identified by division heads. The working group will aid the project team in developing and executing the planning process, technical guidance, plan development, and draft ordinance review.

Working group responsibilities will include reviewing draft chapters, reviewing the draft ordinance, final draft review, and attendance at six meetings.

Working Group Dept./Division Representatives (*Internal to Salt Lake City*)

***bold text** indicates project team member

Engineering	RDA
HAND	Sustainability
Parks & Public Lands	Transportation
Public Utilities (water quality)	Urban Forestry

WORK PLAN: Urban Forest Action Plan and Tree Regulations Zoning Ordinance Amendment

Technical Committee members representing public agencies, nonprofits, academia, and others with specialized knowledge of urban forests, streetscapes, and infrastructure will serve as a resource for the project team. In the future, some may become potential partners in funding and implementing urban forest expansion. Responsibilities include the identification of constraints and opportunities and a technical review of the draft plan.

Technical Advisory Committee Agency Representatives *(Internal and external to SLC)*

<i>SLC Corporation</i>	<i>Nonprofit/State Agency</i>	<i>Research Area (U of U)</i>
Development Review Team	Breathe Utah	Atmospheric Sciences
Economic Development	HawkWatch	Mechanical Engineering
Salt Lake City Golf Streets	ReLeaf Utah	Urban Ecology
Transportation (cycling)	The Nature Conservancy	
Urban Forestry	TreeUtah	
Public Utilities (water conservation)	U of U Neighborhood Partners	
	Utah Chapter ASLA	
	Utah DNR – Division of Forestry, Fire, & State Lands (Wasatch Front Area)	

Plan Timeline

The ordinance revision process will take approximately 16 months, including ordinance adoption and plan preparation and revision. See attached schedule for details.

Plan Expenses

There will be some incidental expenses associated with printing costs and mailing notices.

Action Plan Follow-Up: Pilot Projects

Following the Urban Forest Action Plan's adoption, the urban designer will pursue grant funding for a public and environmental health education campaign. The campaign will provide the public with information about the multiple economic, environmental, climate, aesthetic, and public health values of trees in our streetscapes, possibly in collaboration with Public Utilities or Sustainability.

During the planning process, the urban designer will gather input from the team, working group, and technical committee members to craft a public education campaign. For example, a public education campaign could address the ways our urban forest mitigates urban heat island impacts and the air quality benefits provided by woody plants or planting strategies.

Using the lessons learned from public engagement, Planning (Urban Design) and Urban Forestry will implement priority action steps by pursuing partnerships. Partners could potentially provide funding for planting and irrigation in underserved communities on both public and privately-owned land, where appropriate. Potential partners may include Salt Lake County, private foundations, nonprofits, hospitals, and community organizations.

Project Tasks

1. *Planning Preparation*

Description: The project team will develop an agreed-upon communications process, create and refine goals for what the street tree ordinance update will accomplish, identify critical internal and external stakeholders, and designate responsibility for various tasks to team members.

- 1.1. Develop communication procedures and meeting schedules with the working group and technical committee members
- 1.2. Develop introduction to frame need for the action plan

Deliverable: Chapter 1: Introduction

2. *Existing Conditions: Chapter 2. Urban Forest Strengths, Vulnerabilities, Opportunities, and Constraints Analysis*

2.1. Existing guidance

- Review existing master plans for guidance regarding trees and park strips
- Identify existing GIS resources

2.2. STRENGTHS

- Existing UF
- Public support
- Ordinance/Policies

2.3. VULNERABILITIES (WEAKNESSES)

- Lack of strategic planning
- Utility conflicts
- Inadequate soil volumes downtown
- Lack of awareness regarding the responsibility to water trees
- Inconsistent irrigation: asking residents to water City trees
- Tree replacement policy lacks ecosystem services approach
- Lack of impact data around public outreach and engagement around trees
- The City lacks \$ to maintain pervious paving systems
- Ordinance/policy contradictions
- Environmental inequity

2.4. OPPORTUNITIES

- Create canopy cover goal

WORK PLAN: Urban Forest Action Plan and Tree Regulations Zoning Ordinance Amendment

- Trees as public infrastructure
- Create a resilient UF
- Education on Irrigation/Water Conservation
- Education on UF benefits
- Rethinking the ROW
- Public-Private Partnerships

2.5. CONSTRAINTS (THREATS)

- Arid Climate
- Water Conservation balance
- Climate change impacts

Deliverable: **DRAFT Chapter 2: SWOT Analysis**, to include:

- GIS map with relevant layers identified

3. *Stakeholder Coordination and Public Engagement*

3.1. Stakeholder meetings

- Present to PNUT board
- Stormwater/Water Quality
- Sustainable Infrastructure group
- Water Conservation
- Rocky Mountain Power
- Other underground utility providers
- Others?

3.3. Public Engagement

- Develop narrative to explain the importance of planting trees when SLC was established in the mid-nineteenth century. (Trees are one of the founding urban gestures of the City, and we should work to reintegrate them into every aspect of our urban design – work with civic engagement on how to share stories with the community).
- Public outreach to community members and groups (tabling, tree walks)
- Presentations to community councils
- Webinar during open house period to attract interested residents and those who want to learn more, record and add to OH posting
- Developers – Present to Downtown Development Committee
- Work with UF to distribute information on ordinance revision/text amendment to residents requesting street trees

4. *Best Management Practices*

4.1. Policy

- Oversight
- Planning
- PLAN: Contact other cities with similar climates to see how their tree ordinance works (Boise, Denver, Sacramento) – ask them what is working in the ordinance, ask them how they handle utility conflicts
- UF: Has the PNUT Board addressed UF questions in the last two decades? Would a Forestry Advisory Board be beneficial?
- Look at the Sacramento ordinance update process as a model (esp. for outreach)
- Impact mitigation

4.2. Preservation

- Living infrastructure – urban ecosystem health
- BMPs for mitigation measures – how can fee structure be more in line with tree appraisal? Can we create a "security deposit" for tree protection?
- Work with UF: what are we charging now, and what should we be charging?
- BMPs for conflicts between trees and underground utilities in ROW (look at conduit installation and vaults)
- Underground/ aboveground utilities – what are different conduit types?
- UF: Develop GIS layer with 10-foot o.c. bubbles around existing water lines (see if we can get info from PU about which lines they plan to retire)

4.3. Promotion

- Funding
- Communication
- Partnerships
- Find example community/look in books for education/outreach and community involvement (also talk to local nonprofits about how they do outreach)
- Look at Vancouver's Green Streets program and see if Planning should include similar in the final chapter.
- Look at Sacramento's program for street trees
- Look at Melbourne and SF outreach/education

4.4. Placemaking

- UD: Scale/Form, Spacing
- PLAN: Does every 30 feet make sense? Look at research for 20 feet (See Jim Urban)
- PLAN: Research on street trees and economic development (Susan Wolf) to compare with existing retail/commercial corridors in SLC
- Neighborhood UF districts
- Look at Melbourne DGs

Urban Forest Strategic Action Plan and Street Tree Ordinance Text Amendment Work Plan

- Transitional Elements: Street trees can take decades to mature; what are interim strategies to achieve human scale?
- Cultural Meaning

Deliverable: **DRAFT Chapter 3: Best Management Practices**, to include:

- BMPs to prioritize for inclusion in ordinance and Action Plan to enhance landscape performance.

5. *Livability and the Urban Forest in Salt Lake City*

5.1. PLAN: Perform code/ordinance analysis using "Making your community forest friendly" guide

- Determine which existing SLC regulations might deter or prevent increased tree cover

5.2. PLAN: Look at Sustainable Code Review suggestions on trees/UF

5.3. GIS Analysis - Equity

5.4. Analyze implications of developing neighborhood forest districts with species guidelines

- Irrigation zoning
- Urban Design

5.5. Tree Form/Streetscape

- Develop rough proportional ratio of tree form (height/canopy spread) to building height
- Develop rough proportional ratio of tree form to street width
- Review Jan Gehl's work for guidance on human scale
- Create graphic with approximate tree forms
- Determine proportional relationships for double rows/alleés of trees
- Overlay zoning map with park strips to determine desired tree height ranges
- Assess growing conditions needed for tree form in collaboration with UF
- Consider situations where streetscapes might need exceptions to tree form requirements; Assess if or how to include them in the ordinance.
- Consider areas to change dimensions of park strips
- Consider sites to add medians with trees
 - Alleés
 - Linear parks
- Look at tree height for medians
- Consider underutilized streets to add linear parks and/or bosques
- Look at creating bosques at the intersection of mid-block walkways
- Create diagram/sections for ordinance

5.6. Feasibility of Transitional Elements

- Removable canopies? Market streets?
- Public art to develop human scale, changing interventions.

Deliverables: **DRAFT Chapter 4: Analysis and Recommendations**, to include:

Urban Forest Strategic Action Plan and Street Tree Ordinance Text Amendment Work Plan

- GIS map with relevant layers identified
- A graphic that demonstrates tree/building height/street width proportional ratios
- Tree height/form zone map based on existing/future land use zones

6. *Salt Lake City's Urban Forest Strategy*

- 6.1. Use SWOT and livability analysis and public feedback to prioritize goals
- 6.2. Assess existing or proposed tools to achieve urban forestry and tree-related sustainability goals. These may include: plans, policies, ordinances, and grant partnership opportunities, among others:
 - Urban forest design & sustainability guidelines
 - Urban Forest Management Plan
 - Amendment to existing master plans?
 - Grant partnership opportunities? (US Forest Service Community Forests, etc.)
- 6.3. Determine which mechanisms are most effective to implement change
- 6.4. Develop prioritized list and timeline of short- and long-term actions

Deliverables:

- **DRAFT Chapter 5: Strategies for SLC's Urban Forest**, to include strategic direction, goals, objectives, actions
- **DRAFT Appendix:** Public input summary, outreach materials, relevant existing conditions
DRAFT Executive Summary

7. *Text Amendment Process and UFAP Document Production*

- Initiate petition
- Draft amendments to zoning code
- Include Urban Forestry park strip standards into code
- Include height and form guidelines
- Take amendments to PC and CC for adoption
- Staff report
- Create three educational materials (one-sheets/website posts):
 - Economic development benefits of trees to give developers
 - Equity benefits of trees to provide to HAND, nonprofits, environmental groups
 - Mitigation of environmental impacts using trees (to add to the website)

Deliverables: **FINAL Urban Forest Action Plan**

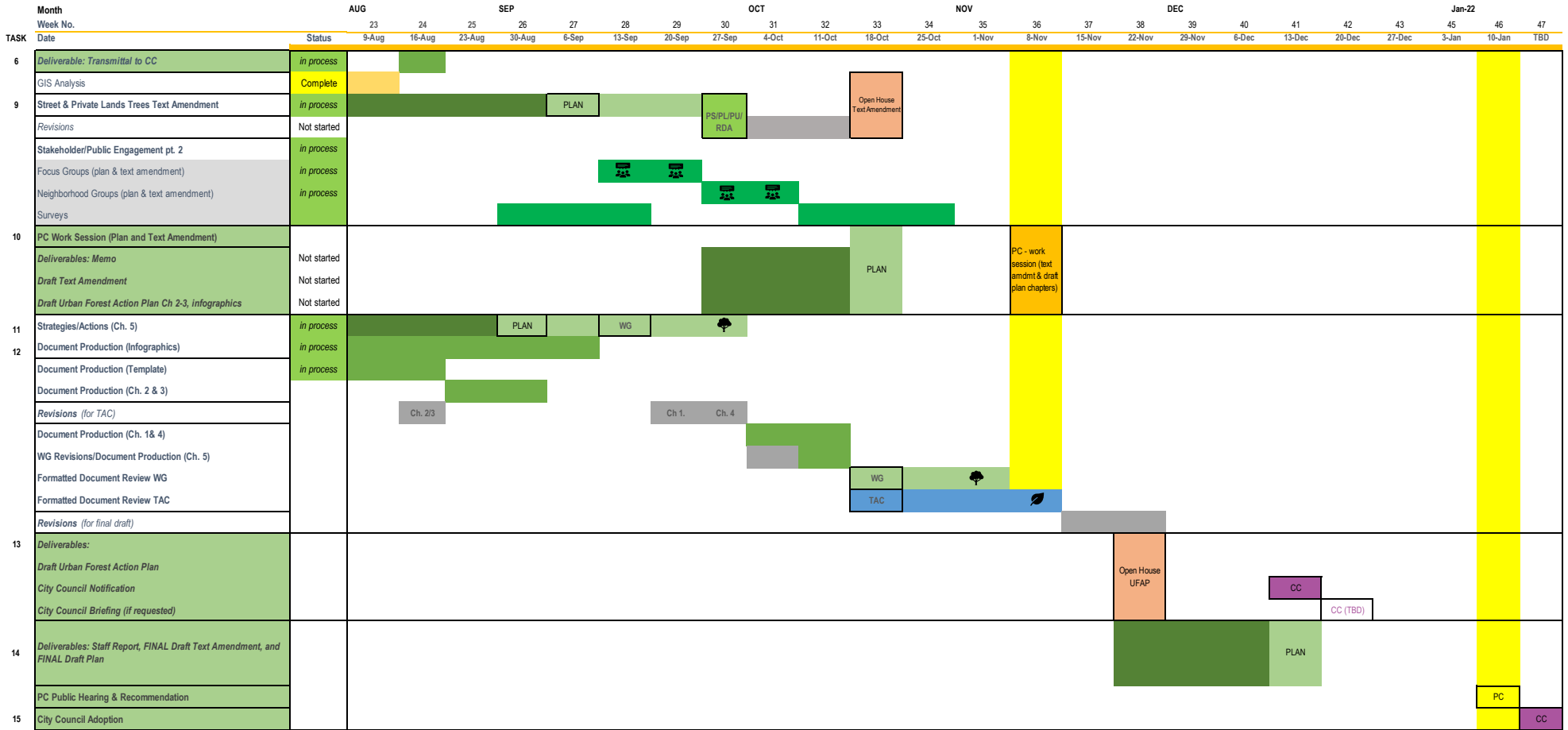
Zoning code amendment
Staff report
Educational materials

Project Budget:

The project has no budget.

There will be some incidental expenses associated with printing costs and mailing notices.

Project Plan: Urban Forest Strategic Action Plan and Public and Private Lands Tree Ordinance Text Amendment



Working Group (WG) meeting 

Technical Advisory Committee (TAC) Meeting 

Potential Barriers to Scope, Budget and Timeline

Potential Barriers to Scope

The most significant barriers to the scope relate to the ambition of the scope and constraints on staff capacity. These constraints have required a delicate balancing act between extending timelines or paring down the scope. The project is led by the Urban Designer, who has multiple responsibilities as the sole employee with that title.

Planning and GIS staff have experienced an increased number of applications and project requirements due to rapid development in Salt Lake City. Urban Forestry and Public Utilities are regularly called on to respond to emergencies due to extreme weather events, which limits their ability to participate as project team members. Recent staff turnover in Sustainability has also had a minor impact to items in the scope.

Potential Barriers to Scope

The plan has no budget beyond that for minor expenses related to mailing and printing. This impacts our ability to use data that is not publicly available without charge, and places limits on community outreach opportunities. This impact was anticipated and accounted for in the work plan.

Potential Barriers to Timeline

Barriers to the timeline may occur due to the time and care required to build consensus and support among both internal and external City stakeholders. These stakeholders include:

- all City departments that work in the public right of way,
- park and golf course managers and users,
- developers and contractors,
- business district members, and
- community members.

B. Existing Conditions

1. [Link to existing plans](#)

2. [Link to trends analysis](#)

Note: Trends analyzed relate to:

- City-owned assets
- City ordinance and policies
- Employee skill sets
- Municipal employee practices
- Resident practices

C. Public Engagement

Public Engagement: Urban Forest! Strategic Action Plan and Public and Private Lands Tree Ordinance Text Amendment

Month		AUG			SEP				OCT				NOV			DEC				Jan-22					
Week No.	Date	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	46	47
4	Public Engagement	Complete	Complete	Complete	Complete																				
	Tabling (plan only)	Complete	Complete	Complete	Complete																				
	Summer Planning Series (plan only)	Complete	Complete	Complete	Complete																				
9	Street & Private Lands Trees Text Amendment	in process	in process	in process	in process	PLAN			PS/PL/PU RDA			Open House TextAmendmt													
	Revisions																								
	Stakeholder/Public Engagement pt. 2	in process	in process	in process	in process																				
	Focus Groups (plan & text amendment)	in process	in process	in process	in process																				
	Neighborhood Groups (plan & text amendment)	in process	in process	in process	in process																				
	Surveys	in process	in process	in process	in process																				
13	Deliverables:																								
	Draft Urban Forest Action Plan																								
	City Council Notification																								
	City Council Briefing (if requested)																								
	PC Public Hearing & Recommendation																								
15	City Council Adoption																								

Working Group (WG) meeting



Technical Advisory Committee (TAC) Meeting



Focus Group



DRAFT Urban Forest Action Plan Vision Statement

The vision for the Urban Forest Action Plan is found in [Plan Salt Lake, Guiding Principle 8: Beautiful City \(2015\)](#)

Salt Lake City residents and visitors recognize our green network, including our urban forest, parks, and street trees, as one of our greatest assets. Our green network plays an important role in shaping our streetscapes and urban form. It enhances the livability of the City, improving air and water quality while providing shade, buffering noises, and enhancing walkability and streetscapes citywide. **We recognize that this green network contributes to a healthy and beautiful city and we will continue to make its maintenance and expansion a priority** (31).

The Urban Forest Action Plan will recommend goals, objectives, and actions to implement this vision.

Draft Public Engagement Metrics

Citywide survey

Response from minimum 3% of residents in each Council district

Planning Open House

Minimum of 100 individual views

Local surveys

Business districts needing trees:

- responses from BID or Chamber of Commerce representatives
- responses from 3-5 business owners in district (with Economic Development)

Neighborhoods needing trees:

- Civic engagement to provide flyers/social media content to Community Councils
- Aim to match the demographics representative of census tract with intercept surveys (modeled after SLC Public Lands Master Plan engagement)
- Posted signs in park-strips with QR codes or text numbers - response from minimum 3% of households in census tract

Focus Groups

Targeted survey response from minimum 25% focus group participants

- Neighborhoods needing trees
 - Community Councils
- Developers
 - Downtown Development Committee
 - ULI Utah
- Designers/Engineers
 - Urban Design Utah
 - AIA EQxD (Equity x Design) Committee
 - WIA (Women in Architecture)
 - WTS (Women's Transportation Seminar)