

Welcome!

UFMP Advisory Group

Workshop 3 of 3 - Management Approach
April 20, 2023, 8:00 - 10:00 a.m.

AGENDA

- Presentation (20 mins.)
- Group Discussions (90 mins.)
 - Management
 - Urban Forest Goals
- What's Next (10 mins.)

KnoxvilleTreePlan.org

KNOXVILLE URBAN FOREST MASTER PLAN



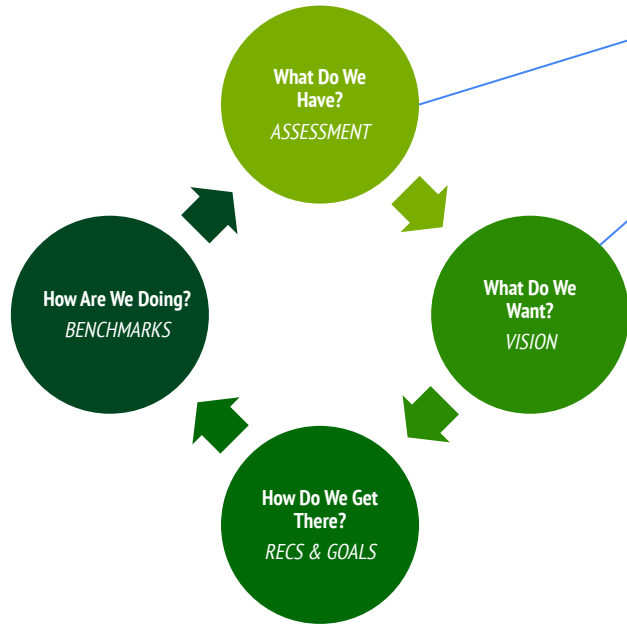
GET THE WORD OUT!

May 4, 6-7:30 p.m. Virtual UFMP Open House

May 11, 4-7 p.m. In-Person UFMP Open House
at Cansler YMCA

Discovery: Self Assessment Approach

#1 Adaptive Management



#2 Structure for Self Assessment

How sustainable is Knoxville's urban forest?

The Trees

The Players

The Management Approach

Recap of Workshop #2

The Players: March 23, 2023

Indicators of a Sustainable Urban Forest related to **The Players**

Presentation (30 mins.)

- The Role of Trees in Knoxville
- “The Players” Topic

Group Discussions (90 mins.)

- Discussion 1: Score Assessment (60 mins.)
- Discussion 2: Outreach Messaging (30 mins.)

KNOXVILLE (TN) Indicators of a Sustainable Urban Forest		Assessed Score			
		Low	Mod.	Good	
The Trees	Urban Tree Canopy Cover				
	Equitable Distribution				
	Streets & Parks <i>(public, landscape)</i>	Age/Size Distribution			
		Condition			
		Diversity / Pest Vulnerability			
		Suitability - Overhead	No data.		
		Suitability - Ground Level	No data.		
		Suitability - Soil Conditions	No data.		
	Natural Areas / Woodlands <i>(public or private)</i>	Suitability - Invasives			
		Suitability - Climate Adaptability			
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Large Landholder Involvement		16	46	1	
Green Industry Involvement		16	35	9	
City Department/Agency Cooperation	4	56	2		
Funder Engagement	22	32	9		
Utility Engagement	21.5	32.5	8		
Developer Engagement	57	5	0		
Public Awareness	24	33.5	0.5		
Regional Collaboration	51	10	0		
The Mgmt Approach	Tree Inventory				
	Canopy Assessment				
	Management Plan				
	Risk Management Program				
	Maintenance of Publicly-Owned Trees (ROWS)				
	Planting Program				
	Tree Protection Policy				
	City Staffing and Equipment				
	Funding				
	Disaster Preparedness & Response				
Communications					

Recap of Workshop #2

The Players: March 23, 2023

Group Scoring

• Reason for Scoring

- Education /awareness needed
- Communications / coordination needed, common goals
- Areas of city so different, therefore different needs
- Some groups engaged, but sub contractors not necessarily
- Trees are an afterthought / not a priority / considered a nuisance to some

• Ways to Improve

- More outreach / education
 - Role of trees (storytelling)
 - Lead by example (ie schools)
 - Setting common goal
 - Training
- More preservation (whether incentives, regulation, or enforcement of existing)
 - Prioritize areas of highest needs first
 - Connect efforts to wide region

		Low	Mod.	Good
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Communications / Outreach Ideas

- Trees Make/Save Money
- Trees For Better Health
- Value of Mature and Diverse Forest
- Tell the Story
- Trees Solve Problems
- Engage in Diverse Messaging Strategies

Today's Topic: The Management Approach

Self Assessment Structure

9 Indicators of a Sustainable Urban Forest

Best Practice or Industry Standard

Low, Moderate or Good based on that Standard

Knoxville Conditions Today

URBAN FOREST SUSTAINABILITY MATRIX
Worksheet to Assess the Sustainability of the Knoxville Urban Forest

Indicators of a Sustainable Urban Forest THE MGMT APPROACH	Overall Objective or Industry Standard	Score Levels			Knoxville Today
		Low	Moderate	Good	
Tree Inventory	Existence of a comprehensive, GIS-based, current inventory of all intensively-managed public trees to guide management, with mechanisms in place to keep data current and available for use. Data allows for analysis of age distribution, condition, risk, diversity, and suitability.	No inventory or out-of-date inventory of publicly-owned trees.	Partial or sample-based inventory of publicly-owned trees, inconsistently updated.	Complete, GIS-based inventory of publicly-owned trees, updated on a regular, systematic basis.	A complete, GIS-based inventory of publicly owned trees exists and is updated on a regular basis.
Canopy Assessment	Existence of an accurate, high-resolution, and recent assessment of existing and potential city-wide tree canopy cover that is regularly updated and available for use across various departments, agencies, and/or disciplines.	No tree canopy assessment.	Sample-based canopy cover assessment or out-of-date high resolution assessment.	Up-to-date high-resolution tree canopy assessment using aerial photographs or satellite imagery.	Up-to-date high-resolution tree canopy assessment is available from both 2008 and 2018.
Management Plan	Existence and buy-in of a comprehensive urban forest management plan to achieve city-wide goals. Re-evaluation is conducted every 5 to 10 years.	No urban forest management plan exists.	A plan for the publicly-owned forest resource exists but is limited in scope, acceptance, and implementation.	A comprehensive plan for the publicly owned forest resource exists and is accepted and implemented.	A comprehensive management plan exists and is implemented each year. However, the scope and budget is limited to street tree work. It does not include parks trees or management of invasive species, and these additional actions are not included in budgeting.
Risk Management Program	All publicly-owned trees are managed for maximum public safety by way of maintaining a city-wide inventory, conducting proactive annual inspections, and eliminating hazards within a set timeframe based on risk	Request-based, reactive system. The condition of publicly-owned	There is some degree of risk abatement thanks to knowledge of condition of publicly-owned trees, though	There is a complete tree inventory with risk assessment data and a risk abatement program in effect. Hazards are eliminated within a	Some degree of risk abatement with inventory and cyclical care, but risk assessment is request or need based. Parks not included in proactive care cycle, so the

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	Disaster Preparedness & Response Communications				
Invasive Species Management					





Today's Topic: Management

Urban Forest Management Approach

Indicator: Tree Inventory

Objective: Existence of comprehensive, GIS-based, current inventory of all public trees, with mechanisms in place to keep data current. Data is used to analyze age distribution, condition, risk, diversity, and suitability.

Public tree inventory (GIS-based) in place

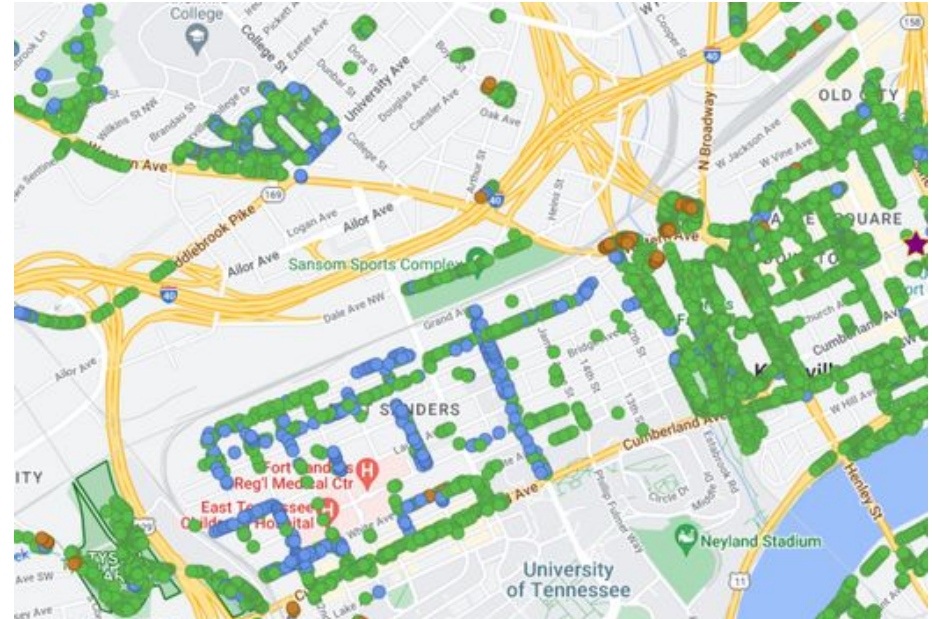
- Over 25,000 public trees, including street trees and other public landscape areas
- Limited information on city-owned natural areas and woodlands

Data is up-to-date

- Divided into five management zones. Each year, one zone receives pro-active management and inventory data is updated

Industry recommendation:

- Update inventory every 5-10 years.
- Knoxville easily meets national best practices in this regard



Indicator: Canopy Assessment

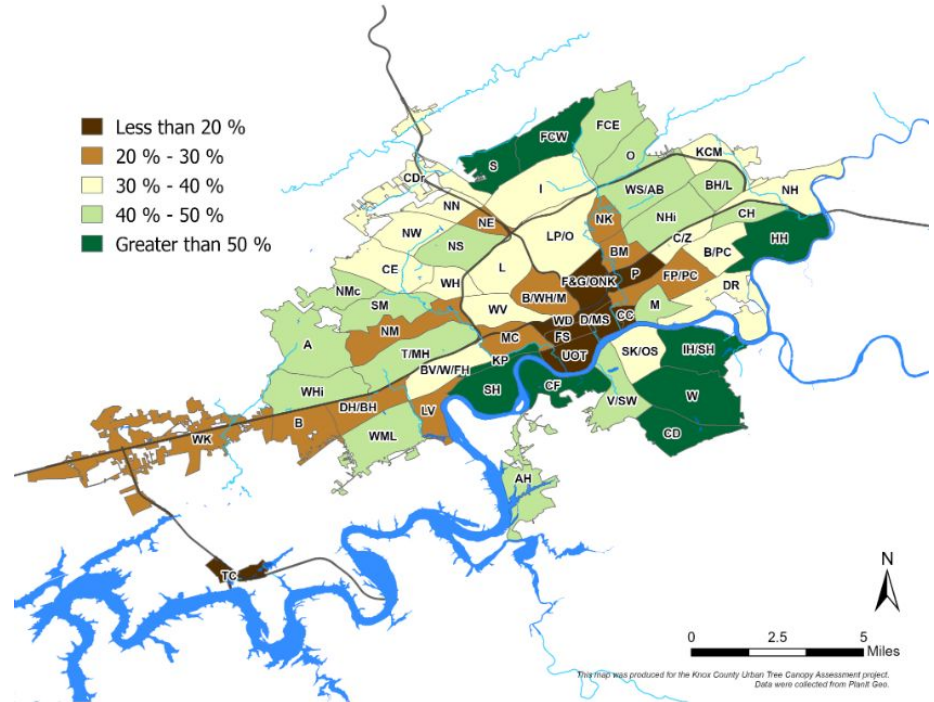
Objective: Existence of accurate, high-resolution, and recent assessment of existing and potential city-wide tree canopy cover that is regularly updated and available for use across departments, agencies, and/or disciplines.

In 2020, Trees Knoxville partnered with the City of Knoxville (and others) to complete an Urban Tree Canopy Assessment (UTC)

- Used 2018 imagery
- 38% of land in Knoxville is covered by trees when viewed from above
- This is down from 40% in 2008
- More analysis is planned to examine equitable distribution of canopy

Industry Recommendation:

- Conduct a new UTC assessment every 5-10 years



Indicator: Management Plan

Objective: Existence and buy-in of a comprehensive management plan, that is based on current data..

- Knoxville has a 2011 urban forest management plan, based on sample inventory data collected at the time.
- Management continues to follow same framework of recommendations, and is based on current data.
- Could be more comprehensive, does not currently include parks trees or invasive management.

Industry Recommendation:

- Management plans is in place, based on current information, and updated on a regular cycle



Indicator: Risk Management, Disaster Preparedness and Response

Objective: Publicly owned trees are proactively managed for risk, and disaster management plan is in place related to the urban forest.

- Tree inventories help with risk abatement because condition of trees is known.
- Risk is assessed as needed, mostly based on request.
- Staff is prepared to respond to disaster, but no formal plan is in place. Response is not organized in a way that is efficient and automatic.

Industry Recommendation:

- Plans are in place, and based on current information, updated on a regular cycle, and staff responsibility is organized.



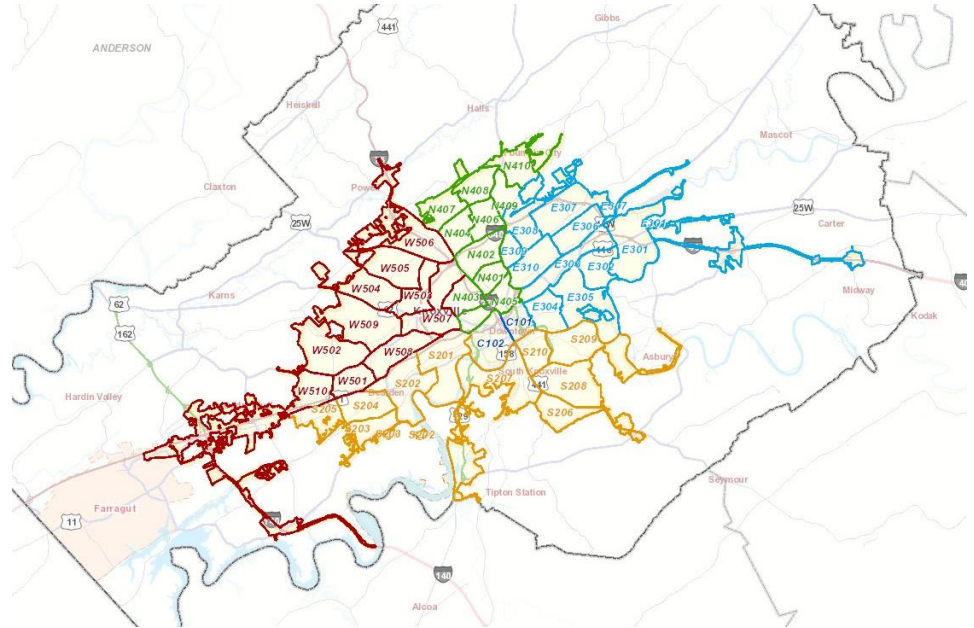
Indicator: Maintenance Program of Publicly Owned Trees

Objective: Public trees are pro-actively maintained for optimal health, targeting a 5-7 year cycle.

- Knoxville's tree inventory is kept up to date on a five year cyclical schedule, and management needs are based on current data.
- Cyclical schedule of tree management includes providing proactive pruning and other tree care needs on a five year cycle.
- Maintenance of trees in parks is more reactive.

Industry Recommendation

- All public trees receive proactive pruning and tree care on a cyclical basis



Indicator: Planting Program

Objective: Comprehensive and effective planting program driven by canopy cover goals, equity considerations, and other established goals.

- Trees Knoxville plants between 100-200 trees per year, and hosts tree giveaways that number into the thousands
- City Forestry plants 400-800 trees per year. Planting typically outweighs removal each year.
- City Budget/funding for planting is established and secure, but at threshold as far as what they can continue to maintain.
- Contracted tree planting is well-organized and contractors are trained by forestry staff on proper planting expectations.

Industry Recommendation

- Comprehensive tree planting program is based on established community goals.



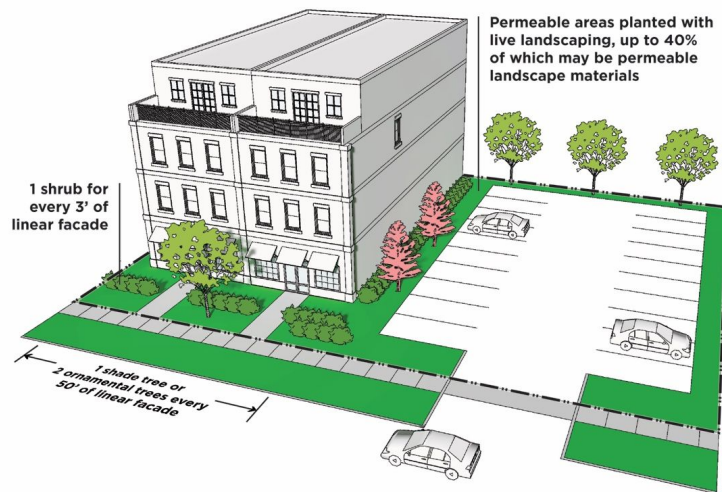
Indicator: Tree Protection Policy

Objective: Comprehensive and up to date tree protection ordinance is in place, based on community goals, and enforced.

- Tree Protection Policy is in place (Chapter 14. Forestry)
- Community concerns about tree removal during development
- Required tree planting and other landscape design requirements are in place in Chapter 12
- Review is ongoing during plan development:
 - Opportunities in existing code to improve outcomes
 - On the lookout for incentives
 - Established goals will influence recommendations

Industry Recommendation

- Comprehensive and up to date ordinance with enforcement and based on community goals



Indicator: Staffing and Equipment

Objective: There is adequate staff and access to equipment to meet current needs, managed by an urban forestry professional with certified arborists on staff.

- Staff and equipment is in place for immediate needs, but at threshold for increasing services.
- Partnering with Trees Knoxville on planting, establishment, and education helps, however Trees Knoxville does not have funding for additional staff to focus on these items.
- High-level urban forester to manage activities, but responsibilities are spread across multiple needs.
- Urban Forester responsible for outreach and education, regulation and enforcement of tree protection, site plan review, tree assessments, communication, etc...

Industry Recommendation

- Multi-disciplinary team with vehicles and equipment to meet needs, current and immediate future

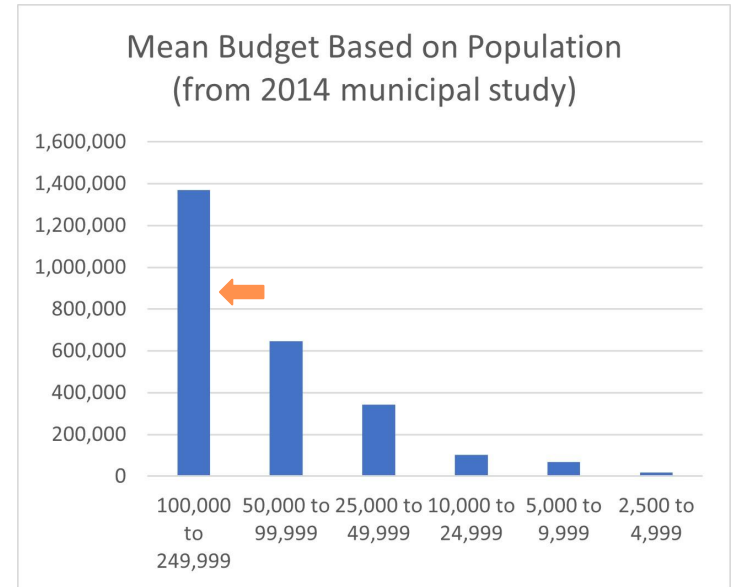
Indicator: Funding

Objective: Appropriate funding is in place for both proactive and reactive management, based on current data on existing and future needs.

- City funding for maintenance and planting is established and there is flexibility to supplement through Tree Bank.
- Funding is not based on future needs.
- Staffing and equipment is at threshold for what can currently be maintained.
- Trees Knoxville could fill in some gaps if they could access more funding, especially for dedicated staff to organize planting, maintenance through establishment, and education and outreach.

Industry Recommendation

- Funding is in place based on existing and future needs, and comes from both public and private partners.



Indicator: Communication

Objective: Effective avenues of two-way communication between the city and its citizens are in place and messaging is consistent and coordinated.

- A work order system for taking tree care requests is in place (311). This provides one-way communication.
- Interdivisional communication can be disorganized, there is no system in place to make sure appropriate staff is always included.

Industry Recommendation

- Communication is consistent, coordinated, and goes both ways.



Indicator: Invasive Species Management

Objective: An invasive species management plan is in place, based on established needs, and funding is in place

- Managing invasive species is a recognized maintenance need.
- Management of invasive species is spread across different crews/divisions, and coordination is informal.
- No formal management plan is in place, although some fragmented plans exist.
- Some funding is available for contracted work, but not based on a plan or established need.



Assessment Results

LOW: 53%
MODERATE: 34%
GOOD: 13%

To Note:

- Lack of data on much of the urban forest
- Moderate on most of the rest
- What's next with matrix?
 - Aids in strategy development
 - Available for measuring progress

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Your turn.

Two Group Discussions

Discussion 1: Management Across Knoxville

Discussion 2: Urban Forest Goals

UF Management

First Discussion: City manages a small part of the urban forest. What about the rest? How to we apply this to the rest of us? Are there concepts the players and community should focus on?

Players:

- Neighborhood Action
- Large Landholder Involvement
- Green Industry Involvement
- City Department/Agency Cooperation
- Funder Engagement
- Utility Engagement
- Developer Engagement
- Public Awareness
- Regional Collaboration

Management Concepts:

- Tree Inventory
- Canopy Assessment
- Management Plan
- Risk Management Program
- Maintenance of Publicly-Owned Trees
- Planting Program
- Tree Protection Policy
- Invasive Species Management
- City Staffing and Equipment
- Funding
- Disaster Preparedness & Response
- Communications



Setting UF Goals

- What are city urban forestry goals?
- How are they used?
- What is a canopy goal?
- How do we develop goals?
- What should Knoxville's unique goals be?

Urban Forestry Goals

What are they? Why have them?

- Goals help define the future Knoxville is working toward.
- Action steps are aimed at meeting goals.
- Measuring progress.
- Established reasoning for efforts (regulations, resources, partnerships)
- Serve as a rallying cry. Important for use in marketing and messaging.
- Can be incorporated into other plans and sustainability efforts.



Setting Goals

There are many ways to measure progress in tree canopy improvement efforts.

Goals need to reflect the priorities of the community.

Multiple options:

- Tree Canopy Goal (% common)
 - Citywide percentage
 - By land use (commercial, residential, etc.)
 - By neighborhood
 - By groups of neighborhoods with similar constraints & opportunities
- Achieving Equity
(requires defining exactly what this means to the community)
- Access to Tree Canopy
- Increasing Levels of Benefits Provided
(i.e. lower temperatures, more stormwater intercepted, improvements in air quality)
- Level of Engagement
(Numbers of neighborhoods or organizations engaged)
- Species Diversity
- Longevity of Trees
- Tree Planting Goal
- Walkability / Shaded Walks
(i.e. Charlotte)
- ...others?

Setting Goals

What are other communities doing?

Cincinnati (38%)

Working to get every neighborhood above 30%.

Boston (27%)

- Goal 1: Equity First
- Goal 2: Proactive Care & Preservation
- Goal 3: Community Led
- Goal 4: Prioritize & Value Trees

Tallahassee

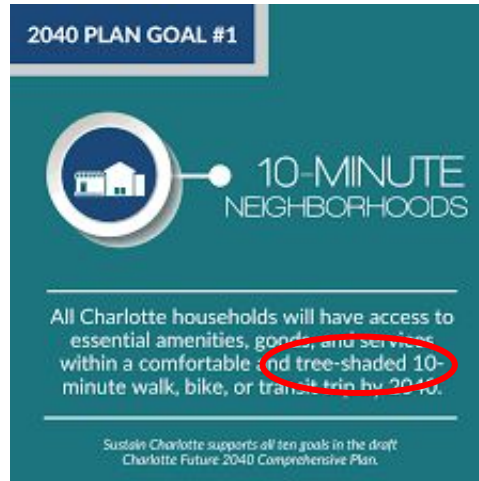
1. Improve canopy quality
2. Maintain canopy levels
3. Engage the community

Columbus (22%)

1. Long term goal of 40% by 2050
2. Two short term goals:
 - Stop the losses
 - Address inequities

Charlotte

50% by 2050. Revisiting goals now. Considering no net loss, walkability.



Cleveland

1. A shift in thinking about trees, acknowledging them as critical community infrastructure
2. A reversal in the trend of canopy loss
3. Assuming full stewardship for the tree infrastructure

Reach 30% percent by 2040 (from 19% today). Long term goal of reaching 40%.

Lost canopy, revisiting goals.

Seattle

Reach 30% tree canopy cover by 2037 (28% currently, goal set in 2013) + quality and engagement.

Setting Goals

Some math for consideration.

How to **GROW** **CANOPY**

1. **Preservation/Care** of Existing
2. **Adding** New Trees
3. **Systems** to support above.

610 ACRES

Additional Canopy Needed (approx.) to
add 1% point to citywide tree canopy in Knoxville
Based on 2018 tree canopy assessment

634 ACRES

UT Main Campus

91 ACRES

Fort Dickerson Park

What's Next

Phase II: Discovery wraps up at the end of May

- **OPEN HOUSES**
 - a. Virtual May 4
 - b. In Person May 11 - Cansler YMCA
 - c. **Your Assignment: Promote, and attend!**
- **Other Input**
 - a. Invite us to attend your next event.
 - b. Online survey.

Phase III: Plan Development (June to December)

- Steering Committee Goals Meeting (June)
- **Review** Narrative, Goals, Strategies (late summer)
- Plan open for public comment (end of year)

