

Welcome!

UFMP Kick Off Event

December 14, 2022, 5:30-7:00 p.m.

AGENDA

Welcome (10 mins.)

How We Got Here (20 mins.)

UFMP Process (15 mins.)

Results in Other Cities (20 mins.)

Q&A (15 mins.)



KnoxvilleTreePlan.org



How We Got Here

Path leading up to this urban forest master plan

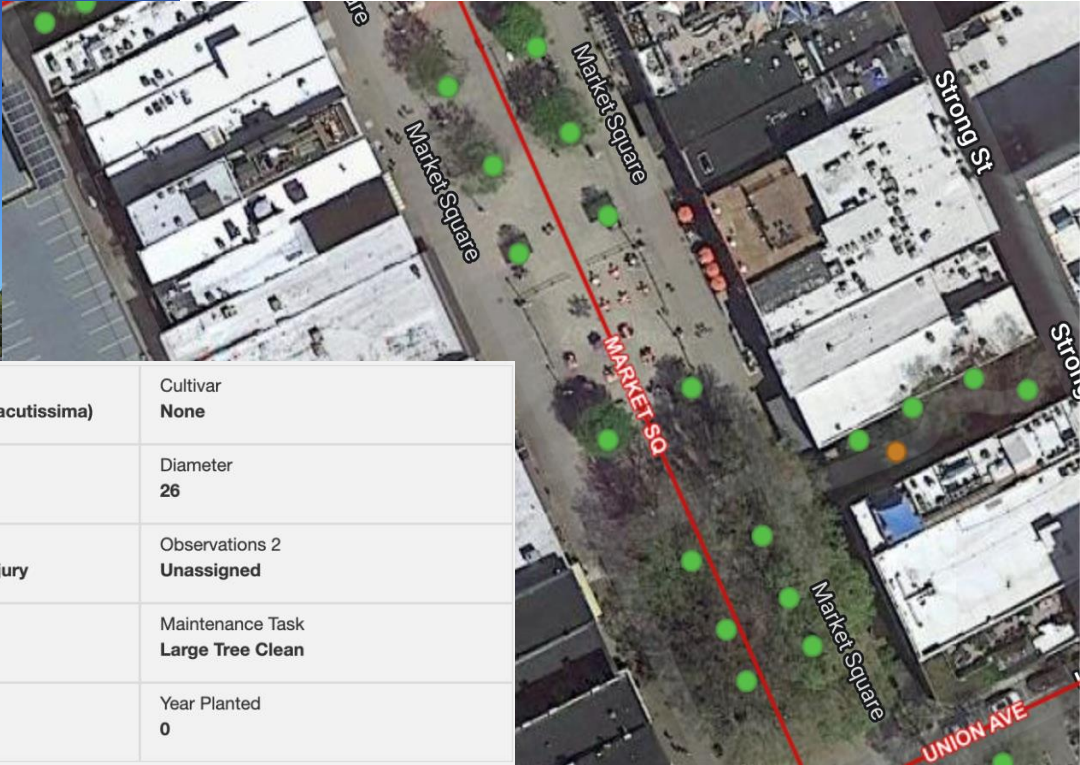
WHY TREES?



2011 Tree Inventory and Management Plan



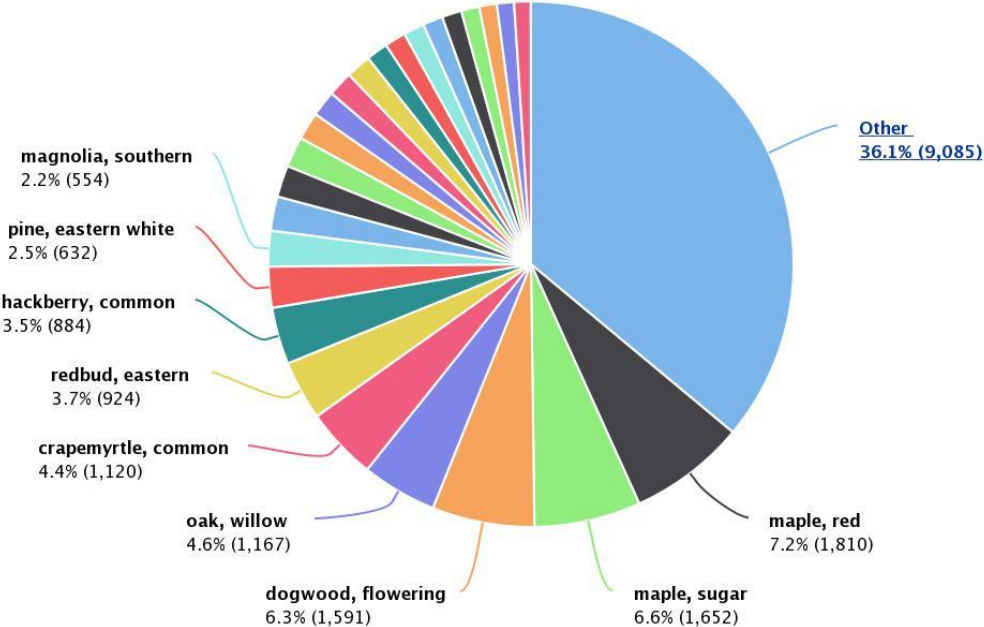
Over 100,000 Trees in Inventory



Species <small>w</small> oak, sawtooth (<i>Quercus acutissima</i>)	Cultivar None
Stems 1	Diameter 26
Observations Human-caused stress/injury	Observations 2 Unassigned
Condition Fair	Maintenance Task Large Tree Clean
Secondary Maintenance None	Year Planted 0

Diversity of Public Tree in Knoxville

Count per (Common) Species





CITY OF KNOXVILLE

City Urban Forestry Program Progresses

Overhauled our planting contract, education, developed a pruning cycle, volcano mulching, updated tree protection ordinance, outreach, etc.



Where City Resources Go

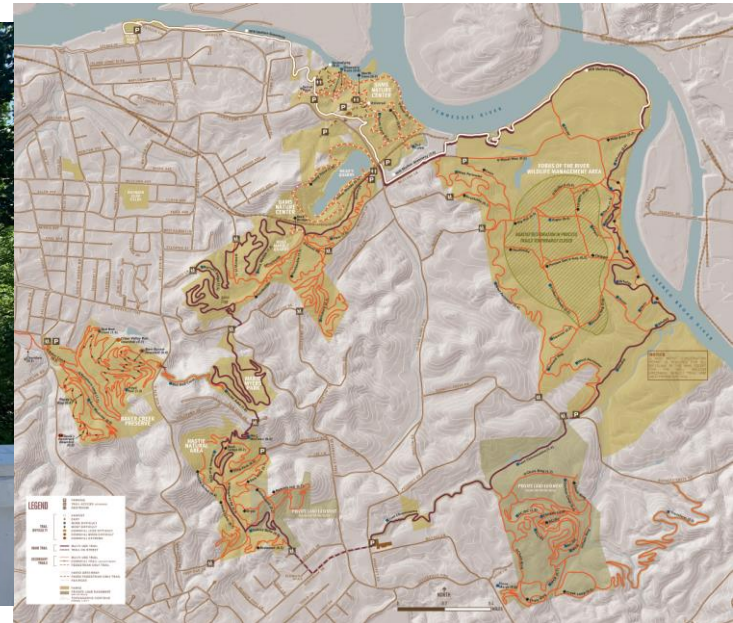


1,000 miles of Streets in Knoxville composed of mostly private trees



Parks, Natural Areas, and “Urban Wilderness”

Years of remaking green space in Knoxville into strong environmental, economic, and social amenities.



Welcome Trees Knoxville in 2015

Tree Canopy Partner- Bridge between Public and Private Stakeholders



TREES
KNOXVILLE



How We Got Here

2020 Urban Tree Canopy Study



TREES
KNOXVILLE



PLANIT GEO™
mapping a greener future

2020 Urban Tree Canopy Study Partners



2020 Urban Tree Canopy Study

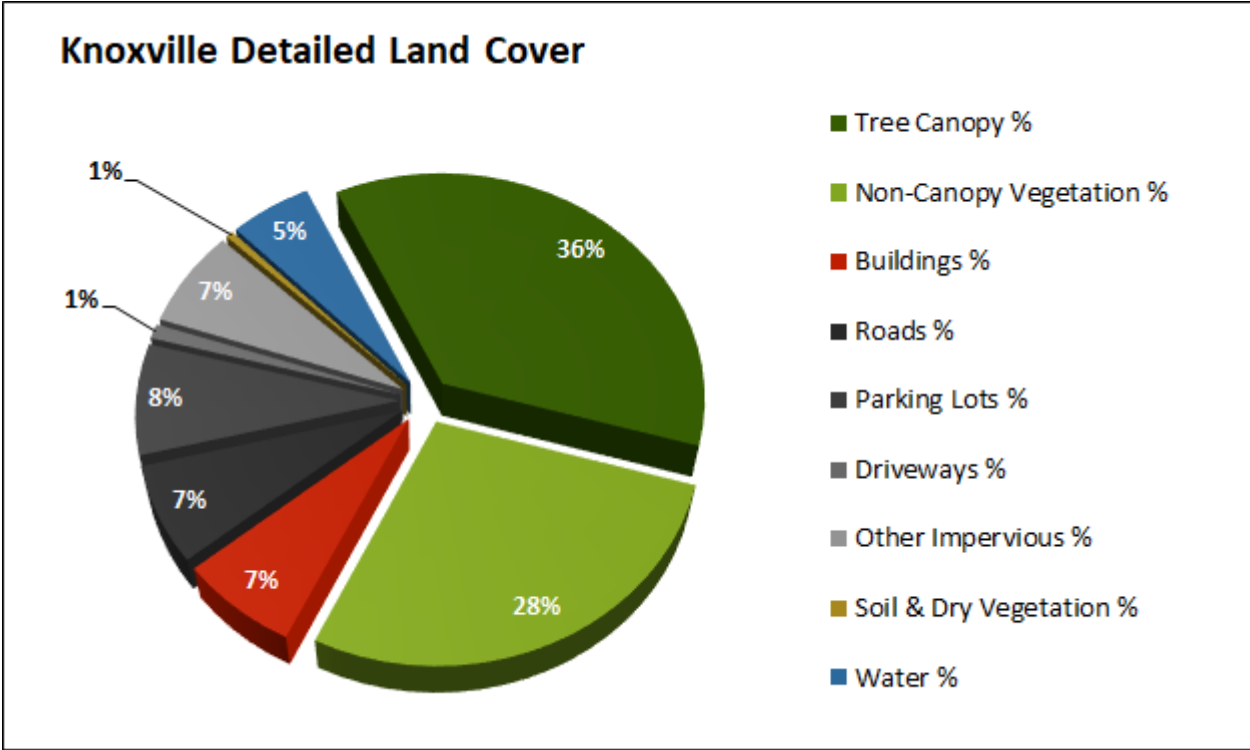
Mapping of 5 Land Cover Types

1. Tree Cover
2. Other Green Space
3. Impervious Surfaces
 - a. Buildings
 - b. Paved surfaces
4. Bare Ground
5. Water



2020 Urban Tree Canopy Study

Results



2020 Urban Tree Canopy Study

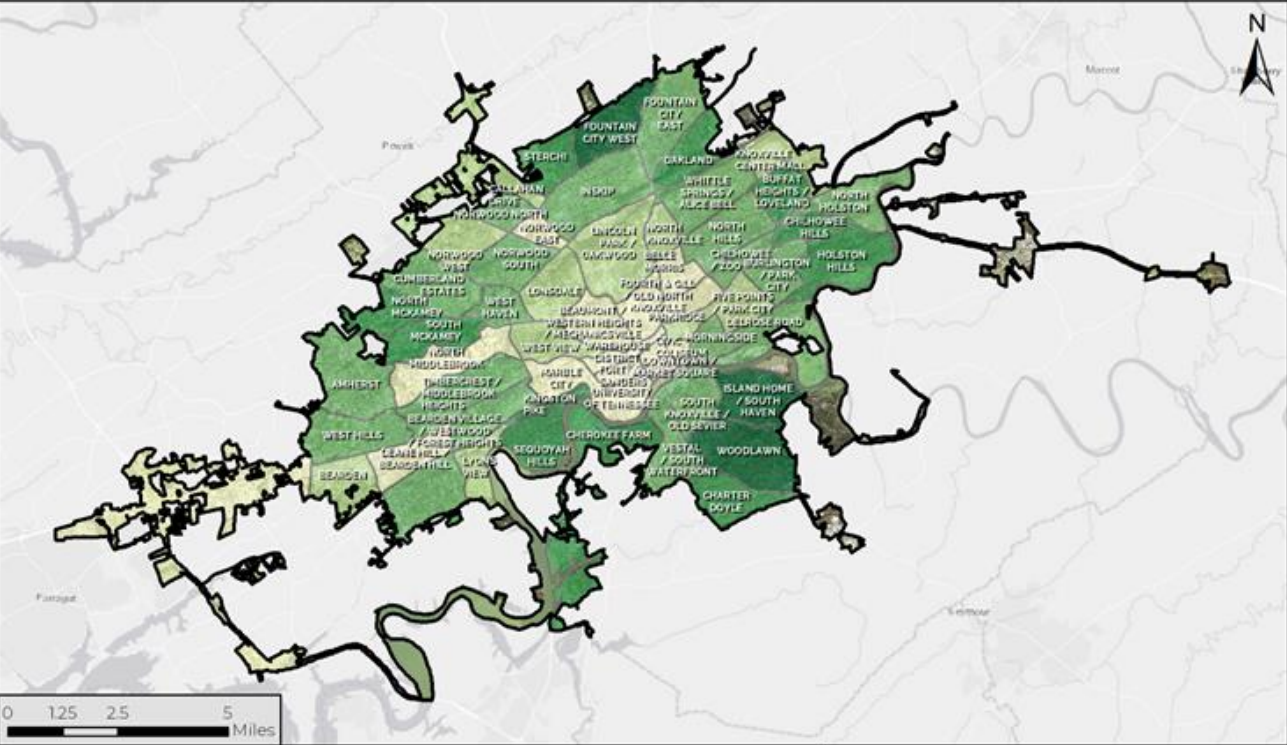
Study Broke the City into Smaller Geographies

- City of Knoxville
- City Council Districts
- Watersheds
- Neighborhoods
- Census Tracts
- Census Blocks
- City of Knoxville Maintenance Zones
- City of Knoxville Zoning
- 100 ft. Stream Buffer
- Street and Highway Right-of-way
- City Parks and Public Spaces



Knox County, TN Urban Tree Canopy Assessment Knoxville

Urban Tree Canopy Percent by Neighborhoods



Urban Tree Canopy %	
	0% - 25%
	26% - 35%
	36% - 45%
	46% - 55%
	56% - 100%

January 21, 2021

This map was produced for the Knox County Urban Tree Canopy Assessment project. Data were derived from USDA's National Agriculture Imagery Program (NAIP) 2018 Imagery and USGS 3DEP 2016 LiDAR. Results were aggregated to various target geographies. Base map provided by ESRI.

2020 Urban Tree Canopy Study

Study Broke the City into Smaller Geographies

2020 Urban Tree Canopy Study

Also looked at Changes in Tree Cover from 2008 to 2018

2018

2008

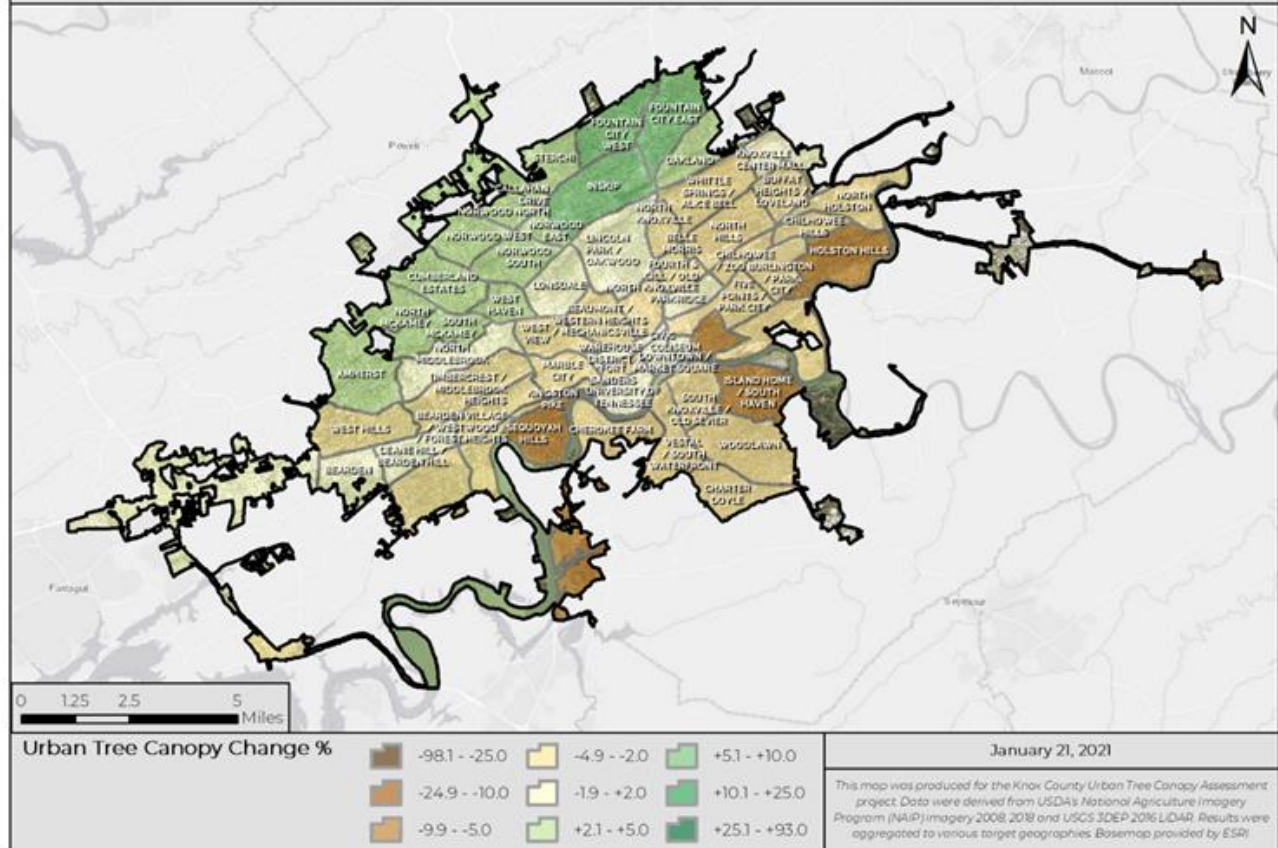


2020 Urban Tree Canopy Study

Example Findings:
Change in Tree Canopy by
Neighborhood

Knox County, TN Urban Tree Canopy Assessment Knoxville

Urban Tree Canopy Change (2008-2018) by Neighborhoods

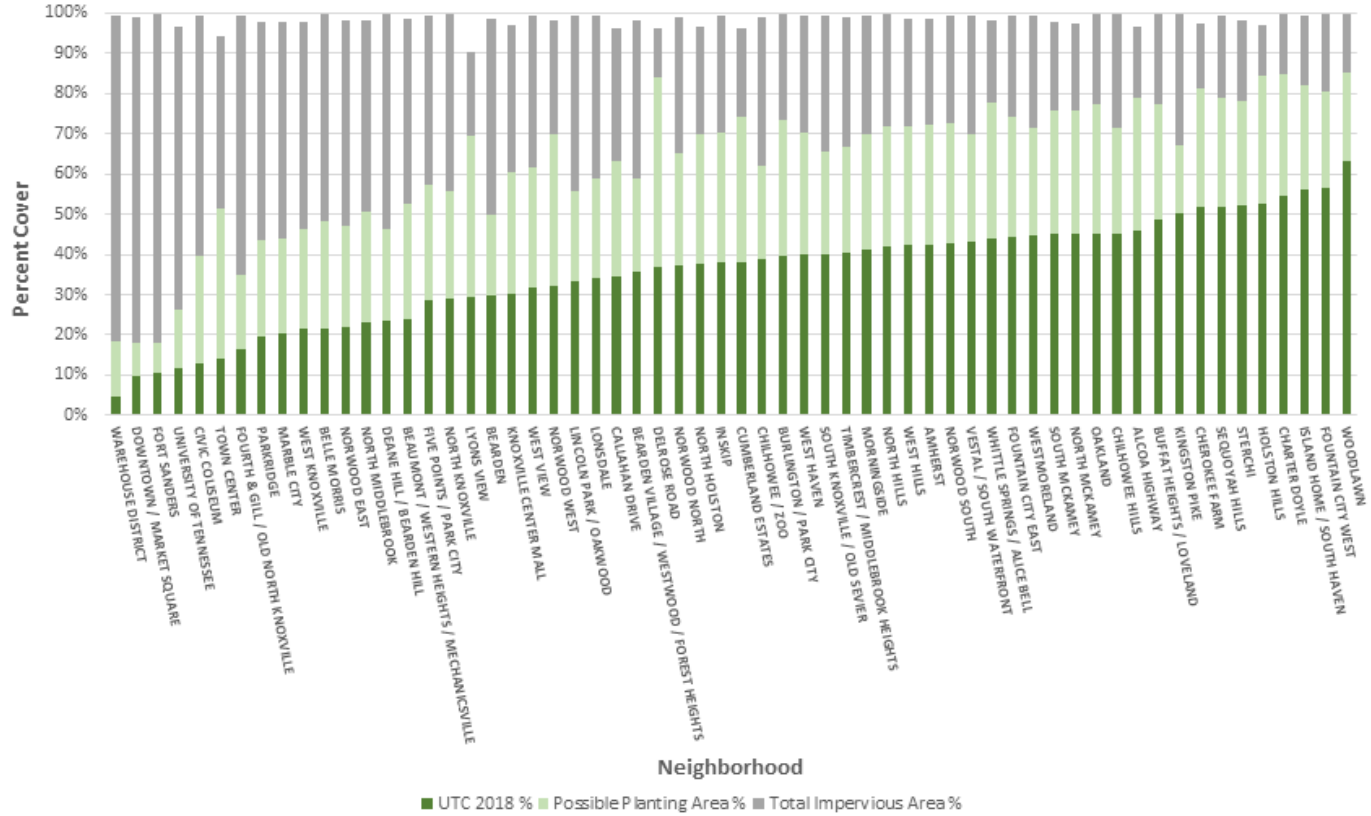


2020 Urban Tree Canopy Study

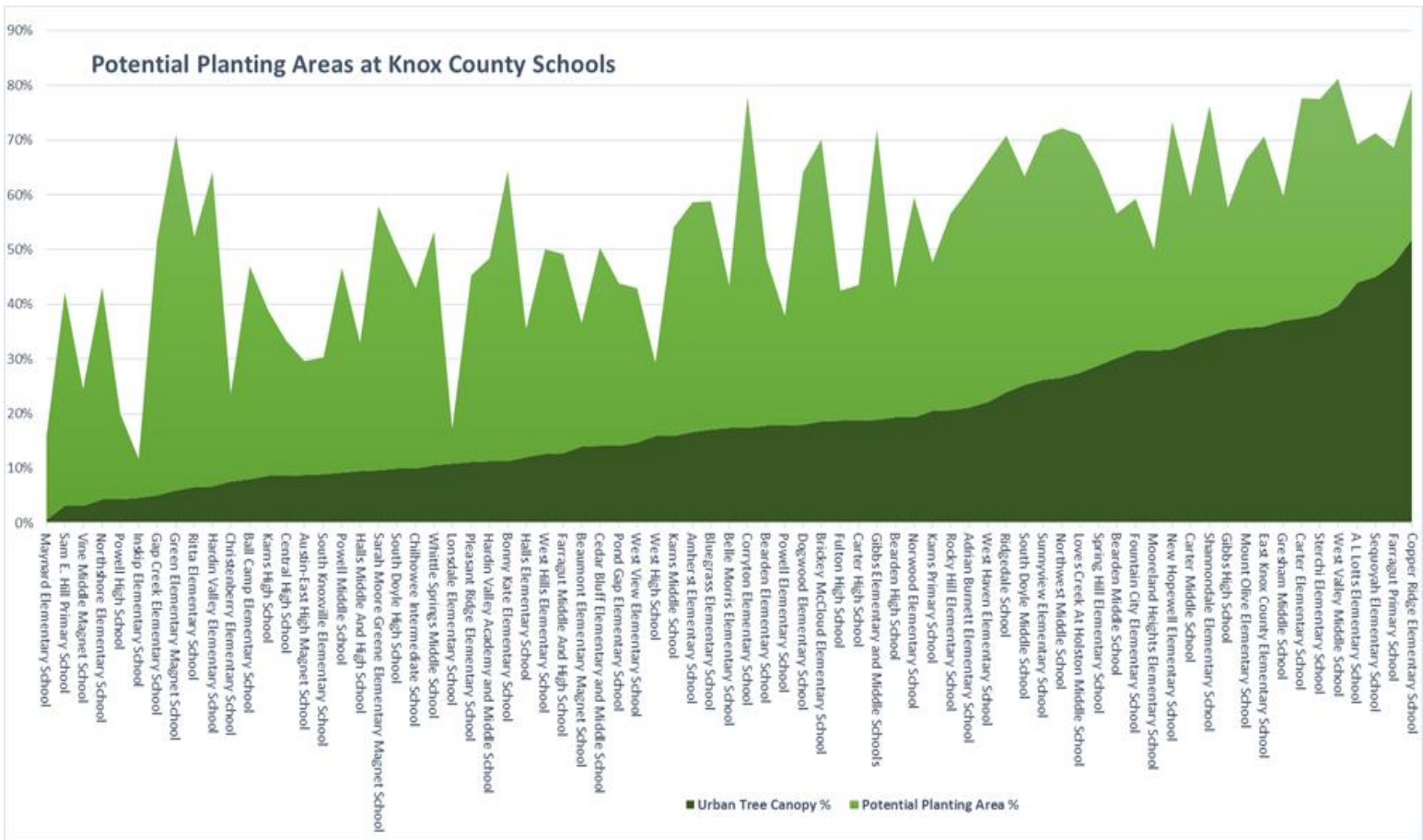
Example Findings:
Available Planting
by Census Blocks



Land Cover for City of Knoxville Neighborhoods



Potential Planting Areas at Knox County Schools



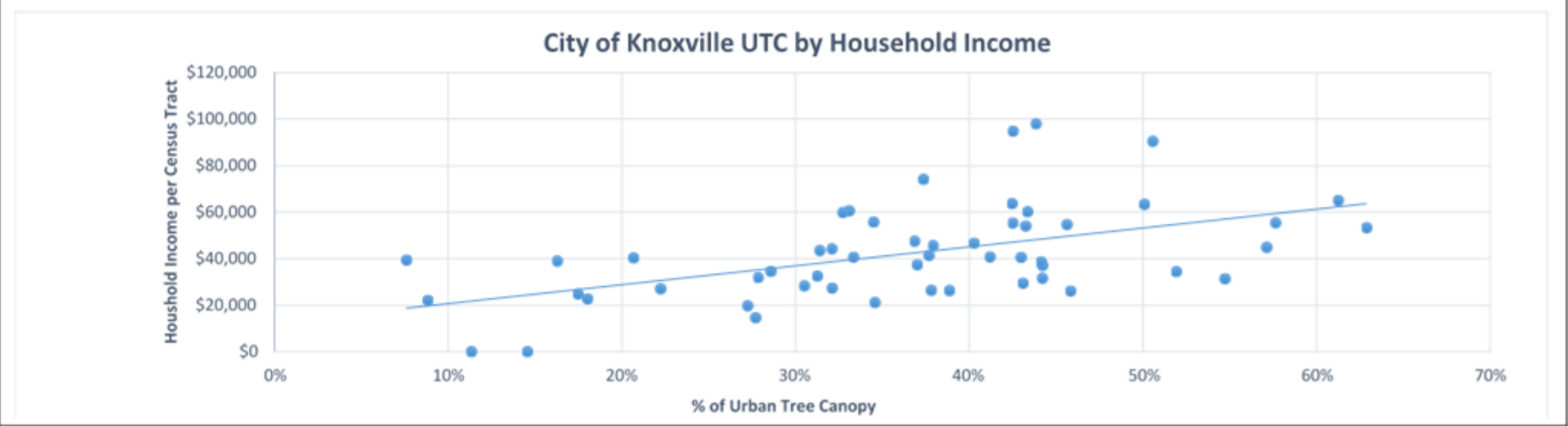
2020 Urban Tree Canopy Study

Example Findings: City of Knoxville Zoning

Zoning Type	Total Area (Acres)	UTC 2008 (Acres)	UTC 2018 (Acres)	UTC Change (Acres)	% UTC	% UTC Change	Impervious Area (Acres)	% Impervious	PPA (Acres)	% PPA
Agricultural	2,504	1,197	1,162	-35	46%	-1%	147	6%	1,042	42%
Commercial	7,146	1,504	1,508	4	21%	0%	3,967	56%	1,603	22%
Cumberland	32	3	2	-1	6%	-2%	29	91%	1	3%
Downtown	245	17	19	2	8%	1%	211	86%	15	6%
Industrial	5,313	1,289	1,243	-46	23%	-1%	2,679	50%	1,299	24%
Institutional	2,074	411	411	0	20%	0%	963	46%	573	28%
Open Space/ Natural Area	5,022	2,983	2,862	-121	57%	-2%	370	7%	1,499	30%
Residential	29,114	14,987	14,472	-515	50%	-2%	5,490	19%	8,984	31%
ROW	11,434	2,544	2,515	-29	22%	0%	6,050	53%	2,813	25%
South Waterfront	229	67	52	-14	23%	-6%	118	51%	59	26%
Citywide	63,114	25,002	24,246	-756	38%	-1%	20,023	32%	17,887	28%

2020 Urban Tree Canopy Study

Example Findings: Census Data



2023 Urban Forest Master Plan

Process of Funding and Hiring Consultant

1. City and Mayor budgeted Urban Forest Master Plan for 2022-2023 Fiscal Year
2. Trees Knoxville raises funds, and put out Requests for Proposals In July 2022
 - a. Funding from City, State, KUB, and Local Organizations
 - b. Still bringing partners together
3. Selection Committee formed and selected a Consultant in October 2022 (City, Trees Knoxville, KUB, City Tree Board, Knoxville Knox County Planning) from 7 different proposals.
4. Project Kick-off December 2022



What Does This Mean for My Community

Neighborhood 1



What Does This Mean for My Community

Neighborhood 2



What Does This Mean for My Community

Neighborhood 3

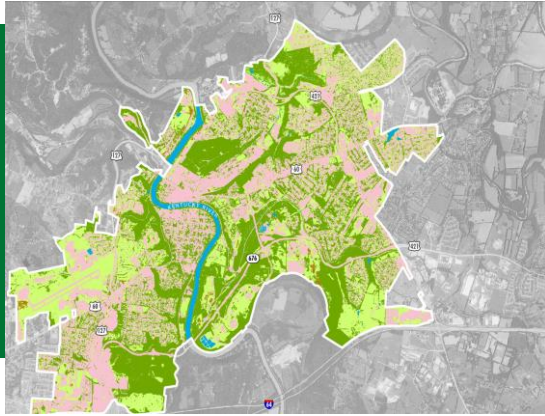




UFMP Process

Process to develop Knoxville's urban forest master plan

Urban Canopy Works



Urban Forest Planning

Strategic planning (UF Master Plans)

Tree canopy assessments

Existing conditions analysis

Public engagement

Existing policy/plan/code reviews



Municipal Services

City arborist services

Code/regulation reviews

Operations analysis

Urban Tree Canopy (UTC) assessments

Special Projects (tree planting contract management, planting plan design, inventories, more)



Arboricultural Consulting

Risk assessment
(realtors, campuses, other grounds)

Development/Construction Services

Appraisal / Assessment Services

Appraisals for insurance losses (post hurricanes and other storms)

Knoxville Plan

Community Focused

Over 24,000 acres of tree canopy in City of Knoxville (36%)

Over 14,000 acres on private residential land ($\frac{2}{3}$ of all canopy)

Approximately 75% on privately owned land citywide.



TREES KNOXVILLE



CITY OF KNOXVILLE



UFMP Process

Three Phases

Phase I: Project
Launch

Phase II: Discovery

Phase III: Plan
Development

Phase I: Project Launch

UFMP Process

Three Phases

Phase I: Project Launch

Phase II: Discovery

Phase III: Plan Development

Timeline: November - December 2022

Efforts:

- Project Set Up
- Data Collection
- Project Website - ***KnoxvilleTreePlan.org***
- Steering Committee
- Advisory Group
- Kick Off Event



Phase II: Discovery

UFMP Process

Three Phases

Phase I: Project
Launch

Phase II: Discovery

Phase III: Plan
Development

Timeline: January - June 2022

Focus:

1. What exists or is in place currently?
2. Where do we want to go?

Research/Analysis

- Tree canopy trends
- City public tree Inventory
- Impact of climate
- Invasives and natives
- Planting strategies
- Prior urban forest efforts
- Broader city plans
- Review of City operations - urban forestry
- Review of City policies/code related to trees
- Intersections of Trees Knoxville, City and County

Engagement

- Interviews
- Advisory Board Workshops
- Open House
- Online community input
- Speaking Circuit

Phase III: Plan Development

UFMP Process

Three Phases

Phase I: Project
Launch

Phase II: Discovery

**Phase III: Plan
Development**

Timeline: June-October 2022

Efforts:

- Setting Goals
- Developing Plan
- Review Process
- Final Plan Release

UFMP Process

Your involvement directly informs this plan.

www.KnoxvilleTreePlan.org

SIGN UP FOR
PROJECT UPDATES

INVITE US
TO YOUR NEXT EVENT

TELL US
WHAT YOU THINK

LEARN MORE
ABOUT KNOXVILLE TREES

COME TO THE
OPEN HOUSE



City of Tallahassee
Urban Forest Master Plan



UFMPs in Other Cities

Insight in UFMP experiences in other communities



City of Tallahassee Urban Forest Master Plan



Tallahassee

226 square miles, 22% canopy (2013)
Number of public trees is unknown

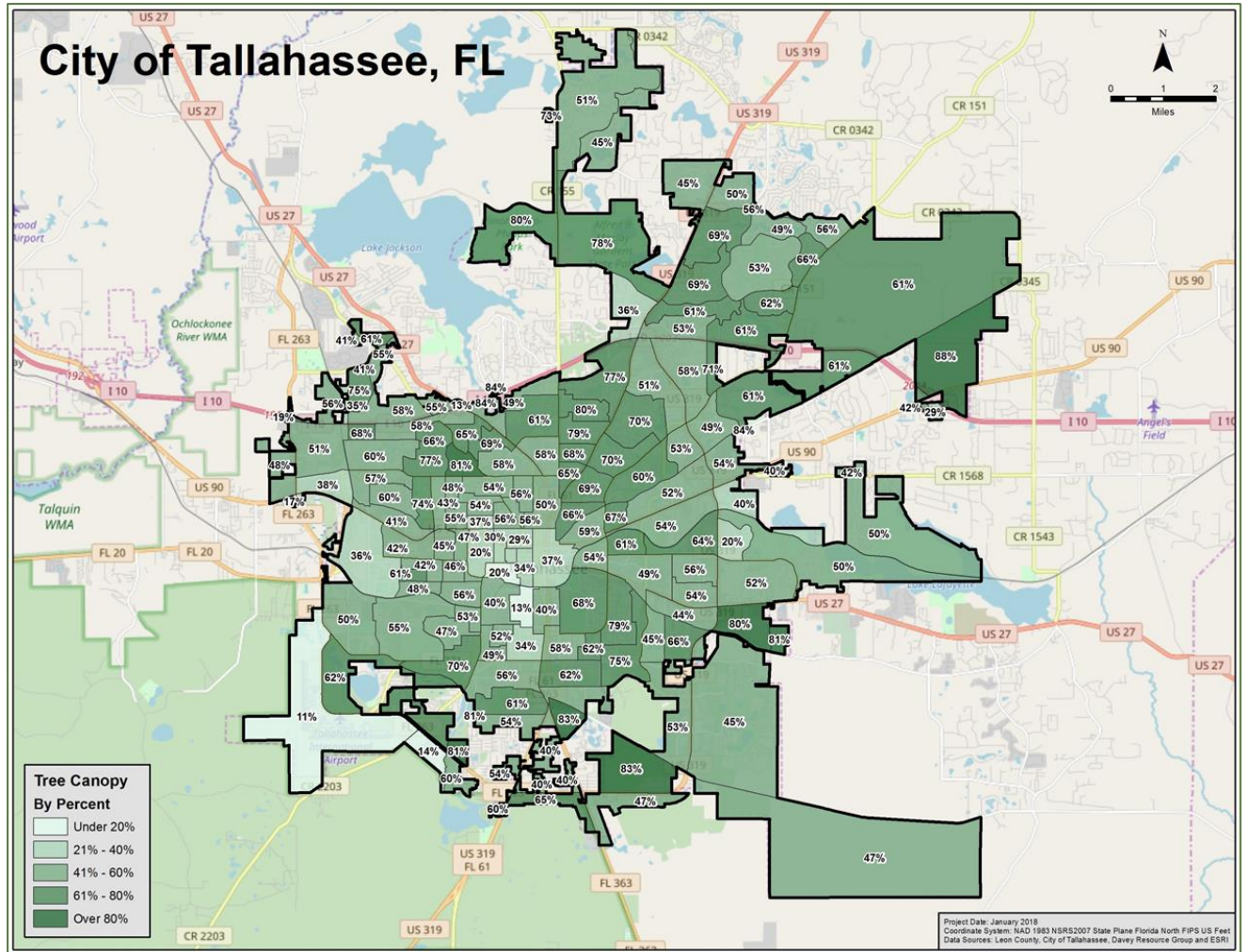
Pre-UFMP

Limited knowledge
Fast growing
Vacant/underutilized
properties in urban core
No NGO partner

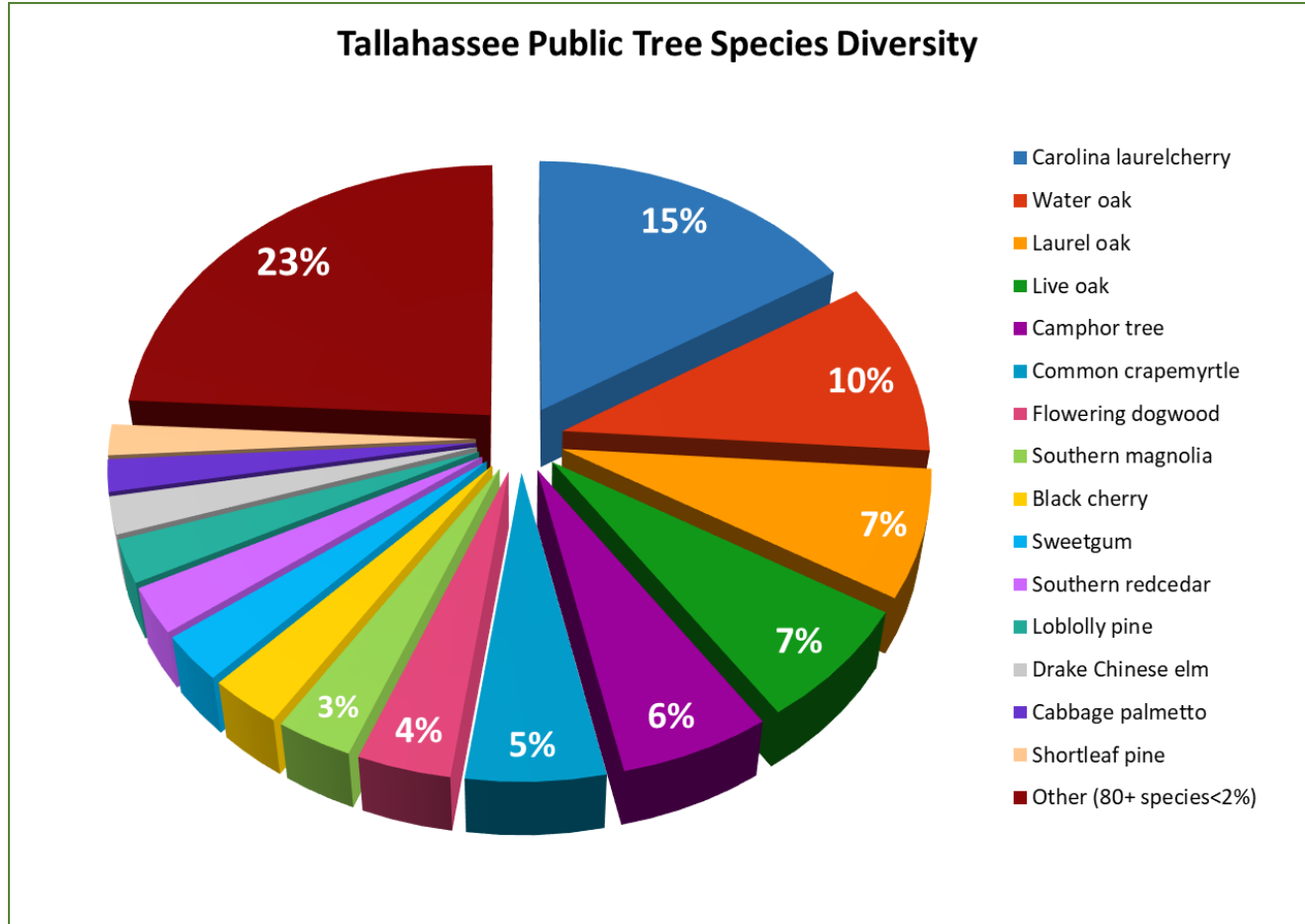
Post-UFMP

Clear goals
Dedicated funding
Progress is measurable

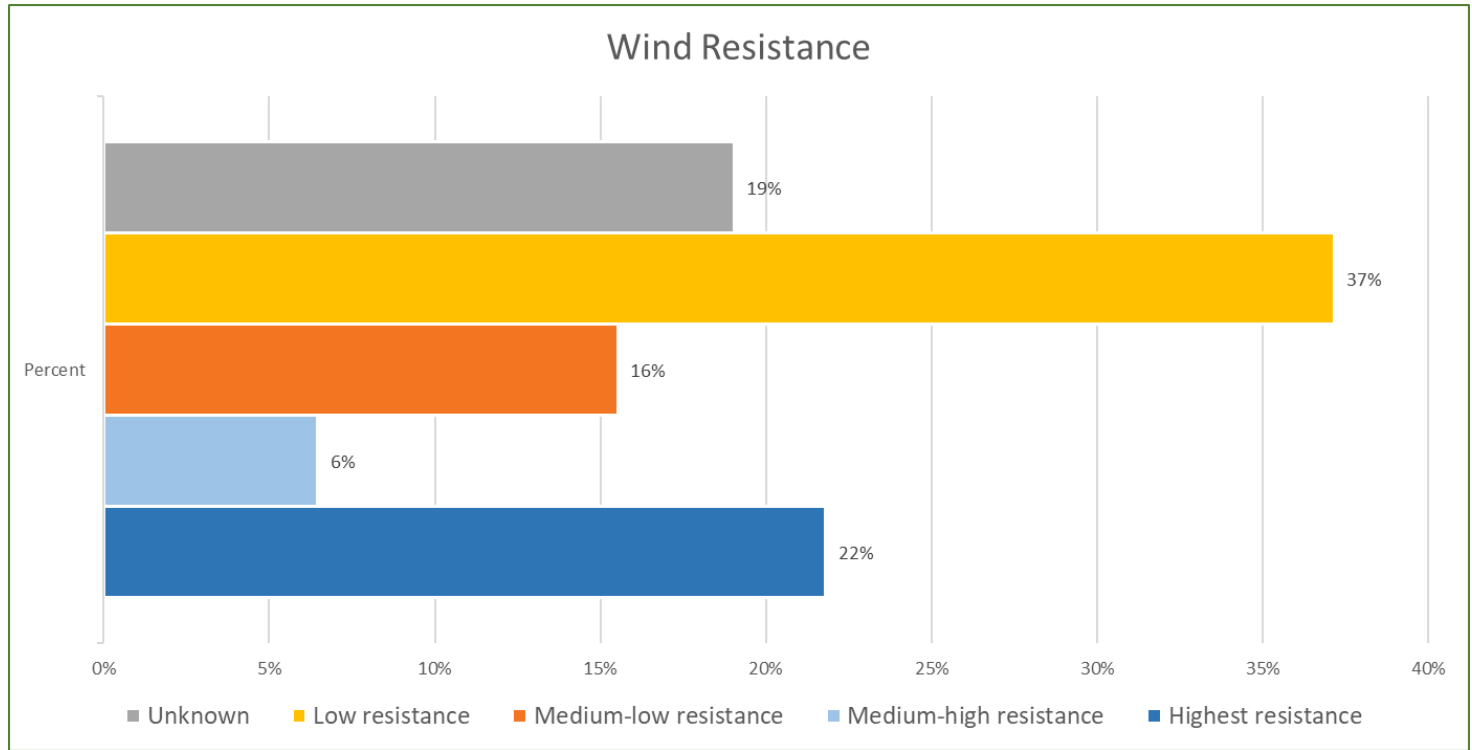
Total Tree Canopy Coverage 55%



Quality of Canopy



Quality of Canopy



Goals

Goal 1: Improve Canopy Quality

Improve the quality and safety of the urban forest to ensure long-term sustainability

Goal 2: Maintain Canopy Levels

Maintain an extensive tree canopy in balance with growth and change

Goal 3: Engage the Larger Community

Engage and partner with the larger community to support urban forestry efforts

Benchmarks for Progress

Goal 1: Improve Canopy Quality

No single species should make up more than 10% of the urban forest
Top 5 species should be wind resistant

Goal 2: Maintain Canopy Levels

Update UTC Assessments every ten years to track canopy levels
Targeted opportunities for reforestation

Goal 3: Engage the Larger Community

Track events and engagement of new neighborhoods, large landowners, and community groups

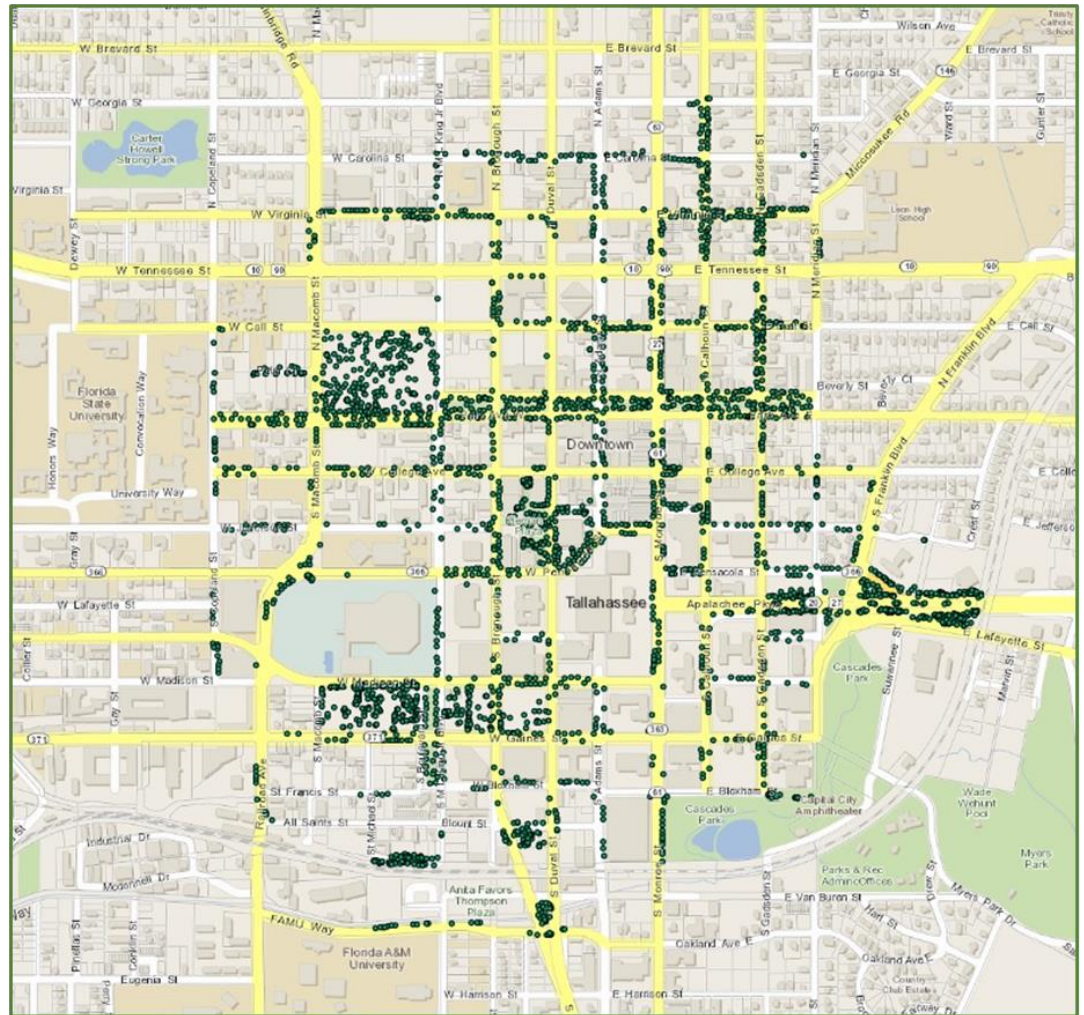
Goal 1: Improve Canopy Quality

The Right Tree in the Right Place

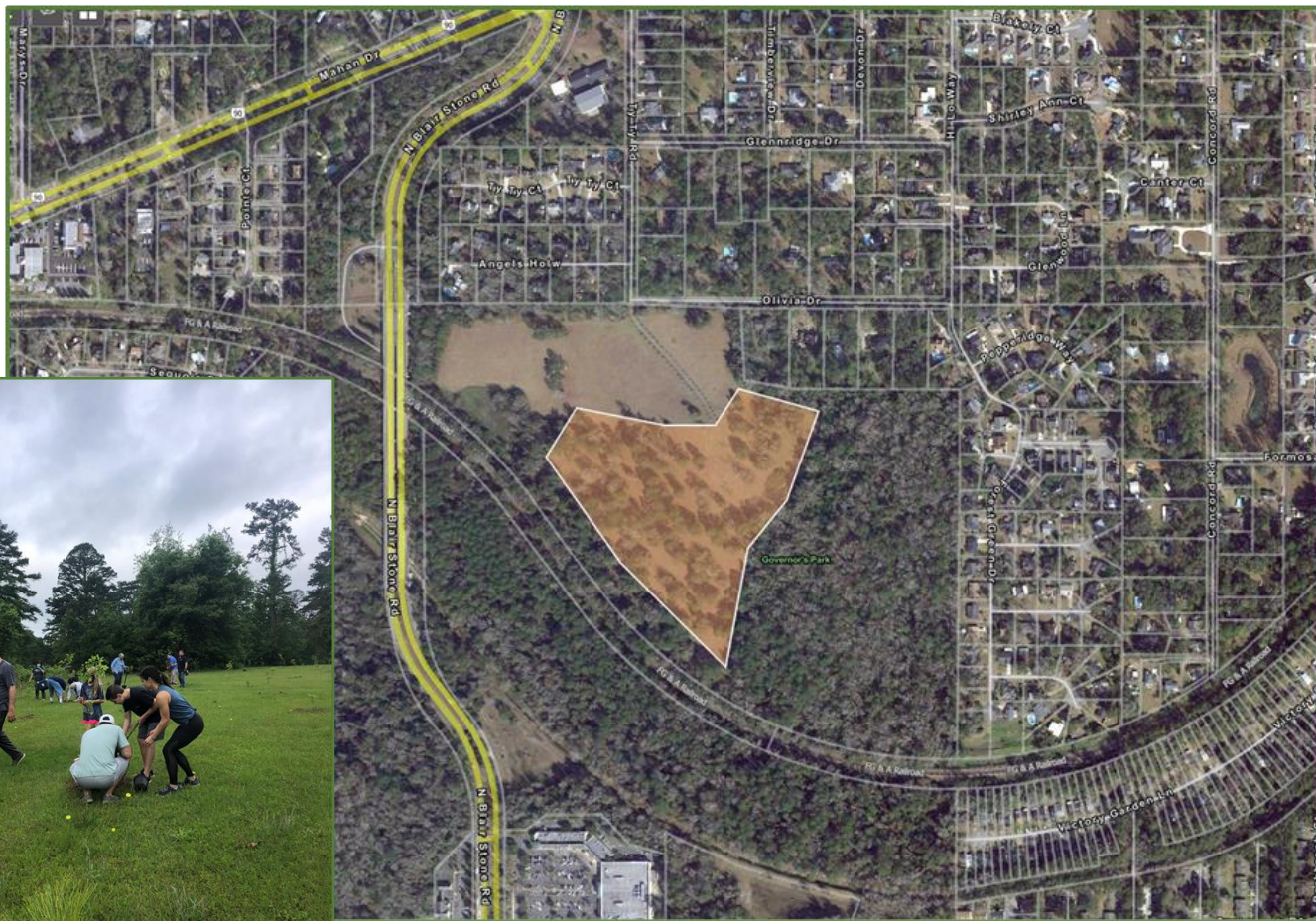
A guide for selecting proper trees for urban spaces

Scientific Name	Common Name	Florida Native	Deciduous, Evergreen, Ornamental	Under Power Lines	Street Tree	Planting Strip/ Minimum Width	Sight Distance Triangle	Parking Lot	Shade or Canopy Tree	Mature Spread	Mature Height	Growth Rate	Wind Resistance	Canopy Square Footage	Soil Area* (w/3' depth)	Size Class	Current List
<i>Acer palmatum</i> var. "Bloodgood"	Japanese Maple		D	x						15'-25'	15'-25'	SLOW	MED-HIGH	400	300	S	B
<i>Aesculus pavia</i>	Red Buckeye	x	D,O	x						15'-25'	15'-20'	MOD	n/a	400	300	S	D
<i>Acer rubrum</i>	Swamp Red Maple	x	D						x	25'-30'	50'-70'	FAST	MED-LOW	1600	2400	L	A
<i>Acer saccharum floridanum</i>	Florida Sugar Maple	x	D						x	35'-50'	50'-60'	MOD	MED-HIGH	1600	2400	L	B
<i>Alnus serrulata</i>	Hazel alder		D, O							8'-15'	10'-20'	MOD	n/a	400	300	S	B
<i>Amelanchier arborea</i>	Downy Serviceberry	x	D,O							15'-20'	25'-35'	SLOW	n/a	400	300	S	D
<i>Amelanchier laevis</i>	Allegheny Serviceberry		D,O							15'-20'	15'-30'	SLOW	n/a	400	300	S	D
<i>Aralia spinosa</i>	Devil's Walking Stick	x	D							6'-10'	10'-15'	MOD	n/a	400	300	S	D
<i>Asimina triloba</i>	Paw Paw	x	D							15'-20'	15'-20'	MOD	n/a	400	300	S	D
<i>Betula nigra</i>	River Birch	x	D		single stem pruned for clearance	4'	x	x	x	25'-35'	40'-50'	FAST	MED-HIGH	900	1200	M	A
<i>Bumelia lanuginosa</i>	Buckthorn		D						x	25'-35'	40'-50'	MOD	n/a	900	1200	M	D
<i>Carpinus caroliniana</i>	American Hornbeam Iron-wood	x	D		single stem pruned for clearance	4'			x	20'-30'	20'-35'	SLOW	MED-HIGH	400	300	S	C
<i>Carya floridana</i>	Florida Scrub Hickory	x	D							10'-30'	15'-30'	MOD	HIGH	400	300	S	C
<i>Carya glabra</i>	Pignut Hickory	x	D						x	30'-40'	50'-65'	MOD	MED-HIGH	1600	2400	L	C
<i>Carya illinoensis</i>	Pecan	x	D						x	40'-70'	70'-100'	MOD	LOW	1600	2400	XL	C
<i>Carya tomentosa</i>	Mockernut Hickory	x	D						x	40'-60'	60'-80'	MOD	MED-HIGH	1600	2400	XL	C
<i>Castanea mollissima</i>	Chinquapin		D							40'-50'	35'-40'	MOD	n/a	900	1200	M	B
<i>Catalpa bignonioides</i>	Southern Catalpa		D,O						x	40'-50'	50'-60'	FAST	n/a	1600	2400	L	B
<i>Cedrus deodara</i>	Deodar Cedar		E						x	20'-30'	40'-60'	FAST	n/a	1600	2400	L	L
<i>Celtis laevigata</i>	Sugar Berry	x	D		x	6'			x	50'-60'	50'-70'	FAST	MED-LOW	1600	2400	L	A
<i>Celtis occidentalis</i>	Hackberry	x	D		x	6'			x	40'-60'	45'-80'	FAST	MED-LOW	1600	2400	L	A
<i>Cercis canadensis</i>	Redbud	x	D,O		single stem pruned for clearance	4'		x		15'-25'	20'-30'	FAST	MED-HIGH	400	300	S	D
<i>Chionanthus retusus</i>	Chinese Fringe Tree		D,O	x	single stem pruned for clearance	4'		x		10'-15'	15'-20'	SLOW	n/a	400	300	S	D
<i>Chionanthus virginicus</i>	Fringe Tree	x	D,O	x	single stem pruned for clearance	4'		x		10'-15'	12'-20'	SLOW	MED-HIGH	400	300	S	D
<i>Cladrasia kentukea</i>	American Yellowwood	x	D,O						x	40'-50'	30'-50'	MOD	n/a	900	1200	M	
<i>Cliftonia monophylla</i>	Buckwheat-tree Black titi	x	E, O							6'-10'	30'	MOD	n/a	400	300	S	C
<i>Continus cogycgria</i>	Smoke Tree	x	D,O		single stem pruned for clearance	4'				10'-15'	10'-18'	SLOW	n/a	400	300	S	D
<i>Cornus florida</i>	Dogwood	x	D,O							25'-30'	20'-30'	MOD	HIGH	400	300	S	D

Continue Data Collection



Goal 2: Identify Opportunities to Expand Canopy



Goal 2: Identify Opportunities to Expand Canopy

Adopt A Tree

2023 Adopt a Tree Program

Every year, the City of Tallahassee provides and plants trees for eligible homeowners, in an effort to increase the urban forest canopy. The trees, depending on the species, are between 5 and 8 feet in height and are species native or cultivars of native species to the southeast. *Eligible homeowners living within the City limits* may request up to 2 trees to be planted in the front yard within 100' of the centerline of the roadway and agree to keep each tree watered for one (1) year.

Tree species offered this year:



Nuttall Oak is one of the most diverse varieties of the oaks - it works well as a street tree or shade tree, can adapt to wet soils, and tolerate moderate drought conditions. It has a beautiful canopy that changes from yellow to orange to red, displaying those wonderful fall colors! This species is fast growing and can reach upwards of 80 feet at maturity, but the canopy spread stays relatively narrow, only reaching 45 ft max in width.



Pond Cypress is an adaptable and wind-tolerant species features a conical silhouette that loses its needles each winter and grows a new set in the spring. Its foliage begins with a soft, bright green that turns rich shades of orange, red, and golden brown in the fall. This tree is a spectacular feature along pond edges or within rain gardens but can also be grown in dry locations. This tree is virtually maintenance-free, requiring no pruning, and is pest and disease-resistant! This fast-growing canopy tree can reach between 45 to 60 feet at maturity, so it

Goal 3: Focus on Community Concerns

 City of Tallahassee, FL - Government 
September 7 ·  

We're more than halfway through hurricane season. After a storm (big or small), trees may have sustained damage that they can recover from. Immediate hazards should be removed, but for trees that don't pose a danger, it is wise to wait and watch. Get tree care tips to help keep the local canopy healthy and strong at <https://bit.ly/3IUIWeD>



  Lexi B at Rybak Realty and 6 others

 Like  Comment  Share

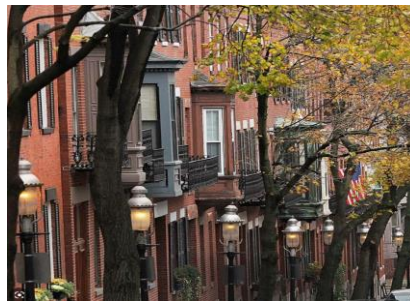


Columbus

226 square miles, 22% canopy (2013)
127,000 public trees

Under-resourced
Limited knowledge
Growing fast
No NGO partner

Pre-UFMP



Boston

89 square miles, 27% canopy
43,000 street trees (parks - ?)

Under-resourced
Infill development pressure
Multiple NGOs active

Post-UFMP

Prioritizing trees & equity
Fund proactive care & inventory
UF leadership role
In search of a NGO partner



Charlotte

312 square miles, 47% canopy
190,000+ street trees

Under-resourced
Limited knowledge
Growing fast
Aging canopy
City initiated NGO

Equity first
Commitment to community
UF leadership role
Staff up to work w/NGOs
UF leadership role

Funding for data, care
Large tree assistance program pilot
<https://youtu.be/Qmd-152uzws>
Tree canopy policy prominent in
citywide comprehensive plan
Updated development ordinance
Looking at role of NGO and City

Q&A

Get Involved!

SIGN UP FOR
PROJECT UPDATES

INVITE US
TO YOUR NEXT EVENT

TELL US
WHAT YOU THINK

www.KnoxvilleTreePlan.org

Open house with update on progress and findings - April 2023