

URBAN FOREST

M A S T E R P L A N

July 2025



Acknowledgments



NEWBERRY CITY COUNCIL

Foster Senn, Mayor
Lemont Glasgow, District 1
Clay Smith, District 2
Carlton Kinard, District 3
David Force, District 4
Jackie Holmes, District 5
David Dubose District 6

CITY OF NEWBERRY TREE BOARD

Bobby Sanders, Sanders Landscaping and Maintenance
Collin Shealy, City of Newberry
Dena Whitesides, South Carolina Forestry Commission
Foster Senn, Mayor of Newberry
Jason Taylor, City of Newberry
Jeff Wicker, City of Newberry
Joe Kitchen, City of Newberry
Scott Motsinger, City of Newberry

CITY OF NEWBERRY STAFF

Collin Shealy, Parks, Recreation, and Tourism Department
Elyssa Haven, Public Relations Coordinator
Jeff Wicker, Assistant City Manager
Joe Kitchen, Public Works Department
Krystal Bates, Utility Department
Scott Motsinger, Utility Department
Wayne Redfern, Planning and Development Department

FUNDING PROVIDED BY

South Carolina Forestry Commission through the United States
Department of Agriculture Forest Service (USFS) Urban and
Community Forestry Grant Program.

CONSULTING PLANNERS

Dudek – Urban Forestry
Community Solutions Consulting, LLC, South Carolina



DUDEK



Table of Contents



ACKNOWLEDGMENTS	II	4 MEASURING SUCCESS OF THE UFMP	22
TABLE OF CONTENTS.....	IV	5 REFERENCES	24
ACRONYMS & ABBREVIATIONS	VI	References	25
1 NEWBERRY’S URBAN FOREST MASTER PLAN	1	EXHIBITS	
1.1 Introduction	1	Exhibit 1. Benefits of Trees in an Urban Environment.....	5
1.2 Why does Newberry Need a UFMP?.....	3	Exhibit 2. Urban Heat Island Effect.	6
1.3 Urban Forest Master Plan Development	8		
2 KEY FINDINGS	10		
The City Is Invested In Preserving The Urban Forest.....	11		
Newberry Does Not Have An Allocated			
Urban Forestry Budget.	12		
Protecting Trees Is A Key Component To Preserving			
Urban Tree Canopy.	13		
Newberry’s Community Value Efforts To Enhance			
The Urban Forestry.	13		
3 URBAN FORESTRY GOALS	14		
Secure Resources for a Proactive Urban Forestry Program ...	16		
<i>Recommended Actions</i>	17		
Preserve Urban Tree Canopy Through Rapid Developmen....	18		
<i>Recommended Actions</i>	19		
Provide Community Members with Resources and Opportunities			
to Engage in Urban Forestry.....	20		
<i>Recommended Actions</i>	21		

Acronyms & Abbreviations

ANSI	American National Standards Institute
BMP	Best Management Practices
City or Newberry	City of Newberry
CSC	Community Solutions Consulting, LLC.
DBH	Diameter at Breast Height
ISA	International Society of Arboriculture
PRT	Parks, Recreation, and Tourism Department
ROW	Right of Way
SCFC	South Carolina Forestry Commission
UFMP	Urban Forest Master Plan
USDA FS	United States Department of Agriculture Forest Service
UTC	Urban Tree Canopy



1

Newberry's Urban Forest Master Plan



1.1 Introduction

What is an Urban Forest Master Plan?

An Urban Forest Master Plan (UFMP) helps the City of Newberry (City or Newberry) preserve the urban forest while experiencing rapid growth in both population and the associated built environment. The City can intentionally preserve their Urban Tree Canopy (UTC) by enhancing their program with an allocated budget, revising planning processes and policies to preserve mature trees, and investing in opportunities to foster urban forest advocacy among community members. Following the framework of the UFMP will ensure the City's urban forest is sustainable over time, continuing to provide cleaner air and water, shaded pathways, and lower urban temperatures for Newberry's future community members. This UFMP Executive Summary is intended for Newberry's community members to understand the City's plans for the urban forest. The UFMP is organized in three chapters where Chapter 1 details the context surrounding Newberry's Urban Forest Master Plan, Chapter 2 discusses the Key Findings from analysis, and Chapter 3 illustrates the City's plan to meet their urban forestry goals. The supplemental Technical Assessment Appendices contain the data, methodologies, and analyses incorporated into the development of Newberry's Urban Forest Master Plan.





City of Newberry

17
PUBLIC
PARKS

APPROXIMATELY
11,000
RESIDENTS

255+ Acres
of Green Space

Location



South Carolina

Topography



Hills and streams

Annual Rainfall



42 to 47 inches



INTRODUCTION

Historical and Environmental Context

The City of Newberry is in the Southern Piedmont region of South Carolina between the Broad and Saluda Rivers located near the center of both Newberry County and South Carolina. The City is characterized by a gently rolling topography, conducive soils, and numerous streams, including Scotts Creek. The City of Newberry covers approximately 8.9 square miles in land area and experiences a mild climate with a mean low temperature of 52 degrees and a mean high temperature of over 74 degrees. Winters are mild with freeze generally occurring mid-October to early April. During summer months, Newberry experiences humidity averaging from 51% to 87% in a single day. Newberry sees annual rainfall totals between 42 to 47 inches and experiences extreme weather such as thunderstorms, tornadoes, hail, hurricanes, and drought (City of Newberry. Comprehensive Plan 2030).



1.2 Why Does Newberry Need a UFMP?

Urban Forests Necessitate Long-Term Management

The City of Newberry, South Carolina (City or Newberry) has been home to approximately 11,000 residents living amongst large mature trees growing in parks, recreation areas, along streets in neighborhoods, and in front or back yards. Newberry community members experience a cooler, shadier, healthier city from the environmental benefits of large mature trees that are growing throughout the community. Green spaces under the City's management include 17 public parks encompassing more than 255 acres. The City continues to invest in recreation areas for their community, including the further development at the Newberry Recreation Complex, which will be a 142-acres at completion (City of Newberry. General Plan 2030. 2025). Trees growing on publicly managed land are under the City's jurisdiction and long-term management strategies, like a UFMP, ensure the urban forest is safe, healthy, and continues to provide environmental benefits for the community over time.

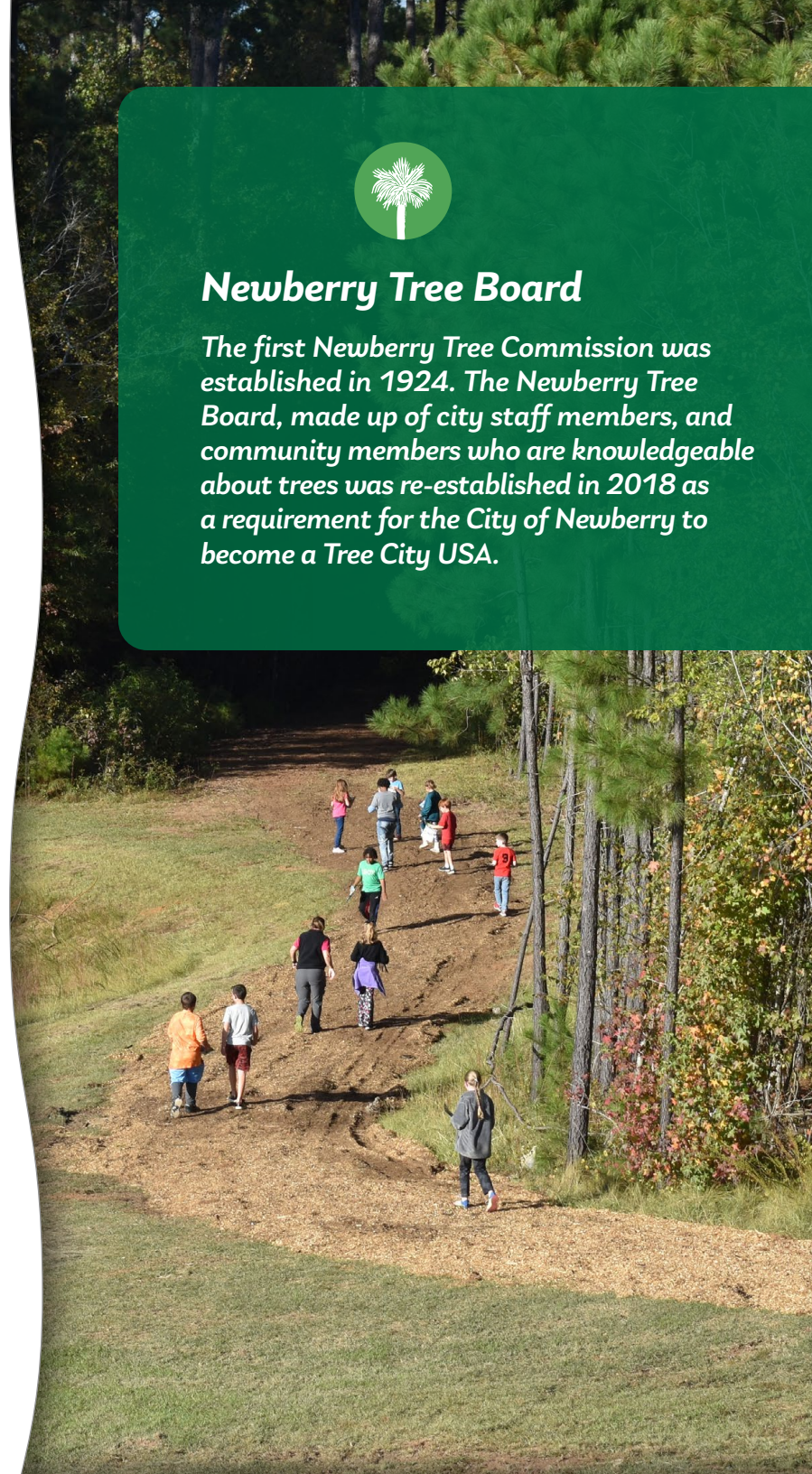
Alignment with Newberry's Goals

The City's Comprehensive Plan 2030 emphasizes the importance of air quality, quality of life, and economic development. As the City grows and develops transportation infrastructure such as roads,



Newberry Tree Board

The first Newberry Tree Commission was established in 1924. The Newberry Tree Board, made up of city staff members, and community members who are knowledgeable about trees was re-established in 2018 as a requirement for the City of Newberry to become a Tree City USA.





The City of Newberry has been designated as a Tree City USA for 6 years!

What does it take to be a Tree City USA?

- Active Tree Board or Department
- A Tree Care Ordinance
- Annual Arbor Day Celebration
- Annual budget of \$2 per capita for tree care



INTRODUCTION

sidewalks, medians, and buildings for homes and businesses, Newberry residents will likely experience a loss of urban tree canopy and an increased level of air and water pollution, which contribute to a decrease in the quality of life and impact public health. The scenic and historic natural resources throughout the community are recognized as a main driver of tourism and contribute greatly to Newberry's economy (City of Newberry. Comprehensive Plan 2030). Enhancing the management of these natural areas also has the potential to provide economic opportunities through local employment. Planning for the urban forest through a UFMP is one tool commonly used by cities to support the City's overall goals and address these anticipated issues through local solutions.

Urban Trees Provide Numerous Benefits

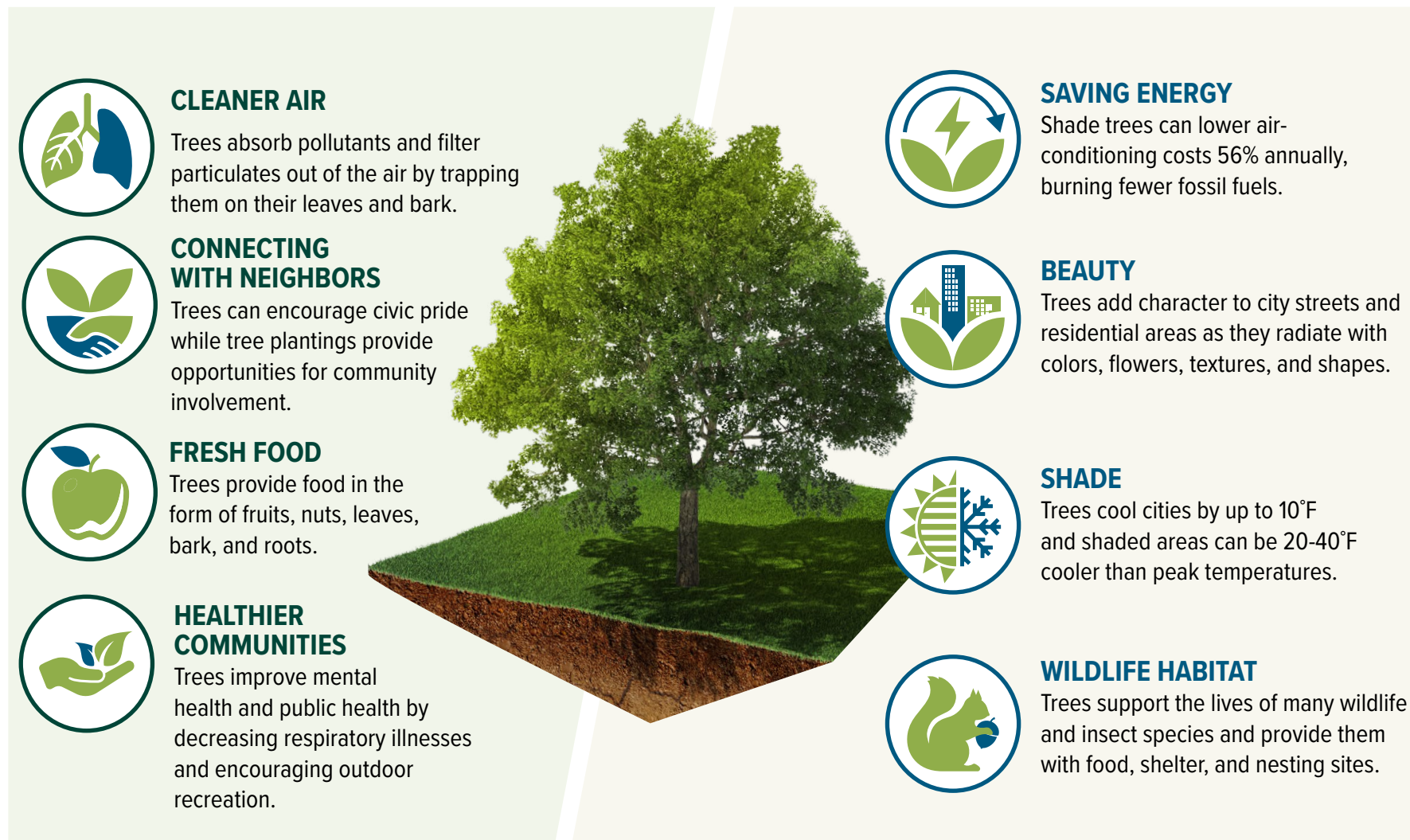
All trees within the City's boundary, including those growing in public spaces and private property, are collectively referred to as the urban forest. The urban forest provides Newberry community members with important environmental benefits including cleaner air and water, shaded spaces to gather, cooler environments, and flood mitigation as seen in **Exhibit 1**.

The urban forest can also contribute to economic benefits such as a positive effect on property values. Research shows that homes with mature trees in backyards increase property values by 2%, and neighborhoods with a mature urban tree canopy increased home values by 15%, when compared to homes and neighborhoods with fewer trees (Wolf 2007). The study indicates that in most cases, the



Exhibit 1. Benefits of Trees in an Urban Environment.

Benefits of Trees *in an* Urban Environment





How Trees Help

1

Solar energy emitted by the sun is partially absorbed by trees.

2

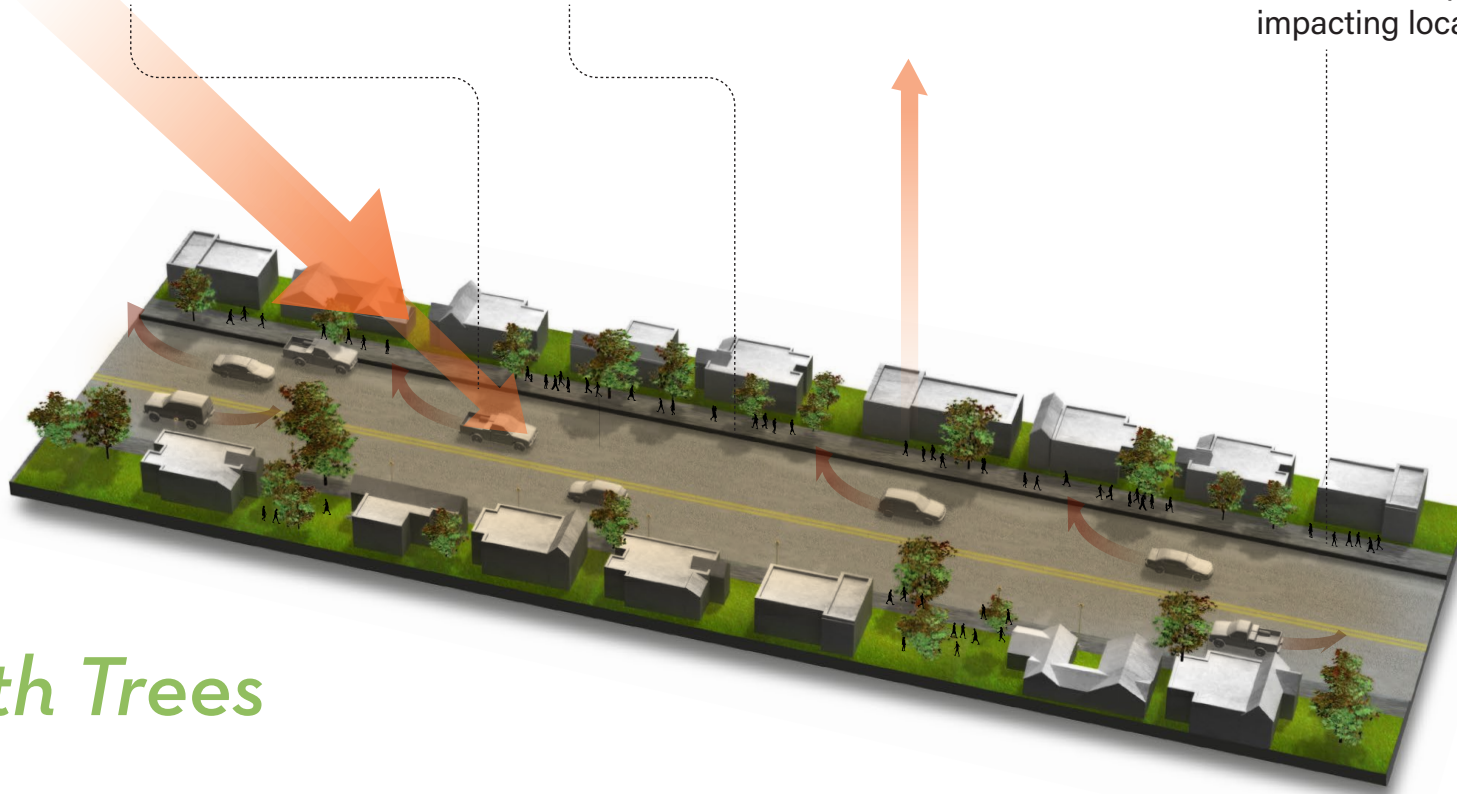
Shaded surfaces absorb and retain less heat.

3

Auto emissions are partially absorbed by trees.

4

Cleaner air, cooler weather creates a pedestrian-friendly environment positively impacting local businesses.



With Trees

Source: EPA 2019, 2020



more trees there exist in a neighborhood, the greater the increase in property values. As the City of Newberry experiences large-scale development, the City has an opportunity to encourage mature tree preservation and require planting new trees as part of development projects, helping to increase future property values.

Protecting Newberry's Current and Future Residents

Newberry's population has been stable over the last 40 years (City of Newberry. Comprehensive Plan. 2025). However, the City is pressured to grow in population and built environment due to several contributing factors including, proximity to the interstate, new industries emerging throughout Newberry County, growth of Newberry College, and surrounding cities meeting their growth capacity. When communities grow, large mature trees are often removed to create spaces for homes, commercial businesses, streets, and sidewalks. In combination with trees being removed, the increase in impermeable surfaces, or surfaces that do not allow water to infiltrate soil, will contribute to stormwater runoff, hotter temperatures, and the urban heat island effect as seen in **Exhibit 2**.

Removing large mature trees and increasing the built environment and infrastructure leaves Newberry's community vulnerable to the environmental burdens from large-scale growth. This includes more extreme and frequent weather events, prolonged periods of drought, and associated consequences such as heat illness, flooding, reduced water availability, and reduced opportunities for

outdoor recreation. These factors have the potential to negatively influence the quality of life, livability, and health of Newberry residents. The UFMP can be used as a tool to provide sufficient care for existing trees, plant new trees, and protect mature trees to help the City effectively balance these priorities. Developing a UFMP, gives the City an opportunity to be protective of their natural resources and ensures the community's priorities are reflected in the urban forest as the City changes. Understanding the community's perspective and identifying how to balance development needs with urban tree canopy goals, are the first steps to preserving Newberry's urban forest.

1.3 Urban Forest Master Plan Development

Newberry's Urban Forest Master Plan (UFMP) was developed through assessments of the City's urban forestry program, City planning documents, ordinances, and policies, and community engagement efforts. These assessments identified the current program's capacity and limitations, the effectiveness of current planning efforts in preserving the urban forest, and explored what community members envision for Newberry's future urban forest.

The urban forestry program was evaluated using work records, Tree City USA reports, the Urban Tree Canopy Assessment (2023), and departmental interviews. These resources were

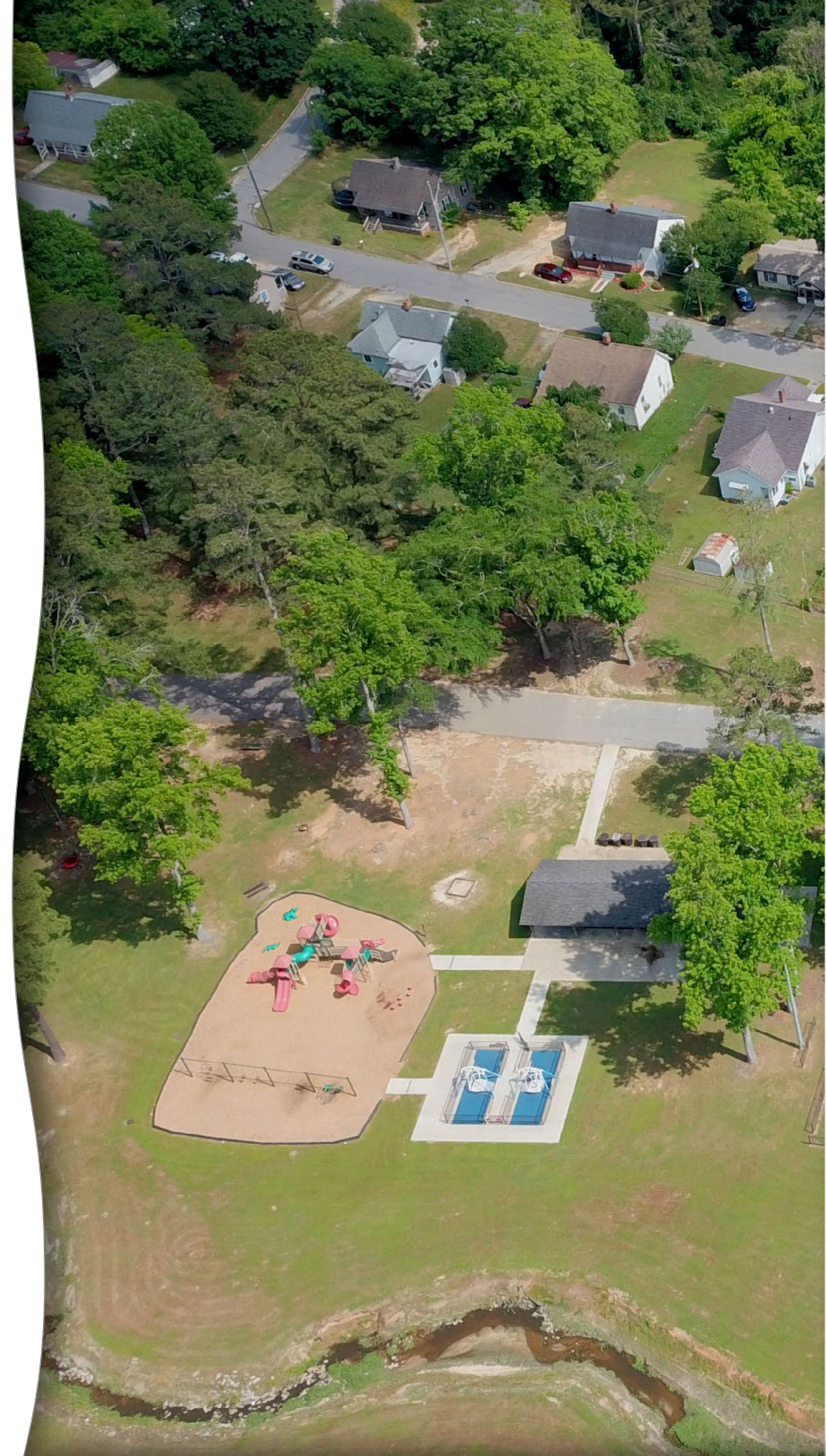
INTRODUCTION



used to understand the current program's capacity, identify opportunities and challenges, and provide recommendations to preserve the City's urban tree canopy. The data was compared against municipal standards for a healthy and sustainable urban forest, national averages of municipal urban forestry programs, regional forestry resources, and the latest research to identify how to achieve the City's urban forestry goals. **Appendix 1** Urban Forestry Resources contains the full analysis.

Newberry's City planning documents, tree ordinance, and tree-related policies were reviewed to better understand the guidance provided to developers when trees are removed for development. Recommended modifications to current City documents, ordinances, and policies were presented, with a goal to better prepare the City to protect their urban tree canopy as they grow. A summary of this review is in **Appendix 2** Zoning and Code Analysis.

Every successful UFMP relies in part on community understanding and advocacy. Community engagement involves residents in decision-making and planning, ensuring their voices and perspectives are heard. Authentic community engagement is a crucial component of a UFMP because it fosters inclusivity, ensures the plan is relevant to community needs, and promotes a sense of stewardship among residents. For the UFMP, a robust outreach and engagement plan was developed to guide outreach efforts, with a goal to gather representative feedback from the community members of Newberry.



2

Key Findings



Chapter 2 describes the Key Findings from the City of Newberry's Urban Forest Master Plan development process. Chapter 3 details how the City will address the components described in each Key Findings.

Key Finding #1

The City is Invested in Preserving the Urban Forest.

Newberry is committed to preserving their urban forest while experiencing rapid growth. The City's Tree City USA designation reflects the City's recognition of urban forestry being an important part of their community, and a priority to preserve for future generations. Newberry goes above and beyond the \$2 per capita annual urban forestry spending required by the Arbor Day Foundation, with an average of \$11 per capita spent during the fiscal years of 20/21-23/24. Newberry's annual spending on tree maintenance activities demonstrates that the City is caring for their trees within their capacity, regardless of allocating a dedicated budget to the urban forestry program.





KEY FINDINGS

Key Finding #2

Newberry Does Not Have an Allocated Urban Forestry Budget.

The City does not have an allocated budget, staff, or resources for a dedicated urban forestry program. The City manages trees growing on public land as the need arises, primarily through the lens of resolving utility conflicts. This is considered reactive management and is common among entities without a specifically dedicated budget, staff, or other resources for their urban forestry program. The lack of allocated funding prevents the City from actively planting new trees, providing supplemental water, performing structural pruning on newly planted trees, and effectively enhancing Urban Tree Canopy (UTC) on public land. An allocated budget provides a measure of security that urban forestry funding will be available and continue as the City allocates resources to balance priorities. Even without allocation, the City spends on average \$11 per capita each year to provide tree care services and budget and resource allocation will allow the City to preserve UTC, and the related environmental benefits, for the community over time and will be a large testament to the City's growing commitment to the urban forest.



Key Finding #3

Protecting Trees is a Key Component to Preserving Urban Tree Canopy.

Newberry's urban tree canopy is especially at risk due to projected future growth of the City's population, size, and new built environment. As the City experiences rapid development, modifications to the planning process, enhanced guidelines for developers, and enforcement of the Tree Ordinance are necessary steps to balance the protection of mature trees, ensure the 'right tree' is planted in the 'right place,' and new trees are being planted to replace those removed. The City will update their development codes, tree ordinances, and zoning requirements to allow for urban forest enhancement without an additional burden on residents. The City is interested in providing positive incentives for developers to protect trees and plant more large stature trees, to ensure Newberry residents continue to receive urban forestry benefits over time. Without guidelines, policies, and ordinances that balance the needs for development and preserving the urban forest, Newberry residents are at risk of losing their communities' urban tree canopy as the City urbanizes.

Key Finding #4

Newberry's Community Value Efforts to Enhance the Urban Forestry.

Engagement efforts revealed that many community members are concerned that tree canopy will be lost as the City develops and preserving UTC should remain a priority. Community concerns also included associated environmental impacts of losing UTC, such as extreme weather, invasive species, and pests or pathogens. Community members are supportive of new developments having space for large mature trees and are interested in participating in urban forestry efforts such as volunteer tree plantings and creating a community fruit orchard.

Many community members shared a concern for the lack of biodiversity among tree species within Newberry. Many of the trees of Newberry's tree canopy either occurred naturally or were planted by the community. With an enhancement of resources and funding, the City will incrementally enhance biodiversity by planting tree species recommended as part of the UFMP implementation phase. Residential resources can be found in **Appendix 3**.

3

Urban Forestry Goals



The City of Newberry successfully secured technical assistance and funding support through the South Carolina Forestry Commission's (SCFC) Urban and Community Forestry Program for several urban forestry efforts. In October 2023, an Urban Tree Canopy (UTC) Assessment identified Newberry's urban forestry goal as maintaining the robust UTC of 37% while experiencing population growth and large-scale development. The 37% is a combination of the land area shaded by tree canopies from both trees growing on public and private properties. In September 2024, the City of Newberry was impacted by Hurricane Helene, which caused significant damage to trees in the City. In response to the unknown impacts on UTC of Hurricane Helene, urban forestry goals were modified to focus on actions to enhance urban tree canopy and protect the urban forest through development. The City was awarded grant funding from SCFC to complete another UTC to better understand the impact Hurricane Helene had on Newberry's urban forest.

Chapter 3 details three urban forestry goals for the City of Newberry, followed by recommended actions to achieve these goals.





Goal #1

Secure Resources for a Proactive Urban Forestry Program.

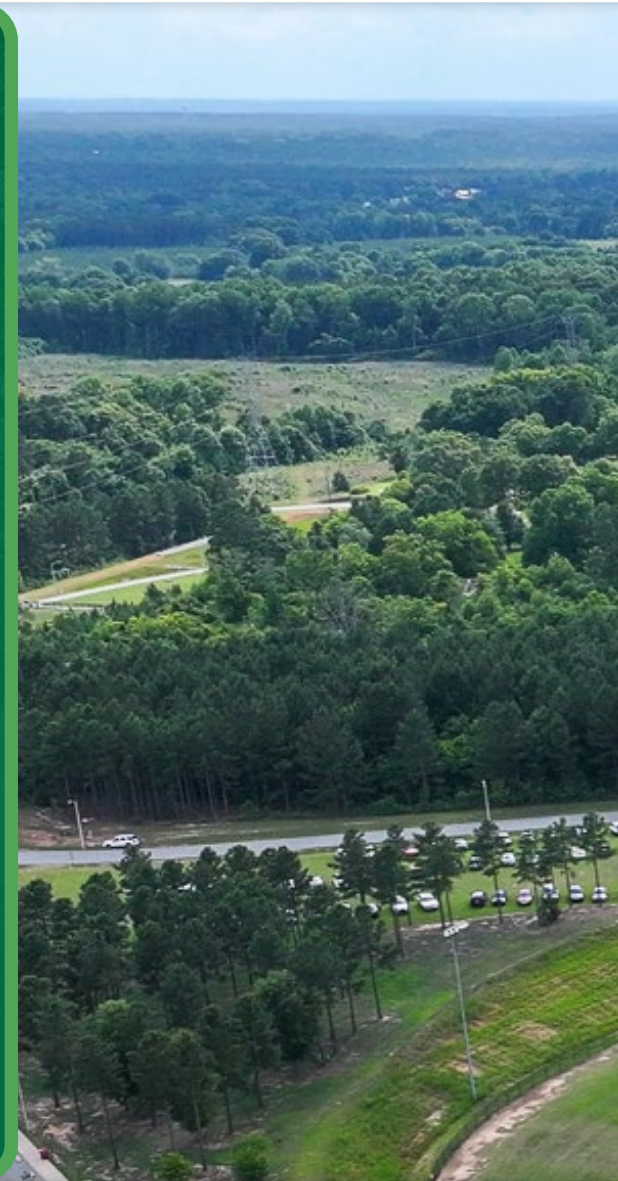
Trees growing within a built environment were serve a purpose such as beautification, landscaping of a residence, or to shade buildings and gathering spaces, meaning urban trees were planted to exist among people. However, trees are living organisms and even healthy trees can fail, and living amongst them carries an inherent level of risk that must be managed. Therefore, trees growing on public land must be systematically maintained and long-term management and planning will help ensure the urban forest is sustainable for the future and safe for all community members. **Appendix 1** Urban Forest Resources Analysis contains full details.



Strategically Funding the Urban Forest

The City strategically funds urban forest management activities through a combination of:

1. **Annually spends \$11/per capita on tree care through the General Fund.**
2. **Partnership planting include:**
 - Planting 500 new trees over a 5 year period through the Central Midlands Council of Governments Environmental Protection Agency Pollution Reduction Grant
 - Planted 30 dogwood trees at the Newberry Recreation Complex
3. **Awarded grant opportunities include:**
 - Urban Tree Canopy Assessment (2023)
 - Urban Forest Master Plan development
 - Risk Assessment of high traffic areas
 - Urban Tree Canopy Assessment Post-Storm





What is a Tree Inventory?

- A tree-related database for each publicly managed tree.
- Data may include species, height, trunk diameter, and tree health, among others.

A Tree Inventory helps the City better understand the make up of the publicly managed trees, allows for informed management decisions, and helps advocate for funding.

Recommended Actions

Newberry is Already Working on:

- PRT Urban Forestry Funding and Staffing Resources to develop an annual tree planting program and include establishment care watering for up to 3 years.
- A fruit tree orchard in the West End neighborhood.
- Conduct a tree risk assessment of all city parks to reduce risk and liability and improve public safety.

UFMP Recommended Actions:

- Enhance the work records and data collection process to advocate for funding.
- Collect tree inventory data and perform associated recommended maintenance actions.
- Modify contract specifications to align with American National Standards Institute (ANSI) A300 tree care standards and ISA BMPs found in **Appendix 4**.
- Engage businesses to become 'Tree Sponsors' or 'Water Sponsors' for planting trees in public spaces.
- Engage workforce development programs and educational institutions to identify if partnership for grant applications is appropriate.



Goal #2

Preserve Urban Tree Canopy Through Rapid Development.

Successfully preserving the Urban Tree Canopy (UTC) through large-scale development requires modification to the zoning code and tree ordinance. The goal of these modifications is to encourage developers to protect mature trees and replace removed trees and minimize UTC loss as the City experiences growth. The current penalty in the tree ordinance is not significant enough to deter violations for a large-scale developer and does not adequately support tree protection during the construction process. This may lead to UTC loss for the community at a rapid rate, further burdening residents with anticipated environmental pollution from population growth. Requiring developers to enhance or replace the natural resources removed for the project will decrease the environmental burden on residents experienced through both loss of urban trees and more impermeable surfaces. This method also allows flexibility for the City, as the community gains new trees but the costs to plant and establish these trees would be the responsibility of the developer. As part of the UFMP, recommendations to enhance both the zoning code and tree ordinance were identified and the full analysis can be found in **Appendix 5** Zoning and Code Analysis.



What policy changes will impact the urban forest?

- A Tree Ordinance is a local law that ensures when trees are removed from public land, new trees are planted to replace the environmental benefits provided by the removed trees.
- A Tree Protection Plan can be included in the Development Plan Review process to ensure existing trees that can be preserved are, and the removed trees are accounted for, and replaced.
- A Tree Removal Permit will ensure that each tree removed by developers will be replaced through the parameters of the Tree Ordinance.

This enhancement of the Tree Protection and Plan Review processes helps the City monitor, manage, and replace urban tree canopy through population growth.





Recommended Actions

Newberry is Already Working on:

- An updated UTC assessment to identify an appropriate goal.
- Use **Appendix 4** to modify current contractor specifications and development guidelines, specifically tree protection during construction and parking lot design standards.
- Modify the Tree Ordinance to require a canopy size-based replacement ratio, and include penalties for violations.
- Modify the Zoning Code to include Tree Protection Plans, Tree Protection Zones, biodiversity requirements, and construction monitoring for development projects.
- Utilize the recommended species list and select the largest stature appropriate tree when reviewing development plans.

UFMP Recommended Actions:

- Develop incentives for developers to encourage more protection of existing trees.
- Host a developer workshop to identify desirable incentives.
- Consider a Heritage Tree Program as an opt-in designation for private property trees. Identify if this designation will be retained when property ownership changes.
- Develop a Tree Removal Permit process for Development Plans with the consulting arborist and request associated training.



Goal #3

Provide Community Members with Resources and Opportunities to Engage in Urban Forestry.

The City can only plant trees on public land and are limited to influencing and encouraging tree planting on private property. This means, once all viable public sites are planted with a new tree, additional urban tree canopy can only be gained through partnerships with landowners and private property plantings. Newberry residents would like to participate in urban forestry through volunteer tree planting events, fruit tree orchards, and attending educational workshops. Although many Newberry residents are supportive of urban forestry, planting a new tree on private property poses challenges for residents including not knowing what species to plant, and associated labor and tree care costs. These challenges should be further explored to see what specific resources would be helpful to encourage private property tree ownership.

Educational resources were developed through the UFMP and include a recommended tree species list, spacing guidelines to plant the 'right tree, in the right place,' and a residential tree care brochure to encourage private property tree ownership (**Appendix 3**). **Appendix 6** Community Engagement Analysis contains full details of the engagement process and its findings.



Newberry community members envision:

- A variety of species including evergreen, flowers, and fruit!
- Less invasive species .
- Large, mature trees.
- Tree-lined neighborhoods.



What do residents need to plant trees on their private property?

- Guidelines for tree species, tree spacing, and tree care resources.
- Tree giveaway programs.

Recommended Actions

Newberry is Already Working on:

- Empower community members by ensuring tree care resources are available for the public:
 - Proper tree care, tree spacing, tree planting, and tree watering.
 - Recommended tree species list.
- Continue partnerships for annual Arbor Day Celebrations including tree planting and educational programs with educational institutions.

UFMP Recommended Actions:

- Develop a community engagement strategy to integrate urban forestry in City programming.
- Encourage citizen engagement to become a Tree Board member.
- Engage residents for an educational session and fruit tree planting for neighborhood orchards.
- Engage educational institutions to collaborate on urban forestry efforts such as workshops and volunteer service days.
- Engage homeowners associations to align tree care standards, tree removal and replanting efforts, and urban tree canopy goals With the City's UFMP.
- Explore incentives for private tree ownership including water rebates and tree giveaway programs.

4

Measuring Success of the UFMP



Urban Forest Master Plans are designed as living documents where implementation should be monitored over time. Periodic review allows the City to adjust their plan and address unanticipated challenges and opportunities that impact the effectiveness of the UFMP.

The City of Newberry will use the Community Assessment and Goalsetting tool developed by the Vibrant Cities Lab to monitor the implementation of the UFMP. The online assessment tool is used to identify a City's current and goal status within specific areas of urban forest sustainability. Each metric is assigned a point value, and the City was assigned a "Total Current Score" of 18 and a "Gap Score" Of 49. The gap score indicates the difference between the current level of service and the desired goal based on responses to the questionnaire. The assessment can be used to demonstrate successes and justify additional funding requests. Newberry's baseline assessment was conducted in May 2025 and can be found in **Appendix 7**. The City should plan to review, reassess, and update its UFMP implementation plan every 5 years to 10 years to ensure successful implementation and realization of Newberry's urban forestry goals.



5

References



References

City of Newberry. Planning and Development Services Department. City of Newberry Comprehensive Plan 2030. October 13, 2020. 2025.

Wolf, K.L. August 2007. City Trees and Property Values. Arborist News 16, 4: 34-36.



URBAN FOREST

M A S T E R P L A N

Prepared by