GREENWAY NETWORK PLAN 2025

Athens-Clarke County Leisure Services Department
Office of Park Planning
In collaboration with the Oconee Rivers Greenway Commission

Revision Prepared June 28, 2025

Athens-Clarke County Leisure Services Department
Park Services Division
Office of Park Planning

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Table of Contents

List of Tables

List of Figures

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Executive Summary

The Oconee Rivers Greenway is a network of natural areas within the 100-year floodplains of the North Oconee River, Middle Oconee River, and Oconee River and their major tributaries as its core. The network includes a system of river-oriented trails that connect the river corridors with adjacent parks and green spaces, as well as neighborhoods and other community sites in Athens-Clarke County. The Greenway trail system currently has 13.2 miles of multi-use trail, 1.7 miles of right-of-way-based trail, and 3 miles of multi-use trail on UGA's campus. An additional combined total 4.2 miles of trials are currently either under construction or funded for future development.

The purpose of this document – the Oconee Rivers Greenway Network Plan – is to update the comprehensive vision for the Oconee Rivers Greenway and its constituent parks, trails, waterways, exceptional resources, and green spaces as well as to provide planning, design, and management guidance for the Greenway trail system. The plan's goals and the strategic actions to meet these goals are explained in the rest of this summary.

The ordinance creating the Oconee Rivers Greenway Commission (ORGC) provides that the primary purpose of the Greenway "shall be the protection of the natural resources of the North Oconee and Middle Oconee rivers, their major tributaries and their 100-year floodplains for the benefit and enjoyment of the citizens of Athens-Clarke County." The Greenway's "boundary" therefore rests on two important regulations: the FEMA 100-year floodplain of the rivers and their major tributaries and the areas protected by the 2019 ACCUG Environmental Areas Ordinance. In addition, the plan and Greenway map refer to two designations – Conservation Areas and Exceptional Resource Areas – that warrant increased management attention. The 100- year floodplain and adjacent greenspaces and areas with cultural and natural resources are included in the Conservation Area. Properties adjacent to the Greenway that are protected by conservation easements as well as those privately owned properties adjacent to the Greenway that have conservation value are also included. Exceptional Resource Areas (ERA) is a management unit on public lands which contains outstanding, particularly sensitive, or officially protected natural or cultural resources requiring special management consideration and actions to sustain them.

The Greenway trail system provides connectivity between schools, neighborhoods, recreational and educational facilities, and other county amenities. The Greenway trail system supports non-motorized transportation through a system of multi-use trails. This helps alleviate traffic and pollution throughout Athens-Clarke County. Use of the trails promotes health and wellbeing.

Importantly, this plan is conceptual in nature, designed to provide a framework for Greenway management, budgeting, fundraising, priority setting, and trail development. As projects are approved and funded, more detailed and site-specific planning will be necessary.

Plan Goals: Tasks for this Update

1. Provide measurable goals, actions, and priorities for plan implementation, and define responsibilities for their implementation.
2. Streamline the plan by shifting the focus from justifying the Greenway to showing past accomplishments and future goals.
3. Revise earlier priorities and set new ones for Greenway expansion and management.
4. Identify potential funding sources for Greenway projects.
5. Identify key decision pathways and partnerships for achieving Greenway goals and objectives.
6. Work with ACC Leisure Services to create a joint Greenway plan and Athens in Motion map.

Developing the Greenway Network Plan reflects a highly collaborative effort that required a high level of engagement from the ORGC, stakeholders, and the community. This plan is organized as follows:

Chapter 1: Introduction

Establishes the history, community, vision, mission, and goals of the Greenway. Sets the framework for the document.

Chapter 2: Greenway Network Trail

Provides an overview of the development of the existing Oconee Rivers Greenway, potential future destinations, and existing trail network and funded projects.

Chapter 3: Natural and Cultural Resources: Ours to Protect and Enjoy

Provides an overview of the natural cultural, and exceptional resources within and contiguous to the Greenway, why they are valuable, and proposed actions to protect them. Explains the Greenway boundary and conservation areas, providing the overall context for the recommendations later in the document related to maintaining and extending the network of trails that run throughout the Greenway.

Chapter 4: Existing & Proposed Greenway Trail Network

Outlines the existing and future network concept of the Greenway and identifies the highest priorities to be considered for the current planning cycle.

Chapter 5: Strategies for Implementation

Describes actions steps, estimates, program, and policy recommendations for extending and maintaining the existing trail network.

Chapter 6: Design Guidelines

Provides design guidelines for trailheads, trails and trail types, trail surface types, crossings, architectural features, amenities, river access, and signage.

Chapter 7: Operations and Maintenance

Provides guidelines for effective operations and maintenance of the Greenway.

Appendix

A. Supplemental Maps

To maintain relevance and incorporate changes over time, this plan is a "living document." Three update intervals have been established to revise the plan as follows:

Every two years: Update the maps used within the Greenway Network Plan. Base map data will be updated as it becomes available, and information that relates to updates to routes, priorities, environmental changes, and other information also will be incorporated into the two-year update cycle.

Every five years: Update the text within the Greenway Network Plan. This update will allow for revisiting the goals and objectives outlined in the document and will allow for the updating of project priorities as well as the addition of new priorities.

Every ten years: Conduct a comprehensive evaluation of the text document and maps. The ten-year effort will incorporate robust public input and careful evaluation of the elements contained in the plan.

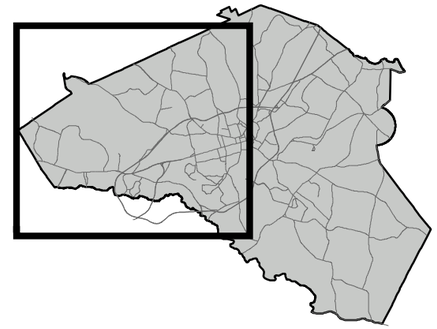
The plan identifies the following three high priority corridors to reflect the goal of connectivity.

1. **North Oconee River Greenway:** The North Oconee River corridor priority will focus on improving trails and connections and filling gaps in connectivity along the existing portions of the Greenway. In addition to this, connections to neighborhoods and downtown areas will be strengthened.
2. **Middle Oconee River Greenway:** The Middle Oconee River corridor priority will focus on connecting Ben Burton Park to Beech Haven, an Exceptional Resource Area. Further development of this corridor will follow in future updates.
3. **Normaltown Connector:** Normaltown is rich with residential and commercial areas and the proposed trail would provide a very much-needed connection between the North and Middle Oconee rivers, passing through the center of Athens. The current focus of this corridor will include linking neighborhoods to each other and to the Greenway paths that are also listed as high priority.

***Table 1: High Priority Trails* - Trails listed below are all considered high priority.** Tiers represent the recommendations for funding and completion.

Trail Name	Corridor	Distance	2025 Estimated Cost	Funding Status	Number of Bridges
Tier 1: First Tier trail projects focus on improving trails and connections while also improving or filling gaps in connectivity along the existing portions of the Greenway					
Cook's Trail	North Oconee River	4.16 miles	> $8 million	Proposed TSPLOST 2026	Multiple
Oak/Oconee Bridge Underpass	North Oconee River	.15 miles	$1 million	Funded TSPLOST 2018	1
Riverside Trail – MLK Parkway	North Oconee River	.66 miles	$4 million	Funded	1
Tallassee Road Connector	Middle Oconee River	3.31 miles	$5 million	Partially Funded SPLOST 2020	2
Tier 2: Second Tier projects continue to improve connections while extending the network to other greenspaces and neighborhoods					
Pulaski Creek Connector – South	North Oconee River	.21 miles	$1 million	Not Yet Funded	Boardwalk
Pulaski Creek Connector – North	North Oconee River	.41 miles	$2.5 million	Not Yet Funded	1
Nature Center Loop – West	North Oconee River	2.93 miles	> $7 million	Not Yet Funded	Multiple
Nature Center Loop – East	North Oconee River	1.8 miles	> $7 million	Not Yet Funded	Multiple
Tier 3: Third Tier projects focus on connecting with new corridors beyond the established North Oconee River Greenway					
Ben Burton to Beech Haven	Middle Oconee River	1.37 miles	$6 million	Proposed TSPLOST 2026	2
Firefly Connector at 78/10 interchange	Firefly Trail	.17 miles	$3 million	Not Yet Funded	1
Normaltown Connector – Ben Burton to Bishop	Normaltown Connector	2.23 miles	$2 million	Not Yet Funded	0
Normaltown Connector – Bishop to Boulevard	Normaltown Connector	2.05 miles	$2 million	Not Yet Funded	0
Normaltown Connector – Boulevard to North Oconee River Greenway	Normaltown Connector	1.95 miles	$6 million	Not Yet Funded	2

Location Map



Greenway Trail Network

Trail Type
- Street Based
- Multi-Use
- Rail to Trail
- Rail with Trail
- Alternate Route
- Pedestrian Only

Trail Status
- Existing
- Funded
- Proposed
- Athens in Motion

Water Trail Access
- Existing
- Funded
- Proposed
- Potential County Connection

Infrastructure
- Railroads
- Major Roads
- Minor Roads

Hydrology
- Surface Water
- Shoals
- Dams
- Wetland

Areas of Interest
- ACC Greenspace
- Limited Access
- Other Greenspace
- UGA Property
- Government
- Conservation Area
- School

0 0.75 1.5 Miles

PROPOSED TRAIL NETWORK – WEST

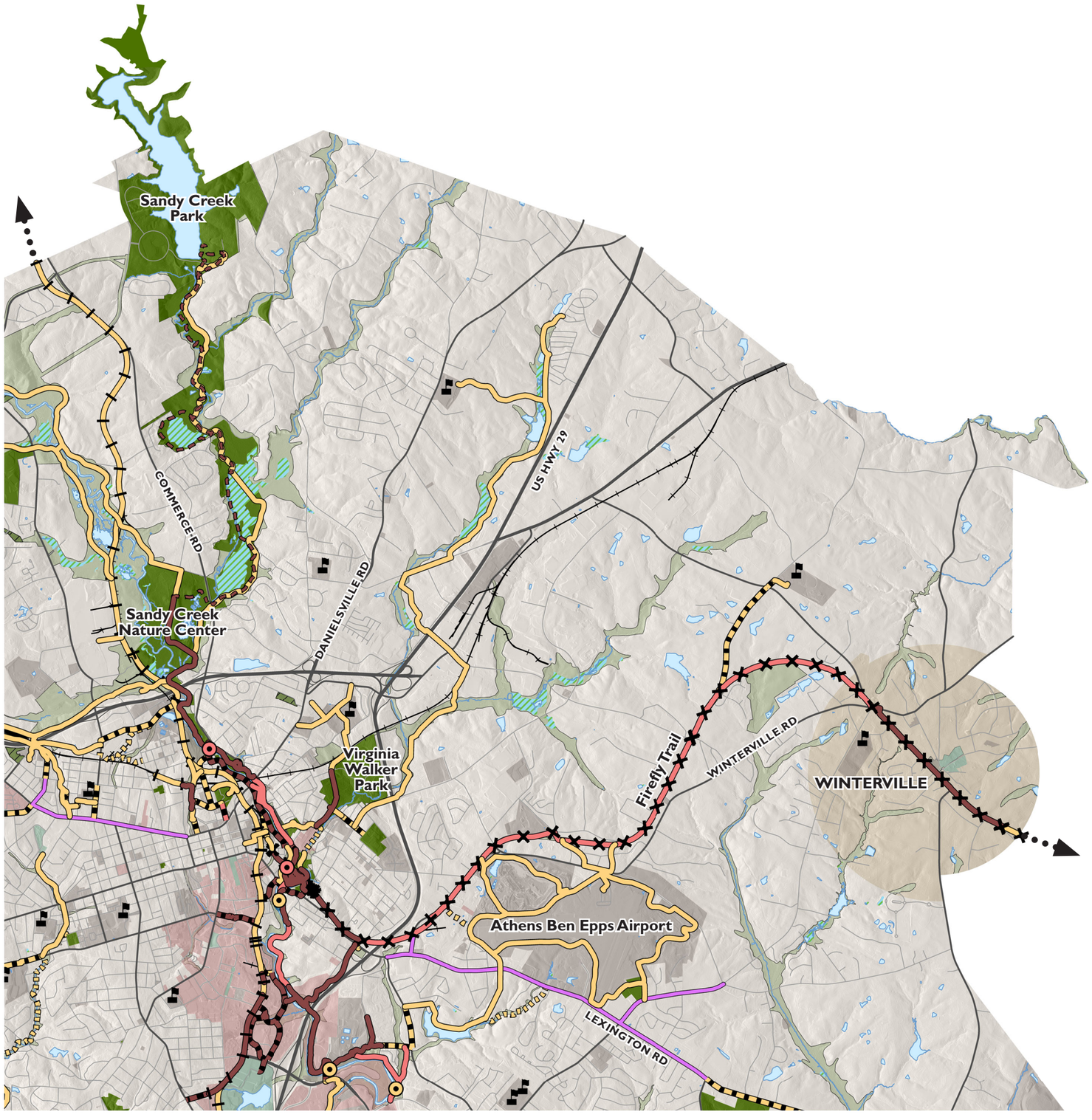
Greenway Network Plan

Athens, Georgia

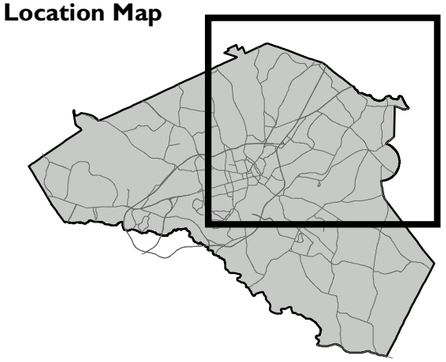
January 2021

Prepared by
ACC Leisure Services
Office of Park Planning

for Athens - Clarke County Leisure Services



Location Map



Greenway Trail Network

Trail Type
- Street Based
- Multi-Use
- Rail to Trail
- Rail with Trail
- Alternate Route
- Pedestrian Only

Trail Status
- Existing
- Funded
- Proposed
- Athens in Motion

Water Trail Access
- Existing
- Funded
- Proposed
- Potential County Connection

Infrastructure
- Railroads
- Major Roads
- Minor Roads

Hydrology
- Surface Water
- Shoals
- Dams
- Wetland

Areas of Interest
- ACC Greenspace
- Limited Access
- Other Greenspace
- UGA Property
- Government
- Conservation Area
- School

0 0.75 1.5 Miles

PROPOSED TRAIL NETWORK – NORTHEAST

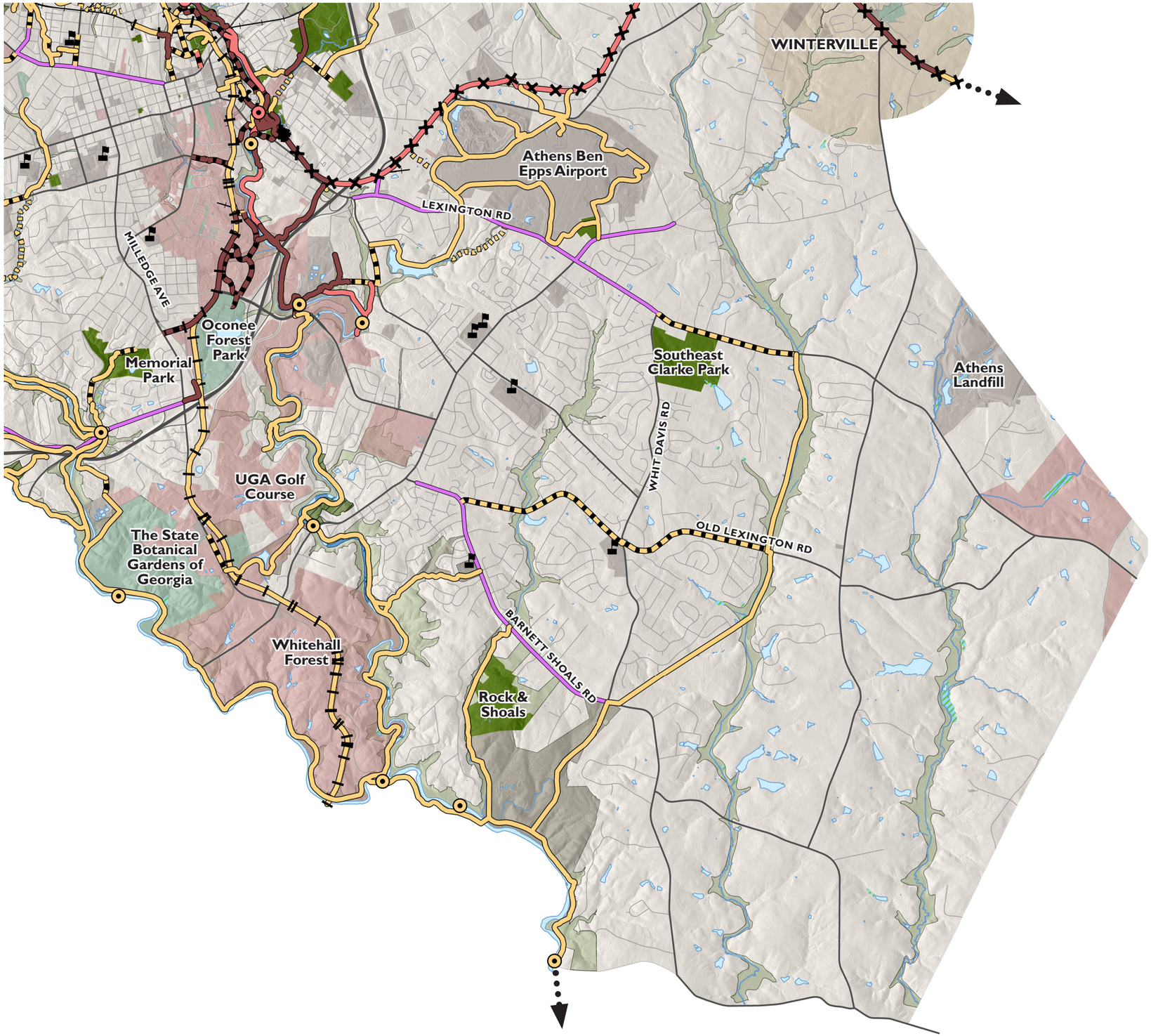
Greenway Network Plan

Athens, Georgia

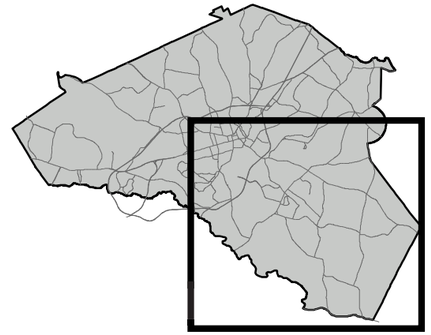
January 2021

Prepared by
ACC Leisure Services
Office of Park Planning

for Athens - Clarke County Leisure Services



Location Map



Greenway Trail Network

Trail Type
- Street Based
- Multi-Use
- Rail to Trail
- Rail with Trail
- Alternate Route
- Pedestrian Only

Trail Status
- Existing
- Funded
- Proposed
- Athens in Motion

Water Trail Access
- Existing
- Funded
- Proposed
- Potential County Connection

Infrastructure
- Railroads
- Major Roads
- Minor Roads

Hydrology
- Surface Water
- Shoals
- Dams
- Wetland

Areas of Interest
- ACC Greenspace
- Limited Access
- Other Greenspace
- UGA Property
- Government
- Conservation Area
- School

0 0.75 1.5 Miles

PROPOSED TRAIL NETWORK – SOUTHEAST

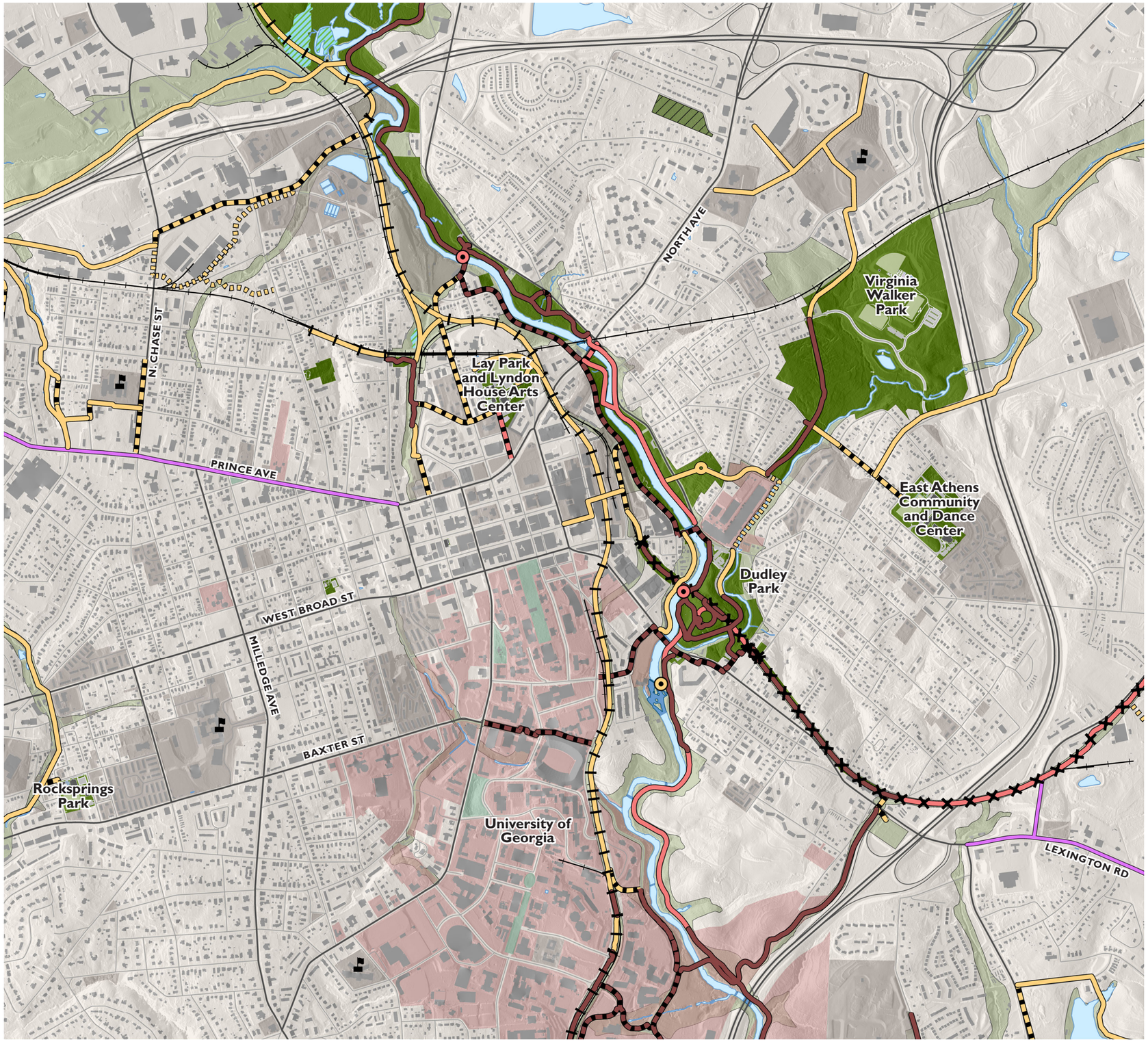
Greenway Network Plan

Athens, Georgia

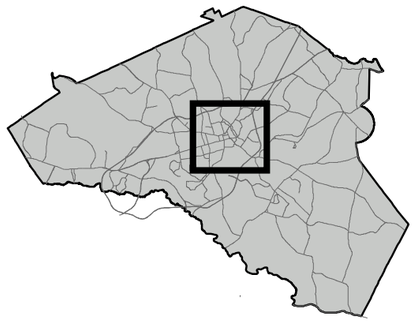
January 2021

Prepared by
ACC Leisure Services
Office of Park Planning

for Athens - Clarke County Leisure Services



Location Map



Greenway Trail Network

Trail Type
- Street Based
- Multi-Use
- Rail to Trail
- Rail with Trail
- Alternate Route
- Pedestrian Only

Trail Status
- Existing
- Funded
- Proposed
- Athens in Motion

Water Trail Access
- Existing
- Funded
- Proposed
- Potential County Connection

Infrastructure
- Railroads
- Major Roads
- Minor Roads

Hydrology
- Surface Water
- Shoals
- Dams
- Wetland

Areas of Interest
- ACC Greenspace
- Limited Access
- Other Greenspace
- UGA Property
- Government
- Conservation Area
- School

0 0.25 0.5 Miles

PROPOSED TRAIL NETWORK – INSET

Greenway Network Plan

Athens, Georgia

January 2021

Prepared by
ACC Leisure Services
Office of Park Planning

for Athens - Clarke County Leisure Services

This plan also recommends the following immediate actions to guide the development of the Greenway and trail network:

1. ***ACCUG Mayor and Commission Adopt this Plan***

   Once this plan is approved by the Mayor and ACC Commission, it will be integrated in other related government planning efforts (Comprehensive Plan, Bike/Pedestrian Plan, etc.).

2. ***Increase full time Greenway Staff***

   Develop a position that is responsible for championing Greenway projects, partnering to develop programs including educational and volunteer efforts, and serving as a liaison with members of the public, the ORGC, and partner agencies.

3. ***Market the Greenway Network***

   Providing print and online materials that describe the Greenway network will help ensure that its purpose is understood as well as increase public awareness about the Greenway. This marketing will include creating a specific Greenway and trail website connected to the ACCUG website, which provides up-to-date information about Greenway facilities, development, programming and operations.

4. ***Secure and Commit Funding***

   Immediately pursuing priority projects is vital in order to expand the Greenway trail network and management programs. Elected officials, appointed committees, and private entities must come together to fund these projects. TSPLOST and SPLOST are key programs for implementation of Greenway proposals and other funding sources will also be pursued.

5. ***Begin working on the High priority projects***

   High priority project trails are logical extensions of the existing and currently funded Greenway trail system. Completing Greenway trails that are already funded through SPLOST referendums will build momentum and focus attention on high priority areas.

The plan includes goals and actions that are complex in nature and will take years to complete. The tables below provide a complete list of the Greenway Network Plan's Goals and Actions:

Table 2: Greenway Network Plan's Goals and Actions – Long Term

Natural and Cultural Resource Goals and Actions: Resource Protection The Greenway is designed to provide a natural environment that enhances quality of life through the conservation and preservation of natural resources.
Educational Goals and Actions: The Greenway provides educational opportunities for citizens to participate in both self-directed and interpretative programs that contribute to an understanding of the natural environment, cultural heritage, and conservation efforts.
Health and Wellbeing Goals and Actions: *Healthy communities have safe and accessible places for their citizens to enjoy the outdoors and exercise. Designed to provide our citizens with health and wellbeing opportunities, the Greenway connects people to the natural environment while also encouraging them to be physically active*
Recreation Goals and Actions: *In addition to its health benefits, outdoor recreation contributes to a community's social cohesion and quality of life. The Greenway provides our community with the opportunity to experience and enjoy the outdoors in a natural environment.*
Transportation Goals and Actions: *Active transportation corridors that support walking and bicycling provide much-needed options to driving. The Greenway provides corridors and facilities that promote the use of non-motorized transportation, thus alleviating traffic congestion and pollution, while giving our citizens more transportation options.*

Acknowledgements

This plan was prepared by ACCUG Leisure Services in collaboration with the Oconee Rivers Greenway Commission.

Leisure Services and the ORGC would like to extend a special thanks to the ACCUG Mayor and Commission for supporting the development of this plan.

Many hours of meetings, interviews, and discussions are reflected in the creation of this document and its update. The planning team is also grateful to the many governments and non-governmental organizations throughout Athens-Clarke County that work hard to protect our natural resources as well as make our community a beautiful, clean, and safe place to live. This plan is more robust because of your efforts.

Special thanks are extended to:

- ACCUG Departments and Programs – Environmental Coordinator, Transportation and Public Works Department, Public Utilities Department, Planning Department, and SPLOST Management.
- ACCUG Citizen Advisory Commissions – Cultural Affairs Commission, Historic Preservation Commission, Rails-to-Trails Committee, and the Community Tree Council.
- The Georgia Department of Natural Resources (GDNR).
- The Georgia Department of Transportation (GDOT).
- The Athens Downtown Development Authority (ADDA).
- The Northeast Georgia Regional Commission (NEGRC).
- The University of Georgia (UGA) – Carl Vinson Institute of Government, College of Environment and Design, Odum School of Ecology, Office of Sustainability, River Basin Center, State Botanical Garden, University Architects for Facility Planning, and the Willson Center.
- Madison-Athens-Clarke-Oconee Regional Transportation Study (MACORTS).
- Non-governmental Organizations – Athens Land Trust, Georgia Rivers Network, Oconee River Audubon Society, Oconee River Land Trust, Upper Oconee Watershed Network, Athens Clarke Heritage Foundation, Bike Athens, Firefly Trail, Inc., and the Southern Off-Road Bicycle Association-Athens.
- Riverview Foundation Inc.
- Brittney Waldheim

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Chapter 1: Introduction

The Oconee Rivers Greenway is a network of natural areas within the 100-year floodplains of the North Oconee River, Middle Oconee River, and Oconee River and their major tributaries as its core. The network includes a system of river-oriented trails that connect the river corridors with adjacent parks, protected areas, green spaces, and natural and cultural resources in Athens-Clarke County. The Greenway trail system currently has 13.2 miles of multi-use trail, 1.7 miles of right-of-way-based trail, and 3 miles of multi-use trail on UGA's campus.

The purpose of this document – the Oconee Rivers Greenway Network Plan – is to establish a comprehensive vision for the Oconee Rivers Greenway and its constituent parks, trails, waterways, exceptional resources, and green spaces as well as to provide planning, design, and management guidance for the Greenway trail system. The plan also provides clear strategic actions and priorities for development of the Greenway, including the many trails that are included within the network. This ambitious project requires the coordination of Athens-Clarke County Unified Government (ACCUG), elected officials, stakeholder groups, and citizens.

The Oconee Rivers Greenway is a network of natural areas within the 100-year floodplains of the North Oconee River, Middle Oconee River, and Oconee River and their major tributaries.

The network includes a system of river-oriented trails that connect the river corridors with adjacent parks and green spaces and neighborhoods and community sites throughout both Athens and Clarke County.

COMMUNITY VISION AND MISSION FOR THE OCONEE RIVERS GREENWAY

The Greenway encompasses a long-standing community vision of interconnected green spaces that provide quality habitat, reflect conservation values by preserving exceptional and sensitive areas, and include a trail system that provides transportation choices, education, and recreation opportunities for our community. Out of this vision arises the mission to provide opportunities for alternative transportation connections, recreation, and education while boosting the community's health and wellbeing. Careful stewardship and conservation of the natural and cultural resources within the Greenway Network are integral to this mission. Protecting this network of preserved and planned space requires local commitment to implementing the appropriate regulatory measures that will safeguard natural resources, preserve historic features, and further the scenic character that is vital to the Greenway's continued growth and success.

A crucial part of the Greenway's origin was formation of the Oconee Rivers Greenway Commission (ORGC), a citizen advisory group to the ACCUG Mayor and Commission. The ORGC, created by ordinance in 1992, is a critical partner in the planning, development, and implementation of the Greenway Network, and is authorized to seek federal, state and private foundation funds for the preservation and enhancement of the Greenway system, or to further the purposes of such commission; conduct education programs about the Greenway system and its resources in coordination with Leisure Services as per the Bylaws of the Oconee Rivers Greenway Commission (Section 1-11-1.(e)(2)) Ordinance[1]. The late Charles Aguar, UGA professor of Landscape Architecture, is often credited as the "father" of the Greenway, raising awareness and support for developing the Greenway and the ORGC. In 2003, a Greenway Network Plan, developed by the Department of Leisure Services, was officially adopted by the ACCUG Mayor and Commission. In the 2003 plan, the conservation and preservation goal of the Greenway was supplemented with goals related to transportation, education, and recreation. These goals are updated in this plan.

[1] *Athens-Clarke County, Code of Ordinances, Section 1-11-1 (2021). It also provides that a primary responsibility of the commission is the development of a "plan for a river-oriented Greenway system." The commission may also recommend parcels of land to be purchased or acquired for inclusion in the Greenway.*

FOUNDATION FOR GREENWAY MANAGEMENT

The ordinance creating ORGC provides that "the primary purpose" of the Greenway "shall be the protection of the natural resources of the North Oconee, Middle Oconee, and the Oconee rivers, their major tributaries and their floodplains for the benefit and enjoyment of the citizens of Athens- Clarke County." The Greenway's "boundary" therefore rests on two important regulations: the 100-year floodplain[2] and the areas protected by the ACCUG Environmental Areas Ordinance[3], which are represented on the 2019 ACCUG Environmental Areas Map.

This Greenway "spine" or "Greenway corridor" is augmented by properties adjacent to the Greenway protected by conservation easements as well as areas adjacent to the Greenway that have conservation value. This plan refers to these areas as "Conservation Areas." This plan also designates specific areas of the Greenway corridor that warrant increased management attention as Exceptional Resource Areas (ERA). The purpose of highlighting these areas is to provide a higher level of awareness about the natural resources throughout our community – and how managing these resources well benefits the Greenway. A primary goal of this plan is to encourage conservation and bring to light the best management practices that can further enhance the protection and conservation of these sensitive resources.

Importantly, this plan is conceptual in nature, designed to provide a framework for Greenway management, budgeting, fundraising, priority setting, and trail development. As projects are approved and funded, more detailed and site-specific planning will be necessary. This plan also will compliment and inform several important plans currently in existence, such as the Downtown Athens Master Plan, the Athens in Motion Master Plan, as well as those in development, including ACCUG's sustainability plan, master plan for pedestrian and bicycle infrastructure, and the comprehensive plan.

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[2] *FEMA's National Flood Insurance Program identifies flood hazard areas on flood insurance rate maps as "Special Flood Hazard Areas," which are defined "as the area that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year. "The Special Flood Hazard Area is often referred to as the "100-year floodplain."*

[3] *ACCUG's Environmental Areas Ordinance serves to protect the water and natural resources associated with the Greenway. It utilizes FEMA's classification of the 100-year floodplain to establish environmental areas. Other areas the ordinance protects include jurisdictional wetlands, riparian buffer areas, significant groundwater recharge areas, and water supply watersheds and water supply intake areas.*

Chapter 2: Greenway Network Trail

This Greenway Network Plan builds upon the investments and actions taken to develop the current network to create additional green space areas, trails, and opportunities for our community to enjoy the Greenway for many years to come. This chapter reviews Greenway accomplishments through 2024, including:

- Segments of the Greenway that have been completed.
- Segments of the Greenway that have been funded but not yet built, including timeline for their completion.
- Community amenities, assets, and destinations, including parks, neighborhoods, points of interest, schools, recreational facilities, museums and community centers, colleges and universities, etc.--that lie within a quarter mile of the Greenway and thus can be accessed through the Greenway.

Establishing a comprehensive vision for the Greenway and its constituent parks, trails, waterways, exceptional resources, and green spaces is a primary purpose of this plan. The current Greenway remains fragmented with several trails lacking connections to the main Greenway corridor. Numerous opportunities exist, as this plan is implemented, to take steps to increase connectivity to the Greenway as well as to develop greater cohesiveness and integration into the community for the Greenway trail network as a whole.

Table 3: Existing & Future Local Network Connections to the Greenway

Trail Name	Trail type	Location	Opened	Size	Amenities
Firefly Trail	Rail to Trail	Between Athens and Union Point	In Progress	39 Miles	Biking, mountain biking, hiking
Athens Line	Rail with Trail	Between Athens and Madison	In Progress	27 Miles	Biking, mountain biking, hiking
Oconee County	Greenway	Oconee County	Proposed	71 Miles	Connections to historical sites
Upper Oconee Water Trail	Water Trail	Jackson, Clarke, Oconee, Putnam and Greene County	In Progress	98 Miles	Six public access points, beginner Class I and II shoals, rocky bluffs, historic textile mill ruins

HSITORY OF THE GREENWAY DEVELOPMENT

Because the Greenway is envisioned to interconnect with the community in a cohesive and deliberate way, this section provides an inventory of existing and potential Greenway destinations. Ultimately, the Greenway network will integrate with the community in a way that connects the built environment with the natural environment, creating a relationship that strengthens both.

The idea of a Greenway along the rivers in Athens first emerged in 1925, when Walter Manning, an associate of Frederick Law Olmstead, carried put a complete study of parks and Greenways in Athens and recommended a Greenway system that followed along both of Athens's major rivers and their tributaries. The idea was not revived until 1972, when a Greenway was proposed by Charles Aguar that would run along the Oconee Rivers in Athens, with the goal of river conservation and recreation. Aguar, a professional planner, advocated for a Greenway for many years. One outgrowth of his effort was the initiation of an event named "River Day" in 1975, which has evolved into an annual event now called "Rivers Alive." In the early 1980s, state and federal grants enabled the purchase of a 4-mile-long gravel and boardwalk hiking path, named Cook's Trail, that connected Sandy Creek Nature Center and Sandy Creek Park. Subsequently, an ad hoc task force created in 1990 brought together a number of governmental and non-governmental organizations and recommended the formation of a Greenway commission. The Oconee Rivers Greenway Commission was created in 1992, with a mission to protect the floodplain corridors of the Oconee Rivers for ecological function and recreational activities.

The 1994 SPLOST provided significant funding for the Greenway concept, which was to be spent between Sandy Creek Park, major features between North Avenue and Broad Street, Dudley Park, Oconee Hills Cemetery, and from College Station Road to Whitehall Dam. The original plan for the Greenway was adopted in 1995 but met with mixed review that included endorsement from concerned citizens and environmentalists but objections from some property owners along the lower stretches. As a result of opposition, the decision was made to begin with the section north of downtown between North Avenue and Sandy Creek Nature Center. In 1997, ACC, in cooperation with the Oconee Rivers Greenway Commission and the Oconee Rivers Land Trust, was awarded $1.5 million from the state RiverCare program. In 1999 the Mayor and Commission approved the plan, as well as the first section of the Greenway connecting East Broad Street to Sandy Creek Nature Center. With SPLOST and federal Transportation Enhancement Act money, construction was planned for two

segments. The Heritage Trail was intended to focus on historical events and buildings near downtown Athens. The North Oconee Greenway was planned to connect East Broad Street to the Sandy Creek Nature Center. Also in 1999, ACC began work to acquire parcels that were needed for the Greenway, including several parcels along Trail Creek and Poplar Street, an old gas station on Oak Street, the Salvation Army Store on Oconee Street, and several parcels along the river north of Broad Street to Sandy Creek. A permanent ACC Greenway coordinator position in Leisure Services was established in 1999.

SPLOST 2000 contained two Greenway acquisition projects, one to purchase buffer lands around Cook's Trail and one to buy land adjacent to the North Oconee River. These, combined with RiverCare funds, set the stage for future Greenway development. In June 2000, the 1.7 mile section on Willow Street from East Broad Street to College Avenue was opened. This section was built along the road to save costs and protect the river's biodiversity and habitat. In 2000, remaining rights of way were secured for the Dudley Park and Sandy Creek Nature Center segment and two miles of trail. The Heritage Trail was designated a "Millenium Trail" through First Lady Hillary Rodham Clinton's Millennium Council. In 2001, Leisure Services in conjunction with the Manager's Office and SPLOST consultants drafted a county-wide Greenway Network Plan that included guidelines for conservation, preservation, transportation, education, and recreation. The Network Plan was adopted by the Commission in 2003. In June 2003 there was an official ribbon cutting and opening ceremony following completion of three pedestrian bridges: Across Sandy Creek to the Nature Center, over Oconee River next to the East Broad vehicular bridge, and over Trail Creek in Dudley Park. At this time there were about 3 miles of Greenway.

With the Greenway Network Plan as a guide, the Greenway continued to grow. In 2004, the North Oconee River Connector was completed using SPLOST 2000 money. This goes from Dudley Park to Oconee Street and along Williams Street to connect with the existing UGA bike paths and walkways at the Thomas Avenue intersection. SPLOST 2000 funding was also used to have 23 interpretive panels designed and installed on the "Greenway Plaza" section of the Heritage Trail across from the former Cook and Brothers Armory (now the Chicopee Building). SPLOST 2005 funding was for the Greenway Plaza, to be called Aguar Plaza, at the intersection of East Broad St. and Willow St.

Initial funding came from RiverCare. From 2005 to 2023, the following SPLOST and TSPLOST were funded for the Oconee Rivers Greenway. (sources: https://www.accgov.com/splost and https://www.accgov.com/TSPLOST)

Construction of the Oconee Rivers Greenway has been undertaken with some grant funds but primarily SPLOST and TSPLOST funds. This highlights the importance of SPLOST and TSPLOST funds for Greenway expansion, although, as well as the need to seek additional grant funding. The county provides maintenance and staff through the ACC Leisure Services Department.

In 2025, including portions that are funded and currently under construction, the total Greenway length will be approximately 22.1 miles. When the Oak Street and North Avenue underpasses are completed, along with the MLK Parkway segment, there will be a continuous, paved trail from Sandy Creek Nature Center all the way south to Carriage Lane, a side street on Barnett Shoals Road. ***A pedestrian or cyclist will be able to travel the entire distance without having to cross a single road.***

Full implementation of the Network Plan will ultimately connect large segments of Athens-Clarke County. It has the potential to become a practical means of safe, alternative transportation for large swaths of the community. But the benefits reach beyond transportation to include economic development, recreational use of the Greenway, opportunities to experience the natural beauty of our rivers and greenspaces.

Future Plans:

- Construction of the missing segment of Greenway between Dudley Park and North Avenue: the MLK Parkway mentioned prior.
- Development of a Greenway connector between Walker Park and the 4th Street/ Gospel Pilgrim Cemetery area.
- Development of a Greenway connector between JJ Harris Elementary School and Highway 29.
- Creation of safe pedestrian infrastructure that will promote access to Beech Haven on Atlanta highway and the Sycamore Drive neighborhoods.
- Reconstruction of Cook's Trail.

GREENWAY FUNDING THROUGHOUT THE YEARS:

SPLOST 2005

- **Project 23.** Pulaski Creek Greenway.
- **Project 25.** North Oconee Rivers Greenway.
    - Sub-project A: Trail Creek Segment.
    - Sub-project B: North Oconee River Segment.

SPLOST 2011

- **Project 9:** Oconee Rivers Greenway Network Connectors.
    - Sub-Project 1: East Campus Connector.
    - Sub-Project 2: Oconee Hills.
    - Sub-Project 3: College Station Road.
    - Sub-Project 4: Research Drive.
    - Sub-Project 5: Bailey Street / Carriage Lane.
    - Sub-Project 6: Carr Creek.
    - Easley's Mill.

TSPLOST 2018

- **Project 5:** Oconee Rivers Greenway.
    - Sub-Project 2: Oconee Hill Cemetery Segment.
    - Sub-Project 4: Research Drive Segment.
    - Sub-Project 6: Carr's Creek / Barnett Shoals Road.
    - Sub-Project 7: Oak/Oconee Bridge Underpass.
    - Sub-Project 8: MLK Greenway Extension.

TSPLOST 2023

- **Project 11:** East Athens MLK Pkwy. Greenway Trail
- **Project 12:** East Athens Greenway Connectors
- **Project 23:** Greenway Trail Safety Improvements

Existing Destinations

Listed below are all of the destinations within a quarter mile of the existing and funded Greenway.

Table 4: Existing Destinations

Parks and Open Spaces	Locations of Interest	UGA Facilities
• East Athens Community Center • Memorial Park • Pittard Park • Dudley Park • Thomas Lay Park • Trail Creek Park • Sandy Creek Park	• Oconee Hill Cemetery • Garden Club of Georgia • Georgia Art Museum • Hodgson Hall • Springfield Cemetery • Bear Hollow Zoo • Ware Lyndon House • Classic Center • Sandy Creek Nature Center	• Sanford Stadium • Dean William Tate Student Center • Intramural Fields • Lake Herrick • Chicopee Complex • North Campus • Ramsey Center

Potential Destinations

As the Greenway expands, opportunities exist to connect with additional public resources critical to our community. Below are some of the destinations within Athens-Clarke County that have the potential to connect with a Greenway network.

Table 5: Potential Destinations

Parks and Open Spaces	Schools
• Holland Youth Sports Complex • Satterfield Park • Southeast Clarke Park • Reese and Pope Park • Boulevard Woods Park • Bishop Park • Tallassee forest • Beech Haven • Rock Springs • Ben Burton Park	• Alps Road Elementary School • Athens Montessori School • Barnett Shoals Elementary School • Burney-Harris-Lyons Middle School • Clarke Middle School • Cleveland Road Elementary School • Oglethorpe Avenue Elementary School • W.R. Cole Middle School • Waseca Montessori School • Johnnie Lay Burks Elementary School
Locations of Interest	**UGA Facilities**
• Athens City Hall • Athens Regional Library	• Health Sciences Campus • Whitehall Forest • State Botanical Garden of Georgia

Other detailed maps regarding the following topics can be found on the Athens-Clarke County Government Website: https://www.accgov.com/7143/Greenway-Network-Master-Plan

- Recreational Analysis
- Community Analysis
- Potential Destinations
- Utility Easements
- Bicycle Circulation
- Existing and Proposed Sidewalks
- Public Transit

Factors Key to Greenway Funding

As per research and the evaluation of various community assets including connection to schools, parks, greenspaces, property ownership, bike lanes, Census tracts, and length - proposed future tracts of the Greenway Network are prioritized and tiered into three groups to support the order of proposal to the Athens-Clarke County Unified Government. These factors are key to obtaining additional funding for future Greenway development[4].

The Greenway and Transportation Networks

The Athens in Motion plan, adopted by Athens-Clarke County in October 2018, is a comprehensive Bicycle and Pedestrian Master Plan aimed at creating a safe, connected, and equitable multi-modal transportation network. Developed with input from the Athens in Motion Commission and the community, the plan focuses on five key goals: enhancing connectivity, promoting equity, increasing active transportation usage, providing education and encouragement, and ensuring sustainable implementation. It includes a variety of projects such as multi-use paths, protected bike lanes, sidewalk improvements, and pedestrian safety devices, all designed to accommodate diverse users and encourage walking, biking, and transit use[5].

[4] The development of an online application to allow citizens of Athens-Clarke County to access an existing priority calculation document is currently being developed for future release

[5] https://www.accgov.com/8808/Sub-Project-2-Pedestrian-Bike-Master-Pla

Chapter 3: Natural and Cultural Resources

Resources: Ours to Protect and Enjoy

Free-flowing streams, lush vegetation, unique rock outcrops, and native plants line the Oconee Rivers Greenway, bringing natural features of the Piedmont into the very fabric of our county. In addition, many of our natural resources are closely intertwined with some of our community's most valuable cultural resources. Athens grew up around its rivers. Easley's Mill at the foot of Oak Street was one of the first structures in what would become the city. The University of Georgia sits on land that was chosen in part because of its many flowing springs. Conserving rivers and springs contributes to our community's character and furthers important social, ecological, aesthetic, and cultural values. Protection should include new acquisition as appropriate, restriction of use as appropriate, monitoring and determining impacts of usage and responses to flood events, Restoration plans should be developed for all Greenway segments. This should be done for all areas and not just the exceptional areas.

This chapter first explains the use of the terms "Conservation Area" and "Exceptional Resource Area" to designate areas of the Greenway that necessitate special management considerations. It then provides an overview of the Greenway's natural and cultural resources and includes descriptions of how these resources are protected through law, policy, and other criteria. After providing this overview, five Exceptional Resource Areas within the Greenway are described. Knowing what we have is essential for protection and future planning. A strategy for the inventory of these resources is proposed at the end of the chapter.

Upon viewing the North Oconee River in 1773, William Bartram wrote "… we came to the banks of that beautiful river. The cane swamps of immense extent, and the oak forests, on the level lands, are incredibly fertile…"

GREENWAY RESOURCE MANAGEMENT UNITS: CONSERVATION AREAS AND EXCEPTIONAL RESOURCE AREAS

In this plan, and on the Greenway Network Map, two terms are used to describe areas relevant to the natural and cultural resources of the Greenway: Conservation Area and Exceptional Resource Area.

Conservation Areas

The 100-year floodplain and adjacent green spaces and areas with cultural and natural resources are included in the Conservation Area. The Greenway corridor cannot be effectively managed without considering the full watershed. Properties adjacent to the Greenway that are protected by conservation easements as well as those privately owned properties adjacent to the Greenway that have conservation value are also included. Conservation easements provide a higher level of protection to some of these areas. The goal is to meet the obligation to protect the natural and cultural resources of the county's river and tributary floodplains, to create a higher level of awareness about these crucial elements of the Greenway network, and to generate conversations about best management practices with landowners. *The need for awareness of conservation easement opportunities should never be put aside.*

Conservation Areas include the 100-year floodplain of the Oconee Rivers and their major tributaries and adjacent areas of conservation value. These cultural and natural resources give our community its character. Conservation efforts focus on protection of these resources for the benefit of our citizens through planning and management of county-owned properties and encouragement of private property owners to exercise similar best management practices.

Exceptional Resource Area

This network plan includes designated areas of the Greenway corridor that warrant increased management attention as Exceptional Resource Areas (ERA). An ERA is a management unit on public lands which contains outstanding, particularly sensitive, or officially protected natural or cultural resources requiring special management consideration and actions to sustain them. An ERA in the Greenway corridor may be established to maintain diversity of habitat types, maintain meaningful connections between habitat areas, and/or protect a specific species or cultural feature or an assemblage of ecologically or culturally related resources. Examples include habitat for state and federally protected species, state-listed natural areas, and properties listed or eligible for listing under state or federal historic designation. An ERA may also be established for the purpose of preserving other natural or cultural features of significant scientific, educational, geologic, ecological, or

scenic value. ERAs are designed to encompass these focal resources and may include a buffer as deemed necessary for protection.

In ERAs, the primary management objective is to protect and sustain the target resources for future generations. This will often require active rather than passive management (e.g., removal of invasive species, prescribed fire, stabilization or restoration of historic structures). Public use will be allowed in ERAs to the extent that it is compatible with sustainable resource management. Depending on the sensitivity of the resource, human use in ERAs may range from highly restricted administrative and research activities to public access controlled by physical structures (e.g., boardwalks, designated trails) or programs limited in extent, season, and timing (e.g., guided walks, periodic closures). Preservation efforts focus on protecting natural resources and thus may require some restrictions on use. Conservation efforts also focus on the systematic protection of natural resources but allow controlled use and access.

Exceptional Resource Areas have outstanding, particularly sensitive, or officially protected natural or cultural resources. They can be areas with a diversity of habit types, connections between habit areas, specific species, cultural features or an assemblage of related resources that make them significant and of special value to our community. Protection may require special planning and management that includes restricted access and use.

GREENWAY NATURAL AND CULTURAL RESOURCES: OVERVIEW

Water Resources

Two rivers – the North Oconee River and the Middle Oconee River – flow through Athens- Clarke County. These rivers converge south of Athens at UGA's Whitehall Forest, combining to form the Oconee River. Wholly located in the Piedmont region of Georgia, the North Oconee River, Middle Oconee River, and Oconee River in Athens-Clarke County tend to be relatively wide, shallow, and punctuated by occasional shoals. The 100-year floodplains of the rivers and their 14 major tributaries are the core of the Greenway. The tributaries are shown on the ACCUG Watersheds Map, which is provided in Appendix A.

Major tributaries of the Oconee Rivers:

Bear Creek	Big Creek	Brooklyn Creek
Carr Creek	Cedar Creek	Hunnicutt Creek
Malcolm Branch	McNutt Creek	Sandy Creek
Shoal Creek	Tanyard Creek	Trail Creek
Turkey Creek	Walton Creek	

Not only do our rivers make our community more beautiful, but they also serve as important sources of drinking water. ACCUG Public Utilities Department (PUD) supplies drinking water for the county from the North Oconee River and the Middle Oconee River. A third source of our drinking water, Bear Creek Reservoir in Jackson County, is filled by water from the Middle Oconee River. While this drinking water meets or exceeds state and federal standards, the U. S. Environmental Protection Agency has listed the North Oconee, Middle Oconee, and some tributaries in Clarke County as "impaired waters" due to unacceptable levels of fecal coliform, as well as elevated copper and mercury pollution and low dissolved oxygen in some segments. High fecal coliform contamination may come from non-point sources such as faulty sewer lines or septic systems as well as wildlife, poultry, dog walking, or livestock operations[6].

In addition to supplying drinking water, recreation is an important function of the waterways. Fishing is permitted on the Middle Oconee, the North Oconee, and Sandy Creek (except within Sandy Creek Nature Center property). Only sport fishing (catch and release) is permitted on Lake Chapman in Sandy Creek Park. Demand is growing for recreational canoeing and kayaking on the North Oconee and Middle Oconee in the Greenway corridors. In 2014, the ACCUG Mayor and Commission passed a resolution supporting the development of water trails in the county. In June 2016, the first public launch ramp suitable for kayaking and canoes as well as fishing opened in Ben Burton Park. A second ramp was constructed in 2023 in Dudley Park, and additional water trail facilities are proposed in this plan.

[6] https://www.accgov.com/10223/Protecting-Your-Source-Water*PUD is currently conducting a study to identify specific coliform sources to mitigate this pollution. Organizations and institutions such as the Upper Oconee Watershed Network and groups at UGA also monitor water quality in local streams*

ACCUG protects these water resources and their buffers with the Environmental Areas Ordinance. The ordinance identifies and describes the types of development that may occur in floodplains. These areas are represented on the 2014 ACC Environmental Areas Map and include the following:

- The 100-year floodplain designated by the most updated FEMA National Flood Insurance Program & the National Wetlands Inventory and jurisdictional wetlands (NWI)
- State and county designated buffers as listed in ACC Ordinances Chapter 8-6 which include:
    - 100 feet around the Middle Oconee, the North Oconee, the Oconee River, and Sandy Creek
    - 150 feet on intermittent and perennial protected streams in industrial zones
    - 75 feet on other protected streams
    - 25 feet around other "state waters," including wetlands, creeks, ponds, lakes, springs, seeps, and wells
    - Groundwater recharge areas
    - Major Watershed

While all these laws and regulations are important to the Greenway, the 100-year floodplain is especially pertinent, as the 1992 ACCUG ordinance establishing the Oconee Rivers Greenway Commission identifies the 100-year floodplains of the rivers and major tributaries as the basis of the Greenway network[7]. As noted earlier in this chapter, areas found within the 100-year floodplain as well as contiguous areas with significant natural and cultural resources are designated in this plan as the "Conservation Area."

Ecological Resources

Areas within the Oconee Rivers Greenway support a thriving and diverse set of species and natural communities. The floodplains of the rivers and tributaries, and adjacent natural areas, are the largest contiguous habitats in the county. The size and connectivity of these habitats is essential to conserve wildlife and plants that require large areas of habitat to survive. They constitute a "river corridor" essential for migrating birds, movement of seeds and pollinators, fish migration, and species with life cycles that require both riverine and upland habitat. The Greenway protects habitats that are experiencing rapid loss and fragmentation due to development in the county and in the region. Tallassee Forest, for example, has

[7] FEMA's National Flood Insurance Program identifies flood hazard areas on flood insurance rate maps as "Special Flood Hazard Areas," which are defined "as the area that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year. "The Special Flood Hazard Area is often referred to as the "100- year floodplain."

the largest areas of old-growth forest, canebrakes, and intact, natural river levees on county-owned land. ACCUG recognizes the conservation value of these resources and manages them as county-owned properties so they will be protected for future generations.

Greenway resources to be conserved and protected are determined based on a variety of factors, including their location within the 100-year floodplain and in adjacent natural areas, green spaces, slopes and uplands. Other criteria for protection include the presence of species and habitats that are rare, threatened or in decline; areas that perform ecosystem services such as flood control and water filtration; and large, unfragmented habitats that can support resilient plant and animal populations. In this section, we describe the importance of considering these criteria.

Undeveloped floodplains provide a variety of benefits for property owners and the public at large. When rivers rise, protected floodplains give the river "space" to expand, without threatening homes and reducing pressure on floodplain protection structures. Vegetated floodplains reduce shoreline erosion and slow rising waters when flooding occurs. Often containing wetlands and fertile soils, floodplains also act as natural filters and thus help maintain higher water quality. Large and diverse populations of plants and animals live in floodplains. Birds, in particular, rely heavily on habitats located within floodplains for migration, nesting, and feeding.

The riparian environment of the Oconee Rivers Greenway is a significant flyway for migrating birds and important habitats for breeding birds and other animals. The diversity of habitat has in turn enabled a diversity of birds. In Athens-Clarke County there have been over 260 species identified [1], and over 125 species have been found within the county during breeding season [2] (June-July). The corridor along the Middle Oconee River from the State Botanical Garden to the confluence of the North Oconee River at Whitehall Forest is of such significance that it has been designated an Important Bird Area (IBA) by the National Audubon Society [3].

Of the over 270 species of birds found in Athens-Clarke County 235 of them have been found at locations that are directly part of the Greenway system or adjacent related locations [4]. Similarly, 115 of the breeding birds found in Athens-Clarke County were found at Greenway locations. [5] These breeding birds include the Swainson's and Prothonotary Warblers, and the seriously declining Rusty Blackbird overwinters in low-lying moist habitat found along the Greenway.

Wetlands in floodplains provide many of the nutrients for nearby aquatic environment, and some species spend their entire life cycles in these very distinct areas where the water meets the land. By

designating the river corridors and adjacent areas as Conservation Areas and identifying Exceptional Resource Areas, the county recognizes their conservation value and manages county-owned properties in a way that protects their resource value while making them available to the public.

The Georgia State Wildlife Action Plan, developed by the Georgia Natural Department of Resources, identifies High Priority Habitats, High Priority Species, and High Priority Watersheds. Many of these priorities are included in ACC. Many of Georgia's "High Priority Habitats" are in floodplains and wetlands. These habitats are threatened and rapidly disappearing from the state due to habitat destruction and fragmentation by development, invasive species, and climate change. The Georgia DNR relies on a technical team of experts to analyze statewide assessments and surveys. These criteria can be applied to Athens-Clarke County as part of a natural resources inventory and mapping, described later in the chapter. SWAP also includes plans for management. ACCUG shares Georgia DNR's goals of protecting, restoring, and maintaining these high priority habitats.

GEORGIA DNR HIGH PRIORITY HABITATS PRESENT IN THE OCONEE RIVERS GREENWAY NETWORK

Of the sixteen High Priority Habitat types in the Piedmont region, the following 13 occur in the Greenway Conservation Area *[These are described in Table 6: DNR High Priority Habitats.]*:

- Beaver Ponds
- Freshwater Marshes
- Bottomland Hardwood Forests
- Canebrakes
- Granite Outcrops
- Glades and Barrens
- Medium to Large Rivers
- Mesic Hardwood Forests
- Oak-Hickory-Pine Forest
- Rocky or Cobbly River Shoals
- Rock/Sandy River Bluffs
- Springs and Spring Runs
- Streams
- Xeric Pine Woodlands

Table 6: DNR High Priority Habitats

High Priority Habitats	Brief Description	Representative Locations along the ORG
Beaver Ponds/ Freshwater Marsh (BPFM)	These are transitory impoundments made by beavers or other still water ponding on small to medium sized streams. Such sites are dominated by sedges, rushes, grasses, and forbs, often with scattered buttonbush, red maple, swamp dogwood, and alder.	Tallassee Forest Cook's Trail Holland Youth Sports Complex
Bottomland Hardwood Forest (BLH)	Riparian deciduous forests are subject to occasional flooding. Canopy may include water oak, willow oak, green ash, sweet gum, river birch, and pignut hickory. Shrubs include hop hornbeam, musclewood, and papaw. Understory frequently occupied by Chinese privet and other invasives.	Tallassee Forest Sandy Creek Nature Center North Oconee River Park
Canebrakes (C)	Native river cane thickets occupy alluvial soils under sparse BLH canopies. Canebrakes are subject to frequent flooding and are dependent on fire or other periodic disturbance. Once common in the Southeast, past land use practices, particularly cattle grazing, row cropping, and fire suppression, have greatly reduce canebrake presence in the region and in Clarke County.	Tallassee Forest State Botanical Garden Ben Burton Park
Granite Outcrops (GO)	Fragile herb and shrub patches and wetland microhabitats occupy flat, granitic rock expanses. Outcrops are challenging environments for plants and animals due limited soils, high solar and wind exposure, and high temperature and moisture fluctuations. Consequently, the biota on outcrops often has limited distribution and special adaptations for such harsh conditions.	Rock and Shoals Outcrop

Medium to Large Rivers (MLR)	This type includes low to moderate gradient rivers, often with heavy sediment loads. Substrate is predominately sand in runs and pools and bedrock at shoals. Rivers show some meanders, and channels and sand bars frequently change with high water events. Fish include catfish, bass, bluegill, and crappie. Wildlife includes river turtles, beaver, and river otter.	North Oconee River Middle Oconee River Oconee River Major tributaries
Rocky or Cobbly River Shoals (RCS)	Shoals are relatively short, rocky, shallow reaches in rivers with high gradients and fast water. They serve as spawning areas for darters, shiners, suckers, and other fish. Wading birds frequently forage in shoals. Because of their high gradient, shoals were historically targeted for mill dam construction and many have been degraded by sedimentation from impoundments.	North Oconee River Middle Oconee River Oconee River Major tributaries
Mesic Hardwood Forests (MHF)	These are deciduous forests on fairly moist, protected sites such as north-facing slopes, ravines, and upper floodplains. Canopies are typically mixed and may include American beech, tulip tree, northern red oak, white oak, hickories, basswood, and others. Common sub-canopy trees and shrubs are bigleaf magnolia, papaw, silverbell, azalea, sweetshrub, and dogwood.	Tallassee Forest Beech Haven Sandy Creek Park State Botanical Garden
Oak-Hickory-Pine Forests (OHPF)	This type is found on intermediately moist sites and is the most common forest type in the Oconee River corridors. It is estimated that prior to European settlement this forest covered 50% to 75% of the Piedmont. Common canopy hardwoods include white, black, and southern red oaks; pignut, mockernut, and shagbark hickories; blackgum; red maple; and loblolly and shortleaf pine.	Tallassee Forest Beech Haven Sandy Creek Park

Rocky/Sandy River Bluffs (RSRB)	Rocky and sandy bluffs are limited within the Greenway corridors. This habitat is exposed, dry, and supports mixed pine-oak stands that may include shortleaf and loblolly pines; eastern red cedar; and post, blackjack, southern red, and white oaks. Understory species include mountain laurel, hop hornbeam, winged elm, sparkleberry, and yucca.	N. Oconee R. – Horseshoe Bend M. Oconee R. – Turkey Creek area
Springs and Spring Runs (SSR)	Springs and their runs within the county watersheds are typically constrained in area but critical in their hydrological and ecological roles. Springs are highly variable in their volume, seasonality, and water chemistry. Many springs in the county have been adversely affected or eliminated by increased stormwater erosion, pollution, and by groundwater withdrawal.	Tallassee Forest Beach Haven Sandy Creek Nature Center
Streams (S)	Most streams within the Greenway corridors are typical of the upper Piedmont with low to moderate gradients and gravel to silt substrates. A few streams have steeper gradients and exposed bedrock and boulder substrate.	Trail Creek Sandy Creek Nature Center Beech Haven
Xeric Pine Woodlands (XPW)	Dry, rocky ridges and other areas with shallow, exposed soils often support an open canopy of pines including loblolly, shortleaf, and Virginia pine. Bare mineral soils, low soil moisture, and occasional fire keep hardwoods from successfully occupying such sites.	Tallassee Forest Sandy Creek Park

Adapted from Georgia Department of Natural Resources website at https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/B-114.pdf

Additional unusual landscape features within the Greenway Conservation Area include rare American holly forests, intact natural riverine levees, legacy forests (i.e., forest stands over 80 years old and identified by the Legacy Forest Project), north-facing slopes that abound in wildflowers, banks of mountain laurel, and piedmont prairies. These are special resources for Clarke County and are worthy of protection.

Many species found within the Greenway are identified in the 2015 State Wildlife Action Plan (SWAP) as High Priority Species. These are listed in the Georgia Rare Elements Database, which is maintained by the Georgia DNR[8]. The 2025 SWAP Program has been complete and approved by the Georgia DNR and is currently awaiting approval by Fish and Wildlife Services. As of December 2024, 20 Species of Greatest Conservation Need (SGCM) 14 are associated with rivers, streams, wetlands, and outcrops and 11 rare plant species can be found within the Greenway Conservation Area. The 3 granite outcrop communities and associated glades at Rock and Shoal Outcrop Natural Area (RSONA), an Exceptional Resource Area described below, are also listed as threatened communities.

Athens-Clarke County has an exceptional concentration of institutions such as the Georgia Museum of Natural History, State Botanical Garden of Georgia, UGA, and individual experts and organizations that study the environment. Because of this, we are rich in natural history information. However, there is no comprehensive inventory or map of natural resources for the Conservation Area. Inventories of select species have been made at some locations. Of the county-owned properties in the Greenway, Rock and Shoals Outcrop Natural Area and Tallassee Forest are the only ones that have extensive species lists and habitat maps. In addition, inventories are included as baseline data in conservation easements, which have been an important tool in ensuring the long-term protection of land included within the Oconee Rivers Greenway. ACCUG is collaborating with UGA to locate locally important resources such as Heritage Trees and Legacy Forests[9]. However, only a few habitats have been mapped to date, and this plan proposes additional inventory compilation and GIS work as detailed in the Natural and Cultural Resources Inventory section below. To protect ecological resources, additional buffer properties may need to be acquired where appropriate.

[8] This database is a GIS inventory of rare species that are protected at the state and federal level. It also includes threatened communities and habitats that are not currently legally protected. The species list is continually updated.

[9] https://www.accgov.com/9914/Community-Tree-Study

Cultural Resources

The Greenway not only helps our community protect our environmental resources, but it also can promote the preservation of cultural resources that contribute to local pride and give our community a stronger sense of shared identity. Cultural resources such as archeological and historic sites help our citizens interpret and value Georgia's heritage. They also foster academic study and tourism, creating destinations for both residents and visitors alike.

This section addresses three components of cultural resources within the Greenway network:

- Archeological resources – both prehistoric and historic
- Historic properties – structures and landscapes listed or eligible for listing on the National Register of Historic Places
- Public Art – contemporary artistic expressions on the Greenway

Archeological resources and historic properties on public lands are subject to protective federal and state laws and regulations. ACCUG ordinances also recognize these resources as valuable community assets. The ACC Historic Preservation Commission, a citizen advisory board, is charged with promoting public understanding of archeological and historic resources and advising the mayor and ACC commission regarding preservation and management of such resources.

Similarly, the ACCUG Cultural Affairs Commission (CAC) advocates for public art and advises the mayor and commission on art in public spaces. ACC ordinances include a "1% for art" provision for major public construction projects in the county, including expansion of Greenway trails.

Archeological Resources

Lands within the Greenway corridors are largely private property and have not been systematically surveyed for prehistoric or historic archeological resources. The ACCUG Comprehensive Plan Community Assessment cites a 1991 county-wide archeological resource survey that totaled 101 sites and related that many sites were located close to waterways and ridge lines. Stone and ceramic prehistoric artifacts are commonly found in the region, and at least one projectile point collected within the Greenway network appears to date from the Paleo-Indian cultural period, 10,000 to 8,000 years ago. Artifacts from subsequent prehistoric cultures have been collected in the county, but there have been few professionally conducted surveys to give a more holistic picture of prehistoric occupation in the river corridors and adjacent lands.

Historic archeological resources related to agricultural and industrial development are common and often visible along the

Greenway. These include remnants of field terraces, bridges, dams, raceways, as waterpower was an essential resource in the history of the county. By the turn of the 20th century, there were about 40 water-powered mills and factories on the rivers and tributaries in Clarke County. These ranged from rural grist and sawmills to major industrial plants that produced textiles and other products for regional and national markets. By the end of the 20th century, every mill in the county had closed due to economic shifts in manufacturing and technical advances that reduced dependency on waterpower. In most cases, mill sites were abandoned and are being reclaimed by nature. The Heritage Trail section of the North Oconee River Greenway at Dudley Park focuses on telling this story.

The Greenway corridor also includes Civil War archeological sites. Two on public land are highlighted in this plan as "Exceptional Resources Areas" – the Cook and Brother Battery on East Broad Street at Trail Creek, and the Battle of Barber Creek site near Macon Highway in the southern part of Clarke County.

HISTORIC PROPERTIES

Athens Clarke County includes 58 properties listed on the National Register of Historic Places and other historically significant locations. Of these, seven are within the Greenway corridor and have significant contributions to the experience:

Table 7: Historic Resources within the Greenway Corridor

Listed Property	Owner	Acres	Notes
Oconee Hill Cemetery *297 Cemetery St.*	OHC Board of Trustees	82	The North Oconee River Greenway Trail traverses the cemetery within the 100-year river floodplain.
Athens Factory *279 Williams St.*	UGA	2.3	The site includes the historic mill building now housing the UGA School of Social Work (formerly O'Malley's Tavern).
Athens Manufacturing Company *585 White Circle*	Private Individuals	9.4	Historic structures that have been incorporated into the Whitehall Mill Lofts.
Athens Brick Factory at Sandy Creek Nature Center	ACCUG	n/a	Ruins of a brick factory from the early 1900s that contributed to the formation of Claypit Pond. The Brick Factory used a patented "tunnel kiln" to produce over 25,000 bricks a day, possibly the first of its kind.
Beech Haven	ACCUG	250	One of the biggest preservation projects in Athens, home to dozens of architectural structures commissioned by the Rowland Family.
Whitehall	UGA	840	Home to the Victorian Era White Hall Mansion listed on the National Register.
Chicopee	UGA	n/a	Home to the Chicopee Mill facility, constructed in 1862.

EXCEPTIONAL RESOURCE AREAS: NATURAL AND CULTURAL

Exceptional Resource Areas have outstanding, particularly sensitive, or officially protected natural or cultural resources. The following Exceptional Resource Areas have been identified in the Greenway corridors: Beech Haven, Cook and Brother Battery, Barber Creek Battle Site, Tallassee Forest, and Rock and Shoals Outcrop Natural Area. These sites are described more fully below.

Beech Haven

An extraordinary example of Arts and Crafts style of both buildings and grounds, Beech Haven was the Rowland family's bucolic retreat along the Middle Oconee River. Purchased by the family in 1910, Beech Haven is now surrounded by suburban and commercial development, but remains a secluded forested sanctuary, essentially unchanged since the 1930s. To date, ACCUG has acquired approximately 100 acres along Boulder Creek and the Middle Oconee. The acreage includes a half-mile gravel driveway with a stone vehicle bridge; beds of three landscaped ponds; artisan-made stone pagoda lanterns, benches, tables, barbecue pits, and a spring; the two story, three-bedroom Summer House; and the elaborate "Camelback Bridge," a stone footbridge modeled on Asian moon bridges. The Summer House and Camelback Bridge have recently been stabilized, through a collaborative effort with the Athens-Clarke Heritage Foundation, and most of the decorative stone features are in good condition.

Segments of walking and horse trails are still evident in the forested uplands and along the creeks, and some may be redeveloped. The Oconee River Land Trust acquired an additional 14 acres of forest land that will be donated to the county. Six High Priority Habitats, as designated by the Georgia Department of Natural Resources, are present on the property. Beech Haven is not currently open to the public because land acquisition is underway, and management capacity is limited.

Cook and Brother Battery

This circular earthen fortification was constructed during the Civil War on high ground above the Cook and Brother Armory (now the University of Georgia Chicopee Complex on East Broad Street). Sitting just off First Street at Vine, the battery was designed to support field guns to protect the armory and the northern approach to the city. The battery never saw action during the war but was part of a system of earthworks thrown up around the county by volunteer home-guard units. Although over-grown, the earthwork is largely intact, and the county has long-standing plans to manage the site for interpretation and education.

Barber Creek Battle Site

"The Battle of Barber Creek" was a skirmish that occurred on August 2, 1864, when Union Army cavalrymen approached Athens from Watkinsville. The soldiers were part of the scattered remnants of General Stoneman's unsuccessful raid east of Atlanta. Athens' Confederate home-guard volunteers had dug in on the high ground above the bridge over McNutt Creek just downstream of the confluence with Barber Creek, and they had removed the bridge's planking to hamper any attempt to cross. As the Union troops paused to assess the situation, the Confederates opened fire with two field howitzers mounted in an earthen fortification at the top of the high ground. In short order, the Union troops were dissuaded from attacking Athens and retreated toward Atlanta. Today, ACCUG owns 11.4 acres encompassing the Confederate trenches and the fortification. The stone abutments for the former McNutt Creek Bridge are still in place on adjacent private property. The battle site is not currently open to the public.

Tallassee Forest

Tallassee Forest was acquired by ACCUG with public funds and a grant from the Riverview Foundation. Oconee River Land Trust holds the conservation easement to Tallassee Forest that restricts use to low-impact, nature-based recreation and education. Remarkable for its biological diversity, Tallassee Forest's 310 acres are relatively undisturbed compared with the rest of the county. Indeed, legacy forests over 80 years old are found throughout the property. Tallassee Forest holds nine high priority habitats, as designated by the Georgia Department of Natural Resources. 65% of the forest consists of these high-priority habitats. At least 65 bird species and 58 butterflies and skippers (including three rare and three that are entirely dependent on native river cane) make their home in Tallassee Forest. In addition, 137 spring wildflowers and herbaceous plant species have been found, including 11 wetland plant species and 43 trees, vines, and shrubs. Additionally, 22 species of reptiles and amphibians and 13 families of aquatic invertebrates are also in this area. Other significant natural areas make up Tallassee Forest, including a rare American holly forest, extensive canebrakes, open bottomland forest that has not been overgrown by privet, and an intact levee. ACCUG is currently developing a management plan for Tallassee Forest. The property is not yet open to the public.

Rock and Shoals Outcrop Natural Area

Rock outcrops, such as those occurring at Rock and Shoals Outcrop Natural Area, are among the few habitats that have remained unchanged for two millennia. ACCUG and the Georgia DNR each own one of the two parcels comprising the 60-acre area. Rock and Shoals Outcrop Natural Area is home to four rare plant species. Three of these rare species are found in the ecotone, the transition area between two biomes and, in this case, between rock surface communities and the surrounding forest. The outcrop communities at the Rock and Shoals Outcrop Natural Area include rock surface/lichen, moss, herbs and temporary seeps. These transition into herbaceous plants, shrub/scrub vegetation and marginal outcrop forest. The surrounding oak-pine-hickory forest serves as a buffer. Rock outcrop communities are immediately threatened by Chinese Privet. The property is not yet open to the public.

Public Art

The Athens Cultural Affairs Commission selects public art that is proximal to any SPLOST or TSPLOST project. With the 1% requirement, SPLOST and other funding for the construction of future trail segments will include support of additional artwork. Examples of public art that have been through this process are Heron Sighting at Dudley Park, Rainbow Forest, and Trail Blossom. For more information athensculturalaffairs.org

NATURAL AND CULTURAL RESOURCE GOALS AND ACTIONS

Building upon what has been accomplished in the Greenway Program, we recommend the following resource goals and actions to be followed by the ACC Government. Setting goals and proposing actions that will protect and improve the natural and cultural resources of the Greenway is an essential part of short and long-term planning. Listed below are the goals and actions designed to ensure that the Greenway provides a natural environment that enhances quality of life through the conservation and preservation of natural resources.

Table 8: Natural and Cultural Resource Goals and Actions Pillar

Natural and Cultural Resource Goals and Actions:
<u>Goal:</u> Improve water quality and restore natural hydrological processes in the North Oconee River, Middle Oconee River, and Oconee River and their tributaries through the following actions: 1. Improve monitoring and enforcement of water quality standards; work with state and federal agencies to address EPA's "impaired waters" in the basin 2. Continue efforts to improve the ACCUG sewerage system to avoid accidental discharges and leakage; Explore alternatives to gravity flow sewer lines in Sandy Creek and Shoal Creek watersheds and when repairing and improving all systems 3. Improve control of stormwater runoff from developed areas to reduce erosion and pollution and to increase ground water recharge 4. To the extent practical, remove man-made obstacles to flows on the Greenway rivers and tributaries; Collaborate with dam operators and other water managers to create more ecologically sustainable flows in the basin 5. Improve monitoring and enforcement of the ACCUG Environmental Areas Ordinance; work with landowners to meet stream and river buffer requirements and restore eroded or damaged sites within the Greenway corridor 6. Promote public awareness of water resource issues and programs and encourage volunteer efforts to protect and improve water ways, partner with non-government organizations in these efforts 7. Promote low-impact and safe river-based recreation; provide public launch sites and fishing and observation points along the rivers 8. Support and advocate for implementation of the ACCUG Sustainability Plan that is currently under development that relates to water quality

Goal: Conserve native species, habitats, and ecological processes on public land and encourage private landowners to conserve resources through the following actions:

1. Facilitate natural resource inventory and monitoring efforts in the Greenway by working with the GDNR and academic and non-profit organizations; collaborate to inventory and map:
    a. Georgia DNR High Priority Habitats
    b. Georgia DNR High Priority Species
    c. Significant Natural Areas
    d. Unique species and communities
    e. Other habitats and communities
    f. ACCUG Legacy Forests
2. Establish Greenway "Exceptional Resource Areas" where appropriate
3. Improve and maintain natural corridor connections among high quality habitats within the Greenway network
4. Prevent wildfires and, where appropriate, conduct prescribed burning to restore more natural fire regimes for native vegetation
5. Support programs and volunteer efforts to remove and control invasive plant and animal species within the Greenway; promote public awareness of invasive issues
6. Control types and levels of recreation on public lands in the corridor to avoid unacceptable impacts on resources and to provide quality experiences for Greenway users
7. Determine if additional properties or easements within the Greenway are appropriate for acquisition through the ACCUG Land Conservation Program
8. Develop master plans and ecological stewardship plans for Tallassee Forest and Beech Haven. Partner with Georgia DNR to develop such plans for Rock and Shoals Outcrop Natural Area

Goal: Conserve cultural resources through the following actions:

1. Conduct reconnaissance archeological surveys prior to construction of trails and other Greenway amenities to avoid or mitigate adverse impacts on cultural resources
2. Survey other Greenway public lands for archeological and historic resources to establish a cultural resources data inventory, as funding is available
3. Review archeological resources and historic structures on Greenway public lands to determine if additional sites are eligible for nomination to the National Register of Historic Places
4. Collaborate with Georgia DNR, UGA, and non-profit organizations in managing cultural resources in the Greenway network
5. Collaborate with ACCUG Cultural Affairs Commission in identifying appropriate locations for public art works along the Greenway network
6. Compile and archive written, visual, and oral histories of the Greenway

Chapter 4: Existing & Proposed Trail Network

The Oconee Rivers Greenway – a network of trails, water trails, and green space – has many different components. Maps are a valuable way to illustrate these many elements as well provide a framework for current and future planning. The maps included in this chapter illustrate the Greenway Network Plan for Athens-Clarke County – they include both existing and planned trails, conservation areas, exceptional resource areas, and greenspace. These maps have been updated and approved alongside each of the 2009, 2011, 2016, and 2025 updates to the Greenway Network Plan to include new data[10].

The network of trails proposed is a vision that is long-term in nature. Buildout will take place over decades. This chapter outlines the network concept and identifies the highest priorities to be considered for the current planning cycle.

The alignment of these trails was determined with the use of the following maps and data sources which appear throughout the document: Cultural and historic resources, Neighborhoods, Commercial nodes, Community resources, Transportation infrastructure including bike lanes, sidewalks, bus stops, and roads, ACCUG Environmental Areas 2014 Map, ACCUG Environmental Areas Ordinance, Federal and state environmental designations, and previously approved Greenway network data[11].

The chapter then provides an overview of the types of trails that make up the Greenway trail network – Greenway trails, water trails, and rails/trails. It then explains how the trail map classifies the trails identified. It concludes by identifying high priority project areas for trail development, ranking each of the trails, connections, and improvements listed.

[10] All maps and data can be found online at https://www.accgov.com/9814/Maps

[11] All data regarding ordinances regarding the Oconee River Greenway can be found within the ACC Gov Municipal Code at https://library.municode.com/ga/athens-clarke_county/codes/code_of_ordinances?nodeId=PTIIICOOR_TIT8PL_CH8-6PRENAR

THE GREENWAY TRAIL NETWORK: ITS TRAILS AND CONTEXT

While many in the community understand the Greenway as a network of trails, these trails reside within the overall Greenway boundary that includes the 100-year floodplain and other protected areas such as jurisdictional wetlands, riparian buffer areas, significant groundwater recharge areas, water supply watersheds, and water supply intake areas. Conservation Areas and Exceptional Resource Areas adjacent to the Greenway are also critical components of the Greenway. This section focuses on the types of trails that make up the Greenway trail network. The proposed trails take into consideration the fundamental conservation and preservation concepts that drove the establishment of the Greenway.

TRAIL CATEGORIES: GREENWAY TRAILS, WATER TRAILS, AND RAILS/TRAILS

Three types of trails weave their way through Athens-Clarke County:

Greenway Trails

Connecting the primary Greenway Trails and other trail networks within Athens-Clarke County to create a contiguous, multi-use trail with limited street-based connections is a major goal of this plan. In addition to these primary multi-use trails, neighborhood connections are crucial for encouraging connectivity and providing opportunities for non- motorized transportation choices. Connectivity is a key factor in a successful well-used Greenway trail system. Some sensitive areas may require foot trails rather than multiuse trails. This will be decided on a project-by-project basis. With the advent of Athens in Motion, the Greenway Network Plan focuses primarily on connecting trails to the river corridors and tributaries found within the area of Athens-Clarke County; all street-based trails fall under jurisdiction of Athens in Motion.

Water Trails

Water trails on rivers and lakes provide recreational opportunities for the public to explore, enjoy, and protect their local rivers. The Middle Oconee, North Oconee and Oconee River provide opportunities for the creation of a water trail system that folds into the larger Upper Oconee Water Trail (UOWT). This water trail will include 98 river miles on the North Oconee and Middle Oconee rivers which converge to create the Oconee River, and then continue into Lake Oconee, formed by Wallace Dam. There are currently six existing public access points on the UOWT and a portion of the trail flows alongside the Oconee River Greenway and the Oconee National Forest. The scenic UOWT passes along beginner Class I and II shoals, beautiful rocky bluffs, historic textile mill ruins, wide sandbars perfect for a picnic, and miles of secluded forest. A plethora of wildlife reside here, such as kingfisher, river otter, osprey, blue heron,

bald eagle, and soft-shell turtle. The UOWT is in the development phase spearheaded by the Georgia River Network, Upper Oconee Watershed Network, UGA Office of Sustainability, and other community partners.

A river access point constructed in Ben Burton Park serves as the initial launch point for the Middle Oconee portion of the Upper Oconee Water Trail. The Greenway Network Plan identifies additional river access points that will allow for the eventual completion of a user-friendly water trail system in Athens-Clarke County and other counties within the watershed.

Rails/Trails

Rails/trails is a nationwide effort to transform unused rail corridors into trails. Rails/trails similarly accommodate trails, though within and adjacent to the right-of-way of active rail corridors. Two railway corridors within Athens-Clarke County – the Firefly Trail and the Athens Line – are projects that provide the opportunity for viable multi-use trail connections with the Greenway trail network. The Firefly Trail is a 39- mile rails/trails project that will connect Athens with Union Point via the old Georgia Railroad Corridor. Along with federal grants, SPLOST 2005, 2011, and 2015 dollars have been dedicated to the construction of the portion of the Firefly Trail located in Athens-Clarke County. It will provide a vital east-west, multi-use trail connection between downtown Athens and the city of Winterville, creating increased connectivity in the eastern portion of the county. The Athens Line is a 38-mile railroad - potential rails/trails corridor - that runs from Athens to Madison, part of a longer route between Macon and Lula owned by Norfolk & Southern and leased to short-line operator Great Walton Railroad. As regular rail uses along this segment ceased in 2015 with the decommissioning of the UGA coal plant, the corridor has the potential to provide a minimally sloped north-south linkage from Downtown Athens to the Georgia State Botanical Garden and beyond.

THE GREENWAY NETWORK CONNECTIVITY MAP

The Greenway Network Connectivity map shows the basic circulation and connectivity of the Greenway trails, water trails, and rails/trails that are part of the Greenway system as well as connecting multi-use trail systems. This map and enlargements of this map can be accessed online as PDF's though the Athens-Clarke County Unified Government's website through this acc.gov link.

EXISTING TRAIL NETWORK AND FUNDED PROJECTS

The Oconee Rivers Greenway is currently comprised of many trails, connections, parks, and open spaces. Taking an inventory of these existing connections is an important step to developing future corridors and connections. The Greenway trail system currently has 13.2 miles of multi-use trail, 1.7 miles of right-of-way-based trail, and 3 miles of multi-use trail on UGA's campus.

The current Greenway trail is fairly fragmented, transitioning from a foot trail to a multi-use trail and then to street-based trails before returning to a multi-use trail. Additionally, three separate trails – Milledge Extension Trail, Trail Creek Trail, and Pulaski Creek Trail – lack safe connections to the main Greenway corridor.

Funded trail projects within the Greenway corridor will connect new neighborhoods to the larger Greenway trail network. These funded sections will connect Oak/Oconee Street Bridge to Research Drive with four miles of new multi-use trail. These projects will connect students to campus, neighborhoods to new recreation opportunities, and allow for people using alternative transportation choices to have a safer and more pleasant experience when commuting downtown or to campus.

NEXT STEPS: HIGH PRIORITY PROJECT AREAS

Increasing public access to an unbroken network of trails is a primary goal of this update of the Greenway Network Plan. We identified the following three high priority corridors to reflect the goal of connectivity and identified 14 high priority projects within these areas.

1. **North Oconee River Greenway**: The North Oconee River corridor priority will focus on improving trails and connections and filling gaps in connectivity along the existing portions of the Greenway. In addition to this, connections to neighborhoods and downtown areas will be strengthened.
2. **Middle Oconee River Greenway**: The Middle Oconee River corridor priority will focus on connecting Ben Burton Park to Beech Haven, an Exceptional Resource Area.
3. **Normaltown Connector:** Normaltown is rich with residential and commercial areas and the proposed trail would provide a very much-needed connection between the North and Middle Oconee rivers, passing through the center of Athens. The current focus of this corridor will include linking neighborhoods to each other and to the Greenway paths that are also listed as high priority.

***Table 9: High Priority Trails* - Trails listed below are all considered high priority.** Tiers represent the recommendations for funding and completion.

Trail Name	Corridor	Distance	2025 Estimated Cost	Funding Status	Number of Bridges
Tier 1: First Tier trail projects focus on improving trails and connections while also improving or filling gaps in connectivity along the existing portions of the Greenway					
Cook's Trail	North Oconee River	4.16 miles	> $8 million	Proposed TSPLOST 2026	Multiple
Oak/Oconee Bridge Underpass	North Oconee River	.15 miles	$1 million	Funded TSPLOST 2018	1
Riverside Trail – MLK Parkway	North Oconee River	.66 miles	$4 million	Funded	1
Tallassee Road Connector	Middle Oconee River	3.31 miles	$5 million	Partially Funded SPLOST 2020	2
Tier 2: Second Tier projects continue to improve connections while extending the network to other greenspaces and neighborhoods					
Pulaski Creek Connector – South	North Oconee River	.21 miles	$1 million	Not Yet Funded	Boardwalk
Pulaski Creek Connector – North	North Oconee River	.41 miles	$2.5 million	Not Yet Funded	1
Nature Center Loop – West	North Oconee River	2.93 miles	> $7 million	Not Yet Funded	Multiple
Nature Center Loop – East	North Oconee River	1.8 miles	> $7 million	Not Yet Funded	Multiple
Tier 3: Third Tier projects focus on connecting with new corridors beyond the established North Oconee River Greenway					
Ben Burton to Beech Haven	Middle Oconee River	1.37 miles	$6 million	Proposed TSPLOST 2026	2
Firefly Connector at 78/10 interchange	Firefly Trail	.17 miles	$3 million	Not Yet Funded	1
Normaltown Connector – Ben Burton to Bishop	Normaltown Connector	2.23 miles	$2 million	Not Yet Funded	0
Normaltown Connector – Bishop to Boulevard	Normaltown Connector	2.05 miles	$2 million	Not Yet Funded	0
Normaltown Connector – Boulevard to North Oconee River Greenway	Normaltown Connector	1.95 miles	$6 million	Not Yet Funded	2

In Table 9, the specific trails that create connectivity in the major corridors are listed. They are categorized into three tiers in according to function. The overarching rationale for categorizing proposed trails is whether they result in extending, improving, or creating infill for the current Greenway.

TIER 1 TRAILS: *First Tier trail projects focus on improving trails and connections while also improving or filling gaps in connectivity along the existing portions of the Greenway.*

Cook's Trail

Cook's Trail, envisioned by ORGC's first chairman, forestry professor Walt Cook, is the foundation trail of the Greenway multi-use trail system. The 4.1-mile natural surface trail traverses a great deal of wetlands as it connects Sandy Creek Nature Center to Sandy Creek Park. The trail and associated boardwalks have consistently deteriorated over the years, in part due to lack of maintenance.

Oak / Oconee Bridge Underpass

This in-progress infill connection is a crucial trail segment for improving Greenway safety and user experience. The Georgia Department of Transportation and ACCUG staff are working together to improve the connection between Heritage Trail and Easley's Mill Trail. This will provide a safe, direct linkage for pedestrians and cyclists, and eliminate pedestrian road crossings along Oak Street and Oconee Street.

Riverside Trail – MLK Parkway

This trail proposal adds an alternative route to the North Oconee River's Willow Street Greenway segment between College Avenue and North Avenue. The new route will take advantage of the county-owned properties on the east bank of the North Oconee River. This trail will extend from the MLK Trailhead parking lot and pass under College Avenue's bridge, follow along the riverbank, and then connect to the North Avenue Bridge. This project will require either the reconfiguration of the North Avenue Bridge or the addition of a pedestrian bridge, similar to Heritage Trail's bridge at E. Broad St. This will allow safer passage for Greenway users across the North Oconee River.

Tallassee Road Connector

The Tallassee Road Connector is a planned street-based connection that will run the length of Tallassee Road from the intersection of Mitchell Bridge to Burney-Harris Lyons Middle School. While this section of trail will not provide the typical riverine experience associated with the Greenway, the Tallassee Road Connector will establish pedestrian and cyclist connectivity between Tallassee Forest and Ben Burton Park.

TIER 2 TRAILS: *Second Tier projects continue to improve connections while extending the network to other greenspaces and neighborhoods.*

Pulaski Creek Connector – South

This proposed connection will link the Pulaski Creek Trail with downtown Athens via a short trail segment that follows alongside Denny Towers. When combined with the Northern Pulaski Creek connector, this project will create a dedicated Greenway experience from the North Oconee River Greenway to downtown Athens.

Pulaski Creek Trail – North

The proposed Pulaski Creek Connector intends to provide a vital connection between the existing Pulaski Creek Trail and the North Oconee River Greenway. The route passes under Norfolk Southern Railroad's bridge, crosses Cleveland Avenue, passes behind ACCUG's recycling center, CHARM, and crosses the North Oconee River, connecting to the existing North Oconee River Greenway. This connection hearkens back to the SPLOST 2005 Pulaski Creek Trail project that did not fully come to fruition.

Nature Center Loop – West

This trail segment addition will take advantage of connecting to the North Oconee River Greenway just south of Sandy Creek Nature Center and provides a vital connection between the North Oconee River Greenway and Holland Youth Sports Complex. Additionally, it provides beneficial connections to new and proposed development along Newton Bridge Road.

Nature Center Loop – East

This trail segment addition will take advantage of connecting from the parking lot at Sandy Creek Nature Center, running along the border of the managed forest project, to the northern segment of the Nature Center Loop – West. Once both segments of the Nature Center Loop have been constructed, a nearly 5-mile loop experience of Greenway trail will be a real gem. The Nature Center Loop provides a great opportunity to combine educational, scenic, aerobic, and recreational interests.

TIER 3 TRAILS: *Third Tier projects focus on connecting with new corridors beyond the established North Oconee River Greenway.*

Ben Burton to Beech Haven

This planned segment of multi-use trail will serve as the catalyst for the Middle Oconee Greenway. Ben Burton Park is a popular destination for paddlers, dog walkers, picnickers, and families seeking outdoor recreation. Beech Haven, currently in acquisition by ACCUG, is a beautiful property with an historic Arts and Crafts home, gardens, and unique stonework throughout the site. As Beech Haven opens for public access, the Greenway trail will provide opportunities for park users to travel between these two treasures bordering on the Middle Oconee.

Firefly Connector at 78/10 Interchange

This connection provides an important link at the nexus of the Firefly Trail, North Oconee River Greenway Trail and the Park and Ride projects. The project is challenging because it crosses Lexington Road, and it may require a pedestrian bridge that crosses over this section of highway.

Normaltown Connector – Ben Burton Park to Bishop Park

This proposed cross-county connection will provide a vital link between the North and Middle Oconee River Greenways and connect the Normaltown community with the Greenway Network. This section of the connector begins with Greenway improvements connecting Ben Burton Park to the existing sidewalk along Mitchell Bridge Road. This section of sidewalk, which connects to Oglethorpe Avenue. would then be adopted as Greenway. From here, a connection will be made to Bishop Park and Beech Haven through a variety of street connections and multi-use trails wherever possible.

Normaltown Connector – Bishop Park to Boulevard

This section of the Normaltown Connector runs as a street-based connection and a multiuse path whenever possible. It connects on Oglethorpe Avenue. past the health science campus. Passing through Normaltown, on street parking along the corridor could be replaced with a street-based Greenway path, reducing the number of cars backing into traffic and creating safer traffic conditions through this corridor. This trail flows north across from King Avenue. and splits in two directions from there. One connection head east and connects Chase Street Elementary to Boulevard with a street-based connection. The other trail heads up Hiwassee and connects over to the wooded area behind the Pound Street Complex. This area has some social mountain bike trails passing through it, and those could be incorporated into a Greenway design. This section of the Normaltown Connector is also prime for stream restoration projects.

Normaltown Connector – Boulevard to North Oconee River Greenway

This last section of the Normaltown Connector completes the connection between Ben Burton Park and the North Oconee River Greenway. Tying in to the Boulevard Greenway, this section starts at the Pound Street Complex and crosses over the railroad with a pedestrian bridge. It then splits east and west. Heading east, Greenway users can connect over to Chase Street for future Greenway expansion, while west, users head under the GA State Route 10 Loop before heading northeast parallel to the Loop along the existing dirt mountain bike trails. From here, the trail crosses Barber Street, follows the stream corridor under the railroad, and connects over the North Oconee River to the existing Greenway.

Chapter 5: Strategies for Implementation

The Greenway Network Plan provides an opportunity to demonstrate the community's commitment to the Greenway's overall goals. In this chapter, the action steps necessary to implement this plan are established. Specifically, this chapter contains action steps, project prioritization and phasing, cost estimates, funding support considerations, and methods for Greenway acquisition.

ACTION STEPS – IMMEDIATE

This plan of action is designed to guide the development of the Greenway and trail network. Some immediate actions will be taken to quickly and efficiently begin the implementation, these actions are:

1. ***ACCUG Mayor and Commission Adopt this Plan***

Once this plan is approved by the mayor and ACC Commission, it will be integrated in other related government planning efforts (Comprehensive Development Plan, Bike/Pedestrian Plan, etc.).

2. ***Increase full-time Greenway Staff***

Develop a position that is responsible for championing Greenway projects, partnering to develop programs including educational and volunteer efforts, and serving as a liaison with members of the public, the ORGC, and partner agencies.

3. ***Market the Greenway Network***

Providing print and online materials that describe the Greenway network will help ensure that its purpose is understood as well as increase public awareness about the Greenway. This marketing will include creating a specific Greenway and trail website providing up-to-date information about Greenway facilities, development, programming and operations.

4. ***Secure and Commit Funding***

Immediately pursuing priority projects is vital to expanding the Greenway trail network and management programs. Elected officials, appointed committees, and private entities must come together to fund these projects. TSPLOST and SPLOST are key programs for the implementation of Greenway proposals and other funding sources will also be pursued.

5. ***Begin work on High Priority Projects***

High Priority Trail Projects are logical extensions of the existing and currently funded Greenway trail system. Completing Greenway trail that are already funded through TSPLOST and SPLOST referendums will build momentum and focus attention on high priority areas.

ACTION STEPS – LONG TERM

The plan includes goals and actions that are complex in nature and will take years to complete. The table below provides a list of the Greenway Network Plan's Goals and Actions with the expanded goals explained following this:

Table 10: Natural and Cultural Resource Goals and Actions Pillar

Natural and Cultural Resource Goals and Actions: Resource Protection The Greenway is designed to provide a natural environment that enhances quality of life through the conservation and preservation of natural resources.
<u>Goal:</u> Improve water quality and restore natural hydrological processes in the North Oconee River, Middle Oconee River, and Oconee River and their tributaries through the following actions: 9. Improve monitoring and enforcement of water quality standards; work with state and federal agencies to address EPA's "impaired waters" in the basin 10. Continue efforts to improve the ACCUG sewerage system to avoid accidental discharges and leakage; Explore alternatives to gravity flow sewer lines in Sandy Creek and Shoal Creek watersheds and when repairing and improving all systems 11. Improve control of stormwater runoff from developed areas to reduce erosion and pollution and to increase ground water recharge 12. To the extent practical, remove man-made obstacles to flows on the Greenway rivers and tributaries; Collaborate with dam operators and other water managers to create more ecologically sustainable flows in the basin 13. Improve monitoring and enforcement of the ACCUG Environmental Areas Ordinance; work with landowners to meet stream and river buffer requirements and restore eroded or damaged sites within the Greenway corridor 14. Promote public awareness of water resource issues and programs and encourage volunteer efforts to protect and improve water ways, partner with non-government organizations in these efforts 15. Promote low-impact and safe river-based recreation; provide public launch sites and fishing and observation points along the rivers 16. Support and advocate for implementation of the ACCUG Sustainability Plan that is currently under development that relates to water quality

Goal: Conserve native species, habitats, and ecological processes on public land and encourage private landowners to conserve resources through the following actions:

9. Facilitate natural resource inventory and monitoring efforts in the Greenway by working with the GDNR and academic and non-profit organizations; collaborate to inventory and map:
    a. Georgia DNR High Priority Habitats
    b. Georgia DNR High Priority Species
    c. Significant Natural Areas
    d. Unique species and communities
    e. Other habitats and communities
    f. ACCUG Legacy Forests
10. Establish Greenway "Exceptional Resource Areas" where appropriate
11. Improve and maintain natural corridor connections among high quality habitats within the Greenway network
12. Prevent wildfires and, where appropriate, conduct prescribed burning to restore more natural fire regimes for native vegetation
13. Support programs and volunteer efforts to remove and control invasive plant and animal species within the Greenway; promote public awareness of invasive issues
14. Control types and levels of recreation on public lands in the corridor to avoid unacceptable impacts on resources and to provide quality experiences for Greenway users
15. Determine if additional properties or easements within the Greenway are appropriate for acquisition through the ACCUG Land Conservation Program
16. Develop master plans and ecological stewardship plans for Tallassee Forest and Beech Haven. Partner with Georgia DNR to develop such plans for Rock and Shoals Outcrop Natural Area

Goal: Conserve cultural resources through the following actions:

7. Conduct reconnaissance archeological surveys prior to construction of trails and other Greenway amenities to avoid or mitigate adverse impacts on cultural resources
8. Survey other Greenway public lands for archeological and historic resources to establish a cultural resources data inventory, as funding is available
9. Review archeological resources and historic structures on Greenway public lands to determine if additional sites are eligible for nomination to the National Register of Historic Places
10. Collaborate with Georgia DNR, UGA, and non-profit organizations in managing cultural resources in the Greenway network
11. Collaborate with ACCUG Cultural Affairs Commission in identifying appropriate locations for public art works along the Greenway network
12. Compile and archive written, visual, and oral histories of the Greenway

Table 11: Educational Goals and Actions Pillar

Educational Goals and Actions: The Greenway provides educational opportunities for citizens to participate in both self-directed and interpretative programs that contribute to an understanding of the natural environment, cultural heritage, and conservation efforts.
Goal: Provide opportunities for Greenway users to learn and serve in volunteer capacities while experiencing our community's natural and cultural resources 1. Assist ACCUG departments and community organizations by providing educational opportunities related to the value of greenspace, natural resources, management of native and invasive species, clean water, recycling and waste management
Goal: Create comprehensive education programming that provides both self-directed and group- led learning opportunities in natural and cultural resources 1. Encourage programming staff of ACCUG to integrate the Greenway into their calendar of activities and educational programming
Goal: Enhance and create links between environmental and natural science education and educational institutions such as pre-schools, schools, technical schools, colleges, and the University of Georgia 1. Provide a forum for creating links among environmental and cultural education efforts and support such efforts
Goal: Educate the community about the importance of environmental stewardship and sustainability 1. Collaborate with ACCUG to document the long history of Greenway planning in the community, as well as the history of the ORGC. 2. Continue to partner with ACCUG staff, ACCUG Boards and Commissions, and partner organizations, such as Sandy Creek Nature Center, to support their educational programming through sponsoring workshops, conferences, etc.

Table 12: Health and Wellbeing Goals and Actions Pillar

Health and Wellbeing Goals and Actions: *Healthy communities have safe and accessible places for their citizens to enjoy the outdoors and exercise. Designed to provide our citizens with health and wellbeing opportunities, the Greenway connects people to the natural environment while also encouraging them to be physically active*
Goal: Promote the crucial role that nature plays in contributing to physical, spiritual, and mental health 1. Partner with local civic organizations and healthcare providers, such as the Athens Area Chamber of Commerce, Athens Downtown Development Authority, Piedmont Athens Medical Center, St. Mary's Hospital, the Athens Nurses Clinic, Mercy Clinic and the Athens Neighborhood Health Centers to develop programs and resources on the Greenway
Goal: Provide ways to empower people to take positive actions to support a healthy lifestyle 1. Encourage programming staff of ACCUG to integrate the Greenway into their calendar of activities for health and wellbeing 2. Work with K-12 and college educators to integrate the principles of outdoor recreation into their curriculums

Table 13: Recreation Goals and Actions

Recreation Goals and Actions: *In addition to its health benefits, outdoor recreation contributes to a community's social cohesion and quality of life. The Greenway provides our community with the opportunity to experience and enjoy the outdoors in a natural environment.*
Goal: Provide walking, jogging, hiking, cycling, paddling, fishing, and other outdoor recreational opportunities 1. Create both self-directed and group-led recreational opportunities such as geocaching, nature walks, full moon walks, 5K races, bicycle safety courses and paddle excursions 2. Increase public awareness about the Greenway by promotion through maps, signage, and other paper and electronic media materials
Goal: Provide for observation, study, and enjoyment of the natural environment and cultural history 1. Provide opportunities for recreational and art programming
Goal: Provide an aesthetically pleasing, safe, and enjoyable environment 1. Greenway design will enhance community interaction and provide opportunities for gathering spaces 2. Create an ACCUG trail patrol team to maintain a safe environment 3. Encourage volunteer groups to assist Greenway users and monitor trail conditions 4. Provide adequate restroom facilities along the Greenway
Goal: Integrate accessibility while protecting natural resources so that all people have the opportunity to enjoy the outdoors 1. Determine risk management at Greenway locations, prepare and install appropriate safety signage and warning systems 2. Partner with ACCUG Police Department, Fire Department and the Swift Water Rescue team to prepare a water trail safety procedure. Assure Greenway facilities and programs comply with the Americans with Disabilities Act

Table 14: Transportation Goals and Actions Pillar

Transportation Goals and Actions: *Active transportation corridors that support walking and bicycling provide much-needed options to driving. The Greenway provides corridors and facilities that promote the use of non-motorized transportation, thus alleviating traffic congestion and pollution, while giving our citizens more transportation options.*
Goal: Provide for the design and construction of transportation facilities that connect existing and/or future modes of transportation such as trails, complete streets, sidewalk systems, transit systems, and water trails. 1. Where appropriate, develop trail surfaces in phases and allow for aggregate surface to be utilized first in order to expedite trail length 2. Build trails to facilitate convenient access between neighborhoods and nearby destinations 3. Foster collaboration among the Georgia Department of Transportation, ACC Leisure Services, ACC Transportation and Public Works, ACC Public Utilities, Athens in Motion, the Firefly Traill, and the ORGC 4. Incorporate the connection, maintenance, and enhancement of greenspace in new development adjacent to the Greenway 5. Pursue private partners to leverage funds to construct additional sections of the Greenway trails and facilities 6. Evaluate and use alternative means of reserving lands required for green space 7. Apply for grants and other state and federal funding resources to leverage available funds
Goal: Educate the community about transportation choices, needs, and benefits 1. Provide opportunities for programming regarding transportation choices
Goal: Provide connectivity to major community facilities and assets such as parks, neighborhoods, points of interest, schools, recreational facilities, and community centers using a phased development strategy to complete the Greenway trail network 1. Connect Sandy Creek Park to the Georgia State Botanical Garden 2. Develop the Middle Oconee River Greenway 3. Develop the Normaltown Connector

PRIORITIZATION OF PHASING TRAIL PROJECTS

Priority Trails were discussed in Chapter 4 and should be completed according to the tiered system of *Table 9: High Priority Trails*[12]. The Priority Trails are as follows:

Tier 1 Trails:

- Cook's Trail
- Oak / Oconee Bridge Underpass
- Riverside Trail – MLK Parkway
- Tallassee Road Connector

Tier 2 Trails:

- Pulaski Creek Connector – South
- Pulaski Creek Trail – North
- Nature Center Loop – West
- Nature Center Loop – East

Tier 3 Trails:

- Ben Burton to Beech Haven
- Firefly Connector at 78/10 Interchange
- Normaltown Connector – Ben Burton Park to Bishop Park
- Normaltown Connector – Bishop Park to Boulevard
- Normaltown Connector – Boulevard to North Oconee River Greenway

Projects that are currently funded through the SPLOST program should be prioritized and accelerated toward completion. Please see the ACCUG FY15 Report on Projects Funded with SPLOST Revenues on the Athens-Clarke County Unified Government Website. https://www.accgov.com/DocumentCenter/View/100523/FY25-Approved-Operating--Capital-Budget?bidId=

TRAIL FACILITY COST ESTIMATES

The cost of Greenway trail construction can fluctuate a great deal from year to year, but a general rule for estimating the cost of constructing the Greenway trail is one million dollars per mile. For any bridge that crosses a river, costs are estimated at approximately two million dollars. Bridges crossing smaller creeks may cost anywhere from $75,000 to $500,000, depending on the span and the engineering required. Boardwalks typically cost $600 per linear foot. All of these estimated costs include project design and engineering fees.

[12] Table 9: High Priority Trails can be found in Chapter 4: Existing and Proposed Trail Network on Page 36

PROGRAM RECOMMENDATIONS

Marketing and Promotion

Another way to provide community outreach related to the Greenway is through marketing and promotion. The Greenway Network Coordinator will be tasked with producing information flyers, kiosk information, trail guides, pamphlets, etc., that promote and educate citizens about the Greenway. All signage and kiosks in the Greenway network will be kept up-to-date and relevant. The coordinator should also take advantage of social networking, print media, and radio to promote the Greenway network and related programming and events.

Community Stewardship

The Greenway Network is too large and far-reaching to be maintained, managed, and cared for by staff alone. For the Greenway to be successful, community buy-in is essential. The community must perceive the Greenway Network as a resource worth caring for and protecting for future generations. In short, the community must become stewards of the Greenway.

The first step in creating a community stewardship program is engaging the community with the Greenway. Keeping the Greenway well-maintained and safe makes the Greenway attractive and draws users. A well-run volunteer program is a cornerstone of retaining community involvement in the Greenway. The Greenway Network Coordinator should be tasked with operating a comprehensive volunteer program that includes beautification, educational programming, habitat restoration, and trail maintenance activities. A volunteer program would also create opportunities for the community to be involved in the Greenway, and doubles as a way to provide extra manpower for operations and maintenance.

Special Events

The Greenway Network Plan has three goals – recreation, health and wellbeing, and education – that can be accomplished through public events on the Greenway and programming related to it. Public events can serve several purposes:

1. ***Educate*** the public as to the existence of a Greenway and share future goals and objectives for its development and operation
2. ***Encourage*** residents to exercise and use alternative forms of transportation
3. ***Promote*** goodwill and community spirit through events, bringing people together
4. ***Generate*** revenue from Greenway events that could help offset costs associated with facility development and operation

ACCUG should work with its local partners from both private and public sectors to sponsor, host, and/or operate events within the Greenway environment.

FUNDING SUPPORT CONSIDERATIONS[13]

Identify Sources of Funding

Funding a Greenway project is a complex effort, with resources coming from different organizations and supporters. Traditional fundraising methods include the establishment of annual membership campaigns and Buy-a-Foot (or Mile) Campaigns. Project merchandising can also be a continuous source of income, as can programs that offer trail tours for a small fee. Greenway projects can also solicit foundation and advocacy group donations and money from government programs at the earlier stages of construction. A number of grant programs and alternative funding sources are described below.

Special Purpose Local Option Sales Tax (SPLOST)

SPLOST is an optional one percent county sales tax used to fund capital outlay projects proposed by the county government and participating qualified municipal governments. The tax is imposed when the county board of commissioners calls a local referendum which is then passed by the voters within that county. The tax is collected on items subject to the state sales and use tax within the county, including the sale of motor fuels. The SPLOST is also imposed on the sale of food and beverages, which are not subject to the state sales tax. Counties and municipalities may fund any capital project if it is owned or operated by a county, qualified municipality or a local authority.

SPLOST funding is often applied to Greenway project. For example, the SPLOST Greenway Fund in Chatham County provided a match for a state grant of $400,000 for the Coastal Georgia Greenway project, a 141-mile trail through six coastal Georgia counties.

[13] *This section is greatly referenced from 2010 The Georgia Greenway Guidebook: A Tool for Governments, Communities, and Individuals, a guidebook created by law students in the UGA Land Use Clinic. See Clay, Christine; Nelson, Kathleen; and Biszko, Katie, "The Georgia Greenway Guidebook: A Tool for Governments, Communities, and Individuals" (2010). Land Use Clinic. Paper 22. http://digitalcommons.law.uga.edu/landuse/22.*

Transportation Special Purpose Local Option Sales Tax (TSPLOST)

Georgia law allows local communities to use Transportation Special Purpose Local Option Sales Tax (TSPLOST) proceeds for transportation purposes if approved by voters in a referendum. General guidelines for projects are below, see Official Code of Georgia (O.C.G.A) 48-8-260(5) for more details.

- 'Transportation purposes' includes roads, bridges, public transit, rails, airports, buses, and all the accompanying infrastructure and services necessary to provide access to these facilities.
- Roads, streets, sidewalks, bicycle paths, and bridge purposes such as:
- Acquisition of rights of way
- Construction
- Renovation and improvement, including resurfacing
- Relocation of utilities
- Improvement of surface-water drainage
- Patching, leveling, milling, widening, shoulder preparation, culvert repair, and other repairs necessary for their preservation
- Stormwater and drainage capital outlay projects, in conjunction with transportation projects

These transportation projects would otherwise be paid for with General Fund and property tax revenues. Governments cannot use TSPLOST funds to pay for operating expenses such as personnel salaries or ongoing expenses.

Georgia Recreational Trails Program

Funding for establishing Greenways can be acquired in the form of grants from the Georgia Recreational Trails Program (RTP). The RTP is federally authorized under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The United States Congress appropriates funding, and the Federal Highway Administration manages the RTP, but it is administered at the state level. In Georgia, staff of the Department of Natural Resources, Division of Parks, Recreation and Historic Sites administers the program. The purpose of the RTP "is to provide and maintain recreational trails and trail-related facilities identified in, or that further a specific goal of, the Statewide Comprehensive Outdoor Recreation Plan (SCORP)."

RTP grants are generally awarded on an annual basis after the following process is complete:

1. Parties submit applications
2. RTP staff rank the applications
3. The Trails and Greenways Advisory Committee reviews them
4. The Director of the Division of Parks, Recreation and Historic Sites reviews them
5. The Federal Highway Administration approves them

There are several important restrictions to keep in mind when applying for an RTP grant. The program generally awards a minimum grant of $25,000, and a maximum award of $100,000. Additionally, the program is a reimbursement program, which requires the Greenway organizers to pay 100% of the cost of an item or service before submitting a request for reimbursement for 80% of eligible costs. Donations of private funds and services at fair market value can be counted toward the remaining 20% match. If the project sponsor is a federal agency, the agency may provide its funding as the match; however, the sum of the grant plus the federal agency's funds is not permitted to exceed 95% of total cost. The partial reimbursement scheme is intended to ensure that state, local, and community sponsors are committed to the project. Additional guidelines for reimbursement procedures and restrictions are updated on an annual basis, and can be found within the program manual and application available for download from the Georgia DNR's website.

Any Greenway project that receives grant funding from the RTP must comply with State and federal laws and executive orders.

The PATH Foundation

The PATH Foundation has been building an extensive network of off-road trails in and around Atlanta for walkers, runners, cyclists and skaters for more than 30 years. This system of diverse Greenways help to preserve the ecology of Georgia and create opportunities for families to enjoy nature and traverse Metro Atlanta safely. The PATH Foundation has developed more than 325 miles of trails across the state of Georgia and continues to grow with the creation of new trials and extension of existing trails.

The PATH Foundation has made significant strides towards building both Atlanta and Georgia a network of trails that are easily accessible by people of all backgrounds and locations.

Bipartisan Infrastructure Law (BIL)

The Bipartisan Infrastructure Law (BIL)[14], officially known as the Infrastructure Investment and Jobs Act, was signed into law by President Joe Biden in November 2021, allocating $1.2 trillion to modernize U.S. infrastructure. The law focuses on key areas such as transportation, broadband internet, water systems, energy, and climate resilience. For government projects, the BIL serves as a crucial funding source, enabling federal, state, and local agencies to apply for grants and access dedicated funding streams. It supports the modernization of public infrastructure, promotes workforce development through job training, and encourages public-private partnerships to carry out large-scale initiatives.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant

The Rebuilding American Infrastructure with Sustainability and Equity (RAISE)[15] program is a competitive grant initiative by the U.S. Department of Transportation that funds complex, multimodal road, rail, transit, and port projects that are often difficult to support through traditional programs. Aimed at advancing national infrastructure goals, the program received a major boost under the Bipartisan Infrastructure Law, which allocated $7.5 billion in supplemental funding over five years—up from $1 billion in 2021. This grant, also commonly known as the BUILD Grant, is another opportunity for the Greenway Network to acquire additional government funding to promote safe biking and walking paths throughout our community.

Georgia Department of Transportation Enhancement (TE) Grants

The Georgia Department of Transportation administers a number of local funding programs to fund projects that ease pressure on roadways, minimize emissions, and enhance Georgia's roadsides. The "TE Program" awards federal funding grants to local and state public agencies and universities for "community-oriented projects that provide connectivity, beautify neighborhoods and highlight culture and heritage."

The TE Program was established by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and enhanced by the Transportation Equity Act for the 21st Century (TEA-21) in 1998. The program was "established as a means to enrich the traveling experience of motorists, bicyclists, and pedestrians through enhancements to our transportation system." Projects receive federal funding in order to provide beautification and transportation

[14] https://www.investopedia.com/here-s-what-s-in-the-usd1-trillion-infrastructure-bill-passed-by-the-senate-5196817

[15] https://www.railstotrails.org/policy/funding/raise/

improvements to "historical, natural, and scenic areas." The Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requires that each project receiving a grant must improve transportation and fall into one of 12 "eligible categories," several of which could be applied to Greenway development. Eligible categories that could be particularly fitting for a Greenway project include:

- Provision of facilities for pedestrians and bicycles;
- Acquisition of scenic easements and scenic or historic sites including historic battle fields;
- Landscaping and other scenic beautification; and,
- Preservation of abandoned railway corridors including the conversion and use for pedestrian or bicycle trails.

Georgia Outdoor Stewardship Program

Passed by voters in 2018, the Georgia Outdoor Stewardship Program (GOSP) aims to provide a dedicated funding mechanism to support parks and trails and protect and acquire lands critical to wildlife. The Georgia Outdoor Stewardship Program became active as of July 1, 2019. Applicants must apply for Conserve Georgia Grants and Loans through the Georgia Outdoor Stewardship Program, eligible projects include state parks and trails that support local and regional significance, provide stewardship of conservation land, or acquire critical areas for the provision or protection of natural resource-based recreation.

The Georgia Outdoor Stewardship Program award varies based on application and size of project.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) program works in partnership with federal, state and local efforts to protect land in our national parks, national wildlife refuges, national forests, national trails, and other public lands; to preserve working forests and ranchlands; to support state and local parks and playgrounds; to preserve battlefields and other historic and cultural sites; and to provide the tools that communities need to meet their diverse conservation and recreation needs.

Every year, $900 million in royalties paid by energy companies drilling for oil and gas on the Outer Continental Shelf (OCS) are put into this fund. The money is intended to protect national parks, areas around rivers and lakes, coastal areas, national forests, and national wildlife refuges from development, and to provide matching grants for state and local parks and recreation projects. Over the years, LWCF has also grown and evolved to include grants to protect working forests, city parks, wildlife habitat, critical drinking

water supplies and disappearing battlefields, as well as increased use of easements.

The Land and Water Conservation Fund award varies based on application and size of project.

Alliance for Biking and Walking – Advocacy Advance Grants

For Greenway projects that incorporate walking and biking trails, Advocacy Advance Grants from the Alliance for Biking and Walking are another great resource. The Alliance is an advocacy group dedicated to "improving and increasing biking and walking in local communities, states, and provinces." Advocacy Advance Grants are awarded to state and local bicycle and pedestrian advocacy organizations to "develop, transform, and provide innovative strategies in their communities."

The Alliance for Biking & Walking provided approximately $225,000 in grants to member organizations in 2010. The grants are for one year, and are awarded twice a year. Through a partnership with the League of American Bicyclists, the Alliance also provides technical assistance, coaching, and training to supplement the grants.

Alliance grants come in two types: Startup/ Capacity Building Grants and Innovation Grants. Startup Grants award $5,000 to $30,000 of matching funds to leverage private and public investment and launch campaigns for biking and walking projects. Startup Grants are for organizational development, staff hiring, and organization needs. Innovation Grants help existing organizations increase biking and walking and improve safety.

The Conservation Alliance

The Conservation Alliance is an organization dedicated to protecting "threatened wild places throughout North America for their habitat and recreational values." The Conservation Alliance is a group of outdoor industry companies that makes grants to registered 501(c)(3) organizations. Grants are awarded to grassroots citizen projects, rather than general education or government-sponsored efforts. Before applying for funding, an organization must first be nominated by a Conservation Alliance member company. As of right now, there are no Georgia based members.

Develop Government Partnerships

After trail organizers have developed a vision statement and identified potential resources, developing partnerships in both the public and private sectors that can help get the project underway will be necessary. Some governmental agencies have a regulatory function and will need to be consulted, while other agencies may be involved only peripherally. Some may provide support and funding. In most cases, trail organizers will meet with local officials at the municipal and county levels first and involve state and federal agencies as the project progresses. When approaching local governments, representatives of the Greenway organization should be ready to explain how Greenways have been an asset to communities that have embraced them. A good strategy may be to present a successful Greenway and show the benefits of the Greenway to that community.

Evaluation and Monitoring

ACCUG, in collaboration with the ORGC, should work with local advocacy organizations to establish performance measures to benchmark progress towards achieving the goals of this plan. These measures should be included in future plan updates.

Baseline data should be collected as soon as the performance measures are established. When establishing performance measures, ACCUG should consider utilizing data that can be collected cost-effectively and be reported at regular intervals. Data collected over time will increase the quality of the information.

GREENWAY ACQUISITION STRATEGIES

A number of methods should be pursued for the overall implementation of the Greenway and trail network. Because the majority of Greenways and trails exist in an off-road environment, the acquisition of land or easements becomes a critical part of the implementation process. The recommended alignment of Greenways in this plan follows publicly-owned land where possible, but in most cases, an acquisition strategy will have to be implemented in areas of privately-owned land.

Working with Landowners

The most important aspect of the land acquisition process is fostering a successful relationship with landowners and the community. The key to this relationship is communicating effectively and working with the landowners. Open communication between trail proponents and landowners about the trail building plan, potential effects, and prospective benefits is essential. As discussed above, a mission statement or letter, informing the community of the project's goals, should be provided to landowners. This letter should be followed up by individual contact or meetings with landowners to provide information. Being clear and straightforward with this information and being available to answer questions and concerns from the beginning are key to building a successful relationship with the community. For landowners to feel comfortable and willing to participate in a trail building project, they should be informed about the legal effects of any easement or other property interest taken in the corridor. Additionally, property owners will likely have concerns about future property values, trespass and damage to their property, crime, landowner liability, and privacy, which should also be discussed.

For example, many landowners may initially have concerns that Greenways attract crime, vandalism, and other disturbances. In fact, there is very little evidence to support the fear that Greenways cause crime or will produce disturbances affecting private landowners. Another fear is that the Greenway will negatively affect property values. In fact, Greenways tend to positively affect property values, making properties nearby easier to market.

To adequately address landowner anxiety and build a positive foundation for the trail building project, these concerns should be addressed early in the process. Some helpful information dissemination tools include providing a booklet and website explaining owner options and incentives. The more informed and aware the community is of the trail building project and its goals, the more support the project is likely to garner.

Once trail proponents have met individually with private landowners an open community meeting is a useful tool

for introducing the Greenway to the entire community, as well as to measure public response and rally support. At that meeting maps and vision documents representing the proposed trail maybe introduced to the community.

Tax Incentives for Landowners

In Georgia, landowners may donate the portion of their property that forms a Greenway corridor to the municipality, relieving them of their tax obligations, and qualifying them for tax deductions. The landowner could also qualify for a Conservation Use Assessment. Should the real property be devoted to a bona fide conservation use, it will be assessed at forty percent of its current value, reducing the property tax burden of to the landowner.

Alternatively, landowners could negotiate a bargain sale with the municipality for the portion of the corridor running through their land. A bargain sale is the sale of property at less than its fair market value (FMV). The landowner would be eligible for tax benefits for the difference between the FMV and the bargain price sale.

Finally, landowners could place a conservation easement on the corridor preserving conservation values and the Right-of-Way (ROW) for the Greenway. A conservation easement is a legally binding agreement in which the landowner agrees to permanent restrictions on the way the property is used. Unlike some temporary conservation covenants, conservation easements never need renewal. A conservation easement may provide the landowner with federal and state tax benefits, as well as property tax revaluation. Landowners can claim the value of their donation on their federal tax returns. Georgia state tax credits must be certified by DNR, which requires submittal of a completed application form with the recorded easement along with evidence of clear title. If approved the landowner may attach the Certification Letter to their Georgia state tax return. Additionally, landowners would be entitled to a property tax revaluation after completing a conservation easement.

Rails/Trails

The Rails/Trails system was enacted on March 28, 1983 as part of the National Trails System Act ("NTS Act") Amendments of 1983. The purpose of the NTS Act is "to provide for the ever-increasing outdoor recreation needs of an expanding population and . . . to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the nation." The NTS Act authorizes the use of discontinued railroad ROW as recreational trails until such a time when railroad transportation is reactivated.

If a local government or private organization agrees to maintain the ROW for possible future railroad use, including assuming liability and paying taxes, it may

use the corridor on an interim basis as a trail. The NTS Act expressly provides that the interim use shall not be treated as an abandonment of the use of the ROW for railroad purposes. Rather, when a railroad ROW is converted to a public trail a new easement is created. Therefore, the NTS Act retains the property as a possible future rail line, i.e., "railbanking," while allowing it to be used in the interim as a recreational trail. To date, every court that has reviewed the NTS Act has considered it to be constitutional and has found that the preemption of state law reversionary rights are a valid exercise of the Congress' power under the commerce clause, and not an impermissible impairment of contracts.

In order for a railroad to discontinue service over an out-of-service track, the trail proponent must file for one of several forms of "abandonment" proceedings provided by the Surface Transportation Board (STB). The STB regulates the construction, operation, and abandonment of most railroad lines in the United States. The STB is also responsible for railroad applications for abandonment.

Great opportunity exists to demonstrate our community's commitment to the Greenway's overall goals. While Greenway trail development has been slow, it has been so because of limited funding. Funding sources outside of SPLOST and federal grants must be explored for this reason. The plan's ultimate goal is to support ACCUG's continuing commitment to develop and maintain the Greenway. To do so, we must pursue new partnerships, meaningfully engage with stakeholders, consider creative funding sources, and work together to fully implement this plan for both current users and generations to come.

PARTNERS OF THE GREENWAY

BikeAthens

BikeAthens is a local organization run by Athens natives that works to build equity in transportation through affordable and accessible means. BikeAthens believes that safe and accessible transportation to all is a critical component of social and economic mobility. Their mission aims to promote these practices and the growth of cycling, walking, and transit solutions to the various transportation needs in Athens, GA.

Athens in Motion

The active community of both Athens natives and University of Georgia students has created a city in growing need and want of an active lifestyle through numerous opportunities and new developments. To encourage this development, Athens in Motion, the Athens-Clarke County Bicycle and Pedestrian Master Plan, identifies clear strategies for improving active transportation in the area. The Plan presents a network of safe and connected infrastructure, providing access to key destinations and encouraging active transportation throughout Athens-Clarke County. The Plan serves as a guiding document for future implementation of local bicycle and pedestrian projects that can transition from planned facilities into design and construction. Athens in Motion frames the current state of active transportation within Athens-Clarke County in order to identify clear leverage points from planning efforts and existing infrastructure. It also summarizes public perception of active travel within Athens-Clarke County; public-identified assets and challenges ensure that the proposed plan best serves citizens. Building off existing conditions and public desires, the proposed network serves to improve overall mobility by connecting people to important destinations.

Firefly Trail Inc.

The Firefly Trail, Inc. Is a 501(c)(3) Georgia non-profit incorporated, community-driven rail to trail project currently in progress. When completed, the Trail will stretch 39 miles between Union Point, GA and Athens, GA – connecting three counties and seven towns with a paved path intended for walking, running, cycling, and rolling. This trail celebrated the historic corridor of the Georgia Railroad Athens Branch, the state's first charted railroad line.

Oconee Rivers Audubon Society

The Oconee Rivers Audubon Society[16] is a community of individuals united by a shared passion for birds and nature. With over 350 members of varying ages and birding experience, the Oconee Rivers Audubon Society promotes conservation and advocates for environmental issues. They exchange information through regular newsletters, meetings, and public presentations on topics related to birds and nature. The organization also leads local conservation efforts, including projects like installing nest boxes for native species.

Upper Oconee Watershed Network

The Upper Oconee Watershed Network (UOWN)[17] was formed in January 2000 in response to citizen concern about the region's rapid growth and its impact to local streams and rivers. UOWN members actively engage in various advocacy, education and stream monitoring initiatives in effort to raise community awareness about local water resource issues and to facilitate a cooperative spirit for long-term watershed protection. The Upper Oconee Watershed Network is dedicated to protecting water resources and improving stream health in our watershed through community-based advocacy, monitoring, education, and recreation.

Friends of the Greenway

The Friends of the Greenway is a locally organized group that focuses on the preservation, cleanliness, and involvement of the Oconee River Greenway Network. The group supports and spreads awareness about ongoing events on the Greenway in conjunction with the ACC Leisure Services team, acting as a liaison between the community and the local government.

[16] https://www.oconeeriversaudubon.org/about

[17] https://uown.org/UOWN-Wordpress/

Chapter 6: Design Guidelines

Trail design requires considering a variety of factors, including safety, connectivity, and environmental sensitivity. The design guidelines included in this chapter establish a range of criteria for the different trail types found on and planned for the Greenway. Trail design criteria vary according to the expected volume of users, type of users, type of users, type of trail, and location of the trail. In some instances, for example, trail design should accommodate a wide range of user activities – from walking to bicycling, pushing a baby stroller or a wheelchair. In other cases, foot trails designed exclusively for hiking may be the most appropriate design choice. Trail design may also reflect areas representing varying degrees of physical challenge. For these reasons, the guidelines contained in this chapter have been developed to provide a standardized guide for Greenway development while allowing for flexibility and diversity of trail use.

In addition to the recommended design standards described in the following section, this plan also supports ACCUG efforts to establish and review design guidelines on a regular basis. Much of this section references standards developed by ACCUG that are not exclusive to the Greenway such as outdoor furnishings, signage, and landscape materials.

This plan recognizes the importance of incorporating ACCUG standards in this way in order to streamline maintenance and minimize operational costs.

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TRAILHEADS

A trailhead is where a trail begins. Amenities such as restrooms, informational guides, and parking associated with a trailhead often depends upon where a trail beginning is located. The following designates the different kinds of trailheads that should be associated with the Greenway.

Table 15: Trailhead Types

Park Trailhead	A trailhead that is located at a park will provide parking spaces, restrooms, structures, picnicking, and areas for play.
Major Trailhead	A major trailhead provides parking spaces, restrooms, and a picnic area.
Minor Trailhead	A minor trailhead provides parking spaces.
Neighborhood Trailhead	A neighborhood trailhead will have two granite columns to indicate the start of the trail.

Figure 6.1: Park Trailhead

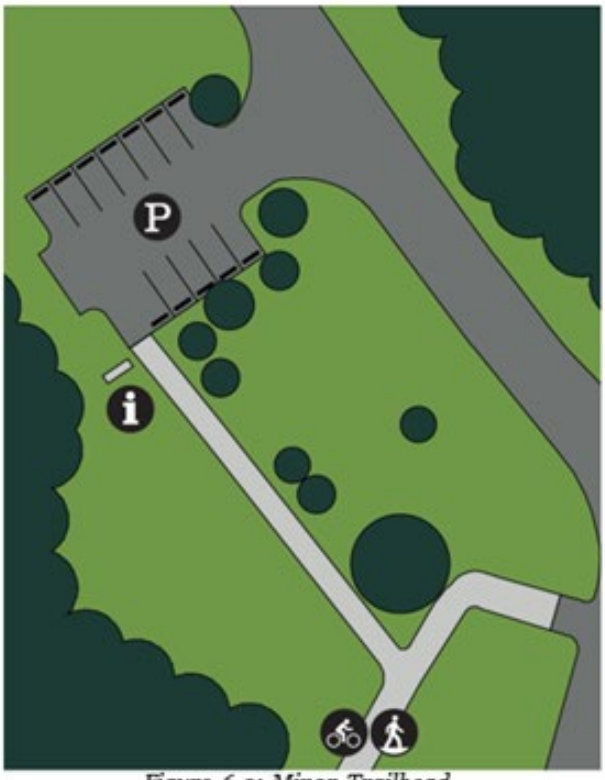


Figure 6.3: Minor Trailhead

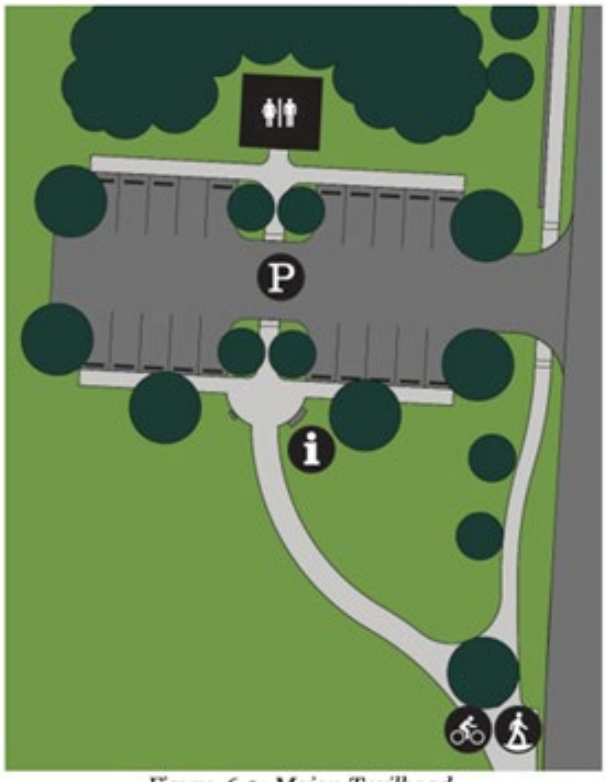


Figure 6.2: Major Trailhead

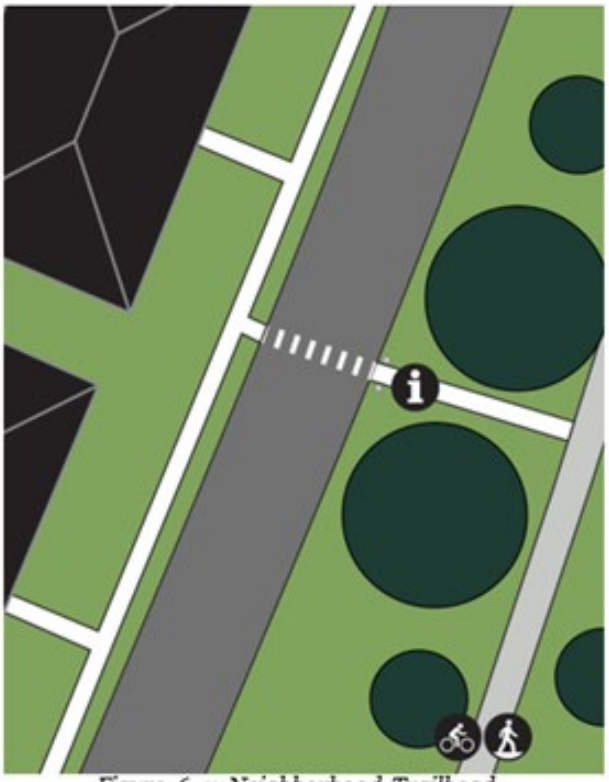


Figure 6.4: Neighborhood Trailhead

Paved Walking Trail | Bike Trail | Restrooms | Parking | Information | Picnic Shelter | Playground

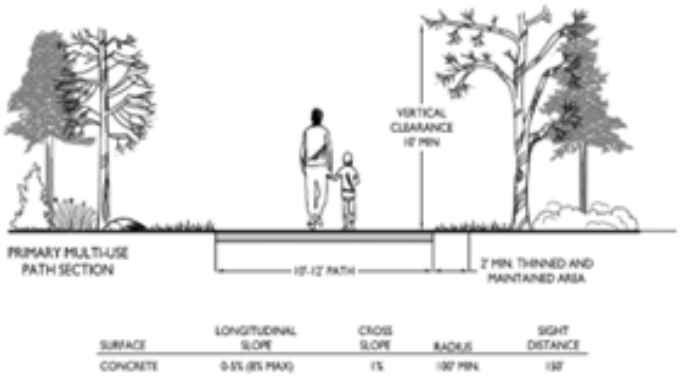
TRAIL AND TRAIL TYPES

Increasing public access to an unbroken network of trails is a primary goal of this plan, with the ultimate goal of developing a comprehensive Greenway Network for our community. Trail design and construction should not only connect trail segments, but it should also create connectivity to major community facilities and assets such as parks, neighborhoods, points of interest, and activity centers. The trail system should also provide viable alternatives to motorized forms of transportation as well as provide recreational opportunities. As noted above, trail design choices may vary depending on location, user needs, and feasibility. The plan recommends several trail types, serving a variety of users, and allowing for differing levels of activity. On a broader level, as noted in Chapter 4, three kinds of trails thread their way through The Greenway: Greenway trails, water trails, and rails/ trails. The designations below refer to the types of trails that may be found within these broader descriptions.

Table 16: Trail Types

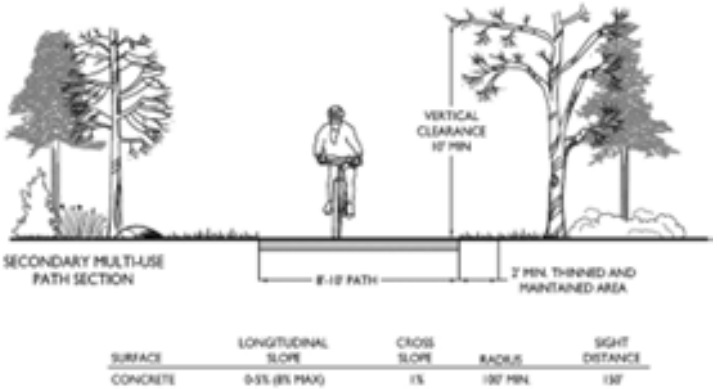
Multi-Use Trail	A trail that permits more than one user group at a time (pedestrians such as joggers, hikers, or dog walkers, and non-motorized vehicles, such as cyclists, mountain bicyclists, and scooters).
Street-Based Connection	A shared-use trail that is either an expanded sidewalk or a separate trail that runs along the right-of-way.
Rail-to-Trail	A multi-use public trail created on or along an inactive rail corridor.
Rail-*with*-Trail	A multi-use trail that is located directly adjacent or near an active railroad or fixed route transit corridor.
Foot-trail	A trail over which the public has a right-of-way on foot only. Wheelchairs are also permitted, although this may not be practical due to surface or slope.

Figures 1-8: Trail Design Cross-Sections



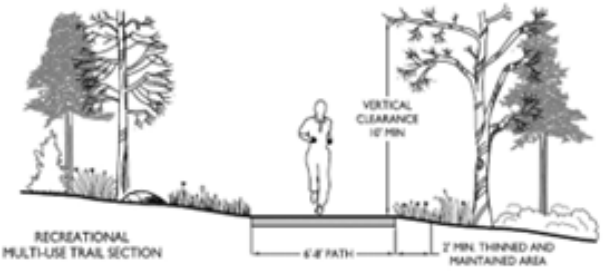
SURFACE	LONGITUDINAL SLOPE	CROSS SLOPE	RADIUS	SIGHT DISTANCE
CONCRETE	0-5% (8% MAX)	1%	100' MIN.	130'

Figure 6.5: Multi-Use – Primary



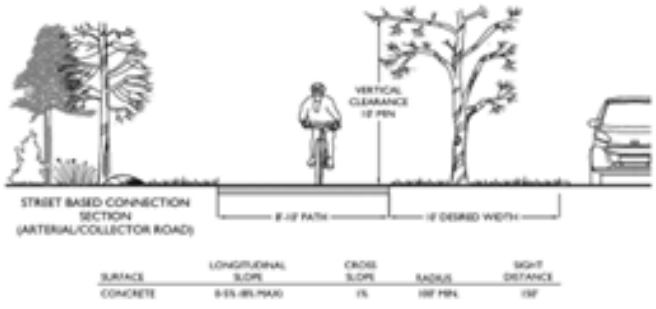
SURFACE	LONGITUDINAL SLOPE	CROSS SLOPE	RADIUS	SIGHT DISTANCE
CONCRETE	0-5% (8% MAX)	1%	100' MIN.	130'

Figure 6.6: Multi-Use – Secondary



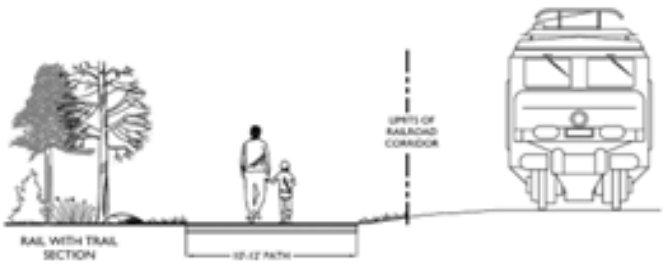
SURFACE	LONGITUDINAL SLOPE	CROSS SLOPE	RADIUS	SIGHT DISTANCE
CONCRETE, ASPHALT, RESIN.	0-5% MAX.	2%	10' MIN.	50'-100'

Figure 6.7: Multi-Use – Recreational



SURFACE	LONGITUDINAL SLOPE	CROSS SLOPE	RADIUS	SIGHT DISTANCE
CONCRETE	0-5% (8% MAX)	1%	100' MIN.	130'

Figure 6.8: Street Based Connection – Arterial/Collector



SURFACE	LONGITUDINAL SLOPE	CROSS SLOPE	RADIUS	SIGHT DISTANCE
CONCRETE	0-5% (8% MAX)	1%	100' MIN.	130'

Figure 6.11: Rail with Trail

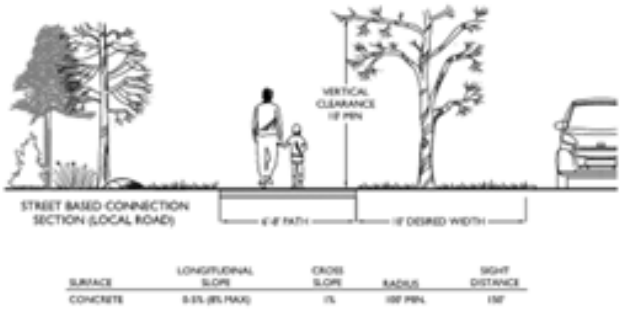


Figure 6.9: Street Based Connection – Local

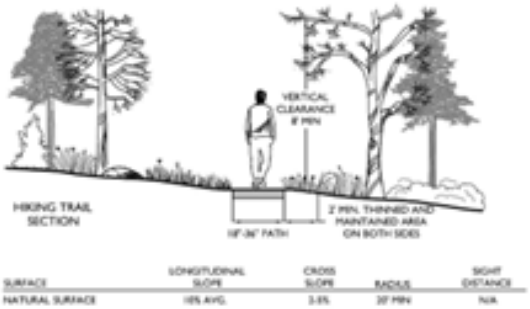


Figure 6.12: Foot Trail

Figure 6.10: Rail to Trail

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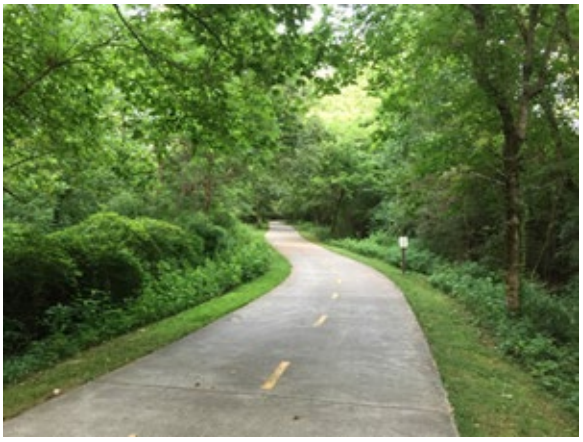
SURFACE TYPES

Several surface options are available for trail use. Factors such as terrain, proximity to the 100-year floodplain, climate, expected usage, cost, availability, and maintenance determine trail surface choices. For example, aggregate materials are low cost, but require more ongoing maintenance, while hard surface materials have higher upfront costs, with lower maintenance costs over the lifespan of the trail.

Concrete



Concrete trails are impervious surfaces that last longer than other surface types, require less maintenance, and have less erodibility than other surfaces. Connector trails and street-based trails are typically 8 to 10 feet wide while primary corridors are typically 10 to 12 feet.

Pervious Concrete

Pervious concrete trails allow water to pass through the surface and absorb into the earth. They have less erodibility than other pervious surfaces but require more maintenance than impervious concrete trails. An equal thickness of pervious concrete is not as strong as the same thickness of impervious concrete; therefore, pervious concrete must be thicker to achieve the same strength as impervious concrete. Additionally, the techniques required to pour pervious concrete differ from those used for impervious concrete, and this limits the pool of contractors experienced in this work.

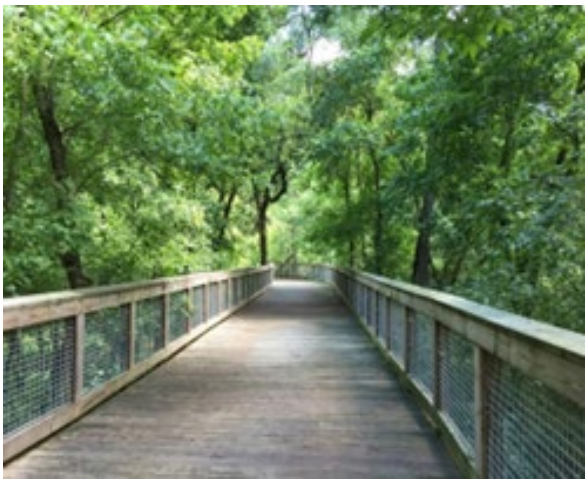
Pervious paving requires monthly visual inspections and regular maintenance to ensure that it is free of debris, continues to drain during storms, and is free of sediment. The use of pervious paving in the 100-year floodplain is impractical because sedimentation during flood events eliminates any permeability and

can damage the trail unless it is intensively maintained. Pervious concrete also may be used in parking stalls to reduce the amount of impervious surface created by additional parking, although the requirements and challenges noted above also apply to this application. Additionally, because pervious pavement has not been extensively used in this region, its long-term life-cycle costs (30-50 year) are not fully known.

Roller-Compacted Concrete

Roller-Compacted Concrete (RCC) is an economical, fast construction candidate for many pavement applications, including multiuse trails. It is made of the same ingredients as typical concrete but has different mixture proportions. RCC has a higher percentage of fine aggregates, which allows for tight packing and consolidation. It is also mixed to be a drier consistency. This dry consistency makes it stiff enough to be compacted by vibratory rollers, while still being wet enough to permit adequate mixing and distribution. Therefore, RCC is constructed without joins, forms, finishing, dowels, or steel reinforcing. This makes RCC simple, fast, and economical. Wet sawn expansion joints should be cut every 20' to minimize cracking.

Boardwalk



Boardwalks should be installed in ecologically sensitive locations, areas with unstable soils, or areas where environmental factors make other construction methods unfeasible. These areas can include soft (alluvial) soils, wetlands, areas with rare plants, granite outcrops, and areas with extensive or excessive terrain changes where accessibility has been determined to be a critical factor. Generally, boardwalks should be used minimally due to their ongoing life-cycle cost and the impact of maintenance closures on trail usage.

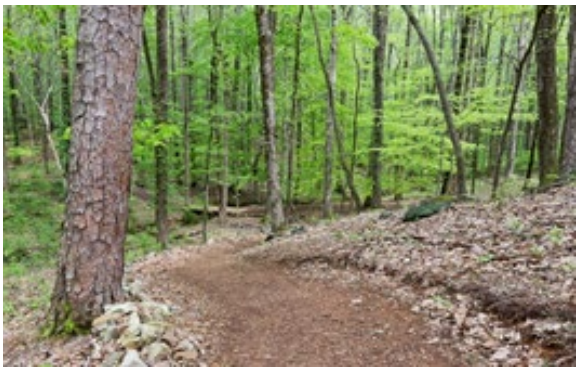
For paved trails, boardwalks should match the width of the trail that they connect to, and for natural surface trails, they should

be 4 to 6 feet wide. Trails with multiple access points may have boardwalks as narrow as 4 feet, but where access is limited for maintenance and emergency response purposes, boardwalks and bridges must be at least six feet wide.

Aggregate

Aggregate trails consist of pervious surfaces that are inexpensive to install and wear better than natural surfacing under heavy trail use but can have higher maintenance costs. One major downside of aggregate surfacing is the likelihood of erosion. For this reason, the slope (grade) of the trail should be considered carefully to promote tread stability. When aggregate is used as a trail surface, longitudinal slopes should be less than 5%. Cross slopes should be less than 2%[18]. Surface water runoff can be managed by using swales, drainage basins, and culverts, and should be sized accurately to ensure reduced cross flow.

Natural Surface[19]



Natural trail surfacing is the least expensive and most environmentally friendly trail solution but can have issues of erosion and require extensive and ongoing maintenance, especially if use by cyclists or other non-foot traffic is planned. Because the trail is built with native, on-site materials, there is very little material cost. The top layer of organic material is removed from the trail tread and dispersed. A backslope is then dug to facilitate "sheet flow" – or surface water diversion – across the tread surface and off the trail when it rains. Then, the tread is dug, out sloped, and compacted.3 Drainage features such as rolling grade dips are constructed to further drain water off the tread. When built sustainably,

[18] *According to the National Park Service, Cross slope is a consideration when constructing trail across the face of a hill (sidehill trail). Some degree of cross slope, or out slope, is desirable so that water moving down the face of the hill continues across the trail. A 5% cross slope on a 24-inch tread amounts to a drop of 1.2 inches. See https://www.nps.gov/noco/learn/management/upload/NCT_CH4. pdf.*

[19] *(Kennesaw Mountain 24 Gun Trail: The hike, 2009)*

natural surface trails are more resistant to erosion and heavy use.

Pavers

Pavers are either impervious or pervious surfacing material that offer increased aesthetic value. Pavers, however, have high installation and maintenance costs. Pavers can be unseated by earth movement as well as plant growth. On the other hand, pavers can also provide a removable surface in locations where accessing a utility or other buried item may be necessary. This surfacing should be limited to areas of Greenway that are either adjacent to commercial development, creating a riverfront aesthetic, or near areas of high traffic in urbanized areas.

Asphalt[20]

Asphalt trails are impervious surfaces constructed of aggregate fused with a waste product from the oil refining process. Asphalt surfaces have a lower upfront installation cost than concrete, but their anticipated lifespan is approximately 33% lower than concrete. Asphalt requires more maintenance than concrete, but less maintenance than aggregate surfaces. Asphalt works well in areas with higher running traffic due to the softer impact on runners' legs. Asphalt trails also have less erodibility than aggregate and natural surface trails.

In terms of increasing the lifespan of asphalt trails, proper drainage is one of the most relevant factors. Efficient removal of excess water from the trail is imperative because standing water can cause trail closures, maintenance issues, and heaving during the freeze/thaw cycle in

[20] *("Biking: Henry Hudson Trail – Marlboro to Freehold", 2012)*

winter months. Surface water runoff is managed on asphalt trails by properly out sloping the trail and using swales, drainage basins, and culverts. Because of the impact of freeze/thaw cycles and subsequent necessity for good drainage, use of asphalt within the 100-year floodplain is not recommended.

CROSSINGS

Crossings are often one of the most important elements of trail design. In most cases they are trail meeting points involving a wide variety of users. Both water and street crossings occur throughout the Greenway – and both present challenges for planners. Bridges, for example, may increase access for users but are expensive. In the meantime, some users may desire a more naturalistic experience. Street crossings inevitably result in a junction involving trail users and motorized traffic. Safety for the wide variety of trail users needing to utilize the crossing is a primary concern. This section discusses water and street crossings.

Water Crossings:

Elevated Boardwalk

Elevated boardwalks are used in locations where the trail crosses a cattail area, deep marsh, or other water body that has little fluctuation in its level and flow.

River and Stream[21]

Single-span bridges should serve as crossings for rivers or streams more than 10 feet wide. Such bridges ordinarily require the construction of cribs or fills on each bank, two to three solid timber or laminated support beams, a board deck, etc. When a river or stream is too wide for a single-span bridge, crossing design becomes more complicated. A multi-span bridge with at least one support structure in the middle of the stream, or a suspension bridge, may be necessary. Bridge design requires that each location is carefully evaluated. Bridge clearance must provide for passage of high water, ice, and debris. A location that is narrow and has a high bank or ledge to anchor the ends of the bridge is best. A major investment, bridges often require engineering consultation, especially those greater than 25 feet in length or a 5-foot clearance above the water level.

[21] *("Gouverneur Riverwalk Pedestrian Bridge", n.d.)*

Street Crossings

Trails crossing public streets require careful consideration to protect public safety and separate users from busy traffic. The following types of design choices are recommended for the Greenway's street crossings.

Pedestrian Bridge[22]

Pedestrian bridges work best when the topography allows for a structure without ramps, such as an overpass over a sunken highway.

Underpasses[23]

Underpasses allow for the uninterrupted flow of bicycle and pedestrian movement separate from vehicle traffic. Underpasses work best when designed to feel open and accessible. Overpasses and underpasses must accommodate all persons, as required by the Americans with Disabilities Act. Extensive ramping accommodates wheelchairs and bicyclists, but results in long crossing distances and steep slopes that discourage use.

Signalized Intersection[24]

Traffic signals are an important way to make intersections safer. For both three and four legged signalized intersections, markings should be installed on all approaches as shown with the exception of intersections with dual left turns. In these cases, if possible, the marked crosswalk should be eliminated from the main street in the pathway of the left turns. All new signalized crosswalk locations should have Light Emitting Diode (LED) pedestrian signal indications and pedestrian activation buttons. Countdown pedestrian signal indications should be installed at intersections that experience at least 20 pedestrians per hour for eight hours of the average day or at locations where the crossing distance is greater than 65 feet. When a construction activity requires any crosswalk to be reinstalled,

[22] *("The pedestrian/bike bridge at Chatsworth Street over I-94", 2014)*
[23] *("Biking the Cape Cod Rail Trail!", 2012)*
[24] *("Example of a HAWK treatment in Tucson, AZ.", 2010)*

all crosswalk markings should be remarked according to the current marking standard at the time of the reinstallation.

Midblock Crossing

Midblock crosswalks are often used to provide safe crossings to places not located at signalized intersections. For multi-lane roads with four or more travel lanes, these crosswalk locations should have physical improvements such as a center raised median to allow pedestrians to stand and wait for gaps in traffic before crossing the second half of the street. On multi-lane roads with three or fewer lanes, pedestrian crossing signs and additional yield and markings, as necessary, should be mounted only on the side of the road adjacent to the marked crosswalk.

Marked midblock crosswalks should not be installed at a midblock location if it is within 300 feet of a signalized location. Midblock roadway crosswalk locations should be posted with fluorescent yellow-green pedestrian crossing signs. Fluorescent yellow-green advance pedestrian crossing signs should be installed approximately 200 feet prior to the mid-block crosswalk on roads with rural cross sections.

There should be a minimum of 10 pedestrian crossings observed during the morning or evening peak hour, or during the peak hour of the adjacent land use to warrant a marked crosswalk. Overuse of marked crosswalks without significant pedestrian use breed contempt of this pavement marking. ACCUG Traffic Engineering should be responsible for conducting the morning and evening observation studies to determine if the pedestrian volume warrant is satisfied.

Greenway Trail Crossing

Greenway crosswalks are used to provide safe crossings across Greenway trails. These crossings are typically foot trails or mountain bike trails. They provide a visual cue for runners, walkers, and cyclists, to make sure they are alerted to cross traffic. These crosswalk locations should have thermoplastic paint and signage that depicts crossing information.

RIVER ACCESS

When designing a river access point, the goal should be to make it accessible, suited to the surrounding environment, cost-effective, durable, and environmentally friendly. Making river access accessible to all paddlers requires considering ADA Accessibility Guidelines on height, width, length, slope, and support. A design suited to the environment provides safe access and a firm surface – one that can withstand different flow levels and water depths, and is a design that is not easily damaged and will not, itself, cause damage. A cost-effective and durable design uses construction only when necessary, chooses sites with minimal exposure to winds and currents, attempts to re-use or recycle existing boat docks, and constructs a river access point that can serve multiple purposes, such as mitigating erosion or restoring wetland vegetation. Low-impact design is key to making a river access point environmentally friendly. For this reason, during the planning process, a local natural resource specialist should be consulted. The design should merge the needs of natural functions with the recreational uses of the river access point.

ARCHITECTURAL FEATURES[25]

The Greenway's architecture and landscape materials reflect the vernacular character of historic Athens architecture through the use of clapboard and board and batten siding, and fieldstone rustication at the base of structures and columns. This fieldstone motif also is used in piers and retaining walls throughout the Greenway.

[25] *("Commercial Standing Seam Metal Roofs", 2015; "True- Wood Beveled Lap Siding", n.d.; "Vinyl Siding", n.d.)*

AMENITIES & SIGNAGE

ACCUG maintains a library of design standards and installation details for structures such as restrooms and picnic pavilions and for furnishings such as waste receptacles, benches and picnic tables, grills, bollards, and bike racks. Materials typically used in these products include black powder coated steel, wood, and granite. If amenities are necessary for the Greenway that are not covered by the department's standards, long- lasting products that utilize the materials above should be chosen.

Figure 9: Site Amenities

Kiosks

Clusters of wayside panels, rules and safety information, bulletin cases, brochure boxes, trash cans, and recycling bins are often grouped in a kiosk arrangement with or without a roof. Some kiosks have lighting to make them useful after dark.

- Bulletin Case
- Major & Minor Informational

Wayfinding

Wayfinding ensures that visitors can navigate to their destination easily. Locating present location, delineating routes, and communicative signage contributes to successful wayfinding design.

- Vehicular
- Community
- Confidence Marker
- Foot Path Wayfinding
- In-ground Medallion (Street Based)
- Mile Marker
- Water Trail
- Location signage at access points, stop overs, and bridges.

Trailhead Identification

Trailhead types vary from large to small, but all are identified in some manner. Existing trailheads have large monuments to alert vehicles that a Greenway trailhead is located nearby. New major trailheads will be constructed with the new monument standard for our parks, while neighborhood connections will have one or two columns delineating where the trail starts.

- New Trailhead Monuments
- Neighborhood Connector Monuments

Interpretive Signs

Interpretive signs are communication tools that are often designed to change behavior, educate, or evoke an emotion in the reader. “Lectern Series” direct a visitor’s attention to a specific landscape feature within a view. “Upright Series” provide orientation, safety information, and site significance.

- Lectern Series
- Upright Series

Traffic Control Devices

Traffic control devices are markers, signs and signal devices used to inform, guide and control traffic, including pedestrians, motor vehicle drivers and bicyclists. These devices are usually placed adjacent, over or along the highways, roads, traffic facilities and other public areas that require traffic control.

- Centerlines & Markings
- Crosswalks
- Intersection
- Mid-Block
- Trail Crossing
- Regulatory Signs
- MUTCD Signs

Figure 10: Sign System

Chapter 7: Operations and Maintenance

OVERVIEW

A comprehensive and practical management plan is essential to the Greenway's longevity. A good management plan begins with sound design standards and sustainable components, which are then stewarded through proper operations and maintenance. Operations and maintenance refer to specific day-to-day tasks and programs performed to ensure resources and facilities are kept in good, usable condition. All entities responsible for operating and maintaining the Greenway network, including ACCUG departments, elected officials, citizens, and stakeholders, should embrace and act in accordance with the management plan as discussed in this chapter.

GUIDING PRINCIPLES FOR EFFECTIVE OPERATIONS AND MAINTENANCE

The Greenway's importance in the community is multi-faceted. The Greenway protects the natural environment, waterways, and exceptional resource areas. Greenway trails serve as recreational and educational opportunities, allowing citizens to exercise and experience nature. The Greenway also serves as a transportation corridor, providing non- motorized connectivity throughout the county. A management plan must effectively address all of the Greenway's uses and purposes. The following guiding principles will help ensure the preservation of a dynamic Greenway network:

- Proper maintenance begins with sound design standards
- Protect and conserve the community's resources
- Promote and maintain a quality outdoor recreation and transportation experience
- Develop a management plan that is reviewed and updated regularly
- Maintain an effective, responsive public feedback system and promote public participation
- Be a good neighbor to adjacent properties
- Operate a cost-effective program with sustainable funding sources

RESOURCE STEWARDSHIP AND MANAGEMENT

A well-managed Greenway network is critical to the implementation and success of the Greenway Network Plan. This includes both the management of facilities – trails, parks, and amenities – as well as the management of cultural and environmental resources. This chapter aims to address resource stewardship by framing the Greenway network itself as a valuable community resource to be operating, maintained, and cared for by citizens and staff alike. Specific stewardship efforts that are addressed in this chapter include community programming, user education, volunteerism, public feedback, and active citizen patrols and task forces.

OPERATIONS

The following sections describe the Greenway's operations.

Routine Operations

Routine operations refer to the daily activities required to oversee the Greenway network. Routine operations include tasks such as routine inspections, record keeping, risk management, and custodial services.

Inspections

Operating the Greenway network as a safe community resource requires routine and meaningful inspections. Inspections must occur on a regularly scheduled basis, as determined by trail use, preexisting safety and maintenance issues, and level of development. Inspections should cover all Greenway facilities and amenities including trails, water trails, parks, open spaces, trailheads, parking lots, river accesses, buildings, pavilions, signage, benches, bridges, and boardwalks.

Two types of inspections are needed: informal inspections performed on a routine basis, and formal inspections performed on an annual or biannual basis. A chart at the end of this section includes specific inspection guidelines. Inspection frequency should fluctuate based on use patterns and safety and maintenance issues. Inspections should cover the following items:

Condition assessments of facilities and amenities including but not limited to: benches, bike racks, bottle fillers, bridges and boardwalks, pavilions, kiosks, parking lots, boat launches, pet waste stations, picnic tables, playgrounds, restrooms, signs, and trash receptacles

- Condition assessments of all trails
- Landscape hazards such as dead trees, limbs, erosion, flooding, sinkholes and other environmental issues
- Inspection of river levels
- Observed use patterns of facilities and trails

- Inspections for illicit activities such as camping, dumping, drug and alcohol use, smoking, trespassing, and vandalism
- Any other maintenance or safety issue

Record Keeping and Reporting

Proper record keeping and reporting makes inspections meaningful and facilitates timely response to safety and maintenance issues. All inspections should be documented using proper forms, processed by staff in a timely manner, and filed in a central location (i.e., on a department server).

Any maintenance issue reported during an inspection should be submitted to ACCUG Parks Maintenance through the Work Order System. The Work Order System tracks labor and associated costs of all work performed in the Greenway network. The Work Order System can also be used to generate reports that help analyze maintenance issues and associated costs.

Any crime or illicit activity observed during an inspection should be submitted to the Police Department and tracked through their software. The software should track specific locations and circumstances of all incidents. Again, reports can be generated that may reveal patterns and assist in allocating resources to specific locations or for specific issues. A comprehensive record-keeping system that is integrated with the Work Order System and Crime Tracking System should be created to track the following:

- Daily activities including programming and events
- Schedule of routine and remedial maintenance tasks
- Hazards, incidents, safety issues, and crime reports, as well as actions taken
- Inspection reports (both informal and formal)
- Annual maintenance budgets and labor tallies
- Funding sources and schedules
- Projected costs for subsequent years
- Database for existing, planned, and proposed projects for the Greenway network

User Safety and Risk Management

Ensuring that citizens feel safe and comfortable while using the Greenway trail network is essential to the success and continued implementation of the Greenway Network Plan. Safety is the single most important issue in guaranteeing the Greenway remains a valuable community resource. Risk assessment, crime reporting, diligent patrol, and inter-departmental cooperation are each critical to safeguarding user safety.

Risk Assessment

Risk assessment is a systematic process for determining and addressing risks associated with the Greenway network such as maintenance, crime, environmental hazards, and others. A successful risk assessment program must be a collaborative effort among ACCUG departments, citizens, and stakeholders. The following steps outline an effective risk assessment program:

- Conduct and document regular inspections, as detailed above
- Maintain an effective public feedback system in which citizens and stakeholders can submit issues
- Direct issues to the appropriate entity and file all inspection data in appropriate database management systems (Work Order Systems, Crime Tracking System, etc.)
- Track and review data regularly to identify risk patterns
- Follow-up with appropriate corrective measures in a timely manner

Risk Management

Effective risk assessment allows for long-term risk management, leading to increased user safety. Maintenance, environmental, and safety issues revealed through inspections and public feedback should be reviewed regularly. A task force should be set up with representatives from all entities. Duties of the task force should include:

- Reviewing all collected data included inspections, public feedback, crime reports, work orders, etc.
- Identifying risk patterns and persistent issues
- Using the collected data to anticipate future issues
- Monitoring operations and maintenance functions
- Setting short and long-term goals for operations and maintenance
- Creating work plans to address persistent and anticipated issues

The foremost goal of the risk management task force is ensuring that Greenway use does not suffer due to real or perceived safety concerns.

Patrol Units

Another way to manage risk is through Greenway network patrol units. Volunteer and professional trail patrols help improve both real and perceived trail safety. The primary function of these patrols is to educate trail users and to aid when necessary.

Volunteer groups can range from litter pick-up and beautification crews to citizen patrol units. All volunteer groups should

assist trail users, explain trail rules, and communicate users' suggestions and comments. They can also report maintenance issues such as damaged facilities or vandalism.

The ACC Police Department should provide professional trail patrol units to cover the territory of the entire Greenway network. While volunteer groups are effective for maintaining a sense of community and user engagement along the Greenway, these groups lack authority to intervene in dangerous or criminal situations.

The police patrol units should be responsible for both enforcing laws and regulations and interacting with users. The patrol's main tasks should include:

- Patrolling, on foot, bicycle, or by vehicle, all Greenway trails and parks
- Enforcing rules and regulations
- Writing citations and making arrests
- Conducting criminal and non-criminal investigations for cases relating to the Greenway network
- Community outreach programming including bike safety classes
- Interacting with users

The goal of the police patrol units is ultimately to create a presence in the Greenway network that deters crime and improves users' enjoyment of the network. Although the specific tasks of the police patrol units are enforcement oriented, the day-to-day operations of the units should focus on user education, risk reduction, and building a positive police image. Having the officers visible, friendly, and engaging with the community creates trust between officers and citizens and makes the user experience of the Greenway system safer and more enjoyable.

Help Locator Program

The Help Locator Program is an existing component of ACCUG emergency response protocol that increases response times in the Greenway network, and it should be continued. The program consists of the following features:

- Signage placed every ¼ mile, which includes five-digit numbers that correspond to unique GPS waypoints, which are mapped in a GIS layer. The GIS layer is available to emergency personnel on in-vehicle computers
- Mapping of access points and maintenance trails for all Greenway trails and parks in the GIS layer
- Access and maintenance road load ratings and vehicle accommodations that are indexed in the layer GIS
- User education on how to utilize the Help Locator Program through information signage at trailheads, media streams, and other methods

In short, the Help Locator Program increases emergency response efficiency by providing GPS coordinates and directions to trained personnel.

Custodial Services

Maintaining a desirable image of the Greenway network is a top priority. To keep facilities clean, routine custodial servicing is necessary. The Greenway network includes a number of developed trailheads and linear parks, which include facilities such as buildings, pavilions, and picnic areas, and all of these facilities must be serviced on a regular basis. These areas include trash cans and dog waste stations that also require routine trash collection. Another routine custodial task is litter pick-up both within parks and along Greenway trails.

Like inspections, the frequency of custodial servicing is determined by use patterns, location, and level of development. A chart at the end of this section provides servicing guidelines.

Table 17: Operational Guidelines

Facility Type	Informal Inspections	Formal Inspections*	Custodial Servicing	Trash Collection	Litter Pickup
Trails and Trails					
Aggregate	1/ week	1/ year	N/A	N/A	1/ week
Asphalt	1/ week	1/ year	N/A	N/A	2/ week
Impervious Concrete	1/ week	1/ year	N/A	N/A	2/ week
Pervious Concrete	1/ week	2/ year	N/A	N/A	2/ week
Impervious Pavers	1/ month	1/ year	N/A	N/A	1/ week
Pervious Pavers	1/ month	2/ year	N/A	N/A	1/ week
Natural Surface	1/ month	2/ year	N/A	N/A	1/ month
Soil Stabilized	1/ month	2/ year	N/A	N/A	1/ week
Multi-Use Trail	2/ week	1/ year	N/A	N/A	2/ week
Street Based Connections	1/ week	1/ year	N/A	N/A	2/ week
Rail with Trail	1/ week	1/ year	N/A	N/A	2/ week
Rail to Trail	1/ week	1/ year	N/A	N/A	2/ week
Hiking Trail	1/ month	2/ year	N/A	N/A	1/ month
Mountain Biking Trail	1/ month	2/ year	N/A	N/A	1/ month
Water Trail	1/ month	2/ year	N/A	N/A	1/ month
Trailheads and Parks					
Open Space Park	2/ week	2/ year	Daily	Daily	Daily
Major Trailhead	2/ week	2/ year	Daily	Daily	Daily
Minor Trailhead	1/ week	2/ year	2/ week	2/ week	2/ week

Neighborhood Connection	1/ month	1/ year	1/ week	1/ week	1/ week
Facilities and Amenities					
Bridge/ Boardwalk	1/ month	1/ year	N/A	N/A	N/A
Dog Parks	1/ month	1/ year	N/A	Daily	Daily
Pavilion	1/ week	1/ year	Daily	Daily	Daily
Playground	1/ week	1/ month	N/A	Daily	Daily
Restroom	1/ week	2/ year	Daily	Daily	Daily
River Facilities and Amenities					
Boat Launch	1/ week	2/ year	N/A	2/ week	2/ week
River Stop Offs	1/ month	1/ year	N/A	N/A	1/ month
Overlooks	1/ month	1 / year	N/A	N/A	1/ month
Signage					
Kiosk	2/ week	1/ year	N/A	N/A	N/A
Interpretive	1/ week	1/ year	N/A	N/A	N/A
Trailhead Identification	1/ week	1/ year	N/A	N/A	N/A
Traffic Control	1/ week	1/ year	N/A	N/A	N/A
Wayfinding	1/ week	1/ year	N/A	N/A	N/A

* More frequent formal inspections may be called for depending on condition of facility

ROUTINE AND REMEDIAL MAINTENANCE

The following items describe the kinds of maintenance required to keep the Greenway safe and in good condition. All maintenance items are detailed in the chart at the end of the section.

Routine Maintenance

Routine Maintenance refers to the day-to-day regimen of facility maintenance, minor repairs and replacements, landscaping activities, habitat management, and other regularly scheduled maintenance activities. These tasks must be performed on a regular basis to keep the Greenway network and associated facilities in good, usable condition.

Maintenance tasks should be prioritized based on use patterns, level of impact, and age of facilities. Areas with the heaviest use patterns should be given highest priority. Areas where the trail could be closed due to lack of maintenance should be given priority over areas with bypass routes. Older facilities may need more attention than newer facilities due to deteriorating conditions. Maintenance priorities should be updated on an annual basis, as well as when new facilities are added to the network.

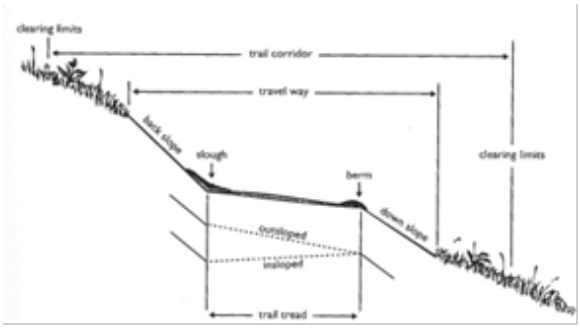
The four main categories of routine maintenance activities include: trail maintenance, facility maintenance, landscape maintenance, and habitat management.

Trail Maintenance

Trail maintenance varies depending on the trail surface, designed use, and trail environment. Trail maintenance encompasses tread maintenance, corridor maintenance, and feature maintenance. All corridor maintenance guidelines are details in ***Chapter 6 – Design Guidelines*.**

Paved and hard surface trails require the least amount of maintenance. These trails should be kept free of debris, leaf litter, and mud. Routine maintenance activities include blowing/sweeping the trail, pressure-washing the trail, and mowing vegetation. Pervious pavement requires extra maintenance as the surface must be vacuumed to facilitate proper flooding patterns.

Figure 11: Trail Section

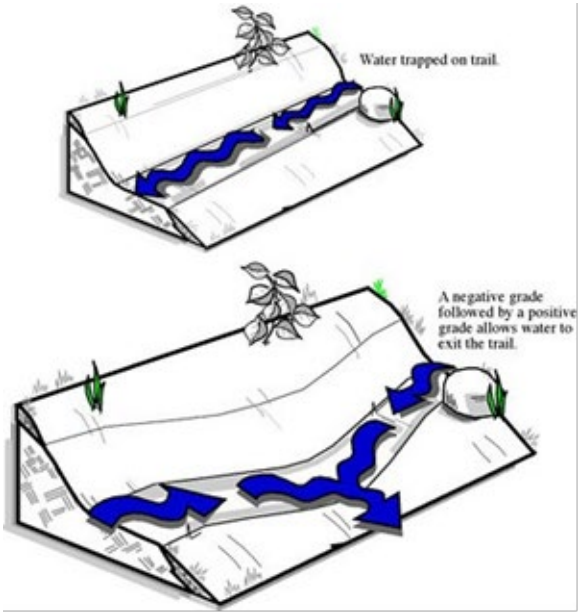


Credit: http://www.lebanonhills.com/sustainable-trails/

Aggregate trails require more maintenance than paved trails. The aggregate material sits on top of hard-packed dirt and is susceptible to erosion. Even with effective drainage features, the aggregate surfacing will wash and erode. It therefore is essential that drains and stormwater features including swales and culverts be kept clear to slow the movement of aggregate trails. Routine maintenance tasks include refreshing the aggregate, raking/ grading the aggregate smooth, and drain maintenance.

Natural surface trails vary widely in their maintenance needs. Proper design is the most important factor in the level of maintenance required for natural surface trails. Properly out sloped trails that include sidehill construction and drainage features may require little routine maintenance. Use patterns also determine maintenance needs for natural surface trails. Higher impact uses such as running and biking will cause trail tread to erode quicker than hiking. Maintaining trail out slope and drainage features are the top priorities. Routine maintenance tasks include removing berms and sloughs, repacking trail tread, root removal, drain maintenance, grade reversal maintenance, and debris removal.

Figure 12: Grade Reversal



Credit: imba.com

Natural surface trails occurring in undeveloped areas will require more routine corridor maintenance than other types of trails. Please refer to the diagrams below for maintenance guidelines.

Water trails are in their own maintenance class. Because the “tread” of a water trail is simply the river, there is no trail surface to maintain. Keeping the water trail free of debris, however, is crucial. Downed trees, limbs, and other debris in the river obstructs access. Special care should be paid to monitoring water trails and removing debris and hazards as soon as possible.

Trail types and designed use will also inform maintenance routines. Primary and secondary multi-use trails, street-based connectors, rails/ trails should be serviced more frequently than hiking and mountain

biking trails, as they serve as main transportation corridors. Use patterns should also be taken into account when determining service plans. Finally, multi-use designed trails should be serviced more frequently than single-use trails as they serve a greater cross section of the population.

Facility Maintenance

Facility maintenance refers to the routine maintenance of all constructed features of the Greenway network. This includes:

- **Bridge, Boardwalk, Overlook Maintenance**: Bridges, boardwalks, and overlooks must also be kept free of all debris, especially leaf litter and mud. Standing leaf litter and mud contribute to accelerated rot of wooden structures, so it is even more important that this debris be removed regularly from wooden structures
- **Dog Park Maintenance**: Routine maintenance of dog parks includes servicing fencing, maintaining water supply lines and drains, as well as landscaping tasks
- **Playground Maintenance:** Playgrounds are to be inspected and maintained pursuant to ACCUG's Playground Safety Policy, which is based on national standards. Routine tasks include cleaning surfaces, removing vandalism, tightening bolts, and maintaining mulch
- **Boat Launch Maintenance:** Boat launches are susceptible to seasonal maintenance due to high water events. Routine maintenance tasks include maintenance of gravel and riprap and removal of debris from launch surface, as well as landscaping tasks
- **Minor Repairs and Maintenance:** Minor repairs and maintenance are considered routine. This includes but is not limited to tasks such as repairing handrails, removing graffiti, removing debris and hazards, repairing signage, repairing fencing, and addressing vandalism

Landscape Maintenance

Landscape maintenance refers to all regular activities, such as tree and shrub trimming and pruning, mowing of vegetation, mulching and edging, and maintenance of plantings, required to maintain the developed areas of the Greenway network. As outlined in the ACCUG Landscape Service Delivery Plan, all developed areas are maintained based on zoning, with zones 1 to 4 defining the level of service:

- **Zone 1 – Weekly Service:** Mow and trim weekly; control weeds in beds, sidewalks, and fence lines; detail maintenance such as flower/ bed maintenance, pest management, ornamental maintenance, curb cleanings, etc.; fertilize lawns, trees, shrubs, ground covers, and perennials; remove fall leaves 2 to 3 times.
- **Zone 2 – Biweekly Service:** Mow and trim biweekly; control weeds in beds, sidewalks, and fence lines.
- **Zone 3 – Monthly Service**: Mow monthly.
- **Zone 4 – Annual Service:** Mow Annually. These are typically intended as meadow areas with natural features supportive of a desired level of wildlife; overseed with flowering meadow plants to enhance appearance and attract suitable wildlife.

System-wide routine landscape tasks include: treating fire ant mounds; treating yellow jackets and wasps; aerating and overseeding bare ground areas; replacing existing landscape plantings or adding new ones; replacing and repairing irrigation systems; irrigating new plantings; removing dead or damaged plants; removing silt from parking lots and storm drains; replacing hardscapes; and grinding tree stumps.

Landscape zones are updated annually and should be determined whenever new sections of the network are built. By determining service levels ahead of time, landscape staff will be able to plan for additional staff needed for the increase in service.

The corridor of all trails and trails must be maintained to standards defined in ***Chapter 6 – Design Guidelines***. This involves keeping all limbs and shrubs trimmed back out of the corridor, as well as mowing ground cover to prevent encroachment onto the trail tread.

Non-paved trails and trails occurring in undeveloped open spaces are not covered by the Landscape Service Delivery Plan. Their maintenance schedule is covered in the chart at the end of this section. Maintenance of undeveloped open spaces in the Greenway network is covered in the following section.

Habitat Management

Routine facility and landscape tasks ensure the Greenway Network is maintained for transportation, recreation, stormwater conveyance, flood control, and safety. The Oconee Rivers Greenway is unique in that its mission is not only to provide recreational and education opportunities, but to also create conservation areas. As stated in the ordinance creating the Greenway, the preeminent conservation goal is the controlled use and systematic protection of natural resources. Habitat management must be a critical piece of the Greenway management plan.

Habitats should be managed in a variety of ways, and exceptional resource areas should carry their own site- specific management plans. An environmental task force should be formed to create management plans, create and prioritize work plans, monitor progress, and set long-term goals. General habitat management guidelines are recommended as follows:

- Control and remove invasive species
- Plant native species
- Mow level 4 landscape areas at the proper time and to the correct height
- Preserve an unmowed vegetative buffer along all trails, parks, and waterways
- Improve tree care and target blights, diseases, and harmful insects
- Manage and close social trails in a timely fashion
- Fence and buffer sensitive areas
- Keep interpretive signage up to date
- Host volunteer cleanup events and work days
- Revegetate trampled banks and social trails
- Improve ground cover and structure of buffer vegetation
- Divert wash water away from creek
- Maintain water quality with BMPs and proper stormwater management
- Leave non-hazardous dead and down trees in their natural state

Habitat management should be integrated into community stewardship efforts. Involving the community not only protects natural resources in and surrounding the Greenway but increases the community's enjoyment of those resources and promotes future generations of conservationists.

Table 18: Maintenance

Facility Type	Facility Maintenance		Landscape Maintenance						
	General Maintenance	Leaf/ Debris Removal	Zone	Pruning/ Trimming	Mowing	Mulching / Edging	Weed Control	Detailing	Tread Maintenance
Multi-Use Trail	As needed or 1/ month	2/ week	1	1/ week	1/ week	2/ month	1/ month	1/ month	1/ month
Street Based Connections	As needed or 1/ month	2/ week	1	1/ week	1/ week	2/ month	1/ month	1/ month	1/ month
Rail with Trail	As needed or 1/ month	2/ week	1	1/ week	1/ week	2/ month	1/ month	1/ month	1/ month
Rail to Trail	As needed or 1/ month	2/ week	1	1/ week	1/ week	2/ month	1/ month	1/ month	1/ month
Hiking Trail	As needed or 1/ month	N/A	N/A	1/ month	1/ month	N/A	N/A	N/A	1/ month
Mountain Biking Trail	As needed or 1/ month	N/A	N/A	1/ month	1/ month	N/A	N/A	N/A	1/ month
Water Trail	As needed or 1/ month	N/A	N/A	1/ month	N/A	N/A	N/A	N/A	N/A
Open Space Park	1/ week	2/ week	1	1/ week	1/ week	2/ month	1/ month	1/ month	N/A
Major Trailhead	As needed or 1/ month	2/ week	1	1/ week	1/ week	2/ month	1/ month	1/ month	N/A
Minor Trailhead	As needed or 1/ month	1/ week	2	1/ month	1/ week	2/ month	1/ month	1/ month	N/A
Neighborhood Connection	As needed	1/ week	2	1/ month	1/ week	1/ month	1/ month	1/ month	N/A
Bridge/ Boardwalk	As needed or 1/ month	2/ week	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dog Parks	As needed or 1/ month	As needed	1	1/ week	1/ week	N/A	1/ month	1/ month	N/A
Pavilion	As needed or 1/ month	1/ week	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Playground	As needed or 1/ month	1/ week	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Restroom	As needed or 1/ month	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boat Launch	1/ month	1/ week	1	1/ week	N/A	1/ month	1/ month	1/ month	N/A
Overlooks	1/ month	1/ week	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Signage	1/ month	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remedial Maintenance

Remedial maintenance refers to correcting significant defects in the network, as well as repairing, replacing, or restoring major components that have been destroyed, damaged, or significantly deteriorated from normal usage and old age. Some tasks may occur on routine five to ten-year cycles such as crack sealing, painting, or replacing signage. Remedial maintenance also covers long-term reconstruction projects.

Facility Repair or Replacement

All facilities require repair or replacement at some point. Planning ahead to conduct necessary repairs and replacement therefore is crucial to ensuring that the Greenway network remains operational. Life-cycle plans with associated funding should be developed for all facility types. Life-cycle planning helps allocate resources evenly so that large replacement projects do not burden the network or staff.

- Current life-cycle plans exist for the following facilities:
- Asphalt (Asphalt Life-cycle Plan)
- Amenities and Playgrounds (Capital Improvement Program Life-cycle Plan)
- Bridges, boardwalks, observation decks, overlooks, stairs (Bridge and Boardwalk Life-cycle Plan)
- Signage
- Even with proper planning, remedial maintenance issues will arise due to damage from vandalism, environmental factors, and other factors. The time between observation of unexpected damage and the repair or replacement will depend on whether the damage is deemed a hazard, to what degree the needed repair will affect the safety of the user, to what degree the damage impedes connectivity of the Greenway network, and whether or not the repair can be performed in-house

The chart found on the next page details common Greenway facilities, associated longevities, and common remedial maintenance issues.

Table 19: Remedial Maintenance Expectations

Facility Type	Longevity	Common Issues
Trails and Trails		
Aggregate	5-10 years	Erosion, rutting, washing of aggregate
Asphalt	7-15 years	Erosion, cracking, crumbling
Impervious Concrete	20-30 years	Erosion, undercut, cracking
Pervious Concrete	20-30 years	Erosion, undercut, debris, cracking
Impervious Pavers	15-20 years	Erosion, earth movement
Pervious Pavers	15-20 years	Erosion, earth movement
Natural Surface	50-75 years*	Erosion, rutting, berming, tread degradation
Soil Stabilized	10 years	Tread degradation, erosion, freeze/ thaw
Facilities		
Boardwalk (Wooden)	20-25 years	Rotting decking, rotting structure, embankment erosion
Bridge – Metal	40-60 years*	Rotting decking, hardware issues, rust, embankment erosion
Bridge – Fiberglass	40-60 years*	Rotting decking, hardware issues, embankment erosion
Bridge – Wooden	20-25 years	Rotting decking, rotting structure, embankment erosion
Street Overpass	100+ years*	Hardware issues, ruts, embankment erosion
Street Based Bridges	100+ years*	Hardware issues, ruts, embankment erosion
Tunnel	100+ years*	Erosion, earth movement, seepage
Amenities		
Bench	30-40 years	Erosion, vandalism, storm damage
Bike Rack	30-40 years	Erosion, rust, wear
Boat Launch	50-75 years*	Erosion, embankment collapse, flood damage
Bottle Filter	10 years	Water line damage, erosion, wear, fixture failure
Dog Park	20 years	Erosion, overuse
Pavilion	50-75 years*	Storm damage, appearance
Pet Waste Station	20 years	Rot, wear
Picnic Table	30-40 years	Erosion, storm damage, vandalism
Playground	20 years	Wear of components, vandalism
Restroom	50-75 years*	Fixture failure, appearance, wear
Signage – Stone	30-40 years	Collapse, fading
Signage – Other	10-15 years	Fading, obsolete content or design
Trash Receptacles	30-40 years	Rust, wear
* Major maintenance required every 20 years.		

Seasonal Maintenance

Seasonal maintenance should be performed as needed. Fall leaf litter is considered a routine maintenance task and is covered in that section. Heavy rains in the winter and spring can cause flooding and damage of Greenway facilities. Flooding can be mitigated by restoring drainage channels, if possible. In the case that seasonal conditions cannot be improved to provide for safe use, affected Greenway facilities should be closed to prevent risk of injury.

Maintenance of the Greenway is key to keeping a safe and usable trail system that spans multiple generations. Currently, the ACCUG Leisure Services Department partners with the ACCUG Central Services Department to accomplish daily landscaping operations. The rest of the maintenance falls on Leisure Services. As the multi-use trail systems of the Greenway and the Firefly Trail continue to develop, there will be a need to add additional resources for both departments. This is a recognized need and the operating budgets need to reflect those additions.

SURVEY FINDINGS

Both surveys provided valuable conclusions with respect to the location of residence of known Greenway users, transportation methods to reach the Greenway, types of trail usage, the frequency of Greenway use, and desired improvements and expansions.

Greenway Users: The majority of respondents that reported using the Greenway are residents of Athens-Clarke County.

Transportation Methods to Greenway: Some divergence exists between the field survey and online survey results with respect to the transportation mode used to reach the Greenway. Within both surveys, most respondents reached the Greenway by car. Within the field survey specifically, a large portion of respondents also reached the Greenway by walking. This data correlates well with the quarter of field survey respondents who reported living within a half mile of the Greenway. A significant number of users within both surveys also reached the Greenway by biking – more within the online survey than the field survey. While the range is slightly larger, users from the online survey also lived relatively close to the Greenway. About a third of online respondents reported living one to three miles from the Greenway. Within both surveys, very few respondents rode a bus to the trail system. The majority of respondents also stated that they do not regularly use the Greenway to commute from one place to another.

Trail Usage: The most common reported Greenway use categories within both surveys included exercise and recreation. An overwhelming majority of Greenway users participate in walking, running or jogging, while the next most popular

activities include nature viewing, relaxation, hiking, and dog walking.

Frequency: The respondents within the field survey reported more frequent use of Greenway facilities than online survey respondents. Within the field survey, slightly more than a third of the respondents interviewed use the parks and trails weekly while about a quarter used them daily. Within the online survey, a larger proportion – roughly half – of respondents use the trails weekly. However, only a small number of online respondents use the parks and trails daily. Approximately one-fourth of online respondents only use the trails monthly. Overall, most people found the Greenway to be easy to navigate, in good condition, and usually safe.

Desired Improvements and Expansions: According to the two surveys, the most popular amenities that users want to see added or improved are restrooms, hiking trails, paved trails, mountain bike trails, dog parks, and kayak launches. Respondents stated that they are most likely to use the paved trails, followed closely by the natural trails. Water trails, riding trails, and mountain bike trails appealed to a more limited set of respondents. With respect to the primary objectives of the Greenway, the majority of users were most concerned with protecting sensitive environmental areas and habitats, providing open space for interacting with the natural world, and connecting the communities with new walking and biking routes. When given a map of Athens-Clarke County, users identified four neighborhoods as being the most important neighborhoods to connect to the Greenway: Downtown, East Athens, Five Points, and Normaltown.

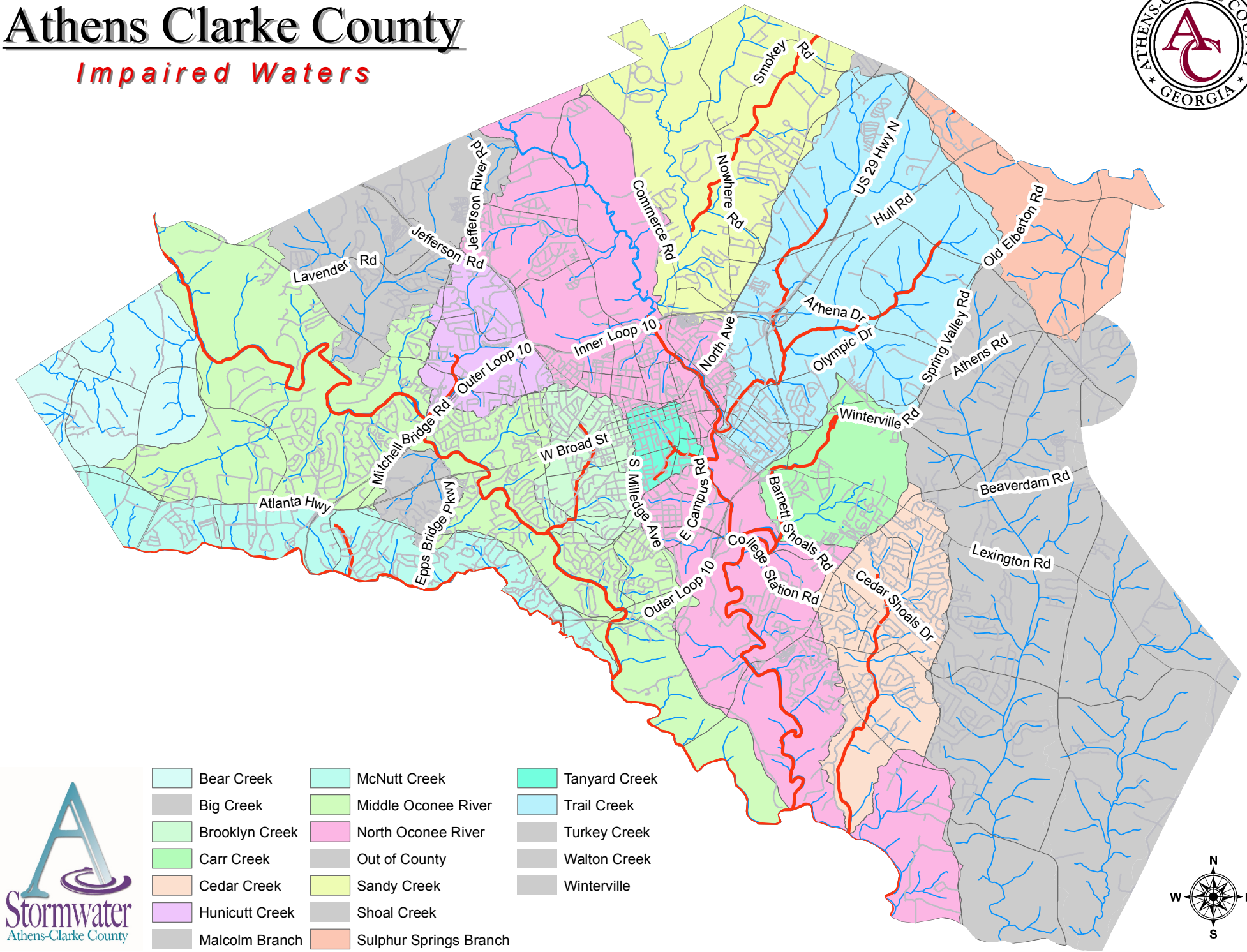
Appendix: Supplemental Maps

Athens-Clarke County Supplemental Environmental Map and Resources: These resources highlight the watersheds found within Athens-Clarke County and the various key environmental areas within the county. Both of these can be found online.

Figure 13: ACC Watershed Protection Plan Map – *higher quality version of this map can be found online through the Athens-Clarke County Unified Government Website: https://www.accgov.com/DocumentCenter/View/62296/ACC-Impaired-Waters-Map*

Athens Clarke County

Impaired Waters



Stormwater
Athens-Clarke County

Figure 14: ACC Environmental Areas Map – *an interactive version of this map can be found through the [Athens-Clarke County Environmental Areas Viewer](https://data-athensclarke.opendata.arcgis.com/apps/7783c2ad68e34a6eabf5add667b99c98/explore): https://data-athensclarke.opendata.arcgis.com/apps/7783c2ad68e34a6eabf5add667b99c98/explore*