

2

Existing Conditions

"There are lots of great greenway trails; however, many are short in-out spurs. Few are loops that provide interesting, new scenery along its entire length."

- Public Comment

OVERVIEW

This chapter summarizes the existing conditions for greenway trails in Wake County, through a regional snapshot, existing conditions maps, public comments, stakeholder feedback, and a summary of support for greenway trails in local and regional existing plans.

Most people feel safe and comfortable using greenway trails in Wake County because they are separated from traffic, wide, well-maintained, and are usually very scenic. In fact, as illustrated in the summary on the following pages, residents in Wake County and its municipalities enjoy one of the most extensive greenway trail systems in the country. However, the key to a successful greenway trail network is connectivity; as more greenway trails are connected to one other, the benefits of any particular greenway are greatly enhanced, whether considering the transportation, recreation, health, or economic aspects of the system. **The current inventory of existing trails (see Map 2.4, page 29) shows nearly 300 miles of trail in Wake County, but much of that mileage is in smaller, disconnected sections** of local trail, or trails that are isolated within parks. The exceptions to this include several large portions of continuously connected trail, such as the Neuse River Greenway and the East Coast Greenway route through Wake County.



The American Tobacco Trail in Wake County is a popular section of the East Coast Greenway.

BOOMING GREENWAY TRAILS IN NORTH CAROLINA'S RESEARCH TRIANGLE

Contributed by John Pucher, Professor Emeritus, Rutgers University

The Research Triangle of North Carolina (Raleigh-Durham-Chapel Hill) has been one of the fastest-growing metropolitan areas in the country. Its population increased seven-fold between 1970 (317,563) and 2014 (2,132,523). The area has experienced a corresponding economic boom, thanks largely to the three renowned universities at each corner of the Triangle: NC State University in Raleigh, Duke University in Durham, and the University of North Carolina at Chapel Hill. The many research institutions and high-tech firms in the area have attracted highly-educated professionals from all over the country, so that the Triangle currently has the highest ratio of doctorates per capita in the United States.

Accompanying this stunning population and economic growth, there has been increasing public support for shared-use greenways. In numerous surveys conducted in the Triangle, investment in greenway expansion and improvement has consistently topped the ranking of citizen preferences for government expenditures. The widespread support for greenway trails has also been reflected in voter approval of virtually all bond referenda to fund more greenway trails. City governments and the two metropolitan planning organizations in the area (CAMPO and DCHC MPO) have also dedicated increasing amounts of their capital budgets for greenway trails. The NC Department of Transportation has contributed to funding, often derived from federal funds for pedestrian/bicycling projects. In Cary, Knightdale, and Chapel Hill, developers have been required to build greenways as part of new developments, and virtually all communities require the dedication of easements on privately owned land along rivers, creeks, and lakes to allow greenway construction.

The result of increased funding and staffing for greenway planning and construction is one of the largest greenway networks in the country. In 2015, the Raleigh-Durham-Chapel Hill metropolitan area had almost 300 miles of paved off-road, shared-use trails. The cities

of Raleigh (115 miles), Cary (71 miles), and Durham (30 miles) have the most greenways, but virtually every community in the Triangle has one or more greenways, and all of them have ambitious plans for future growth.

The increase in recreational cycling on greenways has helped generate more on-road cycling as well, and growing public support for more on-road cycling facilities. In 2000, there were less than 10 miles of on-road bike lanes in the Triangle, but by 2015, total center-line mileage of bike lanes (blue lines on map) had grown to 93 miles, mostly in Durham (36 miles), Chapel Hill-Carrboro (32 miles), Cary (20 miles), and Raleigh (18 miles). Significant expansion is planned. For example, Raleigh is planning to double its mileage of on-road bike facilities by the end of 2016. Cary will increase its mileage of bike lanes from 20 miles to 27 miles by 2017.

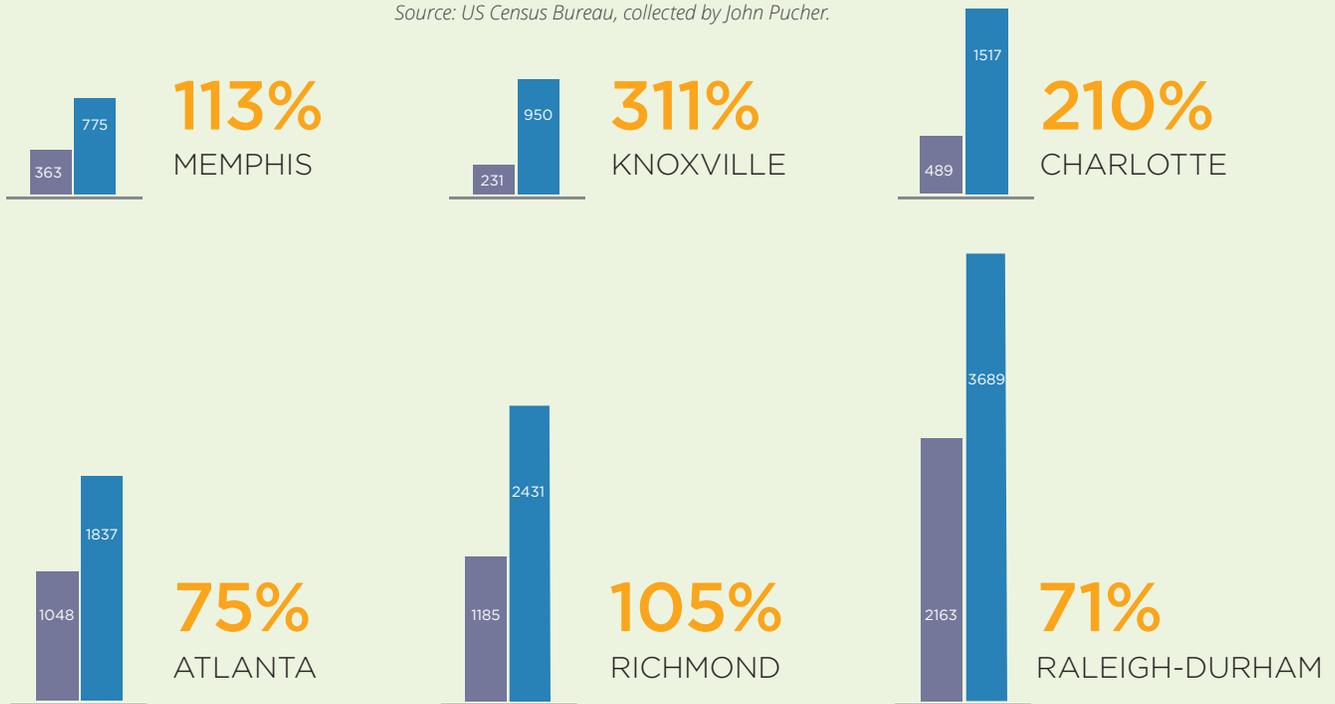
Given the polycentric, decentralized nature of the Research Triangle, it is crucial to provide regional connections between the greenway networks of individual cities. The most important of these connecting routes is the East Coast Greenway (ECG), which connects Durham to Cary and Raleigh, and which connects the Triangle Region to the rest of the East Coast via the 2,900-mile ECG route that runs from Maine to Florida. Of all metropolitan areas the ECG route runs through, the Triangle has the most complete stretch (95%) of off-road, shared-use trails on the entire ECG route.

Triangle greenways are typically 10-14 feet-wide paved trails in 50-150 feet-wide corridors of protected greenspace, running along rivers, creeks, and lakes. They were developed as part of flood management plans, but equally important, they preserve greenspace adjacent to all major waterways and tributaries, protect aquatic and edge habitats, and prevent development of ecologically sensitive lands. The greenways provide a series of linear parks throughout each city, providing recreational opportunities for residents and visitors. Many greenways include playing fields, picnic areas, boating

NUMBER OF BICYCLE COMMUTERS IN THE SOUTHEAST U.S.

■ 2001 ■ 2014 ■ % INCREASE

Source: US Census Bureau, collected by John Pucher.



facilities, fishing spots, bird watching, nature trails, outdoor sculpture, and community centers.

Only partial data are available on usage levels, but an in-person survey of the 71-mile Cary greenways estimated at least 1.1 million annual users just on weekends, not including weekday use. Since Cary has about a fourth of the total mileage of Triangle Area greenways, that suggests over 4 million annual users overall, which might be an underestimate since the Cary survey only counted weekend use. Indeed, on weekends with good weather, many parts of the Triangle greenways are overcrowded, not only with pedestrians, runners, and bicyclists but also with dog walkers, parents with strollers, skateboarders, in-line skaters, bird watchers, and people fishing in the adjacent lakes from the extensive wooden walkways and bridges.

A before-and-after study conducted by the Institute for Transportation Research (ITRE) at NC State University found more than a doubling

(133% growth) in walking and bicycling trips on the American Tobacco Trail in Durham only three months after the bicycle and pedestrian bridge over Interstate 40 was completed, thus connecting the northern and southern portions of the trail. That dramatic jump in use between 2013 and 2014 demonstrates the importance of such connections over roadways and waterways for the success of greenways.

With widespread public support, it seems certain that the Research Triangle will continue to have one of the most extensive and best-integrated greenway systems in the country, supplemented by a growing network of on-road cycling facilities.

Sources: City departments of transportation and parks and recreation in Raleigh, Durham, Cary, Knightdale, Chapel Hill, and Carrboro; the Capital Area Metropolitan Planning Organization (CAMPO); the Triangle J Council of Governments (TJCOG); county parks, recreation, and transportation departments in Wake County, Orange County, and Durham County; East Coast Greenways; the Institute for Transportation Research and Education (ITRE) at NC State University; and the NC Department of Transportation.

EXISTING CONDITIONS MAPS

The existing conditions maps on the following pages provide insight into the demographic, environmental, and existing trail makeup of Wake County, for purposes of a bigger picture understanding of regional need and opportunities.

Map 2.0 Wake County Study Area

The study area for this project, Wake County, is 857 square miles and just over 1 million in population. Opportunities exist to connect the County's municipalities, regional parks, and lake features. Challenges include trail connectivity across major roadway corridors such as I-40/440, I-540, US 1, US 70, and others.

Map 2.1 Social Equity/Community Assessment Index

When evaluating the need for greenway infrastructure, it is important to understand the makeup of vulnerable populations and populations in need. Greenway trails can serve multiple purposes for these areas including access to transportation choice for those without vehicles and opportunities for healthy living for those who may trend towards inactive lifestyles. This assessment was used to help inform the overall list of trail recommendations, as shown in Table 3.1 Summary of Projects, in Chapter 4.

Map 2.2 Environmental Features

This map features the wide variety of land uses ranging from undeveloped forests to higher density development in cities. Sprawling development has occurred in the county, leaving undisturbed land as the exception to the rule. Retrofitting greenway trails will be a challenge in built-out landscapes. However, because of the work of County and municipal planners, many corridors have been protected for open space and future greenway trail use.

In lesser developed areas and farmlands, such as eastern Wake County, a desire for environmental protection and maintaining the rural heritage will be an important aspect of consideration for greenway theming and development.

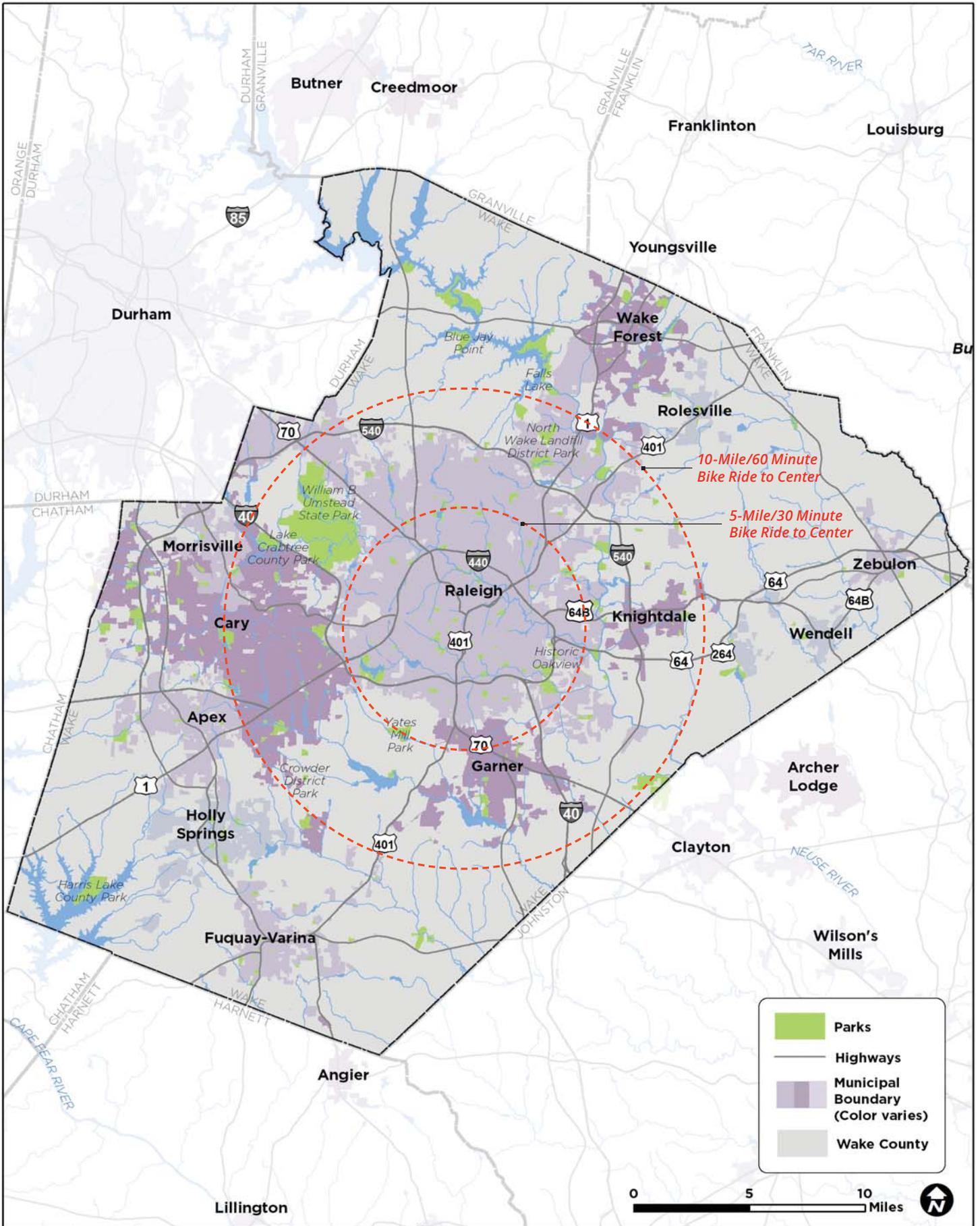
Map 2.3 Population and Destinations

Connecting population centers, where people live, work, and play, is essential for consideration in the development of a successful greenway system. It will also be important to connect greenway trails to key destinations when possible to promote tourism. There are a number of municipal downtowns, historic sites, transportation hubs, colleges, parks, schools, shopping centers, and employment centers that would benefit from greenway connections.

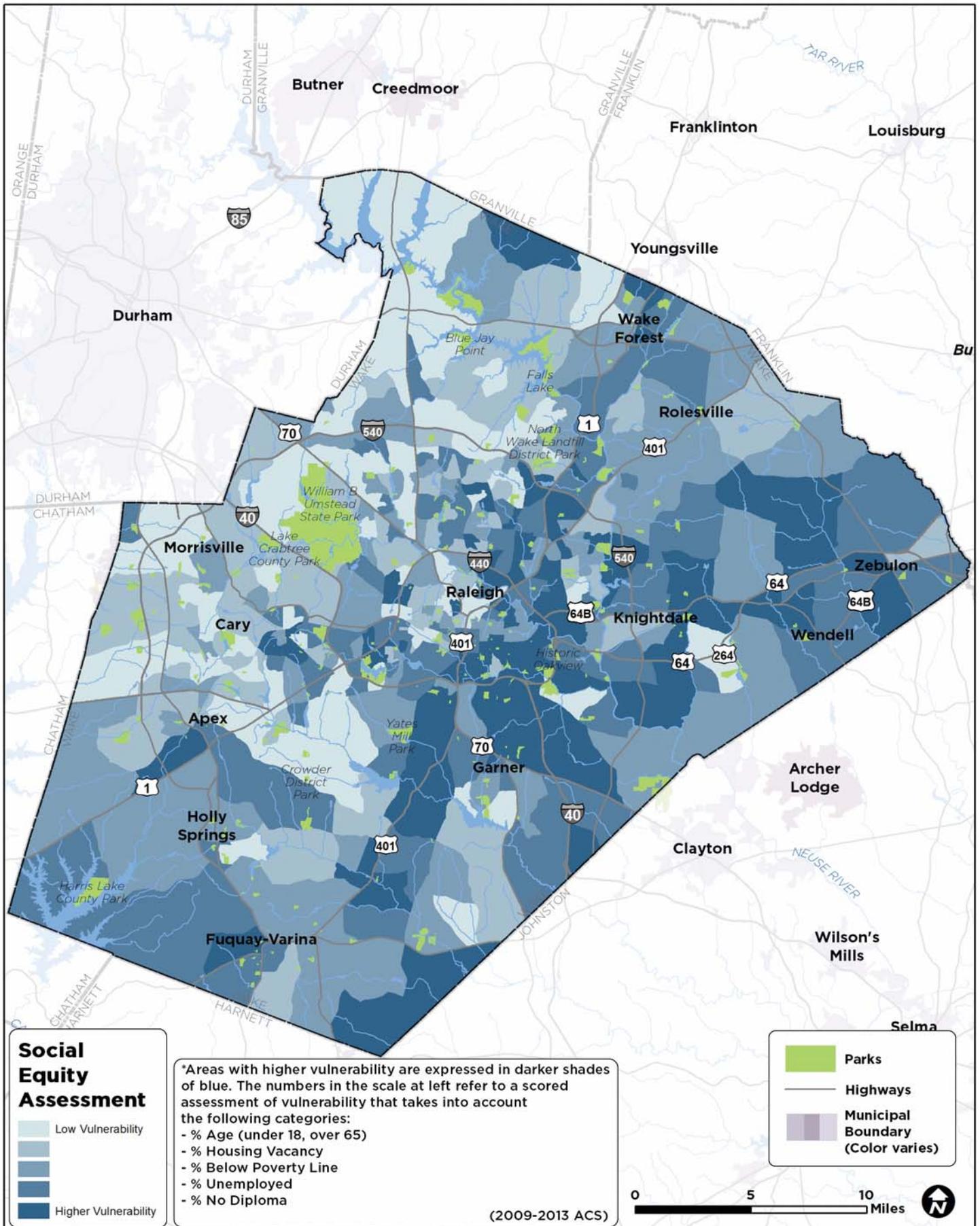
Map 2.4 Existing Trails

Wake County features almost 300 miles of existing greenway trails, including over 100 miles in the City of Raleigh and over 70 miles in the Town of Cary alone. The East Coast Greenway spine traverses the Triangle region, coming through Durham as the American Tobacco Trail, and extending through Cary and Raleigh, to the Neuse River Greenway. Only a couple short sections are remaining to complete the East Coast Greenway through this region. At 33 miles, the Neuse River Greenway is the longest continuous trail in the state of North Carolina, connecting Wake County to Johnston County. Dozens of miles of trail can also be found in Umstead State Park and Falls Lake.

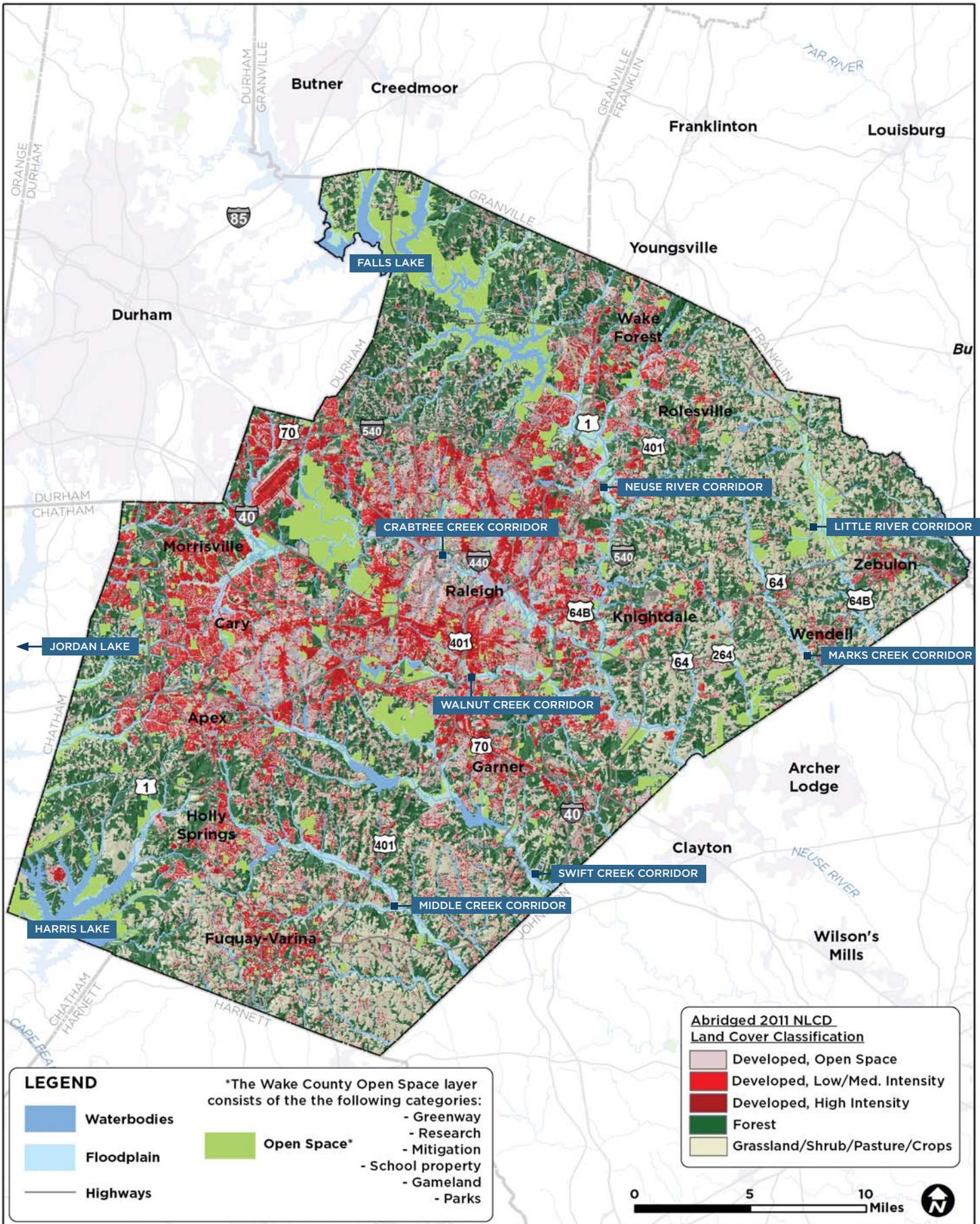
MAP 2.0 WAKE COUNTY STUDY AREA



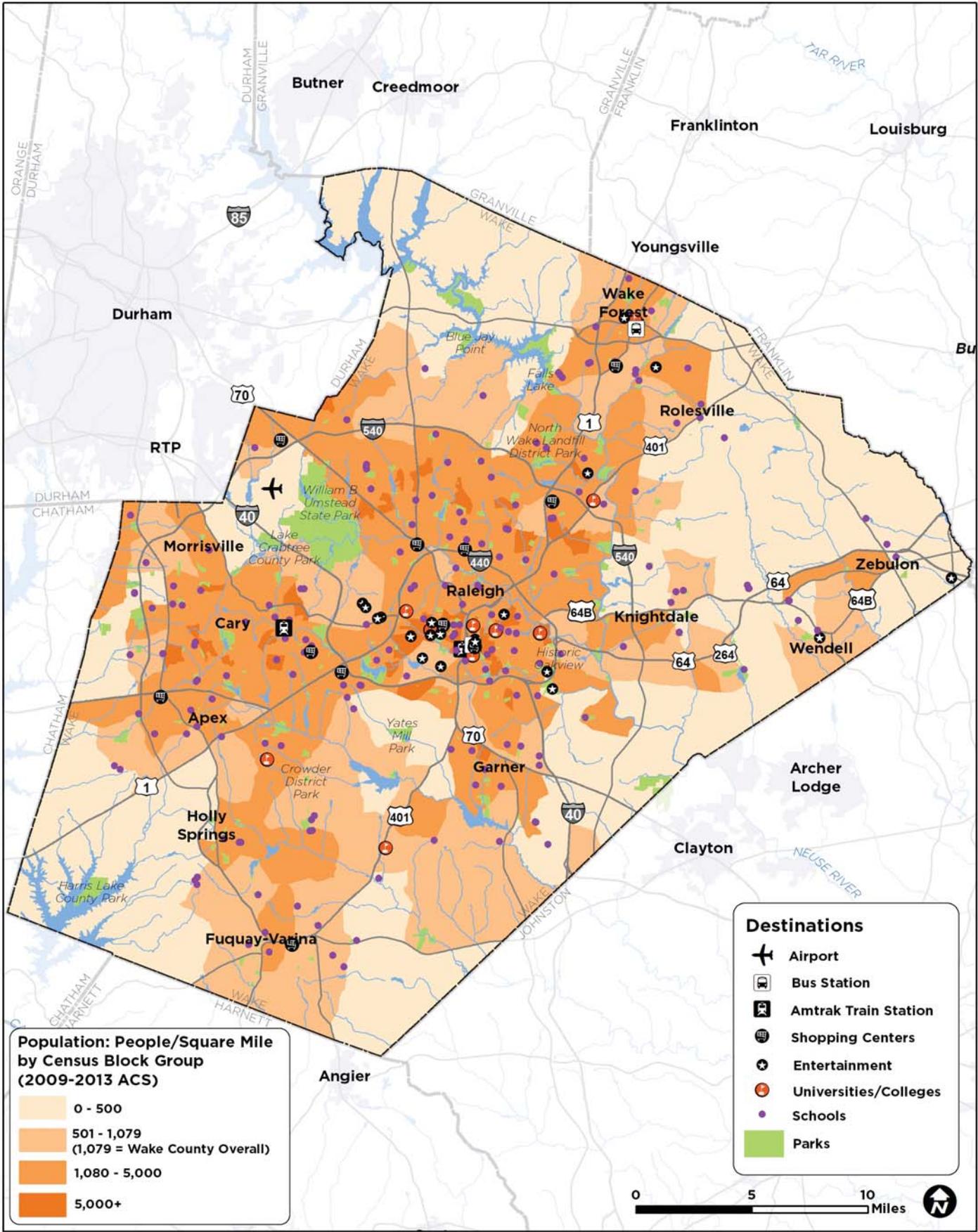
MAP 2.1 SOCIAL EQUITY/VULNERABILITY ASSESSMENT



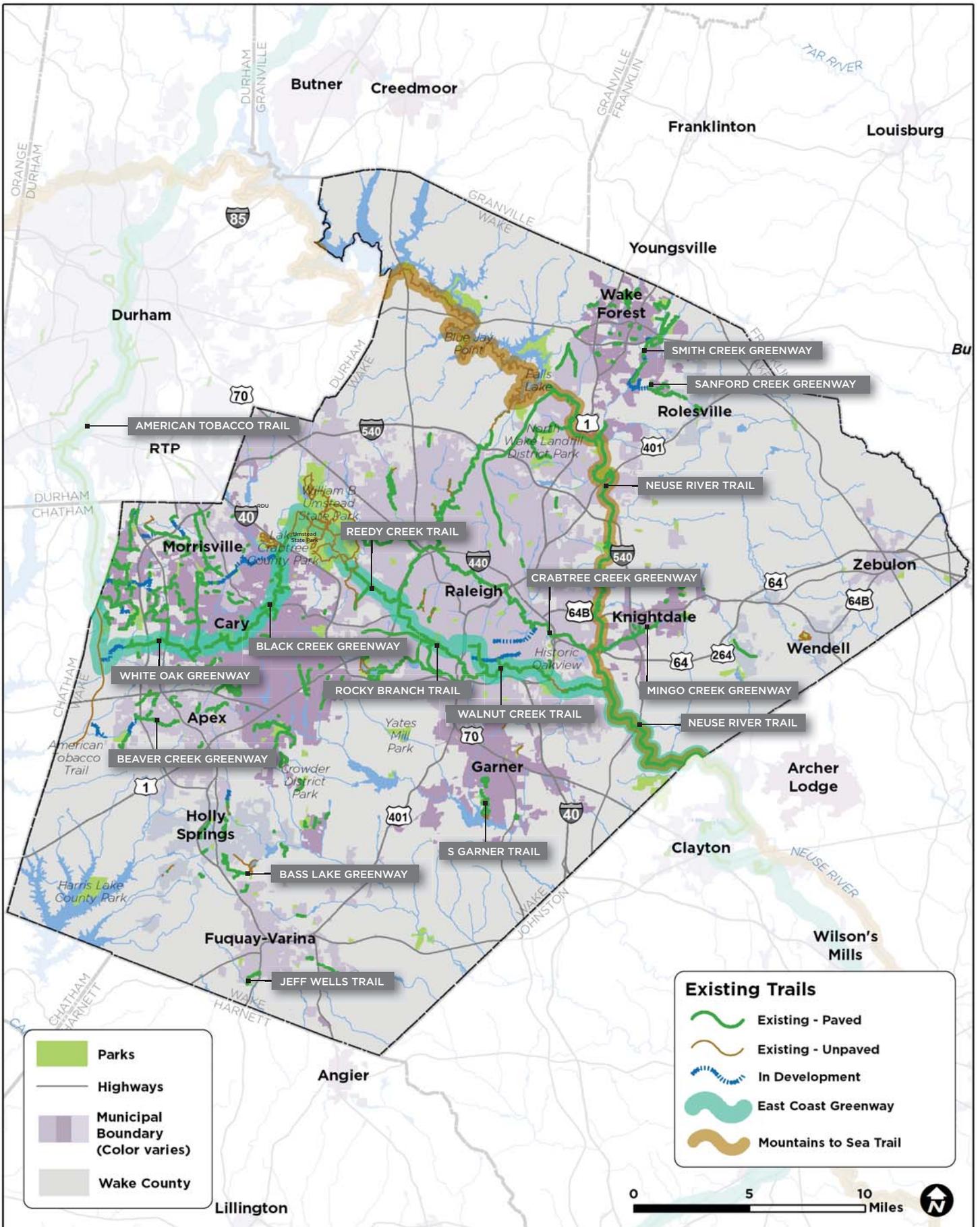
MAP 2.2 ENVIRONMENTAL FEATURES



MAP 2.3 POPULATION AND DESTINATIONS

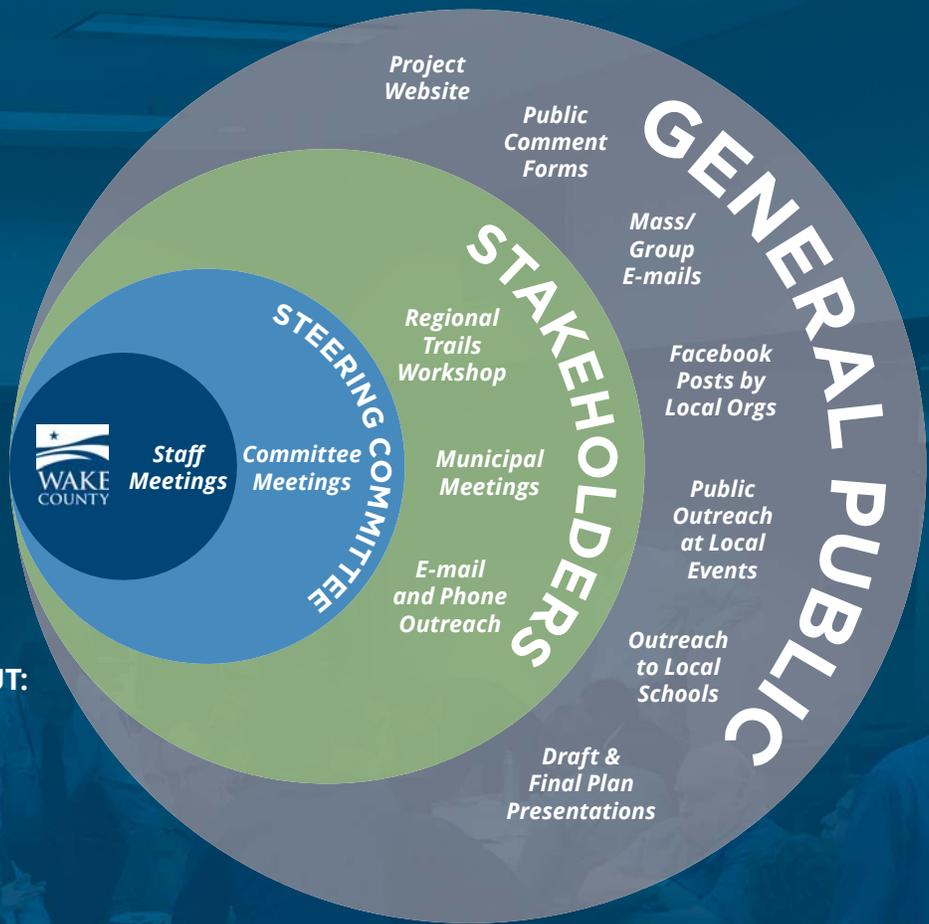


MAP 2.4 EXISTING TRAILS



Public Process Overview

KEY TYPES OF MEETINGS & PUBLIC INPUT:



- 16** STEERING COMMITTEE MEMBERS, WITH 3 OFFICIAL MEETINGS

- 47** STAKEHOLDERS AT THE REGIONAL TRAILS COORDINATION WORKSHOP

- 5** OUTREACH SESSIONS AT LOCAL EVENTS

- 27** PUBLIC HIGH SCHOOLS CONTACTED FOR PLAN OUTREACH

- 25** LOCAL ORGANIZATIONS CONTACTED THROUGH FACEBOOK

- 4** DRAFT AND FINAL PLAN PRESENTATIONS

- 2,300+** PUBLIC COMMENT FORMS

- 1,400+** UNIQUE VISITORS TO THE PROJECT WEBSITE



"We live in one of the most beautiful places on earth, and yet our past successes provide no assurances of future successes. If we don't start planning now and protect our great quality of life in Wake County, it will slowly start slipping away."
- Sig Hutchinson, Wake County Commissioner

Images from the December 2015 Regional Trails Coordination Workshop.

STAKEHOLDER COMMENTS ON EXISTING CONDITIONS

In December 2015, nearly 50 project stakeholders met for a countywide trail coordination workshop. The purpose of this inter-jurisdictional workshop was to better understand local priorities and opportunities for greenway connectivity. The meeting was introduced by Wake County Commissioner Sig Hutchison, highlighting a successful and challenging history in greenway trail development in Wake County. Greenway expert Chuck Flink (FASLA) gave the opening presentation, which focused on the emergence of regional trail systems in other parts of the United States, and touched on funding and partnership strategies for implementation. After the opening presentation, project consultants then facilitated discussions in small groups, covering how to build support for greenways, the challenges and opportunities related to trail development, and the key factors to consider for trail project prioritization.

Building Support for Greenway Trails in Wake County

For the first discussion topic, stakeholders were asked, ***“What are the key messages needed to build public support for greenway trails in Wake County?”*** Stakeholder responses focused on communicating the benefits of trails and how trails will make the region’s communities more livable. Some stakeholders pointed out that the public support for greenways is already there now, and that trail proponents could be more aggressive in building upon the current levels of support. “Connectivity” was suggested as an overarching theme to focus on, with the following other benefit-related topic areas:

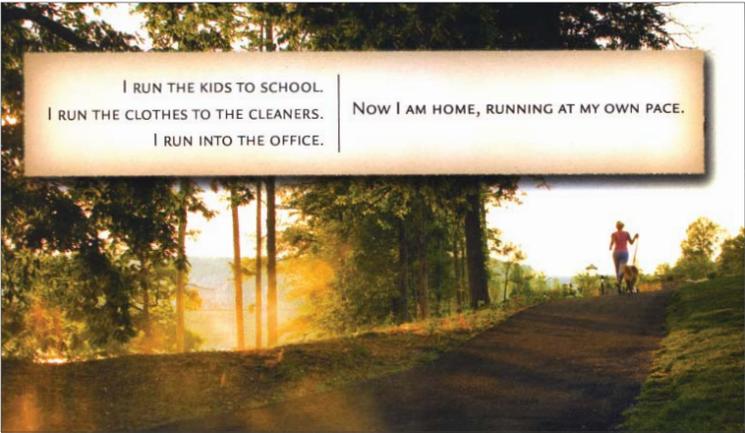
- ***Health, Wellness, and Happiness:*** Stakeholders suggested the message should be very positive, highlighting health, wellness, and happiness.
- ***Safety:*** Examples included teaching how to ride bicycles safely and communicating the need for more “off-road” bicycle and pedestrian facilities that do not require sharing space with automobiles.
- ***Environmental Protection:*** Locals and visitors alike should know this is a place that cares about the environment, and the trail system could be a way to promote that. The trail system could be a tool for education in nature, and for actual protection of water resources and habitat along greenway corridors.
- ***Social Equity:*** Greenways should be places that bring people together and build community. Trail-related outreach and programming events should be used to promote greenways as inclusive public places for a diverse range of people. Local art, history, culture, and native plants could all be incorporated into certain trail features or trail programs.
- ***Economic Benefits:*** Greenway planners should focus on property values and how trails can support local businesses. Mobile apps, paper maps, wayfinding, and strategically located trail heads (parking), can be used to promote trail tourism in the region, and to direct trail users to nearby businesses. Planners should quantify the return on investment for the trail system and communicate it to potential funding partners, decision-makers, and voters.
- ***Communications:*** Salient examples of successful greenway trails should be communicated, focusing on what is already happening in Wake County with respect to greenways. Key

outreach efforts could center around a coordinated campaign among local and regional tourism and visitor bureaus, including a strong social media component and an overall branding of the trail system for “brand recognition.” Special effort should be made to reach out to smaller communities to build support for trails.

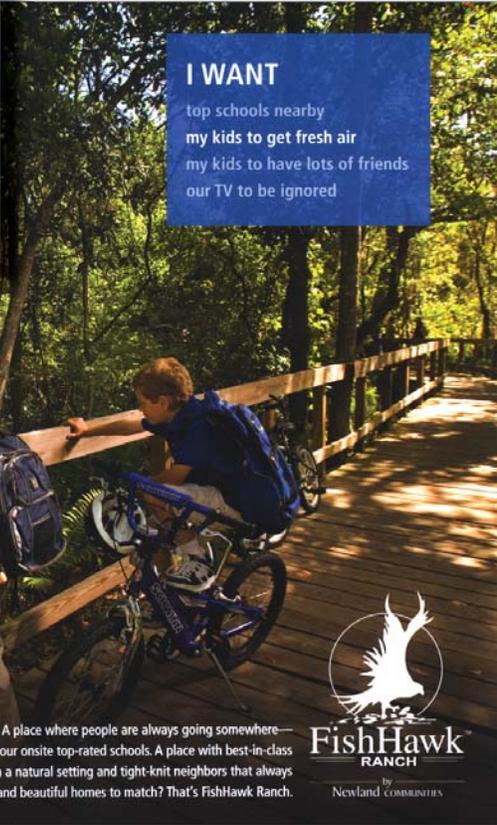
Challenges and Opportunities for Trail Development in Wake County

The second discussion topic was on the key challenges and opportunities to trail development in Wake County. Key themes in stakeholder responses included the topics of trails and development, funding, and overcoming physical and social barriers to trail development.

- **Trails and Development:** With several representatives from the residential development community, some discussions focused on how developers can play a more active role in greenway trail development. Some developers want to include greenway trails in development, but some are still not interested. A desire for mutual benefit was expressed, using each other’s interests to find a solution. Developers want to be compensated, credited, or recognized for dedicating greenway space, and dislike being singled-out to bear the costs of greenway trail dedication. For example, impervious surface calculations can limit trails within some new developments, and a credit or exception for trails would help offset that barrier. Some developers also feel that



Many developers understand the positive impact of trails on property values, and they use them to market their projects; left and below are examples of two magazine advertisements from developers that focus their marketing on greenways. These images are from ads in North Carolina and Florida.



At the award-winning Fishhawk Ranch, nearly 30 miles of trails weave throughout the community, connecting the many parks, amenities, villages and neighbors. Soon to be one of the largest community trail systems in the country, each pathway was carefully positioned to minimize the impact on the existing plant life.



existing landowners, in places that are already developed, should somehow contribute to the cost of providing the facility. From the municipal perspective, they would like to see more developers providing greenway trail infrastructure, the same way they are required to provide sidewalks and roadways. Ultimately, both local governments and developers want to see burden shared in some way – which speaks to the inter-stakeholder effort needed to create a regional greenway system. One potential solution could be to highlight model developer partnerships, model community policies, and model incentives for developer-driven construction. Communicating the potential developer benefits was also mentioned, such as the potential increase in property values and sales.

- **Funding:** The role of Wake County was brought up several times in the discussion of funding, and whether or not they would be able to play a role in filling the gaps between municipalities and between existing trails. The challenge of “the last mile” was brought up, referring to the difficulty in completing trail segments on the fringes of communities (between municipalities and between Wake and surrounding counties). There may be an opportunity for Wake County to play a role in incentivizing those connections at the edges of jurisdictions, and at the very least, facilitating communication and coordination across jurisdictions
- **Physical Barriers:** The discussion of physical barriers revolved around both natural and man-made factors in trail development. Natural barriers, such as crossing wetlands and waterways present design challenges, particularly in finding solutions that are cost-effective. Similarly, man-made barriers, such as railroads and major highways, present their

own design challenges, which are also often expensive, such as trail overpasses and underpasses. For example, the “Complete 540” project is an example of a potential physical barrier for trail connectivity, and US 64 is an example of an existing barrier in connectivity (for Apex and Cary). Other man-made features may present opportunities for connectivity, such as utility corridors. Public sewer corridors are used as a key part of many trail systems, and private utilities, such as power and gas, have their own guidelines for trail development within their corridors.

- **Barriers Related to Operations, Management, and Programming:** Community trails sometimes face skepticism because of a lack of understanding regarding the safe opportunities that trails offer residents for recreation and transportation, and the need to address this misconception was brought up by project stakeholders (see the opposite page for more on trail safety and crime prevention). The most common “not in my backyard” sentiments towards trail development can be offset in several ways. First and foremost, if trails are built as part of new development, they are a known factor from the start, and are seen as an asset from the beginning. In the case of “retrofitting” trails, or planning and constructing them in a place that is already developed, a comprehensive outreach and education effort is often needed. In addition to the typical communication about the benefits of trails and the reality of crime on greenways, these efforts could include testimony from residents in other parts of the region that currently live near trails and enjoy them. Particularly helpful are those that were previously opposed to trails that now support them in their own community. For example, trail planners in Wilmington, North Carolina, use video testimony from such residents as a communication tool.

TRAIL SAFETY AND CRIME PREVENTION

The rate of crime on trails and greenways does not exceed the rate of crime in the communities that surround trails and greenways. In fact, a national study of 372 trails demonstrated that serious and minor crimes were much lower on urban, suburban and rural trails than the national crime rates for urban, suburban and rural areas. For example, a study in Charlotte, North Carolina, examined properties neighboring fourteen Charlotte greenways and found the rates of property crimes to be either insignificantly different or lower than the rates in the surrounding neighborhoods.

Still, working with police remains an important part of ensuring that a trail is safe to use. Regular police involvement—especially patrols by bike—can deter crime in many types of public spaces, including trails. See this Plan’s Chapter 3, Recommendations, for more on programs related to trail design and trail safety.

Sources:

- *Martin, W., Ludden, T., Furuseth, O., and Nixon, S. "Preliminary assessment of crime risk along greenways in Charlotte, North Carolina." 2004. Unpublished UNC-Charlotte study.*
- *Tracy, T., and Morris, H. "Rail-trails and safe communities: The experience on 372 trails". 1998. National Rails-to-Trails Conservancy. Web. 4 December 2015.*
- *Rails-to-Trails Conservancy. "Police Work and Safety". 2015. Web. 4 December 2015.*

Stakeholder Input on Prioritization

The third discussion topic was about greenway planning priorities, and what factors to consider in prioritization. The main theme from stakeholder responses to this question centered on the need to make shorter, local connections first, filling gaps in the existing trails system. This would be followed by connections to downtowns and population centers. The general consensus was to focus on the “spokes” of the overall countywide greenway system first, with at least one main artery through each municipality, followed by the “outer rings” of the system.

Another theme of the prioritization discussions was on greenways for transportation versus recreation, and destination-based priorities in rural versus urban areas. Context-dependent criteria was discussed, in which urban area priorities could focus on trails as transportation, closing gaps and making connections from neighborhoods

to trails and trailheads, so people do not have to drive. Rural communities could then focus on low-hanging fruit and trails as recreation, making connections to local parks, schools, or day trip destinations, such as regional parks and neighboring towns.

Stakeholder Input on Mapping and North Carolina as the “Great Trails State”

After the stakeholder group discussions, project consultants then facilitated mapping exercises in small groups, gathering input on a working draft of proposed county connectors that was based on existing trails and proposed trails from existing plans. Input from that exercise is reflected in this Plan’s existing conditions maps and recommendations maps. The meeting concluded with a presentation from greenway expert Iona Thomas (AICP), focusing on North Carolina’s potential as a “Great Trails State,” with emphasis on local successes and the need for trail marketing.

PUBLIC COMMENTS ON EXISTING CONDITIONS

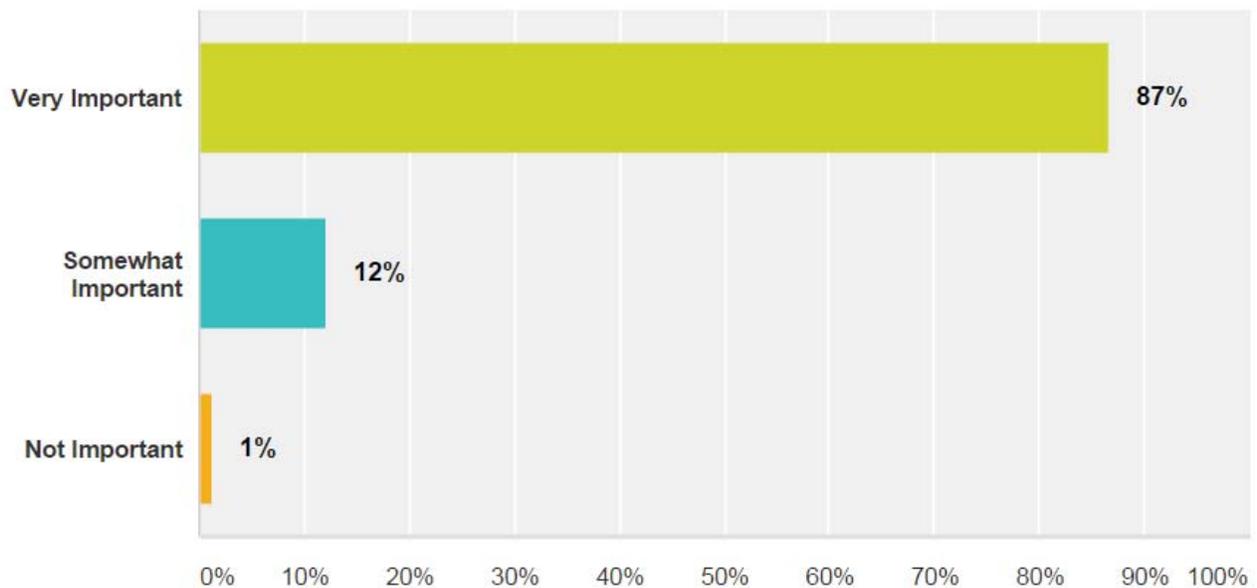
The public comment form was active between November 2015 and March 2016. It was available online through the project website and in hardcopy at outreach events and meetings. People throughout Wake County were encouraged to fill-out these forms through the mass-email lists of project committee members and stakeholders, through social media (Facebook), and through municipal website announcements.

There were more than **2,300 respondents** to the public comment form. Although not statistically valid, the results that follow still reflect the voices of 1000s of Wake County residents who have an interest in the region's greenway trails. Summary responses are displayed below; for full results, please contact Wake County Parks, Recreation and Open Space (PROS).

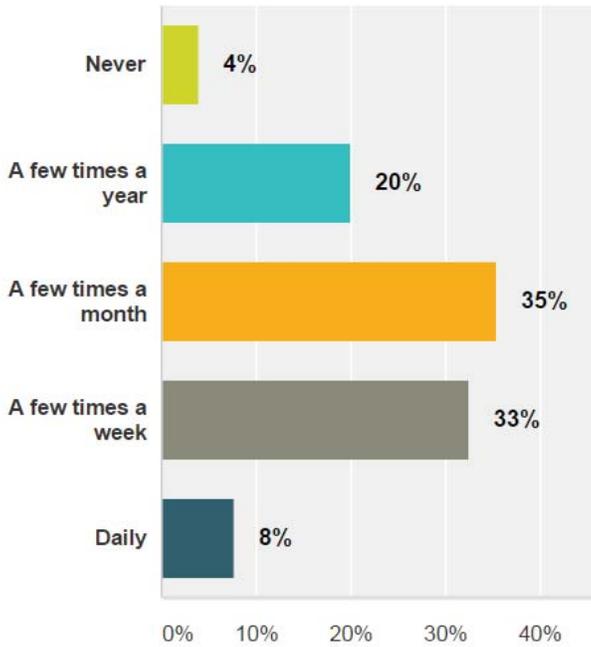


Public input through maps and public comment forms in Fall 2015.

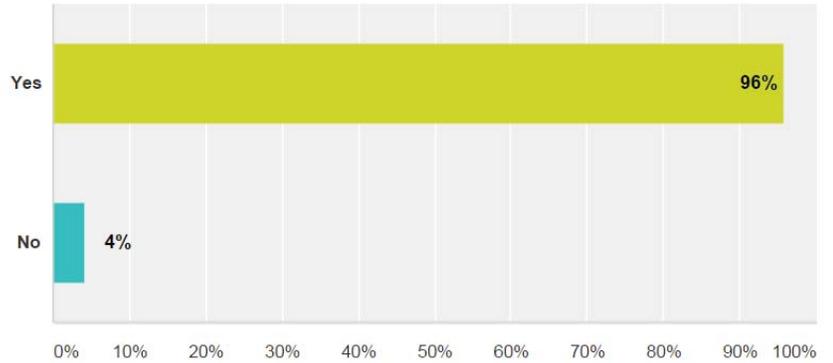
How important to you is the goal of creating more greenways in Wake County?



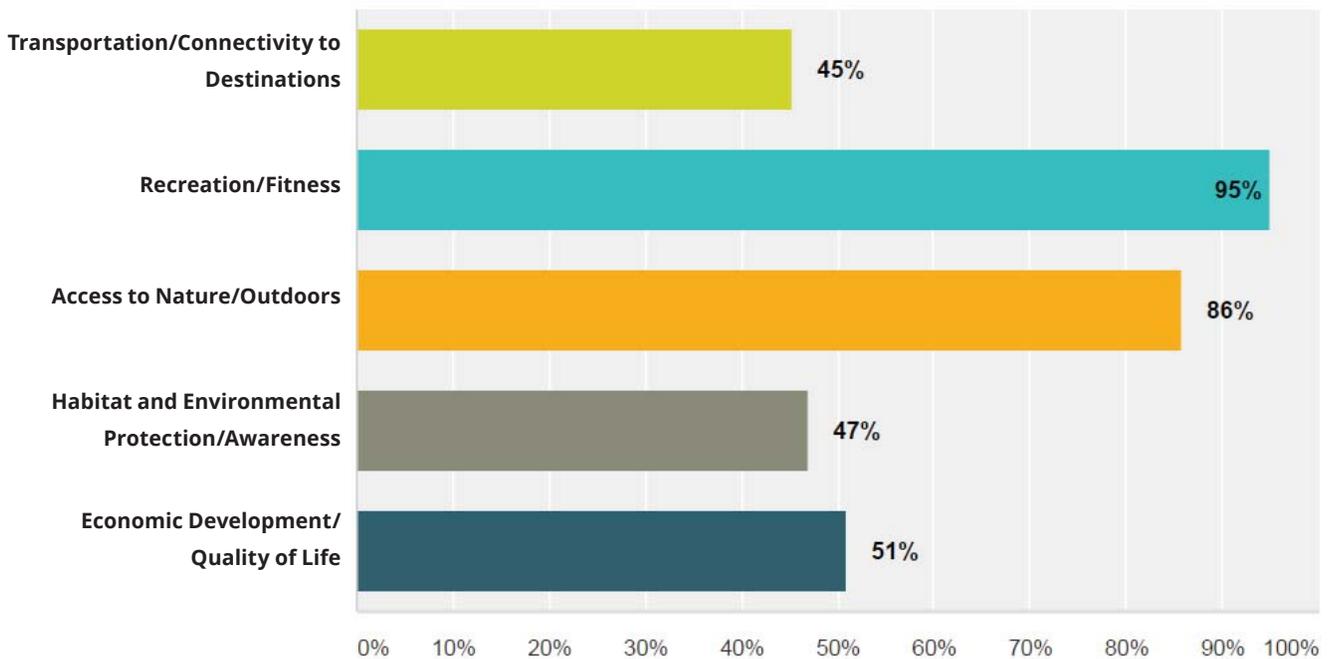
How often do you use a greenway now?



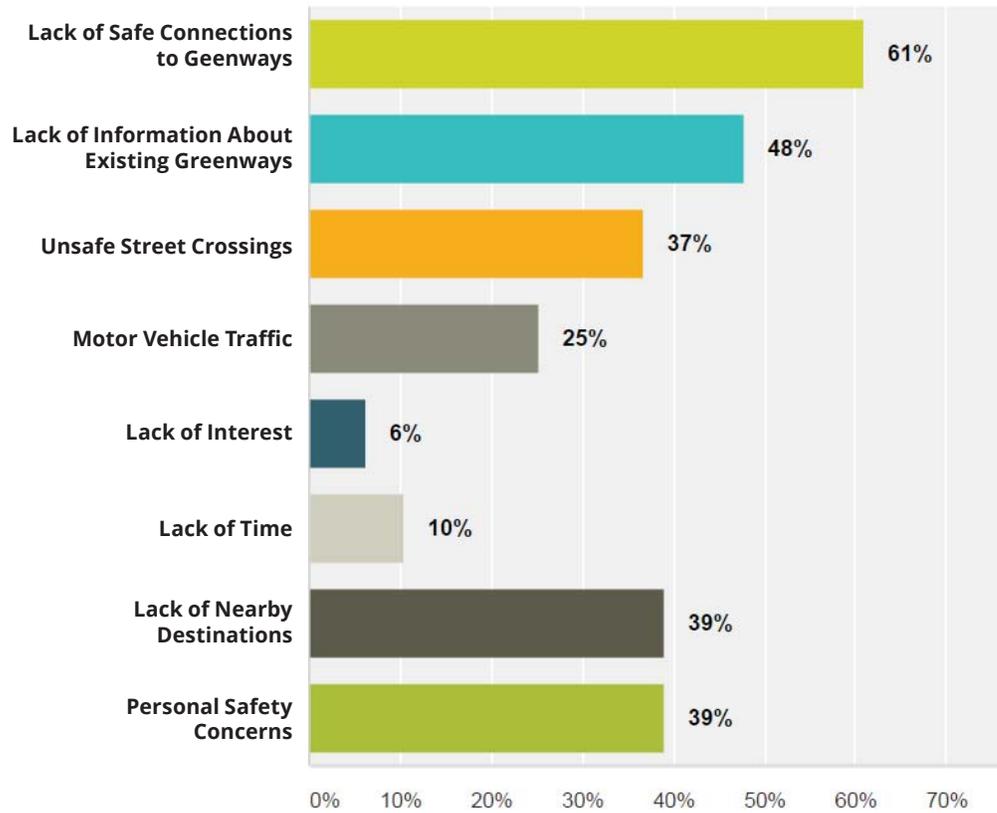
Would you use greenways more often if you were closer to them, or if there were more of them?



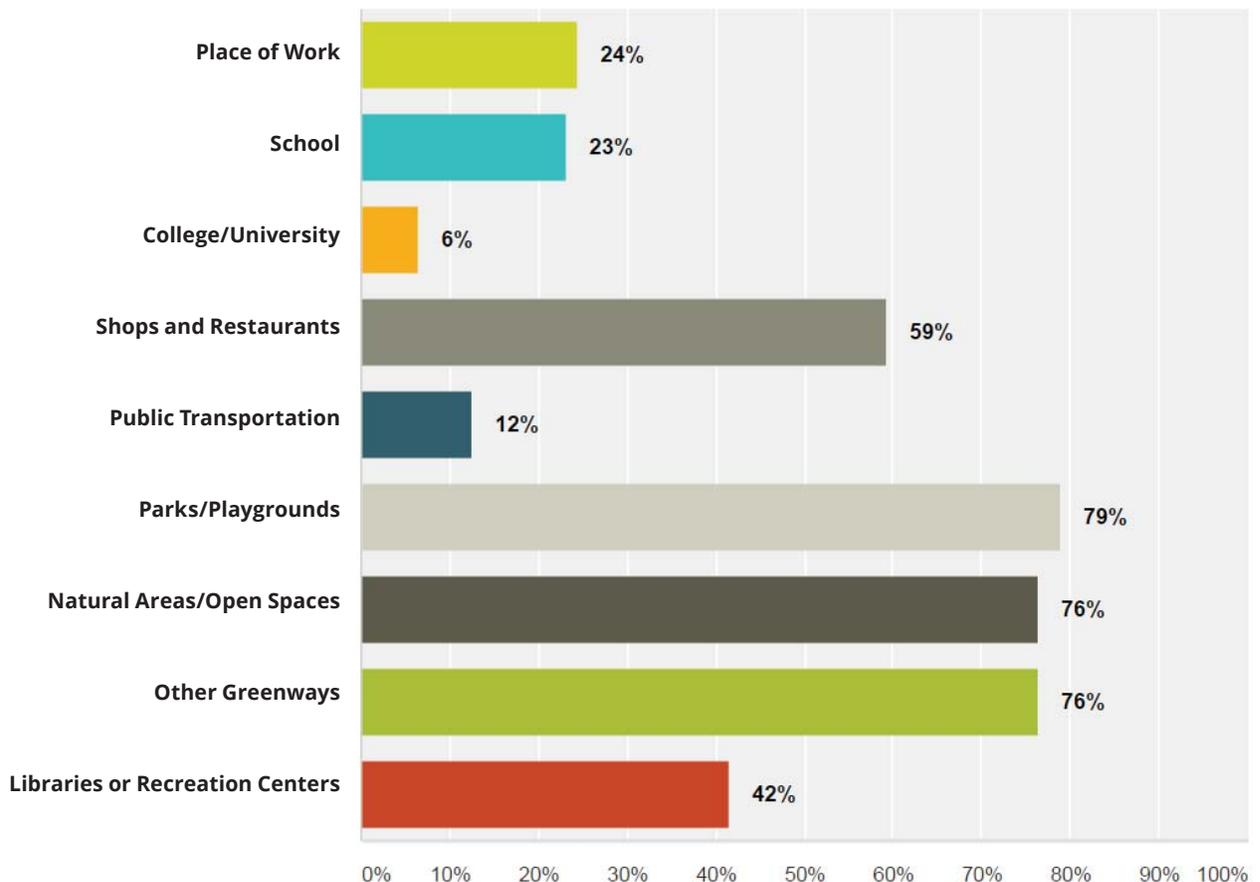
In your opinion, what are the most important benefits and uses of a greenway system? Select all that apply.



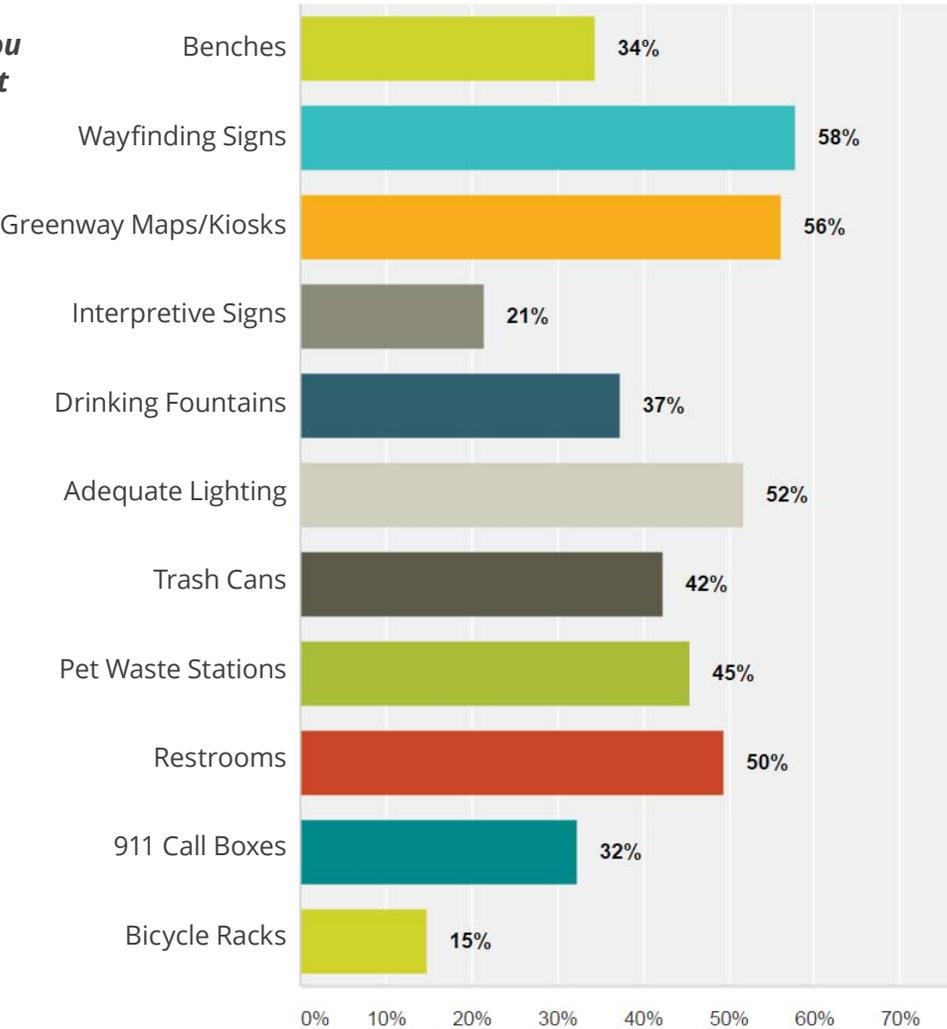
What do you think are the biggest factors that discourage greenway use? Select all that apply.



What destinations would you most like to get to by greenway? Select all that apply.



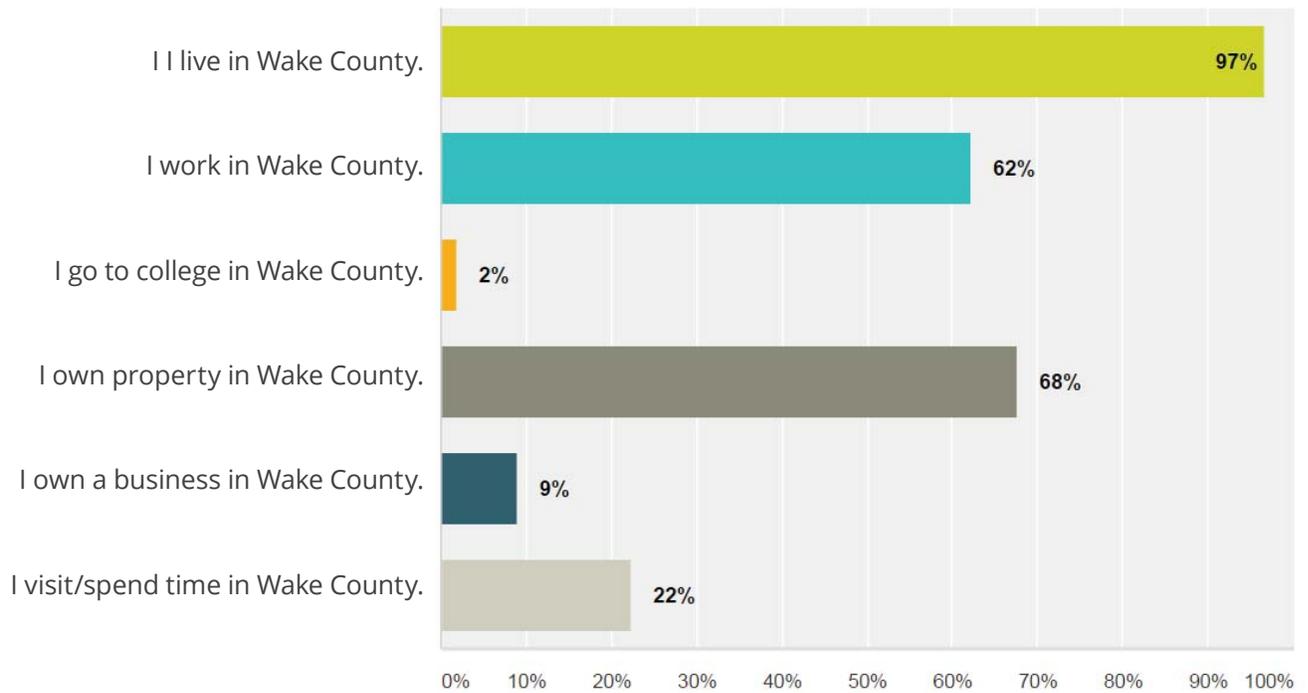
What amenities are most important to you for greenways? Select all that apply.



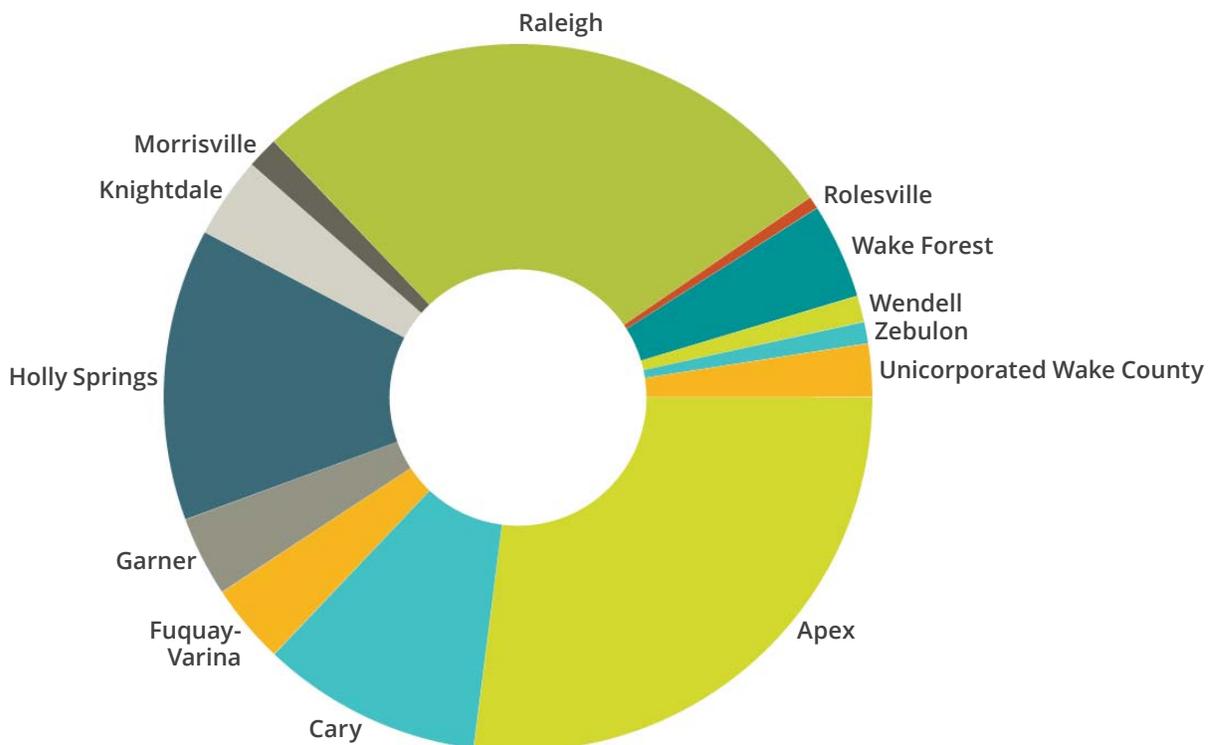
Are there specific locations within Wake County (and its municipalities) that you believe would be ideal for greenway trails, or greenway trail extensions? (summary of responses below)

Respondents overwhelmingly identified Holly Springs, Cary, Fuquay-Varina, and Apex as areas where more greenways are desired. Garner and Knightdale were also mentioned. Within Holly Springs, specific locations that were identified include the 12 Oaks neighborhood, Middle Creek High School, Sunset Lake Road, and Highway 55. Respondents emphasized the importance of connectivity of greenways in terms of connecting to existing trails as well as to neighborhoods and other municipalities. Recommendations include connections from Cary and Apex to the American Tobacco Trail, connections to the Crabtree Creek greenway, and connections from Wake Forest to the Neuse River Trail. Within Raleigh, respondents felt that it was important to have safe connections to and from downtown Raleigh as well as greenways that connect to Renaissance Park and Six Forks Road. Within Apex, the Beaver Creek greenway system was mentioned as an existing greenway that should be extended. Respondents indicated that Apex needs more greenways, preferably ones that connect to neighborhoods and Apex Nature Park. While there are existing greenways in Cary, respondents noted that they don't connect to major destinations and would prefer connections to downtown Cary and other greenways.

What is your connection to Wake County? Select all that apply.



Please share where you live, so we can better ensure broad participation in the comment form.



Are there other comments you would like to share about the greenway plan?

Almost 30% of survey respondents provided additional comments about the greenway plan. Overall, responses were positive and respondents are eager to see continued progress towards improving and building more greenways in Wake County. A major theme was the emphasis on connectivity, especially in terms of connecting existing greenways in Wake County. Due to increasing traffic congestion, respondents indicated that they would like to use the greenways for commuting to work if they connected to major destinations and residential areas. Respondents believe that greenways are a safer and more accessible option for biking, but indicated that they would prefer greenways to be separated from traffic or busy roads. Another major theme that emerged was the recognition that greenways are a major boon for tourism as well as property values. While there weren't many negative comments, respondents indicated that maintenance of greenways could be improved. In particular, wooden bridges and boardwalks tend to become slippery when they are wet and pose safety hazards for bicyclists. Below are sample quotes from the responses to this question:

"My husband and I were just talking about how we would love to ride our bikes from home to downtown, the library, etc., but there is no safe way for us to get there. We currently live near Sunset Lake and Holly Springs Roads, and both include spots that are too dangerous for bikes so a greenway would be perfect."

"Southern wake county (Garner) has little to no greenways or parks. The majority of these are centered around areas with higher income populations like Holly Springs, Cary, etc. The middle and lower income residents could benefit greatly to having a greenway connected to the larger system for use, recreation, and health benefits."

"There are lots of great greenway trails; however, many are short in-out spurs. Few are loops that provide interesting, new scenery along its entire length. Also, many cross busy roads that are dangerous to get children across safely."

"I would like more to connect in Cary. There are a few nice ones but most of them are short and don't really go anywhere."

"Apex does not have a continuous system of greenways so would love to see them extended and joined into one large greenway."

"I would love to see better connections around schools. It just makes sense for students and school staff to be able to use greenways to walk/bike to school. The issue at the moment is that our greenways are not necessarily laid out with active student transportation in mind. I would especially love to see more of this around high schools, but all schools."

"I think Raleigh has done a fabulous job with the greenway system and look forward to it expanding more."

"More greenways where we can cycle or walk to the grocery store, restaurants etc are welcomed."

"With traffic getting heavier through Fuquay, it would help to have increased connectivity through an extended greenway network. It would also help the area grow more sustainably."

"The Greenway is one aspect of living in Raleigh that has increased my standard of living significantly. Please keep expanding, because I love to bike, but not on the road!"

"I'm very pleased to learn of expansion plans for the greenway system. As an active cyclist, I enjoy riding the greenways far more than the roads due to the enhanced safety compared to riding with vehicular traffic."

"I really like the greenways. The more the greenways the better it is for the community."

"Greenways are a great way to promote the outdoors and provide a safer place to walk, run, and bike."

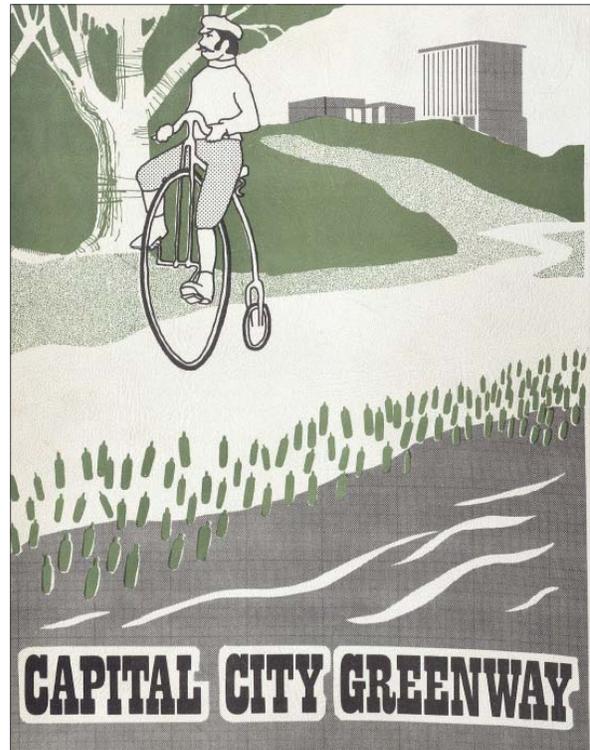
"I love the greenways and it's a huge part of why I live here. Please connect more of them to increase the riding distance."

"Greenways are a tremendous asset. Keep investing in them."

SUPPORT FOR GREENWAYS IN EXISTING PLANS

Wake County and its municipalities have a long history of greenway planning. The City of Raleigh’s 1972 Capital City Greenway report, by Bill Flournoy, explained the greenway concept as it could be implemented in Raleigh, and suggested how a program might be created. Today, each of Wake County’s 12 municipalities have their own plans for greenways, some in stand-alone citywide greenway master plans, others as part of larger citywide transportation or recreation planning initiatives. The table below provides brief summaries and highlights from the most relevant and current greenway planning initiatives in each community, including some plans that are regional in nature, or from neighboring jurisdictions.

These do not represent *all* plans in these communities, but rather the *most relevant and recent* plans that address issues related to this Wake County Greenway System Plan.



Cover of the 1972 Capital City Greenway report by Bill Flournoy.

SUPPORT FOR GREENWAYS IN EXISTING PLANS	
WAKE COUNTY	
Parks and Recreation Master Plan (2008)	The plan outlines goals and strategies for Wake County to focus on in order to protect the environment and provide recreational opportunities for its residents. Results from the citizen survey indicated that Lake Crabtree County Park was the most visited park. In addition, walking and hiking trails were the highest rated new facilities that citizens want. Three major trail projects were identified: Swift Creek Greenway, Neuse River Greenway, and extension of the American Tobacco Trail South. In this plan, Wake County also identified four potential future County Park facilities. They are Lake Myra County Park, Little River County Park, Southeast Wake County Park, and the Brady Jefcoat Property.
Park Facility Master Plan Updates (2016)	The purpose of this plan is to update the Master Plans for each of the County’s parks. One of the goals is to participate in the planning and collaboration of municipal and regional trail and greenway plans. The plan includes an existing conditions analysis of Wake County’s 6.5-mile portion of the American Tobacco Trail, along with recommendations for improving the trail. Potential recommended improvements for the ATT include: User orientation and wayfinding, access to water, parking, lighting, shelters, and bike repair stations.

<p>Open Space Plan (2006)</p>	<p>This plan promotes the protection of at least 30% of Wake County’s land and water as permanent open space. Five types of greenways are proposed: 1) no facility development, 2) limited development, low-impact uses, 3) Multi-Use Unpaved Trail Development, 4) Multi-Use Paved Trail Development, 5) bike and pedestrian facilities in rights-of-way. Recommendations are outlined according to those adopted in open space, greenways, and/or park plans for each municipality in Wake County.</p>
<p>Transit Plan (2015)</p>	<p>The transit plan focuses on enhanced transit within the county. Recommendations include strengthening cross-county connections via a commuter rail line and enhanced bus service, connecting all 12 municipalities, expanding the network and BRT service, and increasing the frequency of service. There is no mention of connecting transit service to greenways or trails, although the plan prioritizes enhancing transit service in urban cores and employment centers.</p>
<p>Trails and Greenways of Wake County: pocket guide and community resource</p>	<p>This resource provides a listing of all the trails and greenways in each of the 12 municipalities of Wake County and provides maps of the parks, greenways, and trails. This resource is currently out of print, but demand for these hardcopy maps has remained consistently high.</p>
<p>CITY OF RALEIGH</p>	
<p>Capital Area Greenway Planning & Design Guide (2014)</p>	<p>This plan, by the Parks, Recreation and Cultural Resources Department, identifies existing and proposed portions of the Capital Area Greenway System. The Capital Area Greenway Trails Composite Map shows existing and proposed greenway trails. The plan’s “Cross City Greenway Trails” are particularly relevant to regional connectivity, including the Reedy Creek Trail, Rocky Branch Trail, Crabtree Creek Trail, and the Neuse River Trail.</p>
<p>TOWN OF APEX</p>	
<p>Parks, Recreation, Greenways, and Open Space Master Plan Map (2015)</p>	<p>According to this plan, “Greenways are the highest priority for Apex residents. They desire easy access to greenways from their homes, and want to be able to travel to parks, commercial centers, work, and schools on a system of well connected paths and bicycle facilities.” Top trail priorities from this plan include: 1) American Tobacco Trail (ATT) connections, including: Jaycee Park to Downtown (1,500 LF); Kelly Road Park to Apex Nature Park (1.2 miles); and Apex Nature Park to American Tobacco Trail (2.3 miles), 2) Middle Creek Greenway connection to ensure safe crossing at the future I-540, and 3) White Oak Creek Greenway through Apex and to the ATT, working in collaboration with the Town of Cary.</p>

TOWN OF CARY	
Parks, Recreation, and Cultural Resources Master Plan (2012)	This plan details key trail connection corridors that link parks, schools, cultural and business centers, open space, other trails, and adjacent jurisdictions. Primary Greenway Trail Recommendations include: 1) Umstead to ATT, 2) RTP to Middle Branch, 3) Umstead to Hemlock Bluffs, 4) Downtown to Raleigh, and 5) Crabtree to ATT.
TOWN OF FUQUAY-VARINA	
Community Pedestrian Master Plan (2013)	In this plan, the top priority shared use path project is the Angier Road Sidepath (all other top projects are for sidewalks). This path would provide access to Fuquay Mineral Spring Park, Fuquay-Varina Public Library, and the proposed Town walking loop route.
TOWN OF GARNER	
Comprehensive Parks, Recreation, and Greenways Master Plan (2007)	This plan serves as a guide for expansion of future parks and recreation facilities and programs. Residents who participated in the planning process listed walking and pedestrian-related facilities as their highest priority. Walking is the highest ranked activity that respondents would like to see the Town of Garner provide facilities for over the next 10 years. Immediate greenway and sidewalk needs are: 1) North Garner Greenway, 2) Downtown Pedestrian Route, 3) Garner Loop, and 4) North-South Greenway. Near-term greenway and sidewalk needs include: 1) Timber Drive Sidewalk Connector, 2) West Garner Connector, 3) East Garner Schools Connector, 4) Mahler's Creek Greenway, and 5) Swift Creek Greenway Phase 1.
TOWN OF HOLLY SPRINGS	
Parks, Recreation, and Open Space Master Plan (2007)	Greenway corridors have been identified along the Colonial Pipeline, along Sunset Lake and Sunset Lake Road, from the White Oak greenway trail to Apex municipal trails and to New Hill-Holleman Road at Friendship Park. Greenway trails would be established from the Fuquay-Varina railroad corridor to other Fuquay-Varina greenway trails and to Buckhorn Creek. Trails will also be established from Friendship Road and New Hill-Holleman Road to the American Tobacco Trail corridor.
TOWN OF KNIGHTDALE	
Knightdale Parks, Recreation, and Open Space Master Plan (2010)	The overarching goal of Knightdale is to be an active, engaged community and the objectives outlined in this plan support this goal. The following greenway corridors are recommended for improvement with a minimum 10-foot wide multi-purpose paved trail: Mingo Creek, Beaverdam Creek, Mark's Creek, Poplar Creek, Clark's Branch.
TOWN OF MORRISVILLE	
Parks and Recreation Master Plan (2011)	The 2011 Parks and Recreation Master Plan focuses on the recreational needs of the community and how to accommodate them for the next ten years. The main proposed greenways are along Chapel Hill Road, McCrimmon Parkway, and Morrisville Parkway.

TOWN OF ROLESVILLE	
Rolesville Open Space and Greenways Plan (2002)	The purpose of the plan is to protect natural and cultural resources. The plan calls for stream buffer zones, greenway corridors, bike routes, and scenic road designation for at least five corridors. Trails identified in the adopted map include the Buffalo Creek Trail, Sanford Creek Trail, Toms Creek Trail, Cedar Fork Trail, and Perry Creek Trail.
TOWN OF WAKE FOREST	
Wake Forest Open Space & Greenways Plan Update (2009)	The greenway system recommendations of the Wake Forest Open Space and Greenways Plan are broken down into two primary phases for future development: Phase 1 - Smith Creek and Dunn Creek Corridors (key north/south corridors that connect Wake Forest with the Neuse River), and Phase 2 - Richland Creek, Sanford Creek, and the NC 98 Bypass Corridors.
TOWN OF WENDELL	
Zebulon & Wendell Open Space Plan (2002)	This document is meant to be a visionary plan, which identifies potential open space and greenway corridors throughout the study area. It is the Town of Wendell's desire to update this plan in the near future to account for changes which have occurred since its adoption in 2002. One of the plan's top objectives is to develop multi-purpose recreational trails, specifically to acquire land for a Zebulon-Wendell Greenway between the towns, and to acquire property for regional trail heads and a water quality demonstration project along the Little River Corridor.
TOWN OF ZEBULON	
Zebulon Greenways Master Plan (2015)	Ten greenway corridors are recommended in this plan. The two priority projects are Corridor 1 - Spiderlily Court cul-de-sac in the Taryn Meadows neighborhood to Pippin Road (including the trail around Hendricks Pond in the Weavers Pond neighborhood); and Corridor 3 - Wake County Branch Library and Eastern Regional Center to the Zebulon Elementary School and the Boys and Girls Club (and adjacent residential development).
REGIONAL PLANS/STAKEHOLDER ORGANIZATIONS & AGENCIES	
2040 Long Range Transportation Plan	The 2040 Long Range Transportation Plan (2040 LRTP) lists future highway, bus transit, light rail, bicycle, pedestrian and other transportation projects to be implemented through the year 2040. One of the goals of the plan focuses on the pedestrian and bicycle system that will support recreational opportunities and includes off-road trails. The 2040 MTP recommends extensive integration of bicycle needs into the design and construction of new highways and future and ongoing transportation projects. Maps included in the plan display off-road bicycle and pedestrian facilities in conjunction with on-road facilities that will receive bicycle-pedestrian accommodations only.
Capital Area MPO Northeast Area Study (NEAS) (2014)	The Northeast Area study evaluated the multi-modal network and land use scenarios for northeastern Wake County, southern Franklin County, and Knightdale, Wendell, Zebulon, Rolesville, Youngsville, Franklinton, Bunn, and parts of Raleigh and Wake Forest.

<p>Capital Area MPO Southeast Area Study (SEAS)</p>	<p>This study includes portions of Wake County, including Garner and part of Raleigh. The plan will update CAMPO's overall Comprehensive Transportation Plan and will produce project priorities to be included in the next Metropolitan Transportation Plan. The study is currently underway. The top three planning themes that were identified during the first public symposium are network connectivity, active transportation, and economic vitality. Among the priorities identified, a common theme was that "sidewalks, greenways, and bike facilities are needed to connect to activity centers."</p>
<p>Capital Area MPO Southwest Area Study</p>	<p>The study seeks to create a long-term sustainable transportation strategy for the area. The study area includes the southwestern portion of Wake County and northern portion of Harnett County including the towns of Angier, Apex, Fuquay-Varina, and Holly Springs. Key recommended greenways displayed in the proposed greenways map are along Middle Creek, Highway 55, Kenneth Creek, and Neills Creek.</p>
<p>Center of the Region Enterprise (CORE) Pedestrian, Bicycle, Green Space Plan (2012/2016 Update)</p>	<p>This plan was prepared by the Triangle J Council of Governments (TJCOG). It is intended to help the municipalities, counties and organizations, like the Research Triangle Foundation, located in the CORE area of the Triangle, create a linked network of pedestrian, bicycle, and green space facilities. According to the Plan's Map 6: Bike Top Priorities, the top projects in Wake County include the following (from north to south): TW Alexander, Briar Creek/Lumley, Crabtree Creek Greenway, Davis Drive, and the White Oak/Black Creek Greenway. A plan update was completed in February 2016.</p>
<p>WalkBikeNC (2013)</p>	<p>WalkBikeNC, North Carolina's Bicycle and Pedestrian Plan, was adopted by the NCDOT Board of Transportation in 2013. An evaluation of the existing NC bike route system was conducted as part of the 18-month statewide planning effort. The following state bike routes go through Wake County: Route 1 - The Carolina Connection, Route 2 - The Mountains to Sea, and Route 5 - The Cape Fear Run. More information on these routes can be found at www.ncbikeways.com.</p>
<p>East Coast Greenway</p>	<p>The East Coast Greenway (ECG) is a developing trail system, linking many of the major cities of the Eastern Seaboard between Canada and Key West. Over 30 percent of the route is already on traffic-free greenways, creating safe, accessible routes for people of all ages and abilities. Of all metropolitan areas the East Coast Greenway (ECG) route runs through, the Triangle has the most complete stretch (95%) of off-road, shared use trails on the entire ECG route. Current goals for the ECG in North Carolina include: Signing the route with ECG trail markers to raise awareness and enhance the trail experience, designating trails, supporting connections between existing greenway trails and gap areas, and hosting events.</p>
<p>Research Triangle Park Master Plan (2011/2015)</p>	<p>The master plan's initiatives include providing green open spaces as integral areas of the development clusters at Triangle Commons, Park Center and Kit Creek Center. The planning process for the RTP Park Center Master Plan is currently underway and guiding principles were published in 2015.</p>

<p>Mountains-to-Sea North Carolina State Trail Master Plan (2015)</p>	<p>The vision for the MST is an off-road hiking trail connecting Clingmans Dome on North Carolina’s western border to Jockey’s Ridge State Park on its eastern Outer Banks. In this master plan, the North Carolina Division of Parks and Recreation (DPR) is focused on completing the trail. The designated segment of trail through Wake County is complete, and is routed as follows: Unpaved trails in Falls Lake in east Durham County and northern Wake County connect with the paved Neuse River Greenway at the eastern edge of Falls Lake. The Neuse River Greenway travels south alongside the Neuse River for 28 miles until it terminates near Clayton in Johnston County at a trailhead parking lot.</p>
<p>NCDOT: Complete 540</p>	<p>The proposed “Complete 540” project, also known as the Southeast Extension, would extend the Triangle Expressway from the N.C. 55 Bypass in Apex to the U.S. 64/U.S. 264 Bypass in Knightdale, completing the 540 Outer Loop around the greater Raleigh area. As of early 2016, the Federal Highway Administration has approved the Draft Environmental Impact Statement prepared for the Complete 540 project, and NCDOT has selected a preferred alternative (see Map 3.0 of this Plan). Construction will likely be done in phases, and the time line for each phase will depend on available funding.</p>
<p>ADJACENT COUNTIES/COMMUNITIES</p>	
<p>Durham Trails and Greenways Master Plan (2011)</p>	<p>Goals for the greenway system include connectivity, accessibility, right-of-way preservation, water quality protection, open space preservation, community education and community involvement. The North/South Greenway has remained a top priority.</p>
<p>Town of Clayton Strategic Growth Plan (2008)</p>	<p>The Mountains-to-Sea Trail is a major proposed trail and it connects to downtown Clayton. Several greenways and trails are proposed in Clayton to connect existing parks and neighborhoods with the Mountains-to-Sea Trail. These proposed trails include Sam’s Branch, Little Creek, Mark’s Creek, and Glen Laurel. The MST and other proposed trails generally follow streams and rivers.</p>
<p>Johnston County Mountains-to-Sea Trail Master Plan (2006)</p>	<p>The plan outlines why the trail is needed, what the trail will entail, and steps for implementation. It is anticipated that the trail will be developed in phases, with initial phases occurring in Clayton and Smithfield. Subsequent phases will occur in more rural areas of Johnston County after trail right-of-way has been secured.</p>
<p>Granville County Greenway Master Plan (2006)</p>	<p>The goal of this plan was to develop an inventory of existing utility and rail easements, assess them for feasibility as greenways, and seek public input. Proposed greenway corridors are listed in Section 2 of the plan. Local governments are encouraged to integrate the greenway master plan into their own plans as well as their local land ordinances.</p>
<p>Nash County Parks and Recreation Comprehensive Master Plan (2014)</p>	<p>This plan provides a ten-year vision for the Parks and Recreation Department. The plan states that “the county may consider developing greenways in the future.” Currently there are no greenways in the county, “but the Tar River offers great opportunities for trail development.”</p>