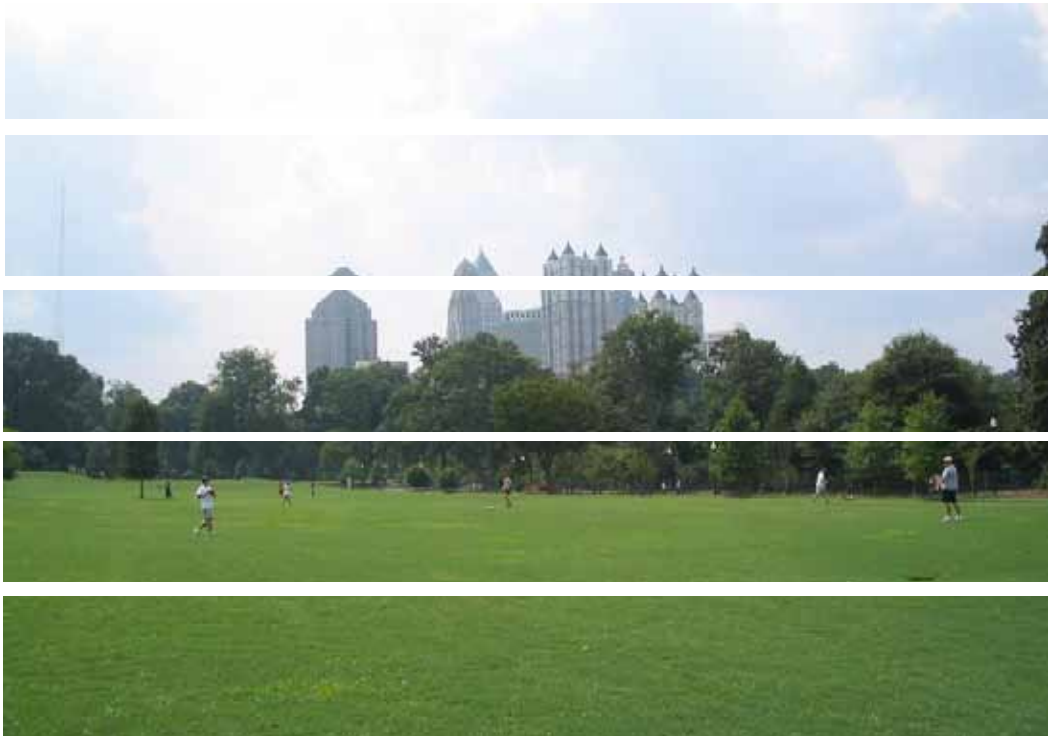


# atlanta nature network

enhancing the city's public greenspace network



*Andrea Rattray*

*Georgia Institute of Technology*

*School of City & Regional Planning*

*Applied Research Paper*

*Dr. William Drummond*

*Spring 2011*



# Table of Contents

<i>Introduction</i>	<b>5</b>
<i>City of Atlanta Greenspace Network Existing Conditions</i>	<b>5-9</b>
City of Atlanta Park System	
City of Atlanta Greenway Acquisition Program	
Atlanta Beltline	
PATH Foundation	
<i>Benefits of Parks</i>	<b>9-16</b>
Why Parks and Greenspace Matter	
Parks and Greenspace for Health	
Parks and Greenspace for Community Improvement	
Parks and Greenspace for Environment	
Greenways to Increase Access to Greenspace	
What Makes Parks and Greenways Successful	
<i>Case Studies</i>	<b>16-19</b>
Boston, Massachusetts	
Raleigh, North Carolina	
Denver, Colorado	
<i>Park Distribution Analysis</i>	<b>19-21</b>
<i>New Regional or Community Park Land Suitability Analysis</i>	<b>22-26</b>
<i>Greenway Network Analysis</i>	<b>27-31</b>
<i>Discussion and Conclusions</i>	<b>32-33</b>



## ***Introduction***

According to the Trust for Public Land City Park Facts 2010 report, parkland is only 4.6% of the entire land area for the City of Atlanta with the median percentage for the 85 most populous cities at 8.3%. It also reports that Atlanta has 7.2 acres of parkland per 1000 persons with the national median of 12.9 acres per 1000 persons (2010, City Park Facts, 2010). The city and the PATH Foundation currently have .33 miles of trails and streambank per 1000 residents and 1.3 acres of conserved greenway property per 1000 residents. In order for Atlanta to compete in attracting new businesses and residents, the city will need to make an effort to increase park acreage and access to greenspace across the area. To achieve this the city will need to do more than create new parks, it will need to implement a network of greenspace that connects people to other resources and recreational opportunities. To develop a network of greenspace within the City of Atlanta the existing park system and potential public space programs will be identified and discussed, the location and distribution of parks will be analyzed, the benefits of parks will be discussed, case studies of cities with successful greenspace networks will be explored and finally areas for increased park acreage and areas for greenspace connectivity will be identified.

## ***City of Atlanta Greenspace Network Existing Conditions***

### **City of Atlanta Park System**

According to the City of Atlanta Parks Department the city contains over 3,200 acres of park space in 332 parks citywide. The city has classified the parks system into eight types of greenspace:

*Regional Park:* These park sites are defined as major sites that serve users outside the city limits. These parks often contain facilities and generate their own revenue. Currently, eight regional parks comprise 1,448 acres and are 44.72% of the total acreage of the City of Atlanta Parks system. The average acreage of these parks is 181 acres.

*Community Park:* These park sites are defined as sites that support organized programming with staff support and often contain facilities such as recreation centers, athletic complexes,

etc. Atlanta currently operates 21 community parks, which total 605 acres and 18.68% of the total acreage of Atlanta parks. The average acreage of these parks is 28 acres.

*Neighborhood Park:* These parks primarily serve communities within a half-mile walkable network and support informal recreational needs. 68 neighborhood parks are currently maintained in the city with 507 acres and 15% of total park acreage. The average neighborhood park size is 7.47 acres.

*Block Park:* These parks are smaller in size and contain limited amenities. 25 block parks exist within the current parks system with 39 acres and are 1.22% of the entire system averaging 1.58 acres in size.

*Garden Park:* These parks are also described as beauty spots and are landscape areas for visual impact and improvement. There are 172 garden parks totaling 94 acres at 2.92% of the total park acreage in Atlanta. The average size of these garden parks is .55 acres.

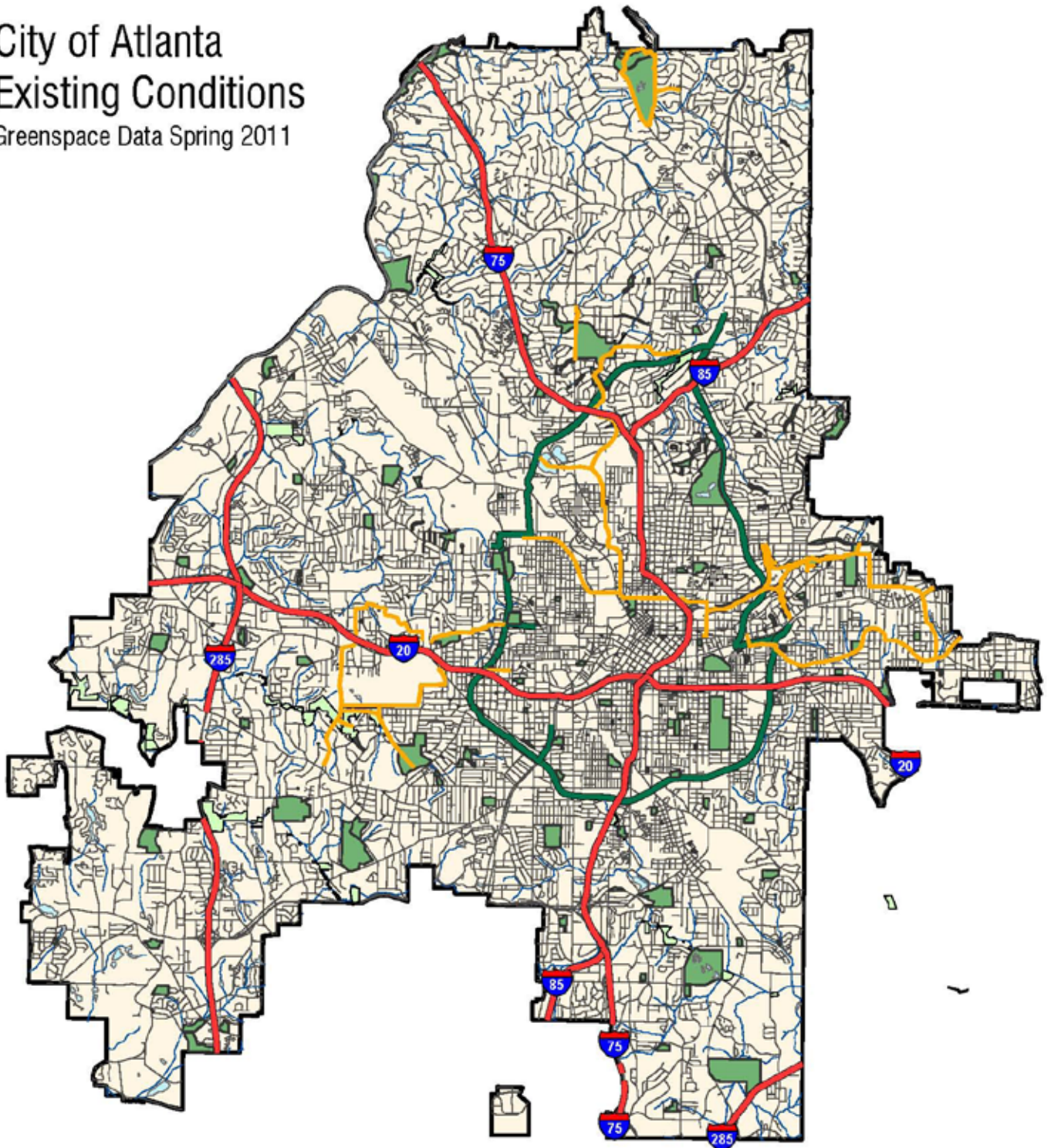
*Nature Preserve:* These parks are primarily maintained as natural areas with facilities of public enjoyment Atlanta currently supports nine nature preserves totaling 361 acres at 11.16% of the total park acreage. The average acreage of nature preserves is 40.18 acres.

*Conservation Park:* These parks are open to the public, but are maintained primarily for environmental protection. There are 23 conservation parks in the current parks system comprising 143 total acres. Conservation parks are 4.43% of the park acreage and the average park is 6.23 acres.

*Greenway Trail:* These trails connect other parks and traverse natural or lightly landscape areas. These parks are limited to 10% total development of the property. There is currently only one greenway trail within the Atlanta parks system with 2.98 acres (City of Atlanta Office of Parks, n.d.).

# City of Atlanta Existing Conditions

Greenspace Data Spring 2011



## Legend

-  City of Atlanta Parks
-  City of Atlanta Greenway Acquisition Properties
-  PATH Foundation Trails
-  Proposed Beltline

0 0.5 1 2 3 4 Miles



Figure 1: Atlanta Parks System

enhancing the city's public greenspace network



## **City of Atlanta Greenway Acquisition Program**

During the 1990s, the General Assembly enacted a bill mandating that the City of Atlanta reduce the amount of phosphorous it was discharging into the Chattahoochee River. After the bill was enacted the City was fined \$10,000 a day for non-compliance, which eventually totaled \$38 million dollars. In 1995 the Upper Chattahoochee Riverkeeper with other plaintiffs filed suit against the City for failure to comply with state water quality regulations and standards. In 1997 both the State and Federal Government filed a second lawsuit against the City. In response to these lawsuits, Atlanta agreed to make extensive improvements to the wastewater infrastructure throughout the city. The Clean Water Program was created and the total cost of improvements totaled \$3.9 billion. The program has worked to improve the wastewater system through the modifications to Combined Sewer Overflows (CSO), sanitary sewer projects, improvement to drinking water, operational improvements and lastly greenway acquisition.

The Greenway Acquisition Program created a plan to acquire nearly 2,000 acres of greenways in an eight-county area with 700 acres located within the city. Through conservation easements and property acquisition, the City of Atlanta has purchased more than 20 miles of stream bank to be protected in perpetuity to provide a riparian buffer to help improve water quality (Franklin, 2007). The Greenway Acquisition Program is a \$25 million effort to acquire and protect lands adjacent to rivers and streams within Metro Atlanta area. While the City has acquired these natural buffers areas to improve the water quality, it has limited the use of these protected lands by prohibiting unauthorized public entry and construction activities (Clean Water Atlanta - Greenway Acquisition Project, n.d.) These restrictions limit the potential for these properties and funds to be used to implement a greenway network that connects the community to nature. The funds of this program could be put to better use by allowing these greenway properties to be utilized for public benefit beyond water quality.

## **Atlanta Beltline**

The proposed Atlanta Beltline project was proposed in 1999 by Ryan Gravel as a method of linking in town neighborhoods to transit utilizing abandoned rail lines. Since its original inception, the plan has grown to include parks, trails, affordable housing, economic development and other various citywide opportunities. The current plan proposes to create a 33-mile network of multi-use trails that will link



nearly 40 parks within Atlanta. The plan proposes to increase the park acreage of Atlanta by 40% by adding 1,300 acres of parks and greenspace (Atlanta Beltline, n.d.).

## **PATH Foundation**

The PATH Foundation was founded in 1991 to develop greenway trail system that would link metro Atlanta for commuting and recreation. After twenty years of developing trails, PATH has created over 160 miles of trails throughout the state for walkers, runners, cyclist and other recreational activities. PATH's success includes trails such as the Silver Comet, Stone Mountain, Westside, Chastain Park and Freedom Park trails (PATH Foundation, n.d.).

To create a network of greenspace throughout the City of Atlanta the existing conditions of Atlanta greenspace must be analyzed in order to understand the areas of the city that are lacking access to parks and identify areas that are conducive to creating links between existing parks, PATH trails, the proposed Beltline and greenway acquisition properties. The following literature review will argue for increased park acreage and access opportunities for the benefit of the health of communities, community and neighborhood improvement and the environmental health of communities. The literature review will also explore the use of greenways to increase park access and the elements of successful greenspace programs.

## ***Benefits of Parks***

### **Why Parks and Greenspace Matter**

As urban communities continue to become increasingly dense and availability of land and resources decreases, parks and greenspace will once again serve as Fredrick Law Olmstead's vision of the "lungs of the city". Historically, "parks within the urban neighborhoods have traditionally functioned as places for passive and active recreation, environmental improvements, and as a mechanism for social control. Many roles that parks serve occur simultaneously and afford both direct and indirect benefits to urban dwellers" (Soleckiav, Welchb, 1995). Greenspace will and has served as a conduit for increased access to physical activity and improved mental health through direct access to nature and recreation facilities. Community greenspace also provides a necessary location for community interaction and social connections, by enhancing the network of urban greenspaces social networks in turn may be enhanced. Urban natural environments also serve an essential function of improving the

environmental quality of already over-stressed environments and combating the effects of urbanization. By approaching the greening of urban environments as an essential and necessary need for all communities an equitable network of beneficial environments can be created. Maller et al. (2010) assert, “Natural environments are an ideal setting for the integration of environment, society and health by promoting a socio-ecological approach to human health and well-being based on human contact with nature” (2010).

### **Parks and Greenspace for Health**

In the past decade, a greater emphasis has been placed on understanding and researching the impacts of the built environment and health. With fewer and fewer people meeting their daily-recommended physical activity, the demand for access to quality greenspace will increase. Maller et al. (2010) argue that nature has been under-valued and under-utilized as a resource in terms of human and community health and support parks and natural areas as a “potential gold mine for population health promotion” (2010). Current standards set forth by the United States Center for Disease Control (CDC) recommend that children age 6-17 receive one hour of daily physical activity, adults 18-64 are recommended to partake in 2 hours and 30 minutes of moderate-intensity aerobic activity or 1 hour and 15 minutes of vigorous activity coupled with 2 or more days of strength training (2008 Physical Activity Guidelines for Americans, 2008). According to the CDC, 33% of adults were considered inactive, 33% of adults had some leisure-time physical activity, 35% of adults engaged in leisure-time physical activity on a regular basis and only 55% of adults 18 years or older never engage in vigorous leisure-time physical activity lasting in excess of 10 minutes while 28% participated in such activity at least three times a day (CDC, 2009).

As the health of communities continues to decline, the importance of reaching the daily-recommended physical activity inventions will be required to increase the activity levels of communities, “physical inactivity is associated with numerous negative health outcomes. Public neighborhood parks represent viable community spaces for promoting population-wide increases in physical activity.” (Floyd MF , Spengler JO, Maddock JE, Gobster PH, Suau L, 2008) Parks and greenspace, especially within walking distance of residences, have been shown to have a positive impact on physical activity and can increase the percentage of people who exercise at least three times a week by 25% (Floyd et al, 2008).

Not only can the presence of parks and greenspace increase the amount of physical activity amongst communities but can also positively impact the mental health of people, “in the context of the growing worldwide mental illness burden of disease, contact with nature may offer an affordable, accessible and equitable choice in tackling the imminent epidemic, within both preventative and restorative public health strategies” (Maller et al, 2010). Public health studies have focused on the relationship between nature and mental health and have discovered several benefits, such as, “the reawakening of a sense of possibility; restoration and a relief from daily struggles; empowerment, skill development and the enabling of opportunity to participate in caring for the environment” (Maller et al, 2010). Not only does the enhancement of quality and availability of natural areas give communities access to the restorative benefits of nature they may also “encourage greater use and help maintain regular walking behavior” (Giles-Corti, Broomhall, Matthew Knuiman, Catherine Collins, Douglas, Ng, Lange, Donovan, 2005)

### **Parks and Greenspace for Community Improvement**

Crompton states, “the status of parks is a signature statement of the status of a neighborhood” (2008). If this statement is true, then one can judge the vibrancy, safety and health of neighborhoods based upon the conditions of their parks. In areas that contain under-utilized and dilapidated greenspaces one would assume that the community and neighborhood in turn is desolate while the opposite would remain for those communities that contain vibrant and safe greenspaces (Crompton, 2008). While this concept may be oversimplifying the relationship between parks and communities it does bring to life the judgments and implications of greenspace. Community benefits can extend beyond the visual impression of the community and can actually enhance the relationships within the community. Community greenspace can also assist in engaging residents and generate a sense of belonging and ownership as well as, “increased sense of identity and ownership of the country they live in and sense of integration rather than isolation” (Maller et al, 2010). Community gardens can be utilized as tools to generate community cohesion and provide opportunities for socialization and resident interaction (Maller et al, 2010).

Parks and greenspace have been shown to provide places for the building of social capital and networks along with the benefit of increased property values within communities. Studies have shown

that both the size of the park and the proximity of an urban park have a significant positive effect on property values (Poudyal, Hodgesa, Merrett, 2009). As urban areas continue to increase density and scarcity of land increases, Conway et al argue that “smaller open spaces, as well as community greening efforts, could positively impact property values without demanding major land resource commitments. Such neighborhood-scale enhancements could also help to revitalize depressed inner city residential real estate markets” (2008). Crompton also argues that finances can be invested to renovate and restore existing park and greenspace facilities create a catalyst for community regeneration in a highly visible and rapid way and spur further reinvestment in the community (2008).

### **Parks and Greenspace for Environment**

Urban greening has been explored as an opportunity to mitigate the urban heat island effect, a phenomenon that addresses the higher temperatures within urban cities in comparison the their surrounding areas (Bowler, Buyung-Ali, Knight, Pullin, 2010). Parks and greenspace can offset the impacts of increased development by increasing the rate of evapotranspiration, which contributes to the cooling of air, as well as provide shade (Bowler et al, 2010). A study of parks worldwide of varying sizes determined that parks of larger size (greater than 3 ha) “were either more likely to be cooler or that the cooling effect was greater” than their surrounding areas whereas parks smaller than 3 ha showed more variable differences in temperature (Bowler et al, 2010). The benefit of cooling from parks expands beyond the boundary of the park and temperatures gradually increase in relationship with distance from parks (Bowler et al, 2010).

As urban areas continue to develop, the issues of stormwater quality will increase and create greater problems for water quality. Parks, natural areas, and conservation areas can assist in mitigating the increased sedimentation of watercourses by filtering and containing sediment (Crompton, 2008). Greenspace located along watercourses and riparian zones are especially beneficial for reducing the impacts of suspended sediment, pesticides, fertilizes negatively impacting waterways (Crompton, 2008). Increased vegetation and greenspace also serve an essential function of flood control through a two-pronged approach. First, the roots of vegetation hold soil in place and reduce the sediment run-off along with their ability to absorb rainfall and slowing the rate of water runoff and allowing water to be absorbed (Crompton, 2008).

Vegetation and soils serve a vital function in urban areas as a source of air pollution reduction by removing “ozone and other gaseous pollutants and toxic chemicals such as nitrogen dioxide, sulphur dioxide, formaldehyde, benzene and hydrogen fluoride, particulate pollutants and carbon dioxide” by absorbing pollutants through both soils and leaves (Crompton, 2008). This added benefit of increased greenspace helps to combat the adverse health outcomes as a result of increased air pollution. Multiple studies have linked air pollution with increased occurrences of “respiratory disease, asthma, and cardiovascular and respiratory mortality” (Crompton, 2008).

### **Greenways to increase access to greenspace**

As urban areas continue to become more densely populated, land for large urban parks will diminish, thus placing a burden on the ability to access these important community features. Poudyal, Hodgesa, and Merrett explain, “As American cities continue to grow, an increasing number of residents are placing unprecedented demands on the existing open spaces and urban recreation parks. This means urban parks will become more congested, possibly to a point which exceeds the potential of these parks to offer recreational and amenity benefits” (2009). In order to maintain healthy environments for urban residents, connections between uses will need to be created in order to develop a connective network of schools, parks, urban forests, waterways and other destinations, “greenways can be a helpful component in the management of change in developing areas. The greenway concept provides for connections between natural and developed areas, and provides for streamlined environmental regulation and protection” (Community Greenways, 1995). This network should not only provide an opportunity for recreational uses, but should also focus on creating an alternative transportation network to enable the safe movement of people through cities.

In an effort connect greenspace and increase accessibility, greenway systems emerged as a solution for linking ecological corridors, recreational uses, or historical and cultural resources (Fabos, 2004). This concept first appeared in the American landscape after Fredrick Law Olmstead’s introduction in 1867 in Boston, Massachusetts (Fabos, 2004). In more modern history, the greenway movement began to gain steam after the 1987 US Commission on American Outdoors recommended greenways as a method for providing people with access to open space and providing a linkage between the rural

and urban landscapes (Fabos, 2004). Greenways are currently viewed as an effective method with “great potential to act as a venue for physical activity as the presence of accessible trails is not only associated with maintaining an increasing activity achieved through walking but also with meeting recommended levels of physical activity (Brownson et al, 2000; 2001; Sharpe et al, 2004)” (Cutts, 2008).

### **What Makes Parks and Greenways Successful**

While the determinants for park usage and success vary, access within a quarter-mile to the nearest park or greenspace has become the agreed upon industry standard utilized through park and greenspace design fields (Cutts, Darby, Boone, Brewis, 2009). Locating parks within existing urban development can provide greater access for residents and community members that can help encourage and engage users of parks and greenspace. The best size of parks has been debated and some suggest, “that when planning open spaces in new residential developments, one large neighborhood park, rather than many smaller parks, may be conducive to sufficient physical activity to promote health among adult residents. However, in existing neighborhoods, where expanding open spaces is unlikely to be feasible, enhancing the attractiveness of existing large open spaces is a practical alternative” (Sugiyama, Francis, Middleton, 2010). Distance to parks is not the sole hindrance to the use and experience of uses, the quality, size and features within parks can encourage or discourage usage, “having good access to larger POS is associated with higher levels of walking. Larger parks tend to have more attributes that provide more satisfying experiences for the user” (Giles-Corti et al, 2005).

In order to create a successful and comprehensive network of parks and greenspace, access to quality larger public greenspaces must be distributed throughout urban areas to ensure all members of the community have access to the benefits of parks. Giles-Corti et al. state that Caucasian users of large urban parks lived in proximity to the park and walked daily with the non-Caucasian park users lived farther from the park and visited infrequently and utilized the facilities for passive recreation versus active recreation (2005). A study of recreation facility and park distributions in North Carolina, Baltimore, and New York discovered that the majority of minority tracts did not contain recreational facilities, lower income tracts were less likely to have recreation facilities compared to wealthy tracts,

and tracts with greater Hispanic/black populations had fewer parks than their predominately white counterparts (Moore, Diez Roux, Evenson, McGinn, Brines, 2008). The study also acknowledged that despite the lack of recreational facilities within these communities parks were distributed more equitably throughout these regions, but that these park facilities offered predominately sports-related activities that do not engage the majority of potential park users, especially adults. The study also suggested that by creating, “policies aimed at improving the types and quality of resources available in parks could be an important strategy to increase physical activity and reduce racial/ethnic and socioeconomic disparities” (Moore et al, 2008).

In areas where large land acquisitions cannot be made due to lack of available lands or lack of revenue greenways can become a viable method for enhancing existing greenspace systems and increase physical activity within communities. Coutts states, “Greenways protecting assets of cultural or historical significance provide an outdoor laboratory for environmental education, create habitat for wildlife migration and reclaim brownfields, and river greenways in particular have the dual-edged anthropocentric benefits of ensuring the quantity and quality of water resources and of providing an attractive setting in which to perform non-motorized forms of activity” (2008). Studies show that most uses and activity occurs in downtown areas, parks, and other natural areas. The locations and uses along the greenway are vital to the success of the any greenway system, in order to maximize the usage of greenways connections should be made between parks, areas of high population density as well as areas of greater land-use mixture and opportunities (Coutts, 2008).

As local, state, and federal funding will continue to decrease appropriations for greenspace acquisition and design, efforts will need to be made to create the greatest impacts to the most people with the least amount of dollars. While this task seems virtually impossible, park planners will need to focus on creating quality public open spaces (POS) for communities that will address the social, health, and environmental needs of these communities and bridge the gap between disparities amongst communities. “Well-designed public open spaces are an important component of the recreational mix providing opportunities for physical activity and social interaction. It may be possible to attract more users to POS by creating walking trails that link smaller local parks through the use of signage, developing shaded walking paths landscaped with trees and shrubs selected to maximize visibility”



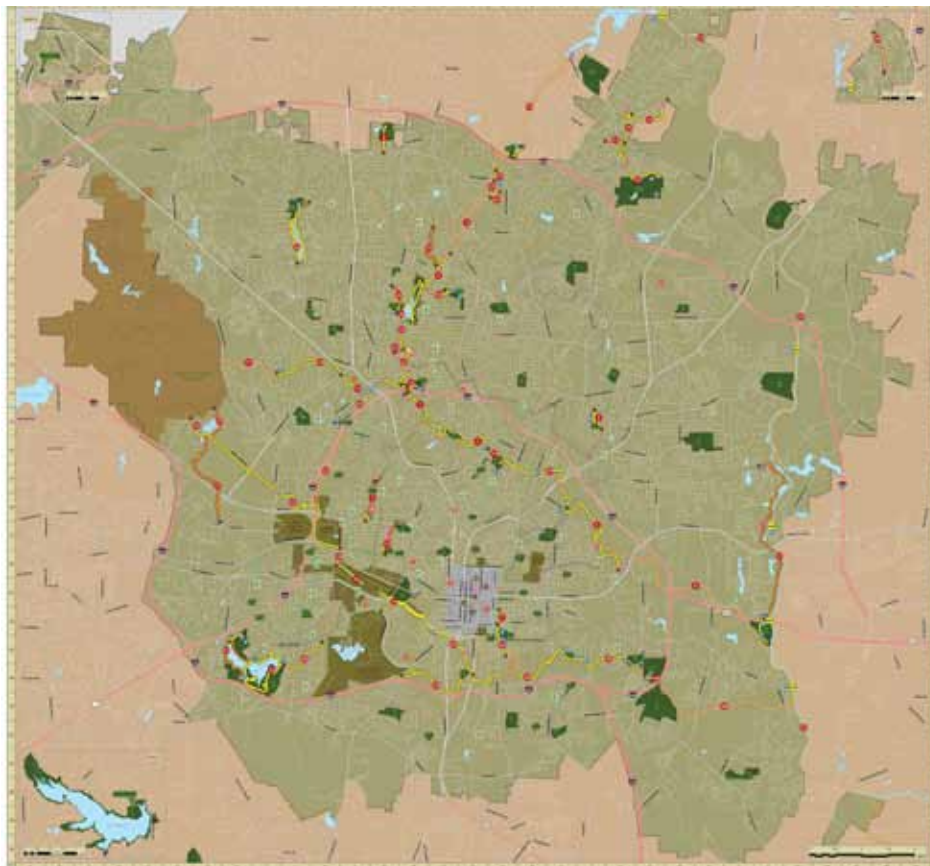


### *Emerald Necklace*

The Emerald Necklace is a nine-park system linked by parkways and waterways. This 1,100-acre linear park system was designed by Fredrick Law Olmstead to connect Boston Commons and the Public Garden with the country Franklin Park (Emerald Necklace – City of Boston, n.d.). In 1870, Olmstead was hired to design this linear park after the overcrowding and unhealthy conditions of Boston concerned city officials (The Emerald Necklace: Boston's Green Connection, n.d.). Each park within the system offers a variety of recreational and leisure activities as well as access via public transportation. Features of the park system included hiking/walking/biking trails, community gardens, sailing, sports fields, playgrounds and a zoo (The Emerald Necklace Conservancy – The Parks, n.d.).

### **Raleigh, North Carolina**

According to the Trust for Public Land City Park Facts 2010 report, parkland makes up 16.9% of the entire land area for the City of Raleigh with the median percentage for the 85 most populous cities at 8.3%. It also reports that Raleigh has 31.6 acres of parkland per 1000 persons with the national median of 7.9 acres per 1000 persons (2010 City Park Facts, 2010).



**Figure 3: Capital Area Greenway Trail Map. Source: [www.greatoutdoorprovision.com/.../pdfs/RP&R-greenway\\_map.pdf](http://www.greatoutdoorprovision.com/.../pdfs/RP&R-greenway_map.pdf)**

## *Capital Area Greenway System*

Since 1974, Raleigh has created a network of public greenspace and trails, the Capital Area Greenway. The greenway and open space planning efforts began as a citizen-driven effort in response to the increasing growth and urbanization of the areas and their desire to conserve and highlight the natural beauty of the area. Bill Flournoy, the father of Raleigh Greenways, conceptualized the greenway network to utilize the environment, “where the greenways wind through the thick woodlands characteristic of the Piedmont, along the rivers, creeks, brooks, runs, branches, and forks that make up a skein of waterways which pattern the city (Little, 1990, 41). The current system now boasts 68 miles of recreational trails and 3,700 acres of greenspace (Capital Area Greenway Trail System, n.d.). The trail system connects North Carolina State University Centennial campus, North Carolina State University main campus, Meredith College and North Carolina State University Veterinary College with the William B. Umstead State Park, areas adjacent to downtown and various parks. The system also connects parks and neighborhoods throughout the city (See Figure 3: Capital Area Greenway Trail Map).

## **Denver, Colorado**

According to the Trust for Public Land City Park Facts 2010 report, parkland makes up 6% of the entire land area for the City of Denver with the median percentage for the 85 most populous cities at 8.3%. It also reports that Denver has 9.9 acres of parkland per 1000 persons with the national median of 7.9 acres per 1000 persons (2010). The city maintains over 220 city and mountain parks (Welcome to Denver Parks, n.d.).

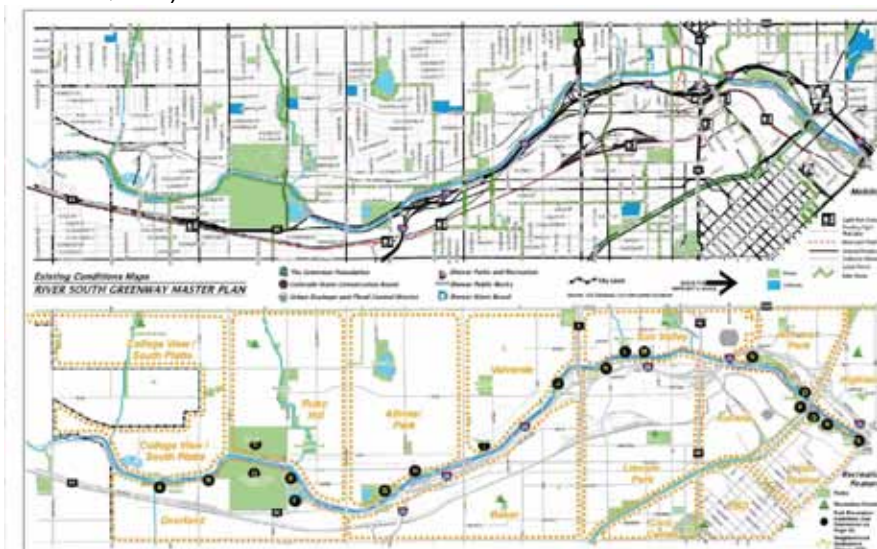


Figure 4: River South Greenway Master Plan. Source: <http://www.denvergov.org/Portals/626/documents/FINALRiverSouth%20GreenwayMasterPlanJan182010.pdf>



## *South Platte River Greenway*

Since 1974, the Greenway Foundation, formerly the Platte River Development Committee, has sought to improve the environmental and recreational quality of the South Platte River and its tributaries. The Greenway Foundation has created more than 100 miles of greenways and trails along with over 20 parks and natural areas (The Greenway Foundation – Enhancements, n.d.). The greenway system has transformed a river formerly describes as “too thick to drink, too thin to plow” into a recreation destination for both residents and tourists. During the 1990s the program saw a resurgence of investment leading to the allocation of \$35 million dollars for six river projects and the creation of an educational program that would partner with the Denver Public School System. The current Denver parks system offers more than 80 miles of urban hiking/biking/jogging trails within the city and additional trails located within city-owned mountain parks (Walking and Jogging Trails, n.d.).

## ***Park Distribution Analysis***

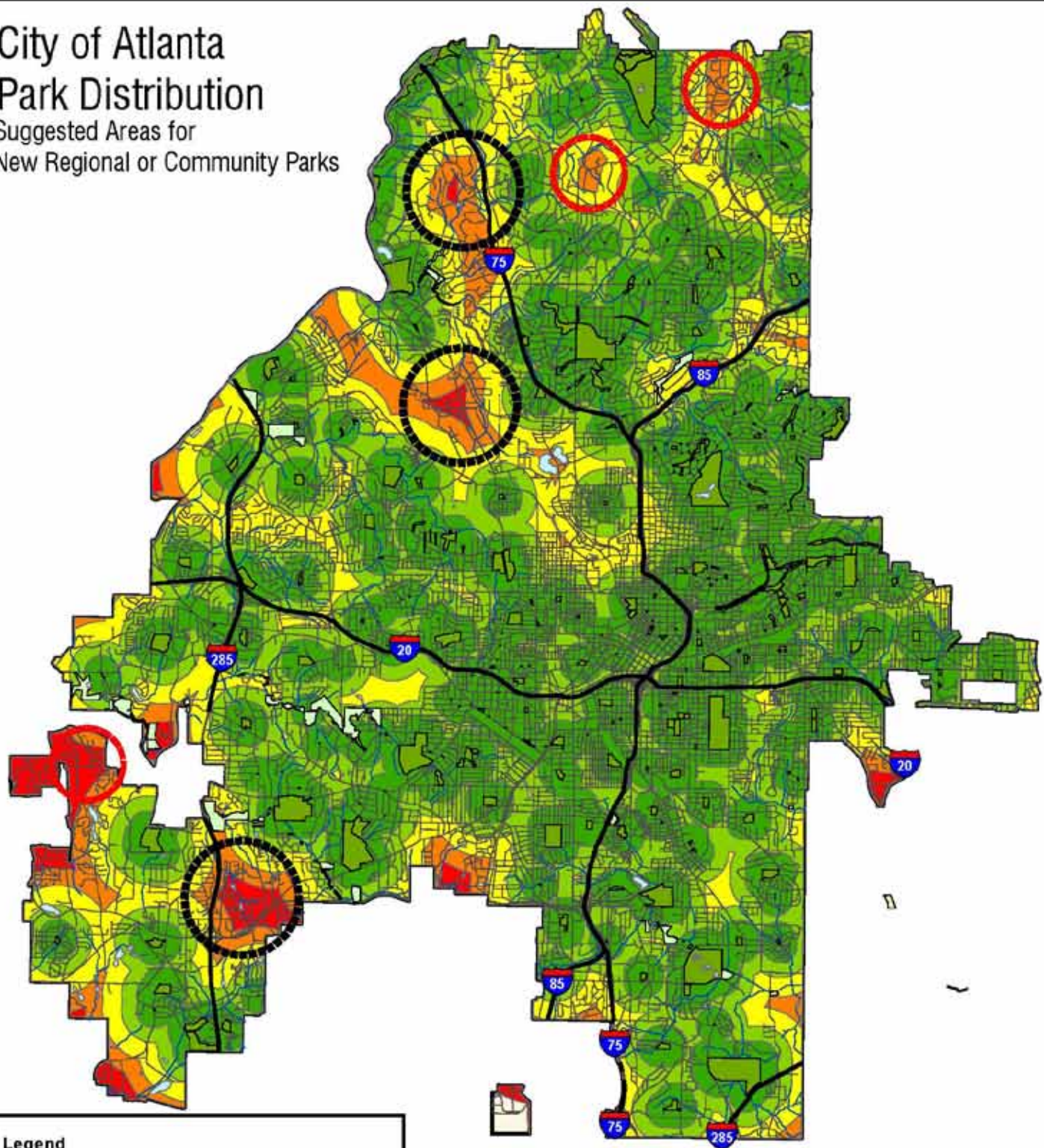
In order to determine and develop and plan for increased greenspace and potential connections to existing parks, PATH trails and the proposed Beltline, an assessment of the distribution of the existing system is required.

**Data Sources and Methodology:** Data was gathered from the City of Atlanta GIS Department along with resources available from the Atlanta Regional Commission. Park locations were identified within the city and distance buffers were created to identify areas that were within  $\frac{1}{4}$  mile,  $\frac{1}{2}$  mile,  $\frac{3}{4}$  mile and 1 mile of existing park features. Those areas located beyond the 1-mile access radius were used to develop primary and secondary priorities for new regional or community parks (See Figure X: Park Distribution and Priority Areas).

**Analysis Results:** Three primary priority areas were identified through this process as the most underserved areas by parks. Three secondary areas were identified as areas that may also benefit from increased greenspace allocations. The distribution analysis displays that much of the City is within  $\frac{1}{2}$  mile of a park while several fringe areas have been neglected. The analysis provides useful information about the spatial distribution of parks and helps to guide the placement of new parks. In order to serve the most people with the limited resources the creation of regional or community level parks and greenway systems to increase access would create the greatest benefit to the City.

# City of Atlanta Park Distribution

Suggested Areas for  
New Regional or Community Parks



## Legend

Distance from Parks

Distance in Feet

1320

2460

3960

5280

10560

City of Atlanta Parks

City of Atlanta Greenway Acquisition Properties

Primary Priority Areas for  
New Regional or Community Parks

Secondary Priority Areas for  
New Regional or Community Parks

0 0.5 1 2 3 4 Miles

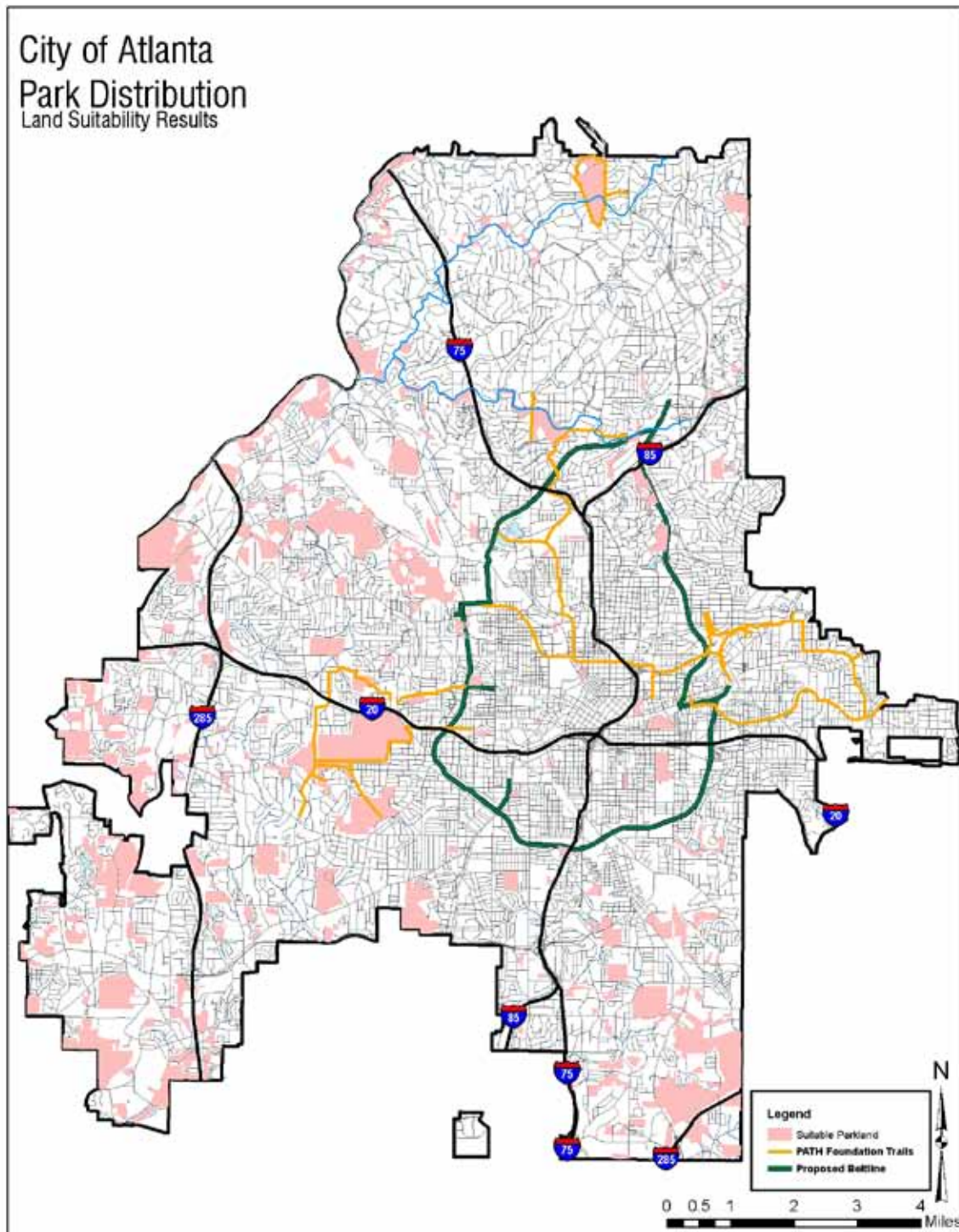


Figure 5: Park Distribution Map with Priority Areas



## ***New Regional or Community Park Land Suitability Analysis***

**Data Sources and Methodology:** Using GIS parcel data gathered from the City of Atlanta, the Atlanta Regional Commission LandPro data and National Land Cover data, a land suitability study was conducted to identify potential parcels for park acquisition. The land suitability analysis determined the most acceptable parcels by identifying those parcels that are larger than 10 acres, have a large percentage of tree cover, are located in areas with limited park access and are currently undeveloped. The results identified areas primarily within the inner ring suburbs of Atlanta.



**Figure 6: Suitable Land for Potential Park Development**

*enhancing the city's public greenspace network*

**Analysis Results:** The results from the land suitability analysis were examined and five areas were selected for potential park expansion. Several parcels were selected within these areas identified to provide a wider range of cost and size.

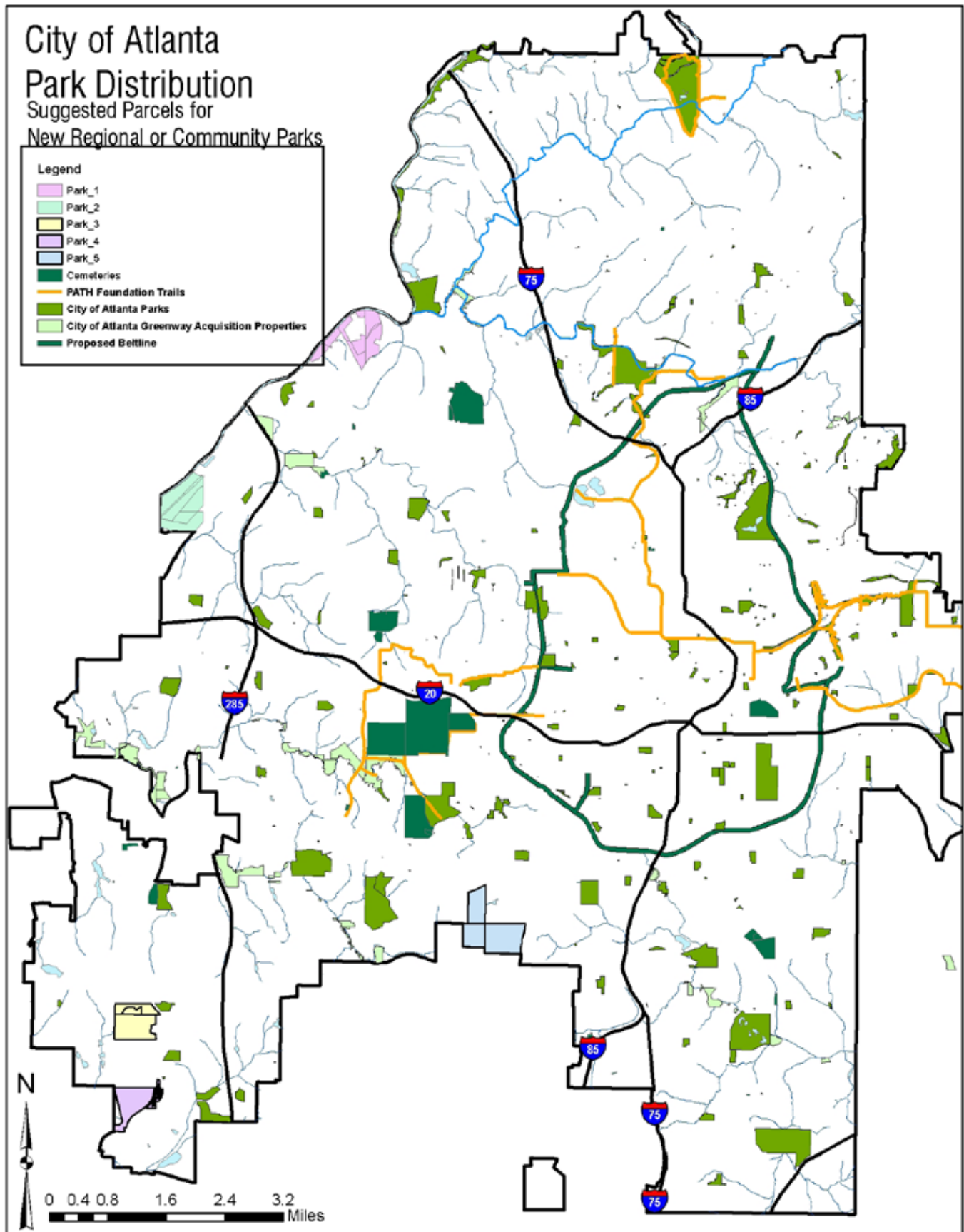


Figure 7: Potential Areas for Park Development



# City of Atlanta

## Park Distribution

Suggested Parcels for  
New Regional or Community Parks

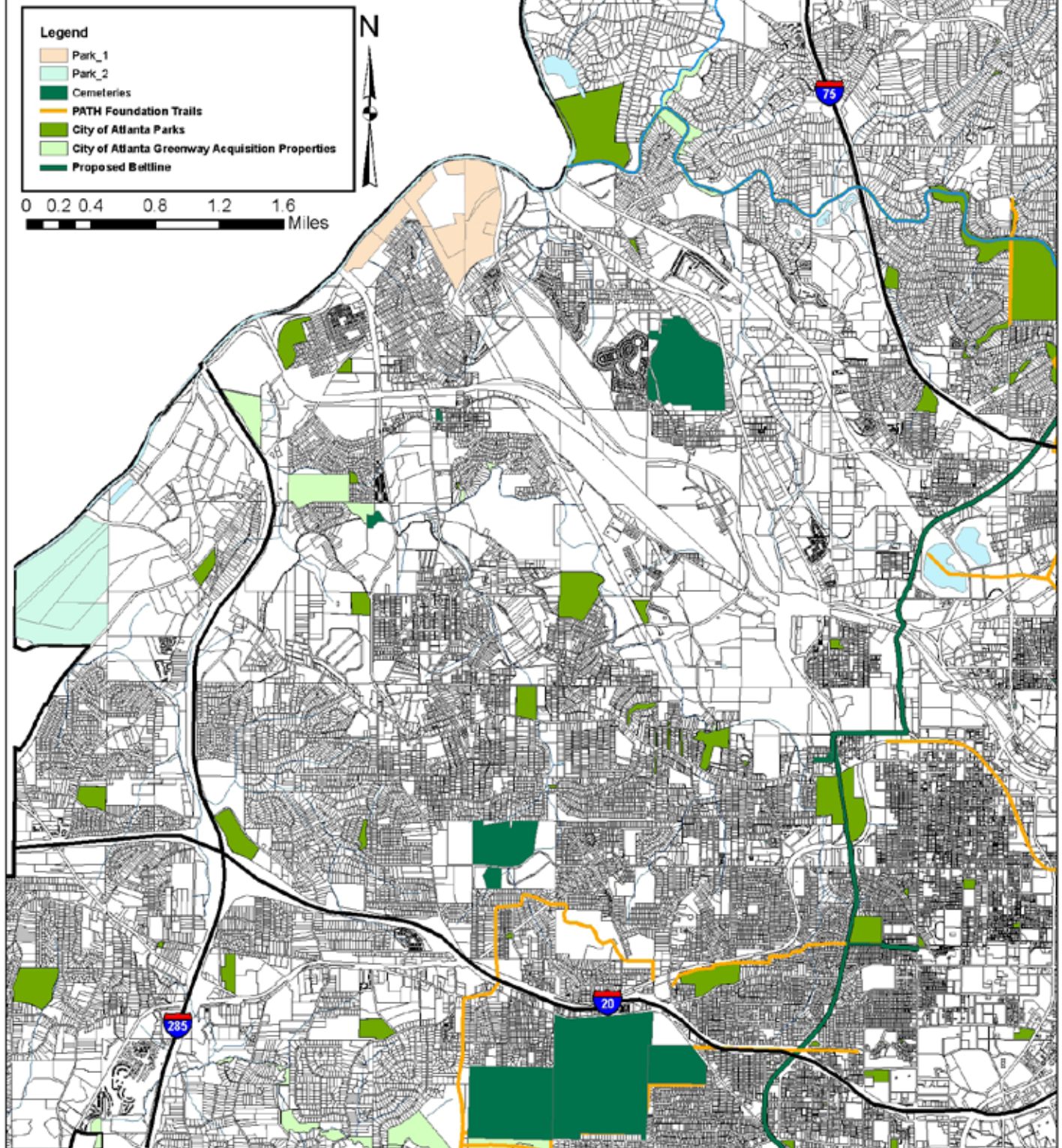


Figure 8: Park One & Park Two for Potential Park Development

## Park One:

Park One parcels lie adjacent to the Chattahoochee River and are located across the river from the Georgia Power Plant McDonough. While this vista may not be the most appealing to some, it does however provide a potential for the utilizing currently undeveloped lands under ownership of Georgia Power to create recreation and environmental improvements. Several parcels have been identified within this area as potential parks:

Year	Address	OWNER1	LUC	PROP. CLASS	TOT. APPR	TOT. ASSESS	IMPR. APPR	LAND. APPR	Acre	Acre Score
2010	FISHER AVE NW	GEORGIA WASTE SYSTEM INC	400	I4	\$42,100.00	\$16,840.00	\$0.00	\$16,840.00	3.30191	1
2010	FISHER AVE NW	CHAMBERS OF GEORGIA INC	401	C5	\$658,800.00	\$263,520.00	\$87,080.00	\$176,440.00	43.4522	9
2010	FISHER AVE NW	GEORGIA WASTE SYSTEM INC	400	I5	\$5,274,200.00	\$2,109,680.00	\$0.00	\$2,109,680.00	31.4873	9
2010	FISHER AVE NW	CHAMBERS OF GEORGIA INC	400	I4	\$1,252,800.00	\$501,120.00	\$0.00	\$501,120.00	2.9787	1
2010	2700 PAUL AVE NW	GEORGIA POWER CO	702	U3	\$0.00	\$0.00	\$0.00	\$0.00	21.564	9
2010	PAUL AVE NW	CHAMBERS OF GEORGIA INC	400	I5	\$1,111,900.00	\$444,760.00	\$0.00	\$444,760.00	21.6438	9
2010	PAUL AVE NW	GEORGIA POWER CO	702	U3	\$0.00	\$0.00	\$0.00	\$0.00	17.1761	9
2010	BERNARD RD NW	GEORGIA POWER CO	702	U3	\$0.00	\$0.00	\$0.00	\$0.00	17.7379	9
2010	PAUL AVE NW REAR	GEORGIA WASTE SYSTEM INC	400	I4	\$168,900.00	\$67,560.00	\$0.00	\$67,560.00	6.80551	1
2010	JACKSON PKWY NW	GEORGIA POWER CO	600	I13	\$0.00	\$0.00	\$0.00	\$0.00	17.9975	9

**Table 1: Potential Parcels for Park One Acquisition**

## Park Two:

Park Two parcels lie adjacent to both the Chattahoochee River and the Fulton County Airport. By protecting this area between the airport and the river the land will serve as an important buffer between potential environmental hazards of runoff from the airport as well as prevent residential development from occurring near a nuisance use.

Year	Address	OWNER1	LUC	PROP. CLASS	TOT. APPR	TOT. ASSESS	IMPR. APPR	LAND. APPR	Acre	Acre Score
2010	SANDY CREEK RD NW	FULTON COUNTY	699	E1	\$3,816,000.00	\$0.00	\$0.00	\$1,526,400.00	22.3887	9
2010	SANDY CREEK RD NW	FULTON COUNTY	699	E1	\$8,400,600.00	\$0.00	\$0.00	\$3,360,240.00	51.6581	9
2010	3601 BANKHEAD HWY NW	CHANG SU KIL	318	C3	\$148,500.00	\$59,400.00	\$21,600.00	\$37,800.00	0.000114784	1
2010	BANKHEAD HWY NW	FULTON COUNTY	699	E1	\$12,751,200.00	\$0.00	\$0.00	\$5,100,480.00	60.2827	9
2010	BANKHEAD HWY NW	FULTON COUNTY	699	E1	\$36,900.00	\$0.00	\$0.00	\$14,760.00	11.7863	9
2010	SANDY CREEK RD NW	FULTON COUNTY	699	E1	\$6,622,200.00	\$0.00	\$0.00	\$2,648,880.00	38.2904	9
2010	SANDY CREEK RD NW	FULTON COUNTY	699	E1	\$10,260,000.00	\$0.00	\$0.00	\$4,104,000.00	49.0989	9

**Table 2: Potential Parcels for Park Two Acquisition**



# City of Atlanta

## Park Distribution

Suggested Parcels for  
New Regional or Community Parks

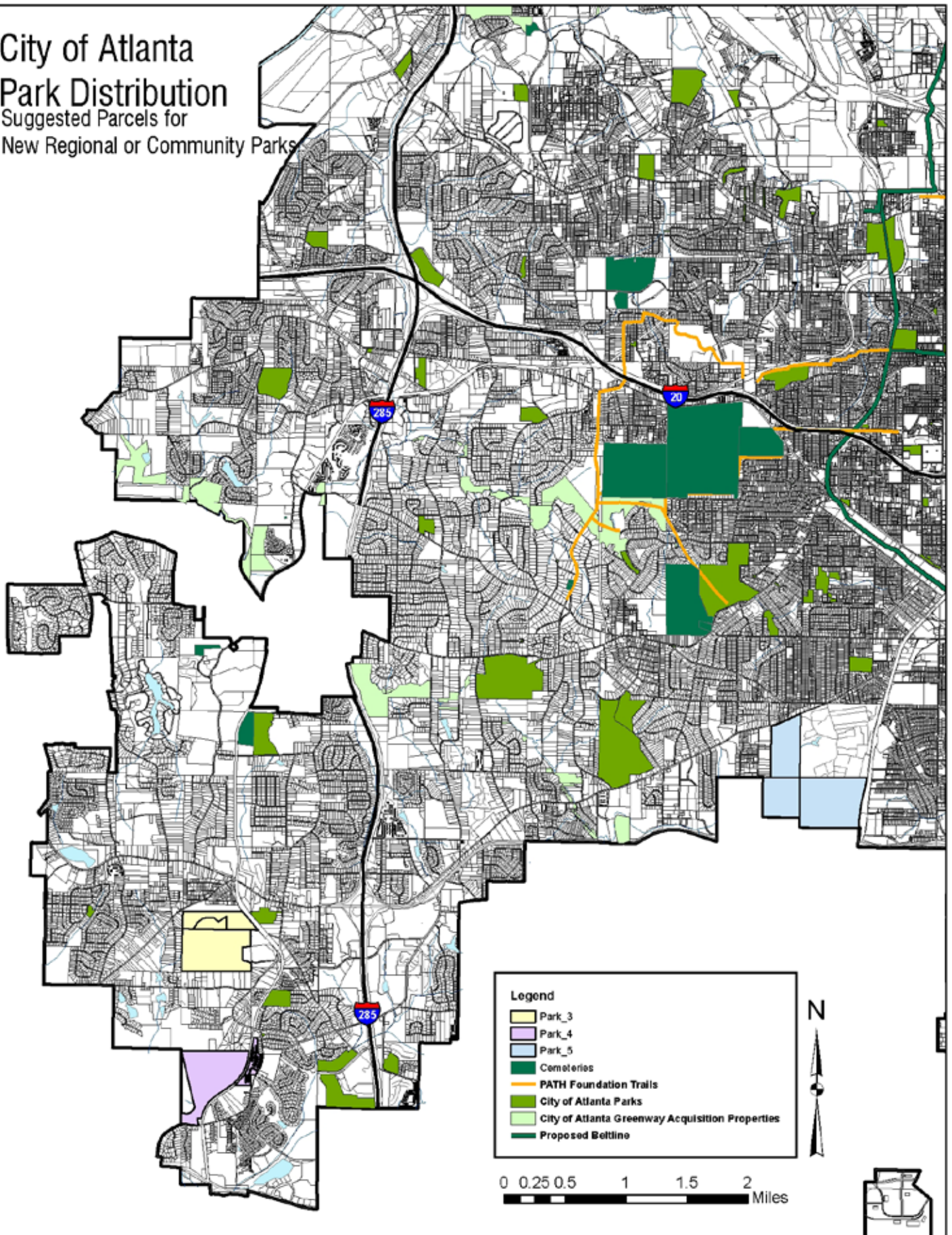


Figure 9: Park Three, Park Four & Park Five for Potential Park Development

### Park Three:

Park Three parcels are located on land currently listed as vacant industrial and vacant commercial according to Fulton County property data. The property lies adjacent to a school as well as residential areas and is located near an area currently underserved by greenspace within the city.

Year	Address	OWNER1	LUC	PROP CLASS	TOT APPR	TOT ASSESS	IMPR APPR	LAND APPR	Acre	Acre Score
2010	FAIRBURN RD SW	VULCAN LANDS INC	400	I5	\$1,789,500.00	\$715,800.00	\$0.00	\$715,800.00	119.36	9
2010	DANIEL RD SW	VULCAN LANDS INC	300	C4	\$630,400.00	\$252,160.00	\$0.00	\$252,160.00	38.9632	9
2010	2300 DANIEL RD SW #REAR	VULCAN LANDS INC	400	I4	\$117,500.00	\$47,000.00	\$0.00	\$47,000.00	13.5103	9

**Table 3: Potential Parcels for Park Three Acquisition**

### Park Four:

Park Four parcels are located on land currently listed as vacant residential land according to Fulton County Property data. These parcels are near Cowart Lake Reservoir located in Fulton County and offers the potential to link Fulton County greenspace with Atlanta greenspace to further develop a greenspace network.

Year	Address	OWNER1	LUC	PROP CLASS	TOT APPR	TOT ASSESS	IMPR APPR	LAND APPR	Acre	Acre Score
2010	FAIRBURN RD SW	DEERWOOD RESERVE AT PRINCETON LAKES TOWN	100	R5	\$191,700.00	\$76,680.00	\$0.00	\$76,680.00	16.3408	9
2010	WELCOME ALL RD	COWART LAKE VENTURES LP	100	R5	\$1,141,200.00	\$456,480.00	\$0.00	\$456,480.00	120.558	9

**Table 4: Potential Parcels for Park Four Acquisition**

### Park Five:

Park Five parcels are located on what is currently Fort McPherson Army Base, which is slated to close in Fall 2011. Current planning efforts are underway by the Local Redevelopment Authority (LRA) to redevelop the existing base into a bioscience center with residential, commercial, greenspace and some community services. To take full benefit of this property from a land conservation and greenspace perspective, three of the four parcels affiliated with Fort McPherson should remain greenspace accessible to the public and the area currently with the heaviest use should be converted for the purposes of housing, employment and retail/commercial.

YEAR	Address	OWNER1	LUC	PROP CLASS	TOT APPR	TOT ASSESS	IMPR APPR	LAND APPR	Acre	Acre Score
2010	LEE ST	UNITED STATES OF AMERICA	699	E1	\$39,073,100.00	\$0.00	\$4,477,320.00	\$11,151,920.00	134.44	9
2010	CAMPBELLTON RD SW	UNITED STATES OF AMERICA	600	E1	\$21,113,700.00	\$0.00	\$0.00	\$8,445,480.00	72.1603	9
2010	MC CLELLAND AVE	FORT MC PHERSON	699	E1	\$12,100,200.00	\$0.00	\$0.00	\$4,840,080.00	62.8908	9

**Table 5: Potential Parcels for Park Five Acquisition**

## ***Greenway Network Analysis***

**Data Sources and Methodology:** The location of existing streams and rivers, existing parks, PATH Foundation trails, the proposed Beltline were analyzed to develop a greenway network to connect Atlanta's current features into a greenspace network. Creeks and streams were selected for greenway potentials to provide access to scenic areas as well as offer environmental protection to such areas. The potential greenways were also chosen because of the potential to link existing greenspace and increase access to greenspace in currently underserved areas.

**Analysis Results:** Three potential greenways were identified in hopes of creating greenspace linkages to areas currently lacking easy access to parks and recreation uses.

### **Peachtree Creek Greenway:**

The proposed Peachtree Creek Greenway will connect Standing Peachtree Park Conservation Park with Atlanta Memorial Park, Bobby Jones Golf Course, PATH Foundation Trails and the proposed Atlanta Beltline. The greenway includes approximately 30 parcels previously acquired through the City's Greenway Acquisition Program in addition to approximately 2,100 parcels running along Peachtree Creek. The greenway traverses areas of medium density residential development as well as several multi-family developments. Conservation easements will be required in order to develop the trail on private property. The proposed Peachtree Greenway would run approximately 6.4 miles long.



# City of Atlanta Proposed Greenways

## Peachtree Creek Greenway

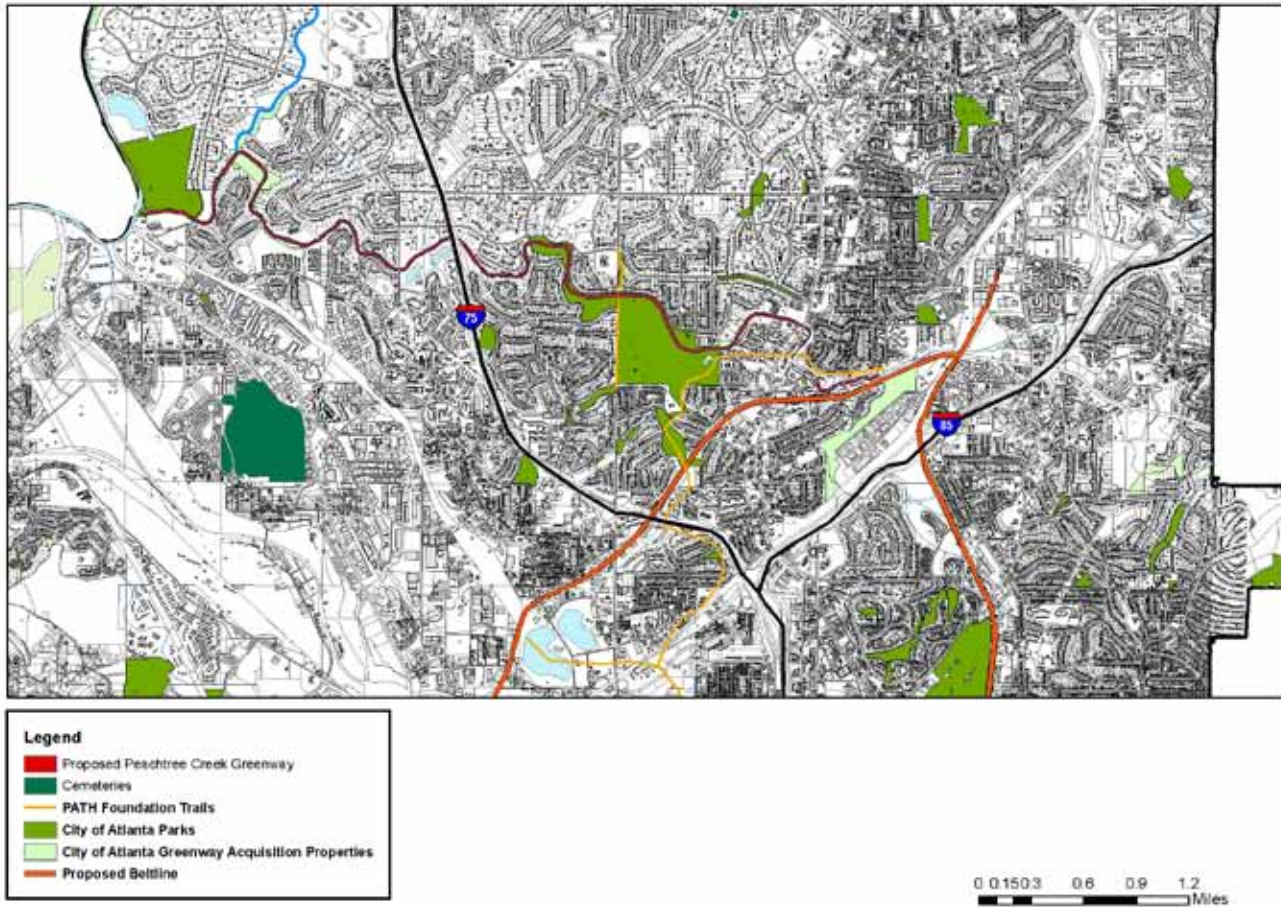


Figure 10: Proposed Peachtree Creek Greenway

# City of Atlanta Proposed Greenways

## Peachtree Creek Greenway

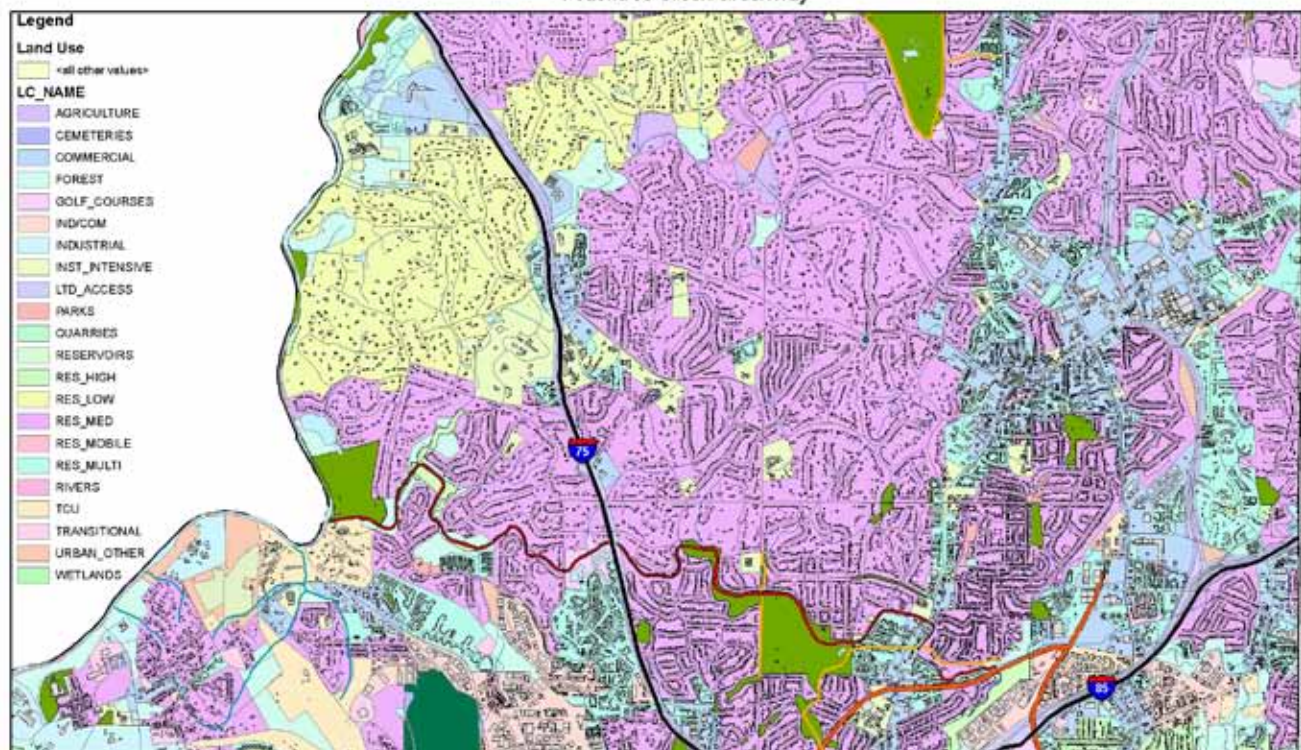


Figure 11: Proposed Peachtree Creek Greenway with Surrounding Land Use



### Nancy Creek Greenway:

The proposed Nancy Creek Greenway connects Standing Peachtree Park to Chastain and PATH Trails.

The proposed Nancy Creek Greenway will connect Standing Peachtree Park Conservation Park with Chastain Park and PATH Foundation Trails. The greenway includes 416 parcels along Nancy Creek and predominately traverses areas of lower and medium density residential developments. Conservation easements will be required in order to develop the trail on private property. The proposed Peachtree Greenway would run approximately 7.5 miles long and provide recreation access in areas currently underserved by park and greenspace access.



Figure 12: Proposed Nancy Creek Greenway



# City of Atlanta Proposed Greenways

## Nancy Creek Greenway

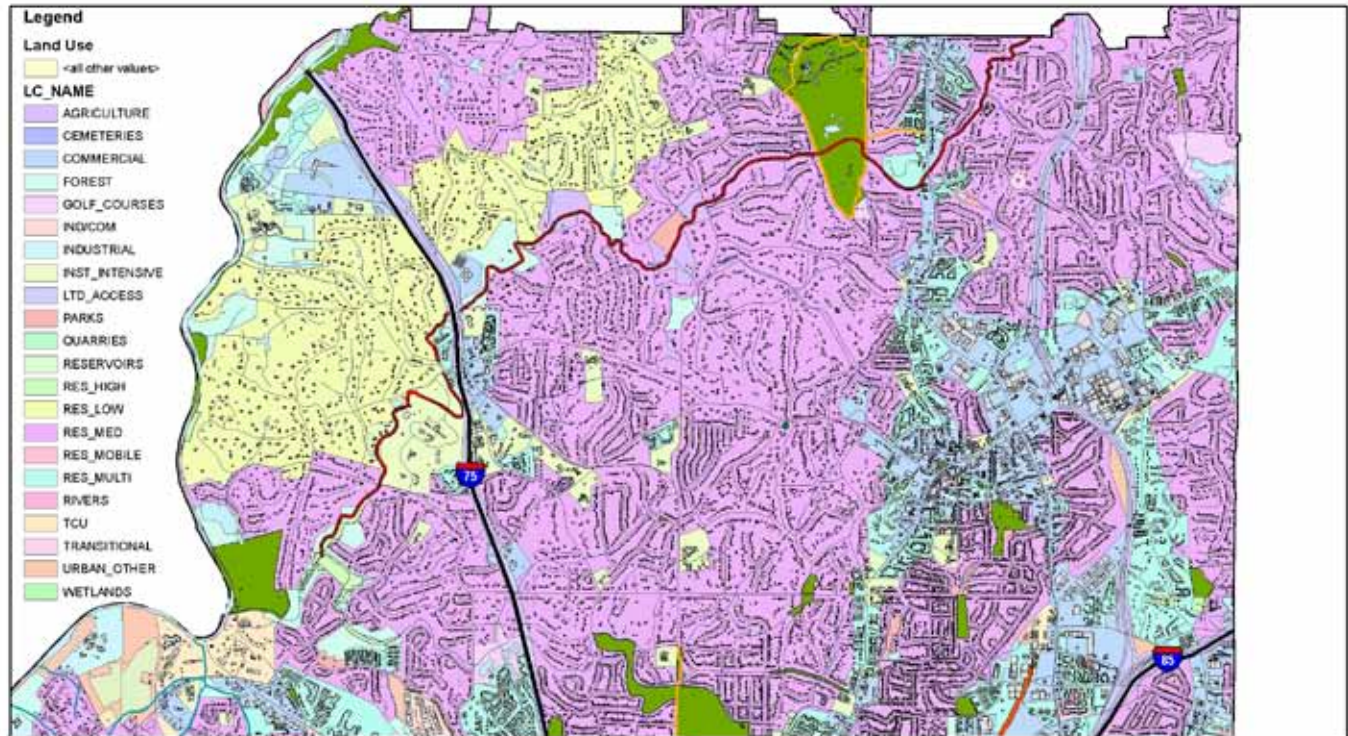


Figure 13: Proposed Nancy Creek Greenway with Surrounding Land Use

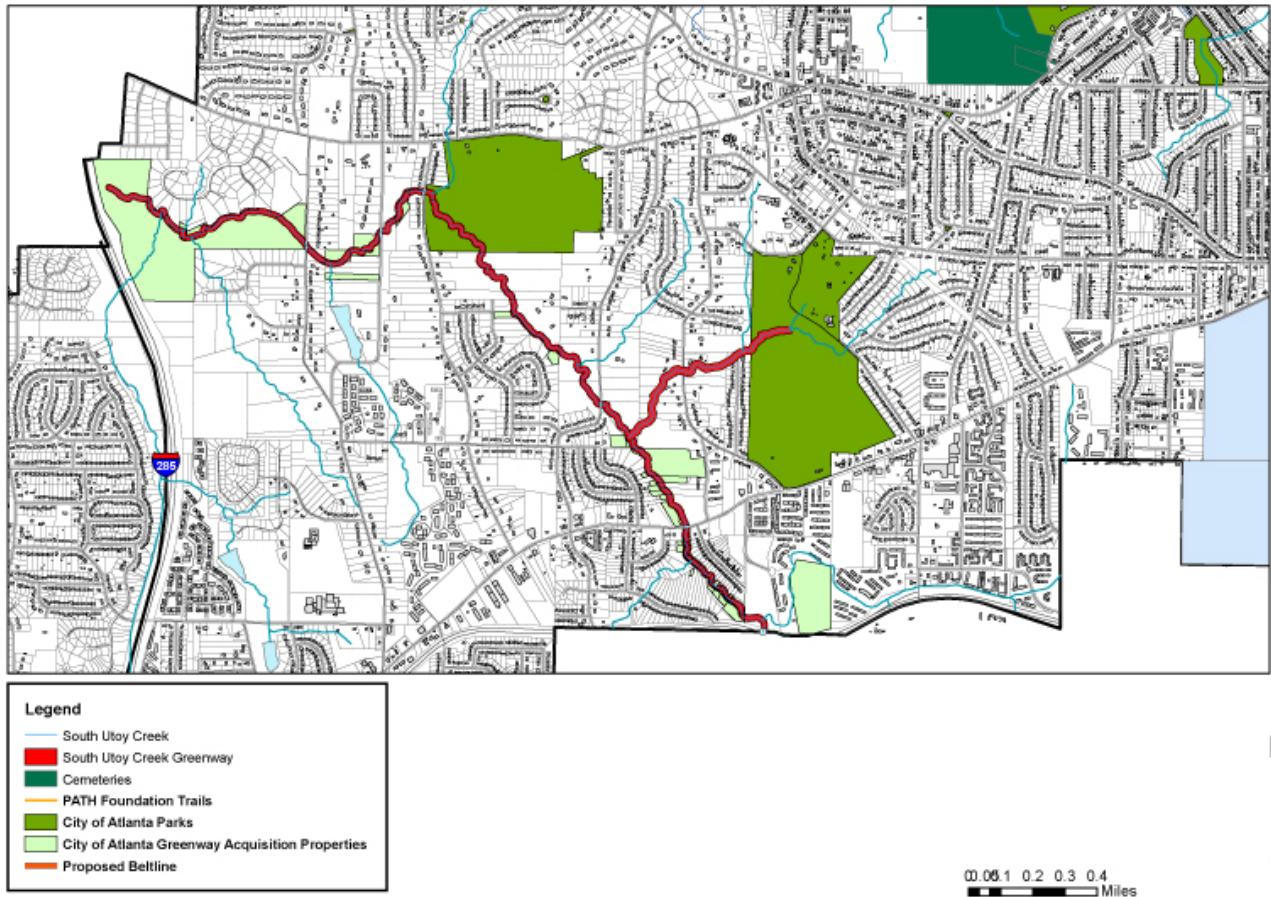
### South Utoy Creek Greenway:

The proposed South Utoy Creek Greenway connects Cascade Nature Preserve with Greenway Acquisition Properties, Adams Park, and Alfred Tup Holmes Golf Course. The greenway includes 184 parcels along South Utoy Creek and its branch and predominately traverses areas of undeveloped forest and is adjacent to large areas of medium density residential development. Conservation easements will be required in order to develop the trail on private property and land acquisition through the Greenway Acquisition program may be used to acquire the undeveloped forest. The proposed Peachtree Greenway would run approximately 3.6 miles long and provide recreation access in areas currently underserved by park and greenspace access.



# City of Atlanta Proposed Greenways

## Utoy Creek Greenway



# City of Atlanta Proposed Greenways

## South Utoy Creek Greenway

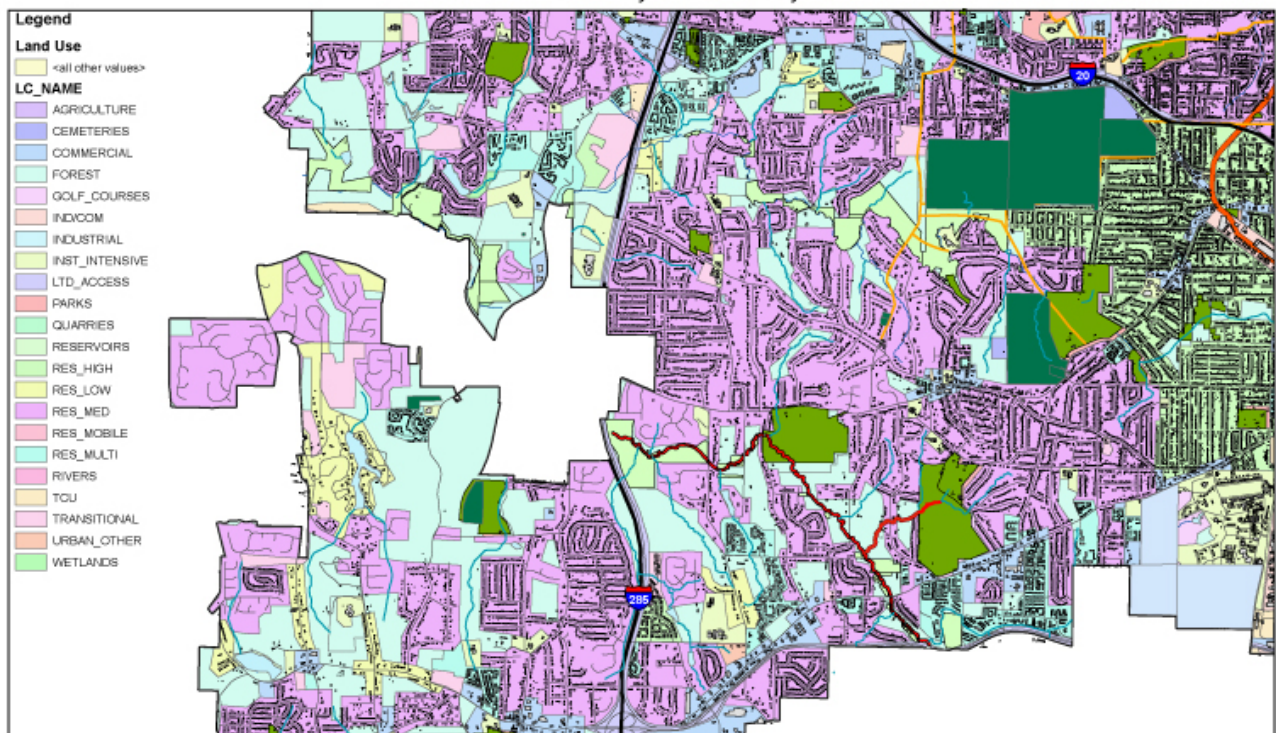


Figure 15: Proposed Nancy Creek Greenway with Surrounding Land Use

## ***Discussion and Conclusions***

While the need for increased greenspace in Atlanta is apparent in comparison to other cities within the United States, efforts to expand the greenspace network will be costly and require community support as seen in the efforts of such cities as Denver and Raleigh. The city has the opportunity to purchase properties or potentially work with existing landowners to develop use agreements for parcels identified as potential park space. The latter option of forming use agreements could be most effectively utilized with Park One, current Georgia Power property and Park Five, currently Fort McPherson. Fort McPherson presents a unique opportunity to increase parkspace within the city since it is currently undergoing redevelopment planning. Park Two offers a unique opportunity for both Fulton County and the City of Atlanta to create a partnership in order to mutually benefit from increased greenspace for residents in the area. Park Three and Four are both currently owned by private owners, this private ownership may prove to favor the city to acquire this land if the owners are eager to sell the land due to the inability to redevelop the land. Despite the need for increased greenspace, the current fiscal situation of the city and the region as a whole presents a large barrier to land acquisition. While the current economic crisis does not lend itself naturally to large acquisition, the city can use the current economic situation to acquire land at a reduced cost and increase the current greenspace acreage within the city for the benefit of current and future residents.

The greenway acquisition process will prove to be even more difficult financially and may face greater public opposition. The areas identified for greenway development lie primarily adjacent to residential development, which is often resistant to surrendering private land for public use. The use of conservation easements or expansion of the Greenway Acquisition Program is essential to creating a successful and complete greenspace network. Private landowners will need to be incentivized to surrender some land for the public good. While this seems like an overwhelming challenge, the added benefit to the public good will far outweigh the “harm” to private landowners. Many state and federal tax incentives are available for private landowners to place their land in conservation easements for the benefit of public use. The current Georgia Tax Credit offers “up to 25% of the fair market value of the donation, with a maximum credit of \$250,000 per individual, \$500,000 per corporation, and up to \$1 million for partnerships, in aggregate” (“Georgia Land Conservation Program” n.d.). At the federal level, tax benefits for donated land via conservation easements include “an income tax deduction of

up to 50% of the donor's adjusted gross income (AGI), which can be used over a 16 year period. Taxpayers who earn the majority of their income from farming or ranching can deduct up to 100% of AGI. Fee title donations are eligible for a deduction of up to 30% AGI and can be used over 6 years" ("Georgia Land Conservation Program", n.d.). While these financial benefits seemingly offset the possible loss in property value from limiting development, the benefits of private landowner extend beyond financial gains. According to the Nature Conservancy, conservation easements help individuals fulfill their visions of their lands and waters by placing these easements in perpetuity as well as making it easier to pass land from generation to generation by potentially lowering the estate tax ("Conserving a Way of Life", n.d.). These financial and personal benefits of conservation easements have helped increase the occurrence and success of private land conservation.

To ensure that the City of Atlanta remains a competitive city within the Southeast, the city will need to make a concerted effort to increase access and availability of greenspace. By expanding both the regional/community park system and the greenway system the city can begin to create a network linking parks, transit, walking/biking trails and other destinations. The pressures of future growth will only place a higher demand for development on current vacant property. To ensure that the city will be a healthy and vibrant well into the future, the city must begin to expand its greenspace network. The expansion of the current system into a network of parks and greenspace connections will create a healthier community for all now and well into the future.

## List of Figures and Tables:

Figure 1: Atlanta Parks System

Figure 2: Emerald Necklace Park System Map. Source: <http://www.emeraldnecklace.org>

Figure 3: Capital Area Greenway Trail Map. Source: [www.greatoutdoorprovision.com/.../pdfs/RP&R-greenway\\_map.pdf](http://www.greatoutdoorprovision.com/.../pdfs/RP&R-greenway_map.pdf)

Figure 4: South River Greenway Master Plan. Source: <http://www.greenwayfoundation.org>

Figure 5: Park Distribution Map with Priority Areas

Figure 6: Suitable Land for Potential Park Development

Figure 7: Potential Areas for Park Development

Figure 8: Park One & Park Two for Potential Park Development

Figure 9: Park Three, Park Four & Park Five for Potential Park Development

Figure 10: Proposed Peachtree Creek Greenway

Figure 11: Proposed Peachtree Creek Greenway with Surrounding Land Use

Figure 12: Proposed Nancy Creek Greenway

Figure 13: Proposed Nancy Creek Greenway with Surrounding Land Use

Figure 14: Proposed South Utoy Creek Greenway

Figure 15: Proposed Nancy Creek Greenway with Surrounding Land Use

Table 1: Potential Parcels for Park One Acquisition

Table 2: Potential Parcels for Park Two Acquisition

Table 3: Potential Parcels for Park Three Acquisition

Table 4: Potential Parcels for Park Four Acquisition

Table 5: Potential Parcels for Park Five Acquisition

## References

2010 City Park Facts. (2010). *The Trust for Public Land--Conservation and Parks for People*. <http://www.tpl.org/cityparkfacts/>

About the Parks Department - City of Boston. (n.d.). *City of Boston*. Retrieved February 28, 2011, from [www.cityofboston.gov/Parks/about/](http://www.cityofboston.gov/Parks/about/)

Atlanta BeltLine. (n.d.). *Atlanta BeltLine*. Retrieved February 26, 2011, from <http://www.beltline.org>

Capital Area Greenway Trail System. (n.d.). *The Official City of Raleigh Portal*. Retrieved March 1, 2011, from [www.raleighnc.gov/arts/content/PRecDesignDevelop/Articles/CapitalAreaGreenwayTrailSystem.html](http://www.raleighnc.gov/arts/content/PRecDesignDevelop/Articles/CapitalAreaGreenwayTrailSystem.html)

Christopher, C. (2008). "Greenway accessibility and physical-activity behavior." *Environment and Planning B: Planning and Design* 35: 552-563.

City of Atlanta Online Office of Parks. (n.d.). *City of Atlanta Online*. Retrieved February 16, 2011, from [http://atlantaga.gov/government/parks/bureau\\_of\\_parks091703.aspx?section=Bureau%20of%20Parks](http://atlantaga.gov/government/parks/bureau_of_parks091703.aspx?section=Bureau%20of%20Parks)

Clean Water Atlanta - Greenway Acquisition Project. (n.d.). *Atlanta Department of Watershed Management*. Retrieved February 17, 2011, from <http://www.atlantawatershed.org/greenway2/QuickFacts/default.htm>

Community greenways: linking communities to country, and people to nature. (1995). Victoria, B.C., Ministry of Environment, Lands and Parks.



Conserving a Way of Life. (n.d). The Nature Conservancy. Retrieved April 10, 2011, from [www.nature.org](http://www.nature.org).

A brief look at the benefits and role of conservation easements to private landowners.

Crompton, J. L. (2008). "Empirical Evidence of the Contributions of Leisure Services to Alleviating Social Problems: A Key to Repositioning the Leisure Services Field " *World Leisure* 4: 243-258.

Crompton, J. L. (2008). "Empirical Evidence of the Contributions of Park and Conservation Lands to Environmental Sustainability: The Key to Repositioning the Parks Field " *World Leisure* 3: 154-172.

Cutts BB, D. K., Boone CG, et al. (2009). "City structure, obesity, and environmental justice." *Social Science & Medicine* 69(9): 1314-1322.

Diana E. Bowler, L. B.-A., Teri M. Knight, Andrew S. Pullin (2010). "Urban greening to cool towns and cities: A systematic review of the empirical evidence " *Landscape and Urban Planning* 97: 147-155.

Emerald Necklace - City of Boston. (n.d.). *City of Boston*. Retrieved March 1, 2011, from <http://www.cityofboston.gov/Parks/emerald/>

Fabos, J. G. (2004). "Greenway planning in the United States: its origins and recent case studies." *Landscape and Urban Planning* 68: 321-342.

Floyd MF , S. J., Maddock JE, Gobster PH, Suau L (2008). "Environmental and social correlates of physical activity in neighborhood parks: An observational study in Tampa and Chicago." *Leisure Services* 30(4): 360-375.

Franklin, Shirley. (2007). "Watershed Letter." Letter to Community Partner. 55 Trinity Ave, SW, Atlanta, GA.

Georgia Land Conservation Program. (n.d.). Georgia Land Conservation Program. Retrieved April 8, 2011, from <http://glcp.georgia.gov/02/glcp/home/0,2682,82613131,00.html>

*atlanta nature network*



Giles-Corti B, B. M., Knuiaman M, Collins C, Douglas K, Ng K, Lange A, Donovan RJ (2005).

“Increasing Walking:How Important Is Distance To, Attractiveness, and Size of Public Open Space? .” American Journal of Preventive Medicine 28(2): 169-176.

Lindsey, G., Wilson, Jeff , Yang, Jihui Anne and Alexa, Christopher (2008). “Urban Greenways, Trail Characteristics and Trail Design: Implications for Design.” Journal of Urban Design 13(1): 53-79.

Little, C. E. (1990). Greenways for America . Baltimore : Johns Hopkins University Press.

Maller Cecily, T. M., Pryor Anita, Borwn Peter, and St Leger Lawrence (2010). “Healthy nature healthy people: ‘contact with nature’ as an upstream health promotion intervention for populations.” Health Promotion International 21(1): 45-54.

Moore LV, E. K., McGinn AP, et al. (2008). “Availability of recreational resources in minority and low socioeconomic status areas.” American Journal of Preventive Medicine 34(3): 16-22.

PATH Foundation. (n.d.). *PATH Foundation*. Retrieved February 28, 2011, from <http://www.pathfoundation.org>

Poudyal Neelam C, H. D. G., Merrett Christopher D. (2009). “A hedonic analysis of the demand for and benefits of urban recreation parks.” Land Use Policy 26(4): 975-983.

Solecki MD, W. J. (1995). “Urban Parks- Green Spaces or Green Walls.” Landscape and Urban Planning 32(2): 93-106.

Statistics, C. D. C. a. P. N. C. f. H. (2009). Vital and Health Statistics: Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2009. U. D. o. H. a. H. Services. Hyattsville, Maryland, DHHS Publication. 10.

Sugiyama T, F. J., Middleton NJ, et al. (2010). "Associations Between Recreational Walking and Attractiveness, Size, and Proximity of Neighborhood Open Spaces." *American Journal of Public Health* 100(9): 1752-1757.

The Emerald Necklace: Boston's Green Connection. (n.d.). *U.S. National Park Service* . Retrieved March 1, 2011, from <http://www.nps.gov/nr/twhp/wwwlps/lessons/86bostonparks/86bostonparks.htm>  
The Emerald Necklace Conservancy - The Parks. (n.d.). *The Emerald Necklace Conservancy*. Retrieved March 1, 2011, from <http://www.emeraldnecklace.org/the-parks/>

The Greenway Foundation - Enhancements. (n.d.). *The Greenway Foundation*. Retrieved March 1, 2011, from <http://www.greenwayfoundation.org/enhancements/index.html>

Walking and Jogging Trails. (n.d.). *City and County of Denver Official Site*. Retrieved March 1, 2011, from <http://www.denvergov.org/WalkingandJoggingTrails/tabid/432299/Default.aspx>

Welcome to Denver Parks. (n.d.). *City and County of Denver Official Site*. Retrieved March 1, 2011, from <http://denvergov.org/parksandrecreation/Parks/tabid/433973/Default.aspx>