Northeast Georgia Resource Management Plan for Regionally Important Resources

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Introduction

Purpose

This document is intended to serve an advocacy guide to educate and guide citizens, local government, regional, state, and federal agencies, conservation organizations, and land trusts as they work for the protection and management of the many important natural, cultural, and historic resources found throughout the 12-county Northeast Georgia region. The resources, called Regionally Important Resources (RIR), are those determined to be of value to the region and thus the state, and vulnerable to the effects of uncontrolled or incompatible development.

The plan was prepared in accordance with the rules and regulations established by the Georgia Department of Community Affairs (effective July 1, 2009) for the identification of RIRs, the development of a plan for protection and management of the RIRs, and for review of activities potentially impacting the RIRs.

Overview

The plan contains three categories of resources: Conservation, Heritage, and Water. However, many resources may provide benefits to more than one resource category. Each individual resource is identified by its primary resource category and reflects snapshot data, a description of the resource's value to the region, an explanation of its vulnerability to new development, and a list of appropriate development practices. These practices should be used by developers for designing new developments to be located within one mile of an RIR. Additionally, Developments of Regional Impact that will be located within one mile of an RIR will be evaluated against the Practices. Finally, general policies and protection measurers are recommended to provide guidance for local government in its decision-making or planning that affects RIRs.

Methodology

The Regional Commission solicited regionally important resource nominations from local government, land trusts, conservation and environmental organizations, and individuals active throughout the region. Nominations were evaluated by RC staff for their value and vulnerability for possible inclusion in the plan. Evaluation factors focused on the regional importance of the resource (versus the local importance) and the degree to which the resource is threatened or endangered. Additional evaluation factors were as follows:

- Natural Resources
  - Preserves water quality and quantity by protecting drainage, flood control, recharge areas, watershed, buffers, potential reservoirs, etc.
  - Creates or preserves active or passive greenspaces including trails, gardens and informal places of natural enjoyment

especially in areas currently underserved by greenspace.
    - Protects wildlife habitat by creating, buffering, preserving, habitat areas and corridors.
    - Preserves significant working agricultural or forest resources and/or creates opportunities for local food production activities.
    - Contributes to region-wide connections between existing and proposed regional resources.
- Heritage Resources:
    - Recognition of national importance by some entity such as the Georgia or National Register of Historic Places;
    - It is the only such resource in the region;
    - The resource has a shared history or an impact on a shared history;
    - The resource is a part of the region's history;
    - The resource has an economic impact through tourism; and
    - The resource is attached to a figure or event of wider importance that just local.

In addition to nominated resources, RC Planning Division staff examined various planning documents such as the Georgia Land Conservation Partnership Plan, Georgia Wildlife Action Plan, Georgia Statewide Comprehensive Outdoor Recreation Plan, the Northeast Georgia Regional Plan 2004, and affected local governments for consideration of possible resources not nominated but deserving of inclusion of in the Regional Resource Plan.

State Vital Areas, as identified by the Georgia Department of Natural Resources, located within the Northeast Georgia region, were included on the RIR Map. For a list of State Vital Areas, see the Appendix. These areas have preservation/conservation mechanisms in place either through federal, state, or local regulations and help serve to form a regional green infrastructure network as depicted on the RIR Map.

Public Involvement

In an effort to keep the public, elected officials, and RC Council members up-to-date throughout the plan's development, the following was undertaken:

- Summary sheets were developed for each designated resource and State Vital Areas and posted to the agency website at http://negplanning.org/rir/links.
- Periodically, drafts of the Regional Resource Plan were posted to the web site for review and comment.
- Through an e-newsletter and e-mail blasts, the RC Council, elected officials, and interested parties were updated as to the plan's development.

In accordance with the Rules for Regionally Important Resources, as published by the Georgia Department of Community Affairs (DCA), a regional hearing was conducted in order to give the general public the opportunity to comment on the content of the plan.

A copy of the plan was made available for review on the RC's website.

Protection Measures

For the purpose of identifying protection measures, designated resources were divided into three categories: Conservation, Heritage, and Water. Many resources will fit into more than one category and identified protection measures are applicable to multiple resource categories. Protection measures are application to land owners, developers, local government and are so identified to assist with implementation.

Timeline

Development of the RIR plan began in September 2009 with the formation of the Planning Advisory Committee, development of the Regional Plan 2035 web page, and development of the RIR Selection Criteria, which was approved by the RC Council at its December 2009 meeting.

Nominations were accepted December 1, 2009 through January 31, 2010. Thirty-five nominations were received. In February, Planning Division Staff mapped the resources and developed a preliminary evaluation of each nominated resource. During March and April, the Planning Advisory Committee evaluated nominated resources based on the selection criteria, vulnerability of the resource, and potential to facilitate the interconnection of a green network, and recommended resources to the RC Council for designation. Mapping demonstrated that most of the resources were associated with river and stream corridors and the resource's ability to facilitate protection of water quality and quantity as well the interconnection provided by the river corridor was an important factor for recommending resources for designation. Of the thirty-five nominated, twenty-five were recommended for designation. (See Appendix A for the list of nominated resources and reason for denial.) Most of the nominated resources were adjacent to major river corridors or their tributaries and, if vulnerable, were recommended for designation due to their value to help protect water quality and quantity. Linear resources (rail corridors) were recommended for designation because of their long-term potential for recreation, linkage to river corridors, and open space protection. A list of recommended resources and the map were posted on the RC website and RC Council members were notified of their availability.

The RC Council unanimously voted at its April 2010 meeting to designate the recommended resources. Following designation, RC Planning Division staff worked with the Planning Advisory Committee, a subcommittee of the RC Council, to formulate a list of recommended best practices to be used by developers when designing new developments within close proximity to the RIRs, as well as devising general policies and protection measures recommended for appropriate local management of the areas included on the RIR map. A public information meeting was held on September 13, 2010 during the Planning Advisory Committee meeting. A public hearing was held on September 14, 2010. The Resource Management Plan was recommended to the RC Council for transmittal to the Georgia Department of Community Affairs for review and comment its September 2010 meeting. Upon receiving certification of completeness by DCA, the Resource Management Plan was adopted by the RC Council November 18, 2010.

Implementation

The Northeast Georgia Regional Commission will actively promulgate the plan in an effort to coordinate activities and planning of local governments, state agencies, land trust, and conservation or environmental advocacy groups toward protection and management of the identified RIRs. Specifically, the Northeast Georgia Regional Commission will work with and encourage each of these stakeholders to coordinate their activities to foster protection of the RIRs.

Additionally, the Northeast Georgia Regional Commission will encourage local governments in the region to adopt appropriate protection measures, policies, and enhancement activities that will promote protection of the region's important resources. The Regional Commission will also encourage local governmental to include the areas on the RIR Map as conservation areas in the respective local comprehensive plans and will review and evaluate local comprehensive plans for consistency with the Regional Resource Plan.

Finally, the listing of best practices to be considered by developers when designing new developments in close proximity to RIRs, will be used by the Northeast Georgia Regional Commission when reviewing all Developments of Regional Impact (DRI) proposed to be located within one (1) mile of any area included on the RIR map. The DRIs will be reviewed for consistency with the recommended development standards.

CONSERVATION RESOURCES

Overview

The Northeast Georgia region is home to numerous Conservation Resources, including a National Forest, numerous state and county parks, wildlife management areas, heritage farms, greenways, two proposed rails-to-trails, and an Arboretum. Conservation resources provide a number of benefits to the region including recreation, economic development, air and water quality, open space, and history.

Parks, open space, and forestry resources perform essential environmental functions for Northeast Georgia in additional to an improved quality of life. Trees and vegetation provide habitat for wildlife, mitigate the effects of the sun and wind, help to sequester carbon thus reducing atmospheric carbon dioxide, reduce stormwater runoff and soil erosion, and filter pollutants. Additionally, trees and other vegetation enhance the aesthetic value of the region.

The Oconee National Forest and five state parks provide unlimited recreational opportunities for the region's residents and visitors, as well as offering economic opportunities associated with eco-tourism.

Wildife Management Areas, managed by the Georgia Department of Resources, are scattered throughout the region and include the Elbert County WMA, Broad River WMA, Redlands WMA, Clybel WMA, Dove Field WMA, Oconee WMA. Individually, these areas may be less regionally important but, in the aggregate, they provide recreational opportunities for residents of the county in which they are located as well as adjacent counties.

The Piedmont National Wildlife Refuge, nine miles south of Monticello, is partially located in southern Jasper County and provides recreational opportunities not only for Jasper County, but also, adjacent counties, as well as serving as a model for forest ecosystem management for wildlife.

Natural Areas are also found in the region. The primary management objective for these properties is the protection of rare species populations and natural communities of plants and animals.

Northeast Georgia's Conservation Resources are vulnerable to the impact of urbanization. The Oconee National Forest is plagued by fragmentation. Property in WMAs is leased to the State thus making their continued availability uncertain.

The following guiding principles provided the basis for final determination for inclusion as a Regionally Important Conservation Resource:

- Preserves water quality and quantity by protecting drainage, flood control, recharge areas, watershed, buffers, potential reservoirs, etc.

- Creates or preserves active or passive greenspaces including trails, gardens and informal places of natural enjoyment especially in areas currently underserved by greenspace.
- Protects wildlife habitat by creating, buffering, preserving, habitat areas and corridors.
- Preserves significant working agricultural or forest resources and/or creates opportunities for local food production activities.
- Contributes to region-wide connections between existing and proposed regional resources.

Many of the designated Conservation Resources are defined as State Vital Areas[1]. The Resource Management Plan sets out to incorporate these resources, in addition to other designated Conservation Resources, into a green infrastructure network for the region including the cultural and water resources in order to link the region's urban areas to the more rural settings. Proper care and management of this network is critical to the long-term quality of life of the region and the individual communities and citizens.

[1] Chapter 110-1204, Regionally Important Resources, Georgia Department of Community Affairs, July 1, 2009. These areas include Coastal Marshes, Salt Marshes, Tidal Wetlands, Water Supply Watersheds, Groundwater Recharge Areas, and Wetlands.

Bert Adams Boy Scout Reservation

Location: Newton County, GA

Acres: 1,250

Owner/Operator: Atlanta Area Council, Boy Scouts of America

Value

Located near Covington, the Bert Adams Boy Scout Reservation is a 1,250 acre site adjacent to the Yellow River that provides for long-term resident and weekend camping and training events. Thousands of Scouts come to Bert Adams each year to participate in Boy Scout, Webelos and JROTC Summer Camps, Order of the Arrow Events, Venturing and Explorer Outings, Cub Family Camping, Cub World Events, District Camporees, Cub Pack Picnics, ScoutReach Outings, Wood Badge Training, Junior Leader Training, and many other Scouting events. Bert Adams Scout Reservation includes Camp Gorman, Camp Emerson, Cub World and the redeveloped Camp Jamison.

Owned by the Atlanta Area Council of the Boy Scouts of America, it is one of only four Scout camps in the Atlanta area and the only such Scout camp in the northeast Georgia region.

Bert Adams is a unique facility that, in conjunction with the nearby FFA Camp, establishes the area and region as a center for camping, recreation and training opportunities for children. Additionally, the site provides water quality and quantity benefits.

Vulnerability

The Camp is in a rural area in southwest Newton County. It's rural location is deemed by its users as essential for camping and training functions. Long-term, the area is designation for Rural Residential land use. Presently, the area is beginning this transition with the development of two large subdivisions with one-acre zoning density on the Camp's western property line. Presently zoned Agricultural, Little Springs Farm, a 1,977 acre farm immediately adjacent to the Camp's north property line, could be considered for similar one-acre density if sold for non-farm use.

The Newton County Comprehensive Plan Community Agenda identifies the county's current traffic congestion problems. As the southwest portion of Newton County develops, it is reasonable that area roads could be widened to alleviate congestion. However, road widening has the effect of promoting more development which would further jeopardize the Camp's rural setting.

Burge Plantation

Location: Newton County, GA

Acres: 930

Owner: Private

Value

Burge Plantation is an active farm that has been in operation and ownership of a single family for 200 years. The Plantation represents not only European agriculture and settlement in Georgia but rural agricultural aspects of Newton County's history. The area where the Plantation is located was occupied by Native Americans for thousands of years and the farm has an extensive artifact collection of stone knives, tools and projectile points found on the property. The Plantation is listed in the National Register of Historical Places.

The Plantation protects water quality by maintaining vegetated riparian buffers and through responsible agricultural practices. Vegetated riparian buffers also protect and preserve wildlife habitat by creating and buffering habitat areas and corridors. Additionally, the Plantation preserves significant working agricultural or forest resources and/or creates opportunities for local food production activities.

Burge Plantation produces Southern Yellow Pine and organic produce and is a private hunting preserve.

Vulnerability

The Plantation is about 1 mile north of both Mansfield and Newborn and approximately 2/3 mile from the intersection of highways 11 and 142. It is anticipated that, over time, development will extend from this major intersection and the two communities, thus threatening the water and air quality value of the plantation. Area zoning allows 2-acre minimum lot size and prior to the economic downturn, nearby properties were rezoned. Further, increased area development could lead to increased property values thus threatening the long-term survival of the Plantation.

Factory Shoals County Park

Location: Newton County, GA

Acres: 400 (approx.)

Owner: Newton County

Value

Located approximately 10 miles south of the City of Covington, Factory Shoals County Park is situated on the Alcovy River, and boasts granite shoals and a 2-mile stretch of preserved forested river corridor. This park offers picnic areas, primitive campsites (with on-site restroom and shower facilities), and opportunities for a variety of recreational activities from kayaking and canoeing to hiking and fishing. Newton County acquired the property containing Factory Shoals from Georgia Power in 1982, and it was operating as a park by the end of the 1980s.

In addition to providing recreational amenities, Factory Shoals County Park is a historic resource for the local and regional community. The shoals served as a power source for cotton and grist mills dating back to the 19th century. Ruins of these factory buildings and supporting structures are visible today on both river banks as remnants of industrial activity in this area. Mills once operated at Factory Shoals include Newton Factory, White's Factory, and Jones' Mill.

Two cemeteries exist on the property; one on the west bank of the river was closely associated with a nearby church that burned in the early 1900s and contains numerous marked and unmarked graves. Another cemetery with no marked graves is located east of the river, and was once surrounded by a stone wall that has nearly collapsed; the remaining standing portions are roughly 4' in height. It is assumed that a prior logging operation inflicted the most damage to this area.

An aboriginal site is located on a prominent ridge overlooking the Alcovy River. This site has been classified as characteristic of the Middle Archaic period (5500 to 2500 B.C.) due to the particular artifacts found. Archaeologists have opined that the site was likely used intermittently as a camp from which local food resources were exploited, as was common with hunting and gathering patterns.

Vulnerability

Even under County ownership, there remain a handful of threats to the health of the park. Water quality of the Alcovy River is a concern for recreation users. The recent construction of the Alcovy High School nearby has led to an increase in new residential subdivisions; in addition, the future widening of Jackson Highway is likely to increase growth pressures in this still-rural community.

Currently, the several worn foot paths leading to the water's edge present erosion concerns and safety hazards for park visitors. As population in Newton County increases, as projected, due to its proximity to the metropolitan Atlanta region, the increase in the number of visitors will necessitate path improvement of an appropriate scale. Plans exist for establishing a trail system connecting the new high school with the park and other recreational amenities as well as surrounding residential areas.

The primary threat to the archaeological resources at Factory Shoals is vandalism, followed by unauthorized digging and neglect.

Firefly Trail

Location: Athens-Clarke, Greene, and Oglethorpe counties, Arnoldsville, Crawford, Maxeys, Winterville, Woodville, and Union Point

Length: 39 mile corridor

Value

The proposed Firefly Trail protects and reuses a 38-mile historic rail corridor from Union Point to downtown Athens, converting it into a path for walking and bicycling. The Trail features pastoral agricultural lands, quaint small towns, scenic rural highways, historical railroad structures, park space, and a bus transfer center than provides connections to nearly all of Athens and the University of Georgia.

The route, once referred to as the "Athens Branch," was completed in 1841 as part of the Georgia Railroad and abandoned in 1984 by what is now CSX Transportation, Inc. The Firefly was the name locals gave to the locomotive that operated on this line; it was named for the sparks that flew from its wood-burning engine. Only three of the original depots remain of the original line.

In addition to its potential as a recreation resource, the Trail could provide economic opportunities for the small communities along the corridor.

Vulnerability

Private ownership and resultant encumbrances threaten the integrity of the original rail bed in addition to the potential increased cost of future trail property acquisition.

Development pressures in Athens-Clarke County could threaten the rail bed though, since most of the adjacent development is industrial, the threat is perceived as low. The remainder of the rail bed is in predominantly agricultural land use.

Georgia Wildlife Federation/Alcovy Conservation Center

Location: Newton County, GA

Acres: 115

Owner: Georgia Wildlife Federation

Value

The Georgia Wildlife Federation's beginning can be traced back to late 1935, when U.S. President Franklin D. Roosevelt called for the first North American Wildlife Conference to be held the following year. In late 1936, the first meeting of the Georgia Wildlife Federation (GWF) was held in Macon. Shortly thereafter, the GWF pushed the State to hire professional wildlife biologists for the purpose of managing the many wildlife resources in Georgia. In the 1960s, the GWF led the fight to stop the dredging and channelization of the Alcovy River by the Soil Conservation Service. In subsequent years, numerous other initiatives and campaigns have been carried out by this organization throughout the State for the purpose of "encouraging the intelligent management of the life sustaining resources of the earth…and promot[ing] and encourag[ing] the knowledge and appreciation of these resources." (Georgia Wildlife Federation Mission Statement, 1936)

The Alcovy Conservation Center, located in Covington, GA on the Alcovy River, is the headquarters of the Georgia Wildlife Federation. In addition, the location serves as a community center for environmental education, sportsman's issues, and natural resource conservation. The site itself contains woodland, wetland, and meadow habitats and demonstration gardens for both appreciation and study. A famed tupelo gum river swamp, along the Alcovy River, is accessible via trails on the property.

Vulnerability

This site is threatened by imminent industrial development on three adjacent properties that are zoned for heavy industrial use. Pollution of the Alcovy River through point and non-point sources, either from future industrial developments or upstream locations along the riparian corridor, are also a concern for the health and vitality of the various species and habitats on the property. As of the February 2010, the segment of the Alcovy River from its headwaters in Gwinnett County through Walton County and into Newton County at Big Flat Creek was included on the Section 303(d) (of the Clean Water Act) list of waters as Not Supporting [its] Designated Use (fishing and drinking water) due to the presence of fecal coliform from non-point sources. An assessment is currently pending for the segment from Big Flat Creek to Cornish Creek, situated entirely in Newton County.

Gaither Plantation

Location: Newton County, GA

Acres: 150

Owner: Newton County

Value

The Gaither Plantation is located off of Davis Ford Road along the proposed Bear Creek Reservoir, and was acquired by Newton County 1996 for its proximity to this project and to preserve its historic nature. This site is one of the few remaining former 19th and 20th century cotton plantations in Northeast Georgia, and contains an historic farmhouse called the Gaither Plantation House (c.1855), a log smokehouse c.1830), a pole hay barn c. 1950), agricultural fields, and a number of other historic buildings relocated from elsewhere in Newton County to Gaither Plantation. In addition, two 19th century cemeteries, the Gaither Family Cemetery and the Gaither Slave Cemetery, are located here.

The Gaither Plantation Master Plan includes proposed gardens, natural areas and wildlife habitats, the preservation of an existing on-site pond that would open up into the Bear Creek Reservoir, and hard- and soft-surface trails throughout the property. Through master plan realization, Newton County hopes to preserve this history of this area, maintain and enhance the natural resources on the land, and develop and promote the recreational potential of the plantation. In total, construction costs for this plan are estimated to be just under $3 million.

Vulnerability

Funding for maintenance and restoration is not sufficient; several important structures are in danger of deterioration.

In addition, the development of the proposed Bear Creek Reservoir has the potential to change this mostly rural area. Though the proposed reservoir benefits from a required 150-foot natural buffer there is a risk of sedimentation and pollution as a result of more construction and increased impervious surface. It will be crucial for the Gaither Plantation to be developed in such a way as to contribute to the conservation of the natural resources on and adjacent to the site to avoid negative impacts on water quality.

Georgia FFA-FCCLA Center

Location: Newton County, GA

Acres: 452

Owner: State of Georgia

Value

Located in south-central Newton county, the FFA-FCCLA Center hosts more than 20,000 campers and serves approximately 100,000 meals annually. From its formation in 1929, the Georgia Future Farmers of America Association had envisioned creating a wholesome summer recreational camp for boys. The vision began to materialize in 1937 on a 150-acre hillside overlooking the headwaters of Lake Jackson on the Alcovy River. After the creation of the FHA (Future Homemakers of America, now FCCLA, Future Career and Community Leaders of America), the camp's forward-thinking leaders expanded the programs to become co-educational. Now encompassing approximately 450 acres owned by the State of Georgia, the camp has grown into a nationally-recognized educational center, meeting and exceeding the original vision of its founders (notably, during the 1996 Olympic Games, over 3,200 Germans utilized the facilities).

Initial site work and building began in 1937, conducted by student members of the National Youth Association who utilized granite quarried on the property to construct several of the main buildings. First Lady Eleanor Roosevelt toured the site in 1938, and was able to secure funds for building and infirmary. The value placed on the camp may be recognized by the concerted effort and cooperation of individuals, corporations, and local and state governments in funding the growth and improvement projects that have taken place over many decades.

The Georgia FFA-FCCLA Center is located contiguous to two other designated Regionally Important Resources: Factory Shoals County Park and the Alcovy River Greenway. Together, the FFA-FCCLA Center and Factor Shoals County Park represent 750 acres of preservation space directly adjacent to the Alcovy River; protecting these two sites will bolster the Alcovy River Greenway's water quality efforts.

Vulnerability

Although no imminent threats to the site are known to exist, vulnerabilities could arise from the urbanization of Newton County and development in nearby Jasper County (directly across Jackson Lake/the Alcovy River), and from pollution upstream on the Alcovy River. Newton County land in the vicinity of the Center is zoned in a mix of agricultural and low-density residential; future zoning changes

to more intensive uses could compromise the site's natural and pastoral features. Along Jasper County's side of the lake/river across from the Center, zoning is virtually all residential, with existing development at densities among the highest in the county; this could lead to water quality concerns from runoff as well as aesthetic impacts to the less developed Center.

Hurricane Shoals Park

Location: Jackson County, GA

Acres: 81.4

Owner: Jackson County

Value

Located approximately 6.4 miles northeast of the City of Jefferson and approximately 4.5 miles northwest of the City of Commerce, Hurricane Shoals Park is situated on the North Oconee River. Believed to have been occupied at various points in early history by Creek and Cherokee tribes, this park officially opened in Jackson County in 1978 and subsequently began to grown in size through land purchases until 1994. The park contains disc golf and miniature golf facilities, the Pat Bell Conference Center, a horseback riding arena, Heritage Village (where historic structures from throughout Jackson County have been relocated to save them from destruction), and a covered bridge that recently underwent a restoration process after having burned in the 1970s. In addition, a working grist mill is located on site, which grinds corn meal for the annual Art in the Park Festival. This grist mill was built in the 1980s as a tribute to the former cotton gin and grist mill that operated at Hurricane Shoals from 1870 until the mid-1920s. Ruins of the original grist mill can still be seen in the western side of the park.

Vulnerability

The North Oconee River is protected by a 100-foot natural vegetative greenway along both sides, per the Jackson County Code of Ordinances. While this provides some protection from development along the river, the park is adjacent to Interstate 85 to the south. This corridor has the potential to negatively impact the water quality of the North Oconee with road runoff pollution. In addition, proximity to I-85 is attractive to developers of industrial and manufacturing sites, and while the land surrounding Hurricane Shoals Park is currently zoned Agricultural Rural Farm District, the area may feel development pressures in the future.

The Athens Line

Location: Athens-Clarke County, Morgan County, and Oconee County, GA

Length: 32.1 Mi.

Value

"The Athens Line" represents the portion of the Macon-to-Athens rail line that first went into full service in December 1888. Once a holding of the Central of Georgia Railway Company, the line between the City of Madison and the Center community (Jackson County) is now owned by Norfolk Southern and leased by Athens Line, LLC, a short-line operator. The rail bed is inactive from Madison to Bishop, with only intermittent use from Bishop north to Watkinsville, Athens, and Center.

The depot in Farmington (unincorporated, Oconee County) is the only intact original structure of its type remaining on the line. The historic rail bed has the potential to become a significant greenspace corridor connecting communities across Morgan County, Oconee County, and Athens-Clarke County. This is particularly true in the short-term for the inactive section, which could provide a multi-use path and linear park/upland greenway (rails-to-trails) for residents and visitors in Northeast Georgia. The remaining active section could be maintained by rail transport while having a parallel mutli-use path (rails-with-trails). The benefits of these types of facilities include economic development, habitat preservation, increased recreation and exercise opportunities, and, in areas where transportation cycling or walking are feasible, improvements in air quality. The line is located directly across US441 from Oconee County's 364-acre Heritage Park, which features trails, woodlands, and streams, as well as the University of Georgia's Whitehall Forest.

In addition to the inherent environmental and recreational value, such an endeavor would facilitate the preservation of significant historical and cultural features such as the Farmington depot, historic warehouses in Bishop, two river trestles (Apalachee and Oconee rivers), and the general agricultural and transportation history of the region. For example, the brick shells of buildings that once processed cotton for oil are still evident in Farmington along the rail line. When in operation, the oil from these buildings was shipped north to the Hodgson Oil Company in downtown Athens. The Athens Line is ideal for use as part of a regional green infrastructure network (it would connect to Athens-Clarke Coutny's existing greenway) with interpreted narrative of the rail line's impact on the region.

Vulnerability

Since no portion of the Athens Line is officially abandoned, the corridor remains fully intact. However, Norfolk Southern was granted approval to abandon the inactive segment of the line in 1987 but has not initiated the formal process to date. Abandonment could mean disintegration of the corridor in certain parts, depending on the proceedings of various different actors, including state and local governments, interested private-sector parties, and adjacent landowners; breaking up the corridor could make the prospects of rails-to-trails conversion much more difficult. On the other hand, swift action either by local or state government to acquire the corridor directly from the railroad could preserve its historic nature by minimizing threat's to its integrity while likely facilitating an easier trail-building process than would occur if the line were first disassembled and ownership became fragmented.

Thompson Mills Forest Arboretum

Location: Jackson County, GA

Owner: The University of Georgia

Acres: 337.2

Value

Thompson Mills Forest Arboretum is a 337-acre forest deeded to the University of Georgia in 1980 by Lenox Thompson Thornton. The forest, which was designated as the State Arboretum by the Georgia General Assembly in 1991, is two miles southwest of the City of Braselton and includes more than 100 species of native Georgia trees, representing approximately 90% of all the state's native trees. This forest serves as a site for the study of trees and natural plant communities, and was named for the Thompson Mills community, a prominent turn-of-the-century agricultural center. The seven-acre Eva Thompson Thornton Garden features over 100 ornamental trees from around the world. Additionally, the arboretum includes an eight-acre granite outcrop and several miles of pedestrian-only trails.

Thompson Mills Forest Arboretum hosts Future Farmers of America (FFA) and 4-H dendrology teams from many Georgia counties. Other groups, such as forest dendrology classes, Cooperative Extension Service groups, church groups, and school groups, make use of the site for educational purposes.

Vulnerability

Development around the Thompson Mills Forest Arboretum could negatively affect the site if appropriate land use regulations are not put into place and enforced. Potential impacts could be realized in erosion and sedimentation, water quality, habitat, and viewsheds/aesthetics. The University of Georgia appears to have no plans to alter the site's character significantly.

HERITAGE RESOURCES

Overview

Many communities in Northeast Georgia have long recognized the importance of heritage conservation as evidenced by the many historic districts, landmarks, and National Register properties in the region. Heritage conservation not only helps to define a community's unique heritage but, can be a source for economic development, housing, and education.

Heritage resources include historic structures, farms, campgrounds, and rail lines. Thirteen heritage resources were nominated as RIRs and nine were designated. The following guiding principles provided the basis for final determination for inclusion as a Regionally Important Heritage Resource:

- ❑ Recognition of national importance by some entity such as the Georgia or National Register of Historic Places;
- ❑ It is the only such resource in the region;
- ❑ The resource has a shared history or an impact on a shared history;
- ❑ The resource is a part of the region's history;
- ❑ The resource has an economic impact through tourism; and
- ❑ The resource is attached to a figure or event of wider importance that just local.

The Northeast Georgia region has an abundance of heritage resources, in addition to those presented in this plan, that are significant to the history and development of individual communities at the local level. Locally important heritage resources should not be disregarded or neglected as they are equally vulnerable to human intrusion. Communities with such resources are encouraged to continue their conservation and preservation initiatives and to pursue new policies and procedures that support protection.

The identification, documentation, and recognition of heritage resources are all extremely important components of the preservation process; however, the protection of heritage resources from insensitive treatment and outright demolition is essential. Unfortunately, protection provided through existing state and national recognition is minimal. For example, any resource listed in or eligible for listing in the National Register comes under the protective umbrella of the National Historic Preservation Act (Public Law 102-575). The Act mandates, under Section 106, that any federally licensed, permitted, or funded project must be reviewed regarding its impact to the resource. While listing in the National Register does not guarantee protection for these resources, the Section 106 process does allow for alternate projects to be researched in order to minimize potential adverse impacts to these heritage resources.

Designated Heritage Resources, with the exception of Oxford College of Emory University, are located in the unincorporated areas and all in are high-growth corridors and are under pressure from adjacent development and/or anticipated future traffic improvements. While all designated resources have some degree of protection, it is treated largely as a local issue and the degree of protection varies by both resource and community. Many local governments in the Northeast Georgia region have preservation ordinances in place; however, there is no regional protection focus of any cultural resource.

Elder Mill

Location: Oconee County, GA

Owner: Private ownership

Value

Constructed near the turn of the 20th century, Elder Mill was a water-driven turbine grist and wheat mill that operated from 1904 until the 1940s and still contains its century-old milling equipment. The mill was operated by four generations of Elders.

The Mill was purchased by Dr. Charles Morgan in 1969. The milling equipment is still mostly in place as it was in 1941. Dr. Morgan with the help of John Cleveland has made many structural repairs, to the roof, siding, foundation and windows, but has kept the mill just as it was over a hundred years ago.

Vulnerability

The mill is located in the Rural Places Character Area, an area characterized by low-density residential, farms, forests, outdoor recreation, and other open-space activities. Allowable zoning in this character area include AR-3, AR-4, AR-5 or densities of 1 dwelling unit per 3, 4, or 5 acres respectively.

Although the mill is included in the county's Scenic Preservation Designation, an overlay district in the county's zoning ordinance, its long-term protection in uncertain due to its private ownership. While it has been cared for and restored by its current owner, long-term it is at-risk unless acquired by the government or some organization that will permanently protect the structure.

Elder Mill Covered Bridge

Location: Oconee County, GA

Owner: Oconee County

Value

Constructed in 1897 by Nathaniel Richardson, this 99-foot-long bridge originally spanned Calls Creek on the Watkinsville-Athens Road. Due to new bridge construction on what would soon become Hwy 441 and its good condition, in 1924. The bridge was moved by wagon to its present location on Rose Creek by John Chandler of Watkinsville. The c.1900 grist mill ceased operation in 1941.

Constructed in the Town lattice design, the bridge's web of planks crisscrossing at 45- to 60-degree angles are fastened with wooden pegs, or trunnels, at each intersection. It is one of the few covered bridges in Georgia continuing to carry traffic without underlying steel beams.

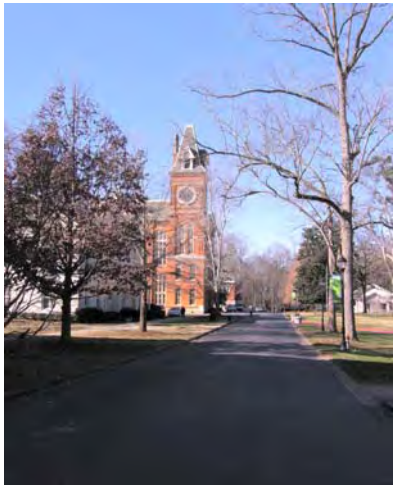
The Bridge was listed in the National Register of Historic Places in 1994.

Vulnerability

Although the bridge is listed in the National Register of Historic Places, and has a Scenic Preservation Designation, an overlay district in the county's zoning ordinance, neither listing offers any real, long-term protection.

The bridge is located in the Rural Places Character Area, an area characterized by low-density residential, farms, forests, outdoor recreation, and other open-space activities. Allowable zoning in this character area include AR-3, AR-4, AR-5 or densities of 1 dwelling unit per 3, 4, or 5 acres respectively. An important consideration in a rezoning to any of these districts is the condition or and level of service provided by road access.

Properties south of the bridge could accommodate a development density and related traffic that the bridge likely could not accommodate thus necessitating rerouting of Elder Mill Road to either bypass the bridge or widening the current road which would necessitate relocation or dismantling of the bridge.



Oxford College of Emory University

Location: Newton County, GA

Acres: Approx. 145

Owner: Emory University

Value

Chartered December 19, 1836, Emory College, now known as Oxford College of Emory University, was established by the Georgia Methodists on 1,452 acres just north of the City of Covington. In conjunction with the school's creation, the intended collegiate community of Oxford, named in honor of the English university where the founders of Methodism (John and Charles Wesley) were educated, was laid out with its main streets converging on the site of the central building of the college campus. Oxford College's first building was started in the spring of 1838, and on December 23, 1839, the Town of Oxford was incorporated.

The historical importance of Oxford College can be viewed from a number of perspectives. Its influence upon Methodism, its formative influence on prominent individuals whose lives impacted all of society, and its connection with significant historical events that have made a lasting impact on the state and nation are all points of reference for study of this institution's importance.

The college contains significant open space, providing active and passive recreation opportunities in abundance. Additionally, great interest in the college and the Town of Oxford has lead to the area becoming a tourist destination, drawing benefits to the local and regional economies.

Vulnerability

Development pressures locally and regionally could threaten Oxford College. As the Town of Oxford, the City of Covington, and Newton County experience growth, communities should take care to minimize potential negative effects. Nearby population growth could conflict with preservation efforts by increasing traffic congestion and threatening aesthetic elements of both the historic campus and the College's more recently acquired natural areas.

Salem Methodist Church and Campground

Location: Newton County, GA

Acres: Approx. 60

Owner: Salem Campground, Inc.

Value

Founded in 1928, Salem Campground is one of the oldest still-existing Protestant camp meeting sites in the nation. Except for during the years of the Civil War, camp meetings have been held every year at Salem since the campground's inception. Adjacent to Salem Campground is the property and site of the Salem United Methodist Church, established in 1824. The current sanctuary was constructed between 1865 and 1870, and replaced the log sanctuary that had been built near the Salem Campground spring. The nearby Town of Oxford and Oxford College of Emory University were formed less than a decade after the church and campground were instituted, and have strong ties to Methodism.

In 1854, the present open-sided tabernacle was constructed, allowing worship to move from an open-air setting to the more formal setting of the substantial and attractive timber-framed edifice. The tabernacle is on the Historic American Buildings Survey of the Library of Congress; the entire campground was placed on the National Register of Historic Places in 1998.

Undeveloped parts of the sixty-acre site could support the goals of local land conservation groups. Over half of the campground (approximately 35 acres) is currently a hardwood forest, which serves as protected wildlife habitat in a community that is rapidly losing such areas. Campground supervisors have no plans to disturb this area. Across Salem Road from the main campground is Salem Spring, a 30-gallon/minute source which is a part of the site. Further, the campground will likely serve as part of a local trail/greenway system envisioned for the Salem Road Overlay, which the County will begin developing this year.

County reports also indicate that the wooden water tower - one of the last entirely wooden structures of its kind in North Georgia - that stores water from Salem Spring houses a family of endangered owls.

Vulnerability

The church and campground site is located on a rapidly developing corridor, surrounded by land that has been rezoned from agricultural and residential to commercial. Current and anticipated future traffic improvements threaten to encroach on the site; Newton County has referenced GDOT plans that appear to call for the widening of Salem Road to six lanes. The site has responsible custodians who recognize

and intend to preserve the heritage of their sites as best they can; however, these caregivers are limited in their abilities to stave off potential off-site threats.

Shields-Ethridge Heritage Farm

Location: Jackson County, GA

Acres: 154

Owner: Shields-Ethridge Farm Foundation

Value

The Shields-Ethridge Heritage Farm has been a working agricultural complex since 1799. The main house was built in 1866; its plantation plain facade was changed to represent the neoclassical style in 1914. Over sixty other structures are part of the historic district, including tenant houses, a two-room schoolhouse, barns and storage buildings, a cotton gin complex, a commissary, and a grist mill/hammer mill operation to serve the surrounding farm populations. Bachelors' Academy, located at the Shields-Ethridge Heritage Farm, is a restored two-room building that accommodated one teacher for seven grades.

The Shields-Ethridge Heritage Farm was listed on the National Register of Historic Places on June 25, 1992. The farm was also recognized as a Georgia Centennial Heritage Farm by the Georgia Department of Natural Resources in 1993. The Shields-Ethridge Heritage Farm Foundation, Inc., formed in 1994 to preserve the site's existing buildings.

The County views the farm complex as part of its historic tourism efforts, alongside those of the Chamber of Commerce and historic groups and societies. Additionally, it is used as an educational site for children and as a place for historic festivals, telling the story of Southern heritage and culture over time. The History Channel, the Georgia Department of Natural Resources' Historic Preservation Division, and the National Trust for Historic Preservation have all awarded funding to preserve and promote the farm site due to its historic and natural value.

The heritage farm complex is located 2.5 miles south of downtown Jefferson, the county seat and activity hub of Jackson County. The Farm Foundation holds 154 acres of the overall 500-plus acres.

Vulnerability

Jackson County cites regional and local growth as the main threat to the Shields-Ethridge Heritage Farm, but recognizes that the site could be protected via land use controls, particularly by designating it as an agricultural conservation area and by minimizing development impacts adjacent to it. Another critical threat to the sustainability of the complex as it exists now is the sensitive nature of such aged, historic structures, which, over time, require significant attention and maintenance.

WATER RESOURCES

Overview

The Northeast Georgia region is home to an abundance of water resources. These resources supply the region with drinking water, sewage treatment, power generation, industry, mining, crop irrigation, and recreation. Yet, many of the streams and rivers in the region do not support their designated use of fishing and drinking. Recent droughts have magnified our dependence on these resources.

The Georgia Department of Natural Resources identified water supply watersheds, jurisdictional wetlands, significant groundwater recharge areas, and Protected Rivers as State Vital Areas. However, there are other large significant water resources equally important to the region including Lake Oconee, Lake Jackson, and Lake Roy Varner.

Five rivers in the region have been designated "Protected Rivers" by the Georgia Department of Natural Resources.[2] Protection Plans are required for these rivers (South, Yellow, Ocmulgee, Oconee, and Broad) and include the establishment of natural vegetative buffers adjacent to the protected river to maintain the integrity of the buffer. River corridors are invaluable in the preservation of the qualities that make a river suitable for wildlife, a site for recreation, and a source for clean drinking water.

Groundwater recharge areas are those land areas where soil and geological conditions are favorable for precipitation to infiltrate the soil and the underlying strata to enter and continually replenish the aquifer. These areas, located throughout the region and providing drinking water to the many of the region's residents, are susceptible to contamination when unrestricted development occurs within the significant recharge area.

The region's streams provide a large percentage of the region's total water use. Therefore, the Planning Advisory Committee put great importance on their protection. Because watersheds in Northeast Georgia connect and encompass terrestrial and freshwater ecosystems, they perform a wide variety of valuable services, including the supply and purification of fresh water, the provision of habitat and biological diversity, the sequestration of carbon that helps mitigate climate change, and the support of recreation and tourism.

Wetlands are valuable and important to our region. They offer habitat for wildlife, including migratory birds and other wildlife that depend on wetlands for their survival; improve water quality by removing and sequestering excess nutrients and sediments found in rivers and streams; and, provide valuable open space and create exceptional recreational opportunities, including hiking, fishing, boating and birdwatching; store floodwaters, acting like natural sponges and slowing down the force of flood and storm waters as they travel downstream; and, naturally sequester carbon - a key greenhouse gas.

Many of the region's local governments recognize the value of wetlands and have adopted the State's minimum wetland protection

[2] Chapter 391-31-6, Rules for Environmental Planning, Georgia Department of Natural Resources, Environmental Protection Division.

criteria in addition to planning for the sensitive ecological areas in the development of their comprehensive plans.

Protection of the region's water resources is of vital concern. Non-point source pollution and urban run-off from ever-increasing development make water source protection a vital concern.

Alcovy River Greenway

Location: Northeast Georgia - Walton and Newton counties; Other - Gwinnett County

Total length: 80 miles (approx.); 54.7 miles in Northeast Georgia

Value

The Alcovy River headwaters are located in Gwinnett County, north of Lawrenceville. The river flows into Northeast Georgia to converge with the South River at Lake Jackson in Jasper County.

The floodplain surrounding the Alcovy River is comprised of hardwood swamps which serve as habitat for diverse plant and animal species. Because the Georgia coast was located just south of Macon millions of years ago, many of the species that exist today in the Alcovy River is swamps are usually found in coastal plain areas. One of these species is the tupelo gum tree, and the confluence of the Alcovy River with Cornish Creek is the northernmost pure stand of tupelo gum in the state.

The Alcovy River is a drinking water source for both Walton and Newton counties, and it will be pumped to help feed the proposed Bear Creek Reservoir. The surrounding floodplain and wetlands help to filter stormwater and prevent pollutants from entering into the water supply. The river and floodplain provide a recreational resource to the surrounding area, and serve as a popular destination for sportsmen, hikers, and campers. Because of its unique ecological characteristics, the Alcovy River and surrounding floodplain are also valued as an educational resource and research site.

Vulnerability

As part of the 1999 Alcovy River Watershed Protection Plan, a computer model was run to determine the greatest threats to water quality of the Alcovy River. Of those run through the model, sediment posed the greatest threat to this stream's health. For the year 2020, sediment was projected to increase by over 150% in some areas as a result of urban and suburban development. In the past, the Alcovy experienced increased sedimentation as a result of intense row-crop agriculture.

In addition to sedimentation, portions of the Alcovy River used for drinking and fishing have been listed in the "Not Supporting Designated Use" category of the 303(d) (of the Clean Water Act) list of waters in February 2010 due to the presence of fecal coliform bacteria as a result of non-point source pollution.

The Alcovy River is protected by a 100-foot natural, vegetative buffer in both Newton and Walton counties. However, this does not always

cover the entire floodplain, increasing the chances for pollutants to enter this vital source of drinking water with increased residential, commercial, and industrial development in previous agricultural areas.

Apalachee River

Location: Northeast Georgia - Barrow, Greene, Morgan, Oconee, and Walton counties; Other - Gwinnett County

Total length: 67.8 miles

Value

The Apalachee River headwaters are located in Gwinnett County, northwest of Dacula, and it flows into Northeast Georgia forming portions of five county borders to culminate at Lake Oconee.

The Apalachee River provides drinking water to Morgan County and the City of Madison, and may be a future drinking water source for Oconee County. In addition, the Apalachee serves as a recreation resource for campers, paddlers, and sportsmen. Two major recreation destinations, Hard Labor Creek State Park and Fort Yargo State Park, are situated on the Apalachee River in Morgan County and Barrow County, respectively. Citizens in Oconee County have come together with the Athens Land Trust to conceptualize the Apalachee River Walk, a proposed 5.5 mile greenway with one trailhead located at the county's Heritage Park, for the purpose of conservation and recreational use. The many intact shoals of various sizes along the corridor serve as important fish habitats.

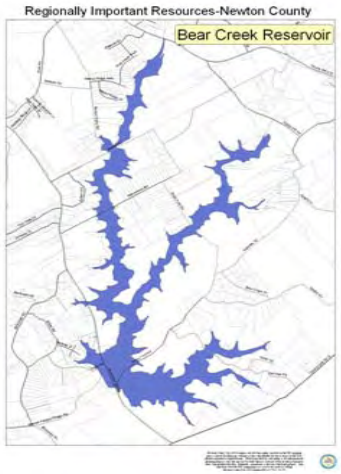
Vulnerability

Barrow, Morgan, and Walton counties have established a 100-foot natural vegetative buffer along the Apalachee River. The Future Development Map for Barrow County identifies two "emerging suburban" neighborhoods and one industrial area immediately adjacent to the river. These land uses, though separated from the river by a 100-foot buffer, may have negative impacts on water quality due to increased sedimentation from construction and/or runoff. In Walton County, the Apalachee is also covered by the Greenspace Subdivision Overlay District, requiring the preservation of 25% of the gross acreage of a development as greenspace deeded to the county. Oconee County has established a 50-foot conservation buffer along the Apalachee and other perennial streams, increasing in areas where the floodplain extends beyond this zone. In addition, the recently-completed Oconee County Greenways Plan identifies the Apalachee corridor as a potential active greenway and blueway, or paddling trail. Greene County has not established any additional protections for the Apalachee River aside from the required statewide stream buffer of 25 feet, though the Apalachee empties into Lake Oconee near U.S. 278, near the City of Madison's (Morgan County) water intake. For this reason, the Greene County portion of the Apalachee River is the most vulnerable. The addition of this watershed to the county's water supply watershed ordinance would create a 100-foot buffer and prohibit impervious surface and septic tanks within 150 feet of the

stream bank, protecting the Apalachee from potentially negative impacts of spillover development from the growing Lake Oconee residential and commercial areas.

The Apalachee River was identified in February 2010 on the Section 303(d) (of the Clean Water Act) list of waters as "Not Supporting [its] Designated Use" for the segment from Williamson Creek in Barrow County to Lake Oconee in Greene County, spanning all five Northeast Georgia counties. The designated use in this instance is fishing, and the violation was cited due to the presence of fecal coliform bacteria as a result of non-point source pollution.

Another potential threat to the Apalachee is the development of the proposed Hard Labor Creek Regional Reservoir, as plans indicate that the Apalachee would be pumped to fill it. These withdrawals would likely have negative consequences for both water quantity and quality.



Bear Creek Reservoir

Location: Newton County, GA

Value

Bear Creek Reservoir is a proposed drinking water reservoir that, once established, will provide drinking water for residents of Newton and Jasper County. (A reservoir with the same name also exists in Jackson County.) A small stream, Bear Creek, will feed the proposed reservoir and will be supplemented by pumping from the nearby Alcovy River. The historic Gaither Plantation, another designated Regionally Important Resource in Northeast Georgia, is located along the edge of the proposed reservoir and will remain intact during and after development. In addition, public walking trails connecting to trail systems in neighboring jurisdictions, as well as picnic areas, are planned for the vicinity.

Vulnerability

Recreational activities and the cost of water treatment in Bear Creek have been negatively affected by increased development in the Alcovy River watershed. Thought predominantly rural at present, the establishment of the Bear Creek Reservoir could dramatically change the surrounding area's landscape; some suburban residential developments have already been constructed in this vicinity. Even with the required 150-foot natural vegetative buffer surrounding the proposed drinking water source, the Bear Creek Reservoir will be at risk of sedimentation and pollution as a result of more construction and increased impervious surface, and state and federal regulations do not provide adequate protection. Newton County has discouraged the development of more residential subdivisions in this area for these reasons; the development of programs encouraging desired development patterns such as agricultural and conservation uses will strengthen this strategy.

Big Haynes Creek/Little Haynes Creek

Location: Northeast Georgia - Walton and Newton counties; Other - Gwinnett and Rockdale counties

Length: Big Haynes Creek (in Northeast Georgia)- 4.9 miles, Little Haynes Creek - 11.4 miles

Value

Situated in the Ocmulgee River Basin, Big Haynes and Little Haynes Creek provide drinking water to nearly 100,000 people in Rockdale County; most of this comes from the 650-acre Big Haynes Creek reservoir, also known as Randy Poynter Lake. From this reservoir, Big Haynes Creek joins with Little Haynes Creek at the Newton County border to flow into the Yellow River.

The two streams also provide important wildlife habitats and contain several wetland areas and groundwater recharge areas.

Vulnerability

In February 2010, a section of Big Haynes Creek in Rockdale County was determined to be in the "Not Supporting Designated Use" category of Section 303(d) (of the Clean Water Act) list of waters. The designated use of Big Haynes Creek in this area is drinking water, and the violation was cited due to the presence of fecal coliform bacteria potentially caused by urban runoff/effects. One intake point along Big Haynes Creek is less than one mile north of the confluence with the Yellow River as it enters Newton County from Rockdale County.

Both Walton and Newton counties have established a required 100-foot natural riparian buffer in the Big Haynes Creek watershed. While this offers some protection, there are numerous reasons to coordinate conservation efforts with the metropolitan Atlanta counties in which the headwaters of the Big Haynes Creek watershed are located.

Development in Rockdale and Newton counties is also causing some stream bank erosion, leading to sediment deposits in the area where Big Haynes Creek meets the Yellow River.

Tributaries of the Broad River: South Fork, Dove Creek, Long Creek which includes Indian, Macks, Dry Fork, Buffalo and Clark creeks

Location: Madison, Oglethorpe, and Elbert counties, GA

Value

The Broad River is among the last free-flowing rivers in Georgia. While its headwaters originate in Banks and Stephens counties, the Broad River is formed by the confluence of the Hudson and Middle Fork rivers at the Franklin/Madison County boundary. The river flows through Elbert, Madison, and Oglethorpe counties to its confluence with the Savannah River at the Strom Thurmond Reservoir.

The Broad River is critical to the health and economic well-being of the citizens of northeast Georgia providing drinking water for the cities of Royston and Franklin Springs, industrial and agricultural water supply for the region, as well as an array of recreational activities including boating and fishing. The river supports a variety of fish including bass, catfish, and as of 2008, the robust redhorse. Currently, public access to the river is quite limited.

The National Park Service recognized 99 miles of the Broad River as being pristine enough to qualify as part of the Federal Wild and Scenic Rivers System. In 1976, The Georgia Department of Natural Resources, recognizing its good environmental condition, proposed that the Broad River be designated an environmental corridor. The Broad River from the Hudson River to its confluence with the Savannah River is designated a Protected River by the Georgia Department of Community Affairs.

The river's 944,000 acre watershed includes parts of thirteen counties. The northern portion of the watershed is confined by steep forested ridges and has very little development. The southern portion is flatter and agriculture extends into the flood plain. Sedimentation is high in this part of the river. Agriculture is the primary land use throughout the valley and includes some managed forest land. Industrial use in the watershed is limited to a few granite quarries.

The watershed remains in a largely natural state. Its position in the Piedmont with the Appalachians to the north and the coastal plain to the south allows for a highly diverse assemblage of plant and animal communities. It provides habitat for deer, turkeys, bobcats, foxes, beavers, otters, muskrats, quail, dove, mallards, wood ducks, turtles, crayfish and many others. Among the rare and endangered species that live in the watershed is the Shoal Lily (Hymenocallis occidentalis) which grows on rocks in and around the river.

Vulnerability

The watershed is in better condition than many Piedmont rivers, but its threats are not taken lightly by its residents. Agricultural non-point source pollution, effluent from septic systems, landfill leachate, litter, construction in the floodplain, riverbank erosion, destruction of the vegetative buffer, lack of tributary protection, and poorly planned development all pose threats to the river. Additionally, lack of public access to the river encourages trespassing which contributes to the degradation of river banks and destruction of vegetation.

Counties within the watershed are taking measures to protect it. Both Elbert and Madison counties require a 100 foot undisturbed vegetative buffer adjacent to the river. Oglethorpe County requires a 150 foot buffer.

The Broad River Watershed Association, a local land trust, was formed with the mission of protecting the Broad River through partnerships with watershed residents and public and private organizations in several conservation projects.

Hard Labor Creek

Location: Walton and Morgan counties, GA

Total length: 31.7 miles

Value

Hard Labor Creek and its watershed, situated within the greater Oconee River Basin, is a contributor to the Apalachee River and Lake Oconee, meeting these two other designated RIRs along the Morgan County/Greene County border. This stream runs through Hard Labor Creek State Park at the Morgan-Walton border, joining the two counties, and is a source of fresh drinking water to Morgan County residents; two intake points are located along Doster Road just northwest of the City of Madison. In Walton County, Hard Labor Creek is planned to feed the proposed 1,634-acre Hard Labor Creek Regional Reservoir that is expected to yield treated water by 2015 to Walton and Oconee counties, as well as other interested jurisdictions.

In addition to its value as a drinking water source, Hard Labor Creek and associated wetlands and floodplain provide habitats to a variety of land-based and aquatic species. The stream and State Park serve as recreational areas offering hiking, horseback riding, camping, swimming, canoeing, and kayaking to Northeast Georgia residents and visitors. This tourist destination is promoted in part by the Friends of Hard Labor Creek State Park.

Vulnerability

The primary threat to water quality in Hard Labor Creek is pollution from nearby roads and agricultural land uses. According to the 2006 Walton County Comprehensive Plan, land use surrounding the stream is mostly agricultural/forestry, with sporadic residential uses. This is also the case for much of the land use surrounding Hard Labor Creek in Morgan County, according to its 2004 Comprehensive Plan, save for the segment traversing the State Park. The Morgan County Zoning Ordinance establishes a 100-foot vegetative buffer along Hard Labor Creek; however, west of the park, the stream runs through a handful of commercial forestry areas before meeting the Apalachee River, opening the door to potential negative impacts as a result of tree harvesting activities. The Georgia Forestry Commission's Best Management Practices for Forestry Manual (2009 version) may help to protect water quality in these areas by providing guidance for operations such as site preparation and pesticide and fertilizer application within the stream management zone (SMZ), or buffer.

The portion of the creek in Walton County is offered some protection by the Cornish Creek, Beaver Dam Creek Watershed & Hard Labor Creek Overlay Protection District, requiring a 100-foot natural

greenway buffer along the stream and prohibiting construction of any impervious surface within 150 feet from the stream bank, in addition to the Greenspace Subdivision Overlay District, requiring the preservation of 25% of the gross acreage of a development as greenspace deeded to the county. Even with these protections against development pressures, the stream is threatened by the construction of the proposed Hard Labor Creek Regional Reservoir. This project would have severe impacts on Hard Labor Creek, both in how it functions within Walton County and in Hard Labor Creek State Park, downstream from the site in Morgan County.

Lake Oconee

Location: Morgan and Greene counties, GA (and Putnam County, outside the Northeast Georgia region)

Size: 21,000 acres

Operator: Georgia Power

Value

Lake Oconee was developed by Georgia Power to create electrical power; it is fed primarily by the Oconee River, which flows along the boundaries of and/or through Athens-Clarke County, Greene County, Oconee County, and Oglethorpe County. The lake provides recreation and tourism opportunities through fishing tournaments, boating events, sightseeing, and other means including picnicking, swimming, and camping. Ten official boat ramp access points, three camping locations, and four marinas exist along the lake (http://www.n-georgia.com/lake-oconee-fishing.html).

Georgia Power holds three 85-acre parks along Lake Oconee, each of which offers a picnic pavilion, full-service campgrounds, day-use areas, playgrounds, boat ramps, and a beach with a beach house that includes restroom facilities and a dressing area. The presence of these amenities boosts the regional and local economies by drawing tourists and attracting real estate development, increasing opportunities for collection of both retail sales tax and property tax.

A key component - along with Lake Sinclair - of the "Georgia's Lake Country" marketing alliance (an endeavor of economic and community development groups), Oconee has been and is expected to continue to be a source of interest in Northeast Georgia and beyond.

Lake Oconee and its surrounding areas provide wide-ranging land and water habitat for wildlife, Bald Eagle (Haliaeetus leucocephalus) and the Oglethorpe Oak (Quercus oglethorpensis). Bo0tyh species are threatened and therefore protected by the Georgia DNR and US Fish and Wildlife Service. Used also as a reservoir, the lake provides valuable flood-protection benefits to the surrounding areas; Georgia Power manages its water levels and protects its shorelines.

In addition to its economic and environmental benefits, Lake Oconee, through its Wallace Dam and Hydroelectric Plant, is an important power source. The 120'-high, 2,395'-long dam, completed in 1980, features six units that combine for a capacity of 321,300 killowatts.

Vulnerability

The State of Georgia's listing of the Bald Eagle and the Oglethorpe Oak as "threatened" means that both species are likely to become endangered in the foreseeable future. While the Oglethorpe Oak's habitat exists in several other places in Northeast Georgia, the Bald

Eagle's may be found only near Lake Oconee and potentially near Lake Russell, in Elbert County. The lake environs represent a unique haven for these two sensitive species in the region.

A contributing factor to the lake environs' desirability as a tourism and recreation destination is the scenic nature that characterizes the area. However, as Georgia's Lake Country develops with residential communities and the associated commercial, employment, education, recreation, and other uses, rapid growth may bring adverse consequences. In addition to accompanying loss of aesthetic integrity, inappropriate types and scales of development could impair habitat, water quality, air quality, and other aspects of the natural environment that contribute the lake's ecosystems.

Both Morgan and Greene counties have water intakes at different locations near US278/SR12 as it crosses Lake Oconee, Morgan's being approximately three miles north of Buckhead and Greene's five miles west of Greensboro. Water quality throughout Lake Oconee - and upstream along the Oconee River, North Oconee River, and Middle Oconee River - must be protected to ensure that these sources remain viable to support nearby populations.

Georgia DNR is updating designated uses of waters including adding recreation uses to some reservoirs. Updated designated uses should be approved by U.S. EPA in spring 2011. If a recreation designated use is added to this lake, an assessment is recommended to evaluate the impact of activities on and around the lake as they pertain to recreation.

Lake Roy Varner

Location: Newton and Walton counties, GA

Size: 1.3 mi^2 (approx. 850 Ac.)

Operator: Newton Co. Water Resources Dept.

Value

Lake Varner is a 1.3 square-mile drinking-water reservoir that supplies water to approximately 150,000 people in Newton, Walton, and Jasper counties (as well as the municipalities of Covington, Oxford, Porterdale, Newborn, and Mansfield). It is a well-known and well-used fishing lake, and features shoreline walking trails and picnic areas for public use. Lake Varner opened to public fishing in 1992, and despite regulations put in place to safeguard the lake and its banks, it continues to be a popular destination for anglers and recreational boaters such as canoeists.

Walton and Newton counties are currently partners in the lake and associated water treatment facilities. County and municipal jurisdictions meet regularly to discuss the lake and the water it provides, with Newton County providing financial assistance to some of the smaller communities to help them expand their distribution systems.

In addition to providing multiple passive recreational activities available to residents of several nearby counties, Newton County's management of the reservoir protects adjacent wetlands and controls development within the watershed. Approximately 1,400 acres are preserved and protected as part of the reservoir's site, including buffers, mitigation space, and recreation areas. The lake's dam provides downstream flood control for Cornish Creek.

The Lake Varner area is part of the known habitat for Altamaha Shiner (Cyprinella xaenura). This species is threatened and therefore protected by the Georgia DNR and U.S. Fish and Wildlife Service.

Vulnerability

Development in the Cornish Creek and Alcovy River watersheds that feed Lake Varner contribute sediment and other pollutants, resulting in increased costs of water treatment, impacts to fishing and canoeing, and higher management costs. Pollution could bring negative impacts for fishing-based tourism and economic development in the area. Droughts and floods can severely impact water quality; impervious area restrictions would ameliorate flood-condition impacts.

The only intake point on the lake is at its southern end, approximately 0.7-miles north of the intersection of Alcovy Road and Gregory Road. The water quality of the lake, Cornish Creek, and Little Cornish Creek

must be protected to ensure that this drinking-water source remains viable to support local populations.

The State of Georgia's listing of the Altamaha Shiner as "threatened" means that the species is likely to become endangered in the foreseeable future. No other habitat for this species is thought to exist within eight miles of Lake Varner.

Georgia DNR is updating designated uses of waters including adding recreation uses to some reservoirs. Updated designated uses should be approved by U.S. EPA in spring 2011. If a recreation designated use is added to this lake, an assessment is recommended to evaluate the impact of activities on and around the lake as they pertain to recreation.

South River

Location: Newton County, GA (and DeKalb, Rockdale, Henry, and Butts counties, outside the Northeast Georgia region)

Length: 22.3 mi

Value

From its headwaters in DeKalb County to its discharge into Lake Jackson, the South River traverses DeKalb County, Rockdale County, Henry County, Butts County, and Newton County (the river forms Newton's boundary with Henry and Butts). It is an important recreational resource, providing fishing, boating, space for trails, and associated greenspace.

DeKalb, Rockdale, and Newton counties all have greenway projects or activities along the South River, involving governments, landowners, the Georgia Wildlife Federation, and groups such as the PATH Foundation and Newton Trails. Historic and cultural resources along the river are, and will continue to be, designated, preserved, and managed by public and/or private groups.

Georgia Power, the Lake Jackson Homeowners Association, and environmental groups are working to improve the quality of the river's discharge into Lake Jackson. Although a Riverkeeper organization does not currently exist specifically to oversee the South River, Riverkeeper groups below Lake Jackson (on the Ocmulgee and Atamaha rivers) have an abiding interest in the South River's water quality. Keep Covington/Newton Beautiful supports the river's health through its participation in the Rivers Alive program, which focuses on stream and riparian cleanup.

The South River provides natural wildlife habitat in a developed area. Most significantly, habitat for the Piedmont Blue Burrower (Cambarus harti), an endangered crayfish, is found along or near the South River where it flows through Newton County. As an endangered species, this crayfish is protected by the Georgia DNR and U.S. Fish and Wildlife Service.

Native American settlements dating back to 5,000 B.C.E. have been found and documented in the area of the confluence of the South River with the Yellow River, at the entry of Lake Jackson.

Vulnerability

The State of Georgia's listing of the Piedmont Blue Burrower as "endangered" means that the species is in danger of extinction throughout all or part of its range. The South River is the only location in Northeast Georgia where the Burrower's habitat may be found, and thus, this resource is critical to the region.

While Newton County maintains a River Corridor Protection Overlay District (including the South River) as part of its zoning ordinance, single-family dwellings are allowed throughout this district, provided they adhere to certain standards. These include a 100-foot local buffer (with an additional 50' buffer for septic tanks and impervious surfaces) and situation on at least two acres of land, in addition to the statewide 25-foot stream buffer. Septic tanks serving single-family dwellings are permitted here, although drain fields are not. Other uses, such as road and utility crossings, timber production and harvesting, wastewater treatment, agricultural production, and recreational facilities, are permitted but must also meet specified conditions. The County has expressed a desire to preserve more of the riparian area through means including conservation easements, increased development regulations, and fee-simple acquisition of flood zones, buffers, and wetlands along the corridor.

Polychlorinated biphenyls (PCBs) have been found in fish tissues in the section of the South River in Newton County. PCB testing on experimental animals has revealed toxicity to the liver, gastrointestinal system, blood, skin, endocrine system, immune system, nervous system, and reproductive system, according to the Georgia Environmental Protection Division (EPD), and effects of PCB ingestion can be especially severe in fetal development. While the source of PCB contamination is unknown, it is attributed to contamination from urban runoff from Metropolitan Atlanta and combine sewer overflows. Other possible sources could include movement of contaminated bedload sediment, soil erosion, air deposition, and other nonpoint source discharges. Continued presence of these contaminants could adversely affect the fishing-related uses along the river, including the economic benefits they bring.

As the South River is one of the three major sources for Lake Jackson (along with the Alcovy River and the Yellow River), water quality preservation activities for the river, its tributaries, and surrounding lands are critical.

Yellow River

Location: Newton County, GA (and Gwinnett, DeKalb, and Rockdale counties, outside the Northeast Georgia region)

Length: 26.7 mi

Value

From its headwaters north of Lawrenceville to its discharge into Lake Jackson, the Yellow River traverses Gwinnett, DeKalb, Rockdale, and Newton counties. It is an important recreational resource, providing fishing, boating, space for trails, white-water rapids, and associated greenspace.

DeKalb, Rockdale, and Newton counties all have greenway projects or activities along the Yellow River, involving governments, landowners, the Georgia Wildlife Federation, and groups such as the PATH Foundation and Newton Trails. Historic and cultural resources along the river are, and will continue to be, designated, preserved, and managed by public and/or private groups. The realization of a master plan for mutli-use trails connecting Conyers to Covington via the Yellow River could provide significant economic and transportation benefits to the area.

The Newton County Water and Sewer Authority and the City of Covington are involved in protecting the river under the terms of their wastewater discharge permits. Georgia Power, the Lake Jackson Homeowners Association, and environmental groups are working to improve the quality of the river's discharge into the lake. Although a Riverkeeper organization does not currently exist specifically to oversee the Yellow River, Riverkeeper groups below Lake Jackson (on the Ocmulgee and Altamaha rivers) have an abiding interest in the Yellow River's water quality.

The Yellow River provides natural wildlife habitat in a developed area. Most significantly, habitat for two state- and federally-listed species is found in or around the Yellow River: the Black-Spored Quillwort (endangered) and the Pool Sprite (threatened).

Native American settlements dating back to 5,000 B.C. have been found and documented in the area of the confluence of the South River with the Yellow River, at the entry of Lake Jackson. The Hightower Trail, the boundary between the Creek and Cherokee nations, crosses the Yellow River in Gwinnett County.

Vulnerability

The Black-spored Quillwort (Isoetes melanospora) is an endangered perennial whose only known location is six Georgia counties; the Quillwort's "endangered" status means that it is in danger of extinction

throughout all or part of its range. The Pool Sprite (Amphianthus pusillus) is listed by the federal and state governments as "threatened," meaning that it is likely to become endangered in the foreseeable future throughout all or parts of its range. Along the Newton County section of the Yellow River, habitat for both species is found only around the upper reaches of the river, near the border with Rockdale County.

After sampling in 1999, the section of the Yellow River in Newton County was listed as "not supporting" its designated use for fishing and drinking water due to the presence of fecal coliform, carried to the river by urban runoff (nonpoint). If conditions do not improve, potential detrimental impacts to the health of humans and wildlife, as well as to fishing-related tourism and economic development, could occur.

Newton County maintains a Watershed Protection Overlay District (including the Yellow River) as part of its zoning ordinance. The district requires a 100 foot natural and undisturbed buffer adjacent to perennial streams and an additional 50 foot setback for septic tanks and their drain fields and structures. Other uses, such as road and utility crossings, timber production and harvesting, wastewater treatment, agricultural production, and recreational facilities, are permitted but must also meet specified conditions. The County has expressed a desire to preserve more of the riparian area through means including conservation easements, increased development regulations, and fee-simple acquisition of flood zones, buffers, and wetlands along the corridor.

As the Yellow River is one of the three major sources for Lake Jackson (along with the Alcovy River and the South River), water quality preservation activities for the river, its tributaries, and surrounding lands are critical.

REGIONALLY IMPORTANT RESOURCES MAPS

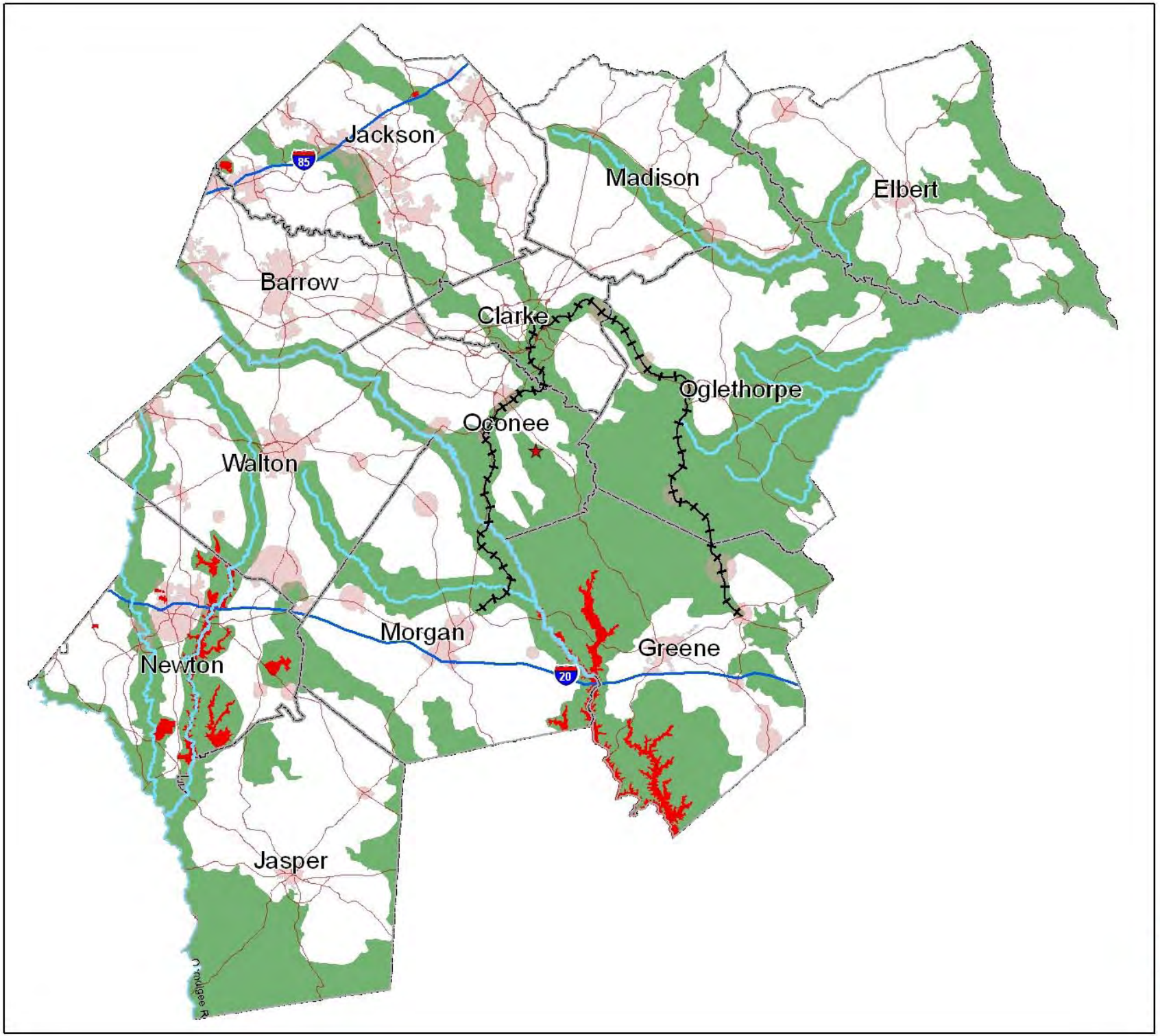
The RIR Map is a detailed illustration of all designated RIRs within the Northeast Georgia RC region as well as the State Vital areas as required by the Department of Community Affairs (DCA) Rules for Regionally Important Resources. The map is presented in two formats, the Green Infrastructure Map and the individual county RIR maps.

The Green Infrastructure Map is a generalized map meant to serve as an advocacy map to educate and guide interested parties on the location of areas recommended to be set aside for greenspace. The RIR Rules require that the designated resources be connected, to the maximum extent feasible, in a continuous regional green infrastructure network. One of the networks DCA suggested using to create the interconnection is the Southeast Ecological Framework.

The Southeastern Ecological Framework Project was a GIS-based analysis to identify ecologically significant areas and connectivity in the southeast region of the US, including Georgia. This network is a strategically planned and managed network of wilderness, parks, greenways, conservation easements, and working lands with conservation value that benefits wildlife and people, supports native species, maintains natural ecological processes, sustains air and water resources, links urban settings to rural ones, and contributes to the health and quality of life for the communities and citizens sharing this network. The network encompasses a wide range of elements, including: natural areas such as wetlands, woodlands, waterways, and wildlife habitat; public and private conservation lands such as nature preserves, wildlife corridors, greenways, and parks; and public and private working lands of conservation value such as forests and farms, as well as, outdoor recreation and trail networks. The Southeast Ecological Framework best connected the RIR resources in the Northeast Georgia region, leaving only two sites not linked to the green infrastructure network.

Individual county RIR maps were developed to provide the detail not possible with the Green Infrastructure Map and depicts designated RIRs and State Vital Areas in their relation to the Green Infrastructure linkage.

The RIR Map is presented in a layered form on the RC's map server http://maps.negplanning.org and allows user to turn the various layers on and off as needed for viewing ease. Additionally, the map displays city and county boundaries, major roads, and the Georgia Department of Transportation designated Bicycle Trails located in the region. While these State Bicycle Trails are not designated RIRs, these components of transportation infrastructure serve as important linkages between resources, particularly east to west, where no other linkages exist.



Regionally Important Resources

of Northeast Georgia

September 2010

Green Infrastructure Map

- NE Ga Green Infrastructure

Designated Resources

- Structures
- Streams
- Athens Line
- Firefly Trail
- Areas

Other Map Elements

- Incorporated Cities
- County Boundaries
- Major Roads
- Freeway System

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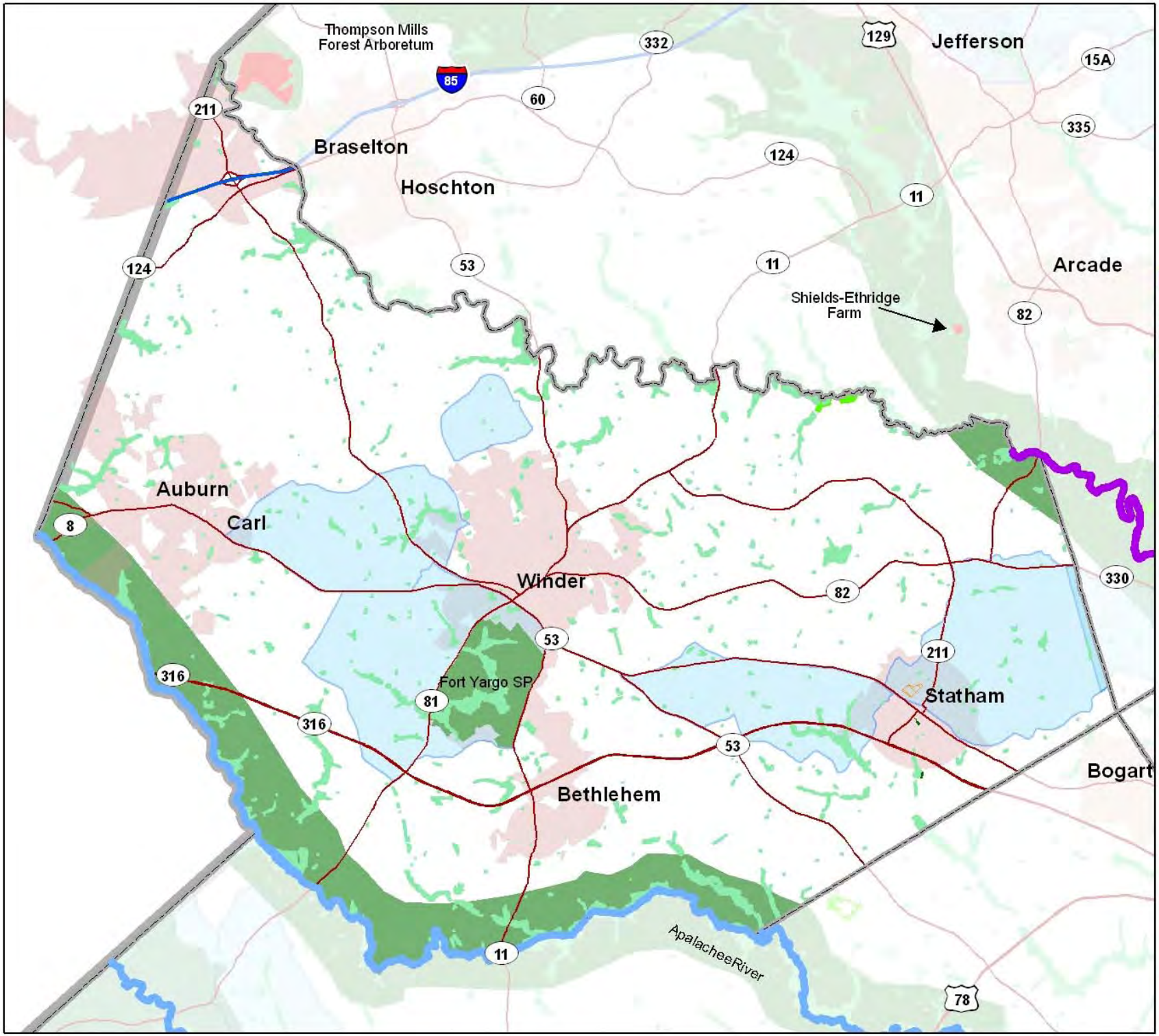
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Barrow County, Georgia

September 2010

Green Infrastructure Map

- NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
- Jurisdictional Wetlands
- Wildlife Management Areas
- Ga Wetlands Trust
- Ga Land Conservation Prog.
- US Fish and Wildlife Service
- Land Trust Lands
- Local Conservation Lands
- Charlie Elliot Wildlife Center
- State Parks
- Oconee National Forest
- Sm Water Supply Watershed

Designated Resources

- Structures
- Streams
- Athens Line
- Firefly Trail
- Areas

Other Map Elements

- Incorporated Cities
- County Boundaries
- Major Roads
- Freeway System

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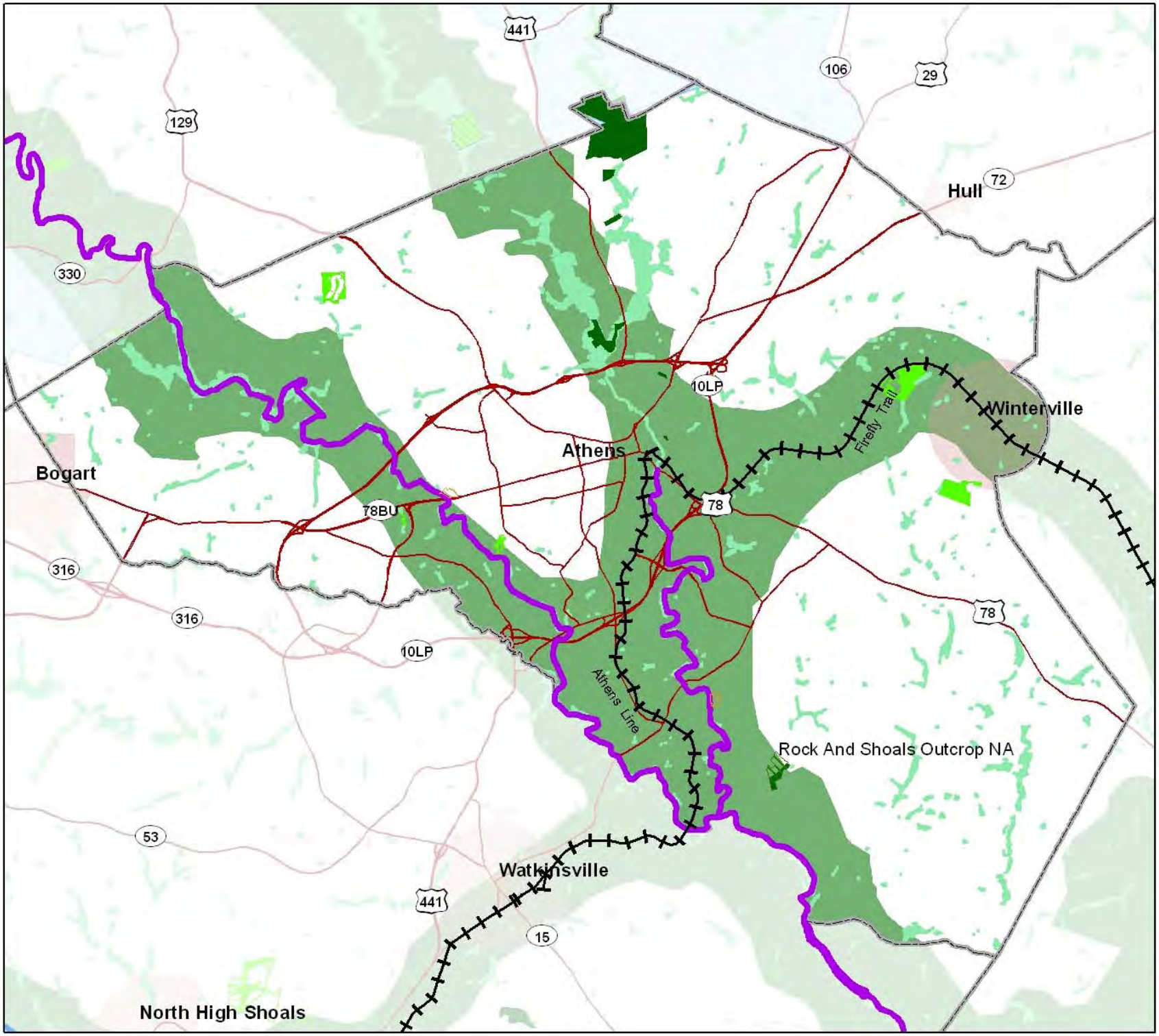
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Athens-Clarke County Georgia

September 2010

Green Infrastructure Map

NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
- Jurisdictional Wetlands
- Wildlife Management Areas
- Ga Wetlands Trust
- Ga Land Conservation Prog.
- US Fish and Wildlife Service
- Land Trust Lands
- Local Conservation Lands
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Designated Resources

- Structures
- Streams
- Athens Line
- Firefly Trail
- Areas

Other Map Elements

- Incorporated Cities
- County Boundaries
- Major Roads

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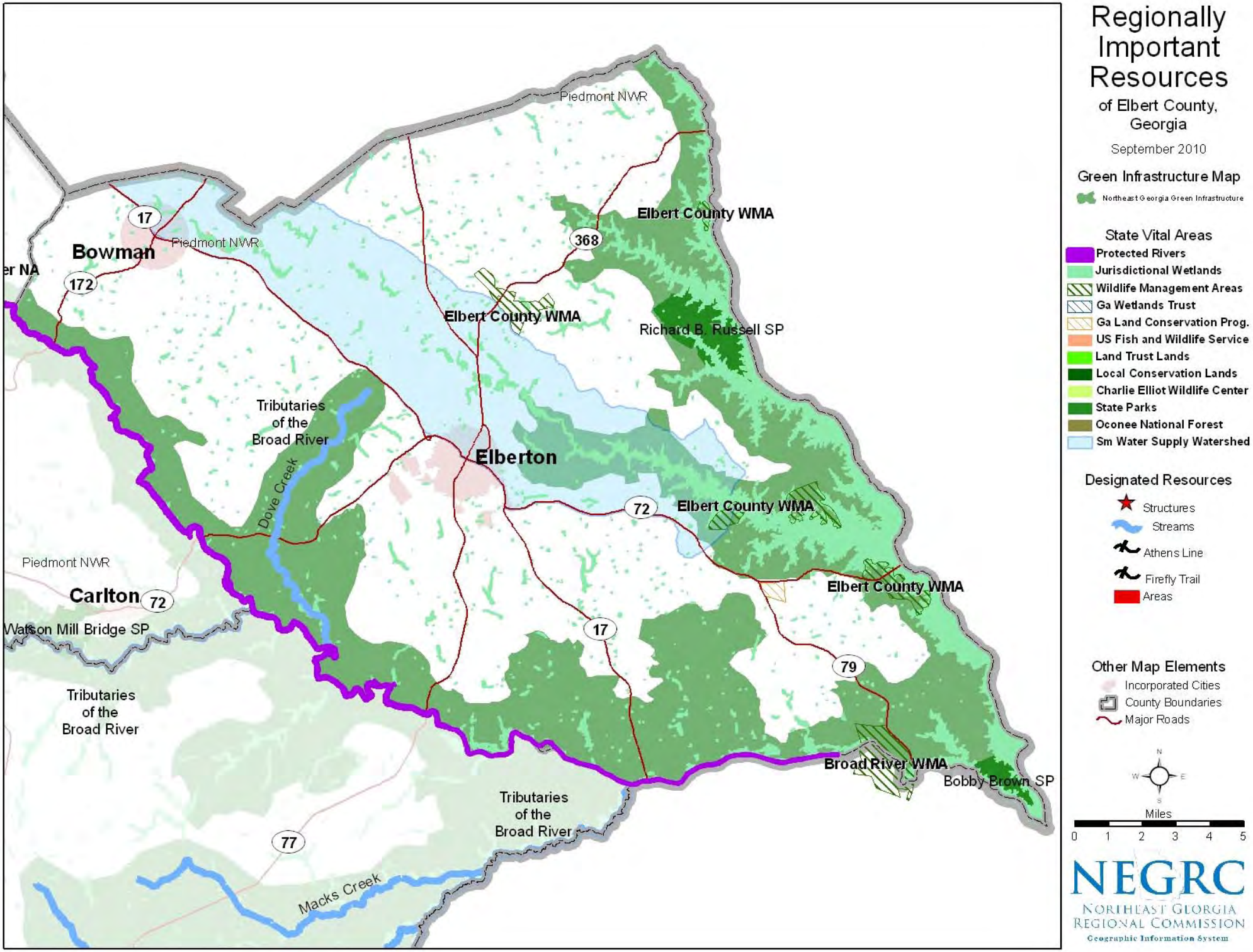
NEGRC

Northeast Georgia Regional Commission

Geographic Information System


Regionally Important Resources
of Elbert County, Georgia
September 2010
Green Infrastructure Map
Northeast Georgia Green Infrastructure
State Vital Areas
Protected Rivers
Jurisdictional Wetlands
Wildlife Management Areas
Ga Wetlands Trust
Ga Land Conservation Prog.
US Fish and Wildlife Service
Land Trust Lands
Local Conservation Lands
Charlie Elliot Wildlife Center
State Parks
Oconee National Forest
Sm Water Supply Watershed
Designated Resources
Structures
Streams
Athens Line
Firefly Trail
Areas
Other Map Elements
Incorporated Cities
County Boundaries
Major Roads
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Northeast Georgia Regional Commission
Geographic Information System
Piedmont NWR
Elbert County WMA
Bowman
Richard B. Russell SP
Tributaries of the Broad River
Dove Creek
Elberton
Carlton
Watson Mill Bridge SP
Macks Creek
Broad River WMA
Bobby Brown SP
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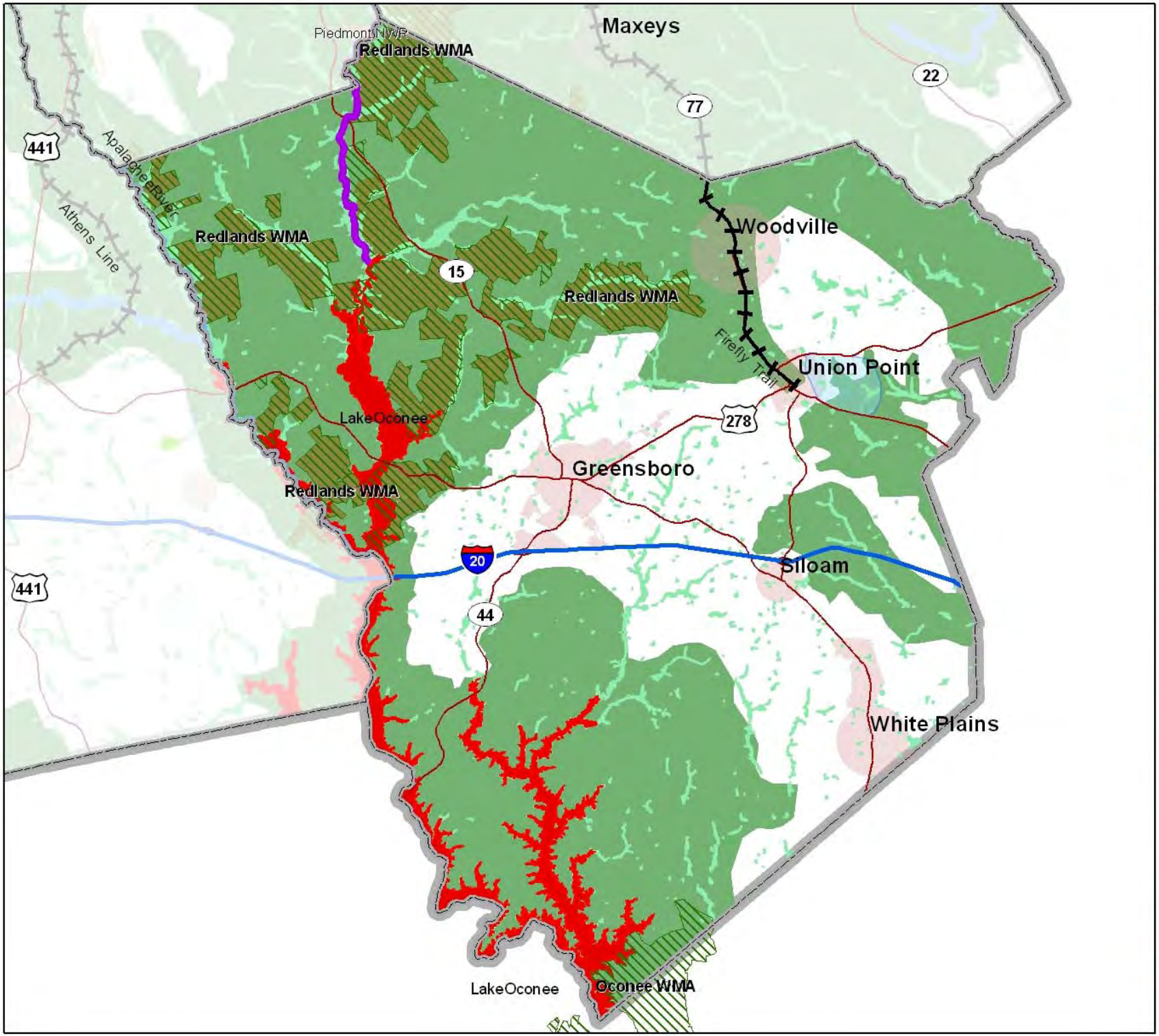

Regionally Important Resources

of Greene County, Georgia

September 2010

Green Infrastructure Map

NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
- Jurisdictional Wetlands
- Wildlife Management Areas
- Ga Wetlands Trust
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Designated Resources

- Structures
- Streams
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- Firefly Trail
- Areas

Other Map Elements

- Incorporated Cities
- County Boundaries
- Major Roads
- Freeway System

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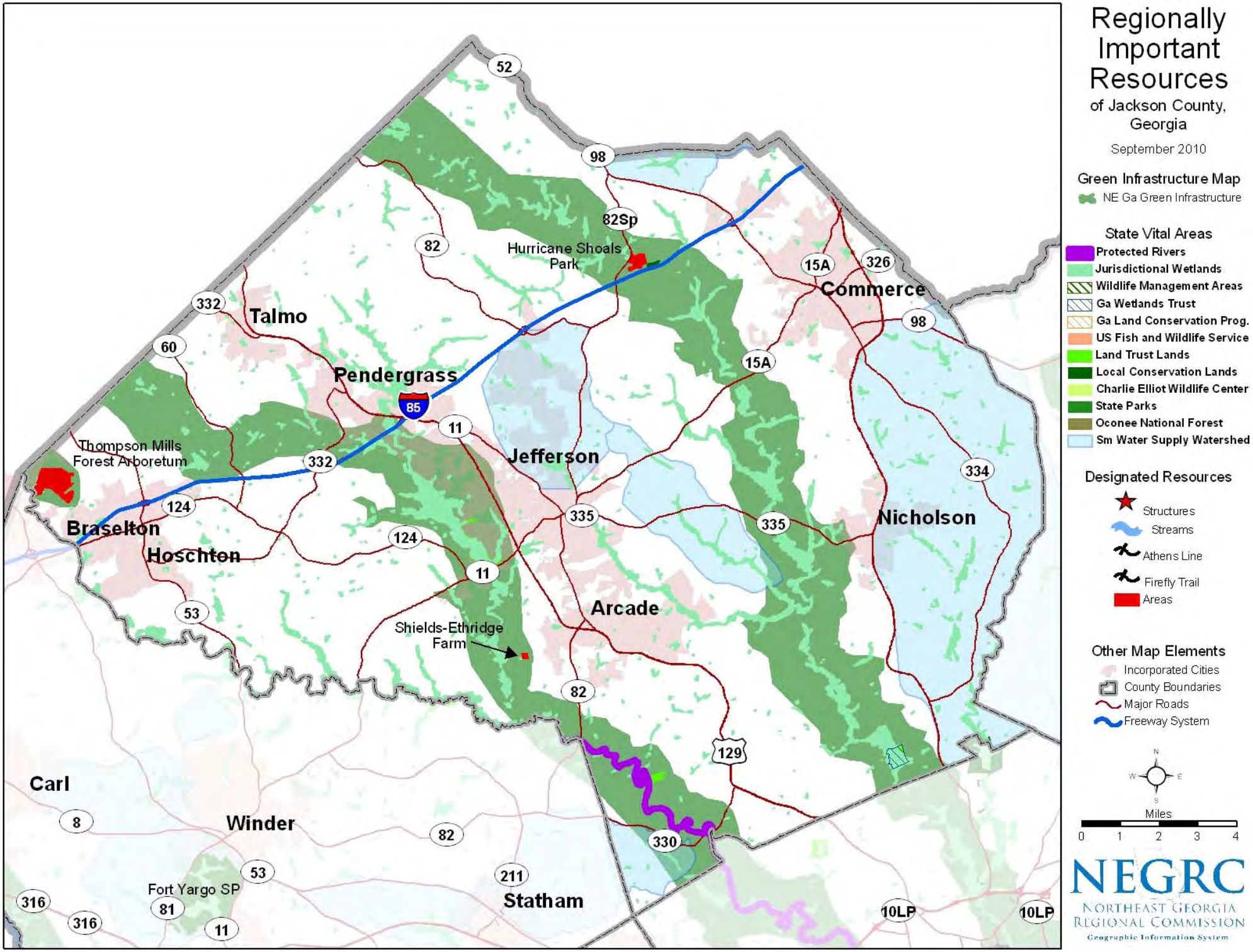
NEGRC

Northeast Georgia Regional Commission

Geographic Information System


Regionally Important Resources
of Jackson County, Georgia
September 2010
Green Infrastructure Map
NE Ga Green Infrastructure
State Vital Areas
Protected Rivers
Jurisdictional Wetlands
Wildlife Management Areas
Ga Wetlands Trust
Ga Land Conservation Prog.
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Other Map Elements
Incorporated Cities
County Boundaries
Major Roads
Freeway System
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Northeast Georgia Regional Commission
Geographic Information System
Talmo
Pendergrass
Jefferson
Commerce
Nicholson
Arcade
Braselton
Hoschton
Carl
Winder
Statham
Fort Yargo SP
Thompson Mills Forest Arboretum
Hurricane Shoals Park
Shields-Ethridge Farm
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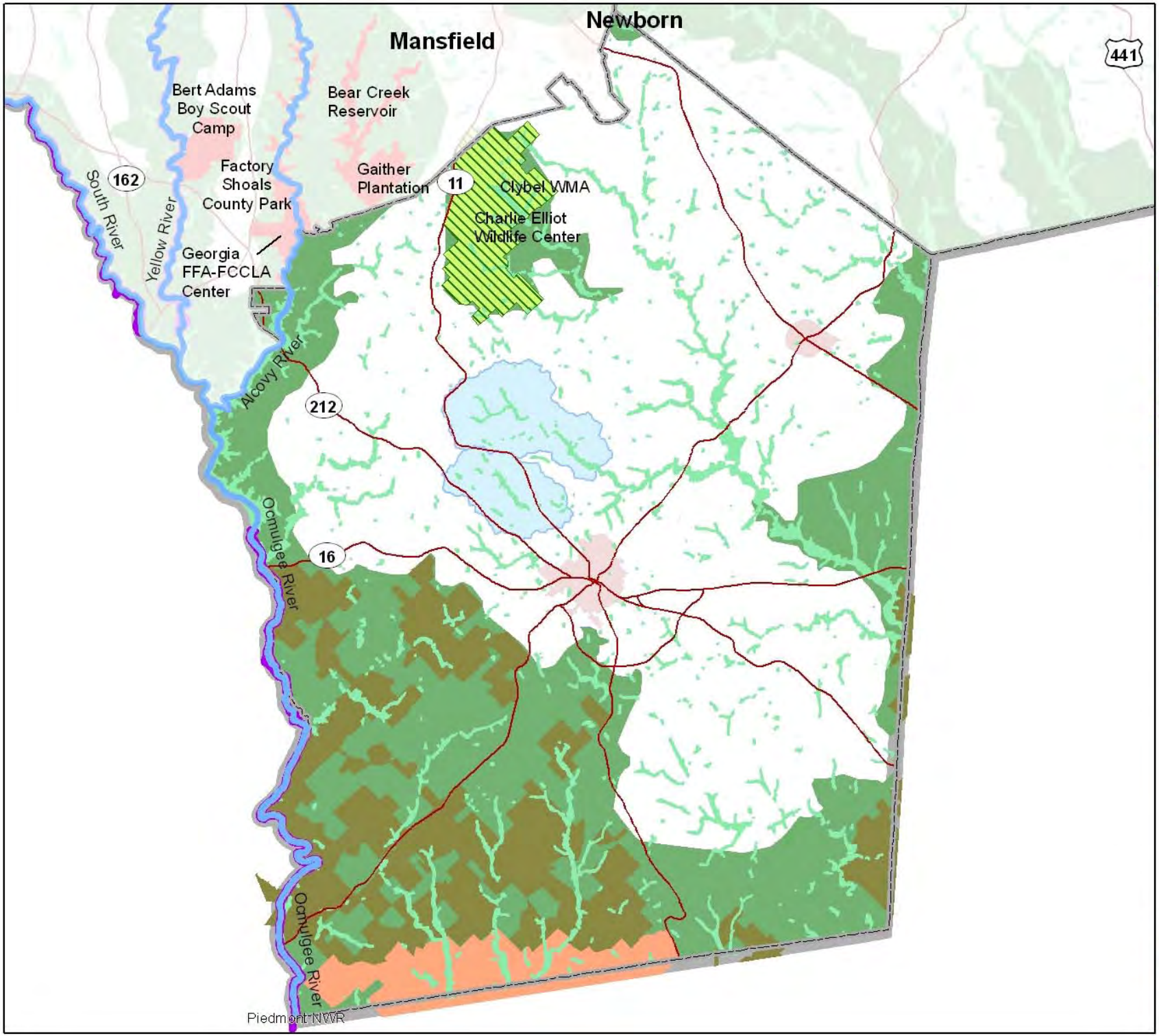

Regionally Important Resources

of Jasper County, Georgia

September 2010

Green Infrastructure Map

NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
- Jurisdictional Wetlands
- Wildlife Management Areas
- Ga Wetlands Trust
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Designated Resources

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- Major Roads
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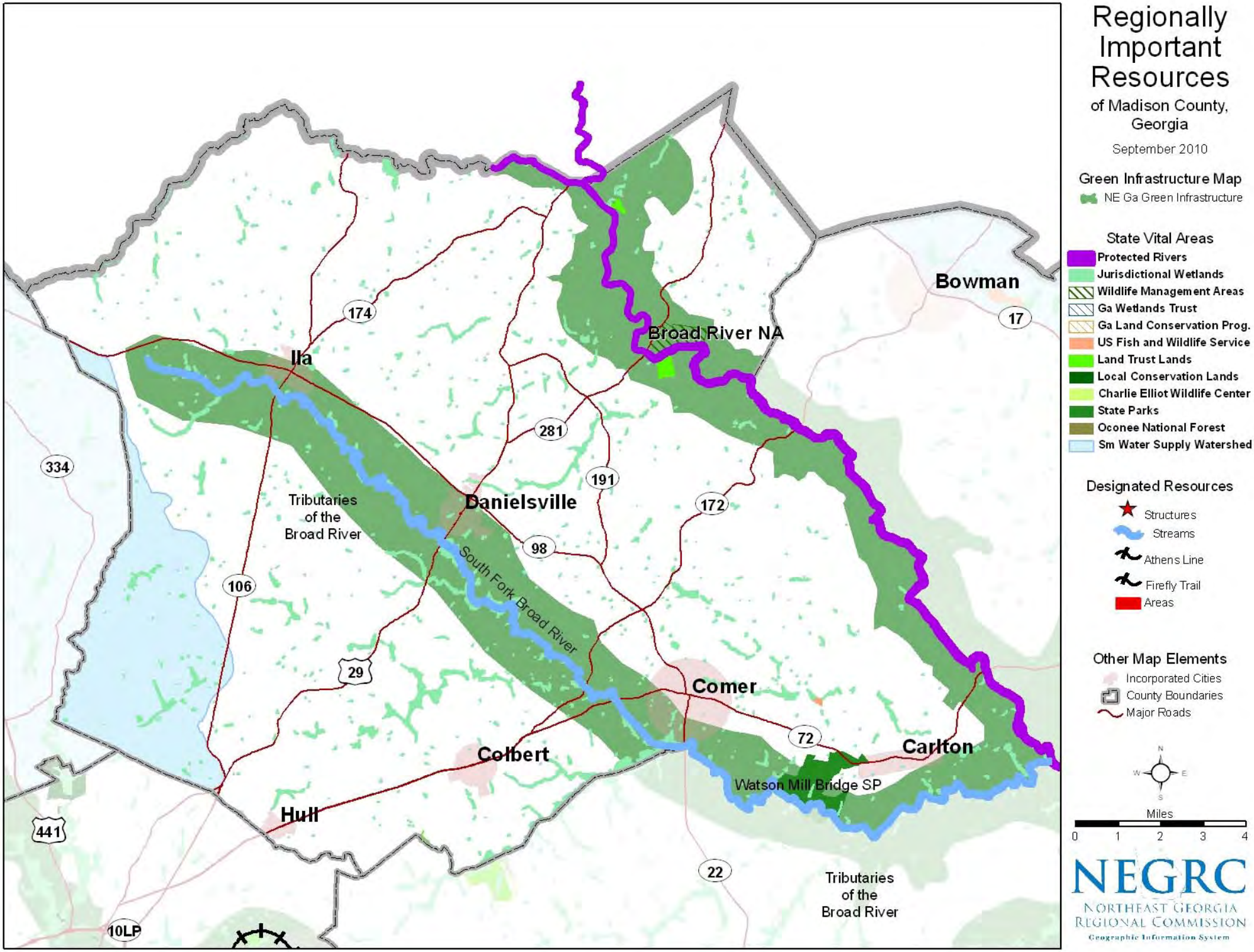
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Madison County, Georgia

September 2010

Green Infrastructure Map

- NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
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- Wildlife Management Areas
- Ga Wetlands Trust
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- Firefly Trail
- Areas

Other Map Elements

- Incorporated Cities
- County Boundaries
- Major Roads

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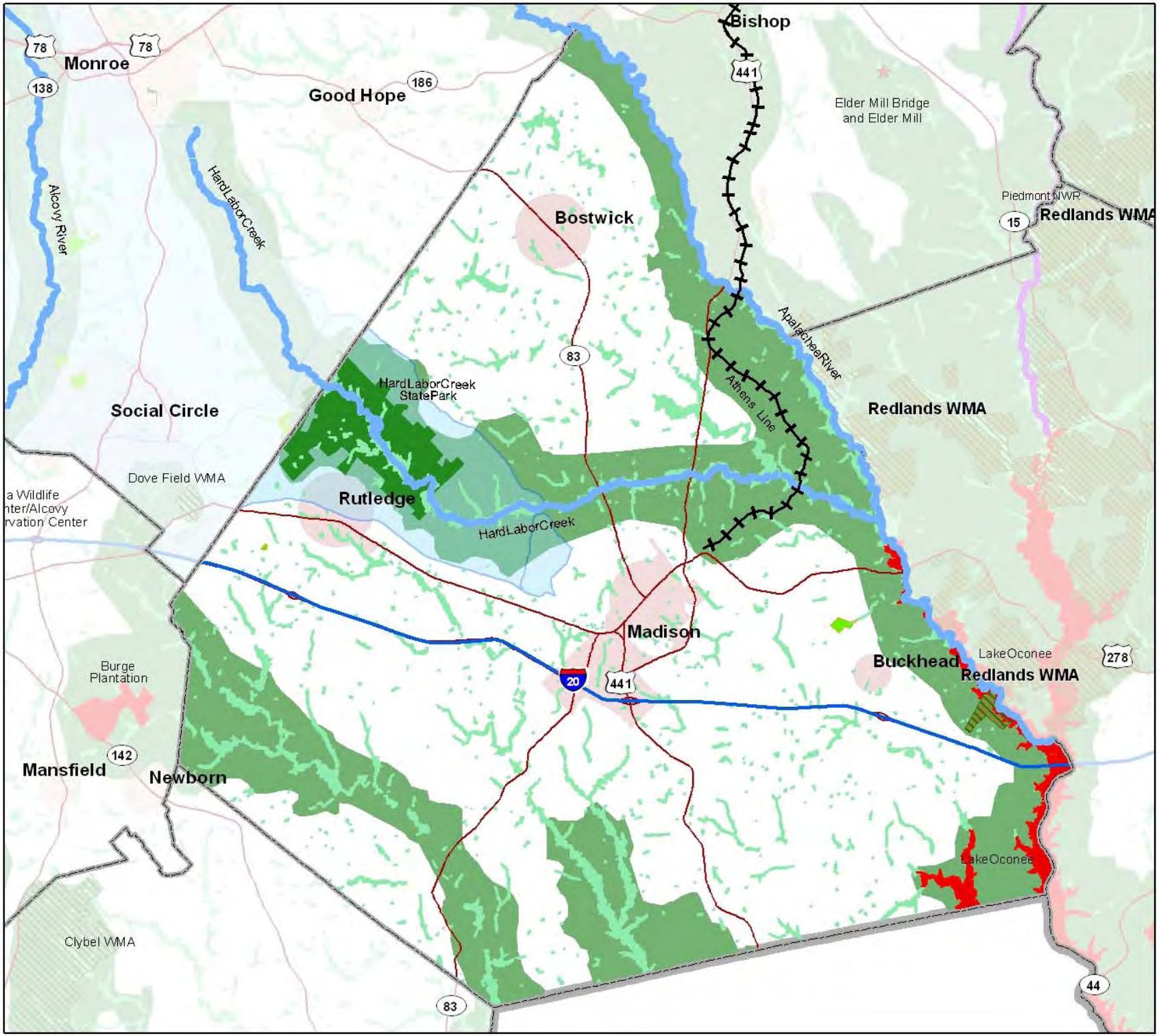
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Morgan County, Georgia

September 2010

Green Infrastructure Map

NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
- Jurisdictional Wetlands
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- County Boundaries
- Major Roads
- Freeway System

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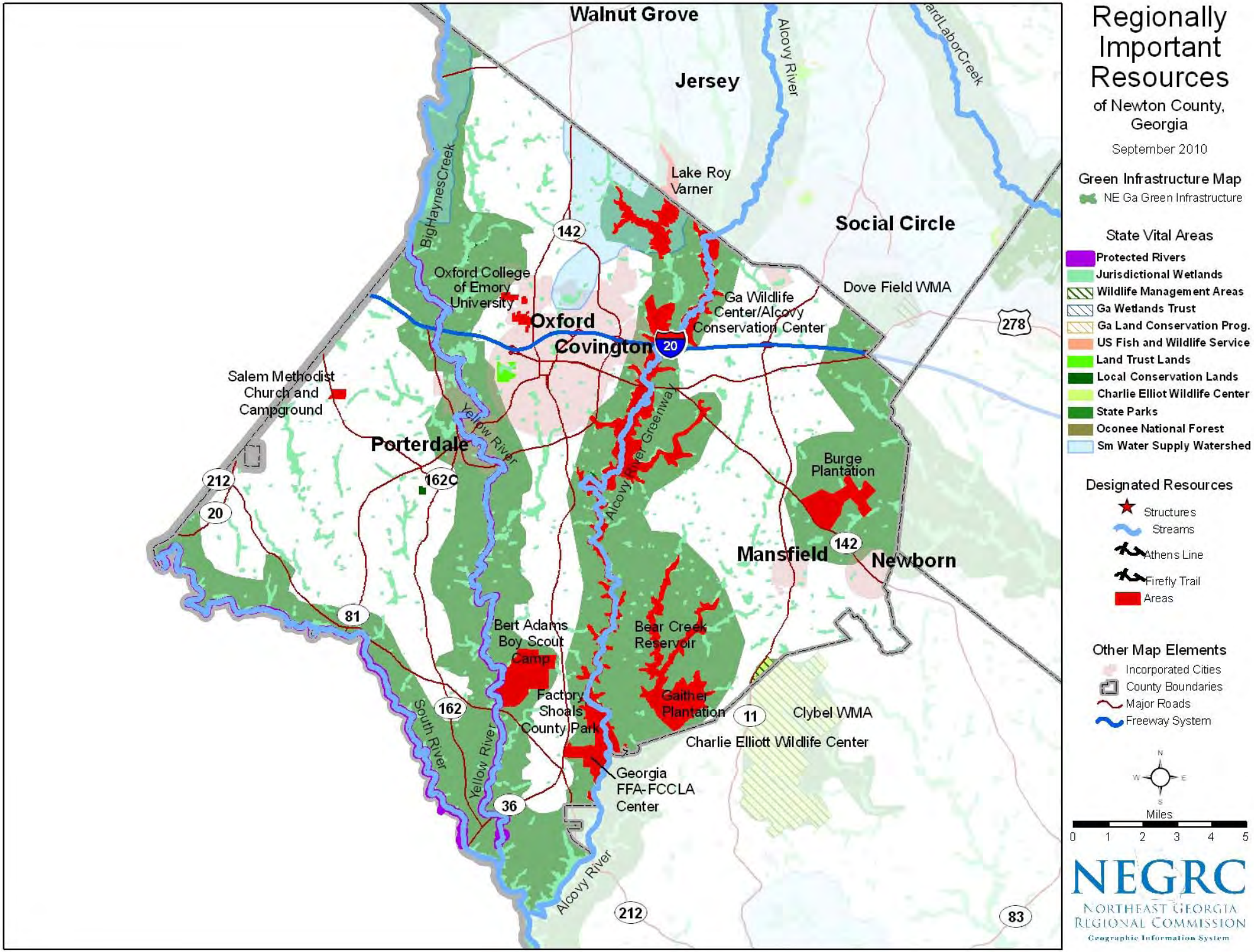
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Newton County, Georgia

September 2010

Green Infrastructure Map

NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
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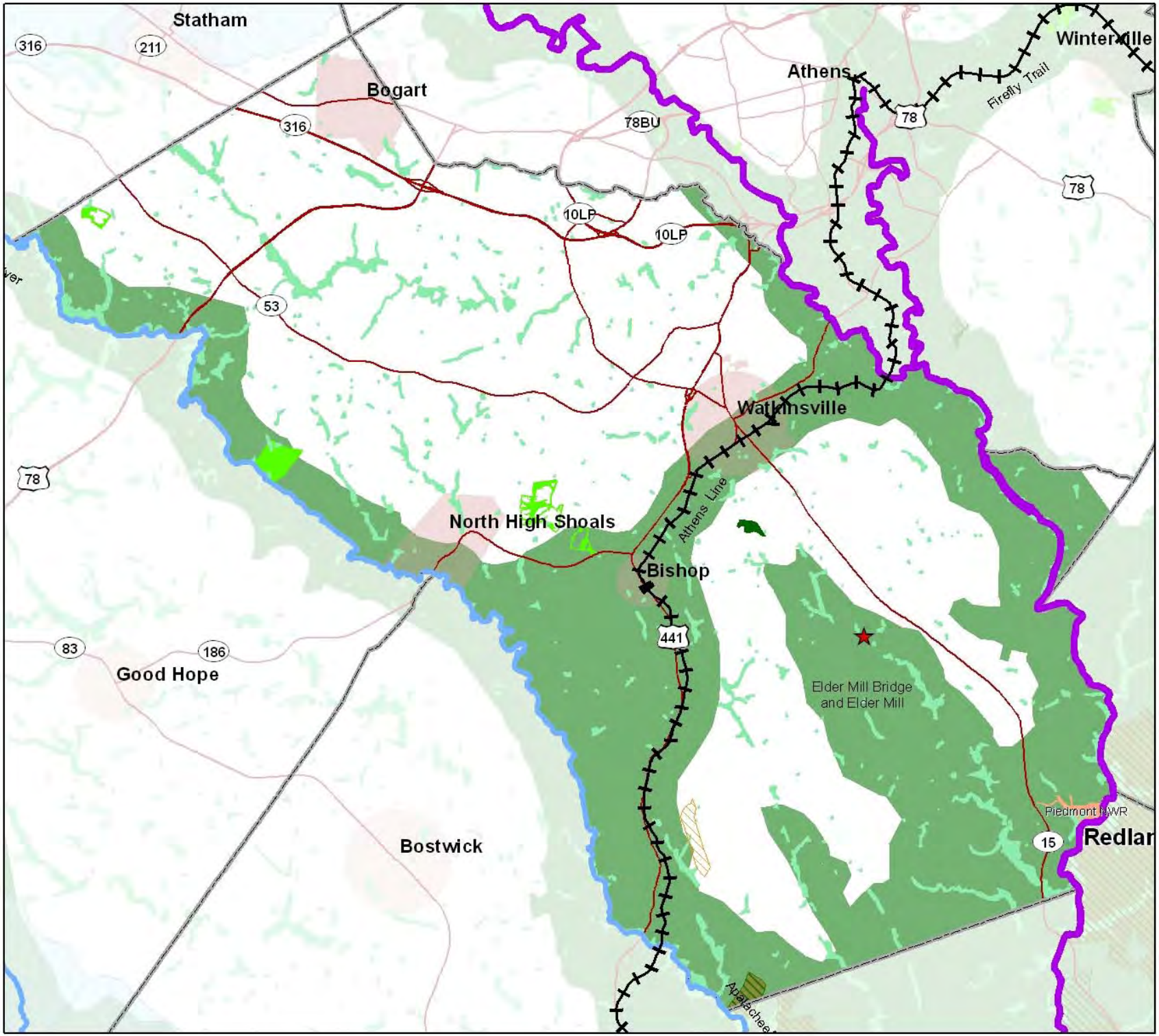
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Oconee County, Georgia

September 2010

Green Infrastructure Map

- NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
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- County Boundaries
- Major Roads

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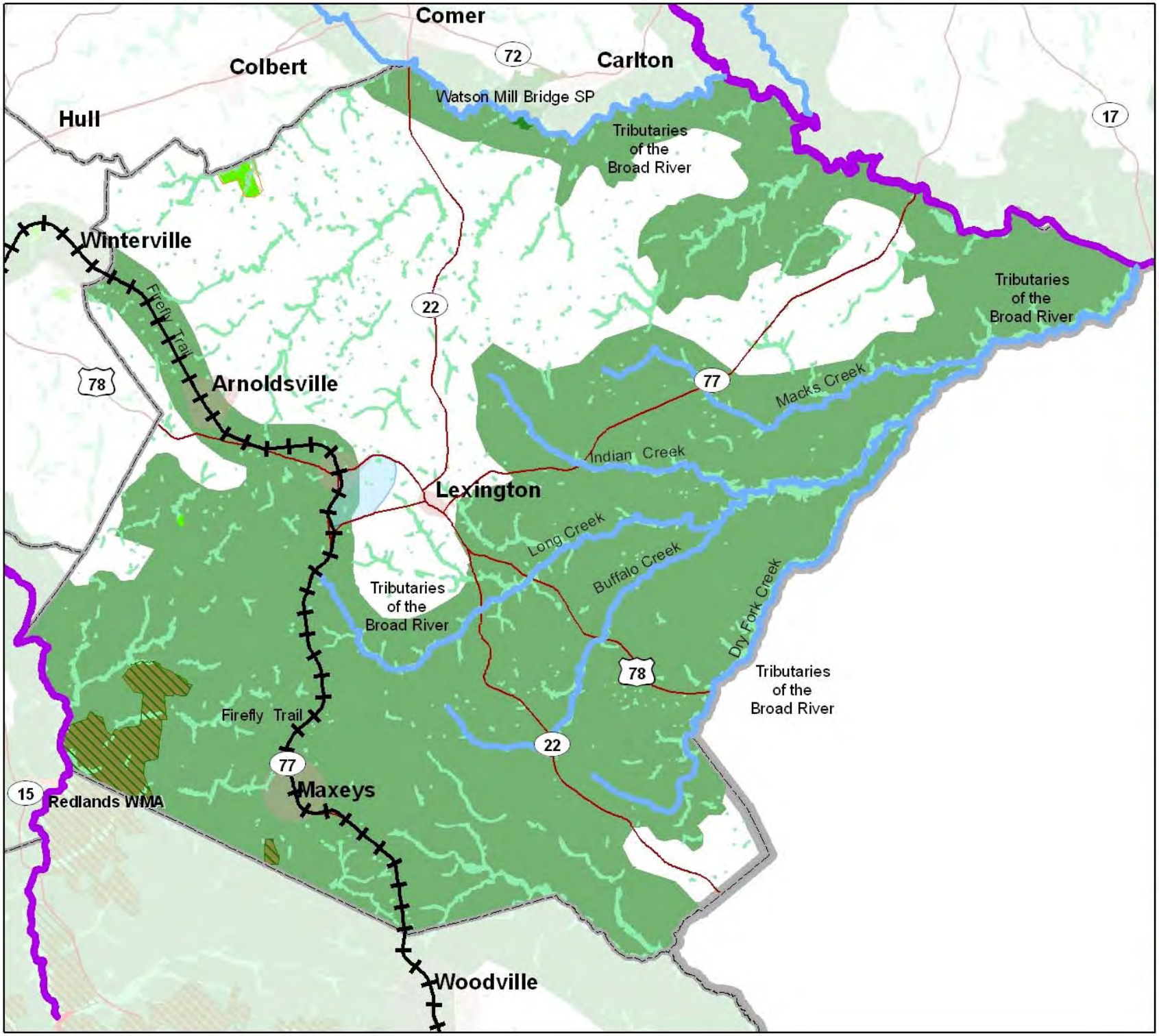
NORTHEAST GEORGIA REGIONAL COMMISSION
Geographic Information System



Regionally Important Resources

of Oglethorpe County, Georgia

September 2010

Green Infrastructure Map

- NE Ga Green Infrastructure

State Vital Areas

- Protected Rivers
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Designated Resources

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Other Map Elements

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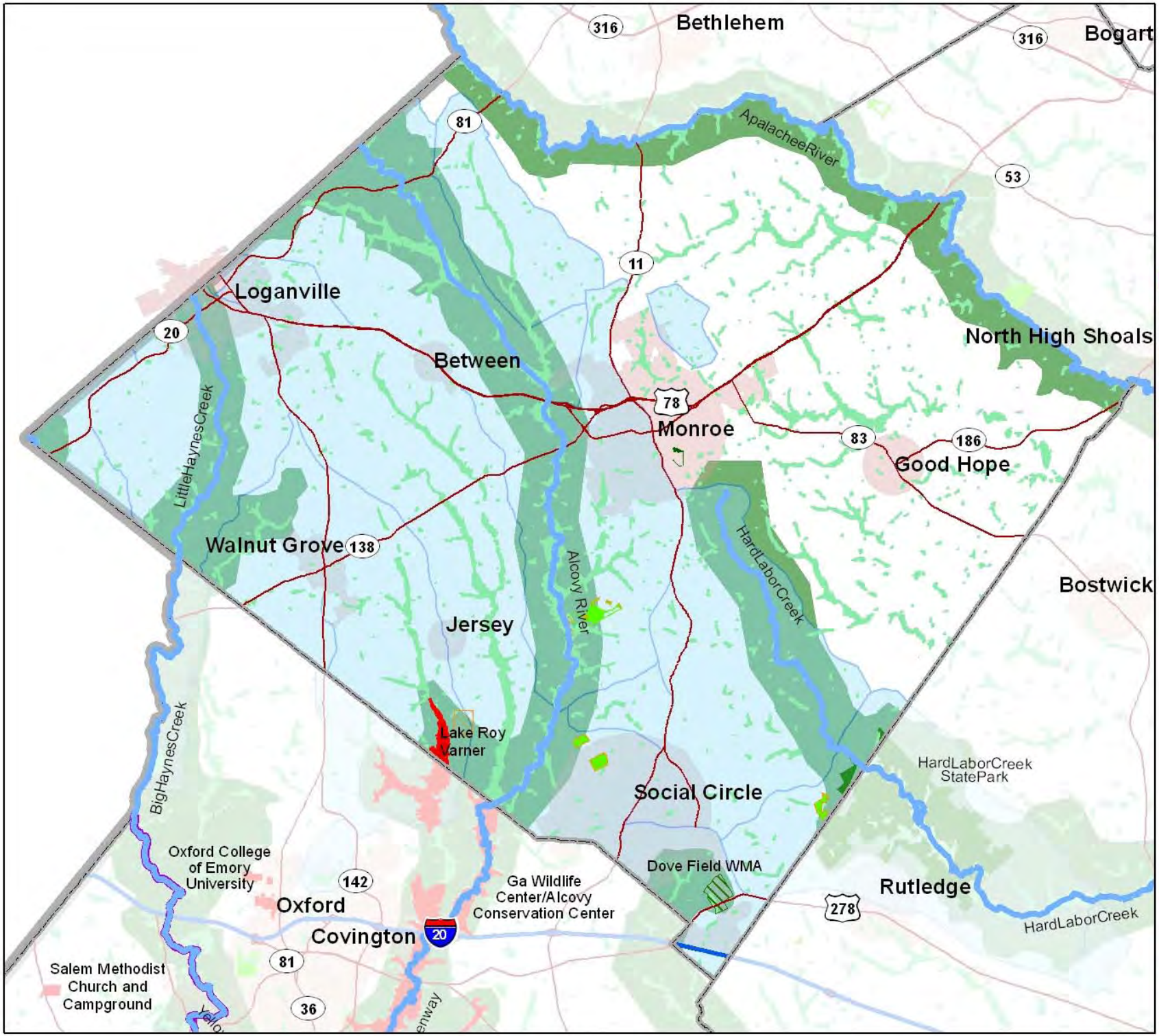
NEGRC

Northeast Georgia Regional Commission

Geographic Information System



Regionally Important Resources

of Walton County, Georgia

September 2010

Green Infrastructure Map

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State Vital Areas

- Protected Rivers
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- Sm Water Supply Watershed

Designated Resources

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- Firefly Trail
- Areas

Other Map Elements

- Incorporated Cities
- County Boundaries
- Major Roads
- Freeway System

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NEGRC

Northeast Georgia Regional Commission

Geographic Information System

APPROPRIATE DEVELOPMENT PRACTICES

Appropriate Development Practices

The integrity of a designated resource is not only the resource itself, but also the viewsheds, adjacent sites and structures, and development and land-use practices that can contribute to, or detract from, a resource's value. Conservation and Heritage resources are most threatened by development. Water Resources are threatened by the potential point and non-point source pollution entering the waters and negatively impacting water quality as well as the destruction of wetlands and wildlife habitat from development activities. Therefore, it is important to discuss appropriate development practices to protect these resources and the areas around them. Examining the potential affects of development and implementing suitable protection mechanisms can reduce, if not completely negate, development impacts.

The following are recommended appropriate development practices that should be used by developers for designing new developments to be located within one mile of an RIR. The practices will be used by the Northeast Georgia Regional Commission for reviewing and evaluating Developments of Regional Impact located within one mile of a resource.

- Establish a complementary mix of land uses (residential, commercial, civic, etc.), both vertically and horizontally, within convenient walking distance of one another (a quarter-mile, or 5-10 minutes) via direct and safe connections. By creating projects with multiple land uses, automobile trips become less necessary and pavement may be used more sparingly, reducing impacts to traffic, air quality, and water quality. The National Association of Homebuilders maintains a Mixed-Use & Compact Development resource online (http://www.nahb.org/reference_list.aspx?sectionID=628).
- Use infrastructure availability to steer development away from areas of natural, cultural, historic, and environmentally sensitive resources.
- Link to adjacent developments and neighborhoods via a trail and/or greenspace system.
- Utilize shared parking opportunities (http://www.vtpi.org/tdm/tdm89.htm) and seek reduced parking requirements (http://www.vtpi.org/tdm/tdm72.htm#_Reduce_Parking_Supply) in areas to decrease the total impervious surface area and protect water quality.
- Encourage the redevelopment or adaptive reuse of existing buildings, sites, and districts, including brownfields and greyfields. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and sensitive lands.
- Coordinate new development patterns with those of existing neighborhoods by use of compatible scale and design. Examples include appropriate housing size and style, lot size and setbacks, street design (especially width), landscaping, tree preservation, and grading.
- Site plans and building design should be sensitive to the natural features of the site, including woodlands, steep slopes, wetlands, and floodplains.
- Enlist significant site features including view shed corridors, trees, and existing heritage resources, as amenities that shape the identity and character of new and infill development, and redevelopment.
- Preserve historic and cultural resources located on or adjacent to the site.

- Buffer the periphery of the development site with natural landscaping that maintains the vegetative and aesthetic character of surrounding roadways.
- Create linkages to and between existing or planned green infrastructure corridors (riparian areas, utility easements, etc.) within and adjacent to the site through the use of conservation easements or other tools. This reduces direct water pollution and can also serve as a tool for natural stormwater management (http://www.epa.gov/greeninfrastructure/).
- Cluster development on designated portions of the site to permanently protect the balance of the total acreage, avoid disturbances to environmentally-sensitive areas, incorporate natural features as amenities, and promote shared water/sewer infrastructure, where possible. This is also known as conservation development (http://urbanext.illinois.edu/lcr/cluster.cfm).
- Establish aquatic buffers, beyond the minimum required by state law, that serve as natural boundaries between waterways and new development to provide greater filtering and better protect wetlands and water quality.
- Utilize Low-Impact Development (LID) practices to employ a range of economical devices to control runoff at the source instead of relying solely on complex and costly collection, conveyance, storage and treatment systems to protect water quality.
    - Limit the proportion of the site that can be covered in impervious roofs and pavement to protect water quality through the use of green roofs and porous pavement materials, where possible, to allow underlying soil to absorb rainfall and treat pollutants, shared parking, shared driveways, or landscaped detention islands within cul-de-sacs.
    - Address stormwater management through site design modification and BMPs to reduce runoff volume and decentralize flows to allow natural infiltration to occur as close as possible to pre-development conditions through the use of bioretention areas or rain gardens, vegetated swales, filter strips, cistern collection systems, preservation of existing wooded areas, mature trees, and natural terrain, and clustering homes on smaller lots. This will create a more hydrologically functional landscape and offer developers a more cost-effective alternative to address storm water management in lieu of costly conveyance systems.
- Limit clearing, grading, and disturbance to those areas that construction actually requires to preserve existing trees and soils that attenuate, treat, and infiltrate rainfall and runoff.
- Survey and analyze the environmental features of the site (topography, soils, wildlife habitat, hydrology, trees and vegetation, and historical and cultural sites) to minimize the potential for negative impacts; to avoid sensitive areas, land physically unsuitable for development, and prime agricultural land; and, to identify areas that may be suitable for parks, trails, or greenbelts.
- Utilize drought-tolerant species in landscape design to promote water conservation. A species list is found in Appendix C.
- Utilize WaterSense® products in new construction and renovation projects to promote water efficiency. Products include showerheads, toilets, bathroom sink faucets and accessories, and urinals.

GENERAL POLICIES AND PROTECTION MEASURES

General Policies and Protection Measures

General policies and protection measurers are intended as guidance for local governments in planning and decision-making that affects Regionally Important Resources. In addition, the Northeast Georgia Regional Commission will use these policies and protection measurers when reviewing local comprehensive plans for consistency with *Plan 2035*, the Northeast Georgia regional plan, and to encourage local government to adopt the policies and implementation measures most appropriate for the protection of the resources in their community. Each policy is followed by identified applicable implementation measures that can be utilized by local government, developers, and property owners for resource protection. A description of each implementation measure follows the list of Policy and Protection Measures.

- Incorporate Regionally Important Resource protection into local planning efforts,
- Reach out to and encourage involvement by local and regional stakeholders in planning and development processes.
- Offer educational opportunities related to Regionally Important Resources through increased public involvement.
- Work with adjacent communities to ensure uniformity in regulations affecting resources that cross or are situated near jurisdictional boundaries.
    - Applicable Implementation Measures:
        - Buffers
        - Connectivity Corridors
        - Focused Growth Areas
        - Increased Public Involvement
        - Habitat Conservation Plans
        - Transportation and Recreation
- Protect water quality by ensuring that development allows for the greatest amount possible of direct infiltration of rainwater (rather than relying on detention/retention ponds).
    - Applicable Implementation Measures:
        - Buffers
        - Cluster Development
        - Connectivity Corridors
        - Conservation Easements
        - Low-Impact Development (LID)
        - Restrictive Covenants
- Reduce contamination of the natural environment by pollutants.
    - Applicable Implementation Measures:
        - Chemical Application Reduction
        - Low-Impact Development (LID)
- Avoid disturbances of pre-development conditions whenever possible to prevent unnecessary harm to the environment.

    - Applicable Implementation Measures:
        - Buffers
        - Cluster Development
        - Connectivity Corridors
        - Conservation Easements
        - Environmental Management
        - Focused Growth Areas
        - Low-Impact Development (LID)
        - Restrictive Covenants
        - Species and Habitat
- Designate and preserve natural corridors for habitat and water quality protection.
    - Applicable Implementation Measures:
        - Buffers
        - Cluster Development
        - Connectivity Corridors
        - Conservation Easements
        - Overlay Zoning
        - Restrictive Covenants
        - Species and Habitat
        - Transferable Development Rights (TDRs)
- Create buffers between developments and sensitive water, conservation, and heritage resources.
    - Applicable Implementation Measures:
        - Buffers
        - Cluster Development
        - Connectivity Corridors
        - Conservation Easements
        - Restrictive Covenants
- Situate development in appropriate areas of the community or site, conserving open space and protecting sensitive environments, including wildlife habitat.
    - Applicable Implementation Measures:
        - Buffers
        - Cluster Development
        - Connectivity Corridors
        - Conservation Easements
        - Focused Growth Areas
        - Overlay Zoning

        - Restrictive Covenants
        - Species and Habitat
        - Transferable Development Rights (TDRs)
- Design new projects that complement existing communities and resources such as historic structures and sensitive ecosystems
    - Applicable Implementation Measures:
        - Buffers
        - Cluster Development
        - Connectivity Corridors
        - Conservation Easements
        - Design Guidelines
        - Form-Based Zoning
        - Historic Preservation
        - Performance Zoning
        - Restrictive Covenants
- Concentrate community development efforts on existing, underused sites and structures (infill development, adaptive reuse of existing structures)
    - Applicable Implementation Measures:
        - Focused Growth Areas
        - Historic Preservation
        - Overlay Zoning
        - Transferable Development Rights (TDRs)
- Encourage concentrations of complementary activities and land uses.
    - Applicable Implementation Measures:
        - Cluster Development
        - Focused Growth Areas
        - Mixed-Use Development
        - Transferable Development Rights (TDRs)
- Link to adjacent developments and neighborhoods via a trail and/or greenspace system.
    - Applicable Implementation Measures:
        - Connectivity Corridors
        - Focused Growth Areas
        - Form-Based Zoning
        - Mixed-Use Development
        - Transferable Development Rights (TDRs)
        - Transportation and Recreation
- Connect to and create recreational opportunities within and between residential areas and activity centers.

- Applicable Implementation Measures:
  - Cluster Development
  - Connectivity Corridors
  - Focused Growth Areas
  - Mixed-Use Development
  - Transportation and Recreation

- Plan for new projects with regard for the significant linkages between Regionally Important Resources protection and local economies.
  - Applicable Implementation Measures:
    - Historic Preservation
    - Low-Impact Development (LID)
    - Mixed-Use Development
    - Overlay Zoning
    - Species and Habitat
    - Transferable Development Rights (TDRs)
    - Transportation and Recreation
- Promote and incentivize best development practices.
  - Applicable Implementation Measures:
    - Cluster Development
    - Conservation Easements
    - Historic Preservation
    - Low-Impact Development (LID)
    - Mixed-Use Development
    - Transferable Development Rights (TDRs)

Description of Implementation Measures

Below is a description of the implementation measures presented in the General Policies and Protection Measures. Each implementation measure is followed by a key to indicate the entity that could undertake the protection implementation.

LG - local government; **D** - developer; **LO** - landowner

Buffers

Buffers offer protection through the physical separation of development and the resource to be safeguarded. Water body buffers may surround rivers, lakes, ponds, and reservoirs. Buffers filter rainwater runoff from adjacent land uses, ensuring better water quality. Many communities set a minimum development buffer width for water bodies, especially those used as drinking water sources. This minimum width should depend on the type and permeability of the soil, the steepness of slopes, existing plant life, and the kinds of pollutants likely to be found in runoff from adjacent land uses. Because water bodies often cross jurisdictional boundaries, intergovernmental cooperation is necessary to improve water quality; of special importance is the coordination of strategies with upstream communities within which headwaters are situated.

A natural or planted buffer may be constructed or maintained along the property line to separate incompatible development from Conservation or Heritage resources. (LG, D, LO)

Chemical Application Reduction

Before, during, and after development, utilize best management practices for fertilization and controlling pests and invasive vegetation. Where feasible, use environmentally benign products. (D, LO)

Connectivity Corridors

A connected system of green infrastructure presents a host of benefits. Preserving sensitive habitat in a linear nature, whether aligned with a stream or an upland passageway, will provide a transportation corridor for wildlife thus increasing the range for area wildlife. When located along riparian areas, these corridors can have important water quality benefits beyond those derived simply from development buffers (communities often choose to extend riparian conservation beyond the bounds of enforced buffers).

Apart from natural corridors such as rivers and ridgelines, some communities use existing easements or other utility corridors to plan and implement greenway systems and habitat corridors. Examples include transmission lines, pipelines, and, on a smaller scale, sewer easements. Greenways often provide significant benefits to community residents in areas such as transportation, recreation,

education, and economic development, in addition to their inherent natural advantages. (LG, D)

Conservation Subdivision

Conservation subdivisions are a popular device for encouraging flexibility and strategically concentrating home construction on the development site in order to protect sensitive and valuable open space, habitat, and other environmental resources. Familiar examples of this principle as used by local governments include planned unit developments (PUDs) or planned developments (PDs). Benefits of these subdivisions include: protected water quality, wildlife habitat, reduced infrastructure construction costs, reduced demand for publically funded greenspace, and a means for expanding public trails and greenways. (LG, D)

Conservation Easements

To preserve natural attributes of their property, landowners may sometimes opt into conservation easements, agreements to forfeit development rights while retaining land ownership. This can be beneficial in situations where reducing the property's tax burden on the owner is necessary, or when an area has been identified as critical to conservation efforts. (D, LO)

Design Guidelines

Building design guidelines may be used to ensure new developments complement the nearby Resources, rather than compete with or detract from them. (LG)

Focused Growth Areas

One method for preventing low-density sprawl is to identify and implement focused growth areas within the community. Within these areas higher-density development would be encouraged through zoning tools; outside of these areas, restrictions would be placed on lot size and uses to preserve agricultural, forested, or designated open space lands. Tools to consider are infill development districts and adaptive-reuse ordinances. (LG)

Form-Based Zoning

Instead of regulating by land use, transect or form-based zoning codes regulate development by building type, location, transect, or a combination of these. These codes focus on the relationship between buildings and the street. Graphics are often used to depict building scale, proportion, location within the site, and location of parking. A similar approach, Performance Zoning, allows for flexibility in use as long as a project meets established criteria pertaining to intensity of development and impacts on the environment and adjacent areas. (LG)

Historic Preservation

Once historic resources have been identified and inventoried, communities have a variety of options available for protecting them in the future. A popular protection mechanism is the designation of an historic property or district. Designation may happen at the federal, state, or local level; local designations offer the most flexibility on the part of the local government, and often have a more direct impact on development. Another tool for protecting existing resources is a demolition delay ordinance, which prohibits the total or partial destruction of structures that meet certain criteria outlined by the community (age, architectural type, etc.) An historic preservation easement is a voluntary legal agreement, initiated by the landowner, to protect the historic or cultural resource through subsequent ownership.

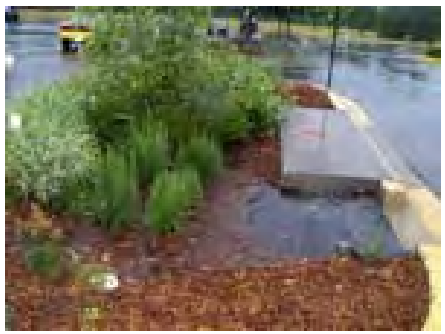
To enhance existing historic resources, developers and landowners may take advantage of existing state and federal historic rehabilitation and restoration tax incentives. Some individual jurisdictions also develop local property tax credit programs to encourage this type of activity in designated historic districts. (LG, D, LO)

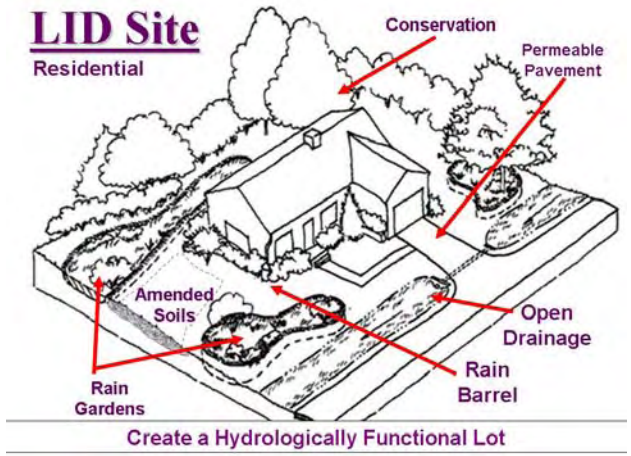
Increased Public Involvement

Increased public involvement during the development process will allow for concerns about impacts on nearby resources to be brought to the attention of local governments and developers before potentially detrimental actions are taken. (LG, D, LO)

Low-Impact Development (LID)

LID is the practice of mimicking pre-development site conditions to the greatest degree possible so as to prevent negative impacts to the surrounding environment. While LID is primarily associated with conscientious stormwater management, there are many additional benefits to be realized through the use of these and other related techniques. Prior to property acquisition, a recommended first step would be to conduct a land suitability analysis, utilizing a Geographic Information System (GIS) to determine whether the site would support its intended use.





LID goals may be realized in part by passing a tree protection ordinance for mature trees, utilizing native species and natural landscapes, and encouraging the planting of green roofs, or vegetated roof covers.

Impervious surface usually refers to pavement such as roads and parking lots; soil compacted during construction is also somewhat impervious. These areas prevent rainwater from infiltrating the ground; instead, they produce runoff that may carry materials from fertilizers, gasoline and motor oil, metals, sediment, and waste to water resources. LID methods of reducing runoff, especially near Regionally Important Resources, may involve encouraging the use of porous or permeable paving materials and reducing impervious surfaces by establishing parking maximums, enabling shared parking for adjacent property owners, limiting street width and curbing, limiting pavement in turnarounds, and reclaiming pavement where possible. Additionally, stormwater regulations favoring vegetated swales over more conventional drainage systems can lessen runoff. These may be used as components of a local green streets or green infrastructure program.

Other water quality problems may be prevented through the development of a local erosion and sedimentation ordinance (per the Erosion and Sedimentation Act of 1975), grading restrictions, and limiting and phasing clearing as part of project development. These tools are especially important in areas where growth, and therefore construction activity, is expected. (LG, D, LO)

Mitigation Banks

Mitigation banks help restore, establish, enhance, or preserve wetlands, streams, or other resources by offering compensation opportunities when development carries unavoidable impacts to these features. Establishing a system that positions mitigation bank sites at certain designated RIRs could provide permanent protection status while encouraging appropriate development elsewhere.

Mixed-Use Development

Mixed-use zoning in areas accessible by foot or bicycle is a tool used, in part, to reduce dependency on automobiles for transportation. Mixed-use development may refer to a mix of uses within one building, or a mixture of uses on a site. Residents and visitors are able to move between residential, commercial, and even light industrial areas with greater ease. This, in turn, reduces the need for increasing impervious surface within the community through the construction of new roads and parking areas. (LG, D)

Overlay Zoning

Overlay zoning is a technique in which additional restrictions are laid over existing zoning; the area covered by the additional restrictions is referred to as an overlay district, and its purpose is to supplement the underlying zoning regulations. Examples of overlay districts include those intended to protect historic areas, floodplains, watersheds, conservation areas, and downtowns. (LG)

Performance Zoning

Performance zoning regulates land uses based on their actual physical characteristics and functions as compared to specific standards identified by the community. (LG)

Restrictive Covenants

In areas where there is no qualified organization available to hold a property easement, a group of landowners with common goals may impose restrictive covenants to limit the future use of their land. An agreement of this sort would be binding on future titleholders. (LO)

Habitat Conservation Plan

The U.S. Fish and Wildlife Service is available to work with individuals and local government to develop Habitat Conservation Plans, the primary tool for balancing development and nature preservation to manage endangered species on property. Potential benefits of Habitat Conservation Plans are: they shift the conservation focus from single-species management to multi-species and habitat management; engage private landowners and local governments in conservation planning; protect unlisted species, thereby reducing the likelihood that listing will be needed; and, promote long-term conservation of species and habitats through protection and management. (LG, D, LO)

Transferable Development Rights (TDRs)

TDR is a technique that restricts development on one property while compensating for said restrictions by allowing a greater intensity of development on another tract. Communities utilizing TDRs identify "sending zones," or areas in which restrictions on development are desirable, and "receiving zones," or areas in which development is encouraged. (LG, D)

Transportation and Recreation

Street connectivity regulations focus on creating a transportation system in which multiple routes serve the same origins and destinations for maximum efficiency. In a related way, non-motorized connectivity ensures that bike lanes, sidewalks, and multi-use paths allow people to get from place to place safely without driving. Appropriate recreation enhancements, such as the conversion of an unused rail corridor to a multi-use trail, also enable residents and visitors to experience and appreciate those Resources accessible to the public. (LG, D)

APPENDICES

Appendix A

Regionally Important Resource Nominations Not Designated

Resource	Reason Not Designated
Auburn Ball Park	Local importance only, small site, does not provide significant water quality protection
Brick Store	Local importance only
Covington Historic Districts: and Campground Covington Mills & Mill Village, Covington Historic District, Floyd Street, North Covington	Local importance only, protected through local designation, not vulnerable
James Shackleford Memorial Park	Local importance only, small site, does not provide significant water quality protection
Mansfield	Local importance only
McGuirt's Bridge Road	Local importance only
Newborn Historic District	Local importance only, protected through local designation, not vulnerable
Oconee County Farmland	Local importance only, area not well defined
Old Social Circle Road	Local importance only
Porterdale Historic District	Local importance only, protected through local designation, not vulnerable

Appendix B

State Vital Areas

State Vital Areas include coastal marshes, salt marshes, tidal wetlands, water supply watershed for municipal drinking water, jurisdictional wetlands (wetlands connected to waters of the United States), groundwater recharge areas (high pollution susceptibility areas only), 100' buffer zone adjacent to protected rivers, state parks, wildlife management areas, conservation easements, and national forests.

State Vital Areas within Northeast Georgia include:

- Protected Rivers
  - Broad River from Hudson River to confluence with the Savannah River
  - Middle Oconee River from Apalachee River to Lake Oconee
  - North Oconee River from its confluence with East Fork Trail Creek to its confluence with the Middle Oconee River.
  - Ocmulgee River
  - South River
  - Yellow River
- State Parks/State Recreation Areas
  - Ft. Yargo
  - Hard Labor Creek
  - Bobby Brown State Recreation Area
  - Watson Mill Bridge
  - Richard B. Russell
- National Forest
  - Oconee National Forest
- Wildlife Management Areas and Heritage Sites
  - Broad River Natural Area
  - Elbert Co WMA
  - Broad River WMA
  - Rock & Shoals State Heritage Site
  - Redlands WMA
  - Oconee WMA
  - Clybel WMA (includes the Charlie Elliot Wildlife Center)
  - Walton Public Dover Field (includes Walton State Fish Hatchery)
- National Wildlife Refuge (NWR)
  - Piedmont NWR

Appendix C

waterSmart

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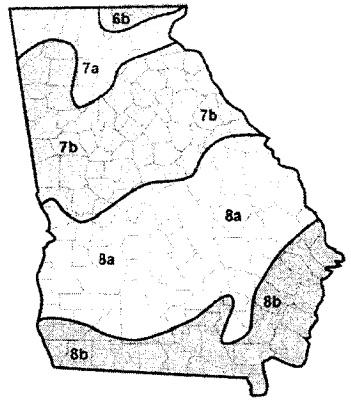
Cold Hardiness Zones in Georgia	
Zone	Ave. Min. Temp.
6b	-5 to 0 °F
7a	0 to 5 °F
7b	5 to 10 °F
8a	10 to 15 °F
8b	15 to 20 °F



Drought-tolerant Plants

The following plants are known to have good drought-tolerance, good pest resistance and adaptability to a wide range of soils and environmental conditions in Georgia. When selecting trees and shrubs, consider their mature size and provide sufficient growing space.

*** Indicates plant is native to the U.S.**

Common Name	Botanical Name	Georgia Hardiness Zones	Mature Size Ht./Width (Ft.)	Evergreen or Deciduous	Comments
Trees					
American Holly*	*Ilex opaca*	6b to 8b	50/40	E	Male and female trees. Only the female bears fruit.
Bald Cypress*	*Taxodium distichum*	6b to 8b	70/30	D	Adapts to wet or dry sites
Bouganvilla Goldenraintree	*Koelreuteria bipnnata*	6b to 8b	40/30	D	Showy pink capsules in summer
Chestnut Oak	*Quercus prinus*	6b to 8b	70/60	D	Very adaptable
Chinese Pistache	*Pistacia chinensis*	6b to 8b	35/35	D	Brilliant orange fall color
Crape Myrtle	*Lagerstroemia indica*	6b to 8b	Variable	D	Many flower colors and plant sizes
Deodar Cedar	*Cedrus deodara*	7a to 8b	70/60	E	Gets large so needs lots of space
European Hornbeam	*Carpinus betulus*	6b to 8b	60/40	D	Use as single specimen or in groups for screening

Common Name	Botanical Name	Georgia Hardiness Zones	Mature Size Ht./Width (Ft.)	Evergreen or Deciduous	Comments
Trees (continued)					
Foster Holly	*Ilex* x *attenuate*	6b to 8b	40/20	E	Red fruit persist all winter. Pyramidal growth habit.
Ginkgo	*Ginkgo biloba*	6b to 8b	80/80	D	Male and female trees. Female has smelly fruit so plant a male
Hedge Maple	*Acer campestre*	6b to 8b	45/45	D	Specimen tree or hedge for screeing
Japanese Zelkova	*Zelkova serrata*	6b to 8b	80/50	D	Elm-like foliage. Nice shade tree
Lacebark Elm	*Ulmus parvifolia*	6b to 8b	50/50	D	Tough tree. Several cultivars
Laurel Oak*	*Quercus hemisphaerica*	6b to 8b	60/40	D	Nice shade tree
Needle Palm*	*Rhapidopyllum hystrix*	6b to 8b	12/12	E	Tough plant. Sharp needles near main trunk
Nellie R. Stevens Holly	*Ilex* 'Nellie R. Stevens'	6b to 8b	25/15	E	Great for specimen or screening
Overcup Oak*	*Quercus lyrata*	6b to 8b	50/50	D	GA Gold Medal Winner
Pin Oak*	*Quercus palustris*	6b to 8b	70/40	D	Pyramidal growth habit
Sawtooth Oak	*Quercus acutissima*	6b to 8b	60/70	D	Tough large shade tree
Shumard Oak*	*Quercus shumardii*	6b to 8b	80/60	D	Large pyramidal shade tree
Southern Magnolia*	*Magnolia grandiflora*	6b to 8b	80/80	E	Little Gem cultivar (30ft. x 15ft.) is recommended for small spaces
Trident Maple	*Acer buergerianum*	6b to 8b	30/30	D	GA Gold Medal Winner
Willow Oak*	*Quercus phellos*	6b to 8b	60/40	D	Nice pyramidal form
Windmill Palm	*Trachycarpus fortunei*	6b to 8b	40/10	E	Cold-hardy trunk-forming palm
Yaupon Holly*	*Ilex vomitoria*	7a to 8b	30/20	E	Female produces translucent red fruit
Shrubs					
Adam's Needle*	*Yucca filamentosa*	6b to 8b	6	E	Bold texture, sharp spines, yellow-white spring flowers
American Beautyberry*	*Callicarpa americana*	6b to 8b	8/6	D	Clusters of magenta fruit in summer
Beautybush	*Kolkwitzia amabilis*	6b to 8b	10/15	D	Pink bell-shaped flowers in spring
Bumald Spirea	*Spiraea* x *bumalda*	6b to 8b	5/5	D	Several cultivars, flower colors and plant sizes
Burkwood Viburnum	*Viburnum* x *burkwoodii*	6b to 8b	10/8	E	Cultivar Mohawk is a GA Gold Medal Winner
Butterfly-bush	*Buddleia davidii*	6b to 8b	15/10	D	Many flower colors. Butterfly magnet
Chastetree	*Vitex agnus-castus*	6b to 8b	20/20	D	Purple, lavender or white cultivars

Common Name	Botanical Name	Georgia Hardiness Zones	Mature Size Ht./Width (Ft.)	Evergreen or Deciduous	Comments
Shrubs (continued)					
Chinese Photinia	*Photinia serrulata*	6b to 8b	25/30	E	Large shrub, hedge, or screen plant
Cutleaf Lilac	*Syringa laciniata*	7a to 8b	8/4	D	Pale lilac, fragrant flowers in spring
Dwarf Yaupon Holly	*Ilex vomitoria* 'Nana'	6b to 8b	5/5	E	A common foundation shrub
Firethorn (Pyracantha)	*Pyracantha coccinea*	6b to 8b	20/20	E	Red summer berries
Flowering Quince	*Chaenomeles speciosa*	6b to 8b	10/10	D	Many flower colors
Fortune's Tea-olive	*Osmanthus* x *fortunei*	6b to 8b	30/30	E	More cold-hardy than fragrant tea-olive
Forysythia (Yellow Bells)	*Forsythia x intermedia*	6b to 8b	10/10	D	Yellow spring flowers
Fragrant Tea-olive	*Osmanthus fragrans*	7b to 8b	30/30	E	Fragrant fall flowers
Glossy Abelia	*Abelia grandiflora*	6b to 8b	6/6	E	Many improved cultivars. Rose Creek is a GA Gold Medal Winner
Japanese Aucuba	*Aucuba japonica*	7a to 8b	10/15	E	Bold tropical-like foliage
Japanese Cleyera	*Ternstroemia gymnanthera*	6b to 8b	10/6	E	Accent plant, hedge or screen
Japanese Spirea	*Spiraea japonica*	6b to 8b	Variable	D	Several cultivars, flower colors and plant sizes
Juniper	*Juniper* spp.	6b to 8b	Variable	E	Many forms and sizes
Leatherleaf Viburnum	*Viburnum rhytidophylum*	6b to 7b	10/10	E	Large shrub or screen plant
Prague Viburnum	*Viburnum* x *pragense*	6b to 8b	10/10	E	White spring flowers. Good screen plant
Rose-of-Sharon	*Hibiscus syriacus*	6b to 8b	12/10	D	Many cultivars and flower colors
Southern Waxmyrtle	*Myrica cerifera*	7a to 8b	15/15	E	Tough plant. Dwarf cultivars available
Thunberg Spirea	*Spiraea thunbergii*	6b to 8b	5/5	D	White spring flowers, fine texture
Vanhoutte Spirea	*Spiraea* x *vanhouttei*	6b to 8b	10/12	D	Arching branches. White spring flowers
Winter Jasmine	*Jasminum nudiflorum*	6b to 8b	4/7	E	Yellow flowers in late winter. Often used on banks or to cascade over walls
Vines/Groundcovers					
Carolina Yellow Jessamine*	*Gelsemium sempervirens*	6b to 8b	20	E	Yellow spring flowers
Confederate Jasmine	*Trachelospermum jasminoides*	7a to 8b	20	E	White spring flowers. Madison is a cold-hardy cultivar.
Creeping Juniper	*Juniperus horizonatalis*	6b to 8b	0.5 to 1/6	E	Blue Rug and Bar Harbour are popular cultivars
Creeping Phlox	*Phlox subulata*	6b to 8b	0.5/2	E	Often used on banks
Lady Banks Rose	*Rosa banksia* 'Alba Plena'	6b to 8b	30	D	Yellow double flowers in spring

Common Name	Botanical Name	Georgia Hardiness Zones	Mature Size Ht./Width (Ft.)	Evergreen or Deciduous	Comments
Vines/Groundcovers (continued)					
Mondograss	*Ophiopogon japonicus*	6b to 8b	0.5/0.5	E	Good turfgrass substitute in shade
Shore Juniper	*Juniperus conferta*	6b to 8b	1/6	E	Blue Pacific and Emerald Sea are popular cultivars
Trumpet Honeysuckle*	*Lonicera sempervirens*	6b to 8b	20	E	Many cultivars and flower colors
Trumpetcreeper*	*Campsis radicans*	6b to 8b	40	D	Orange-scarlet spring flowers
Virginia Creeper*	*Parthenocissus quinquefolia*	6b to 8b	50	D	Tough vine for walls, or arbors
Herbaceous Perennials					
Black-eyed Susan*	*Rudbeckia* spp.	6b to 8b	Variable		Many species and cultivars
Blue Anise Sage	*Salvia guaranitica*	7a to 8b	4/4		Deep blue flowers from spring to frost
Butterfly Weed*	*Asclepias tuberosa*	6b to 8b	3/2		Orange spring flowers
Coronation Gold Yarrow	*Achillea x* 'Coronation Gold'	6b to 8b	2/2		A very popular hybrid
Daylily	*Hemerocallis* spp.	6b to 8b	Variable		Hundreds of cultivars, flower forms and flower colors
False Blue Indigo*	*Baptisia australis*	6b to 8b	3/4		Violet-blue lipine-like flowers
Gaura*	*Guara lindheimeri*	6b to 8b	4/3		White and pink-flowering cultivars
Globe Thistle	*Echinops ritro*	6b to 8b	4/3		Blue summer flowers
Golden Rod Hybrids	*Solidago hybrida*	6b to 8b	Variable		Many nice cultivars
Lamb's-Ears	*Stachys byzantina*	6b to 8b	1/1		Woolly foliage. Purple summer flowers
Mexican Sage	*Salvia leucantha*	7b to 8a	4/4		Blue and white flowers all summer
Purple Coneflower*	*Echinacea purpurea*	6b to 8b	3/2		Several cultivars. Purple, rose or white flowers
Red Hot Poker	*Kniphofia uvaria*	6b to 8b	3/3		Red torch-like flowers in late spring
Rosemary	*Rosmarinus officinalis*	6b to 8b	Variable		Light blue flowers. Many cultivars
Russian Sage	*Perovskia atriplicifolia*	6b to 8b	4/4		Light blue late-summer flowers
Sedum (Stonecrop)	*Sedum* spp.	6b to 8b	Variable		Popular roof garden plant. Tough
Speedwell	*Veronica* spp.	6b to 8b	Variable		Many species and cultivars. Pink, purple, blue, or white flowers
Statice	*Limonium latifolium*	6b to 8b	2/2		Prefers partial shade
Texas Sage*	*Salvia greggii*	7a to 8b	3/3		Scarlet flowers all summer
Wormwood	*Artemisia* spp.	6b to 8b	Variable		Silver King and Powis Castle are popular cultivars

Common Name	Botanical Name	Georgia Hardiness Zones	Mature Size Ht./Width (Ft.)	Evergreen or Deciduous	Comments
Annuals					
Annual Periwinkle	*Catharanthus roseus*		1/1		Pink, red, or white flowers
Blanket Flower*	*Gaillardia pulchella*		1 to 2/2		Flowers spring to frost
Dusty Miller	*Senacio cineraria*		1/1		Gray fuzzy foliage. Small daisy-like yellow flowers
Globe Amaranth	*Gomphrena globosa*		1 to 3/1		Likes heat. Several cultivars
Mealycup Sage	*Salvia farinaceae*		½		Purple or lavender flowers
Moss Rose (Purslane)	*Portulaca grandiflora*		0.5/1		Many colors. Single or double flowers
Musk Mallow	*Abelmoschus moschatus*		2 to 3/2		Yellow flowers, 3 inches across. Pacific Light Pink is a popular cultivar
Narrow-leaf Zinnia	*Zinnia angustifolia*		1/1		Tough plant. Flowers yellow, orange, or white
Purple Heart	*Setcreasea purpurea*		1/3		Magenta foliage. Small lavender flowers
Strawflower (Paper Daisy)	*Helichrysum bracteatum*		1 to 3/2		Many colors
Sulphur Cosmos	*Cosmos sulphurens*		1 to 3/2		Yellow, orange or white flowers
Treasure Flower (Gazania)	*Gazania rigens*		1.5/1.5		Daisy-like flowers. Many colors

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