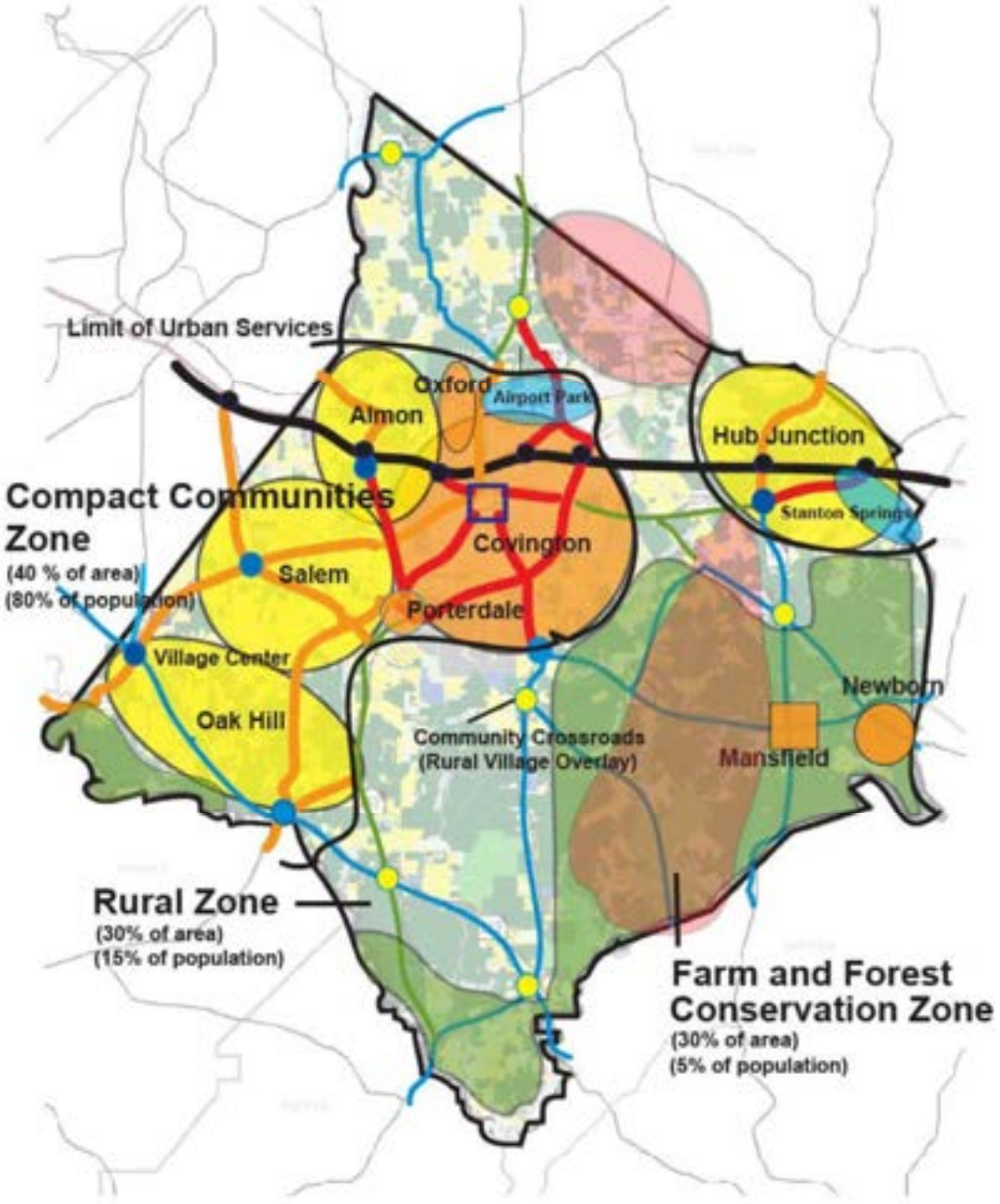
Newton County
Land Conservation Plan
Blueprints for Successful Communities
Spring 2009



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EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

Newton County has embarked on an innovative long-term planning process initiated by the Leadership Collaborative and facilitated through The Center for Community Preservation and Planning (The Center). This Land Conservation Plan is an integral part of this bigger picture process and has been facilitated by the Georgia Conservancy's *Blueprints for Successful Communities* initiative.

The Center for Community Preservation and Planning (The Center) was established in Newton County in 2001 to act as a clearinghouse for relevant information, a neutral gathering place for citizens of Newton County for discourse and mediation on growth issues throughout the County, and a planning "think and do tank" which contracts with various County entities to do specific tasks as needed.

The **Leadership Collaborative,** which was initiated by The Center in 2004, brings together elected officials, board members and key staff from Newton County, the City of Covington, the Newton County Board of Education and the Newton County Water and Sewerage Authority to address common issues of both immediate and long range concern.

1.1 THE PLANNING PROCESS

The *Blueprints* process undertaken for this project was specifically designed to provide research, support and recommendations for development of a county-wide Conservation Plan. The planning process, directed by the Georgia Conservancy's *Blueprints for Successful Communities* and in partnership with The Center, relied on stakeholder working group of over 50 participants, including members of the Leadership Collaborative and individuals from the community with relevant interests and expertise. The Georgia Tech Graduate City and Regional Planning Studio has supported this work which has been organized in four main phases, as listed below.

Phase 1: Identification of conservation assets and challenges in the County, a survey of best practices and tools from around the country, and an audit of Newton County's existing development practices and land use tools.
Phase 2: Development of conservation issues, goals and objectives.
Phase 3: Presentation of GIS based maps of relevant County resources and land use issues and discussion and evaluation of possible solutions to conservation issues.
Phase 4: Presentation of specific recommended conservation solutions and an organized evaluation and ranking of these solutions.

1.1.1 A Strategic Planning Model

In addition to the conventional planning and regulatory tools of zoning, the Comprehensive Development Plan and the Comprehensive Transportation Plan, the Leadership Collaborative has developed three interrelated strategies to guide Newton County towards an even more long-term sustainable future: Comprehensive Development, Economic Development, and Land Conservation (Refer to Figure 1.1a). These strategies formed the foundation from which the *Blueprints* planning process proceeded.

Comprehensive Development: Principles and practices to guide growth, land use and development towards a projected population of 400,000 by 2050, focusing on compact communities with urban infrastructure and public services on less than half of the County's area.

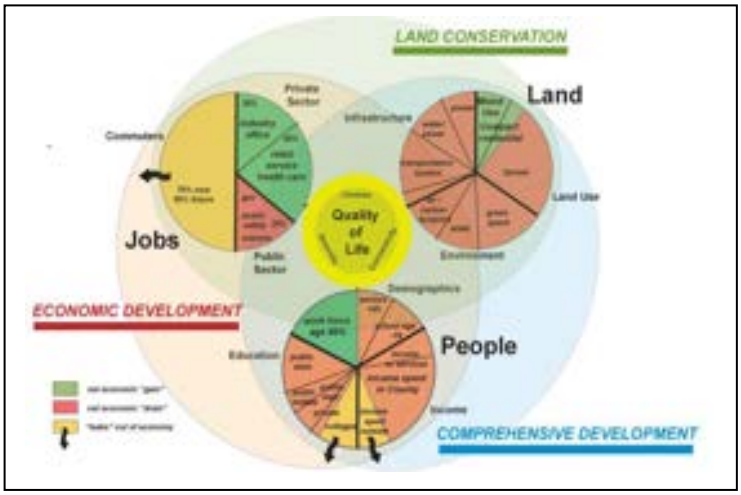


Figure 1.1a: Interrelated Strategies for a Sustainable Future

Economic Development: Management of jobs and people to create 100,000 jobs by 2050, with an emphasis on reducing the number of commuting jobs and growing both traditional and non-traditional jobs (including the revitalizatio
create a balanced, diverse, and sustainabl

Land Conservation: A multifaceted strategy to conserve sensitive environmental land and water resources, to guide new development in environmentally sustainable ways and to promote economically productive uses in rural and conservation areas.

1.1.2 The Faces of Conservation

Within this report, the Land Conservation Plan recommendations have been analyzed under the following categories which are explained in subsequent report sections:

Green Environment: This topic area of the Plan includes elements of environmental protection at both public and private levels and so includes both direct public projects and actions and a regulatory structure addressing environmental measures on privately owned properties. This section of the report addresses the following areas:

1. Land Resources: *Conservation zoning, development rights, and easements*
2. Water Resources: *Stream buffers, floodplain and wetlands, ground water recharge, water supply*
3. Greenway Systems: *Natural corridors, infrastructure corridors, alternative transportation modes, natural habitats*
4. Climate and Energy: *Clean energy, carbon sequestration, forest protection, transportation solutions*

Green Development: This topic area includes measures promoting sustainable development, including both public properties and projects as well as private properties and projects, to achieve long-term environmental and sustainable goals for the County. This section addresses the following areas:

1. Infrastructure and Urban Services: *Urban service limits, sewage treatment and septic tank solutions*
2. Compact Communities: *Compact communities, conservation subdivisions, mixed use, public spaces*
3. Recreation, Historic, Cultural, and Scenic Resources: *scenic corridors, historic rural landscapes and buildings*

Green Economy: This topic area assumes that many "green" areas of the County can provide opportunities for economic development while adhering to long-term "green" goals. Many of these opportunities can be obtained from public policies, incentives, and land use controls, providing a "factory floor" for economic uses in "green" areas. This section of the report addresses the following areas:

1. Agricultural Development: *Farmland preservation and incentives*
2. Green Development: *Eco- tourism and agri-tourism, green enterprise zones*
3. Green Industry: *Other opportunities to foster green or clean technology as local industry*

Green Leadership: This topic area addresses public and private conservation leadership and mechanisms for implementation of the recommendations included in this plan. This plan section addresses the following areas:

1. Funding and Implementation: *Conservation funding and implementation, land trust*
2. Oversight and Coordination: *Intergovernmental cooperation, conservation leadership council*

Green Building: Of the topic areas discussed in the planning process, Green Building, which addresses sustainable practices of design and construction of sites and buildings, is considered important enough to warrant a future separate study and thus was not addressed in this *Blueprints* report. Topics that may be addressed in a future study include:

1. Air Quality: *Construction methods, ozone protection, pedestrian infrastructure, urban heat reduction, indoor air quality*
2. Greenhouse Gas Emissions/Energy Efficiency: *Insulation, air leakage, space heating/cooling and ducts, water heating, light fixtures and appliances, daylighting/orientation, green energy*
3. Water Quality: *Construction activity, stormwater runoff and retention, landscaping, rain water, grey water*
4. Solid waste: *Construction waste, materials reuse and recycling, durable construction*
5. Ecology: *Site and street tree protection, design reflectivity, light pollution, impervious surfaces, tree cover*

1.2 THE RESOUCES, THREATS, AND OPPORTUNITIES

Newton County is unique among exurban counties in the Atlanta Metropolitan Region, with its five major "clean" rivers, and the reasonably clear divide between the recently "sprawled " western half of the County and the reasonably "green" eastern half. While much of the undeveloped portions of the County are made up of mostly large parcels vulnerable to development pressures, the County is laced with a network of environmentally sensitive areas such as protected flood plains, wetlands, designated water supply watersheds, soils, and slopes unsuitable for development (refer to Figures 7.1a and 7.1b in the Appendix). The County is committed to preserving this "green" legacy and historic rural landscape while promoting growth in compact communities on the west side and along I-20 that have a full range of existing urban services. The County's intent is to limit the provision of urban services to these areas only as a method of encouraging future development and redevelopment here and leaving the eastside of the County less intensely developed. This approach creates an unparralled oppurtunty to maintain a fully sustainable community and accommodate growth at the same time.

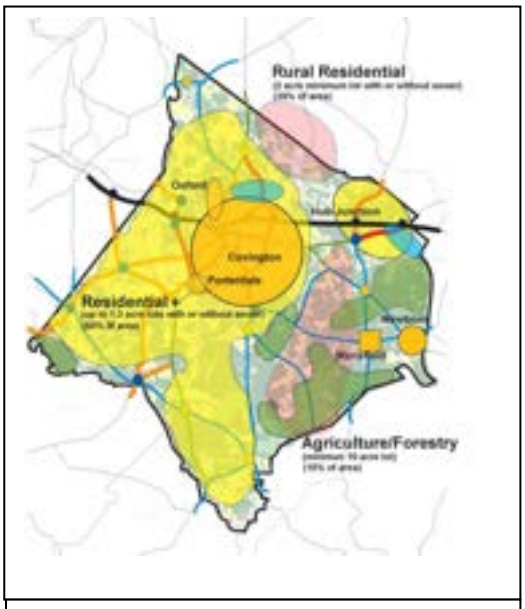
Nationwide, a half century of sprawling land use patterns have consumed millions of acres of the natural environment converting them to low-density, auto-dependent development. Locally, the rapid growth of the Atlanta metropolitan area has spilled suburban sprawl into Newton County.

1.3 THE CONSERVATION PLANNING FRAMEWORK

It was determined that the conservation planning process would look to a "build out" condition, corresponding to the year 2050, when the County is projected to reach a population of 400,000 (four times its current size). This build out scenario formed the foundation of assumptions around which the *Blueprints* process recommendations were framed. The resultant Newton County Conservation Plan, suggests that up to 50% of the County would be comprised of compact communities with urban services while the other 50% would be comprised of "green" land uses, such as:

- Public conservation and recreation land
- Privately held conservation areas [conservation easements, transfer of development rights (TDRs), etc.]
- Local agriculture and forestry
- Watershed protection areas (both streams and reservoirs)
- Very low density (non-sewered) development, such as compact rural villages and large parcel rural landscapes

This existing land use map shows the current limit of Atlanta's suburban "sprawl" and the relatively green character of the eastern half of the County



This map diagrams the future land use pattern recommended in the 2008 Comprehensive Development Plan, with much of the County in low density "rural residential "areas

The Conservation Plan further divides the "green" half of the County into a Rural Zone, made up of large lot residential uses, rural "villages", and some agricultural parcels, and a Conservation Zone, made up of protected water-supply watersheds, and large agriculture and forestry parcels. (Refer to figures 1.3a and 1.3b) The use of these Rural Zone and Conservation Zone designations was agreed upon by the stakeholder group as the appropriate conservation vision for the County. Further, the stakeholder group established four development principles which are supported by these land designations: protect clean water; create communities; create corridors; and coordinate infrastructure, schools and other public investments.

Land Conservation Plan Design Principles

- **Protect Clean Water**
  Establish green areas in 50% of the County that
  - protect water resources and river corridors,
  - support agriculture, and
  - allow for very low density development
- **Create Communities**
  Concentrate higher density development in 50% of the County using existing infrastructure and services to:
  - Create compact communities, adequate services and open space
  - Create multi-use walkable town centers in each community
- **Create Corridors**
  Concentrate growth along corridors that:
  - Preserve our scenic and historic resources
  - Promote quality development at appropriate densities
  - Create the primary components of a transportation grid
- **Coordinate Infrastructure, Schools, And Other Public Investments**
  - Coordinate planning and funding of infrastructure, schools, transportation and other public investments

Figure 1.3a: The 5 compact communities and primary corridors

Land Conservation Plan Zones

- **Compact Communities Zone**
  - 5 compact communities with urban services including gravity based public sewer
- **Rural Zone**
  - Rural villages with school site and approved cluster septic systems
- **Conservation Zone**
  - Water supply watersheds
  - Productive agriculture and forestry parcels

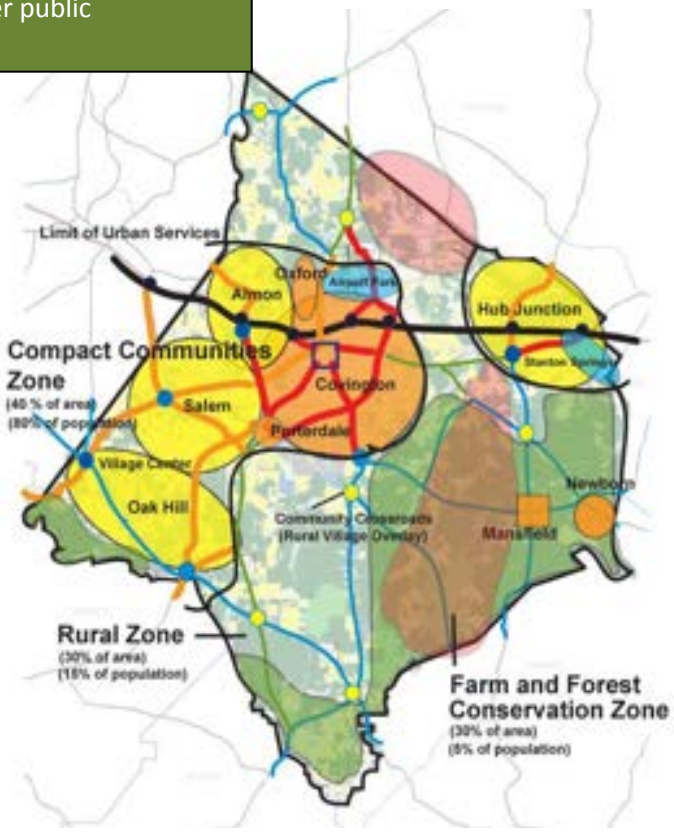


Figure 1.3b: Proposed 2050 Build Out Future Land Use

GREEN ENVIRONMENT

2.0 GREEN ENVIRONMENT

Environmental protection is an important issue for Newton County and its municipalities. The County's communities are seeking ways to protect environmentally sensitive areas through local ordinances, acquisition, or designation of greenspace, which may include provisions for active and passive recreation components. Environmentally sensitive areas broadly include wetlands, river and stream corridors, floodplains, unique geologic formations, pristine farmland and agricultural areas, and forestlands.

Georgia's local governments have the primary responsibility for guiding and regulating environmental protection and land use development within their jurisdictions. For Newton County, achieving the highest level of environmental preservation and mitigation depends not as much on the mandates of the local government as on the priorities and actions of the individual community members, industries, nonprofit organizations, landowners, and countless others, often working together voluntarily, to protect the environment while achieving other economic and social objectives.

Land use development and environmental protection are intricately related. For example, removal of trees or other vegetative cover for development can cause erosion with stormwater runoff depositing sediment into water resources, resulting in costly environmental degradation. Loss of tree cover also impacts air quality as trees help to filter harmful air pollutants and sequester carbon dioxide. Unplanned development tends to sprawl out across the landscape, leapfrogging undeveloped land, producing a scattered built environment that depletes the community's natural resources, compromising agricultural viability and exerting tremendous financial pressure on the community to provide public services to widely dispersed pockets of development. Such a low-density development pattern leads to more vehicle miles traveled (VMT) per day, adds pollutants into the air and diminishes the high quality of life enjoyed by the community. Furthermore, the increase in impervious surfaces accompanying development, such as rooftops, parking lots and roads, exacerbates polluted stormwater runoff problems. The polluted water flows directly into streams, rivers, and reservoirs without any kind of treatment, requiring costly treatment before the water is fit for consumption.

As one of the fastest growing states in the country, Georgia has experienced tremendous development in recent years, especially in the metro Atlanta area. Unplanned and poor planning in the region has resulted in suburban consumption of forestlands, natural resources, and agricultural areas over the past several decades. Local governments must now play a key role in planning and managing land use, development, and environmental conservation practices. Local governments can use a variety of land conservation tools to permanently protect property from future development and prevent further environmental degradation. In this way, land conservation policies using methods such as farmland protection and wetlands conservation in concert with other tools such as riparian buffers, tree ordinances and forest protection, are well-suited to achieve a sustainable and green future for the community. Such methods do not preclude development in a community, but rather direct it to more appropriate areas while protecting sensitive resources.

2.1 LAND RESOURCES

Nationwide, a half century of sprawling land use patterns have consumed millions of acres of the natural environment converting them to low-density, auto-dependent development. Locally, the rapid growth

of the Atlanta metropolitan area has spilled suburban sprawl into Newton County. This type and quantity of development can change the landscape forever by converting valuable natural resources to built resources at the expense of the local environment.

Newton County has begun to lay the foundation to make land conservation feasible despite the County's expected growth. The proposed 2050 build out scenario proposed in this report identifies areas within the County appropriate for a majority of this development (refer to Figure 1.3b). A study has shown that these areas, referred to as "development nodes," can accommodate 80% of Newton County's anticipated growth by 2050 of 400,000 persons at an average gross density of 2 – 3 housing units per acre, still well within small town norms (Refer to Figure 7.1c in the appendix). If sewer and other urban services were limited to these development nodes, as suggested by this report, the remaining land outside of these areas could be more easily protected from suburbanization and development.

Preserving undisturbed land at a reasonable expense to the community is a major challenge to conservation efforts. On the most basic level, the easiest way to ensure a parcel's permanent protection is for the local government to purchase the land and place conservation easements or deed restrictions on it. While this method is guaranteed and effective, it is very costly. A less expensive alternative is to utilize land use regulations, principally zoning, to restrict development, but this method also has some major limitations when used alone. Because "[z]oning is just two public hearings and one vote away from changing," it may not be a permanent conservation solution.[1]

A related challenge is conserving land resources without forcing one group of landowners to bear a disproportionate cost of conservation. Owners of property designated for conservation often oppose land use plans or regulations that they believe will rob them of the opportunity to capitalize on the development potential of their land. At the same time, residents in areas slated for increased development under a land use or conservation plan may also feel that they are being forced to shoulder more than their fair share of the consequences of conservation. Reconciling these opposing viewpoints poses a significant challenge for any community.

2.1.1 Existing Tools and Policies

Newton County's "Community Agenda," a section of the recently adopted County Comprehensive Development Plan, recognizes the importance of land conservation and identifies several strategies to accomplish the County's conservation goals, such as the adoption of a Purchase of Development Rights (PDR) program, the study of a Transferable Development Rights (TDR) program and acquisition of conservation easements. At this time, however, there is no public policy mechanism in place for the County to purchase development rights or to acquire conservation easements. Also, while the County has prepared a draft TDR ordinance, it has been tabled without further action, as of the writing of this report.

While Newton County possesses a beautiful, rural, and scenic landscape, its continued preservation is not guaranteed. The existing land resources in Newton County are shown in Figure 2.1a. On this map,

[1] Hanly-Forde, J. G. (2006). *"Transfer of Development Rights Programs: Using the Market for Compensation and Preservation."* Retrieved 4 21, 2009, from http://government.cce.cornell.edu/doc/html/Transfer%20of%20Development%20Rights%20Programs.htm

land that appears in white has already been developed. The areas of Newton County identified as appropriate for continued development in the 2050 build-out scenario (Figure 1.3b), termed development nodes, are outlined in black. Land outside of the development nodes has been preliminarily identified as suitable for conservation, but note how many parcels in this area are vulnerable to redevelopment if no further action is taken. Parcels in dark green and labeled "Potential Redevelopment" include parcels of 10 acres or more with one primary structure. Vacant Parcels are defined as parcels with no primary structures.

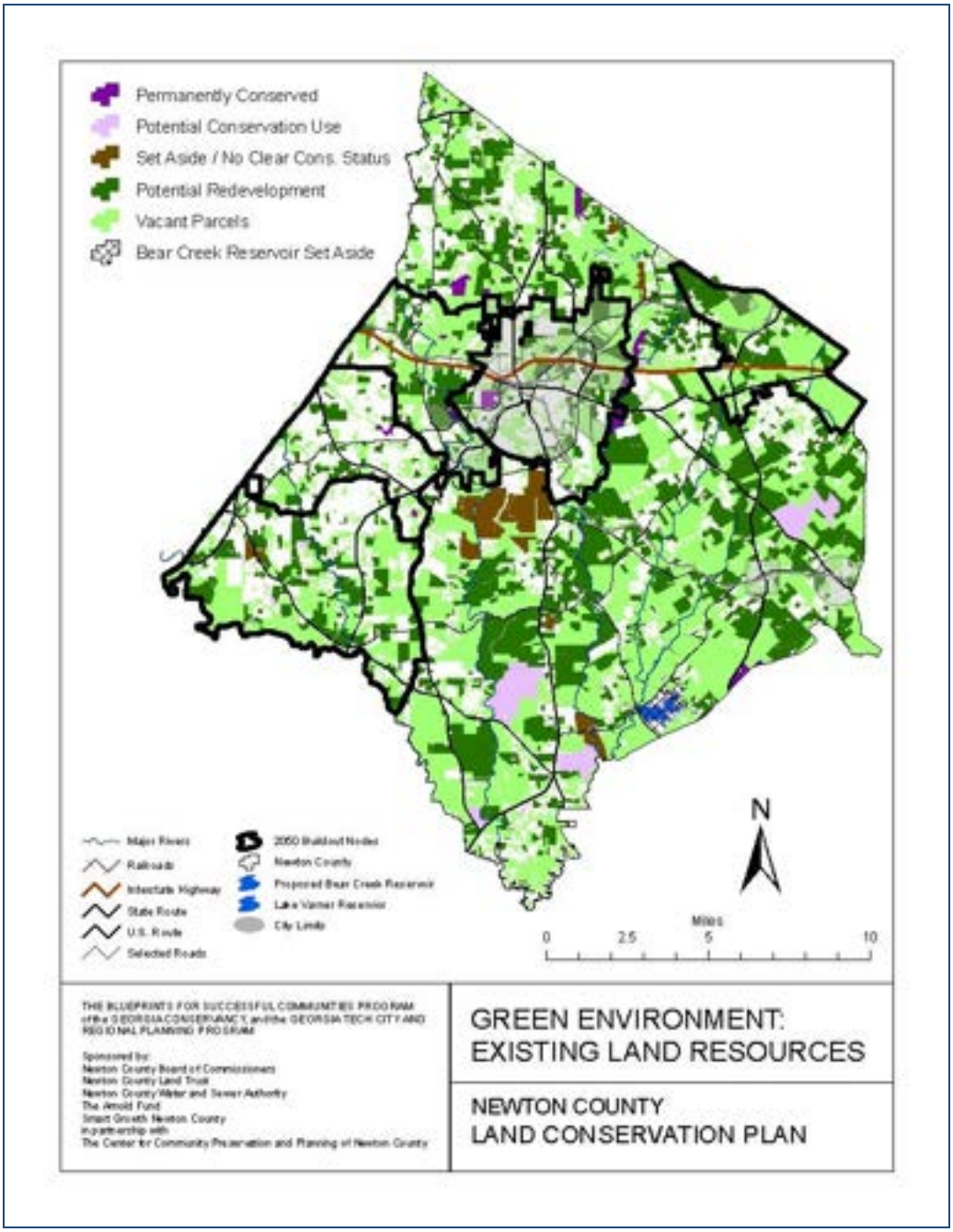


Figure 2.1a: Newton County Existing Land Resources

2.1.1 Land Resource Objectives & Solutions

The primary objective of this section is to propose solutions, developed through the *Blueprints* process, that will ***protect Newton County's land resources and preserve sensitive natural areas throughout the County.*** To achieve this objective in light of the challenges discussed previously, the County should consider pursuing several legislative and policy changes.

Proposed Solutions

Solution 1: Support continued donation of conservation easements and provide for purchase of selected easements.

A conservation easement provides permanent protection from development and ensures that land remains as designated in the easement (such as open space or farmland) for use by future generations. Encouraging landowners to donate easements to qualified conservation organizations, such as the Newton County Land Trust Alliance, would help preserve some of the County's land resources permanently at little or no public cost. Additionally, because the donation is voluntary, it is a non-controversial method of conservation. For these reasons, Newton County should actively promote the donation of conservation easements. Since there are several federal and state tax advantages for landowners who donate their land or their land's development rights through conservation easements, the County should pursue educational campaigns that raise awareness of these programs and their incentives.

The County may consider going beyond relying on the donation of conservation easements for high priority conservation land and develop a County-funded mechanism for the purchase of development rights on those lands. A PDR works in much the same way as a conservation easement, except that qualified conservation trust or government entity buys the development rights. The PDR is a lower cost alternative to buying land outright and is typically uncontroversial since it is voluntary. However, because of the expense associated with purchasing development rights, PDR should be used sparingly and applied only to high priority situations. For example, PDR acquisition may be desirable in order to "fill the gaps" between other lands which are already conserved or in cases where a particular parcel is highly desirable because of specific attributes such as endangered species habitat or unique geological features.

Solution 2: Enact a TDR ordinance with: 1. Sending and receiving areas based on the limit of urban service; and 2. Provision of TDR bonus credits for riparian buffers and land in the Conservation Zone.

Another method of encouraging private landowners to conserve land is a TDR program. As discussed previously, balancing the equities and costs of land use controls with conservation goals can be a significant challenge. Effective TDR programs establish a method to protect natural resources, while allowing property owners (sending area) to recover lost value by selling the development rights to other lands more suitable for development (receiving area).

Enactment of a TDR program can be very beneficial to a jurisdiction seeking to enact strong conservation measures. First, when restrictive land use controls are passed in the sending areas, they often lead to a backlash from property owners, sometimes resulting in lawsuits from landowners alleging constitutional takings. Transfer of development rights programs help avoid valid takings claims by providing a

compensation framework that is fair, effective and efficient. Additionally, a well-constructed TDR program can aid landowners who wish to conserve but feel development is the only choice to profit from the land. A successful TDR program can enable a county to conserve thousands of acres. For example, Montgomery County, Maryland's TDR program alone has protected 51,489 acres as of 2007.[2]

Although Newton County studied TDR programs and prepared a draft ordinance in 2008, the ordinance was deferred for further study prior to being brought to a vote. At least one stakeholder in the *Blueprints* process commented that the ordinance was not sufficiently tailored to address the conservation concerns of Newton County, while another believed that the ordinance was too complicated to be easily understood. While these issues should be addressed, the concept of TDR should not be abandoned. Please refer to Special Topics: Transferable Development Rights, in the appendix of this report, for a more detailed discussion of recommended changes to the County's proposed TDR program.

2.2 WATER RESOURCES

A water resource is defined as any area of the landscape or subterranean areas that act as channels, reservoirs, or vessels for water and/or aquatic habitats and are important for ecosystem services and ultimately the community's drinking water needs. Planners and policy makers must incorporate their knowledge of water resources into their work to protect the wide range of elements that comprise this resource.

Every local government in Georgia that has experienced growth, or expects a significant amount of growth, must address issues of water quality through resource protection. Local officials now have a number of tools at their disposal to offset the impacts of development. Among the most cost-effective and widely used of these methods is the riparian buffer ordinance. Riparian buffers are mandated by state law and in recent years have been the subject of much debate.

The following paragraphs discuss the tools most commonly used by planners and policy makers to protect community water resources. Most of the tools that are commonly used to protect water resources are already extant in Newton County. Refer to Figure 7.1d, Existing Newton County Water Resources, for all County water resources and their respective conservation protections.

2.2.1 Existing Tools and Policies

Newton County currently maintains 100-foot riparian buffers around all perennial streams within the County and a 35-foot riparian buffer around all intermittent streams within the County. Riparian buffers primarily serve to protect stream and river resources from degradation by poorly planned and improper development practices. A secondary function of riparian buffers, if properly planned and managed, is that they can also serve as corridors for effectively connecting wildlife habitats and areas for community recreation and greenspace programs. A riparian buffer ordinance is essentially a land-use planning tool that directs new development away from streams and rivers. It is generally a more cost-effective method to control pollution than trying to retrofit engineering solutions once an area has developed.

[2] Montgomery County Farmland Preservation Annual Report, available at http://www.montgomerycountymd.gov/content/ded/agservices/pdffiles/fy2007farmlandpreservationreport.pdf

Federal environmental protection laws such as the Clean Water Act and the Endangered Species Act can impose significant costs on local governments that have not proactively taken adequate steps to protect aquatic resources.

Overlay zoning is the basic protection method local governments utilize to regulate water resources to comply with broader state and federal laws. Water resources protection overlay districts usually aim to protect specific water resources, such as specific rivers, lakes or other wetlands. They may also protect aquifers and recharge areas of existing and potential groundwater supplies as they relate to sources of public water supplies. Newton County currently maintains water resources overlay districts for the following water resources: 1) Wetlands Protection Overlay District for all wetlands within Newton County; 2) Groundwater Recharge Area Protection Overlay District, which restricts some types of development in areas that may function as significant groundwater recharge areas; 3) River Corridor Protection Overlay District which regulates permitted uses along the Alcovy, South and Yellow Rivers; and 4) Large and Small Water Supply Watershed Overlay Districts, which protects small and large water supply watersheds.

Newton County currently protects property from flood damage through its Flood Damage Prevention Ordinance. The ordinance applies to all areas within the 100-year floodplain. Floodplains are the flat bottomlands adjacent to river channels. They are important to planners because they are prone to flooding and thereby pose a risk to development within and near the floodplain area. Floodplains accommodate floodwaters in excess of the channel capacity and store floodwater; therefore, easing peak flows downstream. Floodplain management involves the designation of flood-prone areas and managing the land uses in those areas. It also aims to minimize modifications to streams, reduce flood hazards, and protect water quality. As such, floodplain management works as a subset to the larger consideration of surface water and stormwater management. Floodplain regulations and development restrictions can greatly reduce future flooding impacts, preserve greenspace and habitat, and protect their function in safely conveying floodwaters and protecting water quality.

2.2.2 Water Resources Objectives & Solutions

The primary objective of this section is to ***maintain the current high level of water quality and to protect existing and future water supply across all water resources throughout Newton County.*** To achieve this objective, existing County ordinances need to be strengthened and new regulations should be introduced. These modifications will fortify the County's commitment to conservation and help to meet existing and future water supply needs within Newton County.

Proposed Solutions

Solution 3: Maintain all existing riparian buffers; increase riparian buffers for intermittent streams from 35-foot to 50-foot and allow for the construction of a multiuse trail within the buffer areas of perennial streams and river corridors.

Setbacks from riverbanks and other shore areas are the most common standards to prevent encroachment by development and agricultural uses. The appropriate width of these buffer strips depends on objectives that can vary widely. In Georgia, stream corridor protection is mandated by several laws: the Erosion and Sedimentation Act, the Georgia Planning Act, the Mountain and River Corridor Protection Act, and the Metropolitan River Protection Act (for metro-Atlanta counties contiguous to the Chattahoochee River corridor). All of these laws require that affected local

governments develop plans and ordinances consistent with these laws and with any minimum standards issued by the state Environmental Protection Division. Because of this abundance of requirements, some local governments find themselves with a patchwork of protected stream corridors of varying width and extent, a situation that can be confusing and aggravating to property owners and officials alike. Counties and municipalities intending to develop effective, comprehensive riparian buffer ordinances that provide sound protection for water quality and wildlife habitat will also find that the minimum standards are insufficient. However, local governments have the authority to develop alternative, more effective riparian buffer ordinances. Therefore, it is recommended that Newton County take a proactive step towards protecting stream and river resources and maintain 100-foot buffers around all perennial streams within the County as well as increase existing 35-foot buffers for all intermittent streams to 50-foot buffers.

In order to establish a contiguous greenway system in Newton County that also provides for passive recreation and alternative transportation uses, it is further recommended that Newton County modify its current Riparian Buffer and River Corridor Protection Ordinances to allow for the construction of multiuse paths (up to a width of 12 feet) within the buffer areas of perennial streams and river corridors where public acquisition of properties or easements is in effect, often called greenways.

Greenways are linear greenspace networks along a natural water corridor, along a designated scenic route or within an easement established for transportation and utility infrastructure. Greenways can serve as important water resource protection tools for the community when they are located adjacent to streams. Greenways can also serve as filter strips for surface water runoff, trapping harmful pollutants before they enter streams, rivers, and lakes.

Greenways should be linked to other trails, conservation areas, parks, schools, wildlife centers, town centers and to an on-road network of bicycle facilities (designated lanes and signed shoulder width facilities) and sidewalks, where available. Greenways should follow the natural contours of the land and take advantage of native landscape features, such as water resources, groupings of vegetation, scenic views, and historic or key attributes of the built environment.

Greenways are addressed in further detail in section 3.0, Green Development. The components of a comprehensive Greenway System are presented in the appendix under Special Topics: Comprehensive Greenway System.

Solution 4: Establish a county-wide mitigation bank for wetlands and streams.

According to the U.S. Environmental Protection Agency (EPA), a mitigation bank is a wetland, stream, or other aquatic resource area that has been restored, established, enhanced, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 of the Clean Water Act or a similar state or local wetland regulation. A mitigation bank may be created when a government agency (such as Newton County), corporation, nonprofit organization, or other entity undertakes these activities under a formal agreement with a regulatory agency (such as the Georgia Environmental Protection Division). Mitigation banks have four distinct components:

1) The bank site: the physical acreage restored, established, enhanced, or preserved;

2) The bank instrument: the formal agreement between the bank owners and regulators establishing liability, performance standards, management and monitoring requirements, and the terms of bank credit approval;
3) The Interagency Review Team (IRT): the interagency team that provides regulatory review, approval, and oversight of the bank; and
4) The service area: the geographic area in which permitted impacts can be compensated for at a given bank.

The value of a bank is defined in "compensatory mitigation credits." The bank identifies the number of credits available for sale and requires the use of ecological assessment techniques to certify that those credits provide the required ecological functions. Although most mitigation banks are designed to compensate only for impacts to various wetland types, some banks have been developed to compensate specifically for impacts to streams as well. Mitigation banks are a third-party compensatory strategy in which the responsibility for compensatory mitigation implementation and success is assumed by a party other than the permittee. This transfer of liability has been a very attractive feature for Section 404 permit-holders, who would otherwise be responsible for the design, construction, monitoring, ecological success, and long-term protection of the site.

2.3 CLIMATE AND ENERGY

Climate change has become an increasing global concern. The anticipated alterations in precipitation and global temperatures have wide-reaching effects, including impacts to local public health, agriculture, and water availability, among a host of unpredictable regional and global outcomes. A variety of approaches can be applied towards reducing the impact individuals have on climate change. From a conservation plan framework, many of these strategies involve reducing energy demand, utilizing alternative energy sources and protecting existing forest canopy while encouraging growth of new canopy. In addition to climate change concerns, many of these strategies can reduce the impact of urban heat islands and the formation of harmful air pollution. These policies should be paired with transportation and land use strategies to reduce vehicle miles traveled, commute times, travel distances and traffic delay to maximize the net benefit to air quality and to reduce carbon dioxide emissions. Lowering energy demand reduces emissions from coal power plants, a large contributor to carbon dioxide in the atmosphere. Building design improvements and energy efficiency guidelines should be included in future phases or updates of the County's Conservation Plan.

Adding alternative power sources into Newton County's power grid would help reduce the per capita emission of carbon dioxide by its citizens. This addition can be provided through a variety of carbon neutral or climate change reducing sources, such as through biomass burning or through the development of a landfill methane capture system.

Protecting tree cover can serve the County in a variety of ways. First, tree cover helps to reduce the energy demand for cooling of buildings they shade. Reduced energy demand translates directly into lowered carbon emissions from power generation. Second, tree cover helps to sequester carbon from the atmosphere. As trees grow, they take in carbon dioxide from the air to build sugars within their bark, root and leaf systems. Third, trees can help improve water quality by shading the water to reduce thermal water pollution. They also slow storm water runoff and stabilize slopes near the banks of

streams and rivers. Finally, enhanced tree cover helps improve regional air quality by reducing urban temperatures and intercepting air pollutants.

2.3.1 Existing Tools and Policies

Newton County currently has no regulations geared towards reducing its carbon footprint, conserving energy or improving air quality, aside from regionally mandated programs. Some legislation does exist (Section 430 of the Newton County Development Regulations) to preserve trees, but this legislation is mostly oriented towards the land disturbance process. Based on current development standards, it is possible for a developer to clear-cut a tract of land of all forest cover and replace only three 1.5" caliper trees on lots of up to one acre in size. For parcels larger than one acre, seven trees must be replaced. Overall, this development practice has lead to a large decrease in total forest canopy cover in Newton County since the predominant development patterns have produced mostly small acreage single-family housing.

2.3.2 Climate and Energy Objectives & Solutions

The primary objective of this section is to ***reduce Newton County's impact on the environment through a reduction in energy consumption and carbon footprint and to improve air quality.*** In order to achieve this objective, existing regulations need to be strengthened and new protection ordinances need to be introduced at the county level. These modifications will strengthen the County's commitment to conservation as well as assist in the reduction of the County's carbon footprint.

Proposed Solutions

Solution 5: Strengthen existing zoning ordinance Section 430 regulations with provisions to prohibit clear-cutting and to specify locations for and species of trees to be planted.

Clear-cutting parcels for development is detrimental to Newton County's goals of improved air quality and a reduced carbon footprint. Section 430 of the Newton County Development Regulations should be amended to discourage or prohibit clear-cutting, and to provide for more trees preserved per acre of developed land.

In addition, regulations should be adopted to ensure replaced trees are of like species, with similar life spans and maximized carbon sequestering potential. Trees should be spatially arranged to maximize future shading potential on cooled buildings and impervious surface areas, such as parking lots.

Solution 6: Develop a tree canopy protection ordinance by adding forest canopy provisions to a proposed General Conservation Overlay Ordinance with:

1) ***Replacement objective to achieve no net tree loss from a 2008 benchmark, which was 48% in forest cover***
2) ***Provision to allow trading of tree replacement credits***
3) ***Exemption for economic forestry operations***

As development pressures have increased in recent years, Newton County has lost many acres of forested land, refer to Figure 7.1e and 7.1f. Overall, tree coverage from 1991 to 2005 was reduced by

around 11,000 acres (or approximately 12%). There has been some regrowth, however, during this period in evergreen and forested wetlands. The evergreen regrowth is most likely attributed to the cycles of growth and harvesting of timber.

Forest canopy protection regulations should be included in the proposed General Conservation Overlay Ordinance (see Green Development Section). Within this overlay, the objective for forest canopy replacement would be set at 100%. The goal amount of tree canopy observed in Newton County should be set at 48% (a 2008 benchmark).

Provisions should allow tree replacement credits to be traded between landowners to permit more intensive development in some areas so long as the trees are replaced within Newton County. Additionally, allotments should be made for clear-cutting of timber farms provided they are replanted as part of the production process. These measures will contribute to no net loss of tree cover in Newton County.

Similar guidelines for species and placement locations should be applied within the General Conservation Overlay Ordinance as are present within the revised Section 430 regulations. This measure will maximize energy efficiency and carbon sequestration potential within the overlay district.

Solution 7: Initiate feasibility study for landfill methane production.

Newton County should pursue the generation of carbon neutral/reducing energy sources. The methane capture and burning capacity of the Newton County landfill should be assessed in light of the projected population growth. Similar programs have been initiated throughout the U.S. In the metro Atlanta area, DeKalb County has developed a profitable methane landfill recapture program. In 2006, Georgia Power and DeKalb County partnered together to generate electricity from the Seminole Road Landfill. DeKalb County is paid directly by the power utility for the energy it develops. This program carried a start up fee of $5 million that DeKalb County projects will be returned in full by 2011. In the first year of the program, Georgia Power created $819,000 worth of energy from the landfill and offset 0.14 million metric tons of CO2, effectively reducing DeKalb County's carbon footprint.

In addition to the strategies in Solutions 5-7, a separate study leading to recommendations and solutions for energy conservation measures for building and site regulations should be undertaken which would include: a) A review of the County's building and site regulations to assess current practices. b) Where applicable, revisions to enhance energy efficiency, improve site specific characteristics that have an impact on climate change and reduce impervious surface area.

These measures are anticipated to be an integral of Phase II of the Conservation Plan. One important component of such a plan would minimize impervious surface. Impervious surface increases stormwater runoff because water cannot soak into the ground. In addition, higher percentages of impervious surface increase the urban heat island effect, impacting regional air quality and energy usage. Finally, the increased cooling energy needs required due to the heat island effect have an impact on climate and air quality in the region. To that end, a comprehensive review of the County's impervious surface allowances should be undertaken as a part of the building regulation review. Refer to Figure 7.1g for changes in impervious surface in the County between 1991 and 2005.

GREEN DEVELOPMENT

3.0 GREEN DEVELOPMENT

Urban sprawl is occurring throughout the United States as cities consume land faster than their populations are growing, pushing the presence of urban and suburban living into rural areas. Often sprawl is an unforeseen effect that arises from unplanned growth and rapid change to an area. Undesirable land use patterns that contribute to sprawl include: commercial strip development, low-density residential developments, and scattered, isolated developments. Rural areas suffer the brunt of the effects of sprawl. As jobs, people, and infrastructure are scattered throughout a region, it begins to infringe on small towns and farms.

In addition to the lost rural land, sprawl also puts pressure on local governments to expand infrastructure to serve the new development costing government and taxpayers significantly in design, construction, and maintenance. The responsibility of promoting quality growth by both anticipating and planning for continued growth is primarily within the jurisdiction of local governments and community members. Water and sewer infrastructure and capacity are major determinants of when and where growth occurs.

Communities around the country have implemented a variety of growth management strategies to combat these problems. These tools range from promotion of infill and redevelopment, limits to building permits, predicting future land use patterns and impacts, controlling density, transferring of development rights, rural/suburban road designation, and flexible zoning, among others. On the edge of the Atlanta's metro area, Newton County must manage its projected population growth while assuring the quality of life its residents currently enjoy.

The main objective of this section of the report is to support the creation of compact communities with accessible open spaces. The key development issues the County faces in pursuing this goal include:

a) The need for high growth in compact communities
b) Providing open space in the developed areas
c) Controlling development in conservation areas
d) The problem and cost of urban services (in particular, both public sewer and septic systems).

Newton County's challenge is to determine to what extent development will be confined to nodal boundaries and how much septic tank development will be permitted outside of these boundaries. Considerations for these decisions include the political viability of a restrictive boundary, terrain and soil characteristics which limit septic usage, and complementary resources such as greenway systems and historic and cultural resources. In order to properly address the complexity of natural, social, and political issues at play, a carefully-crafted comprehensive, strategy must be developed.

In Newton County, natural land features serve as constraints on development activity (refer to Figure 7.1a in the Appendix). Three land surface criteria have been identified that constrain development: slopes, floodplains, and soil characteristics. Taken together, these layers show that large-scale septic-development outside of the development nodes will face significant natural limitations; unsuitable soils and steep slopes are largely concentrated around waterways. There are very few swaths of land in Newton County where none of these three criteria are present

Throughout Newton County, there are parcels of land that are vulnerable to development if measures are not taken to protect them. These areas include vacant parcels and properties susceptible to redevelopment, defined as parcels with a minimum of ten acres that contain only one structure (refer to Figure 7.1b in the Appendix). These lands have the opportunity for higher density development if is not restricted by zoning regulations.

3.0.2 Development Objectives and Solutions

Considering the 400,000 people projected to live in Newton County by 2050, the County is at risk of becoming a sprawling bedroom community without land use constraints to focus its development. The County can manage and guide growth into towns and economic centers and away from agriculture land and environmental resources. The 2050 build out scenario developed through this *Blueprints* process suggests directing at least 75% of the incoming 400,000 residents to compact communities with walkable town centers and setting aside at least 50% of the land for "green areas" that can be used for natural resource preservation, agriculture, and rural development. The guiding principles of the 2050 build out scenario are:

1) **Create Communities**
   Concentrate higher density development using existing infrastructure and services to create multi-use walkable communities.
2) **Create Corridors**
   Concentrate growth along corridors that preserve our scenic and historic resources and promote quality development at appropriate densities.
3) **Protect Clean Water**
   Establish green areas that protect water resources, support agriculture and allow for very low density development
4) **Coordinate Infrastructure, Schools and other Public Investments**
   Establish a coordinated fiscal process for determining when and where to invest public fund in infrastructure and facilities.

The primary solution recommended to support these principles is ***a County-wide Conservation Overlay Ordinance comprised of three distinct zones: a Development Zone, a Rural Zone, and a Conservation Zone.***

Each of these three development typologies has the potential to accommodate conservation objectives. The Development Zone is designated by the projected extent of sewer service in Newton County. The Conservation Zone includes high priority conservation parcels (here recommended as agricultural land greater than 10 acres and land in the water supply watersheds). The Rural Zone includes large lot rural development where individual and cluster septic system development is appropriate.

Figure 3.0a, Newton County Proposed Development Zones, delineates the three development zones proposed for the Conservation Overlay Ordinance. The gradient of color is associated with the level of conservation measures suggested for that zone. The lightest green color is associated with the Development Zone, based on the five compact community nodes with public sewer service as recommended by the 2050 build out scenario, where conservation requirements are least strict. The medium green color indicates Rural Zone parcels, where conservation is guided primarily by septic regulations and lot size requirements. The dark green indicates the Conservation Zone where

conservation requirements are strictest and include water supply watersheds and agriculturally zoned parcels.

The following sections will discuss the recommended actions suggested to accomplish the goals of the three development zones.

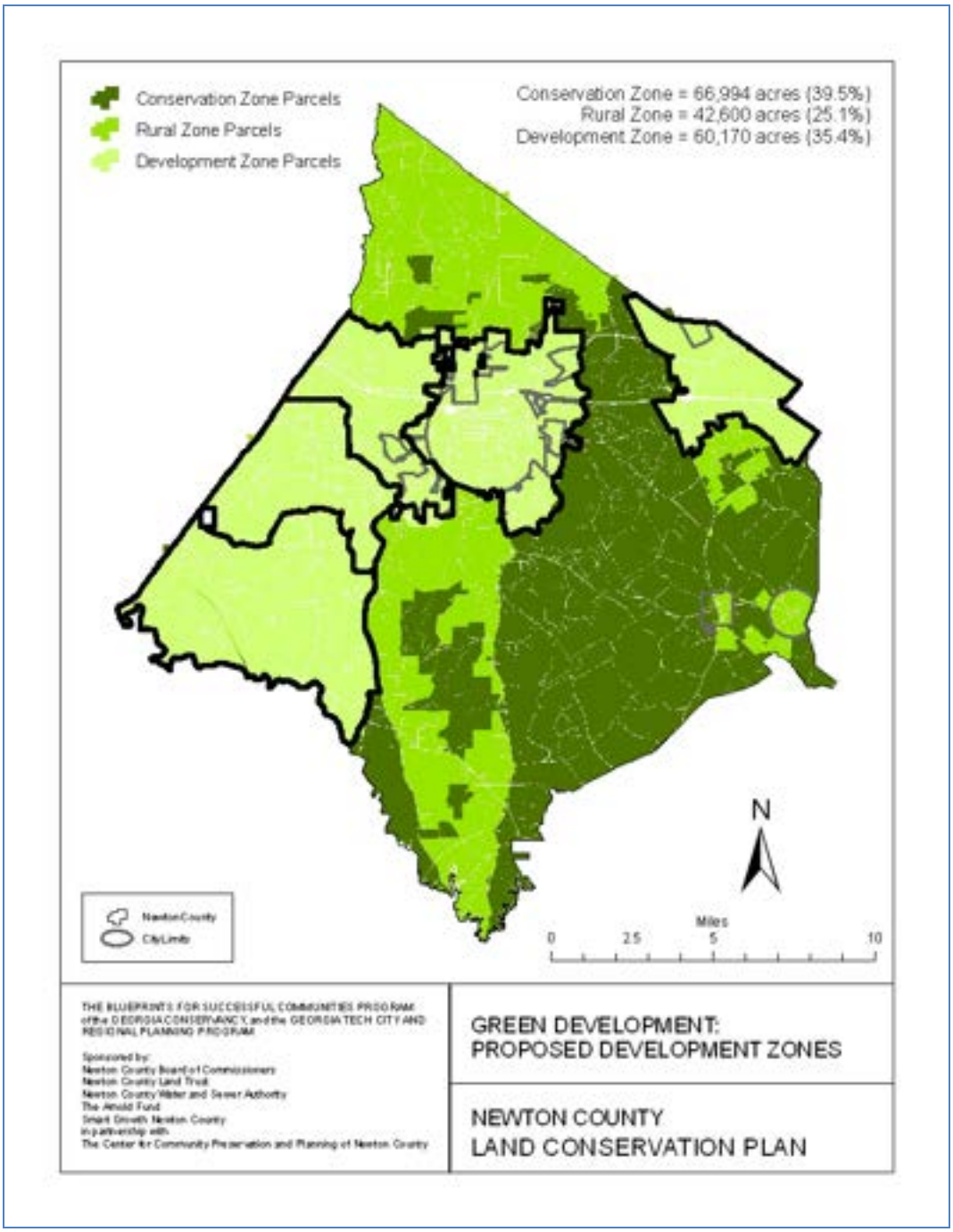


Figure 3.0a: Newton County Proposed Development Zones

3.1 INFRASTRUCTURE AND URBAN SERVICES

Concentrating growth in appropriate locations can be achieved by limiting the extension of infrastructure and urban services outside these areas. For Newton County, specific strategies that can achieve these objectives include the restriction of infrastructure to proposed sewered zones and revising the Rural Village Overlay ordinance to allow cluster septic tank systems will help to achieve these objectives by reducing subdivision "leapfrogging" leading to the overconsumption of agriculture land, forest, and water resources. This strategy also reduces the cost of providing basic services such as roads, sewer lines, and schools to new housing developments.

3.1.1 Existing Tools and Policies

The 2050 build out scenario creates nodal development areas while preserving the rural character of areas outside of the nodes. The Newton County Water and Sewerage Authority (WSA) has proposed limiting the extension of public sewer service to nodal boundaries. In effect, the limitation of sewer service constitutes a "de-facto" growth boundary, at least with respect to higher density development. However, additional regulations may be needed to provide adequate control and administration to make this boundary more effective as a County-wide growth management tool.

Newton County has already adopted a Rural Village Overlay District, but locations are not specified, leaving them to be designated as development proposals are presented on a case-by-case basis. These districts are intended for currently unsewered areas where sewer service is not projected to be extended in the near future. The Rural Village Overlay District discourages expansion of commercial developments along highways and promotes the preservation of historic design elements and more human-scaled development.

Cluster septic systems are currently not allowed in Newton County while individual systems are permitted throughout the County. Septic tanks and drain fields are regulated through the County zoning code. The County restricts septic systems in the Groundwater Recharge Area Protection Overlay District (Section 5.2.1), the River Corridor Protection Overlay District (Section 5.3.1), the Water Supply Watershed Protection Overlay District (Section 5.4.1), and the Open Space Conservation Residential Overlay District. Each of the zoning classifications requires a minimum lot size, depending on the use of some combination private well, public water, septic tank, community well, and community septic system. Generally, the minimum lot size allowed is between 20,000 and 25,500 square feet for single-family residential areas and between 7,500 and 12,000 square feet for multi-family and manufactured home classifications. These minimum lot sizes will allow suburban sprawl. Amending the Rural Village Overlay Zone to allow cluster septic systems has the ability to accommodate new schools in rural areas with housing and small neighborhood retail, encouraging compact communities.

3.1.2 Infrastructure and Urban Services Objectives and Solutions

The primary objective of this strategy is to ***determine limits of community development throughout Newton County and coordinate with provisions of urban services.*** Accomplishing this objective will help to direct growth to the appropriate areas throughout the County and preserve environmental resources. The primary tool for achieving this objective in the creation of a County-wide Conservation Overlay Ordinance covering three development zones and with the following regulatory sections for each zone:

Urban Services Guidelines; Rural Village Overlay Zones; Conservation Subdivision Provisions; and Density Bonus conditions

Proposed Solutions

Solution 8: Create General Conservation Overlay Ordinance with 3 zones (Community, Rural, Conservation) that contains an urban services guidelines: Set mapped boundaries for public sewer, public water and allowable septic tank areas (to match WSA policy). Amend minimum lot sizes for septic tanks to 2 acres of permeable soil, non flood plain, and less than 15% slope for Rural Zone, and 5 acres with same restrictions for Conservation Zone (maintain 10 acres for agriculture lots).

Solution 9: Create General Conservation Overlay Ordinance with 3 zones (Community, Rural, Conservation) that contains a Revised Rural Village Overlay Ordinance that should: Allow cluster septic systems in the Rural Zone when a school site is included and permitted by both the WSA and County Commission. Prohibit Rural Villages in the Conservation Zone.

Allowing cluster septic tanks in Newton County's Rural Village Overlay is a method likely to achieve higher density while preserving the rural character of the area. It is particularly appropriate for non-utility areas, such as those in the eastern and southern areas of Newton County. The Rural Village Overlay allows a concentration of development within areas of rural character while preventing the spread of strip commercial developments. Rural Villages allow a range of residential and local-serving, employment, shopping, educational, and recreational/cultural opportunities and serve as a focal point for the surrounding community.

Cluster systems would allow rural villages to be developed as more compact developments. Cluster systems permit septic tanks on individual lots and then transport wastewater to either a collective drainfield or a conventional treatment plant. Cluster systems can be environmentally sound, financially responsible solutions for small community wastewater needs where conventional central treatment systems are not practical, affordable, or where individual on-site systems are inappropriate because of site or soil limitations.

In a report prepared by Philip Blaiklock as part of a Georgia Tech Growth Management Class in the spring of 2008 on Land Use and Septic Systems in Georgia the following excerpt is taken on cluster septic systems:

The Georgia Department of Human Resources regulates public health, and issues permits for both individual septic systems and clusters. It defines an Experimental On-Site Sewage Management System as —any on-site sewage management system proposed for testing and observation, and provisionally accepted for such purposes by the Department's technical review committee. Any limitations to the use of experimental systems shall be decided by the Department's technical review committee. (The system at Serenbe in the Chattahooche Hill Country)…..certainly fits this bill. It consists of primary treatment tanks located at each home and constructed subsurface-flow wetlands coupled with recirculating sand filters and UV disinfection. The wetlands blend into a park area straddling hiking trails in a nearby forest. Lastly, reclaimed water is piped back into toilets, and also returned for landscaping and pasture irrigation.

Harbour Point, another private development, takes a similar approach. Directly on the sloping shores of Lake Lanier, each resident is responsible for maintaining their unit's 1500-gallon tank. The septic tanks tie into a gravity collection system, which flows to a pumping station. Effluent pumps provide an additional safety factor to protect the dispersal field. In this case, water is available to the lake – and in the current drought situation, every little bit helps. While the costs of this and Serenbe's cluster system were unavailable, Orenco Systems International have installed numerous cluster systems using similar technologies. Based on the firm's published case studies, costs per-dwelling average about $10,000 in inflation-adjusted terms. This is competitive with the cost of an individual septic system.

With Newton County's expected population growth, single lot septic tanks will most likely exceed the collective permeable capacity of the County's soil. Cluster septic tanks allow communities to achieve higher "village" densities reducing sprawl, as well as adequately manage decentralized wastewater systems providing both a cost-effective and long-term option for meeting public health and water quality goals. It is suggested that a cluster system is only allowed with a permit from both the County and the WSA for rural villages with at least one school and other basic services (police, fire, parks, etc). The permit would control the size, location, land uses, amenities and septic technology to the satisfaction of the WSA.

3.2 COMPACT COMMUNITIES

For septic tanks to accommodate the amount of development projected for Newton County, thousands of 1-2 acre lots would be needed in the Rural and Conservation Zones. Such unchecked development, even adhering to the current requirements for septic tanks on individual lots, would threaten to outstrip the collective capacity of the County's soils to drain sewage and dramatically reduce the County's tree canopy cover.

Compact communities, in both sewered and unsewered regions of Newton County, provide an opportunity to preserve rural regions and protect valuable natural resources. For maximum effectiveness, regulatory measures should be paired with economic incentives. While some tools for compact growth are already available to Newton County, some adjustments and additions to the zoning ordinance would greatly bolster the County's ability to focus growth in appropriate areas.

3.2.1 Existing Tools and Policies

Newton County has some existing regulations to encourage compact community development, but they are limited in several ways. Division 430 of the zoning ordinance permits conservation subdivisions, which allows more compact development at equivalent densities, but the regulations could be strengthened to more aggressively promote its objectives. The 33% open space requirement in this ordinance is somewhat minimal compared to other jurisdictions and developers have no obvious incentive to use it.

The Rural Village Overlay District, as mentioned previously, has been enacted as a separate ordinance. Because cluster septic systems are not permitted currently in the County, this overlay is limited in its capacity to accomplish denser, clustered development without the amendments proposed in the previous section.

3.2.2 Compact Communities Objectives and Solutions

The goal of creating compact communities with accessible open spaces in Newton County must, as already mentioned, be pursued within a comprehensive strategy. The primary objective of such a strategy must be to ***protect sensitive natural areas and create open spaces in compact community zones by revising the Conservation Subdivision Ordinance so that provisions are compatible with conditions in the community nodes and rural areas of the County; and to provide incentives for public open space set asides in community nodes, including allowing public trails in utility easements.***

The threat of rampant suburban development, within which open spaces are often, at best, relegated to individual parcels, demands that solutions actively encourage conservation measures while not deterring growth. Specific solutions proposed to accomplish this objective are also included within the proposed County-wide Conservation Overlay Ordinance detailed as follows.

Proposed Solutions

Solution 10: Create a General Conservation Overlay Ordinance with 3 zones (Community, Rural, and Conservation) that contains conservation subdivision provisions (establish conservation subdivision regulations for each zone for project size, minimum lot size, and open spaces) and density bonus conditions (provide 10% density bonus for open space set asides and conservation subdivisions in all zones).

Conservation measures for residential development must constitute a primary element of the proposed County-wide overlay district. Conservation subdivisions have proven to be an effective means of attaining growth objectives while conserving substantial land resources and protecting natural features. Newton County's current conservation subdivision ordinance (Division 430: Open Space Conservation Residential Overlay) should be revised to correspond to the three zones of the proposed overlay district, ensuring that the provisions are compatible with the conditions in the community nodes and rural areas of the County. Including the proposed provisions in a general Conservation Overlay Ordinance ensures that the application of conservation subdivisions truly responds to the needs of the three distinct zones.

This report does not explicitly recommend that all subdivision development in Newton County be subject to the Conservation Subdivision Ordinance, but it does recommend that County leaders and stakeholders consider whether such a strategy might be advisable in some or all of the overlay zones. The Chattahoochee Hill Country (Fulton County, Georgia) ordinance provides a local example of mandatory conservation subdivision development.

Regulations for conservation subdivisions within each zone should include specifications for minimum project size, minimum lot size, minimum open space set-asides, open space types, and level of enforcement. Refer to Table 7.1h, Proposed Conservation Overlay District Provisions, for a list of this report's specific recommendations for each of the criteria, mentioned in the sentence above. Figure 3.0a, Newton County Proposed Development Zones also indicates, the conservation requirements for each zone correspond to its prioritization for either development or conservation – the Development Zone would have the least stringent conservation specifications and the Conservation Zone would have the most. The Development Zone's recommended specifications reflect some of the County's current conservation subdivision specifications, such as: a minimum lot size of 10 acres; minimum gross density of 2 units per acre; and a 33% minimum open space requirement, at least 25% of which must fall outside

natural where development is currently prohibited (e.g. floodplain areas). The Rural Zone should have more stringent specifications and the Conservation Zone should be the most restrictive, as this zone includes farmland and environmentally-sensitive areas.

Economic incentives, such as density bonuses, must be used to encourage conservation subdivisions. This report recommends a 10% density bonus for conservation subdivisions and open space set aside for public use in each of the three overlay zones. The County may choose to offer a higher percentage bonus, but gross project density must consider the danger of septic system saturation in the Rural and Conservation Zones.

Tree cover should also be protected within conservation overlay regulations. The goal of maintaining Newton County's current (2008) tree canopy cover of 48% can be pursued in residential areas by making development in each overlay zone accountable for its impact on canopy cover. This report recommends that a tree canopy protection ordinance be included in the Conservation Overlay District, as described in the Climate and Energy section of this report.

3.3 RECREATION, HISTORIC, CULTURAL & SCENIC RESOURCES

Land conservation through environmentally-sensitive development also preserves quality of life for residents in the community. Preserving local architectural heritage, scenic vistas and access to public open space for recreation can help to strengthen community ties and a sense of place for Newton County.

To preserve rural and historic character, the stakeholders in this *Blueprints* process described the need for greater attention to visual elements and appropriate limits to the size and scale of development in rural areas. Specific areas of concern related to the development along roadways, since it can enhance or detract from the visual appeal of the community.

Other sites, such as the historic plantations and buildings throughout the County, provide insight into the community's heritage and deserve the same protection afforded to the current historic districts in Oak Hill and downtown Covington.

3.3.1 Existing Tools and Policies

Newton County recently adopted a Historic District Ordinance as part of its zoning ordinance. This code could be used to protect the historic viewsheds deemed important by the community. The regulations will only function appropriately, however, with an active committee to oversee its implementation. At present, the new Historic District Ordinance is not yet fully operational.

3.3.2 Recreation, Historic, Cultural and Scenic Resources Objectives and Solutions

In addition to protecting the architectural and agricultural heritage of the County, scenic corridors are of special concern. Scenic corridors preserve the beautiful rural landscapes between the village nodes. Moreover, protecting these corridors from strip commercial development or residential subdivisions makes possible their utilization as connective greenway routes. Obtaining easements and securing

funding for the 10-12 foot pathways within these buffers will be necessary if Newton County is to construct a greenway system with adequate connectivity.

To this end, the primary objective is to ***preserve significant rural landscapes in addition to other scenic, historic and cultural resources throughout the County, by measures such as enacting Scenic Corridor regulations for scenic corridors designated in the Comprehensive Development Plan including easement provision for trails, and allowing impact fees and SPLOST funds to be used for parks and corridors, including purchase of trail easements.***

Proposed Solutions

To meet this objective, Newton County should enact regulations to protect scenic corridors along the roadways identified in the County's Comprehensive Development Plan with provisions to allow greenways within the corridors. (Refer to Figure 7.1k, Existing Cultural, Historic, and Tourism Resources, for scenic corridors as recommended by the 2006 Newton County Comprehensive Development Plan.) There are three ways of accomplishing these regulations: invigorating the existing Historic District Overlay, enacting a Scenic Corridor Overlay, or specifying desired corridors within the overall Conservation Overlay Ordinance. Both the Historic District Overlay and the Scenic Corridor Overlay create a buffer strip along both sides of the road to preserve scenic views. In both of these ordinances, the land remains legally in private hands. A buffer of 200 feet is suggested here, but further discussion is needed to determine the appropriate buffer width.

Solution 11: Protect Scenic Corridors in one of three ways:

1) ***Designate scenic corridors as historic districts under a new Historic Preservation Ordinance requiring certificate for construction and demolition for designated resources on a case-by-case basis.***
2) ***Create separate Scenic Corridor Overlay Districts for the corridors with appropriate regulations.***
3) ***Make explicit the protection of these scenic corridors as provisions within the proposed General Conservation Overlay Ordinance.***

Designating scenic corridors under a new Historic Preservation Ordinance should require a certificate for construction and demolition for designated resources on a case-by-case basis. Under the new Historic District Ordinance in Newton County, the area within the buffer along the roadway would be designated a historic district and thereby protected from development. This is a highly flexible tool, as what constitutes an 'historic or cultural or scenic resource' is largely left to the discretion of an oversight committee. On the other hand, the efficacy of this Historic District Ordinance lies in having an active committee, which is not yet the case in Newton County.

With option two, creating separate Scenic Corridor Overlay Districts for the corridors, the buffer is specified along the roadway under the provisions of a separate Scenic Corridor Ordinance. The Scenic Corridor Overlay can provide protection for historic structures, scenic viewsheds, and provide space for greenways along the roadside. Greenways typically are typically 10-12 feet in width and require acquisition of an easement or fee simple purchase by the County.

Solution 12: Prepare and adopt a Comprehensive Greenways Plan as a high priority implementation initiative and seek funding to purchase multi-use trail easements in all designated Scenic Corridors.

Solution 12 proposes the creation of an interconnected County-wide greenway system for public use. Greenways provide several benefits. They can reduce vehicle trips to improve air quality. Greenways can also be built along streams and riverbanks in floodplain areas and other buffers, the advantage being the funding used to build and maintain trails can often be used to acquire the land or the development rights, which gives the property holder more access to the riverbank to restore any environmental damage that may have occurred. Conversely, acquired land could be used as a match for grant funding to build greenways. This type of land acquisition can provide property owners with some compensation or tax relief for land on which they otherwise cannot build. For the public, greenways along rivers and streams offer the possibility for recreation in generally undisturbed natural areas. Along designated roads and Scenic Corridors, greenways can help protect Newton County's rural character and give residents and visitors a new way to enjoy the natural scenery.

To facilitate connectivity of communities, increase wildlife habitat, strengthen the local sense of place and provide for the use of alternative transportation, Newton County should create a comprehensive Greenway System Plan that includes implementation and funding for purchase of critical trail rights-of-way, including all scenic corridors. This will be a long-term process and will require multiple steps and careful consideration of potential routes, creative exploration of how those routes may be acquired, and implementation of funding strategies.

Ideally, a greenway system is pre-identified within a county as infrastructure and zoned accordingly. An assessment of potential greenway land and routes has been conducted and the results are presented in the appendix under Special Topics: Greenway Systems Plan. These potential routes should be noted and integrated into the next County comprehensive plan or public document for future reference. Early identification of key access corridors prevents the tedious (and potentially expensive) chore of having to secure easements or buy rights to essential properties which have since been developed.

While many segments of the greenway may be readily acquired through zoning, Newton County will still need to seek funding to purchase multi-use trail easements in all designated Scenic Corridors. We suggest that Newton County allow impact fees and SPLOST funds to be used for parks and corridors, including purchase of easements. Several non-profits and government programs can provide advice, grants, and assistance with this process and are listed in greater detail in the appendix under Special Topics: Proposed Greenway Network. Newton County is already home to an active "Newton Trails" organization, as well as having the benefit of The Center as a resource for beginning this funding and implementation process.

GREEN ECONOMY

4.0 GREEN ECONOMY

For Newton County to achieve its 2050 goals of compact development with urban services on 50% of the County's land and preservation of the remaining 50% for various green uses and open space as identified in the *Economic Development Strategy* (a separate report developed by the County), most rural owners will need to realize an economic benefit through conservation that meets or exceeds the return they can gain by selling the land. In this context, the term "green economy" refers to strategies, tools and activities that provide profit-generating incentives for landowners to conserve their property rather than develop it. Creating a green economy in Newton County demands new tools that support and expand agricultural practices, promote rural tourism, and develop and attract green industries that conserve land.

Historically, agriculture has been an important part of Newton County's economy and way of life. To sustain this important asset and use it to drive a green economy, agriculture must be supported by growth management strategies that ease development pressure on rural land and help farmers to maintain their livelihood. Successful preservation of agricultural land will maintain Newton County's rural character and beauty, protect its natural resources by diverting growth to more appropriate areas of the County, and strengthen the local economy by creating jobs.

While agricultural zoning and agricultural land taxation already exist in Newton County, innovative growth strategies such as transfer of development rights (TDRs), purchase of development rights (PDRs), and agricultural land banks can offer additional incentives for land conservation. Moreover, organic farming, community supported agriculture (CSAs), and successful branding can uncover new markets for Newton County agricultural products.

Rural tourism can supplement traditional agricultural activities, giving farmers additional opportunities to generate revenue from their land without developing it. Agritourism, eco-tourism, and historic preservation are all forms of rural tourism that already exist in Newton County. County resources and cooperative leadership could bolster these activities, honoring Newton County's history while creating new jobs and incentives for land conservation.

Finally, green businesses can help diversify Newton's economy and promote land conservation in innovative ways that respond to national and international trends towards sustainability. For example, emerging markets for biomass and ethanol products could combine existing Newton County resources with clean energy technologies.

4.1 AGRICULTURE

Maintaining and encouraging agricultural production has many benefits for Newton County including protecting the environment, supporting local economies and increasing the tax base, responding to increased consumer demand, enhancing health and nutrition, and building community ties. In addition, agricultural production has the same demand for public services as other types of land uses, which helps to keep the cost of public services and property taxes low. Several studies have shown that for every dollar paid in property tax, a farm requires only about 34 cents in return for public services like schools, police, fire departments, and public utilities. In comparison, even low-density residential development

requires $1.15-$2.26 in services for every dollar paid in property tax, generating a net loss that may eventually force the local government to raise taxes.

For these reasons, productive farmland retention is a primary strategy of the County's *Economic Development Plan*. A successful strategy will require the implementation of a well-conceived combination of land use and economic incentives, organizational structures, and funding sources. According to recently released statistics from the Census of Agriculture, "farming is still the biggest industry in Georgia, although the number of farms has dropped and farmers are getting older without being replaced by a new generation." In Newton County, 20% of active farmland has been lost over the last ten years. As the number of farms has declined, the number of agricultural jobs has decreased significantly. Between 1990 and 2000, agricultural jobs decreased from 307 jobs in 1990 to 101 jobs in 2000, a decrease of more than 10%. Today, there are only about 55 jobs still classified as agriculture in Newton County.

Despite growing development pressures, a substantial amount of undeveloped land still remains in the County. In fact, 46% (83,348 acres) of the land is classified as "agriculture/forestry." Although there are scattered parcels throughout, most of the agricultural and forestry land is located in the eastern part of the County. "Prime agricultural soils" account for 27% (48,150 acres) of all land in Newton County. Most of the prime agricultural land is concentrated in three distinct areas: 1) the eastern half of the County including the Highway 11 corridor and the land between Covington and Newborn, 2) the Highway 142/82 corridor north of Covington, and 3) the far western corner of the County between Rockdale County and Highway 81. Most of this land already has an agricultural zoning classification but some parcels are zoned for other uses. A small portion of the area with prime soils is already developed, but the County is in a great position to protect the majority of it. Several pockets of land have been used for row cropping as recently as 1998 and should be some of the first targets for protection as working farms. The suitability map later in the chapter shows the optimal areas for agricultural conservation.

4.1.1 Existing Tools and Policies

While agricultural zoning and a reduced taxation structure for agricultural land are already present in Newton County, new tools can bolster these strategies to improve land conservation efforts and make farming more attractive for rural landowners. Agricultural zoning limits permissible land uses and density to be more compatible and consistent with food and fiber production. The two types of agricultural zoning exist: exclusionary (in which only agriculture uses are allowed) and inclusionary (in which uses that do not disrupt agriculture land are also allowed). Newton County has three basic zoning districts where agriculture is allowed: A, R-E, and A-R. Refer to Table 7.1m and Figure 7.1n, in the Appendix, for more details.

Another tool Newton County currently utilizes is conservation easements; however, they are on a voluntary basis and are not specifically targeted toward agricultural land. Agriculture Conservation Easement is a mapped agricultural area where special regulations on development are applied. An overlay is superimposed over conventional zoning districts, but may also be used as stand-alone regulations to manage development in desired areas of the community. Additionally, the County is currently working on a TDR. A TDR enables landowners in an area planned to remain as open space (sending area) to sell their property development rights for use in other "receiving" areas of the community where higher density development is acceptable or desirable. Buying these additional development rights allows developers in the "receiving" areas to build at a higher density than would

otherwise be allowed. In terms of financial incentives for retaining agriculture land, farmers in Newton County are currently able to apply to be assessed based on the conservation assessment criteria, and be assessed at a reduced value in return for promising to keep their land in agricultural use for a set period.

4.1.2 Agriculture Objectives and Solutions

The proposed objective of this section is to preserve farmland and encourage agriculture production for local markets. Encouraging agriculture as an economic engine for Newton County simultaneously conserves land and maintains its rural character. Several solutions have been identified to meet this objective.

Proposed Solutions

Solution 13: Allow for bonus TDR credits in a TDR ordinance for any land in economic use in the rural or conservation zones.

The proposed TDR program that continues to be discussed in Newton County could be modified to incentivize TDR bonuses for agricultural land. Essentially, a bonus system would allow development rights transferred from designated agricultural land to count for more credits than land outside these areas. This could be done by utilizing the tiered system as described in Special Topics: Legal Issues, located in the appendix of this report. Parcels eligible for the bonus could include any land in economic use or could be restricted to those over 25 acres in area. Properties ineligible for the bonus could still participate in the traditional TDR program.

A good case study to reference is the Rural Land Stewardship Area (RLSA) program in Collier County, Florida. This program encompasses 195,000 acres in a Rural Land Overlay and uses an environmentally-based system to generate transferable credits. Properties are rated based on their environmental characteristics and the amount of development potential that could be removed through conservation. Important agricultural land is also rated more highly. In Newton County, areas most easily targeted for agriculture conservation should be the first areas considered for an agriculture preservation program. The areas that are most suitable for agricultural development have been identified in Figure 7.1p, Newton County Agricultural Development Suitability, located in the Appendix. There are several criteria that were considered while making this evaluation, the parcels include: prime farmland soil that has not yet been developed, are already zoned for agriculture uses, have a large minimum lot size, and have historically been used for row crop farming.

Solution 14: In addition to TDR credits, evaluate feasibility of these incentives:

1) ***Purchase of conservation easements with public funds.***
2) ***Property tax reductions.***
3) ***Property assessment reductions (in addition to state credit for agriculture).***

Another set of incentives is available through the Georgia Conservation Tax Credit Program to encourage rural landowners to donate land or place a conservation easement on their property. Taxpayers can deduct from their state income tax 25% of the fair market value of the conserved property, with a maximum credit of $250,000 per individual and $500,000 per corporation. Since landowners may not be aware of these existing incentives, Newton County should advertise the program and help landowners participate. The County could also sweeten the incentive with a similar

deduction, either by reducing the tax rate or the appraised value of active agricultural land. While such a policy would lower the overall amount of tax revenue that Newton County would collect, it is important to recall that farmers typically pay more in taxes than they receive in services, as discussed previously. Therefore, reducing their tax obligation would be fair and would ultimately ease the burden of providing increasing levels of urban services in rural areas.

A variety of land use tools to promote agricultural preservation are described in Table 7.1q, Agricultural Preservation Tools, located in the Appendix.

New organizations and cooperative leadership teams may be needed to implement some of these tools effectively. Some specific areas of focus that stakeholders mentioned during the *Blueprints* process include marketing Newton County's local agriculture, finding better ways to disseminate important technical information to farmers, and identifying appropriate soil types for various agricultural products. In some cases, existing Newton County organizations, such as the Chamber of Commerce or the Extension Service, could carry out these tasks; other projects may require new organizations. These organizations could also pursue the various sources of funding available for agricultural land preservation and help Newton County farmers to take advantage of these opportunities. Some of the funding opportunities at the federal level are listed in Table 7.1r, Federal Level Funding Tools, located in the Appendix.

4.2 OTHER GREEN DEVELOPMENT

4.2.1 Rural Tourism

Rural tourism can supplement traditional agricultural activities or other land conservation programs to give farmers and rural landowners the opportunity to generate additional revenue from their land without developing it. Agritourism and eco-tourism are two forms of rural tourism that already exist in Newton County, refer to Figure 7.1s, Newton County Green Enterprise, in the Appendix. Agritourism is typically described as visits to farms for recreational purposes, which can include a variety of activities such as "pick-your-own" agriculture, Christmas tree farms, crop mazes and farm weddings. Eco-tourism, on the other hand, involves environmentally-responsible travel to relatively undisturbed areas in order to enjoy and appreciate nature. Some eco-tourism activities in Newton County include bird watching, fishing, hunting and hiking. Although not traditionally considered eco-tourism, golf courses have also been identified on the map because they generally help to preserve the rural landscape. Golf courses must be maintained carefully, however, so they do not contribute to environmental degradation through excessive use of water, pesticides and fertilizer.

4.2.2 Existing Tools and Policies

While most of the rural tourism businesses and organizations currently operate independently in Newton County, many receive indirect benefits or direct assistance from the Covington-Newton County Chamber of Commerce. The Chamber's Tourism Advisory Committee actively works to distribute Calendar of Events cards and sponsors special events that draw Newton County residents and visitors alike. For example, the Covington Century Bike Ride attracts 1,100 bicyclists annually. Other events include the Barbeque Cook-Off, Hummingbird Festival, Satsuki Christmas Tour and Montessori School

Tour. These events bring thousands of visitors to Newton County every year and produce significant tourism revenue for the County. This year, the Tourism Committee will host its first annual cemetery tour. The group is also working to develop farm tours to support local farms that have rural tourism attractions.

The success of these events actually creates a self-reinforcing cycle, as shown in Figure 4.2a. Successful tourism events and businesses lead to increased visibility, which in turn produces more visitors to support the businesses and events. The key to maintaining Newton County's current success, however, is preserving the natural landscapes, historic places and cultural resources that initially attract the visitors.

Successful agritourism strategies can supplement other policies that aim to improve the economic viability of farming in Newton County. Helping current farmers preserve their livelihood and encouraging the establishment of new farming operations in turn supports land conservation by mitigating development pressure on these properties. Similarly, strategies to support eco-tourism can help preserve existing businesses and create new opportunities for rural landowners to either operate these businesses directly or lease their land to others for this purpose.

Figure 4.2a: Tourism Cycle

4.2.2 Green Economy: Other Green Development Objectives and Solutions

In addition to agriculture, other forms of "green" economic activities can promote viable economic uses in conservation areas. For example, rural tourism activities provide compatible economic uses for undeveloped or already-conserved land, while locating green industries in the existing M-2 zoning district and/or Stanton Springs Industrial Park appropriately focuses this more intensive development near I-20 where services and compatible land uses already exist. Essentially, the proposed objective is to **promote diverse forms of "green" economic activity that provides or supports conservation including: economic incentives for compatible economic uses of conservation land, such as agriculture, agri-tourism and eco-tourism, forestry, etc. and create Green Enterprise Zone(s) with appropriate incentives and infrastructure.**

Strategies to promote agri-tourism and eco-tourism can also be incorporated into the proposed TDR program in Newton County and written into specific transfer agreements. Permitting these activities after development rights have been transferred may encourage farmers and rural landowners to participate in the TDR program because it provides them with an additional, ongoing income stream from the conserved land.

Newton County can also target its PDR to large, environmentally-sensitive properties that already have tourism businesses in operation. This strategy would protect the parcel from more intensive use in the future and would provide some financial assistance to the tourism operator. Another approach would be to permit rural tourism activities on land where Newton County, a land trust or similar conservation entity purchases development rights, even if such a business is not currently in operation, in order to encourage new businesses and to provide start-up capital.

Tax incentives can serve as another tool to encourage rural tourism businesses that conserve land. Dr. Kent Wolfe at the University of Georgia's Center for Agribusiness and Economic Development warns that agri-tourism operators may face taxation issues as they incorporate activities on their farms that could be considered commercial enterprises rather than traditional agriculture.[3] If these activities prompt the County to reclassify the business from agriculture to commercial, the operation will incur a significant increase in tax liability. Ecotourism operations are likely to encounter similar issues, especially since farming tax credits are not available. Newton County may also consider going one step further to offer local property tax reductions for parcel owners who commit to start rural tourism businesses that conserve land either permanently or temporarily. By relieving at least some of the tax burden for rural tourism operations, Newton County can encourage their establishment and survival as an economic tool to support land conservation.

In addition to these specific incentives, there are several other initiatives that can be undertaken to promote and allow economic uses compatible with conservation. The permitted use tables in Section 505 of the Newton County's Zoning Ordinance identify several other issues that may need to be resolved to permit rural tourism activities in Agriculture (A), Rural Estate (R-E) and/or Agricultural-Residential (A-R) zoning districts. Table 4.2b, Permitted Tourism-Related Activities, presents several uses that could be included in traditional agriculture or rural tourism operations but would not be permitted under the current zoning.

Type of Use	Zoning Districts			Potential Conflicts
	A	R-E	A-R	
Outdoor Recreational Facilities, Commercial				Not permitted in A, R-E or A-R
Plant Nursery, Greenhouse, Wholesale	A			Only allowed in A
Produce Stand, Farmers Mkt.				Not permitted in A, R-E or A-R

Table 4.2b: Newton County Permitted Tourism-Related Activities

In addition, some uses not listed in Table 4.2b might be appropriate as an accessory use within a rural tourism business. For example, a "Gift, Specialty Shop" could easily be incorporated into a rural tourism experience, but this use is only permitted in the commercial zoning districts and Office-Institutional (OI). Similar issues could occur with the following uses:

Art Studio	Flower Shop
Bakery	Ice Cream, Confectionery Shop
Day Spa	Restaurant

[3] Wolfe, Kent (2007). *Georgia Agritourism Situation and Outlook – 2007.* Center for Agribusiness and Economic Development, University of Georgia. Accessed April 18, 2009 from http://www.caed.uga.edu/agforecast2007/presentations/54-2007%20Agritourism%20%20Outlook%20in%20Georgia%20-%20Kent%20Wolfe%202.doc

There are also several potential or existing rural tourism businesses in Newton County whose uses are not addressed directly in the Zoning Ordinance. While some of these uses may be allowed as “Farming, General” or "Farming, Commercial," the County may want to explicitly regulate these uses in the context of a rural tourism business in agriculturally-zoned areas because they could generate traffic, visual or other issues that the County should address. These uses include:

Crop Art, Mazes	Hunting
Christmas Tree Farms	Petting Zoos
Educational Tours	“U-Pick” Agriculture
Farm Weddings	Vineyards / Wineries

Addressing these potential conflicts in the zoning ordinance can help encourage rural tourism in Newton County.

Finally, Newton County, the Chamber of Commerce, the local Extension Service and other partners should continue to explore new ways to collectively market tourism opportunities in the County. The Chamber's Tourism Committee currently work to formalize farm tours and market them to Atlanta-based tour companies provides a good example of how collaborative efforts can defray marketing costs for individual businesses and improve their success. While not directly a land conservation strategy, such projects can help to promote existing businesses and encourage the creation of new ones that conserve land in Newton County.

4.3 GREEN INDUSTRY

Green industries can help diversify Newton County’s economy and promote land conservation in innovative ways that respond to national and international trends towards sustainability. Green industries typically fall into two categories. The first category includes companies whose products promote sustainability directly, such as generating renewable energy from renewable sources or manufacturing solar panels. The second consists of businesses outside these traditional green industries that incorporate green practices into their operations in order to use resources more sustainably. A local example is the General Mills plant in Covington which installed a wastewater treatment system that reuses half the plant’s process wastewater for other purposes, saving 5.3 million gallons of water per month.

4.3.1 Existing Tools and Policies

Newton County does not currently offer any incentives to specifically attract green businesses. However, the County is working to recruit businesses to locate in the Stanton Springs Industrial Park as well as the industrial park near the airport so there may be an opportunity to target green businesses or industries that commit to using green business practices. Figure 7.1s, Green Enterprise, located in the Appendix, shows the Stanton Springs Industrial Park, other industrial areas as well as existing Rural Tourism sites.

4.3.2 Green Industry Objectives and Solutions

Proposed Solutions

Solution 15: Establish a Green Enterprise Zone in the M2 and/or Stanton Springs Industrial Parks with usual enterprise zone incentives.

Green Enterprise Zones are a fairly new concept in the United States, but they are closely modeled off the Urban Enterprise Zone concept introduced in the 1960s. Essentially, Newton County could identify one or more areas, such as the industrial parks, where special incentives would be used to attract green industries. Such incentives could include property tax reductions or the elimination of development impact fees for green industries. Creating the first Green Enterprise Zone in Georgia would help Newton County brand itself as a regional leader for green industry development.

The proposed Green Economic Development Zone in Middlesex County, New Jersey could provide a good case study for Newton County. With more than 27 million square feet of vacant warehouse space, Middlesex County is considering offering a 2% tax rate for green manufacturers and retailers. The County is also collaborating with Rutgers University, Middlesex County College and the Middlesex County Vocational-Technical schools to create “green” curriculum and train individuals for green jobs. Residents and businesses will be given an opportunity to shop for "green" technology through a retail expo that is also part of the plan. Finally, Middlesex County is organizing a green expo that will offer manufacturers and sellers of "green" technology an opportunity to collaborate and interact.

GREEN LEADERSHIP

5.0 GREEN LEADERSHIP

The intention of the Green Leadership section is to focus on developing new funding mechanisms as well as procedures for implementing recommendations within this report and to create a new public-private conservation leadership council. The funding and implementation strategy focuses on identifying conservation funding and implementation, as well as establishing a Newton County land trust. The public and private conservation leadership focuses on intergovernmental cooperation and on establishing a new conservation leadership council. It will be necessary for private and public leadership models to emerge in order for the measures recommended in this report to reach complete success.

5.0.1 Existing Tools and Policies

In 2004, The Center initiated the creation of the Leadership Collaborative as a way to bring leaders from different governmental agencies together on a regular basis to address common issues, both immediate and long-term, regarding Newton County. This intergovernmental group includes elected officials, board members and key staff from Newton County, the City of Covington, the Newton County Board of Education and the Newton County Water and Sewerage Authority.

5.0.2 Green Leadership Objectives and Solutions

Proposed Solutions

Solution 16: Establish a conservation fund and determine the feasibility of a Newton Land Trust or other third party to act as "banker".

This funding and implementation strategy builds on the existing intergovernmental commitment to fund and implement the Conservation Plan's recommendations, tools and regulations through a new conservation fund and a Newton Land Trust.

Solution 17: Create a conservation council to be made up of public, private and non-profit members to coordinate the funding and project management of conservation projects.

This public-private conservation leadership strategy ties the Conservation Plan to the County's other conservation policies and supports public and private institutions by creating a conservation council that includes public, private and non-profit members.

RECOMMENDATIONS AND STRATEGIES

6.0 RECOMMENDATIONS AND STRATEGIES

The stakeholder workshops held during the *Blueprints* process clearly indicated common areas of concern among the participants. Using these common concerns as guiding principles, further discussions, work groups, and prioritization exercises illustrated most likely solutions for achieving these principles. The concerns and proposed solutions were described in detail in the preceding sections. The following is a succinct summary of the information.

6.1 MAIN ISSUES AND STAKEHOLDER RESPONSES

Rivers, Water Supply and Water Quality: Newton County has an abundance of clean water with 45 main river watersheds, two of which supply today's water and have the capacity to supply a projected population of 400,000. These resources are protected by state and local regulations and stakeholders believed the protections are adequate for the foreseeable future ***(****See solutions A3, 4)*

Conservation Oriented Development: With 80% of the projected 2050 population projected to fall within 40% of the County's area with public gravity flow sewer service and adequate river treatment capacity, the resulting densities will stay within those of historic Covington but will require planning incentives and regulations to protect sensitive areas and provide adequate open spaces. In rural areas, the existing minimum lot sizes of 2 acres will seriously impact the feasibility of septic tanks and create "rural sprawl". Therefore, stakeholders supported the creation of a new County-wide conservation ordinance to govern lot sizes and densities and provide adequate incentives for conservation in all areas of the County. *(See solutions B8, 9, 10)*

Private Land Conservation: With proposed additional regulations for both conservation and development, stakeholders strongly supported the creation of a compensatory system of credits. This system recognizes the property rights and values of persons with parcels to be conserved and provides incentives to conserve those parcels. The solution with the strongest support was to create an equitable and easily managed Transfer of Development Rights (TDR) program*. (See solutions A1, 2)*

Conservation Related Economic Development: Stakeholders strongly supported economically viable uses for land in the "green" areas of the County in order to conserve the rural landscape, to boost economic development, to provide a strong local food infrastructure, and to generally create a strong and sustainable green identity for the County. *(See solutions C 13, 14, 15)*

Green Infrastructure: Newton County lacks a county-wide system of interconnected greenways to accommodate public use, alternative transportation modes and habitat corridors. The stakeholders recommended the creation of a comprehensive Greenway System and strongly supported the designation of scenic corridors that preserve the County's historic rural and agricultural landscape. *(See solutions B 11, 12)*

Long-Term Sustainability: Stakeholders recognized that energy consumption, CO2 emissions (including the significant transportation impacts of a commuting county), and site and building design and construction practices are significant issues of long-term environmental quality and recommended continuing to Phase 2 of the Conservation Plan (*see solutions A 5,6, 7)* to specifically examine these issues.

6.2 RECOMMENDATIONS

6.2.1 Land Conservation Plan

Based on the main issues and stakeholder feedback, discussed in the preceding section, a final Land Conservation Plan was produced through the *Blueprints* process (Figure 6.2a). This Plan is based on the proposed 2050 build out future land use scenario, Figure 1.3b. Both the Land Conservation Plan and the proposed 2050 build out scenario were developed based on a 2050 projected population of 400,000 people. The final Land Conservation Plan includes five compact communities, within the Compact Community Zone, which cover 35% of the land area and accommodate 80% of this projected population; a Rural Zone, which covers 25% of the land area and accommodates 15% of the projected population; and a Conservation Zone, which covers 40% of the land area and accommodates 5% of the population.

The Compact Community Zone contains communities where development will have the least negative impact on the County's natural resources. These areas can accommodate higher density building and, therefore, can accommodate a greater percent of the population. This zone is intended to include urban services, including a gravity based public sewer system.

The Rural Zone is made up of large residential lots, rural "villages" and agricultural parcels. Cluster septic systems are recommended to accommodate development in this zone.

The Conservation Zone is made up of protected water-supply watersheds and large productive agriculture and forestry parcels.

6.2.2 Recommended Solutions

The solutions as discussed throughout this report have been consolidated into Table 6.2b.

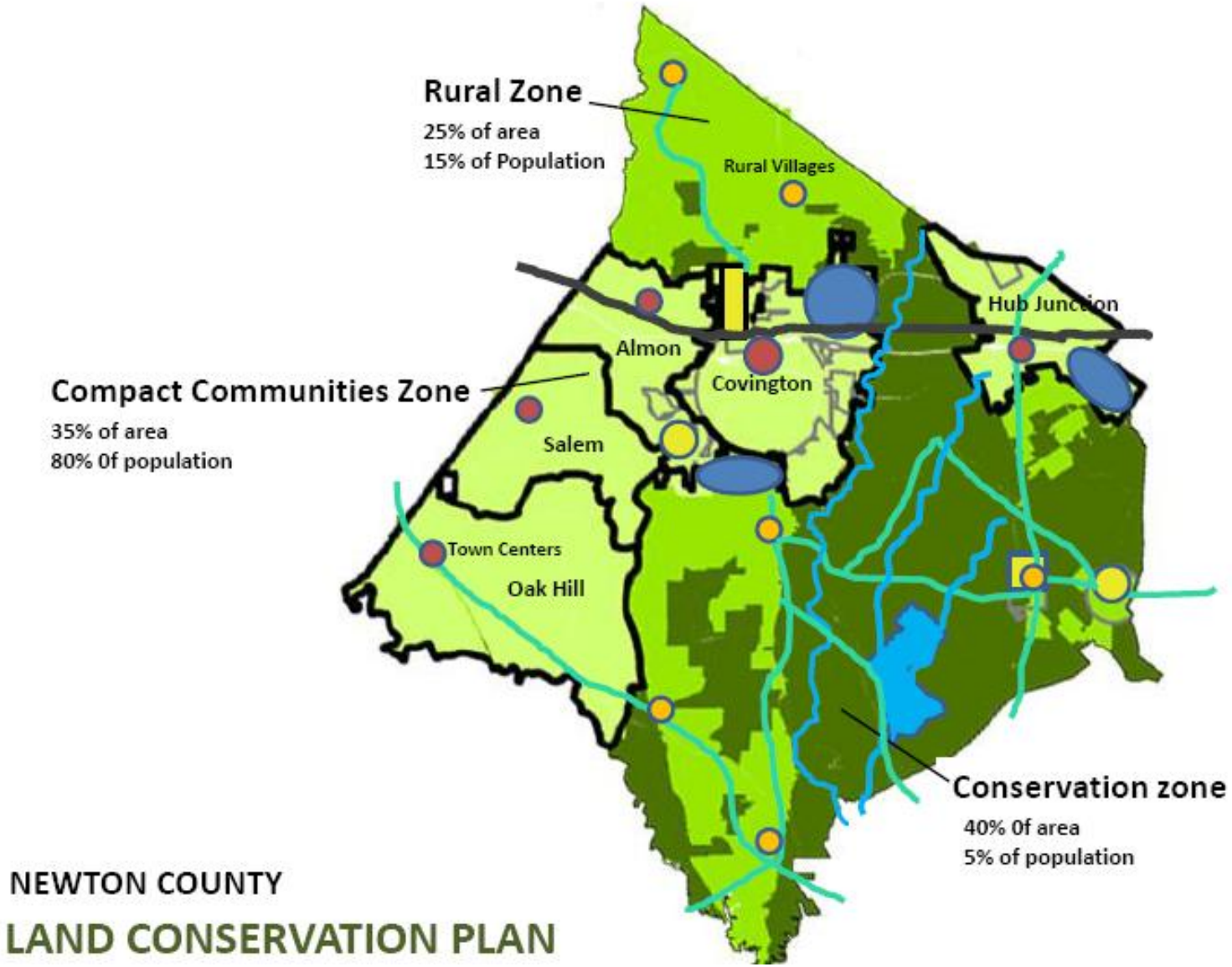


Figure 6.2a: Newton County Land Conservation Plan

A. Green Environment	**Goal: Conserve environmental resources**
Objectives **Land Resources** P*rotect Newton County's land resources and preserve sensitive natural areas throughout the County.*	**Recommended Solutions** **<u>Solution 1</u>: Support continued donation of conservation easements and provide for purchase of selected easements.** **<u>Solution 2:</u> Enact a TDR ordinance with:** • Sending and receiving areas based on the limit of urban services. • Provision of TDR bonus credits for riparian buffers and in Conservation Zone.
Water Resources *Maintain the current high level of water quality and protect existing and future water supply across all water resources throughout Newton County.*	**<u>Solution 3</u>: Maintain all existing riparian buffers; increase riparian buffers for intermittent streams from 35ft to 50ft and allow for the construction of a multiuse trail within the buffer areas of perennial streams and river corridors.** **<u>Solution 4</u>: Establish a county-wide mitigation bank for wetlands and streams.**
Climate and Energy *Reduce Newton County's impact on the environment through a reduction in energy consumption and carbon footprint and an improvement in air quality.*	**<u>Solution 5</u>: Strengthen existing Zoning Ordinance Section 430 regulations with provisions to prohibit clear cutting and to specify locations and species of planted trees.** **<u>Solution 6</u>: Develop a tree canopy protection ordinance by adding Forest Canopy provisions to proposed *General Conservation Overlay* Ordinance with:** • Replacement objective to achieve no net tree loss from 2008 benchmark, which was 48% in forest cover. • Provision to allow trading of tree replacement credits. • Exemption for economic forestry operations. **<u>Solution 7</u>: Initiate feasibility study for landfill methane production.**
B. Green Development	**Goal*: Create compact communities with accessible open spaces***
Objectives **Infrastructure/urban services** *Determine limits of community development throughout Newton County and coordinate with provisions of urban services.*	**Recommended Solutions** **<u>Solution 8</u>: Create General *Conservation Overlay Ordinance* with 3 zones (Community, Rural, Conservation) that contains:** **a) Urban services guidelines:** • Set mapped boundaries for public sewer, public water and allowable septic tank areas (to match WSA policy). • Amend minimum lot sizes for septic tanks to 2 acres of permeable soil, non flood plain, and less than 15% slope for Rural Zone, and 5 acres with same restrictions for Conservation Zone (maintain10 acres for agriculture lots). **<u>Solution 9</u>: Create General *Conservation Overlay Ordinance* with 3 zones (Community, Rural, Conservation) that contains:** **b) Revised Rural Village Overlay Ordinance to:**

Compact Communities *Protect sensitive natural areas and create open spaces in compact community zones.*	1) Allow cluster septic systems in the Rural Zone when a school site is included and permitted by both the WSA and County Commission. 2) Prohibit Rural Villages in the Conservation Zone. **<u>Solution 10</u>: Create General *Conservation Overlay Ordinance* with 3 zones (Community, Rural, and Conservation) that contains:** **c) Conservation subdivision provisions** • Establish conservation subdivision regulations for each zone for project size, minimum lot size, and open spaces. **d) Density bonus conditions** • Provide 10% density bonus for *open space set asides* and *conservation subdivisions in all zones.*
Recreation, Historic, Cultural and Scenic Resources *Preserve significant rural landscapes in addition to other scenic, historic and cultural resources throughout the County.*	**<u>Solution 11</u>: Protect Scenic Corridors in one of three ways:** **a) Designate scenic corridors as historic districts under new Historic Preservation ordinance requiring certificate for construction and demolition for designated resources on a case-by-case basis.** **b) Create separate Scenic Corridor Overlay Districts for the corridors with appropriate regulations.** **c) Make explicit the protection of these scenic corridors as provisions within the proposed General Conservation Overlay Ordinance.**
Greenway Systems *Create an interconnected greenway system for public use, alternative transportation modes and habitat corridors.*	**<u>Solution 12:</u> Prepare and adopt a Comprehensive Greenways Plan as a high priority implementation initiative and seek funding to purchase multi-use trail easements in all designated Scenic Corridors.**
C: Green Economy	**Goal: Promote viable economic uses in conservation areas**
Objectives **Agricultural Development** *Preserve farmland and encourage agriculture production for local markets.*	**Recommended Solutions** **<u>Solution 13</u>: Allow for bonus TDR credits in TDR ordinance for any land in economic use in the Conservation Zone that meets all requirements of the Conservation Zone.** **<u>Solution 14</u>: In addition to TDR credits, evaluate feasibility of these incentives:** • Purchase of conservation easements with public funds. • Property tax reductions. • Property assessment reductions (in addition to state credit for agriculture).
Other Green Economic Development *Promote diverse forms of "green" economic activity that provides or supports conservation.*	**<u>Solution 15</u>: Establish a *Green Enterprise Zone* in the M2 and/or Stanton Springs Industrial Parks with usual enterprise zone incentives.**

D. Green Leadership:	**Goal: Establish strong public and private conservation leadership**
Objectives **Multi-Government Structure** *Build on existing Intergovernmental commitment to fund and implement Plan's recommendations, tools and regulations*	**Recommended Solutions** **<u>Solution 16</u>: Establish a conservation fund and determine feasibility of Newton Land Trust or other third party to act as "banker".**
Public-Private Conservation Leadership *Tie plan to County's other conservation policies and supporting public and private institutions*	**<u>Solution 17:</u> Create a conservation council to be made up of public, private and non-profit members to coordinate the funding and project management of conservation projects**

Table 6.2b: Recommendations

APPENDIX

7.0 APPENDIX

7.1 FIGURES AND TABLES

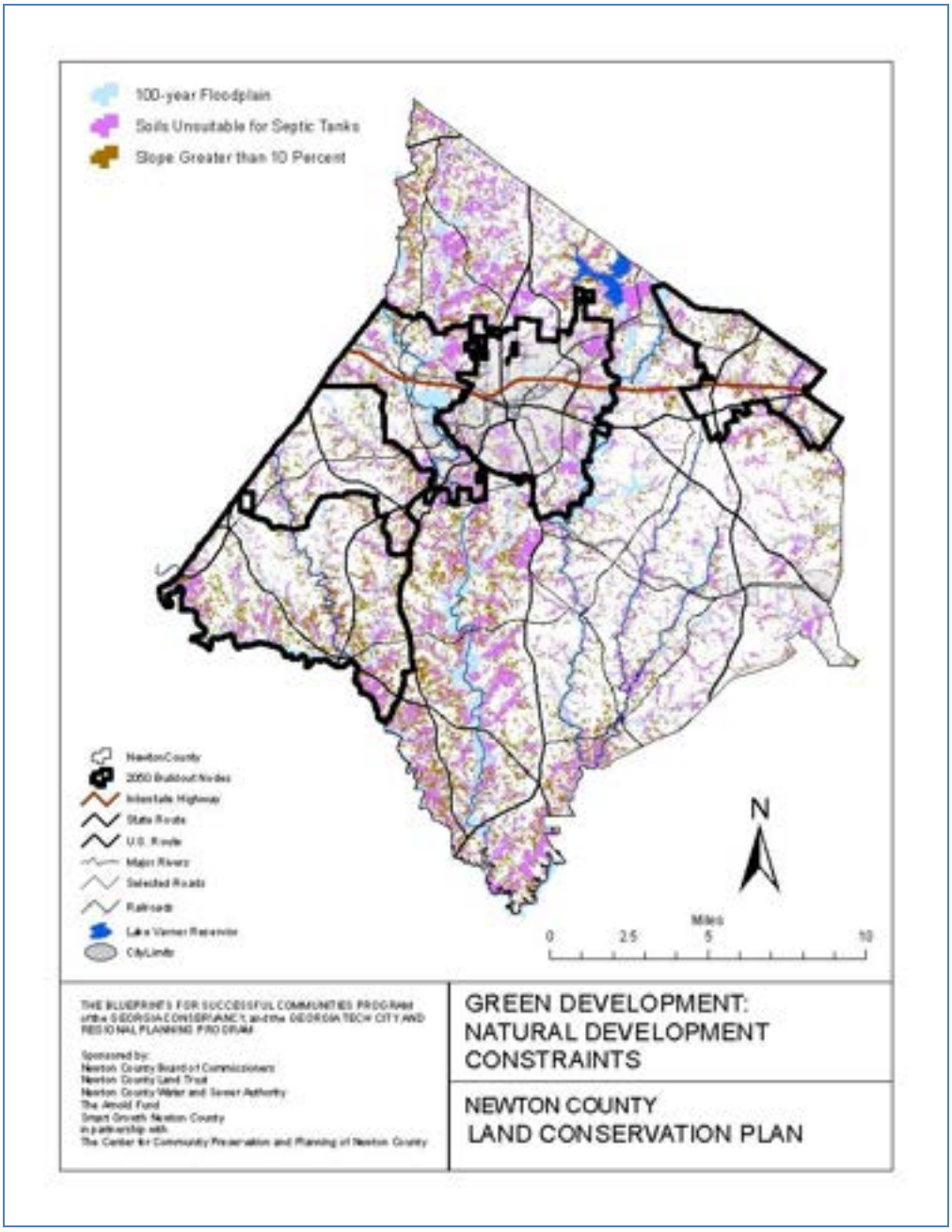


Figure 7.1a Natural Development Constraints: Indicates that the County has a pervasive and fine grained network of sensitive environmental areas made up of river flood plains, wetlands, steep slopes (over 10%) and soils with severe limitations for septic tank development.
The specific layers indicate: areas where slope is greater than 10 percent; floodplain extents; and soils unsuitable for septic tank development.

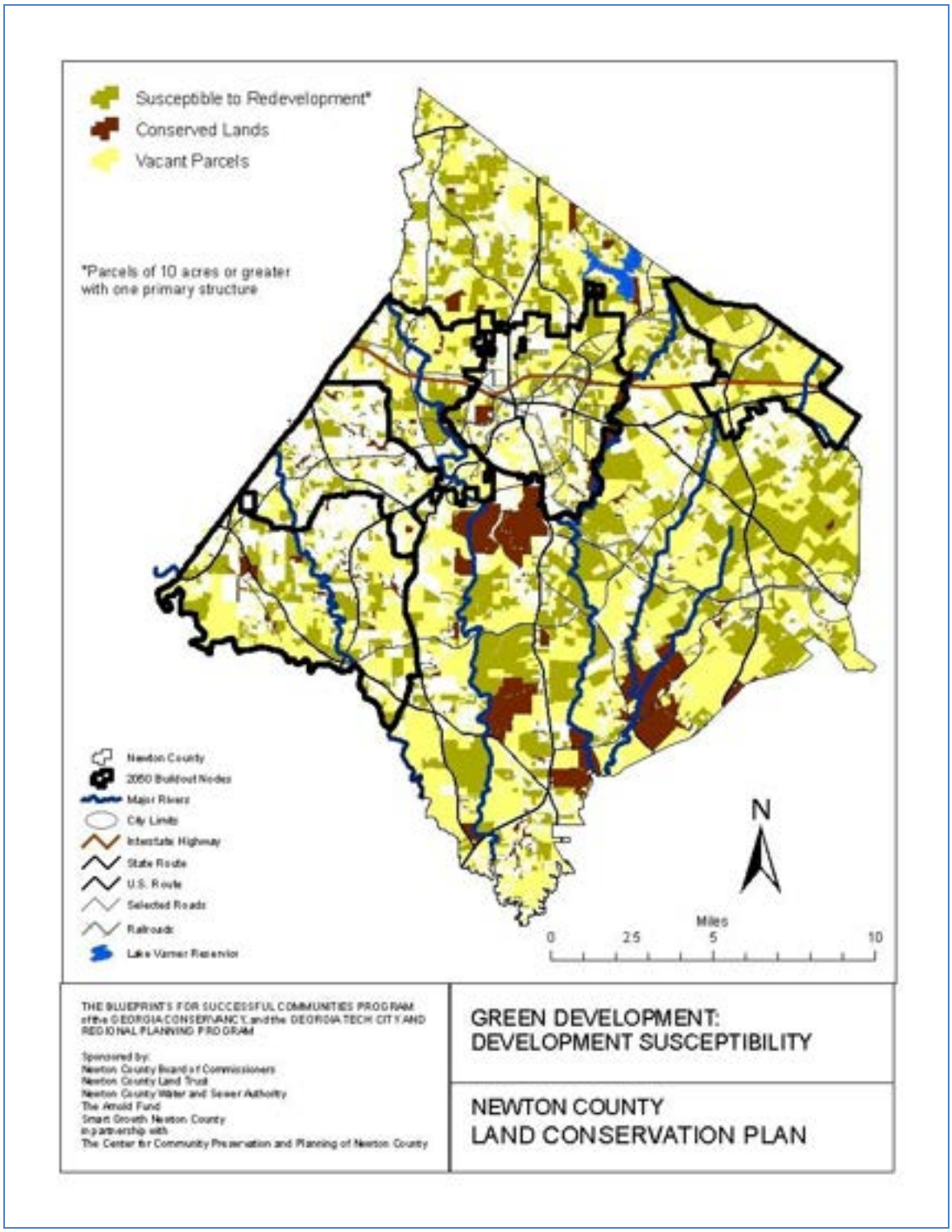


Figure 7.1b Development Susceptibility: Indicates that the County is still largely undeveloped with large parcels that are either vacant or have only one structure and therefore are susceptible to redevelopment in the future.

Newton County Land Conservation Plan
Population and Density by Development Area @ 2050 build-out

Area	Acres (x1000)	% of Total area	Population (x1000)	% of Total Pop.	Number of households (pop/2.5 persons /hh) x 1000	Gross Average Density (hh/acre)	Gross Average Lot sizes
Development Nodes							
• Covington ○ Existing-09 ○ New	21.5 13.0 9.5	12.0	100.0 35.0 65.0	25.0	40.0 14.0 26.0	1.9 1.1 2.7	.4-.8a
• Other ○ Existing-09 ○ New (Almon, Salem, Oak Hill, Hub Junction)	42.2 17.0 25.2	23.0	220.0 47.5 172.5	55.0	88.0 19.0 69.0	2.1 1.1 2.7	.4-.8a
Sub total	**63.7**	**35.0**	**320.0**	**80.0**	**128.0**		.
"Green " Areas							
• Rural Zone	45.3	25.0	55.0	15.0	26.0	.49	3-10a
• Conservation Zone	71.0	40.0	25.0	5.0	10.0	.15	10a+
Sub total	**116.3**	**64.0**	**80.0**	**20.0**	**32.0**		
TOTAL	**180**	**100**	**400.0**	**100**	**160.0**		

Acreages determined by the Conservation Plan. Development Nodes are determined by the limits of urban services and Conservation Zone is determined by water supply watersheds and large agricultural parcels
Population targets are determined by the 2050 build-out scenario.
Gross average densities include all land uses. Average residential densities would be 40-60% larger

Figure 7.1c: Population and Density by Development Area

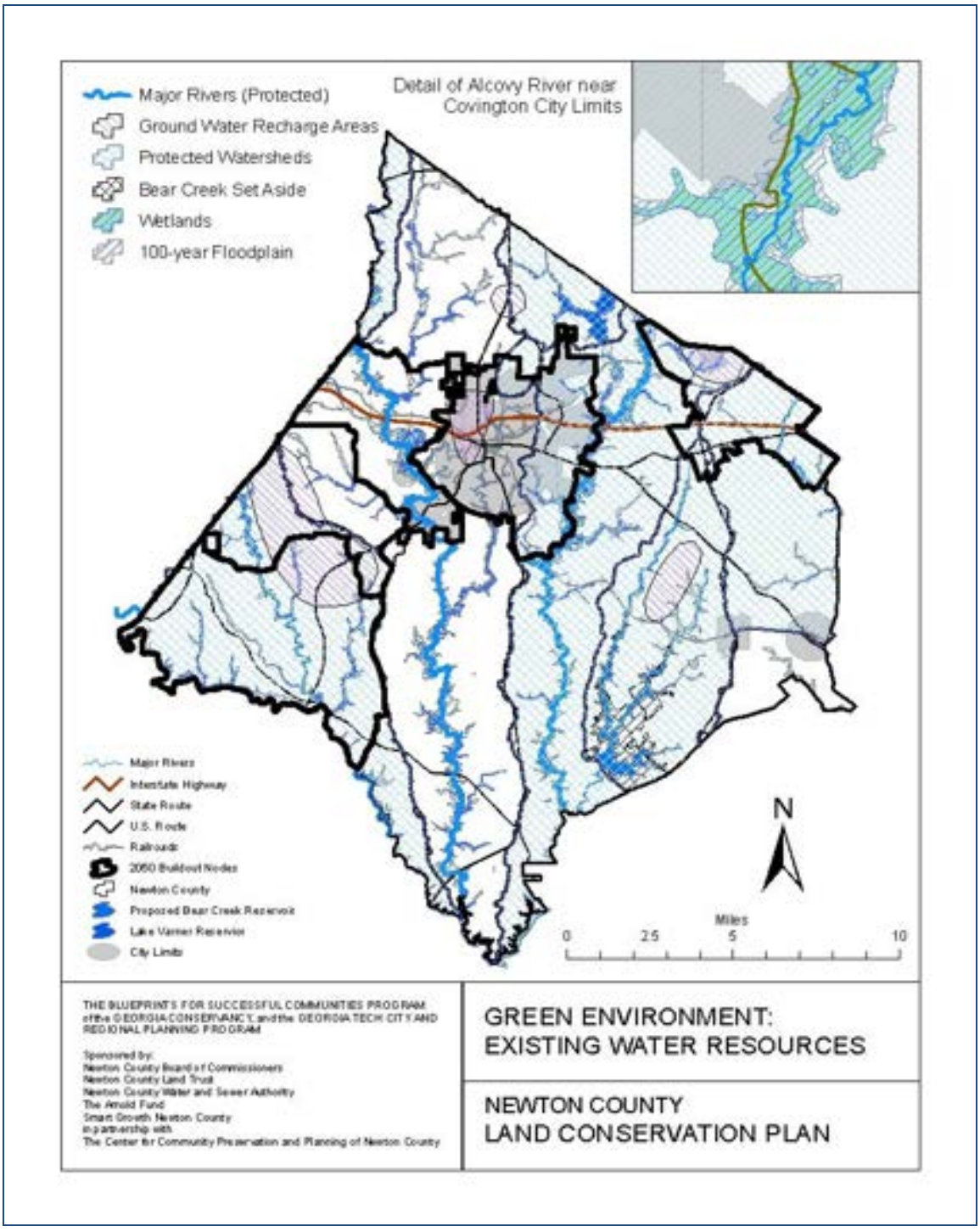


Figure 7.1d: Existing Newton County Water Resources: illustrates all County water resources and their respective conservation protections, including: all perennial streams and their associated 100-foot buffers, three protected rivers covered by Newton County's River Corridor Protection Overlay district (Alcovy River, South River, and Yellow River), 100-year floodplains, wetlands, large water supply watersheds, and groundwater recharge areas.

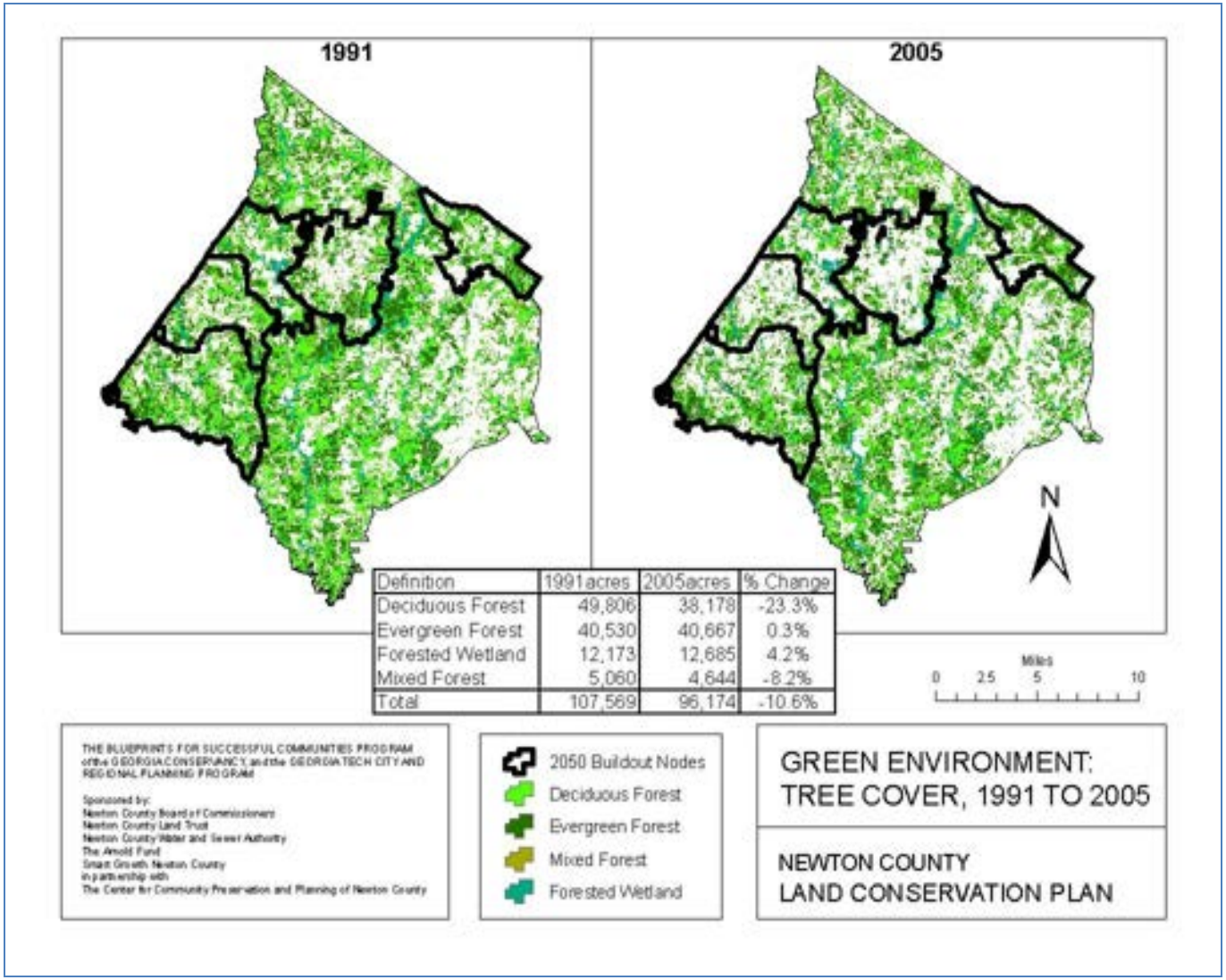


Figure 7.1e: Newton County Forest Cover Change 1991-2005: This figure illustrates the change in tree cover in Newton County over the period of time from 1991 to 2005.

Table 7.1f: Newton County Forest Canopy Change

Definition	1974 acres	1985 acres	1991acres	2001acres	2005acres
Deciduous Forest	52,610	47,974	49,806	42,997	38,178
Evergreen Forest	51,058	53,211	40,530	41,247	40,667
Forested Wetland	12,741	13,364	12,173	11,831	12,685
Mixed Forest	797	4,144	5,060	2,152	4,644
Total	117,206	118,693	107,569	98,227	96,174

Table 7.1f illustrates longer term trends in forest canopy change in the County.

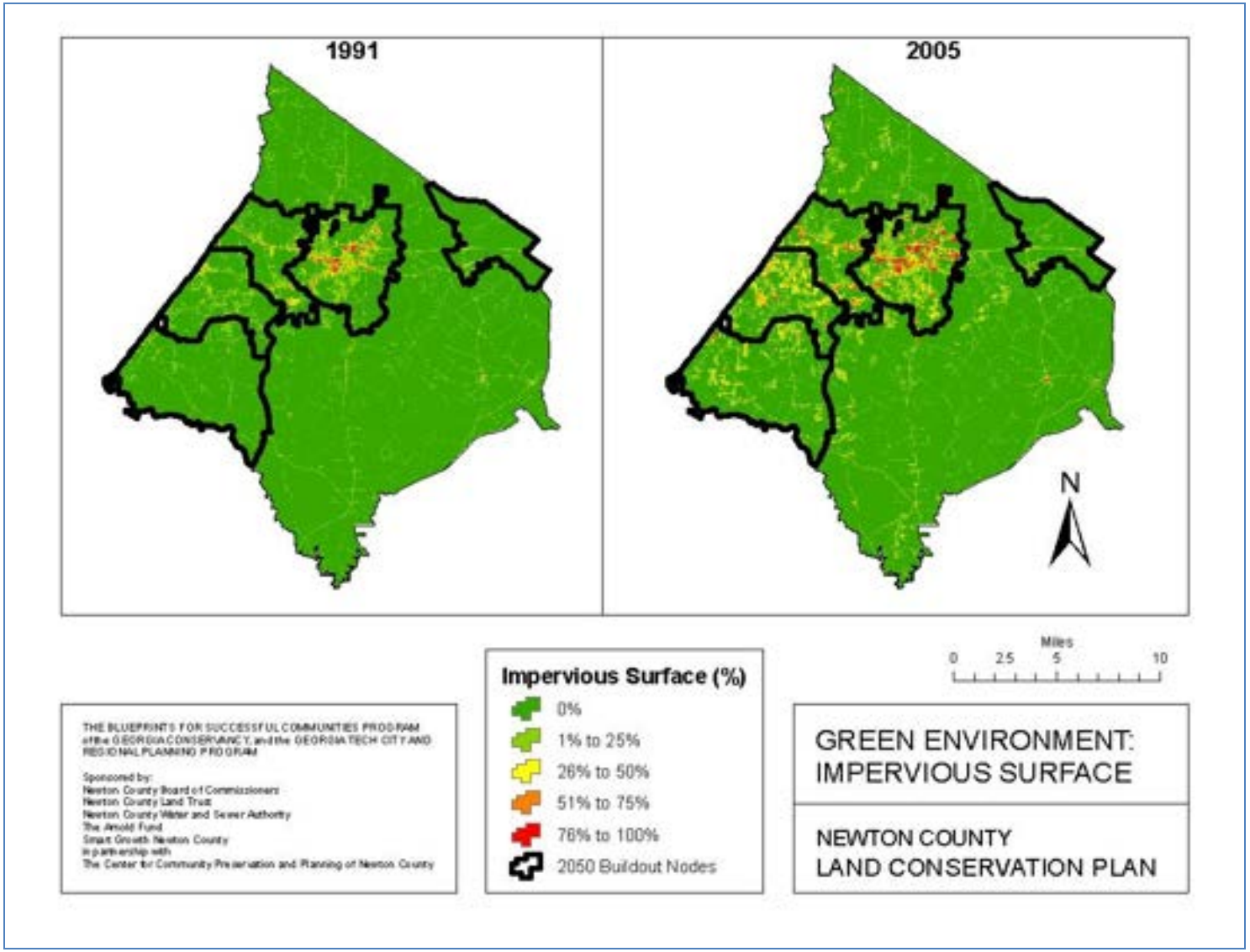


Figure 7.1g: Newton County Impervious Surface Change 1991-2005

Figure 7.1h: Proposed Conservation Overlay District Provisions

	Development Zone	Rural Zone	Conservation Zone
Urban Services **1) Public sewer** **2) Septic tank**	1) Permitted as per WSA regulations and guidelines. 2) Not permitted without approval from WSA.	1) Not available 2) Permitted on lots with a minimum of 2 acres of permeable soil on land with less than 15% slope not in 100 year floodplain. Other existing septic tank regulations apply.	1) Not available 2) Permitted on lots zoned AF with a minimum of 10 acres and on all other lots a minimum of 5 acres of permeable soil on land with less than 15% slope not in 100 year floodplain. Other existing septic tank regulations apply
Subdivision Development **1) Minimum project size** **2) Minimum gross density** **3) Minimum open space set aside** **4) Open space types** **5) Other**	1) 10 acres 2) 2 acres per unit 3) 33% 4) 25% minimum in natural areas 5) Optional	1) 10 acres 2) 5 acres per unit 3) 50% 4) 25% minimum not in natural areas 5) Required	1) 25 acres 2) 10 acres per unit 3) 67% 4) None required 5) Required
Tree and Forest Cover **1) On new development** **2) For forest canopy County-wide (maintain current forest cover of 48%)**	1) Existing development regulations apply 2) Replace all trees 1 for 1, locations may be negotiated with another property owner (size and species TBD)	1) Existing development regulations apply 2) Replace all trees 1 for 1, locations may be negotiated with another property owner (size and species TBD)	1) Existing development regulations apply 2) Replace all trees 1 for 1, locations may be negotiated with another property owner (size and species TBD)
Rural Village Overlay Zone	Not applicable	Only for sites pre-approved by the County and BOE, which include a site for a public school. Cluster septic system allowed with permit from County and the WSA.	Not permitted
Scenic Corridor (if governed by this ordinance) **1) Buffer width** **2) Construction requirement** **3) Trail ROW provision**	1) 100 2) Not allowed 3) All trees require permit 4) 50-foot easement eligible for purchase	1) 200 2) All structures require permit 3) All trees require permit 4) 50-foot easement eligible for purchase	1) 300 2) All structures require permit 3) All trees require permit 4) 50-foot easement eligible for purchase

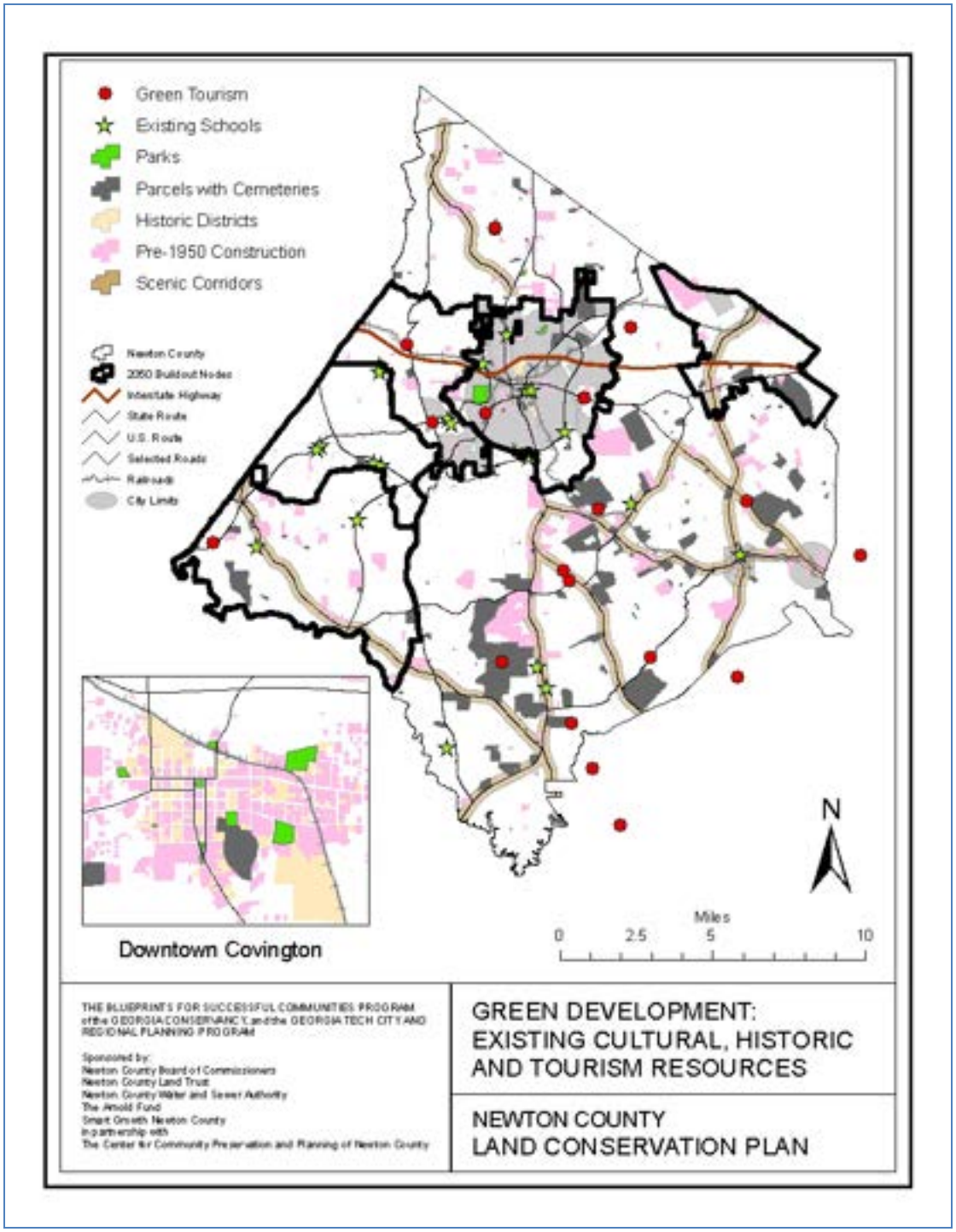


Figure 7.1k: Existing Cultural, Historic, and Tourism Resources: this figure includes rural tourism (agritourism and ecotourism) sites, schools, parks, cemeteries, historic districts, parcels with a structure built before 1950 and scenic corridors as recommended by the 2006 Comprehensive Development Plan.

District	Definition
A	Agricultural – Primarily larger acreage tracts over one hundred acres in size, with the majority of the land being used for agricultural purposes (soil crops, livestock, fish, fowl, and/or commercial timber).
R-E	Rural Estate – Primarily a combination of agricultural uses (see above) and larger acreage, sparse residential uses.
A-R	Agricultural Residential – Primarily large acreage or larger lot subdivisions of relatively low density development.

Table 7.1m: Newton County Existing Agricultural Zoning Districts

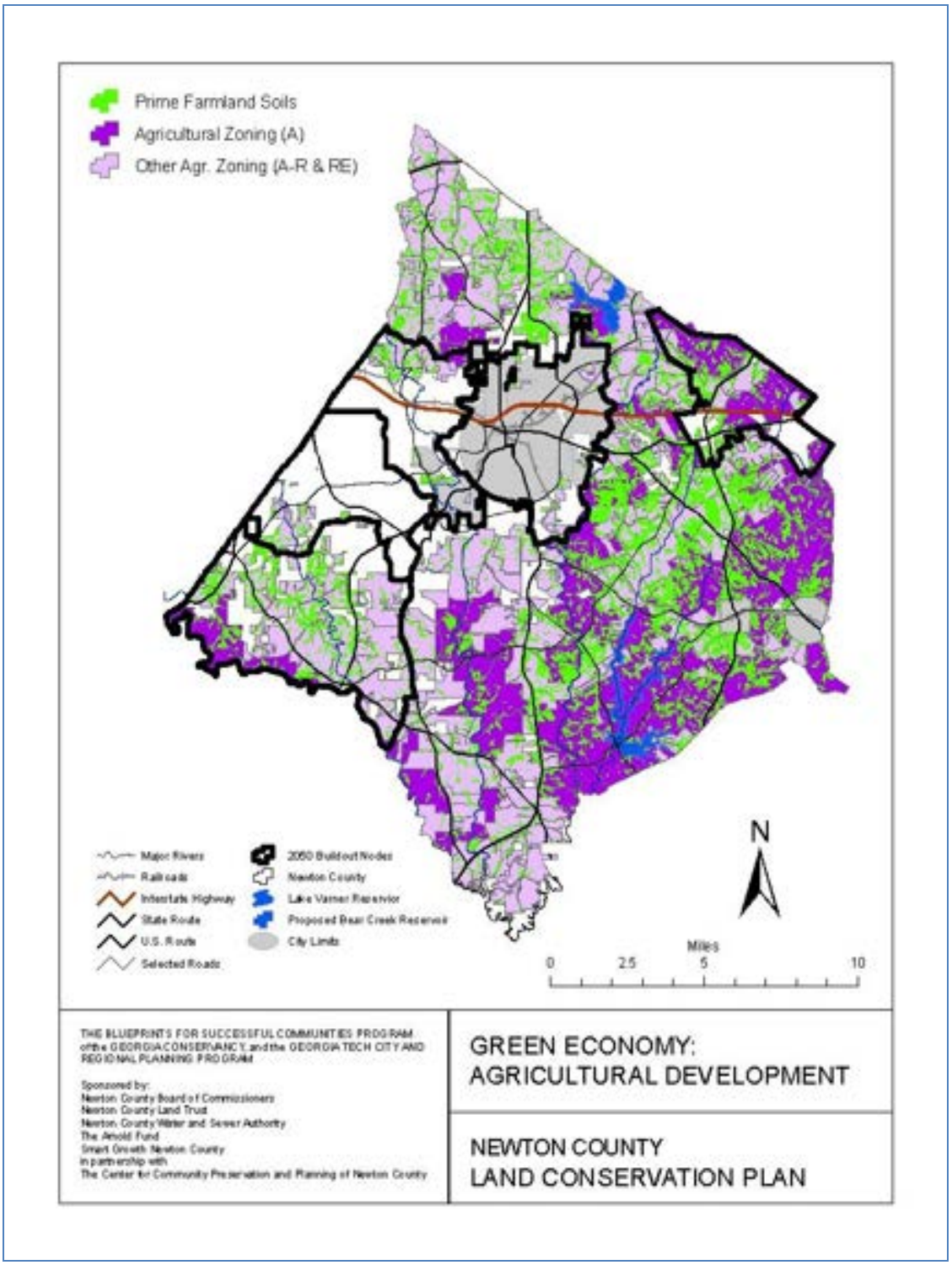


Figure 7.1n: Newton County Agricultural Development: displays all of the areas that are zoned for agriculture uses, with the strict agriculture (A) being separated from other zones where agriculture is also allowed (RE and AR). These areas are overlaid with prime farmland soil that has not yet been developed to show where agriculture conservation should be targeted.

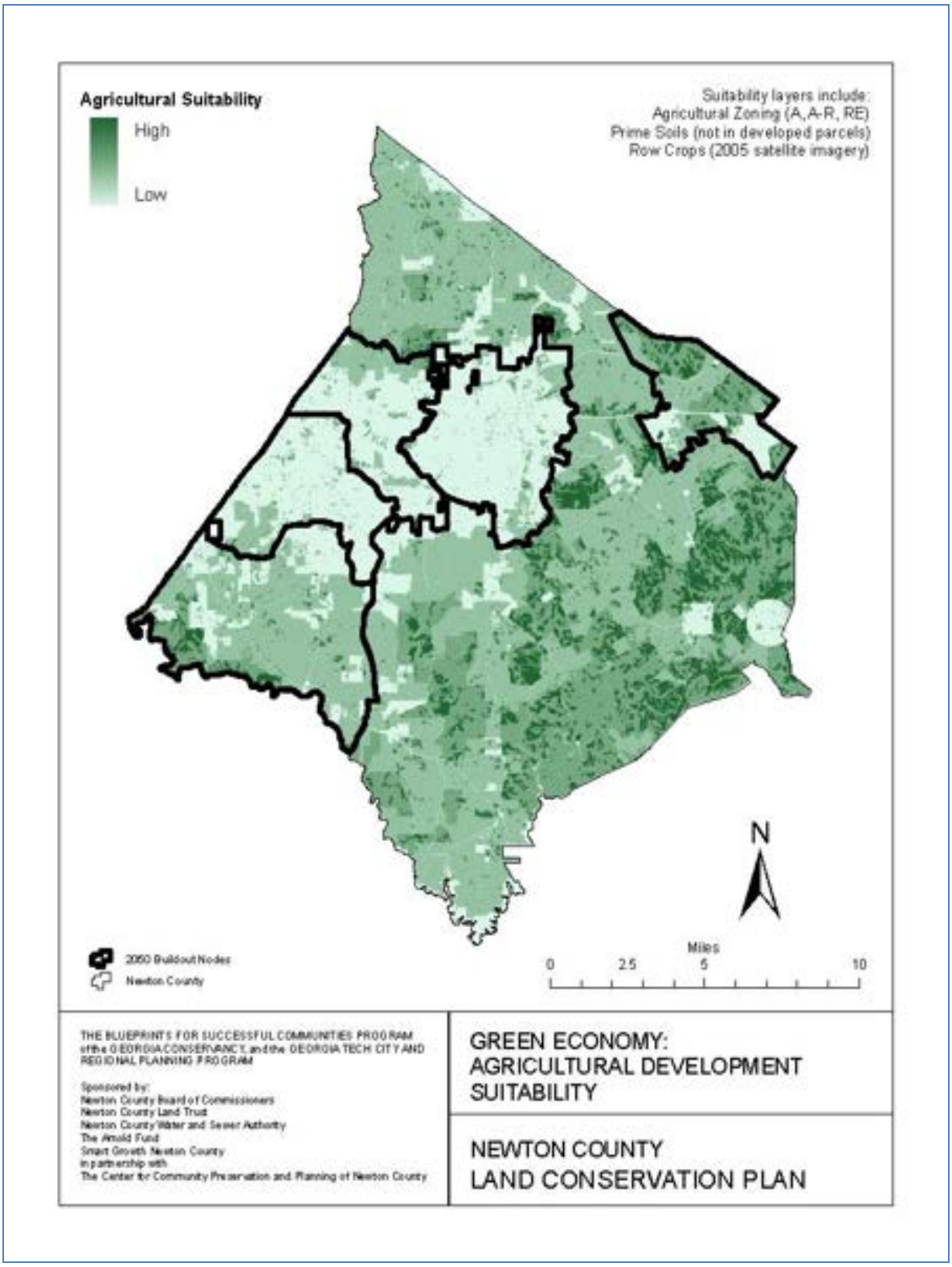


Figure 7.1p: Newton County Agricultural Development Suitability

Agricultural Preservation Tools	
Tool	**Description**
Agricultural Protection Zoning	Specialized form of zoning where the type and intensity of land use and land development are compatible and consistent with food and fiber production. There are two types: exclusionary (in which only agriculture uses are allowed) and inclusionary (where uses that do not disrupt agriculture land are also allowed).
Agriculture Overlay District	A mapped agricultural area where special regulations on development are applied. An overlay is superimposed over conventional zoning districts, but may also be used as stand-alone regulations to manage development in desired areas of the community.
Urban Growth Boundary	Defines the extent of future growth in a community by establishing a boundary within which urban types of development will be permitted. Development is restricted outside the boundary to preserve the farmland and rural character of these areas.
Agriculture Land Trust	Nonprofit organization that works to protect natural areas. Land trusts may purchase land, accept donations of land, create conservation easements, or carry out other activities related to protecting land. They often work together with landowners or local governments. There are various tax advantages associated with giving land (or easements) to land trusts.
TDR	Enables landowners in an area planned to remain as open space to sell their property development rights for use in other "receiving" areas of the community where higher density development is acceptable or desirable. Buying these additional development rights allows developers in the "receiving" areas to build at a higher density than would otherwise be allowed.
PDR	An arrangement whereby private landowners sell the development rights of their property to a qualified conservation organization or government agency, in order to permanently protect the property from development and thereby ensure that it remains as open space.
Impact Fees	One-time fees charged to new developments to cover part of the cost of providing the public facilities that support these developments. If properly applied, impact fees can encourage infill development while discouraging scattered leap-frog development.

Table 7.1q: Agricultural Preservation Tools

Table 7.1r: Federal Level Funding Tools

Federal Level Funding Tools		
Program	**Description**	**Land Qualifications**
Conservation Security Program	Voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on Tribal and private working lands.	Working lands include cropland, grassland, prairie land, improved pasture, and range land, as well as forested land that is an incidental part of an agriculture operation. The program provides equitable access to benefits to all producers, regardless of size of operation, crops produced, or location.
Environmental Quality Incentives Program (EQIP)	Voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land. EQIP may cost-share up to 75 % of the costs of certain conservation practices. Incentive payments may be provided for up to three years.	Must be engaged in livestock or agricultural production on eligible land. The practices are subject to NRCS technical standards adapted for local conditions.
Farm and Ranch Land Protection Program	Provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with state, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50% of the fair market easement value of the conservation easement.	Land must be part of a pending offer from a state, tribe, or local farmland protection program; be privately owned; have a conservation plan for highly erodible land; be large enough to sustain agricultural production; be accessible to markets for what the land produces; have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production.

Grassland Reserve Program	Voluntary program offering landowners the opportunity to protect, restore, and enhance grasslands on their property. This program helps landowners restore and protect grassland and certain other lands and provides assistance for rehabilitating grasslands. Implemented by the Natural Resources Conservation Service (NRCS), Farm Service Agency and Forest Service.	Grassland, rangeland, pastureland, shrubland and certain other lands that need rehabilitation, or are in danger of being developed.
Wildlife Habitat Incentives Program (WHIP)	Voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Through WHIP USDA's NRCS provides both technical assistance and up to 75% cost-share assistance to establish and improve fish and wildlife habitat. WHIP agreements between NRCS and the participant generally last from 5 to 10 years from the date the agreement is signed.	Any lands that can be classified as a valuable wildlife habitat, especially for at-risk species.
Conservation Reserve Program	Provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers.	Any farmer or rancher may apply to see if their land is eligible.

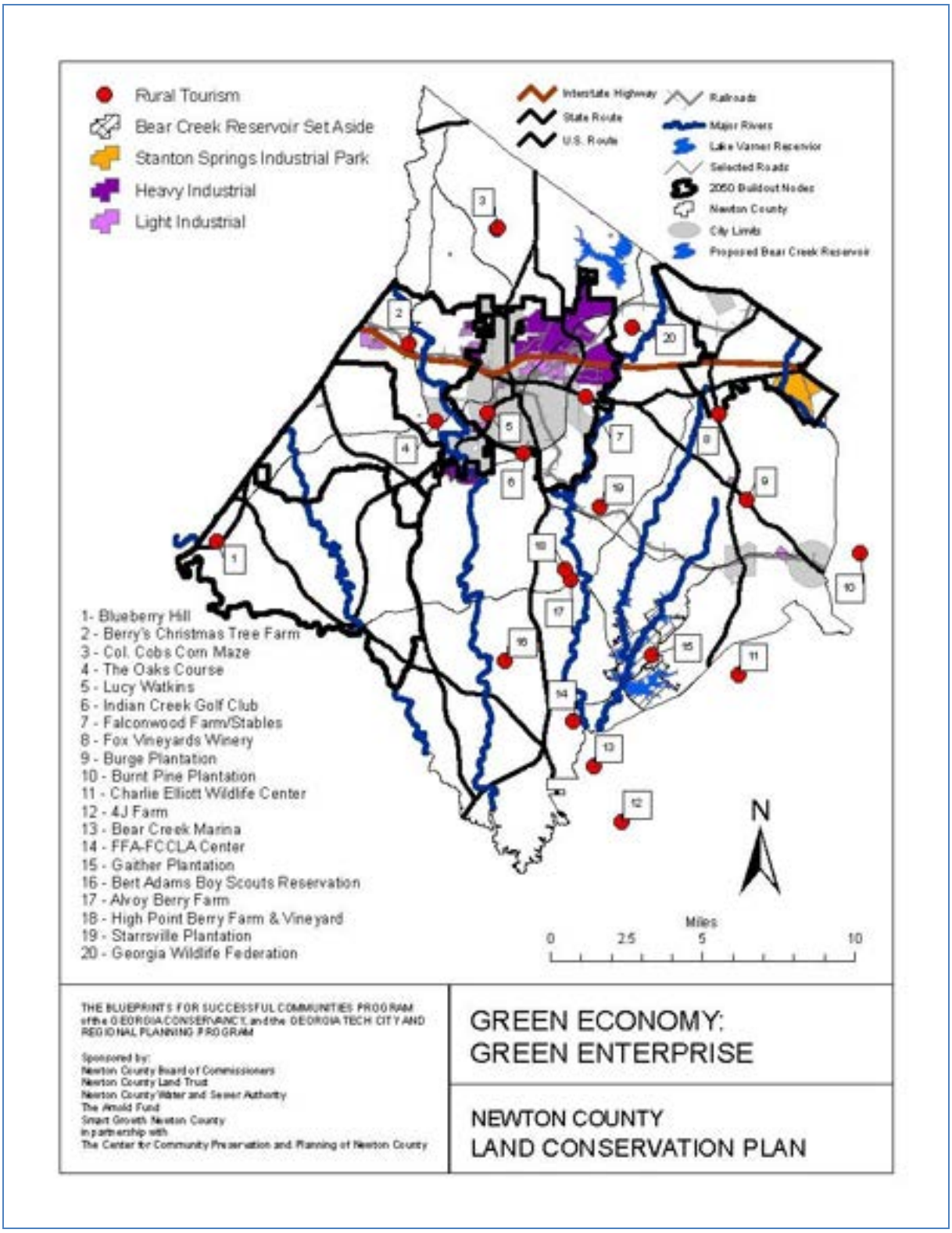


Figure 7.1s: Newton County Green Enterprise

7.2 SPECIAL TOPICS: LEGAL ISSUES

Legal Issues for Conservation in Newton County[4]

This section responds to legal issues raised by the various solutions recommended in this Conservation Plan. The issues are presented in 2 sections: 1) general legal issues; and 2) specific issues and recommendations for a TDR ordinance for Newton County.

General Legal Issues

Land use control regulations and policies, particularly with respect to conservation planning, can be controversial. In order to enact successful, defensible land use controls that make land conservation possible, it is necessary to understand the legal foundations of planning and zoning law. What follows is a brief overview of planning and zoning law in Georgia as well as coverage of a few specific issues that have arisen over the course of the *Blueprints* process.

7.2.1 Planning and Zoning Law: Brief Overview

Police Power and Zoning

"Zoning is a constitutional exercise of the police power," and in Georgia, the Constitution specifically grants the power to plan and zone to each county and each municipality.[5] Under the police power, government may regulate and control private behavior in order to protect the health, safety, morals and general welfare of the community. "As the individual's right to the unfettered use of his property confronts the police power under which zoning is done, the balance the law strikes is that a zoning classification may only be justified if it bears a substantial relation to the public health safety, morals and general welfare."[6] In Georgia, zoning and other land use controls are generally legislative actions and are presumed valid by the courts. *Gradous v. Board of Comm'rs of Richmond County*, 256 Ga. 469 (1986). Therefore, if a law restricting a landowner's ability to use his property is passed by a legislative body, a court will not substitute its opinion for that of the legislators unless the exercise of the police power in enacting the regulation is demonstrated to be unconstitutional. In such a challenge, the burden of proof to overcome the presumption of validity is placed on the challenger and requires a showing of "clear and convincing evidence." *Guhl v. Holcomb Bridge Rd. Corp.*, 238 Ga. 322, 323 (1977).

In Georgia, the validity of zoning ordinances will be determined by specific facts and relevant lines of inquiry, the so called "*Guhl* Factors."[7] These factors include: existing uses and zoning of nearby property; extent to which property values are diminished by the particular zoning restrictions; extent to which the destruction of property values of the plaintiff promotes the health safety…or general welfare of the public; relative gain to the public as compared to the hardship imposed upon the individual property owner; suitability of the subject property for the zoned purpose; and the length of time the

[4]PLEASE NOTE: NOT AN ATTEMPT TO PROVIDE LEGAL ADVICE. AUTHOR IS NOT A LICENSED ATTORNEY. This information was produced by a student for educational purposes only. The information contain herein does not constitute legal opinion. For a legal opinion regarding any of the information contain in this report, please consult a licensed attorney.

[5] *City of Euclid v. Ambler Realty*, 272 U.S. 365 (1926), Ga. Const. of 1983, Art. 9, §2, ¶4.

[6] *Guhl v. Holcomb Bridge Rd. Corp.*, 238 Ga. 322 (1977)(quoting *Barrett v. Hamby*, 235 Ga. 262, 219 S.E.2d 399 (1975).

[7] *Id.*

property has been vacant as zoned, considered in the context of land development in the vicinity of the property.[8]

Takings

The Fifth Amendment requires that private property may not "be taken for public use, without just compensation."[9] Under the current interpretation of the U.S. Constitution's Fifth Amendment taking clause, if a regulation of land goes so far as to significantly destroy the property's value, then that regulation constitutes an impermissible taking of the property through regulation, often referred to as a "regulatory taking."[10] How much devaluation it takes to effect a regulatory taking is not clearly defined by the Court as it has yet to settle on a measurable formula; however, the diminution in value must typically approach total devaluation.[11]

Exactions as Takings

An exaction can be described as "a form of subdivision control that requires the developer to provide some facility, either on-site or off-site at their own expense."[12] There are two federal cases which primarily govern the constitutionality of exactions. Those two cases decided that, in order for an impact fee to be constitutional, it must address an impact to the community which shares an "essential nexus" with the development and the fee (or other exaction) must be "roughly proportional" to the impact that the development will affect.[13] This standard has become known as the rational nexus test and governs how states, counties and other local governments can regulate exactions. Therefore, if an exaction does not meet the requirements of the rational nexus test, it may be considered an impermissible taking.

However, both *Nollan* and *Dolan* dealt with public access exactions made as an adjudicative decision on a single parcel, and there is no clear consensus on how broad exaction requirements enacted as a result of a legislative process would be handled—such as proposed in Solution 10, outlined in GREEN DEVELOPMENT which recommends the establishment of conservation subdivision regulations for each conservation overlay zone requiring open space dedication for each new subdivision. *Parking Association of Georgia v. City of Atlanta*, 450 S.E.2d 200 (GA 1994) which held that *Dolan* does not apply to a development condition imposed through the legislative process rather than through individualized determinations, seems to indicate that in Georgia a distinction would be drawn. The question has not been answered at the federal level.[14]

Impact Fees

In Georgia impact fees are defined as "a payment of money imposed upon development as a condition of development approval to pay *for a proportionate share of the cost of system improvement needed to serve new growth and development*."[15] Because impact fees are considered a type of exaction, impact fees are subject to the constitutional requirements just discussed. An impact fee must address an

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[8] *Id.*
[9] U.S. Const., Amendment V.
[10] *Lucas vs. South Carolina Coastal Council*, 505 U.S. 1003, 112 S.Ct. 2886 (1992).
[11] *See Palazzolo v. Rhode Island* 533 U.S. 606, 121 S.Ct. 2448 (2001).
[12] D. Basil *Recent Legal Developments in Land Use Planning*, University of West Georgia's Program in Rural and Small Town Planning and the Department of Continuing Education.
[13] *Nollan v. California Coastal Comm'n* 483 U.S. 825 (1987); *Dolan v. City of Tigard*, 512 U.S. 374 (1994).
[14] D. Basil *Recent Legal Developments in Land Use Planning*, University of West Georgia's Program in Rural and Small Town Planning and the Department of Continuing Education.
[15] Georgia Development Impact Fee Act O.C.G.A §36-71-2(8) (emphasis added).

impact to the community which shares an "essential nexus" with the development and the fee (or other exaction) must be "roughly proportional" to the impact that the development will affect.[16]

Governed by the Georgia Development Impact Fee Act, O.C.G.A §§36-71-1, "impact fees may be adopted through a planning process that clearly demonstrates that new development creates a need for new facilities (the *nexus*), that fees charged to new development do not exceed its proportionate share of the cost of those new facilities (the *proportionality* test), and that fees collected will be spent in a manner benefitting those who paid (the *benefit*). These elements are at the crux of what has become known as the *rational nexus* test."[17] The Act limits impact fees to financing of seven categories of capital facilities:

1) Water supply, treatment and distribution;
2) Wastewater collection, treatment and disposal;
3) Roads, streets and bridges;
4) Stormwater collection, retention, detention and disposal facilities, flood control facilities, and bank and shore protection and enhancement improvements;
5) Parks, open space, recreation areas and related facilities;
6) Public safety facilities (police, fire, emergency medical and rescue facilities); and
7) Libraries and related facilities.

In addition, a county or municipality who adopts an impact fee ordinance must also: adopt a comprehensive development plan with a capital improvements element; make a determination of system improvements, service areas, and fee structures; form an Advisory Committee; and establish a public hearing procedure.

While it is clear that impact fees may be used to fund "parks, open space, recreation areas and related facilities" under the Georgia Development Impact Fee Act,[18] what is not clear is whether impact fees can be used to fund the of purchase of development rights from private property owners in order to conserve non-public green space.

7.2.2 Specific Issues and Recommendation for a Transfer of Development Rights (TDR) Ordinance for Newton County

Introduction

As discussed elsewhere in this report, land conservation requires a balancing of the benefits and costs of land use controls. In response to this challenge, TDR programs have emerged to help strike a more equitable balance. Effective TDR programs aim to establish a method for protecting and conserving natural resources, while allowing property owners of such lands to recover lost value and residential

[16] *Nollan v. California Coastal Comm'n* 483 U.S. 825 (1987); *Dolan v. City of Tigard*, 512 U.S. 374 (1994).
[17] D. Basil *Recent Legal Developments in Land Use Planning*, University of West Georgia's Program in Rural and Small Town Planning and the Department of Continuing Education.
[18] "The Georgia Development Impact Fee Act clearly encompasses the imposition of a development impact fee for permanent open space protection that provides greenways, parks, or other forms of open space. The creation of green space meets the specifications of "system improvements," defined as "capital improvements that are public facilities. A "capital improvement" is defined as an improvement with at least a ten-year useful life that "increases the service capacity of a public facility. Public facilities" include "[p]arks, open space, and recreation areas and related facilities." 35 Wake Forest L. Rev. 563 (internal citations omitted).

development potential through an economically viable process of transferring such rights to other lands more suitable for development. Adopting a TDR program for Newton County will help serve the conservation goals of the County, including the goal of directing development to areas where urban services are already available or are planned to extend. In order to compliment the other conservation solutions recommended in this report, Newton County should devise a two-tiered TDR program with sending and receiving areas based on the proposed urban services limits that allows for bonus density credits when certain criteria are met.

The envisioned program's design would be based on a traditional TDR program and would include traditional sending and receiving areas. For Newton County, the Conservation Zone and the Rural Zone would constitute the sending area and the Development Nodes/Urban Service Area would function as the receiving area. In the sending area, the ability to develop should be strictly limited through the use of tools such as very low density zoning. In the receiving areas, developers would be entitled to purchase development rights from landowners in the sending area in order to exceed the baseline building density by a certain amount in the receiving area. A landowner's ability to sever and sell the development rights allotted to her property under the program would be conditioned upon the execution and recording of a restrictive easement against the property limiting its future development.

Unlike a traditional TDR program, we are recommending the adoption of a bonus rights/density system for Newton County in order to incentivize the conservation of priority class land resources, i.e. parcels directly touching riparian buffers and large parcel agricultural or timber lands. This is why the recommendation calls for a "two-tiered" program. Under the bonus element, high priority parcels would be allotted development rights at a slightly higher margin than other parcels in the conservation area, creating a greater incentive for those parcels to be conserved. This may be accomplished through a special overlay for parcels meeting the criteria.

Case Study: Collier County, Florida

A similar system was put in place by Collier County, Florida. Collier County, Florida lies on the southwest Gulf Coast of Florida, borders the northwest of the Everglades, much of its eastern portion constitutes Cypress National Preserve, and it was one of the fastest growing areas in the nation for the first part of the decade. The area faced high development pressure but possesses a wealth of environmental value.

Unlike Georgia, Florida requires local governments to engage in growth management planning in compliance with State growth management law. After an administrative law judge ruled in 1998 that Collier County was encouraging sprawl by allowing premature conversion of farmland in the County, Collier developed two systems to ensure the conservation of valuable environmental lands within the County.[19] The base program is a traditional TDR program called Rural Fringe Mixed Use District (RFMUD) and this program is augmented by an overlay program intended to create incentive based land use and preserve the highest value of the environmentally sensitive lands while permitting more intense uses on land where they are more appropriate. The program is the called the Rural Land Stewardship Area (RLSA) Overlay Program and it is highly relevant to Newton County.

Application of the RLSA overlay does not change the underlying density, permitted uses, or property rights of land within the overlay area, unless a property owner elects to use its provisions. A

[19] Bosi, M, Buskirk, P.V, and Ryffel, C. (2009).In Florida, an Anti-Sprawl Strategy It's the law—but it's also good planning. *Planning*.

participating property owner is compensated for protecting important agricultural land and natural resources. That compensation consists of stewardship credits, which are based on the environmental rating of the land and the amount of development potential being removed from the property.

A matrix of development layers allows landowners to preserve the natural resource or agricultural value of their property, thereby retaining some limited use of the land. This restriction on the land — the removal of residential development — generates stewardship credits. The selected mix of conservation, agricultural, and other uses determines the amount and types of credits to be awarded.

A similar program could apply in Newton County. High priority lands, such as those described elsewhere in this report, could be incorporated into an overlay where upon an owner's election to conserve, more credits could be sold depending on the level of conservation elected by the property owner. Thus owners would have greater incentive to opt for more restrictive conservation in order to obtain the right to sever and sell more credits.

However, in the rest of the County where conservation is deemed desirable, land owners would still have incentive to conserve and gain the right to sell development credits. Collier County programs share this value, and the County has developed a traditional TDR program called the RFMUD, as described previously. Under that program, the County acts as the central registry for buyers and sellers—something which would be advisable for Newton County as well. By doing so, the County can be assured that all development rights/credits which change hands are duly recorded and accounted for.

7.3 SPECIAL TOPICS: POTENTIAL GREENWAY CORRIDORS

Potential Greenway Corridors

Throughout the process of developing the Land Conservation Plan, stakeholders repeatedly suggested the possibility of creating a greenway network throughout Newton County as a way to support a variety of conservation and quality of life goals. Drawing from land conservation resources identified by all three "green" focus areas (Environment, Development and Economy), this section offers a composite map that could serve as the baseline for future greenway initiatives or the development of a comprehensive Greenway Systems Plan.

Greenways provide several benefits. Greenways can reduce vehicle trips to improve air quality; greenways offer wildlife corridor habitats; greenways provide recreation opportunities; greenways provide stream bank and aquatic protection.

When located along designated roads and Scenic Corridors, greenways can help protect Newton County's rural character and give residents and visitors a new way to enjoy the natural scenery. Ideally, these trails would be built as off-road, multi-use paths to minimize the conflict between vehicles, pedestrians and bicyclists; however, bicycle lanes can also be created by widening the existing shoulder. For state roads, the Georgia Department of Transportation (GDOT) will only widen the shoulder to accommodate bicycle lanes if there is an existing bikeway, if the project is on an approved bicycle route, or if the project is on a route where there is an approved bicycle plan.[20]

Connecting greenways to local historic, cultural and tourism sites in Newton County would showcase the County's unique amenities and support the local economy. A recent study by the Maryland Greenway Commission found that a 20-mile trail through Baltimore County annually attracts 450,000 people who spend $3.38 million on trail-related purchases.[21] The PATH Foundation in Atlanta has demonstrated that the value of properties adjacent or in close proximity to multi-use trails increases faster than those without such amenities.[22]

Finally, a well-connected greenway system would create new opportunities for physical activity for residents and visitors of all ages. A recent study in Newton County found that obesity, poor nutrition and a lack of exercise are the primary contributors to the three leading causes of death in the County: cardiovascular disease, cancer and diabetes.[23] Greenways could benefit these at-risk populations and help children adopt active, healthy lifestyles to avoid developing these problems later in life. Connecting greenways with schools would also enable some Newton County children to be able to walk or ride their bikes to school, perhaps exceeding the national average of only 15%.

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[20] Georgia Department of Transportation (2009). *GDOT Design Policy Manual*. Section 6.12. Retrieved April 21, 2009 from http://wwwb.dot.ga.gov/dpm/desmanual/ch06/ch06.12.html

[21] Waits, Julianne. 'Urban Green Space: Is it the Next Financial Frontier?' Business Perspectives, Fall/Winter 2008. Entrepreneur.com. http://entrepreneur.com/tradejournals/article/192437362.html

[22] Newton Trails (no date). *Benefits of Trails*. Retrieved April 19, 2009 from http://www.newtontrails.org/HTML/NT_Benefits.htm

[23] Ibid.

Existing Plans

At least two greenway studies have already been developed for Newton County. The County's 1999 Comprehensive Plan included a *Trails Master Plan* prepared by the Newton County Trails-PATH Foundation (Newton Trails). Newton County, the City of Oxford and the City of Porterdale have worked with Newton Trails and GDOT to construct several greenway segments already.

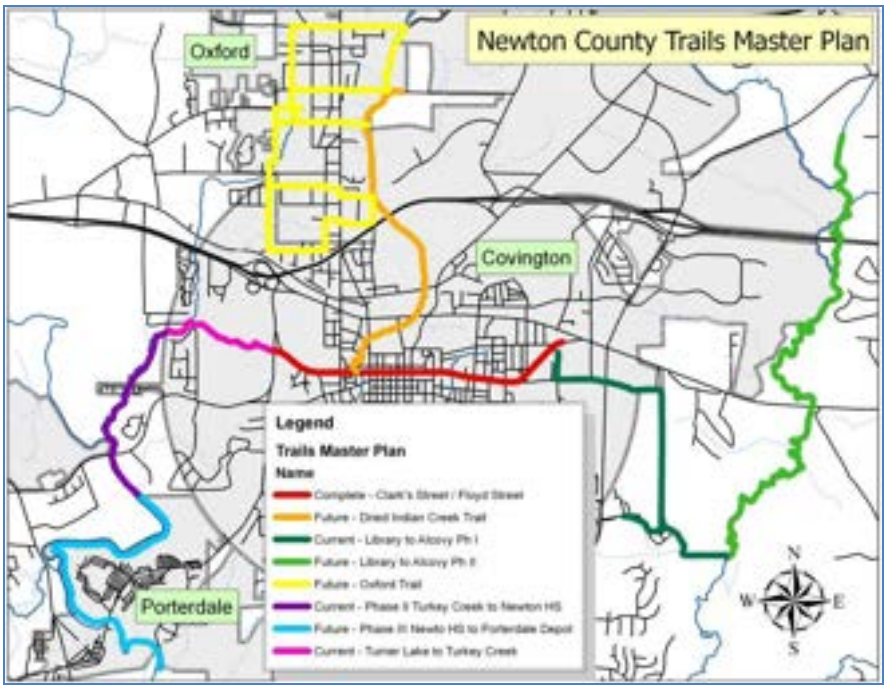


Figure 7.3a: Newton County Trails Master Plan

In June 2008, the Northeast Rural Georgia Regional Development Center prepared a *Corridor Feasibility Study* to evaluate potential greenway networks in the region.[24] The plan focuses on the possibility of using rights-of-way along interstate highways and overhead electric transmission lines, as shown in Figure 7.3a.

7.3.1 Greenway Objectives and Solutions

An interconnected greenway system supports Newton County's goal to create compact communities that are linked by publicly-accessible open space corridors. The development of a Greenway Systems Plan could incorporate the plans that have already been prepared, identify priorities and sources of funding, and create an implementation strategy.

[24] Northeast Georgia Regional Development Center (June 2008). *Corridor Feasibility Study for Evaluation of Potential Greenway Networks in Northeast Georgia*. Retrieved April 21, 2009 from http://www.negplanning.org/docs/Corridor%20Feasibility%20Study%20FINAL.pdf

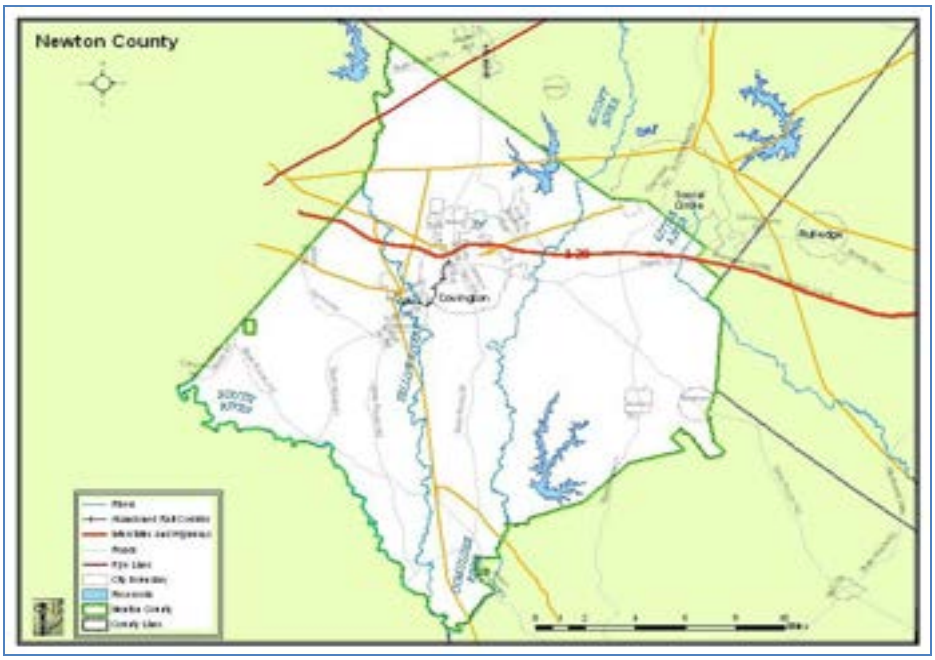


Figure 7.3b: Newton County Right-of-Way Corridors

Figure 7.3b, Newton County Right-of-Way Corridors, incorporates several land conservation resources, some of which are described in further detail elsewhere in this report. In many cases, developing greenways along these corridors supports other land conservation objectives and can help to secure funding from a variety of sources. It is important to note that this figure does not attempt to designate specific greenway routes, but rather suggests options to connect sites of interest. We hope that this description of available routes will assist the County in greenway routing and will be integrated into the next revision of any future development plans.

Possible greenway linkages include:

1. **Bicycle and Pedestrian Networks** are identified in the Newton County Comprehensive Development Plan, as proposed by Newton Trails.
2. **Inactive Railroads** are rail lines that are currently underused by the rail companies that own them and therefore have low amounts of rail traffic and cargo tonnage passing over these lines. Efforts should be made to acquire such corridors from the rail companies. The *Corridor Feasibility Study* for northeast Georgia identified the Covington-Porterdale Norfolk Southern line as inactive. Funding from the Rails-to-Trails Conservancy may be available to help construct this segment.
3. **Major River Corridors** could provide greenway opportunities within the 100-ft. buffer required along the Alcovy, South and Yellow Rivers.
4. **Scenic Corridors** as identified in the Newton County Comprehensive Development Plan.

Figure 7.3c also notes a variety of historic, cultural and touristic sites in Newton County that greenways could connect, specifically:

1. **Green Tourism Sites** – Connecting agritourism and eco-tourism sites in Newton County via greenways would encourage residents and tourists to visit and support these businesses.

2. **Existing Schools** – Connecting greenways to schools would enable some children to walk or bicycle to school.
3. **Existing Parks** – Parks provide a logical recreation destination to connect with a greenway system.
4. **Parcels with Cemeteries** – Cemeteries have increasingly become popular destinations for genealogy and recreation purposes. Newton County recently received funding from the Georgia Department of Economic Development to create a cemetery driving brochure.

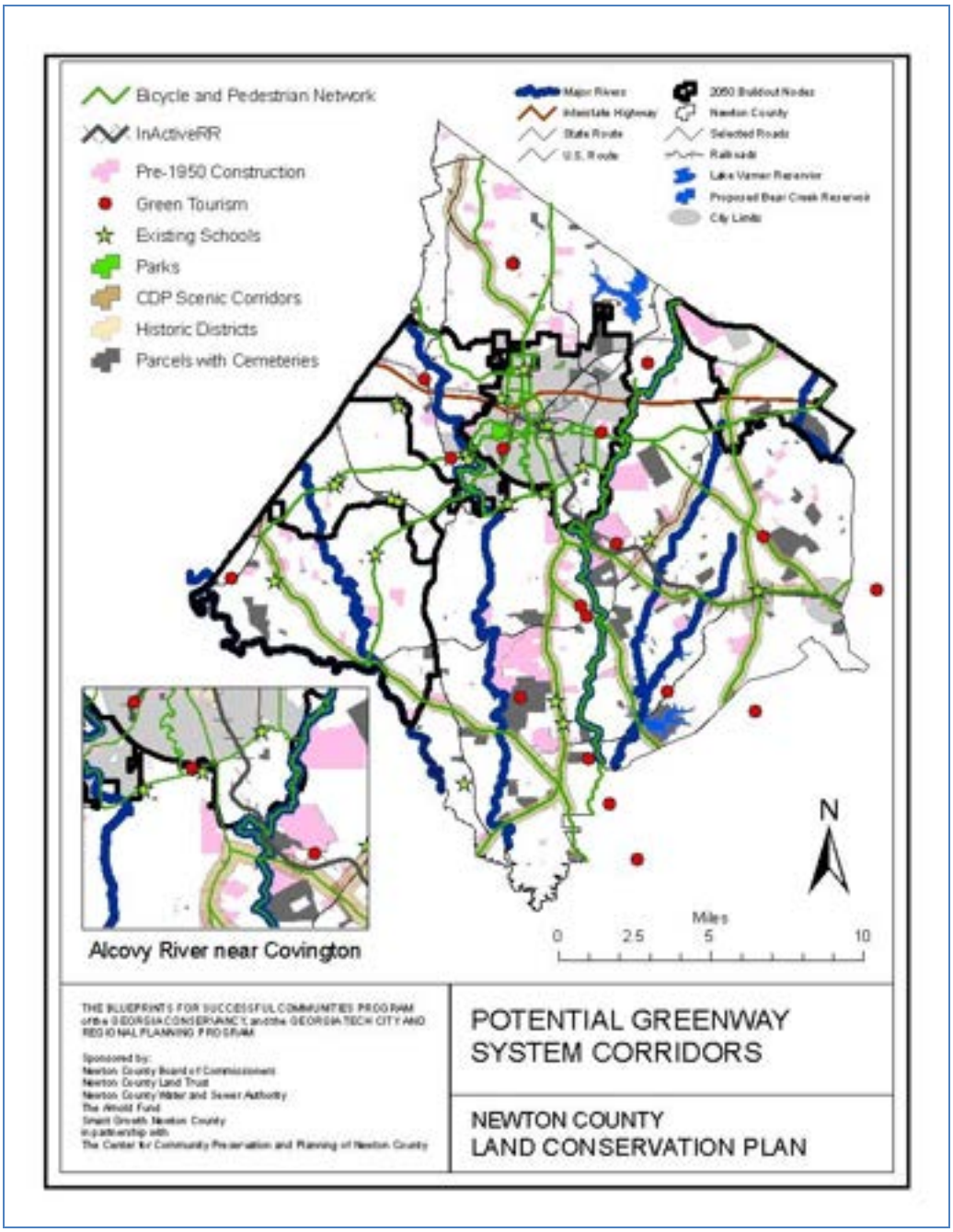


Figure 7.3c: Newton County Potential Greenway System Corridors

This composite map superimposes the natural, cultural, historic and tourism resources in Newton County on a backbone of land accessible for greenways and trails. The existing resources include parks, schools, cemeteries, historic districts, rural tourism (including agri-tourism and ecotourism) sites, and parcels with structures built before 1950.

7.4 SPECIAL TOPICS: CARBON FOOTPRINT

Measuring Newton County's Carbon Footprint

The emission of carbon dioxide has become an increasing global concern. Scientific evidence has pointed to its impact on climate change. As a result, it is important for people to understand their impact on carbon emissions, and for governments to take measures and make plans that take climate change into consideration.

In general, carbon emissions arise from activities that encourage energy use. Daily tasks like driving a car, heating and cooling homes and businesses and running appliances all have an impact on our carbon footprint. Many less well known behaviors also contribute to an individual's carbon footprint. Things such as how far away our food comes from and how much we recycle also contribute. Local governments have a direct hand in shaping the future of carbon emissions in the United States. Local governments have the ability to control building codes to enhance household energy efficiency; establish zoning policies to discourage excess driving and the preservation of greenspace; and develop conservation ordinances to encourage carbon sequestration and forest canopy preservation. These and many other tools are available for governments to utilize in reducing a community's impact on the global environment.

As a means for comparing current and future trends in carbon emissions, a simple carbon footprinting methodology was developed for demonstration to the Newton County stakeholders. This method serves as a first pass at estimating the carbon footprint, both total and per capita, for the citizens of Newton County. Our presentation focused on highlighting the possible benefits for the County's citizens if they were to implement some of the presented solutions in both the Conservation Plan and other plans they have prepared for the horizon year 2050. These benefits were contrasted against the 2050 status quo conditions, the environment assumed to exist if no government intervention occurs. The carbon footprint benefits revolved around the following key points:

1) Improved commute times due to more jobs within the County.
2) 2050 build out nodes will reduce internal vehicle miles traveled.
3) Enhanced access to local food due to the preservation and encouragement of agriculture within the County.
4) Improved household energy efficiency.
5) Preservation of greenspace, including active forests that can sequester carbon.
6) Development of a landfill methane capture and combustion program.

The subsequent pages contain the PowerPoint slides presented at one of the stakeholder meetings in the *Blueprints* process. This presentation walks a reader through the methodology used and the results developed for the two future 2050 carbon footprint scenarios. Within several of the slides are screenshots from carbon calculating websites. These websites are free to the public and were used to determine characteristics of household energy use and other carbon emission factors. These values were multiplied across the base 2009 County's population of 100,000 and the estimated future value of 400,000 inhabitants. These values are meant to be an estimated first pass at a County-wide carbon footprint. The magnitude of the total result is not as important as the change in values possible via the separate 2050 scenarios.

Methodology

- Developed an equation to determine current and future carbon footprint for the county
- Utilized carbon footprinting software and 2050 projections and estimates
- Determined impact variations based on three scenarios:
  - 2009 current conditions
  - 2050 continuation of the status quo
  - 2050 development of a green county

Equation

- Inputs
  - Commuting VMT (in county)
  - Commuting VMT (out county)
  - Internal VMT
  - Home Energy Usage
  - Commercial Sources
  - Secondary Sources
- Potential Carbon Sinks
  - Forest Sequestration
  - Methane Combustion

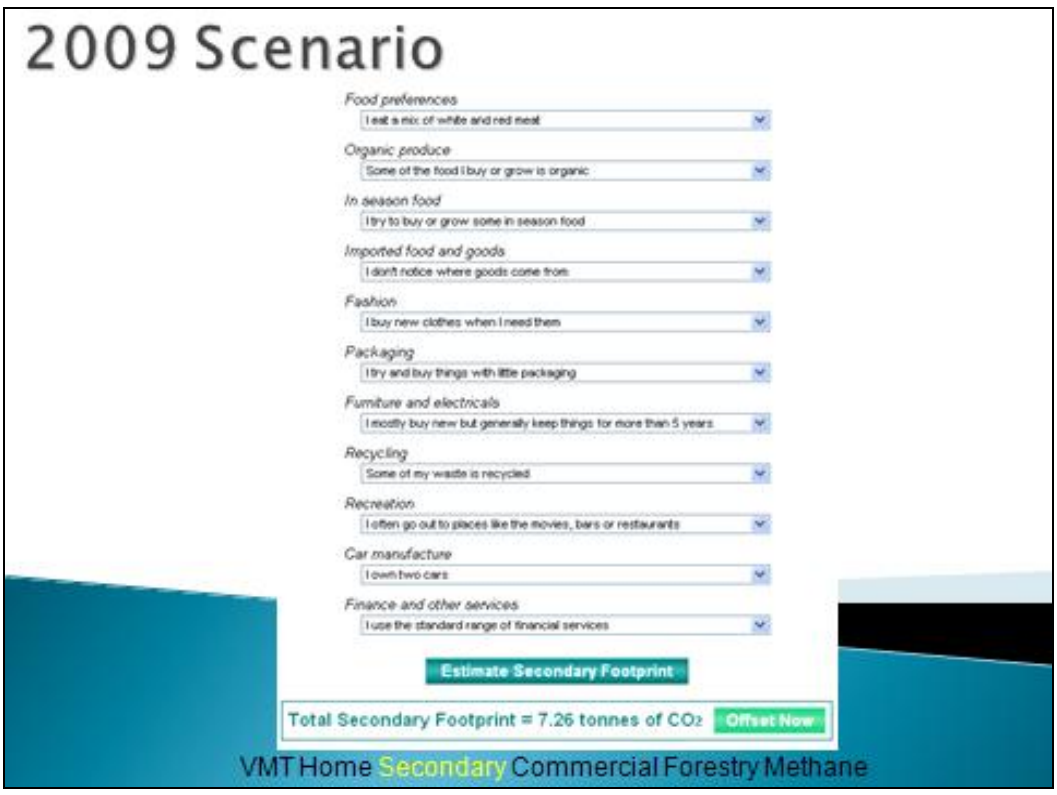
2009 Scenario

- 68% commute out of the county
  - Round trip to Atlanta 70 miles/day
- 32% of jobs are internal
  - Round trip 10 miles/day
- Per person other trips
  - 10 miles/day

VMT Home Commercial Secondary Forestry Methane

2009 Scenario

2009 Scenario



2009 Scenario

- VMT, Home, Secondary were summed
- Commercial was taken as an additional 1/3
  - A 2007 Georgia Tech study found that in the metro region, commercial ventures account for approximately 33% of the total carbon footprint for a county

VMT Home Secondary Commercial Forestry Methane

2009 Scenario

CO_2 Variables	Tons CO_2
Commuting VMT (in)	26,182
Commuting VMT (out)	406,600
Internal VMT	260,000
Home	1,200,000
Secondary	726,000
Commercial	864,198
Forest Sequestration	-288,522
Methane Combustion	0
Total	3,194,458
Per capita (tons CO_2/yr)	31.94

US Average: 20 – 26 tons per year

2009 Scenario

- Current forest cover is 48%
  - ~96,000 acres
- Sequestration rate
  - ~3 tons per acre per year
- Offsets
  - 9,032 people (9% of the population)

VMT Home Secondary Commercial Forestry Methane

2050 Status Quo

- Home energy efficiency improved
- Secondary improved slightly
- Commercial constant percent

2050 Conservation

- Home energy efficiency maxed
- Secondary improved more
  - 1.5 cars/household
  - Most food local
- Commercial constant percent

VMT Home Commercial Secondary Forestry Methane

2050 Status Quo

- Tree cover
  - Down to 25 %
- No methane capture
- Offset
  - 5,040 people
  - 1.3% of the population

2050 Conservation

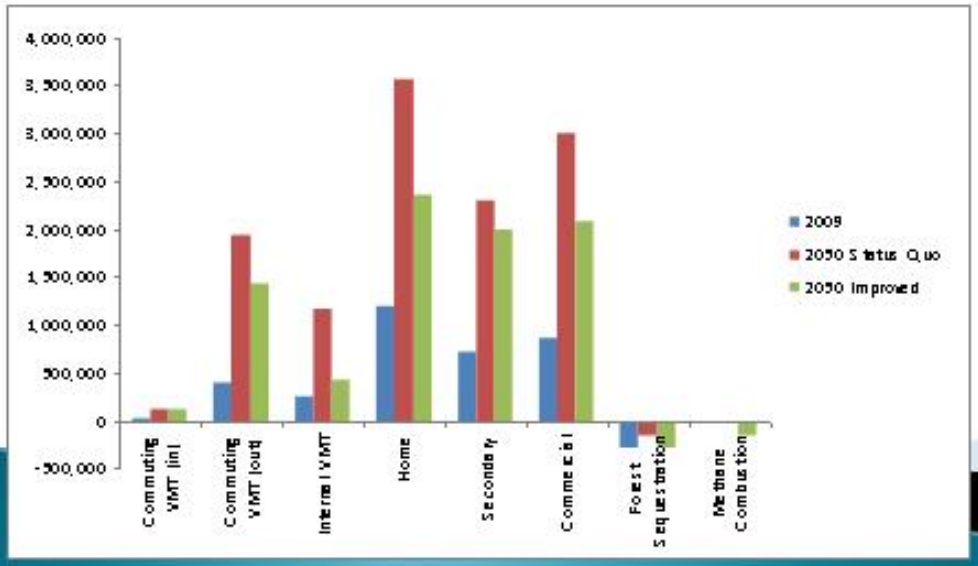
- Tree cover
  - Retained at 48 %
- Methane capture
- Offset
  - 22,448 people
  - 5.6% of the population

VMT Home Commercial Secondary Forestry Methane

All Scenarios

CO_2 Variables	2009	2050 St. Quo	2050 Conservation
Commuting VMT (in)	26,182	124,800	117,000
Commuting VMT (out)	406,600	1,938,000	1,425,000
Internal VMT	260,000	1,162,200	422,500
Home	1,200,000	3,560,000	2,360,000
Secondary	726,000	2,296,000	2,004,000
Commercial	864,198	2,996,730	2,008,405
Forest Sequestration	-288,522	-150,271	-288,522
Methane Combustion	0	0	-158,733
Total (tons CO_2/yr) w/commercial	2,618,782	9,081,000	7,969,650
Per Capita (tons CO_2/yr)	31.94	29.81	19.92
% Reduction from 2009 Values	-	-6.7%	-37.6%

All Scenarios



Summary

- 2050 conservation scenario benefits from:
  - Improved commute VMTs
  - Nodal development reduced VMT
  - Enhanced access to local foods
  - Improved household energy efficiency
  - Preservation of greenspace
  - Landfill methane recapture

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Blueprints for Successful Communities is an education and technical assistance program of the Georgia Conservancy designed to facilitate community-based planning across the state. The program is committed to achieving successful communities by creating sound conservation and growth strategies, and building consensus for action.

Georgia is home to an abundance of natural and cultural resources. Our development patterns over the last 50 years present a very real threat to these resources and to quality of life as a whole. Sprawling, decentralized development, where people must depend on automobiles, is expensive for local governments to serve and has a staggering effect on the environment. Vehicle emissions create toxic air pollution. Stormwater runoff from asphalt poisons rivers and streams. Thousands of acres of farms, woodlands, and open space are lost to wasteful, non-sustainable forms of development.

The Georgia Conservancy partnered with the Urban Land Institute and the Greater Atlanta Homebuilders in 1995 to host its first *Blueprints for Successful Communities* symposium. Currently the Conservancy maintains an active partnership with thirteen organizations. These diverse organizations and their members provide a great deal of understanding and expertise in the relationships that exist between land use, public infrastructure, economic growth, and environmental quality.

Prior to the Lindbergh-LaVista Corridor Coalition effort, *Blueprints* has addressed multi-jurisdictional watershed planning, heritage corridor preservation, location of commuter rail stations, inner city neighborhood issues, and other planning opportunities all through a collaborative planning process.

BLUEPRINTS PRINCIPLES

- *Maintain and enhance quality of life for residents of the community*
- *Employ regional strategies for transportation, land use, and economic growth*
- *Consider the effect of the built environment on the natural environment as well as history and culture*
- *Employ efficient land uses*

GEORGIA CONSERVANCY'S

BLUEPRINTS

FOR SUCCESSFUL COMMUNITIES

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