



## 8. QUALITY GROWTH

*THE NEED of rural regions for help in managing growth and preserving their quality of life.*

Tennessee’s population is projected to increase overall by 10% between 2010 and 2020, the timeframe of this plan. The impacts of this growth can be expected to fall most heavily on the parks, waters, and landscapes of some of Tennessee’s most scenic rural counties. Tennesseans are sometimes characterized as inclined to dismiss loss of farmlands and forests as an unavoidable cost of growth, but the 2009 TRAB Survey found just the opposite:

Conservation Goals	% ranking this goal as “Extremely Important”
Protecting water quality in rivers and streams	89.9%
Protecting fish and wildlife habitat	78.7%
Preserving working farm land	72.4%
Preserving farms, wooded areas and open fields	67.8%
Preserving historical and cultural resources	66.3%
Preserving forest lands for recreational purposes	63.9%

A large majority of Tennesseans also favor specific measures to pursue these conservation goals:

- 78.4% support requirements for new developments to include open space for neighborhood access to nature and recreation.
- 75.7% say that 10% or more of new development acreage should be set aside for these purposes.

## A Shift to Regional Strategies

In the last six years, there has been a major shift in Tennessee toward addressing impacts of land conversion through regional rather than county-specific strategies. These strategies recognize two fundamental realities:

- The network of roads and highways is the primary driver of sprawl.
- Every aspect of land use, especially conversion of farmland and forest to development, has an impact on water quality in the network of streams and rivers.

A regional approach is warranted for both road

planning and land use management because highways and streams run across county boundaries. The State has a major role in both of these networks: The Tennessee Department of Transportation (TDOT) has the job of deciding how public funds will be spent on new or improved roads, and TDEC has a responsibility to protect the waters of the state from significant impairment. These two departments, working with many partners, have implemented new initiatives to achieve a better balance between growth and resource conservation and to involve the public more directly in planning decisions that affect them.

## Tennessee Department of Transportation

At TDOT, this new perspective has been evident in three areas:

1. **Context Sensitive Solutions.** Context Sensitive Solutions (CSS) has ushered in an entirely new approach to project planning. A Community Based Resource Team including community members, area

### Six Tennessee Counties at Risk

The six Tennessee counties projected to grow in population by 25% or more in the next ten years could experience significant transformation of their landscapes and cultures if land conversion patterns continue as they have in the past. For Fayette County, which has had a history of resisting growth management, the prevailing pattern of land consumption could result in a 76% increase in the county's developed acreage by 2020. All six of these high-growth counties are rural, with traditions and landscapes that reflect a strong heritage of thriving agricultural economies. Rapid land conversion of farmland and forests to suburban developments and strip malls has the potential to severely impair quality of life in these counties.

County	Projected Pop. Growth 2010-2020	Metropolitan Area
Fayette	39%	Memphis
Williamson	39%	Nashville
Rutherford	38%	Nashville
Bedford	25%	Nashville
Wilson	25%	Nashville
Sequatchie	25%	Chattanooga

interest groups and local government representatives is appointed for each project. A collaborative and consensus-driven process is utilized where the Community Based Resource Team members and the design professionals all play integral roles in the outcome of the process. This results in stakeholder representatives working jointly to build consensus for alternative, aesthetic solutions that will be acceptable, affordable, maintainable and safe. As described by TDOT, CSS “balances safety and mobility and the preservation of scenic, aesthetic, historic, environmental and other community values.” There have been nine CSS projects since the inception of this new process.

**2. Long-range Strategic Plan.** Whereas past highway planning has generally been playing catch-up with local congestion increases, this new plan presents a strategic plan for the whole transportation network of the state, looking forward proactively toward the next 25 years. A major goal established in this plan is to “develop transportation infrastructure and services that minimize adverse impacts to people, communities, and cultural and historical resources...and natural resources...and that minimizes land consumption...”

**3. Rural Transportation Planning Organizations (RPOs).** The RPO process is intended to serve as the primary tool to increase local input and to pursue a more comprehensive approach to multi-modal planning in the state. The RPO organizations established by TDOT include: Center Hill, Dale Hollow, East Tennessee North, East Tennessee South, First Tennessee, Greater Nashville Regional, Memphis Area, Northwest Tennessee, South Central Tennessee East, South Central Tennessee West, Southeast Tennessee, and Southwest Tennessee.

TDOT’s new approach to highway planning represents a significant culture shift for the department. TDOT now sees itself as more than a road-building agency. It considers the impacts of new highways on sprawl as an integral part of the planning process. Just as important, it has given local residents a mechanism for demanding protection of their prized recreation assets

whenever new highways are being considered. In the process, TDOT has gone from being one of the primary enablers of sprawl to being a leader in encouraging higher-quality forms of growth.

## **Tennessee Department of Environment and Conservation**

At TDEC a similar shift is underway toward a more comprehensive, regional approach to water quality regulation that involves all stakeholders. Traditionally water quality regulation has focused on discrete stream segments. The department’s Watershed Management Approach considers the interconnected network of streams in a watershed and the cumulative effects of all forms of pollution as they move downstream. As this approach evolves, it will use GIS mapping technology to provide an online reference with every pollution source and every permit or land use change in a given watershed. This information has been fragmented in the past among many jurisdictions. Having it all accessible in one place will give state and local planners a far more complete picture of every factor that affects the quality of a watershed.

One benefit of this new approach for recreation resource managers will be to make more evident the impacts of land development on public land and water resources. Continued implementation of TDEC’s Watershed Management Approach will play an important role in protecting Tennessee’s recreation resources; and for that reason, this plan takes up the watershed approach in greater detail in the **Recreational Waters** initiative.

While these changes at the state level are important steps toward addressing the impacts of land use on parklands and waters, Tennessee’s cities and counties still have the major role in local land use decisions. They issue permits for new development, develop subdivision plans, and produce county growth boundaries as required under the Tennessee Growth Management Act. Any meaningful protection of Tennessee’s public recreation resources must address land-use decision-

making within the cities and counties themselves. And since individual cities and counties, each with its own standards and regulations for land use, can end up competing with their neighbors, a regional approach is likely to be the most effective.

## Cumberland Region Tomorrow

Fortunately a successful model for promoting quality growth at the regional level already exists in Tennessee. Cumberland Region Tomorrow (CRT) was formed in 2000 as a response to runaway sprawl in ten counties of the Nashville region. This private, non-profit, citizen-based, regional organization works with many public and private sector partners. Thanks to CRT's efforts, the region has embraced a set of Quality Growth Guiding Principles, one of which is aimed directly at protecting recreation assets: "Conserve our region's land, water and natural resources for our future

economic, health and cultural well-being."

CRT has incorporated these principles into an integrated system for facilitating Quality Growth at the local and regional level. The system is composed of three primary elements:

- Quality Growth Toolbox
- GIS GreenPrinting
- Training, Technical Assistance and Networking

### Quality Growth Toolbox.

The CRT Quality Growth Toolbox is the key element in their overall strategy. CRT researched best practices for growth management from all over the United States and compiled them into a comprehensive set of strategies for local governments to learn and apply. These strategies are presented under five topic areas:

- Reinvesting in towns, city centers and communities,



- Creating a variety of housing choices,
- Conserving the region's land, water, natural, and cultural resources,
- Transportation/land use planning for Quality Growth,
- Guiding infrastructure investments for sustainable growth.

In each of these interrelated areas, the toolbox stresses that choosing to promote quality growth is the region's best pathway to economic growth and vitality. It also stresses that these efforts will result in increased community and regional livability, of which recreational resources are an integral part. Since CRT is a private

### Changing Perspectives on Growth Planning

Until recently, state law left growth planning largely in the hands of individual communities. In 1998, Tennessee's Growth Policy Act began to encourage local governments to cooperatively develop growth plans and set growth boundaries. Opportunities exist for planning and zoning systems to be strengthened to better guide growth and development and ensure efficient use of public resources. For decades in our region and state, growth in any form was considered desirable. To plan for growth - much less require developers and builders to conform to a plan - was thought to stymie growth and harm the community.

However, with the pace of growth experienced in the Cumberland Region in the past decade, communities of all sizes have come to recognize the increasing value of planning for the region's imminent growth. More and more, the region's communities have come to recognize that quality of life is impaired by unplanned or unchecked growth. Communities also recognize the significant expense of supporting growth through the cost of added infrastructure and community services.

entity, their success must depend on their ability to build local buy-in to the concepts of promoting Quality Growth rather than new land use regulation. This model appears to be especially well suited to Tennessee's traditions and culture. It has helped communities recognize Quality Growth as a practical pathway toward becoming stronger and avoiding the adverse consequences of unplanned growth.

### Strategies for Conservation

The CRT Toolbox contains strategies for conservation of land, water, natural, and cultural resources. A basic premise of CRT's community planning is to consider the value of natural resources to the local economy, environment, and quality of life. Their approach to planning establishes a framework to protect water and natural resources, preserve important natural and historic landscapes, and support local farmers. Citizen involvement in this process ensures the effectiveness and success of the effort.

Practical measures detailed under the resource conservation theme of the toolbox include:

- **Natural Resources Inventory.** Identify the region's specific land, water, natural, and cultural resources and combine it in a geospatial database to build a comprehensive picture of the region's combined natural resource assets.
- **Conservation Priorities.** Analyze the Natural Resources Inventory to identify land, water, natural, and cultural resource areas that are most critical for conservation in the region. This allows conservation and planning efforts to be implemented more strategically.
- **Community and Regional Plans.** Include critical areas for conservation into regional, local and site plans.
- **Priority Funding Areas.** Local governments create priority funding areas for government infrastructure investment to guide development into designated areas and away from critical conservation areas. Because private development relies on public infra-

structure investments in utilities and transportation, priority funding areas for infrastructure can be a significant incentive for attracting new development into desirable locations and away from sensitive resources.

- **Link Corridors of Public and Private Open Space.** The toolbox stresses the importance of planning to maintain a “natural infrastructure” of connected undeveloped lands, riparian zones, natural resource corridors, greenways, and parks. This natural infrastructure connects wildlife habitats and supports biodiversity in all parks in the network - all of which contribute to a region’s quality of life and economic health.
- **Development Buffers.** Prescribing “no development” zones of a defined width and encouraging or requiring appropriate native landscaping provides multiple habitat and water quality benefits. Development buffers help mitigate compatibility problems between new development and resource lands such as parks, forests, and farmland. Such buffers contribute vital connections for the region’s natural infrastructure network, and can also serve as lands for greenways.

- **Native Vegetation for Water Quality.** Stream water quality is improved by increasing absorption with native trees and plants that filter sediment and pollutants. Aquatic and terrestrial wildlife habitat is also improved by large tree canopies that provide shelter and lower stream water temperatures. In addition, flood damage is reduced when trees and plants are available to slow the velocity of runoff.

### Use of GIS: Regional GreenPrinting

The second major component of the CRT system is the use of Geographic Information System (GIS) technology in the Quality Growth planning process.

In the past, permitting processes at all government levels often suffered from a narrow focus on the individual permit application and the specific site involved. Agency personnel simply did not have access to information about the locations of nearby resources that might be affected. In 1985, TDEC pioneered an initiative to compile the geographic information needed for a more comprehensive perspective. The department’s *Tennessee Recreation Atlas* contained detailed maps of the state’s 95 counties showing the locations of all state, federal, and local parks and other important



resources. This may well have been the nation's first example of what has become a widely embraced strategy that has taken off with the advent of GIS technology. Known as "GreenPrinting," this strategy develops GIS databases of natural resources, infrastructure, and other elements in a region so that permitting agencies can be fully aware of potential unintended consequences of a particular decision. GIS information provides a better knowledge base for assessing the impacts and costs of land use and transportation decisions.

CRT has incorporated GreenPrinting as a strategic approach to integrating critical natural resource areas into community and regional growth plans. Through the support of TWRA and several key partner agencies, the CRT counties became the pilot region for Tennessee to make such information available. The objective of the CRT Regional GreenPrint project was to develop a GIS-based decision-making tool that could be used by local and state government planners to insure access to and knowledge of critical lands for conservation in the region.

Information currently available in the TWRA *Tennessee Wildlife Action Plan* serves as the base layer, with other critical GIS layers being added as they become available. As TDEC's evolving Watershed Management Approach for integrated permitting produces watershed-based GIS databases in the next few years, these will be important resources added to the regional GreenPrint.

### Training and Networking

Planning tools alone cannot ensure that quality growth will occur. CRT has recognized that, especially in rural counties, the whole notion of growth management can represent a radical departure from long-established assumptions and practices and can feel threatening to the individuals making the critical decisions. For this reason, CRT's methodology places a strong emphasis on personal relationships and collaborative leadership. Their work strives to establish a leadership advisory group in each community

comprised of business and community leaders who join with their local government officials to commit to joint actions that take advantage of the positive benefits of Quality Growth in their communities and region. In addition, the organization provides training and technical assistance for local planners, local officials and business and community leaders to help them learn to use Quality Growth Toolbox planning tools effectively. This emphasis on personal relationships and collaborative leadership has been the single element that has contributed most to CRT and their pilot communities' successes.

### Landscape-Level Conservation

It was the promise of fertile farmland that moved Tennessee's early settlers to endure hardships and dangers to carve out new lives on a distant frontier. Life in the rural landscape became the core of the state's heritage and identity, producing the great musical traditions for which the state is known across the world. Until just a few years ago, Nashville was known as "the fifteen minute city" because the residents prided themselves on being able to reach Middle Tennessee's lush, scenic farmlands with no more than a short drive from downtown.

Much of Tennessee's scenic beauty is still found in the great expanses of farm and forest lands that have survived. Preserving these heritage landscapes intact is a concern shared by many. The 2009 TRAB Survey found that 91% of Tennesseans feel it is important or extremely important for a county to preserve its farms, wooded areas and open fields. Asked about their priorities for various conservation goals, 76% ranked preserving working farmland as extremely important.

Landscape-level conservation is a concept that is receiving increasing attention nationally as it has become apparent that the more traditional focus on protecting individual parcels is not sufficient to maintain the integrity of ecosystems, wildlife habitats, and the water quality of streams. Accordingly, the 2009 *Great America Outdoors* report of the Outdoor Recreation

Review Group (ORRG) proposes as follows:

“Federal and other public agencies should elevate the priority for landscape-level conservation in their own initiatives and through partnerships across levels of government, with land trusts, other nonprofit groups, and private landowners to conserve America’s treasured landscapes.

“The Secretary of the Interior should work with state and local officials, land trusts, conservancies, and other groups to identify opportunities for landscape-level conservation in both rural and urban settings. An increment of the Land and Water Conservation Fund should be allocated to the Secretary for use at his discretion to encourage landscape-level conservation by stimulating innovative public-private partnerships and rewarding outstanding state and local commitments to protecting treasured landscapes.”

The CRT methodology embodies this priority. The organization’s networking process emphasizes developing public/private partnerships for landscape-level conservation. An especially important partner, the **Land Trust for Tennessee**, has been working closely with private landowners to safeguard privately owned and managed forests, wildlife habitat, wetlands, and other working landscapes through conservation easements and other measures. This organization has achieved permanent protection for a total of over 9,000 acres in the CRT region and over 42,000 acres statewide. Landscape-level conservation requires a concerted effort. As the ORRG report notes: “It requires the cooperation of many sectors and agencies, melds numerous sources of funding, and tailors strategies to the circumstances of communities and private landowners.

## Conclusion

CRT has developed a successful, well integrated model for addressing the problems associated with growth and land use change in Middle Tennessee. This model can provide significant benefits for conserving recreation resources and should be exported to other regions of the state. TDOT, which provided the seed

## Duck River Highlands Project

The Duck River Highlands Project is a broad land and historic preservation initiative facilitated by the Land Trust for Tennessee to identify and protect the fragile rural resources of northwest Maury, southwest Williamson, and northeast Hickman Counties bounded by the watersheds of Snow Creek, Lick Creek, and Leipers Creek.

In 2005, concerned landowners approached the Land Trust and raised funds to help formulate a plan for protecting some of the region’s rich assets on a community-wide scale. The first phase of the project involved a year-long inventory study sponsored by the National Park Service that documented the natural, cultural, historic, and agricultural resources in the region. The inventory staff interviewed residents, surveyed historically important sites and structures, and documented important natural and agricultural resources. Community meetings were held to present the work and explain different land conservation and historic preservation tools local residents could utilize to protect these resources. The inventory project generated widespread enthusiasm for the area, and inspired some residents to take advantage of these tools.

The Land Trust for Tennessee completed the first of several conservation easements in the Duck River Highlands area in fall of 2006, and local natural resource and historic preservation groups are working to safeguard other irreplaceable hallmarks of this community.

money for Cumberland Region Tomorrow's work to create and pilot the Quality Growth Toolbox anticipates that federal planning dollars can be used to fund this initiative. TDOT, TWRA and TDEC resources can support the creation of GreenPrint GIS systems with consolidated data resources for each region. Cumberland Region Tomorrow's leadership has indicated a commitment to assisting in other regional or statewide replication efforts.

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## 2015 Action Plan

DOT, TDEC, and CRT should form a partnership to establish new regional organizations or work with existing ones to implement the CRT Quality Growth methodologies.

This initiative should include supporting coalitions of TDOT's Rural Planning Organizations, regional Development Districts, regional chapters of non-profit and professional organizations relating to Quality Growth and planning, and private partners.

The partners should assist these new Quality Growth entities in building region-specific GreenPrint geospatial databases of natural infrastructure, including parklands, greenways, streams and buffers, and critical conservation areas.

The partners should also assist these entities in developing region-specific Quality Growth Toolboxes.

The partners should help train the staff of these organizations in the use of the Quality Growth Toolbox and the GreenPrint database, and in Community/Collaborative Leadership training/technical assistance for county decision-makers.

Implementation of this initiative should begin with active pilot projects in strategic locations in each planning region to demonstrate successful application of the CRT resources and methods.

## 2020 Vision

Every Tennessee county will incorporate Quality Growth tools and principles in its land use planning and development permitting, so that each county will

conserve its recreation resources - parklands, greenways, streams and buffers, and critical conservation areas - to accommodate future population growth. New development will include greenways and buffers to preserve the integrity of streams. Open lands, farms, and forests will be recognized as critical amenities for the region. And all state and local parks will be protected by natural buffers from impacts of adjacent development.

## Coordination Links

**Advocacy and Funding.** CRT's approach stresses that preserving the natural infrastructure and critical conservation areas ultimately benefits the residents in terms of better quality of life, a stronger local economy, and higher local real estate values.

**State Parks Management.** Having a GreenPrint database for use by local planners, and requiring buffers to protect these resources from adjacent development will help ensure that the resource protection needs of State Park managers will be considered and respected as part of the local land use planning process.

**Local Parks and Recreation.** The Quality Growth process encourages communities to value their current parks and potential future ones as critical community amenities and to consider the impacts on these amenities in all land use planning decisions.

**Tennessee Recreation One-Stop.** The GIS data acquired from state and federal agencies and local parks and recreation departments for the Recreation One-Stop website will provide recreation resource information for Quality Growth GreenPrint databases.

**Rural Economies.** Entities that promote Quality Growth will help build local buy-in to the principle that regional cooperation to conserve natural and historic resources is a good way to strengthen the local economy. This understanding will support for initiatives to develop heritage area and scenic byways.

