

Community Goal # 10

GOAL STATEMENT: Our citizens will manage our natural resources in a way that will support current and future generations.

Leadership Team

Mr. Dick Carr, Piedmont Sourcing, Inc (Chair)

Mr. Ricky Richardson, Smith Barney (Co-Chair)

Mr. Charlie Marshall, Priority Metrics Group (Facilitator)

Membership & Diversity

The Taskforce was assembled by sponsors Dick Carr, and Ricky Richardson and began its work on June 6, 2005. Members of the team were selected based on their expertise in environmental areas encompassed in Community Goal # 10, as well as their past community involvement with issues relative to the Community Indicators. Taskforce members represented every aspect of community engagement including state and local government, higher education, non-profit organizations and for-profit business and industry.

Approach & Methodology

Once the team agreed on the components necessary in achieving meaningful results associated with GOAL 10, the team was broken down into sub-committees. Each sub-committee was tasked with researching their topic area, and developing strategies with associated objectives and indicators. The entire team reviewed recommendations of each of the sub-committees throughout the process. Once the team was in agreement with the sub-committees the findings and recommendations were brought together into a single document.

The sub-teams utilized a number of resources in researching their topic areas, there resources included, but were not limited to:

- GSP Urban Sprawl Data
- City of Jacksonville Community Indicators
- Spartanburg County Water Quality data
- Current Spartanburg County Community Indicators
- EPA Watershed Ordinances
- 1998 Spartanburg County Master Growth Plan
- The Clemson Research

Over-Arching Strategy

“Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does to himself” Chief Seattle, 1852 (from The Power of Myth)

We, as all citizens, must respect and care for our natural resources. They are finite. How we treat land, air and water is up to us, and those to come. Those who preceded us understood that by living *on* the land they must live *with* the land, respecting honoring and protecting it. In our “modern” world of global business and broad living we have become separated from close

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contact with our natural environment. This shift tends to render our natural resources to the status of a consumable, not a healthy position for a finite resource.

As we expand the use of our natural resources, we debate the merits of their use to the value of societal growth versus the danger of unrelenting encroachment of natural resource in their transformation to satisfying our perceived societal needs. In this on-going debate, the positive consequences normally prevail since they favor perceived progress, comfort and grander living. As for the other side, it is human nature to circumvent the negative. But can we afford to overlook the growing impact of society on finite resources?

No. As evidenced by the addition of “*caring for our natural resources*” to the Community Indicators VI, there is a concerned constituency in Spartanburg. Fortunately, this community self-examination has the benefit of concerned leaders driving the process. We of Task 10 “*Natural Resources Report Card*” have benefited greatly from the support of the *Indicators* leadership group. Of equal importance, a diverse group of environmental professionals, advocates, businesspersons and concerned citizens have labored at length developing our goals and strategies. They are good; thoughtful in perspective, definable in importance and actionable. But they are only as good as the willingness of the community to act on them.

There is a general understanding within our task group regarding perceived barriers to implementation of environmental protection issues:

1. Environmental improvement awareness is not a pervasive topic within the community. There are, however, several very sensitive reactionary issues and are centered on land use. These tend to be emotional and focused on the negative creating a challenge of bringing positive solutions to long-term environmental challenges.
2. Local governments’ attitudes regarding environmental issues are passive. There is a lack of inspired leadership and adequately trained staff plus too many higher profiled problems. This is not an uncommon problem, which further exacerbates developing positive leadership from our governments.
3. There is a great span of differences regarding land development.
4. The “lack of funding” issue is old hat in government circles and takes the urgency out of advanced planning, particularly for lower priority issues.

On the other hand, there are some positives for implementation:

1. There are some very good private “natural resource” groups and institutions operating within Spartanburg and the upstate. They are highly visible and respected. They have good data and solid strategies for implementing various environmental projects and processes.
2. Industry in the area is quite advanced and sophisticated in its environmental controls and conservation initiatives. As a whole, they make good environmental citizens.
3. Because of federal and state government laws and regulations, air, water and solid waste quality standards are mandated and measured. Energy use is tied to best practices and conservation standards are also mandated in some instances. Minimum and stretch standards are well known to those regulated.

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4. There are some successful regional best practices available for benchmarking land use.

The Taskforce members believe that within the private sector there is the knowledge, desire and leadership to positively impact the natural resources indicators chosen. However, to successfully meet indicator-supporting goals within the chosen time frame a major support piece is missing. That piece is the public sector. For that reason we submit the following over-arching goal:

To assure that

Water Quality

Land Use

Energy

Solid Waste

Air Quality...

Indicator goals are met, local governments will commit to establishing and acting upon synergistic Environmental Initiatives with Environmental Action Agendas by 2008. Action Agendas are extensive documents that reinforce the government's commitment to conserving natural resources, promoting environmentally healthy lifestyles, forging and respecting public/private partnerships and leading by example in the community's pursuit of its environmental stewardship

Land Use Strategies & Objectives

The primary theme of the land use element of Goal 10 would be to refine and implement the recommended strategies in the Spartanburg County Comprehensive Plan 1998-2015. By directing development toward growth nodes and giving “teeth” to policies that would formalize designated land use category areas, we can encourage growth while conserving Spartanburg’s rural character.

Strategy 1: Spartanburg will reinvest in neglected communities, rehabilitate abandoned properties and provide more housing opportunities to strengthen its metropolitan centers. By tracking different levels of residential density, we can identify strategies that support and encourage growth in designated growth nodes. It is important to note that high-density does not equal high-rises

Objectives:

- Establish and track the gross population density in Spartanburg in persons per square mile (per census tract) and track the average lot size for single family dwellings
- Establish and track the percentage of population living at densities less than 1,500 person and greater than 12,500 persons per square mile
- Support educational programs and initiatives that infuse badly needed resources into neglected neighborhoods and may reverse these trends.
- Assess and track the percentage of redeveloped land (infill) verses newly developed land (green field development) on a countywide scale.

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Strategy 2: Spartanburg will encourage new development or redevelopment in already built-up areas to create a greater degree of neighborhood mix in homes, shops and offices. A more fine-grained mix of different land uses – which allows the placement of housing near shops and offices above storefronts – can offset the strict segregation of land uses which requires every trip to be made by car and can result in a “jobs-housing imbalance.”

Objectives:

- Identify and track the percentage of residents with:
 - Business or institutions within ½ block of their home.
 - Satisfactory neighborhood shopping within 1 mile
 - A public elementary school within 1 mile
- Support initiatives that may educate the public and policymakers about the benefits of mixed-use development.
- Identify and track the ratio of jobs to residents eligible for employment within 1 square mile
- Support initiatives that may educate the public and policymakers about how to we can focus growth toward the urban footprint and to designated growth nodes as identified in the county’s Comprehensive Plan
- Assess the rate at which growth is occurring within the growth nodes to determine whether the rate is faster than the county’s population density.

Indicators

1. Residential Density (GSP: 2nd in nation for density)

- Gross population density in persons per square mile
- Percentage of population living at densities less than 1,500 person per square mile
- Percentage of population living at densities greater than 12,500 persons per square mile
- Estimated density at the center of the metro area
- Gross population density of urban lands
- Average lot size for single family dwellings

2. Neighborhood Mixed-Use (GSP: 4th in nation for mixed-use)

- Percentage of residents with business or institutions within ½ block of their home
- Percentage of residents with satisfactory neighborhood shopping within 1 mile
- Percentage of residents with a public elementary school within 1 mile
- Ratio of jobs to residents eligible for employment within 1 square mile

3. The eight designated Spartanburg County growth “nodes” population density is increasing at a rate “X” times greater than the county population density.

4. Track the percentage of redeveloped land verses newly developed land by building permit data.

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Air Quality Strategies & Objectives

The Clean Air Act (CAA) requires that air quality in every state meet federal health based limits called the National Ambient Air Quality Standards (NAAQS). Geographical areas can be classified as attainment, meeting the standards, or non-attainment, not meeting the limits.

If a community does not meet one or more of these criteria, it risks losing federal funding for highway projects, is required to do more stringent air permitting for new and existing businesses putting development at risk, and has to develop strategies to qualify as attainment within specified time frames. This can impact a localized area, a large geographical area like the I-85 corridor, or can affect a whole state.

Strategy 1: Provide citizens with objective and accurate sources of information regarding the status of Upstate air quality, the efforts to improve it and personal actions that can have a positive impact.

Objectives:

- Establish the status of compliance with federal Ozone, PM-10 and PM-2.5 standards as Upstate Air Quality Indicators.
- Publicize and support initiatives of Appalachian Area Early Action Compact designed to improve air quality.
- Explore ways to expand communications regarding Upstate Air Quality (schools, church and civic organizations, media, etc.).

Strategy 2: Educate and provide information in the area of air quality, and create an understanding of the implications to the county if air quality standards are not met.

Objectives:

- Communicate to the public the facts behind federal standards for Ozone and Particulate Matter, including the economic impacts of non-attainment.
- Provide to the public sources of information regarding air quality such as SC DHEC's Bureau of Air Quality web pages:

<http://www.scdhec.gov/eqc/baq/html/ozone.html>,
<http://www.scdhec.gov/eqc/baq/html/factsheets/25things.html>,
<http://www.scdhec.gov/eqc/baq/html/factsheets/pm25.html>,
<http://www.scdhec.gov/eqc/baq/html/factsheets/pm10.html>,
<http://www.scdhec.gov/eqc/baq/html/eap.html>

Indicators

- 1. Ground level ozone, compliance with Clean Air Act (CAA).**
- 2. Particulate matter, PM10, compliance with Clean Air Act (CAA).**
- 3. Particulate matter, PM 2.5, compliance with Clean Air Act (CAA).**

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Solid Waste & Recycling Strategies & Objectives

The proper management of the solid waste (the solid waste normally generated and disposed of by households and industry) in our community is essential to the long-term environmental well being of Spartanburg County. The strategies outlined in this section are follow the long standing strategies of reduce, reuse, and recycle.

Strategy 1: To attain a waste generation rate equal to or below the EPA's current estimate of the national waste generation rate, which is 4.3 pounds per person per day.

Objectives:

- Identify large source generators and work with them to reduce waste generation levels.
- Raise awareness of, and participation in, waste prevention and recycling opportunities among all populations by using regular cycles of advertising and other targeted information avenues.
- Encourage the reuse of reusable items by residents, businesses, and government agencies in the County.
- Provide information helpful to local governments in attracting industries that use recycled materials.
- Evaluate financial incentive options for discouraging waste generation, such as unit-based pricing for refuse collection, where residents pay according to how much waste they generate.
- Identify and evaluate additional funding sources for solid waste programs, like charging private haulers in the County a solid waste franchising fee.

Strategy 2: Attain an annual recycling rate of 20%. (According to the EPA the national recycling rate in 2000 was 30%. The state goal under the SC Solid Waste Management Act is a recycling rate of 35%. Spartanburg's current recycling rate is 9%.)

Objectives:

- Encourage all citizens to practice drop-off-recycling by educating them of the importance of recycling and of the opportunities to recycle.
- Strengthen existing recycling programs to handle commercial source separated materials beginning with corrugated cardboard or other readily identifiable materials such as glass from bars and restaurants.
- Increase the number of waste reduction educational programs.
- Increase the number of drop-off centers and curbside pick-up recycling programs.
- Identify businesses that generate materials in large quantity and enlist their participation in a source separation program.

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- Actively pursue markets for the sale of recycled materials.
- Require commercial and institutional properties to document their waste reduction and recycling programs.

Strategy 3: Attain a waste disposal rate of 3.75 pounds per person per day. (The state goal under the SC Solid Waste Management Act is a waste disposal rate of 3.5 pounds per person per day.)

Objectives:

- Educate school children and teachers about waste reduction and recycling by direct classroom instruction.
- Encourage development of yard waste reduction and collection programs in order to divert this waste from landfills.
- Utilize revenues from out-of-county waste for recycling/waste reduction efforts.

Indicators

1. Pounds per person per day of solid waste generated (total tonnage/population) (available from DHEC)

- Solid waste generation by source (total pounds residential, commercial, institutional, industrial)
- Total pounds of specific materials (possible categories: paper, yard waste, glass, metal, plastic, wood, food, and other)
- Total pounds of out-of-county waste

2. Percent of solid waste recycled

- Pounds of recycled materials, by category (i.e. plastic, aluminum, corrugated cardboard, paper, glass) (available from DHEC)
- Number of waste reduction educational programs
- Number of curbside pick-up recycling programs (available from DHEC)
- Number of drop-off centers (available from DHEC)
- Number of businesses, institutions and industries that recycle
- Number of businesses, institutions and industries that purchase recycled materials

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3. Pounds per person per day of solid waste disposed of in landfill (*available from DHEC*)

- Solid waste disposed of by source (total pounds residential, commercial, institutional, industrial)
- Total pounds of specific materials (possible categories: paper, yard waste, glass, metal, plastic, wood, food, and other)
- Total pounds of out-of-county waste

Energy Consumption Strategies & Objectives

Strategy 1: Reduce Spartanburg's Energy Demand by promoting, supporting, and implementing energy efficiency and conservation programs and measures:

Objectives:

- Develop plans to exceed energy efficiency standards for new and existing municipal buildings and facilities.
- Develop plans, with incentives, to exceed State energy efficiency standards. Consider fee adjustments or rebates for projects that exceed these standards and that incorporate green building measures that are over and above the minimum requirements.
- Modify the City's lighting standards to discourage excessive lighting.
- Consider developing an ordinance that encourages energy efficiency upgrades and improvements in buildings upon sale. Include the real estate community and other stakeholders in the ordinance development process.
- Promote energy conservation design features in major renovation and new development projects.
- Encourage pool covers and solar pool heating systems in place of conventional methods for heating pools in public and private facilities and consider possible incentives.
- Promote heat-load reduction strategies such as the use of landscaping to shade new homes and developments and street designs that maximize street tree canopies to reduce local neighborhood heat build up and associated building cooling energy needs and costs. Heat-load reduction strategies should be evaluated in conjunction with other energy-saving strategies, and should be promoted where appropriate.
- Encourage the installation of energy-saving roofing materials.
- Improve the City's vehicle fleet by replacing older vehicles with less polluting vehicles that are more energy efficient.

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- Explore opportunities to reduce vehicle travel distances, the number of vehicle trips in and around Spartanburg, and reliance on the automobile.
- Explore and implement other energy conservation programs and measures that may prove beneficial to Spartanburg's economy and environment

Strategy 2: Improve Spartanburg's Energy Supply.

Objectives:

- Deploy photovoltaics and renewable power generation to the maximum extent feasible.
- Strive to make Spartanburg more energy self-sufficient.
- Develop programs to build local control, where consistent with the policies of Spartanburg's Energy Plan.
- Evaluate opportunities for purchasing and/or developing wind power projects and explore joint venture opportunities for wind power.
- Support environmentally responsible distributed power generation.
- Evaluate membership in power cooperatives.
- Work with local and other municipalities and utilities and evaluate partnership opportunities.

Strategy 3: Develop an educational and advocacy program about energy conservation, renewable energy sources, public and private energy-related programs, and rebates.

Objectives:

- Sponsor energy-related workshops and invite local builders, architects, homeowners, and business owners.
- Distribute educational materials to schools, library, media, and other organizations.
- Compile and update basic data on the sources, uses, costs, and amounts of energy within the city and related air quality, transportation, solid waste, and environmental data.
- Evaluate ways City staff can better provide energy-related educational and technical assistance to the public.

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Strategy 4: Support and develop ordinances, policies, programs, and legislation that promotes energy conservation.

Objectives:

- Develop a General Energy Plan that will serve as the policy document for Spartanburg's energy strategy. The Energy Plan shall contain at a minimum conservation and efficiency section, a renewable energy section, and a transportation section.
- Support and facilitate the implementation of a Green Building Ordinance(s).
- Support local, State, and Federal legislation that is consistent with the policies of Spartanburg's Energy Plan.
- Pursue funding and grant applications for projects consistent with the policies of Spartanburg's Energy Plan.
- Evaluate the establishment of a non-profit Community Energy Services Corporation to help implement the City's energy programs.
- Research and monitor the status of State and Federal regulations, programs, and funding opportunities, and make recommendations for new programs and opportunities based on changes (e.g., direct access). Work with the community to assist with funding, grant, energy education, and other program applications.

Strategy 5: Develop Financial Possibilities and incentives to promote energy conservation.

Objectives:

- Explore public/private partnerships with local businesses, developers, and banks with the idea of creating local markets for renewable power generation, energy efficiency, and energy conservation products and services.
- Create or join a program that would distribute and install solar and other generation and efficiency equipment and services at a low cost.
- Create opportunities to purchase and distribute renewable power generation facilities, equipment, and services in bulk.
- Investigate third party financing possibilities for renewable energy facilities.
- Pursue subsidies for renewable energy projects.
- Consider opportunities, such as peak pricing opportunities, grants, and subsidy programs, to reduce the overall cost of electricity.
- Perform a feasibility study to evaluate revenue bond opportunities for energy-related projects.

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- Pursue funding and grant applications for projects consistent with the policies of Spartanburg's Energy Plan.

Indicators

- 1. Per capita consumption of gasoline (available re: revenues from motor fuel taxes)**
- 2. Per capita consumption of electricity (available re: SC Energy Department)**
- 3. Per capita consumption of natural gas (available re: SC Energy Department)**
- 4. Vehicle Miles Traveled (available for state but not by county)**

Water Quality Strategies & Objectives

Water quality standards are set by the United States Environmental Protection Agency (USEPA) and South Carolina Department of Health and Environmental Control (SCDHEC). These standards determine whether a water body supports its intended use or is determined to be impaired. Failure to meet any one standard for a particular sampling location will cause that segment of the stream to be classified as impaired. USEPA is required under the Clean Water Act and its amendments to list all impaired U.S. waters in a published federal document. States are then required to develop a Total Maximum Daily Load for the parameter(s) that do not meet standards set by SCDHEC, and this prohibits waters from attaining their intended use.

Presently, of the 37 sampling sites of the Broad River drainage basin located in Spartanburg County, 30 do not meet the criteria established for their intended use (impaired waters). Of the 30 sites, 24 were found to be impaired solely due to the presence of fecal coliform. Fecal coliform is an indicator organism used to determine the presence of bacteria from intestinal tracts of warm-blooded animals. Potential sources of fecal coliform are storm water runoff, malfunctioning septic tanks, sanitary sewer overflows, and improperly treated municipal/industrial wastes. Animals can have a significant impact on fecal coliform concentrations in streams and lakes depending on near-field land use practices.

An assessment of water quality data collected by SCDHEC in the Broad River Basin is published every five years. The last report was published in 2001, and it is anticipated that the next report will be released in 2006.

Strategy 1: Improve water quality in area streams through compliance with state-mandated stream use classifications. Presently of the 37 sampling sites in Spartanburg County, only seven are in compliance with their respective designated-use classification.

Objectives:

- Spartanburg County, Spartanburg, and other cities should develop comprehensive storm water management plans that address impacts of storm water runoff on water quality in streams and lakes.
- Perform additional sampling on impaired streams to determine magnitude of stream impairment and to identify possible/probable sources.

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Strategy 2: Provide education and public outreach to citizens concerning water quality status of area streams and lakes.

Objectives:

- Continue to utilize USC – Upstate’s Watershed Ecology Center to provide water quality/environmental education for students K – 12.
- Provide public sources of water quality information through the use of internet, seminars, and other outlets.
- Educate the public on state and federal water quality initiatives.

Indicators

- 1. Total number of sites that meet state designated use vs. sites that do not.**
- 2. Total number of streams that are listed on federal impaired water list (303[d] list).**
- 3. Number of streams that cannot support diversified aquatic life.**

CONCLUSIONS

Air, water and land... how we treat them is up to us. A major component of our quality of life for now and in particular for the future is dependent upon the priorities we assign to the stewardship of our natural resources. Air and water purity are priceless asset to any community. Land and its use is a vital asset for any growing population and its economy. But they are finite

As a community we must understand that as we grow we must do so within the context of our finite environment. To do so citizens, businesses and governments must collectively take a responsible role in the sustainable use of our natural resources with a determined awareness that we are sharing with the future.

Members of this Taskforce believe the tools and knowledge to achieve viable environmental sustainable growth are available. The challenge however, will be to provide public/private leadership that consistently elevates the community’s environmental awareness and provides sustained leadership in the development and implementation of environmental initiatives focused on *our “commitment to conserving natural resources, promoting environmentally healthy lifestyles, forging and respecting public/private partnerships and leading by example in the community’s pursuit of its environmental stewardship.”*

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TASKFORCE PARTICIPATION

<u>Name</u>	<u>Organization</u>
1. Graham Rich	Spartanburg Water Systems
2. Joe Mullinax	Hatcher Garden and Preserve
3. Mary Walter	Spartanburg Area Conservancy (SPACE)
4. Yon Lambert	Palmetto Conservation Foundation
5. Briggs Hamilton	BMW Manufacturing
6. Emily Neely	Upstate Forever
7. Rebecca Ramos	Community Volunteer
8. Jack Turner	USC Upstate
9. Kimberly Grimm	HEXION Specialty Chemicals
10. Stanford Lumas	S&ME
11. Mark Coleman	T&D Nursery
12. Charlie Marshall	Priority Metrics Group