

Buncombe County Sustainability Plan

This plan is a response to the environmental and economic imperatives for sustainability and will serve as a guide for Buncombe County in making decisions that balance the values of environmental stewardship, social responsibility, economic vitality, fiscal responsibility and support for mandated services.

Energy conservation and best practices have rarely attracted as much attention in the media or in policy circles as they have in recent times. Sharp increases in energy prices gave rise to widespread concern not only over utility bills but also about potential impacts on local jobs and growth. Concern over high prices and the environmental impacts of fossil-fuel burning power plants has renewed interest in energy conservation, sustainability, local control, and predictable energy rates. Policies and measures that help create clean, reliable, economical, and energy efficient systems of an acceptable power quality are more important now than at any time in Buncombe County's history.

Sustainability, in a broad sense, is the capacity to endure. It can be defined as the ability of an ecosystem to maintain ecological processes, functions, biodiversity and productivity into the future.¹ In order to endure, Buncombe County must develop a set of sustainable guidelines for future decisions. The purpose of this plan is to guide the County toward a sustainable energy future without increasing adverse impacts to the community. Primary provisions of this plan include promoting and developing energy conservation strategies and programs for Public Buildings, Purchasing, Grounds Management and Transportation; as well as educating county employees and the public about energy saving techniques and programs. **Sustainable decision making is a balance of environmental stewardship, social responsibility and economic vitality. We must meet our current needs without leaving our future generations to deal with the environmental consequences.**

Buildings

Buildings account for approximately 40% of the total annual energy consumed in the United States. Buncombe County is responsible for maintaining and constructing many different types of buildings from small outlying radio towers and parks to the County Detention Center. For fiscal year 2009, Buncombe County spent approximately \$2.3 million on utilities.

One widely accepted format for improving the performance of both new and existing buildings is The Leadership in Energy and Environmental Design (LEED) Green Building Rating System. LEED was established by the U.S. Green Building Council in 1999 and is one of the most comprehensive and widely recognized systems for rating and improving building design and efficiency in the nation. Improving building design and efficiency is a vital component needed for Buncombe County to begin moving in a more sustainable direction for this and future generations.

Objectives for Existing Buildings

¹ [Sustainability - Wikipedia, the free encyclopedia](#)

- Introduce and apply energy saving, sustainable building maintenance practices including LEED for Existing Buildings to the highest level practical. There have been many strides made over the past decade to improve the energy performance of our existing facilities and that work must continue. Projects such as lighting upgrades, window replacement, reflective roof installation, efficient electric motor and HVAC system upgrades which have already been completed or are currently in the planning stages are examples of the County's commitment to constantly improving the performance of our facilities.
- Retro-commissioning of County Facilities to confirm that building systems are functioning as designed, and to determine if the system was properly designed for its current use. Retro-commissioning will also help facility maintenance to pinpoint systems that are in need of repair or replacement.
- Reduce Electrical Consumption and Establish a Key Performance Indicator for electrical energy (i.e. kWhr/sqft) and use the KPI to track progress in our total energy reduction goal.
- Reduce Water Consumption and Establish a Key Performance Indicator for water (i.e. CCF/sqft) and use the KPI to track progress in our total reduction goal.
- Reduce Natural Gas, Propane, and Heating Oil consumption. Establish a Key Performance Indicator for Natural Gas (i.e. btu/sqft) and use the KPI to track progress in our total energy reduction goal.
- Expand the application of sustainable building practices in all facility renovation and upgrade projects.
- Seek out and apply innovative energy and water saving technologies. Technologies must be a balance between cost and their ability to meet statutory requirements.
- Explore the possibilities in alternative energy production and utilization.
- Develop and test contingency plans to protect critical county operations in the event of energy or water shortages.

Objectives for New Construction

- Introduce sustainable LEED design concepts in building design and construction, to the highest level practical.

Purchasing

Sustainable purchasing is the purchase of products that have a reduced effect on the environment when compared to products and services that serve the same purpose. However, sustainable purchasing does not stop at just protecting the environment; it helps to protect human health,

improve the overall quality of Buncombe County purchases and is fiscally responsible. Sustainable purchasing will benefit the employees and residents of Buncombe County in several ways, including: assisting in reducing the County's overall carbon footprint, improve community and worker safety and significantly reduce the County's waste generation.

Objectives for Sustainable Purchasing

- Develop a sustainable purchasing program in line with the requirements set forth by LEED-EB. Key factors in purchasing decisions should include: products with recycled content, energy efficient products, alternative fuel vehicles, alternative fuels and environmentally friendly products and services (i.e. janitorial contractor using "green" products)
- Make all purchasing decisions based on "total lifecycle costs"

Employee/Community Outreach and Education

Employees

Buncombe County owes a great deal to its employees. With a work force of almost 2000 people, the County will not be able to obtain its goals without the support of its employees. A well informed and educated staff will help the County reach its goals as an organization but will also have a far reaching regional effect as people begin to apply some of the lessons learned at work in their personal lives. The County's sustainability efforts must be far reaching to be truly successful and benefit the community at large.

Objectives for Employee Outreach and Education

- Develop training for employees to help them understand how decisions they make on a daily basis effect productivity and the positive or negative effects those decisions may have on the sustainability of the environment.
- Educate employees on how to reduce the use of water and electricity.
- Educate employees on alternative means of transportation that are available to them.

Objectives for Community Outreach and Education

- Begin spreading the word about sustainability and how the community as a whole can help through efficiency, waste reduction and recycling. Using existing means of communication, such as E-Zine, County Website or new forms of communication (Facebook, Twitter etc.) to pass along useful information to the community.

- Provide education in several areas of sustainable land use such as infill development, water conservation, wetland conservation and forest conservation.
- Expand waste reduction and recycling programs.

Grounds Management

Landscaping chemicals and fertilizers build up in the natural environment. Buncombe County currently maintains hundreds of acres of parks, athletic fields and greenways. Maintenance of these areas often requires the use of fertilizers and pesticides which have negative effects on the environment. In addition turf maintenance, particularly mowing, consumes a tremendous amount of energy in the form of fossil fuels and releases large amounts of CO₂ into the atmosphere.

Objectives for Grounds Management

- Explore the use of natural fertilizers or composted material in place of chemical fertilizer wherever it is practical.
- Create landscape plantings using native species and xeri-scaping as often as practical. Xeri-scaping is the use of slow growing drought tolerant plants to reduce mowing and water needs. This should reduce the cost associated with maintenance and help to conserve water.
- Reduce mowed turf in parks. Certain areas that are currently mowed could be replaced with more “natural plantings” or “tall grass/meadow areas”.
- Improve Storm Water Management practices at County Facilities to increase infiltration, evapotranspiration and reduce water runoff. Implement soil and water conservation measures where ever practical to help conserve topsoil and reduce sedimentation.
- Pursue “green” certifications for exterior site development and construction.
- Conserve electricity used in site lighting. Some ways to achieve this is with control systems that turn off lighting when not needed or investment in more energy efficient lighting products.

Transportation/Fleet

Pollution from internal combustion engines has been linked to numerous human health issues and imposes significant financial costs on the region. The air pollution in the region also has a negative effect on the County’s largest industry, tourism. The County’s transportation and fleet policies should address how to move residents, employees and materials in our community in a more efficient and sustainable manner. The transportation and fleet policies should also include

measures to reduce the emissions of carbon dioxide and other greenhouse gases without impacting the current level of service.

Objectives for Transportation and Fleet

- Compile a complete inventory of current CO2 emissions from the entire county vehicle fleet.
- Estimate, as accurately as possible, the emissions from employee commute.
- Implement strategies that reduce the emissions of county fleet to the greatest extent practical without reducing the current level of service.
- Review fleet maintenance policies to see if any additional emissions reductions can be achieved.
- Explore and implement innovative technologies to reduce fleet emissions
- Evaluate alternative fuels and alternative vehicle options.
- Devise ways to reduce employee commute emissions.
- Implement the use of “green” products in fleet maintenance to the extent that is practical

The Buncombe County Sustainability Plan encourages a continuous reassessment of its strategies and goals, and emphasizes consistent monitoring of performance and communication of results to enable continual improvement of the County’s sustainability efforts. The Plan itself is intended to be a continuously evolving document. It is critical to update and re-evaluate the opportunities presented in the Plan on a regular basis to maintain its relevancy as a useful guide toward sustainability. Additionally, similar to other County/City plans, a thorough reassessment of the Plan should be conducted periodically. The landscape of County operations, partnerships, funding opportunities, priorities, and even goals is and should be viewed fluid, and accordingly, the Plan will require updating. Community sustainability is a complex topic, requiring broad partnerships and multiple solutions. This Plan can and should be a catalyst for continuous evolution towards a more sustainable County.