

SUSTAINABILITY  
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# SUSTAINABILITY

*in state government*

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“  
... to meet the needs of the  
present without compromising  
the ability of future generations  
to meet their needs.”

# INTRODUCTION

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North Carolina has much to be thankful for—and much to lose—in the quality of its environment. Clean water and air, unlimited natural resources, abundant wildlife, and beautiful scenery are things North Carolinians no longer can take for granted. The bounty of economic growth will present us with new challenges in sustaining a healthy environment.

State government is an important contributor to environmental quality in three ways:

- ♦ As a large employer that consumes energy

and natural resources and creates wastes and emissions.

- ♦ As a highly visible model for the state's citizens, businesses, industries, and local governments.
- ♦ As a developer and implementer of policies that shape the growth of our state and its impact on the environment.

Sustainable practices are important for the long-term health of the environment. Additionally, environmentally beneficial measures often promote efficiency and cost savings.

## WHAT STATE AGENCIES CAN DO TO PROMOTE SUSTAINABILITY

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State agencies are responsible for an impressive array of operations that have actual or potential impacts on the environment. Each agency ultimately must plan and choose how it can implement environmental practices to best fit its specific circumstances.

Below is a sampling of state agency operations, examples of sustainable practices that some agencies have already implemented, and ideas for further action.

**PURCHASING.** The enormous purchasing power of state agencies can be harnessed to improve environmental quality.

Sustainable practices for **Purchasing** include:

- ♦ Buying supplies and items that are durable, reusable, and recyclable.
- ♦ Procuring supplies and items that are non-toxic and made with recycled content.
- ♦ Specifying that purchased items be delivered in bulk or with minimal packaging
- ♦ Identifying environmentally preferable products that meet all basic quality and performance specifications and making them the only product of their kind available to agency personnel.
- ♦ Establishing environmental screening for all new purchases.

## AGENCY EXAMPLE

In response to Governor Hunt's Executive Order #8 mandating all state agencies to buy recycled products, the University of North Carolina-Chapel Hill adopted a Buy Recycled Policy requiring all departments to purchase recycled paper. It also specifies that stationery and memoranda be printed on recycled paper with at least 10 percent post-consumer content and that all photocopiers and laser printers be able to use paper with at least 50 percent recycled content. Recognizing that higher prices for recycled paper create financial barriers for department purchasers, the University requires its storerooms to sell recycled paper at the same price as virgin paper. With these barriers removed, the University expects that by 1998, purchases of recycled paper will exceed 65 percent of all expenditures for paper and paper products.

**OFFICE OPERATIONS.** Every day, thousands of state employees work in office buildings where environmentally responsible practices can be implemented easily with beneficial results.

## AGENCY EXAMPLE

All state departments and offices in the Raleigh area (and many in other locations statewide) participate in recycling. Sixteen of 18 state universities and 54 out of 58 community colleges provide recycling opportunities for their employees and students. State agencies collectively diverted 69,611 tons of recyclables from landfills and incinerators in Fiscal Year 1996-1997.

Sustainable practices for **Office Operations** include:

- ♦ Reducing paper usage through double-sided copying and printing, use of email, circulating memos, central filing systems, and moving toward a paperless office.
- ♦ Ensuring that all computers and other office equipment have the US EPA Energy Star rating.
- ♦ Beginning or expanding recycling programs for office discards.
- ♦ Buying recycled office supplies, such as reformatted diskettes, remanufactured toner cartridges, and recycled paper.
- ♦ Share journals and remove names from mailing lists to reduce junk mail.

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**TRANSPORTATION.** How state employees get to work and how they travel while on the job directly affect air quality and energy usage.

Sustainable practices for **Transportation** include:

- ♦ Reducing agency car miles through teleconferencing, trip consolidation, and staff carpooling.
- ♦ Making use of train transport for state business whenever possible.
- ♦ Encouraging the use of carpooling and mass transit by employees.
- ♦ Implementing telecommuting/work-at-home policies, alternative work hours, and other means to reduce employee car miles and travel during peak traffic times.

## AGENCY EXAMPLE

The Division of Air Quality has initiated the Air Awareness Program to alert state employees to air quality concerns and to educate them on specific ways they can reduce air pollution, including carpooling and the use of mass transit.

*“We’ve got to stop thinking of ourselves as owners of our planet, and start thinking of ourselves as stewards.”*

Governor James B. Hunt Jr.  
North Carolina

**FLEET MAINTENANCE / PROCUREMENT.** The enormous environmental impact of cars, trucks, and buses can be improved through prudent procurement and maintenance practices.

## AGENCY EXAMPLE

As part of a pilot project, school districts in 10 counties have installed by-pass oil filters on buses to dramatically extend oil life and decrease the need for oil changes. By-pass filters have been shown to reduce oil usage by 80 percent, and also to extend engine life, improve mileage efficiency, and reduce vehicle emissions.

The Department of Transportation has reduced solvent use by switching to an aqueous cleaning system for parts cleaning.

Sustainable practices for **Fleet Maintenance / PROCUREMENT** include:

- ◆ Procuring “alternative fuel vehicles” (AFVs) that reduce energy use and emissions.
- ◆ Installing by-pass oil filters and other proven technologies that reduce automotive wastes and emissions.
- ◆ Implementing pollution prevention practices in fleet maintenance operations.
- ◆ Setting a goal of increasing overall miles-per-gallon (MPG) performance for fleet(s).
- ◆ Specifying low emissions and high MPG in fleet procurement contracts.

**FOOD SERVICE.** Numerous cafeterias in state buildings affect the environment through energy and water usage and the generation of food and other wastes.

Sustainable practices for **Food Service** include:

- ◆ Encouraging energy and water efficiency in cooking and washing operations.
- ◆ Providing washable, reusable dinnerware, and implement recycling programs for cans, bottles, and other discards.
- ◆ Donating excess food to area “food rescue” programs.
- ◆ Establishing composting programs for food wastes that cannot be donated to food rescue.

## AGENCY EXAMPLE

The University Honors Program at UNC-Charlotte has implemented a “food rescue” operation that delivers more than 25,000 pounds of leftover food annually from university cafeterias to area homeless shelters and soup kitchens.

**MANUFACTURING.** Some state agencies have manufacturing operations that use raw materials, energy, and cleaning chemicals, and also generate wastes and emissions.

## AGENCY EXAMPLE

The Correction Enterprises paint plant in Smithfield implemented a source reduction program for steel drums, extending drum life ten-fold, dramatically reducing inventories, and saving \$326,500 in drum processing costs.

Sustainable practices for **Manufacturing** include:

- ◆ Using less toxic materials and recycled feedstocks whenever possible.
- ◆ Implementing pollution prevention practices in painting, coating, and cleaning operations.
- ◆ Using reusable and recyclable transport packaging.
- ◆ Setting energy and water efficiency goals in manufacturing processes.

**FACILITY MANAGEMENT / HOUSEKEEPING.** State buildings are large energy and water users; maintenance and cleaning of these buildings can have substantial environmental effects.

## AGENCY EXAMPLE

The Department of Administration has joined the Energy Star program to increase energy efficiency in state buildings. One of the first projects will be converting a pilot state building facility to more efficient lighting under the Green Lights portion of the Energy Star program. Other agencies that have signed on to the Green Lights program include schools in Alamance, Bertie, Cumberland, and Wake counties and North Carolina State and East Carolina universities.

Sustainable practices for **Facility Management/ Housekeeping** include:

- ♦ Installing water-saving devices such as low-flow toilets and showerheads.
- ♦ Encouraging water and energy conservation by employees.
- ♦ Maximizing energy efficiency in lighting (Green Lights program) and in heating and cooling buildings (Energy Star Buildings program)
- ♦ Using the least toxic cleaning materials and buying them in bulk.
- ♦ Employing “green building” techniques in maintenance and renovation practices.

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**CONSTRUCTION / DEVELOPMENT / LEASING.** Construction and leasing of buildings for state agency use, as well as other development activities of state government, are areas in which environmentally beneficial practices can have a dramatic effect.

Sustainable practices for **Construction / Development / Leasing** include:

- ♦ Specifying energy and water conservation measures in construction and leasing contracts.
- ♦ Using non-toxic and recycled content products in building projects.
- ♦ Requiring contractors to implement recycling and reuse of construction by-products in all state construction projects.
- ♦ Requiring new state buildings to use energy efficient designs like passive solar heating and day-lighting.

## AGENCY EXAMPLE

The North Carolina Department of Transportation (NCDOT) has established a Recycled Products and Solid Waste Utilization Task Force to review recycled products and materials for use in highway construction and maintenance operations. The Task Force is the central contact for various agencies, municipalities, and industries that have specific proposals to use recycled materials. Since 1989, DOT has utilized more than 4 million scrap tires, 40,000 tons of coal fly ash, 450,000 tons of recycled asphalt, and 475,000 tons of recycled concrete in a variety of construction and landscaping projects.

“ *Doing well by doing good is the standard by which companies of the future will be measured. It is good business to respect and protect the Earth.* ”

Ray Anderson  
Interface, Inc., Georgia

**Landscaping / Agricultural Operations.** Many state agencies have landscaping or agricultural operations that can directly affect land and water quality.

## AGENCY EXAMPLE

In March 1997, the North Carolina Zoological Park's waste reduction efforts received recognition from the North Carolina Recycling Association as the best "in-house" waste reduction program. In addition to its extensive recycling and reuse activities, the Zoo composts 1,100 tons of animal manure, bedding, and horticultural wastes each year, saving \$44,000 in disposal costs and \$2,500 in purchases of soil additives.

Sustainable practices for **Landscaping / Agricultural Operations** include:

- ♦ Evaluating the use/application of fertilizers, pesticides, and herbicides and reducing or eliminating them where appropriate.
- ♦ Using Integrated Pest Management and planting native species that are best suited to the climate.
- ♦ Landscaping building and grounds to conserve water (xeriscaping), and monitoring automatic watering systems to use only when needed.
- ♦ Establishing composting programs at facilities that generate organic wastes and using compost and mulch to enhance soil health.

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**Interaction with the Public and "Customers."** Citizens who use state facilities or interact with state agencies can be vital participants in sustainability efforts.

Sustainable practices for **Interaction with the Public and "Customers"** include:

- ♦ Informing public and customers about sustainability efforts and encouraging them to participate.
- ♦ Providing recycling opportunities to members of the public that visit facilities.
- ♦ Implementing water and energy saving mechanisms in facilities visited by the public.

## AGENCY EXAMPLE

The Department of Transportation offers recycling opportunities for bottles, cans, and newspapers to all travelers at rest areas around the state, and many rest area bathrooms use automatic shut-off valves in sink faucets.

# HOW STATE AGENCIES IMPLEMENT SUSTAINABLE PRACTICES

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Private companies that have been successful in reducing waste and preventing pollution provide a good model for state agencies to follow. The “tried and true” formula for environmental excellence includes:

- ◆ Clearly communicate **management commitment** to environmental improvement.
- ◆ Employ **“team” approach** established to identify and implement environmentally

sound measures.

- ◆ Conduct a comprehensive review of **environmental impacts**.
- ◆ **Establish goals** to improve environmental performance.
- ◆ Educate and **involve employees**.
- ◆ Establish mechanisms to **evaluate the effect** of implemented practices.
- ◆ Incorporate a “loop” to re-confirm commitment and to **ensure continual improvement**.

## QUESTIONS TO CONSIDER ABOUT YOUR AGENCY

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What resources does our agency use?  
What are some of the most important specific ways our agency affects the environment?  
What could we do immediately to improve our environmental performance?

What barriers need to be acknowledged and addressed?  
What incentives should we put in place to encourage environmental improvement?

## U.S. EPA VOLUNTARY PROGRAMS THAT ENCOURAGE SUSTAINABILITY

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Green Lights  
Waste Wi\$e  
Climate Wise  
WAVE: Water Alliance for Voluntary Efficiency  
Energy Star Buildings  
Motor Master  
WaterWiser

The North Carolina Division of Pollution Prevention and Environmental Assistance (DPPEA) can provide more information about these programs. Please call (919) 715-6500.

# North Carolina Waste Wi\$e Program

As of April 30, 1998, North Carolina state government became an official partner in the WasteWise program, a voluntary U.S. EPA program to reduce waste in business, industry, and government operations. WasteWise partners make a three-year commitment to implement or expand source reduction (i.e., waste prevention), recycling, and recycled product procurement. An inter-agency task force of recycling and purchasing representatives from state departments and offices, community colleges, and universities has been convened by the Division of Pollution Prevention and Environmental Assistance to set goals for North Carolina's program, which will be announced in October 1998. Many opportunities still exist for state agencies to reduce waste through purchasing and in construction projects, daily operations, and educational settings. North Carolina's participation in WasteWise is a positive step toward addressing these opportunities and leading the way for others.

## S U S T A I N A B I L I T Y

### Brown Creek Correctional Institution

Brown Creek Correctional Institution, located in Polkton, North Carolina, has been aggressively pursuing opportunities to reduce its waste stream by 60 percent since October 1997. The prison employs a number of measures to reduce waste at the source, including the composting of food, shredded paper, dryer lint, hair from its barber shop, and other organic materials. Vermicomposting bins handle more than 250 pounds of food per month. Inmates enrolled in a therapeutic horticultural program use the worm castings to grow vegetables and flowers. The prison switched from using half-pint milk cartons to a bulk dispenser and replaced five-gallon containers of detergents with 55-gallon reusable drums. Prisoners, who sort all trash before it leaves the premises, recover metals, paper, glass, plastics, and cardboard for recycling and clothing for reuse. The amount of waste requiring disposal has been reduced by 47 percent, resulting in a cost savings of \$1,000 per month. (Source: *Biocycle*, May 1998, p.78.)

## S U S T A I N A B I L I T Y

### State Surplus Property Computer Program Initiative

In February 1997, the State Surplus Property Agency (SSPA) implemented a program to supply refurbished computers to North Carolina's public schools. State universities and agencies send their discarded computers to the SSPA computer warehouse where they are sorted and tested for functionality and processor speed. Technicians repair and rebuild computers to meet the specific needs of recipient schools, agencies, and non-profit organizations. Unusable parts from obsolete computers, such as circuit boards, disk drives, metal fixtures, and power supplies are sorted and sold in bulk to recycling companies. Nonfunctioning monitors are sold under contract to be refurbished instead of being landfilled. To date, 1,600 computers have been refurbished and placed in schools for a nominal fee of \$20 apiece. The sale of these computers has generated approximately \$32,000 in revenue. In one year, schools saved nearly \$3,168,000 by purchasing repaired/refurbished computers from the SSPA program.