

Sustainability Action Plan Overview

The *Sustainability Action Plan* (Action Plan) was recommended by the Community Sustainability Council (CSC) and accepted by the Greensboro City Council on January 4, 2011. The Action Plan documents Greensboro's progress toward sustainability and to advise City Council on actions the City can take to effectively manage energy, resource use and waste production internally and promote these and other actions throughout the community. This Action Plan is considered the first version of what a "living document," subject to further review and revision as strategies are implemented, progress is monitored, new strategies developed, and goals revisited.

The goals of the Action Plan are to reduce greenhouse gas (GHG) emissions, improve energy efficiency, provide for economic development opportunities, promote an improved quality of life and save tax payer money. To make progress toward these goals as well as pursue community sustainability overall, the Action Plan includes 12 policies and supporting strategies organized around 8 topic areas identified by the CSC in dialogue with City staff and the community over the last two years.

Topic Areas Identified in Action Plan



Transportation and Land Use



Nature in the City



Green Jobs and Buildings



Education and Outreach



Recycling and Waste Reduction



Green Technologies



City Operations



Adaptation

Collectively, the 12 policies, along with strategies already funded as part of the City's recently completed Energy Efficiency and Conservation Strategy (EECS), are anticipated to reduce GHG emissions by 276,000 MTCO₂e annually in 2020 and result in a cumulative cost savings to the City and community of approximately \$29 million between 2010 and 2020.

Summary of Progress

The Sustainability Action Plan is a comprehensive document containing 12 policies, 40 strategies and over one hundred implementation items. Many of these strategies require cooperation and coordination between multiple City departments and community partners to be successful.

The City of Greensboro and its community partners have made considerable strides in promoting sustainability and energy conservation efforts. In the year since the Action Plan was accepted, 29 of the 40 strategies, more than half, have been addressed through 119 implementation items.

The following is a summary of Year One projects or programs initiated. For more details on the projects and programs, please refer to the spreadsheets in the Appendix.

Status of Implementation Items

<u>Status</u>	<u>Number</u>
Complete	35
Initiated	71
Planned	13
TOTAL	119

Implementation by Topic Area

TRANSPORTATION AND LAND USE

2 Policies
6 Strategies
6 initiated

CITY OPERATIONS

1 Policy
6 Strategies
4 Initiated

GREEN JOBS AND BUILDINGS

4 Policies
12 Strategies
10 Initiated

WASTE REDUCTION AND RECYCLING

1 Policy
4 Strategies
2 Initiated

EDUCATION AND OUTREACH

2 Policies
8 Strategies
7 Initiated

ADAPTATION

1 Policy
1 Strategy
Not yet initiated

Project Highlights

Strategies to address sustainability in a community as large as Greensboro require the dedication of considerable resources including time, people, and funding. To date, most of the Action Plan strategies have been initiated and executed by City of Greensboro staff by leveraging funding and resources for new and existing programs.

In December 2009, the City completed and submitted to the U.S. Department of Energy an Energy Efficiency and Conservation Strategy (EECS) to serve as a road map for spending approximately \$2.55 million in federal Energy Efficiency and Conservation Block Grant (EECBG) funds allocated to the City, through 9 project areas. The City was awarded a \$5 million BetterBuildings grant April 2010 from the Department of Energy to be used for residential and non-residential energy retrofits on existing buildings. Many of the Implementation Items were made possible through these programs funding.

Examples of Implementation Items that have been carried out thus far include the following:

- BetterBuildings for Greensboro – Nearly 300 property owner contracts with the City are being prepared to move forward with approved Scope of Work for energy efficiency upgrades which comes close to \$700,000.
- Enhanced Recycling Efforts
 - Within City facilities: Field Operations designated two separate routes for City facilities that are serviced with recycle carts or 8yd commercial dumpsters to track tons. The government routes collected over 965 tons of recyclable material in 2011.
- 80 Receptacles have been ordered for picnic shelters at parks and 2 in 1 receptacles have been placed downtown and at the Coliseum.
- Sustainability Challenge
 - The City has planned an exciting and fun opportunity for City staff to become personally responsible for energy efficiency and resource conservation prior to the implementation of sustainability policies throughout the City.

Greater details can be found in project spreadsheets.

Green Technologies

The City of Greensboro has been proactive in its approach to energy efficiency in City operations and facilities. Even prior to the development of the Action Plan, the City of Greensboro promoted green technologies in City facilities and operations. As part of the first performance contract, prior to 2010, solar thermal (domestic hot water) was installed in 8 fire stations, the Public Safety Training Center, and the MMOB. The Sustainability Action Plan recommended that the City continue to explore local green technologies and resources.

Below is an update of the green technologies explored or utilized in City facilities:

- Biofuels/landfill gas
 - *The City experimented recently with Biodiesel for the fleet (GTA buses, Field Operations and other Service Vehicles), but it is not currently being used*
 - *Field Operations is preparing and/or issuing an RFP for Landfill Gas*
- Active solar hot water
 - *Two new fire stations (57 & 59) have come online with solar thermal hot water*
- Solar photovoltaics (PV)
 - *Engineering & Inspections is working to develop a large one megawatt solar photovoltaic (solar electric) project at City facilities. It could potentially begin construction later this year.*
- Industrial scale waste heat recovery
 - *Greensboro Aquatics Center has a custom built HVAC and a commercial scale heat recovery system*
- Smart grid
 - *None at this time*
- Other
 - *GTA bought and operates 2 new Hybrid Diesel-Electric Buses*

- *High efficiency condensing boilers were installed at 4 City facility sites*
- *GTA Maintenance and Operations Facility has Solar Thermal Panels, a Green Roof, an Ice Plant, and Day-lighting. Is seeking LEED Gold certification*
- *MMOB window replacement is currently underway and is expected to achieve energy savings of 1600 mBTU.*

The City of Greensboro has committed to and accepted the concept of sustainability across many of its operational practices and plans. Sustainability is important to Greensboro for promoting economic development, environmental stewardship, and government efficiency. With all of this progress toward sustainability, however, there are still many opportunities to more fully integrate sustainability across the City's plans, policies, and practices. This Action Plan is considered the first version of what a "living document," subject to further review and revision as strategies are implemented, progress is monitored, new strategies developed, and goals revisited.