



Introduction

On June 24, 2008, the Broward County Board of County Commissioners (Board) accepted the Broward County Government Operations Climate Change Report. The Report summarized early voluntary greenhouse gas (GHG) reduction actions implemented by the County from 1997 through 2007, and reiterated the County's GHG emission reduction goal of 7% below 1997 levels by 2015. On June 9, 2009 and June 15, 2010, the Board accepted the First and Second, respectively, Broward County Government Operations Progress Reports that described GHG reduction actions Broward County government implemented during 2008 and 2009. Both of these years, Broward County government exceeded annual reduction goals.

In FY2010, Broward County government agencies achieved a net reduction of 191 tonnes of GHG emissions from FY2009 levels. This is equivalent to the GHG emissions from 21,413 gallons of gasoline combusted.

This third annual progress report, developed by the Broward County Climate Change Government Operations Workgroup (Workgroup), describes measures Broward County government implemented during FY2010, (October 2009 through September 2010), and progress towards achieving the GHG reduction goal.

Greenhouse gases are expressed in carbon dioxide equivalents (eCO₂): 1 tonne of eCO₂ is equal to the emissions from the combustion of 112 gallons of gasoline.

Broward County government operations FY2010 carbon footprint is 256,036 tonnes of GHG emissions. To meet the established 2015 reduction target of 222,099 tonnes of GHG emissions, Broward County government must reduce

an additional 33,937 tonnes from 2010 emission levels (Figure 1, page 2). This represents an average annual reduction of 6,787 tonnes of GHG emissions.

2010 Highlights

Broward County government agencies reported 64 GHG emission reduction measures in FY2010. A detailed description of the measures, cost savings, environmental benefits, and results are included in this report's [APPENDIX](#). The estimated GHG emissions reduction from the quantified measures totals 14,971 tonnes which resulted in an estimated annual cost saving of \$1,015,975.

The following are a few highlights of significant measures implemented:

- * **Hybrid Transit Buses:** In FY2010, the Broward County Transit Division introduced seven new 60-foot articulated hybrid buses into the fleet. The buses provide additional capacity for passengers, and resulted in a GHG reduction of 3,163 tonnes.



- * **Recycling at the – Fort Lauderdale-Hollywood International Airport:** The airport continued to maintain the tri-sort recycling bins program. In FY2010, Airport Recycling Services collected approximately 2,593 tonnes of waste of which 851 tons were recyclable materials. This resulted in 2,741 tonnes of GHG emissions avoided.

- * **Green Lights Program, Phase I:** The Traffic Engineering Division implemented system-wide improvements in traffic signal coordination. This contributed to reductions in vehicle miles traveled, idling time, and a reduction of an estimated 300,000 tonnes of community-wide GHG emissions annually.

- * **Energy Efficient County Buildings:** Building construction and retrofit projects coordinated by the Facilities Maintenance Division contributed to an estimated reduction of 5,933 tonnes of GHG emissions.



- * **Energy Savings Through Information Technology:** Enterprise Technology Services replaced 1,065 workstations with more energy efficient models resulting in an estimated reduction of 111 tonnes of GHG emissions.

- * **Virtual Computer Pilot:** Water and Wastewater Services completed a pilot project to deploy 300 virtual computers in FY2010. These units can save up to 80% of the energy used by traditional personal computers.

- * **Broward County is "WasteWise":** The Government Center West (GCW) composting pilot program collected an estimated 85 gallons of food waste during the first two months of the program. The program is on-going in FY2011. The nutrient-rich soil compost is being used to fertilize the NatureScape garden at GCW.

- * **County Employees Go Green:** The Workgroup launched the new [Employees Go Green](#) section of the County's Go Green web site featuring testimonials from County employees supporting green initiatives in the workplace and at home.

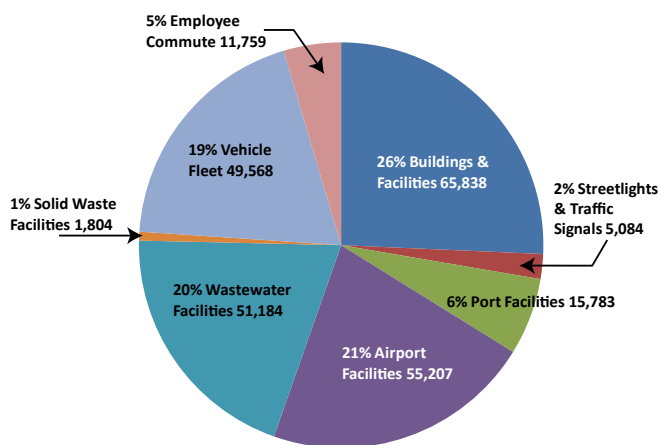
- * **Increased Recycling at County Facilities:** An estimated 584 tons of office paper, magazines, newspapers, file folders, cardboard, and food and beverage containers were recycled from County offices and buildings. This resulted in

an estimated cost savings of \$57,000 through “avoided disposal” and a GHG reduction of 1,881 tonnes.

- * **Employee Commuting Outreach:** An educational campaign at the Government Center to educate County employees about clean transportation options resulted in 151 ride matches for County employees.

A Word on Greenhouse Gases

Human-produced GHG emissions, such as carbon dioxide and methane, are the primary cause of climate change. A key element of any GHG reduction program is the quantification of GHG emissions and reduction measures. The International Council for Local Environmental Initiatives 2009 Clean Air Climate Protection software was used to calculate the GHG generated by energy use, fuel use, and solid waste. FY2010 GHG emissions from Broward County government operations are shown below:



Broward County’s government operations FY2010 carbon footprint is 256,036 tonnes of GHG, a net reduction of 191 tonnes of GHG emissions compared to FY2009. Over 75% of the emissions are generated by electricity use at Port Everglades, the Fort Lauderdale-Hollywood International Airport, Wastewater Services, and other County facilities. To meet the established FY2015 target of 222,099 tonnes of GHG emitted, Broward County government must reduce an additional 6,787 tonnes of GHG emissions, annually (Figure 1).

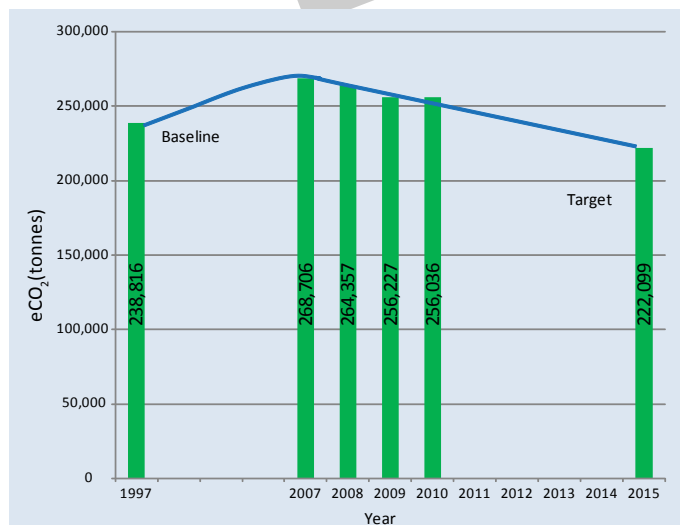


Figure 1: Broward County Government Operations GHG Emissions and Reduction Target

Measuring Progress

In FY2010, Broward County Government agencies reduced GHG emissions from existing facilities and operations by 14,971 tonnes as a result of energy efficiency measures and operational practices. At the same time, the demand for government services continued to escalate, resulting in a net increase of electricity and fuel use. As projected last year, the on-going efforts to conserve energy, fuel, water and reduce waste generation offset the emissions generated by new major facility and operations expansions, maintaining the overall government operations GHG emissions at a level comparative to FY2009.

Some examples of this offsetting trend include the following. In FY2010, the GHG emissions generated by the Broward County Transit and general purpose fleets increased by 6% compared to FY2009. However, the provision of additional bus service including the I-95 Commuter Express Bus Service, contributes to a reduction of community-wide GHG emissions by eliminating the commute of hundreds of passengers vehicles. Port Everglades FY2010 GHG emissions increased by 6% from FY2009 as a result of Terminal 18 expansion to accommodate a larger class of cruise ships scheduled for year round sailings (52 weeks a year). Wastewater treatment services GHG emissions increased by 1% compared to the previous year due to regulatory driven process changes to comply with the Florida Department of Environmental Protection ocean outfall rule. The North Regional Wastewater Treatment Plant reduced nutrient loading to the ocean by diverting effluent disposal from the ocean to the underground deep injection wells, which required additional pumping and therefore higher electrical use.

Future Strategy

The strategy moving forward is to enhance the government operations GHG emissions evaluation process to identify new energy and fuel consumption efficiency opportunities. For example, electricity use per square foot for County buildings and fuel consumption per mile for County vehicles will be determined, and this data will be used to support future GHG emission reduction actions.

The **Broward County Climate Change Government Operations Workgroup** includes representatives from many County agencies that are organized into committees in the areas of buildings/ infrastructure, waste, transportation, natural systems, and policies. The Workgroup Steering Committee meets monthly to identify potential emission reduction actions, propose implementation of selected actions, and share progress made.

For questions or information call the **Pollution Prevention, Remediation and Air Quality Division** at **954-519-1260** or visit www.broward.org/pollutionprevention.

