



# Alachua County Government Greenhouse Gas (GHG) Inventory Calendar Years 2008 and 2009

Alachua County Environmental Protection Department

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April 2010

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## Background

- 1999 -- County made ICLEI commitment  
ICLEI Cities for Climate Protection Campaign
- 2001 – County adopted ICLEI goal  
20% reduction from 1990 levels by 2010
- 2001 -- County completed first GHG inventory  
Measured Year 1998, Estimated Year 1990
- 2002 – Initial Local Action Plan for GHG reduction

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## Background

- Energy Conservation Strategies Commission (ECSC), December 2008 recommendation:
  - “ Develop the organizational capacity within Alachua County government to measure & evaluate Greenhouse Gas Emissions (GHG), emission reductions & scoping of lands (public & private) for offset potential”
- December 2009 - USEPA declares GHGs (including CO<sub>2</sub>) air pollutants

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## Background

- Current atmospheric CO<sub>2</sub> level ~ 390 ppm
- Potential future federal regulations
- Updated inventory needed to assess progress
- Federal grant opportunities require inventory

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## Inventory Overview

- 2008 and 2009 Inventory Summary
  - Includes BoCC Departments and Constitutional Officers
- 2009 Inventory Final Report– Week of April 19, 2010
- Comparison to 1990, 1998 inventory and 2010 County goal
- Conclusions and Benefits
- Recommendations

2009 Community GHG Inventory -- in progress

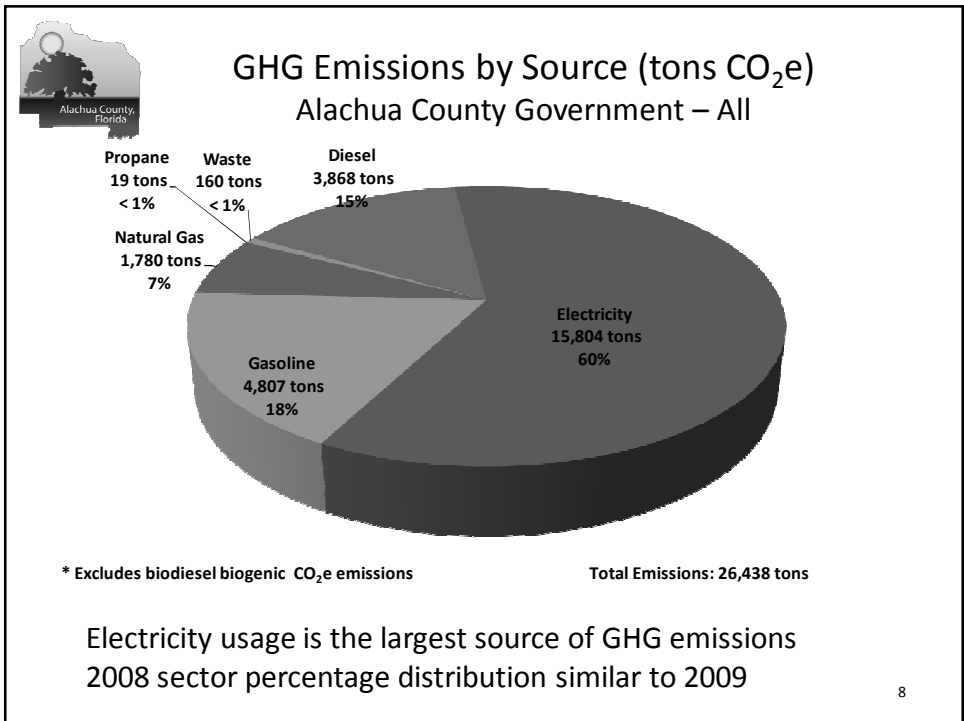
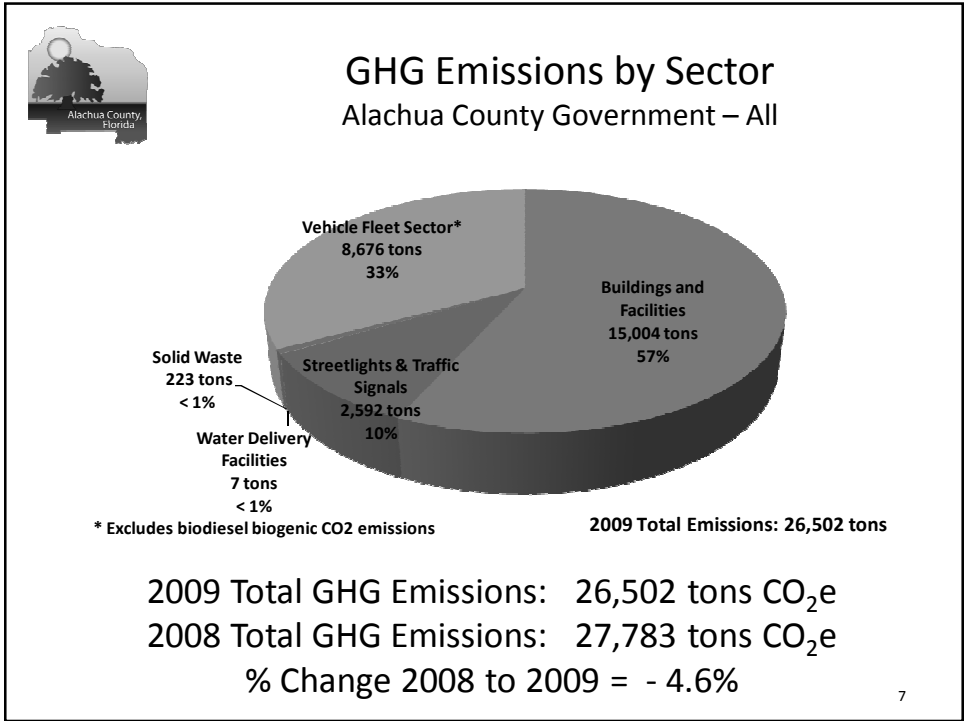
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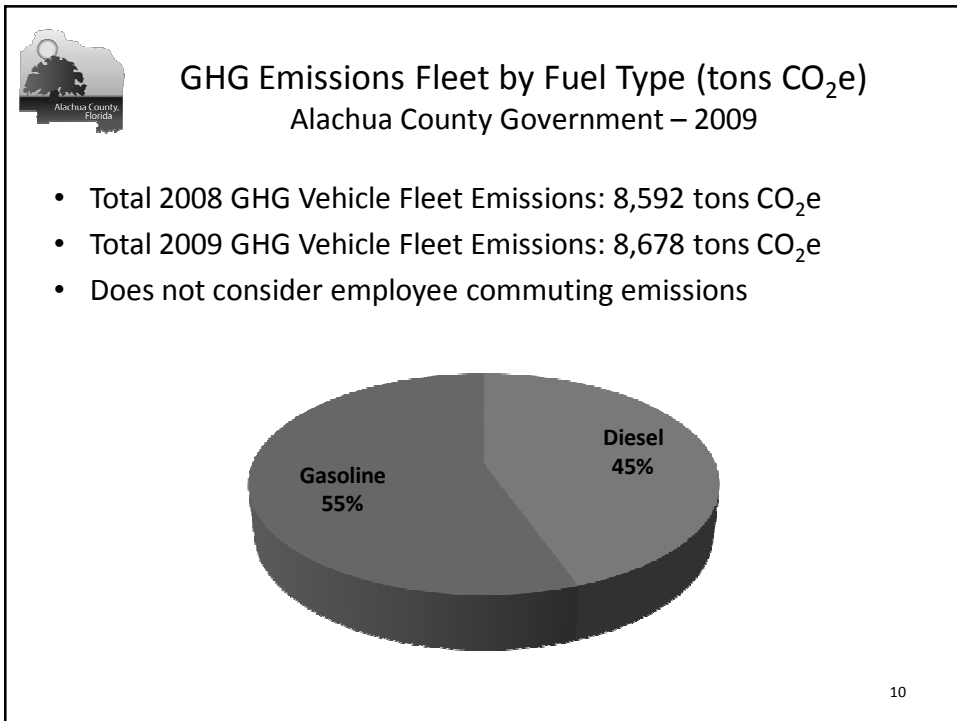
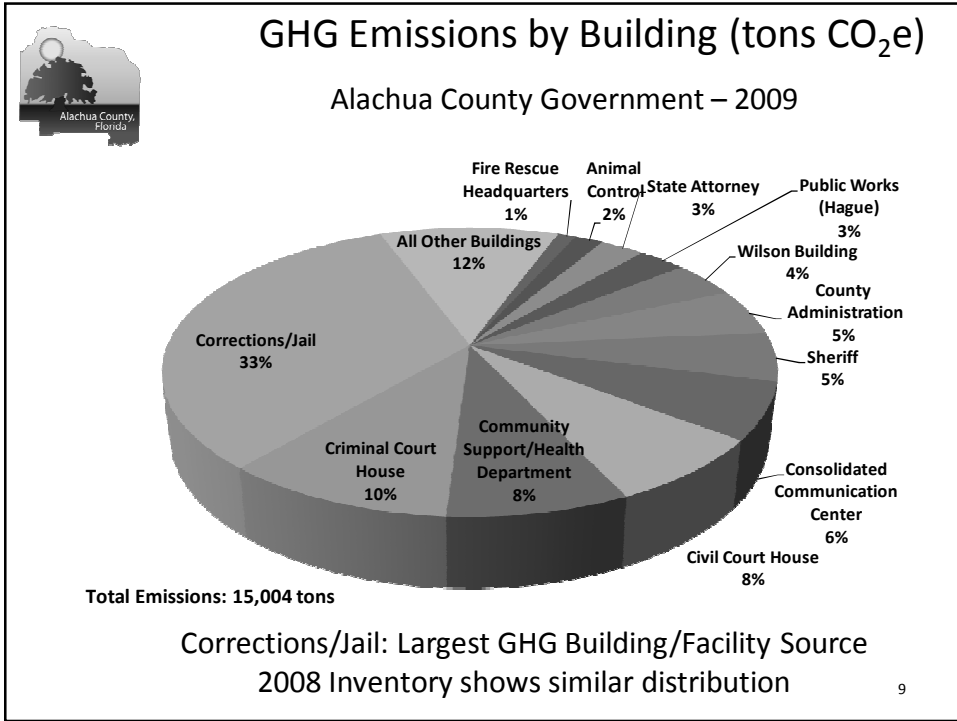


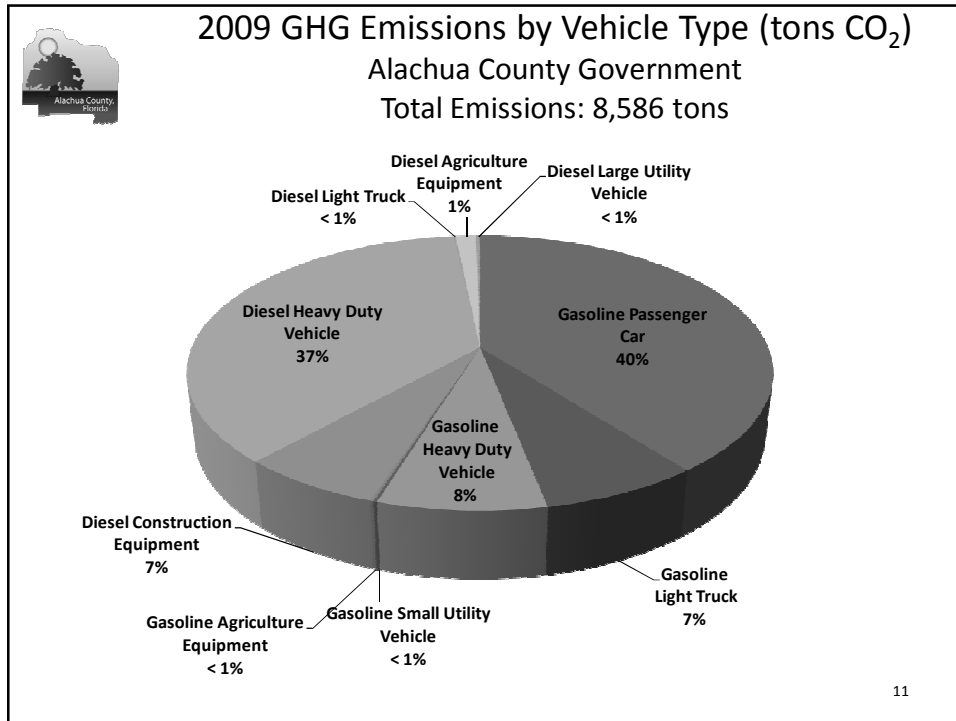
## Inventory Overview

- GHG reported as Carbon Dioxide Equivalents (CO<sub>2</sub>e)
  - Takes into account different GHG potentials of various pollutants
- Biodiesel emissions are not included in GHG inventory totals
- Inventory comparisons only do not include emissions from Const. Officers vehicle fleet and some smaller facilities

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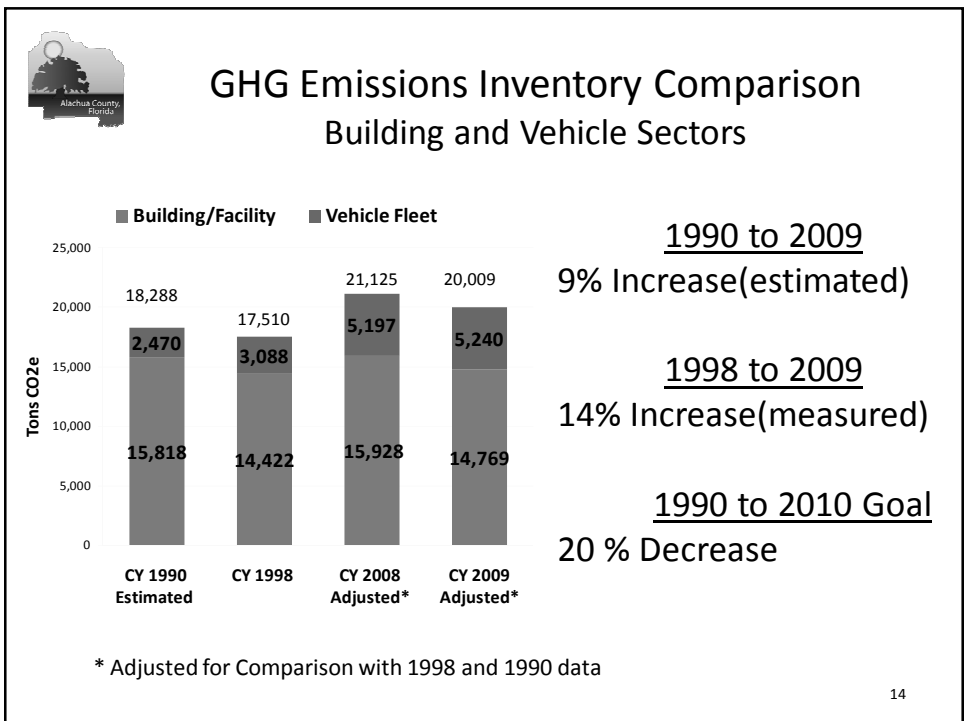
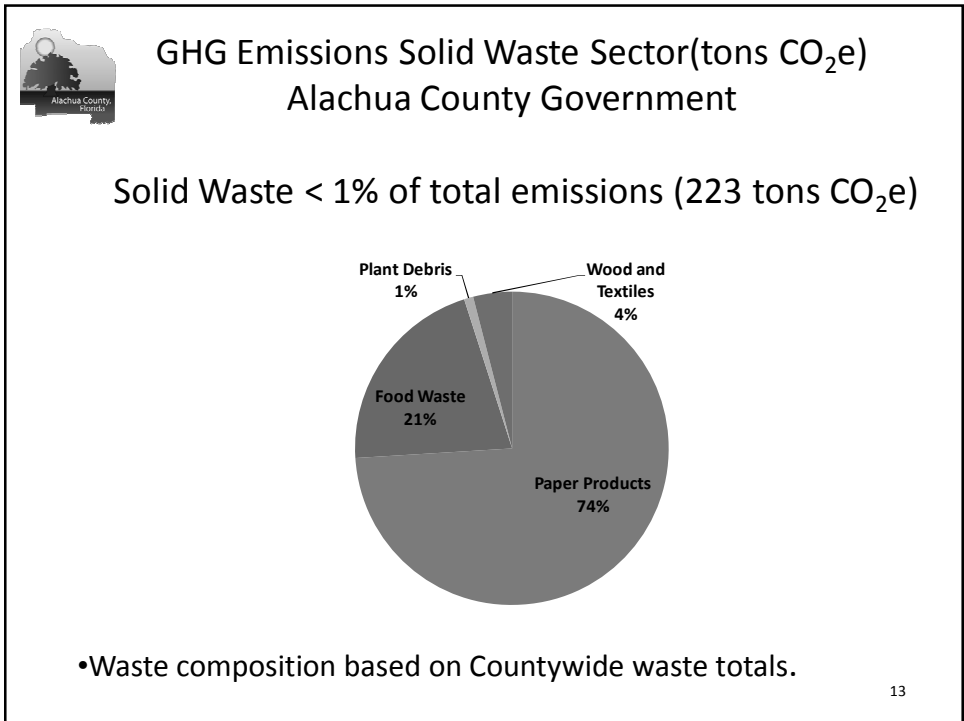


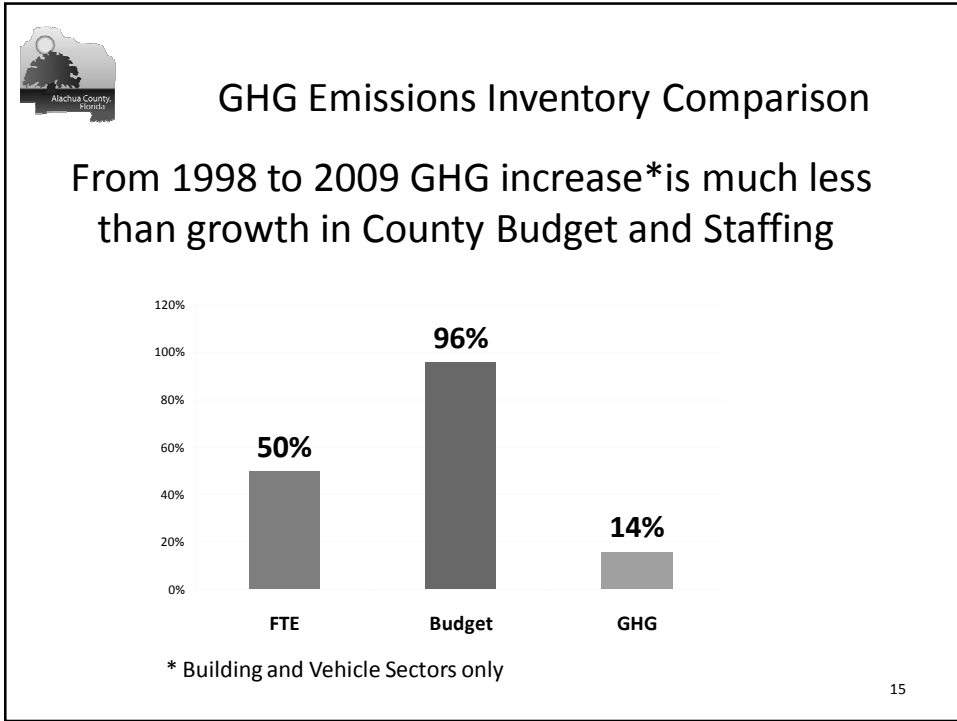
### GHG Emissions Streetlights (tons CO<sub>2</sub>e) Alachua County Government

- Streetlights and Traffic Signals GHG emissions - 2,589 tons CO<sub>2</sub>e
  - ~ 10% of Total GHG Emissions
  - 4% of energy usage by metered reading
  - 96% of energy usage by GRU average estimates per unit
  - Unincorporated county

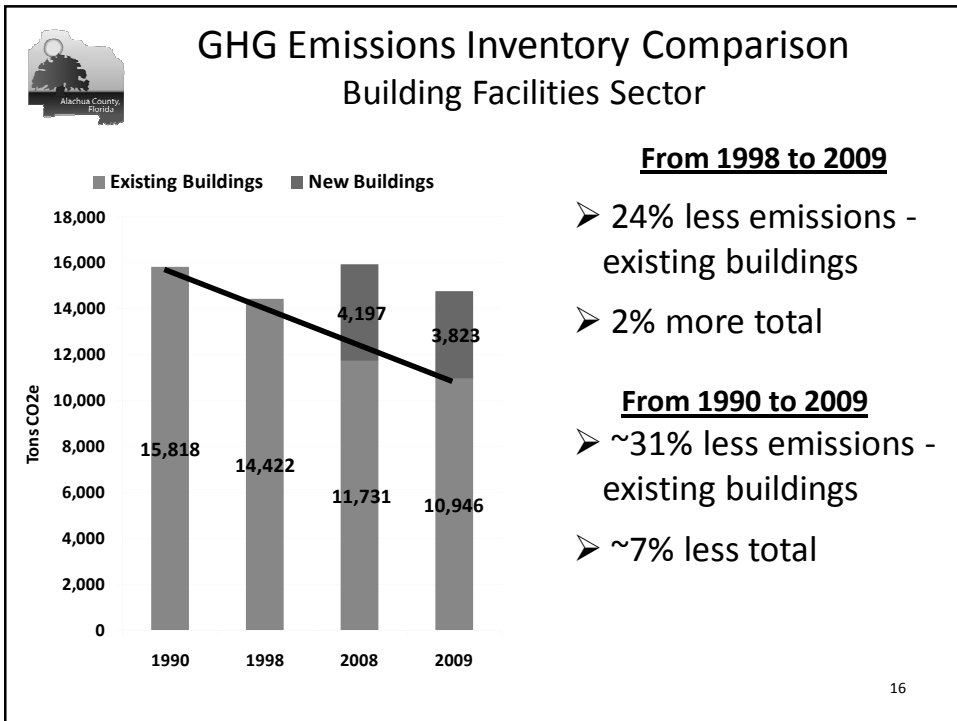
2008 Emissions are 2,735 tons CO<sub>2</sub>e

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## GHG Emissions Inventory Comparison

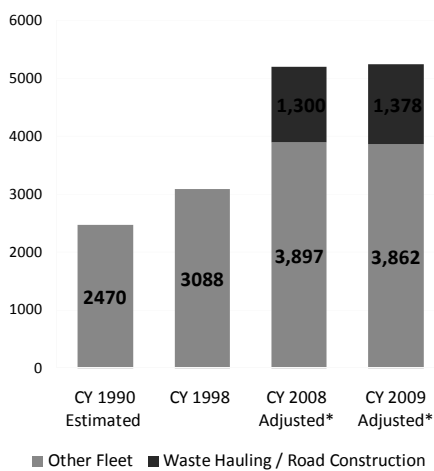
Examples of County's GHG emission reduction success in individual buildings - 1998 to 2009

	% Reduction	Annual Tons CO <sub>2</sub> e
Corrections/Jail	31%	2,189
County Admin	29%	318
Wilson Building	17%	129
State Attorney	24%	129
Total Annual Tons of CO <sub>2</sub> e Reduced		2,765

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## GHG Emissions Inventory Comparison Vehicle Fleet Sector (tons CO<sub>2</sub>e)



From 1998 to 2009

- 70% total increase
- 64% of total increase due to Waste Hauling/Road Construction

\* Adjusted for Comparison with 1998 and 1990 data

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## GHG Emissions Inventory Vehicle Fleet GHG Reduction Efforts

	2000-2009 <u>% Increase</u>	Current <u>% of Fleet</u>
41 Hybrid Vehicles	88%	23%
27 Compact SUVs, Trucks	89%	16%

- “5-5-5” campaign – First year (2009) eliminated 9 vehicles and saved over 7,500 gallons of fuel annually (73 tons CO<sub>2</sub>)
- Biodiesel currently makes up approximately 15% to 20% of diesel usage

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## GHG Inventory Conclusions

- Alachua County government not likely to achieve 2010 GHG reduction goal
- Building energy reduction efforts have successfully reduced GHG emissions, but growth is a challenge
- Vehicle fleet GHG emission reduction efforts have been impacted by emissions from waste hauling and road construction vehicles.

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## GHG Inventory Process Benefits Achieved

- Provided database for measuring effectiveness of pollution prevention and energy management efforts
- Identified weaknesses with utility data sources
- Provided initial database for Utility Manager
- Strong foundation for future inventories

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## Specific Recommendations for GHG Reductions Building Sector

- Continue successful building energy reduction efforts
- Track energy usage and costs through use of Utility Manager and automation
- Continue adoption of rigorous energy efficiency standards for new county buildings
- Evaluate building space needs to reduce energy
- Consider GHG impacts when planning for building capital improvements

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### Specific Recommendations for GHG Reductions Vehicle Fleet Sector

- Continue fuel efficiency improvements in county fleet vehicles
- Increase use of alternate fuels -- natural gas, biodiesel, hybrid and electric vehicles
- Continue to “right-size” County fleet

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### Recommendations for GHG Reductions Vehicle Fleet Sector

- Increase use of teleconferencing, telecommuting and ride sharing
- Consider GHG impacts as well as costs when planning for future vehicles and fuel reduction strategies
- Reduce out-of-county solid waste disposal

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### Specific Recommendations for GHG Reductions Solid Waste Sector

- Reduce food waste through anaerobic digestion and reuse of methane
- Increase % of County solid waste that is diverted from the landfill through recycling and reuse strategies.

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### Specific Recommendations for GHG Reductions Streetlight and Traffic Signal Sector

- Increase use of LED lighting for streetlights and traffic signals
- Consider reducing number of street lights in unincorporated area
- Review street lighting policy and inter-local agreement with GRU for energy and cost savings

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## General Recommendations

1. GHG reduction goal for Alachua County government should be re-evaluated
2. GHG impacts should be considered in future facilities and vehicle fleet planning by the County
3. Community inventory update for 2009 should be completed

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## General Recommendations

4. Periodic inventory update should be completed for timely assessment of GHG reductions
5. Utility Manager software should be used for centralization and tracking of utility consumption and cost data and for data reporting
6. Continue collaboration -- ICLEI, UF, City of Gainesville, local municipalities and private sector

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## Acknowledgements

**This inventory was produced with the cooperation and assistance received from many County Departments and Constitutional Officer offices and external vendor organizations. Special thanks are in order for the following organizations:**

- Facilities Management
- Fleet Management
- Finance and Administration
- Public Works
- Information Technology Services
- Office of Management and Budget
- Constitutional Officers
- Gainesville Regional Utilities
- Clay Electric
- Progress Energy
- Florida Power and Light
- Central Florida Electric
- City of Alachua
- Emerald Waste Services
- Waste Pro – Gainesville
- Suburban Propane
- Ferrellgas

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