

2009 Carbon Footprint Report



Inventory performed by:

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Using ICLEI's CACP software

Go Green



Save Green
VILLAGE OF HOWARD

What is a Carbon Footprint?

- ⊗ A Carbon Footprint is a way of measuring the impact on the environment by an entity.
- ⊗ The Footprint is comprised of Six Greenhouse Gases:
 - ⊗ Carbon Dioxide, Carbon Monoxide, Methane, Sulfur Oxides, Nitrous Oxides, Mono-Nitrogen Oxides, Volatile Organic Compounds (VOCs), and various sized particulates
- ⊗ Because each of these gases effects the environment on a different scale, all gases can be adjusted by formula to create CO₂e- carbon dioxide equivalents. Carbon dioxide equivalents are used as a common unit to describe the effect on trapping heat in the atmosphere.

Howard Analysis

- ⚙ This inventory analyzed emissions caused by government operations.
- ⚙ 2006 = Baseline year
- ⚙ 2007 and 2008 data has also been collected and analyzed.
- ⚙ 2009 data will be included in the analysis in early 2010 when all data is available.

- ⚙ Targets will be set when 2006-2009 inventories are complete using the CACP measures/forecasts feature.

Sectors

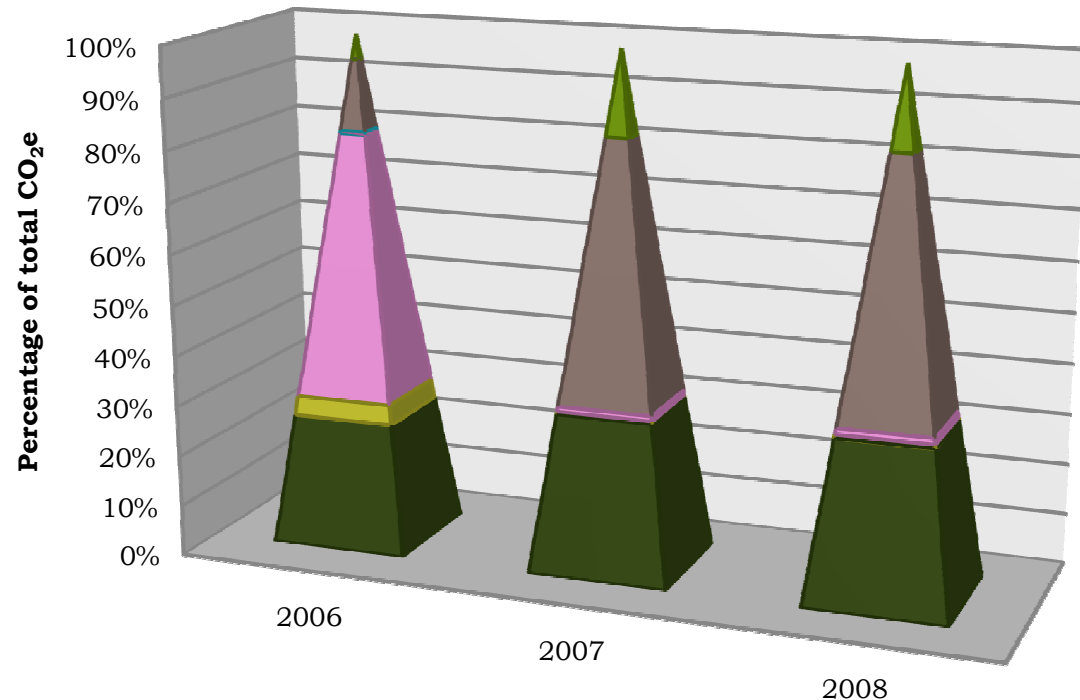
✿ Emission sources have been broken down by sector. There are six sectors evaluated in the government operations inventory:

- ✿ Buildings and Facilities
- ✿ Streetlights and Traffic Signals
- ✿ Water Delivery Services
- ✿ Wastewater Facilities
- ✿ Vehicle Fleet
- ✿ Employee Commute

Results

In recent years, Buildings & Facilities and Vehicle Fleet contribute the most to the Village greenhouse gas emissions.

CO₂e Emissions by Sector 2006-2008



	2006	2007	2008
■ Employee Commute	4.90%	16.50%	15.80%
■ Vehicle Fleet	13.70%	50.90%	50.30%
■ Wastewater Facilities	0.50%	0%	0%
■ Water Delivery Facilities	51.60%	1%	1.20%
■ Streetlights and Traffic Signals	3.80%	0.50%	1%
■ Buildings and Facilities	25.50%	31.00%	32.00%

Time Series Results

Performance Metric	2006	2007	2008	Next Steps:
CO ₂ e (tons)	3,524 (over 7 million pounds)	1,042 (nearly 2.2 million pounds)	1,070 (over 2.1 million pounds)	-2009 analysis -set future targets -amend action plan
Energy (MMBTU)	25,549	22,593	18,714	
Costs	\$669,646	\$647,023	\$665,049	

The major reduction in carbon dioxide equivalents from 2006 to 2007 can be attributed to the change in the Village's water supply source. In 2007, the Village contracted with Manitowoc Public Utilities for water. No longer using two Village wells saved the Village over \$130,000 in utility costs from 2006 to 2008.

Pending Projects

- ☀ The Village of Howard is involved in many exciting projects that will impact the emissions from government operations. These projects include:
 - ☀ Three LED streetlights will be installed and metered separately to track energy and cost savings.
 - ☀ Howard is applying for the Energy Efficiency and Conservation Block Grant (EECBG). If grant funding is awarded, the Village will:
 - ☀ Replace two 17+ yr old boilers at Village Hall with 92% efficient boilers.
 - ☀ Install 24 light pipes in Public Works garage to minimize electrical light usage.
 - ☀ One police vehicle is using E-85 fuel as a pilot program to monitor performance and savings. If successful, E-85 will be used in other flex-fuel Village vehicles.

Contact Information

- ⚙ This presentation is for general summary purposes only. Readers are encouraged to review the full Carbon Footprint Report available on the Village website.
- ⚙ The Village of Howard Energy Action Plan is also available on the Village website and presents key target goals for energy reduction for government operations.
- ⚙ This Carbon Footprint project was initiated by the Village of Howard's Go Green Save Green Taskforce. The taskforce is responsible for finding cost and energy reducing opportunities for the Village.
- ⚙ Questions regarding this report or analysis should be directed to Jennifer Pollitt at jpollitt@villageofhoward.com.

All materials can be found at:

www.villageofhoward.com/go-green_save-green.cfm.