

EXECUTIVE SUMMARY

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**PARK CITY MUNICIPAL CORPORATION
1990 & 2007 CARBON INVENTORY
BASELINE ASSESSMENT**



Executive Summary

Park City Municipal Corporation 1990 & 2007 Carbon Inventory Baseline Assessment* August 2008

The Park City Municipal Corporation's
carbon footprint was calculated and reported
by:

The Environmental Performance Group, Inc.

www.epgsustainability.com

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Park City Municipal Corporation, 2008.

*The carbon footprint summarized in this report does not reflect emission outputs for the greater Park City community or City residents. This report reflects government operation carbon emissions from the years 1990 and 2007.



In August 2008, The Park City Municipal Corporation (PCMC) completed a carbon inventory assessment for their government operations. Also known as a Carbon Footprint, the City chose to collect data and report carbon emissions for all government operations during the calendar year 2007. 2007 was chosen for two reasons: emissions reflect up-to-date operations of the local government and the accessibility of reliable data proved excellent.

A 1990 carbon footprint was also calculated for government operations. While data was less accessible and certain emission calculations are estimated, the 1990 inventory will provide insight for Park City's City Council to later set carbon reduction goals for the municipality.

Why did Park City Municipal calculate their carbon footprint?

A carbon footprint of City operations was highlighted by Park City Council in the 2007 Environmental Strategic Plan as a Top Priority Action Item. The results will assist City Council members and municipal employees in identifying opportunities for the Park City Municipal Corporation to become more economically and environmentally sustainable.

Additionally, in May 2005, Mayor Dana Williams signed the U.S. Mayor's Climate Protection Agreement. As a signatory, Park City Municipal became a member of ICLEI's Cities for Climate Protection campaign, which follows Kyoto Protocol targets for reducing

carbon emissions in government operations and in communities. Membership with ICLEI will further assist Park City Municipal in setting an emissions reduction target and to develop an action plan.

What are the total emissions of Park City Municipal Corporation's Carbon Footprint?

For the calendar year 2007, PCMC emitted 14,536 short tons of CO₂ equivalent. PCMC's estimated 1990 emissions equal 6,841 short tons of CO₂ equivalent. See Figure 1.1.

This change equates to a 4.4% annual increase in municipal carbon emissions between 1990 and 2007.

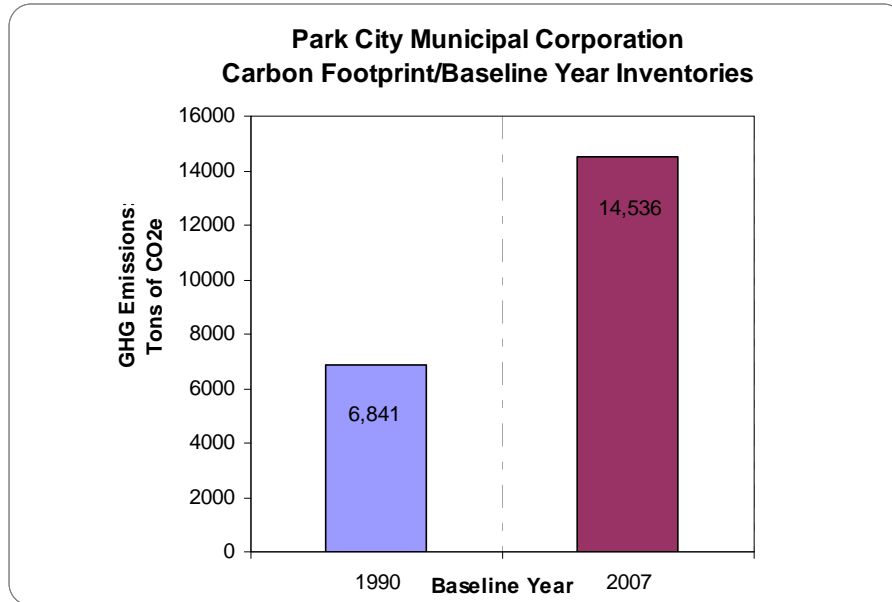


Figure 1.1

What is measured in a carbon footprint?

A carbon footprint measures the tons of greenhouse gases emitted by an organization, group, or community. Currently, the 'ISO 14064: Offset Standard Protocol' is the standard for conducting carbon emission inventories. Carbon is not the only gas counted. Six greenhouse gases make up the footprint; each having a carbon equivalent number. Also known as the Global Warming Potential, this number allows the conversion of those gases and provides a final measurement unit of "CO₂e", where "e" stands for equivalent. Table 1.1 outlines these gases and their carbon equivalents.

The Offset Standard Protocol suggests what to measure, but not how to measure it. Furthermore, there are

emission sources that one is required to count as well as some sources that are optional. It is the inclusion or exclusion of these optional emission sources that makes a carbon footprint very unique and, unfortunately, very difficult to compare. Park City Municipal chose to count all relevant 'optional' emission sources in order to have the most transparent and complete carbon footprint possible.

Table 1.2 outlines the sources used, and how they were measured, in calculating PCMC's 2007 carbon emissions inventory.

Carbon Footprint: Required Greenhouse Gases	
Greenhouse Gas	Carbon equivalent (aka Global Warming Potential):
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	21
Nitrous oxide (N ₂ O)	310
Perfluorocarbons (PFCs)	6,500 – 9,200
Hydrofluorocarbons (HFCs)	140 – 11,700
Sulfur hexafluoride (SF ₆)	23,900

Note: Because PFCs and HFCs describe a variety of compounds, the range of their associated GWPs is listed.

Table 1.1

PCMC 2007 Carbon Emission Sources			
Source Type		Source	Measured in...
REQUIRED	Indirect GHG Sources	Building and Structure Power	kWh (kilowatt-hours) of electricity
		Building heat	Decatherms of natural gas
	Direct GHG Sources	Building heat	Gallons of propane
		Building cooling	Pounds of fugitive coolant
		City Vehicle Fleet	Gallons of fuel (gasoline, diesel, bio-diesel B-100)
		Transit System	Gallons of fuel (gasoline, diesel, bio-diesel B-100)
OPTIONAL	Other Indirect GHG Sources	Solid Waste Disposal	Tons of Municipal Solid Waste (MSW)
		Recycling Disposal/ReUse	Tons of recyclables
		Employee Commuting	Mileage traveled (per fuel type: gasoline, diesel, bio-diesel, CNG)
		Business Travel	Mileage of air and automobile travel

Table 1.2

How are the results of the PCMC's carbon footprint sorted?

The PCMC carbon footprint is not represented simply as 14,536 tons of CO₂e. The results can be broken out by department, per building, or holistically for the whole corporation.

Additionally, all buildings, facilities, and public areas which are part of the Municipal Building Inventory and require power (including street lights and sports fields) were also counted.

What are the primary greenhouse gas sources that comprise PCMC's 2007 carbon footprint?

Overall, the three primary sources of greenhouse gases for Park City Municipal Corporation were Energy, Transportation and Solid Waste. See Figure 2.1.

Park City Municipal Corporation's greatest primary emissions source is its energy use, accounting for 63% of all emissions. This can be better understood by breaking it down into the various types of energy used: electricity (86%), natural gas (10%), and propane (4%). See Figure 2.2.

While natural gas and propane are used strictly for heating various municipal buildings and facilities, electricity usage is attributable to more purposes. Much is used to light the aforementioned buildings and facilities, but a great deal is also a result of the water treatment and distribution services provided by the City.

At 29%, transportation greenhouse gases account for the second largest source of PCMC's carbon footprint. In addition to counting fuel usage from the City's fleet and free public transportation service (required by the ISO protocol), Park City Municipal Corporation chose to include a number of optional greenhouse gas sources such as commuter fuel usage and airplane flights for business travel. Figure 2.3 provides a breakdown of the greenhouse gases emitted by the PCMC's transportation fuel usage.

Despite Public Transit having the largest GHG emissions of all transportation sectors, a significant amount of air pollutant is saved annually by fueling the free bus system with bio-diesel rather than regular diesel fuel.

Solid waste is the third largest primary source in PCMC's carbon footprint, representing 8% of the total greenhouse gases emitted. While much of this waste comes directly from the municipal offices and

Park City Municipal Corporation 2007 Carbon Inventory Primary GHG Sources

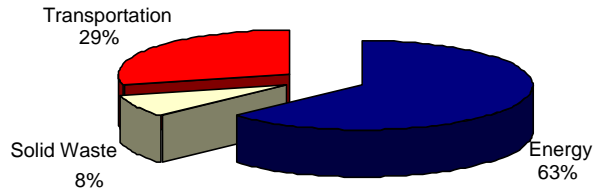


Figure 2.1

Park City Municipal Corporation 2007 Carbon Inventory Primary GHG Sources with Energy Break-down

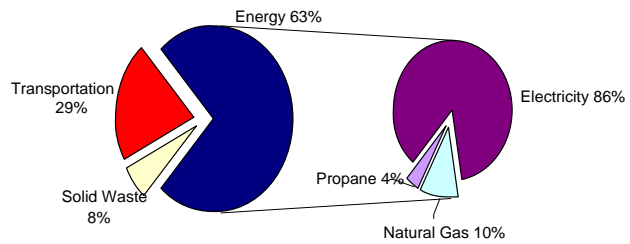


Figure 2.2

Transportation Break-down: Municipal fuel use greenhouse gas emissions

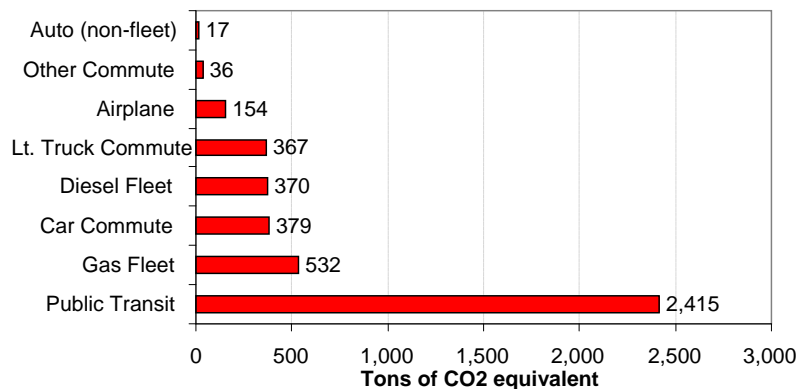


Figure 2.3

recreation facilities, a good portion is collected in public areas including parks, meeting halls, the library, and the streets of Historic Main Street. Thus, some of the waste the municipality counts as their own actually comes from

the public – residents and visitors alike. PCMC chose to take responsibility for the emissions of this garbage because municipal operations collect and manage that waste.

What does the 1990 carbon footprint look like compared to the '07 footprint?

The primary sources for the '07 carbon footprint were energy, transport fuel use, and solid waste. These same sources dominated the 1990 carbon footprint, but in much smaller capacities. Overall, Park City Municipal Corporation emitted 53% fewer greenhouse gases in 1990 than in 2007. Figure 3.1 shows the level of both inventories for those primary sources.

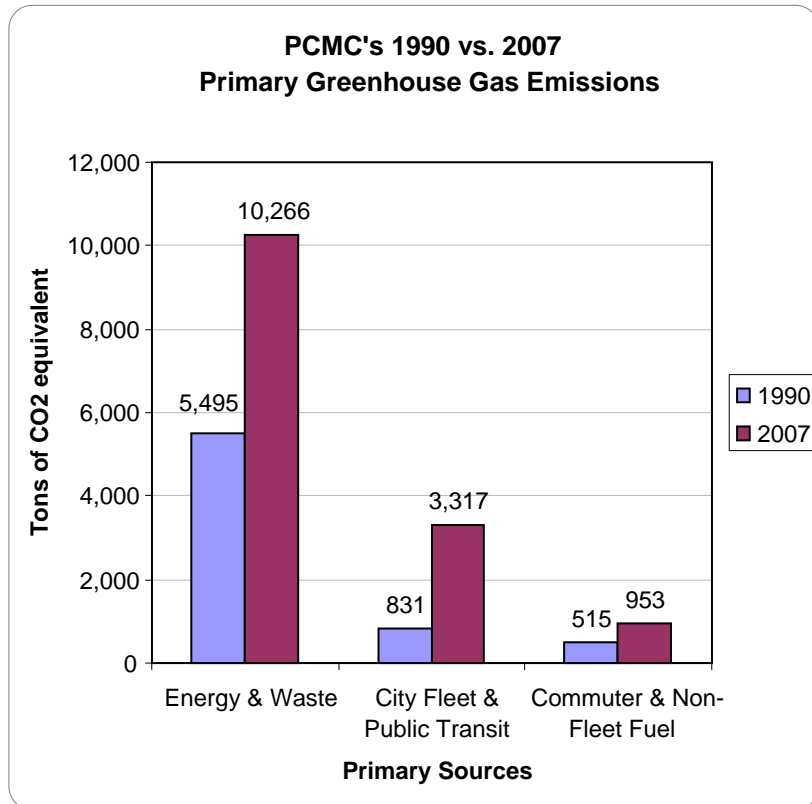


Figure 3.1

What will Park City Municipal Corporation do with their carbon footprint?

Park City's City Council has outlined environmental goals under their City Goals, Policies, and Strategies. Using the 2007 carbon footprint as a baseline and the 1990 carbon footprint as a reference, Park City Municipal Corporation will set a carbon emissions reduction target. From there, an action plan will be implemented to meet that target. In order to track progress, the

municipality will continue to monitor their carbon emissions in upcoming years.

In the meantime, the municipality has taken a close look at the energy efficiencies of twenty-three buildings and facilities. Upgrades to those buildings will occur in 2008 and 2009 with the intention of reducing the carbon footprint of City operations. Furthermore, significant water conservation efforts are underway, as well as fuel usage monitoring of all City Fleet vehicles.

