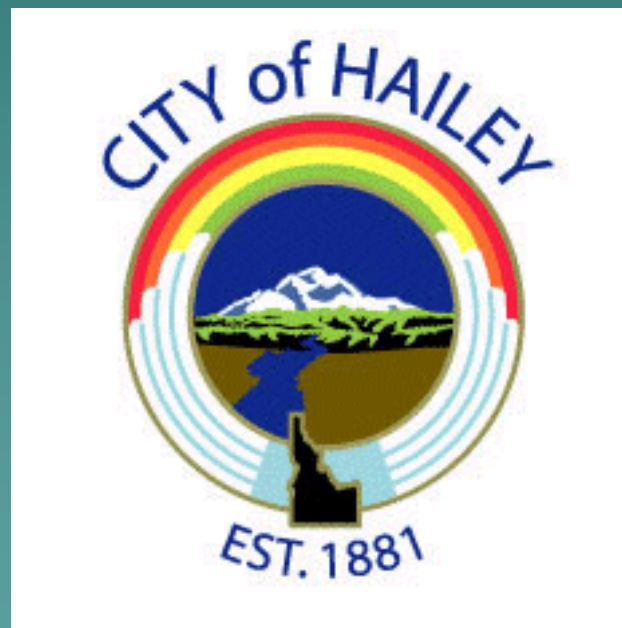


City of Hailey

Carbon Baseline Inventory



HAILEY
ENVIRONMENTAL
LEADERSHIP
PROGRAM

HELPING OUR EARTH
HELPING OUR COMMUNITY
HELPING OURSELVES

ICLEI Milestones

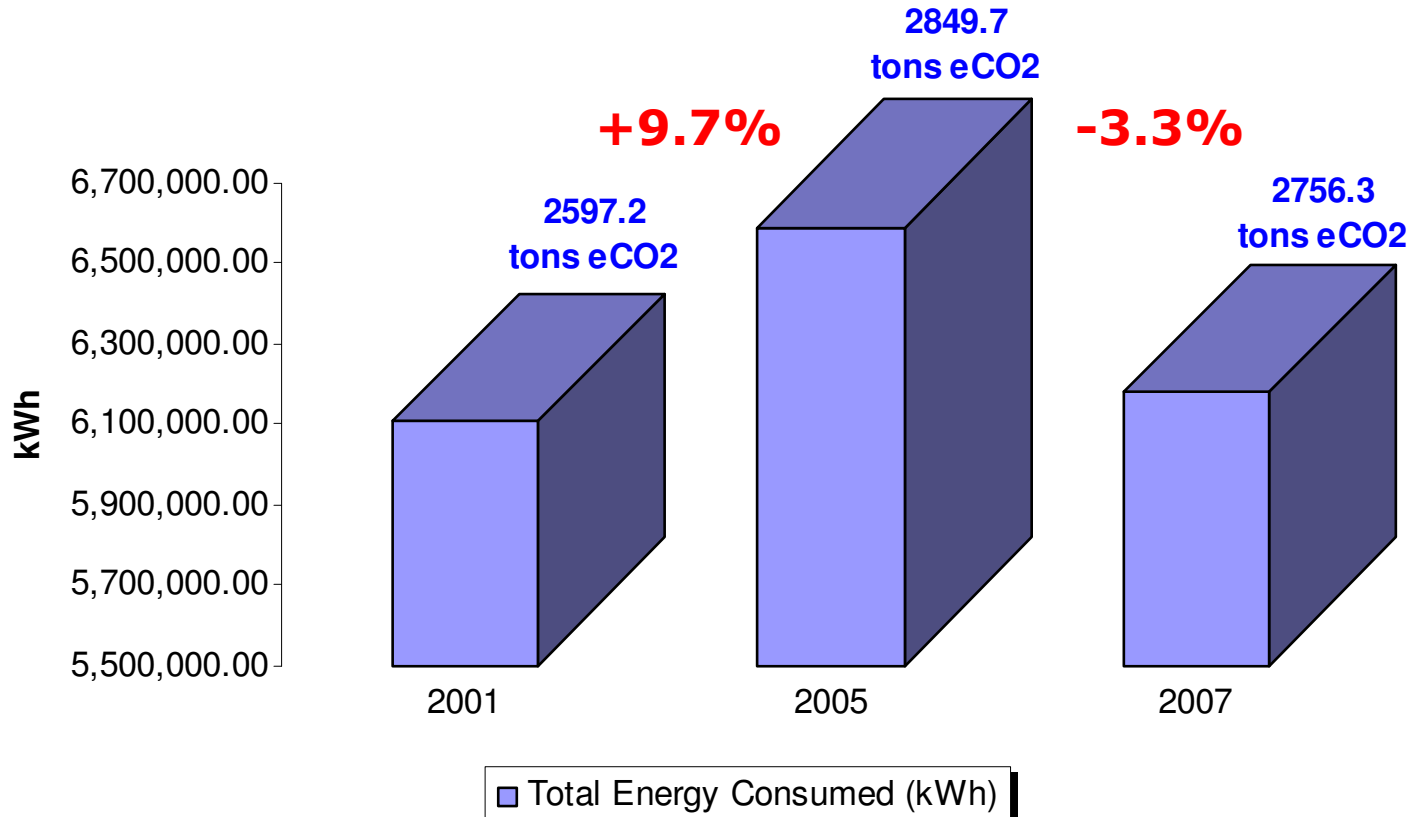
The 5 milestones of ICLEI's performance-based campaign model for local governments to reduce their carbon emissions are:

- ◆ **(1) establish a baseline**
- ◆ (2) set a target
- ◆ (3) develop a local action plan
- ◆ (4) implement the local action plan
- ◆ (5) measure results



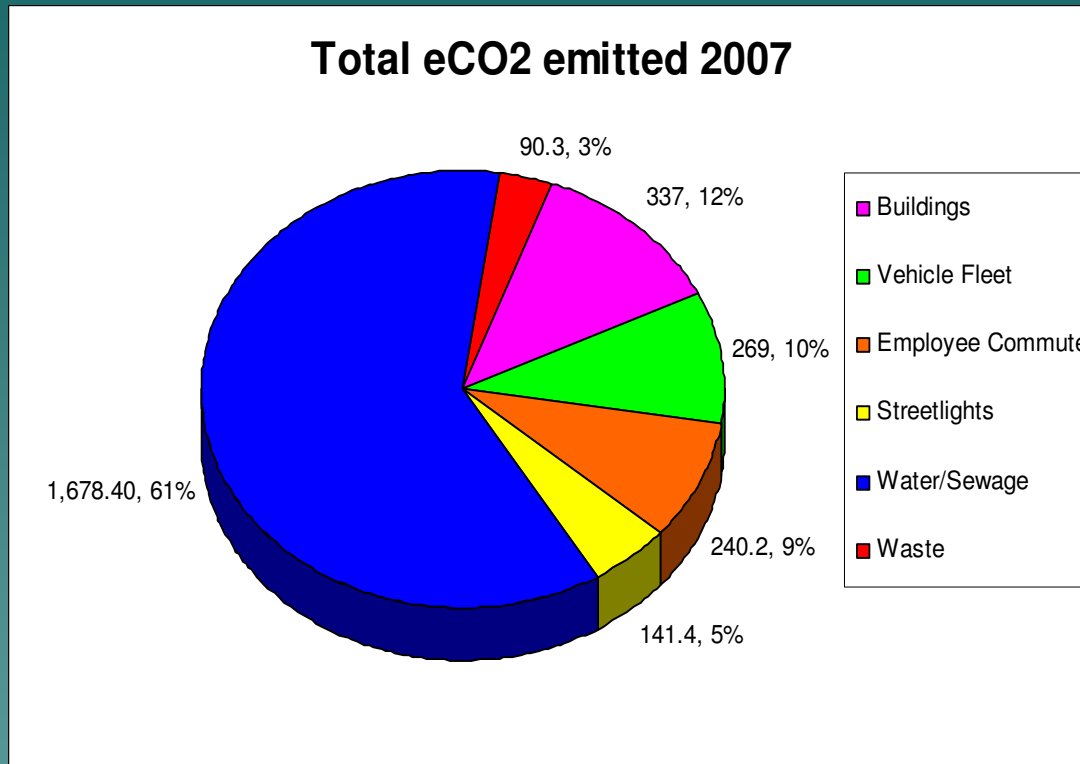
City of Hailey Government Emissions

Total Energy Consumed and eCO2 Emitted



eCO2 = carbon dioxide, methane, nitrous oxide, and fluorinated gases (sulfur hexafluoride, HFCs, and PFCs)

Carbon Emissions in 2007



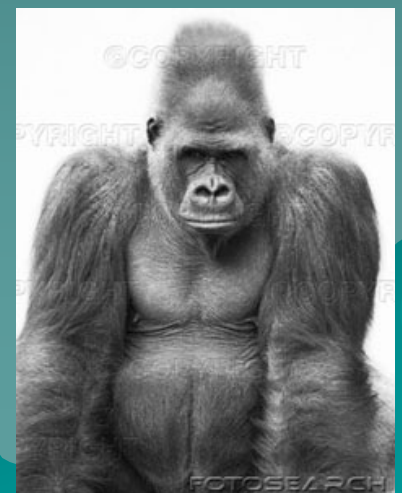
FOR PERSPECTIVE:

Average person emits 20 tons of eCO2 per year

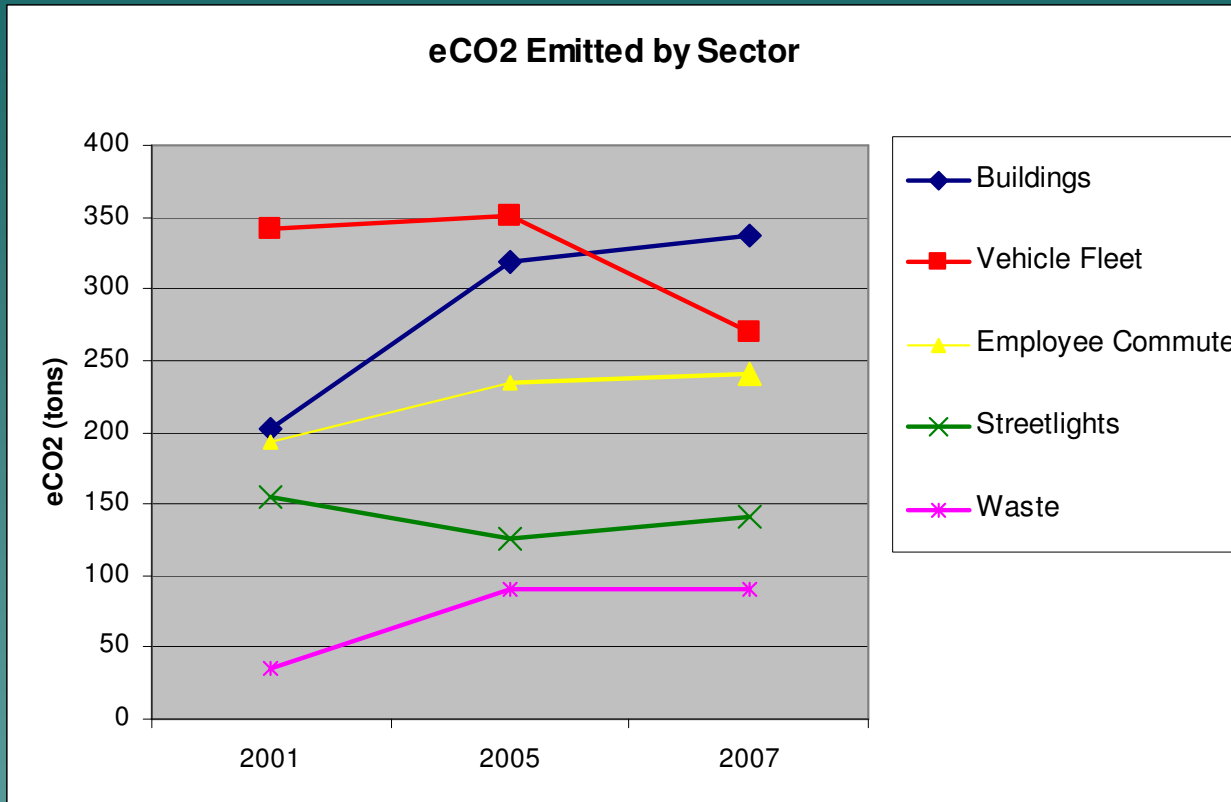
Carbon emissions projected to increase by 1.1% per year in the U.S.

Source: EIA Energy Information Administration

800 lbs. Gorilla = WWTP and W/S infrastructure
61% of City's carbon emissions, 1678.4 tons



Carbon Emissions by Sector



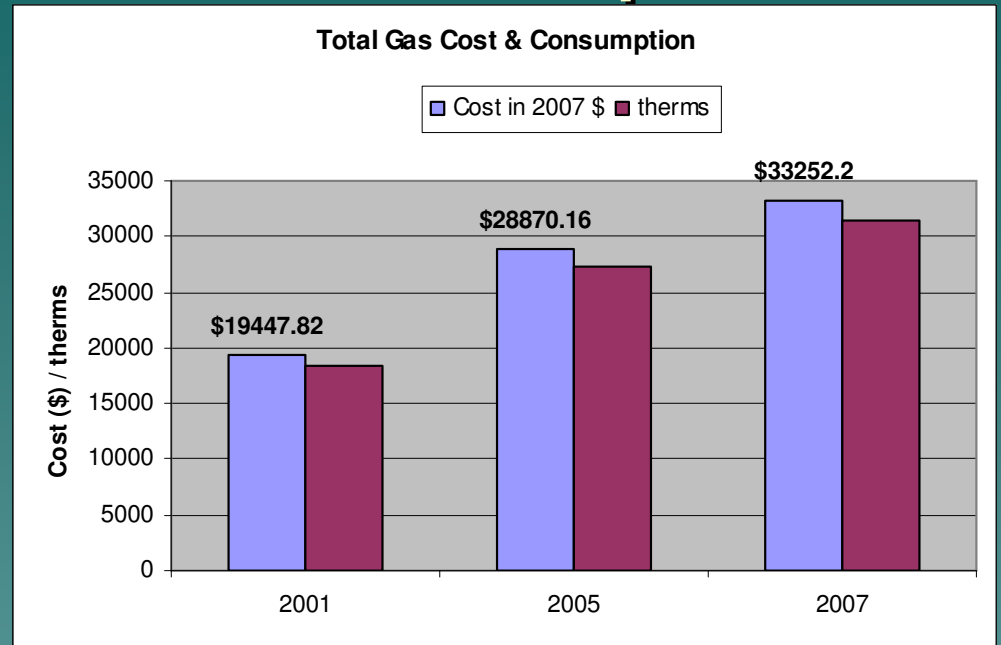
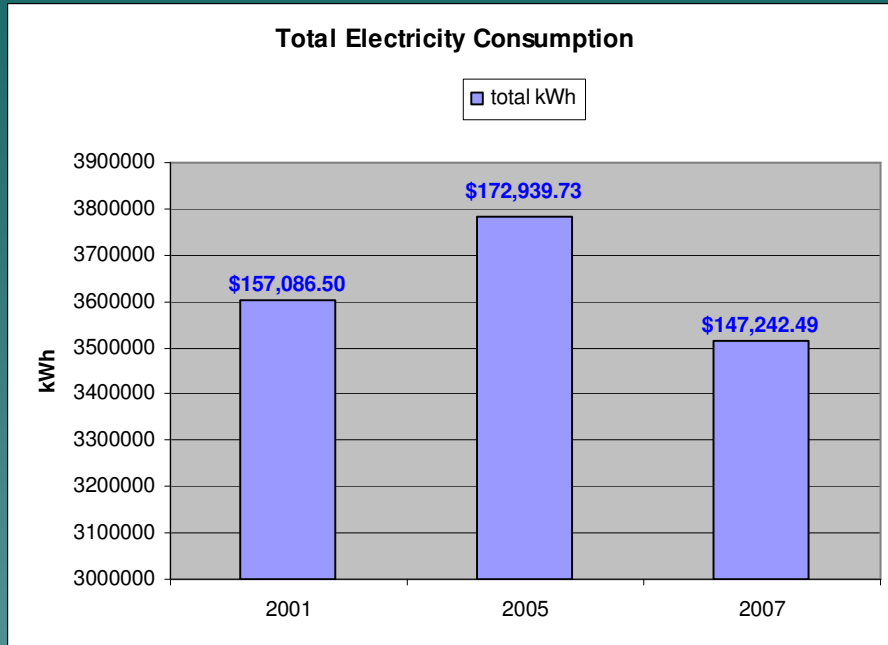
eCO2 emissions have increased slightly in most sectors from 2005 to 2007

Vehicle Fleet decrease most likely due to better practices (alt. transportation) and low snowfall in winter '07

Water/Sewage decrease (not shown) most likely due to efficiency upgrades

Overall decrease of 93 tons in eCO2 emissions!

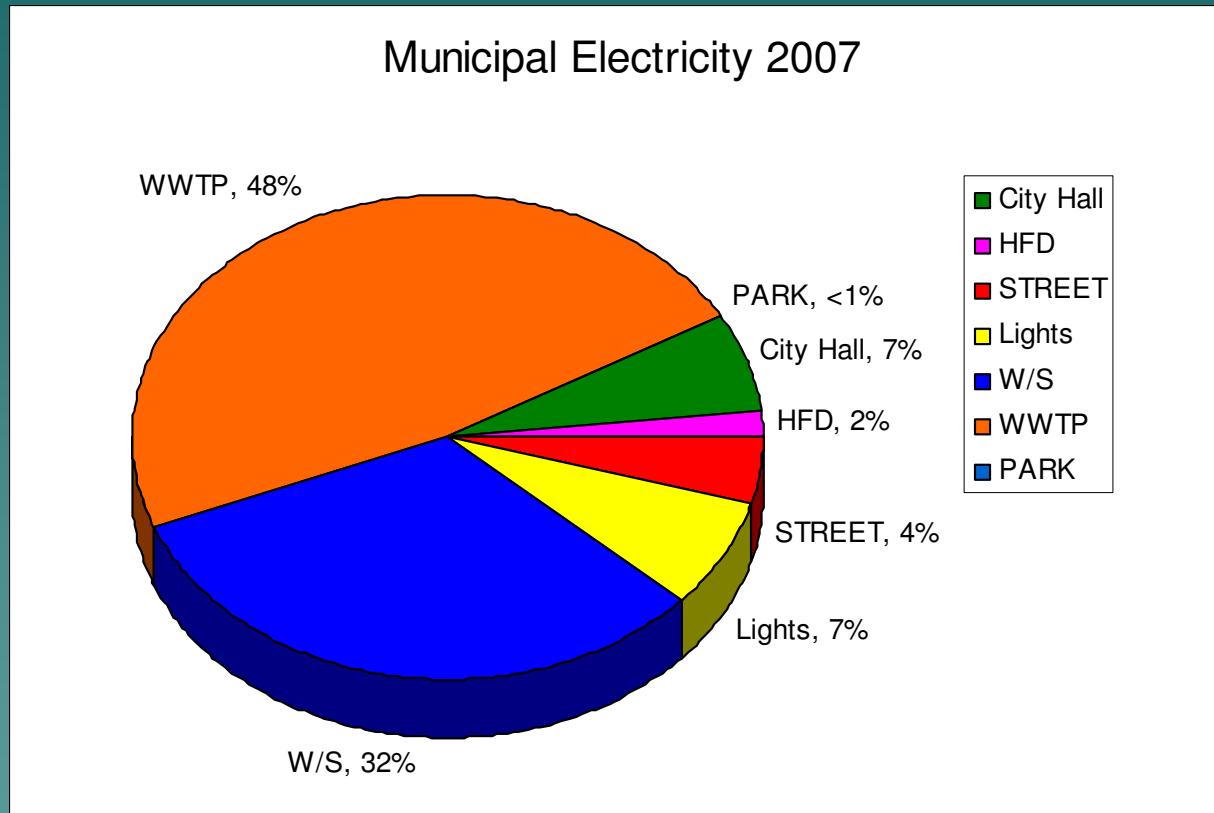
Total Elec. & Gas Consumption



Savings of \$25,000 in elec. bills from 2005 to 2007

Overall gas consumption has increased due to WWTP usage
(up 39% from 2005)

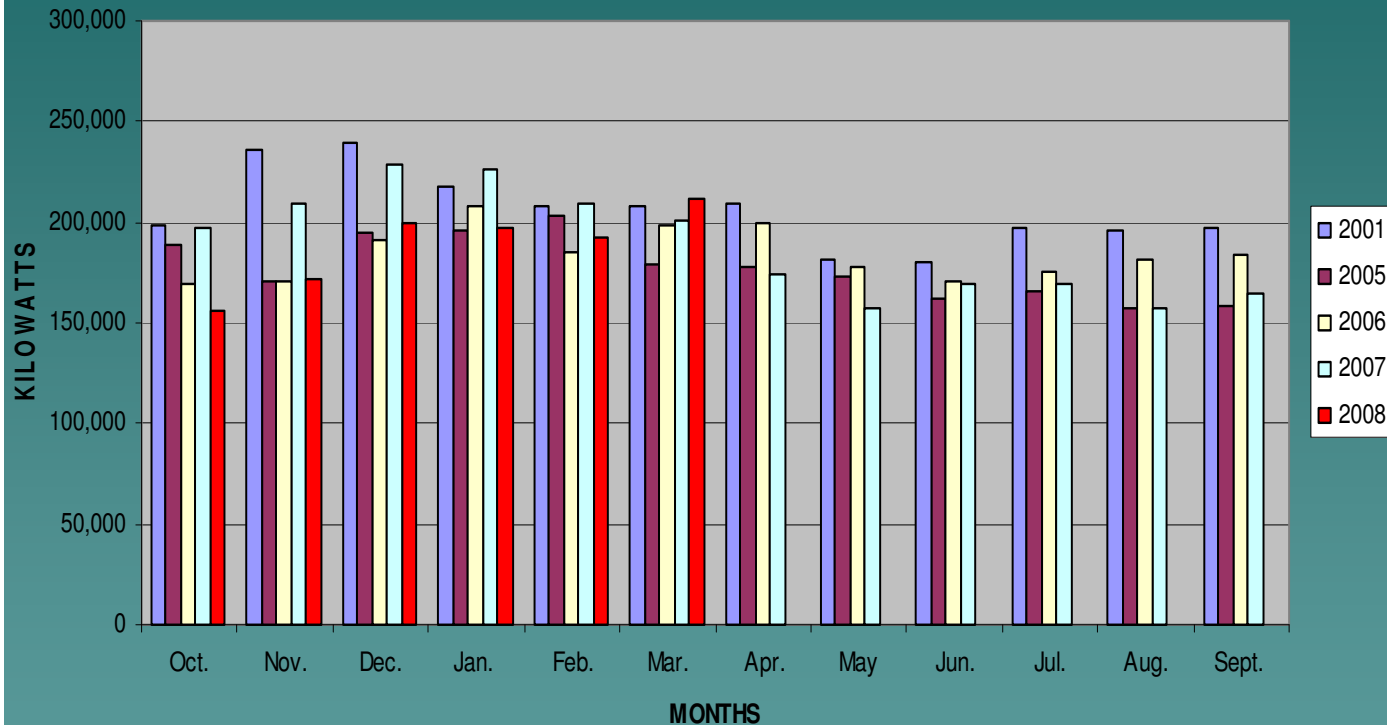
Total Electricity in 2007



WWTP accounts for nearly half of City's electricity use
Other Water & Sewage (pumps, wells, regulator) is one third
Closest resemblance to industrial infrastructure in City of Hailey

City Building Electricity Consumption

CITY BUILDINGS ELECTRICITY USAGE



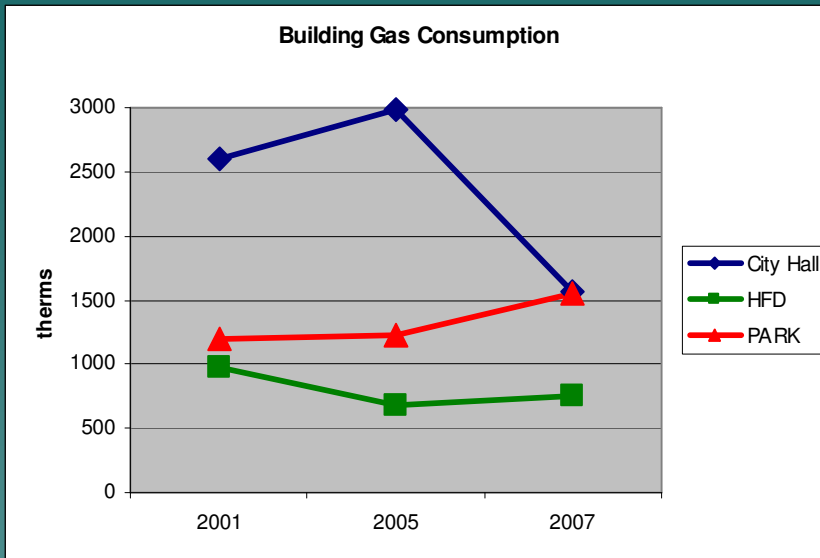
Oct 07	-21%
Nov	-18%
Dec	-12%
Jan 08	-13%
Feb	-8%
March	+5%

March '08 had colder temperatures than previous year

Overall trend in electricity usage is decreasing

Power savings from light retrofit not yet realized

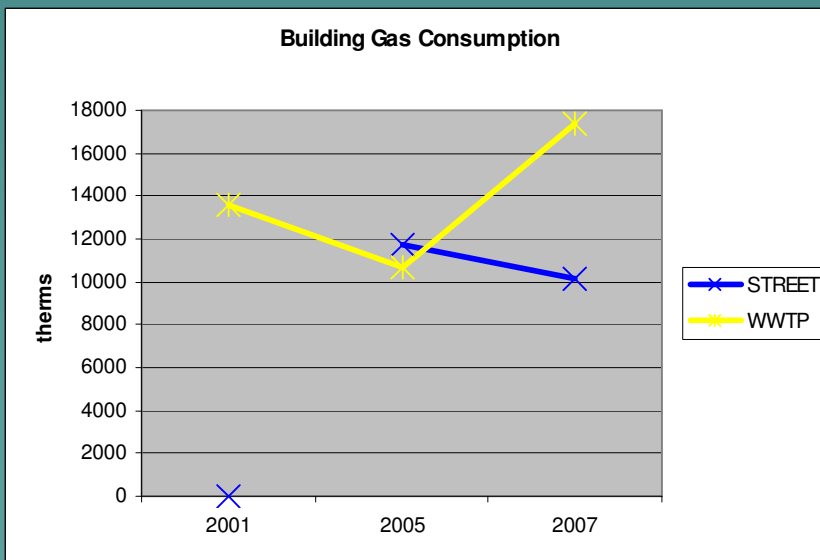
City Building Gas Consumption



PARK, HFD relatively steady

City Hall reduced consumption drastically

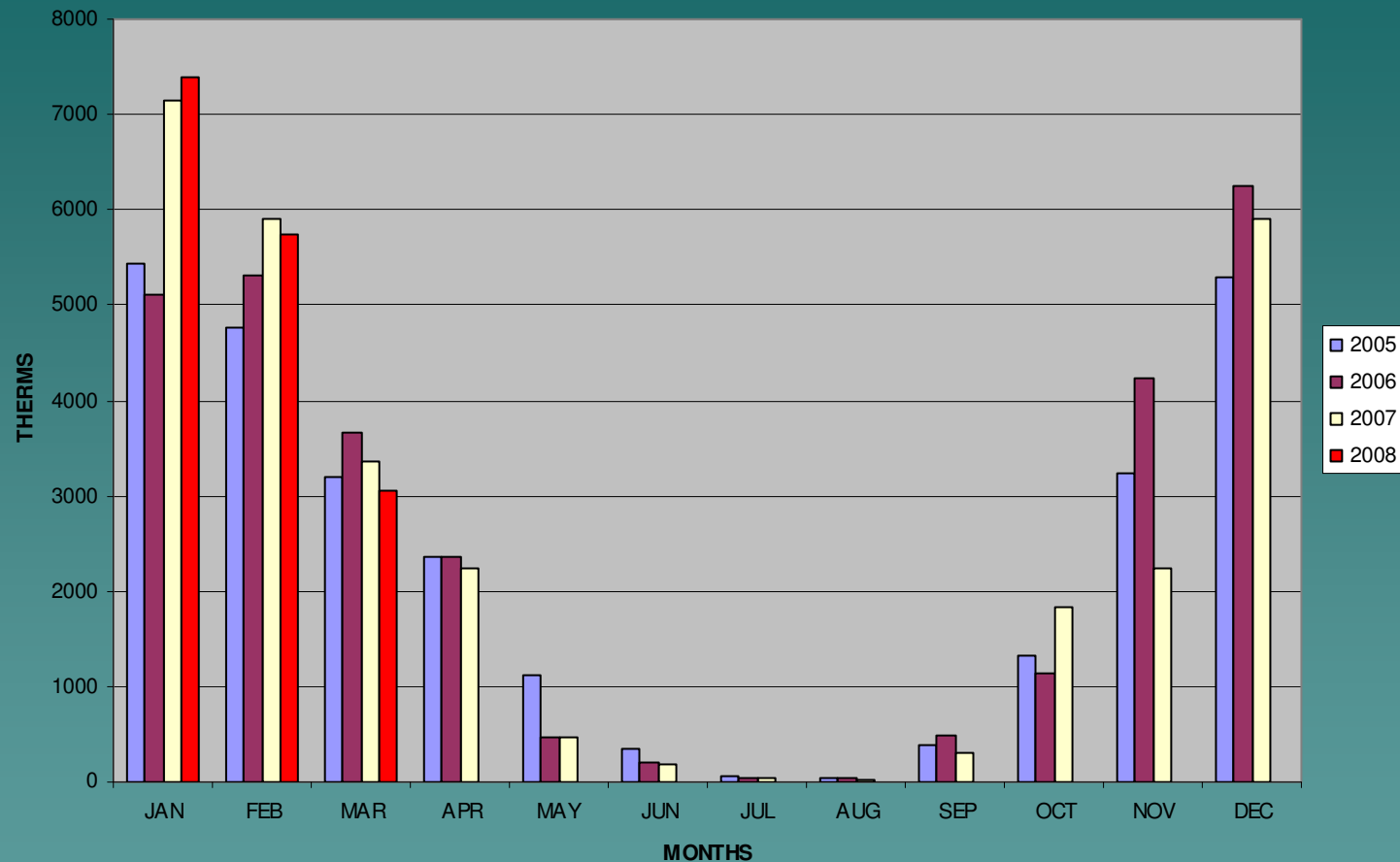
STREET reduced consumption by 10% from 2005 to 2007



WWTP gas consumption has increased 39% from 2005, but down 21% in March '08 from March '07

Hailey City Building Gas Consumption

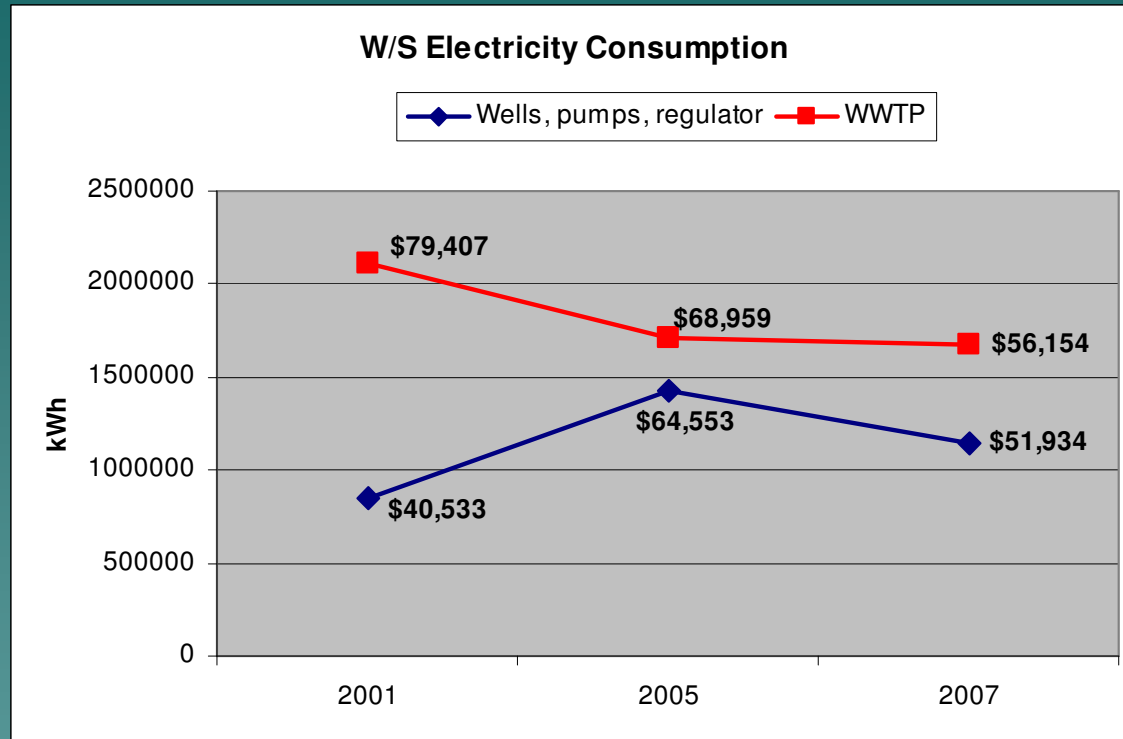
HAILEY CITY BUILDING GAS USAGE



Overall trend is decreasing (not including WWTP)

Programmable Thermostats installed in Nov. 07, decrease of 7% from Oct. 07 to March 08

Water & Sewage Trends



Efficiency increase partially due to installation of variable frequency drives: vary with the load

6% increase in March '08 may be due to colder temperatures & need for more air exchanges

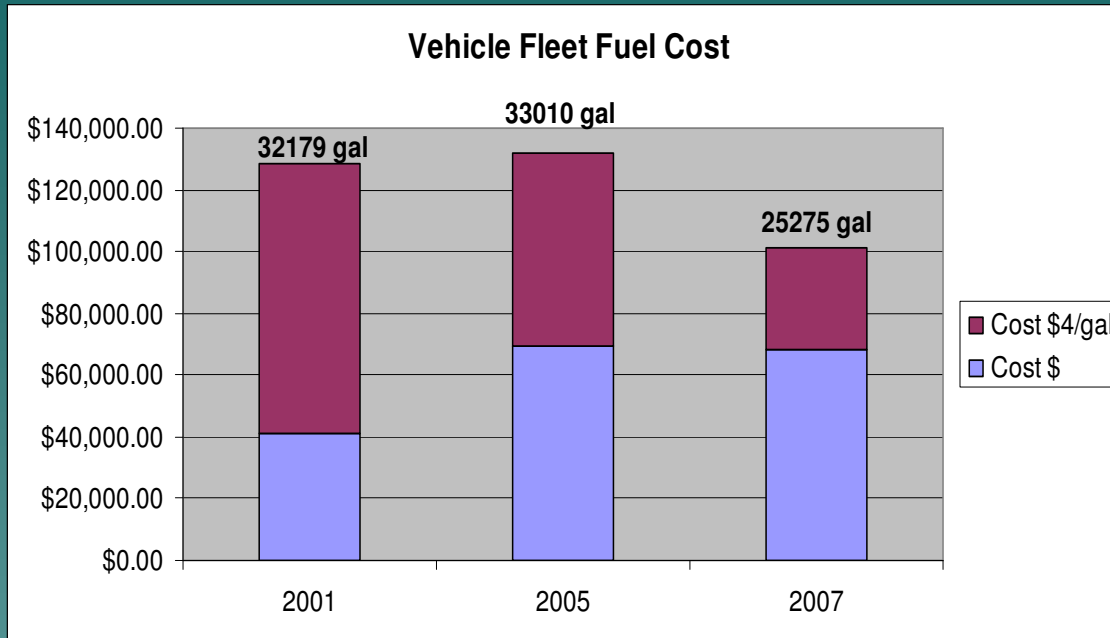
Employee Commute



Alternative Transportation methods include walk, bike, bus, and carpool

Majority of daily commuters from south do not carpool, significant part of VMT & carbon emissions

City of Hailey Vehicle Fleet



2001 and 2007 low snow and less snow removal

STREET dept. accounted for 47% of fuel usage in 2007

With rising gas prices, 2007 Vehicle Fleet cost is nearly **50% higher (>\$32,712)**

	Gas (gal)	Cost \$	\$/gal	Total Cost 4\$/gal	% increase in Cost
2001	32178.556	\$40,899.97	\$1.27	\$128,714.22	214.70%
2005	33009.811	\$69,180.88	\$2.10	\$132,039.24	90.86%
2007	25,274.538	\$68,386.58	\$2.71	\$101,098.15	47.83%

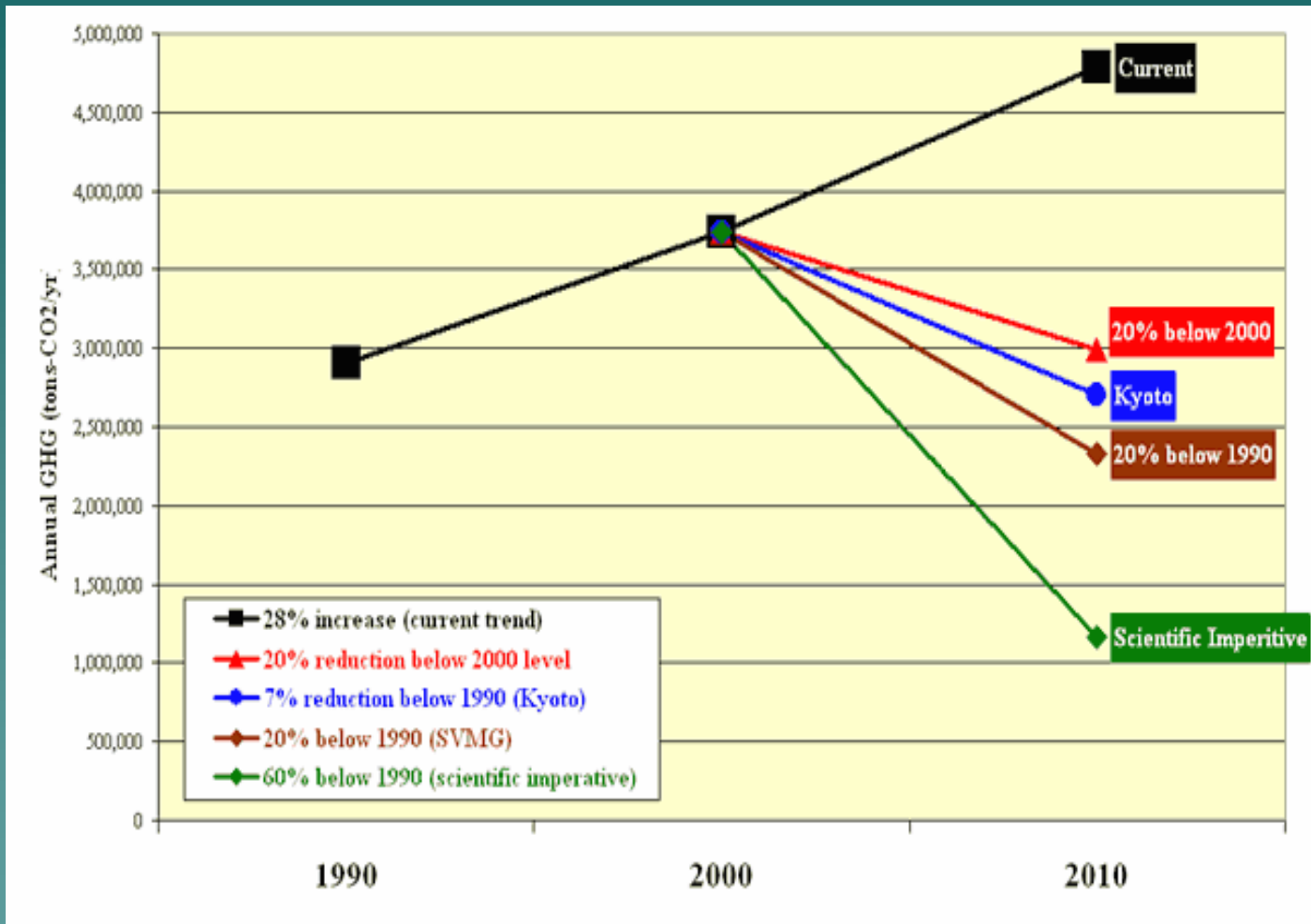
ICLEI Milestones revisited

The 5 milestones of ICLEI's performance-based campaign model for local governments to reduce their carbon emissions are:

- ◆ (1) establish a baseline
- ◆ **(2) *set a target***
- ◆ (3) develop a local action plan
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GHG Reduction Targets: Context



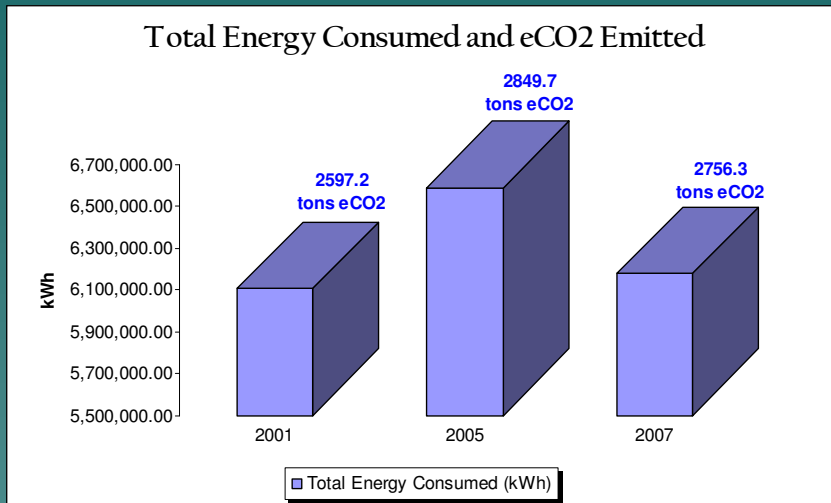
What Should Target % Be?

7% below 1990 levels = Kyoto Protocol & US Mayors Agreement

20% below 1990 = Figure recommended by ICLEI

Note the deep cuts needed to meet the Scientific Imperative

City of Hailey Growth



Biggest challenge:

Decreasing carbon emissions despite community growth and inevitable need for more municipal resources

Year	Population
2000	6200
2006	7751
2012 est.	10,659

	Growth Rate
People/year	333
%/year	4.3%

*Data based on U.S. Census Bureau estimates and Hailey Wastewater study. Growth rates used by Hailey and Blaine County Planning Departments

Reduction Opportunities

- ◆ Already Implemented
 - CFL light retrofitting in City buildings
 - No-idling campaign
 - Programmable thermostats
 - Water consumption campaign
 - ◆ Trout-friendly lawns, water metering
 - Reduction in travel expenses (ex: video-conferencing)
 - Alternative transportation benefits for City employees
 - Expansion of Recycling

- ◆ 2008 Implementation Opportunities
 - Energy Star building code
 - Reducing Vehicle Fleet fuel usage
 - Holiday LED lighting ordinance
 - On-going education and awareness opportunities
 - Increase sustainability practices and purchasing
 - Water conservation incentives

Specific Actions for ICLEI Analysis

- ◆ Reduce Employee Commute
 - Change to 10-hour work days, 4-day work week
 - More benefits for alternative transportation
- ◆ Vehicle Fleet fuel consumption
 - Reduction in number of vehicles
 - Responsible vehicle purchasing according to fuel efficiency (ex: biodiesel, hybrids)
- ◆ Increase building energy efficiency
 - Solar pre-heating, new HVAC

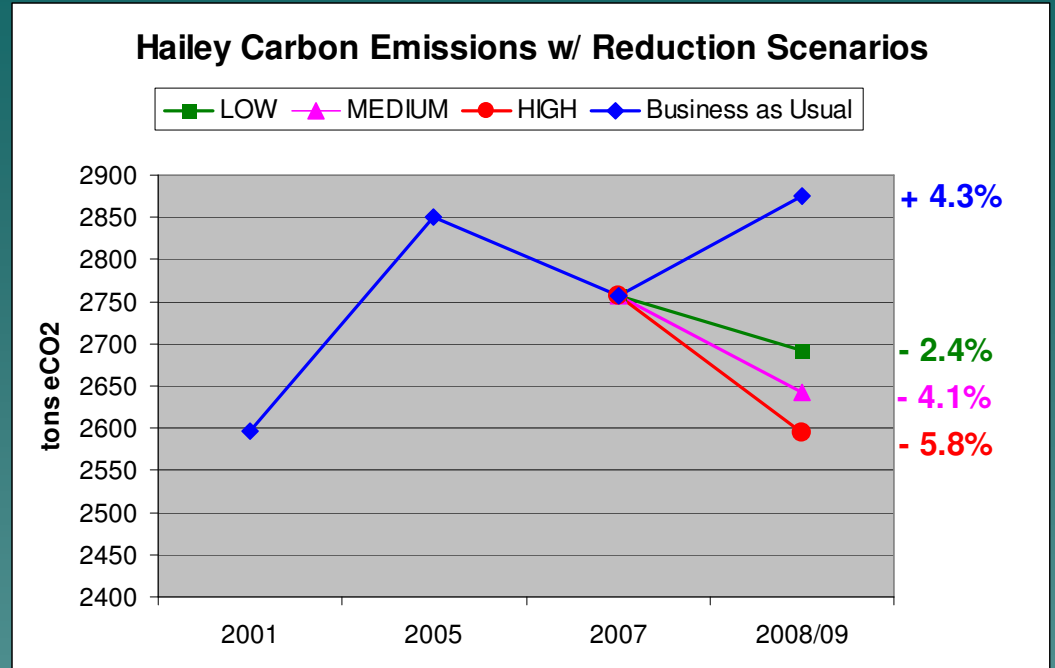
**ICLEI CACP Software can quantify reduction strategies to meet overall target*

Three Reduction Scenarios

Measure	%	eCO2	\$
Building Energy Efficiency	10	23	\$2,242
Employee Alt. Trans.	30	15	\$5,444
Fuel Use Reduction	10	27	\$10,108
		65 tons	\$17,794

Measure	%	eCO2	\$
Building Energy Efficiency	15	34	\$3,363
Employee Alt. Trans.	40	38	\$14,333
Fuel Use Reduction	15	41	\$15,164
		113 tons	\$32,860

Measure	%	eCO2	\$
Building Energy Efficiency	20	45	\$4,485
Employee Alt. Trans.	50	62	\$23,244
Fuel Use Reduction	20	54	\$20,216
		161 tons	\$47,985



Not enough to expect carbon emissions to decrease on their own (ex. 2005-07)

Real cost savings are greater if you consider rising fuel and energy prices

HELP Committee

To view this presentation, please visit the HELP section of the City of Hailey website

www.haileycityhall.org/finance/ClimateCom.asp

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