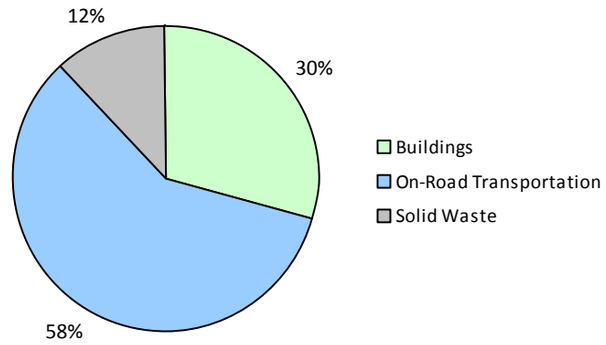
Warfield Village

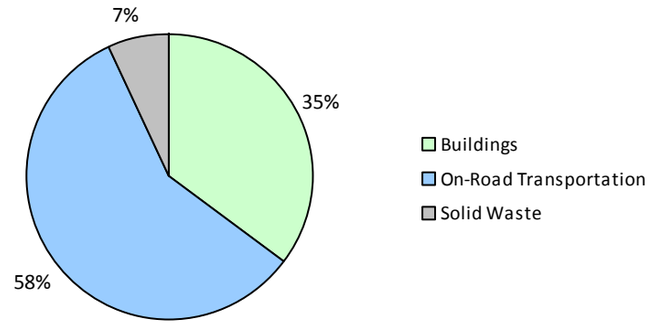
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

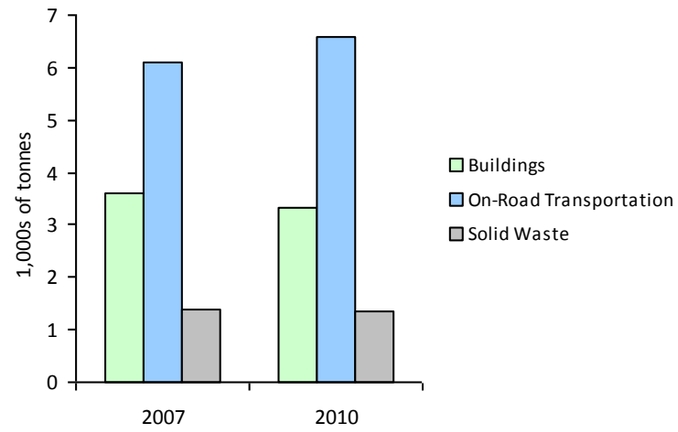
2010 GHG Emissions Sources (Total for this Community)



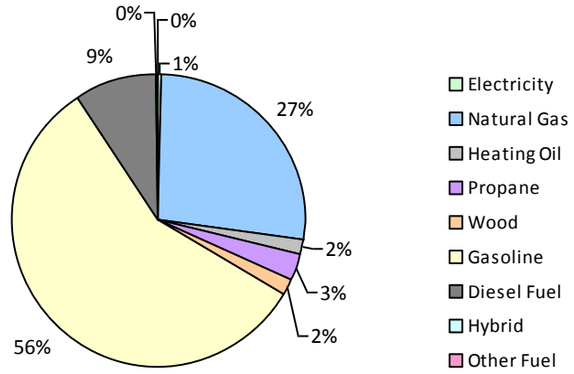
2010 GHG Emissions Sources (Total for BC)



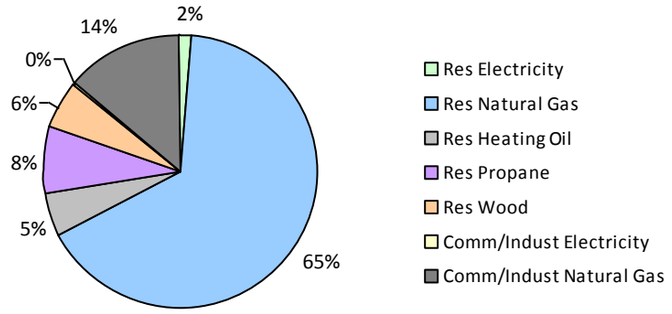
GHG Emissions Comparisons for this Community



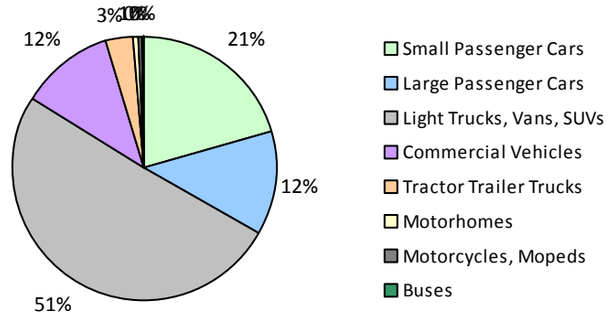
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



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Core Items

On-Road Transportation		2007					2010				
		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Gasoline	380	582,971 L	16,300	20,404	1,383	372	600,742 L	17,200	21,027	1,345
	Diesel Fuel			21,500	327	24			25,700	401	28
Large Passenger Cars	Hybrid			23,400	50	3			21,600	229	14
	Gasoline	206	362,871 L	15,800	12,700	858	198	354,369 L	15,800	12,402	793
	Diesel Fuel			15,100	162	11			15,800	171	12
Light Trucks, Vans, SUVs	Hybrid			21,600	59	4			17,200	48	4
	Gasoline	471	1,264,809 L	18,400	44,269	3,020	504	1,415,179 L	19,400	49,531	3,204
	Diesel Fuel	17	36,678 L	12,800	1,405	100	19	52,270 L	17,700	2,002	137
Commercial Vehicles	Gasoline	26	79,599 L	18,300	2,786	188	38	128,983 L	20,400	4,513	288
	Diesel Fuel	30	112,038 L	21,300	4,292	301	45	182,803 L	23,400	7,001	477
	Other Fuel			18,500	87	6			10,900	104	8
Tractor Trailer Trucks	Diesel Fuel			30,900	1,917	135			43,300	2,900	197
Motorhomes	Gasoline			17,600	443	30			18,500	466	30
	Diesel Fuel			15,800	432	30			15,500	332	23
Motorcycles, Mopeds	Gasoline	22	5,354 L	5,200	188	12	28	7,524 L	5,800	263	16
Buses	Gasoline								20,100	110	8
	Diesel Fuel								16,700	193	12
Totals		**1,152**	**2,444,320 L**	**16,981**	**89,521**	**6,105**	**1,204**	**2,444,320 L**	**17,966**	**101,693**	**6,596**

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	9,926 GJ	9,926	201	N/A	9,555 GJ	9,555	194
	Heating Oil	N/A	2,556 GJ	2,556	180	N/A	2,460 GJ	2,460	168
	Propane	N/A	4,499 GJ	4,499	274	N/A	4,331 GJ	4,331	264
	Natural Gas	622	46,493 GJ	46,493	2,332	621	43,293 GJ	43,293	2,172
	Electricity	946	9,135,215 kWh	32,887	55	826	8,834,829 kWh	31,805	53
Commercial/Small-Medium Industrial	Natural Gas	26	11,076 GJ	11,076	556	25	9,173 GJ	9,173	460
	Electricity	57	2,532,437 kWh	9,117	15	52	2,281,064 kWh	8,212	14
Totals		**1,651**		**116,554**	**3,613**	**1,524**		**108,829**	**3,325**

Warfield Village

2010 Community Energy and Emissions Inventory

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Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	830 t	N/A	1,385	0	830 t	N/A	1,344
Totals		**0**			**1,385**	**0**			**1,344**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	1		0	0				
Totals		**1**			**0**	**0**			

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 1,794)			2010 (Population: 1,808)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	109	7	0 L	277	18
Gasoline	2,295,604 L	80,790	5,491	2,506,797 L	88,312	5,684
Diesel Fuel	148,716 L	8,535	601	235,073 L	13,000	886
Other Fuel	0 L	87	6	0 L	104	8
Wood	9,926 GJ	9,926	201	9,555 GJ	9,555	194
Heating Oil	2,556 GJ	2,556	180	2,460 GJ	2,460	168
Propane	4,499 GJ	4,499	274	4,331 GJ	4,331	264
Natural Gas	57,569 GJ	57,569	2,888	52,466 GJ	52,466	2,632
Electricity	11,667,652 kWh	42,004	70	11,115,893 kWh	40,017	67
Solid Waste	830 t	0	1,385	830 t	0	1,344
Grand Totals		**206,075**	**11,103**		**210,522**	**11,265**

Warfield Village

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Supporting Indicators

No new supporting indicator data have been provided in the 2010 reports. Work is currently underway to produce a complete second round of data for the indicators below in the 2012 reports (available in 2014). In the interim, we are including the same supporting indicator data that was provided in the 2007 reports. Feedback is requested on all supporting indicators; please contact us directly at

Housing Type - Private dwellings by structural type

Housing type is important for reducing building-related GHG emissions and energy consumption. A trend toward fewer single family dwellings indicates an increase in residential density, which is known to reduce transportation-related GHG emissions.

	1996		2001		2006	
	Units	%	Units	%	Units	%
Single Detached House	635	46	635	84	625	84
Semi-Detached House	0	0	10	1	5	1
Row House	0	0	0	0	0	0
Apartment, Duplex	15	1	15	2	5	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	80	6	90	12	100	14
Other Single Attached House	10	1	0	0	5	1
Movable Dwelling	10	1	5	1	0	0

Commute to Work - Employed labour force - by mode of commute

An increase in the number of people choosing to walk, cycle and use transit reduces GHG emissions. More compact, complete, connected communities should see an increase in the use of these transportation modes.

	1996		2001		2006	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	625	80	670	81	660	83
Car, Truck,Van as Passenger	55	7	40	5	55	7
Public Transit	50	6	0	0	15	2
Walked	45	6	75	9	45	6
Bicycle	10	1	45	5	20	3
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	0	0	0	0	0	0

Parks and Protected Greenspace

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	2009	
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	0	0
Local Parks	4	2
Agricultural Land Reserve	0	0
Other land use	190	98
Total Parks and Protected Area	4	2
Total Land Area	194	100

* Total is net of Indian Reserves
** Quantity of parkland may be underestimated

Residential Density

Increasing residential densities is known to reduce vehicle use resulting in fewer transportation-related GHG emissions. There are many additional benefits from more compact development.

	2009	
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	0	0
Local Parks	4	2
Agricultural Land Reserve	0	0
Other land use	190	98
Total Parks and Protected Area	4	2
Total Land Area	194	100

* Net of Crown land, parks, Indian Reserves, water features, airports, ALR,waste disposal site

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Supporting Indicators Under Consideration

Work is currently underway to produce a complete second round of supporting indicators for the 2012 reports (available in 2014). These reports will new data for the five supporting indicators included in the 2007 and 2010 Reports:

- **Housing Type**: Private dwellings by structural type
- **Commute to Work:** Employed labour force - by mode of commute
- **Commute Distance**
- **Residential Density**
- **Parks and Protected Greenspace**

And in addition, the 2012 reports we are working to be able to include:

- **Proximity to Transit**
- **Building Energy Intensity**
- **Building Floor Space**
- **Waste Diversion**

We are continuing to work towards reporting on even more supporting indicators in the future including:

- **Proximity to Services** (e.g destinations such as grocery store, school, other retail etc.)
- **Transit Ridership**
- **Water Use**
- **Impervious Surface Cover:** % change in impervious surface cover
- **Tree Canopy Cover**: % change in tree canopy cover
- **District Energy**: # and energy output (e.g. buildings connected, energy consumed in GJ or kWh) of district energy systems by energy type e.g. renewable or non-renewable)
- **On-Site Renewable Energy**: # and energy output (in GJ or kWh) from households producing and/or consuming on-site renewable heat (e.g. biomass, solar thermal, geo-exchange) and/or electrical (e.g. solar photovoltaic, small wind, small scale hydro) energy
- **Energy Recovery** from waste energy (GJ or kWh) recovered from waste (e.g. from landfill gas, sewage treatment, industrial operations, farm)

Please give us feedback by contacting us directly at CEEIRPT@gov.bc.ca

Many local governments have been undertaking a significant amount of climate action in both the corporate and community-wide spheres, as demonstrated in both the public reports from the Climate Action Revenue Incentive Program (CARIP) http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm, and on the http://toolkit.bc.ca website. These two resources may be helpful to those who are interested in learning from other BC local governments. The toolkit also contains additional information and resources including decision-support/planning frameworks and tools for undertaking actions to reduce GHG emissions and energy consumption.

This is your local government's 2010 Community Energy and Emissions Inventory (CEEI) Report

What is a CEEI Report?
CEEI Reports are a result of a multi-agency effort to provide a province-wide solution to assist local governments in BC to track and report on community-wide energy consumption and greenhouse gas (GHG) emissions as well as supporting indicators every two years. CEEI Reports are one of the many resources available through the Climate Action Toolkit (http://www.toolkit.bc.ca), a web-based service provided through the ongoing collaboration between UBCM and the Province.

Why does my local government need a CEEI Report?
A community energy and GHG emissions inventory can be a valuable tool that helps local governments plan and implement GHG and energy management strategies, while at the same time strengthening broader sustainability planning at the local level. CEEI reports fulfill local governments' Climate Action Charter commitment to measure and report their community's GHG emissions profile, establish a base year inventory for local governments to consider as they develop targets, policies, and actions related to BC's Local Government Act requirements, fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program, as well as supporting local government efforts to monitor progress towards Regional Growth Strategy objectives.

A first in North America!
CEEI is a first in North America and a first step for BC communities. The 2010 CEEI Reports are based on best available province-wide data. The accuracy and detail of CEEI reports will continue to improve to meet increasing local and provincial government information needs. Improvements have been made from the original draft 2007 CEEI Reports posted in Spring 2009. These include estimates for residential heating oil, propane and wood use, breaking out small from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items'. Following the 2010 CEEI Reports, inventories will be generated every two years, and will continue to improve as government information needs, international protocols and new data sources emerge.

For More Information
The full list of all BC local government 2010 CEEI Reports, User Guide, Technical Methods and Guidance Document, and additional information on the Supporting Indicators are available at: http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html For guidance on target setting and community actions, go to http://www.toolkit.bc.ca and http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm

We Need Your Feedback
To continue to guide us on CEEI, please take the time to contact us directly at CEEIRPT@gov.bc.ca

Notice to the Reader
This CEEI Report uses information from a variety of sources to estimate GHG emissions. While the methodologies, assumptions and data used are intended to provide reasonable estimates of greenhouse gas emissions, the information presented in this report may not be appropriate for all purposes. The Province of BC and the data providers do not provide any warranty to the user or guarantee the accuracy or reliability of the data contained in this report. The user accepts responsibility for the ultimate use of such data. We need your help to make these reports better,