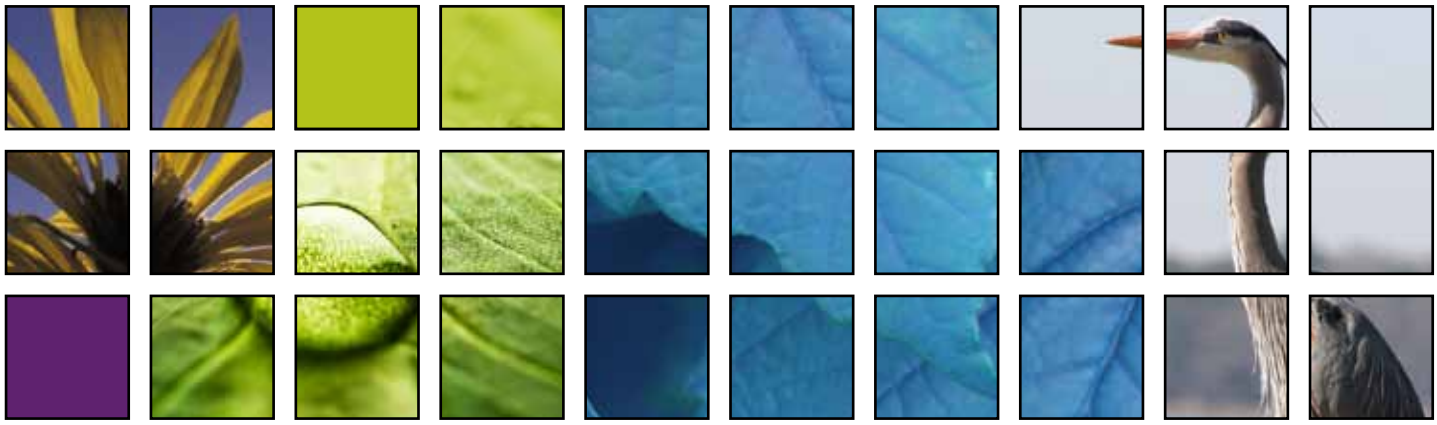
City of

Pitt Meadows



CORPORATE ENERGY & GREENHOUSE GAS PROGRESS REPORT

2013

FOR THE 2008, 2009, 2010, 2011 & 2012 INVENTORY

City of Pitt Meadows

Corporate Energy and Greenhouse Gas Emissions Progress Report

City of Pitt Meadows

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Executive Summary

As a follow-up to the City's corporate greenhouse gas (GHG) emissions plan and accompanying reduction target that was endorsed by Council in 2010[1], inventories of greenhouse gas emissions, energy consumption, and costs for energy have been completed for the City for 2009, 2010, 2011, and 2012. This information augments information previously reported in the corporate plan for the 2008 inventory year. Inventory trends are summarized in Table E1.

As a member of the Federation of Canadian Municipalities' (FCM) Partners for Climate Protection (PCP), the City has been recognized for Milestones One, Two, and Three of the corporate and community portion of the program. Upon submission to the PCP Secretariat, this report provides the necessary information for the City to be recognized for Milestone Four and Five of the corporate portion of the program.

In 2012, the City's GHG emissions decreased by 24 percent over 2008 base year levels largely from reductions in buildings and vehicle fleet. Also, as a result of BC Hydro offsetting all GHG emissions from the production of electricity in British Columbia, GHG emissions from electricity in buildings, outdoor lighting, and water and wastewater is now zero. The GHG emissions in the buildings sector that remain are from natural gas.

It is important to note that the FCM PCP quantification method for GHGs is different than that of the Provincial climate action program. Under the FCM PCP, the City's annual GHG emissions are 812 tonnes CO_2e, whereas under the provincial program, the City's annual GHG emissions are 797 tonnes (see "1.1 Differences Between the Province of BC's CAC and the FCM's PCP" on page 1).

Table E1 - Reduction Target Calculation

Sector	2008 Base Year Emissions (tonnes CO_2e)	2012 Emissions (tonnes CO_2e)	Magnitude of Change (tonnes CO_2e)	Percent Change
Buildings	659	525[1]	134	-20%
Lighting	16	0[2]	16	-100%
Water and Wastewater	41	0[2]	41	-100%
Vehicle Fleet	297	232	65	-22%
Corporate Solid Waste	55	55	0	0%
Totals	**1,068**	**812**	**256**	**-24%**

[1] Greenhouse gas emissions from electricity in 2012 are lower because BC Hydro purchased offsets for electricity. The GHG emissions that remain are from natural gas consumption.

[2] Greenhouse gas emissions from electricity in 2012 are zero because BC Hydro purchased offsets for electricity.

1.1 Target Update Statement

The City is on track to meet the 32 percent reduction target for 2018 given that GHG emissions have been observed to decrease by 24 percent or 256 tonnes CO_2e between 2008 and 2012

This statement will remain true if the magnitude of change in the forecast for 2018 remains approximately the same as that reported in the City's Corporate Energy and GHG Emissions Management Plan (2010).

[1] The target statement endorsed by Council was, "***The City of Pitt Meadows can reduce GHG emissions by 32 percent by reducing its 2008 base year emissions quantity by 441 tonnes CO_2e by 2018.***"

1.2 Next Steps

In order for the City to maintain progress towards the reduction quantity previously endorsed by Council, a number of steps are recommended in section 2 of this report and summarized as follows:

Future Growth

Ensure that all buildings and engineering assets that the City plans to construct and/or procure in the future meet the highest energy efficiency standard that is economically feasible.

Buildings

Continue to improve energy efficiency in existing buildings by upgrading heating, air conditioning, lighting and ensuring that replacements for computers, monitors, and other office appliances are EnergyStar™ rated. Pursue real time monitoring of energy consumption at the Ice Arena to be able to identify problems with mechanical systems as they are occurring, as opposed to the end of a billing cycle for energy consumption.

Lighting

Although electricity consumption has no direct implications to the City's GHG emissions inventory, to reduce the cost of consumption for electricity, recommendations for adaptive streetlighting and/or LED technology for overhead streetlights should be developed.

Water and Wastewater

Staff should continue to replace motors with high efficiency motors as required and replace backup generator sets for sewage lift stations with more efficient units.

Vehicle Fleet

Consider developing a low carbon fleet management plan that would include cost benefit analyses when considering vehicle purchases. To reduce vehicle idling, consider purchasing generator sets for vehicles that must run auxiliary equipment from an idling vehicle.

Corporate Solid Waste

Although the City has increased the diversion rate of recyclable materials and has implemented organics recycling in all offices, quantifying the reductions is challenging. The City will explore innovative methods of quantifying corporate solid waste in the future.

1.3 Looking Ahead

The City is a signatory to the Provincial Climate Action Charter[2] and voluntarily reports its' GHG emissions to the Province on an annual basis. Provincial guidance on the scope of GHG emissions inventories is becoming more stringent and the Province is encouraging local governments to include all contracted services that fall under 'traditional services' as defined by the Province in their guidance document[3]. Staff will report new information regarding the GHG emissions from contracted, traditional services to Council as more information on reporting requirements becomes available from the Province.

2 Province of British Columbia website 2012. http://www.env.gov.bc.ca/cas/mitigation/charter.html#features

3 Province of British Columbia website 2012. http://toolkit.bc.ca/sites/default/files/Carbon%20Neutral%20Workbook%20v%202_0.pdf

1 Corporate Inventory and Trends

The City of Pitt Meadows has taken several steps toward corporate sustainability including a Corporate Energy and GHG Emissions Plan and a Community Energy and GHG Emissions Plan.

The City joined other local governments in British Columbia by signing the Provincial Climate Action Charter[1] (CAC) in 2009. The CAC is a voluntary commitment made by local governments to become carbon neutral in their corporate operations by 2012[2]. Other functions of the Charter are to foster cooperative inter-government relationships, remove legislative and regulatory barriers to climate change actions, and encourage the development of compact, socially responsible communities.

At the national level, the City endorsed participation in the Federation of Canadian Municipalities' (FCM) Partners for Climate Protection (PCP) program in January 2001. The City has taken advantage of the programs offered by the FCM and received a grant to complete the corporate and community GHG emissions plans, and received a grant and low interest loan to assist with the construction of the City's LEED™ standard South Bonson Community Centre.

As a participant of the FCM PCP, the City pledged to cut corporate greenhouse gas emissions by 32 percent by 2018 relative to the 2008 base year (e.g., the quantity to be reduced is 441 tonnes CO_2e). This reduction target was endorsed by Council in 2011.

This progress report is a follow-up to the City's Corporate Energy and GHG Emissions Plan 2010. The report adds four additional inventory years, illustrates trends, and provides a brief discussion of progress and next steps. It has been developed in order to receive recognition for FCM PCP Milestones Four and Five and provides commentary on the City's voluntary commitment to the Provincial CAC.

1.1 Differences Between the Province of BC's CAC and the FCM's PCP

Although the goals of the Provincial CAC and the FCM PCP are similar, the PCP is slightly different than the CAC. The PCP is Canada's implementation of an International program followed by over 1000 local governments worldwide[3] (231 local governments participate in Canada), whereas the CAC is a provincial program tailored to the context of local government in British Columbia.

The programs differ in many ways. One difference is that the PCP includes a reduction target that is relative to a year in the past, whereas the CAC does not associate a reduction target with its commitment. Instead, the CAC requires that signatories be carbon neutral on an annual basis.

The most significant difference between the two programs is to become carbon neutral as defined by the CAC, signatories must purchase carbon offsets from the Provincial Carbon Trust, a Crown Corporation. In contrast, there are no costs associated with the FCM PCP program (i.e., a local government does not have to be an FCM member to be a PCP member) and the achievements of members are recognized through Milestone Awards.

Another difference between the two programs is the source of GHG emissions included in each inventory. The CAC does not include GHG emissions from corporate solid waste, whereas the PCP does account for GHG emissions from corporate solid waste. Further, CAC inventories must include GHG emissions from contracted services (e.g., solid waste collection, road construction, maintenance of streets and streetlighting, etc.), whereas PCP inventories do not include contracted services.

Another component of the Provincial climate action program is the Carbon Action Revenue Incentive Program[4] or CARIP rebate. This program returns the carbon tax local governments pay annually from the purchase of fossil fuel-based energy (e.g., natural gas, gasoline, diesel fuel, propane, fuel oil, etc.). Theoretically, the amount of carbon tax paid annually should be equal to the quantity of fossil fuels consumed, although that is not the case. From an accounting point of view, the CARIP rebate must be calculated based on the actual amount of carbon tax paid in a calendar year, which is not necessarily equivalent to the amount of fossil fuel consumed. In contrast, GHG emissions management programs must be based on the actual quantity of fossil fuels consumed in the year, which is not necessarily equivalent to the amount quantified in the CARIP rebate. Therefore, the CARIP rebate quantities are not used to calculate GHG emissions in a management program such as the City's participation in the FCM PCP.

Accordingly, the GHG emissions reported herein are calculated using the FCM PCP quantification method, not the CAC quantification method. For reference, the GHG emissions using the CAC method is provided in the City's Climate Action

1 Province of British Columbia website 2012. http://www.env.gov.bc.ca/cas/mitigation/charter.html#features
2 Solid waste facilities regulated under The Environmental Management Act are not included
3 http://www.iclei.org/our-activities/our-agendas/low-carbon-city.html
4 http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm

Revenue Incentive Program (CAIRP) INTERIM Public Report for 2012. The quantity of GHG emissions in the interim report is 797 tonnes CO_2e compared to 812 tonnes CO_2e reported herein using the PCP quantification method. The differences of ~15 tonnes between the two methods are attributed to the inclusion of ~39 tonnes CO_2e from contracted services and exclusion of ~55 tonnes CO_2e from corporate solid waste in the CAC report (i.e., with rounding errors, 55 minus 39 is approximately 15 tonnes).

1.2 Report Objectives

This report contains the following components:

- Inventories of energy consumption, costs for energy, and GHG emissions by sector for 2008, 2009, 2010, 2011, and 2012;
- A comparison of greenhouse gas emissions and energy consumption for each sector;
- A summary of reduction initiatives implemented since 2010; and,
- A summary of reduction initiatives that the City should consider pursuing in the next five years.

These objectives will enable the City to apply to the FCM PCP Secretariat for recognition of PCP Milestones Four and Five.

1.3 Inventory Methods

1.3.1 Electricity

BC Hydro provided monthly electricity consumption data and costs for consumption for assets owned by the City.

1.3.2 Natural Gas

Fortis BC provided monthly natural gas consumption data and costs for consumption for assets owned by the City.

1.3.3 Vehicle Fleet

Fuel consumption data originated from the City's records of vehicle fill ups at commercial service stations.

1.3.4 Solid Waste

Solid waste generated from operations was derived from the total volume of solid waste collected at City facilities. The volume was estimated using the volume of bins and frequency of pickup.

1.3.5 Greenhouse Gas Emissions Calculations

Data were imported into the energy and emissions module of Energy & Emissions Monitoring and Reporting System™. The emissions calculator within this software conforms to the methods described in the International Panel on Climate Change Greenhouse Gas Inventory Reference Manual[5] and the principles provided in the International Standards Organization (ISO) International Standard for Greenhouse Gases[6].

1.3.6 Greenhouse Gas Emissions Coefficients and Electricity Emissions Factors

Emissions coefficients, which are used to calculate GHG emissions from energy sources, are reported in Table 1.1 for liquid and gaseous fuels. The emissions coefficients originate from Environment Canada's National Inventory Report[7]. Emissions factors for electricity are provided by BC Hydro[8].

5 IPCC (2006), IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National. Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.
6 ISO (2006), International Standard ISO/TC 207 WG5 N162. Greenhouse Gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals. 28pp.
7 Environment Canada (2008). National Inventory Report, Table A9-11, p. 509.
8 http://www.bchydro.com/about/company_information/reports/2010_gri/f2010_environmental_EN16_2.html

Table 1.1 - Emissions Factors and Coefficients

Fuel Type	Units	Emissions Coefficient			Emission Factors		
		CO_2	CH_4	N_2O	CO_2e		
Natural Gas	kg/GJ	50.17	0.0010	0.0009			
Gasoline	kg/L	2.289	0.000068-0.0014*	0.00005-0.00016*			
Diesel Fuel	kg/L	2.663	0.000051-0.00012*	0.000082-0.0011*			
Biodiesel 5		-3.92 %#	-3.92 %#	-3.92 %#			
Propane	kg/GJ	15.51	0.0010	0.0043			
Electricity by Inventory Year	Year				2008	2009	2010 - 2012
	tonnes/GWh				28	25	0§
Global Warming Potential		1	21	310			

* assigned according to emissions technology of the vehicle

% relative to Diesel Fuel

§ All BC Hydro-supplied electricity is carbon neutral in 2010, 2011, and 2012

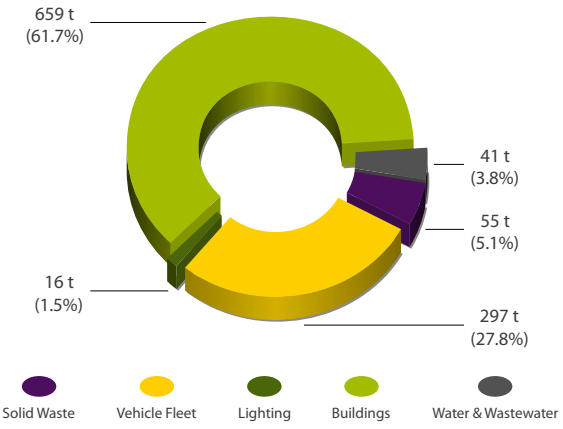
1.4 Corporate Inventory Overview

Chart 1.1 provides tables and pie charts for each inventory year (2008 to 2012 inclusive). Charts for GHG emissions are included as well as the energy and costs for energy in each sector in each year. GHG emissions were 1,068 tonnes CO_2e in 2008, 1,032 tonnes CO_2e in 2009, 846 tonnes CO_2e in 2010, 635 tonnes CO_2e in 2011, and 812 tonnes CO_2e in 2012. Note that there are no greenhouse gas emissions from electricity in 2010, 2011, and 2012 because of BC Hydro's purchase of offsets for electricity supplied to the City (e.g., there are no GHG emissions associated with electricity consumption).

In terms of GHG emissions, the two largest sectors are the buildings and vehicle fleet sectors. See "2.2 Corporate GHG Emissions Inventory By Sector" on page 4 for a discussion of trends. Section 2.3 provides a table describing the level of detail in the datasets for each year and a general sense of data confidence. See the appendices for an account-by-account inventory for all inventory years.

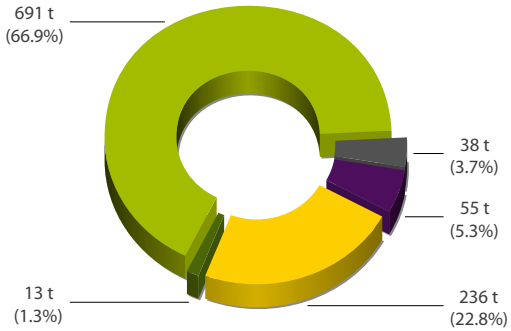
Chart 1.1 - GHG Emissions by Sector (2008 - 2012 ; tonnes CO_2e)

Sector	GHGs	Energy	Costs
Buildings	659	24,051	$451,465
Lighting	16	2,001	$40,719
Water & Wastewater	41	5,244	$139,624
Vehicle Fleet	297	4,176	$140,823
Solid Waste	55		
2008 Total	1,068	35,472	$772,631
	CO_2e (t)	(GJ)	



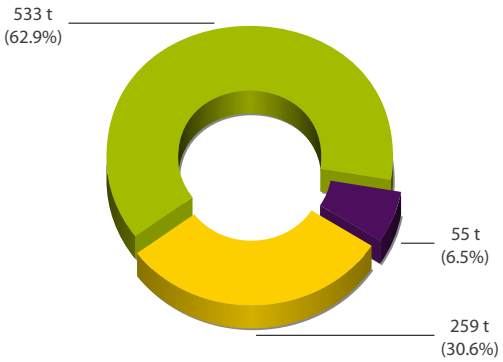
2009

Sector	GHGs	Energy	Costs
Buildings	691	24,388	$458,440
Lighting	13	1,889	$40,349
Water & Wastewater	38	5,429	$146,938
Vehicle Fleet	236	3,312	$90,740
Solid Waste	55		
Total	1,032	35,017	$736,466
	CO_2e (t)	(GJ)	



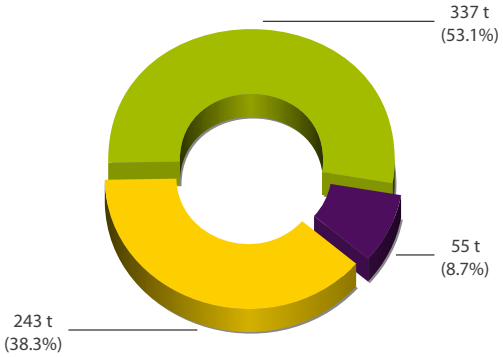
2010

Sector	GHGs	Energy	Costs
Buildings	533	22,621	$452,535
Lighting	0	2,179	$50,127
Water & Wastewater	0	5,826	$188,507
Vehicle Fleet	259	3,777	$114,635
Solid Waste	55		
Total	846	34,403	$805,805
	CO_2e (t)	(GJ)	



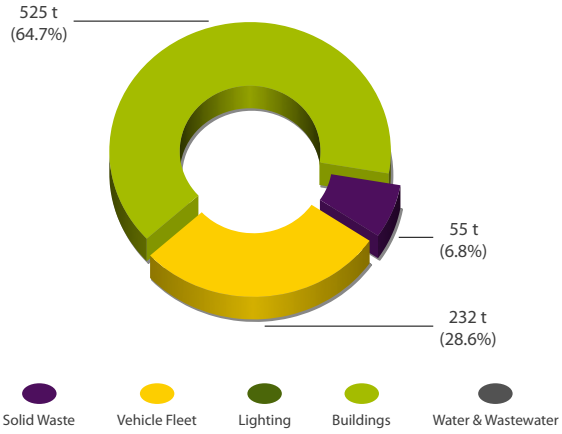
2011

Sector	GHGs	Energy	Costs
Buildings	337	20,180	$403,851
Lighting	0	2,716	$56,696
Water & Wastewater	0	6,721	$185,704
Vehicle Fleet	243	3,556	$118,632
Solid Waste	55		
Total	635	33,173	$764,882
	CO_2e (t)	(GJ)	



2012

Sector	GHGs	Energy	Costs
Buildings	525	21,149	$392,592
Lighting	0	2,177	$49,601
Water & Wastewater	0	7,217	$267,630
Vehicle Fleet	232	3,397	$113,689
Solid Waste	55		
Total	812	33,940	$823,513
	CO_2e (t)	(GJ)	



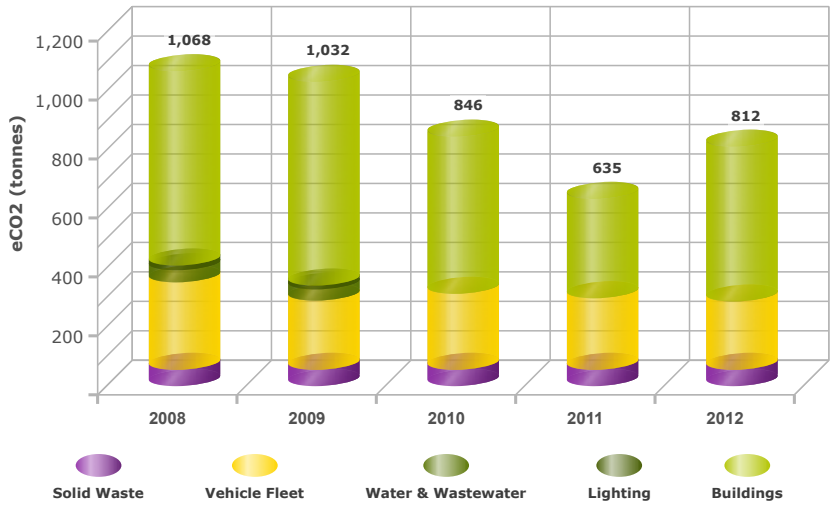
1.5 Corporate Inventory Trends

Bar charts illustrate the City's total corporate GHG emissions and energy consumption for the years 2008 through 2012. Each cylinder represents the totals for each inventory year and include a breakdown by sector.

1.5.1 Trends in GHG Emissions

GHG emissions in 2012 were lower than GHG emissions in 2008 (Chart 1.2). The decrease from 2008 is approximately 256 tonnes CO_2e[9] or a decrease of approximately 24 percent.

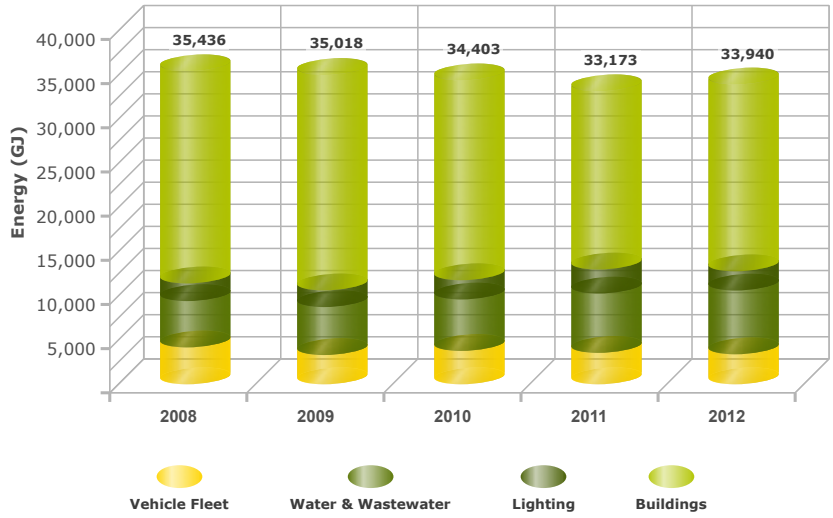
Chart 1.2 - Total GHG Emissions by Sector (2008 - 2012 ; tonnes CO_2e)



1.5.2 Trends in Energy Consumption

Energy consumption in 2012 was lower than energy consumption in 2008 (Chart 1.3). The decrease from 2008 is approximately 1,500 GJ[10] or approximately four percent.

Chart 1.3 - Total Energy Consumption by Sector (2008 - 2012 ; GJ)



9 The data associated with Chart 1.2 and 1.3 is presented in the tables in "Chart 1.1 - GHG Emissions by Sector (2008 - 2012 ; tonnes CO_2e)" on page 3 and page 4.

10 ibid

1.6 Summary of Trends

A summary of the trends for GHG emissions and energy consumption from 2008 to 2012 is presented as follows:

i. Overall GHG emissions decreased by approximately 24 percent (256 tonnes CO_2e) due to a net overall decrease in energy consumption and zero GHG emissions from BC Hydro-supplied electricity[11] (note: this effect is exclusive to GHG emissions);

ii. Overall energy consumption in all sectors decreased from 2008 to 2012 by approximately four percent (~1,500 GJ) due to a decrease in buildings (e.g., the ice arena) and a decrease in fleet vehicles; and,

iii. The decrease in energy consumption in the buildings sector from improvements to the ice arena was buffered by increases in energy consumption by the addition of South Bonson Community Centre and increases in the water and wastewater sector (1,973 GJ).

1.7 Data Confidence

Table 1.2 reports an annual, non-weighted average rating for each inventory year, and an overall, non-weighted average rating for all years combined. The rating is based on the level of detail in the data for the energy types consumed for each sector. See the appendix for a description of the rating system applied and the assumptions used.

Confidence in the City's annual datasets for each year has been assigned a rating of '4.5' and is considered 'high'. For the purposes of Carbon Neutral accounting, corporate solid waste is excluded. With corporate solid waste excluded, the rating assigned would be elevated to '5' or the confidence in the data sets would be considered, 'extremely high'.

Table 1.2 - Data Confidence Rating

Year							
Level of Detail			2008	2009	2010	2011	2012
	Sector	Data Type	Base Year	On-going Monitoring			
Energy Data	Buildings	Electricity	5	5	5	5	5
		Natural Gas	5	5	5	5	5
	Lighting	Electricity	5	5	5	5	5
	Water & Wastewater	Electricity	5	5	5	5	5
	Vehicle Fleet	Diesel Fuel	5	5	5	5	5
		Gasoline	5	5	5	5	5
	Solid Waste[1]	Volume	1	1	1	1	1
annual, non-weighted average rating			4.5	4.5	4.5	4.5	4.5
overall, non-weighted average rating (all years)			★★★★ (4.5)				

[1] Corporate solid waste data is a coarse estimate based on volume of bins and frequency of pickup. There is no economical improvement that could be implemented to increase this rating because tracking of actual volumes is not practical.

11 In 2010, BC Hydro purchased 30,000 tonnes of carbon offsets from the Pacific Carbon Trust to achieve carbon neutrality in its corporate operations. The year of purchase of the offsets was for the 2010 calendar year as stated in the B.C. Carbon Neutral Government Regulation.

2 Target, Reduction Initiatives, and Next Steps

2.1 Council-endorsed Target

In 2010, Council endorsed a reduction target of 32 percent from 2008 GHG emissions by 2018. The reduction target was reported in the City's Corporate Energy and GHG Emissions Management Plan (2010). The base year for the report was 2008.

Within this progress report, the City's 2012 GHG emissions total is 812 tonnes CO_2e, a reduction of 256 tonnes or 24 percent from 2008 levels (Table 2.1).

Table 2.1 - Reduction Target Calculation

Sector	2008 Base Year Emissions (tonnes CO_2e)	2012 Emissions (tonnes CO_2e)	Magnitude of Change (tonnes CO_2e)	Percent Change
Buildings	659	525[1]	134	-20%
Lighting	16	0[2]	16	-100%
Water and Wastewater	41	0[2]	41	-100%
Vehicle Fleet	297	232	65	-22%
Corporate Solid Waste	55	55	0	0%
Totals	**1,068**	**812**	**256**	**-24%**

[1] Greenhouse gas emissions from electricity in 2012 are lower because BC Hydro purchased offsets for electricity. The GHG emissions that remain are from natural gas consumption.

[2] Greenhouse gas emissions from electricity in 2012 are zero because BC Hydro purchased offsets for electricity.

From Table 2.2, 98 tonnes CO_2e of the 256 tonne reduction amount is from energy types other than electricity (e.g., natural gas, diesel fuel, and gasoline) and 158 tonnes CO_2e of the 256 tonne reduction is from zero-GHG emissions electricity.

Table 2.2 - Reductions from Electricity vs. Other Fuel Types†

Sector	2008 Base Year Emissions (tonnes CO_2e)		2012 Emissions (tonnes CO_2e)		Magnitude of Change (tonnes CO_2e)	
	Other	Electricity	Other	Electricity	Other	Electricity
Buildings	558	101	525	0	-33	-101
Lighting		16		0		-16
Water and Wastewater		41		0		-41
Vehicle Fleet	297	-	232	-	-54	
Corporate Solid Waste	55	-	55	-		
Subtotal	**910**	**158**	**812**	**0**	**-98**	**-158**
Totals	**1,068**		**812**			

† Note: rounding errors are possible when comparing numbers to tables and charts in section 1

2.2 Reduction Initiatives Undertaken

The City's Corporate Energy and GHG Emissions Management Plan was presented to Council in the spring of 2010. Since that time, the City has undertaken two initiatives that were identified in the previous plan to reduce energy consumption and greenhouse gas reductions. These include a major renovation to the City's ice arena which is further described below. Although insignificant and not described in detail herein, the single-glazed windows at the Heritage Hall were replaced with double-glazed windows.

2.2.1 Ice Arena

A significant retrofit to the ice arena has resulted in a reduction of natural gas consumption of ~850 GJ per year and a reduction of electricity consumption of ~670,000 kWh per year. Reductions in costs for consumption are ~$8,000 per year for natural gas and $4,700 per year for electricity. The total GHG emissions savings for the ice arena from 2008 consumption levels to 2012 levels is 45 tonnes CO_2e (e.g., 356 tonnes in 2008 to 311 tonnes in 2012).

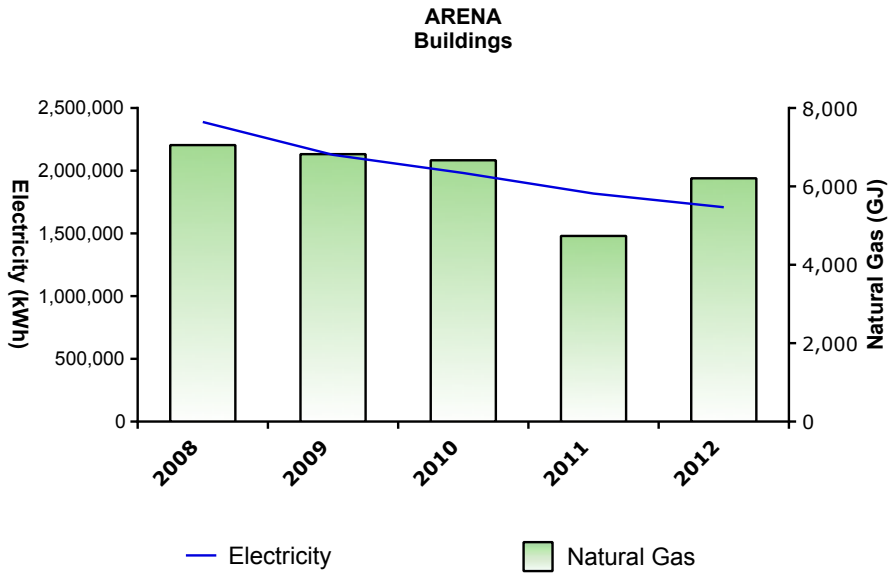
The total cost of the retrofit of the arena was approximately $8.6 million and City staff estimate that approximately $3.0 million of this total was spent on items that improved energy efficiency.

The following energy efficiency initiatives were undertaken as part of the retrofit:

- Installed a reflective roof membrane to reflect the sun and cool the building;
- Insulated the entire roof structure;
- Installed insulated panels/cladding on all the exterior walls;
- Replaced the hot water boiler with a more energy efficient unit;
- Upgraded the dehumidification system to improve efficiency;
- Replaced the rooftop HVAC systems with energy efficient units;
- Replaced existing exterior glazing and doors; and,
- Replaced the ice plant cooling tower.

Chart 2.1 illustrates the decrease in energy consumption at this facility before and after implementation (e.g., 2008 vs. 2012). Note that the decrease in natural gas consumption in 2011 was during the closure of the arena during renovations.

Chart 2.1 - Energy Consumption Reductions at the Arena Subsequent to Major Retrofit



2.3 Other Observed Reductions

Fuel consumption in fleet vehicles decreased from 2008 to 2012 (e.g., 113,000 litres of gasoline/diesel fuel in 2008 to 91,000 litres in 2012). Staff note that the decrease may be partly the result of major construction projects undertaken in the City in close proximity to City Hall. The economic downturn may also play a role in reduced vehicle use by City staff. GHG emissions from diesel fuel decreased by approximately three percent due to Provincial legislation requiring that diesel fuel be replaced with a five percent blend of biodiesel.

2.4 Adjustments in 2012

The City expected an increase in GHG emissions for the 2012 calendar year due to the opening of the South Bonson Community Centre in September 2011 (e.g., the 2011 inventory year does not reflect a full year of consumption). The South Bonson Community Centre, which is a LEED™ certified building, added approximately 4 tonnes CO_2e to the City's annual inventory. If this building were not designed to a LEED™ standard, the GHG emissions would be slightly higher.

2.5 Next Steps

In order for the City to continue to make progress towards the reduction quantity previously endorsed by Council, a number of administrative steps are recommended as follows:

1. Once received by Council for information, submit this report to the PCP Secretariat and request recognition for PCP Milestones Four and Five;
2. Continue to track the GHG emissions associated with any contracted services that the City procures (e.g., garbage collection, street resurfacing, traffic signal maintenance, etc.);
3. Continue to monitor corporate energy consumption and report GHG emissions on an annual basis for all sectors;
4. Monitor natural gas consumption at the ice arena on a monthly basis to ensure mechanical systems are performing as designed;
5. Although electricity consumption has no direct implications to the City's GHG emissions inventory, to reduce the cost of consumption for electricity, recommendations for adaptive streetlighting and/or LED technology for overhead streetlights should be developed;
6. Continue to replace motors with high efficiency models as required and replace backup generator sets for sewage lift stations with more efficient units;
7. Develop a low carbon fleet management plan that would include cost benefit analyses when considering vehicle purchases. To reduce vehicle idling, purchase generator sets for vehicles that must run auxiliary equipment from an idling vehicle; and,
8. Explore innovative methods of quantifying corporate solid waste that reflects the City's efforts to increase the diversion of recyclable materials and organic waste from the landfill.

2.6 Looking Ahead

The City is a signatory to the Provincial Climate Action Charter and voluntarily reports its' GHG emissions to the Province on an annual basis. Provincial guidance on the scope of GHG emissions inventories is becoming more stringent and the Province is encouraging local government to include all contracted services that fall under 'traditional services' as defined by the Province in their guidance document[1]. Traditional services include:

- Administration and Governance;
- Drinking, Storm and Wastewater;
- Solid Waste Collection, Transportation and Diversion;
- Road and Traffic Operations;
- Arts, Recreational and Cultural Services; and,

1 Province of British Columbia website 2012. http://toolkit.bc.ca/sites/default/files/Carbon%20Neutral%20Workbook%20v%202_0.pdf

- Fire Protection.

For the City, garbage collection, street resurfacing, and traffic signal maintenance are a few examples of external contracts that fall under the Province's definition of traditional services that will need to be included in future GHG emissions inventories. Other external contracts may also fall under this definition and will be identified by staff as the City renews or enters into new agreements with external contractors.

Also, the Public Library closed in 2012 and is now an annex to the City Hall. The replacement building is not under operational or functional control of the City and is therefore excluded from this PCP inventory. Staff should note that the GHG emissions from the new Public Library may be required to be counted in Provincial CAC inventories.

Staff will report this information to Council as more information on the details of including external contracts becomes available from the Province.

2.7 Conclusion

The City of Pitt Meadows developed a corporate energy and GHG emissions management plan in 2010 for the 2008 inventory year. Since that time, the City has monitored energy consumption and GHG emissions and Inventories of energy and GHG emissions were developed for 2009, 2010, 2011, and 2012.

Further, since developing the management plan, the City undertook a $3 million retrofit to their ice arena which is responsible for approximately 45 tonnes CO_2e savings per annum. These costs are for the energy efficiency portion of the retrofit, whereas the total costs for the retrofit were approximately $8.6 million.

In 2012, the City's GHG emissions decreased by 24 percent over 2008 base year levels largely from reductions in buildings and vehicle fleet and as a result of BC Hydro offsetting all their GHG emissions from the production of electricity in BC (e.g., the quantity of GHG emissions from electricity is now zero).

In 2012, the City's GHG emissions have decreased by 24 percent over 2008 levels. Although the City has not met its 32 percent reduction target, the City is on track to meet its corporate GHG emissions reduction target by 2018.

APPENDICES

Appendix I: Ratings and Assumptions

Rating Descriptions

Description	Rating		
Data estimated: 96-100% of total GHGs	1	★	EXTREMELY POOR
Data estimated: 66%-95% of total GHGs	1.5	★½	POOR
Data estimated: 36%-65% of total GHGs	2	★★	
Data estimated: 6%-35% of total GHGs	2.5	★★½	MODERATE
Data estimated: 1%-5% total consumption of sector account	3	★★★	
Actual data: data aggregated annually (no account-by-account breakdown)	3.5	★★★½	
Actual data: data aggregated monthly (no account-by-account breakdown)	4	★★★★	HIGH
Actual data: data aggregated annually (account-by-account breakdown)	4.5	★★★★½	
Actual data: data aggregated monthly (account-by-account breakdown)	5	★★★★★	EXTREMELY HIGH

Assumptions

A number of assumptions have been made regarding the quality of data received by HES Ltd. from the utilities as follows:

- Electricity data received from BC Hydro is assumed to be the same as values consumed and billed to the City; and,
- Natural gas data received from Fortis BC is assumed to be the same as values consumed and billed to the City.

Verification of local government GHG emissions inventory is not a requirement and nor should local government undertake expensive verifications of their inventories. In the absence of verification, some data errors are possible.

Appendices

Appendix II: 2008 Inventory

City of Pitt Meadows
The Natural Place

Pitt Meadows Corporate Inventory

2008 Account-by-Account Listing

BUILDINGS

Administration Office	Source	Consumption	Energy	Costs	CO_2e
City Hall			**1,094 GJ**	**$22,300**	**21**
	Electricity	222,007 kWh	799 GJ	$17,042	6.22
	Natural Gas	295 GJ	295 GJ	$5,258	14.88
Caretaker House	Source	Consumption	Energy	Costs	CO_2e
Hoffman House			**29 GJ**	**$560**	**0**
	Electricity	8,000 kWh	29 GJ	$560	0.21
Community Centre	Source	Consumption	Energy	Costs	CO_2e
Family Recreation Centre			**3,444 GJ**	**$51,762**	**92**
	Electricity	533,154 kWh	1,919 GJ	$32,211	14.93
	Natural Gas	1,525 GJ	1,525 GJ	$19,551	76.97
Community Hall	Source	Consumption	Energy	Costs	CO_2e
Heritage Hall			**930 GJ**	**$15,187**	**33**
	Electricity	87,543 kWh	315 GJ	$7,134	2.45
	Natural Gas	615 GJ	615 GJ	$8,053	31.05
Fire Services	Source	Consumption	Energy	Costs	CO_2e
Fire Hall			**604 GJ**	**$12,311**	**17**
	Electricity	88,088 kWh	317 GJ	$7,195	2.47
	Natural Gas	287 GJ	287 GJ	$5,115	14.46
Heritage Site	Source	Consumption	Energy	Costs	CO_2e
Struthers House			**95 GJ**	**$1,769**	**2**
	Electricity	17,189 kWh	62 GJ	$1,227	0.48
	Natural Gas	33 GJ	33 GJ	$542	1.67
Ice Arena	Source	Consumption	Energy	Costs	CO_2e
Arena			**15,651 GJ**	**$202,136**	**423**
	Electricity	2,388,350 kWh	8,598 GJ	$127,735	66.87
	Natural Gas	7,053 GJ	7,053 GJ	$74,401	355.98
Library	Source	Consumption	Energy	Costs	CO_2e
Pitt Meadows Public Library			**430 GJ**	**$8,995**	**11**

	Electricity	69,564 kWh	250 GJ	$5,688	1.95
	Natural Gas	180 GJ	180 GJ	$3,308	9.07
Museum	Source	Consumption	Energy	Costs	CO_2e
Museum			**207 GJ**	**$2,919**	**9**
	Electricity	9,807 kWh	35 GJ	$702	0.27
	Natural Gas	172 GJ	172 GJ	$2,217	8.69
Outdoor Pools	Source	Consumption	Energy	Costs	CO_2e
Harris Park Pool			**622 GJ**	**$113,753**	**28**
	Electricity	20,841 kWh	75 GJ	$106,361	0.58
	Natural Gas	547 GJ	547 GJ	$7,392	27.59
Parks & Playing Fields	Source	Consumption	Energy	Costs	CO_2e
Athletic Park Outbuilding			**21 GJ**	**$530**	**0**
	Electricity	5,765 kWh	21 GJ	$530	0.16
Community Garden - New			**1 GJ**	**$62**	**0**
	Electricity	287 kWh	1 GJ	$62	0.01
Community Garden - Old			**7 GJ**	**$194**	**0**
	Electricity	1,994 kWh	7 GJ	$194	0.06
Cottonwood Park			**28 GJ**	**$679**	**0**
	Electricity	7,646 kWh	28 GJ	$679	0.21
North Bonson Park			**0 GJ**	**$69**	**0**
	Electricity	4 kWh	0 GJ	$69	0.00
Public Works Bldg & Yard	Source	Consumption	Energy	Costs	CO_2e
Public Works Department			**888 GJ**	**$18,239**	**22**
	Electricity	146,822 kWh	529 GJ	$11,900	4.11
	Natural Gas	360 GJ	360 GJ	$6,339	18.15

LIGHTING

Ornamental Lighting	Source	Consumption	Energy	Costs	CO_2e
Barnston Ornamental Streetlighting			**61 GJ**	**$1,433**	**0**
	Electricity	16,886 kWh	61 GJ	$1,433	0.47
Ornamental Streetlighting			**1,736 GJ**	**$34,716**	**14**
	Electricity	482,319 kWh	1,736 GJ	$34,716	13.50
Parking Lot Lighting (open)	Source	Consumption	Energy	Costs	CO_2e

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2008

Parking Lot Lights			**106 GJ**	**$2,434**	**1**
	Electricity	29,359 kWh	106 GJ	$2,434	0.82
Pedestrian Signal	Source	Consumption	Energy	Costs	CO_2e
Pedestrian Signal			**7 GJ**	**$144**	**0**
	Electricity	1,992 kWh	7 GJ	$144	0.06
Pedestrian Signal			**7 GJ**	**$144**	**0**
	Electricity	1,992 kWh	7 GJ	$144	0.06
Seasonal Decorative Outdoor Lighting	Source	Consumption	Energy	Costs	CO_2e
Christmas Lights			**29 GJ**	**$680**	**0**
	Electricity	8,189 kWh	29 GJ	$680	0.23
Seasonal Lighting			**1 GJ**	**$28**	**0**
	Electricity	351 kWh	1 GJ	$28	0.01
Sign Lighting	Source	Consumption	Energy	Costs	CO_2e
Kpm#1 Sign E Of Pitt Bridge			**3 GJ**	**$136**	**0**
	Electricity	908 kWh	3 GJ	$136	0.03
Traffic Signal	Source	Consumption	Energy	Costs	CO_2e
Traffic Signal			**7 GJ**	**$141**	**0**
	Electricity	1,949 kWh	7 GJ	$141	0.05
Traffic Signal			**7 GJ**	**$137**	**0**
	Electricity	1,901 kWh	7 GJ	$137	0.05
Traffic Signal			**7 GJ**	**$136**	**0**
	Electricity	1,889 kWh	7 GJ	$136	0.05
Traffic Signal			**5 GJ**	**$105**	**0**
	Electricity	1,452 kWh	5 GJ	$105	0.04
Traffic Signal			**7 GJ**	**$136**	**0**
	Electricity	1,889 kWh	7 GJ	$136	0.05
Traffic Signal			**6 GJ**	**$111**	**0**
	Electricity	1,540 kWh	6 GJ	$111	0.04
Traffic Signal			**4 GJ**	**$82**	**0**
	Electricity	1,131 kWh	4 GJ	$82	0.03
Traffic Signal			**6 GJ**	**$130**	**0**
	Electricity	1,805 kWh	6 GJ	$130	0.05

Traffic Signal			**1 GJ**	**$25**	**0**
	Electricity	361 kWh	1 GJ	$25	0.01

WATER & WASTEWATER

Drainage Pump Station	Source	Consumption	Energy	Costs	CO_2e
Alouette Pump Station (Area 1) Drainage			**130 GJ**	**$2,959**	**1**
	Electricity	35,990 kWh	130 GJ	$2,959	1.01
Baynes Rd Pump Station			**552 GJ**	**$16,198**	**4**
	Electricity	153,292 kWh	552 GJ	$16,198	4.29
Fenton Storm Pump Station			**365 GJ**	**$12,219**	**3**
	Electricity	101,510 kWh	365 GJ	$12,219	2.84
Kennedy Road Storm Pump Station			**1,515 GJ**	**$38,282**	**12**
	Electricity	420,928 kWh	1,515 GJ	$38,282	11.79
Mckechnie Storm Pump Station			**899 GJ**	**$26,213**	**7**
	Electricity	249,653 kWh	899 GJ	$26,213	6.99
Pitt Polder Drainage Pump Station			**944 GJ**	**$23,803**	**7**
	Electricity	262,151 kWh	944 GJ	$23,803	7.34

Liquid Waste Lift Station	Source	Consumption	Energy	Costs	CO_2e
124a Ave/188a St Pump Station			**18 GJ**	**$476**	**0**
	Electricity	5,107 kWh	18 GJ	$476	0.14
Bonson Lwls			**47 GJ**	**$1,120**	**0**
	Electricity	13,104 kWh	47 GJ	$1,120	0.37
Bonson Rd Lift Station			**52 GJ**	**$1,232**	**0**
	Electricity	14,410 kWh	52 GJ	$1,232	0.40
Hammond Liquid Waste Lift Station			**352 GJ**	**$8,266**	**3**
	Electricity	96,776 kWh	348 GJ	$7,907	2.71
	Natural Gas	4 GJ	4 GJ	$359	0.19
Harris/Fieldstone Lift Station			**41 GJ**	**$981**	**0**
	Electricity	11,419 kWh	41 GJ	$981	0.32
Lougheed Liquid Waste Lift Station			**49 GJ**	**$1,166**	**0**
	Electricity	13,579 kWh	49 GJ	$1,166	0.38
Lougheed Lwls			**44 GJ**	**$1,049**	**0**
	Electricity	12,204 kWh	44 GJ	$1,049	0.34

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Potable Water Booster Station	Source	Consumption	Energy	Costs	CO_2e
Sheridan Water Booster Station			**47 GJ**	**$1,120**	**0**
	Electricity	13,072 kWh	47 GJ	$1,120	0.37
PRV Station	Source	Consumption	Energy	Costs	CO_2e
Allen Way Prv			**20 GJ**	**$524**	**0**
	Electricity	5,690 kWh	20 GJ	$524	0.16
Dewdney Trunk Prv Station			**29 GJ**	**$674**	**0**
	Electricity	8,091 kWh	29 GJ	$674	0.23
Kennedy Road Prv			**22 GJ**	**$544**	**0**
	Electricity	6,083 kWh	22 GJ	$544	0.17
Lougheed Prv Station			**57 GJ**	**$1,327**	**0**
	Electricity	15,696 kWh	57 GJ	$1,327	0.44
Mcmyn Road Park Prv			**23 GJ**	**$582**	**0**
	Electricity	6,429 kWh	23 GJ	$582	0.18
Meadow Gardens Prv Station			**37 GJ**	**$892**	**0**
	Electricity	10,317 kWh	37 GJ	$892	0.29

VEHICLE FLEET

Diesel Fuel Dump Trucks	Source	Consumption	Energy	Costs	CO_2e
1997 L9000 Dump			**269 GJ**	**$7,960**	**19**
	Diesel Fuel	6,962 litres	269 GJ	$7,960	19.36
2007 International 7600 Dump			**217 GJ**	**$6,910**	**16**
	Diesel Fuel	5,609 litres	217 GJ	$6,910	15.60
Diesel Fuel Equipment	Source	Consumption	Energy	Costs	CO_2e
Small Tools (Diesel*)			**143 GJ**	**$4,045**	**10**
	Diesel Fuel	3,691 litres	143 GJ	$4,045	10.27
Diesel Fuel Medium to Heavy Trucks	Source	Consumption	Energy	Costs	CO_2e
1996 L8000 Dump (Sold)			**275 GJ**	**$8,168**	**20**
	Diesel Fuel	7,102 litres	275 GJ	$8,168	19.75
F750 Ford Dump			**138 GJ**	**$4,125**	**10**
	Diesel Fuel	3,557 litres	138 GJ	$4,125	9.89
Diesel Fuel Off Road Vehicles & Equipment	Source	Consumption	Energy	Costs	CO_2e
1979 John Deer 670 Grader			**78 GJ**	**$2,288**	**6**

	Diesel Fuel	2,012 litres	78 GJ	$2,288	5.60
1981 Gradall (Sold)			**170 GJ**	**$4,881**	**12**
	Diesel Fuel	4,405 litres	170 GJ	$4,881	12.25
1990 Ford E350 Van (Sold)			**7 GJ**	**$251**	**1**
	Diesel Fuel	191 litres	7 GJ	$251	0.53
2003 John Deere 310 Sg			**161 GJ**	**$5,024**	**12**
	Diesel Fuel	4,153 litres	161 GJ	$5,024	11.55
2003 New Holland Tractor			**527 GJ**	**$16,897**	**38**
	Diesel Fuel	13,628 litres	527 GJ	$16,897	37.91
2006 A300 Bobcat Allsteer			**7 GJ**	**$217**	**0**
	Diesel Fuel	176 litres	7 GJ	$217	0.49
2007 Gradall Xl4100-3			**122 GJ**	**$4,006**	**9**
	Diesel Fuel	3,153 litres	122 GJ	$4,006	8.77
Fire Services	Source	Consumption	Energy	Costs	CO_2e
1989 Mack Pumper Truck (Sold)			**42 GJ**	**$1,302**	**3**
	Diesel Fuel	1,096 litres	42 GJ	$1,302	3.05
1998 Mack Pumper			**103 GJ**	**$3,308**	**7**
	Diesel Fuel	2,617 litres	101 GJ	$3,246	7.28
	Gasoline	54 litres	2 GJ	$62	0.13
2000 Dodge Durango V8 (Sold)			**18 GJ**	**$609**	**1**
	Gasoline	530 litres	18 GJ	$609	1.29
2000 Freightliner Fl80 Rescue Truck			**59 GJ**	**$1,859**	**4**
	Diesel Fuel	1,520 litres	59 GJ	$1,859	4.23
2003 Dodge Dakota V6			**62 GJ**	**$2,096**	**4**
	Gasoline	1,793 litres	62 GJ	$2,096	4.36
2006 Dodge Dakota V6			**68 GJ**	**$2,315**	**5**
	Gasoline	1,976 litres	68 GJ	$2,315	4.80
2008 Quint Ladder Truck			**74 GJ**	**$2,388**	**5**
	Diesel Fuel	1,906 litres	74 GJ	$2,388	5.30
2011 Ford Explorer			**28 GJ**	**$1,029**	**2**
	Gasoline	813 litres	28 GJ	$1,029	1.98
Gasoline Equipment	Source	Consumption	Energy	Costs	CO_2e

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Small Tools (Gasoline)**			**26 GJ**	**$868**	**2**
	Gasoline	758 litres	26 GJ	$868	1.84
Gasoline Medium to Heavy Trucks & Vans	Source	Consumption	Energy	Costs	CO_2e
1991 F450 V8 (Sold)			**84 GJ**	**$2,863**	**6**
	Gasoline	2,415 litres	84 GJ	$2,863	5.87
2006 F450 V 10 Utility Truck			**6 GJ**	**$190**	**0**
	Gasoline	179 litres	6 GJ	$190	0.43
2006 F450 V10 Bucket Truck			**124 GJ**	**$3,852**	**9**
	Gasoline	3,584 litres	124 GJ	$3,852	8.72
Gasoline Passenger Cars	Source	Consumption	Energy	Costs	CO_2e
2006 Ford Focus Se			**27 GJ**	**$868**	**2**
	Gasoline	765 litres	27 GJ	$868	1.86
Light Trucks, Vans, and SUVs	Source	Consumption	Energy	Costs	CO_2e
1993 F350 4x4 V8 (Sold)			**60 GJ**	**$2,060**	**4**
	Gasoline	1,720 litres	60 GJ	$2,060	4.18
1995 F350 V8 ((Sold)			**75 GJ**	**$2,556**	**5**
	Gasoline	2,153 litres	75 GJ	$2,556	5.24
2000 F550 V10 (Sold)			**195 GJ**	**$6,656**	**14**
	Gasoline	5,617 litres	195 GJ	$6,656	13.66
2002 Dodge Dakota			**49 GJ**	**$1,679**	**3**
	Gasoline	1,425 litres	49 GJ	$1,679	3.47
2003 F150 V6			**118 GJ**	**$3,956**	**8**
	Gasoline	3,402 litres	118 GJ	$3,956	8.27
2005 3/4 T Dodge V8			**100 GJ**	**$3,440**	**7**
	Gasoline	2,889 litres	100 GJ	$3,440	7.03
2005 F150 V8 (Sold)			**198 GJ**	**$6,676**	**14**
	Gasoline	5,707 litres	198 GJ	$6,676	13.88
2005 F550 V10			**128 GJ**	**$4,366**	**9**
	Gasoline	3,680 litres	128 GJ	$4,366	8.95
2006 Ford F450 V10			**239 GJ**	**$8,212**	**17**
	Gasoline	6,890 litres	239 GJ	$8,212	16.76
2007 F250 2wd V8			**122 GJ**	**$4,255**	**9**

2007 F250 2wd V8 continued...

	Gasoline	3,534 litres	122 GJ	$4,255	8.59
Personal Vehicle Use On City Business	Source	Consumption	Energy	Costs	CO_2e
Passenger Vehicles			**58 GJ**	**$8,645**	**4**
	Gasoline	1,666 litres	58 GJ	$8,645	4.05
Propane Equipment	Source	Consumption	Energy	Costs	CO_2e
Zambonis			**GJ**		
	Mobile Propane	litres	GJ		

SOLID WASTE

All Solid Waste from Corporate Operations	Source	Volume	Mass	CO_2e
All Solid Waste From Corporate Operations		*688*	*103 t*	*55*
	Solid Waste	*688*	*103.20*	*54.70*

APPENDICES

Appendix III: 2009 Inventory

City of Pitt Meadows
The Natural Place

Pitt Meadows Corporate Inventory

2009 Account-by-Account Listing

BUILDINGS

Administration Office	Source	Consumption	Energy	Costs	CO_2e
City Hall			**1,454 GJ**	**$26,767**	**34**
	Electricity	254,638 kWh	917 GJ	$19,614	6.37
	Natural Gas	538 GJ	538 GJ	$7,153	27.14
Caretaker House	Source	Consumption	Energy	Costs	CO_2e
Hoffman House			**29 GJ**	**$560**	**0**
	Electricity	8,000 kWh	29 GJ	$560	0.20
Community Centre	Source	Consumption	Energy	Costs	CO_2e
Family Recreation Centre			**3,977 GJ**	**$61,386**	**109**
	Electricity	588,330 kWh	2,118 GJ	$36,656	14.71
	Natural Gas	1,859 GJ	1,859 GJ	$24,730	93.85
Community Hall	Source	Consumption	Energy	Costs	CO_2e
Heritage Hall			**888 GJ**	**$14,437**	**34**
	Electricity	69,484 kWh	250 GJ	$5,952	1.74
	Natural Gas	638 GJ	638 GJ	$8,485	32.20
Fire Services	Source	Consumption	Energy	Costs	CO_2e
Fire Hall			**735 GJ**	**$13,305**	**23**
	Electricity	89,482 kWh	322 GJ	$7,810	2.24
	Natural Gas	413 GJ	413 GJ	$5,494	20.85
Heritage Site	Source	Consumption	Energy	Costs	CO_2e
Struthers House			**118 GJ**	**$2,138**	**3**
	Electricity	19,498 kWh	70 GJ	$1,499	0.49
	Natural Gas	48 GJ	48 GJ	$638	2.42
Ice Arena	Source	Consumption	Energy	Costs	CO_2e
Arena			**14,476 GJ**	**$213,528**	**397**
	Electricity	2,126,190 kWh	7,654 GJ	$122,797	53.15
	Natural Gas	6,822 GJ	6,822 GJ	$90,731	344.32
Library	Source	Consumption	Energy	Costs	CO_2e
Pitt Meadows Public Library			**619 GJ**	**$11,699**	**17**

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Pitt Meadows Public Library

Electricity	90,752 kWh	327 GJ	$7,816	2.27
Natural Gas	292 GJ	292 GJ	$3,884	14.74

Museum	Source	Consumption	Energy	Costs	CO_2e
Museum			**232 GJ**	**$3,336**	**10**
	Electricity	10,039 kWh	36 GJ	$726	0.25
	Natural Gas	196 GJ	196 GJ	$2,609	9.90
Outdoor Pools	Source	Consumption	Energy	Costs	CO_2e
Harris Park Pool			**910 GJ**	**$92,262**	**43**
	Electricity	21,000 kWh	76 GJ	$81,000	0.53
	Natural Gas	834 GJ	834 GJ	$11,262	42.10
Parks & Playing Fields	Source	Consumption	Energy	Costs	CO_2e
Athletic Park Outbuilding			**29 GJ**	**$750**	**0**
	Electricity	8,040 kWh	29 GJ	$750	0.20
Community Garden - New			**9 GJ**	**$287**	**0**
	Electricity	2,612 kWh	9 GJ	$287	0.07
Cottonwood Park			**25 GJ**	**$656**	**0**
	Electricity	6,848 kWh	25 GJ	$656	0.17
Public Works Bldg & Yard	Source	Consumption	Energy	Costs	CO_2e
Public Works Department			**886 GJ**	**$17,329**	**21**
	Electricity	150,050 kWh	540 GJ	$12,735	3.75
	Natural Gas	345 GJ	345 GJ	$4,594	17.43

LIGHTING

Ornamental Lighting	Source	Consumption	Energy	Costs	CO_2e
Barnston Ornamental Streetlighting			**63 GJ**	**$1,565**	**0**
	Electricity	17,633 kWh	63 GJ	$1,565	0.44
Ornamental Streetlighting			**1,732 GJ**	**$36,488**	**12**
	Electricity	481,116 kWh	1,732 GJ	$36,488	12.03
Overhead Lighting	Source	Consumption	Energy	Costs	CO_2e
~~Overhead Streetlighting~~			229 GJ	$22,086	
	Electricity	63,597 kWh	229 GJ		
Parking Lot Lighting (open)	Source	Consumption	Energy	Costs	CO_2e
Parking Lot Lights			**83 GJ**	**$2,022**	**1**
	Electricity	23,178 kWh	83 GJ	$2,022	0.58

Pedestrian Signal	Source	Consumption	Energy	Costs	CO_2e
Pedestrian Signal			**7 GJ**	**$153**	**0**
	Electricity	1,992 kWh	7 GJ	$153	0.05
Pedestrian Signal			**7 GJ**	**$153**	**0**
	Electricity	1,992 kWh	7 GJ	$153	0.05
Reader Board/Kiosk	Source	Consumption	Energy	Costs	CO_2e
Spirit Square			**-56 GJ**	**-$1,196**	**-0**
	Electricity	-15,547 kWh	-56 GJ	$-1,196	-0.39
Sign Lighting	Source	Consumption	Energy	Costs	CO_2e
Kpm#1 Sign E Of Pitt Bridge			**4 GJ**	**$165**	**0**
	Electricity	1,160 kWh	4 GJ	$165	0.03
Traffic Signal	Source	Consumption	Energy	Costs	CO_2e
Traffic Signal			**7 GJ**	**$146**	**0**
	Electricity	1,935 kWh	7 GJ	$146	0.05
Traffic Signal			**7 GJ**	**$143**	**0**
	Electricity	1,887 kWh	7 GJ	$143	0.05
Traffic Signal			**7 GJ**	**$142**	**0**
	Electricity	1,875 kWh	7 GJ	$142	0.05
Traffic Signal			**7 GJ**	**$142**	**0**
	Electricity	1,875 kWh	7 GJ	$142	0.05
Traffic Signal			**6 GJ**	**$116**	**0**
	Electricity	1,529 kWh	6 GJ	$116	0.04
Traffic Signal			**4 GJ**	**$85**	**0**
	Electricity	1,123 kWh	4 GJ	$85	0.03
Traffic Signal			**6 GJ**	**$136**	**0**
	Electricity	1,791 kWh	6 GJ	$136	0.04
Traffic Signal			**3 GJ**	**$69**	**0**
	Electricity	962 kWh	3 GJ	$69	0.02
Unidentified	Source	Consumption	Energy	Costs	CO_2e
-			**1 GJ**	**$21**	**0**
	Electricity	222 kWh	1 GJ	$21	0.01

WATER & WASTEWATER

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2009

Drainage Pump Station	Source	Consumption	Energy	Costs	CO_2e
Alouette Pump Station (Area 1) Drainage			**135 GJ**	**$3,251**	**1**
	Electricity	37,597 kWh	135 GJ	$3,251	0.94
Baynes Rd Pump Station			**685 GJ**	**$20,142**	**5**
	Electricity	190,238 kWh	685 GJ	$20,142	4.76
Fenton Storm Pump Station			**623 GJ**	**$16,839**	**4**
	Electricity	173,006 kWh	623 GJ	$16,839	4.33
Kennedy Road Storm Pump Station			**1,202 GJ**	**$34,712**	**8**
	Electricity	333,872 kWh	1,202 GJ	$34,712	8.35
Mckechnie Storm Pump Station			**951 GJ**	**$26,466**	**7**
	Electricity	264,162 kWh	951 GJ	$26,466	6.60
Pitt Polder Drainage Pump Station			**961 GJ**	**$24,201**	**7**
	Electricity	267,048 kWh	961 GJ	$24,201	6.68
Liquid Waste Lift Station	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
124a Ave/188a St Pump Station			**17 GJ**	**$469**	**0**
	Electricity	4,778 kWh	17 GJ	$469	0.12
Bonson Lwls			**43 GJ**	**$1,070**	**0**
	Electricity	11,877 kWh	43 GJ	$1,070	0.30
Bonson Rd Lift Station			**37 GJ**	**$933**	**0**
	Electricity	10,266 kWh	37 GJ	$933	0.26
Hammond Liquid Waste Lift Station			**312 GJ**	**$7,363**	**2**
	Electricity	86,790 kWh	312 GJ	$7,363	2.17
Harris/Fieldstone Lift Station			**42 GJ**	**$1,046**	**0**
	Electricity	11,562 kWh	42 GJ	$1,046	0.29
Lougheed Liquid Waste Lift Station			**59 GJ**	**$1,466**	**0**
	Electricity	16,496 kWh	59 GJ	$1,466	0.41
Lougheed Lwls			**38 GJ**	**$968**	**0**
	Electricity	10,661 kWh	38 GJ	$968	0.27
Liquid Waste Pump Station	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Hammond Pump Station			**65 GJ**	**$1,485**	**1**
	Electricity	17,252 kWh	62 GJ	$1,442	0.43
	Natural Gas	3 GJ	3 GJ	$43	0.16

Potable Water Booster Station	Source	Consumption	Energy	Costs	CO_2e
Sheridan Water Booster Station			**47 GJ**	**$1,182**	**0**
	Electricity	13,167 kWh	47 GJ	$1,182	0.33
PRV Station	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Allen Way Prv			**20 GJ**	**$548**	**0**
	Electricity	5,676 kWh	20 GJ	$548	0.14
Dewdney Trunk Prv Station			**43 GJ**	**$1,053**	**0**
	Electricity	11,840 kWh	43 GJ	$1,053	0.30
Kennedy Road Prv			**15 GJ**	**$422**	**0**
	Electricity	4,114 kWh	15 GJ	$422	0.10
Lougheed Prv Station			**58 GJ**	**$1,457**	**0**
	Electricity	16,096 kWh	58 GJ	$1,457	0.40
Mcmyn Road Park Prv			**26 GJ**	**$684**	**0**
	Electricity	7,343 kWh	26 GJ	$684	0.18
Meadow Gardens Prv Station			**48 GJ**	**$1,181**	**0**
	Electricity	13,242 kWh	48 GJ	$1,181	0.33

VEHICLE FLEET

Diesel Fuel Dump Trucks	Source	Consumption	Energy	Costs	CO_2e
1997 L9000 Dump			**161 GJ**	**$2,934**	**12**
	Diesel Fuel	4,150 litres	161 GJ	$2,934	11.54
2007 International 7600 Dump			**258 GJ**	**$5,248**	**19**
	Diesel Fuel	6,682 litres	258 GJ	$5,248	18.59
Diesel Fuel Medium to Heavy Trucks	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
1996 L8000 Dump (Sold)			**87 GJ**	**$2,113**	**6**
	Diesel Fuel	2,037 litres	79 GJ	$1,853	5.66
	Gasoline	250 litres	9 GJ	$260	0.61
F750 Ford Dump			**45 GJ**	**$1,068**	**3**
	Diesel Fuel	1,168 litres	45 GJ	$1,068	3.25
Diesel Fuel Off Road Vehicles & Equipment	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
1979 John Deer 670 Grader			**23 GJ**	**$532**	**2**
	Diesel Fuel	599 litres	23 GJ	$532	1.67
1990 Ford E350 Van (Sold)			**7 GJ**	**$171**	**1**

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2009

	Diesel Fuel	175 litres	7 GJ	$152	0.49
	Gasoline	21 litres	1 GJ	$19	0.05
2003 John Deere 310 Sg			**128 GJ**	**$2,896**	**9**
	Diesel Fuel	3,320 litres	128 GJ	$2,896	9.23
2003 New Holland Tractor			**421 GJ**	**$9,816**	**30**
	Diesel Fuel	10,885 litres	421 GJ	$9,816	30.28
2006 A300 Bobcat Allsteer			**13 GJ**	**$301**	**1**
	Diesel Fuel	327 litres	13 GJ	$301	0.91
2007 Gradall Xl4100-3			**266 GJ**	**$6,282**	**19**
	Diesel Fuel	6,884 litres	266 GJ	$6,282	19.15
Fire Services	Source	Consumption	Energy	Costs	CO_2e
1989 Mack Pumper Truck (Sold)			**31 GJ**	**$721**	**2**
	Diesel Fuel	800 litres	31 GJ	$721	2.22
1998 Mack Pumper			**86 GJ**	**$2,000**	**6**
	Diesel Fuel	2,222 litres	86 GJ	$2,000	6.18
2000 Dodge Durango V8 (Sold)			**16 GJ**	**$444**	**1**
	Gasoline	449 litres	16 GJ	$444	1.09
2000 Freightliner Fl80 Rescue Truck			**52 GJ**	**$1,221**	**4**
	Diesel Fuel	1,352 litres	52 GJ	$1,221	3.76
2003 Dodge Dakota V6			**54 GJ**	**$1,555**	**4**
	Gasoline	1,560 litres	54 GJ	$1,555	3.79
2006 Dodge Dakota V6			**50 GJ**	**$1,424**	**3**
	Gasoline	1,434 litres	50 GJ	$1,424	3.49
2008 Quint Ladder Truck			**78 GJ**	**$1,794**	**6**
	Diesel Fuel	2,020 litres	78 GJ	$1,794	5.62
2011 Ford Explorer			**37 GJ**	**$1,055**	**3**
	Gasoline	1,063 litres	37 GJ	$1,055	2.59
Gasoline Equipment	Source	Consumption	Energy	Costs	CO_2e
Small Tools (Gasoline)**			**207 GJ**	**$5,077**	**15**
	Diesel Fuel	4,647 litres	180 GJ	$4,315	12.93
	Gasoline	796 litres	28 GJ	$763	1.94
Gasoline Medium to Heavy Trucks & Vans	Source	Consumption	Energy	Costs	CO_2e

2006 F450 V 10 Utility Truck			**77 GJ**	**$2,206**	**5**
	Gasoline	2,226 litres	77 GJ	$2,206	5.41
2006 F450 V10 Bucket Truck			**107 GJ**	**$3,085**	**8**
	Gasoline	3,090 litres	107 GJ	$3,085	7.52
Gasoline Passenger Cars	Source	Consumption	Energy	Costs	CO_2e
2006 Ford Focus Se			**30 GJ**	**$862**	**2**
	Gasoline	865 litres	30 GJ	$862	2.10
Light Trucks, Vans, and SUVs	Source	Consumption	Energy	Costs	CO_2e
1993 F350 4x4 V8 (Sold)			**43 GJ**	**$1,246**	**3**
	Gasoline	1,241 litres	43 GJ	$1,246	3.02
1995 F350 V8 ((Sold)			**57 GJ**	**$1,595**	**4**
	Gasoline	1,631 litres	57 GJ	$1,595	3.97
2000 F550 V10 (Sold)			**140 GJ**	**$4,006**	**10**
	Gasoline	4,046 litres	140 GJ	$4,006	9.84
2002 Dodge Dakota			**46 GJ**	**$1,347**	**3**
	Gasoline	1,340 litres	46 GJ	$1,347	3.26
2003 F150 V6			**93 GJ**	**$2,680**	**7**
	Gasoline	2,677 litres	93 GJ	$2,680	6.51
2005 3/4 T Dodge V8			**105 GJ**	**$3,028**	**7**
	Gasoline	3,017 litres	105 GJ	$3,028	7.34
2005 F150 V8 (Sold)			**142 GJ**	**$4,072**	**10**
	Gasoline	4,104 litres	142 GJ	$4,072	9.98
2005 F550 V10			**61 GJ**	**$1,786**	**4**
	Gasoline	1,770 litres	61 GJ	$1,786	4.31
2006 Ford F450 V10			**236 GJ**	**$6,780**	**17**
	Gasoline	6,799 litres	236 GJ	$6,780	16.53
2007 F250 2wd V8			**95 GJ**	**$2,750**	**7**
	Gasoline	2,750 litres	95 GJ	$2,750	6.69
Personal Vehicle Use On City Business	Source	Consumption	Energy	Costs	CO_2e
Passenger Vehicles			**58 GJ**	**$8,645**	**4**
	Gasoline	1,666 litres	58 GJ	$8,645	4.05

SOLID WASTE

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2009

All Solid Waste from Corporate Operations	Source	Volume	Mass	CO_2e
All Solid Waste From Corporate Operations		*688*	*103 t*	*55*
	Solid Waste	*688*	*103.20*	*54.70*

Appendices

Appendix IV: 2010 Inventory

City of Pitt Meadows
The Natural Place

Pitt Meadows Corporate Inventory

2010 Account-by-Account Listing

BUILDINGS

Administration Office	Source	Consumption	Energy	Costs	CO_2e
City Hall			**1,298 GJ**	**$26,373**	**1,882,714**
	Electricity	255,716 kWh	921 GJ	$21,351	0.00
	Natural Gas	378 GJ	378 GJ	$5,022	1,882,713.71

Caretaker House	Source	Consumption	Energy	Costs	CO_2e
Hoffman House			**29 GJ**	**$560**	**0**
	Electricity	8,000 kWh	29 GJ	$560	0.00

Community Centre	Source	Consumption	Energy	Costs	CO_2e
Family Recreation Centre			**3,810 GJ**	**$62,205**	**6,842,288**
	Electricity	677,127 kWh	2,438 GJ	$43,954	0.00
	Natural Gas	1,372 GJ	1,372 GJ	$18,252	6,842,288.21

Community Hall	Source	Consumption	Energy	Costs	CO_2e
Heritage Hall			**759 GJ**	**$12,861**	**2,682,967**
	Electricity	61,339 kWh	221 GJ	$5,704	0.00
	Natural Gas	538 GJ	538 GJ	$7,157	2,682,966.76

Fire Services	Source	Consumption	Energy	Costs	CO_2e
Fire Hall			**582 GJ**	**$11,646**	**1,342,730**
	Electricity	86,841 kWh	313 GJ	$8,065	0.00
	Natural Gas	269 GJ	269 GJ	$3,582	1,342,729.88

Heritage Site	Source	Consumption	Energy	Costs	CO_2e
Struthers House			**45 GJ**	**$744**	**148,583**
	Electricity	4,145 kWh	15 GJ	$348	0.00
	Natural Gas	30 GJ	30 GJ	$396	148,582.81

Ice Arena	Source	Consumption	Energy	Costs	CO_2e
Arena			**13,799 GJ**	**$214,960**	**33,234,684**
	Electricity	1,981,582 kWh	7,134 GJ	$126,308	0.00
	Natural Gas	6,666 GJ	6,666 GJ	$88,652	?

Library	Source	Consumption	Energy	Costs	CO_2e
Pitt Meadows Public Library			**442 GJ**	**$10,158**	**458,712**

Electricity	97,099 kWh	350 GJ	$8,935	0.00
Natural Gas	92 GJ	92 GJ	$1,224	458,712.03

Museum	Source	Consumption	Energy	Costs	CO_2e
Museum			**210 GJ**	**$3,095**	**860,085**
	Electricity	10,340 kWh	37 GJ	$801	0.00
	Natural Gas	172 GJ	172 GJ	$2,294	860,085.05

Outdoor Pools	Source	Consumption	Energy	Costs	CO_2e
Harris Park Pool			**732 GJ**	**$91,165**	**3,274,306**
	Electricity	21,000 kWh	76 GJ	$82,300	0.00
	Natural Gas	657 GJ	657 GJ	$8,865	3,274,306.40

Parks & Playing Fields	Source	Consumption	Energy	Costs	CO_2e
Athletic Park Outbuilding			**32 GJ**	**$860**	**0**
	Electricity	8,756 kWh	32 GJ	$860	0.00
Community Garden - New			**7 GJ**	**$246**	**0**
	Electricity	1,996 kWh	7 GJ	$246	0.00
Cottonwood Park			**23 GJ**	**$648**	**0**
	Electricity	6,251 kWh	23 GJ	$648	0.00

Public Works Bldg & Yard	Source	Consumption	Energy	Costs	CO_2e
Public Works Department			**854 GJ**	**$17,013**	**1,889,694**
	Electricity	132,042 kWh	475 GJ	$11,972	0.00
	Natural Gas	379 GJ	379 GJ	$5,041	1,889,694.11

LIGHTING

Ornamental Lighting	Source	Consumption	Energy	Costs	CO_2e
Barnston Ornamental Streetlighting			**66 GJ**	**$1,734**	**0**
	Electricity	18,460 kWh	66 GJ	$1,734	0.00
Ornamental Streetlighting			**1,873 GJ**	**$42,202**	**0**
	Electricity	520,316 kWh	1,873 GJ	$42,202	0.00

Overhead Lighting	Source	Consumption	Energy	Costs	CO_2e
~~Overhead Streetlighting~~			228 GJ	$23,414	
	Electricity	63,395 kWh	228 GJ		

Parking Lot Lighting (open)	Source	Consumption	Energy	Costs	CO_2e
Parking Lot Lights			**131 GJ**	**$3,383**	**0**
	Electricity	36,357 kWh	131 GJ	$3,383	0.00

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2010

Pedestrian Signal	Source	Consumption	Energy	Costs	CO_2e
Pedestrian Signal			**7 GJ**	**$163**	**0**
	Electricity	1,992 kWh	7 GJ	$163	0.00
Pedestrian Signal			**7 GJ**	**$163**	**0**
	Electricity	1,992 kWh	7 GJ	$163	0.00
Reader Board/Kiosk	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Spirit Square			**-20 GJ**	**-$386**	**-0**
	Electricity	-5,606 kWh	-20 GJ	$-386	-0.00
Sign Lighting	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Kpm#1 Sign E Of Pitt Bridge			**6 GJ**	**$208**	**0**
	Electricity	1,580 kWh	6 GJ	$208	0.00
Traffic Signal	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Traffic Signal			**7 GJ**	**$159**	**0**
	Electricity	1,944 kWh	7 GJ	$159	0.00
Traffic Signal			**7 GJ**	**$155**	**0**
	Electricity	1,896 kWh	7 GJ	$155	0.00
Traffic Signal			**7 GJ**	**$154**	**0**
	Electricity	1,884 kWh	7 GJ	$154	0.00
Traffic Signal			**7 GJ**	**$154**	**0**
	Electricity	1,884 kWh	7 GJ	$154	0.00
Traffic Signal			**6 GJ**	**$126**	**0**
	Electricity	1,536 kWh	6 GJ	$126	0.00
Traffic Signal			**4 GJ**	**$92**	**0**
	Electricity	1,128 kWh	4 GJ	$92	0.00
Traffic Signal			**6 GJ**	**$147**	**0**
	Electricity	1,800 kWh	6 GJ	$147	0.00
Unidentified	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
-			**56 GJ**	**$1,486**	**0**
	Electricity	15,587 kWh	56 GJ	$1,486	0.00
-			**9 GJ**	**$186**	**0**
	Electricity	2,469 kWh	9 GJ	$186	0.00

WATER & WASTEWATER

Drainage Pump Station	Source	Consumption	Energy	Costs	CO_2e
Alouette Pump Station (Area 1) Drainage			**432 GJ**	**$18,435**	**0**
	Electricity	119,898 kWh	432 GJ	$18,435	0.00
Baynes Rd Pump Station			**662 GJ**	**$23,515**	**0**
	Electricity	183,924 kWh	662 GJ	$23,515	0.00
Fenton Storm Pump Station			**599 GJ**	**$20,468**	**0**
	Electricity	166,424 kWh	599 GJ	$20,468	0.00
Kennedy Road Storm Pump Station			**1,160 GJ**	**$40,004**	**0**
	Electricity	322,233 kWh	1,160 GJ	$40,004	0.00
Mckechnie Storm Pump Station			**1,175 GJ**	**$35,454**	**0**
	Electricity	326,323 kWh	1,175 GJ	$35,454	0.00
Pitt Polder Drainage Pump Station			**1,019 GJ**	**$29,965**	**0**
	Electricity	283,164 kWh	1,019 GJ	$29,965	0.00
Liquid Waste Lift Station	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
124a Ave/188a St Pump Station			**21 GJ**	**$584**	**0**
	Electricity	5,724 kWh	21 GJ	$584	0.00
Bonson Lwls			**46 GJ**	**$1,220**	**0**
	Electricity	12,764 kWh	46 GJ	$1,220	0.00
Bonson Rd Lift Station			**31 GJ**	**$855**	**0**
	Electricity	8,740 kWh	31 GJ	$855	0.00
Harris/Fieldstone Lift Station			**37 GJ**	**$995**	**0**
	Electricity	10,274 kWh	37 GJ	$995	0.00
Lougheed Liquid Waste Lift Station			**56 GJ**	**$1,467**	**0**
	Electricity	15,466 kWh	56 GJ	$1,467	0.00
Lougheed Lwls			**39 GJ**	**$1,035**	**0**
	Electricity	10,720 kWh	39 GJ	$1,035	0.00
Liquid Waste Pump Station	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Hammond Pump Station			**329 GJ**	**$8,450**	**0**
	Electricity	91,410 kWh	329 GJ	$8,450	0.00
Potable Water Booster Station	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Sheridan Water Booster Station			**53 GJ**	**$1,404**	**0**
	Electricity	14,742 kWh	53 GJ	$1,404	0.00

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2010

PRV Station	Source	Consumption	Energy	Costs	CO_2e
Allen Way Prv			**20 GJ**	**$593**	**0**
	Electricity	5,678 kWh	20 GJ	$593	0.00
Dewdney Trunk Prv Station			**34 GJ**	**$902**	**0**
	Electricity	9,347 kWh	34 GJ	$902	0.00
Kennedy Road Prv			**13 GJ**	**$412**	**0**
	Electricity	3,661 kWh	13 GJ	$412	0.00
Lougheed Prv Station			**50 GJ**	**$1,341**	**0**
	Electricity	13,763 kWh	50 GJ	$1,341	0.00
Mcmyn Road Park Prv			**20 GJ**	**$560**	**0**
	Electricity	5,481 kWh	20 GJ	$560	0.00
Meadow Gardens Prv Station			**31 GJ**	**$849**	**0**
	Electricity	8,622 kWh	31 GJ	$849	0.00

VEHICLE FLEET

Diesel Fuel Dump Trucks	Source	Consumption	Energy	Costs	CO_2e
1997 L9000 Dump			**165 GJ**	**$4,418**	**11**
	Biodiesel 5	4,261 litres	165 GJ	$4,418	11.07
2007 International 7600 Dump			**289 GJ**	**$7,815**	**19**
	Biodiesel 5	7,481 litres	289 GJ	$7,815	19.43

Diesel Fuel Medium to Heavy Trucks	Source	Consumption	Energy	Costs	CO_2e
1996 L8000 Dump (Sold)			**102 GJ**	**$2,727**	**7**
	Biodiesel 5	2,634 litres	102 GJ	$2,727	6.84
F750 Ford Dump			**71 GJ**	**$1,883**	**5**
	Biodiesel 5	1,833 litres	71 GJ	$1,883	4.76

Diesel Fuel Off Road Vehicles & Equipment	Source	Consumption	Energy	Costs	CO_2e
1979 John Deer 670 Grader			**27 GJ**	**$755**	**2**
	Biodiesel 5	703 litres	27 GJ	$755	1.83
1990 Ford E350 Van (Sold)			**1 GJ**	**$38**	**0**
	Biodiesel 5	36 litres	1 GJ	$38	0.09
2003 John Deere 310 Sg			**171 GJ**	**$4,557**	**12**
	Biodiesel 5	4,434 litres	171 GJ	$4,557	11.52
2003 New Holland Tractor			**428 GJ**	**$11,465**	**29**

	Biodiesel 5	11,076 litres	428 GJ	$11,465	28.77
2006 A300 Bobcat Allsteer			**56 GJ**	**$1,522**	**4**
	Biodiesel 5	1,456 litres	56 GJ	$1,522	3.78
2007 Gradall Xl4100-3			**272 GJ**	**$7,260**	**18**
	Biodiesel 5	7,042 litres	272 GJ	$7,260	18.29
2009 New Holland T6030			**43 GJ**	**$1,154**	**3**
	Biodiesel 5	1,099 litres	43 GJ	$1,154	2.86
Fire Services	Source	Consumption	Energy	Costs	CO_2e
1989 Mack Pumper Truck (Sold)			**21 GJ**	**$572**	**1**
	Biodiesel 5	555 litres	21 GJ	$572	1.44
1998 Mack Pumper			**72 GJ**	**$1,949**	**5**
	Biodiesel 5	1,874 litres	72 GJ	$1,949	4.87
2000 Dodge Durango V8 (Sold)			**52 GJ**	**$1,592**	**4**
	Gasoline	1,503 litres	52 GJ	$1,592	3.65
2000 Freightliner Fl80 Rescue Truck			**42 GJ**	**$1,135**	**3**
	Biodiesel 5	1,090 litres	42 GJ	$1,135	2.83
2003 Dodge Dakota V6			**51 GJ**	**$1,575**	**4**
	Gasoline	1,478 litres	51 GJ	$1,575	3.59
2006 Dodge Dakota V6			**58 GJ**	**$1,790**	**4**
	Gasoline	1,670 litres	58 GJ	$1,790	4.06
2008 Quint Ladder Truck			**54 GJ**	**$1,473**	**4**
	Biodiesel 5	1,383 litres	54 GJ	$1,450	3.59
	Gasoline	23 litres	1 GJ	$24	0.06
2011 Ford Explorer			**38 GJ**	**$1,176**	**3**
	Gasoline	1,103 litres	38 GJ	$1,176	2.68
Gasoline Equipment	Source	Consumption	Energy	Costs	CO_2e
Small Tools (Gasoline)**			**315 GJ**	**$8,524**	**21**
	Biodiesel 5	7,299 litres	282 GJ	$7,486	18.96
	Gasoline	948 litres	33 GJ	$1,039	2.31
Gasoline Medium to Heavy Trucks & Vans	Source	Consumption	Energy	Costs	CO_2e
2006 F450 V 10 Utility Truck			**76 GJ**	**$2,327**	**5**
	Gasoline	2,198 litres	76 GJ	$2,327	5.34

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2010

2006 F450 V10 Bucket Truck			**122 GJ**	**$3,724**	**9**
	Gasoline	3,517 litres	122 GJ	$3,724	8.55
Gasoline Passenger Cars	Source	Consumption	Energy	Costs	CO_2e
2006 Ford Focus Se			**28 GJ**	**$853**	**2**
	Gasoline	801 litres	28 GJ	$853	1.95
Light Trucks, Vans, and SUVs	Source	Consumption	Energy	Costs	CO_2e
1993 F350 4x4 V8 (Sold)			**40 GJ**	**$1,241**	**3**
	Gasoline	1,161 litres	40 GJ	$1,241	2.82
1995 F350 V8 ((Sold)			**68 GJ**	**$2,113**	**5**
	Gasoline	1,962 litres	68 GJ	$2,113	4.77
2000 F550 V10 (Sold)			**173 GJ**	**$5,291**	**12**
	Gasoline	5,000 litres	173 GJ	$5,291	12.16
2002 Dodge Dakota			**53 GJ**	**$1,645**	**4**
	Gasoline	1,536 litres	53 GJ	$1,645	3.73
2003 F150 V6			**76 GJ**	**$2,339**	**5**
	Gasoline	2,201 litres	76 GJ	$2,339	5.35
2005 3/4 T Dodge V8			**118 GJ**	**$3,640**	**8**
	Gasoline	3,413 litres	118 GJ	$3,640	8.30
2005 F150 V8 (Sold)			**75 GJ**	**$2,297**	**5**
	Gasoline	2,161 litres	75 GJ	$2,297	5.26
2005 F550 V10			**122 GJ**	**$3,777**	**9**
	Gasoline	3,526 litres	122 GJ	$3,777	8.58
2006 Ford F450 V10			**286 GJ**	**$8,767**	**20**
	Gasoline	8,246 litres	286 GJ	$8,767	20.05
2007 F250 2wd V8			**85 GJ**	**$2,630**	**6**
	Gasoline	2,464 litres	85 GJ	$2,630	5.99
2010 Ford F150 4x4 V8			**31 GJ**	**$942**	**2**
	Gasoline	890 litres	31 GJ	$942	2.16
2010 Ford F150 V8 4x4			**34 GJ**	**$1,026**	**2**
	Gasoline	969 litres	34 GJ	$1,026	2.36
Personal Vehicle Use On City Business	Source	Consumption	Energy	Costs	CO_2e
Passenger Vehicles			**58 GJ**	**$8,645**	**4**

	Gasoline	1,666 litres	58 GJ	$8,645	4.05

SOLID WASTE

All Solid Waste from Corporate Operations	Source	Volume	Mass	CO_2e
All Solid Waste From Corporate Operations		*688*	*103 t*	*55*
	Solid Waste	*688*	*103.20*	*54.70*

APPENDICES

Appendix V: 2011 Inventory

City of Pitt Meadows
The Natural Place

Pitt Meadows Corporate Inventory

2011 Account-by-Account Listing

BUILDINGS

Administration Office	Source	Consumption	Energy	Costs	CO_2e
City Hall			**1,281 GJ**	**$24,144**	**20**
	Electricity	244,385 kWh	880 GJ	$18,811	0.00
	Natural Gas	401 GJ	401 GJ	$5,333	20.11
Caretaker House	Source	Consumption	Energy	Costs	CO_2e
Hoffman House			**29 GJ**	**$560**	**0**
	Electricity	8,000 kWh	29 GJ	$560	0.00
Community Centre	Source	Consumption	Energy	Costs	CO_2e
Family Recreation Centre			**3,799 GJ**	**$60,066**	**77**
	Electricity	628,164 kWh	2,261 GJ	$39,621	0.00
	Natural Gas	1,537 GJ	1,537 GJ	$20,445	77.11
South Bonson Community Centre			**409 GJ**	**$10,073**	**3**
	Electricity	95,618 kWh	344 GJ	$9,207	0.00
	Natural Gas	65 GJ	65 GJ	$866	3.27
Community Hall	Source	Consumption	Energy	Costs	CO_2e
Heritage Hall			**943 GJ**	**$15,976**	**31**
	Electricity	89,561 kWh	322 GJ	$7,723	0.00
	Natural Gas	620 GJ	620 GJ	$8,253	31.12
Fire Services	Source	Consumption	Energy	Costs	CO_2e
Fire Hall			**683 GJ**	**$13,103**	**16**
	Electricity	103,831 kWh	374 GJ	$8,989	0.00
	Natural Gas	309 GJ	309 GJ	$4,114	15.51
Ice Arena	Source	Consumption	Energy	Costs	CO_2e
Arena			**11,279 GJ**	**$167,322**	**238**
	Electricity	1,817,703 kWh	6,544 GJ	$104,347	0.00
	Natural Gas	4,735 GJ	4,735 GJ	$62,975	237.51
Library	Source	Consumption	Energy	Costs	CO_2e
Pitt Meadows Public Library			**475 GJ**	**$9,386**	**10**
	Electricity	79,173 kWh	285 GJ	$6,861	0.00
	Natural Gas	190 GJ	190 GJ	$2,526	9.53

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2011

Pitt Meadows Public Library

Museum	Source	Consumption	Energy	Costs	CO_2e
Museum			**207 GJ**	**$3,138**	**8**
	Electricity	12,510 kWh	45 GJ	$987	0.00
	Natural Gas	162 GJ	162 GJ	$2,151	8.11
Outdoor Pools	Source	Consumption	Energy	Costs	CO_2e
Harris Park Pool			**736 GJ**	**$91,819**	**33**
	Electricity	21,000 kWh	76 GJ	$82,900	0.00
	Natural Gas	661 GJ	661 GJ	$8,919	33.14
Parks & Playing Fields	Source	Consumption	Energy	Costs	CO_2e
Athletic Park Outbuilding			**31 GJ**	**$796**	**0**
	Electricity	8,512 kWh	31 GJ	$796	0.00
Community Garden - New			**2 GJ**	**$106**	**0**
	Electricity	460 kWh	2 GJ	$106	0.00
Cottonwood Park			**38 GJ**	**$979**	**0**
	Electricity	10,543 kWh	38 GJ	$979	0.00
Public Works Bldg & Yard	Source	Consumption	Energy	Costs	CO_2e
Public Works Department			**817 GJ**	**$16,163**	**16**
	Electricity	138,331 kWh	498 GJ	$11,919	0.00
	Natural Gas	319 GJ	319 GJ	$4,244	16.01

LIGHTING

Ornamental Lighting	Source	Consumption	Energy	Costs	CO_2e
Barnston Ornamental Streetlighting			**42 GJ**	**$1,018**	**0**
	Electricity	11,553 kWh	42 GJ	$1,018	0.00
City Of Pitt Meadows			**8 GJ**	**$181**	**0**
	Electricity	2,207 kWh	8 GJ	$181	0.00
Ornamental Streetlighting			**1,876 GJ**	**$39,822**	**0**
	Electricity	521,185 kWh	1,876 GJ	$39,847	0.00
Overhead Lighting	Source	Consumption	Energy	Costs	CO_2e
~~Overhead Streetlighting~~			228 GJ	$21,990	
	Electricity	63,199 kWh	228 GJ		
Parking Lot Lighting (open)	Source	Consumption	Energy	Costs	CO_2e
Parking Lot Lights			**115 GJ**	**$2,797**	**0**

Parking Lot Lights continued...

	Electricity	32,078 kWh	115 GJ	$2,797	0.00
Pedestrian Signal	Source	Consumption	Energy	Costs	CO_2e
Pedestrian Signal			**7 GJ**	**$153**	**0**
	Electricity	1,997 kWh	7 GJ	$153	0.00
Pedestrian Signal			**7 GJ**	**$153**	**0**
	Electricity	1,997 kWh	7 GJ	$153	0.00
Reader Board/Kiosk	Source	Consumption	Energy	Costs	CO_2e
Spirit Square			**3 GJ**	**$150**	**0**
	Electricity	961 kWh	3 GJ	$150	0.00
Sign Lighting	Source	Consumption	Energy	Costs	CO_2e
Kpm#1 Sign E Of Pitt Bridge			**8 GJ**	**$269**	**0**
	Electricity	2,310 kWh	8 GJ	$269	0.00
Traffic Signal	Source	Consumption	Energy	Costs	CO_2e
City Of Pitt Meadows			**10 GJ**	**$211**	**0**
	Electricity	2,755 kWh	10 GJ	$211	0.00
Traffic Signal			**7 GJ**	**$149**	**0**
	Electricity	1,949 kWh	7 GJ	$149	0.00
Traffic Signal			**7 GJ**	**$145**	**0**
	Electricity	1,901 kWh	7 GJ	$145	0.00
Traffic Signal			**7 GJ**	**$144**	**0**
	Electricity	1,889 kWh	7 GJ	$144	0.00
Traffic Signal			**7 GJ**	**$144**	**0**
	Electricity	1,889 kWh	7 GJ	$144	0.00
Traffic Signal			**6 GJ**	**$118**	**0**
	Electricity	1,540 kWh	6 GJ	$118	0.00
Traffic Signal			**4 GJ**	**$86**	**0**
	Electricity	1,131 kWh	4 GJ	$86	0.00
Traffic Signal			**6 GJ**	**$138**	**0**
	Electricity	1,805 kWh	6 GJ	$138	0.00
Unidentified	Source	Consumption	Energy	Costs	CO_2e
-			**48 GJ**	**$1,209**	**0**
	Electricity	13,261 kWh	48 GJ	$1,209	0.00

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2011

WATER & WASTEWATER

Drainage Pump Station	Source	Consumption	Energy	Costs	CO_2e
Alouette Pump Station (Area 1) Drainage			**625 GJ**	**$24,601**	**0**
	Electricity	173,665 kWh	625 GJ	$24,601	0.00
Baynes Rd Pump Station			**705 GJ**	**$21,139**	**0**
	Electricity	195,733 kWh	705 GJ	$21,139	0.00
Fenton Storm Pump Station			**713 GJ**	**$19,944**	**0**
	Electricity	198,109 kWh	713 GJ	$19,944	0.00
Kennedy Road Storm Pump Station			**1,361 GJ**	**$36,990**	**0**
	Electricity	378,120 kWh	1,361 GJ	$36,990	0.00
Mckechnie Storm Pump Station			**1,369 GJ**	**$34,017**	**0**
	Electricity	380,225 kWh	1,369 GJ	$34,017	0.00
Pitt Polder Drainage Pump Station			**1,158 GJ**	**$29,030**	**0**
	Electricity	321,765 kWh	1,158 GJ	$29,030	0.00

Liquid Waste Lift Station	Source	Consumption	Energy	Costs	CO_2e
124a Ave/188a St Pump Station			**17 GJ**	**$465**	**0**
	Electricity	4,705 kWh	17 GJ	$465	0.00
Bonson Lwls			**41 GJ**	**$1,036**	**0**
	Electricity	11,361 kWh	41 GJ	$1,036	0.00
Bonson Rd Lift Station			**32 GJ**	**$821**	**0**
	Electricity	8,835 kWh	32 GJ	$821	0.00
Harris/Fieldstone Lift Station			**36 GJ**	**$936**	**0**
	Electricity	10,135 kWh	36 GJ	$936	0.00
Lougheed Liquid Waste Lift Station			**65 GJ**	**$1,624**	**0**
	Electricity	18,125 kWh	65 GJ	$1,624	0.00
Lougheed Lwls			**41 GJ**	**$1,030**	**0**
	Electricity	11,343 kWh	41 GJ	$1,030	0.00

Liquid Waste Pump Station	Source	Consumption	Energy	Costs	CO_2e
Hammond Pump Station			**344 GJ**	**$8,587**	**0**
	Electricity	95,689 kWh	344 GJ	$8,587	0.00

Potable Water Booster Station	Source	Consumption	Energy	Costs	CO_2e
Sheridan Water Booster Station			**75 GJ**	**$1,857**	**0**

	Electricity	20,897 kWh	75 GJ	$1,857	0.00
PRV Station	Source	Consumption	Energy	Costs	CO_2e
Allen Way Prv			**20 GJ**	**$555**	**0**
	Electricity	5,693 kWh	20 GJ	$555	0.00
Dewdney Trunk Prv Station			**19 GJ**	**$520**	**0**
	Electricity	5,338 kWh	19 GJ	$520	0.00
Kennedy Road Prv			**10 GJ**	**$303**	**0**
	Electricity	2,799 kWh	10 GJ	$303	0.00
Lougheed Prv Station			**45 GJ**	**$1,121**	**0**
	Electricity	12,509 kWh	45 GJ	$1,121	0.00
Mcmyn Road Park Prv			**16 GJ**	**$449**	**0**
	Electricity	4,548 kWh	16 GJ	$449	0.00
Meadow Gardens Prv Station			**26 GJ**	**$680**	**0**
	Electricity	7,333 kWh	26 GJ	$680	0.00

VEHICLE FLEET

Diesel Fuel Dump Trucks	Source	Consumption	Energy	Costs	CO_2e
1997 L9000 Dump			**163 GJ**	**$4,810**	**11**
	Biodiesel 5	4,201 litres	163 GJ	$4,810	10.91
2007 International 7600 Dump			**286 GJ**	**$8,549**	**19**
	Biodiesel 5	7,399 litres	286 GJ	$8,549	19.22
Diesel Fuel Medium to Heavy Trucks	Source	Consumption	Energy	Costs	CO_2e
1996 L8000 Dump (Sold)			**137 GJ**	**$3,991**	**9**
	Biodiesel 5	3,544 litres	137 GJ	$3,991	9.21
F750 Ford Dump			**102 GJ**	**$3,051**	**7**
	Biodiesel 5	2,642 litres	102 GJ	$3,051	6.86
Diesel Fuel Off Road Vehicles & Equipment	Source	Consumption	Energy	Costs	CO_2e
1979 John Deer 670 Grader			**48 GJ**	**$1,461**	**3**
	Biodiesel 5	1,236 litres	48 GJ	$1,461	3.21
2003 John Deere 310 Sg			**144 GJ**	**$4,310**	**10**
	Biodiesel 5	3,723 litres	144 GJ	$4,310	9.67
2006 A300 Bobcat Allsteer			**10 GJ**	**$315**	**1**
	Biodiesel 5	265 litres	10 GJ	$315	0.69

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2011

2007 Gradall Xl4100-3			**316 GJ**	**$9,337**	**21**
	Biodiesel 5	8,168 litres	316 GJ	$9,337	21.22
2009 New Holland T6030			**514 GJ**	**$15,497**	**35**
	Biodiesel 5	13,291 litres	514 GJ	$15,497	34.52
Fire Services	Source	Consumption	Energy	Costs	CO_2e
1989 Mack Pumper Truck (Sold)			**25 GJ**	**$772**	**2**
	Biodiesel 5	651 litres	25 GJ	$772	1.69
1998 Mack Pumper			**65 GJ**	**$1,953**	**4**
	Biodiesel 5	1,683 litres	65 GJ	$1,953	4.37
2000 Freightliner Fl80 Rescue Truck			**49 GJ**	**$1,473**	**3**
	Biodiesel 5	1,268 litres	49 GJ	$1,473	3.29
2003 Dodge Dakota V6			**39 GJ**	**$1,316**	**3**
	Gasoline	1,114 litres	39 GJ	$1,316	2.71
2006 Dodge Dakota V6			**46 GJ**	**$1,586**	**3**
	Gasoline	1,323 litres	46 GJ	$1,586	3.22
2008 Quint Ladder Truck			**59 GJ**	**$1,789**	**4**
	Biodiesel 5	1,525 litres	59 GJ	$1,789	3.96
2011 F350 Crewcab V8 4x4			**63 GJ**	**$2,145**	**4**
	Gasoline	1,822 litres	63 GJ	$2,145	4.43
2011 Ford Explorer			**23 GJ**	**$784**	**2**
	Gasoline	675 litres	23 GJ	$784	1.64
2012 Pierce Pumper			**11 GJ**	**$344**	**1**
	Biodiesel 5	275 litres	11 GJ	$344	0.71
Fire Dept.			**14 GJ**	**$514**	**1**
	Gasoline	412 litres	14 GJ	$514	1.00
Gasoline Equipment	Source	Consumption	Energy	Costs	CO_2e
Small Tools (Gasoline)**			**151 GJ**	**$4,352**	**10**
	Biodiesel 5	3,764 litres	146 GJ	$4,157	9.78
	Gasoline	164 litres	6 GJ	$194	0.40
Gasoline Medium to Heavy Trucks & Vans	Source	Consumption	Energy	Costs	CO_2e
2006 F450 V 10 Utility Truck			**63 GJ**	**$2,125**	**4**
	Gasoline	1,822 litres	63 GJ	$2,125	4.43

2006 F450 V10 Bucket Truck			**100 GJ**	**$3,416**	**7**
	Gasoline	2,897 litres	100 GJ	$3,416	7.05
Gasoline Passenger Cars	Source	Consumption	Energy	Costs	CO_2e
2006 Ford Focus Se			**26 GJ**	**$889**	**2**
	Gasoline	742 litres	26 GJ	$889	1.81
Light Trucks, Vans, and SUVs	Source	Consumption	Energy	Costs	CO_2e
2000 F550 V10 (Sold)			**83 GJ**	**$2,618**	**6**
	Gasoline	2,388 litres	83 GJ	$2,618	5.81
2002 Dodge Dakota			**50 GJ**	**$1,670**	**3**
	Gasoline	1,430 litres	50 GJ	$1,670	3.48
2003 F150 V6			**59 GJ**	**$2,015**	**4**
	Gasoline	1,695 litres	59 GJ	$2,015	4.12
2005 3/4 T Dodge V8			**106 GJ**	**$3,668**	**7**
	Gasoline	3,066 litres	106 GJ	$3,668	7.46
2005 F550 V10			**139 GJ**	**$4,684**	**10**
	Gasoline	4,000 litres	139 GJ	$4,684	9.73
2006 Ford F450 V10			**271 GJ**	**$9,382**	**19**
	Gasoline	7,820 litres	271 GJ	$9,382	19.02
2007 F250 2wd V8			**39 GJ**	**$1,358**	**3**
	Gasoline	1,138 litres	39 GJ	$1,358	2.77
2010 Ford F150 4x4 V8			**101 GJ**	**$3,418**	**7**
	Gasoline	2,902 litres	101 GJ	$3,418	7.06
2010 Ford F150 V8 4x4			**103 GJ**	**$3,531**	**7**
	Gasoline	2,973 litres	103 GJ	$3,531	7.23
2010 Mt45 Freightliner Van			**79 GJ**	**$2,480**	**5**
	Biodiesel 5	2,052 litres	79 GJ	$2,480	5.33
Personal Vehicle Use On City Business	Source	Consumption	Energy	Costs	CO_2e
Passenger Vehicles			**58 GJ**	**$8,645**	**4**
	Gasoline	1,666 litres	58 GJ	$8,645	4.05
Unidentified Diesel Vehicles	Source	Consumption	Energy	Costs	CO_2e
Unidentified Diesel Vehicles			**14 GJ**	**$385**	**1**
	Biodiesel 5	350 litres	14 GJ	$385	0.91

Pitt Meadows
Corporate Energy & Greenhouse Gas Emissions Inventory: 2011

SOLID WASTE

All Solid Waste from Corporate Operations	Source	Volume	Mass	CO_2e
All Solid Waste From Corporate Operations		*688*	*103 t*	*55*
	Solid Waste	*688*	*103.20*	*54.70*

Appendices

Appendix VI: 2012 Inventory

City of Pitt Meadows
The Natural Place

Pitt Meadows Corporate Inventory

2012 Account-by-Account Listing

BUILDINGS

Administration Office	Source	Consumption	Energy	Costs	CO_2e
City Hall			**1,243 GJ**	**$26,225**	**19**
	Electricity	237,782 kWh	856 GJ	$21,073	0.00
	Natural Gas	387 GJ	387 GJ	$5,151	19.43
Community Centre	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Family Recreation Centre			**3,661 GJ**	**$64,639**	**78**
	Electricity	587,225 kWh	2,114 GJ	$44,069	0.00
	Natural Gas	1,547 GJ	1,547 GJ	$20,570	77.58
South Bonson Community Centre			**229 GJ**	**$5,262**	**4**
	Electricity	42,862 kWh	154 GJ	$4,273	0.00
	Natural Gas	74 GJ	74 GJ	$989	3.73
Community Hall	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Heritage Hall			**826 GJ**	**$14,434**	**27**
	Electricity	79,353 kWh	286 GJ	$7,251	0.00
	Natural Gas	540 GJ	540 GJ	$7,183	27.09
Fire Services	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Fire Hall			**741 GJ**	**$13,807**	**21**
	Electricity	91,472 kWh	329 GJ	$8,328	0.00
	Natural Gas	412 GJ	412 GJ	$5,479	20.67
Heritage Site	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
The Hoffman Shop			**196 GJ**	**$2,835**	**9**
	Electricity	2,521 kWh	9 GJ	$355	0.00
	Natural Gas	186 GJ	186 GJ	$2,480	9.35
Ice Arena	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Arena			**12,357 GJ**	**$230,704**	**311**
	Electricity	1,708,677 kWh	6,151 GJ	$148,171	0.00
	Natural Gas	6,206 GJ	6,206 GJ	$82,533	311.27
Library	**Source**	**Consumption**	**Energy**	**Costs**	**CO_2e**
Pitt Meadows Public Library			**450 GJ**	**$7,670**	**16**
	Electricity	38,427 kWh	138 GJ	$3,528	0.00

	Natural Gas	311 GJ	311 GJ	$4,141	15.62
Pitt Meadows Public Library			**218 GJ**	**$2,900**	**11**
	Natural Gas	218 GJ	218 GJ	$2,900	10.94
Museum	Source	Consumption	Energy	Costs	CO_2e
Museum			**193 GJ**	**$2,987**	**8**
	Electricity	11,819 kWh	43 GJ	$991	0.00
	Natural Gas	150 GJ	150 GJ	$1,996	7.53
Parks & Playing Fields	Source	Consumption	Energy	Costs	CO_2e
Athletic Park Outbuilding			**30 GJ**	**$836**	**0**
	Electricity	8,466 kWh	30 GJ	$836	0.00
Community Garden - New			**14 GJ**	**$406**	**0**
	Electricity	3,764 kWh	14 GJ	$406	0.00
Cottonwood Park			**35 GJ**	**$951**	**0**
	Electricity	9,820 kWh	35 GJ	$951	0.00
North Bonson Park			**GJ**	**$64**	
	Electricity	kWh	GJ	$64	
Public Works Bldg & Yard	Source	Consumption	Energy	Costs	CO_2e
Public Works Department			**870 GJ**	**$17,710**	**18**
	Electricity	143,069 kWh	515 GJ	$12,995	0.00
	Natural Gas	355 GJ	355 GJ	$4,715	17.78
Tourism Building	Source	Consumption	Energy	Costs	CO_2e
Tourism Maple Ridge And Pitt Meadows			**87 GJ**	**$1,162**	**4**
	Natural Gas	87 GJ	87 GJ	$1,162	4.38

LIGHTING

-	Source	Consumption	Energy	Costs	CO_2e
-			**3 GJ**	**$67**	**0**
	Electricity	830 kWh	3 GJ	$67	0.00
Ornamental Lighting	Source	Consumption	Energy	Costs	CO_2e
Barnston Ornamental Streetlighting			**64 GJ**	**$1,679**	**0**
	Electricity	17,764 kWh	64 GJ	$1,679	0.00
Ornamental Streetlighting			**1,883 GJ**	**$42,034**	**0**
	Electricity	523,145 kWh	1,883 GJ	$42,034	0.00

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Overhead Lighting	Source	Consumption	Energy	Costs	CO_2e
~~Overhead Streetlighting~~			227 GJ	$23,178	
	Electricity	63,158 kWh	227 GJ		

Parking Lot Lighting (open)	Source	Consumption	Energy	Costs	CO_2e
Parking Lot Lights			**87 GJ**	**$2,241**	**0**
	Electricity	24,034 kWh	87 GJ	$2,241	0.00

Pedestrian Signal	Source	Consumption	Energy	Costs	CO_2e
Pedestrian Signal			**7 GJ**	**$148**	**0**
	Electricity	1,831 kWh	7 GJ	$148	0.00
Pedestrian Signal			**7 GJ**	**$148**	**0**
	Electricity	1,831 kWh	7 GJ	$148	0.00

Reader Board/Kiosk	Source	Consumption	Energy	Costs	CO_2e
Spirit Square			**8 GJ**	**$256**	**0**
	Electricity	2,124 kWh	8 GJ	$256	0.00

Sign Lighting	Source	Consumption	Energy	Costs	CO_2e
Kpm#1 Sign E Of Pitt Bridge			**6 GJ**	**$215**	**0**
	Electricity	1,603 kWh	6 GJ	$215	0.00

Traffic Signal	Source	Consumption	Energy	Costs	CO_2e
City Of Pitt Meadows			**10 GJ**	**$222**	**0**
	Electricity	2,756 kWh	10 GJ	$222	0.00
Traffic Signal			**7 GJ**	**$157**	**0**
	Electricity	1,949 kWh	7 GJ	$157	0.00
Traffic Signal			**7 GJ**	**$153**	**0**
	Electricity	1,901 kWh	7 GJ	$153	0.00
Traffic Signal			**7 GJ**	**$152**	**0**
	Electricity	1,889 kWh	7 GJ	$152	0.00
Traffic Signal			**7 GJ**	**$152**	**0**
	Electricity	1,889 kWh	7 GJ	$152	0.00
Traffic Signal			**6 GJ**	**$124**	**0**
	Electricity	1,540 kWh	6 GJ	$124	0.00
Traffic Signal			**4 GJ**	**$91**	**0**
	Electricity	1,131 kWh	4 GJ	$91	0.00

Traffic Signal			**6 GJ**	**$146**	**0**
	Electricity	1,805 kWh	6 GJ	$146	0.00
Unidentified	Source	Consumption	Energy	Costs	CO_2e
-			**44 GJ**	**$1,184**	**0**
	Electricity	12,274 kWh	44 GJ	$1,184	0.00
-			**16 GJ**	**$430**	**0**
	Electricity	4,386 kWh	16 GJ	$430	0.00

WATER & WASTEWATER

Drainage Pump Station	Source	Consumption	Energy	Costs	CO_2e
Alouette Pump Station (Area 1) Drainage			**675 GJ**	**$26,109**	**0**
	Electricity	187,627 kWh	675 GJ	$26,109	0.00
Baynes Rd Pump Station			**791 GJ**	**$29,847**	**0**
	Electricity	219,707 kWh	791 GJ	$29,847	0.00
Fenton Storm Pump Station			**673 GJ**	**$27,078**	**0**
	Electricity	186,821 kWh	673 GJ	$27,078	0.00
Kennedy Road Storm Pump Station			**1,687 GJ**	**$69,875**	**0**
	Electricity	468,510 kWh	1,687 GJ	$69,875	0.00
Mckechnie Storm Pump Station			**1,454 GJ**	**$52,495**	**0**
	Electricity	403,913 kWh	1,454 GJ	$52,495	0.00
Pitt Polder Drainage Pump Station			**1,167 GJ**	**$41,453**	**0**
	Electricity	324,155 kWh	1,167 GJ	$41,453	0.00
Liquid Waste Lift Station	Source	Consumption	Energy	Costs	CO_2e
124a Ave/188a St Pump Station			**12 GJ**	**$371**	**0**
	Electricity	3,339 kWh	12 GJ	$371	0.00
Bonson Lwls			**32 GJ**	**$879**	**0**
	Electricity	8,922 kWh	32 GJ	$879	0.00
Bonson Rd Lift Station			**32 GJ**	**$873**	**0**
	Electricity	8,887 kWh	32 GJ	$873	0.00
Harris/Fieldstone Lift Station			**38 GJ**	**$1,024**	**0**
	Electricity	10,556 kWh	38 GJ	$1,024	0.00
Lougheed Liquid Waste Lift Station			**64 GJ**	**$1,693**	**0**
	Electricity	17,912 kWh	64 GJ	$1,693	0.00

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Lougheed Lwls			**46 GJ**	**$1,220**	**0**
	Electricity	12,744 kWh	46 GJ	$1,220	0.00
Liquid Waste Pump Station	Source	Consumption	Energy	Costs	CO_2e
Hammond Pump Station			**344 GJ**	**$9,172**	**0**
	Electricity	95,581 kWh	344 GJ	$9,172	0.00
Potable Water Booster Station	Source	Consumption	Energy	Costs	CO_2e
Sheridan Water Booster Station			**81 GJ**	**$2,116**	**0**
	Electricity	22,583 kWh	81 GJ	$2,116	0.00
PRV Station	Source	Consumption	Energy	Costs	CO_2e
Allen Way Prv			**20 GJ**	**$586**	**0**
	Electricity	5,691 kWh	20 GJ	$586	0.00
Dewdney Trunk Prv Station			**16 GJ**	**$475**	**0**
	Electricity	4,492 kWh	16 GJ	$475	0.00
Kennedy Road Prv			**7 GJ**	**$245**	**0**
	Electricity	2,017 kWh	7 GJ	$245	0.00
Lougheed Prv Station			**33 GJ**	**$897**	**0**
	Electricity	9,293 kWh	33 GJ	$897	0.00
Mcmyn Road Park Prv			**11 GJ**	**$347**	**0**
	Electricity	3,085 kWh	11 GJ	$347	0.00
Meadow Gardens Prv Station			**32 GJ**	**$876**	**0**
	Electricity	8,984 kWh	32 GJ	$876	0.00

VEHICLE FLEET

Diesel Fuel Dump Trucks	Source	Consumption	Energy	Costs	CO_2e
2007 International 7600 Dump			**280 GJ**	**$8,946**	**19**
	Biodiesel 5	7,231 litres	280 GJ	$8,946	18.78
Diesel Fuel Equipment	Source	Consumption	Energy	Costs	CO_2e
Small Tools (Diesel*)			**297 GJ**	**$9,448**	**20**
	Biodiesel 5	7,679 litres	297 GJ	$9,448	19.95
Diesel Fuel Medium to Heavy Trucks	Source	Consumption	Energy	Costs	CO_2e
1996 L8000 Dump (Sold)			**25 GJ**	**$785**	**2**
	Biodiesel 5	654 litres	25 GJ	$785	1.70
F750 Ford Dump			**72 GJ**	**$2,261**	**5**

	Biodiesel 5	1,854 litres	72 GJ	$2,261	4.82
Ford Tandem			**151 GJ**	**$4,865**	**10**
	Biodiesel 5	3,899 litres	151 GJ	$4,865	10.13
Diesel Fuel Off Road Vehicles & Equipment	Source	Consumption	Energy	Costs	CO_2e
1979 John Deer 670 Grader			**32 GJ**	**$1,049**	**2**
	Biodiesel 5	820 litres	32 GJ	$1,049	2.13
2003 John Deere 310 Sg			**124 GJ**	**$3,981**	**8**
	Biodiesel 5	3,213 litres	124 GJ	$3,981	8.35
2006 A300 Bobcat Allsteer			**6 GJ**	**$193**	**0**
	Biodiesel 5	155 litres	6 GJ	$193	0.40
2007 Gradall Xl4100-3			**210 GJ**	**$6,716**	**14**
	Biodiesel 5	5,422 litres	210 GJ	$6,716	14.08
2009 New Holland T6030			**502 GJ**	**$16,206**	**34**
	Biodiesel 5	12,970 litres	502 GJ	$16,206	33.69
Fire Services	Source	Consumption	Energy	Costs	CO_2e
1989 Mack Pumper Truck (Sold)			**13 GJ**	**$398**	**1**
	Biodiesel 5	325 litres	13 GJ	$398	0.84
1998 Mack Pumper			**59 GJ**	**$1,874**	**4**
	Biodiesel 5	1,516 litres	59 GJ	$1,874	3.94
2000 Freightliner Fl80 Rescue Truck			**56 GJ**	**$1,785**	**4**
	Biodiesel 5	1,452 litres	56 GJ	$1,785	3.77
2003 Dodge Dakota V6			**53 GJ**	**$1,898**	**4**
	Gasoline	1,527 litres	53 GJ	$1,898	3.71
2006 Dodge Dakota V6			**47 GJ**	**$1,691**	**3**
	Gasoline	1,360 litres	47 GJ	$1,691	3.31
2008 Quint Ladder Truck			**60 GJ**	**$1,973**	**4**
	Biodiesel 5	1,562 litres	60 GJ	$1,973	4.06
2011 F350 Crewcab V8 4x4			**55 GJ**	**$1,993**	**4**
	Gasoline	1,601 litres	55 GJ	$1,993	3.89
2012 Pierce Pumper			**65 GJ**	**$2,113**	**4**
	Biodiesel 5	1,688 litres	65 GJ	$2,113	4.38
Fire Dept.			**35 GJ**	**$1,272**	**2**

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	Gasoline	1,019 litres	35 GJ	$1,272	2.48
Gasoline Equipment	Source	Consumption	Energy	Costs	CO_2e
Small Tools (Gasoline)**			**7 GJ**	**$254**	**0**
	Gasoline	200 litres	7 GJ	$254	0.49
Gasoline Medium to Heavy Trucks & Vans	Source	Consumption	Energy	Costs	CO_2e
2006 F450 V 10 Utility Truck			**111 GJ**	**$4,055**	**8**
	Gasoline	3,194 litres	111 GJ	$4,055	7.77
2006 F450 V10 Bucket Truck			**98 GJ**	**$3,462**	**7**
	Gasoline	2,815 litres	98 GJ	$3,462	6.84
Gasoline Passenger Cars	Source	Consumption	Energy	Costs	CO_2e
2006 Ford Focus Se			**25 GJ**	**$917**	**2**
	Gasoline	736 litres	25 GJ	$917	1.79
Light Trucks, Vans, and SUVs	Source	Consumption	Energy	Costs	CO_2e
2002 Dodge Dakota			**43 GJ**	**$1,563**	**3**
	Gasoline	1,241 litres	43 GJ	$1,563	3.02
2005 3/4 T Dodge V8			**123 GJ**	**$4,443**	**9**
	Gasoline	3,540 litres	123 GJ	$4,443	8.61
2005 F550 V10			**119 GJ**	**$4,259**	**8**
	Gasoline	3,422 litres	119 GJ	$4,259	8.32
2006 Ford F450 V10			**213 GJ**	**$7,545**	**15**
	Gasoline	6,143 litres	213 GJ	$7,545	14.94
2007 F250 2wd V8			**54 GJ**	**$1,943**	**4**
	Gasoline	1,545 litres	54 GJ	$1,943	3.76
2010 Ford F150 4x4 V8			**101 GJ**	**$3,658**	**7**
	Gasoline	2,917 litres	101 GJ	$3,658	7.10
2010 Ford F150 V8 4x4			**113 GJ**	**$4,109**	**8**
	Gasoline	3,267 litres	113 GJ	$4,109	7.94
2010 Mt45 Freightliner Van			**133 GJ**	**$4,283**	**9**
	Biodiesel 5	3,442 litres	133 GJ	$4,283	8.94
Unidentified Diesel Vehicles	Source	Consumption	Energy	Costs	CO_2e
Unidentified Diesel Vehicles			**94 GJ**	**$2,936**	**6**
	Biodiesel 5	2,421 litres	94 GJ	$2,936	6.29

Unidentified Gasoline Vehicles	Source	Consumption	Energy	Costs	CO_2e
Unidentified Gasoline Vehicles			**23 GJ**	**$812**	**2**
	Gasoline	658 litres	23 GJ	$812	1.60

SOLID WASTE

All Solid Waste from Corporate Operations	Source	Volume	Mass	CO_2e
All Solid Waste From Corporate Operations		*688*	*103 t*	*55*
	Solid Waste	*688*	*103.20*	*54.70*