



FONVCA AGENDA
THURSDAY June 17th 2010

Place: DNV Hall 355 W. Queens Rd V7N 2K6
Time: 7:00-9:00pm
Chair: Dan Ellis – Lynn Valley C.A.
Email: ellis7880@shaw.ca Tel: 604-816-8823

Regrets:

1. Order/content of Agenda

2. Adoption of Minutes of May 20th
<http://www.fonvca.org/agendas/jun2010/minutes-may2010.pdf>

3. Old Business

3.1 Council Agenda Distribution
<http://www.fonvca.org/agendas/jun2010/council-agenda-distribution.pdf>

WEB posting (www.dnv.org)	Yes
Facebook (Wall)	Yes
Paper copy in 3 libraries	Yes
Sunday North Shore News	To come...
Paper Copy at District Hall	Yes

3.2 Renewal of FONVCA.ORG in Oct/2010

- need to collect dues for another 3-5yr term
- cost is ~ \$100/yr
-

3.3 Update on OCP Process

4. Correspondence Issues

4.1 Business arising from 1 regular emails:

4.2 Non-Posted letters – 0 this period

5. New Business
Council and other District issues.

5.1 DNV Energy & GHG Emissions

<http://www.env.gov.bc.ca/cas/mitigation/ceei/pdf/2007North-Vancouver-DM.pdf>
http://www.env.gov.bc.ca/cas/mitigation/ceei/RegionalDistricts/Metro-Vancouver/ceei_2007_north_vancouver_district_municipality.pdf

For all munis...

<http://www.env.gov.bc.ca/cas/mitigation/ceei/reports.html>

<http://www.env.gov.bc.ca/cas/mitigation/ceei/pdf/ceei-user-guide.pdf>
http://www.bchydro.com/about/company_information/report_s/gri_index/en8_2_greenhouse.html
<http://www.toolkit.bc.ca/ceei>
<http://www.bcclimateexchange.ca/index.php?p=caee>

5.2 2009 Annual Report

“District Council will consider the Annual Report at the Council meeting on **Monday, June 21 at 7 p.m.** in the Council Chamber at District Hall. This meeting is your opportunity to ask questions or make submissions on any aspect of the report.”

<http://www.dnv.org/article.asp?a=4851>

5.3 Next Shirtsleeve Mtg – Oct 12/2010

http://www.fonvca.org/agendas/jun2010/Cathy_Adams_27may2010.pdf
<http://www.fonvca.org/agendas/jun2010/Fall-Shirtsleeve.pdf>

5.4 Summer meetings of FONVCA

- Council breaks July 13- Aug 15

<http://www.fonvca.org/agendas/jun2010/council-schedule-7jun2010.pdf>

- Cancel FONVCA for July 15 or Aug 19?

5.5 Web Posting of Council Correspondence

FONVCA Request as per May 20 meeting agenda item 6.1(a)
http://www.fonvca.org/agendas/jun2010/Cathy_Adams_27may2010b.pdf

6. Any Other Business

6.1 Legal Issues

Potholes: Court finds for DNV in pothole suit

<http://www.fonvca.org/agendas/jun2010/potholes.pdf>
http://www.provincialcourt.bc.ca/judgments/pc/2010/00/p10_0064.htm

Related Issue:

<http://csc.lexum.umontreal.ca/en/1989/1989scr2-1228/1989scr2-1228.html>

6.2 Any Other Issues (2 min each)

7. Chair & Date of next meeting.

Thursday July 15th 2010

Attachments

-List of Email to FONVCA - **ONLY NEW ENTRIES**

OUTSTANDING COUNCIL ITEMS-Cat Regulation Bylaw;
 Review of Zoning Bylaw; Securing of vehicle load bylaw; Snow removal for single family homes bylaw.

FONVCA Received Correspondence/Subject
17 May 2010 → 13 June 2010

LINK	SUBJECT
http://www.fonvca.org/letters/2010/17may-to/Wendy_Qureshi_2jun2010.pdf	Municipal Politics

FONVCA

Minutes May 20th 2010

Place: DNV Hall, 355 West Queens

Time: 7:00pm

Attendees

Diana Belhouse	Delbrook C.A. and NV Save our Shores Soc.
Cathy Adams(NOTES)	Lions Gate N.A.
Val Moller (CHAIR)	Lions Gate N.A.
Lyle Craver	Lynn Valley C.A.
John Hunter	Seymour C.A.
Corrie Kost	Edgemont C.A.
Eric Andersen	Blueridge C.A.

The meeting was called to order at 7:05 PM

1. ORDER / CONTENT OF AGENDA

3 items were added under Any Other Issues.

- d) FutureQuest (OCP) of Parks – May 20
- e) Police Review meetings (see also 3.1)
- f) Community Gardens

2. ADOPTION OF MINUTES

Adoption moved by Lyle Craver, seconded by Diana Belhouse. Last month's minutes were adopted as circulated.

***Action - Noted as outstanding: item under 5.2 concerning sending a letter to District staff in regards to the Sign Bylaw's "sunset clause", which becomes effective this fall. Cathy to follow up.**

3. OLD BUSINESS

3.1 Review of May 5th Shirtsleeve Meeting with Council

There was good turnout for this meeting. And all but one councilor (Alan Nixon) attended. While some thought that too many topics ended up on the agenda, almost all were discussed and those in attendance found the meeting to be very worthwhile.

Policing/speeding concerns- The RCMP will receive feedback on local issues such as this from any community association that has a problem in their area and take action as appropriate. It's

difficult for the RCMP to be aware of all issues such as this, and they welcome community input. On the related issue of Community Policing and Community Policing Offices it was pointed out that this was more a philosophy than a location issue. The need is to have programs run in the community. The existing situation has some RCMP staffing issues – and some felt they should even be 24/7 if run in the communities. Also – what gets measured gets done. When photo-radar was abandoned it seems speed enforcement dropped. There seems to be a need to have a force somewhat answerable to community needs. DNV has very low crime rate – but then also one of the lowest case-loads/officer. **CA's were to be encouraged to provide feedback to RCMP liaison.**

OCP Review Process:

There have been 22 workshops to date. The next public ones are scheduled for Wed June 16th and Sat June 19th. Need for complete communities – not just a case of more housing. Housing stock impacts on demographics uncertain. Citizens need some certainty about future direction of the community.

Street-ends – Opening of street-ends was another discussion item. **Community Associations are encouraged to provide input to the District on priority street-ends and/or community links in their areas.** It was noted that staircases that might be desirable in some areas are expensive to build, and partnerships could be an appropriate method to addressing some of these items.

It was pointed out that there is a need for alternatives to using property taxes to fund projects (esp. Translink)

The meeting ended with agreement around the table to hold another shirtsleeve meeting in the fall. Dave Stuart mentioned that he would find it valuable to use such a meeting to get feedback on issues surrounding making critical financial choices (so called "service adjustments") in the District.

***Action – FONVCA will send an email to the Mayor concerning a shirtsleeve meeting in the fall, and indicating that FONVCA members would find the topic Dave Stuart put forward to be of interest.**

3.2 Renewal of FONVCA.ORG by Oct/2010

We would like to collect a total of \$300. so that the renewal can be for 3 years. While some community associations have contributed the suggested \$20. , many have not. Cathy agreed to assist with some follow up on this.

3.3 Update on OCP Process

There have been something like 26 meetings so far for the OCP Process – about 20 have been for stakeholder groups, so about 6 have been public workshops. Summaries of the input received are available on the District's OCP "Identity" website under Resources/then go to documents.

<http://www.identity.dnv.org/article.asp?c=1092>

Upcoming Dates: Forums on making choices in the OCP process are scheduled for June 16th and 19th.

LGA Regulations/Requirements:

<http://www.fonvca.org/agendas/may2010/LGA-OCP.pdf>

May 18 Roundtable:

http://www.fonvca.org/agendas/may2010/OCP_Round_Table_May18_all_9pp.pdf

4. CORRESPONDENCE ISSUES

4.1 Business arising from 5 regular e-mails

No discussion.

4.2 Non-posted letters – 0 this period.

5. NEW BUSINESS

Council and other District Issues

5.1 (Lack of) Bylaw Enforcement

Diana Belhouse presented an issue in her neighbourhood that has been going on for several years. There is a landscaping business operating in a single family house that has been a problematic situation for residents in the area. Despite multiple complaints, meetings, etc. with District bylaws officers, there continues to be significant problems associated with this home based business. There was some brainstorming and input given by those in attendance.

5.2 Public Land-Use Planning

http://circle.ubc.ca/bitstream/handle/2429/10308/ubc_2000-0128.pdf?sequence=1

The above reference may prove useful on the subject matter.

5.3 Metro's Waste Management Plan

<http://www.metrovancouver.org/services/solidwaste/planning/Pages/default.aspx>

http://www.metrovancouver.org/services/solidwaste/planning/SWMP_Docs/DraftISWRMP.pdf

Some useful references on the issue of Metro's waste management plan – but some members wondered where this issue is really heading?

5.4 Local Plan Monitoring Committees

– Request by Cathy Adams

- Getting started.

- What works?

- Problems?

- Terms of reference?

Cathy was looking into the need for such a committee for Lower Capilano. Some information sharing took place on monitoring committees that are currently in place, and what those involved feel about their effectiveness, etc.

5.5 Risk for different transportation modes

This was an "informational topic" – details at

<http://www.fonvca.org/agendas/may2010/Risk-vs-travel-modality.pdf> but a highlight was...

"Relative to passenger vehicle occupants, motorcyclists, bicyclists, and pedestrians are 58.3, 2.3, and 1.5 times, respectively, more likely to be fatally injured on a given trip."

6. ANY OTHER BUSINESS

6.1 Legal Issues

a) Public Correspondence sent to Mayor & Council –

<http://www.westvancouver.ca/Level3.aspx?id=27458>

http://www.bcclocalnews.com/greater_vancouver/northshoreoutlook/news/90867004.html

This issue is about open/transparent governance and improving citizen participation in local government.

West Vancouver is currently looking at this issue in their municipality. There was some discussion about the availability of public correspondence in DNV, and the lack of consistency in how making it available to the public seems to be handled.

*** Action – Moved by Corrie Kost, seconded by Eric Andersen, that a letter be sent to Mayor & Council requesting that public correspondence be posted on the District's website, as well as on council agendas, where correspondence is received that pertains to an agenda item.**

b) Provincial Changes to Liquor Licensing Policies – Bill 20.

<http://www.fonvca.org/agendas/may2010/Changes-Liquor-Licence-Policy.pdf>

The Province is giving consideration to deleting the requirement to consult with Local Governments on granting/renewing liquor licenses. The UBCM is asking for input on the proposed changes from Municipalities.

***Action – FONVCA will request that District council consider the impact of Bill 20 Sections 120&121 on our community and support the UBCM's work in addressing municipal concerns with the Provincial Government.**

c) Public Notification Bylaw

DNV regulations:

<http://www.fonvca.org/agendas/may2010/updated-bylaw6078.pdf>

LGA Regulations:

<http://www.fonvca.org/agendas/may2010/LGA-892.pdf>

There were some concerns raised with the District surrounding notification issues on the Industrial and Commercial Rezoning Bylaws. The end result was that the District delayed closing the public hearing and resolved notification deficiencies. Reconvening of the public hearing is set for June 8th.

6.2 Any Other Issues

a) Save Our Shores – The walk will take place on Sunday, June 13th this year.

<http://www.fonvca.org/Waterfront-Walk-13jun2010/SOSad10.jpg>

b) Democracy in Summerland

TV broadcast of Public Input Blocked

<http://www.vancouversun.com/news/Council+public+question+period+deemed+unsuitable/3050753/story.html>

– Facing some uncomfortable questions from the public on recent issues in that municipality, Summerland council had blocked TV broadcast of the Public Input segment of their council meetings.

c) Only 1% would give up their car

Interesting stats...

<http://www.digitaljournal.com/article/292237>

<http://www.earthtimes.org/articles/show/canadians-choose-driving-over-sex-and-candy.1306507.shtml>

d) FutureQuest - This Parks planning process has given opportunities for input only at the meetings held to discuss this issue. There are some controversial issues to be dealt with. There was discussion on whether to request that input opportunities be able to be given electronically. **Update**-this is now the case. From the DNV website: ***Your feedback on our draft vision, guiding principles, goals, objectives and key recommendations would be appreciated. Are we on the right track? Have we missed anything? Please forward your comments to Carolyn Girard at girardc@dnv.org by June 11, 2010.***

e) Police Review Meetings – The first one was held on May 11th, with 5 attendees. One was also held in the City with only one member of the public there – Eric Andersen.

f) Community Gardens – There has been some criticism of these initiatives, which some feel are a poor use of public funds, benefiting very few people. Council recently approved a community garden in the Lillooet Road area.

7. CHAIR AND DATE OF NEXT MEETING

Thursday, June 17th, 2010

Lynn Valley Community Association – Lyle Craver will notify Dan in regards to chairing.

The meeting was adjourned at 9:25 p.m.

Subject: Distribution of Council Agendas to Libraries

From: James Gordon <gordonj@dnv.org>

Date: Tue, 25 May 2010 16:10:39 -0700

To: Mayor and Council - DNV <Council@dnv.org>

CC: "corrie@kost.ca" <corrie@kost.ca>, Nathalie Valdes <ValdesN@dnv.org>, Linda Brick <BrickL@dnv.org>, Jeanine Bratina <BratinaJ@dnv.org>, James Gordon <gordonj@dnv.org>

The District is pleased to announce that paper copies of Council agendas will be provided to each of the three library branches starting with the June 7th meeting. The agendas will be delivered at approximately 5:00 pm on the Wednesday before a Council meeting and the librarians will find an appropriate location at each branch for the agenda to be posted. This should enhance access to Council information for those residents who are not able to do so via the internet.

James A. Gordon

Manager of Administrative Services

and Municipal Clerk

District of North Vancouver

355 West Queens Road

North Vancouver, BC V7N 4N5

604.990.2207 Direct

604.984.9637 Fax

North Vancouver DM

Community Energy & Greenhouse Gas Emissions Inventory: 2007

This is your local government's draft 2007 Community Energy and Greenhouse Gas Emissions Inventory (CEEI). From March 10th to April 15th 2009, the Province and partners are asking for your review and feedback - <http://www.toolkit.bc.ca/ceei> - on the content, clarity and usefulness of your community's draft 2007 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 annual community-wide energy consumption and greenhouse gas (GHG) emissions. For 2007, the CEEI Reports provide high-level energy and GHG emission estimates in three primary sectors – on-road transportation, buildings and solid waste. As additional information, estimates on land-use change emissions from deforestation are provided at the regional district level. 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?

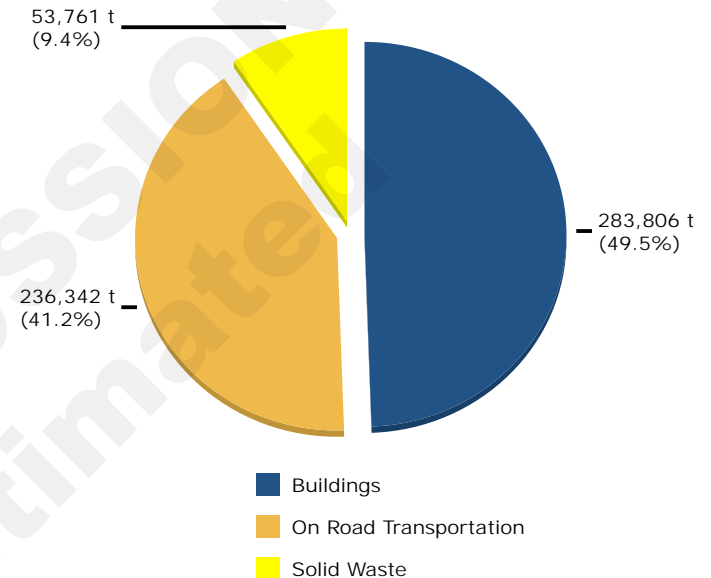
An energy and GHG emissions inventory can be a valuable tool that helps local governments plan and implement GHG and energy management strategies, while at the same time strengthening broader sustainability planning at the local level. CEEI reports have two primary purposes – to fulfill local governments' Climate Action Charter commitment to measure and report their community's GHG emissions profile, and to establish a base year inventory for local governments to consider as they develop targets, policies, and actions related to the Province's new Green Communities Legislation (Bill 27). As an additional benefit, CEEI Reports support BC local government members of the Federation of Canadian Municipalities' Partners for Climate Protection program to achieve Milestone One of the community stream – a community GHG emissions inventory.

A first in North America!

CEEI is a first in North America, and a first step for BC communities. The 2007 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. For example, the CEEI working group is presently pursuing ways to refine community boundary accuracy for a number of BC's smaller communities. Also, local governments may wish to provide additional information to the CEEI and/or enhance their CEEI report (in sectors and/or detail) where interest, capacity and local information sources permit (e.g., provide the CEEI with accurate community-specific solid waste data). For future reports, the CEEI working group will be considering the inclusion of additional components to GHG inventories as advised by emerging international protocols, the information needs of local governments, and the Province's forthcoming Green Communities Incentive Program.

Hyla Environmental Services Ltd. (HES) is providing 2007 CEEI Reports using its Energy and Emissions Monitoring and Reporting System™. HES is also developing a 2007 CEEI Technical Methods and Guidance document, presently scheduled to be available in late March 2009.

CO₂e (tonnes) by Sector *



* In some CEEI Reports, inaccuracy in solid waste data and/or where electricity and natural gas consumption data for buildings has been withheld for confidentiality purposes, the relative percentages of GHGs in each sector as illustrated above may appear disproportionate. For this reason, care should be taken in interpreting these reports, particularly where comparisons with other local government may be of interest.

Please refer to the CEEI User Guide for overviews of each sector (<http://www.env.gov.bc.ca/epd/climate/ceei/pdf/ceei-user-guide.pdf>). For answers to Frequently Asked Questions go to <http://www.env.gov.bc.ca/epd/climate/ceei/pdf/ceei-faq.pdf>. To explore 'taking action community wide', go to <http://www.toolkit.bc.ca/taking-action/community-wide>. For more information, please contact the Ministry of Environment 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, data providers and HES Ltd. 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.

North Vancouver DM

Community Energy & Greenhouse Gas Emissions Inventory: 2007

BUILDINGS	Consumption By Type							Energy & Emissions Total	
	Type	Connections	Consumption	Energy/Connection	Energy (GJ)	CO ₂ e (t)	Energy (GJ)	CO ₂ e (t)	
RESIDENTIAL BUILDINGS	Electricity	27,249	311,107,591 kWh	11,417 kWh/C	1,119,987	6,844	3,760,959	141,928	
	Natural Gas	22,075	2,640,972 GJ	120 GJ/C	2,640,972	135,084			
COMMERCIAL BUILDINGS	Electricity	2,484	195,872,766 kWh	78,854 kWh/C	705,142	4,309	1,314,776	35,492	
	Natural Gas	1,276	609,635 GJ	478 GJ/C	609,635	31,182			
INDUSTRIAL BUILDINGS	Electricity	492	987,219,105 kWh	2,006,543 kWh/C	3,553,989	21,719	5,209,278	106,386	
	Natural Gas	28	1,655,289 GJ	60,192 GJ/C	1,655,289	84,667			
SUBTOTAL	Electricity	30,225	1,494,199,462 kWh		5,379,118	32,872	10,285,013	283,806	
	Natural Gas	23,378	4,905,895 GJ		4,905,895	250,933			

ON ROAD TRANSPORTATION	Consumption By Type						Energy & Emissions Total	
	Type	Units	Consumption	Litres/Unit	Energy (GJ)	CO ₂ e (t)	Energy (GJ)	CO ₂ e (t)
SMALL PASSENGER CARS	Gasoline	22,017	19,461,838 litres	884 L/U	674,547	48,603	681,945	49,135
	Diesel Fuel	338	191,263 litres	566 L/U	7,398	532		
LARGE PASSENGER CARS	Gasoline	12,161	13,908,257 litres	1,144 L/U	482,060	34,734	486,493	35,053
	Diesel Fuel	137	114,601 litres	837 L/U	4,433	319		
LIGHT TRUCKS, VANS, AND SUVs	Gasoline	25,169	46,872,249 litres	1,862 L/U	1,624,592	117,057	1,642,136	118,280
	Diesel Fuel	268	369,850 litres	1,380 L/U	14,306	1,028		
	Mobile Propane	61	127,935 litres	2,097 L/U	3,238	194		
COMMERCIAL VEHICLES	Gasoline	2,276	4,023,559 litres	1,768 L/U	139,457	10,048	374,734	26,910
	Diesel Fuel	1,121	5,984,998 litres	5,339 L/U	231,500	16,635		

North Vancouver DM

Community Energy & Greenhouse Gas Emissions Inventory: 2007

ON ROAD TRANSPORTATION CONTINUED

	Mobile Propane	64	149,254 litres	2,332 L/U	3,778	227		
TRACTOR TRAILER TRUCKS	Diesel Fuel	46	703,932 litres	15,303 L/U	27,228	1,957	27,228	1,957
MOTORHOMES	Gasoline	495	968,860 litres	1,957 L/U	33,581	2,420	36,951	2,662
	Diesel Fuel	41	87,136 litres	2,125 L/U	3,370	242		
MOTORCYCLES AND MOPEDS	Gasoline	1,582	588,504 litres	372 L/U	20,398	1,470	20,398	1,470
BUS	Gasoline	42	351,120 litres	8,360 L/U	12,170	877	12,170	877
SUBTOTAL	Gasoline	63,742	86,174,387 litres		2,986,804	215,209	3,282,055	236,342
	Diesel Fuel	1,951	7,451,780 litres		288,235	20,712		
	Mbl Propane	125	277,189 litres		7,016	421		

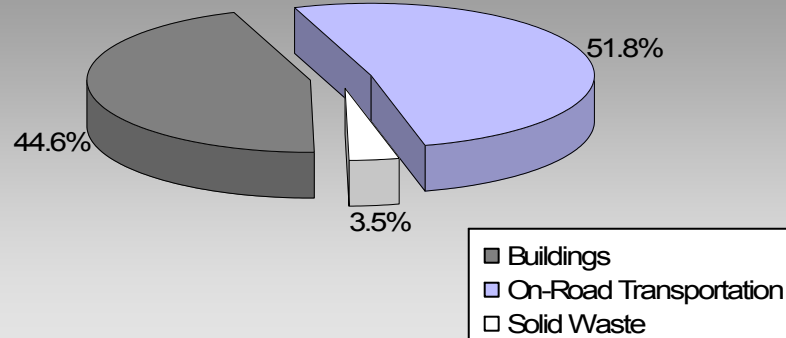
SOLID WASTE	Direct Emissions				Emissions Total	
	Type	Estimation Method	Mass (t)	CO ₂ e (t)	CO ₂ e (t)	
COMMUNITY SOLID WASTE	Solid Waste	Waste Commitment	135,047	53,761	53,761	
SUBTOTAL			135,047	53,761	53,761	

Grand Total	Activity	Consumption	Energy	CO ₂ e	Energy & Emissions Total	
	Electricity	1,494,199,462 kWh	5,379,118 GJ	32,872 t	Energy (GJ)	CO ₂ e (t)
	Natural Gas	4,905,895 GJ	4,905,895 GJ	250,933 t		
	Gasoline	86,174,387 litres	2,986,804 GJ	215,209 t	13,567,068	573,910
	Diesel Fuel	7,451,780 litres	288,235 GJ	20,712 t		
	Mbl Propane	277,189 litres	7,016 GJ	421 t		
	Solid Waste			53,761 t		

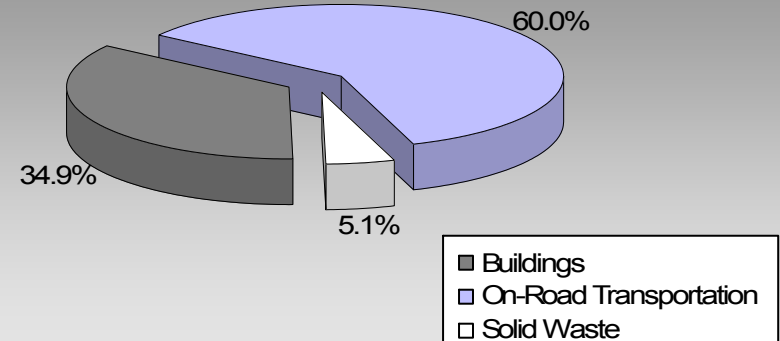
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

Where are the majority of our community's emissions coming from?

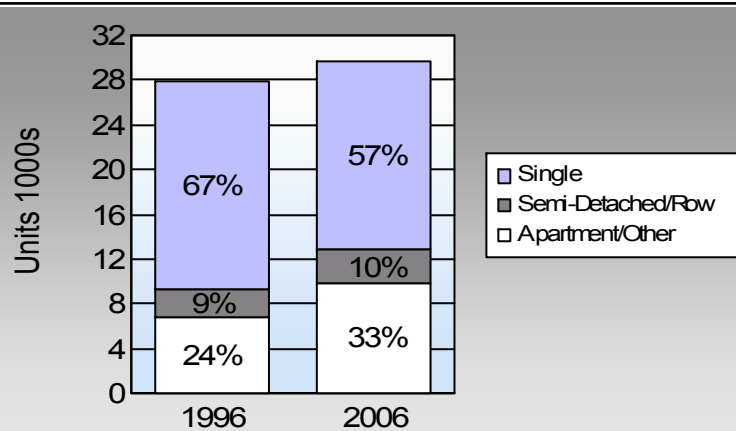
**North Vancouver District Municipality
2007 GHG Emissions Sources**



**Total for BC
Communities**








Are we living more compactly? Housing Type



In BC, single family detached housing made up 49% of housing in 2006.

Are we driving less? Commute To Work

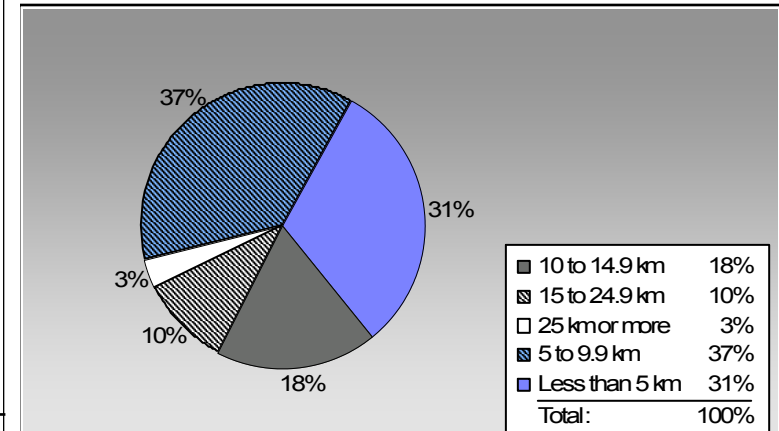
	1996	2006
 Car	77.3%	77.4%
 SUV	6.5%	6.6%
 Transit	10.9%	10.0%
 Walk	3.4%	3.6%
 Cycle	1.3%	1.4%

In BC, 10% of people took transit, 7% walked, and 2% cycled to work in 2006.

Residential Density

North Vancouver District Municipality: 9 people per net ha
BC municipal average: 7.4 people per net ha

Are we living closer to where we work? Commute Distance



In BC, 41% of people lived within 5km of their work in 2006.

Sectors

On Road Transportation		<u>Vehicles</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Average-VKT(km)</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	19,198	24,932,380	Litres	13,347	872,633	59,191
	Diesel Fuel	460	461,020	Litres	13,606	17,657	1,259
	Other Fuel	<10	2,029	Litres	9,340	78	3
Small Passenger Cars						890,368	60,453
Large Passenger Cars	Gasoline	9,771	16,817,537	Litres	14,829	588,614	39,756
	Diesel Fuel	156	256,300	Litres	13,096	9,816	699
	Other Fuel	14	28,059	Litres	11,536	1,075	43
Large Passenger Cars						599,505	40,498
Light Trucks, Vans, SUVs	Gasoline	18,362	35,080,681	Litres	13,615	1,227,824	83,634
	Diesel Fuel	555	1,189,229	Litres	16,558	45,547	3,249
	Other Fuel	47	93,558	Litres	10,520	3,583	143
Light Trucks, Vans, SUVs						1,276,954	87,026
Commercial Vehicles	Gasoline	46	180,710	Litres	14,439	6,325	422
	Diesel Fuel	231	1,090,959	Litres	21,668	41,784	2,936
	Other Fuel	<10	20,351	Litres	11,899	779	31
Commercial Vehicles						48,888	3,389
Tractor Trailer Trucks	Gasoline	<10	15,416	Litres	22,941	540	36
	Diesel Fuel	226	7,647,235	Litres	90,343	292,889	20,578
	Other Fuel	<10	7,001	Litres	10,418	268	11
Tractor Trailer Trucks						293,697	20,625
Motorhomes	Gasoline	314	17,856	Litres	2,715	625	42
	Diesel Fuel	29	1,481	Litres	5,171	57	4
	Other Fuel	<10	138	Litres		5	-
Motorhomes						687	46
Motorcycles, Mopeds	Gasoline	771	301,867	Litres	5,626	10,565	705
Motorcycles, Mopeds						10,565	705
Bus	Gasoline	29	248,131	Litres	26,296	8,685	583
	Diesel Fuel	<10	63,094	Litres	21,845	2,416	170
	Other Fuel	<10	2,926	Litres		112	4
Bus						11,213	757

North Vancouver District Municipality Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	2,715,811	184,369
	Diesel:	410,166	28,895
	Other Fuel:	5,900	235
On Road Transportation Totals	All Fuels:	3,131,877	213,499

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>	
Residential	Electricity	27,006	309,609,391	Kilowatt Hour	1,114,593	7,637	
	Natural Gas	22,111	2,692,355	GigaJoules	2,692,355	137,310	
Residential					3,806,948	144,947	
Commercial/Small-Medium Industrial	Electricity	2,571	201,255,989	Kilowatt Hour	724,521	4,964	
	Natural Gas	1,303	665,753	GigaJoules	665,753	33,953	
Commercial/Small-Medium Industrial					1,390,274	38,917	
					Electricity:	1,839,114	12,601
					Natural Gas:	3,358,108	171,263
					Propane:		
					Wood:		
					Heating Oil:		
Buildings Totals	Buildings:				5,197,222	183,864	

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	39,973	14,545

North Vancouver District Municipality

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	10,709,318 L	410,166	28,895
Electricity	510,865,380 kWh	1,839,114	12,601
Gasoline	77,594,578 L	2,715,811	184,369
Natural Gas	3,358,108 GJ	3,358,108	171,263
Other Fuel	154,062 L	5,900	235
Solid Waste	39,973 T	0	14,545
Total of Transportation / Buildings / Solid Waste:		8,329,099 GJ	411,908 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	4	withheld	Kilowatt Hour	-	-
	Natural Gas	26	withheld	GigaJoules	-	-
Large Industrial					-	-

Supporting Indicators

Below you will find supporting indicators for which data is provided. These are the first five supporting indicators for which data is provided as a part of the updated 2007 CEEI. Thirteen additional supporting indicators are under consideration for future reports (see next page). Local government feedback is requested on all supporting indicators. Please take the time to complete the short CEEI Survey at <http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html> or contact us directly at CEEIRPT@gov.bc.ca

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	18,575	67	18,455	63	16,915	57
Semi-Detached House	480	2	415	1	475	2
Row House	2,115	8	2,275	8	2,495	8
Apartment, Duplex	2,110	8	3,200	11	4,645	16
Apartment, 5 storeys or higher	1,755	6	1,680	6	1,705	6
Apartment, under 5 storeys	2,830	10	3,035	10	3,485	12
Other Single Attached House	25	0	15	0	25	0
Movable Dwelling	15	0	10	0	5	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	
	People	%	People	%	People	%
Car, Truck, Van as Driver	30,060	77	30,270	79	29,245	77
Car, Truck, Van as Passenge	2,530	7	2,425	6	2,490	7
Public Transit	4,215	11	3,170	8	3,765	10
Walked	1,305	3	1,470	4	1,360	4
Bicycle	505	1	655	2	540	1
Motorcycle	65	0	50	0	150	0
Taxicab	10	0	20	0	10	0
Other Method	175	0	225	1	245	1

Residential Density

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

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
Population	86,725.0
Net Land Area (ha) *	9,738.3
Residential Density (people per net ha)	8.9

Commute Distance

Shorter commute distances generally reduce GHG emissions by increasing the likelihood of people walking, cycling or using transit. Commute distance is also indicative of the 'completeness' of a community from an employment perspective.

	2006	
	People	%
Less than 5 km	10,460	31
5 to 9.9 km	12,430	37
10 to 14.9 km	6,195	18
15 to 24.9 km	3,380	10
25 km or more	1,115	3

Parks and Protected Greenspace

* Total is net of Indian Reserves

** The quantity of parkland may be underestimated

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

	2009	
	Area (ha)	%
National Parks	0.0	0.0
Provincial Parks / Protected Areas	2,442.8	14.9
Local Parks	2,687.8	16.4
Agricultural Land Reserve	0.0	0.0
Other land use	11,239.1	68.7
Total Land Area	16,369.8	100.0

Supporting Indicators Under Consideration

The following supporting indicators are under consideration for inclusion in future CEEI reports. The 2007 CEEI reports provide these 'placeholder' indicators to give indication of data that may be provided in the future by the Province on an ongoing basis to assist in monitoring actions to reduce GHG emissions and energy consumption. Please submit feedback to CEEIRPT@gov.bc.ca (see survey on CEEI website).

On-Road Transportation (and Land Use)

Proximity to Transit	Persons, dwelling units (du) and employment within 400m of a quality transit stop/line
Proximity to Services	Persons and dwelling units (du) within 400m of services (e.g. grocery store, school, other retail etc.)
Transit Ridership	Annual per capita transit ridership

Buildings

Residential; Public Building Energy Intensity	Average energy use per person per square metre of floor space
Floor Space	Average residential dwelling unit size

Solid Waste (and Water)

Waste Diversion	Tonnes of waste diverted
Avoided Waste Emissions	Tonnes of CO ₂ e of avoided future emissions due to reduced waste since 2007
Water Use	Per capita residential water use

Land-Use Change

Impervious Surface Cover	% change in impervious surface cover
Tree Canopy Cover	% change in tree canopy cover

Community and Renewable Energy Supply

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)

This is your local government's Updated 2007 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 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, and fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program.

A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2007 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 and medium from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items', and the first of a suite of 'supporting indicators'. 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 Updated 2007 CEEI Reports, CEEI Data Summary Report, Technical Methods and Guidance Document, and additional information on the Secondary 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, particularly now with the new Indicators. Please take the time to complete the short CEEI Survey at <http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html> or 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, where you do note inaccuracies, please contact us.

2007 Community Energy and Emissions Inventory

(CEEI) Reports User Guide

draft March 11th, 2009

Draft CEEI Reports for the inventory year 2007 are being provided for regional districts and municipalities in British Columbia for review and comment. The reports contain four sectors – buildings, on-road transportation, solid waste, and deforestation - each of which capture the type and amount of energy consumed and/or greenhouse gases (CO₂e) released into the atmosphere.

Aggregated, actual energy consumption data and resulting greenhouse gas emissions from electrical utilities, and natural gas and propane distribution companies are included as well as estimates of fuel consumed by vehicles on the road and the resulting estimates of greenhouse gas emissions, the greenhouse gas emissions (methane) from each community's contribution to landfills, and the greenhouse gas emissions released from deforestation (regional district level only).

This User Guide provides an overview of the information included in each sector of the draft 2007 CEEI Reports¹. Each section describes the information included for each sector, the methodology and calculations used, some limitations of the data, and the data sources used. Existing limitations in some of the province-wide data and analysis tools (e.g., Translation Master File) will be the focus of improvement in future CEEI reporting years². A short section on how a community may choose to use 2007 CEEI Reports concludes the document.

The 2007 CEEI Report Format

Each local government's draft 2007 CEEI Report is typically two to three pages in length. The sectors in the Reports and the general information included in each sector are as follows:

- The buildings sector is subcategorized into residential, commercial and industrial buildings. Each subcategory includes the number of connections, the amount of actual (not normalized³) energy consumed (e.g., electricity (kWh) and natural gas (GJ)), and the resulting CO₂e totals for each building subcategory as well as a CO₂e subtotal for the sector;
- The on-road transportation sector is subcategorized into several passenger and commercial vehicle classes. Each subcategory includes an estimate of the amount of fuel used (e.g., gasoline, diesel fuel, and mobile propane), and the resulting CO₂e totals for each vehicle class as well as a CO₂e subtotal for the sector;
- The solid waste sector states the estimated mass of waste disposed by local governments at community and/or regional landfill(s), with the associated CO₂e (methane) net of any known landfill gas flaring, capturing, etc.;
- The land-use change (deforestation) sector includes the estimated amount of CO₂e from the clearing of forests for urban development and agriculture. This data is only provided at the regional district level and as information only (e.g., the data does not form part of the total emissions profile reported); and,
- The total amount of energy and CO₂e for each energy type and direct emission source, and the total combined energy and CO₂e is presented in the Grand Total.

¹ Once completed, refer to the *2007 CEEI Technical Methods and Guidance Document* for more detail.

² The scope and detail of the CEEI sectors, and the quality of the data will continue to improve to meet the increasing information needs of both the provincial and local governments. Refining CEEI mapping to rural community boundaries and improving community-level vehicle kilometres traveled are two such examples.

³ Normalization refers to a process that removes the effect of outside influences (e.g. weather, fuel prices, economic conditions) on the use of energy in buildings year-over-year. For example, energy consumption is normalized for weather by removing the effects of abnormal winters or summers. Actual energy consumption is required under prevailing community inventory protocols, so normalization is not used.

Sector-by-Sector Descriptions

Buildings Sector

What's Included?

The buildings sector includes all electricity and natural gas delivered by the four major utilities in the Province – BC Hydro, Fortis BC, Terasen Gas Inc, and Pacific Northern Gas Ltd. It also includes piped-propane delivered to Whistler and Revelstoke by Terasen Gas Inc. This information is broken down into residential, commercial, and industrial subsectors. The commercial subsector includes traditional business and retail outlets, and institutional buildings such as schools, hospitals and government buildings. For each subsector, the energy consumed and the related greenhouse gases is shown along with the number of physical connections or accounts.

Although the term “buildings” is used to describe this sector, the energy consumption reported in these subsectors includes electricity and natural gas used for other purposes. For example, in the commercial subsector, the energy consumption figure may include streetlights and water pumping stations. For industrial buildings, this could include energy-based industrial processes. However, GHG emissions caused by non-energy consuming processes such as chemical reactions during the production of industrial goods are not presently included.

This sector does not include electricity distributed by systems not owned or operated by BC Hydro or Fortis BC (industrial self-generation, remote community systems, etc.), but does include electricity purchased by local governments to service a segment of their community (e.g., Nelson Hydro). This sector also does not include heating oil, propane, except as noted above, or wood, due to the existing difficulty in obtaining province-wide data for these energy types. The Province is exploring the feasibility of including these estimates in future CEEI Reports.

Methodology and Calculations

Electricity and gas consumption data is obtained directly from the utility companies. GHG emissions from electricity vary from year to year, depending on a number of factors. The 2007 electricity emissions factor used is 0.022 tonnes/kWh (see Data Sources). GHG emissions for natural gas (and piped propane in Whistler and Revelstoke) are calculated using emission factors reported in Table 1 and originate from Intergovernmental Panel on Climate Change (IPCC) guidelines.

Table 1 - 2007 Source Emission Factors – Buildings

Fuel Type	Units	Emission Factor			
		CO ₂	CH ₄	N ₂ O	CO ₂ e
Electricity	tonnes/kWh				0.022
Natural Gas	kg/m ³	1.891	0.000037	0.000035	
Piped Propane	kg/litre	1.51	0.000024	0.000108	

Total energy, reported in GJ, for each of the residential, commercial and industrial subsectors is based on the consumption of electricity (kWh converted to GJ) and natural gas (GJ) for each building ‘connection’ (i.e., account).

Issues and Accuracy Limitations

Electricity consumption is assigned to each municipality or regional district using the Province’s Translation Master File (TMF) for postal codes. In the more rural areas of the Province postal codes can frequently cross municipal boundaries into adjacent electoral areas resulting in all the electricity data for a particular postal code being counted in only one jurisdiction. This is more prevalent in small and/or rural communities and is not generally observed in the higher population centres of the Province. In future years, electrical utilities may use other methods of tracking accounts (e.g., GPS coordinates) to improve the accuracy of account locations. Because of these postal code issues, some CEEI reports have been identified as problematic. Users of these reports should be aware of these concerns and contact Ministry of Environment for further details. Those municipalities determined to have significant boundary-related issues are listed in Table 2.

Table 2 – Communities with CEEI Boundary Issues

100 Mile House	Alert Bay	Anmore	Armstrong
Ashcroft	Burns Lake	Cache Creek	Chase
Chetwynd	Clinton	Enderby	Fort Nelson
Fort St. James	Fraser Lake	Fruitvale	Gibsons
Gold River	Golden	Grand Forks	Granisle
Greenwood	Harrison Hot Springs	Hazelton	Hope
Hudson’s Hope	Invermere	Kaslo	Kent
Keremeos	Lake Cowichan	Lantzville	Lillooet
Lytton	Lumby	Masset	McBride
Montrose	New Denver	New Hazelton	North Vancouver, City
North Vancouver, District	Pemberton	Pouce Coupe	Princeton
Radium Hot Springs	Sayward	Sicamous	Slocan
Smithers	Sooke	Spallumcheen	Stewart
Tahsis	Telkwa	Tofino	Tumbler Ridge
Ucluelet	Valemount	Vanderhoof	Wells
Zeballos			

Natural gas data for local governments do not suffer from the same problem as electricity data. Although Terasen Gas Inc. can provide data by municipal boundary, they were not able to separate natural gas data for two pairs of neighbouring local governments. Natural gas data for the City and District of North Vancouver is lumped together within the District of North Vancouver report and natural gas data for the City of White Rock and the City of Surrey is within the City of Surrey report. The Province will work with Terasen Gas Inc. to resolve this issue in the near future.

Each utility uses a different method to describe and assign accounts to the three buildings subsectors. Some buildings cannot be clearly assigned to a specific subsector (e.g. a mixed-use building with ground floor retail is both residential and commercial). Also, some utilities use rate codes to differentiate between accounts, while others use business classifications. This can lead to differences in

the number of accounts and consumption assigned to the subsectors by each provincial utility company. For these reasons, subsector breakdowns should be treated with caution.

Confidentiality is a significant concern in the release of utility data. Some large industrial and commercial customers will dominate energy consumption within a municipality or regional district. For this reason, the utilities generally withhold all data within a subsector when a single customer exceeds 50% of the community's total for that subsector. Therefore, a number of draft 2007 CEEI Reports do not include industrial or commercial data. This is an unfortunate, but unavoidable, deficiency at this time. If energy data in the industrial (or commercial) sector has not been made available, the number of customers will still appear as a line item within the industrial (or commercial) listing, but with an en dash “–” for consumption. If there are no industrial or no commercial customers within the local government boundary, the line item for either industrial or commercial buildings will not appear. In the latter case, the data provider(s) do not recognize any industrial or commercial customers within the local government boundary. In the future, the Province may look to develop release agreements with applicable utility customers that would allow for the release of this information to local governments⁴.

Also, there are many factors that will influence a community's use of electricity and natural gas such as the price of fuel, the state of the economy, and the weather. In terms of weather, GHG emissions from electricity generation and consumption in British Columbia will vary annually based on a combination of total snow pack levels, timing and intensity of rainfall as well as heating and cooling degree days in different areas of the Province⁵.

Data Sources

- Electricity and natural gas consumption data are provided by BC Hydro, Fortis BC, Terasen Gas Inc., and Pacific Northern Gas.
- Emission factors for natural gas and piped propane, and GWPs⁶ are from *2006 IPCC Guidelines for National Greenhouse Gas Inventories*, Volume 2 – Energy, Table 2.2, Intergovernmental Panel on Climate Change.
- 2007 emission factor for electricity from *Global Reporting Initiative report EN8(2)*, BC Hydro http://www.bchydro.com/about/company_information/reports/gri_index/en8_2_greenhouse.html.

⁴ The Province's proposed Mandatory Reporting of Greenhouse Gas Emissions Regulation (GHG Reporting Regulation) will require industrial facilities to submit data on greenhouse gas emissions to the Minister of Environment, providing the foundation for a cap and trade system and other climate policies to reduce greenhouse gases. For 2008 CEEI Reporting, the industry sector will be revisited to ensure it complements industrial reporting requirements under the new regulation.

⁵ See footnote #1 above on 'normalization'.

⁶ Global Warming Potential, or GWP, is a measure of how much a given mass of greenhouse gas is estimated to contribute to global warming. It is a relative scale that compares the gas in question to that of the same mass of carbon dioxide (whose GWP is by definition 1).

On-Road Transportation Sector

What's Included?

For the draft 2007 CEEI Reports, only vehicles on-the-road are reported. This represents all vehicles registered to be driven on public roads, including personal vehicles such as small passenger cars (e.g., Honda Civic, Toyota Prius) and large passenger cars (e.g., Ford Crown Victoria) which are separated by a net vehicle weight of 1400 kg; light trucks and vans (i.e., <3600 kg) such as Ford F150, Dodge Dakota and GMC 1500, passenger vans, and sport utility vehicles; motorhomes; motorcycles and mopeds; commercial vehicles such as cargo vans, panel trucks, heavy trucks, ambulances, and fire trucks; tractor trailer trucks; and buses, representing transit and private buses.

It does not include vehicles not licensed to be driven on public roads such as bulldozers, forklifts, all-terrain vehicles, etc. It also does not include slow moving heavy equipment that is licensed to be operated on public roads such as rollers, pavers, backhoes, graders, etc. Also, the draft 2007 CEEI Reports do not include marine, rail or air transportation. One or more of these sectors may be added in the future.

Methodology and Calculations

There are several different ways of calculating on-road transportation emissions, including fuel sales, vehicle registrations, traffic counts, and traffic modeling. As part of a CEEI background report – “*Assessing Vehicular GHG Emissions: A Comparison of Theoretical Measures and Technical Approaches*” – it was determined that the ‘resident-based’ approach using vehicle registrations at its core was the most practical, accurate and cost effective province-wide approach. The 2007 CEEI on-road transportation emissions are therefore calculated using a vehicle registration method. The formula for calculating fuel consumed and CO₂e emitted for each B.C. community is:

(1) # vehicles X (2) fuel consumption X (3) kilometres driven X (4) GHG emissions factors = GHG Emissions

1. Data of actively insured vehicles was provided by the Insurance Corporation of British Columbia (ICBC). Vehicles are assigned to municipalities and regional districts according to their registered owner's postal code. Vehicles registered to operate in an area of the Province that does not include the registered owner's postal code are not counted in the registered owner's jurisdiction.
2. Fuel consumption, as reported by manufacturers to Natural Resources Canada (NRCAN), are then matched to each vehicle by make, model year, model, body style, engine displacement and transmission. Hyla Environmental Services Ltd.'s (HES) Transportation Energy and Emissions Module™ (TEEM™) matches these vehicles to their NRCAN fuel consumptions, adjusted upwards by 7.5%, a correction factor now used by the US Environmental Protection Agency (USEPA).
3. Kilometres driven, or vehicle kilometres traveled (VKT) are derived from odometer readings from AirCare in the Metro Vancouver area, and odometer readings taken from vehicle transfer forms from around the Province.⁷
4. GHG emissions (CO₂e) are calculated from the above resulting fuel consumption using CO₂ emission factors specific to fuel type, and CH₄ and N₂O emission factors as per Table 1.

⁷ Based on a recent CEEI Background Report – “*CEEI VKT Study*” – vehicle kilometres traveled (VKT) for cars and for trucks around the Province were estimated from AirCare data. Outside of the Lower Mainland, the *VKT Study* determined AirCare data “adjustment factors” for seven regions of the Province for each of four broad vehicle classes. For example, a regional adjustment factor of 1.13 means that, on average, one of the vehicle classes in the region travels 13% more kilometres in a year than the same type of vehicle in the Lower Mainland. The *CEEI VKT Study* was based on a statistical representation of ICBC vehicle transfer forms around the Province. The consultant (Pacific Analytics Inc.) provided the adjustment factors based on local econometrics for various geographic regions of the Province.

Issues and Accuracy Limitations

As vehicle registrations are assigned to communities by postal code using the Translation Master File (TMF), there are similar problems with overlapping postal codes as are found in the Buildings sector. See Buildings Sector: Issues and Accuracy Limitations above for more details.

As part of the CEEI initiative, significant progress has been made to match the Vehicle Identification Numbers (VINs) database to NRCan's fuel consumption data, greatly improving the accuracy of the estimated fuel efficiency for CEEI reporting purposes. An 'adjustment factor' (7.5%) based on more recent US Environmental Protection Agency research is used to adjust the NRCan data, consistent with the Province's approach to core government and public sector organization estimates of greenhouse gas emissions from vehicle fleets.

The "*CEEI VKT Study*" has taken the first step towards more accurate VKT estimates across the Province, since previous data has used national vehicle class estimates from the National Transportation Study. Even so, for 2007, VKT estimates could only be made for a small grouping of vehicle classes within seven geographical regions. Until more refined VKT estimates, or 'actual VKT data' can be secured, neither differing driving patterns that may exist between communities, nor successful local government efforts to reduce vehicle use in individual communities will be accurately reflected in the annual CEEI reports. The Province is presently exploring ways to improve VKT data for the 2008 CEEI Reports.

Vehicles are assigned to a municipality or Regional District according to their registered owner's policy renewal postal code. Some of these vehicles may operate predominantly in other communities. This can be problematic, since all vehicles in a commercial fleet may be registered at a single location, regardless of where in the Province they operate. Where vehicles are operated outside the ICBC rating territory they are registered in, they have not been included in the CEEI inventory.

Data Sources

- Vehicle registration data provided by ICBC.
- Fuel consumption data from HES' TEEMTM derived from NRCan's fuel consumption tables, US EPA's fuel efficiency tables, and fuel consumption data for vehicles over 6,000 lbs Net Vehicle Weight from HES' research with specific vehicle manufacturers.
- Emission factors for vehicle fuel from *2006 IPCC Guidelines for National Greenhouse Gas Inventories*, Volume 2 – Energy, Tables 3.2.1, 3.2.2, 3.2.3, 3.2.4, Intergovernmental Panel on Climate Change.
- Pacific Analytics' 2008 report entitled: *Assessing Vehicular GHG Emissions: A Comparison of Theoretical Measures and Technical Approaches* provided the rationale for the CEEI's 'resident-based' approach.
- Vehicle kilometres traveled from AirCare database and Pacific Analytics' 2008 report entitled *CEEI VKT Study* provided estimated vehicle kilometres traveled (VKT) for four broad vehicle classes in seven regions around the Province, grounded by AirCare data.

Solid Waste Sector

What's Included?

The draft 2007 CEEI Reports include estimates of the annual mass (tonnes) of municipal solid waste (MSW) disposed⁸ of at all regional district landfills and attributed to contributing municipalities, as well as each community's estimated share of CO₂e (methane) emissions.

Waste that is not disposed of at a regionally operated landfill (e.g., a forestry landfill), some industrial waste, compostable material, green waste, and waste originating from federal lands, are not included in the draft 2007 CEEI Reports. There are also no estimates CO₂e provided for closed landfills. Demolition, land clearing and construction (DLC) waste, which is considered relatively inert, has not been included in the tonnage figures where known. The waste shipped to Metro Vancouver's Waste-to-Energy facility and the overall CO₂e contribution has been included in the tonnage figures.

Methodology and Calculations

Waste Composition

To support a common approach, and in the absence of comprehensive province-wide data, it is assumed that the composition of waste (percent organic, paper, plastics, etc.) at all British Columbia landfills is the same.

Waste Disposal Estimates

A variety of data sources were used to compile tonnes of solid waste disposed at MSW landfills across the Province. These included Solid Waste Management Plans or related landfill annual reports, where available to the CEEI Working Group, the Golder Associates recent inventory of major provincial landfills, and the Recycling Council of British Columbia's municipal solid waste tracking reports. The nature of the data available for a particular regional district and its member municipalities guided the methodological approach for calculating tonnes of waste tipped for (deposited by) each municipality. Metro Vancouver and the Capital Regional District maintain accurate records that annually track the amount of waste disposed of by member municipalities. Otherwise, only a small number of landfills owned and operated by other regional districts had such direct attribution data available to the CEEI Working Group. If disposal data was not available, or could not be apportioned by other means, waste disposal estimates for communities were based on regional district totals distributed to each community by their respective population.

Emissions Estimates

There are generally two methods for estimating landfill gas emissions generation: *waste commitment* and *waste-in-place*. The **waste commitment method** calculates each site's total potential future

⁸ Waste 'generated' and waste 'disposed' are different. While waste generated is generally the total amount of waste produced in a community, waste disposed is the net amount of waste going to a landfill after recycling, re-use or other diversion efforts are undertaken. It is waste disposed that is the quantity used for community inventory calculations.

landfill gas production from the waste deposited in one year, regardless of whether or not any landfill gas is generated in the year the waste was disposed. The **waste-in-place methodology** estimates landfill gas production for all the waste tipped at the landfill since the landfill opened. Both of these methods have strengths and weaknesses, however waste-in-place is the most widely used model in North America and is the *de facto* standard in a number of recognized protocols⁹, including adoption by the US Environmental Protection Agency (i.e., LandGEM model). Where practical, the waste-in-place methodology was chosen for the draft 2007 CEEI Reports. In cases where the data was not available to support the waste-in-place methodology, the waste commitment approach was used.

In 2008, Golder Associates provided solid waste tonnages and greenhouse gas emission estimates for the 35 largest landfills of the approximately 92 municipal solid waste landfills currently operating in British Columbia under provincial jurisdiction. They used a first-order kinetic methane generation model, otherwise known as the waste-in-place methodology¹⁰. Landfills that received at least 10,000 tonnes in the 2006 calendar year formed the core part of the study. As a group, these landfills are estimated to account for more than 90% of all MSW disposed of at provincially regulated landfills in British Columbia.

Since Metro Vancouver and Capital Regional District systematically track the amount of annual waste each member municipality contributes to the respective landfill(s), tonnages and methane emissions could be directly attributed to each municipality.

For those Regional Districts with at least one landfill included in the Golder report, a waste-in-place methodology was applied. In most cases, the CO₂e estimate from the Golder report was pro-rated to the other landfills within that RD based on the mass of waste disposed at each landfill. In the majority of cases where the data did not allow the CEEI to attribute mass and/or CO₂e directly from a landfill to a contributing municipality, mass (solid waste tonnage) and CO₂e emissions estimates were assigned on a per capita basis from the total aggregate waste disposed at the Regional District level. In those Regional Districts with no landfills receiving more than 10,000 tonnes of municipal solid waste per year (hence, not treated in the Golder report), a waste commitment method was used for all landfills.

Where available, volumetric data of methane flared or otherwise beneficially used was subtracted from the landfill gas generation totals.

Issues and Accuracy Limitations

In addition to any inaccuracies in the assumptions applied to calculate methane using the waste-in-place methodology in the Golder report (for those landfills receiving more than 10,000 tonnes of solid waste per year), the quality of the data available for a number of the other landfills in the Province limited the overall accuracy of greenhouse gas emissions estimates within the draft 2007 CEEI reports. To address some of these deficiencies in the future, the Province will draw upon the experiences of regional landfill managers in pursuit of a common (i.e., waste-in-place) approach for monitoring and reporting tonnes of

⁹ A number of organizations with recognized inventory protocols support a Waste-In-Place approach, including *IPCC*, *ICLEI*, *Environment Canada* (National Inventory Reporting), and the *Federation of Canadian Municipalities Partners in Climate Protection* (Developing Inventories for Greenhouse Gas Emissions and Energy Consumption).

¹⁰ *Inventory of Greenhouse Gas Generation from Landfills in British Columbia* (http://www.env.gov.bc.ca/epd/codes/landfill_gas/pdf/inventory_ggg_landfills.pdf).

municipal solid waste disposed in all significant landfills across the Province (note, many very small landfills in the Province receive less than 1,000 tonnes of municipal solid waste per year, and do not have weigh scales) as well as work to refine the waste-in-place methodology to reflect local conditions.

Since the waste-in-place methodology estimates greenhouse gas emissions (CO₂e) from all the solid waste that has been tipped since the landfill opened, reducing waste streams in an inventory year will not necessarily result in an equivalent reduction in GHG emissions. Regardless, CEEI Reports will still capture direct reductions in the mass of solid waste disposed in any given year.

Local governments are encouraged to inquire in the short term whether or not more accurate 2007 data is available locally and, if so, provide this information so that the draft 2007 CEEI Reports can be improved accordingly. This is the first leg of a journey to continuously improve the accuracy of solid waste disposal and CO₂e estimates at the local government level, providing an ever-improving province-wide understanding of the role solid waste plays in contributing to community-based greenhouse gas emissions, and the steps necessary to reduce these important sources of methane.

Data Sources

- Recent Solid Waste Management Plans (SWMPs) or annual reports (i.e., Annual Operations and Monitoring Reports) for each landfill where they could be identified.
- Golder Associates' *Inventory of Greenhouse Gas Generation from Landfills in British Columbia* (2008).
- Recycling Council of British Columbia's *BC Municipal Solid Waste Tracking Report* (2006 or 2003-2005).
- BC Stats' *British Columbia Municipal & Regional District Population Estimates 1996-2007*.
- Municipal waste disposal rates and estimated methane emissions from the Metro Vancouver landfills and waste-to-energy facility and City of Vancouver landfill provided by Metro Vancouver and City of Vancouver staff.
- Methane emissions factor for landfills was based on a methane factor of 0.53 tonnes CO₂e per tonne waste from the IPCC Second Assessment Report (SAR).

Land-Use Change (Deforestation) Sector

What's included?

The draft 2007 CEEI Reports include estimates of hectares of deforestation for each Regional District, broken down into agriculture and urban development, and the resulting CO₂e emissions. For the purposes of greenhouse gas accounting, deforestation is defined as "the direct human-induced conversion of forested land to non-forested land". Deforestation includes activities such as clearing of forest for urban development or agriculture. Human activities that do not cause a land-use change, such as forest harvesting followed by regeneration of a new forest and natural events such as beetle-killed forests or forest fires, are excluded.

British Columbia is using the same criteria for a deforestation 'event' that Canada is using internationally: 1 ha (hectare) minimum area, 20m (metres) minimum width, 5 m minimum tree height at maturity, and 25% minimum crown closure¹¹.

The CEEI reports only consider deforestation. Afforestation (the conversion of non-forested land to forest) is not included.

Methodology and calculations

CEEI uses deforestation emissions estimated by the Canadian Forest Service (CFS) and Environment Canada for reporting of Canada's emissions. Satellite images from different years were compared and interpreted to determine whether deforestation had occurred.

The CFS chose areas (sample plots) to provide reasonable estimates within each terrestrial ecozone¹² across Canada. Deforestation rates from these sample plots have been extrapolated to other areas with similar characteristics to be able to estimate deforestation in each regional district.

The amount of greenhouse gas emissions from each hectare deforested was determined based on the general age, type and density of forest prior to deforestation (as mapped from the satellite imagery and aerial photographs) within each terrestrial ecozone. These calculations assume that all carbon contained in the forest above ground is released to the atmosphere either during or in the years following a deforestation 'event'.

Issues and accuracy limitations

As the mapping was completed to provide estimates at the provincial and national level, the very low sampling rate for most regional districts will mean that the estimates reported here are very uncertain. In the few cases where the sample plot network is poor for a regional district (e.g., due to budget and

¹¹ Crown closure is the proportion of tree canopy overlying the forest floor. '25% crown closure' implies that 1/4 of the ground surface area has tree growth above it.

¹² Terrestrial Ecozones are a Canada-wide ecosystem classification. B.C. contains three zones (see <http://www.ec.gc.ca/soer-ree/English/vignettes/Terrestrial/terr.cfm>). Terrestrial ecozones are on a similar scale to B.C. Ecodomains in the 'Ecoregions of British Columbia' series.

time constraints), relevant deforestation rates from other regional districts were extrapolated to those with similar characteristics.

In addition, as the estimates are extrapolated to 2006 from interpretations of 1990 and 2000 satellite imagery and aerial photographs, deforestation rates may have decreased or increased since that time (e.g., preliminary analysis of new data indicates the 2000-2006 agricultural deforestation rate may be lower than the 1990-2000 deforestation rates).

For these reasons, the reported deforestation areas should be viewed as preliminary data provided for information rather than decision-making or comparison purposes. To reduce temporal uncertainty the Canadian Forest Service and British Columbia are currently updating the sample plot mapping to add deforestation events for the 2000-2006 time period. Options to reduce uncertainty at the scale of a municipality are also currently being explored.

Data sources

- Canadian Forest Service (http://carbon.cfs.nrcan.gc.ca/TrackingLandUse_e.html; and http://carbon.cfs.nrcan.gc.ca/deforestation_e.html) and Environment Canada.

Suggestions for Using the 2007 CEEI Reports

A Recognized Inventory

The draft 2007 CEEI Reports fulfill one of three voluntary commitments most B.C. local governments have made under the *Climate Action Charter*¹³: “measuring and reporting on their community’s GHG emissions profile”. In and of themselves, CEEI Reports will become an important monitoring tool, informing communities of their level of success in implementing energy conservation and greenhouse gas reduction actions. As an additional benefit, B.C. local governments can use their draft 2007 CEEI Report and an accompanying ‘forecast’ as recognition for Milestone One of the community stream of the Federation of Canadian Municipalities’ (FCM) Partners for Climate Protection (PCP) program.

Forecasting

The PCP program requires a “Business As Usual” (BAU) forecast of future energy consumption and emissions. Future forecasts are notoriously unreliable and typically do not take into account changes in technology or land-use. Whereas this level of forecasting is generally not considered accurate, a forecast can otherwise provide an informative picture of the future based on the observed trends and should energy consumption and waste generation continue unabated. Although simplistic, forecasts are often extrapolated at the rate of projected population growth. Other extrapolations are possible depending upon the type and quality of trend data local governments have available to them (e.g., commercial buildings can be extrapolated at the rate of anticipated economic growth).

Target-setting

Local governments are encouraged by the Province to approach target setting on a number of levels. First, it is important to set an overall “visionary target” or community goal. It is then useful to think about setting targets related to actions in different sectors of the community. The development of action-oriented targets related to secondary indicators (see below) will be critical to effectively measuring progress in each sector.

A target sets a goal for the community and encourages the development and alignment of a set of progressive policies and initiatives aimed at achieving the target. A target makes a statement about a community’s commitment to addressing climate change and other community objectives. Provincial legislation now requires all local governments to include GHG reduction targets, policies and actions in OCP’s and RGS’s by 2010 and 2011, respectively.

The Province recommends local governments set bold and aggressive targets consistent with the provincial targets of 33% reduction in province-wide GHG emissions by 2020 and 80% by 2050 (2007 baseline). Whether a community chooses to mirror the provincial targets or identify other targets, the broad community targets should inspire strong action particularly in areas that are within local government jurisdiction.

¹³ The *Climate Action Charter* can be found at http://www.cd.gov.bc.ca/ministry/docs/climate_action_charter.pdf. The *Charter* acknowledges the shared goals of the Province of British Columbia, the Union of BC Municipalities and signatory Local Governments, and the collaborative effort required between all parties to reduce greenhouse gas emissions.

Though most communities may set a single target, usually an overall GHG reduction target, it is helpful to include an overall energy reduction target as well. Though electricity in B.C. is mostly generated from hydroelectricity, which has minimal GHG emissions, such an energy target would ensure that the community is working assertively towards energy efficiency, energy security and reduced energy costs, while also mitigating greenhouse gas emissions.

Secondary or ‘Influence’ Indicators

Secondary indicators represent actions that directly influence energy consumption or GHG emissions, and can be useful in assessing progress in those areas. Secondary or ‘influence’ indicators represent actions that local governments have under their control, or in partnership with others, and help to inform community decision makers by providing a more complete, detailed picture, in tandem with the higher level CEEI Reports, of energy consumption and greenhouse gas emissions in each of the major sectors. Examples include kilometres of bike lanes or trails, transit ridership, residential building density, renewable energy generation, solid waste recycling, etc.

Target Periods

It is important for a plan to include both long-term and short-term targets. Longer-term targets (e.g., to 2020 or 2050) reflect the overall vision, while short-term target(s) (e.g., to 2012 or 2016) can build momentum and more definitive steps toward the longer term vision. If aligning with recognized standards, the date for achieving the target is usually set (e.g., 2020 for B.C. Government targets). Alternatively, a community may choose to meet an established target, but by a different date, or to set a variety of unique targets and dates. Interim targets can be important in assessing progress, particularly if they align with recognized standards (e.g., 2012 and 2016 for B.C. Government interim targets).

Developing Action Plans

The CEEI Reports can broadly guide communities in determining which actions to pursue in reducing energy and GHG emissions. Target-setting can be a very informative exercise for any community. A prioritized listing of energy conserving, greenhouse gas reducing actions that identifies which actions will be undertaken when can comprise the core of any community action plan. See the CEEP guide for more information <http://www.toolkit.bc.ca/ceei>).

The *Climate Action Toolkit* is a web-based tool – <http://www.toolkit.bc.ca> – designed to assist BC local governments to take actions on conserving energy, developing renewable energy options, and reducing GHG emissions. The growing list of community-wide actions can be found at <http://www.toolkit.bc.ca/taking-action/community-wide>. In determining community priorities for action, an essential part of a good action planning framework is a situational analysis - <http://www.toolkit.bc.ca/community-wide-situational-analysis>.

Monitoring

In subsequent years, annual CEEI reports will allow communities to monitor the progress they are making in reducing energy consumption and GHG emissions. Comparisons will also be able to be made with other jurisdictions, but should always be undertaken with caution, and with comparative benchmark indicators that enable more rational alignments (e.g., accounting for variables such as population size, geographical conditions and municipal area). However, it should be recognized that community emissions will fluctuate from year to year due to factors such as weather and the economy.

It may take several years before action on climate change will result in sufficient reductions to be noticeable for some communities. In addition, some sector data is not yet sufficiently accurate to capture reductions occurring within a given community. In future, as the pace of reductions grows and accuracy increases, CEEI will become an invaluable monitoring tool for local governments.

Conclusion

In addition to this draft 2007 CEEI Reports *User Guide*, a *2007 CEEI Technical Methods & Guidance* document is being produced, providing greater technical detail on the data sources and methodologies used in developing the draft 2007 CEEI Reports. Emerging protocols for voluntary reporting requirements for local government energy and greenhouse gas emissions inventories are anticipated to become more rigorous and, therefore, the information provided through future CEEI reports may include sectors not customarily reported on by local government. For 2008 Reports, the CEEI Working Group will be exploring what other sectors should be included, and to what extent additional detail (e.g., breaking out the types of residential buildings, or finer detail of vehicle classes) can be provided. Input from Regional Districts and member municipalities province-wide will be an invaluable component of determining the 2008 CEEI Reports over the first six months of 2009.

The document *Community Energy and Emissions Planning: A guide for local governments* (www.toolkit.bc.ca/ceei) provides present context for local government community inventories (CEEs), to develop emission targets and action plans, to implement relevant policies and actions, and to monitor success. The Province, in partnership with BC Hydro, are developing a series of workshops from May through September 2009 to engage with local governments on how to most effectively develop and implement GHG and energy reduction targets, policies and actions in their OCPs and RGSs. New tools for local governments to consider in developing community energy and emissions targets and action plans are also forthcoming.

Subject: Council/FONVCA shirtsleeve follow-up

From: Cathy Adams <cathyadams@shaw.ca>

Date: Thu, 27 May 2010 11:07:41 -0700

To: "Richard Walton, Mayor" <waltonr@dnv.org>

CC: David Stuart <StuartD@dnv.org>, Nathalie Valdes <ValdesN@dnv.org>, Corrie Kost <corrie@kost.ca>

Hello Richard

This is a follow-up on behalf of FONVCA from the shirtsleeve meeting held last month between District Council and FONVCA.

As always, those attending from FONVCA felt that the agenda topics were relevant, and found the discussion to be constructive and worthwhile.

As the meeting closed, there was agreement to hold another shirtsleeve meeting in the fall, and I am sending this as a reminder. The clerk's office can either set a date now, or in a few months - it may be too early to choose a date, but Nathalie can determine the timing for doing so.

Dave Stuart was interested in having Financial Planning for the District be the topic for our next shirtsleeve meeting. I believe he was interested in having an opportunity to get feedback on issues surrounding making financial choices that will support community objectives.

This topic would be of interest to FONVCA members. I would suggest that if this is the agenda item chosen, that Dave prepare something brief to go out to attendees in advance that would be thought provoking and promote valuable discussion. He could also send any appropriate reading materials.

Sincerely,
Cathy Adams,
on behalf of FONVCA

Subject: Re: FW: Fall Meeting with FONVCA
From: Cathy Adams <cathyadams@shaw.ca>
Date: Fri, 04 Jun 2010 09:09:13 -0700
To: Nathalie Valdes <ValdesN@dnv.org>

Thank you, Nathalie.
We will circulate this date to FONVCA members.

Cathy Adams

At 09:04 AM 6/4/2010, you wrote:

October 12 at 7:00 p.m.

-----Original Message-----

From: Cathy Adams [<mailto:cathyadams@shaw.ca>]
Sent: Thursday May 27, 2010 11:08 AM
To: Richard Walton, Mayor
Cc: David Stuart; Nathalie Valdes; Corrie Kost
Subject: Council/FONVCA shirtsleeve follow-up

Hello Richard

This is a follow-up on behalf of FONVCA from the shirtsleeve meeting held last month between District Council and FONVCA.

As always, those attending from FONVCA felt that the agenda topics were relevant, and found the discussion to be constructive and worthwhile.

As the meeting closed, there was agreement to hold another shirtsleeve meeting in the fall, and I am sending this as a reminder. The clerk's office can either set a date now, or in a few months - it may be too early to choose a date, but Nathalie can determine the timing for doing so.

Dave Stuart was interested in having Financial Planning for the District be the topic for our next shirtsleeve meeting. I believe he was interested in having an opportunity to get feedback on issues surrounding making financial choices that will support community objectives. This topic would be of interest to FONVCA members. I would suggest that if this is the agenda item chosen, that Dave prepare something brief to go out to attendees in advance that would be thought provoking and promote valuable discussion. He could also send any appropriate reading materials.

Sincerely,
Cathy Adams,
on behalf of FONVCA

2010 Council Meeting Schedule

All meetings commence at **7:00 PM**, unless otherwise noted.

January		
Monday	January 4	CANCELLED
Monday	January 11	Regular
Monday	January 18	Regular (LIVE)
Monday	January 25	Other
February		
Monday	February 1	Regular
Monday	February 8	CANCELLED
Monday	February 15	Regular (LIVE)
Tuesday	February 16	Public Hearing
Monday	February 22	CANCELLED
March		
Monday	March 1	Regular
Tuesday	March 2	Financial Plan Deliberations
Monday	March 8	Other
Tuesday	March 9	Financial Plan Deliberations
Monday	March 15	Regular (LIVE)
Tuesday	March 16	Other
Monday	March 22	Financial Plan Deliberations
Monday	March 29	5th Monday - No meeting
April		
Monday	April 5	STAT Holiday - No Meeting
Monday	April 12	Other
Monday	April 19	Regular (LIVE)
Tuesday	April 20	Other
Monday	April 26	Other
May		
Monday	May 3	Regular
Monday	May 10	CANCELLED
Tuesday	May 11	Special/Other/Public Hearing
Monday	May 17	Regular (LIVE)
Monday	May 24	STAT Holiday - No Meeting
Monday	May 31	5th Monday - No meeting - FCM
June		
Monday	June 7	Regular
Tuesday	June 8	Reconvened Public Hearing
Monday	June 14	Other
Monday	June 21	Regular (LIVE)
Tuesday	June 22	Public Hearing
Thursday	June 24	Reconvened Public Hearing
Monday	June 28	Other
July		

NOTES:

Updated: May 19, 2010

Document No. 1278170

- LMLGA Conference May 12, 13, 14 (Harrison Hot Springs)
- FCM Convention May 28 - 31 (Sheraton Centre Toronto)
- UBCM Convention September 26 - October 1 (Whistler Convention Centre)
- Public Hearings are generally held on the Third Tuesday of each month as required except July and August
- Other Meetings includes Workshops, Policy Discussions on specific issues, Town Hall Meetings, Special Recognition Meetings, etc.
- SUMMER Break July 19 – August 9, 2010

Monday	July 5	Regular
Monday	July 12	Regular (LIVE)
August		
Monday	August 16	Regular (LIVE)
Monday	August 23	Regular
Monday	August 30	5th Monday - No meeting
September		
Monday	September 6	STAT Holiday - No Meeting
Monday	September 13	Regular
Monday	September 20	Other
Tuesday	September 21	Public Hearing (TENTATIVE)
Monday	September 27	Regular (LIVE)
October		
Monday	October 4	Regular
Monday	October 11	STAT Holiday - No Meeting
Monday	October 18	Regular (LIVE)
Tuesday	October 19	Public Hearing (TENTATIVE)
Monday	October 25	Other
November		
Monday	November 1	Regular
Monday	November 8	Other
Monday	November 15	Regular (LIVE)
Tuesday	November 16	Public Hearing (TENTATIVE)
Monday	November 22	Other
Monday	November 29	5th Monday - No meeting
December		
Monday	December 6	Regular
Monday	December 13	Other
Monday	December 20	Regular (LIVE)
Tuesday	December 21	Public Hearing (TENTATIVE)
Monday	December 27	No Meeting

NOTES:

Updated: May 19, 2010

Document No. 1278170

- LMLGA Conference May 12, 13, 14 (Harrison Hot Springs)
- FCM Convention May 28 - 31 (Sheraton Centre Toronto)
- UBCM Convention September 26 - October 1 (Whistler Convention Centre)
- Public Hearings are generally held on the Third Tuesday of each month as required except July and August
- Other Meetings includes Workshops, Policy Discussions on specific issues, Town Hall Meetings, Special Recognition Meetings, etc.
- SUMMER Break July 19 – August 9, 2010

Subject: accessibility to public correspondence

From: Cathy Adams <cathyadams@shaw.ca>

Date: Thu, 27 May 2010 11:12:37 -0700

To: District Council <dnvcouncil@dnv.org>, "Richard Walton, Mayor" <waltonr@dnv.org>

CC: Corrie Kost <corrie@kost.ca>

Dear Mayor Walton and Council

At our recent meeting, members of FONVCA discussed the issue of correspondence sent to council, and everyone felt that access to such correspondence should be open and easily available to the public.

FONVCA requests that all public correspondence received by council be posted on the District's website, and also on council meeting agendas, where such correspondence pertains to an agenda item.

We look forward to seeing these changes in the near future.

Sincerely,

Cathy Adams,
on behalf of FONVCA

Court finds for DNV in pothole suit

Woman out \$614 after car hits 1-metre pothole

BY BENJAMIN ALLDRITT, NORTH SHORE NEWS MAY 28, 2010

A woman whose car struck a pothole in the District of North Vancouver has left provincial court empty-handed after suing the district for the cost of her car repairs.

Maliheh Kheradmeh was driving on Marine Drive near Philip Avenue on the night of Jan. 12, 2009, during that winter's heavy snowfall.

Kheradmeh felt her car strike something and when she got out to check, saw a metre-wide pothole in the road, which she photographed with her cellphone. She made it home safely but noticed her car shaking when she drove to work the next day. By the end of her work day one of her tires was flat, and mechanics advised her that the rims on both passenger-side tires had to be replaced. The inspection, repairs and alternate travel arrangements cost her \$614.

Kheradmeh argued that the district had failed to monitor the state of the pothole, which crews were aware of five days before the accident and had patched twice already. She also asserted that the cone left on the patched pothole was inadequate.

Testifying in court, district streets sub-foreman Robert Warwick said municipal workers were focused on handling the unexpected dump of snow at the time. Nevertheless, the hole on Marine Drive was filled in with a temporary product, cold patch asphalt, at 7 a.m. on Jan. 12, only hours before Kheradmeh hit it. Warwick said he had inspected the work himself later that morning and found it acceptable. He also felt the 45-centimetre-tall traffic cone left near the patch was sufficient warning for pedestrians and motorists. A larger cone, he said, may have impeded people in wheelchairs or pushing strollers.

Judge William Rodgers ruled that the district's efforts were reasonable.

"The pothole had been fixed at 10 a.m. to a reasonable standard," he wrote. "It had been inspected by Mr. Warwick in a supervisory capacity to ensure that the municipal work crews had carried out their duties in a responsible manner. I find that was all that was necessary. I certainly have sympathy for Ms. Kheradmeh who suffered over \$600 worth of damage to her vehicle. It is a hazard that we all must risk, but the court's job is to measure the standard of care of the municipality, and I find that the standard of care has been met by the district. I have to dismiss the claim."

balldritt@nsnews.com

© Copyright (c) Lower Mainland Publishing

Citation: Kheradmeh v. District of North Vancouver
2010 BCPC 0064

Date: 20100325
File No: 09-21012
Registry: North Vancouver

IN THE PROVINCIAL COURT OF BRITISH COLUMBIA

BETWEEN:

MAL�HEH KHERADMEH

CLAIMANT

AND:

DISTRICT OF NORTH VANCOUVER

DEFENDANT

**REASONS FOR JUDGMENT
OF THE
HONOURABLE JUDGE RODGERS**

Appearing on their own behalf:

Maliheh Kheradmeh

Counsel for the Defendant:

L. Woo

Place of Hearing:

Vancouver, B.C.

Date of Hearing:

March 25, 2010

Date of Judgment:

March 25, 2010

[1] THE COURT: This claim is brought by Maliheh Kheradmeh against the District of North Vancouver. On the 12th of January, 2009, at approximately 10:00 p.m., Ms. Kheradmeh was

driving on Marine Drive in North Vancouver. It was a dark winter night. As she approached Philip Avenue, she felt her vehicle hit something on the roadway. She stopped her vehicle and got out to investigate. She saw there was a pothole in the middle of the road which she struck. She took photographs of the pothole with her camera phone. She estimated the hole to be approximately 36 inches or one metre in diameter. The photograph appears to show that. She estimated that the depth of the hole was between 18 inches or half a metre. I was not able to determine from looking at the photographs whether the hole was of that depth. It is not essential that I determine the exact size of the pothole.

[2] Ms. Kheradmeh drove home and the next day drove her car to work. She noticed that the car was shaking somewhat. When she returned to her car at the end of her work day, she found that the tire was flat. She took the car to a garage. She was advised that the two rims on the passenger side tires of her car were damaged and needed to be repaired. The cost of the repair was \$495. The cost to have the vehicle inspected was \$55. While Ms. Kheradmeh's vehicle was being repaired, she incurred some travel expenses of \$64.

[3] Ms. Kheradmeh went to the District of North Vancouver. She was told that other people had complained about the pothole at the intersection of Marine Drive and Philip Avenue. She attempted to resolve this claim with the District of North Vancouver, but she was not able to do so.

[4] Ms. Kheradmeh says that the District of North Vancouver failed to meet the duty of care which was expected of the municipality. There are two parts to her claim. She says, firstly, the District of North Vancouver failed to inspect the pothole and to repair it as became necessary from time to time. Secondly, she says that the District of North Vancouver failed to use the right equipment when they were dealing with the pothole.

[5] There were two other photos entered by Ms. Kheradmeh. They show the pothole having been patched by the District of North Vancouver. These photos were taken sometime in July of 2009.

[6] The District of North Vancouver called as a witness Mr. Robert Warwick. He is a sub-foreman in the Streets Department of the District of North Vancouver. He has held that position since 1992. He has been employed by the District for 25 years. In January of 2009, Mr. Warwick's duties included taking inquiries from the public, dispatching work crews to deal with problems, and to inspect the streets from time to time. Mr. Warwick was aware of the claim of Ms. Kheradmeh, and he was familiar with the operations of the District of North Vancouver Streets Department during the week leading up to the 12th of January, 2009. Mr. Warwick relied in part on the records which were kept by the District of North Vancouver. These records were kept in the usual course of business. The records were created from time to time on the dates set out on the records. There is no suggestion that the records relied upon by Mr. Warwick were created after the claim of Ms. Kheradmeh arose.

[7] Mr. Warwick testified that he first became aware of the pothole on January 7th, 2009. At the time he was working extra shifts because there had been heavy snowfall. This heavy snowfall was centred on the upper portions of the municipality. Employees of the Streets Department were working extra shifts in order to deal with the heavy snowfall. The snowfall was not a factor in the pothole creation. As I have said, the snowfall was on the upper

elevations of the municipality.

[8] At approximately 2:00 a.m. on the 7th of January, Mr. Warwick conducted an inspection of the area around Capilano Road and Marine Drive. He saw the pothole in question at the intersection of Marine Drive and Philip Avenue. It was on the northwest corner of that intersection, and it was in the curb lane of Marine Drive. Marine Drive at that location has two eastbound lanes and two westbound lanes of traffic. He described the pothole as being approximately two feet square and approximately two inches deep. He dispatched a crew to fill in the pothole.

[9] The process to fill the pothole is described as being cold patch asphalt. This is the usual substance used to quickly repair potholes. It is easy to transport to the location. It is then shovelled by work crews into the pothole and pressed down. The cold patch asphalt hardens quickly so that traffic can once again begin to travel in the area. It is not a permanent solution.

[10] Mr. Warwick referred to the instructions given to the crew in writing to repair the pothole on the 7th of January. He referred to the reports received from the work crew confirming that the pothole had been patched. On the 8th of January and on the 9th of January, Mr. Warwick instructed crews to patch the pothole. He received reports showing that this had been done.

[11] On the 12th of January, there was a report from the Streets Department crew indicating that the pothole in question had again been patched. Mr. Warwick testified that at approximately 7:00 o'clock in the morning of the 12th of January, the crew would have been onsite patching this pothole.

[12] It was one of the duties of Mr. Warwick to inspect the streets and to ensure that his instructions to the various work crews had been carried out. Mr. Warwick testified that between 10:00 a.m. and 12:00 noon on the 12th of January, Mr. Warwick went to the intersection of Marine Drive and Philip Avenue, he looked at the pothole, he saw that it had been repaired, and he described it as being fully intact. Mr. Warwick saw that there was a traffic cone in place. The traffic cone was located on the curb approximately one to two feet away from the location of the pothole. It was approximately 18 inches in height. Mr. Warwick testified that he had seen this cone every time that he had inspected the pothole in the past few days.

[13] After consulting the records of the District of North Vancouver, Mr. Warwick could not say whether there was any inspection of the pothole between 10:00 a.m. on the 12th of January and 10:00 p.m. when the pothole was struck by Ms. Kheradmeh's vehicle.

[14] Mr. Warwick said that Marine Drive is one of the major arteries in the municipality. If the pothole had been noticed by either the bus transit system or the RCMP, there would have been a report.

[15] In cross-examination Mr. Warwick was asked why he did not use different equipment when dealing with the pothole. He was asked why he had not used something other than an 18-inch traffic cone to indicate to motorists that there might be a problem in the roadway. He said, firstly, there was a space restriction. The distance between the curb and the adjacent

building was only 40 inches. A larger cone would have restricted pedestrian access. In particular, Mr. Warwick was concerned about pedestrian access on the sidewalk for persons using wheelchairs or parents pushing children in strollers.

[16] He was asked why a flashing light cone or a reflective cone would not have been used. He said both of those devices would have restricted access to the curb. He was also concerned about a possible traffic hazard if a larger cone had been pushed into the roadway inadvertently. Mr. Warwick was then asked why some sort of signal device was not placed into the pothole. Mr. Warwick explained that if this was done, traffic would be impeded on Marine Drive. He said that when he inspected the hole, it was patched and level.

[17] In cross-examination, Mr. Warwick was asked why there was no inspection of the pothole during the 12 hours between his physical inspection and the time when the pothole was struck by Ms. Kheradmeh. He said that, firstly, there were other duties for the work crew. In particular, there were issues relating to snow clearance that had to be addressed. He said the work crews were busy dealing with other potholes.

[18] Ms. Kheradmeh says that the inspection undertaken by the municipality was inadequate, and secondly, that the proper equipment was not used to alert motorists to the presence of this traffic hazard created by the pothole. She understands that the municipality need not be held to a standard of perfection. She says that some special equipment was required because of the hazard and that the pothole should have been inspected more regularly.

[19] This type of case has come to the attention of judges on other occasions. In British Columbia, the leading case is *Duddle v. The City of Vernon*. It is a decision of the British Columbia Court of Appeal found in (2004) BCCA 390. The court sets out that when assessing the actions of a government body to determine whether or not there has been negligence, the test is whether or not the steps taken by the municipality were reasonable in the circumstances. The municipality must not be held to a standard of perfection, rather to a standard of reasonableness.

[20] In the case of *Roy's Midway Transport Ltd. v. New Brunswick*, the plaintiff suffered property damage to his vehicle after running into a pothole. The municipality had noticed the pothole 12 days prior to the incident. The pothole had been repaired and was inspected on several occasions. It was determined that the trial judge's decision regarding the frequency and manner of the inspections were reasonable. It was held that the defendant municipality had met the requisite standard of care. The case of *Roy's Midway Transport Ltd. v. New Brunswick* is found at (1995) CanLII 6564.

[21] In *Margeson v. Halifax* (2009), N.S.S.N. 14, the claimant sustained property damage to his vehicle after running into a pothole. It was proven that the defendant had recently temporarily repaired the road using the cold patch material. The municipality inspected the road repair on the morning of the claimant's accident and noted that a pothole might be forming. The court found that it was unreasonable to expect the defendant to place any sort of warning by the road where a pothole may be forming, as this would place an inordinate burden on the defendant to place warnings at all questionable road surfaces. The court held that the defendant's inspection and actions were reasonable.

[22] I turn, first of all, to consider the systems in place in the District of North Vancouver during the week of January 2009 with respect to potholes. I find that there was an adequate system in place for the identification of potholes. I find there was a system in place to dispatch work crews to deal with these potholes. I accept the documentary evidence and the testimony of Mr. Warwick concerning the nature and extent of the systems which were in place and the steps taken to repair the pothole. I find that the steps taken by the municipality were reasonable in the circumstances.

[23] I turn now to consider whether or not there should have been a different warning device put in place near the pothole in order to alert drivers. I accept the evidence of Mr. Warwick that there was an 18-inch cone placed on the curb in the proximity of the pothole. I further accept the evidence of Mr. Warwick that when he inspected the pothole 12 hours prior to the accident suffered by Ms. Kheradmeh, there was no indication of a new pothole forming. He noted that the repairs undertaken by municipal work crews that morning had resulted in the pothole being filled, and that the road surface was level and safe for vehicular traffic. I do not find that there was a duty on the part of the District to put in place any different form of signalling device other than the cone which had been placed there by the work crews.

[24] I turn next to consider whether there was a duty on the part of the municipality to inspect the pothole between approximately 10:00 a.m. in the morning and 10:00 p.m. when the accident occurred. I do not find there was any duty on the municipality to carry out a more frequent inspection. The pothole had been fixed at 10:00 a.m. to a reasonable standard. It had been inspected by Mr. Warwick in a supervisory capacity to ensure that the municipal work crews had carried out their duties in a responsible manner. I find that was all that was necessary.

[25] I certainly have sympathy for Ms. Kheradmeh who suffered over \$600 worth of damage to her vehicle. It is a hazard that we all must risk, but the court's job is to measure the standard of care of the municipality, and I find that the standard of care has been met by the District. I have to dismiss the claim. In the circumstances, there will be no award as to costs. Thank you, Ms. Kheradmeh. Thank you, Ms. Woo.

(REASONS FOR JUDGMENT CONCLUDED)