



SCHOOL DISTRICT NO. 40

NEW WESTMINSTER

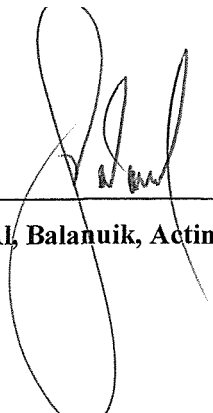
2012

Carbon Neutral Action Report

Executive Summary

On behalf of School District #40, New Westminster, I am pleased to submit the 2012 Carbon Neutral Action Report. New Westminster School District continues to actively work towards carbon neutrality. The School District believes that all stakeholders play a key role individually and collectively in this endeavour. The Board believes district staff has a responsibility to ensure that every effort is made to conserve energy and natural resources while exercising sound financial management. We believe each employee, student and school volunteer, should be encouraged to actively participate in district sustainability programs to the point that acting in a sustainable manner will be "second nature" for everyone. Reducing energy use and GHG emissions will benefit the district by a reduction in expenses, provide a less environmental impact on the surrounding area and be a positive example within the community by demonstrating that our district is leading the way.

School District No. 40 is proud of our continued work towards achieving carbon neutrality with conscious and committed effort to support energy and natural resource conservation.



Al, Balanuik, Acting Secretary Treasurer

Greenhouse Gas Emissions

- 2012 Greenhouse Gas (GHG) Emissions: 2,285 tonnes of CO₂e

	Emissions Reported in 2011 CNAR	Emissions Reported in 2012
Total Emissions	2081	2285
Emissions for offsets	2081	2283

Offsets Applied to Become Carbon Neutral in 2012

In order to become carbon neutral for 2012, the Board of Education of School District #40 (New Westminster) purchased carbon offsets for 2283 tones of CO₂e from the Pacific Carbon Trust on May 1, 2013. As required by section 5 of the Carbon Neutral Government Regulation, 49 tonnes CO₂e of emissions resulting from the operation of heavy duty maintenance vehicles were reported as part of our greenhouse gas emissions profile in 2012. However, they were not offset as they are out-of-scope under section 4(2)© of the Carbon Neutral Government Regulation.

@ Work Green Ideas Home Make A Difference CNAR SMARTTEC SMARTTool

SMARTLoad

Help

Exports

SMARTool Home

March 27, 2013

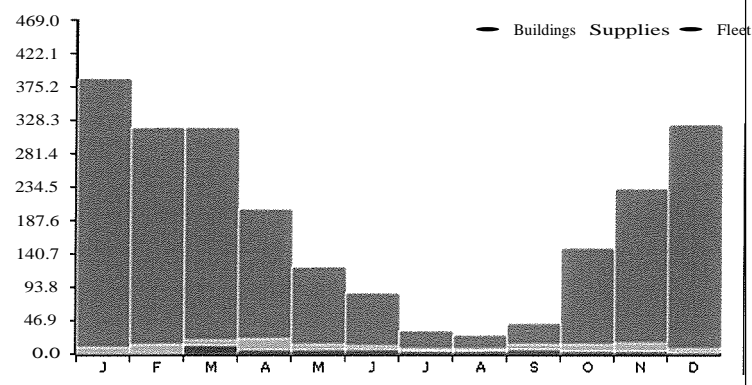
Reporting Unit:

School District 40- New Westminster **31** Calendar Year 2012 **3** Show Report

Total Emissions
Calendar Year 2012
School District 40 - New Westminster

Metric tonnes

CO₂ equivalent (tCO₂e)



Click on the bars to view data for each month

Totals Calendar Year 2012, School District 40- New Westminster

			Greenhouse Gases in Tonnes				
	Measure	Quantity	CO ₂	BioCO ₂	CH ₄	N ₂ O	tCO ₂ e ¹
Scope 1 (Direct) Emissions							
Mobile Combustion (Fleet)	Litres	27,057.21	61.74	2.20	0.01	0.01	67.97
Stationary Combustion, Estimated ²	GigaJoules	163.06	8.13	0.00	0.00	0.00	8.18
Stationary Combustion, Reported ³	GigaJoules	39,418.37	1,969.42	0.00	0.04	0.04	1,981.67
Scope 2 (Indirect) Emissions							
Purchased Energy, Reported ³	GigaJoules	15,699.55	108.33	0.00	0.00	0.00	108.33
Scope 3 (Business Travel and Office Paper) Emissions							
Office Paper	Packages	18,523.00	119.08	0.00	0.00	0.00	119.08
Total Emissions, Calendar Year 2012			2,266.70	2.20	0.04	0.05	2,285
Carbon Neutral or Offset Exempt			0.00	2.20	0.00	0.00	2
Total for Offsets ⁴			2,266.70	0.00	0.04	0.05	2,283

Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1; methane (CH₄) is 21, and nitrous oxide (N₂O) is 310. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

2. Estimated data has been calculated based on the methods described in the Methodology Document.

3. Reported data refers to consumption which has been directly billed to the organization.

4. Report the tCO₂e value from the "Total for Offsets" line, to the Pacific Carbon Trust.

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Changes to Greenhouse Gas Emissions and offsets Reporting from previous years

Following the public release of School District No. 40, New Westminster's 2011 Carbon Neutral Action Report it was determined that the total emissions for the 2010/2011 calendar year were over reported by 74 tonnes CO₂e and offsets required to become carbon neutral in 2011 were over reported by 74 tonnes CO₂e.

The surplus of offsets purchased in 2011 has been applied against our 2012 emissions.

Emissions Reduction Activities

We continue to manage energy management software on computers and to manage default duplex printing on print devices. Our employees are reminded of energy conservation by stickers placed at their site reminding them to turn off the lights. The district has initiated an energy management program district wide.

We replaced four furnaces with high efficient energy saving models and retrofitted lighting systems and added occupancy sensors to four of our schools. At Lord Kelvin we completed a new partial mechanical upgrade and at Hume Park we completed a new mechanical upgrade.

Plans to Continue Reducting Greenhouse Gas Emissions 2013 - 2015

School District #40, New Westminster has grown by 1760 sq. meters and with this in mind we are looking to reduce our greenhouse emissions in the next three years as follows:

We are entering an Energy Management Program and plan to reduce gas emissions by introducing a DDC program and installing HVAC equipment upgrades. We plan to recommission our mechanical systems at all school on our five year school renewal plan. The school district is implementing a vehicle replacement program that will replace current vehicles with smaller more efficient models. With regards to paper emissions, the district is encouraging the staff to use electronic messages and to use re-cycled paper.

We continue to encourage New Westminster students and employees to commit their efforts to support our energy efficient plans.

School District 40 New Westminster- 2012 Carbon Neutral Action Report

Actions Towards Carbon Neutrality					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Mobile Fuel Combustion (Fleet and other)					
Behaviour change program					
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	Driver Training scheduled for summer 2013.	Continue to schedule Driver Training.	2013	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Completed (in Previous Year)				No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	Encourage when practical.	Continue to encourage.	2011	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress	Public transit taken to attend seminars and meetings where practical.	Continue to use public transit.	2011	No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	Addition to Fleet: Purchased 2011 Chevrolet Silverado Pick Up	Plan to replace 2 vehicles with more efficient models	2009	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	No replacement in 2012	Plan to replace 2 vehicles with smaller more efficient models	2009	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	Oil changes and filters every 6 months and completion by Maintenance staff the regular weekly vehicle inspection reports.	Continue to schedule regular fleet maintenance.	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	In Development	Plan to develop Board Policy and introduce staff training.	Plan to develop Board Policy and introduce staff training.	2012	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Encourage staff to be energy efficient.	Continue to encourage staff.	2011	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Encourage staff to be energy efficient.	Continue encourage staff.	2011	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Encourage staff to be energy efficient by closing the blinds.	Continue to encourage staff.	2011	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	We encourage all staff to use to use energy saving settings on the dishwashers - air dry.	We continue to encourage staff to set the dish washers with the air drying setting.	2011	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	In Development	Part of our energy management program.	Continue to encourage staff.	2011	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	We promote the use of stairs and use the elevators for special ed students.	Continue to use the stairs within the district.	2011	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	We remind the staff to turn off the lights and several sites have stickers.	Plan to provide additional stickers for the remaining sites.	2011	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress	The district uses tempering valves to set hot water temperature for the Primary grades. We installed 2 on demand hot water tanks @ NWSS	At our new sites we will be installing high efficiency hot water tanks.	2011	No End Date (Continuous)
IT power management					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	In evaluation.	Continue to evaluate.	2012	No End Date (Continuous)
Implement server virtualization	Completed (in Previous Year)				No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	Newly purchased moiliOrshaveabuTiflnpowersave. --	topurchase monitorswltthe built in-powersave.	2012	No End Date

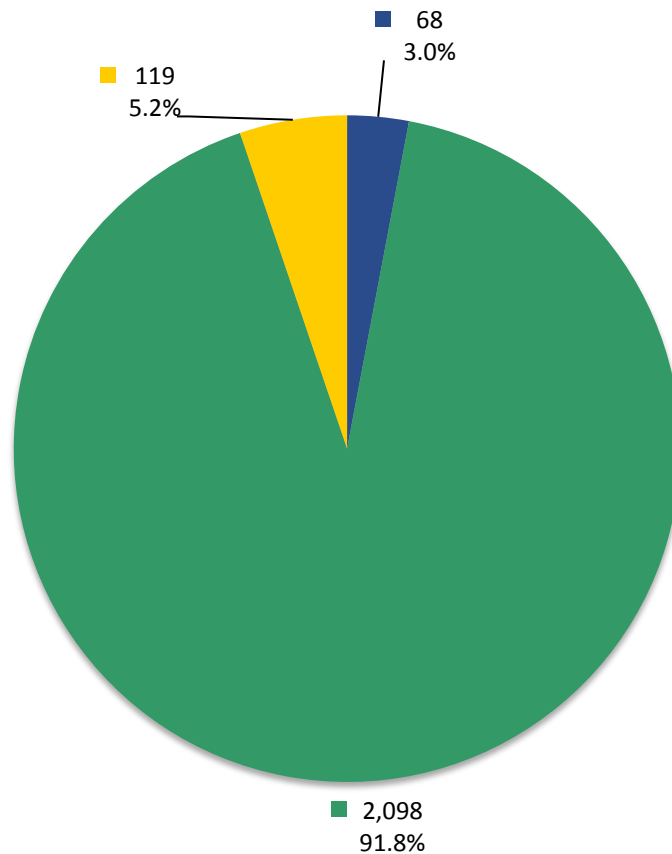
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	Completed (in Previous Year)	Newly installed work stations are configured optimal power savings.			(Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Completed (in Previous Year)				No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Completed (in Previous Year)				No End Date (Continuous)
Owned buildings					
Establish energy performance baseline for owned buildings	Completed (in Previous Year)				No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	In Progress for new district buildings.	District specifications to include Target Gold Certification for 2 new schools.	2011	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Replaced 4 furnaces with high efficient energy saving model.	Plan to replace several furnaces with high efficient energy saving model.	2011	No End Date (Continuous)
Planning/management					
Reduce office space (square meters) per employee	Ongoing/In Progress	Continue meeting Ministry standards for school district areas.	Continue to follow as per Ministry standards	2012	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	Design for new John Robson Elementary school is being developed.	Develop system for 2 replacement schools to meet district standards (new John Robson Elementary school and new west side middle school).	2012	No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Upgraded a complete mechanical and ventilation system at Hume Park Elementary/	Recommision our mechanical systems at all schools on our 5 year school renewal plan.	2011	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	Retrofitted 4 lighting systems and added occupancy sensors at: Herbert Spencer Elementary, Lord Tweedsmuir Elementary, Hume Park Elementary and John Robson Elementary.	Lighting Upgrades and occupancy sensors planned for Lord Kelvin Elementary. Occupancy sensors planned for Glenbrook Middle School.	2011	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	Upgraded DDC system at Hume Park, Richard McBride and Herbert Spencer.	Install a new DDC system at Connaught Elementary school.	2011	No End Date (Continuous)
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Completed (in Previous Year)				No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	Paperless meetings currently a practice - many powerpoint presentations within the district.	Continue to promote paperless meetings.	2011	No End Date (Continuous)
Electronic media in place of paper					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Completed (in Previous Year)				No End Date (Continuous)
Use electronic document library for filing common documents	Completed (in Previous Year)				No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed (in Previous Year)				No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	17% of paper purchased was recycled paper. 12% of paper purchased was coloured.	Continue to purchase colour paper @ 30% recycled. Encourage employees to purchase white recycled paper.	2011	No End Date (Continuous)
Printer/document settings					

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	A large group of employees to practice this procedure and we encourage all remaining district staff to follow this practice.	Continue to encourage employees to follow practice.	2011	No End Date (Continuous)

School District 40 - New Westminster Greenhouse Gas Emissions by Source for the 2012 Calendar Year (tCO₂e*)



Total Emissions: 2,285

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2012 (Generated May 28, 2013 3:49 PM)

Total offsets required: **2,283**. Total offset investment: **\$57,075**. Emissions which do not require offsets: **2** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.