

## 2012 CARBON NEUTRAL ACTION REPORT







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# Executive Summary

Climate change is a global issue, but positive steps to mitigate it can be taken at a local level. The Vancouver School District is proud to submit our 2012 Carbon Neutral Action Report, which details a wide range of significant and proactive steps we've undertaken to make our district more sustainable. The plan includes educational initiatives targeting both students and staff, the enhancement of our existing facilities and the initiation of a number of innovative pilot projects designed to reduce carbon emissions across the district.

Our students are our future and based on the growing awareness and interest among the Vancouver student body around climate change issues, it's safe to say our future is in good hands. This year, hundreds of students across the district played a role in organizing two successful Climate Change Conferences at Windermere and Magee Secondary. Meanwhile, Youth4Tap student clubs helped reduce the sale of bottled water while promoting tap water at multiple secondary schools with the installation of new water bottle refill stations. Students aren't the only people we're seeking to educate. We've also worked hard to educate our staff including our school building engineers and custodians on how they can cut down the school's energy consumption.

Sometimes the best learning doesn't happen in the school at all. That's why we're taking many of our lessons of sustainability into our schools' outdoor gardens with the implantation of a Fruit Tree Partnership, Market Garden Pilot and the Farm2School Initiative. All of these programs are introducing students and staff to sustainable food systems and empowering them to get activity involved in making their school (and the district) greener.

At a district level, we've purchased Carbon Offsets from the Pacific Carbon Trust to cover our 17,111 tCO<sub>2</sub>e emissions. We are also implementing a Carbon Neutral Capital Program which will lead to the installation of three modern high efficiency boiler models, attic insulation in five schools and innovative thermal infra-red reflective window coatings at 12 schools to cut down on heat loss. In addition to our facilities, we've also been working on improving our transportation systems. We've implemented a successful car-sharing program to reduce emissions

and are planning to add three new electric vehicles and eight fuel-efficient compact pick-up trucks to our maintenance vehicle fleet. Finally we've tried to cut down on the amount of materials the district churns through annually. Over the past year we've reduced our paper consumption by digitalizing our payroll systems and our district reference materials and increased the amount of recycled paper we're using day to day.

When we aren't improving our current school systems, we're building new ones that incorporate aggressive sustainability benchmarks. Over the past year the district has opened Kitchener Elementary and University Hill Secondary, both of which feature cutting edge learning environments in addition to the district standard of LEED Gold equivalent architectural design. Currently we have six other construction projects underway. All of these projects will include a myriad of green features and are being designed to help us exceed our current standards with high-performance 'Carbon Neutral' or 'Net-Zero' construction methods.



The Vancouver School Board has set a long term goal of becoming one of the greenest school districts in the world. We believe that this report demonstrates that we are well on our way to accomplishing this goal.

**Steve Cardwell, EdD**  
**Superintendent/CEO**



## 2012 Greenhouse Gas Emissions

The total greenhouse Gas (GHG) Emissions for the Vancouver School District for calendar year 2012, for all sources covered under the Greenhouse Gas Reduction Targets Act (GGRTA), is 17,111 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).

It was estimated that fugitive emission from stationary cooling comprises less than 1 % of the Vancouver School District's total emissions, and the ongoing effort to collect or estimate emissions from this source annually is disproportionately onerous. These emissions meet both the requirement to be below 1 % of the Vancouver School District's total emissions and the requirement to be onerous to collect. For this reason, emissions from this source have been deemed out-of-scope and are not included in the Vancouver School District's total greenhouse gas emissions profile or offset purchase.

## Offsets Applied to Become Carbon Neutral in 2012

The Vancouver School District will submit payment to purchase Carbon Offsets from the Pacific Carbon Trust (PCT), for the 17,111 tCO<sub>2</sub>e emissions. This excludes 19.63 tCO<sub>2</sub>e from bio-diesel consumption in our fleet vehicles due to its inherent carbon neutrality. The carbon dioxide emissions resulting from the combustion of biogenic fuel sources require reporting but do not require offsets, as per the Methodology for Reporting B.C. Public Sector Greenhouse Gas Emissions Version 2.0. The total Carbon Offsets purchase for 2012 is valued at \$427,775, excluding tax.

## Changes to Greenhouse Gas Emissions and Offsets Reporting from Previous Years

As a result of adjustments and corrections of utility data received through utility bills after the final offset calculations for the calendar year 2011, SD39 emission were determined to be understated by 65 tCO<sub>2</sub>e.



# Emission Reduction Activities

## Actions Taken to Reduce Greenhouse Gas Emissions in 2012

- Lighting system upgrades were completed at three secondary and three elementary schools reducing electricity consumption by over 565,000 kWh. Lighting system upgrades began at four additional schools.



- New construction was completed at one elementary school where energy-efficient lighting designs were integrated, reducing electricity consumption by over 50,000 kWh. Three energy efficient new construction projects began in 2012 and three new construction projects entered the design stage where energy efficient measures are being influenced through the BC Hydro Power Smart Integrated Energy Modeling process.
- The annual "Energy Bulletin" was distributed to all building engineers and custodians and administrators in the school district. This publication raises awareness of energy and carbon reduction actions taken across the school district and the role of building engineers in maintaining our schools to support our carbon neutral commitment.



- A car-sharing program was launched at the Education Centre to promote sustainable transportation in the school district. This program will not only reduce transportation related emissions from business travel due to the fuel-efficient hybrid technology of the vehicles, but employees have the option of leaving their personal vehicles at home as they have a way of now getting around for work.
- In addition an incentive based pilot program was implemented at the Education Centre to encourage staff to switch from personal automobiles to public transportation.
- Students at Windermere Secondary organized and ran the third annual C3 Conference (Climate Change Conference) in December. This conference is open to all VBE and external secondary students and focuses on, actions and solutions to climate change issues.





## Emission Reduction Activities *continued*

### Actions Taken to Reduce Greenhouse Gas Emissions in 2012



- Students initiated the Youth4Tap program to reduce the sale of bottled water while promoting tap water. They fundraised to purchase new water bottle refill stations and convinced the district to match one for one any Secondary School on the installation of new water bottle refill stations. The students plan to continue to work with the district to support their water initiatives and one day make the VBE a truly bottled water-free district.
- The district has taken several steps to reduce paper consumption:
  - In 2012 VBE switched over to electronic payroll notification instead of paper pay-stubs

– this was adopted by approximately 80% of employees eliminating the printing of 7,000 pay-stubs every two weeks.

- Moved to an electronic version of the school district's 'Ready Reference' – this avoids printing approximately 4,000 copies annually.
- Almost 87% of all paper consumed in 2012 in SD39 had 30% or more recycled paper content. This is a marked improvement of 9% over 2011.
- The installation of a 5 kWh solar-photovoltaic energy system was completed at Sir Charles Tupper Secondary School. This will serve as an educational tool to support the school's sustainable education initiatives.





## Plans to Continue Reducing Greenhouse Gas Emissions 2013 – 2014

- The new Carbon Neutral Capital Program has allowed the district to move forward on several carbon reducing initiatives.
  - The VBE will purchase three high-efficiency boilers for three elementary schools.
  - Attic insulation will be upgraded at five elementary schools.
  - Installation of innovative thermal infra-red reflective window coating will occur at twelve schools as a retrofit solution to reduce heat loss in buildings.
- An application outlining further initiatives has been submitted for approval.
- Schools are being built to LEED Gold equivalency and going forward, we will strive to exceed this standard and build high-performance schools that approach 'Carbon Neutral' or 'Net-Zero' standards.
- A pilot building envelope sealing project will be implemented at one elementary school which will assist in the reduction of heating loads.
- The VBE car-sharing program, launched at the Education Centre to promote sustainable transportation in the school district, will be expanded district wide. This will help reduce transportation related emissions from business travel and provide employees with the option of leaving their personal vehicles at home as they now have a way of getting around for work.
- Three new Electric Vehicles will be purchased for the first time at the VBE thus removing larger less efficient vehicles from the fleet. In addition the introduction of 8 fuel efficient compact pick-up trucks and 'partnering' of individuals in these trucks will remove 16 personal vehicles from daytime use.







## Plans to Continue Reducing Greenhouse Gas Emissions *continued* 2013 – 2014

A total of four Electric Vehicle charging stations will be installed at U-Hill Secondary, King George Secondary, and the Education Centre.

The district has issued a new contract for the pick-up, in all district-owned buildings, of waste, recycling and organics, enabling us to divert more material from the landfill.

- **Phase 1** will see waste and recycling services rolled-out in the coming months.
- **Phase 2** will see the roll-out of the new organics pick up program. Organics represents up to 40% of our total waste material.

The district will continue to implement its urban garden program in partnership with many outside organizations:

- **Draft Food Action Plan** is being updated based on current projects and aligned with City of Vancouver's (COV) new Food Strategy.
- **"Think&Green@School"** UBC staff and students are working with schools on garden preparation and waste management projects.
- **Fruit Tree Partnership** with the Vancouver Parks Board to supply fruit trees to VBE schools.
- **"Farm2school"** provides access to local produce for 1,194 students at four schools through funding for salad bar equipment.

- **Market Garden Pilot** is a partnership with Fresh Roots Urban Farm to grow food on 1/3 acre of land at Vancouver Technical Secondary School.

Support youth initiatives to advance Climate Action and Sustainability in the school district.

VBE students will hold the First Annual VSB Sustainability Conference. The conference will feature an interdisciplinary focus on sustainability. Committed student delegates, volunteers, trustees and other staff from other Metro Vancouver school districts will attend to plan the next steps of action for proactive sustainable efforts across the region.

***Through the above actions, behavioural change programs and education the Vancouver School Board is working toward the reduction of its overall energy and carbon footprint, as it is consistent with our long-term vision for sustainability.***





School District 39 Vancouver - 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	Continued training of all new drivers. Improved "Driver Training" standards and evaluation were implimented in 2012. Start Year - prior to 1995.	Continue driver training as required.	2008	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	GPS/Monitoring units in all fleet vehicles. Idling can be monitored in all GPS units. New GPS units have non-adjustable (by driver) idling alarms incorporated. 20% of units are now equipped with anti-idling alarms. Start Year is 2007.	This will continue in the future. All future vehicle procurements will be equipped with anti-idling alarms.	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	Crew Cab style truck added to the fleet putting up to four people per truck.	Utilization of Crew Cab trucks to reduce use of individual vehicle transportation. Introduction of 8 fuel efficient compact pick-up trucks. "Partnering" of individuals in these trucks removing 16 personal vehicles from daytime use.	2009	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Not Yet Evaluated				No End Date (Continuous)
Other Mobile Fuel Combustion Actions					
BioDiesel Fuel use in Fleet	Ongoing/In Progress	All diesel engines use 5% bio-diesel as dictated by availability at fuelling depot. Have limited use of service station supplied non-bio fuel to emergency fuelling only.	Planned Fleet rotation is to replace older gasoline burning trucks with morte efficient diesel fuelled units.	2008	No End Date (Continuous)
Ethanol blended fuel use in Fleet	Ongoing/In Progress	As of March 1st, 2011 the fuel depot started supplying 10% ethanol blended gasoline, which is now included in our fuel consumption.	Continue to use ethanol in gasoline.	2011	No End Date (Continuous)
Introduction of High Velocity, Turbine Debris Blowers	Ongoing/In Progress	3 tow behind debris blowers (US EPA Stage II rated) were introduced for crew use. Each debris blower introduced can replace the use of upto 4 - 2 cycle back pack blowers.	Explore the acquisition of 2 additional debris blowers for crew use.	2012	No End Date (Continuous)
Upgrade of 2 stroke power equipment	Ongoing/In Progress	As power equipments are replaced, the replacement model "MUST" be an improvement for the environment (i.e. 2 Cycle/4 stroke, Tier 4 certified).	Replacement of older back-pack blowers and power equipment as they become problematic with new technology models. Explore cost differential between repair and replacement of older units.	2009	No End Date (Continuous)
CNG Motor Fuel	In Development	Research of new generation technology and fuelling availability/options for CNG motor-fuel.	Exploration of Ford Motor Co. CNG motor fuel technology and fuelling options available. (i.e. fuelling depots vs. on - site low pressure fuelling)	2011	No End Date (Continuous)
EREV (Extended Range Electric Vehicle)	In Development	Investigation of Via Motors -Vtrux Extended Range Electric Vehicles.	Further exploration of EREV technology and availability leading to acquisition of Crew style vehicles.	2012	No End Date (Continuous)
Electric Vehicles	In Development	Initial investigations into viability of limited range electric vehicles (i.e. Nissan Leaf). Applied for funding for 3 Electric Vehicles for use in maintenance fleet. Received approval for two EV charging stations to be situated at U-Hill Secondary and King George Secondary.	Further investigation into short distance needs, start-up and infrastructure needs etc. Hope to purchase 3 EV for maintenance fleet.	2012	No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	Replacement of 2004 Massey Ferguson tractor with new Tier 4 emission model; introduction of new high efficiency grass cutting equipment. Start Year - 2002.	Projected Fleet Rotation replacements of older less efficient vehicles and equipment.	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	Introduction of Hybrid vehicles; reallocation of replaced vehicles and removing larger less efficient vehicles from fleet. Start Year - 2002	Reallocation of vehicles promoting "Right Usage" principles.	2008	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	Scheduled Preventative Maintenance Program in place. All required vehicles passed AirCare testing without adjustments or modification.	Ongoing scheduled Preventative Maintenance/Safety Inspection program in place.	2008	No End Date (Continuous)



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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		Start Year - prior to 1995.			
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	Not Yet Evaluated				No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	During Christmas, spring and summer break periods Building Engineers unplug major appliances.	During Christmas, spring and summer break periods Building Engineers unplug major appliances.	2008	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	During Christmas, spring and summer break periods Building Engineers unplug major appliances.	During Christmas, spring and summer break periods Building Engineers unplug major appliances.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Building Engineers close blinds as part of their regular duties. Start Year - prior to 1995.	Building Engineers close blinds as part of their regular duties.	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Not Yet Evaluated				No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Not Yet Evaluated				No End Date (Continuous)
Encourage use of stairs instead of elevators	In Development	No concrete steps, except adhoc encouragement by some staff members to others.	No concrete steps, except adhoc encouragement by some staff members to others.	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	Most schools have them. Start Year - 1995.	Most schools have them.	2008	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress	Building Engineers are instructed to turn off hot-water tanks, circulation pumps etc., as part of the winter, spring and summer shutdown procedure. Start Year - 1990.	We will continue with this program going forward.	2008	No End Date (Continuous)
IT power management					
Install power management software which shuts down computers outside of regular business hours	Completed (in Previous Year)				No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	Major migration to production VMware environment begun.	Completion of migration of all eligible systems (>95%).	2008	2013
Apply auto-sleep settings on computer monitors and CPUs	Completed (in Previous Year)				No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	Ongoing/In Progress	Raised awareness about sustainability of many standalone devices. All new devices are set up as network print devices.	Establish printing guidelines, reduce printer fleet and right size mfd fleet: Continue to limit purchase of standalone devices, acquire more multifunction devices for all output needs.	2011	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Not Yet Evaluated				No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	All new devices purchased were 'Energy Star' rated.	As computers are retired, new devices are either Energy Star or battery powered.	2008	No End Date (Continuous)
Other Stationary Fuel Combustion					
District-wide Heating Plant review	Ongoing/In	Commissioned and completed a review of heating plants across the	Explore results and implications of feasibility assessment.	2010	2014



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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
	Progress	entire school district to inform decision making on opportunities to integrate low carbon and high efficiency heating plants and renewable energy systems.			
Waste Heat Recovery between Community Centre and School	Ongoing/In Progress	MOU between the VSB and City of Vancouver signed. In the RFP stage for Kitsilano Secondary. Awaiting proposed options from Design Builders regarding option for heat recovery.	Award contract to start construction of the new Kitsilano secondary school.	2010	No End Date (Continuous)
Energy Management Assessment (EMA); Energy/Carbon Goals & Targets	Ongoing/In Progress	Conducted the BC Hydro Energy Management Assessment with the Senior Management Staff. Developed a comprehensive set of Goals and Targets (5 year period) for the Management of Energy and Carbon Emissions (electricity/natural gas).	Execute the actions in the EMA Report.	2009	2014
Summer/Winter/Spring Shutdown checklist	Ongoing/In Progress	As part of improving efficiency of operating our schools, all building engineers across the school district were required to submit a detailed checklist of actions for shutting down all non-essential systems during break periods. Start Year - 1997.	This program will be continued every year.	2008	No End Date (Continuous)
Spot the Energy Savings' Training Program - NRCan	Ongoing/In Progress	We have continued to provide this training to all Asst. Building Engineers and Asst. Head Custodians, as needed. Start Year - 2005.	We will continue providing this training to all Asst. Building Engineers and Asst. Head Custodians, as needed.	2008	No End Date (Continuous)
Heating Plant Operating Guidelines	Ongoing/In Progress	Strict operating times and set-points were enforced through a district wide Memo to all Building Engineers.	We will continue these operating times and set-points over this time frame.	2010	No End Date (Continuous)
Technology Pilot - Thermal Coating for windows and thermal Paint for walls	Ongoing/In Progress	Applied and received funding for 12 schools to install thermal paint and window coating.Will contineu to monitoring energy consumption at the original 4 sites to evaluate technology effectiveness in reducing the heating and electricity loads.	Install the thermal paint and window coating at the 12 school sites.	2010	2013
Owned buildings					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	Evaluating and benchmarking building performance on an ongoing basis.	Evaluating and benchmarking building performance on an ongoing basis.	2009	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Not Yet Evaluated				No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	Registering most of our projects. SD39 always builds/renovates to LEED Gold even if we do not certify the contruction.	Review projects in order to register for LEED Gold. Will continue to build/renovate to LEED Gold even if we do not cerify the construction.	2008	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Sealing building envelope study completed at Magee, Thunderbird and McBride. Start Year - 1990.	Implementation of study recommendations will occur at Thunderbird. The results of this implementation will be reviewed and work will be considered for the other two sites	2008	No End Date (Continuous)
Planning/management					
Reduce office space (square meters) per employee	In Development	We are presently reviewing district space.	We are presently reviewing district space.	2010	No End Date



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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
					(Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	Installed at one site (Britannia Complex).	High costs are a barrier; however, considering on a case by case basis with new construction.	2011	No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Applied for 3 high efficiency boilers for 3 elementary schools (Tyee, Fraser, Moberley). Start Year - 1990.	Install 3 high efficiency boilers for 3 elementary schools (Tyee, Fraser, Moberley) and apply for additional funding for HE boilers at other schools.	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	Completed lighting system upgrades at three secondary (PW, Glad, Byng partial) and three elementary schools (McBride, Shaugh, and Roberts Ax) that reduced electricity consumption by over 565,000 kWh. Lighting system upgrades began at 4 additional schools (TecX, Mnt P, Oppe, MaqX). Start Year - 1990.	Lighting system upgrades will begin at 19 schools. Lighting system re-design and upgrades will be continued with other schools when feasible, cost-effective and if timing is right for capital turnover.	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	This was included as part of the lighting system upgrades and in addition, upgraded the control system to DDC in one elementary school (Moberly). Start Year - 1995.	Lighting system re-design and upgrades will be continued with other schools when feasible, cost-effective and if timing is right for capital turnover. An ASHRAE study will be completed on some HE use schools.	2008	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	Attic insulation was added/upgraded at three school.	Depending on the availability of funds we will explore opportunities to replace single glazed windows with double glazed high efficiency windows in additional schools.	2010	No End Date (Continuous)
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Not Yet Evaluated				No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	Presently on an adhoc basis. Some staff are starting to hold paperless meetings.	Continue on an adhoc basis. Some staff are starting to hold paperless meetings.	2012	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	Ongoing/In Progress	Deployed Sharepoint 2010. Working with contractor to implement better collaboration, electronic workflow for common tasks. Implemented Contract Management Software - 2013/14. 2007 Move to electronic purchase requisition-complete 2013/4	Begin development of District portal to support the transformation of paper-based processes to digital. Establish collaboration, expand to include all contract types, finish implementation 2013/14	2011	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed (in Reporting Year)	Implementation completed. 7000 employees receive this electronically while 1800 still receive paper. This is not expected to change.		2010	2012
Paper Type					
Purchase 30% post-consumer recycled paper	Ongoing/In	Communicated with schools/departments with a requirement to	Further communication and establish paper use guidelines, with the	2011	No End Date



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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
	Progress	purchase recycled content.	intent to reduce consumption and further increase 'pcw' content purchases.		(Continuous)
Purchase 40% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	Multi function devices have been set-up for double-sided printing.	Work to widely implement double sided printing only; increase site management by engaging user codes; encourage printing of 2 pages per side; reduce the number of printers.	2011	2014



School District 39 Vancouver - 2012 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	In Development	Different technologies for web conferencing are being used throughout the district on an ad-hoc basis. As technology becomes available different teams use it as viable meeting option where applicable.	Different technologies for web conferencing are being used throughout the district on an ad-hoc basis. As technology becomes available different teams use it as viable meeting option where applicable.	2011	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	In Development	Different technologies are considered for virtual attendance/presentations throughout the district on an ad-hoc basis. As technology becomes available different teams use it as viable meeting option where applicable.	Different technologies are considered for virtual attendance/presentations throughout the district on an ad-hoc basis. As technology becomes available different teams use it as viable meeting option where applicable.	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	This occurs on an adhoc basis. VSB business 'car-sharing' program also encourages carpooling.	This will continue to occurs on an adhoc basis.	2012	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	In Development	Some staff offer bus tickets for meeting participants.	Continue to explore other avenues for encouraging alternative travel to meetings.	2009	No End Date (Continuous)
Other Business Travel Actions					
Bike share with City of Vancouver	In Development	In negotiations with the City of Vancouver to locate bike share stations at downtown VSB sites.	In negotiations with the City of Vancouver to locate bike share stations at downtown VSB sites.	2012	No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Ongoing/In Progress	Implemented an incentive based pilot program at the Board office to encourage staff to switch to Public Transportation instead of driving to work. A car-sharing program using fuel-efficient hybrid vehicles was launched at the Education Centre to promote sustainable transportation and provides employees with the option of leaving their personal vehicles at home as they have a way of now getting around for work.	Evaluate pilot programs and other options for encouraging alternate transportation methods. Expand car-sharing program to the district.	2011	No End Date (Continuous)
Virtual meeting technology					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	In Development	none	Will be included with new unified communications system.	2013	No End Date (Continuous)
Make desktop web-cameras available to staff	Not Yet Evaluated				No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	In Development	none	Will be considered as part of the unified communications system implementation.	2013	No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Not Yet Evaluated				No End Date (Continuous)
Other Education, Awareness, and Engage					
Organics diversion pilot program	Ongoing/In Progress	Planned and implemented an organics diversion pilot program at three sites.	Expanding program district wide.	2011	No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Partnership agreement with Urban Farmer in development	Ongoing/In Progress	Develop a partnership agreement to work with an urban farmer on VSB land.	Complete and implement agreement and evaluate.	2011	2013
Food garden policy revised and updated	Ongoing/In Progress	Revise and update food garden policy and process.	Complete revisions and disseminate to all schools.	2011	2013
Climate Change Conference	Ongoing/In Progress	Students organized a Climate Change Conference where 300 VSB students attended.	Students will organize an annual Climate Change Conference for VSB students.	2010	No End Date (Continuous)
Annual VSB Sustainability Conference	Ongoing/In Progress	Students organized a Sustainability Conference where 200 VSB students attended.	Students will organize an annual Sustainability Conference for VSB students.	2012	No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress	Sustainability pro-d for VSB management staff, pro-d offered year round on sustainability topics.	Continue with pro-d, re-constitute sustainability networking and sustainability cafes.	2009	No End Date (Continuous)
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	Ongoing/In Progress	Set up sustainability portal. Communicate website opportunity to all staff.	Further develop the sustainability portal with more features.	2011	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	In Development	Communicate goals and targets for waste reduction to all schools.	Implement organics diversion program district wide and engage all stites in waste reduction and behaviour change work.	2010	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	E-newsletter circulated once a month, sustainability portal established containing district information and resources on sustainability.	Continue with pro-d, re-constitute sustainability networking and sustainability cafes.	2009	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress	New staff orientation includes information on VSB sustainability goals.	Continue this practice, ensure that sustainability information is up to date and included for more staff group orientation.	2010	No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Not Yet Evaluated				No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	1-2 staff respond to frequent questions for resources and support from staff and students.	Re start sustainability networking events and topic specific workshops for VSB staff.	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development	Organized more training opportunities on behaviour change strategies and tactics.	Organized more training opportunities on behaviour change strategies and tactics.	2009	No End Date (Continuous)
Other Sustainability Actions					
Adaptation to Climate Change					
Assessed whether extreme weather events and/or long term changes in climate will affect the organization's business areas	Not Yet Evaluated				No End Date (Continuous)
Integrated considerations of extreme weather events and/or long term	Not Yet				No End Date



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Actions to Reduce Provincial Emissions and Improve Sustainability					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
changes in climate into the organization's decision making.	Evaluated				(Continuous)
<b>Building construction, renovation</b>					
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress	Whenever possible with new construction/renovation projects, steps are taken to maintain heritage buildings and reduce demolition waste. For demolished buildings, specifications are in place to divert up to 75% of building material from landfills.	We will continue this into the future.	2010	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress	On all seismic projects and new builds we are employing lifecycle costing. Start Year - 2005.	On all seismic projects and new builds we are employing lifecycle costing.	2008	No End Date (Continuous)
<b>Commuting to and from home</b>					
Introduce telework/work from home policy	Not Yet Evaluated				No End Date (Continuous)
Offer staff a compressed work week	Not Yet Evaluated				No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	Implemented an incentive based pilot program at the Board office to encourage staff to switch from driving to using Public Transportation. Pro-d offered for staff on cycling to school and work, encourage staff to participate in Bike to Work week.	Evaluate the effectiveness of Pilot program and evaluate options for deploying such a program across the school district. Continue to offer transportation related pro-d.	2009	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress	In all new construction or renovations provision are considered to support those who commute by foot or bicycle. Start Year - 1998.	Continue exploring opportunities in this area.	2008	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress	In all new construction or renovations provision of storage are considered to support those who commute by bicycle.	Continue exploring opportunities in this area.	2010	No End Date (Continuous)
<b>Other Sustainability Actions</b>					
Print management	Ongoing/In Progress	Draft 'print' goals, strategy and guidelines with the intent to reduce print, reduce printers (carbon footprint), reduce electricity consumption	Implement 'print' goals, strategy and guidelines district wide. Reduce printers.	2011	No End Date (Continuous)
Procurement	Ongoing/In Progress	Expand the use of Environmental sustainability section in competitive procurement processes. Include relevant evaluation criteria. Move to reduce vendor base (less trucks arriving at sites)	Continue to refine method. Establish a standard evaluation criteria value of overall weighting. Continue to expand to all procurement. Establish KPI to monitor.	2010	No End Date (Continuous)
<b>Procurement (non-paper supplies)</b>					
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Ongoing/In Progress	Awarded office related and ink/toner contract for VBE and 21 public organizations that includes enviro order selection mechanism and reporting. 30% of prod's purchased are 'green'.	Increase the percentage of 'green' type products.	2011	No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress	All Request for Proposals have sections that require proponent responses to environmental sustainability (ES). Weighted value of ES can be up to 15% of overall value.	As contracts expire and resulting competitive processes are initiated, green standards are included.	2010	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products,	Ongoing/In	New Purchasing policy established in 2012 with reference to	Develop reporting for the percentage of green related products	2008	No End Date

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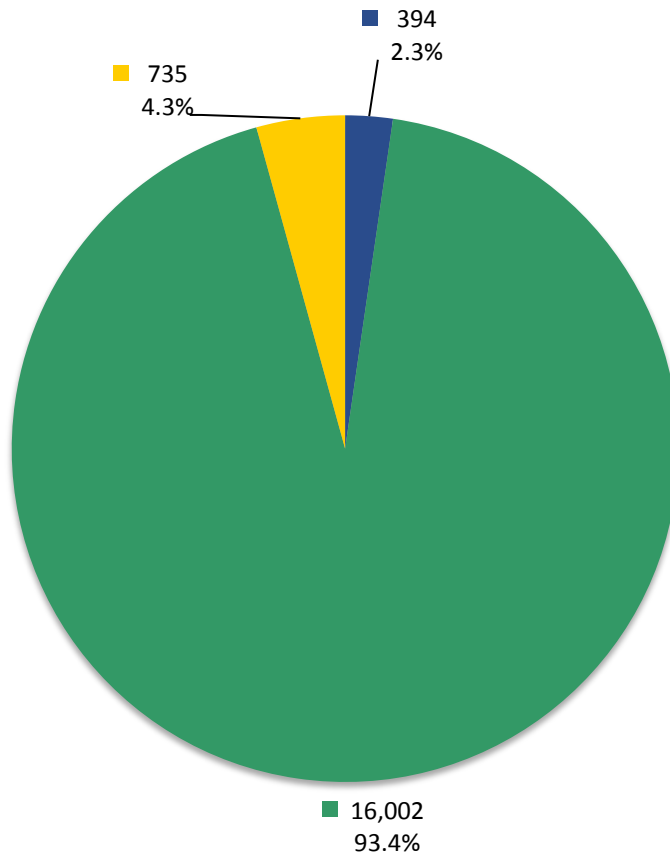
Actions to Reduce Provincial Emissions and Improve Sustainability					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
disposable paper products and trash bags	Progress	environmental sustainability			(Continuous)
Waste reduction/diversion					
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress	Issued an RFP for pickup of: organics, recycling and waste for all VSB sites. Students initiated projects to eliminate the sale of bottled water from the VSB. Major projects include water bottle refill stations and having VSB cafeterias and vending machines stop selling bottled water.	Implement new contract and district wide organics program. Students will continue work to ban the sale of bottled water.	2010	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	Annual hazardous waste pickup organized for curriculum based chemicals. Arrangements currently in place for: lamps, bulbs, ballasts, auto oil, batteries, curriculum based chemicals, ballasts, paint slops, anti-freeze, gypsum, propane tanks, tires, and asbestos. Start Year - 1995.	Annual hazardous waste pickup organized for curriculum based chemicals. Arrangements currently in place for: lamps, bulbs, ballasts, auto oil, batteries, curriculum based chemicals, ballasts, paint slops, anti-freeze, gypsum, propane tanks, tires, and asbestos.	2008	No End Date (Continuous)
Water conservation					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress	When fixtures require replacement they are upgraded to water efficient models. Start Year - 2005.	When fixtures require replacement they are upgraded to water efficient models.	2008	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	Ongoing/In Progress	Gather information on water reduction/conservation for sports field irrigation systems.	Implement CICS over 3 years to all district sports fields to allow for proper water management.Completion of the installation of Centralized computer for irrigation systems 2013. 25 sports fields to be running on CICS beginning in spring 2013.Water savings to be reduced by 20-30%.	2012	2014
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development	Stormwater Mgmt development is reviewed in all New Construction projects and will be continued with other schools when feasible, cost-effective and if timing is right.	Stormwater Mgmt development will continually be reviewed in all New Construction projects and will be continued with other schools when feasible, cost-effective and if timing is right.	2008	No End Date (Continuous)



# School District 39 - Vancouver

## Greenhouse Gas Emissions by Source

### for the 2012 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 17,131**

- 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 3:47 PM)

Total offsets required: **17,111**. Total offset investment: **\$427,775**. Emissions which do not require offsets: **20** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.