



School District 19
(Revelstoke)

School District 19 (Revelstoke)

2011 Carbon Neutral Action Report

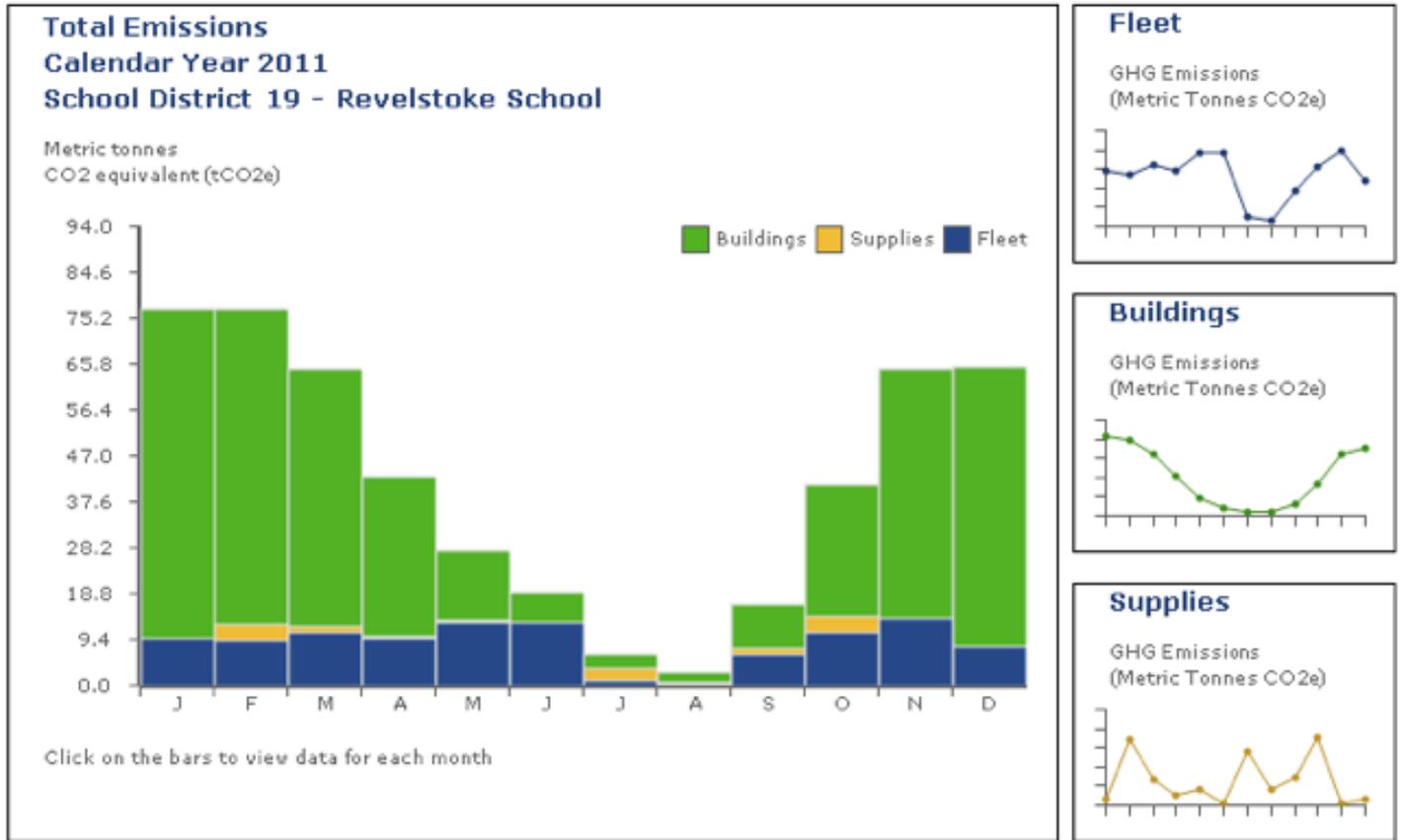
Executive Summary

The mission statement of the Revelstoke Board of Education is “to provide all learners with an opportunity to acquire knowledge and skills according to individual potential, to develop positive attitudes towards life-long learning and to develop personal social values that will prepare them to participate in and contribute to, a healthy, sustainable and democratic society.”

As a Board, we believe that modeling sustainable practices is an important part in achieving our mission. One key value in our school district is that our system should create and nurture an environment in which appreciation, conservation and sustainability of our natural environment are learned and acted upon. Our efforts at achieving carbon neutrality give voice to our mission and values.

In addition to the commitment to reducing our environmental footprint, the efforts summarized in this report also contribute to reductions in operating costs, thereby enabling the district to channel funds directly into classrooms to sustain and enrich school programs and student services. In this way, the efforts of the school district to achieve the highest levels of success for students are further enhanced.

2011 Greenhouse Gas Emissions



Totals Calendar Year 2011, School District 19 - Revelstoke School

	Measure	Quantity	Greenhouse Gases in Tonnes				tCO ₂ e ¹
			CO ₂	BioCO ₂	CH ₄	N ₂ O	
Scope 1 (Direct) Emissions							
Mobile Combustion (Fleet)	Litres	41,959.20	104.61	3.95	0.01	0.01	111.56
Stationary Combustion, Reported ³	GigaJoules	5,845.70	348.75	0.00	0.01	0.03	356.67
Scope 2 (Indirect) Emissions							
Purchased Energy, Reported ³	GigaJoules	4,873.03	33.62	0.00	0.00	0.00	33.62
Scope 3 (Business Travel and Office Paper) Emissions							
Office Paper	Packages	2,173.00	14.76	0.00	0.00	0.00	14.76
Total Emissions, Calendar Year 2011			501.74	3.95	0.01	0.03	517
Carbon Neutral or Offset Exempt			89.50	3.95	0.00	0.01	95
Total for Offsets⁴			412.24	0.00	0.01	0.03	421

Offsets Applied to Become Carbon Neutral in 2011

School District 19 has applied total emissions offsets to become carbon neutral for 2011. Some emissions are currently exempt from carbon offsets. As required by section 5 of the Carbon Neutral Government Regulation, 95 tonnes CO₂e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2011. However, they were not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation

Emissions Reductions Activities – Summary

School District 19 (Revelstoke) is currently reviewing energy consumption at all district facilities to re-establish targets for energy consumption reduction. In 2011 we have engaged BC Hydro in discussions regarding our PowerSmart Partnership for our 2 new schools that are currently under construction. When completed in September 2012, our new elementary school will result in the closure of 2 old, energy inefficient, elementary schools. Our new secondary school, which opened in October 2011 resulted in the immediate closure and demolition of old, inefficient secondary school. Both of our new schools are built to a very high standard of energy efficiency and sustainability and both will be seeking LEED Gold certification.

We have continued with our revised custodial services in our schools where custodians operate in teams so that schools can be cleaned quickly and can then be shut down for the evening to reduce energy consumption. We have also re-organized the community user groups that use District facilities in order to concentrate these activities at a fewer sites, which in turn, enables us to shut down other sites in the evening to reduce energy consumption



Anne Cooper

Superintendent

School District 19 (Revelstoke)

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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 (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	District vehicles are on a regular maintenance schedule	Sustain regular maintenance schedule	1995	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	50	% of small maintenance vehicles are fuel-efficient	Replaced John Deere mower (1978) with new 2011 model	None planned for 2012	2011	No End Date (Continuous)
Behaviour change program							
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress			Review anti-idling policy with staff	Review anti-idling policy with staff	2010	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Reduced number of maintenance vehicles	Further refinement of carpooling for maintenance staff in District vehicles	2011	2012
Other Mobile Fuel Combustion Actions							
Review of school bus routes to determine opportunities for efficiencies and mileage reductions	Ongoing/In Progress			Consolidate bus routes with implementation of all day Kindergarten	Further review of bus routes to reduce overall annual fuel consumption	2011	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Owned buildings							
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	In Development				Two new school under construction will achieve LEED Gold certification	2009	2012
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development				Two new school under construction will achieve LEED Gold certification	2010	2012
Incorporate integrated design process into new construction or during renovations of owned buildings	In Development				Two new school under construction will achieve LEED Gold certification and utilized integrated design process	2010	2012
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	30	% of fridges are ENERGY STAR rated	Replaced 5 refrigerators with with new energy efficient models	replace 4 more refrigerators	2011	2012
Behaviour change program							
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development				Review energy consumption tips with staff	2012	No End Date (Continuous)
Supplies (Paper)							
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	10	% of staff workstations with software installed	Ongoing encouragement for staff to use online conferencing	Continue to encourage staff to use collaborative software	2011	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress			Online conferences used for common documents and capital project documents	Continue to add common documents to existing systems	2011	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Documents that need widespread distribution are posted on District email server conferences and district website.	Continue to add common documents to existing systems	2011	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Switch to an electronic payroll notification system in place of paper pay stubs	In Development			New accounting software purchased for payroll in 2011	Electronic payroll stubs are pending	2011	2012
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	5	% of staff currently have received collaborative software training	Administrators using Microsoft Word mark-up feature for document development. Google Docs being used by some staff in schools and school board office.	Continue to encourage the use of these features	2011	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			All meetings are encouraged to be paperless wherever possible	All meetings are encouraged to be paperless wherever possible	2011	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Printers in computer labs use scrap paper	Continue to encourage re-use of scrap paper for student work in labs	2011	No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability

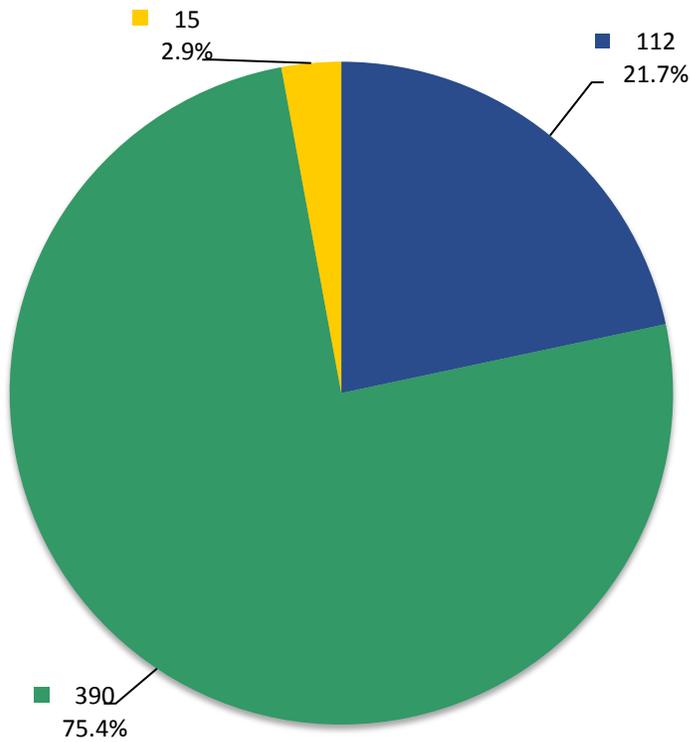
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel						
Virtual meeting technology						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	5 % of computers have web-conferencing software installed	All staff have access to web conferencing (Elluminate Live) when needed.	Encourage use of Elluminate Live where appropriate	2011	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress	95 % of staff have access to a desktop web-camera	Classrooms in 2 schools were upgraded to computers with built in cameras	Encourage use of cameras for Skype or Elluminate Live where appropriate	2011	No End Date (Continuous)
Behaviour change program						
Train staff in web-conferencing	Ongoing/In Progress	5 % of staff are trained web-conferencing	Elluminate Live used when needed by staff	Continue to use Elluminate Live for scheduled meetings	2010	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		Encourage staff to use virtual attendance where possible	Encourage staff to use virtual attendance where possible	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		Encourage staff to carpool where possible	Encourage staff to carpool where possible	2011	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development			New electronic "Green Team" conference established to raise awareness	2011	No End Date (Continuous)
Staff awareness/education						
Provide green tips on staff website or in newsletters	Ongoing/In Progress		Electronic "Green Team" conference utilized to raise awareness	Electronic "Green Team" conference utilized to raise awareness	2011	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		Included in school curricula	Included in school curricula	2011	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Included in school curricula	Included in school curricula	2011	No End Date (Continuous)
Other Sustainability Actions						
Water conservation						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		New secondary school provided with water conservation features (LEED Gold)	New elementary school provided with water conservation features (LEED Gold)	2011	2012
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		New secondary school provided with water conservation features (LEED Gold)	New elementary school provided with water conservation features (LEED Gold)	2011	2012
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress		New secondary school provided with water conservation features (LEED Gold)	New elementary school provided with water conservation features (LEED Gold)	2011	2012
Waste reduction/diversion						

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress			Waste paper and cardboard products are recycled throughout the District	Waste paper and cardboard products are recycled throughout the District	2011	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			Significant quantities of hazardous waste were removed from inventory at secondary school and overall inventory reduced.	Future purchases of hazardous materials will be restricted. All electronic waste is recycled.	2011	No End Date (Continuous)
Procurement (non-paper supplies)							
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress			Custodial and Maintenance supplies have switched to Green products wherever possible	Further increase in Green products to include Graffiti remover for indoor use	2011	No End Date (Continuous)
Building construction, renovation, and leasing							
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress			Construction and demolition debris from new secondary school was handled according to LEED Gold standards	Construction and demolition debris from new elementary school under construction is being handled according to LEED Gold standards	2011	2012
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress	100	% of business cases incorporating lifecycle costing since start year indicated	Life Cycle costing was used in the design and construction of the new secondary school	Life Cycle costing is being used in the design and construction of the new elementary school	2011	2012
Indoor air quality							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress			Awareness is encouraged as part of OH&S mandate at schools	Ensure that scent-free issues are part of the mandate of OH&S committees	2011	No End Date (Continuous)
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress			Low VOC products are mandated for custodial and maintenance supplies	Low VOC products are mandated for custodial and maintenance supplies	2011	No End Date (Continuous)
Commuting to and from home							
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			Staff are encouraged to participate in Bike to Work Week	Staff are encouraged to participate in Bike to Work Week	2011	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	In Development			New secondary school has provision for staff showers	New elementary school will have provision for staff showers	2011	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress			All schools have ample bicycle parking	All schools have ample bicycle parking	2011	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	Ongoing/In Progress			New secondary school has reduced on-site parking and greater shared parking with adjacent community facilities	New school construction currently underway will have reduced on-site parking	2011	2012

**School District 19 - Revelstoke School
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 517

- 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 2011 (Generated May 18, 2012 11:57 AM)

Total offsets required: **421**. Total offset investment: **\$10,525**. Emissions which do not require offsets: **95** **

*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.