


School District No. 47 (Powell River) - 2012 Carbon Neutral Action Report



Executive Summary

In 2012 School District 47 made further progress in reducing greenhouse gases. By funding the Sustainable Schools Committee and a half time District Sustainability Co-ordinator, School District 47 is advancing its belief that education is critical to changing behaviour. Part of the vision of the Board of Education is to increase awareness of and positive action regarding climate change. The main focus for the year was reduction in energy consumption. Through Destination Conservation we were able to quantify an overall 9% reduction, saving almost 42 tonnes of carbon dioxide and just under \$26,000 in electricity bills. It was gratifying to see all students and staff get behind our conservation efforts in a significant way. To further encourage our students some of the financial savings have been returned to schools as an incentive to support future projects. Student engagement was ongoing in 2012 as Year 4 of Destination Conservation put emphasis on reducing energy consumption. In the area of computer technology steady progress was made with acquiring improved hardware and virtualizing servers. Our Sustainable Schools Committee continues to lead the work of educating and inspiring employees. They used their financial resources to provide in-service, assist with supporting Destination Conservation's school based teams and provide grants to Brooks Secondary's Students For Environmental Action (SEA) group. The SEA group is gaining traction, with special initiatives to get staff and students cycling to school and designing a major school garden project. District-wide, recycling initiatives are in place – involving entire schools in efforts to recycle paper products and return drink containers, proceeds of which benefit the students through purchase of school supplies and events sponsored by Parent Advisory Councils.

 28-Mar-2013

Steve Hopkins, March 28, 2013
Secretary Treasurer

2012 Greenhouse Gas Emissions

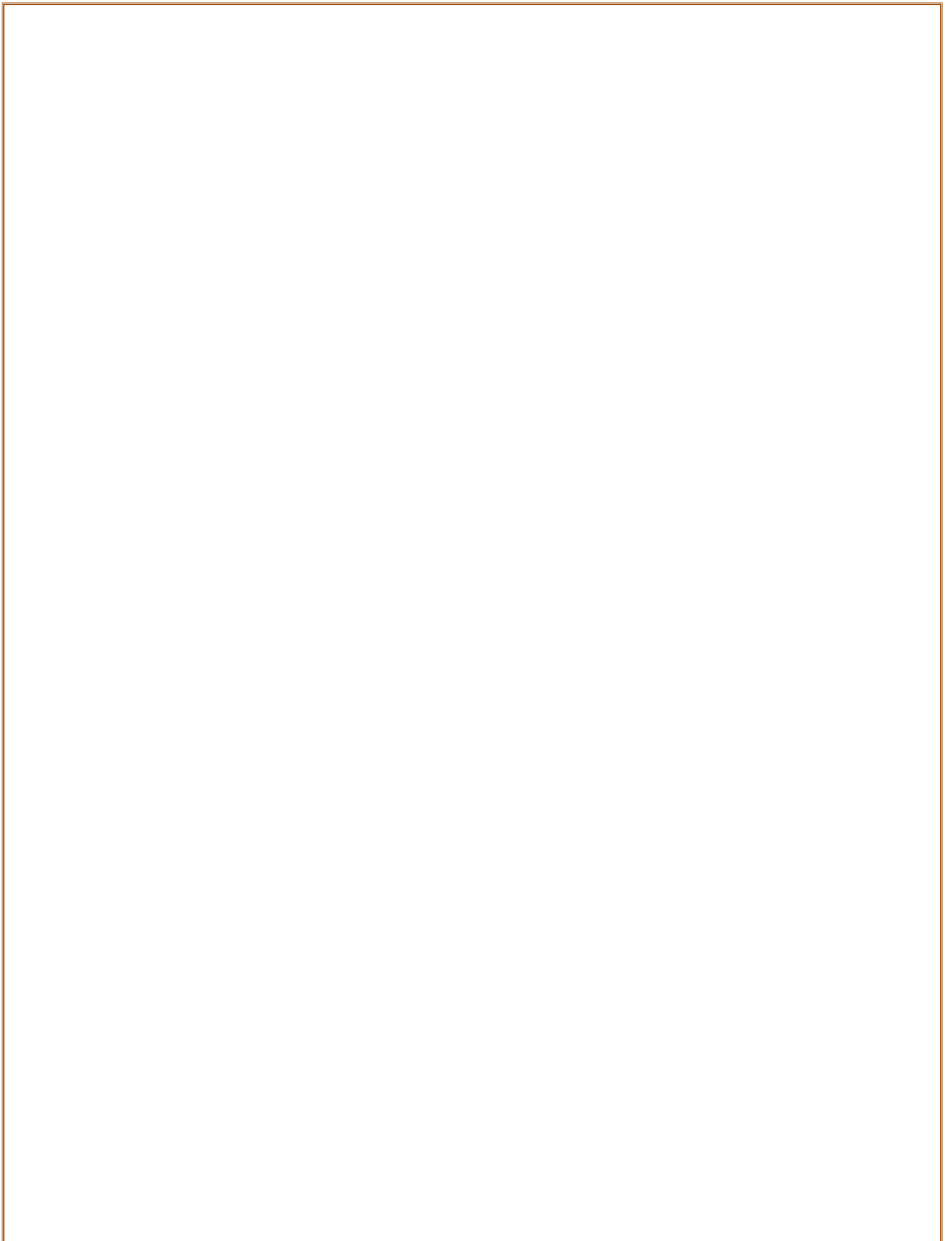
School District 47 has reported 2012 greenhouse gas (GHG) emissions from all sources totalling 1158 tonnes, a reduction of 255 from 2011. It was estimated that stationary fugitive emissions from cooling do not compromise more than 0.01% of School District 47's total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in School District 47's total greenhouse gas emission profile.

Offsets Applied to Become Carbon Neutral in 2012

Total emission offsets in the amount of \$28,515.75 have been purchased from Pacific Carbon Trust, making School District 47 carbon neutral. As required by Section 5 of the Carbon Neutral Government Regulation, 208 tonnes of CO₂e emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2012.

Changes in Greenhouse Gas Emissions & Offsets Reporting from 2010-2012

School District 47 has reported 2012 greenhouse gas (GHG) emissions from all sources totalling 1158 tonnes, a reduction of 255 tonnes from 2011.



Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2012

District schools have continued to purchase supplies with increasing recycled content – nearly 100% of paper products purchased have a minimum of 30% recycled content. In the area of computer technology, server virtualization continues, with over a few more new, more energy-efficient servers virtualized in the past year and plans to virtualize half a dozen more within the next year. All retired equipment was again recycled; no electronics went to the landfills this past year. High school students continue to be encouraged to bring their own electronic devices (computers, iPads, iPod Touch, iPhones) to school, reducing both purchase and maintenance costs, increasing the quantity and quality of available equipment and giving them the use of the most energy efficient equipment available. The implementation of a fleet maintenance program continued with our buses and maintenance vehicles. Improving sustainability continued to be a target. Our district-wide Sustainable Schools Committee (SSC) significantly expanded their initiatives with additional staff in-service, workshops and guest speakers for students, a Bike to Work/School incentive, garden initiatives at two of our elementary schools, and the addition of critter-proof composts at two more of our schools. School District 47 continued its support of Destination Conservation, with every school having a multi-stakeholder team and Year 4 progressing very well. This year, we have continued to make progress in reducing the need for paper documents, with most of our common forms now available online, including registration forms and bus pass applications. The continued growth of our French Immersion program in 2012, called Eco-Immersion due to its focus on outdoor and environmental education, reflects the desire of parents to have even very young children engage learning that has a positive impact on the future of our world.

Plans to Continue Reducing Greenhouse Gas Emissions 2013-2014

School District 47 is involved in two building projects that will lead to a reduction in greenhouse gasses. In April 2011 construction began on the new Westview Elementary School, designed to LEED Gold standards, and is due to open in September 2013. Another project begun in 2011 is due to commence usage in Spring 2013. This project is a wilderness camp for students which will house programs focused on environmental leadership and sustainable living; the buildings themselves were designed using a number of sustainable building principals including solar energy. Our inventory of properties continues to decrease; the reduction of square meterage in our building portfolio will further reduce greenhouse gases. In September 2012, Oceanview Secondary School closed down and its facility is currently in the process of being reconfigured to house alternate and trades programs, with plans to eliminate the spaces the district has been leasing by the end of 2013. We will continue to pursue incremental changes such as doing less printing, increasing double sided copying and consistently having lights off and exterior doors closed. In 2013, emphasis will be placed on encouraging parents and staff to use the newly available online forms instead of the previous paper copies. Continued support for Year 5 of Destination Conservation (DC) and the Sustainable Schools Committee is critical to behaviour change. It is proposed that School District 47 continue with its own home grown Destination Conservation programming after the current partnership agreement ends. Building on the success of significant progress with paper supply purchases, emphasis will be placed on purchasing more materials made with recycled content, including other paper products (ie: envelopes, boxes), and plastics.

We invite you to visit the School District 47 Sustainability and Eco-Education website:
www.outdoors.sd47.bc.ca

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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	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	Additional driver in-service was provided.	Continuer driver in-service with the goal of all drivers being trained. Include training in new driver orientation.	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	Anti-idling policy discussed during scheduled drivers' meetings.	Continue to remind all drivers of the anti-idling policy on a regular basis.	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	Computer technicians continued to carpool whenever possible. Tradesmen and laborers continued to carpool to job sites whenever possible.	Continue to look for opportunities to increase this practice among all staff members	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress	Schools advocated with staff/student/parent population to cycle, walk, use public transit or carpool where possible.	Continue to find creative ways to promote this practice to all staff and students	2008	No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	Planning for purchase of three new school buses.	Buses to arrive and be operational in 2013. All other vehicles to be replaced with fuel-efficient models as needed.	2012	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Not Yet Evaluated				No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Not Yet Evaluated				No End Date (Continuous)
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	Staff reminded to switch off and unplug electrical equipment not in use.	Continue to remind staff to switch off and unplug electrical equipment.	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Staff reminded to switch off and unplug electrical equipment not in use.	Continue to remind staff to switch off and unplug electrical equipment.	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Staff reminded to close blinds at end of work day.	Continue to remind staff to close blinds	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	Staff encouraged to use the air dry setting on dishwashers	Continue to encourage staff	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	Staff reminded to turn out lights that aren't in use and keep exterior doors closed, as well as keeping the heat down.	Continue to encourage staff and provide additional tips where necessary	2008	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	Elevators reserved for use only by physically disabled persons.	Elevators remain reserved for use only by physically disabled persons.	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	Destination Conservation teams continued to remind staff and students.	Continue with the "lights out" initiative	2008	No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Promote hot water conservation	Ongoing/In Progress	Destination Conservation teams initiated school level water conservation initiatives.	Continue with the school level water conservation initiatives through Destination Conservation.	2008	No End Date (Continuous)
IT power management					
Implement server virtualization	Ongoing/In Progress	The process of virtualizing computers was continued and we virtualized most of our other servers.	Complete server virtualization.	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	Replaced current stand-alone printers, copiers and/or fax machines with multi-function devices as equipment needed replacing	Continue replacing stand-alone items with multi-function devices.	2008	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Ongoing/In Progress	Applied auto-sleep settings on many district communications devices.	Apply auto-sleep devices on remaining devices	2008	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	All computers purchased in 2012 were ENERGY STAR models	Continue to repalce computers with ENERGY STAR models as needed	2008	No End Date (Continuous)
Owned buildings					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	Due to small district size we are not able to have an energy manager. Baseline data has been collected as personnel resources permit and additional data and information is provided through our participation in Destination Conservation.	Continue to collect data and gather information through Destination Conservation.	2010	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)
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Not Yet Evaluated				No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development	The design of our new elementary school is targeted at achieving LEED Gold certification. Building is in nearing completion.	The new elementary school building is set to open in Fall 2013.	2010	2013
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Roof top ventilators at OV; window upgrades completed at JT in 2012	Ongoing window replacements at Oceanview.	2008	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Not Yet Evaluated				No End Date (Continuous)
Planning/management					
Reduce office space (square meters) per employee	Not Yet Evaluated				No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Not Yet Evaluated				No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Heating system updated on OV and JT in 2012	Additional upgrades contingent on grant funding.	2010	2012
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	Completed control and boiler upgrades to KCCS in early 2012.	Control upgrades contingent on other mechanical upgrades subject to grant funding.	2011	No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	Structural reviews completed in 2012 on James Thomson Elementary and Oceanview Secondary buildings.	All future retrofits to improve building insulation during retrofit	2012	2014
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Additional teachers interested in Sharepoint were trained.	Train more teachers in the use of Sharepoint software.	2009	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	Promoted this behaviour at all district- and school-based meetings	Continue to encourage staff	2009	No End Date (Continuous)
Electronic media in place of paper					
Use electronic document library for filing common documents	Ongoing/In Progress	Each school has a shared drive, under which common forms are filed	Continue to develop and encourage electronic filing of common documents	2010	No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	Continued to encourage all schools and the board office to achieve the goal of using only paper with recycled content.	Would like to see all schools and the board office using only paper with recycled content.	2009	No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Ongoing/In Progress	Saw schools greatly increase purchase of paper with 40% recycled content.	Continue to encourage schools to increase the purchase of paper with 40% recycled content.	2010	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	Schools increased the purchase of paper with 100% recycled content.	Continue to encourage schools to increase the purchase of paper with 100% recycled content.	2010	No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	As printers need replacing we will continue to install duplex printers. Encourage all staff to print and copy double-sided whenever possible.	Continue to buy duplexing printers to replace existing equipment, as needed. Continue to encourage staff to use these functions whenever possible.	2009	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
Business Travel					
Behaviour change program					
Train staff in web-conferencing	Ongoing/In Progress	Our web-based tech continued to provide staff training in web-conferencing.	Continue to train staff in web-conferencing in 2013	2011	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	This is done via phone, video, and web-conferencing as much as possible.	Continue to encourage staff	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	Carpooling to meetings has increased over 2012	Continue to encourage staff	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress	There has been an increase in alternative transportation, particularly bicycles, to meetings over 2012	Continue to encourage staff	2008	No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Ongoing/In Progress	Created travel reduction goals for 2012 and beyond	Continue with travel reduction goals, evaluating and adjusting as necessary.	2012	No End Date (Continuous)
Virtual meeting technology					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	Currently using Elluminate	Encourage increased usage of web-conferencing software	2010	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	Not Yet Evaluated				No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	Sustainable Schools Committee used their financial resources to provide grants to Brooks Secondary's Students For Environmental Action (SEA) group.	Continue with efforts already established by the Sustainability Committee.	2011	No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress	Additional staff-in-service was provided by the district Sustainable Schools Committee	Continue to provide staff with green professional development through training and workshops.	2011	No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	Ongoing/In Progress	The Sustainable Schools Committee continues to educate employees.	Continue with the efforts of the Sustainable Schools Committee.	2010	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	The Sustainable Schools Committee continues to educate staff about conservation.	Continue with the efforts of the Sustainability Committee.	2010	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	Staff are provided with green tips in newsletters	Continue to find creative formats to provide green tips	2010	No End Date (Continuous)
Team-building					
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	We continued with the position of a dedicated half-time sustainability coordinator.	Continue with this position, so long as funding is available.	2010	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g.,	Ongoing/In	District Sustainability teams have provided education to staff and	Continue with and build on the education and training provided by	2010	No End Date

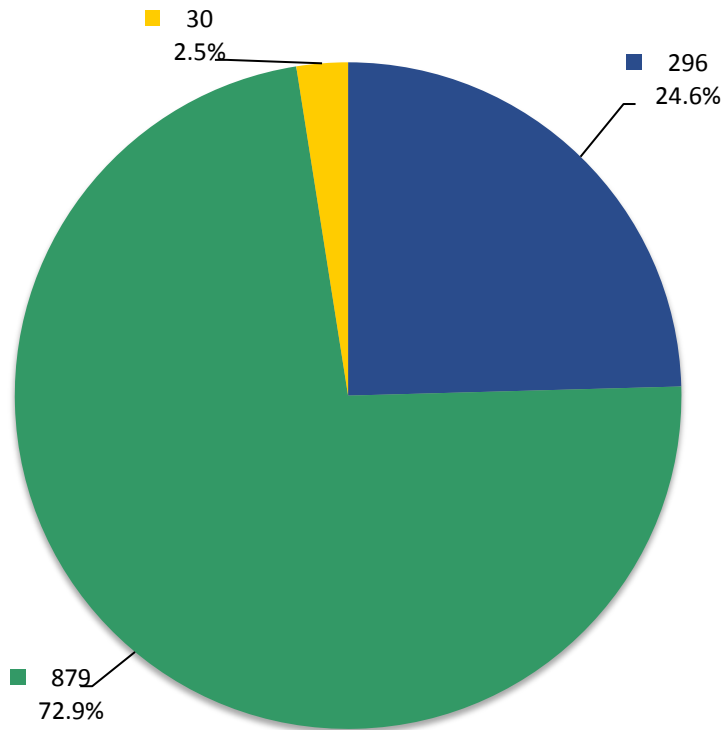
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Actions to Reduce Provincial Emissions and Improve Sustainability

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
community-based social marketing)	Progress	students throughout 2012.	the Sustainability Committee.		(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 changes in climate into the organization's decision making.	Not Yet Evaluated				No End Date (Continuous)
Building construction, renovation					
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	In Development	Developing a policy with ongoing support of the community's sustainability charter	Continue with development and gaining support.	2012	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress	Lifecycle costing considered in the evaluation of proposals for the construction of the new elementary school, set to open in Sept. 2013	Continue to consider lifecycle costing in future renovations where appropriate.	2011	No End Date (Continuous)
Commuting to and from home					
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	Continued with the Bike to Work/School Incentive begun in 2011 by the Sustainable Schools Committee	Continue to encourage students and staff.	2010	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress	Shower facilities for staff and students available at some locations, and considered in planning of new school.	Continue to encourage staff and students to use shower facilities provided.	2008	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress	Secure bicycle storage is available at some locations.	Continue to encourage staff to use storage provided.	2008	No End Date (Continuous)

**School District 47 - Powell River
Greenhouse Gas Emissions by Source
for the 2012 Calendar Year (tCO₂e*)**



Total Emissions: 1,204

- 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 3:56 PM)

Total offsets required: **991**. Total offset investment: **\$24,775**. Emissions which do not require offsets: **214** **

*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.