



2010 Carbon Neutral Action Report School District No. 47 (Powell River)

Executive Summary

In 2010 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 electrical consumption. Through Destination Conservation we were able to quantify an overall 9% reduction, saving 13 tonnes of carbon dioxide and \$40,000 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 2010 as Year 2 of Destination Conservation put emphasis on reducing water consumption. In the area of computer technology steady progress was made with acquiring improved hardware and virtualizing servers. The Operations Department made some additional progress in reducing greenhouse gas but funding constraints prevented the department from making major changes. 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.

Steve Hopkins April 7, 2011

Steve Hopkins Date
Secretary Treasurer

2010 Greenhouse Gas Emissions

School District 47 has reported 2010 greenhouse gas (GHG) emissions from all sources totalling 1,144.07 tonnes. 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 2010

Total emission offsets in the amount of \$28,601.75 have been purchased from Pacific Carbon Trust, making School District 47 carbon neutral. As required by section 5 of the Carbon Neutral Government Regulation, 208.55 tonnes of CO₂e emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2010. However, they are not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation.

Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2010

District schools made major progress with their supplies, with 59% of the paper purchased having recycled content. In the area of computer technology server virtualization has been expanded, new servers are bigger and more energy efficient than the ones they replaced, and 35 ultra energy efficient mini computers were purchased to replace less efficient machines. High school students were encouraged to bring their own electronic devices (computers, iPads, iPod Touch, iPhones) to school, reducing purchase and maintenance costs, increasing the quantity 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) expanded their initiatives with additional staff in-service, a new website that is part of the school district portal and funding the performance of environmental singer/musician Holly Arntzen at all elementary schools. The SSC has funded permanent, locally built compost bins at about half the district schools. School District 47 continued its support of Destination Conservation, with every school having a multi-stakeholder team and Year 2 progressing very well. Staff knowledge of Sharepoint software has been expanded, allowing everyone to share more information electronically and reduce meetings. In 2010 our district initiated our first French Immersion class, a kindergarten and grade 1 split class, with an outdoor education and environmental focus. We call it Eco-Immersion. This reflects the desire of parents to have even very young children engage in nature-based learning.

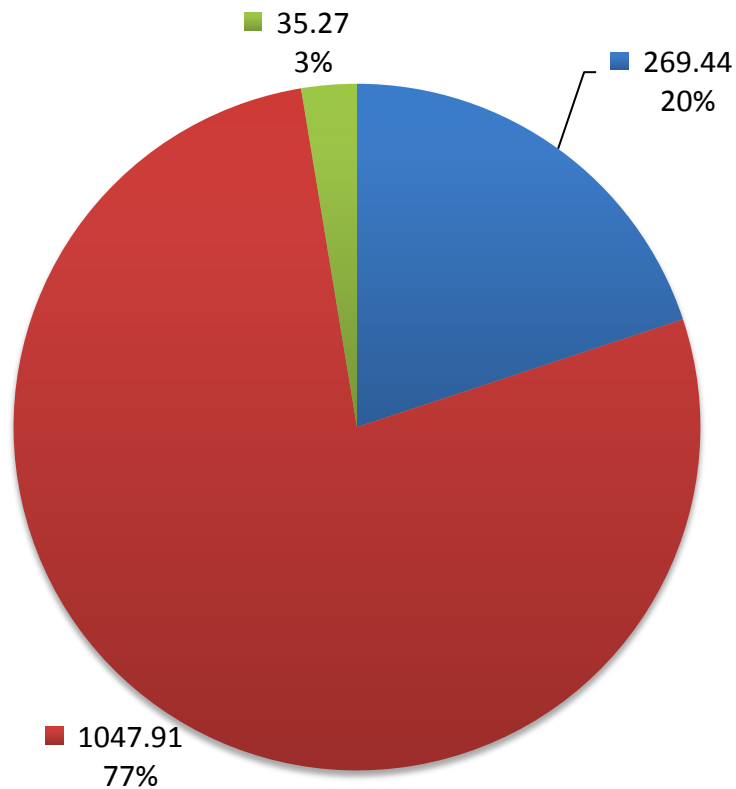
Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013

School District 47 is involved in two building projects that will lead to a reduction in greenhouse gasses. In April 2011 construction will begin on the new Westview Elementary School, designed to LEED Gold standards. A new field house adjacent to the all-weather playing field at our high school is nearing completion. It includes a variety of green technologies and will be a demonstration site for elementary students. The inventory of district properties is decreasing, led by the demolition of the former Max Cameron Secondary School in 2011. After June 2012 Oceanview Middle School will be reconfigured to house alternate and trades programs, eliminating the spaces the district has been leasing. This reduction of square meterage in our building portfolio will reduce greenhouse gases. We will pursue incremental changes such as doing less printing, increasing double sided printing and consistently having lights off and exterior doors closed. Continued support for Year 3 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. The focus in Year 3 of DC is on waste reduction. Completing a permanent compost bin at every school will support this. Building on the success of significant progress with paper supply purchases, emphasis will be placed on achieving 100% use of paper with recycled content.

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

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Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 1352.62

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **1144.07**. Total offset investment: **\$28,601.75**. Emissions which do not require offsets: **208.55** **

*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.

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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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Behaviour change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	80	% of current drivers are trained	Additional driver in-service was provided.	Continuer driver in-service with the goal of all drivers being trained.	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Computer technicians continued to carpool whenever possible.	Look for opportunities to expand this practice to tradesmen and labourers.	2008	2013
Other Mobile Fuel Combustion Actions							
Computer and software service is done remotely using remote access software.	Ongoing/In Progress			Use of remote access continued.	Use remote access software as extensively as possible.	2009	2013
Computer sevice calls are planned to include multiple destinations in a single trip.	Ongoing/In Progress			Reducing the number of service calls by careful planning continued.	Continue to be efficient in carrying out service calls.	2009	2013
Zonar hardware and software is in use to monitor fleet driver practices.	Completed in 2010			The installation of Zonar hardware and software was completed.		2009	2010
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Owned buildings							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	50	% of owned buildings have an established energy performance baseline	Due to small district size we are not able to have an energy manager. Through our participation in Destination Conservation we have received some initial energy performance information.	Baseline data will be collected as personnel resources permit and additional data is provided by Destination Conservation.	2010	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development			Ongoing design work on our new elementary school targeted achievement of LEED Gold certification.	The design of new elementary school is now completed.	2010	2011
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	100	% of buildings built or renovated since start year indicated used the integrated design process	The new elementary school will open in September 2012.	The design of new elementary schoo is now completed.	2010	2011
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress			To date, no money has been available for energy retrofits.	Dependent on the availability of money for retrofits.	2005	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Completed in 2010	100	% of computers shut down automatically outside of regular business hours	Installed software that shuts down monitors on teacher computers.		2009	2010
Implement server virtualization	Ongoing/In Progress	40	% of servers have been virtualized since start year indicated	The process of virtualizing computers was continued.	Virtualize another 50% of district servers.	2008	2011
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	50	% of computers have auto-sleep settings applied	All teacher computer monitors have had auto sleep settings applied.	At this point there are no plans to extend this process to district computers.	2008	2011

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	75	% of fridges are ENERGY STAR rated	No refridgerators were replaced.	Continue to replaced current refridgerators with Energy Star models as equipment is relaced.	2008	2013
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Staff reminded to unplug electrical equipment.	Continue to remind staff to unplug electrical equipment.	2009	2013
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Destination Conservation teams continued to remind staff and students.	Use energy use data to reinforce the idea that turning off lights does reduce the consumption of electricity.	2008	2013
Promote hot water conservation	Ongoing/In Progress			Year 2 of the Destination Conservation program focusses on water conservation.	Destination Conservation teams initiate school level water conservation initiatives.	2010	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	18	% of total paper purchased contains 30% recycled content	Encouraged schools and the board office to increase the amount of paper containing 30% recycled content that is purchased.	Require all schools and the board office to achieve the goal of using only paper with recycled content.	2009	2013
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	2	% of total paper purchased contains 100% recycled content	Schools have started to purchase some paper with 100% recycled content.	Encourage schools to increase the purchase of paper with 100% recycled content.	2010	2013
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	40	% of network printers or photocopiers are set to automatic double-sided	As printers need replacing we will continue to install duplex printers.	Continue to buy duplexing printers to replace existing equipment.	2009	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Completed in 2010	100	% of staff workstations with software installed	The implementation of Sharepoint software is complete. Every employee has access.		2008	2010
Post materials online that were previously printed	Ongoing/In Progress	10	% of materials that were previously printed are posted online	Orientation materials for new employees have been posted online.	Continue to review district printed materials and post them online if appropriate.	2009	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed in 2010			All employees who are willing to receive their payroll information electronically have it provided in that manner.		2008	2010
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	60	% of staff currently have received collaborative software training	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			Used staff meetings and Green Glance newsletter to promote this behaviour.	Continue to encourage staff.	2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Used staff meetings and Green Glance newsletter to promote this behaviour.	Continue to encourage staff.	2009	No End Date (Continuous)
Other Paper Supplies Actions							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Purchase 40% post-consumer recycled paper.	Ongoing/In Progress	40	% of total paper purchased contains 40% recycled content.	Schools increased their purchases of paper with recycled content substantially.	Require all schools and the board office to achieve the goal of using only paper with recycled content.	2010	2013

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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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Business Travel							
Virtual meeting technology							
Make desktop web-cameras available to staff	Ongoing/In Progress	8	% of staff have access to a desktop web-camera	Hardware is installed for use of the following programs: Partners In Education, Provincial Resource Program	Make additional hardware available when requested.	2008	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	10	% of staff are trained web-conferencing	Access to technical support is readily available.	Look for opportunities to make future use of web conferencing and train additional teachers as necessary.	2009	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	9	% of staff are trained in video-conferencing or have access to technical support	At this time there is no need for video-conferencing and the district has no equipment.	Continue to monitor the district needs and provide training if necessary.	2008	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Some out of district meetings were only available electronically so teachers and administrators did get experience in virtual attendance.	As additional events and meetings are only offered electronically additional teachers will be encouraged to participate virtually.	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			District computer technicians continued to carpool to school sites.	Use the Green Glance newsletter to encourage carpooling. Encourage district management team members to carpool where possible.	2009	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Completed in 2010			The Sustainable Schools Committee (SSC) is a well established , multi stakeholder group. The committee chair is part of a posted position.		2008	2010
Provide resources and/or dedicated staff to support teams	Completed in 2010			The district provides a small fraction of an FTE of teacher time to chair the SSC. An annual budget allocation is provided to the SSC.		2008	2010
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			Approximately 15 staff and 50 students received Destination Conservation training.	Year 3 of Destination Conservation training will be provided to students and staff.	2009	2013
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Completed in 2010			A \$500 scholarship was established and awarded to a high school student for environmental leadership. An allocation in the SSC budget will fund this scholarship in perpetuity.		2009	2010
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Martin Leblanc, an environmentalist, was the keynote speaker at a district professional development day attended by all teachers and support staff. Teachers were trained in Destination Conservation for a second year.	The Sustainable Schools Committee will look for other presenters to speak to employees.	2009	No End Date (Continuous)
Staff awareness/education							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		The Green Glance newsletter includes conservation information and is sent to all employees. Fifteen staff received Year 2 Destination Conservation training.	Year 3 of Destination Conservation training will be proved to teachers.	2009	2012
Provide green tips on staff website or in newsletters	Ongoing/In Progress		The Sustainable Schools Committee publishes their electronic Green Glance newsletter on a regular basis.	Continue to develop the district based Sustainable Schools Committee website.	2008	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		School students receive climate change education in their science courses.	Continue to educate students about climate change as part of their basic educational program.	2005	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Approximately 50 students received Destination Conservation training. They in turn educated other students through the projects they implemented. Conservation is a topic in various school curricula.	Implement Year 3 of Destination Conservation.	2009	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Elementary school newsletters contained some green tips.	Encourage all schools to have a green tips section in their school newsletter.	2008	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions						
Provide additional funding to support student engagement.	Ongoing/In Progress		The Sustainable Schools Committee made grant money available to schools to support their projects.	Continue to make grant monies available.	2009	2013
Provide energy savings rebates to Destination Conservatin teams.	Ongoing/In Progress		10% of the electrical energy savings from 2010 over 2009 were returned to schools.	Continue to offer the incentive of rebating to schools a percentage of the savings realized from their greenhouse gas reductions.	2010	No End Date (Continuous)
Eco Immersion program established.	In Development		A French Immersion class with a nature based learning component was established, beginning sustainability education at a very young age.	If there is sufficient enrolment demand the program will be expanded.	2010	No End Date (Continuous)
Other Sustainability Actions						
Waste reduction/diversion						
Implement a hazardous waste reduction and disposal strategy	Completed in 2010		As the policy has been in place for several years, no new steps were required.		2005	2010
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Completed in 2010		Completed the process of replacing non-green cleaning products with green ones.		2007	2010
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		No policy has been established. We are a small district with the ability and motivation to simply reuse materials where appropriate.	Continue to reuse materials where appropriate.	2005	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress		The construction of a new elementary school is in the design stage and lifecycle costing is incorporated.	Monitor that the planned green aspects of the school are incorporated into the construction process.	2009	2012
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Scent free schools or areas of schools are implemented as necessary.	Maintain or expand scent free schools or areas on a needs basis.	2007	No End Date (Continuous)

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Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress			When carpeting was replaced the new product purchased was low VOC.	When a school painting program is reestablished low VOC paint will be purchased.	2005	No End Date (Continuous)
Commuting to and from home							
Introduce telework/work from home policy	Ongoing/In Progress			Three distance education teachers work from home on a regular basis.	Investigate whether there are further opportunities to telework.	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			The Brooks Secondary environmental club is making a vigorous effort to promote cycling to school	Continue to encourage staff and students throughout the district.	2007	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress			Staff shower facilities are designed into the new elementary school that is starting construction in April 2011. Currently showers are only available at the middle school and high school.	Due to financial constraints the situation across the district is unlikely to change.	2005	No End Date (Continuous)
Other Sustainability Actions							
Conserve water used to sprinkle school playing fields.	Ongoing/In Progress			The number of field sprinkling systems on timers remain the same.	Expand the use of timers with field watering systems to include our new elementary school.	2008	2012
All obsolete computer hardware is recycled.	Completed in 2010			Continued with the established practice of recycling 100% of obsolete computer hardware.		2008	2010
Application for Trees for Tomorrow grant was successful.	Completed in 2010	100	% of bank restoration work is completed	Restoration of a bank area near Brooks Secondary using trees and shrubbery is complete.		2009	2010
School vegetable gardens, looked after by students, are planned.	In Development			Two district schools are fundraising to pay for establishing school vegetable gardens.	Start and sustain the gardens. Encourage additional schools to have vegetable gardens.	2010	No End Date (Continuous)
Permanent compost bins are constructed at each district school.	Ongoing/In Progress	50	% of schools have a compost bin.	Attractive, animal proof, compost bins were built on district school grounds.	Build compost bins for those schools that do not have them.	2009	2013