

School District 53 (Okanagan Similkameen)

2009 Carbon Neutral Action Report

Executive Summary

Due to funding issues and the loss of AFG the district was not able to move forward as quickly as desired towards becoming carbon neutral. Our schools are heated/cooled primarily with rooftop units and we typically replace 3 to 6 every year. This reduces our carbon footprint as the newer units are more efficient and environmentally friendlier. As we are now behind on this aspect of becoming carbon neutral our priority moving forward will be to catch up on our replacement of older inefficient units.

Despite our inability to move forward in 2009 on the big ticket items noted above, the district has been active in reducing our carbon footprint. Driver training has been continued, our anti idling policy is in force and has been accepted by staff and we look forward to a renovation of Southern Okanagan Secondary School and becoming LEED Gold in that school.

As an educational organization and as members of society we realize the importance of looking after the planet. Our students benefit greatly by the increased awareness around climate and other environmental issues. The modeling that government is doing today will shape the attitudes and responses of today's students when they are charged with leading families and communities in environmentally sound behaviour.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

One of our key actions in 2009 was to implement walk limits for the first time. The result of this is that we were able to eliminate several bus routes in our district. Additionally more students were walking to school than previously which provides many other societal benefits as well.

Additionally, we have gone to DDC for better temperature monitoring,, continue to car pool where possible, ensure our vehicles are maintained, continue with sound and improving paper purchase practice, have defaulted our multi functional devices to double side copy and have utilized technology for classroom instruction and participation in activities through webcasting and Elluminate. We are beginning to work with Elluminate to host district meetings to reduce windshield time for our employees.

Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

Our two major focuses going forward are with the construction/renovation of Southern Okanagan Secondary School (SOSS) and replacing aging and inefficient roof top units. The SOSS project presents many opportunities as it is built to LEED Gold standards. One of the biggest contributors to Greenhouse gas reduction will be the development of a geo thermal field for the school, with a tie in to Oliver Elementary School. This will reduce our dependency on the costly and less energy efficient rooftop unit. Also the renovated SOSS will have a wind turbine, primarily to educate the students, but one which will also provide a small GHG reduction. We will also be installing solar panels in the school to utilize and obtain environmental benefits from the sun.

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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 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	95	% of vehicles are fuel- efficient models	most vehicles are 2006 or newer	continue replacing older vehicles as the budget allows with a focus on fuel efficiency	2010	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	0	% of vehicles down-sized since start year indicated	No vehicles were replaced in 2009. However in some cases in the past we have increased vehicle capacity for reduction in the number of vehicles on the road.	Right sizing is an important principle to us and will be an important consideration when we need to replace a vehicle.	2010	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Complete	100	% of vehicles are subject to regular maintenance for fuel efficiency	All vehicles have regular maintenance performed on them	continue providing ongoing servicing and maintenance	2010	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	In Development			as we replace vehicles we review the needs of the district	fuel efficiency will be an important consideration in making a decision.	2010	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Complete	100	% of current drivers are trained	Drive smart training provided to all drivers	Ensure any new drivers are given this training and refresh older employees periodically.	2009	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Complete	100	% of current drivers are trained	operating procedures are instructive/signage in place at schools and other work sites	Continue with our practices and procedures	2009	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	100	encouraged and/or required depending on circumstances	example - grounds people often vehicle pool and will utilize a crew cab so more wokers can be transported in one vehicle.	continue with our practice/procedures to minimize our carbon footprint.	2009	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
No action taken at this time with respect to hybrids or alternate fuels	In Development				we will review our needs and the applicable funding to see if there is a fit.	2010	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development	0		research started on this. Our analysis indicates this is a costly item	ongoing research to view where benefits may arise versus cost	2010	2012
Owned buildings							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	100	% of owned buildings have an established energy performance baseline	comparitive review of facilities undertaken	continue our ongoing monitoring and where feasible improve efficiencies	2009	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Ongoing/In Progress	0	% of owned buildings have operations and maintenance labelling/certification	decision made that SOSS school renovations will be to Leed Gold Standard	no plans to spend money on existing buildings to upgrade to Leed Gold certification unless costs funded	2009	2012

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Ongoing/In Progress	0	% of commercial interiors in owned buildings have labelling	SOSS School Renovations plus Neighborhoods Of Learning will be to Leed Gold Standard	very little "commercial facing" in our district. Continue with plans for Neighborhoods of Learning Leed Gold standard.	2010	2012
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	0	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	As stated above...decisions on SOSS renovation and Neighborhoods of Learning.	Continue with plans for building upgrades to Leed Gold Standard	2010	2012
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	0	% of buildings built or renovated since start year indicated used the integrated design process	Construction begins summer of 2010	ongoing with SOSS and Neighborhoods of Learning as well as any other construction projects that may materialize.	2010	2012
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	40		review refrigerants in use...discuss with school admin	as replacing, upgrade to newer technology	2010	2012
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress			replacement of RTU with heat pumps	continue with improvements as funding allows.		
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	10	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	as above	with new construction we will move to geo thermal and away from more costly energy systems	2010	No End Date (Continuous)
Upgrade lighting systems during retrofits	Complete	100	% of retrofits (captured above) had lighting systems upgrades	little completed in 2009 as several years back we upgraded our lighting in consultation with Fortis BC.	Energy efficient lighting will be installed in our building projects ay SOSS and Neighborhoods of Learning	2010	2012
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had control system upgrades or adjustments	Completion of DDC controls	as above...new construction will incorporate	2010	2012
Improve building insulation (including windows) during retrofits	In Development	0		minimal building insulation/window upgrades. Building reviews completed	Results of 2009 building reviews will lead to building action as funding allows for 2010-2012	2010	2012
Install an on-site renewable energy demonstration project	Ongoing/In Progress	0	% of retrofits (captured above) had on-site renewable energy components	SOSS Planning	Renovated SOSS will utilize some solar panelling and will also demonstate the utilization of wind power.		
IT power management							
Install power management software which shuts down computers outside of regular business hours	Complete	100	% of computers shut down automatically outside of regular business hours	project completed	continue utilizing power management software.	2009	No End Date (Continuous)
Implement server virtualization	In Development			computer technicians have provided recommendation	implementation	2010	2012
Apply auto-sleep settings on computer monitors and CPUs	Complete	100	% of computers have auto-sleep settings applied	all new computers purchased had them	refresh program for computers will require sleep settings. (AS we currently have)	2009	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Complete	99	% reduction in printers, copiers, and/or fax machines since start year indicated	continuation of multi functional device lease from before 2009	ensure when new lease occurs MFD's have sound energy usage technology	2006	No End Date (Continuous)

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Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Complete	100	% of devices have auto-sleep settings applied	completed prior to 2009	continue with new technology for energy efficiency as new lease negotiated.	2006	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Complete	100	% of computers are ENERGY STAR rated	completed prior to 2009	ensure new computers have every star rating	2008	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			equipment has been evaluated for energy efficiency	as replaced, upgrade to new technology. SOSS reno will include energy rated appliances.	2010	2012
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			as above	as above	2010	2012
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	Ongoing/In Progress			personal office reviews	implement sound practices	2010	2012
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			education through the schools and other office locations	monitor the practices being used and continue education.	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			as above	monitor staff and continue education	2010	2012
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			encouragement/education	monitor staff and provide encouragement	2010	2012
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			reminders about lights	control settings for heat and cooling set for weekend/evening use and can not be changed on site.	2010	2012
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			will always be ongoing. Sticker messages in some schools	increased measurement of usage and more reminders	2009	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	20	% of total paper purchased contains 30% recycled content	we purchase paper as part of a consortium of several school districts and recycled paper is ordered as much as possible.	Consortium will review paper choices	2010	2011
Purchase 100% post-consumer recycled paper	Ongoing/In Progress			as above	as above with a view to 100% recycled	2010	2011
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Complete			continue with what we are doing			
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	complete			MFD's all have this capability. It is controlled by the user from their desktop.			
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	Ongoing/In Progress			nothing formal done. However awareness of paper usage reduction communicated	require these settings to be changed if necessary	2011	2012
Electronic media in place of paper							

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Use electronic document library for filing common documents	Ongoing/In Progress		we have many of our forms online. We have looked at electronic document retention and will implement when funding allows.			
Post materials online that were previously printed	Ongoing/In Progress		increased use of our website www.sd53.bc.ca as a means to store common information and forms. Also many documents can be completed online.	continue our progress to fully utilize online capabilities.		
Switch to an electronic payroll notification system in place of paper pay stubs	Complete		completed 2009	continuance of our practice	2009	No End Date (Continuous)
Behaviour change program						
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress		agendas filed online for board meetings. Trustees/staff utilize their computers during meetings	encourage continued expansion of paperless meetings	2010	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress		encouragement offered as a way to preserve budgets	continue encouragement until it becomes the norm. Tighten paper budgets	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 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 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Business Travel							
Policy and budgeting							
Create a low-carbon travel policy or travel reduction goal	Ongoing/In Progress			review travel costs, more carpooling requirements, don't duplicate travel where possible	continue monitoring, potentially less people attend functions	2010	2012
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Complete	100	% of computers have web-conferencing software installed	Elluminate is used in our district. Even the odd high school course is offered to all our secondary schools utilizing elluminate. Started 2008-09 year)	continued expansion of this technology including for admin meetings. This will assist in reducing travel costs.	2010	2012
Make desktop web-cameras available to staff	Ongoing/In Progress			many of our staff have already utilized web cams during or prior to 2009	Increase usage.	2010	2012
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	50	% of meeting rooms have access to video-conferencing equipment	Video conferencing became common in 2009	Increase usage as opportunity presents itself	2010	2012
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress			many of our staff utilized web conferencing	continue and increase usage. Assist staff who need help	2010	2012
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	100	% of staff are trained in video-conferencing or have access to technical support	started using - technical support available for those who need assistance	as above	2010	2012
Encourage staff to consider virtual attendance/presentation at events where possible	In Development				some internal meetings will be held in the virtual world. Outside events if the opportunity allows for it. The technology is available	2010	2012
Encourage carpooling to meetings	Complete			The district has always been active of encouraging/requiring car pooling		2009	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development				It would be helpful if government could provide targeted funding to non BC Hydro school districts so an Energy Manager could be hired to take on energy management and GHG reductions, particularly in smaller school districts where an Energy Manager will not likely be hired over another classroom teacher in terms of priority.	2010	2012
Provide resources and/or dedicated staff to support teams	In Development			off the side of several persons desks	In a small district the dedicated time can only be minimal due to lack of staff to develop a program.	2010	2012
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development				see above	2010	2012
Staff Professional Development							

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Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Workshops attended by facilities staff	ongoing education. Awareness is the key for those not directly involved in this. We are looking to incorporate green thinking into some of our pro d sessions.	2010	2012
Staff awareness/education						
Provide education to staff about the science of climate change	Ongoing/In Progress		Informal discussion	ensure all staff are aware of the districts direction and the rational	2010	2012
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		Most focus has been on the renovated school. Water metering will be introduced in Oliver further raising the focus on conservation	Expand the use of reclaimed water where possible.	2010	2012
Provide green tips on staff website or in newsletters	In Development		some schools were doing things in newsletters	find opportunities to encourage green thinking	2009	2012
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		Started installing low flush toilets as they are being replaced.	continue this practice. Our SOSS project will meet Leed Gold Requirements in this area.	2009	2012
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress		all stormwater goes into rock pits or bio swales.	continue practice	2009	2012
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		recycling programs were expanded	Continue looking for alternative ways of disposal to expand to more types of material.	2010	2012
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		facility assessments completed.	SOSS asbestos abatement program to remove all asbestos as part of renovation program	2010	2012
Procurement (non-paper supplies)						
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	In Development			Green standards will be a factor in the selection of such office equipment	2010	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		standards reviewed and environmentally sound product choice	Continue purchasing supplies consistent with sound environmental practice.	2010	No End Date (Continuous)
Require a minimum purchase of sustainable, and organic food and beverages supplied by contracted food suppliers or caterers	Ongoing/In Progress		Farm to School Salad Bar program established where product is locally grown to organic standards	Program is expanding across district and eventually will be in all schools	2009	2012
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		Policy not established, but attention paid to this matter with upcoming construction	landfill cost control/waste management part of planning for SOSS renovation project.	2010	2012
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress		Part of the SOSS redevelopment planning	Implementation. Continue with other projects as developed	2009	No End Date (Continuous)
Indoor air quality						

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Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Many of our worksites voluntarily adhere to this	Provide encouragement to other sites. Find the "champions"	2009	2012
Commuting to and from home						
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Complete		All schools have this capability. School Board office does not.		2009	2010
Provide secure bicycle storage	complete		as above		2009	2010