

Carbon Neutral Action Report School District No. 82 (Coast Mountains)

Executive Summary

The Coast Mountains Board of Education SD 82 and its 22 schools are working to be leaders in Northern BC in sustainable practices and environmental awareness. Our Districts commitment to promoting environmentally friendly practices and reducing our collective carbon footprint is beginning to take hold at all levels of the organization.

There are currently many projects and initiatives being carried out in Schools and Classrooms throughout the Coast Mountains School District, including: recycling, anti-idling, walk to school, turn it off programs for both lighting and computers and water conservation awareness. Our schools also participate in a number of celebrations revolving around earth day.

Objectives

As an K-12 educational provider our mandate is to provide educational service to our students and through them their families. Coast Mountains Board of Education believes what we teach our students effect what they bring home and practice in their communities .

Part 1: Actions Taken to Reduce Greenhouse Gas Emissions in 2008

Overview

In 2008 our schools provided leadership in a variety of projects designed to educate our students in the importance of sustainability. School projects ranged from paper and drink container recycling, celebrating earth day, litterless lunches, anti idling campaigns to community gardens, tree planting and healthy eating programs. In addition to this our facilities department has continued to practice energy reduction strategies with the mandate of reducing the overall cost of energy used within our facilities.

1.1 Mobile Fuel Combustion

In 2008 The Coast Mountains Board of Education made a commitment to promote car pooling for all meetings within the district. In addition to this the Board is encouraging staff to use telephone conferencing and the internet to reduce the amount of travel required.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	In Progress	Reduced fuel costs decreased maintenance costs and reduction of GHG emissions	Replacing older vehicles with newer more efficient ones.
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	In Progress	Reduction of GHG emissions	School based programs have been promoted on a site by site basis
Encouraged car pooling in fleet vehicles	In Progress	Reduced fuel costs and reduction of GHG emissions	District staff, AOs and trustees are car pooling to meetings

1.2 Stationary fuel combustion and electricity

The Coast Mountains Board of Education continues to look for efficiencies to reduce overall energy consumption. In 2008 the District has completed the elimination of standard light bulbs, continued to install motion sensors for lighting control, completed phase 1 of a DDC control system for its heating plants, upgraded an HVAC system in one of our schools, installed energy efficient boilers in one of our schools, reinforced the lights out program and replaced aging copiers with models that both fax and copy. In addition to this our IT department replaced over 100 computers with energy star models.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # computers with EnergyStar models	In Progress	Reduced energy costs	Replacing older machines with new energy efficient models
Turned off lights in unused rooms	In Progress	Reduced energy costs	Continue to support lights off programs in schools. Custodial staff have received in-service on lights off programs and they know the benefits of the program.
Replaced Refrigerators (EnergyStar rated appliance)	In Progress	Reduced energy costs	Replacing units and funding becomes available.
Replaced other appliances (with EnergyStar rated appliance)	In Progress	Reduced energy costs	Replacing units and funding becomes available.
Installed multi-function devices (and removed stand-alone printers/faxes)	Completed	Reduced copy costs and energy costs	Photo copiers and fax machines were replaced with dual purpose machines in 2008
Replaced standard bulbs with CFLs	Completed	Reduced energy and maintenance costs	District supplies CFL only to schools. No incandescent lights are purchased for lighting purposes
Installed motion activated lights	In Progress	Reduces energy costs	Installing as funding permits
Undertaken lighting retrofit	Completed	Reduced energy costs	retrofitted all T 12 tubes with t8 energy efficient tubes and ballasts. Replaced mercury lights with t8s in gym areas
Utilized desk-top power management settings on computer	In Progress		
Initiated corporate computer shut-down/wake-up for maintenance	In Progress	Reduces energy costs	deep freeze presently used - looking for other solutions
	Installed energy efficient condensate boilers	Reduced energy and maintenance costs	Expecting a 40 % reduction in natural gas used due to this change.

1.3 Supplies

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Initiated automatic double sided printing	In Progress		New equipment has capabilities for double sided printing .
Re-used non-confidential scrap paper	In Progress	Reduces paper purchase costs and reduces volume in waste stream.	Used as note paper in some facilities. Not yet district wide.
Restructured a process to use less paper	Planned	Reduced purchase costs and reduces volume in waste stream	Install hand dryers in wash room and change room areas.
Actions on non-paper related supplies:			
Encouraged re-use of furniture and equipment	In Progress	Reduces purchase costs	On going

1.4 Travel

Coast Mountains Board of Education has promoted the use of car pooling and teleconferencing to reduce both costs and GHG emissions.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Mandated car pooling to government meetings	In Progress	Reduced fuel costs and reduces GHG emissions	District staff, AOs and trustees use car pooling to get to meetings
teleconferencing	In Progress	Reduces GHG emissions and travel costs	Health and Safety committee has members who join monthly meeting by conference call

1.5 Employee Engagement

The Facility department has lead the way in the education of its staff on both energy and water conservation. Staff training sessions on DDC controls and PA Systems for the trades staff and energy conservation seminars for the custodial staff have started to produce reductions in the majority of our facilities.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided conservation education	In Progress	Better educated custodial staff and lower energy costs Electrical staff are looking for electrical savings that they can generate with our DDC system.	Meeting with custodial staff outlining lights out program and their responsibilities. Provided DDC inservicing for our Electrical department staff.
Developed Green Teams	In Progress	Lower energy consumption, reduction in waste stream, lower water consumption	Only have teams in small number of schools

1.6 Sustainability Actions (others)

Our schools have a number of recycling programs which assist us in educating the students on environmental stewardship. Our custodial department has also contributed by exploring alternative cleaning methods within the schools.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Took water conservation measures – low flow showers or toilets, fix leaks	In Progress	Reduction in water usage and costs. Reduction in maintenance.	Installed waterless urinals, low flow toilets and retrofit tank style urinals with flush valves
Ran dishwasher only when full	In Progress	Reduction in water usage and costs	Presently not District wide program.
Reduced/replaced bottled water with filtered or refrigerated water	In Progress	Reduction in waste stream. Costs saving measure.	Board of Trustees are setting an example during board meeting by eliminating bottled water and replacing it with pitchers and glasses.

Improved recycling measures	In Progress	Reduction of material in waste stream	Some type of recycling program presently running in each school
Supported composting	In Progress	Reduction of material in waste stream	Maintenance waste going to community gardens for composting
Used re-usable dishes	In Progress	Reduces costs and reduces volume in waste stream.	Used in salad bars and some areas - not district wide
Purchased green cleaning products	In Progress		
Used green (low-e paints)	In Progress		Most paints used within our schools are low e paints
provided leaves from school properties to community gardens for winter munch	In Progress	reduces volume in waste stream. Assists community group	diverted waste from land fill to composting

Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011

2.1 Mobile Fuel Combustion

The Coast Mountains Board of Education is in the process of reviewing the fuel consumption of its fleet and investigating methods of reducing the emissions created. Purchasing fuel efficient vehicles, looking at hybrid models, reviewing vehicle maintenance programs and requiring our future Bus contractors to have all of their drivers complete the NRCAN Smart Driver Education program will assist us in meeting our reduction goals.

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Replace # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	in progress	Reduction in fuel and maintenance costs. Reduction of GHG emissions	hybrid cars for our district IT and itinerant Staff are being reviewed. We will continue to update our fleet with newer fuel efficient models	2009 - 2011
Initiate new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	planned	Reduction of fuel consumption and GHG emissions	Expand vehicle maintenance program to ensure scheduled preventive maintenance cycles are adhered to	2010
Establish anti-idling behaviour change program (e.g. signs, stickers, messages)	In Progress	Reduction of fuel consumption and GHG emissions	Anti idling program will be promoted as a District and school initiative. All maintenance department staff will be included in this program. Bussing tender includes the smart driver training requirement.	2009/2010
Encourage car pooling in fleet vehicles	In Progress	Reduction in fuel and maintenance costs	Staff have been instructed to use car pooling wherever feasible	2009

2.2 Stationary Fuel Combustion (including electricity)

We are committed to reducing our Districts Carbon Footprint and reducing the amounts of carbon offsets the District will be require to purchase. Over the next four years we will be concentrating on replacing outdated non efficient boilers and equipment with new energy efficient equipment. the District will also be upgrading and fine tuning our control systems to take full advantage of the savings that exist. Our IT department has also been challenged to find ways to reduce the energy used in our computers and servers throughout the District.

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Undertaken Monitor turn-off challenge			Sustainability committee to research	2009-2011
Replace # computers with EnergyStar models	In Progress	Reduces electrical energy consumption. Ensures computers are able to keep up to the changes in technology.	On going as budget permits	2009-2011
Use air dry setting on dishwashers	Planned	Reduces electrical energy consumption	Sustainability committee to research and promote	2009/2010
Turn off lights in unused rooms	In Progress	Reduces electrical energy consumption	Continue with lights out programs in schools	2009-2011
Replace Refrigerators (EnergyStar rated appliance)	In Progress	Reduces electrical energy consumption	Replace as budget permits	on going
Replace other appliances (with EnergyStar rated appliance)		Reduces electrical energy consumption	Replace as budget permits	on going
Install multi-function devices (and remove stand-alone printers/faxes)	In Progress	Reduction in equipment maintenance costs and reduction in energy consumption.	Continue to support changeover completed last year	2009
Replace standard bulbs with CFLs	Completed			
Install motion activated lights	In Progress	Reduces electrical energy consumption	Continue with energy reduction program	2009-2011
Implement server virtualization		Reduction in equipment costs, energy costs, and future maintenance costs.	Needs to be investigated	2010
Utilize desk-top power management settings on computer	Planned	reduction in electrical energy consumption	Replacing deep freeze software	2009
Initiate corporate computer shut-down/wake-up for maintenance	In Progress	Reduces electrical energy consumption	New program is being looked at for 2009	2009
Unplug unused equipment	Planned	Reduces electrical energy consumption	Sustainability committee to research and promote	2009/2011
Undertake building energy audit at LOCATION(s)	Planned	process to target areas for future reduction and savings	with BC Hydro's assistance	2009 - 2011
Initiate or complete a building energy retrofit	Planned	Our facilities department is involved in a number of retrofit projects that when complete will have a significant effect in reducing the amount of natural gas, propane and electricity to heat and light our facilities.	4 boiler upgrades planned for 2009/2010. we will be continuing with our boiler plant conversions until all schools have been upgraded to condensate boilers. we also have three mechanical system upgrades that we are applying for funding.	2009 - 2011
Solar wall	Planned	Reduction of natural gas and reduction of GHG emissions	Solar wall project at Mount Elizabeth	2009-2010
Optimizing DDC controls	In Progress	Reduction of electrical and natural gas consumption and reduction of GHG emissions	we are reviewing the DDC systems and planning to do continual optimization to improve our controls and thus reduce energy use.	2009 - 2010
Using DDC to operate lighting	Planned	Reduction of electrical consumption	we are reviewing the DDC systems and planning to investigate controlling our common area lighting with DDC	2009 - 2013

2.3 Supplies

The Coast Mountains Board of Education has placed a priority on purchasing and procurement. Our Finance department will continue to explore ways to reduce waste and to improve and streamline processes. In addition our sustainability committee is excited to be involved with supporting our schools reuse and recycle programs.

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to use 30% recycled paper	Planned		Review policy	2009
Initiate automatic double sided printing	Planned	Reduction of costs. Less paper purchased	Review policy	2009/2010
Change document template margins	Planned	Reduction of paper purchased and discarded	Review policy	2009
Commit to hold paperless meetings	Planned	Reduction of costs and energy. Less paper purchased, less copying costs	Partially do now. Will attempt to fully implement	2011
Develop document library (online and one printed copy) for large documents	Planned		Document management planned district wide	2010
Re-use non-confidential scrap paper	Planned	Reduction of waste and reduction of costs	Sustainability committee to promote	2009
Use laptops/tablets	Planned		As and teachers have now. Will increase	2010
Restructure a process to use less paper	Planned	Reduction of waste and reduction of costs	Sustainability committee to promote	2009
Actions on non-paper related supplies:				
Encourage re-use of furniture and equipment	In Progress	Reduces volume in waste stream and reduces costs.	District garage sale	2009

2.4 Travel

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Train staff in the use of Live Meeting (or other desktop collaborative software)	Planned	Travel to meetings will be reduced. Reduced mileage charges and fuel costs. Reduction in GHG emissions.	The use of webinars becoming more viable for many of our staff.	2009/2010
Install Video Conferencing facilities	Planned	Video conferencing will offer better educational opportunities to students in remote communities.	in discussions stages	
Mandate car pooling to government meetings	In Progress	costs reduction and reduces GHG emissions	district team members car pool to out of town meetings	2009
Interviewing candidates by video-conferencing	In Progress	Costs reduction and reduction of GHG emissions. Reduces travel requirements and saves staff time.	Starting to interview out of town candidates by conference calls, thus reducing travel costs	2009

2.5 Employee Engagement

The Coast Mountains Board of Education is excited about the formation of a District Sustainability Committee. We are looking forward to having the Committee involved with all of our schools and facilities, promoting and supporting environmental stewardship and conservation programs. The Facilities department will also be involved in the continued education and involvement of its staff in energy conservation programs.

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	Planned	Coast Mountains School District is also looking at partnering with BC Hydro on a number of energy conservation initiatives in our schools. In Addition the District is looking at partnering opportunities with our local municipalities and community groups to find ways to promote sustainable practices and responsible stewardship.	Implement District Sustainability Committee 2009.	2009
Provide conservation education	Planned	Coast Mountains Board of Education School District 82 is committed to providing the leadership and educational experiences that will assist both our students and the community reduce their carbon footprints and make a better future for generations to come.	Contacted hydro for programs and support will go to sustainability committee to work with schools	2009-2011
Hold contests to change behaviour/make pledge	Planned	Schools energy usage drops as behaviour change ideas are adopted by students	Sustainability committee to co-ordinate with schools for district wide program	2009-2011
Hold contests/support to generate ideas	Planned	empowers students to learn	Sustainability committee to coordinate with District and Schools	2009-2011
Develop Green Teams	Planned	Green teams formed in all schools energy reduction and waste programs will be more successful. Reuse programs will assist in reducing overall costs	Sustainability committee to promote the green team concept to all schools in district	2009-2011
Support Green Teams (resources)	Planned	Green teams will be able to better promote programs in their schools. energy reduction and costs savings on material purchases	Sustainability committee will lobby the District for resources needed for program	2009-2011
Provide green tips	Planned	Ensures all schools get consistent information for students to embrace.	Sustainability committee to develop newsletter/ news email and web notices	2009-2011

2.6 Sustainability Actions (others)

The Coast Mountains Board of Education SD 82 and its 22 schools are working to be leaders in Northern BC in sustainable practices and environmental awareness. Our Districts commitment to promoting environmentally friendly practices and reducing our collective carbon footprint is beginning to take hold at all levels of the organization. The District is excited to continue this leadership role into 2009 and beyond.

Coast Mountains firmly believe that our students are the ones who will make a difference for the future and They are the ones who we need to support to make sustainability a reality . Our District is also committed to leading by example and ensuring that our successes are celebrated within our communities.

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Take water conservation measures – low flow showers or toilets, fix leaks	In Progress	Reduction of water consumption and costs. Reduction of maintenance requirements.	Complete replacement of tank urinals. Continue low flow toilet Installations, install ground sensors for field irrigation systems, continue to replace aging water service lines in buildings	2009-2011
Run dishwasher only when full	planned	Reduction of water and electrical consumption	Sustainability committee / site green teams	2009/2010
Reduce/replace bottled water with filtered or refrigerated water	In Progress	Reduces costs and waste	Board sets the example / sustainability committee	2009 - 2011
Improve recycling measures	In Progress	Reduction of volume in waste stream	Sustainability committee site green teams	2009 - 2011
Support composting	Planned	Reduction in volume in waste stream	Sustainability committee/Facilities	2009 - 2011
Use re-usable dishes	In Progress		Sustainability committee to promote concept to all schools in 2009	2009
Purchase green cleaning products	In Progress	Healthier cleaning practices	RFP to go out before June 2009	2009
Use green (low-e paints)	In Progress			2009
Support sustainable procurement practices	Planned		Purchasing department policies	2009
Tree planting	In Progress	Greener school properties that are appealing to the community	Plant trees on School sites for shade and community use	2009-2011
Composting leaves and field waste	In Progress	Reduction in waste stream	Work with community gardens groups to supply leaves and grass clippings for composting	2009-2011