



CARBON NEUTRAL ACTION REPORT 2010



RICHMOND
SCHOOL DISTRICT NO. 38



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executive summary



Monica Pamer, EdD
Superintendent of Schools

On behalf of the Richmond School District, I am pleased to submit the 2010 Carbon Neutral Action Report. This report provides an overview of the steps that we have taken to reduce our greenhouse gas emissions as well as other environmentally sustainable actions that have been achieved or initiated in the 2010 calendar year.

The Province of British Columbia has demonstrated leadership in climate action initiatives, setting aggressive targets and high standards. The Richmond School District is committed to meeting those standards. We are proud to report that the Richmond School District is carbon neutral with respect to its operations in 2010.

We have found that our efforts to reduce our greenhouse gas emissions are more than just environmentally sustainable; they also make sound financial sense. By investing in energy efficiency upgrades over the past decade we have been able to reduce greenhouse gas (GHG) emissions and reduce our operating expenses while also enhancing the learning conditions in our facilities with benefits such as improved lighting, air quality and climate control. Taking action to conserve resources, whether it is fuel in our fleet vehicles or paper in our schools, benefits the environment and our bottom line. As we continue to make curriculum connections to environmental sustainability, acting sustainably also provides limitless real-world learning opportunities for students.



executive summary

As education professionals, we know that educating our young people is a collaborative effort involving parents, teachers, support staff, administrators and students. Students are learning not only what they are taught by their teachers but also from the behaviours that are modeled around them. We understand that it is crucial we model sustainable behaviour within our schools and operations and that we take a leadership role in environmental sustainability initiatives. To this end, in 2010 we began the process of revising our Environmental Stewardship policy and developing our 5-year Sustainability Action Plan. The objective of this process is to shift from a project-based approach to environmental stewardship to a strategic approach, creating the necessary conditions to integrate environmental sustainability into the overall organizational structure and culture.



Monica Pamer, EdD
Superintendent of Schools

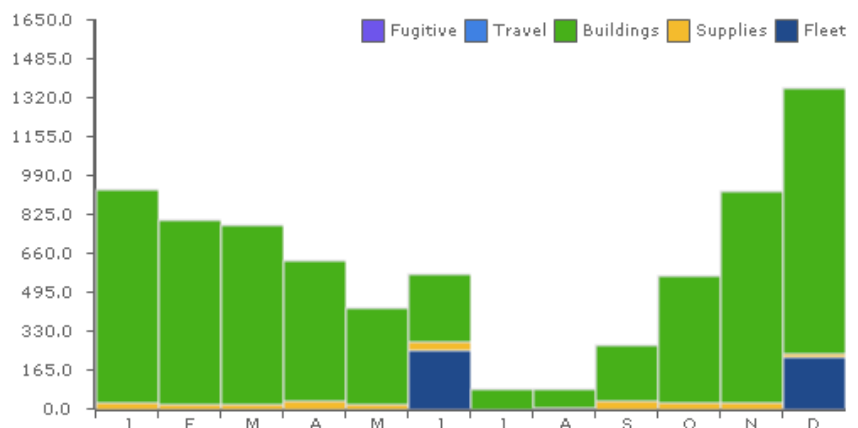


greenhouse gas emissions

Total greenhouse gas emissions for the Richmond School District for the 2010 calendar year were 7,554.03 tonnes CO₂e. The picture below shows the district's emissions by source. The majority of greenhouse gas emissions generated by the Richmond School District came from energy required to provide heat and power to our buildings. It is important to note that data for fuel used by fleet vehicles was input only twice during the year and therefore the fuel totals in the graph below do not reflect a consumption pattern the way buildings do.

Total Emissions Calendar Year 2010 School District 38 - Richmond

Metric tonnes
CO₂ equivalent (tCO₂e)



Our 2010 greenhouse gas emissions represent a reduction of approximately 15% compared to 2009 emissions. Lower emissions can be attributed to both greenhouse gas reduction initiatives as well as a warmer winter in 2010 (and therefore less energy used to heat our buildings).



carbon neutral 2010

offsets applied to become carbon neutral

In order to become carbon neutral for 2010, the Board of Education of School District 38 (Richmond) purchased carbon offsets for 7334.60 tonnes of CO₂e from the Pacific Carbon Trust on March 31, 2011 at a total cost of \$183,365.00 (excluding HST). We were subsequently advised by Shared Services BC that an error in SMARTTool calculations caused a small overstatement in our emissions. Our final emissions for 2010 are 7295.46 tonnes of CO₂ equivalent. We have therefore submitted an adjustment to the Pacific Carbon Trust and will have a credit of \$1095.92 toward our offset purchases to become carbon neutral in 2011.

As required by section 5 of the Carbon Neutral Government Regulation, 258.56 tonnes CO₂e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2010. However, they were not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation.



reducing emissions

overview

School District No. 38 (Richmond) is an exciting, multicultural, educational organization that provides public education for approximately 22,000 students K-12 and boasts the highest graduation rates in BC. Staff and students are spread across fifty-two locations in the District: 38 elementary schools, 10 secondary schools, one alternative school, the Administration building, Technology Services Centre and the Works Yard. During 2010, the Richmond School District was engaged in a diverse range of environmental sustainability initiatives. An overview of these actions is provided in the following pages.



reducing emissions

actions taken to reduce greenhouse gas emissions in 2010

By far the largest proportion of the district's emissions result from buildings, and therefore many of our GHG reduction initiatives are focussed on energy conservation in our facilities. Although supplies make up only a small percentage of our overall emissions, we recognize that our operations are nonetheless quite paper intensive; thus we continue to implement paper conservation initiatives. Given that we have not purchased new fleet vehicles in the past two years, conservation efforts in this area have centered on achieving reductions through vehicle maintenance and behaviour change such as anti-idling campaigns.

School-based green teams continue to expand their scope of sustainability initiatives, working on a variety of projects while being supported through incentive grants from the district. Our Richmond Sustainability Action Team and Sustainability Café meet regularly to enhance the implementation of our environmental stewardship policy.

In 2010 much of our focus was on building the necessary structures to enable consistent sustainability and energy conservation practices across the district. In the spring of 2010 the Board of Trustees passed a motion to update the district's Environmental Stewardship Policy. A policy revision team, comprised of staff from Maintenance & Operations, Facilities and Curriculum & Education and a member of the Board of Trustees, worked together throughout the year to draft a revised Environmental Stewardship Policy. This process will continue through 2011 with solicitation of stakeholder feedback on the revised policy and the development of a set of key guidelines that can be followed by all schools and district departments.



reducing emissions

We are continuing with the District's comprehensive energy conservation program and in 2010 we made a number of important steps to move the program forward:

- We are building a Green Fund whereby savings realized through energy conservation will be utilized to fund further energy conservation and sustainability programs. We completed the model for the Green Fund in 2010 and allocated \$250,000 from the 2010/2011 budget as seed money for the fund.
- We continued working as a Power Smart Partner with BC Hydro to reduce energy consumption using a Sustainable Energy Management Plan (SEMP). We renewed our Energy Manager Contract with BC Hydro and our executive team completed a strategic Energy Management Assessment.
- We completed energy retrofits in sixteen facilities including one boiler replacement, one upgrade to rooftop heating unit and lighting upgrades in fourteen facilities. The lighting upgrades included installation of new energy efficient light fixtures as well as lighting controls such as occupancy sensors and/or photo cells. In addition to improved energy efficiency, building occupants at some facilities have also reported improved lighting condition.
- In September 2010 we completed computer power management initiatives to have computers automatically put into sleep modes when not being used and/or powered off after business hours. The initiative saved 878,000Kwh (the equivalent of powering 80 homes for a full year) and was recognized with a plaque from BC Hydro.

reducing emissions



- We enrolled all ten of our secondary schools (our largest energy consumers) in the BC Hydro Continuous Optimization program and five of our elementary schools in a pilot Building Optimization Services program with Honeywell. Both programs will allow for real-time metering of energy consumption and will support our goal of having school occupants and district staff work together to monitor energy and make our buildings more efficient, resulting in a reduction of greenhouse gas emissions.
- Our district renewed enrolment in the Canadian Green Building Council – GREEN UP program in order to benchmark our facilities and target aggressive yet achievable improvements in energy efficiency of our buildings.
- Construction continued in 2010 on a replacement school for Brighthouse Elementary. The facility is being built to LEED Gold standards and will be one of the most environmentally sustainable and energy efficient elementary schools in Canada when it opens in 2011.



reducing emissions

initiatives

In addition to our energy conservation efforts, we undertook a number of other initiatives in 2010 to reduce greenhouse gas emissions and promote sustainable behaviours.

- Green teams were supported at schools to promote sustainability and reduce greenhouse gas emissions. With support from district sustainability grants, these teams developed and executed initiatives from anti-idling campaigns to school composting programs.
- Our monthly Sustainability Café networking events targeted a different sustainability theme each month and included great insight from experts in the community. Topics included Green Team Building and Grants/Funding Sources, Energy Conservation, Recycling and Waste Reduction, Composting and Gardening and Greening.
- Our district Environmental Stewardship website has a number of areas related to greenhouse gas emissions, from a section on energy saving initiatives to greenhouse gas background information.
- We implemented a major paper reduction initiative in 2010, converting all printers and multi-function devices with duplexing capability to double-sided print default.



plans to continue reducing greenhouse gas emissions 2011-2013

In the next year we plan to finalize and roll out the revised Environmental Stewardship policy. The revised policy will include guidelines in the areas of Leadership, Curriculum, Energy Conservation, Gardening and Greening, Waste Management, Transportation, Water Conservation and Purchasing. These guidelines will provide information on leading practices for all future sustainability projects and will incorporate triple bottom line considerations (social/educational, environmental and financial) for evaluating the impact of future decisions. We believe each employee, student and school volunteer should be encouraged to actively participate in district sustainability programs to the point that acting in a sustainable manner will be embedded in our operational processes. Future plans include supporting system-wide implementation of Environmental Stewardship across the District through 50 site-based Green Teams. A series of Green Team Training workshops will be delivered in 2011.

In 2009 the district developed the Eco-Wise web tool that allows schools to explore a variety of ways to promote awareness and behavioural change for environmental sustainability. Currently school green teams can log-in to record progress towards environmental sustainability in Energy Conservation and Waste Management. In 2011 we plan to expand the Eco-Wise web tool to include our eight key focus areas, adding Leadership and Teamwork, Gardening/Greening & Composting, Purchasing, Water Conservation, Curriculum and Transportation. We also plan to incorporate applicable actions from the Carbon Neutral Action Report into Eco-Wise in order to allow us to better collect and measure our actions at the individual school/site level that contribute to greenhouse gas reduction.

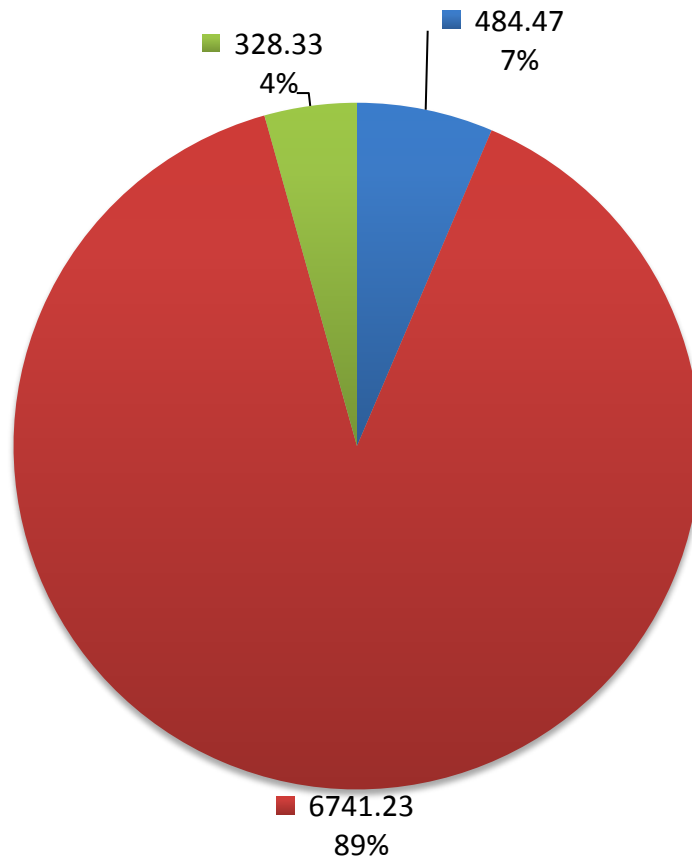


future plans

We plan to continue to focus on reducing GHG emissions through energy conservation. Following the CaGBC GREEN UP program strategies, we hope to lower the energy intensity by 25% over five years therefore reducing our energy cost, decreasing our reliance on fossil fuels and electricity, and lowering our carbon offset costs. In 2011 we plan to focus on optimizing our building controls (conserving energy by ensuring that systems are turned off or set back when facilities are unoccupied) and on providing better information on energy consumption to building occupants and executive management in order to encourage energy conservation behaviours. As we decrease energy consumption, we will also be building our Green Fund which will enable us to fund further energy conservation projects and sustainability initiatives in the district.

We will also continue encouraging schools to support behavioural changes related to sustainability by linking curriculum to school district practice. In 2011 we plan to develop Environmental Stewardship curriculum kits and lessons including the integration of the Ministry of Education's Environmental Learning and Experience Guide into classrooms. We plan to offer a variety of professional development sessions for teaching and non-teaching staff to support sustainability.

School District No. 38 (Richmond)
Greenhouse Gas Emissions by Source
for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 7554.03

- 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: **7295.46**. Total offset investment: **\$182,386.50**. Emissions which do not require offsets: **258.57** **

*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.

School District No. 38 (Richmond) - 2010 Carbon Neutral Action Report

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 <i>Greenhouse Gas Reduction Targets Act</i> .							
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)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	10	% of vehicles are fuel- efficient models	No vehicles purchased in 2010. The fleet is reviewed annually. Continued to assess new fuel efficient vehicles on the market .	When vehicles are replaced, the most fuel efficient and economical model will be selected given the vehicle use.	2009	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development	0	% of vehicles down-sized since start year indicated	No vehicle purchases were made in 2010.	Plans for future vehicle replacements call for smaller models in several cases.	2010	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	All fleet vehicles are serviced at 5000km or 3 months.	Continue this practice	Started before 1995	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	10	% of small maintenance vehicles are fuel-efficient	No vehicle purchases were made in 2010.	Fuel efficiency will be reviewed for every new purchase	2010	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	20	% of current drivers are trained	Smart Driver program was delivered to bus drivers in 2009. No training was delivered in 2010.	Deliever training again in 2011. Consider expanding to all fleet vehicle drivers, not just bus drivers.	2005	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	In Development	70	% of schools have anti-idling signs	Two secondary and two elementary schools conducted anti-idling campaigns.	Implement a program refresh. Install anti-idling signage at 100% of schools. Distribute "idle free campaign" kids to schools. Have secondary schools provide anti-idling training to 'feeder' elementary schools.	2005	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Encouraged. Managers carpool to meetings. Tradespersons carpool when possible.	Carpooling when possible will be emphasized to tradespersons by maintenance managers on a continuous basis	Started before 1995	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Tradespersons using vehicles group assigned work orders to minimize travel	Ongoing/In Progress			This is emphasized by managers/forepersons on a continual basis	The district will continue to explore ways of minimizing travel by tradespersons	Started before 1995	No End Date (Continuous)
Downsized fleet	Completed in 2010			Seven fleet vehicles sold in 2010 and not replaced.		2010	2010
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	Ongoing/In Progress	100	% of buildings enrolled in GREEN UP program	Renewed enrollment in CaGBC GREEN UP program. Participated quarterly in GREEN UP K-12 working groups. Benchmarking completed for all sites. Identified list of most energy intensive sites as well as sites with the most savings potential.	Continue to measure energy intensity and benchmark progress against targets. Set up process to share results with key personnel at each site. Set up quarterly reporting to executive.	2009	No End Date (Continuous)
Reduce office space (square meters) per employee	In Development			No action taken in 2010	A building review of the Administration building is planned to review maximizing use of office space. School buildings are sized according to student population, and are not suitable for further reduction	2009	2012

School District No. 38 (Richmond) - 2010 Carbon Neutral Action Report

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
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	0	% of buildings have a real time metering system installed	Enrolled in the BC Hydro Continuous Optimization (C-Op) Program which will provide real-time metering in ten secondary schools. Enrolled in a Building Optimization Services pilot program through Honeywell which will provide real-time metering in five elementary schools.	The C-Op program is being phased in over three years. Opportunities for energy efficiency will be investigated, energy conservation measures with a 2-year or less payback will be implemented and staff will be trained on maintaining energy efficiency of facilities. Future plans also include leveraging real-time metering to enhance students' understanding of the impacts of their energy conservation behaviours.	2009	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Completed in 2010	100	% of owned buildings have an established energy performance baseline	Established 2007 as consistent energy baseline for the District. Energy savings are being measured in comparrison to 2007 baseline.		2008	2010
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	Steveston-London Secondary School is currently undergoing the certification process to achieve LEED NC Gold	Certification to LEED NC Gold level is planned for Brighthouse elementary school replacement, with completion expected in September 2011	2005	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	Brighthouse Elementary replacement and Anderson Elementary expansion both incorporated integrated design process	Integrated design process started with Steveston London Secondary School in 2005 and continued with Brighthouse Elementary and Anderson Elementary. The District plans to continue to use process with all new construction.	2005	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			In the District's service and maintenace contract, if 10% or more of refrigerant is found to be lost, the contractor must perform a leak test	Continue current maintenance practice for leak testing and repairs. All new equipment purchased uses 410 refrigerant.	2008	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	45	% of owned buildings have undergone energy retrofits since start year indicated	In 2010, energy efficiency lighting upgrades were completed in 14 schools, a high efficiency condensing boiler was installed in one school, and two rooftop units were replaced with high efficiency models in one school.	Ongoing energy efficiency upgrades to heating and lighting systems will be implemented where sufficient funding and reasonable payback exists.	2009	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	10	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Boiler was replaced with high efficiency condensing boiler at Kidd elementary; two rooftop units were replaced with high efficiency models at Maple Lane elementary.	Mechanical upgrades likely as part of BC Hydro Continuous Optimization program. Additional mechanical upgrades will be considered when conducting end of useful life replacements.	2009	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	90	% of retrofits since start year indicated had lighting systems upgrades	20 of 22 energy retrofits conducted since 2009 start year included lighting upgrades (6 facilities in 2009 and 16 facilities in 2010). Primarily gymnasium, corridor and hallway areas.	Upgrade T12 lighting to T8 lighting in portables. Upgrade metal hallide pendant lighting to fluorescent tubes in some areas.	2009	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	95	% of retrofits since start year indicated had control system upgrades or adjustments	All lighting upgrades include the addition of lighting controls (photo cells and/or occupancy sensors). The upgrade to rooftop units included the addition of night setback.	Control upgrades will be implemented with the Anderson Elementary addition if funding is available. Upgrades/opimization of lighting controls planned for 2011/2012. Full sequencing reviews planned for sites with high energy intensity to ensure that controls are optimized.	2009	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	0	% of retrofits since start year indicated had insulation improvements	No building envelope upgrades were undertaken in 2010.	Where renovation requires opening exterior walls etc., new insulation always applied.	Started before 1995	No End Date (Continuous)

School District No. 38 (Richmond) - 2010 Carbon Neutral Action Report

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
Install an on-site renewable energy demonstration project	In Development	5	% of retrofits since start year indicated had on-site renewable energy components	Solar thermal installed at replacement Brighthouse Elementary school. Brighthouse also has a geoexchange system for heating and cooling. Applied for funding for installation of Photovoltaic (PV) systems on school buildings under the Solar Schools project of the SolarBC program.	If funding is awarded, will install solar PV array on a secondary school. Seven modular classrooms being installed for Full Day Kindergarten expansions will have air source heat pumps.	2010	2011
IT power management							
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress			Thirteen multi-function devices upgraded to more energy efficient models.	Conduct inventory of stand-alone printers and track number of prints processed through each device. Use results to implement strategy to reduce the number of stand-alone printers. Reduce the number of fax machines now that they are only required to process outgoing faxes.	2009	2012
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	50	% of fridges are ENERGY STAR rated	All new refrigerators purchased in 2010 (as well as for the 5 preceeding years) were ENERGY STAR rated.	Continue practice of purchasing only ENERGY STAR rated refrigerators	2005	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	In Development			Appliances and electronic devices purchased centrally through the Purchasing Department are ENERGY STAR rated.	Develop Sustainable Purchasing Guidelines as part of revised Environmental Stewardship policy	2010	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	100	% staff informed	Routinely emphasized when energy conservation is discussed. Included as part of winter break procedures.	We have continued to emphasize this with teaching and support staff. It is also part to the procedures manual for all custodians.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	100	% staff informed	We have continued to emphasize this with teaching and support staff. It is also part to the procedures manual for all custodians.	Continue to emphasize this process throughout the district. Include in revised energy conservation guidelines.	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	In Development	0	% staff informed	No action taken in 2010	Plan to include as a recommended measure in revised Energy Conservation Guidelines.	2011	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			Only our administration building has regularly used elevators. Staff have been encouraged to take the stairs for health and energy conservation reasons. Signs are posted at elevator doors and inside elevators encouraging use of the stairs.	Continue this process in the administration building	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Reminders sent out to all staff to ensure all lights are turned out prior to closures (e.g. winter break, spring break). 'Lights out' stickers provided at Energy Conservation Sustainability Café.	Continue to encourage this practice. Provide more stickers to schools.	Started before 1995	No End Date (Continuous)
Other Stationary Fuel Combustion and Electricity Actions							
Winter shut-down program	Completed in 2010	100	% of staff informed	Reminder sent to all staff before Winter Break suggesting energy conservation tips that they could take prior to the two-week winter break. Maintenance department emphasised shut down energy conserving procedures with maintenance and custodial staff.		2010	No End Date (Continuous)
District Guidelines for Energy Conservation	Ongoing/In Progress			Guidelines for Energy Conservation under revision as part of revised Environmental Stewardship policy.	Guidelines to be rolled out in 2011.	2009	2011
Replace standard bulbs with CFLs	Ongoing/In Progress			Various CFL conversion and replacements in schools	Continue with replacement of incandescent with CFL as a maintenace practice.	2009	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
Install heat recovery ventilation units in classrooms	In Development			Plans developed in 2010 to install heat recovery ventilation units as an energy efficient means to improve air quality	As funding permits, install heat recovery ventilators in classrooms at one secondary and one elementary school	2010	2012
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	17	% of total paper purchased contains 30% recycled content	All white paper is virgin paper and all coloured paper is 30% recycled content. In 2010 the District changed paper suppliers which lowered the cost of 30% PWC paper to less than what was previously being paid for virgin paper, making 30% PCW a more attractive alternative.	Decrease amount of virgin paper used by removing virgin paper from paper order catalogue for standard copy paper.	2000	2011
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2010	10	% of network printers or photocopiers are set to automatic double-sided	All copiers and printers with the functionality to double-side are default double-side. Printers without duplexing units cannot be changed.		2010	2010
Electronic media in place of paper							
Use electronic document library for filing common documents	In Development			First Class currently used for housing common documents such as policies	Investigate and implement document management system.	2008	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Implemented conferences for electronic posting of minutes of meetings. Each school has a school website and schools are increasingly using electronic distribution for School Newsletters. Catalogues and information sheets moving to more electronic.	Continue to go paperless where possible.	2008	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	75	% of staff currently have received collaborative software training	Training is ongoing. Limited number of training sessions in 2010.	Hold ongoing training sessions.	2005	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Several departments have implemented paperless meetings. Executive Team meetings are paperless. All schools have projectors and use of Smart Boards is increasing.	Continue to encourage paperless meetings. Enable paperless meetings through increased access to technology (Smart Boards and projectors). Utilize EcoWise tool to encourage paper conservation activities and track progress on paper conservation actions.	2008	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Paper conservation tips on the District's Environmental Stewardship website recommend reuse of scrap paper. Some classrooms have 'good one side' paper bins.	Continue to encourage reuse of scrap paper. Communicate additional sources of good one side materials: poster board and scrap art paper from art rooms. Add as a measurable action in EcoWise.	2008	No End Date (Continuous)
Other Paper Supplies Actions							
Incoming fax to email	Completed in 2010	100	% of incoming faxes that are sent directly to email	Incoming faxes are processed electronically through email rather than printed on paper.		2010	2010

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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 <i>Greenhouse Gas Reduction Targets Act</i> . 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	Completed in 2010	100	% of staff have access to a desktop web-camera	Mac computers all have built in web cameras. All other staff have access to web cameras.		2010	2010
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	10	% of staff are trained web-conferencing	Majority of training has been done for teaching staff	Offer web conferencing training on an ongoing basis	2005	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	100	% of staff have access to carpooling information	Staff regularly carpooled to offsite meetings.	Continue to encourage. Remind staff about the Rideshare conference.	Started before 1995	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	60	% of schools have Green Teams	Green Teams are endorsed by executive. Green Teams were actively engaged in sustainability actions throughout 2010 including school gardens, composting, energy conservation, anti-idling campagns etc. 90% of schools have a Sustainabiliy Contact (teacher or administrator)	Have Green Teams in 100% of sites, including all schools, Administration Building and Works Yard.	1998	2012
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	2	FTE with Sustainability included in position portfolio	10% increase in educational consultant support in 2010. \$10,000 of professional development budget was dedicated to Sustainability in to allow for Green Team Training and Environmental Stewardship Curriculum Development.	Further increase educational consultant time to roll out Environmental Stewardship curriculum plan	1998	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			Sustainability Kick-off with education around development of Green Teams. Monthly Sustainability Café networking events with specialized educational component. Monthly email communication to Sustainability Contacts outlining events, grants and resources.	Deliver three Green Team Training 1/2 day workshops to Green Teams (comprised of teachers, administrators, students and support staff)	2004	No End Date (Continuous)
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Ongoing/In Progress			Green Gala recognizes schools/students who have completed Envirionmental Stewardship projects during the year. Several schools have Environmental Stewardship service awards for students.	Re-vitalize EcoWise Star rewards program. Continue to encourage all schools to include an Environmental Stewardship award in their school's service awards.	2009	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Several staff attended 'green' conferences (BC Hydro Power Smart Forum, Xerox Sustainability Summit etc). Environmental stewardship professional devlopment was provided through monthly Sustainability Cafés and multiple specialized Pro D offerings (e.g. BC Hydro School Programs, Metro Vancouver's Get Outdoors workshop etc.)	Continue to offer increased Environmental Stewardship ProD content: 2011 District Convention environmental workshops, 2011 Support Staff ProD Sustainability theme, Vancouver Area Cycling Coalition Pro-D workshop, Urban Impact ProD tour, etc.	1998	No End Date (Continuous)

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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
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress			Primarily through district Environmental Stewardship website information.	K-12 curriculum connections to be developped. Green Team training to include climate change component	1998	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			Energy Conservation focus for October Sustainability Café. Emails with conservation suggestions provided to staff. Conservation education provided through Environmental Stewardshp website.	Develop and roll out Guidelines for Best Practice for Energy Conservation, Water Conservation and Purchasing	1998	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress			Provided through our website, district staff newsletters and school newsletters.	Create campaigns with different sustainability focus for each month. Include 'green' tips associated with monthly theme.	2008	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the science of climate change	Ongoing/In Progress			Primarily provided through district Environmental Stewardship website information.	Develop strategies to provide climate change education to families and public through partnership with the David Suzuki Foundation	1998	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress			Public welcome to attend Sustainability Cafés. Work with partners such as City of Richmond to have students act as Green Ambassadors at city events. Hosted City of Richmond 'Green Living' workshops for the community at Richmond schools. Provided information for the public through our district Environmental Stewardship website.	Two LEED Gold schools will have public information on green building design and construction. Develop environmental handout for Settlement Workers in schools to be provided to new immigrant families. Co-present 'Green Living' workshops with the City of Richmond.	1998	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress			Public Richmond School District 'Environmental Stewardship' website containts green tips.	Continue this practice. Encourage schools to include green tips on school websites and newsletters.	2008	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions							
Eco-Wise assessment tool (district developed)	Ongoing/In Progress			Tool was developed in 2009 and was used moderately in 2010	Build out additional 5 assessment areas in EcoWise to include all eight of the District's Environmental Stewardship focus areas. Include Carbon Neutral Action Report actions in EcoWise where appropriate to facilitate site-level data collection and aggregation. Have all locations (schools, Administration and Works Yard) utilize EcoWise assesment tool to measure and monitor sustainability actions.	2009	2011
Sustainability Grants	Ongoing/In Progress			Provided grants to schools for school-based sustainability initiatives	Increase participation in district sustainability grant program with objective of every site applying for and receiving a grant for a sustainability project.	2004	No End Date (Continuous)
Major District Sustainability Celebrations	Ongoing/In Progress			Sustainability Kick-off at the start of each year and Green Gala (celebrating sustainability actions taken during the year) to wind up the year.	Continue with sustainability celebrations.	2004	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress			Efficient water fixtures installed at replacement Brighthouse Elementary school	Water Conservation Gudelines of Best Practice to be developed in 2011. Develop a program to install water meters in schools.	2000	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	Ongoing/In Progress			Urinal flush controls with occupancy sensors installed at Brighthouse (All other schools had urinal flush controls installed prior to 2010). Several schools use rain barrels to collect rain water for school gardens.	Water Conservation Gudelines of Best Practice to be developed. More schools to install rain barells in 2011.	2010	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
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress			Ongoing strategy for new construction. Brighthouse Elementary has stormwater flow management (use of rain gardens).	Implement stormwater management at Anderson Elementary (as part of the addition) and in future construction projects.	2009	No End Date (Continuous)
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	100	% of schools with recycling program	District-wide paper and container recycling program in place. 20% of schools have self-initiated on-site composting programs. 8% of schools have Bokashi composting. In 2010 the District began a pilot food scraps collection project in select schools.	Increase percentage of waste being diverted and move toward 'zero waste' through the following actions: Develop Guidelines for Best Practice for Waste Management; Hold a Recycling Networking Workshop to assist schools in streamlining their recycling processes; Conduct waste audits and share results; Continue to pilot food scraps collection process; Put processes in place to collect additional items for recycling (e.g. batteries, electronics).	2009	No End Date (Continuous)
Procurement (non-paper supplies)							
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Ongoing/In Progress			District purchases remanufactured toner catridges and there is a program in place to recycle empty toner cartridges.	Guidelines of Best Practice for Purchasing to be developed. Recycling to included as a consideration in RFPs for ink jet cartridges for printers.	2000	No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress			Furniture was refurbished rather than replaced in several instances. District joined EdCo (cooperative purchasing) which has evaluated environmental sustainability in selecting vendors.	Green purchasing standards to be included in Guidelines of Best Practice for Purchasing to be developed in 2011	2004	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress			Garbage bags are 100% biodegradable. Paper towels and toilet paper are 100% with up to 83% PCW content. Two secondary schools use "ecologo" certified line of cleaning chemicals which are manufactured in the Lower Mainland.	Move to a greater use of 'ecologo' products as budgets allow.	2008	No End Date (Continuous)
Building construction, renovation, and leasing							
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress			Materials reused where possible and recycled if they cannot be reused.	Achieve minimum of 70% diversion of waste from landfill in demolition of old Brighthouse elementary. Include construction materials and demolition debris in Waste Management Guidelines for Best Practice to be developed in 2011.	2008	2011
Indoor air quality							
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress			District practice to purchase materials (e.g. paint, flooring) with low VOCs	To be included as a consideration in updated Purchasing Policy and in Guidelines of Best Practice for Purchasing which will be developed in 2011.	2005	2012
Commuting to and from home							
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			Many schools have Walk to School programs (e.g. Walking Wendesdays). Some schools have a 'Walking School Bus' where parents monitor intersections to allow children to walk to school safely in a group. For staff a carpool conference is maintained so that staff can post ride share requests. Staff are encouraged to use the Canada Line to commute to meetings/conferences in Vancouver.	Develop district-wide Transportation Guidelines of Leading Practice and roll out as part of revised Environmental Stewardship Policy.	2008	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress			Shower facilities included in new Brighthouse elementary. Existing shower facilities at all the Administration building and all secondary schools.	Consider expanding number of shower facilities as funding becomes available.	2000	No End Date (Continuous)

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Provide secure bicycle storage	Ongoing/In Progress			Secure bicycle storage available at some facilities. Bike racks provided at schools.	Assess where additional bike storage may be necessary. Include as a consideration in Transportation Guidelies of Best Practice (to be developed in 2011)	2000	No End Date (Continuous)
Other Sustainability Actions							
Renew Energy Manager Agreement with BC Hydro	Completed in 2010			Board approved renewal of Energy Manager Agreement for Power Smart Partners; an agreement with BC Hydro that provides for funding for the services of an Energy Manager who leads the energy conservation initiatives in the District.	Continue to demonstrate value of Energy Management and quantify savings achieved to ensure continued funding for position.	2010	2011
Hire Energy Specialist	Completed in 2010			New position of Energy Specialists (funded by Terasen Gas) to support energy management and GHG reduction initiatives in the District	Demonstrate effectiveness of position to Terasen Gas and encourage Terasen to continue to provide funding for this position.	2010	2011
Establish Green Fund	Ongoing/In Progress			Receieved Board approval for a Green Fund whereby savings achieved through energy conservation initiatives will be directed towards futher energy conservation and sustainability initiaitves. Initial draft of model developed. \$250,000 directed as seed funding for the Green Fund.	Finalize Green Fund model	2010	2011
Revise Envirionmental Stewardship Policy	Ongoing/In Progress			Board approved revision of 1998 Policy 602.14.1 Environmental Stewardship. Cross-department Policy Review Committee created. Draft revised policy, regulations and key guidelines developed.	Present revised policy to Policy Committee and Board of Trustees for approval to have draft policy distributed to stakeholders for input and comments. Seek stakeholder input. Finalize Policy. Develop Guidelines of Best Practice in 8 areas: Leadership, Curriculum, Energy Conservation, Gardening and Greening, Water Conservation, Waste Management, Transportation and Purchasing. Launch revised policy in September 2011.	2010	2011