

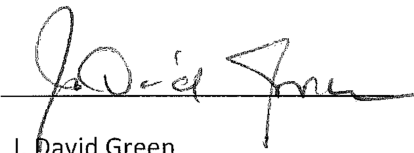


## School District #35(Langley) Carbon Neutral

### Action Report

#### Contents

<b>Overview:</b> .....	2
<b>Executive Summary:</b> .....	2
<b>2012 CO2e</b> .....	3
<b>Carbon neutral</b> .....	5
<b>Emission reduction</b> .....	6
<b>Buildings:</b> .....	6
<b>Procurements:</b> .....	7
<b>Behavioural Change:</b> .....	7

Authorized by:   
J. David Green  
Secretary Treasurer

## **Overview:**

Located approximately 45 kilometers southeast of Vancouver, BC, Langley School District provides services to the City of Langley and the Township of Langley. The district extends from the US border, north to the Fraser River and is neighbour to the communities of Surrey to the west and Abbotsford to the east. Total area of the district is 313 square kilometers. The district service over 20,000 students employs over 2,500 teachers, support staff and administrators and has an operating budget of over \$161 million. All of the resources are directed to our mission of Student success through excellence in education.

Langley School District opened the doors of Lynn Fripps in September 2012. This LEED Gold Elementary is the first of three new LEED Gold facilities within our District. Richard Bulpitt Elementary, now under construction, will open in September 2013 and a new Middle School will be opened in September 2014.

## **Executive Summary:**

The 2012 calendar year was a relatively mild one for the Langley community. This milder weather brought reduced fuel consumption to keep our building warm and less cooling required in the spring and fall season providing us with a considerably reduced Carbon Tax payment this year.

Langley is very conscious of the weather and how it impacts our district and realize that this year is an exception therefore continued efforts to enhance our existing systems to be more energy efficient will continue. With the support of our District Leadership Team the focus remains on upgrading older, less efficient systems with new technology and energy saving devices. The support shown has extended to our purchasing department where this year introduced a district wide removal of 168 printers and replaced another 168 with new multifunctional devices.

The support of the District Leadership Team also allowed the full implementation of the new recycling program where Single Stream Recycling (Glass, Metal, Plastic & Paper) was introduced as well as the redirection of Organic waste to a nearby community turf farm. Of key importance in the sustainability of this program is the introduction of Green Teams. While still in the early stages, the concept of this program is to incorporate all areas of the school and their community in the environmental concerns being faced. These teams were requested to measure and report how the schools are doing and to assist us in optimizing schedules and programs for each site.

It has been a very busy year and promises to be even more so in 2013!

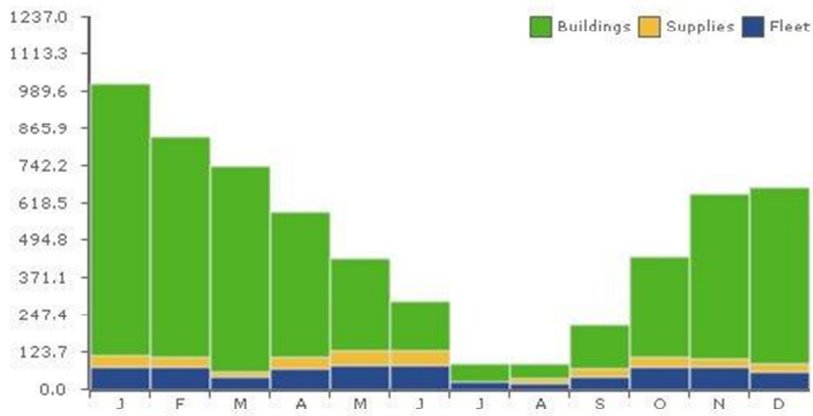
## 2012 CO2e

The chart below shows the breakdown of emissions by month and by source. The majority of our Carbon emissions arise from heating/cooling and power to our facilities.

March 26, 2013

### Total Emissions Calendar Year 2012 School District 35 - Langley

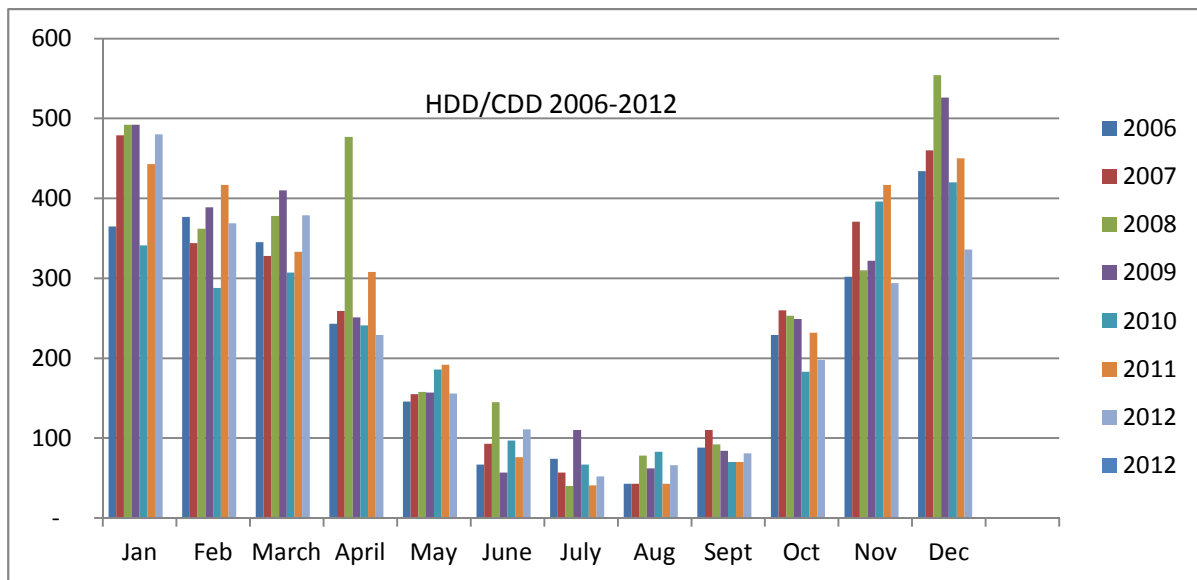
Metric tonnes  
CO2 equivalent (tCO2e)



Click on the bars to view data for each month.

## Impact of Weather

The amount of Heating fuel and cooling energy has a direct impact on the ability to reduce emissions in any given year. When a comparison was done of the heating and cooling days in previous years, 2012 was at levels last enjoyed in 2006. While this has provided the District with a significant reduction in our fuel consumption and CO<sub>2</sub>e, we are not relying on this for the long term. The District is busy auditing our existing systems for life-cycle and right sizing of equipment as well as monitoring our preventative maintenance program to ensure we receive the most we can from the systems. The impact of climate change for us means extreme weather patterns, although this year has been mild in comparison to others, we may not be as fortunate in coming years.



## Carbon neutral

To become carbon neutral in 2012, the Board of Education of School District 35(Langley) purchased carbon offsets for 5702 tonnes of CO<sub>2</sub>e from the Pacific Carbon Trust on March 26, 2013. With a cost of \$25.00 per tonne CO<sub>2</sub>e and including HST @ 5% the bill came to \$ 149,677.50..



### SMARTTool Greenhouse Gas Inventory Report

Reporting Entity: School District 35 - Langley  
Reporting Year: Calendar Year 2012

Measure	Quantity	Greenhouse Gases in Tonnes				
		CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	tCO <sub>2</sub> e <sup>1</sup>	
<b>Scope 1 (Direct) Emissions</b>						
Mobile Combustion (Fleet)	Litres	291,165.00	697.27	0.04	0.10	730.33
Stationary Combustion, Reported <sup>3</sup>	GigaJoules	93,703.32	4,693.79	0.09	0.09	4,724.24
<b>Total Scope 1 Emissions</b>			<b>5,391.07</b>	<b>0.13</b>	<b>0.20</b>	<b>5,454.57</b>
<b>Scope 2 (Indirect) Emissions</b>						
Purchased Energy, Reported <sup>3</sup>	GigaJoules	47,364.05	326.81	0.00	0.00	326.81
<b>Total Scope 2 Emissions</b>			<b>326.81</b>	<b>0.00</b>	<b>0.00</b>	<b>326.81</b>
<b>Scope 3 Emissions</b>						
<b>Business Travel and Office Paper</b>						
Office Paper	Packages	61,768.00	387.48	0.00	0.00	387.48
<b>Total Scope 3 Emissions</b>			<b>387.48</b>	<b>0.00</b>	<b>0.00</b>	<b>387.48</b>
<b>Emissions from Biomass</b>						
<b>Total Biomass Emissions</b>			<b>30.15</b>	<b>0.00</b>	<b>0.00</b>	<b>30.15</b>
<b>Total Emissions, Calendar Year 2012</b>			<b>6,135.51</b>	<b>0.13</b>	<b>0.20</b>	<b>6,199.02</b>

1. Global Warming Potential (GWP) has been applied only to the tCO<sub>2</sub>e values.

2. Estimated data has been calculated based on the methods described in the Methodology Document.

3. Reported data refers to consumption which has been directly billed to the organization.

*This information is provided by the Government of British Columbia, and is subject to verification.*

As required by section 5 of the Carbon Neutral Government Regulation, 497 tonnes CO<sub>2</sub>e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2012. These emissions were not offset as they are currently not within the scope under section 4(2)(c) of the Carbon Neutral Government Regulation.

## **Emission reduction**

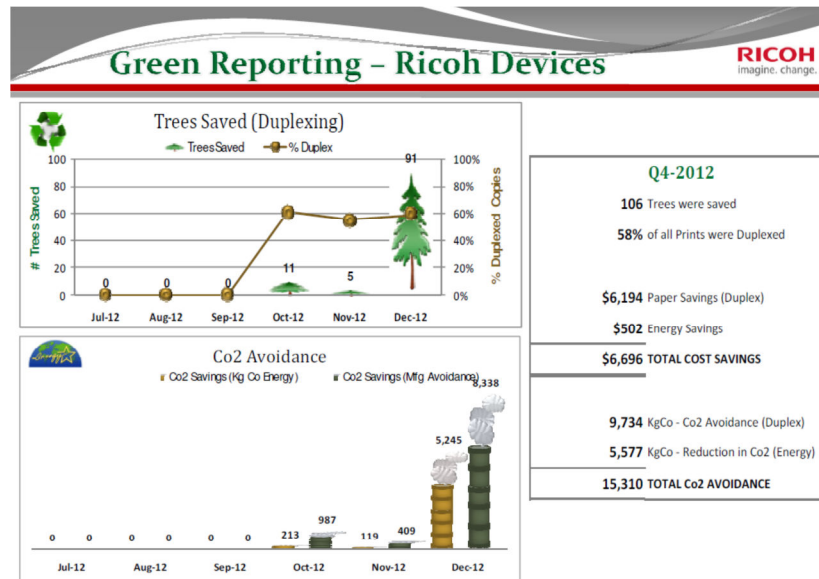
### **Buildings:**

As the majority of the emissions were from building fuel/power, this is our primary focus.

- A new LEED Gold School opened up in September 2012
- As a BC Hydro Power Smart partner, Langley School District has a long term plan to eliminate T12 lights and move to more energy efficient T8. In 2012, in addition to upgrading 3 schools we went a step further by upgrading 3 High Schools from T8-32W to T8-25W. This brought in further kWh savings but did not impact the educational experience for students and staff.
- As previously mentioned in 2011, all incentive funding received in is being utilized in further energy efficiency projects.
- Funding approval was received by CNCP for a boiler replacement upgrade at one of our Elementary Schools. This project will be completed in 2013.
- 5 Domestic Hot Water tanks were replaced with on-demand hot water systems.
- Replacement of High Pressure Sodium exterior lights with new, efficient LED 30W wall packs is providing further energy saving opportunities for the District.
- Power Management Software is being installed on all PC's and MAC computers within the district and is anticipated to be completed by June 2013.
- Updated DDC software for over 30 of our schools to ensure systems are working to their peak performance levels and proper schedules are maintained.

## Procurements:

- This has been a banner year for procurements. This year the District inventoried the total number of printing/fax devices and removed 168 of the 660 total devices. In addition they replaced 168 of the remaining with new multifunctional devices. This change provided the District with an avoidance of 15,310 Total Co2 emissions.



## Behavioural Change:

- This year, working with the Township of Langley, the District has concluded a six month pilot project at two schools for the increased recycling and redirection of Organic waste. The Fall of 2012 marked the implementation of the program District wide. With the new program came the incorporation of Green Teams in every school. These teams are composed of Administrators, Teachers, Support staff, students and community leaders to ensure sustainability of the program. Measurements are being taken of the waste and right sizing of the containers is being done to optimize the scheduled pickups and reduce excess emissions. Our continued partnership with BC Hydro along with assistance from community organizations has provided us with support and opportunities to educate our students and staff on environmental concerns.

## School District 35 Langley - 2012 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 Greenhouse Gas Reduction Targets Act.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
<b>Mobile Fuel Combustion (Fleet and other)</b>					
<b>Behaviour change program</b>					
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	Three Professional Development days per year exist and each year at least one of those days is utilized in driver training and safety for our Transportation fleet.	Development in progress to create a more formalized, mandatory driver training and abilities testing annually.	2008	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	No idling policy is in place at all sites within the District and drivers are consistently reminded of the policy. Schools are instructed to monitor parents picking up their children. Signs are posted at every site.  Langley Environmental Protection Group attended schools to promote the message with parents and staff.	continue with existing practices.	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Not Yet Evaluated				No End Date (Continuous)
<b>Other Mobile Fuel Combustion Actions</b>					
Introduction of recycling program expansion. Introduce larger bins to reduce overall frequency of lifts which should reduce fuel emissions.	In Development	A new waste program was piloted at 2 schools in January 2012 followed by a staggered introduction to all schools in the fall of 2012. Single Stream recycling of Glass, Metal, Plastic & Paper reduced the number of bins required at each location and larger bins reduced the number of pickups. This will reduce emissions for the Township and City of Langley while providing the District with a reduction in cost. Also introduced was redirection of Organic waste. Utilizing right sized containers for the locations ensures we optimize pickup schedules.	Continuation and enhancement of existing program.	2012	No End Date (Continuous)
<b>Vehicle fuel efficiency</b>					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	no change to current practices known at this time. Still working within a deficit situation.	Available funding will determine next steps.	2008	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	Routine maintenance every 4 months on white fleet and bi-monthly for bus fleet or as required.	continue with present practice.	2008	No End Date (Continuous)
<b>Stationary Fuel Combustion, Electricity</b>					
<b>Behaviour change program</b>					
Help staff reduce personal energy use through ""workstation tune-ups""	Ongoing/In Progress	Green Teams introduced in each school in 2012. Although the focus is on waste in 2012, expansions to behavioural change with energy is also part of the program.	Continue with current practice.	2012	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Green Teams introduced in each school in 2012. Although the focus is on waste in 2012, expansions to behavioural change with energy is also part of the program.	continue with current practice	2012	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	In Development	Green Teams introduced in each school in 2012. Although the focus is on waste in 2012, expansions to behavioural change with energy is also part of the program.	continue with current practice	2012	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	This is common practice in all schools. Although not instituted for energy savings as it is a security measure, it will continue to be standard practice throughout the District.	Continue with current practice	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	Most schools have dishwashers in place. It has always been	Continue with current practice	2008	No End Date



## School District 35 Langley - 2012 Carbon Neutral Action Report

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
	Progress	encouraged to use the air dry settings to reduce waste.			(Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	The District website has a page devoted to Energy & Environment which carries tips as well as educational opportunities to all staff and students.	Continue with current practice	2008	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	In our schools elevators are operational through a key system. They are not available for staff to use unless there is a specific need.	Continue with current practice	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	Many of our schools have these stickers in place and all schools are encouraged to turn it off.	Continue with current practice	2008	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress	District custodial staff have been provided with products that are utilized in cold water. In the summer all hot water tanks are turned off.	Continue with current practice	2008	No End Date (Continuous)
<b>IT power management</b>					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	Installed at 3 High Schools and partially installed at all remaining sites.	To be installed on all Macs and PCs by the end of 2013	2012	2013
Implement server virtualization	Ongoing/In Progress	Although virtualization is very limited at the moment, it is something that will continue to be pursued.	continue with current practice	2011	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	This was completed throughout the District but will continue to be done with all new installations.	Continue with current practice	2008	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	Ongoing/In Progress	An audit was done of all units found in the District. The initial survey showed 660 devices of these 321 were removed and of the remaining, 168 were replaced with multi-function devices. It is estimated that in 2012 the District saved 9,734 KgCo2 (Duplex) and 5,577 KgCo2 (Energy) for a total of 15,310 total Co2 avoidance.	Continue with upgrades	2012	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Ongoing/In Progress	This process is done with each device installed.	Continue with current practice	2008	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	This is purchasing policy and has been in place for a few years now.	Continue with current practice	2008	No End Date (Continuous)
<b>Other Stationary Fuel Combustion</b>					
Sustainability	Ongoing/In Progress	This year brought about the policy and procedures for the structure and development of Green Teams in each school. With the introduction of the recycling and redirection of organic waste Green Teams became more formalized and are now required to report back on progress. Teams are encouraged to develop practices that will create reductions in waste as well as energy conservation.	continue and enhance current practices.	2012	No End Date (Continuous)
<b>Owned buildings</b>					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	Sustainable Energy Management Plan in place with funded Energy manager and Energy Specialist. Baseline average for all sites is 105 ekWh/SqM.	Continue with existing program and reduce baseline.	2008	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Not Yet Evaluated				No End Date (Continuous)
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Not Yet Evaluated				No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	Minimum LEED Gold standard for all new schools being built within the Langley School District. Lynn Fripps opened in September 2012	continue with current practice	2011	No End Date (Continuous)

## School District 35 Langley - 2012 Carbon Neutral Action Report

<b>Actions Towards Carbon Neutrality</b>					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		and a new school each year for the next few years is anticipated to have the same standard.			
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	In 2012 the District: -Completed retrofits of 3 Elementary schools from T12 - T8 -Relamped 3 High Schools from T8 32W to T8 25W -Replaced 5 DHW tanks with on-demand systems	Continue with current practice by upgrading 3 schools from T12-T8 lighting. 2 Mechanical upgrades scheduled On going replacement of DHW tanks with on-demand	2008	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	Existing walk-in freezers have temperature alarms to advise when malfunctions occur. Regular preventative maintenance program is in place.	continue with current practice	2008	No End Date (Continuous)
<b>Planning/management</b>					
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development	The District has pulse meters for Natural Gas at 12 locations. In addition, with the Continuous Optimization program, a Electrical Pulse meter was installed at our largest High School.  BC Hydro is developing and introducing the Smart Meter for Electrical monitoring and although we will not have access in the Commercial sector until 2013/14 residential customers soon will. The readings will be in 5-15 minute intervals with a 24 hour delay which will greatly enhance our ability to optimize our existing systems and schedules.	Look to more Continuous Optimization programs.	2008	No End Date (Continuous)
<b>Retrofit details for owned buildings</b>					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Received approval for 2 mechanical upgrades Awaiting Capital funding for major mechanical at one Elementary School (end of life cycle) DDC controls upgrade for better systems monitoring. Vent cleaning to optimize performance levels and improve IAQ.	continue with mechanical upgrades	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	In the majority of our lighting retrofits existing systems are being customized to reduce number of lamps required within the buildings. This with the application of a lower wattage (32W to 25-28W) is improving energy savings and providing proper lighting to enhance the learning experience. Lighting controls are included as well as upgrading exterior wall packs with LED.	continue with current practices	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	Every opportunity is taken to introduce or enhance both building controls within all installations. District wide DDC upgrade done in 2012 for over 30 sites	continue with current practices	2008	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	There is an on-going program in place to replace existing single paned windows with double glazed.	continue with current practice	2008	No End Date (Continuous)
<b>Supplies (Paper)</b>					
<b>Behaviour change program</b>					
Train staff to use collaborative software for electronic editing (e.g.	Ongoing/In	If software is utilized District wide, then training in that application is	Continue with current practice.	2008	No End Date

## School District 35 Langley - 2012 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 Greenhouse Gas Reduction Targets Act.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
SharePoint, Groove, etc.)	Progress	supplied by the IT or department responsible. If it is software specific to a smaller group or individual, education on the product is done through other means.			(Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	This practice is done primarily with other organizations. When possible and practical, most meetings are held either by conference call or on-line.	Continue with current practice	2008	No End Date (Continuous)
<b>Electronic media in place of paper</b>					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Not Yet Evaluated				No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	In our current District mail system, there exists a library of forms and templates for each District department. Most of these documents can be completed on-line. The District will be changing to a new mail system in 2013 that may better facilitate this process.	Continue with current practice	2008	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Ongoing/In Progress	Electronic payroll has been in our district for some years now. There is also the addition this year of electronic T4's	continue with current practices	2008	No End Date (Continuous)
<b>Paper Type</b>					
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	Purchasing in this district ensures that we maintain a minimum standard of 30% recycled paper. We have not been able to introduce higher levels due to older copiers however this year that has changed. As of September 2012 the District introduced new Ricoh copiers.	Increase the amount of recycled content. The only obstacle now is the cost of introducing higher concentrations of recycled paper.	2008	No End Date (Continuous)
Purchase 40% post-consumer recycled paper	In Development	The upgrade to anything over 30% was limited within our District due to the age of the existing printers. With the introduction of the new devices, we can now start introducing more recycled content although this still depends heavily upon the cost.	Continue with current practice	2012	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	In Development	The upgrade to anything over 30% was limited within our District due to the age of the existing printers. With the introduction of the new devices, we can now start introducing more recycled content although this still depends heavily upon the cost.	Continue with current practice	2012	No End Date (Continuous)
<b>Printer/document settings</b>					
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	Duplex printers are in place with the new printers and existing old printers that have the capability have been set to duplex printing.	Continue with current practice	2008	No End Date (Continuous)

## School District 35 Langley - 2012 Carbon Neutral Action Report

### Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
<b>Business Travel</b>					
<b>Behaviour change program</b>					
Train staff in web-conferencing	Not Yet Evaluated				No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	Due to deficit situation, whenever possible, staff attend external conferences through web based attendance.	Continue with current practice	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	Always encouraged and supported by the District Management.	Continue with current practice	2008	No End Date (Continuous)
<b>Virtual meeting technology</b>					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	In Development	Although utilized with other organizations, not yet installed within our District.	Review necessity.	2011	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Not Yet Evaluated				No End Date (Continuous)
<b>Education, Awareness, and Engagement</b>					
<b>Awards/Recognition</b>					
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	Although we have had Energy challenges in the past, with the formalization of the Green Teams comes a new incentive for schools. The team that garners the most points by school year end 2013 will receive a new bottle refill station for their school. All schools are eligible to win.	Continue with this practice in coming years.	2012	No End Date (Continuous)
<b>Staff Professional Development</b>					
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress	Organizations offering educational opportunities, such as BC Hydro, Langley Environmental Protection Society and others, are encouraged in our District and provide necessary resources for the sustainability of the programs.	Continue and enhance current programs	2012	No End Date (Continuous)
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
<b>Staff awareness/education</b>					
Provide education to staff about the science of climate change	Not Yet Evaluated				No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	With the inclusion of Langley Environmental Protection Society they have reached out to various schools within our District to educate them on water conservation.	Continue with current practice	2012	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	With the Energy & Environment webpage within our District website, staff and students are provided with tips on greening up their environment.	Continue with current practice and enhance where possible.	2010	No End Date (Continuous)
Provide sustainability education during new staff orientation	Not Yet Evaluated				No End Date (Continuous)
<b>Team-building</b>					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	While the Green Team concept has been in our District for a number of years, 2012 saw the formalization of the structure. All schools within the District are now mandated to have Green Teams. The teams are comprised of Administrators, Teachers, Support staff, students and community leaders.	Continue and enhance current practices	2008	No End Date (Continuous)

## School District 35 Langley - 2012 Carbon Neutral Action Report

### Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	While in the past there was only one District representative to support the Green Teams and their development, now there are two. Education and training of staff and students is done regularly and verification and measurement of progress has been organized.	Continue and enhance current practices	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress	As previously mentioned, ongoing training is being provided to each school within our District to support their Green Teams. The District website has a dedicated page for Energy & Environment as well.	Continue and enhance current practice	2012	No End Date (Continuous)
<b>Other Sustainability Actions</b>					
<b>Adaptation to Climate Change</b>					
Assessed whether extreme weather events and/or long term changes in climate will affect the organization's business areas	Ongoing/In Progress	The District has a dedicated Energy Manager and Specialist. These positions review the existing weather conditions and work towards ensuring the district is in the best possible situation should those conditions become extreme. Ex. of this would be the boiler replacement program. Although Natural Gas is at a low unit cost now, during extreme weather patterns these prices are volatile. Ensure the equipment we have is the right size for the facility and with our existing purchasing practices, we are able to provide some stability to our facilities.	Continue with current practices.	2009	No End Date (Continuous)
Integrated considerations of extreme weather events and/or long term changes in climate into the organization's decision making.	Ongoing/In Progress	The Energy Manager & Specialist are provided with multiple opportunities to educate Senior Management on progress being made for our Districts sustainability. Support from Senior Management is confirmed through their attendance at our quarterly meetings with BC Hydro and through signoff of Government documents on the subject.	Continue with current practices	2009	No End Date (Continuous)
<b>Building construction, renovation</b>					
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress	This has always been the practice within the District. Tight budgets ensure that product is used and reused on an ongoing basis. Upgrades are done only when necessary and if the end result will promote savings.	Continue with current practice.	2008	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress	The majority of our mechanical systems are anticipated to survive beyond life-cycle. The preventative maintenance system, when operating smoothly is designed to ensure this will happen. All purchases take into consideration the lifecycle and right sizing of the equipment being installed.	Continue with current practices.	2008	No End Date (Continuous)
<b>Commuting to and from home</b>					
Offer staff a compressed work week	Ongoing/In Progress	This opportunity is available to staff that work through the summer months. A varied school calendar was presented to the community however it was not passed.	Continue with current practice	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	Although public transport is not adequate in our area, it is encouraged within our schools to have non-car days. It is supported through the L.E.P.S. and will continue along with litter-less lunches and water conservation programs.	Continue and enhance where possible.	2008	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Not Yet Evaluated				No End Date (Continuous)

## School District 35 Langley - 2012 Carbon Neutral Action Report

### Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Provide secure bicycle storage	Ongoing/In Progress	As with most school district, we have bicycle racks at all our schools and ensure they provide the best security available to us.	Continue with current practice	2008	No End Date (Continuous)
<b>Procurement (non-paper supplies)</b>					
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Not Yet Evaluated				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.)	Not Yet Evaluated				No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	This has been in place for many years now. All bleach products were removed from the District and replaced with Hydrogen Peroxide solutions for cleaning. Each product in use within the cleaning of our schools are a Health Hazard 1 rating or less. These measures are sustainable through a Product Review Committee that was formalized with the cleaners union contract.	Continue with current practice.	2008	No End Date (Continuous)
<b>Waste reduction/diversion</b>					
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress	The Langley School District has had a recycling program in effect for many years now. In 2012 it was enhanced to include Glass, Metal, Plastic and Paper in a single stream recycling program. In addition the District introduced an Organic Waste program. This organic waste goes to a turf growing farm in Delta. As this community is close to Langley, it was a consideration when accepting the tender.	We will be looking to include other recycling opportunities within the District in the coming years.	2008	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	Langley School District has had a hazardous waste removal program in place for many years. All schools containing asbestos have been identified and with each opportunity, it is being removed. Ex. tile flooring replaced with safe vinyl flooring etc. We have a regular hazardous waste pickup schedule at our schools twice a year to provide them with the opportunity to eliminate hazardous materials which might have been used in their schools.	Continue with current practice	2008	No End Date (Continuous)
<b>Water conservation</b>					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress	All plumbing fixtures that require repairs are upgraded with the most water efficient systems available. Low flush toilets have been installed when replacements are required. Years ago, all large water storage tanks were removed and replaced with Domestic Hot Water tanks and now those tanks are being replaced with on-demand water systems.	Continue with current practices	2008	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	Not Yet Evaluated				No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress	Environmentally sound practices are incorporated into all of our land development/groundskeeping measures. Bioswales are utilized when necessary which utilize natural growth to control the water	Continue with current practices	2008	No End Date (Continuous)

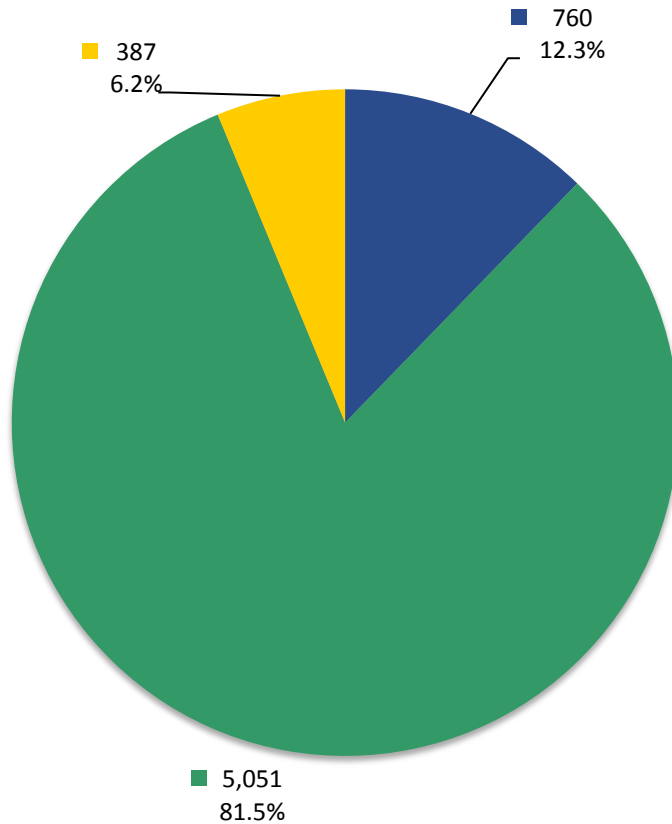
## School District 35 Langley - 2012 Carbon Neutral Action Report

### Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		movement.			

**School District 35 - Langley  
Greenhouse Gas Emissions by Source  
for the 2012 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 6,199**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

**Offsets Applied to Become Carbon Neutral in 2012 (Generated May 28, 2013 3:42 PM)**

Total offsets required: **5,702**. Total offset investment: **\$142,550**. Emissions which do not require offsets: **497** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.