



**School District 19**  
(Revelstoke)

# **School District 19 (Revelstoke)**

## **2010 Carbon Neutral Action Report**

### **Executive Summary**

The mission statement of the Revelstoke Board of Education is “to provide all learners with an opportunity to acquire knowledge and skills according to individual potential, to develop positive attitudes towards life-long learning and to develop personal social values that will prepare them to participate in and contribute to, a healthy, sustainable and democratic society.”

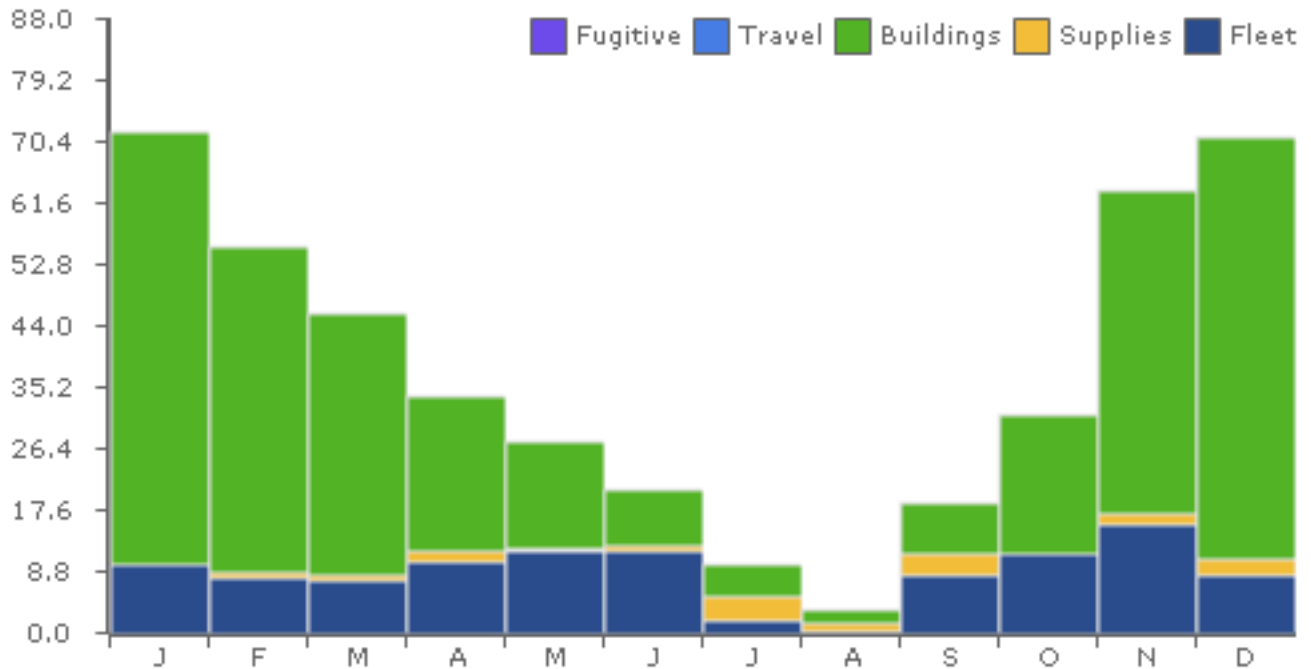
As a Board, we believe that modeling sustainable practices is an important part in achieving our mission. One key value in our school district is that our system should create and nurture an environment in which appreciation, conservation and sustainability of our natural environment are learned and acted upon. Our efforts at achieving carbon neutrality give voice to our mission and values.

In addition to the commitment to reducing our environmental footprint, the efforts summarized in this report also contribute to reductions in operating costs, thereby enabling the district to channel funds directly into classrooms to sustain and enrich school programs and student services. In this way, the efforts of the school district to achieve the highest levels of success for students are further enhanced.

## 2010 Greenhouse Gas Emissions

### Total Emissions Calendar Year 2010 School District 19 - Revelstoke School

Metric tonnes  
CO2 equivalent (tCO2e)

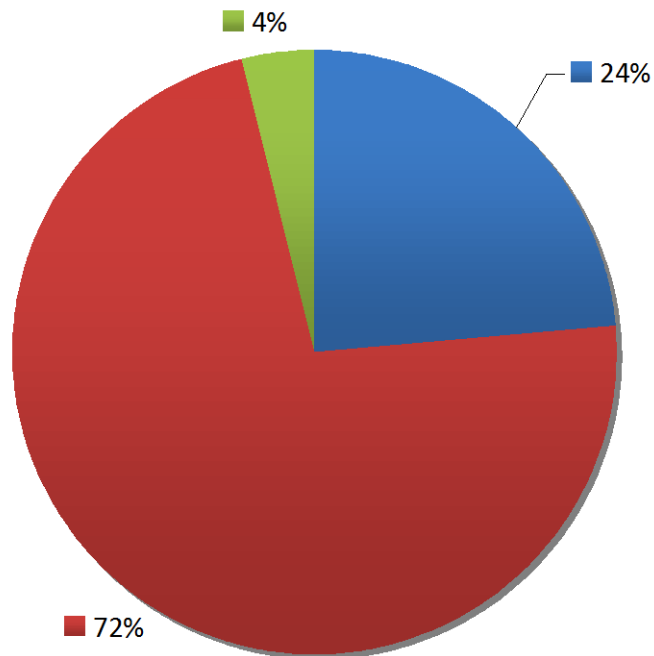


Click on the bars to view data for each month

### Offsets Applied to Become Carbon Neutral in 2010

School District 19 has applied total emissions offsets to become carbon neutral for 2010. Some emissions are currently exempt from carbon offsets. *As required by section 5 of the Carbon Neutral Government Regulation, 96.36 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*

# School District 19 Revelstoke Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 462.98**

- 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: **366.62**. Total offset investment: **\$9,165.50**. Emissions which do not require offsets: **96.36** \*\*

\*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

## **Emissions Reductions Activities – Summary**

School District 19 (Revelstoke) is currently reviewing energy consumption at all district facilities to re-establish targets for energy consumption reduction. In 2010 our school district completed a comprehensive energy efficient lighting upgrade at 3 of our facilities. We have engaged BC Hydro in discussions regarding our PowerSmart Partnership for our 2 new schools that are currently under construction. When completed in September 2012, our new elementary school will result in the closure of 2 old, energy inefficient, elementary schools. Our new secondary school, which will open in September 2011 will result in the immediate closure and demolition of our existing secondary school. Both of our new schools will be built to a very high standard of energy efficiency and sustainability and both will be eligible LEED Gold certification.

We have changed our approach to cleaning our schools. Custodians now operate in teams so that schools can be cleaned quickly and can then be shut down for the evening to reduce energy consumption. We have also re-organized the community user groups that use District facilities in order to concentrate these activities at a few sites which in turn enables us to shut down other sites in the evening.

The school district embarked on a district-wide commitment to reduce energy consumption by 8% in 2010. We have met and/or exceeded that commitment in all of the facilities used for instructional purposes.

In 2010 three of our schools were retrofitted with energy efficient lighting throughout the facilities. Two of our elementary schools will be the subject of an energy audit in the coming year which will help us identify areas where further projects could be undertaken to reduce energy consumption and greenhouse gas emissions.

Signed:

Anne Cooper

Superintendent

School District 19 (Revelstoke)

# School District 19 Revelstoke - 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 *Greenhouse Gas Reduction Targets Act*.

| Action   | Status<br>(as of 12/31/10) | Performance to Date<br>(as of 12/31/10) |  | Steps Taken in 2010  | Steps Planned for 2011 -2013   | Start Year          | End Year                 |
|--|----------------------------|---|--|--|--|---------------------|--------------------------|
| <b>Mobile Fuel Combustion (Fleet and other mobile equipment)</b>   |                            |   |  |  |  |                     |                          |
| <b>Vehicle fuel efficiency</b>   |                            |   |  |  |  |                     |                          |
| Replace vehicles with more fuel-efficient models   | Ongoing/In Progress        | 33                                      | % of vehicles are fuel- efficient models                             | None   | Replace 1 district vehicle with more fuel efficient models                 | 2011                | 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 | District vehicles are on a regular maintenance schedule                | Sustain regular Maintenance Schedule                                       | Started before 1995 | No End Date (Continuous) |
| Replace small maintenance vehicles with more fuel-efficient models   | In Development             | 0                                       | % of small maintenance vehicles are fuel-efficient                   | None   | Replace 1 tractor mower with more fuel efficient model                     | 2011                | 2011                     |
| <b>Behaviour change program</b>  |                            |   |  |  |  |                     |                          |
| Provide fleet driver training to reduce fuel use   | In Development             |   |  |  | Review annually with bus drivers   | 2008                | No End Date (Continuous) |
| Encourage carpooling in fleet vehicles   | Ongoing/In Progress        |   |  | Reviewed opportunities with maintenance staff                          | Continue to carpool to job sites where appropriate                         | 2008                | No End Date (Continuous) |
| <b>Other Mobile Fuel Combustion Actions</b>  |                            |   |  |  |  |                     |                          |
| Review of school bus routes to determine opportunities for efficiencies and mileage reductions                         | Ongoing/In Progress        |   |  | Eliminated 1 bus route   | Consolidate bus routes with implementation of all day Kindergarten         | 2011                | No End Date (Continuous) |
| <b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>                                      |                            |   |  |  |  |                     |                          |
| <b>Owned buildings</b>   |                            |   |  |  |  |                     |                          |
| Establish energy performance baseline for owned buildings  | In Development             |   |  |  | Establish baseline for new secondary school under construction             | 2011                | 2011                     |
| Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M) | In Development             |   |  |  | Establish baseline for new secondary school under construction - LEED Gold | 2011                | 2011                     |
| Achieve LEED NC Gold certification at a minimum for new construction or major renovations                              | Ongoing/In Progress        |   |  | Constructing new secondary and elementary school to LEED Gold          | Complete secondary school Sept. 2011), elementary Sept.2012                | 2011                | 2012                     |
| Incorporate integrated design process into new construction or during renovations of owned buildings                   | Ongoing/In Progress        |   |  | Constructing new secondary and elementary school to LEED Gold standard | Complete secondary school Sept. 2011, elementary Sept. 2012                | 2010                | 2012                     |
| <b>Retrofitting owned buildings</b>  |                            |   |  |  |  |                     |                          |
| Upgrade mechanical systems (heating, cooling, ventilation) during retrofits  | In Development             |   |  |  | Review HVAC system at 2 elementary schools                                 | 2011                | 2012                     |
| Upgrade lighting systems during retrofits  | Completed in 2010          |   |  | Upgraded Lighting to high efficiency throughout 3 schools              |  | 2010                | 2011                     |
| Upgrade/adjust control systems during retrofits  | Completed in 2010          |   |  | Occupancy sensors added to lighting controls in 3 schools              |  | 2010                | 2011                     |
| <b>IT power management</b>   |                            |   |  |  |  |                     |                          |

## School District 19 Revelstoke - 2010 Carbon Neutral Action Report

| Action   | Status<br>(as of 12/31/10) | Performance to Date<br>(as of 12/31/10) |  | Steps Taken in 2010  | Steps Planned for 2011 -2013  | Start Year | End Year                 |
|--|----------------------------|---|--|--|---|------------|--------------------------|
| Install power management software which shuts down computers outside of regular business hours   | Completed in 2010          | 95                                      | % of computers shut down automatically outside of regular business hours                                 | Installed energy management software in 3 school computer labs   |   | 2010       | No End Date (Continuous) |
| Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices      | Completed in 2010          |   |  | All devices are auto-sleep   |   | 2008       | No End Date (Continuous) |
| Replace computers with ENERGY STAR models during regular computer upgrades                       | Ongoing/In Progress        |   |  | 3 computer labs replaced with Energy Star models   | Replace classroom and secretarial computers at 2 schools  | 2011       | 2011                     |
| <b>Appliances and electronic devices</b>   |                            |   |  |  |   |            |                          |
| Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases  | Ongoing/In Progress        | 20                                      | % of fridges are ENERGY STAR rated   | No refrigerators replaced in 2010  | All refrigeratos in new secondary & elementary will be Energy Star  | 2011       | 2012                     |
| <b>Behaviour change program</b>  |                            |   |  |  |   |            |                          |
| Ask staff to close blinds at end of work day to reduce heating/cooling demands                   | In Development             |   |  |  | Review with custodial staff annually  | 2010       | No End Date (Continuous) |
| Provide reminders for turning off lights (e.g., signs, stickers, messages)                       | In Development             |   |  |  | Review new installations of energy efficient lighting with staff  | 2011       | No End Date (Continuous) |
| <b>Other Stationary Fuel Combustion and Electricity Actions</b>                                  |                            |   |  |  |   |            |                          |
| Reorganize work schedules to reduce energy consumption   | Ongoing/In Progress        |   |  | Custodial shifts re-aligned to reduce hours of operation - team cleaning   | continue to refine custodial evening work schedules   | 2010       | No End Date (Continuous) |
| <b>Supplies (Paper)</b>  |                            |   |  |  |   |            |                          |
| <b>Electronic media in place of paper</b>  |                            |   |  |  |   |            |                          |
| Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)            | Ongoing/In Progress        | 10                                      | % of staff workstations with software installed  | Staff are encouraged to use multi-user software and Elluminate Live sessions where appropriate                               | Staff are encouraged to use multi-user software and Elluminate Live sessions where appropriate  | 2010       | No End Date (Continuous) |
| Use electronic document library for filing common documents                                      | Ongoing/In Progress        | 100                                     | Online conferencing used for common documents  | Began using Google Docs for some projects  | Continue to encourage use of online repositories (FirstClass software suite) for common documents                                     | 2009       | No End Date (Continuous) |
| Post materials online that were previously printed   | Ongoing/In Progress        | 100                                     | Both collective agreement for our unionized staff now on the web, rather than being distributed by paper | Documents that need widespread distribution are posted on District email server conferences and district website.            | Increased scrutiny of paper documents for electronic distribution   | 2009       | No End Date (Continuous) |
| Switch to an electronic payroll notification system in place of paper pay stubs                  | Ongoing/In Progress        | 100                                     |  | New online financial management software system purchased  | New financial management software system implemented in 2010. Will implement payroll stub electronic distribution by the end of 2011. | 2009       | 2011                     |
| <b>Behaviour change program</b>  |                            |   |  |  |   |            |                          |
| Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Ongoing/In Progress        | 5                                       | % of staff currently have received collaborative software training                                       | Administrators using Microsoft Word mark-up feature for document development. Google Docs being used at School Board Office. | Administrators using Microsoft Word mark-up feature for document development. Google Docs being used at School Board Office.          | 2009       | No End Date (Continuous) |
| Encourage staff to hold paperless meetings or presentations (i.e., no handouts)                  | Ongoing/In Progress        |   |  | All meetings are encouraged to be paperless wherever possible  | All meetings are encouraged to be paperless wherever possible   | 2008       | No End Date (Continuous) |
| Encourage re-use of scrap paper  | Ongoing/In Progress        |   |  | Printers in computer labs use scrap paper  | Continue to encourage re-use of scrap paper for student work in labs  | 2008       | No End Date (Continuous) |

## School District 19 Revelstoke - 2010 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 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<br>(as of 12/31/10) | Performance to Date<br>(as of 12/31/10) |   | Steps Taken in 2010   | Steps Planned for 2011 -2013  | Start Year | End Year                 |
|--|----------------------------|---|---|---|---|------------|--------------------------|
| <b>Business Travel</b>   |                            |   |   |   |   |            |                          |
| <b>Virtual meeting technology</b>  |                            |   |   |   |   |            |                          |
| Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)   | Ongoing/In Progress        | 5                                       | % of computers have web-conferencing software installed | Board Office staff usings WebEX online training for new software and other inservice                      | Anticipated greater use of conferencing software for administrative use with outside organizaitons                      | 2009       | No End Date (Continuous) |
| Make desktop web-cameras available to staff  | Ongoing/In Progress        | 70                                      | % of staff have access to a desktop web-camera          | Some use of skype for meetings involving district staff   | Additional staff will have access to desktop cameras which will make desktop web-conferencing more viable district-wide | 2010       | No End Date (Continuous) |
| <b>Behaviour change program</b>  |                            |   |   |   |   |            |                          |
| Encourage staff to consider virtual attendance/presentation at events where possible   | Ongoing/In Progress        |   |   | Encourage staff to use virtual attendance where possible  | Encourage staff to use virtual attendance where possible  | 2009       | No End Date (Continuous) |
| Encourage carpooling to meetings   | Ongoing/In Progress        |   |   | Staff encouraged to car pool where possible   | Staff encouraged to carpool where possible  | 2009       | No End Date (Continuous) |
| Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)   | Ongoing/In Progress        |   |   | Staff encourage use use alternate transport to meetings   | Staff encourage use use alternate transport to meetings   | 2009       | No End Date (Continuous) |
| <b>Education, Awareness, and Engagement</b>  |                            |   |   |   |   |            |                          |
| <b>Team-building</b>   |                            |   |   |   |   |            |                          |
| Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement  | In Development             |   |   | New electronic "Green Team" conference established to raise awareness                                     | Creation of Green Teams planned for 2011  | 2010       | No End Date (Continuous) |
| <b>Awards/Recognition</b>  |                            |   |   |   |   |            |                          |
| Establish a sustainability/green awards or recognition program   | In Development             |   |   | Partnerships forming with north Columbia Environmental Society, Parks Canada, Screen Smart, Wildsite, etc | Continuation of initial steps to support green professional development   | 2009       | No End Date (Continuous) |
| <b>Staff awareness/education</b>   |                            |   |   |   |   |            |                          |
| Provide green tips on staff website or in newsletters  | Ongoing/In Progress        |   |   | Green Schools information shared with staff through District online conference                            | Green Schools information shared with staff through District online conference  | 2009       | No End Date (Continuous) |
| <b>Other Sustainability Actions</b>  |                            |   |   |   |   |            |                          |
| <b>Water conservation</b>  |                            |   |   |   |   |            |                          |
| 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 | In Development             |   |   |   | Building 2 new schools, built to LEED Gold standards. Schools will have stormwater management strategies                | 2010       | 2012                     |
| Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)  | In Development             |   |   |   | Building 2 new schools, built to LEED Gold standards. Schools will have stormwater management strategies                | 2010       | 2012                     |
| <b>Waste reduction/diversion</b>   |                            |   |   |   |   |            |                          |

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| Action   | Status<br>(as of 12/31/10) | Performance to Date<br>(as of 12/31/10) | Steps Taken in 2010   | Steps Planned for 2011 -2013  | Start Year | End Year                    |
|--|----------------------------|---|---|---|------------|-----------------------------|
| Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities | Ongoing/In Progress        |   | All paper products recycled throughout the district   | Continue and refine recycling processes   | 2006       | No End Date<br>(Continuous) |
| Implement a hazardous waste reduction and disposal strategy  | Ongoing/In Progress        |   | All paper products recycled throughout the district   | Continue and refine recycling processes   | 2006       | No End Date<br>(Continuous) |
| <b>Procurement (non-paper supplies)</b>  |                            |   |   |   |            |                             |
| Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags   | In Development             |   | Custodial supplies switched to Green products where applicable  | Custodial supplies switched to Green products where applicable  | 2009       | No End Date<br>(Continuous) |
| <b>Building construction, renovation, and leasing</b>  |                            |   |   |   |            |                             |
| Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities    | In Development             |   | Construction of 2 new schools starting in 2010 will be LEED Gold certified, salvage items identified and recycling of materials from demolition will take place | Construction of 2 new schools starting in 2010 will be LEED Gold certified, salvage items identified and recycling of materials from demolition will take place | 2010       | 2012                        |
| Incorporate lifecycle costing into new construction or renovations   | In Development             |   | Construction of 2 new schools starting in 2010 will be LEED Gold certified for lifecycle costing with projects well exceeding the Model National Energy Code    | Construction of 2 new schools starting in 2010 will be LEED Gold certified for lifecycle costing with projects well exceeding the Model National Energy Code    | 2010       | 2012                        |
| <b>Indoor air quality</b>  |                            |   |   |   |            |                             |
| Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture          | Ongoing/In Progress        |   | Low VOC paints used by Maintenance Department   | Low VOC paints and supplies used by Maintenance Department  | 2004       | No End Date<br>(Continuous) |
| <b>Commuting to and from home</b>  |                            |   |   |   |            |                             |
| Encourage commuting by foot, bicycle, carpool or public transit  | Ongoing/In Progress        |   | Engaging in local initiatives, such as walk to work week  | Engaging in local initiatives, such as walk to work week  | 2008       | No End Date<br>(Continuous) |
| Provide shower or locker facilities for staff/students who commute by foot or by bicycle   | In Development             |   |   | Construction of 2 new schools starting in 2010 will meet LEED Gold requirements for this initiative   | 2010       | No End Date<br>(Continuous) |
| Provide secure bicycle storage   | Ongoing/In Progress        |   | Bicycle storage available at all sites  | Bicycle racks will be installed in both new schools for staff and students  | 2011       | 2012                        |
| Modify parking fees or parking availability for staff/students   | In Development             |   | New school construction currently underway will have reduced on-site parking and greater shared parking with adjacent community facilities                      | New school construction currently underway will have reduced on-site parking and greater shared parking with adjacent community facilities.                     | 2010       | No End Date<br>(Continuous) |