

2013

Final Carbon Neutral Action Report School District #71 Comox Valley

Today's Learning
for Tomorrow's World



School District 71 (Comox Valley)
<http://www.sd71.bc.ca>

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Declaration Statement

This is the 2013 Carbon Neutral Action Report for School District #71, Comox Valley. This report contains our 2013 emissions profile, offsets purchased, the actions we have taken in 2013 to reduce our GHG emissions and our plans to continue reducing emissions in 2014 and beyond.

By June 30 SD#71, Comox Valley final CNAR will be posted to our website at www.sd71.bc.ca

Signature: _____

Name (printed please): Sherry Elwood

Title: Superintendent

Date: _____

May 26, 2014



Modern Double Pane Windows

Overview Summary

School District #71, Comox Valley proudly submits the Carbon Neutral Action Report for 2013 to the Climate Action Secretariat for review.

Throughout SD#71 we are committed to preparing all learners for a changing world. We value healthy living and social responsibility as well as academics. Our guiding goals for SD#71 are outlined in the Achievement Contract, Mission Statement and Environmental Principals of the Board of Trustees Policy (2000). Working together to achieve carbon neutrality ties into the SD#71 vision of student success.

A student that develops a sense of belonging and contribution to their school and community creates learners who graduate with an understanding and stewardship of the environment they belong to - both locally and globally. This sense of belonging is fostered through the continued multi-level support of environmental initiatives, e.g. Earth Day Celebrations, BC Hydro Energy Ambassadors Program, Green Teams, and the Environmental Clubs.

In 2012 we proudly proclaimed, from our solar paneled roof tops, that we were Carbon Neutral. Without a doubt SD#71 continues to walk the talk. Some of the key actions we have taken to reduce GHG emissions for 2013 include implementing an Active Travel to School Pilot Project which creates awareness for students and families to actively commute to their elementary school instead of contributing to parking lot congestion. In addition we have replaced 15% of our gas guzzling maintenance van fleet with more fuel efficient van models.

As part of our 2013 energy savings program we continue to implement the best practice of replacing and upgrading with energy efficient systems. At several schools the building envelopes became more energy efficient through window replacement or caulking, cladding upgrades and weather stripping renewal programs.

With the continued approval and support of Senior Management and the Board of Trustees we have invested in the replacement of domestic hot water tanks with 92% efficient hot water boiler units resulting in significant GHG savings.

We cannot ask our students to be Energy Ambassadors and Active Travelers without being sustainably minded champion ourselves. We are excited to build on the SD#71 core policies, our successes in GHG reductions since 2011 and continue to walk the talk.



Angela Holmes

Active Travel Program Worker

School District #71, Comox Valley

Emissions and Offset Summary

Organization School District #71, Comox Valley GHG Emissions and Offsets for 2013

GHG Emissions created in calendar year 2013 (from SMARTTool Homepage):	
Total Emissions	2,271
Total Emissions for Offsets	2,233
Adjustments to GHG Emissions Reported in Previous Years (from SMARTTool Homepage):	
Total Emissions	2,288
Total Emissions for Offsets	2,288
Credit owing from PCT at end of 2012 reporting year (if applicable – from May 15 Invoice):	
Credit Owing	0
Total Emissions for Offsets for the 2013 Reporting Year (from Offset Invoice): 2, 233	

Signature: _____

Name (printed please): Sherry Elwood

Title: Superintendent

Date: _____

Emission Reduction Activities

During 2013 SD#71 completed several major GHG reduction projects:

Building Envelope Upgrades

A portion of our capital budget was allotted to window replacements. Most of these upgrades occurred at Courtenay Elementary where 80 windows were replaced with modern double pane windows. In addition to window upgrade and replacement, re-caulking of all windows and tilt-up panel joints was done at Aspen and Queneesh Elementary. Weather stripping renewal at Huband and Lake Trail Schools rounded out our commitment to GHG savings, better air quality to provide our students with a much improved learning environment.

DDC Building Control Improvements

We continued this project from 2012 at the School Board Office where intelligent building control systems were installed. In addition an upgrade at NIDES and Ecole Robb Road to Delta Version 3 controls with CO2 and occupancy sensors occurred to better control outside air intake and CO2 mitigation.

Infrastructure / Mechanical Upgrades

SD #71 Replaced Domestic Hot Water (DHW) Boilers at 5 schools: Mark Isfeld, Highland, Brooklyn, Aspen and Queneesh with high efficiency condensing technologies. By leveraging the CNCP Carbon offset Investment funding we were able to replace these boilers.

In addition to the major boiler upgrade, we replaced a split Air Conditioning Unit at a middle school with a proper sized high efficiency unit. There were also a few schools that still had HPS (high pressure sodium) exterior lighting on their exterior walls. The energy electricians replaced them with LED wall packs. The LED lights use about one fifth of the energy (or less) than the old style lights.

Fleet Improvements

SD#71 has continued to upgrade its vehicle fleet, this year replacing 15% of the maintenance van fleet with more fuel efficient vans. All service trucks and vans now have GPS tracking systems to provide "smarter" dispatch to reduce mileage driven.

In summary, as the Greenhouse Gas Emissions Source Detail Report indicates it is still essential to focus on the energy consumptions of our 110,000 square feet of building space as this area is the highest (90.7% of total emissions) emitter of tCO2e over Fleet consumption and Paper consumption. (Reference: Green House Gas Emissions by Source Report). We continue to see improvements. In 2012 Building emissions alone were 2,288 tonnes of CO2 emitted and in 2013 there was a slight decrease to 2,059 tCO2e.

2014 Planned Emissions Reduction Activities

Proud and excited to continue our sustainability initiatives into 2014:

Student, Administration and Family Engagement in Sustainability Activities

The 2014 – 2015 school year, will see an increase in the scope of successful Active Travel to School 2013 – 2014 pilot project to further increase active forms of travel to school by the school community. SD #71 will continue to engage youth in sustainability projects, awareness campaigns and events through the Energy Ambassadors groups, community garden projects and Earth Day events.

Building Envelope Upgrades

Continue the previously effective work of replacing windows at various SD#71 sites. Re-caulking of all windows and tilt-up panel joints will be completed at Valley View, Highland, Cumberland and Brooklyn Elementary schools. We will undertake a partial cladding upgrade and replacement at Courtenay Elementary. This is integral in maintaining effective building envelope to reduce energy consumption.

Infrastructure / Mechanical Upgrades

Several schools are targeted for Domestic Hot Water tank upgrades to the state of the art condensing technologies are planned for Lake Trail, Vanier, Courtenay Elementary and Cumberland Junior. The H-Vac at Miracle Beach School will be upgraded with new boiler technology, modern automated building control systems and an air source heat pump. The installation of an air source heat pump will provide a significant GHG savings.

Operational Changes in 2013

- Completion of the conversion of automated building controls at all SD#71 facilities to centralized control. This allows the SD#71 HVAC technician to promptly respond from a central location to school HVAC deficiencies thereby improving efficiency.
- Transitioned from an Energy Management position focused on electricity consumption reduction to a SD#71 Sustainability Coordinator position. This person is dedicated to a broad range of sustainability initiatives including energy efficiency, waste reduction, GHG savings and promoting cultural and behavioral shift within the school district populations.
- Improved focus on tracking of water consumption through Smart Irrigation systems.

Actions to Reduce Provincial Emissions and Improve Sustainability 2013 – 2015

School District #71 efforts to engage the public and to improve environmental sustainability across all aspects of our organization expanded this year. BC Transit and the Comox Valley Regional District are in the process of engaging stakeholders to develop the 25 year transit plan for the Comox Valley. As School District #71 has a ridership of 42% on public transit we were excited to be at the table working collaboratively on behalf of our students and families. Due to this participation at a planning level we were able to maintain the most heavily used routes by our students resulting in less vehicles on the road. Secondly we were able to bring attention to routes that needed more frequent service at student peak times. Once these services are active we will also be able to encourage students to use these rather than taking their car.

In addition, School District #71 participated in the Comox Valley Earth Day Festival. Through our Active Travel to School and Huband Park Elementary Environmental Club booths we were able to speak with members of the public about our commitment to a sustainable future.



2013 Carbon Neutral Action Report (CNAR) - Part 2 ACTIONS

Created Tuesday, May 20, 2014

Updated Saturday, May 24, 2014

<http://fluidsurveys.com/surveys/cas-z/2013-cnar-form-bps-actions/3a5e60b5a9f9121d9c52727d65203790/>

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Please complete the following sections of the 2013 Carbon Neutral Action Report form. Save your work frequently to prevent it from being lost. You can also save a copy for your own use as either a WORD or PDF file using the buttons at the bottom of each page.

This is Part 2 of the Carbon Neutral Action Report form. This section reports on actions taken to reduce emissions during the 2013 calendar year. This information will be included in your final Carbon Neutral Action Report posted on the Ministry of Environment website.

When the form is complete press the submit button on the last page to automatically submit the information to the Climate Action Secretariat (CAS). Do not press submit before you are ready – this may result in a loss of work.

In addition to completing this survey (Part 1 2), you are required to submit your completed Overview (Executive Summary) and Self-Certification Checklist. The 2013 Overview template was included in the email sent and can also be found on the LiveSmart leaders Community.

Please ensure you meet the following reporting deadlines:

A DRAFT 2013 CNAR is due to CAS by March 31, 2014. The draft is comprised of the Overview ONLY (no executive sign-off required).

The FINAL 2013 CNAR is due to CAS by May 30, 2014. The final 2013 CNAR includes Part 1 Part 2 survey form and Overview.

The Self-Certification Checklist is due to CAS by May 15, 2014.

For more information about the Carbon Neutral Government process, please refer to *Becoming Carbon Neutral 2013*, or should you have any questions please contact climateactionsecretariat@gov.bc.ca.

Organization Name

School District #71, Comox Valley

Actions Taken to Reduce Emissions

1) Stationary Fuel Combustion, Electricity (Buildings):

Indicate which actions were taken in 2013:

Performed energy retrofits on existing buildings

Yes

Built or are building new LEED Gold or other "Green" buildings.

No

Undertook an evaluation of overall building energy use.

No

Please list any other actions taken to reduce emissions from Buildings:

Upgrades to building control systems.

Replaced HPS (high pressure sodium) exterior lighting on their exterior walls with LED wall packs.

2) Mobile Fleet Combustion (Fleet and other vehicles):

Indicate which actions were taken in 2013:

Do you have a fleet?

Yes

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)

Yes

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

No

Took steps to drive less than last year

Yes

Please list any other actions taken to reduce emission from fleet:

GPS tracking systems installed in vehicles to track mileage, make better route choices and dispatch more efficiently this will result in reduced fuel consumption.
Participation in Bike to Work week 2013 by Maintenance department.
Summer work force swells so we need to have spare vehicles. Next year potential to replace GM light duty trucks with propane run trucks and to replace Sustainability Coordinators vehicle with an electric car.
Perform regular fleet maintenance by in house mechanics.
Each driver is required to check tire pressure regularly to ensure best fuel economy.

3) Supplies (Paper):

Indicate which actions were taken in 2013:

Used less paper than previous year

No

Used only 100% recycled paper

No

Used some recycled paper

Yes

Used alternate source paper (Bamboo, hemp, etc.)

No

Please list any other actions taken to reduce emissions from paper use:

*Completed the switch to an electronic payroll notification system for whole Sd#71. This includes all T4 and employment documents.
The Energy Reduction Incentive Program to educate and train teams continued and expanded to paper use in the final months of 2013.*

Actions Taken to Reduce Emissions - continued

Explain how you plan to continue minimizing emissions in 2014 and future years:

Hiring of a Sustainability Coordinator whose major focus of this role is to establish GHG reduction targets and a 5 year strategy to reach these targets with in SD#71. Dedicating resources to this position will be instrumental in reaching set targets.

If you wish to list any other "sustainability actions" outside of buildings, fleet, paper and travel check "yes". This reporting is optional.

Yes

Actions to Promote Sustainability and Conservation - Optional

The following are actions that fall outside the scope of the *Carbon Neutral Government Regulation*, but which many organizations still undertake and may wish to report on. This section is optional for reporting.

Business Travel

Created a low-carbon travel policy or travel reduction goal (Low-carbon: Lowest emission of greenhouse gases per kilometre per passenger)

No

Virtual Meeting Technology

Installed web-conferencing software (e.g., Live Meeting, Elluminate, etc.)

Yes

Made desktop web-cameras available to staff

No

Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)

Yes

Encourage carpooling to meetings

Yes

Education and Awareness

Have created Green, Sustainability, Energy Conservation, or Climate Action Teams.

Yes

Provided resources and/or dedicated staff to support these teams

Yes

Provided behaviour change education/training for these teams (e.g., community-based social marketing)

No

Established a sustainability/green awards or recognition program

Yes

Support green professional development (e.g., workshops, conferences, training)

Yes

Planning for Climate Change

Have assessed whether extreme weather events and/or long term changes in climate will affect our organization's business areas

No

Long term changes in climate have been incorporated into our organization's decision making.

Yes

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Actions to Promote Sustainability and Conservation - Optional (continued)

Staff Awareness and Education

Provided education to staff about the science of climate change

No

Provided education to staff about the conservation of water, energy, and raw materials

Yes

Provided green tips on staff website or in newsletters

Yes

Alternate Work/Commuting Options

Allow for telework/working from home

Yes

Staff have the option of a compressed work week

Yes

Commuting by foot, bicycle, carpool or public transit is encouraged

Yes

Shower or locker facilities are provided for staff/students who commute by foot or by bicycle

Yes

Secure bicycle storage is provided

No

Other Sustainability Actions

Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models

Yes

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

Yes

Have put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities

No

Have implemented a hazardous waste reduction and disposal strategy (Hazardous Waste: E.g., electronics including computer parts and monitors, batteries, paints, fluorescent bulbs)

No

Have incorporated minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)

No

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)

No

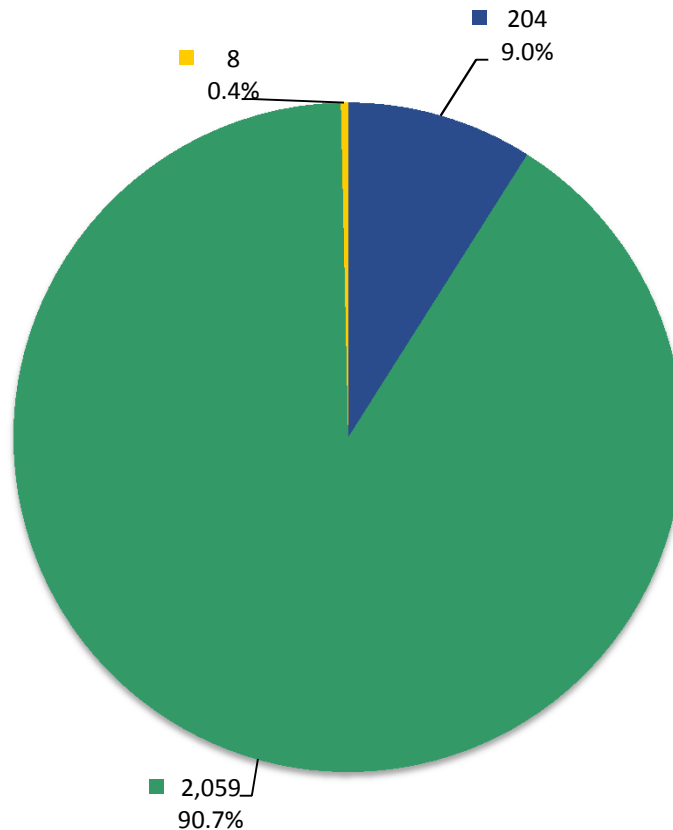
Incorporated lifecycle costing into new construction or renovations

Yes

Please list and other sustainability actions you wish to report not included in the previous list.

Implementing the Student Travel Planning program which encourages families to actively commute to school when dropping off or picking up their kids. Results in less car being used for the daily commute.

School District 71 - Comox Valley Greenhouse Gas Emissions by Source for the 2013 Calendar Year (tCO₂e*)



Total Emissions: 2,271

- 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 2013 (Generated May 21, 2014 4:07 PM)

Total offsets required: **2,233**. Total offset investment: **\$55,825**. Emissions which do not require offsets: **38** **

*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.