



## **Chilliwack School District 2015 Carbon Neutral Action Report**

### **Executive Summary**

We began 2015 with a more positive outlook, as the Teacher's job actions are now behind us. We lost one of our energy champions who was also our Facility and Energy Manager; Dale Churchill; to another district, but were fortunate enough to replace him with our new Director/Energy Manager, Allan Van Tassel, who will be working with our current Facility Manager/Energy Specialist, Brent Neufeld, on new projects. We also entered into a Workplace Conservation Awareness program with BC Hydro, that resulted in some new opportunities in conservation, to work with our teaching staff and students. With continued support from Fortis and BC Hydro with their programs and incentives, along with the new Routine Capital Funding program, we will continue to push forward toward meeting our reduction goals.

### **Overviews**

#### **Actions Taken to Reduce Greenhouse Gas Emissions in 2015**

- Continuing project of replacing metal halide perimeter and parking lot lighting with higher efficient LED models.
- Replacement of older, non-efficient domestic hot water boilers and tanks with high efficient tank less, on-demand models.
- Replacement of older, low efficient boiler plants, nearing the end of their work cycle, with new high efficient condensing models.
- Replacement of older, constant volume hot water circulating pumps, with higher efficiency, variable speed drive models.
- Encourage carpooling to meetings
- Expand on existing sustainability/green awards and recognition program.
- Provide green tips to staff, students and parents, as well as members of the public, in websites, Superintendent's Memo and site based student Green Teams.
- Continue with a water conservation strategy which includes a plan or policy for replacing water fixtures and equipment with efficient models to reduce water use.
- Continue to monitor irregularities in utility invoices, to find any possible problems and reduce preventable waste of energy and water.

- Continue the practice of reusing materials wherever possible and diverting construction and demolition debris from landfills and incineration facilities.
- Eliminating creation of paper documents wherever possible and replacing with electronic documents at the district level.
- Continue working with City of Chilliwack and disposal companies to encourage and increase the use of recycle bins at all sites.
- Replacement of old single pane windows with new energy efficient models.
- Electrical upgrades at several sites, including replacement of fluorescent lamps with low wattage type. Also, installation of room occupancy sensors to turn off lights, when rooms are unoccupied.
- Entered into the Workplace Conservation Awareness program with BC Hydro.
- Replacement of old boiler plant with efficient condensing boilers and new variable speed drive pumps, thanks to CNCP project.
- Received funding for three mechanical upgrade projects, that will result in reduced energy consumption, from the Ministry's new Routine Capital Plan.

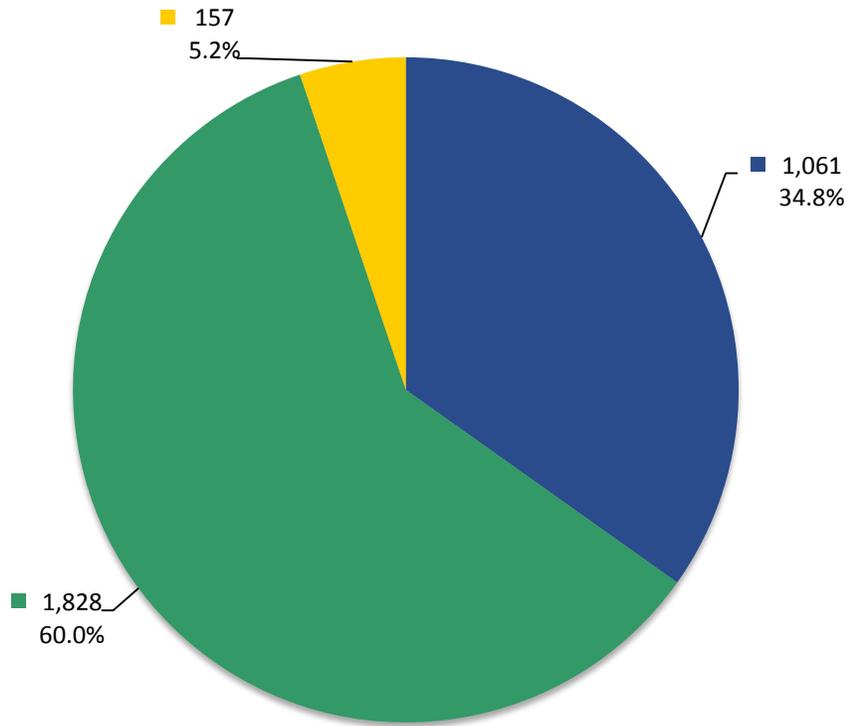
### **Plans to Continue Reducing Greenhouse Gas Emissions 2016-17**

- Work with Transportation Manager and our new Transportation audit, to simplify bus routes and reduce fuel consumption by our bus fleet.
- Continue to encourage staff to consider virtual attendance/presentations at events where possible.
- With the support of senior school district staff; continue to support green, sustainability, energy conservation and climate action teams.
- Provide education to staff, students and parents about the science of climate change whenever possible.
- Continue to provide education to staff and students about the conservation of water, energy and raw materials.
- Continue with lighting, boiler and DDC upgrades throughout the district, including the use of heat pump technology to replace existing roof top units in order to reduce Greenhouse Gas emissions.
- We have begun LED replacements of certain lighting fixtures, including replacing T8's with new LED technology.
- Utilizing CNCP monies to replace older inefficient boiler plant with new condensing model, along with replacement of pumps and DDC upgrade at middle school site.
- Fine-tuning of control systems in three new buildings to take full advantage of geo thermal and new higher technology based systems to reduce energy use.
- Try to increase use of recycled paper where possible in the district.





**School District 33 - Chilliwack  
Greenhouse Gas Emissions by Source  
for the 2015 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 3,047**

- 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 2015 (Generated May 26, 2016 9:03 AM)**

Total offsets required: **2,243**. Total offset investment: **\$56,075**. Emissions which do not require offsets: **804** \*\*

\*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.

# 2015 Carbon Neutral Action Report Survey

Organization Name:

*SD 33 Chilliwack*

Please select your sector:

- School District

1) Stationary Sources (Buildings, Power Generators, Ext. Lighting) Fuel Combustion, Electricity use, Fugitive Emissions:

Please indicate which actions your PSO took in 2015:

Have developed an overall strategy/plan to reduce energy use in your organization's buildings inventory:

*Yes*

If Yes, please describe:

*Replacing older inefficient heating plants and doing electrical upgrades, along with window replacement projects and more efficient scheduling through our DDC systems.*

Undertook evaluations of building energy use:

*Yes*

Performed energy retrofits on existing buildings:

*Yes*

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

*Yes*

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from buildings:

*We have an Energy management team that includes an Energy Manager, Energy Specialist, and an educational staff liaison. The BC Hydro WCA program to help with behavioral changes. Included energy conservation projects in our Routine Capital submissions.*

2) Mobile Sources (Fleet, Off-road/Portable Equipment) Fuel Combustion:

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to support systematic reductions in fleet related emissions:

(e.g., program to convert fleet to renewable fuels)

*No*

If Yes, please describe:

*(No response)*

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

*Yes*

Replaced existing vehicles with hybrid or electric vehicles:

*No*

Took steps to drive less than previous years:

*Yes*

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from fleet combustion:

*Engaged in an Transportation audit to better schedule bus routes and tighten up driving routes.*

3) Supplies (Paper):

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to facilitate a systematic reduction in paper-related emissions:

(e.g., policy to purchase 100% Recycled Content; default to double-sided printing)

*Yes*

If yes, please describe:

*Purchased new, more efficient photo copiers, that utilize scan to e-mail and double side printing technology.*

Have put in place an operations policy/program to facilitate behavioural changes from paper use:

(e.g. awareness campaign to reduce paper use):

No

If yes, please describe:

*(No response)*

Used only 100% recycled paper:

No

Used some recycled paper:

Yes

Used alternate source paper:

(e.g., bamboo, hemp, wheat etc.)

Yes

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from paper supplies:

*In implementing our new photo copier program, which requires log-in; making the user more aware of the paper use used by each individual per school year.*

4) Other Sustainability Actions:

Please note that this section is optional

Business Travel

Created a low-carbon travel policy or travel reduction goal:

(low-carbon = lowest emission of greenhouse gas per kilometer per passenger)

*(No response)*

Encouraged alternative travel for business:

(e.g. bicycles, public transit, walking)

*(No response)*

Encouraged or allow telework/working from home:

*(No response)*

Other:

*(No response)*

Education Awareness

Have a Green/Sustainability/Climate Action Team:

*Yes*

Supported green professional development:

(e.g. workshops, conferences, training)

*Yes*

Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials:

*Yes*

Other:

*(No response)*

## Adaptation Planning for Climate Risks

Have assessed whether increased frequency of extreme weather events and/or long term changes in climate will affect your organization's infrastructure, its employees and/or its clients:

*No*

Have incorporated these anticipated changes in climate into your organization's planning and decision making:

*No*

Other:

*(No response)*

## Other Sustainability Actions

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

*Yes*

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

(e.g., composting, collection of plastics, batteries)

*Yes*

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase:

(e.g., office furniture, carpeting, etc.)

*Yes*

Incorporated lifecycle costing into new construction or renovations:

*Yes*

Please list any other sustainability actions your organization has taken not listed above:

*(No response)*