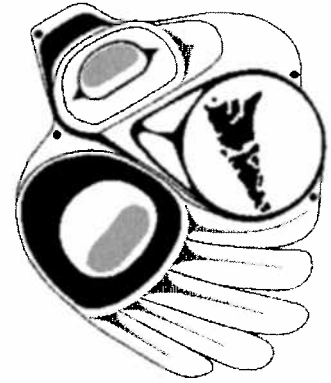
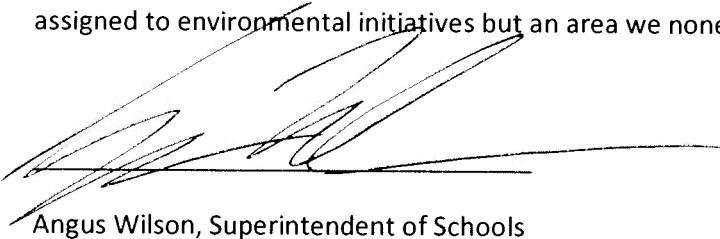


# School District 50 (Haida Gwaii) - 2010 Carbon Neutral Action Report



## Executive Summary

Placed in a small, fragile and unique ecosystem, School District 50 (Haida Gwaii) is endeavouring to be a leader in sustainable practises and carbon neutrality. We see around us in severe winter storms, coastal erosion and tidal flooding the implications of climate change and want to actively engage in this problem of our era. We see that, as an institution dedicated to education, we must make sure our staff and students are full participants in the solutions we develop and actions we take. SD 50 has moved to a virtually all electronic format for letters, memos, and similar items. As much as possible, we are reducing the numbers of meetings, conferences, and the like that require physical travel. Finally, we are looking ahead to gradual replacement and elimination of inefficient or oversized vehicles, equipment and buildings. This continues to be a challenge as a small, remote district with no staff assigned to environmental initiatives but an area we nonetheless take very seriously.



Angus Wilson, Superintendent of Schools

March 2011

Date

## Overviews

### Greenhouse Gas Emissions in 2010

Total emissions for SD 50 in 2010 were 862.65 tonnes of Carbon Dioxide. While smaller than many other institutions, SD 50 is a disproportionately large polluter on a per capita basis. Large, older buildings with old heating systems are the most significant factor in this. Emissions from other sources, in particular vehicles and supplies amount to less than 3% of our footprint. New heating systems are already noted at several buildings for having lower emissions than our legacy systems.

### Offsets Applied to Become Carbon Neutral in 2010

Total Emission offsets have been applied to become neutral for 2010.

### Emissions Reduction Activities 2010

- Significant reduction in off island travel (20%); reduced on-island travel with most meetings now skyped/teleconferenced, etc. Increased utilisation of Elluminate as an alternate to off island trips.
- Removed two 'over-capable' lease vehicles from the fleet, a 30% reduction in vehicles, and they possessed the two largest engines in the district.
- Meetings are now virtually paperless – agendas are emailed or posted on our website as appropriate, with no shared physical copies. PC/CCing of documents has been replaced by EC (electronic copies) for all but the most significant legal documents.

- A significant improvement in 2009 occurred when we moved into a new school building in Port Clements shared with the local Village and several other partners. The new building is smaller, more efficient, and more environmentally friendly. Additionally, our Board Office replaced a fifty year old diesel boiler with electric heat; these successes have led to plans in 2010 continue this move to efficiency, as we hope to repeat the Port Clements Multiplex success in the 2011/12 year with a new building in the community of Sandspit.
- Completed various in-services with staff on recycling, reducing electrical consumption, right-sizing of orders, and similar activities.
- Work with students on environmentally themed programmes, including BC Hydro powersmart, Farm to School, and a number of local initiatives in this area.

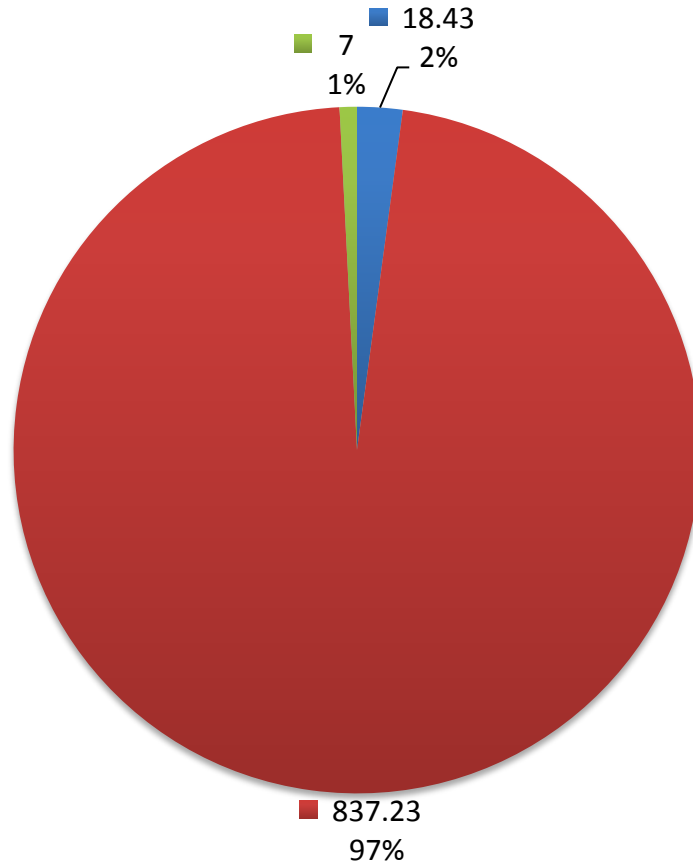
### **Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013**

Looking ahead, we plan to reduce the footprint of the district by continuing to reduce the number of face to face meetings, eliminate one more of our vehicles, replace current vehicles, computers and other appliances with more efficient models, and continue to improve the efficiency of our buildings by replacing outmoded heating systems or complete building replacement. As our enrolment declines, our emissions per square metre will continue to increase unless we begin to rationalise our building envelope. This challenging work is already in the planning stages.

As an institution of education, we also recognise that educating our staff and students will be key. We already work with BC Hydro in our secondary schools with reducing lighting costs and various food initiatives to relate our consumption to environmental impact for all of our students, but we need to do more with our employees and staff to educate and empower them to make wise decisions on equipment use and utilise their innovative ideas.

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# School District 50 Haida Gwaii Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 862.66**

- 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: **847.85**. Total offset investment: **\$21,196.25**. Emissions which do not require offsets: **14.81** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all of types greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

\*\* Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

## School District 50 Haida Gwaii - 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        | 40                                      | % of vehicles are fuel- efficient models  | Removal of 2 Full Sized Pick Ups with no replacements   | Imminent return of a lease vehicle; replacement will be more fuel efficient  | 2009       | 2012                     |
| Replace larger vehicles with smaller models according to fleet "right-sizing" principles                            | Ongoing/In Progress        | 29                                      | % of vehicles down-sized since start year indicated   | Reduction of V8 vehicle usage   | Imminent return of a lease vehicle; replacement will be more fuel efficient  | 2009       | 2012                     |
| Perform regular fleet maintenance to improve fuel-efficiency  | Ongoing/In Progress        | 100                                     | % of vehicles are subject to regular maintenance for fuel efficiency                            | Ongoing   | Ongoing  | 2006       | No End Date (Continuous) |
| Replace small maintenance vehicles with more fuel-efficient models  | Ongoing/In Progress        | 25                                      | % of small maintenance vehicles are fuel-efficient  | Removal of larger trucks from fleet means an increase in fleet efficiency   | As leases expire and/or replacement required   | 2010       | 2013                     |
| <b>Behaviour change program</b>   |                            |   |   |   |  |            |                          |
| Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages) | Ongoing/In Progress        |   |   | Meeting with Mainenance Staff   | Posters and other reminders in prominent locations   | 2010       | 2011                     |
| Encourage carpooling in fleet vehicles  | Ongoing/In Progress        |   |   | Difficult in large remote district, but utilised as available; encouraging communication between staff prior to meetings or maintenance trips to co-ordinate                                | Ongoing;reduce travel requirements, multiple trips, etc.   | 2006       | No End Date (Continuous) |
| <b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>                                   |                            |   |   |   |  |            |                          |
| <b>Planning/management</b>  |                            |   |   |   |  |            |                          |
| Reduce office space (square meters) per employee  | Ongoing/In Progress        | 160                                     | is the current average rentable square meters per employee                                      | Student number decline has led to ongoing review of used classroom space; one school due for replacement with smaller building, as most of our buildings were designed for larger enrolment | Review of School Buildings, planning around closing buildings and/or partial close downs to reflect current enrolment  | 2003       | No End Date (Continuous) |
| Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)                                 | Ongoing/In Progress        | 75                                      | % of buildings have a real time metering system installed                                       | 09/10 replaced at Board Office  | As available for replacement   | 2003       | No End Date (Continuous) |
| <b>Owned buildings</b>  |                            |   |   |   |  |            |                          |
| Incorporate integrated design process into new construction or during renovations of owned buildings                | Ongoing/In Progress        | 100                                     | % of buildings built or renovated since start year indicated used the integrated design process | All renovations, etc planned with stakeholder groups to include disposal of materials, building envelope, etc.  | Possible construction of a new school in Sandspit; may be a multiplex as we have built in Port Clements with shared services in one building (and thus saving on heating, etc) | 2009       | 2013                     |
| Complete energy retrofits on existing, owned buildings  | Ongoing/In Progress        | 86                                      | % of owned buildings have undergone energy retrofits since start year indicated                 | Replaced Diesel heat for one building with electric   | Refits on heating systems in three schools   | 2007       | 2013                     |
| <b>Retrofitting owned buildings</b>   |                            |   |   |   |  |            |                          |

## School District 50 Haida Gwaii - 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                 |
|--|----------------------------|---|--|---|---|------------|--------------------------|
| Upgrade mechanical systems (heating, cooling, ventilation) during retrofits  | Ongoing/In Progress        | 50                                      | % of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades | All Retrofits and renovations now include comprehensive review and improvement/replacement of heating systems | Likely replacement of heating system for one school in 2012 | 2007       | 2013                     |
| Upgrade lighting systems during retrofits  | Ongoing/In Progress        | 0                                       | % of retrofits since start year indicated had lighting systems upgrades                          | Ongoing replacement as possible throughout district   | Ongoing   | 2008       | No End Date (Continuous) |
| Upgrade/adjust control systems during retrofits  | Ongoing/In Progress        | 50                                      | % of retrofits since start year indicated had control system upgrades or adjustments             | Ongoing replacement as possible throughout district   | Ongoing   | 2007       | No End Date (Continuous) |
| Improve building insulation (including windows) during retrofits   | Ongoing/In Progress        | 86                                      | % of retrofits since start year indicated had insulation improvements                            | Replacement as necessary  | Ongoing   | 2002       | No End Date (Continuous) |
| <b>IT power management</b>   |                            |   |  |   |   |            |                          |
| Install power management software which shuts down computers outside of regular business hours                           | Completed in 2010          | 100                                     | % of computers shut down automatically outside of regular business hours                         | completed power revisions, computer replacements, etc.  |   | 2008       | 2010                     |
| Implement server virtualization  | Completed in 2010          | 100                                     | % of servers have been virtualized since start year indicated                                    | Servers virtualised January 2011  |   | 2010       | 2010                     |
| Apply auto-sleep settings on computer monitors and CPUs  | Completed in 2010          | 100                                     | % of computers have auto-sleep settings applied  | completed power revisions, computer replacements, etc. by Nov 2010  |   | 2007       | 2010                     |
| Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices                             | Ongoing/In Progress        | 75                                      | % reduction in printers, copiers, and/or fax machines since start year indicated                 | Expanded to all schools   | As available for replacement                                | 2006       | 2012                     |
| Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices                              | Completed in 2010          | 90                                      | % of devices have auto-sleep settings applied  | Only a few legacy items at this point incapable of auto sleep   |   | 2010       | 2010                     |
| <b>Appliances and electronic devices</b>   |                            |   |  |   |   |            |                          |
| Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases                          | Ongoing/In Progress        |   |  |   |   |            |                          |
| Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases | Ongoing/In Progress        |   |  |   |   |            |                          |
| <b>Behaviour change program</b>  |                            |   |  |   |   |            |                          |
| Help staff reduce personal energy use through "workstation tune-ups"   | In Development             | 10                                      | % of current staff have completed a workstation tune-up  | planning for 2011 implementation; used Board Office for trial   | Implement and complete at all sites                         | 2011       | 2012                     |
| Ask staff to unplug electrical equipment or switch off power bars when not in use  | Completed in 2010          |   |  | occurs repeatedly due to large number of brown and black outs   |   | 2005       | 2010                     |
| Provide tips to staff on saving energy in the office while working outside of regular business hours                     | In Development             |   |  | planning for 2011 implementation  | Complete by end of 2011                                     | 2010       | 2011                     |

## School District 50 Haida Gwaii - 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                    |
|--|----------------------------|---|--|--|--|------------|-----------------------------|
| Provide reminders for turning off lights (e.g., signs, stickers, messages)                       | Ongoing/In Progress        |   |  | Use of e mail and posters; expanding auto-off lights   | Auto off lights as feasible  | 2000       | No End Date<br>(Continuous) |
| <b>Supplies (Paper)</b>  |                            |   |  |  |  |            |                             |
| <b>Printer/document settings</b>   |                            |   |  |  |  |            |                             |
| Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs          | Completed in 2010          | 100                                     | % of network printers have 'print and hold' settings applied       | All Photocopiers now have security functions and efficiency settings   |  | 2010       | 2010                        |
| <b>Electronic media in place of paper</b>  |                            |   |  |  |  |            |                             |
| Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)            | Ongoing/In Progress        | 20                                      | % of staff workstations with software installed                    | Use of SharePoint, etc. for relevant documents and data  | Possible expansion   | 2010       | No End Date<br>(Continuous) |
| Use electronic document library for filing common documents                                      | Ongoing/In Progress        | 80                                      | % of documents electronic at this point                            | All documents on our website or wiki as appropriate; all Board Meetings now electronic for documentation             | Further exploration of use of mobile technology in the classroom and offices of the District | 2007       | No End Date<br>(Continuous) |
| <b>Behaviour change program</b>  |                            |   |  |  |  |            |                             |
| Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Ongoing/In Progress        | 10                                      | % of staff currently have received collaborative software training | Ongoing; limited staff have used this sort of software   | Further Training   | 2010       | 2013                        |
| Encourage staff to hold paperless meetings or presentations (i.e., no handouts)                  | Ongoing/In Progress        |   |  | Ongoing; have reduced the number of physical meetings and increased emphasis on skype, electronic documentation, etc | Continue Electronic Distribution, teleconference, etc.                                       | 2009       | No End Date<br>(Continuous) |

## School District 50 Haida Gwaii - 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>Policy and budgeting</b>  |                            |   |   |  |   |                     |                          |
| Create a low-carbon travel policy or travel reduction goal                                     | In Development             |   |   |  | draft policy                                | 2011                | 2012                     |
| <b>Virtual meeting technology</b>  |                            |   |   |  |   |                     |                          |
| Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)                       | Completed in 2010          | 40                                      | % of computers have web-conferencing software installed | All District officers have conferencing software, as well as limited access at schools |   | 2009                | 2010                     |
| Make desktop web-cameras available to staff  | Ongoing/In Progress        | 75                                      | % of staff have access to a desktop web-camera          | Limited numbers of web cams but are available at all sites                             | Continue expansion via computer replacement | 2008                | 2013                     |
| <b>Behaviour change program</b>  |                            |   |   |  |   |                     |                          |
| Train staff in web-conferencing  | Completed in 2010          | 50                                      | % of staff are trained web-conferencing                 | All staff that need training have been trained.  |   | 2008                | 2010                     |
| Encourage staff to consider virtual attendance/presentation at events where possible           | Completed in 2010          |   |   | All staff encouraged to consider this (dependent on meeting's nature)                  |   | 2009                | 2010                     |
| <b>Other Business Travel Actions</b>   |                            |   |   |  |   |                     |                          |
| Reduction in Travel Budget, Off Island Travel for School District                              | Completed in 2010          | 15                                      | % reduction in air travel                               | Limited by geographic location, but a budget reduction is in place                     |   | 2008                | 2010                     |
| <b>Education, Awareness, and Engagement</b>  |                            |   |   |  |   |                     |                          |
| <b>Staff Professional Development</b>  |                            |   |   |  |   |                     |                          |
| Support green professional development (e.g., workshops, conferences, training)                | Ongoing/In Progress        |   |   | Part of Education System mandate   | Ongoing                                     | 2009                | No End Date (Continuous) |
| <b>Staff awareness/education</b>   |                            |   |   |  |   |                     |                          |
| Provide education to staff about the science of climate change                                 | Ongoing/In Progress        |   |   | Part of Education System Mandate   | Ongoing                                     | 2001                | No End Date (Continuous) |
| Provide education to staff about the conservation of water, energy, and raw materials          | Ongoing/In Progress        |   |   | Reminders, emails, etc.  | Ongoing                                     | 2007                | No End Date (Continuous) |
| Provide green tips on staff website or in newsletters  | Ongoing/In Progress        |   |   | As available; mostly at a school level   | Ongoing                                     | 2006                | No End Date (Continuous) |
| <b>Client/public awareness/education</b>   |                            |   |   |  |   |                     |                          |
| Provide education to clients/public about the science of climate change                        | Ongoing/In Progress        |   |   | This is an essential part of Science, Social Studies, and Planning Curriculum          | Ongoing                                     | 1997                | No End Date (Continuous) |
| Provide education to clients/public about the conservation of water, energy, and raw materials | Ongoing/In Progress        |   |   | This is an essential part of Science, Social Studies, and Planning Curriculum          | Ongoing                                     | Started before 1995 | No End Date (Continuous) |

## School District 50 Haida Gwaii - 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                    |
|--|----------------------------|---|--|--|---|------------|-----------------------------|
| Provide green tips on client/public website or in newsletters  | Ongoing/In Progress        |   |  | All school websites and newsletters feature green items and issues   | Ongoing                                   | 2008       | No End Date<br>(Continuous) |
| <b>Other Education, Awareness, and Engagement Actions</b>  |                            |   |  |  |   |            |                             |
| Numerous activities at schools around growing local and traditional foods, in Science, Home Economics, Social Studies, etc.  | Ongoing/In Progress        | 50                                      | % schools with comprehensive programmes            | Expansion beyond one school  | Ongoing; expanding to all schools by 2013 | 2009       | 2013                        |
| Participant in Farm to School programme  | In Development             | 33                                      | % schools with programmes                          | In development for 2011  | Programme initiated                       | 2010       | 2013                        |
| <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 | Ongoing/In Progress        |   |  | Ongoing replacement of toilets with low flow models, etc.  | Ongoing                                   | 2008       | No End Date<br>(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        | 90                                      | % paper recycled; some sites have composting, etc. | Policy in place  | Ongoing                                   | 2005       | No End Date<br>(Continuous) |
| Implement a hazardous waste reduction and disposal strategy  | Ongoing/In Progress        |   |  | Some materials like mercury and lead are difficult to store and dispose of on island; ongoing work on this area. | Ongoing                                   | 2006       | No End Date<br>(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.)               | In Development             |   |  | Policy under development   | Implementation                            | 2010       | 2012                        |
| Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)                            | In Development             |   |  | Policy under development   | Implementation                            | 2010       | 2012                        |
| <b>Commuting to and from home</b>  |                            |   |  |  |   |            |                             |
| Introduce telework/work from home policy   | Ongoing/In Progress        |   |  | Only applicable to a very few employees as we are a school district  | None                                      | 2008       | No End Date<br>(Continuous) |