

2011 Carbon Neutral ACTION REPORT



A document from the department of
Lower Mainland Facilities Management
Energy & Environmental Sustainability
the home of GreenCare

EXECUTIVE SUMMARY

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Dr. David N. Ostrow

President and Chief Executive Officer

It is my pleasure to present the 2011 Vancouver Coastal Health Carbon Neutral Action Report. This is our fourth year of tracking our carbon footprint and we are proud to claim carbon neutrality for the second year in a row.

A key to achieving sustainable health care is establishing a healthy balance among energy & environmental conservation, maintenance of public health, and fiscal responsibility. This is a critical

balance in a time of continued population growth, needed facility space, and rising costs.

Vancouver Coastal Health has included GreenCare in its organizational Strategic Framework. The following report will highlight key accomplishments in energy & environmental conservation. Most notably in 2011 we:

- **Reduced our energy consumption** by 2.6 GWh & 19,158 GJ.
- **Reduced waste** by implementing the recycling renewal program at 4 acute care sites and 5 residential care sites.
- **Increased staff engagement** through the launch of the *Cut the Carbon Community* and the Green+Leaders program.
- **Decreased staff commuting**, via single occupancy vehicles, through a *Clean Commuter Challenge*.

We are very excited about the progress we've made and look forward to a bright future of embedding green initiatives in an effort to make health care more sustainable.



Peter Goldthorpe

*VP Capital Projects, Real Estate & Facilities
Lower Mainland Facilities Management*

Within Facilities Management, we know the design and construction of buildings to support the delivery of health care services involves substantial resources, technology and materials. It also requires decades of further investment related to maintenance and remodeling. The environmental impact and resulting carbon footprint are significant.

We're taking responsibility to reduce this environmental impact. Facilities Management is working to support sustainability through effective site planning, energy efficiency, water efficiency, material flow reduction, toxics reduction, better land use, and life cycle analysis. We're also encouraging staff and clients to live in an environmentally sound way that expresses a modest level of consumption and ecological impact.

We have a lot of work to do, but becoming better stewards of the environment is worth it. The Carbon Neutral Action Report is an important part of this quest.

ABOUT VCH

Vancouver Coastal Health is a health care provider that serves over one million people in British Columbia

We serve one in four British Columbians

Vancouver Coastal Health (VCH) is one of six publicly funded healthcare regions within the Canadian province of British Columbia. One in four of British Columbia's population of 4 million people are served by Vancouver Coastal Health.

We provide direct and contracted health services including:

- **Primary health care**
- **Secondary, tertiary and quaternary care**
- **Home and community health care**
- **Mental health and addiction services**
- **Population and preventive health services**

Thirteen hospitals and 260+ facilities

We operate in part of Greater Vancouver and in the Coast Garibaldi area. We administer 165 VCH-owned facilities and 90 leased facilities. This includes 9 hospitals, 3 diagnostic and treatment centers, and 15 community health centers. We also contract our services to third parties, primarily long term care facilities.

As a health authority in British Columbia, the Provincial Government, through the British Columbia Ministry of Health, sets province-wide goals, standards and performance agreements for health service delivery. This includes a mandate for Vancouver Coastal Health to reduce its carbon emissions.

"The delivery of public health care has complex and far reaching ecological reverberations. Thus, the health care sector must take responsibility and ensure it isn't contributing to the very environmental problems that need to be addressed locally and globally."

Duncan Campbell
CFO & VP Systems Development & Performance
Vancouver Coastal Health



Quick Facts

\$2.8 billion

Operating budget 2010/11

22,000 staff

Including 12,936 full-time equivalents (FTE)

2 FTE for projects

To reduce our footprint

1 FTE to measure

Our energy/carbon use

2,500 physicians

Plus 4,000 volunteers

0 small vehicles

In our fleet (forklifts, gators etc)

48 medium vehicles

(Cars, ambulances etc.)

8 large vehicles

(Buses, transport trucks)

Our Communities

Vancouver

Richmond

Within Greater Vancouver

The North Shore

The municipalities and districts of North and West Vancouver

Coast-Garibaldi

Sea-to-Sky (including Whistler), and the Sunshine Coast, Powell River, Bella Bella, and Bella Coola.

CHANGES IN OUR OPERATIONS

We created a new Energy & Environmental Sustainability group dedicated to reducing the environmental impact of all the Lower Mainland health authorities

Four health authorities are working together

Beginning in 2010, the following four health organizations began formally working together to manage and deliver administrative and clinical support services:

- **Vancouver Coastal Health**
- **Fraser Health Authority** (FH)
- **Providence Health Care** (PHC)
- **Provincial Health Services Authority** (PHSA)

This partnership allows us to consolidate operations across the four health organizations for greater efficiency, so our health care dollars can be effectively focused on patient care.

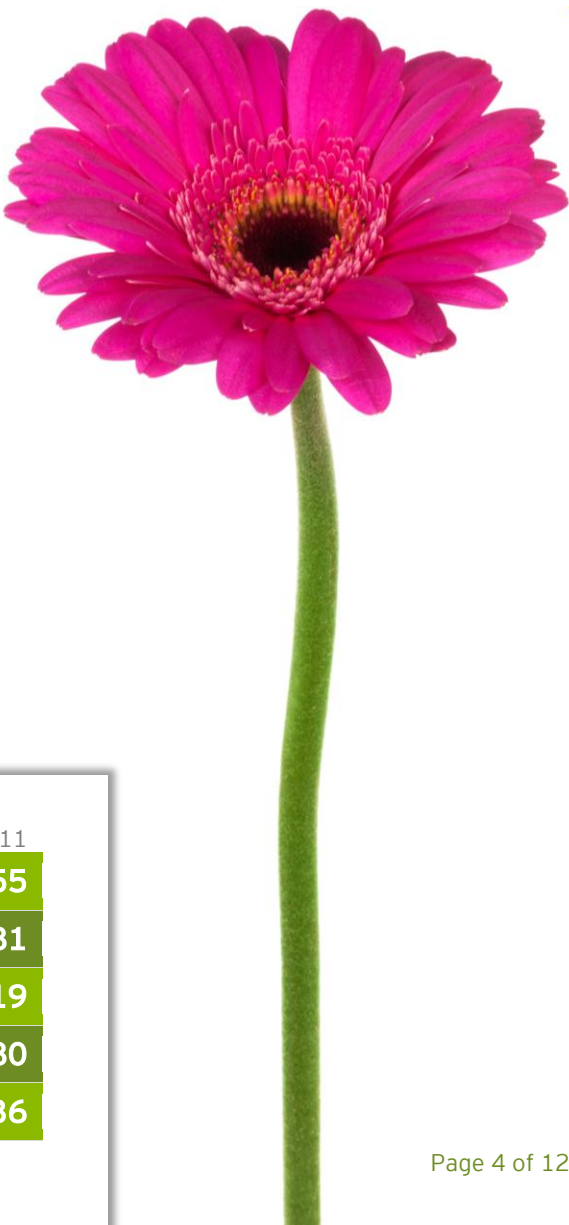
Facilities Management was one of the ten administrative and clinical services areas consolidated. Now, the Lower Mainland Facilities Management team has a mandate that includes 27 acute care hospitals and 50 residential care facilities, which serve over 2.5 million British Columbians living in 37 municipalities and regional districts.

Coordinating our sustainability work

Consolidation enabled the creation of an Energy & Environmental Sustainability (EES) group in 2010 within the Lower Mainland Facilities Management department. This has presented new opportunities to coordinate our environmental and sustainability work across Vancouver Coastal Health, FH, PHC, and PHSA for greater impact.

Building Space Change	2010	2011
Distinct VCH Buildings	270	255
% Owned	81	81
% Leased	19	19
Usable Square Meters	817,753	816,880
Full-time Employee Equivalents	13,600	12,936

% based on floor areas



ENERGY AND ENVIRONMENTAL SUSTAINABILITY

We consider energy and environmental sustainability to be important components of organizational, human and environmental health

Reducing our environmental impact

Our new Energy & Environmental Sustainability group includes Energy Managers and Sustainability Managers tasked with reducing the waste and environmental impact of our health organizations.

It's the goal of this EES group to unite all four organizations in their commitment to reduce health care's impact on the environment, while increasing the health and wellbeing of British Columbians by maintaining the important link between health and the environment.

Increasing our staff's enviroengagement

An increased focus is on engaging our staff and work communities to take action to reduce the organizations' environmental impact and carbon footprint.

Vancouver Coastal Health has endorsed an Environmental Sustainability Policy, along with the other Lower Mainland health organizations, that includes a Vision Statement and Sustainability Conservation Goals.

Creating a conscious work culture

Our vision is to promote an environmentally conscious culture that's actively aware and engaged in creating sustainable solutions for healthy lives and a healthy community.



GreenCare is the brand name for all the environmental sustainability activities across the Lower Mainland health organizations. This includes work done through our EES group, our Green+Leaders staff champions, our recycling program, and through our online staff engagement forum Cut the Carbon Community.

10 Focus Areas

Our EES group aims to create greater sustainability in ten key areas of focus:

1. Chemicals & Toxics
2. Energy
3. Finance
4. Green Built Systems
5. Land & Food
6. Materials
7. People
8. Sustainability & Carbon Reporting
9. Travel
10. Water

Our Sustainability Goals

	2015	2020
Energy Reduction	10%	20%
Green House Gas Reduction	15%	33%
Water Reduction	7%	10%
Alternate Commute Increase	10%	20%
Waste Diversion (Recycling) *	70%	80%
Staff Engagement in GreenCare	40%	75%

Targets use a 2009 baseline, except Green House Gas Emissions which uses 2007.

* Goals aligned to Metro Vancouver Targets

2011 GREEN HOUSE GAS EMISSIONS

Vancouver Coastal Health is committed to setting aggressive targets for the reduction of Greenhouse Gas Emissions

"There are major health benefits from low carbon lifestyles, which can reduce obesity, heart and lung disease, diabetes and stress."

Prof. Anthony Costello
Institute for Global Health

Our Goal: An 18% drop in GHG emissions by 2016

As a government funded organization VCH must abide by the Provincial Government of British Columbia's *Greenhouse Gas Reduction Targets Act* (Bill 44), passed in 2007.

Under the Act, our Green House Gas emissions are to be reduced below our 2007 levels as follows:

- **6% by 2012**
- **18% by 2016**
- **33% by 2020**
- **80% by 2050**

The Act also laid the foundation for the *Emission Offsets Regulation* and the *Carbon Neutral Government Regulation*, both enacted in December 2008, which guides VCH.

Our 2011 carbon footprint: 47,038 tCO₂e

VCH has calculated our 2011 carbon footprint, in accordance with the Greenhouse Gas Reduction Targets Act (as reported in SMARTTool), to be 47,038 tonnes. This represents a 1.4% increase over our 2010 footprint.



Our Carbon Footprint (in tCO ₂ e)	2010	2011
Mobile Fuel Combustion (Fleet & other mobile equipment)	107	49
Stationary Fuel Combustion & Electricity (Buildings)	44,882	45,576
Supplies (Paper)	1,392	1,425
Emissions Which Do Not Require Offsets*	0	-12
Total Carbon Footprint (tCO₂e)	46,382	47,038
Emissions per Full-Time Employee	3.41	3.64
Emissions per Meter Square Facility Space	.057	.058

*As outlined in the Carbon Neutral Government Regulation of the Greenhouse Gas Reductions Targets Act, some emissions do not require offsets.

It was estimated that Fugitive Emissions from cooling equipment do not comprise more than 0.01% of VCH's total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in our total greenhouse gas emissions profile.

CARBON OFFSETS

Vancouver Coastal Health purchased carbon offsets to become carbon neutral in 2011

Offsets applied to be carbon neutral in 2011

Vancouver Coastal Health was carbon neutral in 2011. We achieved this through our commitment to reduce energy, paper, travel and CO2 emissions, and by purchasing offsets.

The offsets, for in-scope emissions, were purchased from the Pacific Carbon Trust and amounted to \$1,188,675.

Weather increased our total GHG emissions

Although our in-scope emissions were reduced by mechanical and electrical retrofits, policy development, and behavior change programs, our total carbon footprint increased in 2011.

This increase was due to weather conditions. Carbon emissions from buildings are based upon actual energy use data and not adjusted for weather. Weather variances will cause fluctuations in energy usage and ultimately the CO2 footprint from year to year.

In 2011, the Heating Degree Days were 13% higher than 2010. Because some fuel consumption is weather dependent, this likely contributed a 7.0% increase in VCH's 2011 carbon emissions.

In 2011
we were
carbon
neutral
for the
second
year in a
row

Our Carbon Offsets

	2010	2011
Carbon Footprint in tCO2e	46,382	47,038
Purchased Carbon Offsets	\$1,147,124	\$1,188,675
Purchased Carbon Offsets +HST	\$1,284,779	\$1,331,316

2011 purchased carbon offsets include payment credits and space adjustments from 2010

EMISSIONS REDUCTION ACTIVITIES 2011

Vancouver Coastal Health continued to take strides to reduce our carbon footprint. In 2011 we undertook multiple projects, including the following highlights

Energy Saved

Vancouver Coastal Health completed 23 energy projects in 2011 which led to big annual savings for us...and the environment.

2.6 GWh
Electricity saved

19,158 GJ
Natural gas saved

964 tCO₂e
Greenhouse gas reduction

ENERGY: We improved efficiency

- **Installed real-time Pulse meters in 12 VCH buildings.**
- **50% of VCH-owned facilities now have active PML sub-metering in place.**
- **Building Energy Performance Indexes (BEPI – kWh/m²/yr) are now in 100% of all VCH-owned acute, and extended/residential care facilities.** BEPIs can be compared to the average BEPI at other same-function VCH facilities and at other BC Health Care Authorities.
- **Completed 23 energy-retrofit projects in 13 buildings** (2,199,214 sqft). This included:
 - **Conducted energy audits** and BC Hydro Continuous Optimization Projects (COP) at 13 buildings.
 - **Upgraded mechanical systems in 10 buildings** (80% of all 23 energy retrofits).
 - **Optimized Digital Design Control (DDC) systems in 3 buildings.**
 - **Finished 6 lighting-retrofit projects** (26% of all 23 energy retrofits).
- **Initiated the investigation phase of BC Hydro's COP at an additional 7 VCH-owned buildings** (994,696 sqft). Most energy measures will be to upgrade/optimize the mechanical systems and the DDC building systems.
- **Started a major energy retrofit on an 83-year old 60,000 sqft Vancouver site** to be completed by July 2012. To maximize energy savings this retrofit has undergone a BC Hydro Energy Modeling process. Previously heated by inefficient steam, the retrofit will include a number of energy measures such as condensing boiler, additional insulation for roof, walls, and windows, lighting controls, and a high efficiency HVAC system.
- **Completed lighting audits at 14 VCH-owned buildings.**



Green Buildings

Construction projects on new or existing facilities are now built to an existing sustainability/green standard at Vancouver Coastal Health. This includes LEED (Leadership in Energy and Environmental Design) for new buildings, and BOMA BEST (Building Environmental Standards) for existing buildings.

Our current building rankings are:

- **We're seeking Gold-LEED certifications** for St. Mary's Hospital in Sechelt and for Hope Center in North Vancouver, which is under construction and targeted for completion in December 2013.
- **One building has been rated a BOMA BEST Level 1**, 520 West 6th Avenue (Corporate), rated 10/01/2011.
- **One building has been rated a BOMA BEST Level 2**, 1669 East Broadway.
- **We're seeking BOMA BEST status for one building**, 132 W. Esplanade.

DESIGN: We use green standards

- **It's now mandatory to incorporate an Integrated Design Process** for all new construction and major renovation projects at VCH. A number of new projects, currently in various stages of development in 2011, incorporated Integrated Design Process and LEAN principles where appropriate and feasible.
- **LEED NC Gold standards are being used** in the construction of a residential care facility extension (4,830 square meters) of St Mary's Hospital in Sechelt. Occupancy is scheduled for October 2012.
- **Three more patient care facilities are being built to LEED Gold Standards.** These projects are currently in the various design and planning stages.

WASTE: We recycled and reduced

- **Implemented recycling renewal program at 4 acute care sites and 4 residential care sites.**
- **Rechargeable batteries are now used in ARAMARK-staff pagers**, instead of disposable batteries. ARAMARK is VCH's contracted housekeeping provider.
- **EcoLogo-certified represented 70% of paper consumables purchased** in 2011 by ARAMARK. An additional 10% of paper products have recycled content of 80% or higher.

TRAVEL: We facilitated greener commutes

- **Continued to reinforce anti-idling** by installing 34 anti-idling signs in VCH entrance areas which have vehicle idling potential. Signs were obtained from LiveSmart BC.
- **VCH staff participated in the national Clean Commuter Challenge** that encouraged them to commute/travel carbon neutral or carbon reduced.
- **Promoted sustainable transportation and ran a commuting campaign** through our Green+Leaders program which encouraged staff to walk, cycle or take public transit to work.
- **Implemented secure bicycle cages/rooms** for staff to use at most VCH facilities.

One Less Tonne

During 2011, as part of our new Cut the Carbon Community at c3community.ca, we ran a One Less Tonne challenge and asked Lower Mainland staff at Vancouver Coastal Health, Providence Health Care, Fraser Health, and the Provincial Health Services Authority to commit to taking actions to reduce their personal carbon footprint.

Here's what they committed to for the year:

524 tCO₂e

Green House Gas Reduction

5,939 GJ

Energy Saved

936,400 kWh

Power saved

\$153,446

Cost savings

BEHAVIOUR: We engaged staff

- **Over 2,300 Lower Mainland staff, including 975 Vancouver Coastal Health employees, signed up for our new Cut the Carbon Community website and campaign, launched in 2011.** They committed to take actions that would reduce over 500 tonnes of carbon emissions through this Fortis-sponsored site.
- **We incorporated GreenCare messaging into staff orientations** at Vancouver General, Richmond and Lion's Gate Hospitals.
- **We launched a Green+Leaders program** and recruited VCH staff volunteers. They champion and run behavior change campaigns at their hospitals, care facilities and offices focusing on:
 - **waste and paper reduction**
 - **energy reduction, and**
 - **sustainable transportation**
- **We encouraged staff to change their behavior** by hosting Energy Fairs, and other Energy and Sustainability awareness sessions, all rolled out as part of our BC Hydro Workplace Conservation Agreement. This included "Stop the Energy Bleed, Turn off the Lights" bookmarks.
- **Staff have access to real-time power usage per hospital** through our online Cut the Carbon Community and our partnership with Pulse Energy. This builds awareness of the success of initiatives and retrofits.
- **We ran energy awareness campaigns** to encourage staff to use stairs to save energy and encourage fitness.
- **Alternative/green travel to meetings was encouraged**, as was video conferencing and other virtual attendance/presentations.
- **Staff shuttle services were provided to employees** travelling between our sites within Vancouver.

Our C3community.ca is for staff engagement



EMISSION REDUCTION

GOALS 2012–14

Our plans to continue reducing greenhouse gas emissions 2012–2014

The four Lower Mainland health organizations, Vancouver Coastal Health, Fraser Health, Provincial Health Services Authority, and Providence Health Care, will continue to coordinate, collaborate and integrate energy and environmental initiatives within all our operational clinical and non-clinical work.

As part of those efforts, the following is a list of tasks to be achieved by Vancouver Coastal Health in 2012.

ENERGY

- **Install pulse meters in more buildings** pending the implementation of Continuous Optimization Programs.
- **Begin BC Hydro COP Implementation phases at 12 VCH-owned sites.** This includes optimization of the DDC systems.
- **Begin BC Hydro COP Investigation Phases at 12VCH buildings** (1,651,838 sqft) and complete in 2014. These will focus on electrical savings, mechanical systems upgrades and optimizations, and DDC system optimizations or upgrades.
- **Retrofit T12 lighting fixtures at 16 facilities,** pending available funding. Estimated savings of 2.8 million kWh per annum.
- **Complete the installation of a geo-exchange clean energy project** at St. Mary's Hospital in Sechelt.
- **Develop an Energy & Environmental Sustainability "Playbook"** describing the team and work involved in our efforts.

BEHAVIOR

- **Maintain and grow the online Cut the Carbon Community.**
- **Recruit more staff volunteers and continue to support our Green+ Leaders.**
- **Run Green+Leaders paper reduction campaign in 120 departments** across all four health authorities by the end of 2013.
- **Run energy reduction campaigns in 120 departments** across all four health authorities by end of 2013.

BUILDING DESIGN

- **Continue to use the GOLD LEED standard in new facility design and construction,** and the LEED standard for all major renovations. VCH has 1 project seeking certification completion in 2012.
- **Continue to encourage the BOMA BEST standard** in our leased buildings.
- **Investigate using Evidence Based Design** and LEAN principles in building designs.
- **Evaluate using Perkins Will Precautionary List and the Living Building Challenge's Red List** in all project design.

TRAVEL

- **Continue the Clean Commuter Challenge** in 2012.
- **Continue the Green+Leaders sustainable transportation focus** including a campaign to encourage walking, cycling or public transit for work commute.

WASTE

- **Roll out recycling renewal programs** to 8 acute care and 10 residential care sites.
- **Implement food services recycling and composting** at 18 sites.
- **Set standard of 60% cleaning products to be Environmental Choice-certified** used by ARAMARK at all VCH sites, pending approval for use in healthcare facilities by infection control authorities.

ASSURANCES AND RESOURCES

Health Authority Resources

- **Vancouver Coastal Health**
<http://www.vch.ca/>
- **Providence Health Care**
<http://www.providencehealthcare.org>
- **Fraser Health**
<http://www.fraserhealth.ca>
- **Provincial Health Services Authority**
<http://www.phsa.ca>
- **Cut the Carbon Community**
www.c3community.ca

External Resources

- **LiveSmart BC: 2010 Carbon Neutral Action Reports: Health Authorities**
http://www.livesmartbc.ca/government/carbon_neutral/health_authorities.html
- **Bill 44 - 2007; Greenhouse Gas Reduction Targets Act**
http://www.leg.bc.ca/38th3rd/1st_read/gov44-1.htm
- **Canadian Green Building Council LEED description**
<http://www.cagbc.org/>
- **ASHRAE 189.1 standard for new buildings and renovations**
<http://www.ashrae.org/resources--publications/bookstore/standard-189-1>
- **BOMA BEST Environmental Certification**
<http://www.bomabest.ca/>
- **Natural Resources Canada**
<http://www.nrcan.gc.ca/home>

Partner Resources

- **Fortis**
<http://www.fortisbc.com>
- **BC Hydro**
<http://www.bchydro.com/>

Assurance

As part of meeting the Carbon Neutral Government Regulations, all Public Sector Organizations (PSOs) are now required to annually self-certify, i.e. declare that the data entered into SMARTTool is accurate and complete.

Beginning in 2012, each year a cross section of PSOs will undergo an independent verification process.

In 2011, our Energy and Environmental Sustainability team volunteered for the Climate Action Secretariat's pilot self-certification program.

Feedback from the auditors was good, indicating the Lower Mainland Health Authorities' new process for self-certification is sound.



Vancouver Coastal Health - 2011 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 <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	1-Fleet of 13 vehicles used by VCH for supplies deliveries are managed by PHH-Arval Fleet Management Services 2-Forty three (43) other vehicles, owned by VCH, are not currently managed by PHH-Arval. All vehicles are maintained regularly to ensure vehicle safety and optimize fuel efficiency. Stringent annual AirCare, a motor vehicle inspection/maintenance (IM) program implemented in BC in 1992, requires all vehicles to undergo emissions testing prior to licence renewals.	Maintain current practice. As of April 1, 2011, Five (5) VGH stores vehicles were added to PHH-Arval fleet Management services	Started before 1995	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Reduce office space (square meters) per employee	Ongoing/In Progress	39	is the current average rentable square meters per employee	1-Ongoing consolidation of some under-utilized leased facilities to reduce energy utilities consumptions, the organization's carbon footprint, square footage footprint and leasing costs 2- A 10,530 square foot floor in a leased facility was converted to an open office in January 2011 to accomodate 74 working stations (66 permanent stations 2 touch downs and 6 flex stations) for VCH, PHC, PHSA, and FH Lower Mainland facilities management employees to maximize space usage, increase efficiency and reduce utilities consumption. 3-Overall leased space ffor VCH was reduced by 3.6% during 2011	Continue consolidation of under-utilized leased facilities and reducing leased space inventory	2010	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Completed in 2011	50	% of buildings have a real time metering system installed	Approximately 50% of VCH owned facilities have active PML sub-metering in place. Total of 12 real time Pulse meters were implemented in 12 VCH buildings in 2011.	Additional Pulse meters will be installed in other buildings pending the additional implementation of Continuous Optimization Programs in other VCH facilities	2009	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	100	% of owned buildings have an established energy performance baseline	All owned VCH buildings have a Building Energy Performance Index (BEPI - ekWh/m2/yr) for Acute, and Extended/Residential Care facilities. These can be compared to the average BEPI for same function facilities at VCH and other Health Care Authorities in BC where applicable	Building Energy Performance Index (BEPI - ekWh/m2/yr) are updated quarterly for all VCH owned buildings	2008	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	0	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	1 - Construction of one (1) residential care facility, an extension (4,830 square meters) of St Mary's Hospital in Sechelt, was started in 2010 with occupancy scheduled for July 2012. This is being built to LEED NC Gold standards. 2 - Three (3) more patient care facilities are currently in the various design and planning stages and will be built to LEED NC Gold standards.	All new constructed facilities and major renovations are mandated to meet LEED NC Gold standards. Four (4) facilities, in various stages of development, will meet LEED NC Gold standards over the next 4 years: - St Mary's Hospital extension in Sechelt, a 38 bed extension, currently in construction is due to open in July, 2012 - Powel River Residential Care Centre, currently in the design stage, with Capacity of 102 beds which will replace the existing Olive Devaud residence facility in 2004, in Powell River - Joe and Rosalie Segal Care Centre, currently in the design stage, a 100 bed mental health care centre to be opened in Vancouver in 2014. - The HOpe Centre, a mental health facility, currently under construction in North Vancouver, will be opened in December 2013.	2010	No End Date (Continuous)
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	Incorporating Integrated Design Process is mandatory for all new construction and major renovations at VCH. A number of new construction and major renovations projects, currently in various stages of development in 2011, incorporated Integrated Design Process and LEAN principles where appropriate and feasible	All new construction and major renovations are mandated to incorporate Integrated Design Process and LEAN principles where appropriate and feasible	2008	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			Chiller and refrigeration maintenance contracted services incorporate refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, and appropriate bleeding of banned refrigerants.	Maintain practice	2005	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	16	% of owned buildings have undergone energy retrofits since start year indicated	1-Twenty three (23) energy retrofit projects were completed in 2011 in 13 buildings (2,199,214 sqft). Estimated annual savings of 2.4 GWh of Electricity, 15,804 GJ of natural gas and a reduction of 858 tCO2e of GHG emissions, a reduction of approximately 1.9% from the current VCH carbon footprint. 2-A major renovations retrofit of a 60,000 sqft 1929 building at the VGH site in Vancouver, initiated in 2011 is still under renovations and will be completed in June/July 2012. Previously heated by inefficient steam, the retrofited building will incorporate a high efficiency condensing boiler for building heating and will also include building envelope insulation and energy efficient windows replacement. This building retrofit has gone through a BC hydro Energy Modeling process to maximize energy savings. 3-Initiated the investigation phase of BC hydro's Continuous Optimization Project (COP) in seven (7) separate (994,696 sqft) VCH owned buildings. Most energy measures will be to upgrade/optimize mechanical systems as well DDC building systems. 4-Initiated Lighting audits at 15 VCH owned buildings (2,199,244 sqft)	1- BC Hydro's Implementation Phase of the Continuous Optimization Project (COP) is being implemented in six (6) separate VCH owned buildings (2,035,474 sqft) in 2012 and implementation of energy measures are scheduled for completion in 2013. 2. BC Hydro's COP Project Investigation Phase weere initiated in eight (8) VCH buildings (995,000 sqft) in February 2012. Implementation Phase energy measures will be implemented in early 2013 with completion scheduled for 2014. 3- BC hydro Continuous Optimization Projects Investigation Phase are committed for another six (6) VCH owned buildings for late 2012. Implementation Phase of identified energy measures to start in 2013 and are scheduled for completion in 2014. 4-Pending available funding, VCH will retrofit T12 lighting fixtures at fifteen (15) facilities that have gone through a detailed lighting audit process in 2011. Estimated savings of 2.5 million kWh savings per annum.	2008	No End Date (Continuous)
Retrofitting owned buildings							

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	80	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Twenty three (23) energy retrofit projects including energy audits and Continuous Optimization programs were completed in 2011 in 13 buildings (2,199,214 sqft) of which ten (77%) included mechanical systems upgrades as part of the retrofits.	1- Implementation phase of BC hydro's Continuous Optimization Project (COP) of six (6) separate VCH owned buildings in 2010 will be initiated in 2012 and scheduled for completion in early 2013. Most energy measures will be to upgrade/optimize mechanical systems as well DDC building systems 2. BC Hydro's COP Project Investigation Phase was initiated in eight (8) VCH buildings (995,000 sqft) in February 2012. Implementation Phase Energy measures will be implemented in early 2013 with completion scheduled for 2014. These will focus on electrical savings, mechanical systems upgrades and optimization as well as DDC buildings systems optimization and/or upgrades. 3- BC hydro Continuous Optimization Projects Investigation Phase are committed for another six (6) VCH owned buildings for late 2012. Implementation Phase of identified enermmy measures to start in 2013 and scheduled for completion in 2014. These will focus on electrical, mechanical and DDC systems optimization and/or upgrades..	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Completed in 2011	26	% of retrofits since start year indicated had lighting systems upgrades	1-Six lighting retrofit projects were completed in 2011. This constitutes 26% of the total 23 energy retrofit projects completed in 2011 2-Lighting audits were completed at 14 VCH owned buildings (2,199,244 sqft) in 2011	Pending available funding, VCH will retrofit T12 lighting fixtures at fifteen (15) facilities that have gone through a detailed lighting audit process in 2011. Estimated savings of 2.5 million kWh per annum.	2011	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Completed in 2011	13	% of retrofits since start year indicated had control system upgrades or adjustments	Of the twenty three (23) completed energy retrofit projects completed in 2011, three (3) included optimization of the buildings DDC system	The implementation of BC hydro COp program of energy measures from 2012-2014 includes optimization of the targeted buildings DDC systems	2011	2014

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Improve building insulation (including windows) during retrofits	Completed in 2011	0	% of retrofits since start year indicated had insulation improvements	1-A new 85,000 sqft building completed in July, 2011, includes windows and roof insulation 2-One (1) 1929 65,000 sqft building at the VGH Site is undergoing total retrofit and includes windows replacement and insulation as well as building and roof insulation. Building to be occupied in June of 2012	All new facilities and major renovations under construction (2) as well new facilities in planning and Desgn phase at VCH will be mandated to be LEED NC Gold certified as well as have superior building insulation, including windows and roofs. One (1) facility currently under construction and to be occupied in 2012 and three (3) others in design stage and tentatively scheduled for completion in 2014.	2010	2014
Install an on-site renewable energy demonstration project	Completed in 2011	0	% of retrofits since start year indicated had on-site renewable energy components	Installation of a geo-exchange clean energy project at St. Mary's Hospital (Sechelt) expansion is currently in progress	Completion of geo-exchange at St Mary's Hospital expansion project in Sechelt will be completed in July, 2012	2010	2012
Leased buildings							
Develop a green lease policy that requires green features to conserve energy be included in all lease negotiations	Ongoing/In Progress			A Tenant Improvement Handbook, incorporating some elements of Green Lease policies developed in 2007 and updated in 2009, is in the process of additional updates to incorporate the different standards for all of 2011 consolidation of the lower mainland	1-Final edit and approval of the Tenant Improvement Hanbook by the Steering Committee in Apri/May 2011. 2-Maintain and improve green leasing practices, energy consumption, buildings efficiency, sustainability, and occupant satisfaction and comfort.	2010	No End Date (Continuous)
IT power management							
Implement server virtualization	Ongoing/In Progress	70	% of servers have been virtualized since start year indicated	Updated energy study carried out by Greenhalo investigating the further potential of virtualization across the Lower Mainland Helath Authorities (VCH/PHC/FH/PHSA). This study was transferred to a BC Hydro Power Smart Incentive agreement	Virtualization to commense affecting the VCH core sites	2012	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	100	% reduction in printers, copiers, and/or fax machines since start year indicated	All new stand-alone printers, copiers, and/or fax machines have been replaced with new multi-function devices , where feasible	Maintain practice	2007	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	100	% of devices have auto-sleep settings applied	Auto-sleep settings are the standard configuration setting for all devices that support this functionality. All new printers, copiers, fax machines and/or MFPs (Multi-function Printers) have auto-sleep settings applied.	Maintain practice	2007	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	100	% of computers are ENERGY STAR rated	All PC Desktops and flat screen monitors, purchased in 2011, are star ENERGY STAR models and replace energy inefficient PC Destops and CRT monitors .	Maintain practice	2011	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	100	% of fridges are ENERGY STAR rated	All new refrigerators purchased in 2011 were Energy Star models	Maintain practice	2011	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			New purchases of appliances or electronic devices are ENERGY STAR rated when available.	Maintain practice	2011	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Completed in 2011			Desk lamp Incandescent lamp bulbs are not supported by VCH Maintenance departments and are being replaced with CFL bulbs requisitioned through Maintenance . The purchase of more efficient desk lamps using CFL lamps and/or LED lighting are recommended to user departments	Maintain practice	2007	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			"Stop the Energy bleed, Turn off lights no one is using" book marks are provided by energy management staff to employees during energy fairs and other Energy Awareness sessions.	Maintain practice	2007	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Information provided to staff during Energy Awareness and education sessions. Also included in the Green+Leaders energy reduction campaign.	Maintain practice and awareness initiatives	2007	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			"Stop the Energy bleed, Turn off lights no one is using" book marks are provided by Energy and Environment Sustainability staff to employees during energy fairs and other Energy and Sustainability awareness sessions. Energy reduction is also one of the three behaviour change campaigns in the Green+Leaders program. Launched the Cut the Carbon Community online web engagment campaign.	Maintain practice and awareness initiatives. Use the Green+Leaders behaviour change program which focuses on energy reduction throughout the year. Target is to recruit 120 volunteers by end of 2013 for the Lower Mainland Health Authorities VCH, PHC, PHSA, and FH	2007	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			Energy awareness campaigns encourage staff to use stairs where feasible to save energy and encourage personal fitness	Maintain practice and awareness initiatives. "Take the stairs" awareness is incorporated into the Green+Leaders program.	2007	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			"Stop the Energy bleed, Turn off lights no one is using" book marks are provided by Energy and Environment Sustainability staff to employees during energy fairs and other Energy and Sustainability awareness sessions. Non-wall damaging stickers to turn off lights when not in use have been installed installed by light swtiches to encourage electricity savings. Green+Leaders ran an energy reduction campaign to promote energy conservation.	Green+Leaders will continue running energy reduction campaigns in their departments to encourage staff to turn off lights and equipment. Will be implemented in 120 departments by end of 2013.	2007	No End Date (Continuous)
Promote hot water conservation	In Development			The Energy and Environment Sustainability team initiated a water conservation assessment trial in 2011 using water saving device at one VCH Hospital in preparation for a hot water conservation plan at other Lower Mainland Health Authorities (FH, VCA, PHSA, PH).	A water Conservation plan will be developed over the next 3 years	2011	2014
Supplies (Paper)							
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	100	% of network printers or photocopiers are set to automatic double-sided	All new Multi-function printers and photocopiers installed since 2009 have automatic double-sided set as the default setting. All printers and copiers have been adjusted to default to double-sided printing	Maintain practice	2009	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Current use of MS Sharepoint Collaborative software for Electronic editing is available to staff where required. Planning in place for facilities to upgrade to one centralized web-based system using Sharepoint 2010	Initiative in place to enhance use of a centralized web-based MS SharePoint 2010 electronic editing and make available to all approved facilities staff across VCH, PHC, FH, PHSA health authorities.	2008	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress			Shared drives and electronic document libraries are available to most staff at VCHA	Practice will continue. Enhance and extend use in Facilities, including Planning, Construction and Engineering	2008	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Public Affairs and Communications post most materials that were previously printed through various web-based media	It is expected that most printed material will be slowly reduced and replaced with various on-line electronic media including e-mail bulletins, intranet newsletters and other electronic media	2009	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Some training is currently available	HSSBC to review training needs and develop action plan	2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Practice is encouraged Green+Leaders materials reduction campaign included a focus on paper reduction.	On-going and part of the paper reduction campaigns strategies. Green+Leaders program includes a paper reduction campaign that includes a tool on paperless meetings. Will be implemented in 120 departments by end of 2013.	2008	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Practice is encouraged. Green+Leaders materials reduction campaign included a focus on paper reduction.	On-going and part of the paper reduction campaigns strategies	2008	No End Date (Continuous)

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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 <i>Greenhouse Gas Reduction Targets Act</i> . 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 (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress			Web-conferencing software is installed as may be needed on some management desktop as well as in major conference rooms	The installation of Office Communication System (OCS), including web-conferencing software, is now part of HSSBC mandate and responsibility. Use will be expanded	2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress			Most main conference rooms in the larger facilities had video-conference units installed	The installation of Office Communication System (OCS), including video-conferencing , is now part of HSSBC's mandate and responsibility. Installation of video-conferencing units will continue to be installed across VCH	2010	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress			Limited staff training at this time due to lack of staff resources	Staff training for web-conferencing is now part of the HSSBC mandate and responsibility. Staff Training will be expanded	2010	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress			Limited staff training and technical support at this time due to lack of staff resources	Staff training for video-conferencing and technical support is now part of the HSSBC mandate and responsibility. Staff Training and technical support will be expanded	2010	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Green+Leaders sustainable transportation campaign includes a tool to encourage staff to hold virtual meetings. Staff are encouraged to participate in video conferencing and other virtual attendance/presentation.	Maintain practice where possible. Part of the Green+Leaders program will include encouraging staff to hold virtual meetings as part of the sustainable transportation focus.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Green+Leaders sustainable transportation campaign includes a tool to encourage staff to carpool to meetings. Staff are encouraged to carpool to meetings	Practice to continue. Green+Leaders program will include encouraging staff to carpool as part of the sustainable transportation focus.	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Green+Leaders sustainable transportation campaign includes a tool to encourage staff to take sustainable alternatives to meetings.	Practice to continue. Part of the Green+Leaders program will continue to encourage alternatives to SOVs when travelling to meetings.	2008	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress			The Green+Leadersprogram recruits, trains and supports staff volunteers to run behaviour change campaigns in their departments. The program is supported by Executive Team	Practice to continue	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			The Green+Leaders program has one FTE dedicated to training and supporting volunteers	Practice to continue	2010	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			The Green+Leaders program provides training on community-based social marketing and CBSM is integrated into its tools	Practice to continue	2010	No End Date (Continuous)
Awards/Recognition							

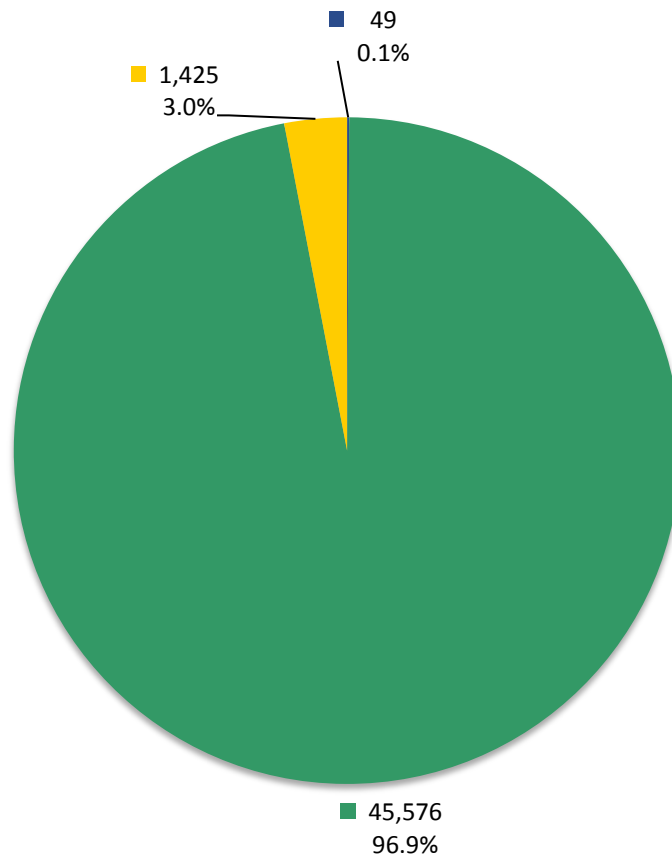
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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Establish a sustainability/green awards or recognition program	Ongoing/In Progress			Recognition event held for Green+Leaders annually	practice to continue	2009	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			The Green+Leadersprogram recruits, trains and supports staff volunteers to run behaviour change campaigns in their departments. The program is supported by Executive Team	Practice to continue	2010	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			Green+Leaders energy reduction campaign provides training on energy conservation through behaviour change.	Practice to continue	2010	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress			Monthly newsletters sent to Green+Leaders featuring resources and suggested readings on various sustainability topics.	Practice to continue	2010	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress			Conducted GreenCare presentations at the VGH new staff (monthly) orientations.	GreenCare presentations to at the new staff orientations will be expanded to Richmond Hospital and Lion's Gate Hospital	2011	No End Date (Continuous)
Client/public awareness/education							
Provide green tips on client/public website or in newsletters	Ongoing/In Progress			Many tips offered through a variety of newsletters, websites, and updates.	Practice to continue	2010	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
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			Water conservation strategies were included in a number of new constructions completed in late 2010, in 2011 and in one major renovations currently in progress and scheduled for occupancy in July of 2012. These include the use of efficient low flow water fixtures to reduce potable water demand. One facility that was completed in late 2010 includes water use reduction through the planting of local plant species, thus reducing the need for irrigation.	All new constructed facilities and major renovations are mandated to meet LEED NC Gold standards. Four (4) facilities, in various stages of development, will meet LEED NC Gold standards over the next 3-4 years: As part of the LEED process, all of these facilities will incorporate water conservation strategies to reduce and conserve potable water and reduce hot water consumption to reduce energy consumption. Other renovations will also include plans to replace inefficient water fixtures with efficient models	2010	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development			One facility that was completed in late 2010 includes water use reduction through the planting of local plant species, thus reducing the need for irrigation. A Storm water management feature was also included through the planting of a rain garden to accomodate overflow from the natural dispersion of rainwater through swale system and dispersion into natural aquifer. Excess rainwater is sent to the rain garden.	All new constructed facilities and major renovations are mandated to meet LEED NC Gold standards. Four (4) facilities, in various stages of development, will meet LEED NC Gold standards over the next 3-4 years: As part of the LEED process, some of these these facilities may incorporate storm water management landscape strategies where feasible or practicable	2010	No End Date (Continuous)
Waste reduction/diversion							

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	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			<p>A Coordinator, Reduction & Recycling position implemented recycling strategies at major acute sites; designed and commissioned marketing /training/educational materials and finalized signage; drafted a communication plan; visited recycling plants in order to understand processes and what materials can be recycled; developed indicators for recycling reporting; designed surveys to assess staff awareness and satisfaction; compiled waste and recycling data; completed waste audit training; completed power point for staff education; initiated recycling programs at a number of VCH sites authorities sites. Recyclable materials include paper, confidential paper, plastics, soft drink cans, cardboard, batteries, Mercury, electronics, and fluorescent and HID lighting.</p> <p>ARAMARK (contracted housekeeping services provider) has moved from disposable to rechargeable batteries for their staff pagers.</p>	Recycling programs will continue to be implemented all VCH acute care sites where waste management contracts are in place; Program implementation will include planning and distribution of bins, education of staff and the public and continued support & progress reporting for all sites; Investigation into additional recycling streams and systems will be implemented; it is expected that recycling volumes and diversion rates, staff awareness and satisfaction with recycling will increase as the program moves forward.	2004	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			Compliance levels for the safe disposal of all hazardous waste are met through regular audits of biomedical waste to exclude exclude hazardous waste from the recycling and general waste streams.	Maintain and improve current practice	Started before 1995	No End Date (Continuous)
Procurement (non-paper supplies)							
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress			70% of paper consumables purchased in 2011 by ARAMARK (contracted housekeeping services provider) were EcoLogo certified ; an additional 10% of paper products have a recycled content of 80% or higher.	60% of cleaning products used by ARAMARK (contracted housekeeping services provider) will be Environmental Choice certified at all VCH sites where ARAMARK provides housekeeping services; purchasing practices to be reviewed regularly and new green products added where available, pending approval for use in healthcare facilities by infection control authorities.	2010	No End Date (Continuous)
Commuting to and from home							
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			Green+Leaders sustainable transportation focus includes a campaign to encourage walking, cycling or public transit for work commute.	Maintain campaign	2007	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	In Development			No Change	Develop Commuter Strategy Plan to promote shower and locker room facilities to meet increase in demand pending availability of space and funds	2012	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress			Most VCH facilities have implemented secure bicycle cages/rooms for staff use.	A complete audit of all sites. This will entail the exact amount of the currently offered storage space and shower facilities being offered. Increase secure bicycle storage at various sites pending available funding.	2007	No End Date (Continuous)

Vancouver Coastal Health Authority Greenhouse Gas Emissions by Source for the 2011 Calendar Year (tCO₂e*)



Total Emissions: 47,050

- 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 2011 (Generated May 18, 2012 10:59 AM)

Total offsets required: **47,038**. Total offset investment: **\$1,175,950**. Emissions which do not require offsets: **12** **

*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.