

Climate Action Program 2013 Annual Report

CRD | Capital Regional District



Climate change may be the single biggest challenge facing our planet. The impacts of a changing climate continue to affect our ecological and economic systems, human health and community well-being around the world.

In 2007, the Capital Regional District (CRD) signed the BC Climate Action Charter and committed to becoming carbon neutral in corporate operations by 2012. In early 2008, the CRD set the target of reducing operational emissions 33% by 2020, from 2007 levels. To help meet these targets, the CRD formalized our commitment to climate action in 2008 through the Climate Action and Adaptation Service Establishment Bylaw No. 3510. In 2009, the CRD launched the Climate Action Program, dedicating staff and resources to support the shifts in policy, infrastructure, behaviour and planning that are required to create a vibrant, healthy and low-carbon Capital Region. Building upon these successes, in 2012, the CRD became one of the first BC local governments to achieve carbon neutrality within its operations and, in 2013, we continued to make gains in reducing our operational impact and planning for future climate impacts.

The benefits of action at the local and regional levels are numerous. For example, economic development initiatives can drive competitiveness and improve quality of life, while creating jobs and enhancing the skills of the local workforce. Reducing energy consumption in housing and commercial buildings lowers operating costs for companies and households. Strategic investment in energy efficient and climate resilient local government operations can produce substantial cost savings and reduce corporate risk. Looking ahead, the CRD plans to continue taking bold leadership on climate action by generating concrete emissions reductions within our corporate operations, working with the municipalities in the region to find tangible solutions to climate change, and seeking solutions that improve our resiliency to climate impacts.

The contents of this report provide a snapshot of the CRD's climate action activities in 2013. More information is available at www.crd.bc.ca.

Establishing a Climate Action Service

The CRD Climate Action Program serves the region's municipalities and electoral areas by acting as a resource, hub and facilitator on both climate mitigation and adaptation issues.

The Program is resourced with 1.5 staff members and directly supports stakeholders in five important ways:

1. Assisting local governments in developing and implementing emissions reductions and climate adaptation policies, actions and programs under their corporate and community portfolios.
2. Providing scientific information, data and indicators related to local and regional greenhouse gas (GHG) emissions and projected climate impacts for the capital region.
3. Supporting the CRD in fulfilling its own corporate climate objectives on mitigation and adaptation, including becoming carbon neutral in its own operations starting in 2012.
4. Liaising with senior levels of government on climate change related programs, policies and legislation that impact the capital region.
5. Increasing public awareness of climate change issues and catalyzing action through partnerships with public and private sectors, non-governmental organizations and community organizations.





Corporate Climate Action

Fulfilling the BC Climate Action Charter

The CRD, the Islands Trust and the 13 CRD municipalities are signatories to the BC Climate Action Charter. The CRD measures its corporate emissions annually and is taking action to reduce energy and fuel use in its buildings, fleet and major operations.

The CRD became carbon neutral in corporate operations in 2012. There are four annual steps associated with carbon neutrality under the Climate Action Charter:

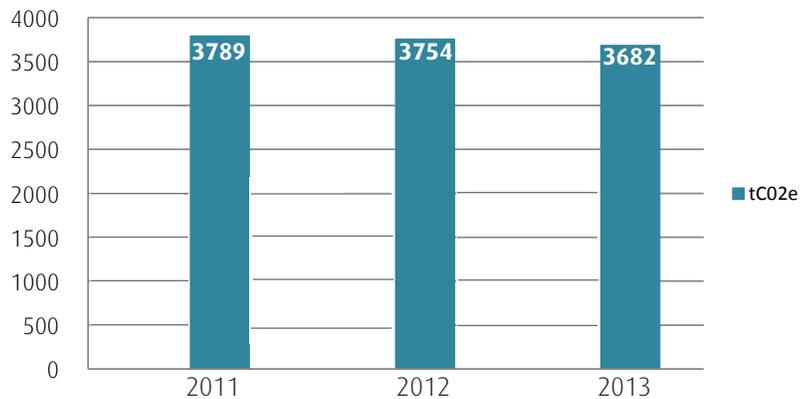
- 1. Measure** corporate energy and fuel use and calculate GHG emissions with a robust approach using a standardized scope of responsibility.
- 2. Reduce** emissions each year through policy, infrastructure, technology, behavior
- 3. Offset** emissions to achieve no net GHG impact for operations.
- 4. Report** on efforts to fulfill program requirements and share progress.

2013 GHG Emissions Inventory

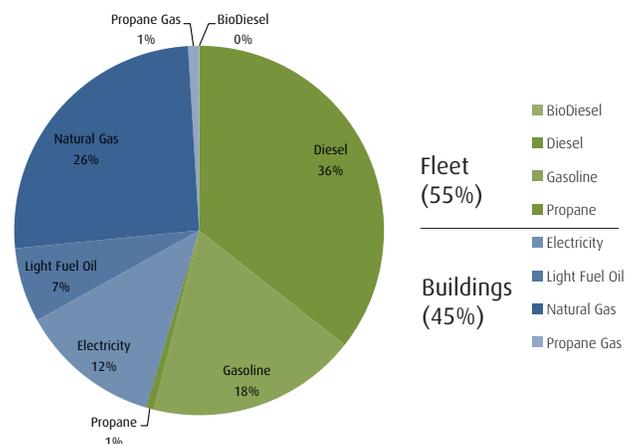
The CRD generated 3682 tonnes of CO₂e from corporate operations and services in 2013. This represents a decrease of approximately 1% below 2012 levels.

The main source of emissions from CRD operations is our vehicle fleet, and the power to heat and cool our buildings.

Three Year Emissions Trend



2013 Corporate Emissions Breakdown



Reducing the CRD's Carbon Footprint

To meet our target of reducing GHG to 33% below 2007 levels by 2020, responsibility for emissions reductions has been mandated across all CRD departments. The Climate Action Program helps champion efforts to reduce energy use and prepare for climate change impacts. Some 2013 activities included:

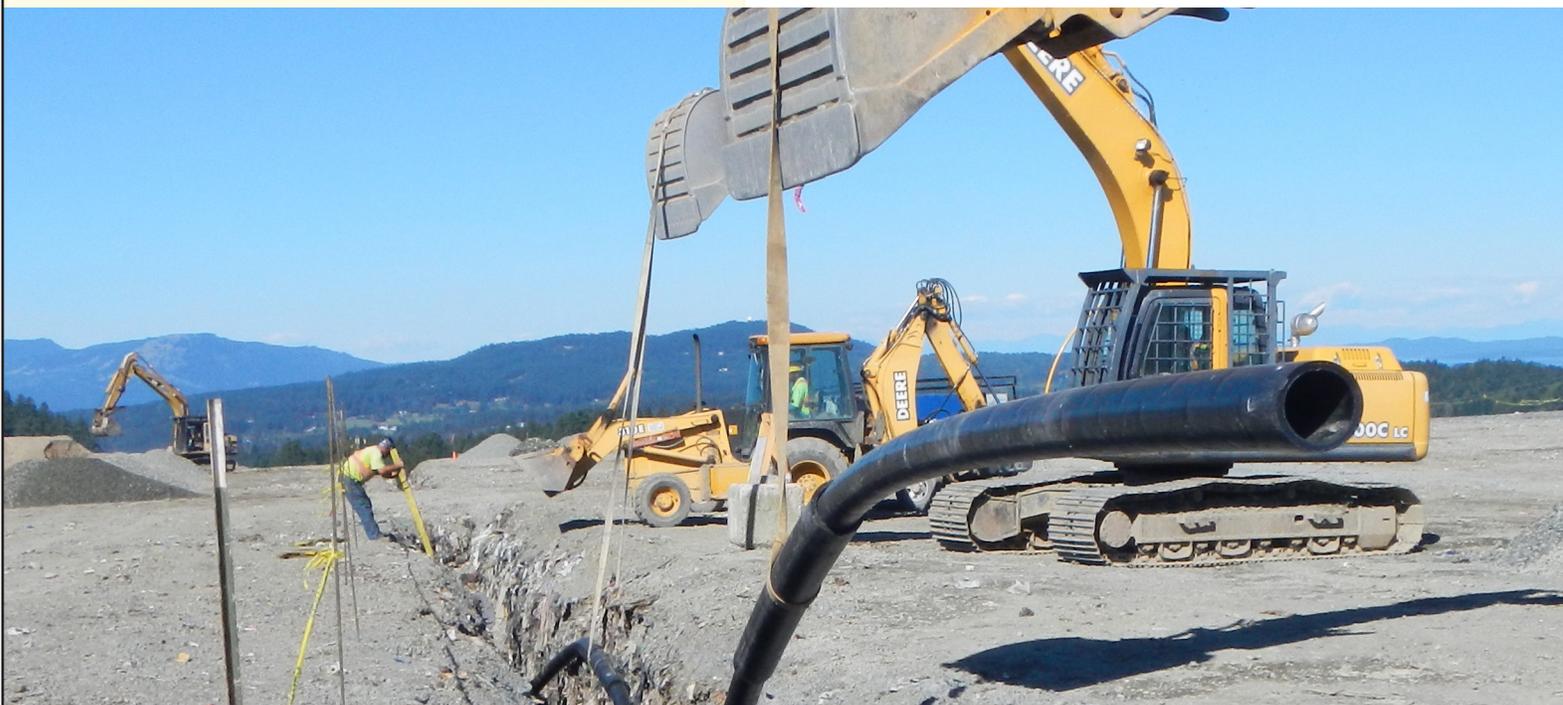
- Analyzing GHG benefits associated with various CRD reduction projects.
- Integrating climate-related information and research into the development of the forthcoming Regional Sustainability Strategy.
- Working to incorporate fuel consumption data into request for proposals and contracts, where appropriate.
- Communicating technical information and sharing new provincial guidelines related to sea-level rise.
- Providing appropriate climate messaging for various environmental education campaigns.

In addition to fulfilling the objective to be carbon neutral in corporate operations, the CRD is committed to taking action and incorporating GHG reduction strategies into the policies, programs and services we deliver, helping to create future-friendly communities that are resilient in a changing climate.

Reducing Emissions at Hartland landfill

The Hartland landfill provides services for recycling, household hazardous waste collection, yard and garden collection, controlled waste and landfill disposal. The landfill currently occupies approximately 36 hectares and contains an estimated 6,500,000 tonnes of municipal solid waste. Decomposition of refuse creates landfill gas, primarily made up of methane and carbon dioxide. Methane is a GHG and has 21 times the warming potential of carbon dioxide. In 2013, the landfill generated 70,779 Tonnes of CO₂e. These emissions fall outside of the scope of the CRD's corporate emissions inventory, however still have an impact on the climate.

In 2012, the CRD implemented a landfill gas management plan to minimize emissions and meet the provincial regulatory target of 75% gas collection efficiency by 2016. Five gas capture wells were installed and upgrades were completed to increase gas capture efficiency on existing wells. Combined, these initiatives increased gas capture efficiency from 34% to 48.8%. The installation of six additional wells in 2013 further increased efficiency to 58%. Ten new well installations are scheduled for 2014, to keep up with the increasing volume of waste being added to the landfill. These will help the CRD meet the commitment of reducing GHG emissions and achieving further gas collection efficiency.



Energy Audits

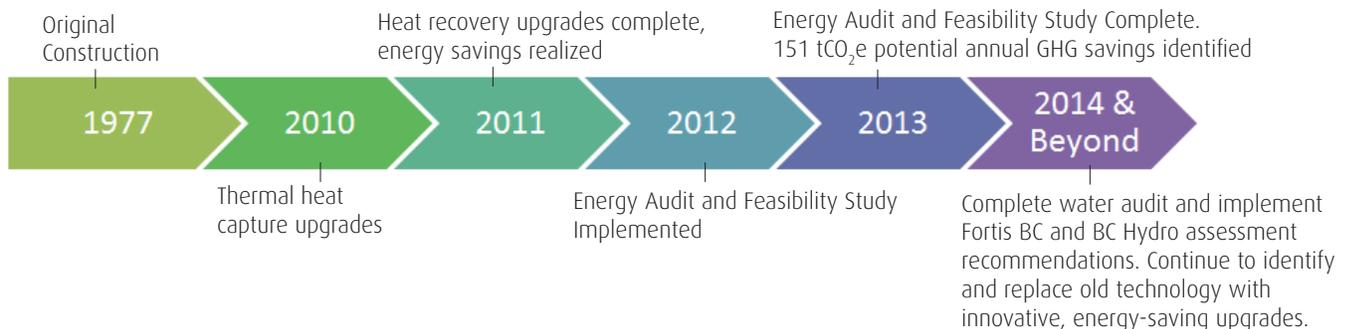
Finding ways to reduce energy consumption within CRD buildings is a key strategy in meeting our climate commitments. Working with BC Hydro, the CRD completed energy audit assessments and feasibility studies on Panorama and SEAPARC Recreation Centres. These studies, which assessed over 17,000 m² of internal floor space, sought to identify energy conservation opportunities and reveal potential mechanical and electrical utility savings measures. Some strategies the audits identified include:

- Replacing indoor and outdoor lights with high efficiency LED
- Installing low-flow showerheads in arena change rooms
- Implementing pool ventilation
- Replacing the Freon-based ice plant with an updated, energy saving model

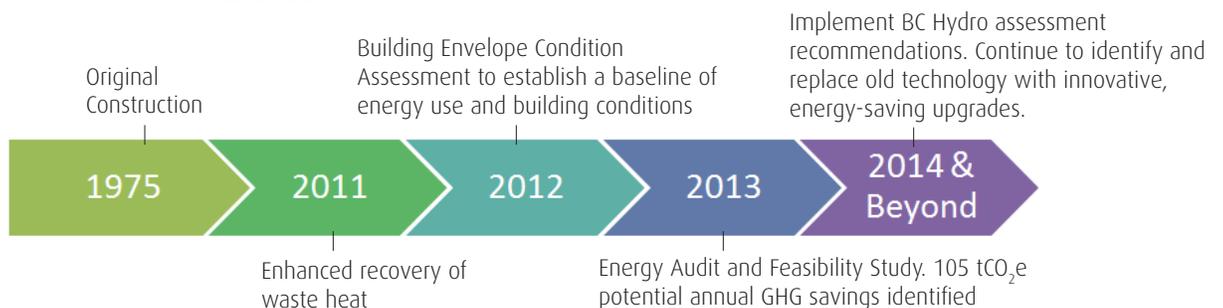
In 2014, CRD staff will review the results of the energy audits to determine which energy savings recommendations to implement.

The energy audits follow a timeline of commitment to reducing energy and GHG emissions at the Panorama and SEAPARC Recreation Centres.

Panorama Recreation Centre Timeline



SEAPARC Recreation Centre Timeline





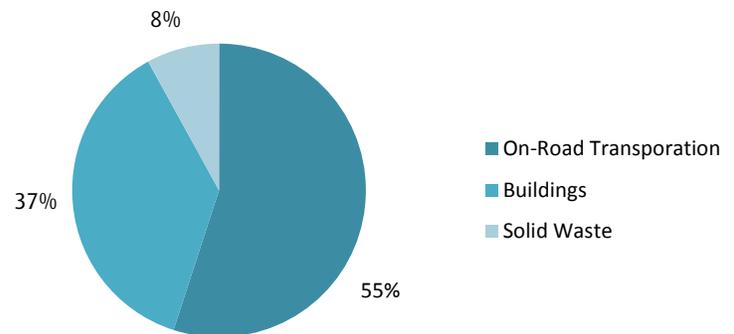
Climate Action at a Regional Scale

The CRD works with the Province of BC to compile **Community Energy and Emissions Inventory (CEEI)** reports for municipalities and electoral areas. Each receives a custom report articulating GHG emissions associated with buildings, transportation and solid waste, along with relevant climate related indicators to help measure progress against targets.

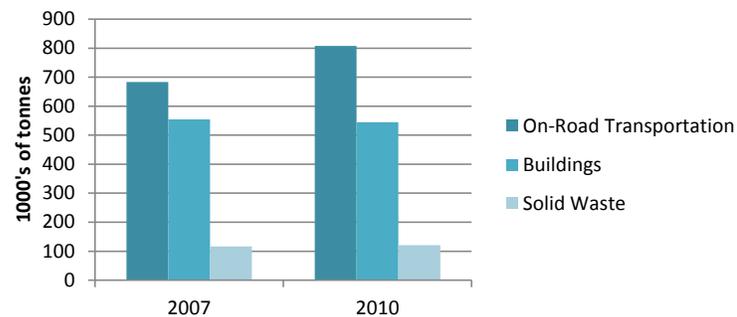
The CEEI reporting cycle is every two years – the next being a 2012 inventory report expected in late 2014. The most recent CEEI reports provide information on the region’s 2010 GHG emissions.



2010 Greenhouse Gas Emissions for the Capital Region



Comparison of 2007 and 2010 Greenhouse Gas Emissions for the Capital Region



Transportation-related activities are the largest source of emissions, followed by building energy consumption and solid waste diversion. This data informs regional actions on policies and programs.



Municipal Climate Action

For more than a decade, local governments in the region have been stepping up to the climate challenge. The CRD has a diverse climate change portfolio that is shaped by the priorities and interests of our partner local governments.

Each community has unique priorities for climate action. Throughout 2013, CRD staff provided customized support to local governments through activities such as:

- Assisting with the implementation of corporate and community-wide policies, programs, information reports and educational initiatives.
- Undertaking technical analysis of GHG benefits in proposed projects and initiatives.
- Sharing data and indicators on projected climate impacts and reporting on community-wide emissions trends.
- Assisting staff with completion of corporate GHG inventories.
- Attending public events and open houses.
- Communicating information and processes associated with the BC Climate Action Charter.
- Undertaking research on best practices related to topics of electric vehicles, climate change risk assessments, building retrofits, sustainable development guidelines and GHG modelling.
- Initiating a sea-level rise mapping and risk assessment project to provide detailed data and indicators on future climate risk throughout the region.
- Working with the Province to offer a local government sea-level rise policy workshop for Climate Action Working Group members.
- Hosting capacity-building workshops, guest speakers, and webinars.
- Sponsoring the Cowichan Energy Alternatives presentation for the Inter-Municipal Climate Action Working Group.
- Hosting a Solar CRD workshop for municipal building inspectors to support the adoption and installation of solar hot water systems across the region in 2014.
- Working with the Pembina Institute to support a joint letter to the BC government to improve building energy efficiency policies.

In 2013, the CRD supported climate change mitigation and adaptation programs that affect the entire region.

Responding to the needs of local governments, the CRD hosts a **Climate Action Inter-Municipal Working Group** and the **Inter-Municipal Climate Action Steering Committee**. Through quarterly meetings, CRD staff provide resources and support to municipal staff working on climate issues. These committees are a forum for information sharing and networking to identify common opportunities and challenges related to climate change within the region.

Beginning in Fall 2013, the CRD embarked on a **Sea-Level Rise Mapping & Risk Assessment Project**. Using the provincial sea-level rise guidelines, the CRD is undertaking a multi-year regional mapping and risk assessment project in partnership with Natural Resources Canada. The goals are to understand where we are vulnerable to sea-level rise, provide technical information to municipal planning departments in establishing flood hazard construction levels and develop a model bylaw.

To communicate region-wide climate related news, the CRD produces local government and community **Climate E-Newsletters** with information, events, resources and grant opportunities for local government staff and community members. Combined, the newsletters directly reach more than 500 people each month.



Climate Action in the Community

The CRD also works to support residents, businesses and students in the region in learning about climate change, and meeting their own climate action goals. Here are some of the initiatives undertaken in 2013:



Established in January 2011, the **Resilient Region Breakfast Exchange** connects individuals from government, business, the public sector, non-profits and academia who work on climate and sustainability issues in the region. The location changes each month, showcasing innovative organizations, buildings and people. The five 2013 events attracted more than 500 individuals and membership in the online community exceeds 400 citizens.



Regional Sustainability Strategy

The **Regional Sustainability Strategy** incorporates climate change mitigation and adaptation policies throughout the document. An associated “blueprint” will provide actions and strategies for the CRD and its partners to undertake over the next decade.



In partnership with local libraries, the **Climate Action To-Go Kit** program is a creative way to engage households on energy conservation and climate action. Across the local branches of the Greater Victoria, Vancouver Island Regional and the Salt Spring Island public library systems, 24 kits have been in circulation since 2012. Each kit includes books, videos, energy efficiency tools, LED light bulbs, and select print information. The CRD designed the program for replication in other jurisdictions and the Sunshine Coast Regional District adopted it in 2012. This program is one of many energy conservation educational initiatives under an ongoing partnership with BC Hydro.



As the local government partner, the CRD delivered the **LiveSmart BC: Small Business Program** to further support the business community. In partnership with the West Shore Chamber of Commerce and City Green Solutions, this program provided 98 local businesses with a free energy assessment and access to enhanced financial incentives from utility providers. Since 2011, the Small Business program has served close to 300 businesses.



Launched in March 2013, the **Tap by Tap Retrofit Program** provided more than 6000 direct installations for eligible multi-unit residential buildings, retrofitting units with low-flow shower heads and faucet

aerators, and providing free walk-through assessments. The program resulted in approximately 11,500 GJ of energy savings and up to 590 tonnes CO₂e in emissions savings. Delivered in partnership with City Green Solutions, this program was funded by the CRD, BC Hydro and Fortis BC.



The **Climate Change Showdown Program**

delivered through the BC Sustainable Energy Association, helps young people learn about climate change and take action to reduce GHG emissions in the classroom and at home. The CRD and local municipalities provided funding for program in 26 schools across the region.



The CRD supported the **Vancouver Island Green Business Certification Pilot Program** to help kick start a

green economy in the region. VIGB certification is a unique way to identify and award businesses for making substantial energy upgrades and greening their operations. This innovative program will be available in the region in 2014.



The CRD Student Climate Challenge

The **Ready, Set, Solve Program** challenged 18 teams of undergraduate students to solve real climate and energy related challenges submitted

from municipalities, non-profit organizations and institutions. An awards ceremony in April 2013 celebrated the results of their work.



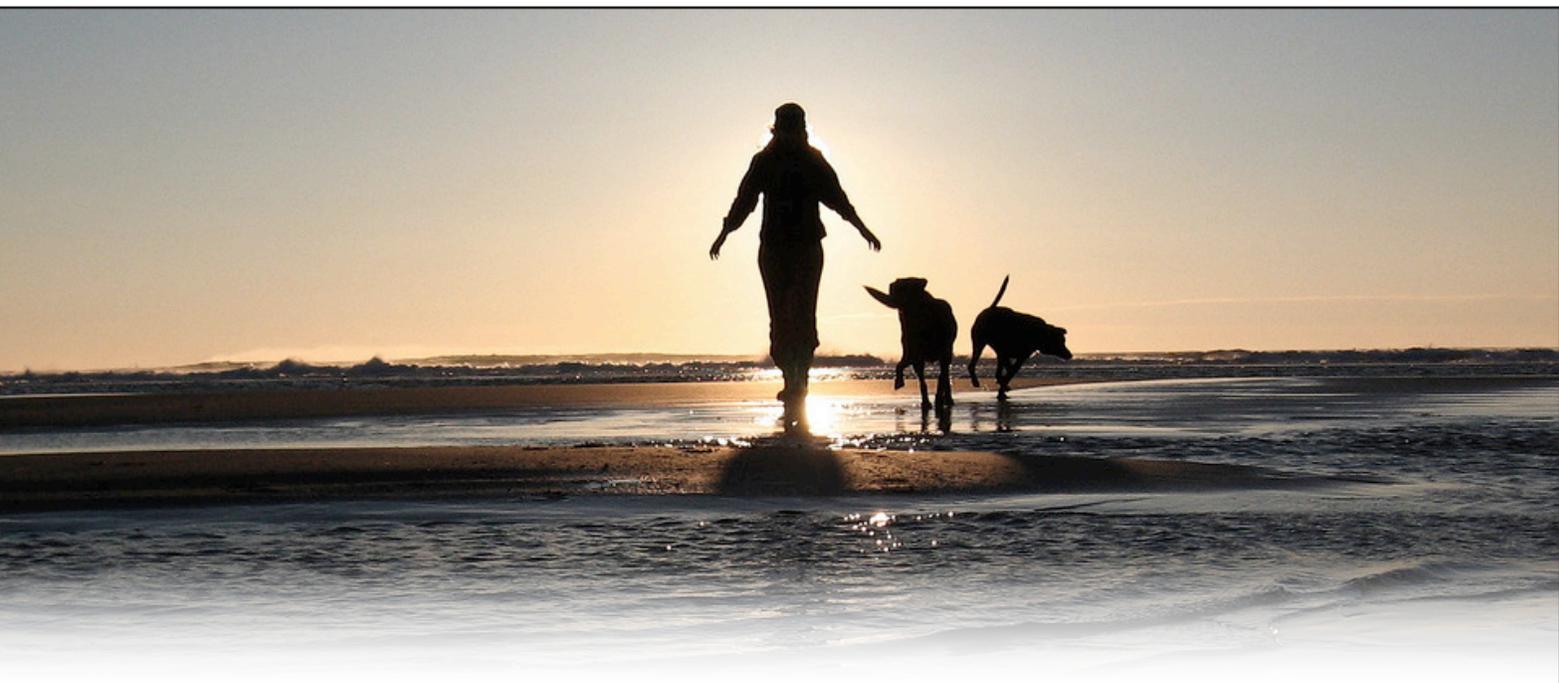
Community Networks

CRD staff engaged more than 12,000 citizens and 30 community organizations in climate change action and awareness. By engaging diverse stakeholders in its work, the CRD helps citizens and decision makers understand the magnitude of climate change and how it will affect the economy, environment and community in the region.

The CRD supported a number of community projects in 2013, including:

- **Off-the-Grid Youth Climate Action Festival.** A one-day regional festival to celebrate youth empowerment in environmental stewardship that attracts over 200 regional youth.
- **Lifecycles Project Society Urban Agriculture Hub Website.** An interactive, community-driven online tool kit to assist with urban agriculture and biodiversity projects.
- **My Green Plan.** An online tool that helps households select and prioritize sustainability actions they want to undertake.
- **My Green High School Plan.** A challenge promoting sustainable behaviour changes in secondary schools.
- **BCSEA Climate Change Showdown Workshops.** In-school workshops that teach students about climate change and many of the solutions available to address this problem.
- **Living the New Economy Opportunity Fair.** A workshop to showcase local businesses, projects and initiatives creating a positive social and environmental impact.
- **Green 365 Indoor and Outdoor Living campaigns.** A year-long campaign promoting the use of green behaviours in and around the home.





Looking Ahead to 2014

The CRD continues to build momentum and regional capacity to reduce GHG emissions and adapt to a changing climate. In 2014, the CRD will continue to focus on projects that reduce our corporate and community-wide emissions, and help improve resiliency to increasing climate impacts. Some 2014 work includes continued progress towards our BC Climate Action Charter commitments, integration of climate-related targets and indicators within the Regional Sustainability Strategy, completion of the Sea-Level Rise Mapping and Risk Assessment Project, and the launch of the Solar CRD program.



The **Solar CRD** program launches in Spring 2014 and offers solar hot water financial incentives for single family and multi-unit residential dwellings, as well as businesses within the Capital Region.



Discover Solar



Incentives Available



Registered Installers



Choosing Your Installer



System Comparisons



Frequently Asked Questions



Making a difference...together