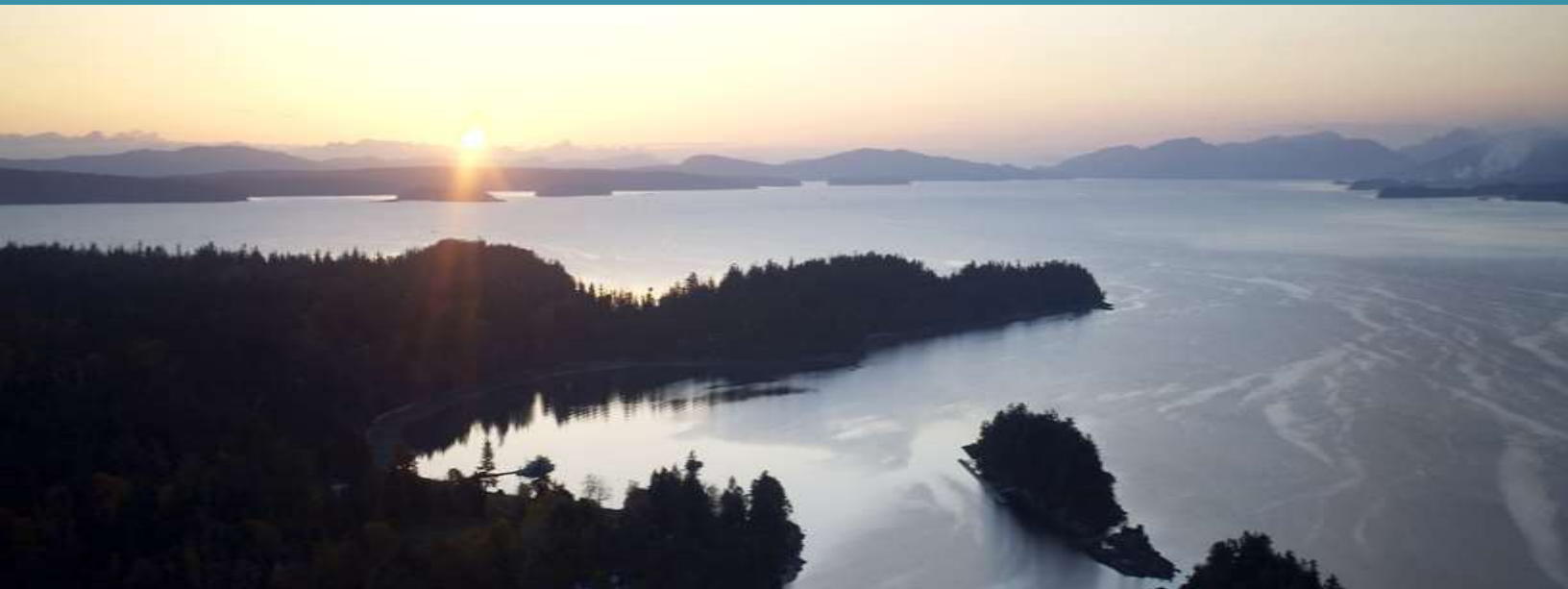




Climate control

# Smart solutions that pay off.



**COWICHAN VALLEY REGIONAL DISTRICT**

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2012 CLIMATE ACTION REVENUE INCENTIVE PUBLIC REPORT



## CONTENTS

General Information .....	5
Community-Wide Actions for 2012 .....	5
1.1 Measure .....	5
Community-Wide Measurement Actions .....	5
1.2 Plan .....	6
Community-Wide Targets.....	6
1.3 Reduce .....	7
Supportive Community-Wide Actions .....	7
Direct Community-Wide Actions .....	15
1.4 Community Wide Innovation.....	23
Corporate Actions for 2012 .....	25
2.1 Measure.....	25
Corporate Measurement Actions .....	25
2.2 Reduce .....	26
Supportive Corporate Actions .....	26
Direct Corporate Actions .....	29
2.3 Corporate Innovations .....	34
Carbon Neutral Progress Reporting.....	35
Making Progress on Your Carbon Neutral Commitment .....	36



## GENERAL INFORMATION

Name of Local Government *Cowichan Valley Regional District*

Member of Regional District (RD) *Cowichan Valley Regional District*

Regional Growth Strategy (RGS) in region *No*

Population *80332*

## COMMUNITY-WIDE ACTIONS FOR 2012

### 1.1 MEASURE

#### COMMUNITY-WIDE MEASUREMENT ACTIONS

Question	Have you been using the <i>Community Energy and Emissions Inventory (CEEI)</i> to measure progress? What else have you been using instead of/in addition to CEEI?
Answer	Yes
Additional Information	<p>The CVRD continues to use <i>the CEEI data as a means of baseline data for community energy consumption and emissions analysis. The CVRD has also been involved as a pilot community in the Natural Resources Canada project - Tract and Neighbourhood Data Modelling (TaNDM) which further developed CEEI reports that provided energy and emissions data for buildings at the scale of the neighbourhood or census tract.</i></p> <p><i>In addition, the CVRD developed a custom energy and emission tool that provides planners an ability to, at a site level, game various emissions policy modifications as well as a preliminary feasibility study of district energy potential to offset emissions.</i></p>

## 1.2 PLAN

## COMMUNITY-WIDE TARGETS

Question	Do your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act</i> (LGA)? If yes, please identify the targets set. If no or in progress, please comment.
Answer	Yes
Additional Information	<i>8 of 9 electoral area OCP's have adopted the provincial targets to reduce GHG emissions by 33% (from 2007 levels) by 2020 and an 80% reduction by 2050. The final electoral area will have its GHG emissions targets adopted in 2013 as it is a custom bylaw amendment package that includes farther ranging sustainability objectives and policies.</i>

Question	If you are a Regional District, does your RGS have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act</i> (LGA)? If yes, please identify the targets set. If no or in progress, please comment.
Answer	No
Additional Information	<i>The CVRD anticipates undertaking a RSP in 2013</i>

## 1.3 REDUCE

## SUPPORTIVE COMMUNITY-WIDE ACTIONS

Action Type	Broad Planning (e.g. creation/revision of OCPs, CEPs, transportation plans)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Development of Area E custom bylaw amendment package including GHG emission targets and farther ranging sustainability objectives and policies</i></li> <li>• <i>CVRD Regional Community Energy Plan takes the place of a finer resolution CEP than the BC Hydro option</i></li> </ul> <p><b><i>Tract and Neighbourhood Data Modelling (TaNDM) 2011-2012</i></b>  <i>The CVRD participated in this Natural Resources Canada research project as a pilot community. The project aimed to refine the community energy and emissions inventory by improving the level of geography and addressing the barriers to neighbourhood-scale reporting. The scalability of the analysis allows better understanding of energy and emission characteristics of distinct neighbourhoods and building types.</i></p> <p><b><i>Cowichan Valley Future Transit Plan</i></b>  <i>Completed in 2012 in cooperation with BC Transit, The Transit Future Plan envisions the Cowichan Valley Region's transit network 25 years from now and describes what services, infrastructure and investments are needed to get there. The Plan includes a review of the existing transit services, regional and local land use plans, transportation data, and demographic projections. Consultation efforts included discussions with municipal partners, stakeholder meetings and Transit Future bus public events at various locations throughout the community.</i></p>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Regional Sustainability Strategy</i></li> <li>• <i>Climate Action Plan</i></li> </ul>

Action Type	Building and Lighting (e.g. developed green building policy, increased density in the downtown)
Actions Taken this Year	<i>Creation of urban containment boundaries in a number of OCP's in the regions fastest growing areas.</i>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Development permit areas are being improved to include guidelines on green building, energy conservation, and onsite rainwater management</i></li> <li>• <i>Development of a private sector green building strategy including a green building rebate policy and green building rezoning policy</i></li> </ul>

Action Type	Energy Generation (e.g. signed on to provincial 'solar ready' regulation, explored options for bio-heating for buildings)
Actions Taken this Year	<p><i>Regional Energy Mapping and Modelling study complete.</i></p> <p><i>This study has identified, from a broad perspective</i></p> <ol style="list-style-type: none"> <li><i>1) Renewable Energy Resources</i></li> <li><i>2) Energy Consumption and Density Mapping</i></li> <li><i>3) Analysis of potentially distributed energy opportunities</i></li> <li><i>4) Analysis of opportunity cost and regional energy resilience</i></li> <li><i>5) Energy Density Mapping Projections</i></li> </ol>
Proposed Actions for Next Year	<i>Ongoing discussion regarding the potential options for district heat in the central core</i>



Action Type	Green Space (e.g. developed urban forestry policy, adopted park acquisition policy)
Actions Taken this Year	<p><b>Area B</b></p> <ul style="list-style-type: none"> <li>• <i>Community Parks and Trails Master Plan completed and adopted</i></li> <li>• <i>Area B Community Parks Invasive Plant Inventory was conducted to develop a strategy and future management of invasive species in Area B parks.</i></li> </ul> <p><b>Area C</b></p> <ul style="list-style-type: none"> <li>• <i>Community Parks and Trails Master Plan completed and adopted</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Bright Angel Park Master Plan to be completed</i></li> <li>• <i>Area D Community Parks and Trails Master Plan to be Completed</i></li> </ul>

Action Type	Transportation (e.g. developed sustainable transportation plan, completed bicycle master plan)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>2012 handyDART pilot project with BC Transit.</i></li> <li>• <i>2012 pilot project with Cowichan Seniors Care Foundation.</i></li> <li>• <i>CVRD participated in The City of Duncan and North Cowichan consultation sessions on an Active Transportation Plan.</i></li> </ul>
Proposed Actions for Next Year	<p><b>Public Transit</b></p> <p><i>The purpose of the following actions are to improve the service and customers experience so that we can increase the transit ridership and reduce their use of vehicles.</i></p> <ul style="list-style-type: none"> <li>• <i>Review handyDART 2012 pilot project with BC Transit and confirm best use of expansion service hours.</i></li> <li>• <i>Work with BC Transit and the consultant to complete the Regional Paratransit Study. (how best to service rural areas)</i></li> <li>• <i>Review the 2012 pilot project with Cowichan Seniors Care Foundation and consider 50% expansion (re senior's transportation).</i></li> <li>• <i>Conduct a ticketing/fare product review and provide recommendations to the</i></li> </ul>

	<p><i>Transit Committee for service improvements.</i></p> <ul style="list-style-type: none"> <li>• <i>Work with BC Transit to implement Google Transit across the CVRD. (service improvement)</i></li> <li>• <i>Review First Canada ridership statistical report on existing transit stop to consider possible stop changes.</i></li> <li>• <i>Continue supporting the CVRD Environmental Education program.(ie. transit, solid waste and others)</i></li> <li>• <i>Work with BC Transit to implement various regional and local marketing initiatives.</i></li> <li>• <i>Assist Town of Ladysmith staff with BC Transit infrastructure standards (i.e. signs, road markings, schedule holders, etc.)</i></li> <li>• <i>Create a priority list for transit stop improvements (ie. road shoulder paving) and proceed with list as funds permit.</i></li> <li>• <i>Determine possible feasible locations for commuter bike lockers and proceed with installation as funds permit.</i></li> </ul>
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Action Type	Waste (e.g. introduced composting and recycling education programs)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Launched the online “Cowichan Recyclopeda” on the CVRD website. This searchable database is an updated, digitized version of our previous Recycling Directory. Residents can easily find where to recycle just about anything locally, in addition to relevant lifecycle information for specific materials.</i></li> <li>• <i>New Bylaw Enforcement officer hired, with part time supportive duties including: air quality, waste stream management licensing, illegal dumping etc.</i></li> <li>• <i>Received approval to implement in-house Automated Curbside Collection Program (MSW and Recyclables) in summer, 2013. Similar programs in other jurisdictions have seen increased participation and recycling rates, not to mention improved operational efficiencies (able to service more households per day/ less fuel usage).</i></li> <li>• <i>Revamped the free Environmental School Education Program, provided in conjunction with a local non-profit group to all schools in the region. Outreach at public events is included.</i></li> </ul>

	<ul style="list-style-type: none"> <li>• Supported the Recycling Council of BC (RCBC) Recycling Hotline and website; 394 phone calls and 566 web searches were made by CVRD residents in 2012.</li> <li>• Promotion of the “Cowichan Zero Waste Challenge” public education campaign continued through 2012 and worked to increase community involvement. Zero waste messaging was used for a “3R’s of Christmas” holiday campaign, featuring recycling options for seasonal items and focusing on giving experiences as gifts (instead of material gifts with excessive packaging).</li> <li>• The “Recycled Tune of the Day” on the local radio station (where a song is prefaced with information on local recycling options and environmental tips) was continued through 2012.</li> <li>• The “CVRD Recycling Hotline” was continued, allowing residents to call toll-free to find out where/how to recycle any item locally.</li> <li>• Continued to work with local First Nations communities to support better access to options for waste disposal and recycling.</li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• The CVRD will be establishing a Solid Waste Advisory Working Group, derived from a request from the newly established Cowichan Valley Waste Management Association (‘CVWMA’). CVWMA requested greater consultation between local, private solid waste industry stakeholders and the CVRD on CVRD initiatives and programs relating to solid waste matters. The purpose of this working group is to be an avenue for knowledge and information sharing between private and public solid waste stakeholders and the CVRD. This is achieved by allowing working group members to review and comment on solid waste initiatives and programs during their development and implementation.</li> <li>• Continue to work with the Cowichan Valley Waste Industry Association during the development and implementation of CVRD initiatives.</li> <li>• Support the school district(s) in developing and implementing zero waste programs at local schools.</li> <li>• Develop Zero Waste certification standards for schools, businesses and residents (as part of the Cowichan Zero Waste Challenge initiative).</li> </ul>

Action Type	Water/Sewer (e.g. participated in water smart initiatives, implemented Water Action Plan, introduced rebates on low flush toilets)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>CVRD Low Flow Toilet Rebate Program continued in 2012 with over 70 rebates given out</i></li>   <li>• <i>For the 2012 for Drinking Water Week, the CVRD had a community open house at Lambourn water and Dogwood water system to showcase the newly constructed water treatment plants, with water conserving give-aways (toilet tablets for leak detection, flow rate bags, hand water nozzles and rain gauges) educational material and a community bbq.</i></li>   <li><b>Surface Water Quality Program</b> <ul style="list-style-type: none"> <li>• <i>Partnered with local governments, Cowichan Tribes, and Provincial Government agencies to examine the Kokislah, and Cowichan river areas with a focus on water quality, impacts of runoff/land use, attainment and compliance, and shellfish food.</i></li> </ul> </li>   <li><b>South Cowichan Water Program</b> <ul style="list-style-type: none"> <li>• <i>surface quality monitoring program</i></li> <li>• <i>ongoing watershed protection planning</i></li> <li>• <i>Community and Multi-Stakeholder consultations to identify issues ranging from water quality to water supply.</i></li> <li>• <i>Assist in informing what the priority actions are</i></li> <li>• <i>Continued participation in a five year study with University of Victoria on the effect of climate variability and land use on water quality.</i></li> </ul> </li>   <li><b>Well Owners Workshop</b> <ul style="list-style-type: none"> <li>• <i>In partnership with Agriculture and Agri-food Canada, the Ministry of Environment, the BC Groundwater Association and the Ministry of Forests, lands and natural resource operations, the CVRD hosted two well owners workshops providing education on well head protection, groundwater, and the efficient use of water sources.</i></li> <li>• <i>Agricultural Water Demand Analysis Project - to map and estimate the volume and timing of water needed for agricultural production in the region</i></li> <li>• <i>Ongoing education program regarding water balance analysis as part of land use decisions to protect stream health and infrastructure.</i></li> <li>• <i>Continued support of the Cowichan Watershed Board.</i></li> </ul> </li> </ul>

<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> <li>• <i>The Low Flow Retro Program (replacement of 2 toilets, 2 showerheads, installation of aerators on faucets and a short water audit performed by a qualified plumber) piloted in 2011 will be brought back in 2013 to all users of the Shawnigan Lake North water system.</i></li>   <li>• <i>Outdoor Water Conservation educational guide to be developed and distributed to water service users.</i></li>   <li>• <i>Launch the Water Balance Model web interface for public use in the region to provide a easily accessible tool to the public in low impact development standards and impact on rainwater management.</i></li>   <li>• <i>Undertake a review of the central sector liquid waste management plan.</i></li>   <li>• <i>Septic Smart Workshops throughout the region</i></li>   <li>• <i>Provide regional water utilities data to Vancouver Island University to assist in the ground water monitoring network.</i></li>   <li><b>2013 Drinking Water Week</b> <ul style="list-style-type: none"> <li>• <i>the CVRD will host a community open house at the Arbutus Ridge water system and the Douglas Hill water system to showcase the upgraded treatment plants, with educational water conserving give-aways (toilet tablets for leak detection, flow rate bags, hand water nozzles and rain gauges) and a community bbq.</i></li>   <li>• <i>The CVRD will support various promotional activities throughout the region providing a free wellhead and water quality assessment as a prize to winning homeowners.</i></li> </ul> </li> </ul>
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Action Type	Other Actions
Actions Taken this Year	<p><b>Air Quality</b></p> <ul style="list-style-type: none"> <li>• <i>Launched extensive “Clear the Air Cowichan” campaign, focusing on all aspects of burning, including: health effects, smarter home heating, and open burning regulation. Multiple forms of outreach were used: professionally designed advertisements and messaging, a new website, a rack card mail-out to 12,000 homes (directing residents to the website), radio advertisements, and media coverage.</i></li> <li>• <i>Invited our regional Air Quality Meteorologist (Ministry of Environment) and our Medical Health Officer (Vancouver Island Health Authority) to present to the CVRD Regional Services Committee (containing all of the CVRD Board members) on air quality within the regional district, and the health effects of wood smoke. The presentation prompted several newspaper articles and multiple editorials, and was very well received by air quality proponents within the community.</i></li> </ul>
Proposed Actions for Next Year	<p><b>Air Quality</b></p> <ul style="list-style-type: none"> <li>• <i>Backyard Burning Bylaw drafting/implementation for five CVRD Electoral Areas, including related education and outreach campaign.</i></li> <li>• <i>Renewing “Clear the Air Cowichan” campaign efforts, and also hoping to host an Air Curtain Burner Demonstration event for local industry and media, in support of our Land Clearing Management Regulation Bylaw (venting index permitting).</i></li> <li>• <i>Hosting a free “Burn It Smart” Workshop in the spring of 2013. An industry professional will present on smart burning practices for cleaner woodstove use, and provide tips and techniques on residential home heating. The intention is to decrease particulate matter emissions.</i></li> </ul> <p><b>Economic Development</b></p> <ul style="list-style-type: none"> <li>• <i>Implement the Green Business Development Plan.</i></li> <li>• <i>Promote education programs for greening local business and green solutions.</i></li> <li>• <i>Communicate new benchmarking principles to municipal councils and the general public.</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Develop new “sustainability” benchmarks to mark the progress of economic development.</i></li> <li>• <i>Implement a “triple bottom line” (community, environment, economic) program to support projects that have the potential to create employment in the region (M)/ core.</i></li> <li>• <i>Partner with local farmers and land owners to explore the interrelationship of agriculture and the renewable energy industry.</i></li> </ul> <p><b><i>Economic Development - Local Foods and Energy</i></b></p> <ul style="list-style-type: none"> <li>• <i>Organized and partnered in the Islands Agriculture Show helping to promote, educate, and share farming and agriculture practices on Vancouver Island. The Conference has a broad range of subjects ranging from organics, fresh food, water management, and renewable energy.</i></li> </ul>
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**DIRECT COMMUNITY-WIDE ACTIONS**

Action Type	Buildings (e.g. implement use of sustainability checklists and development permit guidelines for new buildings)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Continued use of sustainability checklist for permitting process</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Implement development guidelines on green building, energy conservation, and onsite rainwater management.</i></li> <li>• <i>Implement private sector green building strategy including a green building rebate policy and green building rezoning policy.</i></li> </ul>

Action Type	Energy Generation (e.g. implement district energy, geothermal, solar)
Actions Taken this Year	

Proposed Actions for Next Year	
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Action Type	Transportation (e.g. implement bike lanes, pedestrian paths, upgrade transit service and infrastructure, improve roads, parking fees etc.)
Actions Taken this Year	<p><b>Electric Vehicle Infrastructure</b></p> <ul style="list-style-type: none"> <li>• <i>Applied and received CCI (Community Charging Infrastructure) grant money for the installation of 3 dual-cord EV (Electric Vehicle) charge stations to be installed at the Island Saving Centre, Kerry Park Recreation Centre, Shawnigan Lake Community Centre and Cowichan Lake Sports Arena.</i></li> <li>• <i>CVRD participated as a stakeholder in the City of Duncan's EV planning workshop in order to determine possible locations for EV charge stations.</i></li> </ul> <p><b>Public Transit</b></p> <ul style="list-style-type: none"> <li>• <i>2,500 conventional service expansion hours implemented in Feb to increase trip frequency on various routes.</i></li> <li>• <i>1,600 handyDART service expansion hours in order to increase operating hours and trial service to Shawnigan Lake and Lake Cowichan areas.</i></li> <li>• <i>Partnered with the CVRD Solid Waste Management and Water Division to offer free environmental school education sessions intended to help reduce garbage and increase public transit ridership.</i></li> <li>• <i>Entered three local parades in order to help increase ridership.</i></li> <li>• <i>Installed 20+ transit schedule holders in order to assist with route info and promote ridership.</i></li> <li>• <i>Offered a free transit promo for Remembrance Day and week, and Xmas Shoppers in order to increase exposure of the transit service.</i></li> <li>• <i>Installed 50+ transit poles and signs to formalize specific transit stops, which will help promote the transit service.</i></li> <li>• <i>Installed lighting at the Koksilah transit shelter, which will improve the visibility of the transit service.</i></li> <li>• <i>Installed 25+ stand-alone benches at various stops across the district, which will improve the transit experience and promote the service.</i></li> <li>• <i>Will install by December 31, a new large bus shelter and improved lighting at Valleyview Park and Ride to improve the transit experience and help promote the ridership on the Commuter service to Victoria.</i></li> <li>• <i>The CVRD received a BC Transit report on the CVRD Annual Performance Summary for 2011/12 compared to the previous year, on November 6, 2012.</i></li> </ul>



	<p><i>And it states that the ridership on the Commuter service increased 29% from the previous year and the ridership on our regular conventional service increased 13.8%</i></p> <ul style="list-style-type: none"> <li>• <i>Shawnigan Lake Community Centre, replaced a 1993 22 passenger bus with a 2011, 22 passenger bus that is much more fuel efficient.</i></li> <li>• <i>CVRD participated as stakeholder in the City of Duncan’s Active Transportation Plan.</i></li> </ul> <p><b>Regional Trails</b></p> <ul style="list-style-type: none"> <li>• <i>1 km of new separated and designated trail was added to the Cowichan Valley Trail part of the Trans Canada Trail. The trail now extends 120 km through the region with 90 km of separated designated trail for active recreation and commuting. The trail connects communities and provides excellent recreation opportunities for all ages and levels of ability as well as bicycle commuting.</i></li> </ul> <p><b>Area A</b></p> <ul style="list-style-type: none"> <li>• <i>Trail building within the community of Mill Springs provide pedestrian trails that link the community and the nearby amenities in Mill Bay.</i></li> </ul>
Proposed Actions for Next Year	<p><b>Electric Vehicle Infrastructure</b></p> <ul style="list-style-type: none"> <li>• <i>Install dual-cord Electric Vehicle charging station at Shawnigan Lake Community Centre, Island Savings Centre, Kerry Park Recreation Centre, and Cowichan Lake Sports Arena.</i></li> <li>• <i>Install level 3 fast charge station at Island Savings Centre</i></li> </ul> <p><b>Public Transit</b></p> <ul style="list-style-type: none"> <li>• <i>Complete the transit expansion to Ladysmith (4,100 service hours) for September 2013.</i></li> <li>• <i>Complete Valleyview Commuter Park and Ride transit shelter installation.</i></li> <li>• <i>Install next phase of schedule holders at various transit stops.</i></li> <li>• <i>Continue replacing outdated signage with standardized bus stop poles and strip signs.</i></li> <li>• <i>Confirm locations and implement next phase of transit bench installations.</i></li> </ul>

Action Type	Waste (e.g. introduce composting and recycling programs )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Hosted the 2012 (Subsidized) Backyard Composter Sale where 500 units were sold to the public at roughly one third the individual commercial price (traditionally held biannually on even numbered years). Over 8,000 composters have been sold to date.</i></li>   <li>• <i>Undertook preliminary environmental investigation of the brownfield site on the surplus lands at Bings Creek Solid Waste Management Complex.</i></li>   <li>• <i>Continued with curbside recycling program for electoral areas and the regional neighbourhood recycling bin program.</i></li>   <li>• <i>The free Zero Waste Event Program continued in 2012 providing equipment/signage/pick-up to the public/businesses using portable four-stream collection stations (organics, recyclables, refundables, garbage), along with free tipping.</i></li>   <li>• <i>Free year-round drop off of Yard &amp; Garden materials continued in 2012, at all CVRD Recycling Drop-Off Depots and a private business in South Cowichan, as an air quality initiative to decrease particulate matter emissions (by circumventing backyard burning).</i></li>   <li>• <i>Continued with yearly garbage tipping fee increase as an incentive to reduce waste and increase recycling.</i></li>   <li>• <i>Pursued greater loading efficiencies with waste export (increased shipping container weights (aiming to be at capacity) = less trips = reduced GHG emissions).</i></li>   <li>• <i>Offered as many new (and existing) stewardship programs as possible at all CVRD recycling depots. Participated in ongoing consultation with stewards, as new programs are developed.</i></li>   <li>• <i>Plans for Peerless Road Recycling Drop-Off Depot upgrade and remediation of</i></li> </ul>

	<p><i>the incinerator ash landfill. Worked to finalize design component for re-use of existing building.</i></p> <ul style="list-style-type: none"> <li>• <i>Drafted closure plan for Meade Creek Recycling Drop-Off Depot incinerator ash landfill.</i></li> <li>• <i>Continued to offer many free recyclables at all CVRD recycling depots; materials that do have a fee are priced lower than garbage, as an incentive to increase recycling and keep unnecessary items out of the landfill.</i></li> <li>• <i>Continued to offer Free Stores at two of our recycling depot locations to encourage reuse.</i></li> <li>• <i>Enforcement of the CVRD Land-Clearing Management Regulation Bylaw, banning the open-burning of land clearing debris in electoral areas.</i></li> <li>• <i>Continued enforcement of Solid Waste Management Charges and Regulation Bylaw, including commercial organic ban; haulers monitored for infractions and fined accordingly.</i></li> <li>• <i>Continued to enforce Waste Stream Management Licensing Bylaw, a facility licensing bylaw to help mitigate social and environmental impacts.</i></li> <li>• <i>Continued to offer free residential tipping of organic food waste at Bings Creek Solid Waste Management Complex (eg. 5 gallon pail/day).</i></li> <li>• <i>“Community Clean-up Fund” for local groups that volunteer to clean up illegal dumping sites. Free tipping of material collected/ supplies for clean-up/ and lunch provided.</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Upgrade existing infrastructure at Bings Creek Solid Waste Management Complex in order to provide three stream tipping capacity.</i></li> <li>• <i>Continue with the environmental investigation/remediation of brownfield site on surplus lands at Bings Creek Solid Waste Management Complex.</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Continue with process for remediation and closure of incinerator ash landfill at Meade Creek Recycling Drop-off Depot.</i></li> <li>• <i>Undertake upgrades and remediation of the Peerless Road Recycling Drop-off Depot / incinerator ash landfill. A state-of-the-art recycling facility is intended for this site, reusing existing components where possible.</i></li> <li>• <i>Apply for any new product stewardship programs for all CVRD recycling depots.</i></li> <li>• <i>Continue to explore long term solid waste disposal solutions.</i></li> </ul>
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Action Type	Water/Sewer (e.g. implement water conservation and reduction initiatives)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Completed installation of water meters at all residential water connections at Honeymoon Bay water system</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Metered water billing initiative to be introduced at Honeymoon Bay Water System and Douglas Hill Water System.</i></li> </ul>

Action Type	Green Space (e.g. plant trees, conserve forest etc.)
Actions Taken this Year	<p><b>Area A</b></p> <ul style="list-style-type: none"> <li>• <i>Trail building within the community of Mill Springs provide pedestrian trails that link the community and the nearby amenities in Mill Bay.</i></li> <li>• <i>Trail building in Mill Bay Nature Park provided further safe trail system to promote active recreation as well trail upgrades provided slope stability and storm water management controls.</i></li> </ul>

**Area B**

- *New Park acquisitions: Bell Irving Beach Access, Mays Road Beach Access, Worthington Beach Access, Ida Park (CVT Trail Access) (total areas equal 0.37 Ha )*

**Area D**

- *CVRD partnered and facilitated the development of the Cowichan Estuary Nature Centre in Cowichan Bay. The nature centre provides education and community outreach about the habitat in the bay.*
- *CVRD Parks and Trails partnered with the Cowichan Land Trust in a green shores style beach remediation in Cowichan Bay at Hecate Park. The shoreline received beach nourishment soft armouring and native planting to stabilize the beach erosion.*
- *CVRD Parks and Trails acquired a former ocean front industrial site (0.61 Ha) and developed a public green space, habitat viewing area and kayak launching dock. This location is adjacent to Hecate Park and added to the connected public green space, connectivity to the shoreline and public trails.*

**Area E**

- *CVRD Parks and Trails Division worked with local environmental groups to aid in the annual migration of western toads from Wake Lake Ecological Reserve. Education and community awareness about sensitive habitat and wildlife was facilitated.*
- *New Park acquisitions: Granite Road Park, Johns Road Trail Access, Caromar Park, Creighton Park (total areas equal 7.25 Ha)*

**Area G**

*New community trails in Stocking Creek that connect to the Trans Canada Trail.*

**Area H**

*New Park acquisition: Raise Road Beach Access ( 0.1 Ha)*

*Regional Parks and Trails*

*1 km of new separated and designated trail was added to the Cowichan Valley Trail part of the Trans Canada Trail. The trail now extends 120 km through the region with 90 km of separated designated trail for active recreation. The trail connects communities and provides excellent recreation opportunities for all ages and levels of ability.*

Proposed Actions for Next Year	<p><b>All Areas</b> <i>New park land acquisitions</i></p> <p><b>Area B Parks</b></p> <ul style="list-style-type: none"> <li>• <i>Invasive Species Treatment</i></li> </ul> <p><b>Area C Parks</b></p> <ul style="list-style-type: none"> <li>• <i>A new Park washroom is being developed utilizing new community grey water lines. Project to be completed 1013.</i></li> <li>• <i>Grey water system for new washroom facility at Cobble Hill</i></li> <li>• <i>5 km of new upgraded trails on Cobble Hill Mountain</i></li> </ul> <p><b>Area E Parks</b></p> <ul style="list-style-type: none"> <li>• <i>Development of a new playground at Creighton Park</i></li> </ul> <p><b>South Cowichan Parks</b></p> <ul style="list-style-type: none"> <li>• <i>New potable water service in Bright Angel Park</i></li> <li>• <i>Trail resurfacing to provide fully accessible loop</i></li> <li>• <i>Trail system expansion</i></li> </ul> <p><b>Regional Parks</b></p> <ul style="list-style-type: none"> <li>• <i>Kinsol Interpretive Pavillion - providing historic and rehabilitation information for the public</i></li> <li>• <i>New Plantings at the Kinsol Parking Area</i></li> <li>• <i>Development of 800 metres more of the Cowichan Valley Trail</i></li> </ul>
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Action Type	Other Actions
Actions Taken this Year	<p><b>Air Quality</b></p> <ul style="list-style-type: none"> <li>• <i>Offered a 2012 Regional Woodstove Exchange Program whereby 51 uncertified stoves were switched out for cleaner-burning, EPA-certified appliances; old appliances were recycled.</i></li> </ul> <p><i>New technology stoves can significantly reduce wood smoke by up to 90%, increase energy efficiency, and consequently reduce the amount of wood needed to heat a home.</i></p>

	<i>Well over 400 stoves have now been swapped out within the region, over the course of several successive programs (since 2009). Economic Development</i>
Proposed Actions for Next Year	

#### 1.4 COMMUNITY WIDE INNOVATION

Question	Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.
Answer	<p><b>CVRD Regional Community Energy Plan</b>  <i>This work fundamentally supports the development of climate action planning at both the corporate and community scale by providing the necessary analytical and planning tools for local governments. In addition this work supports the development and exploration of new pathways for local economic development by identifying opportunities for strategic support of energy based businesses.</i></p> <p><i>This has been a three year project which is now fundamentally complete. The CVRD Regional Community Energy Plan including the following 6 reports:</i></p> <ol style="list-style-type: none"> <li><i>1) GIS Mapping of Potential Renewable Energy Resources in the CVRD</i></li> <li><i>2) Energy Consumption and Density Mapping</i></li> <li><i>3) Analysis of Potentially Applicable Distributed Energy Opportunities</i></li> <li><i>4) Analysis of Opportunity Costs and Issues Related to Regional Energy Resilience</i></li> <li><i>5) Energy Density Mapping Projections</i></li> <li><i>6) Findings and Recommendations</i></li> </ol> <p><i>The analytical and forecasting tool is available to all local governments at no charge for non-commercial purposes via a LUA with the CVRD</i></p>

**Regional LiDAR data collection**

*High accuracy LiDAR, Orthophotos and hyperspectral mapping has been completed for the developed portions of the region and is now available to the public at no charge.*

**Incinerator Ash Reuse**

*The CVRD was awarded (Innovative Category) Gas Tax Funding in 2012 for their plan to reuse the existing incinerator ash at the Peerless Road Recycling Drop-Off Depot as fill, in a state-of-the-art engineered cell, underneath the new depot during the slated upgrade in 2013. The incinerator ash will also be mined for metals prior to being placed in the lined cell, with the recovered metals being recycled. The Government of Canada is supporting this through a \$950,000 investment from the Gas Tax Fund. The Peerless Road project has two main goals: First, to upgrade and expand the existing recycling depot; second, to clean up 40,000 tonnes of toxic ash produced by the now decommissioned incinerator to protect local residents, waterways and the environment.*



## CORPORATE ACTIONS FOR 2012

## 2.1 MEASURE

## CORPORATE MEASUREMENT ACTIONS

Question	What steps has your local government taken toward completing its corporate emissions inventory (e.g. corporate assets identified related to energy and fuel data and calculated GHG emissions from energy use)?
Answer	<p><i>In 2012, the CVRD employed an Energy Analyst to aid in energy management and emissions reductions programs. In the fall of 2012 all 2011 and 2012 data for calculating emissions was reviewed and referenced back to actual billing data to ensure accuracy in type and amounts energy consumed and GHG emissions.</i></p> <p><i>In 2012, the CVRD Greenhouse Gas reduction plan and inventory was completed and accepted by the Board for inclusion in the corporate strategic plan for actioning</i></p>

Question	What tool are you using to measure, track and report on your corporate emissions (e.g. SMARTtool, other tools including excel spreadsheets)?
Answer	<p><i>The CVRD uses the SMARTtool for measuring, tracking and reporting corporate emissions. Energy bills are collected by the finance department and entered into the SMARTtool upload spreadsheet quarterly with data cross checked against account history records from the Utility companies</i></p>

## 2.2 REDUCE

## SUPPORTIVE CORPORATE ACTIONS

Action Type	Broad Planning (e.g. <i>developed corporate climate action plan</i> )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Developed new staff position - Energy Analyst to develop corporate energy management plan.</i></li> <li>• <i>Completion and adoption of the 2012 Corporate Emissions Inventory and Reduction Plan.</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Develop a corporate energy policy</i></li> <li>• <i>Develop a corporate strategic energy management plan targeting energy consumption and GHG reductions</i></li> <li>• <i>Complete the GHG emissions inventory by adding contracted emissions and proportional emissions from leased space.</i></li> </ul>

Action Type	Building and Lighting (e.g. <i>developed energy reduction plan for all corporate buildings</i> )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Review/audit facilities to identify as many energy savings initiatives as possible.</i></li> <li>• <i>Completed preliminary level 1 building and energy use audits of all CVRD corporate buildings.</i></li> <li>• <i>Completed building heat loss and air source heat pump sizing for 4 community halls in West Cowichan Area to upgrade from Oil furnaces.</i></li> <li>• <i>Efficient ice arena workshops for operations staff</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Level 2 detailed energy audit for recreation centres.</i></li> <li>• <i>Retro-commissioning and continuous optimization programs for new buildings</i></li> <li>• <i>2013 Home Energy Challenge for CVRD employees to raise awareness on</i></li> </ul>

	<p><i>energy conservation.</i></p> <ul style="list-style-type: none"> <li>• <i>Ice Arena efficiency upgrade plan for Island Savings Centre and Kerry Park.</i></li> <li>• <i>HVAC upgrade plan for the Island Savings Centre</i></li> <li>• <i>Develop Corporate Green Building Policy</i></li> </ul>
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Action Type	Energy Generation (e.g. <i>undertook feasibility study of green energy generation for civic buildings</i> )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Town of Ladysmith exploring potential biomass district heating system</i></li> <li>• <i>Participated in Cowichan Place Partners meeting to work with Vancouver Island University, District of North Cowichan, City of Duncan, and School District 79 to identify district heating and renewable energy potential for the Cowichan Place area.</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Joint Energy study between North Cowichan and the CVRD to investigate opportunities for combined heating and cooling / district energy at the Island Savings Centre and the Cowichan Aquatic centre.</i></li> </ul>

Action Type	Transportation (e.g. <i>created anti-idling policy for city vehicles, bike to work week promotion</i> )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>The 2012 CVRD promotion of bike to work week saw a total of 1304.2 kilometers cycled by CVRD employees.</i></li> <li>• <i>2012 Employee Commuting survey used to identify barriers preventing staff from using alternative modes of transportation to get to work, such as shower availability, transit schedules, secure storage for bikes, etc.</i></li> <li>• <i>Carpool program for staff party sponsored by CVRD social committee, wellness committee, and Green Team.</i></li> </ul>
Proposed	<i>Establish a corporate fleet management policy; a regular vehicle maintenance</i>

Actions for Next Year	<i>schedule; idle-free policy</i>
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Action Type	Waste(e.g. completed waste <i>audit of City Hall</i> )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Completed Level 1 energy audit of Bing's Creek Solid Waste Management Complex</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Green Team to measure paper use in all facilities and identify reduction opportunities</i></li> </ul>

Action Type	Water/Sewer (e.g. <i>completed study of sewer and water energy use</i> )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Completed Level 1 energy audit of major water and sewage facilities to develop strategies for reducing energy use</i></li> <li>• <i>CVRD Energy Analyst worked with Senior Operator to identify and reduce energy consumption at Arbutus Mountain Sewage Treatment Plant.</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Develop Key Performance indicators for Water and Sewer energy use by comparing volume to kWh energy use</i></li> </ul>

Action Type	<b>Other Actions</b>
Actions Taken this Year	
Proposed	<ul style="list-style-type: none"> <li>• <i>Development of a green purchasing policy</i></li> </ul>

Actions for Next Year	
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**DIRECT CORPORATE ACTIONS**

Action Type	Building and Lighting (e.g. energy efficiency retrofits to municipal buildings )
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Review/audit facilities to source out as many energy savings initiatives as possible.</i></li> <li>• <i>Continue to add motion sensor light switches at ISC and CVRD building.</i></li> <li>• <i>Added new LED track lighting to Arbutus and Koksilah meeting rooms at ISC.</i></li> <li>• <i>Continue to replace T-12 fluorescent lighting fixtures to T-8s in machine shop and storage rooms at ISC.</i></li> <li>• <i>Continue to replace T-12 with T- 8s at Kerry Park Recreation Centre, approximately 25 fixtures were replaced in 2012.</i></li> <li>• <i>Replaced 2 Mycom refrigeration compressors at Cowichan Lake Sports Arena, which are expected to save 5% in energy consumption.</i></li> <li>• <i>Lighting upgrades done at Youbou and Cowichan Lake community halls.</i></li> <li>• <i>CVRD Firehalls energy audit completed</i></li> <li>• <i>Completed building energy heat loss calculations, system sizing and business case for community hall heating system upgrades.</i></li> </ul>
Proposed Actions for Next Year	<p><b>West Cowichan</b></p> <ul style="list-style-type: none"> <li>• <i>Heating system upgrades from Oil to Air Source heat pumps proposed for Youbou, Honeymoon Bay, Mesachie Lake, and Lake Cowichan Community halls including building envelope upgrades to improve thermal efficiency.</i></li> <li>• <i>Cowichan Lake Sports Arena to install recirculation loop to reduce water use for refrigeration cooling cycle.</i></li> </ul> <p><i>Shawnigan Lake Community Centre</i></p> <ul style="list-style-type: none"> <li>• <i>lighting upgrades from T-12 to T8</i></li> <li>• <i>exterior lighting upgrades to LED</i></li> <li>• <i>Investigate heating system upgrade</i></li> </ul> <p><b>Elsie Miles</b></p> <ul style="list-style-type: none"> <li>• <i>Lighting upgrades to all rooms</i></li> <li>• <i>Replace oil furnace with air-source heat pumps</i></li> <li>• <i>Plumbing updates to low flow fixtures</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Window replacement (currently single pane)</i></li> <li>• <i>Building envelope upgrades</i></li> </ul> <p><b>Kerry Park Recreation Centre</b></p> <ul style="list-style-type: none"> <li>• <i>Ongoing lighting updates</i></li> <li>• <i>Continued energy use study and planning</i></li> </ul> <p><b>Island Savings Centre</b></p> <ul style="list-style-type: none"> <li>• <i>Upgrades to the Arena thermal envelope (door replacements, weather stripping and seals)</i></li> <li>• <i>Arena Compressor Upgrade</i></li> <li>• <i>Continued lighting upgrades from T-12 to T-8</i></li> <li>• <i>Cowichan Theatre energy efficient lighting upgrade</i></li> </ul> <p><b>Bing's Creek Waste Transfer Facility</b></p> <ul style="list-style-type: none"> <li>• <i>Energy Efficiency lighting and HVAC upgrades</i></li> </ul> <p><b>CVRD Firehalls</b></p> <ul style="list-style-type: none"> <li>• <i>Lighting upgrades</i></li> <li>• <i>Heating upgrades proposed</i></li> </ul> <p><b>CVRD Ingram Street Office</b></p> <ul style="list-style-type: none"> <li>• <i>Bathroom lighting upgrade to LED and motion sensor</i></li> <li>• <i>Under cabinet Halogens to LED</i></li> </ul>
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Action Type	Energy Generation (e.g. implemented heat recovery systems, solar)
Actions Taken this Year	
Proposed Actions for Next Year	Upgrade <i>heat recovery from ice arena for preheating domestic hot water and snow melting at the Island Savings Centre</i>



Action Type	Fleet (e.g. anti-idling policies for fleet vehicles, purchasing of hybrid)
Actions Taken this Year	<ul style="list-style-type: none"> <li>• <i>Shawnigan Lake Community Centre replaced a 1993 22 passenger bus with a 2011, 22 passenger bus which is much more fuel efficient.</i></li> <li>• <i>Staff are encourage to use the most appropriate vehicle for their needs. Use of Nissan Leaf Electric Vehicle and Smart Car are recommend over higher fuel consuming vehicles.</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Green team to provide mechanism to match up cars and carpoolers on StaffNet</i></li> </ul>

Action Type	Waste (e.g. introduction of composting and recycling programs and education)
Actions Taken this Year	<p><b>Solid Waste</b></p> <ul style="list-style-type: none"> <li>• <i>Green team initiated paper towel composting with compostable garbage bags for washroom waste paper bins</i></li> <li>• <i>Four-stream recycling in the lunchroom at CVRD Administrative Building.</i></li> <li>• <i>All CVRD events are Zero Waste with four stream recycling stations/signage.</i></li> </ul> <p><b>Paper Use Reduction Initiatives</b></p> <ul style="list-style-type: none"> <li>• <i>Email pay stubs and cell phone bills rather than printing</i></li> <li>• <i>Board Meeting agendas are distributed electronically rather than on paper</i></li> <li>• <i>Budgets to be distributed in electronic format</i></li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• <i>Green Team and facilities to implement 4-stream recycling plan for CVRD facilities</i></li> <li>• <i>Introduce centralized garbage stations in combination with personal compost bins in office</i></li> </ul>



Action Type	Water/Sewer (e.g. initiated water conservation and reduction initiatives)
Actions Taken this Year	<p>The CVRD adopts, operates and maintains water and waste water systems throughout the electoral areas of the CVRD. The operations is constantly looking at ways to provide reliable, energy efficient water and waste water services.</p> <ul style="list-style-type: none"> <li>• Douglas Hill Water System - completion of new treatment plant with major energy efficiency upgrades and controls</li> <li>• Installed programmable control on UV treatment units at Wastewater plants to turn units off during no-flow periods, reducing electrical usage and extending the life of the lights.</li> <li>• Arbutus Mountain Wastewater plant - system monitoring and upgrades resulting in reduced energy consumption per volume effluent by up to 50%.</li> <li>• Arbutus Ridge Wastewater plant - motor control upgrades to variable frequency drives increase energy efficiency</li> <li>• Bald Mountain Wastewater plant: Repaired anoxic pumps that used to run continuous (24 hrs/day) to now run between 45-65% of the time.</li> </ul>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <li>• New Treatment Plant for Carlton Water System</li> <li>• New Treatment Plant for Shellwood Water System, including new reservoir</li> </ul>

Action Type	Green Space (e.g. planting of trees )
Actions Taken this Year	
Proposed Actions for Next Year	

Action Type	Other Actions
Actions Taken this Year	<ul style="list-style-type: none"> <li><i>The Green Team worked with the social committee to bring local food into CVRD social events</i></li> </ul>
Proposed Actions for Next Year	

### 2.3 CORPORATE INNOVATIONS

Question	Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.
Answer	

## CARBON NEUTRAL PROGRESS REPORTING

	Tonnes CO2e
Annual corporate emissions using SMARTTool or equivalent inventory tool	<b>1450</b>
Emissions from services delivered directly by the local government	<b>1450</b>
Emissions from contracted services	<b>0</b>
Less: GHG reductions being claimed for this reporting year from Option 1 - GHG reduction project	<b>0</b>
Energy Efficient Building Retrofits and Fuel Switching	<b>0</b>
Solar Thermal	<b>0</b>
Household Organic Waste Composting	<b>0</b>
Low Emissions Vehicles	<b>0</b>
Less: GHG reductions being claimed for this reporting year from Option 2 - GHG reduction projects  Please list all Option 2 Projects Implemented (insert title of the projects(s) as per project plan template. If you have more than two Option 2 projects you can add more lines at the bottom of this sheet)	<b>0</b>
Less: Offsets purchased for this reporting year (Option 3). Please identify your offset provider in the offset provider information section below.	<b>0</b>
Balance of corporate emissions for this reporting year. (If the corporate emissions balance is zero, your local government is carbon neutral for this reporting year)	<b>1450</b>

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## MAKING PROGRESS ON YOUR CARBON NEUTRAL COMMITMENT

**If your community has not achieved carbon neutrality for this reporting year please describe the actions that you intend to take next year to move you toward your carbon neutral goal.**

The Cowichan Valley Regional District is actively pursuing both energy conservation and reductions in its corporate GHG emissions through targeted projects throughout its facilities and fleet including fuel switching, energy conservation measures, employee awareness campaigns, energy efficiency improvements and research into alternative energy sources for heating, cooling and lighting. In addition, the CVRD is partnering with local governments and stakeholders in examining district heating and other long term large scale energy solutions. The CVRD is currently invested in reducing its corporate energy use and GHG emissions with a strategic energy management plan to be completed in 2013 setting energy and emission reduction targets.

Investment in projects including the CVRD Regional Community Energy Plan now provide the community with the necessary analytical and planning tools for the development and exploration of new pathways for local economic development by identifying opportunities for strategic support of energy based businesses and a decrease in reliance on fossil based fuels.

In addition, the CVRD has invested in a community Energy Efficient Building Retrofit and Fuel Switching Option 1 project completed in 2012 that will be accounted for in the 2013 CARIP report. The CVRD is looking at further investment into community projects that may meet the Option 1 and Option 2 categories to reduce its corporate emissions for upcoming years. CARIP funds have been set aside to leverage future potential opportunities in a growth fund.