

Climate Action Revenue Incentive (CARIP) Public Report for 2016

Local Government:

Capital Regional District
625 Fisgard Street
Victoria, BC, Canada
V8W 1R7



Making a difference...together

Report Submitted by:

Name: Liz Ferris

Role: Climate Action Analyst

Email: lferris@crd.bc.ca

Phone: 250-360-3643

Date: June 1st, 2017

The Capital Regional District has completed the 2016 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2016 and proposed for 2017 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

2016 BROAD PLANNING ACTIONS

Broad Planning Actions

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, and centred) plays an especially important role in energy and GHG reduction.

Community-Wide Actions Taken in 2016	
	Advanced in Regional Growth Strategy preparation
	Completed Regional Food and Agriculture Strategy
	Developed draft Regional Climate Action Strategy
	Developed the <i>Climate Projections for the Capital Region</i> report
Community-Wide Actions Proposed for 2017	
	Adopt Regional Growth Strategy
	Begin implementation of Food and Agriculture Strategy
	Complete SGI Food and Agriculture Strategy
	Complete Agricultural Land Use Inventory and Agricultural Water Demand Modelling (grant dependent)
	Develop future climate change projections for the capital region
	Approve and implement Regional Climate Action Strategy
	Finalize the <i>Climate Projections for the Capital Region</i> report and develop communication materials

Corporate Actions Taken in 2016	
	Implemented energy monitoring software for 400+ CRD utility accounts to obtain baseline usage data
	Reviewed division guidelines for developing leasehold and capital improvement projects
	Developed climate-lens for decision making for all new capital projects
	Developed Corporate Climate Action Strategy
Corporate Actions Proposed for 2017	
	Ongoing land acquisition strategy to purchase forested lands/carbon sequestration
	Implement the Corporate Climate Action Strategy
	Implement climate-lens for decision making for all new capital projects
	Update the procurement policy to align procurement and vendor selection with the CRD's corporate climate policy, and develop supporting decision criteria and matrix

Broad Planning

What is (are) your current GHG reduction target(s)?	Corporate Emissions Reduction: 33% below 2007 levels by 2020
Has your local government used the Community Energy and Emissions Inventory (CEEI) to measure progress?	Yes/No
What plans, policies or guidelines govern the implementation of climate mitigation in your community? <ul style="list-style-type: none"> • Community Energy and Emissions (CEE) Plan • Climate Action Plan • Integrated Community Sustainability Plan • Official Community Plan (OCP) • Regional Growth Strategy (RGS) • Do not have a plan • Other: 	Yes/No Yes/No Yes/No N/A Yes/No Yes/No Yes/No
Does your local government have a corporate GHG reduction plan?	Yes/No
Does your local government have a climate reserve fund or something similar?	Yes/No

2016 BUILDINGS AND LIGHTING ACTIONS

Building and Lighting Actions

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

Community-Wide Actions Taken in 2016	
	Offered and promoted Food Service Establishment Water, Energy and GHG Savings Program providing energy assessments and pre-rinse spray valve and aerator installations free of charge in partnership with FortisBC and City Green Solutions, with support from the City of Victoria
	Provided and promoted top up incentives to CRD residents for the Provincial Oil to Heat Pump Incentive Program
	Delivered social media energy conservation education campaign in partnership with BC Hydro
	Distributed and revised the Climate Action To Go Kits. Available for residents and teachers (grades K-12), kits include resources and tools to reduce home energy use and GHG emissions
	Supported industry workshop centered on upcoming BC Energy Step Code
	Engaged local governments on BC Energy Step Code and adaptation
	Promote available home retrofit incentive programs to CRD residents
Community-Wide Actions Proposed for 2017	
	Co-host a Resilient Region Exchange Breakfast event centred on low-carbon buildings
	Complete the Food Service Water and Energy Savings Program
	Provide and promote additional Oil to Heat Pump top up incentives to regional households
	Distribute and promote the revised and new Climate Action To Go Kits
	Develop and deliver energy literacy education and outreach
	Engage local government staff and industry on BC Energy Step Code and climate adaptation

	Promote available home retrofit incentive programs to CRD residents
--	---

Corporate Actions Taken in 2016	
	Established policies for new and existing buildings and facilities to minimize GHG emissions and maximize lifecycle cost savings
	Conducted an LED upgrade with estimated 150,000 kwh reduction and \$25,500 savings annually at SEAPARC recreation facility
	Began to phase out old technology fluorescent light fixtures and replace with high efficiency LED fixtures within various buildings
	Engaged energy consultant reviews of LED Lighting applications, indoor and outdoor applications
	Built lighting replacement program for energy conservation and efficiency review
	Began natural gas boiler upgrade with estimated 61 ton Carbon Dioxide reduction and \$40,000 savings annually at SEAPARC recreation facility
	Completed rehabilitation of existing roof at Greenglade. The new roof coating improves thermal heat retention in facility, thus reducing energy consumption
	Pursued BOMA Best Certification to assist developing energy utilization baseline data for all facilities managed by the Facility Management division
	Conducted building Hazardous Materials Assessments in CRD owned buildings
	Completed inventory of buildings containing asbestos and identified actions to address issues
	Installed programmable thermostats in the buildings at Parks HQ, programmed to reduce power usage in the evenings and on weekends
	Used low-VOC interior 100% acrylic latex paint
	No pressure treated wood used in direct ground contact applications
	Returned surplus paints and stains to paint recycling facility when possible
	Used LEED certified building materials where possible
	Commissioned East Sooke Fire Hall
	Engaged local contractors wherever possible
Corporate Actions Proposed for 2017	
	Establish a corporate energy management process for buildings, facilities and infrastructure that includes: monitoring and reporting of facility energy consumption and energy management in existing buildings using the real-time utility data, metrics that communicate progress towards the CRD GHG target, contextual information on changes in level of service, e.g.: total corporate GHG emissions and GHG emissions/square foot of buildings operated by CRD
	Establish technical standards for new construction to ensure high energy performance and low-carbon criteria are incorporated into design of new facilities, including: aligning standards with new provincial Energy Step Code (e.g., Passive House Standard), ensuring standards are incorporated in requests for proposals as baseline
	Complete recommendations from the Panorama and SEAPARC energy assessments that minimize GHG emissions and energy use, including upgrading to high-efficiency natural gas boilers, implementing ice plant heat recovery at SEAPARC and investigating the waste heat recovery opportunity at Panorama
	Continue replacement program for LED fixtures
	Install new refrigeration piping and insulated concrete slab installation, for improved efficiency and energy reductions

	Review and install new dehumidification system for arena A&B for improved energy efficiencies and possible heat reclaim at Panorama Recreation Center
	Continue to use low-VOC interior 100% acrylic latex paint policy
	Continue to use alternatives to pressure treated wood in direct ground contact applications
	Continue to return all surplus paints and stains to paint recycling facility
	Continue to engage local contractors wherever possible
	Continue use of LEED certified building materials
	Continue lighting upgrades in FM managed buildings
	Conduct boiler retrofit at Panorama Rec Center
	Conduct integrated design process for heat recovery program at Panorama Recreation Center
	Update asset management process to incorporate evaluation of and/or low carbon technologies at the time of asset renewal
	Incorporate energy efficiency into regional water supply infrastructure renewal projects through strategic asset management plans
	Design heating, ventilation and air conditioning systems that minimize the use of fossil fuels (heating oil and natural gas) and consider renewable energy sources.

2016 ENERGY GENERATION ACTIONS

Energy Generation Actions

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

Community-Wide Actions Taken in 2016	
	Provided top up incentives to CRD residents for the Provincial Oil to Heat Pump Incentive Program
	Distributed and promoted Climate Action To Go Kits, resources and tools to reduce energy use and GHG emissions for residents and K-12 classrooms
Community-Wide Actions Proposed for 2017	
	Continue to provide top up incentives to CRD residents for the Provincial Oil to Heat Pump Incentive Program
	Distribute and promote new and updated Climate Action To Go Kits, resources and tools to reduce energy use and GHGe for residents and K-12 classrooms

Corporate Actions Taken in 2016	
	Reviewed landfill gas utilization to ensure continued long-term beneficial use of landfill gas for the region
	Continued operating the Saanich Peninsula Thermal Energy Recovery pilot project, which reduces GHG emissions by approximately 370 tonnes CO ₂ -e/year

	Continued operating the Pump as Turbine (PAT) or onsite hydro generation system at the Sooke River Road Water Treatment Facility
	Used power saving plugs and power bars for equipment left plugged in
	Initiated Panorama Recreation Center (PRC) Boiler Replacement / Energy Integration Study. This study was to identify opportunities to maximize the utilization of waste heat from various facility systems and operations. The waste heat could supplement the thermal energy demand and natural gas consumption within the PRC. However, due to budget constraints this initiative has been deferred.
	Processed brush pile from invasive species removal into biofuel in Parks
Corporate Actions Proposed for 2017	
	Investigate increased utilization of landfill gas as an alternate energy source and conduct business case analysis to produce RNG in partnership with Fortis BC
	Continue operating the Saanich Peninsula Thermal Energy Recovery pilot project, which reduces GHG emissions by approximately 370 tonnes CO2-e/year
	Continue operating the Pump as Turbine (PAT) or onsite hydro generation system at the Sooke River Road Water Treatment Facility
	Investigate heat reclaim as part of the new dehumidification system upgrade at Panorama Recreation Center
	Continue to have brush pile from invasive species removal processed into biofuel

Energy Generation	
Is your local government developing, or constructing: <ul style="list-style-type: none"> • A district energy system • A renewable energy system 	Yes/No Yes/No
Is your local government operating: <ul style="list-style-type: none"> • A district energy system • A renewable energy system 	Yes/No Yes/No
Is your local government connected to a district energy system that is operated by another energy provider?	Yes/No
Are you aware of the Integrated Resource Recovery guidance page on the BC Climate Action Toolkit ?	Yes/No

2016 GREENSPACE/ NATURAL RESOURCE PROTECTION ACTIONS

Greenspace Actions

Greenspace/Natural Resource Protection refers to the creation of parks and greenways, boulevards, community forests, urban agriculture, riparian areas, gardens, recreation/school sites, and other green spaces, such as remediated brownfield/contaminated sites as well as the protection of wetlands, waterways and other naturally occurring features.

Community-Wide Actions Taken in 2016

	Adopted the Food & Agriculture Strategy, which identifies the CRD's role in food and agriculture, along with recommendations, associated actions and resourcing requirements
	Developed and adopted the Regional Trails Management Plan to guide development, operations and management decision-making for Regional Trails
	Provided Community Gardens at the Greenglade location. This project has allowed for individuals to plant and grow a variety of edible and non-edible items each year
	Initiated a nature-based preschool program in Central Saanich (Centennial Park) to educate young children (3-5 yrs) on nature/the forest and its importance – creating environmental ambassadors
	Continued an ongoing land acquisition strategy to purchase and conserve forested lands increasing carbon sequestration
	Continued restoration of high ecological value habitats in 20 active restoration sites in Regional Parks
	Undertook reforestation/ revegetation of previously contaminated & remediated site at the Thetis Lake Pistol Range
	Participated in the Green Shores Local Government Working group and promote Green Shores to encourage shoreline property owners to protect shorelines using more softer “green” approaches
	Hosted workshop for local government staff to learn about Sea Level Rise adaptation taking place in mainland cities
	Offered Grow an Edible Garden workshops to residents to support them choose the right varieties of food plants they can grow on their property. Workshop covered the basics of plant nutrition, soil fertility and preparation, designs for garden beds and efficient ways to water plants
	Engaged residents at community events and farmers markets on local food security, watershed protection, providing Growing Solutions Fresh Food calendars for local food harvest
	Developed a Growing Solutions Planting Schedule for local food harvest planning
	Participated on advisory committee and review provincial adaptation video series
	Supported the completion of the Oak Bay High School Bowker Creek Restoration Project
	Supported keyline design study and education for agricultural rainwater management
	Participated in outreach with the Capital Region Invasive Species Partnership
	Implemented Elk and Beaver Lake Initiative to enhance lake function
	Piloted Residential Edible Plant Gardening Workshop
	Engaged 188 regional school aged children in the earning of their CRD watershed warden badges
	Conducted Native Plant Workshops promoting drought tolerant plants, replacing of high water use lawns, increasing food security, and composting with a focus on the restoration of the Douglas Fir and Garry Oak ecosystems
	Administered multi-stakeholder watershed focused initiatives (Gorge Watershed Initiative, Esquimalt-Lagoon Stewardship Initiative, Bowker Creek Initiative)
	Administered two Integrated Watershed Management Committees (one for community members, one for municipal staff); hosted 6 meetings total
Community-Wide Actions Proposed for 2017	
	Implement the Regional Food & Agriculture Strategy
	Implement the Regional Trails Management Plan
	Continue promotion of urban gardens
	Expand the nature-based preschool program in Central Saanich (Centennial Park) to educate young children (3-5 yrs) on nature/the forest and its importance – creating environmental ambassadors
	Continue Green Shores Local Government Working Group participation

	Continue to offer residential “Grow an Edible Garden” workshops
	Distribute and promote Growing Solutions resources
	Continue support of the keyline design study and education for agricultural rainwater management
	Continue administration of multi-stakeholder watershed focused initiatives (Gorge Watershed Initiative, Esquimalt-Lagoon Stewardship Initiative, Bowker Creek Initiative)
	Continue administration of two Integrated Watershed Management Committees (one for community members, one for municipal staff)
	Continue Elk and Beaver Lake Initiative to enhance lake function
	Host a natural asset management workshop for regional stakeholders

Corporate Actions Taken in 2016	
	Maintained green space planted with indigenous species on closed portions of Hartland landfill
	Continued enhancement of Panorama Recreation Center landscaping and garden areas
	Trail management of Panorama Recreation Center forested areas and nature trails
	Maintained green roof, rooftop garden, and living wall at CRD headquarters facility
Corporate Actions Proposed for 2017	
	Maintenance of green space planted with indigenous species on closed portions of Hartland landfill
	Maintain green roof, rooftop garden, and living wall at CRD headquarters facility

Greenspace	
Does your local government have urban forest policies, plans or programs?	Yes/No

2016 SOLID WASTE ACTIONS

Solid Waste Actions

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Community-Wide Actions Taken in 2016	
	Maintained existing waste diversion and residuals management programs
	Conducted waste stream analysis to assess success of kitchen scraps ban and other initiatives and to plan new programs with GHG reduction potential
	Expanded recycling program at 479 Island Hwy for example separating wood out of garbage and sending it for recycling
	Installed of recycling stations for waste diversion at Panorama Recreation Center
	Hosted Hartland Happening, a community open house and tours of Hartland landfill and recycling facility
	Educated residents about safely managing home renovation and demolition waste

	Provided community outreach services to promote waste reduction and diversion
	Provided school and community tours of the Hartland Landfill and Recycling Facility to promote waste reduction and diversion
	Promoted the online Blue Box collection schedule and calendar reminder
Community-Wide Actions Proposed for 2017	
	Maintain existing waste diversion and residuals management programs
	Enhance kitchen scraps education to divert additional materials from the landfill

Corporate Actions Taken in 2016	
	Undertook Regional Parks initiative to encourage staff to bring in cardboard, paper, Styrofoam, plastic, electronics and organic materials for recycling and divert from the landfill
	Returned stale fuel, oil, tires and batteries for recycling
	Encouraged staff to print double-sided and avoid use of colour printing wherever possible
	Used sign making Printer/Cutter, that uses "Eco-Solvent" (Low Volatile Organic Compounds (VOC), Non-toxic)
	Re-used vinyl sign liner-paper as packaging. Save and re-purpose paper roll ends. Source recycled/recyclable materials, i.e.: use a rigid paper-based recyclable rigid display board instead of plastic materials
	Collected recyclable materials within Regional Parks and returned to appropriate recycling depots (bottles, cans, metal etc.).
Corporate Actions Proposed for 2017	
	Conduct feasibility study with Fortis for innovative landfill gas utilization
	Issue RFEOI for Integrated Resource Management and submit beneficial bio solids reuse plan to Ministry by May 31, 2017
	Continue running previously established staff recycling programs in place
	Continue In House diversion of general refuse, plastic containers, packing materials, sorting and disposal
	Continue Re-use of vinyl sign liner-paper as packaging. Save and re-purpose paper roll ends. Source recycled/recyclable materials, i.e.: use a rigid paper-based recyclable rigid display board instead of plastic materials

Solid Waste	
Does your local government have construction and demolition waste reduction policies, plans or programs?	Yes/No
Does your local government have organics reduction/diversion policies, plans or programs?	Yes/No

2016 TRANSPORTATION ACTIONS

Transportation Actions

Transportation actions that increase transportation system efficiency, emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling, ridesharing, and public transit, can contribute to reductions in greenhouse gas emissions and more livable communities.

Community -Wide Actions Taken in 2016	
	Continued use of CNG fueled collection vehicles used to collect curbside recyclables
	As part of the People Power initiative, the free Play in the Park program offered fire bike safety workshops and promotional water bottles as well as funded the purchase of a mobile skate park and large water canteen to encourage community members to walk, cycle or roll to the event; these purchases will also be used at other community events and will encourage active transportation options
	Constructed 250 m of the E&N Rail Trail a multi-modal cycle trail– Humpback Connector completed between Wilson Street and Esquimalt Road in the City of Victoria
	Delivered the Active and Safe Routes to School Program
	Delivered the “People Power” Program to increase use of active transportation
	Facilitated Discussion of CRD taking on a broader role in regional Transportation – including active transportation and TDM
	Deployed and promoted Smart Drive Challenge for residents to increase fuel efficient driving habits and use of active modes
	Promoted EV vehicle and charging infrastructure incentive programs
	Co-Hosted Resilient Region Exchange centred on multi-modal transportation
	Sponsored Bike to School and Bike to Work Week 2016
Community-Wide Actions Proposed for 2017	
	Continue use of CNG fueled collection vehicles used to collect curbside recyclables
	Continue active transportation integration with our Play in the Park program: more workshops and education, promotion and prizing
	Construct approximately 1km of the E&N Rail Trail – Humpback Connector between Maplebank Road (Songhees First Nation), Admirals Road (Ministry of Transportation and Infrastructure) and Hallowell Road (Town of View Royal)
	Deliver Active and Safe Routes to School Program (last year of 2 year pilot project)
	Deliver “People Power” Programming to increase use of active transportation (last year of 2 year pilot project)
	Complete region-wide ‘Origin Destination’ transportation survey
	Install EV Charging station for SEAPARC recreation facility
	Undertake EV education and literacy in partnership with the Emotive Program
	Promote EV vehicle and charging infrastructure incentive programs
	Co-Host Resilient Region Exchange for low-emission transportation including EV
	Host active transportation fair

Corporate Actions Taken in 2016	
	Established a green fleet policy to achieve continuous, significant reductions in GHG emissions from the CRD fleet and strive towards zero emissions for all new fleet vehicles

	Signed the west coast electric fleets initiative pledge to increase the update of electric vehicles within the CRD fleet
	Conducted feasibility analysis and established partnerships for a 2017 launch of the Zero Emissions Fleet Initiative, which will aim to reduce GHG emissions from the light-duty segment of the CRD fleet through piloting of alternative fuel vehicles (hydrogen fuel cell, battery electric and e-bikes) and the use telematics and fleet optimization
	Procured first electric vehicle within the CRD fleet, and continued to right-size and replace end-of life units with lower emissions units, where feasible
	Used teleconference technology and installed Skype capability in meeting rooms
	Coordinated staff meetings and group travel to minimize trips between CRD locations
	Continued No idling policy on Regional Parks vehicles
	Installed real-time utility monitoring system (Prism) for all electricity, natural gas, oil and water with future potential for fleet capability
	Purchased a fuel efficient diesel engine aquatic weed harvester (Tier 3 emissions) for use at Elk/Beaver lakes
Corporate Actions Proposed for 2017	
	Implement the green fleet policy to achieve continuous, significant reductions in GHG emissions from the CRD fleet and strive towards zero emissions for all new fleet vehicles
	Launch the Zero Emissions Fleet Initiative, which will aim to reduce GHG emissions from the light-duty segment of the CRD fleet through piloting of alternative fuel vehicles (hydrogen fuel cell, battery electric and e-bikes) and the use telematics and fleet optimization
	Establish a fleet management system that includes: GHG footprint calculations, installing/engaging a monitoring system to improve fleet performance, evaluating and expanding a telematics system to the whole fleet as appropriate, issuing an annual report of total vehicles, utilization, volume of fuel consumed, GHGs emitted and costs of ownership and maintenance, reviewing data collected to inform fleet policy and asset management and procurement processes
	Continue replacement of vehicles to those with diesel engines/lower displacement engines for reduced greenhouse gas emissions
	Identify opportunities for greater regional resilience in the CRD fleet (emergency preparedness) by: researching possibilities to use electric vehicles as a power source during outages, incorporating strategies to enhance emergency preparedness and resiliency through the use of electric vehicles into corporate plans, where appropriate
	Issue tender for waste management hauling contract that includes options for the use of CNG fueled trucks
	Install 7 EV charging stations for use by corporate fleet (Two 479 Island Hwy, Two at Fisgard Headquarters, 2 at SEAPARC and 1 on Salt Spring Island)
	Pilot 2 Hydrogen Fuel Cell Vehicles within the CRD fleet
	Pilot the use of electric bicycles within the Source Control Program
	Continue to encourage efficient use of vehicles while at work including minimizing idling, as well as minimizing unnecessary vehicle trips and optimizing trip routing to minimize mileage.
	Install bike racks at Greenglade Recreation facility
	Continue to use teleconference technology
	Continue to coordinate staff meetings and group travel to minimize trips between CRD locations
	Local vendors used wherever feasible to reduce transportation
	Continue to implement no idling policy on Regional Parks vehicles

	Continue to replace end-of-life gas and diesel vehicles with zero emissions vehicles when possible, including adding more battery electric vehicles to the fleet
	Identify, develop or procure a tool to support selection of new vehicles based on utilization, operational needs, potential for electric vehicles and right-sizing
	Review and identify path to meeting highest level of the West Coast Electric Fleet Pledge (striving towards purchasing at least 10% zero emissions vehicles for all new light-duty fleet purchases)
	Better utilize SAP asset management system to support preventative maintenance program and track all costs (including purchase-card purchases) associated with each fleet unit
	Conduct an in-depth analysis of the entire CRD fleet to identify ways to optimize fleet utilization and efficiency and to reduce emissions and cut costs
	Identify, develop or procure a tool to support preparation of high-level business cases that demonstrate life cycle costs and payback (fuel and maintenance) for investing in efficient vehicles
	Institute fleet management best practices by: engaging all fleet vehicle operators in energy-efficient driver training program, recognizing staff that demonstrate efficient driving practices as part of the climate action recognition program
	Renew the draft corporate fleet policy (2007) and develop or identify tools to support implementation of the policy, including: guidelines and/or a tool to evaluate operational needs in advance of vehicle purchase based on industry best practices, a tool to incorporate life cycle costs and GHG emissions impacts as priorities during fleet purchasing process
	Add two additional battery electric vehicles to the CRD fleet to be available for staff to test out and determine the locations and uses where a battery electric vehicle is a good fit to replace gas or diesel vehicles
	Test the use of electric bikes for the Source Control program inspections to replace existing gas powered vehicle use, and evaluate opportunities for other downtown or short trip applications.
	Test hydrogen fuel cell electric vehicles to replace existing gas-/diesel-powered vehicles that are used for longer trips and heavier-duty applications
	Move towards centralized responsibilities for fleet vehicle acquisition, use and maintenance while maintaining a distributed approach to day-to-day operational activities (scheduling, fueling, determining local needs and performing maintenance and repairs), based on a renewed corporate fleet policy

Transportation	
Does your local government have policies, plans or programs to support: <ul style="list-style-type: none"> • Walking • Cycling • Transit Use • Electric Vehicle Use • Other (please specify) 	Yes/No Yes/No Yes/No Yes/No Yes/No
Does your local government have a transportation demand management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behavior)?	Yes/No
Does your local government have policies, plans or programs to support local food production (thus reducing transportation emissions)?	Yes/No

2016 WATER AND WASTEWATER ACTIONS

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces greenhouse gas emissions.

Community-Wide Actions Taken in 2016	
	Led campaigns related to minimizing water use at home and work. Promotional material was provided on CRD website, as well as at the operational centre at 479 Island Highway.
	Flush toilets at, Hamsterly, Eagle and Beaver Beach and Thetis Lake are closed down for all except the summer months to save water. All other washrooms are pit toilets. All other washrooms in the parks are pit toilets
	Purchased of an aquatic weed harvester to positively affect the biological health of Elk/Beaver Lake
	Integrated climate change considerations into Inflow and Infiltration Management Plan update
	Continued offering free fixture replacements for hair wash sprayers, aerators, and pre-rinse spray valves to promote water and energy conservation
	Initiated a new partnership with Camosun College to replace water cooled equipment and find water and energy savings synergies between two campuses. Involves linking them to progressive actions done by UVic
	Applied a newer water audit tool to multi-tenant commercial properties to promote water and energy conservation
	Continued to promote more efficient commercial water use in industrial/Commercial/institutional permits
	Initiated "Just Ask" campaign to encourage restaurants to limit their glasses of water to customers by request. Target 100 restaurants participating
	Reviewed existing Food Services Code of Practice within Sewer Use Bylaw 2922
	Piloted Grease Interceptor maintenance tracking program to increase inspection efficiency
	Initiated H2Otel regional initiative to support hotels in reducing water consumption via free online EPA WATERSENSE tool
	Developed partnership for on-site wastewater treatment for food carts at public space
	Expanded pilot project to assess the increase pump-out intervals of residential onsite septic systems
	Promoted wise and efficient use of water in residential buildings
	Undertook residential "Fix A Leak" week outreach and education campaign
	Conduct irrigation workshops to promote proper design, installation, operation, and maintenance of irrigation systems
	Piloted Residential water reduction/shower behaviour campaign
	Developed and implemented a water wise social media campaign to encourage residential water savings
	Co-host a Water Balance Accreditation workshop in partnership with Inter-regional Education Initiative for practitioners in the CRD
	Continue ongoing hydrological monitoring on 7 creeks throughout the region as input to watershed evaluation and assessment tool and to monitor changes in hydrology as our climate changes

	Offered and promoted Food Service Water and Energy Savings Program providing energy assessments and pre-rinse spray valve and aerator installations free of charge in partnership with FortisBC and City Green Solutions
Community-Wide Actions Proposed for 2017	
	Continue to lead campaigns related to minimizing water use at home and work. Promotional material was provided on our website, as well as at the operational centre at 479 Island Highway.

Corporate Actions Taken in 2016	
	Continued program to reduce Inflow and Infiltration into our sanitary collection system at our various services. This effort is paying off to reduce the amount of extra pumping and processing required at the wastewater pump stations and treatment plants.
	Continued to phase out direct drive motors for more efficient variable frequency drives to optimize energy usage within the Integrated Water Service department.
	Continued operation of rain water collection and use within toilets at the CRD Headquarters facility
	Continue ongoing conversations to Low flow toilets and taps within CRD facilities
	Used environmentally friendly cleaning supplies and recycled paper products in washrooms and kitchen areas of corporate facilities.
Corporate Actions Proposed for 2017	
	The Capital project to reuse the wastewater stream by filtering and pumping it to the screening works will be completed for Clover Point Sanitary Pump Station. This project will eliminate the need for the large volume of domestic water currently being used for this purpose.
	Low flow toilets and taps(Ongoing conversions each year) (PRC)
	Installation of new low flow water taps Arena B change rooms. The project is completed, PRC will monitor water saving.
	Installation of new low flow toilets Arena B change rooms. On-going this year.
Water Conservation	
Does your local government have water conservation policies, plans or programs?	Yes/No

2016 CLIMATE CHANGE ADAPTATION ACTIONS

Climate Change Adaptation Actions

For local governments, adaptation to a changing climate can take the form of changes in policy, management, technology and behaviour that minimize negative impacts or exploit opportunities. It can involve both “hard” and “soft” solutions, including: changes in infrastructure engineering, planning, zoning, bylaws, and public education.

Climate Change Adaptation Actions Taken in 2016	
	Partnered with Pacific Climate Impacts Consortium to develop and update future climate projections for the Capital Region
	Developed “winter readiness” standard operating procedures to account for the increased number of severe winter storms that come with wind and rain and impact the operations infrastructure within the Integrated Water Service.

	Began development of a climate change adaptation strategy for the Greater Victoria Water Supply Area which includes assessment of vulnerability and risk
	Created green infrastructure common design guidelines for storm water source control
	Established three year partnership with Green Shores Local Government Working Group and host education and outreach sessions to achieve to achieve broad-based recognition and use of green shores by property owners, professionals, contractors and government
	Presented to PIBC, APEG BC and Natural Resources Canada Adaptation Platforms on CRD sea level rise study results.
	Participated in the BC Climate Risk Network
	Developed corporate policy to accelerate corporate climate adaptation activities to enhance resilience and prepare infrastructure and assets (including parks and the watershed) to withstand the impacts of climate change
Climate Change Adaptation Actions Proposed for 2017	
	Continue to review facilities which currently do not have back-up electrical power and develop a risk-based plan to protect these facilities. This is in recognition of the number of severe wind and rain storms that are resulting in wide-spread utility power outages for extended periods of time
	Publish and distribute green infrastructure common design guidelines for storm water source control
	Complete climate adaptation strategy for the Greater Victoria Water Supply Area
	Conduct assessment of potential impacts of climate change on water supply reservoirs
	Develop Climate Change Adaptation Strategy for Regional Water Supply area
	Undertake community-wide adaptation education campaign
	Develop process to identify climate impacts and consider adaptation within corporate risk registers, enterprise risk management and asset management
	Consider climate adaptation in all new capital projects through the climate lens review template
	Continue to establish long-term monitoring plots to detect changes in forest stands
	Continued assessment and upgrade of drainage structures to meet a 13% increase in design flow projected as a result of climate change
	Identify opportunities for greater regional resilience in the CRD fleet by: researching possibilities to use electric vehicles as a power source during outages and incorporating strategies to enhance emergency preparedness and resiliency through the use of electric vehicles into corporate plans, where appropriate

Resources you have used to support climate change adaptation (e.g. Plan2Adapt, Preparing for Climate Change: Implementation Guide)	
	Plan2Adapt, Preparing for Climate Change: Implementation Guide
	Guidance from provincial government on vulnerability of forests to climate change
	Review of scientific literature on climate change and watersheds/forests/hydrology
	Guidance on climate change for water supply utilities
	Review of US forest service reports on adapting to climate change in the Pacific Northwest
	Reviewing and incorporating results of research in the water supply area

In 2016 did you consider climate change impacts in any of the following areas? (check if yes)

Risk reduction strategies Risk and Vulnerability assessment Asset management Infrastructure upgrades (e.g. stormwater system upgrades) Cross-department working groups Emergency response planning Land-use policy changes (eg. OCP, DPA) Economic diversification initiatives Ecosystem-based approaches (incl. shorelines) Incentives (e.g. property owner reducing storm water run-off) Public education and awareness Research (e.g. mapping, participation in studies) Other (Please Identify):	
--	--

2016 OTHER CLIMATE ACTIONS

Other Climate Actions

This section provides local governments the opportunity to report other climate actions that are not captured in the categories above.

Community-Wide Actions Taken in 2016	
	Active wildfire prevention and preparedness programs to greatly reduce the likelihood of a large scale wildfire in the forested water supply area
	Active program of developing forest fuel breaks to reduce the spread and increase the potential for quick suppression of a wildfire
	Annual overview flights to detect tree mortality from insects and diseases that could threaten forests in the water supply area
	Monitoring and control of invasive species that could interfere with the establishment and growth of young forest stands in the water supply area
	Delivered the Ready Set Solve: the CRD student climate challenge, an applied learning challenge that invites post-secondary students to solve real sustainability and climate change challenges in the capital region
	Supported elementary and middle school classes to participate in Planet Protector Academy, a digital-led classroom program about environmental issues, empowering students to lead change.
	Distribute a digital climate newsletter for local governments and community
	Supported CRD Roundtable on the Environment.
	Host quarterly Resilient Region Exchange events for community, industry and staff and council
	Host Climate Action Inter-municipal Steering Committee and Working Group meetings for municipal staff and elected officials
Community-Wide Actions Proposed for 2017	
	Produce a Climate Projections for the Capital Region report

	Support delivery of Cool It! Climate Leadership Training, an interactive environmental workshop and contest for students in grades 4 to 7. Environmental Educators use videos, games, quizzes and discussion to build on students' knowledge of climate change
	Progress report on the Regional Climate Action Strategy
	Continue to distribute a digital climate newsletter for local governments and community
	Continue to host quarterly Resilient Region Exchange events for community, industry and staff and council
	Host Climate Action Inter-municipal Task Force and Working Group meetings for municipal staff and elected officials

Corporate Actions Taken in 2016	
	Use of chipper in the management of debris generated by forest fuel reduction rather than burning
Corporate Actions Proposed for 2017	
	Provide membership of all committees and commissions an orientation to CRD's corporate climate policy at the start of each new session
	Include climate lens considerations within staff reports to the CRD Board and committees
	Develop a mechanism for financing (seed funding) for studies or components of capital projects that support CRD's corporate climate action policy
	Establish an ongoing staff climate action working group to share knowledge across the organization and continually evaluate best opportunities for accelerating climate action
	Integrate a requirement to document alignment with the CRD's corporate climate action policy into strategic asset management plans for new and retrofit facilities and infrastructure.
	Establish a process to collect the GHG emissions for all contracted services considered "in scope" for GHG reporting
	Develop a communications plan to share corporate progress on climate action with staff and public.
	Consider identified climate impacts within risk registers in the enterprise risk management process
	Develop conservation demand management program for staff to raise awareness about energy-saving habits and behaviours
	To seek funding to conduct the PRC Energy Integration study.

Other	
Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC) ?	Yes/No
Have you used CLIC?	Yes/No

INNOVATION AND PEER-TO-PEER LEARNING

Innovation

This section provides the opportunity to showcase an innovative Corporate and/or Community-Wide GHG reduction or climate change adaptation activity that your local government has undertaken and that has had or has the potential to have a significant impact. Projects included here may be featured as success stories on the B.C. Climate Action Toolkit and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible.

Community-Wide Innovative Action

In 2016, CRD implemented the People Power Program. People Power motivates, supports and encourages residents to safely walk, roll and cycle more often with over 15 different events, workshops and initiatives. People Power uses a collective impact model to harness the skills and knowledge of partner organizations. Working with non-profits, recreation centres and local governments, the program includes bike skills courses for youth, seniors and new Canadians, development of a bike map for Salt Spring Island, Living Streets resource guide and micro-grant program and social connect mapping for older adults and their caregivers.

Find out more at <https://www.crd.bc.ca/project/regional-transportation/people-power>

Corporate Innovative Action

In 2016, CRD began systematic assessment of the design flow capacity of all drainage structures (culverts and cross drains beneath roads) in relation to 13% increase estimate for project change in the intensity, frequency and duration of winter precipitation. Results will be used to develop a long-term risk-based drainage structure replacement program.

In 2016, CRD also released the Corporate Climate Action Strategy to integrate a climate lens into the everyday business and operations of the organization. Every capital project greater than \$ 100,000 in value will now be evaluated through a climate lens- determining how the project will impact the organization's corporate GHG footprint, and if the project has considered future climate change impacts into design criteria. The strategy provides a road-map for meeting the corporate GHG reduction target of 33% reduction below 2007 levels, by 2020 through policy, actions and goals.

<https://www.crd.bc.ca/docs/default-source/climate-action-pdf/corporateclimateactionstrategy.pdf?sfvrsn=2>

Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below.

Programs and Funding

Pacific Climate Impacts Consortium
Pacific Institute for Climate Solutions
Natural Resources Canada

Canadian Forest Service
 University of Alberta
 Province of BC-Ministry of Energy and Mines
 University of Victoria- Institute for Integrated Energy Systems
 Fortis BC
 BC Hydro Power Smart
 Province of BC
 Victoria Foundation
 Traffic Safety Commission
 Real Estate Foundation of British Columbia
 Natural Resources Canada
 Scout Environmental
 Camosun College
 University of Victoria
 RBC Blue Water

2016 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the Climate Action Charter. Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this survey, please ensure that you are familiar with guidance available on the B.C. Climate Action Toolkit website, especially *Becoming Carbon Neutral: A Guide for Local Governments in British Columbia*.

Reporting Emissions

Did you measure your local government's corporate GHG emissions in 2016?	Yes/No
If your local government measured 2016 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from services delivered <u>directly</u> by your local government:	2,436
If your local government measured 2016 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from <u>contracted</u> services:	(included in corporate emissions total)
TOTAL A: CORPORATE GHG EMISSIONS FOR 2016	2,436 tCO₂e

Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions by one or a combination of the following actions:

- undertake GCC-supported Option 1 Projects
- undertake GCC-supported Option 2 Projects (community GHG emissions reduction projects that meet project eligibility requirements)
- purchase carbon offsets from a credible offset provider

If applicable, please report the 2016 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from Option 1 GHG Reduction Projects:

OPTION 1 PROJECTS	REDUCTIONS
Energy Efficient Retrofits	
Solar Thermal	
Household Organic Waste Composting	
Low Emission Vehicles	
Avoided Forest Conversion	
TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2016	tCO2e

If applicable, please report the names and 2016 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from Option 2 GHG Reduction Projects:

OPTION 2 PROJECT NAME	REDUCTIONS
CRD Landfill Gas Emissions Reduction Project	2,436
TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2016	2,436 tCO2e

If applicable, please report the number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO2e)) from an offset provider for the 2016 reporting year:

(NOTE: DO NOT INCLUDE ANY FUNDS THAT MAY BE SET ASIDE IN A CLIMATE ACTION RESERVE FUND)

OFFSET PROVIDER NAME	OFFSETS
TOTAL D: OFFSETS PURCHASED FOR 2016	tCO2e

TOTAL REDUCTIONS AND OFFSETS FOR 2016 (Total B+C+D) = 2, 436 tCO2e

Corporate GHG Emissions Balance for 2016

Your local government's Corporate GHG Emissions Balance is the difference between total corporate GHG emissions (direct + contracted emissions) and the GHG emissions reduced through GCC Option 1 and Option 2 projects and/or the purchase of offsets.

CORPORATE GHG EMISSIONS BALANCE FOR 2016 = (A – (B+C+D)) = 0 tCO2e

**If your Corporate GHG Emissions Balance is negative or zero,
your local government is carbon neutral.
CONGRATULATIONS!**

GCC CLIMATE ACTION RECOGNITION PROGRAM

Green Communities Committee (GCC) Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

This year a new recognition level has been added – **Level 3: Accelerating Progress on Charter Commitments**–. Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

Level 1 – Demonstrating Progress on Charter Commitments: for local governments who demonstrate progress on fulfilling one or more of their Charter commitments

Level 2 – Measuring GHG Emissions: for local governments that achieve level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with the Community Energy and Emissions Inventory (CEEI)

Level 3 – Accelerating Progress on Charter Commitments: for those local governments who have achieved level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (ie: through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

Level 4 - Achievement of Carbon Neutrality: for local governments who achieve carbon neutrality in the reporting year.

For purposes of Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time or financial resources and is intended to result in significant GHG reductions:

PROJECT NAME:

Based on your local government's 2016 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

<input type="checkbox"/>	Level 1 – Demonstrating Progress on Charter Commitments	
<input type="checkbox"/>	Level 2 – Measuring GHG Emissions	
<input type="checkbox"/>	Level 3 – Accelerating Progress on Charter Commitments	
<input checked="" type="checkbox"/>	Level 4 - Achievement of Carbon Neutrality	✓
<input type="checkbox"/>	Not Sure	