

Capital Regional District 2019 Climate Action Annual Report





Organizational Overview

The Capital Regional District (CRD) delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands.

Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region.



Making a difference...together

Capital Regional District
625 Fisgard Street
Victoria, BC V8W 2S6

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Overview

This report summarizes all of the climate action related activities undertaken by the Capital Regional District (CRD) in 2019 and satisfies the annual reporting requirements associated with the CRD's Regional Climate Action Strategy, the CRD's Corporate Climate Action Strategy and the provincial Climate Action Revenue Incentive Program (CARIP), as per the CRD's BC Climate Action Charter commitment.

The CRD has an obligation to support climate action, whether that be through the planning and management of its assets or through the delivery of its services.



Regulations & Commitments

The CRD is required to take action to reduce corporate and community-related greenhouse gas (GHG) emissions and prepare for the impacts of climate change under the following provincial regulations and commitments:

- **Local Government (Green Communities) Statutes Amendment Act** (Bill 27) requires regional districts and local governments to include targets, policies and actions for the reduction of GHG emissions in Regional Growth Strategies and Official Community Plans. The Act also provides powers to local governments to support mitigation and adaptation through development permit areas, development cost charges and parking and building code requirements.
- **Landfill Gas Management Regulation** establishes province-wide criteria for landfill gas capture from municipal solid waste landfills. The regulation focuses on GHG emissions reductions from landfills, with the objective of maximizing reductions of landfill gas emissions and identifying potential opportunities to increase landfill gas recovery. As a manager of the Hartland landfill, the CRD is responsible for adhering to this regulation.
- All local governments in the region, including the CRD, became signatories of the *BC Climate Action Charter* in 2008. This includes a commitment to:
 - become carbon neutral in corporate operations starting in 2012
 - measure and report on the community's GHG emissions profile
 - work to create compact, complete, and more energy-efficient rural and urban communities
- In late 2018, the CRD united with more than 350 Canadian local governments in joining the Federation of Canadian Municipalities (FCM) International Council for Local Environmental Initiatives (ICLEI) (Local Governments for Sustainability) **Partners for Climate Protection Program**, affirming its ambitious GHG reductions and participating in a five-milestone planning, implementation and reporting framework.



CRD Climate Emergency Declaration

In February 2019, the CRD Board voted unanimously to declare a climate change emergency and assume a leadership role to work towards achieving carbon neutrality in the region by 2030.

As an immediate response, the CRD:

- **Embedded the declaration and leadership intentions to greatly accelerate greenhouse gas emissions reductions** in the 2019-2022 CRD Board priorities. In addition to the three Board priorities related to climate change, the 2019-2022 CRD Corporate Plan includes eleven additional initiatives related to climate action.
- Through a letter, **encouraged municipalities to declare a climate emergency** and work towards carbon neutrality by 2030.
- **Formally advocated to federal and provincial governments for increased support** for climate action.
- **Increased its staff capacity by one FTE for a two-year term**, co-funded with BC Hydro, to support its community energy and emissions portfolio and increased the climate action service requisition by \$95,000 for two years to accommodate the new position and key projects.
- Is undertaking initiatives that **support regionally and locally relevant data procurement**, local government policy and capacity building and community outreach initiatives related to community energy emissions inventories, building energy retrofits and electric vehicle charging, among others.
- Restructured and amalgamated its corporate and community focused climate action staff into one cohesive service.
- **Increased frequency of CRD Climate Action Inter-Municipal Task Force meetings** (to quarterly from bi-annual) and developed new collaboration websites to support ongoing coordination and communication for members of the Task Force and the associated staff committee (i.e., Working Group).
- **Developed an advocacy strategy** and continues to look for opportunities **to inform and influence programs and policies of the provincial and senior governments** (either staff-to-staff or CRD-Board-to-Minister, when required).
- To be more transparent, now regularly reports to the CRD Board on ongoing climate action related initiatives through the CRD Chief Administrative Officer quarterly updates.
- **Expanded the “Environmental Implications” section of the CRD staff report template to include “Climate Implications”**, where relevant.
- **Staff continue to identify opportunities to mitigate, adapt to and reduce climate change impacts** and engage in opportunities to expedite greenhouse gas reduction projects in corporate buildings, infrastructure and fleet. Capital projects over \$100,000 must apply a climate lens to inform decision-making.

See the highlights section and comprehensive list of actions in **appendices A and B**.

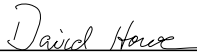
Climate Emergency DECLARATION

At its February 13, 2019 meeting, the Capital Regional District Board unanimously passed a motion to declare a climate emergency and assume a leadership role to work towards achieving carbon neutrality in the region by 2030.

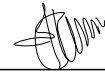
CRD Board Members



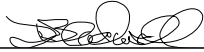
Director Colin Plant (Chair)
Councillor – District of Saanich



Director David Howe
Southern Gulf Islands Electoral Area



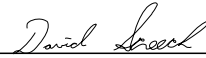
Director John Ranns
Mayor – District of Metchosin



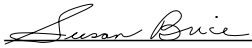
Director Denise Blackwell (Vice Chair)
Councillor - City of Langford



Director Ben Isitt
Councillor - City of Victoria



Director David Screech
Mayor - Town of View Royal



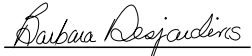
Director Susan Brice
Councillor – District of Saanich



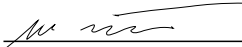
Director Jeremy Loveday
Councillor - City of Victoria



Director Lanny Seaton
Councillor – City of Langford



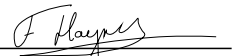
Director Barbara Desjardins
Mayor – Township of Esquimalt



Director Rob Martin
Mayor - City of Colwood



Director Maja Tait
Mayor – District of Sooke



Director Fred Haynes
Mayor – District of Saanich



Director Cliff McNeil-Smith
Mayor - Town of Sidney



Director Ned Taylor
Councillor – District of Saanich




Director Lisa Helps
Mayor – City of Victoria



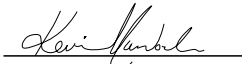
Director Rebecca Mersereau
Councillor – District of Saanich



Director Ken Williams
Mayor – District of Highlands



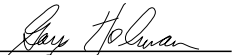
Director Mike Hicks
Juan de Fuca Electoral Area



Director Kevin Murdoch
Mayor - District of Oak Bay



Director Ryan Windsor
Mayor – District of Central Saanich



Director Gary Holman
Salt Spring Island Electoral Area



Director Geoff Orr
Mayor – District of North Saanich



Director Geoff Young
Councillor - City of Victoria



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CRD Climate Action Strategies

The CRD has two strategies dedicated to climate action: one related to community-based activities, the other to CRD corporate operations, assets and decision-making. These strategies, among others, support the overarching Regional Growth Strategy.

Regional Growth Strategy

The Regional Growth Strategy (RGS) is a vision for the future of the capital region, guiding decisions on regional issues such as transportation, population growth and settlement patterns until 2038. The RGS promotes the long-term livability of the region, with policy intended to enhance social, economic and environmental performance. It is developed in partnership with local governments and, since 2008, must include policies, actions and targets for the reduction of greenhouse gas emissions. The current RGS was adopted in 2018.

The strategy can be found at www.crd.bc.ca/rgs

Regional Climate Action Strategy

In 2017, the CRD Board approved the **Regional Climate Action Strategy (RCAS)**, which guides the CRD's services to support community-focused climate mitigation and adaptation action over the following five years. The RCAS builds on the work that is already being done by residents, businesses, not-for-profits, local governments and First Nations, by federal and provincial governments, and the direction provided in the **Regional Growth Strategy**. The success of this RCAS relies on a commitment to climate action by both the CRD and its partners.

Multiple CRD service areas are responsible for the implementation of the actions (*see Appendix A - Regional Climate Action Strategy Actions*). This report satisfies the annual reporting commitments associated with the RCAS. The full strategy can be found at: www.crd.bc.ca/climate.

Corporate Climate Action Strategy

In 2016, the CRD Board endorsed the Corporate Climate Action Strategy (CCAS) to guide the CRD's operational approach and decision-making through a policy framework and corresponding climate action activities and actions related to the CRD's buildings, fleet and lands.

The CCAS reflects on what the CRD has accomplished to date and renews corporate climate action efforts through seven long-term goals (*see Appendix B – Corporate Climate Action Strategy Actions*). The full strategy can be found at www.crd.bc.ca/climate.

The CRD Regional Growth Strategy identifies a target for the capital region to reduce greenhouse gas emissions by 61% (from 2007 levels) by 2038.

CLIMATE MITIGATION

Reduce Greenhouse Gas Emissions

Capital Region Community Greenhouse Gas Emissions

In 2020, the CRD conducted an inventory using the **Global Protocol for Community-Scale Greenhouse Gas Inventories** (GPC) BASIC + reporting level, a robust framework that aligns with and expands on the Community Energy and Emissions Inventories (CEEI) previously conducted by the province of BC.

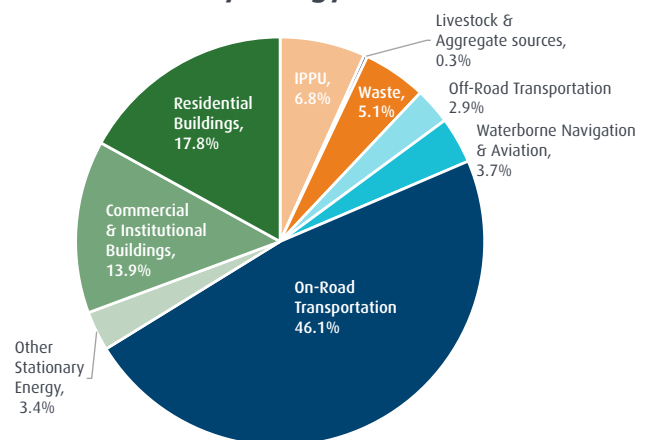
The GCP is widely accepted as the best practice for community inventories and classifies GHG emissions from community activities into five main sectors:

- stationary energy (e.g., buildings)
- transportation (e.g., commuter vehicles)
- waste (e.g., landfills)
- industrial processes and product use (IPPU) (e.g., chemical industry)
- agriculture, forestry and other land use (e.g., fertilizer application)

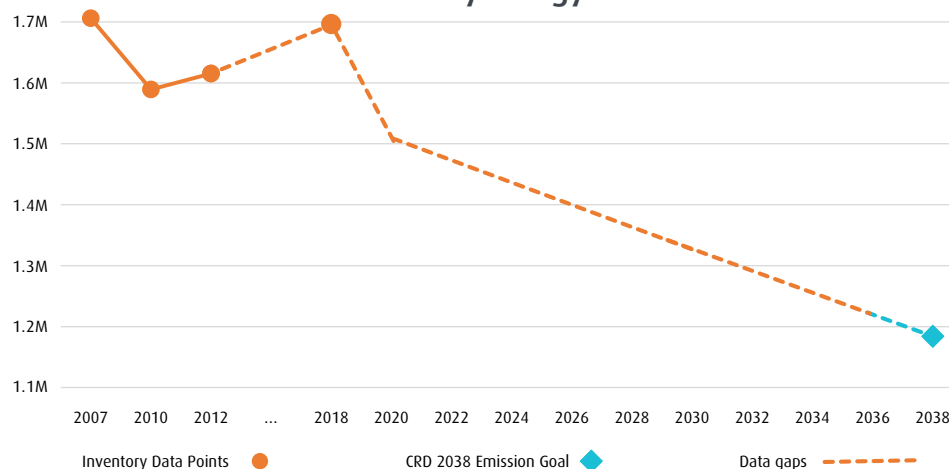
The inventory includes all territorial-based emissions (scope 1), grid-supplied energy (scope 2), and some territorial external emissions (scope 3) such as trans-boundary transportation.

The 2018 inventory indicates **the capital region emits approximately 1.7 million tonnes of CO₂e annually**. This represents an 1.1% decrease compared to 2007 levels.

2018 Capital Region Community Energy Emissions



2007-2018 Capital Region Community Energy Emissions



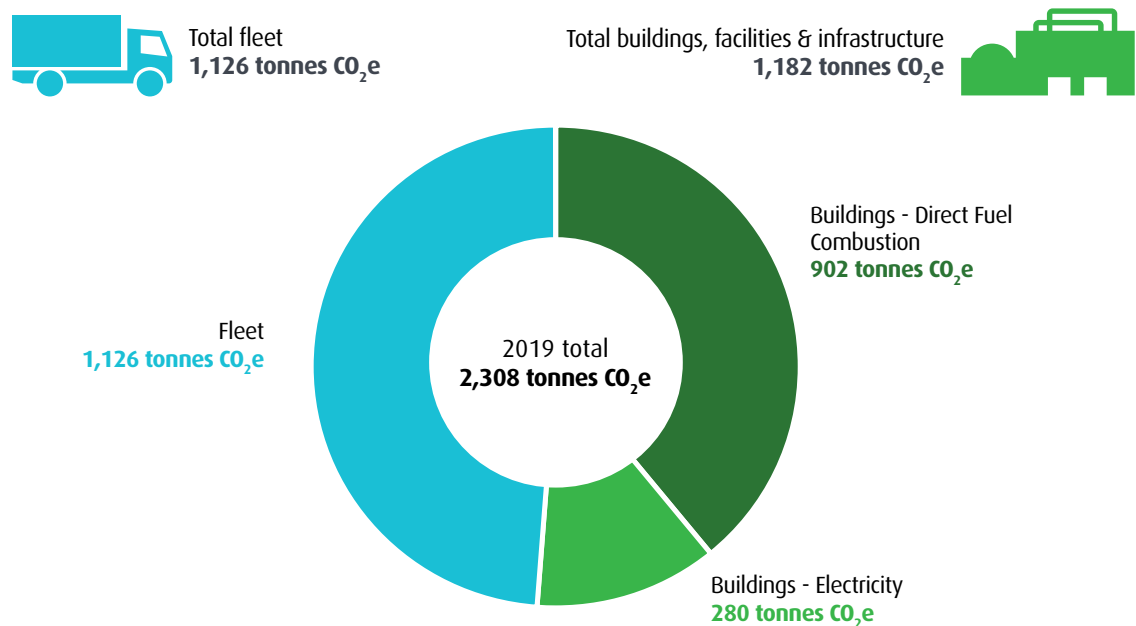
CRD Corporate Greenhouse Gas Emissions and Targets

In 2008, the CRD Board set a target to reduce operational GHG emissions **33% below 2007 levels by 2020**. Since 2012, the CRD has completed an annual GHG inventory and reported GHG emissions through the provincial Climate Action Revenue Incentive Program (CARIP), following the guidance provided by the provincial Green Communities Committee.

In 2019, CRD operations produced 2308 Tonnes CO₂e. This represents an 18% reduction compared to 2007 levels. It is expected that in 2020, emissions will increase as a result of the new wastewater treatment plant operations.

The CRD has been carbon neutral in its operation since 2012. In 2019, carbon neutrality was achieved by applying historical carbon credits that were generated through methane destruction from the Hartland landfill gas capture system. Activities undertaken to reduce annual carbon emissions are outlined in the CCAS (see Appendix B for 2019 actions).

2019 Operational GHG Emissions* by Source



*Figures rounded to the nearest whole number

CLIMATE ADAPTION

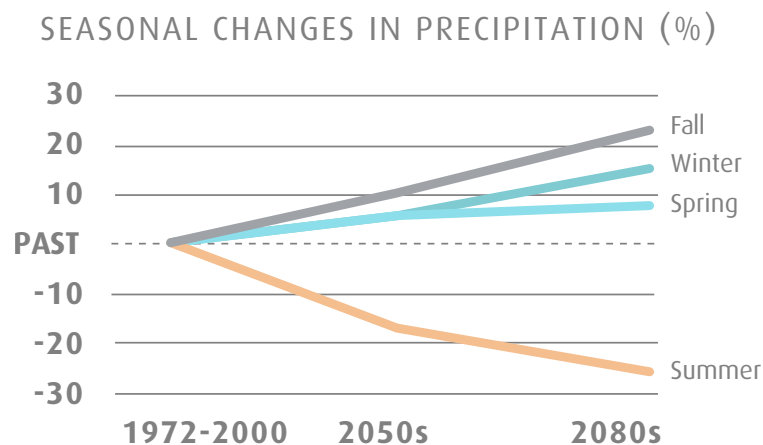
Build Resilience

The climate is changing and the “new normal” for the region may be very unlike the past. Global climate models project an average increase of about 3°C in the capital region by the 2050s. In 2017, the CRD worked with the Pacific Climate Impacts Consortium (PCIC) to undertake a comprehensive assessment of the projections of global climate models for the capital region. This assessment shows, as a result of global warming, the capital region will experience:

- hotter summer days and nights, **longer summer dry spells**, with an extension of the dry season into September.
- milder winter days and nights, with a near **loss of frost days and snowpack** in all areas but the highest elevations in the region.
- stronger and more frequent **extreme rainfall events**.

Scientists also project the capital region will be impacted by **sea level rise**.

Climate Projections for the Capital Region, 2017 Report Results



Climate Action Service

Under Bylaw 3510, the CRD established a climate action service in 2009 to act as a resource and facilitator for local governments, citizens and organizations in the capital region on energy and climate issues. The service has five major focus areas:

- **Provide support to local governments in developing and implementing climate action plans and programs** (emissions reductions and climate adaptation), as part of legislative requirements under Bill 27 and voluntary commitments under the BC Climate Action Charter.
- **Catalyze action through partnerships with public and private sectors, non-governmental organizations and community organizations** and increase public awareness of climate change issues.
- **Liaise with senior levels of government on climate change related programs, policies and legislation** that impact the capital region.
- **Provide scientific information, data and indicators** related to local and regional greenhouse gas emissions and projected climate impacts.
- **Support the CRD in fulfilling its corporate climate objectives** by developing and facilitating implementation of corporate climate action plans, policies and programs and support execution of climate-related Board strategic priorities.

The service administers two inter-municipal committees, one with elected officials and one with staff, which represent the 13 municipalities and three electoral areas in the region. These committees meet quarterly and work in an advisory capacity to the CRD to develop priority objectives and support project delivery with the aim of supporting regional coordination on climate action.

In 2019, the program operated on an annual budget of approximately \$470,000, which included two full-time employees and one two-year, full-time term position (co-funded by BC Hydro Sustainable Communities).^{*} The program's core budget is provided through an annual requisition from all of the municipalities and electoral areas. The program also relies on external grants and partnerships to undertake community climate action programming.

^{*} In May 2019, the full-time Corporate Climate Action Analyst position, funded in part from the CRD's CARIP grant, was amalgamated with the climate action service.

The CRD climate action service is a part of the Parks & Environmental Services Department, Environmental Protection Division. The service reports through the CRD Environmental Services Committee to the CRD Board.

See *appendices A and B* for accomplishments.

2019 Climate Action Highlights

The CRD completed and supported a number of climate actions throughout 2019 listed in *Appendix A – CRD Regional Climate Action Strategy Actions* and *Appendix B – Corporate Climate Action Strategy Actions*. Some highlights are:

Ready Step Roll - Active Travel Planning



In 2019, the CRD Board approved ongoing funding for an active school travel planning initiative, transitioning the pilot (previously referred to as Active and Safe Routes to School) to Ready Step Roll.

Ready Step Roll is an 18-month active school travel planning program, which helps more students have the option to walk, bike, bus or roll to and from school. The program examines infrastructure, behaviour, enforcement

and educational needs, on school grounds and in surrounding neighbourhoods, while also tackling traffic safety, air pollution and climate issues.

Each year, working collaboratively with multiple stakeholders, including parents, students, school administration, school boards, transportation planners and engineers, public health agencies and law enforcement to develop travel plans, the CRD will fund and develop travel plans for up to five schools in the capital region. Additional information is available at www.crd.bc.ca/ready.

Ready Step Roll helps more students have options to walk, bike, bus or roll to school.



Solid Waste Management Plan

The CRD continued work on the development of a new Solid Waste Management Plan to respond to the changing waste management context. Informed by the current waste management system, regulatory obligations, and challenges and opportunities, the CRD embarked on a planning exercise to understand the public's needs, expectations, and preferences related to how solid waste will be managed in the future. The draft plan is expected to be prepared in 2020.

Landfill Gas Utilization

The volume of landfill gas collected at Hartland landfill has exceeded the capacity of the current landfill gas utilization plant, which produces clean electricity. The equipment is also reaching its end of life. As a result, the CRD has evaluated two enhanced utilization alternatives: upgrading landfill gas to Renewable Natural Gas (a carbon neutral form of biogas) for sale to FortisBC or expanding the capacity of the current plant to produce more electricity.

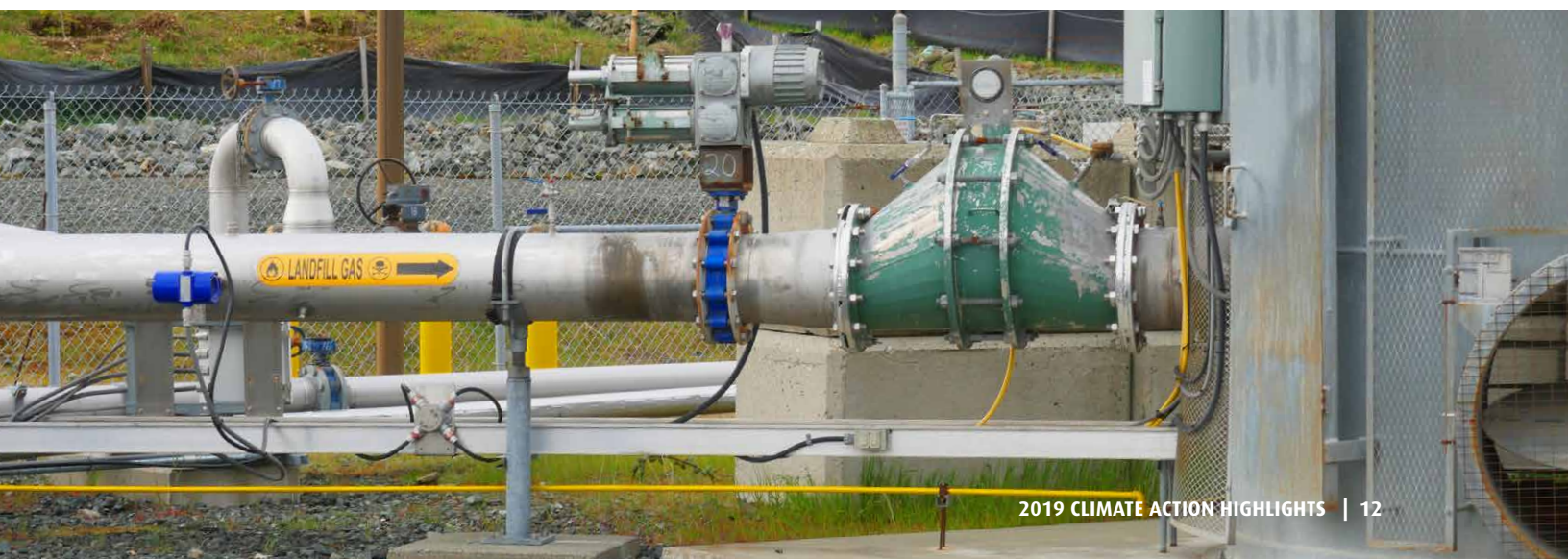
How the CRD decides to maximize landfill gas for public benefit can have both environmental and financial benefits for the community. It also fosters a greater circular economy, using waste to generate energy. A decision on the future of landfill gas utilization will be made in 2020.

2019 Canada's Greenest Employers



In 2019, the CRD was recognized as one of Canada's Greenest Employers by the Canada's Top 100 Employers project. This special

designation recognizes employers that lead the nation in creating a culture of environmental awareness in their organizations. The CRD's CCAS aims to integrate climate action into everyday business across the CRD's departments, divisions and services.



Energy Retrofit & Incentives Programs

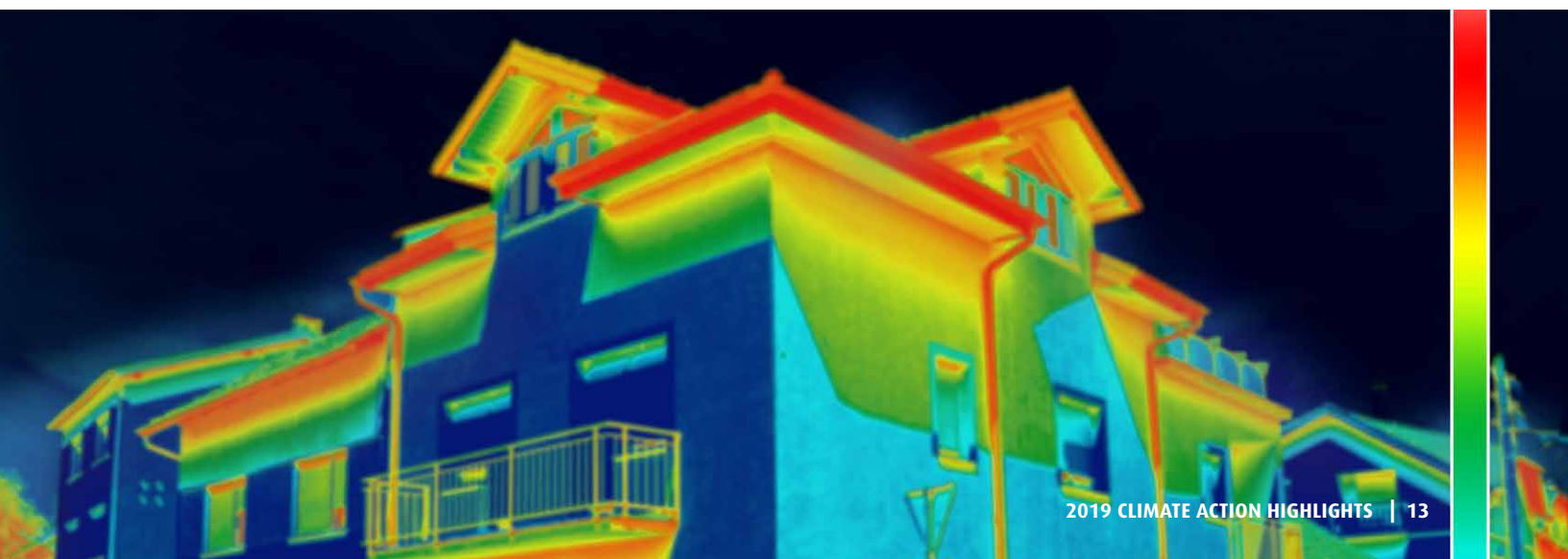
The CRD is a partner in the Federation of Canadian Municipalities' grant-funded Transition 2050: Residential Retrofit Acceleration Project. Led by City Green Solutions and the Home Performance Stakeholder Council, the project engaged with the building industry, held a number of capacity building sessions, developed other educational tools and began the development of a residential building retrofit acceleration strategy to help prioritize areas of focus for supporting home retrofits across the region.

The CRD and select municipalities also partnered with the provincial CleanBC Better Homes program to offer and promote an additional \$350 incentive to residents who switch from a fossil fuel-powered home heating system to an electric heat pump. Between September 2018 and December 2019, 183 homes made the switch.

Learn more at www.crd.bc.ca/heatpump.

Capital Region Coastal Flood Inundation Mapping Project

Working with an inter-municipal project team, in 2019 the CRD received a \$705,000 National Disaster Mitigation Program grant to support a Capital Region Coastal Flood Inundation Mapping project. Project deliverables will include modelling outputs identifying potential sea level rise inundation at various storm surge and future sea level rise scenarios and various tsunami scenarios. Local governments may use this information to inform their future local government hazard policies. The project will be completed in mid-2020.



Looking Ahead - 2020

In 2020, the CRD will continue to complete actions identified in its climate strategies, and endeavour to accelerate actions and explore opportunities, as a response to the CRD's climate emergency declaration. The CRD will continue to pursue strategic partnerships, external funding sources, and respond to opportunities as local and senior levels of governments advance their efforts.

Some activities planned for 2020 include:

- **Landfill Gas Utilization:** In 2020, the CRD Board will decide how to proceed with landfill gas utilization at Hartland landfill (i.e., either upgrading landfill gas to Renewable Natural Gas, or expanding the capacity of the current plant to produce more electricity). Planning and implementation is expected to begin in 2020.
- **Heat Recovery Opportunity at Panorama Recreation Centre:** In 2020, the CRD will seek additional grant funding to continue working towards implementation of an energy recovery project to reclaim heat from the ammonia refrigeration plant and repurpose the heat for arena dehumidification, Domestic Hot Water and space heating.
- **Capital Region Coastal Flood Inundation Mapping project:** In 2020, the CRD and local government partners will complete the study and share the data and information with local governments, regional First Nations and other key stakeholders.
- **Community Greenhouse Gas Emissions Inventory projects:** The CRD will complete a regional GHG inventory and modelling project that will provide the CRD and local governments with an updated emissions portfolio. This information will then be used to do further analysis on GHG reduction strategies. With 10 other BC-based communities, the CRD will also participate in the development and the pilot testing of BC Institute of Technology's ecoCity Footprint Tool to provide a regional ecological footprint, urban metabolism and a broader consumption-based emissions inventory.
- **Residential Energy Retrofit programs:** As part of the Transition 2050: Residential Retrofit Acceleration Project, in 2020, the CRD will participate in a pilot project aimed at supporting 'agents of change' in neighbourhoods. Through facilitation support, energy audits and expert coaching, the pilot will be designed to overcome various barriers.
- **Regional Electric Vehicle charging policy and planning support:** To inform local government policy and planning in the context of the rapidly changing EV market, the CRD will build off previous work to understand EV charging performance standards (to inform model bylaw language for the region's local governments), EV charging infrastructure targets and strategies for the region.
- **Update and amalgamate Corporate Climate Action Strategy and Regional Climate Action Strategy:** The CRD will be undertaking a planning exercise to review and update its existing climate action strategies.

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Capital Regional District
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Victoria, BC V8W 2S6

Appendix A:



Goal 1 | Developed urban areas are compact and complete

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
1-1. IDENTIFY OPPORTUNITIES TO SUPPORT LOCAL GOVERNMENTS and interested First Nations governments with transit-oriented development	 Complete	<ul style="list-style-type: none"> Considered in context of Regional Growth Strategy (RGS) and policies to support urban containment. 	<ul style="list-style-type: none"> All municipalities and Juan de Fuca electoral area (not SSI or SGI)
1-2. DEVELOP TOOLS AND UNDERTAKE RESEARCH to support local governments, and interested First Nations governments, in creating compact and complete urban areas		<ul style="list-style-type: none"> No actions reported. (See past annual reports.) 	
1-3. MANAGE COMPLIANCE WITH REGIONAL GROWTH STRATEGY (RGS)	Ongoing	<ul style="list-style-type: none"> Liaise with CRD Development and Planning Advisory Committee to manage compliance with RGS. No changes / amendments brought forward for action in 2019. 	<ul style="list-style-type: none"> Municipalities, Juan de Fuca electoral area
1-3-1. Review Regional Context Statements for alignment with the RGS	Ongoing	<ul style="list-style-type: none"> CRD Board accepted four Regional Context Statements, with provisions in place to achieve RGS climate action policies. In 2020, the Board has seven remaining Regional Context Statements to accept. 	<ul style="list-style-type: none"> Municipalities
1-3-2. Continue to adopt Official Community Plans (OCP) for the Juan de Fuca electoral area that are consistent with the RGS		<ul style="list-style-type: none"> For 2020, see Goal 1 – 3. 	
1-3-3. Monitor and report on RGS commitments	 Complete	<ul style="list-style-type: none"> Developed a monitoring report framework for the 2018 RGS and prepared the first annual RGS monitoring report. 	<ul style="list-style-type: none"> Internal CRD departments
	 Planned	<ul style="list-style-type: none"> In 2020, prepare annual RGS monitoring report. 	<ul style="list-style-type: none"> Internal CRD departments
1-4. CONTINUE TO DEVELOP GHG-RELATED TARGETS , policies and actions for the Juan de Fuca electoral area OCP		<ul style="list-style-type: none"> See Goal 1 – 3. 	
PERFORMANCE INDICATORS			
<ul style="list-style-type: none"> Percentage of new dwelling units within the Growth Policy Area 		<ul style="list-style-type: none"> 92.7% (2017) = percentage of new dwelling units within the Urban Containment Policy Area. 	

Goal 2 | Multi-modal transportation systems are low carbon

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
2-1. ESTABLISH A CRD TRANSPORTATION SERVICE TO FULFILL THE MULTI-MODAL VISION OF THE REGIONAL TRANSPORTATION PLAN	n/a	<ul style="list-style-type: none"> CRD Board decided on March 14, 2018 not to further pursue a transportation service at this time. 	
2-1-1. Consolidate CRD transportation functions	n/a	<ul style="list-style-type: none"> CRD Board decided on March 14, 2018 not to further pursue a transportation service at this time, which means transportation services will not be consolidated. 	
2-1-2. Apply for external funding	n/a	<ul style="list-style-type: none"> See 2-1 	
2-1-3. Requisition for future infrastructure projects	n/a	<ul style="list-style-type: none"> See 2-1 	
2-2. IMPLEMENT THE REGIONAL TRANSPORTATION PLAN AND THE PEDESTRIAN AND CYCLING MASTER PLAN	 Complete	<ul style="list-style-type: none"> Updated the Capital Region Bike Map. Printed and distributed 25,000 maps. 	<ul style="list-style-type: none"> Municipalities, advocacy organizations and bike-related businesses.
	 In progress	<ul style="list-style-type: none"> Working closely with Ministry of Transportation and Infrastructure on ensuring regional transportation priorities are included in the South Vancouver Island Multi-Modal transportation Plan. 	<ul style="list-style-type: none"> Ministry of Transportation and Infrastructure, BC Transit, partner municipalities and electoral areas, BC Ferries.
	 Planned	<ul style="list-style-type: none"> In 2020, implement recommendations from a transportation data review to improve cycling data collection and generate reliable volume estimates. 	<ul style="list-style-type: none"> Municipalities, UVic
	Ongoing	<ul style="list-style-type: none"> CRD Board approved funding for ongoing active school travel planning initiative, transitioning the Active and Safe Routes to School pilot to Ready Step Roll. Ready Step Roll will work with up to 5 schools per year. 	<ul style="list-style-type: none"> School boards, schools, municipalities and electoral areas, public health, local law enforcement agencies, parents, students and school administration, ICBC Road Safety, and The Greater Victoria Bike to Work Society, CRD Traffic Safety Commission, Island Health, Ministry of Transportation and Infrastructure
	Ongoing	<ul style="list-style-type: none"> Coordinate annual Walk and Wheel to School Week. In 2019, 40 schools from 4 School Districts registered with more than 8,000 active trips to/from school reported. 	<ul style="list-style-type: none"> Island Health, school boards, schools, CRD Traffic Safety Commission

Goal 2 | Multi-modal transportation systems are low carbon (cont.)

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
2-3. IMPLEMENT PRIORITY PROJECTS IDENTIFIED IN THE REGIONAL TRAILS MANAGEMENT PLAN TO SUPPORT ACTIVE TRANSPORTATION	 Complete	<ul style="list-style-type: none"> Developed and implemented an updated sign plan for the Galloping Goose and Lochside regional trails to provide easier wayfinding on the regional trails. 	
	 Complete	<ul style="list-style-type: none"> Assessed and developed regional sign standards for trail-road intersections given sightlines and rights of way at various types of trail-road crossings. 	
	 In progress	<ul style="list-style-type: none"> Completed planning and design for Phase 3 of the E&N Rail Trail in Langford. In 2020, complete construction. 	<ul style="list-style-type: none"> Funders: Bike BC \$1 million
	 In progress	<ul style="list-style-type: none"> Undertake the second stage of a regional trail widening or separation feasibility study on a portion of the Galloping Goose and Lochside Trails. The study will also consider the feasibility and costs to provide lighting along the sections of the regional trails within the project study area. 	
	 Planned	<ul style="list-style-type: none"> Port Renfrew Trail network - Phase 1 complete; Future phases dependent upon development. 	
	Ongoing	<ul style="list-style-type: none"> Continue to monitor external funding opportunities to support the Gulf Islands Regional Trails Plan project implementation, which will require significant external funding, and many years to complete. 	
2-4. IDENTIFY OPPORTUNITIES TO WORK WITH BC TRANSIT as they develop policies and plans for rapid transit, frequent transit and increased accessibility	 In progress	<ul style="list-style-type: none"> Provide modelling, data and planning support. 	<ul style="list-style-type: none"> BC Transit, partner municipalities and electoral areas
2-5. FACILITATE DELIVERY OF THE SALT SPRING ISLAND (SSI) COMMUNITY TRANSIT SERVICE AND IMPLEMENT MULTI-MODAL TRANSPORTATION PROJECTS, including recommendations from the Pedestrian and Cycling Master Plan: SSI Edition	 Complete	<ul style="list-style-type: none"> Explore construction of a family-style bike park, including an environmental assessment, other feasibility studies and community consultation. 	<ul style="list-style-type: none"> Salt Spring Bike Club Funders: Salt Spring Island Lions donated \$150,000
	 In progress	<ul style="list-style-type: none"> Completed an environmental assessment to inform trail design for a connector trail on land purchased for park purposes on Salt Spring Island. Construction is expected in 2020. 	
	 In progress	<ul style="list-style-type: none"> Transit Infrastructure Review: Review and plan with BC Transit priority infrastructure actions. In 2020, this work will be initiated. 	<ul style="list-style-type: none"> BC Transit






Goal 2 | Multi-modal transportation systems are low carbon (cont.)

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
2-5. FACILITATE DELIVERY OF THE SALT SPRING ISLAND (SSI) COMMUNITY TRANSIT SERVICE AND IMPLEMENT MULTI-MODAL TRANSPORTATION PROJECTS , including recommendations from the Pedestrian and Cycling Master Plan: SSI Edition (CONTINUED)	 In progress	<ul style="list-style-type: none"> Salt Spring Island Parks and Recreation Commission (PARC) is working with residents and trail enthusiasts to develop a plan for a connector trail for acquired lands off Starks Road on Salt Spring Island. An environmental assessment has been completed to inform trail design. In 2020, initiate construction. 	
2-6. SUPPORT ELECTRIC VEHICLE (EV) AND ELECTRIC BICYCLE (E-BIKE) ADOPTION AND INFRASTRUCTURE DEPLOYMENT (including battery plug-in and fuel cell EV infrastructure) in coordination with the Province, local governments and private sector	 Planned	<ul style="list-style-type: none"> In 2020, undertake a study to understand EV charging performance standards for local government bylaws. 	
	 Planned	<ul style="list-style-type: none"> In 2020, work with local governments, initiate a regional EV charging roadmap project. 	
	Ongoing	<ul style="list-style-type: none"> Participate in provincial local government EV network to support capacity building and information sharing. 	<ul style="list-style-type: none"> BC Hydro, local and regional governments
2-7. DEVELOP, DELIVER AND SUPPORT EDUCATION PROGRAMS AND INITIATIVES THAT ACHIEVE REDUCTIONS IN TRANSPORTATION-RELATED GHG EMISSIONS	 Complete	<ul style="list-style-type: none"> Developed a transportation engagement public display for CRD and partner use. 	
	 Planned	<ul style="list-style-type: none"> In 2020, support development and pilot of high school climate action program. 	<ul style="list-style-type: none"> BC Sustainable Energy Association
	 In progress	<ul style="list-style-type: none"> Supported delivery of Cool It! Climate Leadership workshops in 40 grade 4-5 classrooms throughout the capital region and provide tools for behaviour change. In 2020, support delivery. 	<ul style="list-style-type: none"> BC Sustainable Energy Association, District of Saanich, City of Victoria
	 In progress	<ul style="list-style-type: none"> Support maintenance, distribution and promotion of Climate Action To-Go Kits through local libraries. 	<ul style="list-style-type: none"> Greater Victoria Public Library (GVPL), Vancouver Island Regional Library (VIRL), Salt Spring Island (SSI) Public Library, Camosun College Library
	Ongoing	<ul style="list-style-type: none"> Coordinate annual Walk and Wheel to School Week. In 2019, 40 schools from 4 School Districts registered with more than 8,000 active trips to/from school reported. 	<ul style="list-style-type: none"> Island Health, CRD Traffic Safety Commission









Goal 2 | Multi-modal transportation systems are low carbon (cont.)

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
2-8. DEMONSTRATE LEADERSHIP BY IMPLEMENTING THE CCAS CORPORATE FLEET ACTIONS AND POLICY	Ongoing	<ul style="list-style-type: none">• See Appendix B	
PERFORMANCE INDICATORS			
<ul style="list-style-type: none">• Reductions in GHGe from personal vehicle transportation		<ul style="list-style-type: none">• Undertaking regional GHG inventory in 2020. Includes transportation emissions.	
<ul style="list-style-type: none">• Increase in active transportation infrastructure kilometres		<ul style="list-style-type: none">• Not currently available.	
<ul style="list-style-type: none">• Percentage of all trips made by walking, biking or transit		<ul style="list-style-type: none">• Not currently available.	
<ul style="list-style-type: none">• Total kilometers of the Regional trail network completed		<ul style="list-style-type: none">• 96 km (fifty-five km Galloping Goose; twenty-nine km Lochside; 12 km E&N)	





Goal 3 | Buildings are high-performing and low carbon

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
3-1. SUPPORT THE TRANSITION FROM OIL HEATING TO HIGH-EFFICIENCY, LOW-EMISSIONS HEATING SYSTEMS	 In progress	<ul style="list-style-type: none"> Coordinated CRD and local government top-up incentives to the provincial CleanBC Better Homes program offering incentives to switch from fossil fuel heating to electric heat pumps. 183 top-ups (153 oil, 25 natural gas, 5 propane) were accessed from September 2018 to December 31, 2019. In 2020, coordinate CRD and local government top-up fuel switching incentives. 	<ul style="list-style-type: none"> Government of Canada, Province of British Columbia, local governments, BC Hydro and FortisBC, District of Saanich, City of Victoria Funders: District of Saanich, City of Victoria
	 In progress	<ul style="list-style-type: none"> Continue to coordinate and develop promotional and display materials for local Better Homes top-up incentives for use by CRD and local governments. 	<ul style="list-style-type: none"> Government of Canada, Province of British Columbia, local governments, BC Hydro and FortisBC. Funders: District of Saanich, City of Victoria
	 In progress	<ul style="list-style-type: none"> Support development and implementation of FCM grant-funded Transition 2050: Residential Retrofit Acceleration Project; includes strategies, marketing, industry engagement and pilot projects. In 2020, support pilot project aimed at supporting 'agents of change' in neighbourhoods. Through facilitation support, energy audits and expert coaching, the pilot will be designed to overcome various barriers. 	<ul style="list-style-type: none"> City Green Solutions. Home Performance Stakeholder Council, Victoria, Saanich, Central Saanich, Esquimalt Funders: Federation of Canadian Municipalities
3-2. EDUCATE AND PROVIDE REGIONAL COORDINATION FOR NATIONAL AND PROVINCIAL INITIATIVES	Ongoing	<ul style="list-style-type: none"> Displayed and shared energy literacy materials for community displays; including a model house and building energy trivia with local governments. 	
	Ongoing	<ul style="list-style-type: none"> Supporting regional local governments in information sharing and coordination around BC Energy Step Code, EV charging policy and incentive programs. 	
3.2.1 Opt-in regulations (e.g., the Energy Step Code, a tiered energy-performance standard beyond Building Code)	Ongoing	<ul style="list-style-type: none"> Participating on the provincial local government step code peer network and share learnings with capital region local governments. 	<ul style="list-style-type: none"> Province of BC, Energy Step Code Council, Utilities, local governments
3.2.2 Energy literacy initiatives such as energy benchmarking and voluntary and mandatory energy-labeling programs for buildings	 In progress	<ul style="list-style-type: none"> Continue to circulate the building energy literacy materials and Climate Action To Go Kits. 	<ul style="list-style-type: none"> GVPL, VIRL, SSI Library, Camosun College Library, local governments
	 In progress	<ul style="list-style-type: none"> Coordinating partnerships for the provincial CleanBC Better Homes retrofit program rebate top-ups. In 2020, continue to coordinate partnerships for the provincial CleanBC Better Homes retrofit program rebate top-ups. 	<ul style="list-style-type: none"> Government of Canada, Province of British Columbia, local governments, BC Hydro and FortisBC Funders: District of Saanich, City of Victoria



Goal 3 | Buildings are high-performing and low carbon (cont.)

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
3.2.2 Energy literacy initiatives, such as energy benchmarking and voluntary and mandatory energy-labeling programs for buildings (CONTINUED)	 Planned	<ul style="list-style-type: none"> In 2020, undertake regional benchmarking opportunities study. 	
3-3. DEVELOP, DELIVER AND SUPPORT EDUCATIONAL PROGRAMS AND INITIATIVES that achieve reductions in building-related GHG emissions and water and energy use	 Complete	<ul style="list-style-type: none"> Completed the Hotel Water, Energy and GHG Savings program to provide free assistance to local businesses. Participants received free high-efficiency water fixtures and on-site education about further water and energy saving opportunities and rebate programs. To date, the program has resulted in 30,000 m³ water savings (potential for 64,000 m³), 103,000 kWh savings (potential for 195,000 kWh) and 2,300 GJ savings (with potential 3,250 GJ). 	
	 Complete	<ul style="list-style-type: none"> Continue to circulate the building energy literacy materials and Climate Action To Go Kits. 	<ul style="list-style-type: none"> Libraries in the region (GVPL, VIRL, SSI Library and Camosun College)
	 Complete	<ul style="list-style-type: none"> Delivered and staffed drinking water cart to 10 community events. 	
	 Complete	<ul style="list-style-type: none"> Fix a Leak Week campaign. 	
	 Complete	<ul style="list-style-type: none"> Delivered water conservation workshops and presentations (e.g., girl guides). 	
	 Planned	<ul style="list-style-type: none"> In 2020, develop new drinking water school education programming. 	<ul style="list-style-type: none"> District of Saanich, District of North Saanich
	 Planned	<ul style="list-style-type: none"> In 2020, offer the Water, Energy and GHG Savings program for another sector or sectors. 	
	Ongoing	<ul style="list-style-type: none"> Developing and delivering school programming related to water conservation and watershed protection (includes climate change impacts and adaptation). 	







Goal 3 | Buildings are high-performing and low carbon (cont.)

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
3-4. PROVIDE RESEARCH, DATA AND ANALYSIS TO LOCAL GOVERNMENTS AND INTERESTED FIRST NATION GOVERNMENTS on high-performing, resilient and low-carbon buildings	 Planned	<ul style="list-style-type: none"> In 2020, participate on inter-municipal project to understand the local government policy needs regarding high-performance buildings. 	
	Ongoing	<ul style="list-style-type: none"> Participated in the provincial local government step code peer network and share learnings with capital region local governments. In 2020, participate on the provincial local government step code peer network and share learnings with capital region local governments. 	<ul style="list-style-type: none"> BC Energy Step Code Council
3-5. SUPPORT AND DEVELOP PROGRAMS THAT INCREASE THE USE OF RENEWABLE ENERGY, GREEN INNOVATION AND SMART TECHNOLOGY in buildings	 In progress	<ul style="list-style-type: none"> See Action 3-1 (Clean BC Better Homes, EfficiencyBC and Oil to Heat Pump Program, Transition 2050) 	
	 In progress	<ul style="list-style-type: none"> Planning for The Summit at Quadra Village, a 320-unit residential care facility with environmentally sustainable building features. The Capital Regional Hospital District will design and build the Summit on behalf of Island Health. Full occupancy expected in 2020. 	
	 In progress	<ul style="list-style-type: none"> Implementation of The Summit at Quadra Village project. Construction includes many energy efficient measures with an anticipated savings of 632,680 kWh. 	
3-6. BUILD CAPACITY AMONG BUILDING OFFICIALS AND INDUSTRY IN THE REGION by:			
3-6-1. Sharing and promoting resources at monthly South Vancouver Island Building Officials meetings	Ongoing	<ul style="list-style-type: none"> Chair Chief Building Officials Association – review new policies 	






Goal 3 | Buildings are high-performing and low carbon (cont.)

RCAS Action	Status	2019/2020 Actions & Projects	External Partners
3-6-2. Supporting ongoing education of building officials and industry	 In progress	<ul style="list-style-type: none"> See Action 3-1 (Transition 2050) 	
	 In progress	<ul style="list-style-type: none"> See Action 3-1 (CleanBC Better Buildings & Homes) 	
	Ongoing	<ul style="list-style-type: none"> Share Energy Step Code information and related training opportunities. 	
3-7. DEMONSTRATE LEADERSHIP BY IMPLEMENTING THE CORPORATE CLIMATE ACTION STRATEGY POLICY AND ACTIONS related to existing and new corporate buildings	Ongoing	<ul style="list-style-type: none"> See Appendix B 	
PERFORMANCE INDICATOR			
<ul style="list-style-type: none"> Reductions in residential and commercial building GHGe and energy use 		<ul style="list-style-type: none"> Undertaking regional GHG inventory in 2020. Includes residential and commercial emissions. 	
<ul style="list-style-type: none"> Volume of water used in the Greater Victoria Water Supply Area 		<ul style="list-style-type: none"> 48.2 mm³ of drinking water was delivered through the regional water supply system. 	








Goal 4 | Natural assets are valued for reducing our contributions to climate change

RCAS Action	Status	2019/2020 Actions & Project Descriptions	External Partners
4-1. WORKING WITH PARTNERS, UPDATE THE REGIONAL INVENTORY OF LAND COVER	 Complete	<ul style="list-style-type: none"> Completed regional parks landscape evaluation analysis and public consultation. 	<ul style="list-style-type: none"> Local municipalities, Core, Saanich Peninsula, SGI, SSI, Juan de Fuca EA
	 In progress	<ul style="list-style-type: none"> Initiated a landscape evaluation analysis using best available data and techniques in support of park land acquisition, with consideration for climate change adaptation and mitigation. In 2020, complete analysis. 	
	 Planned	<ul style="list-style-type: none"> In 2020, update land cover data by watershed to show municipal and community change in forest cover and impervious surface. 	<ul style="list-style-type: none"> Habitat Acquisition Trust
	 Planned	<ul style="list-style-type: none"> In 2020, identification of ecosystem services from regional land cover. 	
4-2. COLLABORATE WITH LOCAL GOVERNMENTS AND INTERESTED FIRST NATIONS GOVERNMENTS TO DEVELOP AND IMPLEMENT A STRATEGY TO IMPROVE, INCREASE AREA OF, AND PROTECT RURAL, SUBURBAN AND URBAN TREE CANOPY AND ROOT SPACE	 In progress	<ul style="list-style-type: none"> Development of a new two-year Land Acquisition Strategy to replace the previous strategy, which concluded in 2019. 	
	 Planned	<ul style="list-style-type: none"> For 2020, see 4-1 (urban forest cover). 	
	Ongoing	<ul style="list-style-type: none"> Current regional park land base is more than 13,000 ha. This increases periodically as a result of land acquisitions supported by a dedicated levy on regional property tax assessments. Further acquisitions are anticipated. 	
4-3. CONSIDER CARBON SEQUESTRATION AND STORAGE IN ALL CRD LAND, MARINE MANAGEMENT, ASSET MANAGEMENT AND ACQUISITION DECISIONS to reduce community GHG emissions, in collaboration with stakeholders and First Nations governments	Ongoing	<ul style="list-style-type: none"> Consider carbon sequestration in all park land acquisition decisions. 	

Goal 4 | Natural assets are valued for reducing our contributions to climate change (cont.)

RCAS Action	Status	2019/2020 Actions & Project Descriptions	External Partners
4-3. CONSIDER CARBON SEQUESTRATION AND STORAGE IN ALL CRD LAND, MARINE MANAGEMENT, ASSET MANAGEMENT AND ACQUISITION DECISIONS to reduce community GHG emissions in collaboration with stakeholders and First Nations governments (<i>CONTINUED</i>)	 In progress	<ul style="list-style-type: none"> Development of a new two-year Land Acquisition Strategy to replace the previous strategy, which concluded in 2019. 	
	 Planned	<ul style="list-style-type: none"> In 2020, undertake collaborative research project: Balancing Forest, Wildfire and Carbon Management Strategies in a Changing Climate. 	<ul style="list-style-type: none"> University of Victoria; ESSA Technologies, Pacific Forestry Centre Funders: \$85,000 over 2020-2022
	 Planned	<ul style="list-style-type: none"> In 2020, Greater Victoria Water Supply Area (GVWSA) Land Acquisition Priorities to be developed and approved by the Regional Water Supply Commission. 	
	 Planned	<ul style="list-style-type: none"> In 2020, hire an intern to initiate regional forest carbon sequestration study. 	<ul style="list-style-type: none"> Funders: Pacific Institute for Climate Solutions
4-4. DEVELOP A SILVICULTURE WORKING GROUP FOR THE JUAN DE FUCA ELECTORAL AREA in collaboration with landowners	 Planned	<ul style="list-style-type: none"> Timing unknown. 	
PERFORMANCE INDICATORS			
<ul style="list-style-type: none"> Completion of the regional inventory of land cover 		<ul style="list-style-type: none"> Planned for 2020. 	
<ul style="list-style-type: none"> Number of hectares of protected areas, forest land tree cover 		<ul style="list-style-type: none"> 150 hectares of protected areas acquired. 	




Goal 5 | Waste generation is minimized and remaining waste is transformed into a resource

RCAS Action	Status	Action / Project Description	External Partners
5-1. MINIMIZE COMMUNITY GHG EMISSIONS BY COMPLETING THE CRD INTEGRATED SOLID WASTE AND RESOURCE MANAGEMENT PLAN	 In progress	<ul style="list-style-type: none"> Develop a Solid Waste Management Plan. 	
5-2. WORK WITH LOCAL GOVERNMENTS TO PLAN WASTE REDUCTION STRATEGIES BASED ON WASTE COMPOSITION STUDY RESULTS	 Complete	<ul style="list-style-type: none"> Coordinated a waste summit and direct outreach to First Nations around waste management. 	
	 In progress	<ul style="list-style-type: none"> Develop a Solid Waste Management Plan. 	
5-3. DEVELOP AND DELIVER PROGRAMS TO PROMOTE THE 3Rs (reduce, reuse, recycle) and ZERO WASTE APPROACHES to reduce the amount of community solid waste (e.g., food preservation)	 Complete	<ul style="list-style-type: none"> Piloted a family workshop and tour. 	
	 Complete	<ul style="list-style-type: none"> Develop new school programming. 	
	 In progress	<ul style="list-style-type: none"> Love Food Hate Waste education and awareness campaign. 	<ul style="list-style-type: none"> Zero Waste Council; Metro Vancouver
	 Planned	<ul style="list-style-type: none"> In 2020, deliver family workshops and tours. 	
	Ongoing	<ul style="list-style-type: none"> Deliver and staff drinking water cart to community events. 	
	Ongoing	<ul style="list-style-type: none"> Maintaining and promoting use of MyRecyclopedia online diversion directory. 	
	Ongoing	<ul style="list-style-type: none"> Support curbside recycling education (e.g., subscription for service reminders and updates, seasonal diversion, "extra material", warm weather tips education. 	
	Ongoing	<ul style="list-style-type: none"> Offer general public landfill tours. 	
	Ongoing	<ul style="list-style-type: none"> Offer the InfoLine service, which responds to waste reduction, waste management and general Hartland Landfill inquiries. 	






Goal 5 | Waste generation is minimized and remaining waste is transformed into a resource (cont.)

RCAS Action	Status	Action / Project Description	External Partners
5-3. DEVELOP AND DELIVER PROGRAMS TO PROMOTE THE 3Rs (reduce, reuse, recycle) and ZERO WASTE APPROACHES to reduce the amount of community solid waste (e.g., food preservation) (<i>CONTINUED</i>)	Ongoing	<ul style="list-style-type: none"> Under contract with the CRD, the Compost Education Centre (CEC) offers presentations, workshops, and educational demonstrations both at our demonstration gardens and out in the community. CEC also engages with volunteers, publishes a monthly e-newsletter and fact sheets on a range of related topics, and maintains the CEC Hotline and website. <p>For more information, see the CRD's Environmental Resource Management 2019 Progress Report.</p>	
	Ongoing	<ul style="list-style-type: none"> Maintain the MyRecyclopedia tool developed to encourage sustainable practices and to reinforce the 3Rs of reduce, reuse and recycle. Items listed received 257,682 web visits in 2019. 	
	Ongoing	<ul style="list-style-type: none"> 10 organizations participated in the diversion funding program. 	
	Ongoing	<ul style="list-style-type: none"> Partners with five non-profit organizations for the management of donated items received in the Hartland depot. 	
	Ongoing	<ul style="list-style-type: none"> Manage the Hartland Public Drop Off Depot, accepting over 80 items from 28 product categories for recycling. 	
	Ongoing	<ul style="list-style-type: none"> In 2019, under agreement with Recycle BC, the CRD provided 123,629 single family dwellings with curbside recycling service for packaging and paper products. Since the program's inception in 1989, over 468,000 tonnes of recyclables have been collected. 	
	Ongoing	<ul style="list-style-type: none"> Residents on Salt Spring Island and the Southern Gulf Islands are provided recycling services through drop-off programs set up at depots in their communities. The CRD, under agreement with Recycle BC, partners with local non-profit associations for recycling services for packaging and paper products at these depots. 	
	Ongoing	<ul style="list-style-type: none"> Under a local service funded by the community of Port Renfrew, residents and businesses access a transfer station for drop off of general refuse, kitchen scraps and recycling. 	
	Ongoing	<ul style="list-style-type: none"> Supported industry-led product stewardship. Continued to have one of the highest medication return rates per capita amongst regional districts in the province and a total of 15,269 tonnes of Paper and Plastic Packaging was collected through CRD programs. 	
	Ongoing	<ul style="list-style-type: none"> Over 1,142 tonnes of source-separated yard and garden material was received at Hartland where it was processed and used on-site. 	











Goal 5 | Waste generation is minimized and remaining waste is transformed into a resource (cont.)

RCAS Action	Status	Action / Project Description	External Partners
5-4. PROMOTE ORGANIC MATERIAL DIVERSION (kitchen scraps, yard and garden waste) and facilitate the responsible recovery of resources locally	 Complete	<ul style="list-style-type: none"> Hosted Regional Invasive Species Symposium to discuss proper disposal of invasives. 	<ul style="list-style-type: none"> Local governments and Capital Region Invasive Species Partnership
	 Complete	<ul style="list-style-type: none"> Promoted Love Food Hate Waste at community recreation centre. 	
	 In progress	<ul style="list-style-type: none"> Investigated mobile incineration unit for disposal for select invasives. In 2020, continue to investigate mobile incineration unit for disposal for select invasives 	
	Ongoing	<ul style="list-style-type: none"> Support Greater Victoria Compost Education Centre to develop and deliver programs and workshops. 	<ul style="list-style-type: none"> Greater Victoria Compost Education Centre
	Ongoing	<ul style="list-style-type: none"> Deliver 3R school programs, school and community group tours, youth summer programs, presentations and workshops. 	<ul style="list-style-type: none"> School districts, schools
	Ongoing	<ul style="list-style-type: none"> Under contract with the CRD, the Compost Education Centre (CEC) offers presentations, workshops, and educational demonstrations both at our demonstration gardens and out in the community. CEC also engages with volunteers, publishes a monthly e-newsletter and fact sheets on a range of related topics, and maintains the CEC Hotline and website. For more information, see the CRD's Environmental Resource Management 2019 Progress Report. 	
	Ongoing	<ul style="list-style-type: none"> Deliver 3R school programs, school and community group tours, youth summer programs, presentations and workshops. In 2020, continue to deliver the above activities. 	<ul style="list-style-type: none"> School districts, schools
	Ongoing	<ul style="list-style-type: none"> Staff booth at 30 communities events including kitchen scraps initiative information. 	








Goal 5 | Waste generation is minimized and remaining waste is transformed into a resource (cont.)

RCAS Action	Status	Action / Project Description	External Partners
5-5. IDENTIFY AND EVALUATE ADDITIONAL OPPORTUNITIES TO OPTIMIZE LANDFILL GAS RECOVERY and energy production from organic waste	 Complete	<ul style="list-style-type: none"> One-year speciation project in support of landfill gas project. 	
	 Complete	<ul style="list-style-type: none"> Present landfill gas utilization business plan to Environmental Services Committee. 	
	 Planned	<ul style="list-style-type: none"> In 2020, monthly speciation will support landfill gas utilization and operations. 	
	 Planned	<ul style="list-style-type: none"> In 2020, update landfill gas quantification of fugitive emissions (wet and dry season). 	
	Ongoing	<ul style="list-style-type: none"> Annual installation of landfill gas collection infrastructure. (2019 collection rate at 66% efficiency). 	
PERFORMANCE INDICATORS			
<ul style="list-style-type: none"> Completion of the CRD Integrated Solid Waste and Resource Management Plan 	 In progress		
<ul style="list-style-type: none"> Percentage of methane gas captured at Hartland landfill 		<ul style="list-style-type: none"> 66% percentage of methane gas captured at Hartland landfill. 	
<ul style="list-style-type: none"> Per capita waste disposal rate 		<ul style="list-style-type: none"> 380 kg/per capita waste disposal rate. 	


Goal 6 | Regional vulnerabilities to the impacts of climate change are understood

RCAS Action	Status	Action / Project Description	External Partners
6-1. CONTINUE AND EXPAND DATA COLLECTION AND MAPPING EFFORTS TO IDENTIFY VULNERABILITIES TO THE IMPACTS OF CLIMATE CHANGE AND ACQUIRE RESOURCES to help prepare for a changing climate (e.g., Light Detection and Ranging data)	 Complete	<ul style="list-style-type: none"> Installation of leachate monitors to assess capture efficiency in real time is complete. Project considered climate impact of climate projections, in particular precipitation. Monitoring is ongoing. 	
	 Complete	<ul style="list-style-type: none"> Master Filling Plan - Landfill engineering phasing design for 2020 that includes current projections (e.g., leachate and landfill gas collection). 	<ul style="list-style-type: none"> Work completed by National Resources Canada - Canadian Forest Service - Pacific Forestry Centre
	 Complete	<ul style="list-style-type: none"> New Greater Victoria Water Supply (GVWSA) wildfire risk modelling. 	<ul style="list-style-type: none"> Work completed by National Resources Canada - Canadian Forest Service - Pacific Forestry Centre Funding: \$22,000
	 Complete	<ul style="list-style-type: none"> Leech and Cragg River Slope and Channel Stability Assessment. 	
	 Complete	<ul style="list-style-type: none"> Goldstream River Bridge Replacement. 	
	 Complete	<ul style="list-style-type: none"> Leech River Bridge Replacement. 	
	 Complete	<ul style="list-style-type: none"> GVWSA Forest Fuel Management - Fuel Break. 	
	 In progress	<ul style="list-style-type: none"> Undertook a pilot project to determine a methodology of the Harbours Inventory and Atlas. In 2020, complete project. 	<ul style="list-style-type: none"> CRD Climate Action Inter-Municipal Working Group, CRD Local Government Emergency Programs Advisory Committee
	 In progress	<ul style="list-style-type: none"> GVWSA Watershed Assessment. 	
	 In progress	<ul style="list-style-type: none"> GVWSA installation of long-range wildfire detection infrared camera. 	

Goal 6 | Regional vulnerabilities to the impacts of climate change are understood (cont.)

RCAS Action	Status	Action / Project Description	External Partners
6-1. CONTINUE AND EXPAND DATA COLLECTION AND MAPPING EFFORTS TO IDENTIFY VULNERABILITIES TO THE IMPACTS OF CLIMATE CHANGE AND ACQUIRE RESOURCES to help prepare for a changing climate (e.g., Light Detection and Ranging data) (<i>CONTINUED</i>)	 In progress	<ul style="list-style-type: none"> Undertake GVWSA post wildfire debris flow modelling. In 2020, purchase post wildfire debris flow mitigation supplies. 	
	 In progress	<ul style="list-style-type: none"> Initiate the Capital Region Coastal Flood Inundation Mapping Project to model and map various scenarios related to sea level rise and tsunamis. In 2020, complete project and share results with local governments, First Nations and other partners. 	<ul style="list-style-type: none"> Inter-Municipal Climate Action Working Group, Local Government Emergency Managers Advisory Committee Funders: Province of BC, Government of Canada (National Disaster Mitigation Fund)
	Ongoing	<ul style="list-style-type: none"> Continue orthophoto project (every two years). Increased resolution and elevation information for Juan de Fuca. 	
	Ongoing	<ul style="list-style-type: none"> Capture of past and ongoing snow coverage data for the GVWSA from satellite imagery. 	
	Ongoing	<ul style="list-style-type: none"> Survey of GVWSA tree damage from forest insects, diseases and climate. 	
6-2. CONDUCT REGION-WIDE CLIMATE RISK AND VULNERABILITY ASSESSMENTS FOR NATURAL AND SOCIAL IMPACTS (e.g., ecosystem shifts, invasive species, drought, disease) every five years, or sooner, as new information (e.g., climate projects) becomes available, in partnership with local governments and interested First Nations governments	 Complete	<ul style="list-style-type: none"> Implemented rapid response program for priority invasive species and create alert sheets for public education. 	
	 In progress	<ul style="list-style-type: none"> Bowker Creek Daylighting Feasibility Study. In 2020, complete final report. 	<ul style="list-style-type: none"> Victoria, Saanich, Oak Bay
	 In progress	<ul style="list-style-type: none"> Work with municipalities to create a municipal toolkit (e.g., OCPs, bylaws) to operationalize improved hydrological function and greenways. 	
	 In progress	<ul style="list-style-type: none"> Undertake collaborative research project - an Assessment of the Effects of Major Wildfires in the Past on Forests in the Sooke WSA and Water Quality in Sooke Lake Reservoir. 	<ul style="list-style-type: none"> Canadian Forest Service, University of Victoria Funding: \$63,000
	 In progress	<ul style="list-style-type: none"> Partner in the forWater Research Network investigating/trialing forest management solutions to adapt to climate change with the aim of maintaining long-term source water quality. 	<ul style="list-style-type: none"> forWater research Network - University of Waterloo, University of Alberta, Halifax Water, Epcor, etc. Funding: \$25,000 for five years

Goal 6 | Regional vulnerabilities to the impacts of climate change are understood (cont.)

RCAS Action	Status	Action / Project Description	External Partners
6-2. CONDUCT REGION-WIDE CLIMATE RISK AND VULNERABILITY ASSESSMENTS FOR NATURAL AND SOCIAL IMPACTS (e.g., ecosystem shifts, invasive species, drought, disease) every five years, or sooner, as new information (e.g., climate projects) becomes available, in partnership with local governments and interested First Nations governments (<i>CONTINUED</i>)	 In progress	<ul style="list-style-type: none"> Using mapping of ecosystems, forest characteristics, and invasive species to identify potential vulnerabilities and identify risk to the projected effects of climate change on the Greater Victoria Water Supply Area (GVWSA) and associated functions. <p>Expanding the monitoring network for weather and stream flow in the GVWSA to better understand watershed hydrology in the GVWSA and the potential effects of projected changes to climate. Conducting a review of how the latest climate change projections for the CRD relate to the records of climate for the water supply area over the past 100 years. Identifying needs for additional information to better understand the effects of climate change on the GVWSA.</p> <ul style="list-style-type: none"> In 2020, continue study. 	
		Ongoing <ul style="list-style-type: none"> Supported GreenShores presentations and workshops (2x level 1; 1x level 2). In 2020, extend participation of working group for another two-years. 	<ul style="list-style-type: none"> Core local governments
		Ongoing <ul style="list-style-type: none"> Coordinate the Regional Outcomes Monitoring Group (operates as a Community Health Network for the CRD). Collect and share data and indicators around the social determinants of health. Identified Healthy Safe Environments as a priority goal in 2019. Develop and host educational workshops around the social determinants of health and their impact on policy planning and program development. In 2020, continue coordination. 	<ul style="list-style-type: none"> Island Health, Greater Victoria Public Library, Inter-Cultural Association, Community Social Planning Council, Capital Region Food and Agriculture Initiatives Roundtable, United Way of Greater Victoria, University of Greater Victoria, Children's Health Foundation of Vancouver Island
6-3. CONVENE APPROPRIATE PARTNERS TO IDENTIFY AND FILL GAPS IN MARINE MONITORING PROGRAMS , to determine whether changes in the marine environment are related to climate impacts and advocate for the coordination of marine science data collection and research in region by the federal government	Ongoing	<ul style="list-style-type: none"> Ongoing seafloor monitoring. Stations should provide enhanced spatial coverage to detect any climate or broader environmental changes relative to our outfall impacts. 	
	Ongoing	<ul style="list-style-type: none"> Continue to standardize monitoring methods to those used by other agencies such as PollutionTracker, Washington State Department of Ecology, etc. This standardization allows cross-jurisdictional comparison of results, thereby also ensuring a broader spatial coverage to detect environmental change. 	
	Ongoing	<ul style="list-style-type: none"> Monitoring program staff maintain connections with local academics and federal researchers to keep abreast of others' research into this topic. Staff attend relevant conferences, seminars, etc. to learn about what others are detecting within the Salish Sea. 	<ul style="list-style-type: none"> Local academics and federal researchers

Goal 6 | Regional vulnerabilities to the impacts of climate change are understood (cont.)

RCAS Action	Status	Action / Project Description	External Partners
6-4. SHARE WITH STAKEHOLDERS AND FIRST NATIONS GOVERNMENTS, AND FACILITATE THE UPDATING OF REGIONAL CLIMATE PROJECTIONS, as the latest climate data becomes available	 In progress	<ul style="list-style-type: none"> Continue Elk/Beaver Lake sampling and surveying. Part of the Elk/Beaver Initiative. 	
	 In progress	<ul style="list-style-type: none"> Completed public engagement related to the Elk/Beaver Lake Watershed Management Plan. Communications and collaboration with local interest groups, lake users and stakeholders are ongoing. In 2020, staff will compile and review feedback and finalize the plan. 	<ul style="list-style-type: none"> The Province of BC, Island Health, District of Saanich
	 In progress	<ul style="list-style-type: none"> See Goal 6-1 (Coastal Flood Mapping Project). 	
	Ongoing	<ul style="list-style-type: none"> Collect king tide information with all initiatives (pictures including Portage, Gorge, Esquimalt Lagoon and Victoria harbour). 	
6-5. COMPILE RESEARCH ON ECOSYSTEM SHIFTS TO INCLUDE IN NATURAL AREA AND WATERSHED MANAGEMENT PLANNING for stakeholders, and interested First Nations (e.g., watershed report cards)	 In progress	<ul style="list-style-type: none"> Long-term forest monitoring plots, as well as hydrological-meteorological stations, aim to capture climate and ecosystem changes in the GVWSA. For 2020, continue partnership in the Climate Related Monitoring Program. 	<ul style="list-style-type: none"> Province of BC, BC Hydro, RioTinto, MetroVan and others
6-6. COLLABORATE WITH LOCAL GOVERNMENTS, AND INTERESTED FIRST NATIONS GOVERNMENTS, TO INCLUDE REGIONAL CLIMATE CHANGE PROJECTIONS IN INFRASTRUCTURE PLANNING STANDARDS (e.g., revise design storms, Intensity Duration Frequency curves)		<ul style="list-style-type: none"> No actions reported 	
6-7. INCLUDE REGIONAL CLIMATE CHANGE PROJECTIONS IN HAZARD, RISK AND VULNERABILITY ASSESSMENTS for the three Electoral Areas' Emergency Operations Work Plans and share regional climate change projections with local authorities' emergency programs	 In progress	<ul style="list-style-type: none"> Applied for grant funds to support wildfire education and equipment procurement to assist electoral areas responding to wildfires. Project delivery planned for 2020. 	<ul style="list-style-type: none"> Electoral areas' volunteer fire departments, North Galiano, Otter Point, Shirley and Port Renfrew Funding: \$117,000
	 In progress	<ul style="list-style-type: none"> Received Community Resilience grant funds to build electoral area resiliency to wildfires. Project delivery, including assessment, fuel treatment and demonstration sites planned for 2020. 	<ul style="list-style-type: none"> Government of Canada, Salt Spring Island, Pender Island, Juan de Fuca emergency program, Saturna FireSmart Funding: \$100,000

Goal 6 | Regional vulnerabilities to the impacts of climate change are understood (cont.)






RCAS Action	Status	Action / Project Description	External Partners
6-7. INCLUDE REGIONAL CLIMATE CHANGE PROJECTIONS IN HAZARD, RISK AND VULNERABILITY ASSESSMENTS for the three Electoral Areas' Emergency Operations Work Plans and share regional climate change projections with local authorities' emergency programs	 In progress	<ul style="list-style-type: none"> Applied for Community Resilience Fund to build regional and Galiano's ability to prevent and respond to wildfire. Project delivery planned for 2020-2021. 	<ul style="list-style-type: none"> Government of Canada, Galiano Electoral Area Funding: \$84,000
	Ongoing	<ul style="list-style-type: none"> Collaboration with Community Wildfire Working Group & Juan de Fuca. 	<ul style="list-style-type: none"> BC Wildfire; Parks Canada, local governments and electoral areas
6-8. DEMONSTRATE LEADERSHIP BY DEVELOPING A CORPORATE CLIMATE CHANGE ADAPTATION PLAN	 In progress	<ul style="list-style-type: none"> See Appendix B. 	

PERFORMANCE INDICATORS	
<ul style="list-style-type: none"> Number of stakeholders and residents engaged through educational programming and outreach 	<ul style="list-style-type: none"> Parks & Environmental Services: more than 35,000 residents.
<ul style="list-style-type: none"> Completion of the Climate Projections for the Capital Region report and integration of the results into CRD plans, strategies and processes 	<ul style="list-style-type: none"> Study complete in 2017. Ongoing integration.
<ul style="list-style-type: none"> Completion of an updated list of Species at Risk and critical habitats in regional parks 	<ul style="list-style-type: none"> Critical Habitat and species at risk data sharing agreements were updated in 2019. Others planned for 2020.
<ul style="list-style-type: none"> Updated habitat survey for core area harbours 	<ul style="list-style-type: none"> 2019 - completed pilot to assess methodology. 2020-2021 - update habitat survey.
<ul style="list-style-type: none"> Number of streams with water quality and flow monitoring stations 	<ul style="list-style-type: none"> 10 (including hydrometric).


Goal 7 | Communities are prepared for, and resilient to, the impacts of climate change

RCAS Action	Status	Action / Project Description	External Partners
7-1. COLLABORATE AND COORDINATE WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS GOVERNMENTS TO INCLUDE CLIMATE CHANGE PROJECTIONS AND RISKS IN STRATEGIES, PLANS AND POLICIES	 In progress	<ul style="list-style-type: none"> Participate in the ICLEI Canada Together for Climate initiative. 	<ul style="list-style-type: none"> ICLEI Canada Funders: Real Estate Foundation of BC (via ICLEI)
	 In progress	<ul style="list-style-type: none"> Support Vancouver Island Agricultural Climate Adaptation Strategy. In 2020, complete the strategy. 	<ul style="list-style-type: none"> BC Agriculture & Food Climate Action Initiative, Province of BC, other Vancouver Island regional districts
	 Planned	<ul style="list-style-type: none"> In 2020, work to support TETÁĆES Gulf Islands Climate Action and Education Project. 	<ul style="list-style-type: none"> W̱SÁNEĆ Nations
7-2. WORK WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS GOVERNMENTS ON AN INTEGRATED WATERSHED MANAGEMENT APPROACH TO ADAPT TO CHANGES in flows, groundwater storage and other stressors due to climate change	 Complete	<ul style="list-style-type: none"> Launched the Green Stormwater Infrastructure Common Design Guidelines. 	
	 Complete	<ul style="list-style-type: none"> Completed daylighting Bowker Creek Project Request for Proposal and implementation. 	<ul style="list-style-type: none"> Province of BC, Victoria, Saanich, Oak Bay, Bowker Creek Initiative
	Ongoing	<ul style="list-style-type: none"> Climate adaptation strategies and actions are being incorporated into Watershed Protection programs, projects and activities within the GVWSA. A watershed-based approach is being taken for the assessment of vulnerability and adaptation to climate change. 	<ul style="list-style-type: none"> Federal and provincial agencies and other large water supply utilities in the Pacific Northwest
7-3. WORK WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS GOVERNMENTS TO ADDRESS THE CAPACITY OF WASTEWATER TRANSMISSION AND TREATMENT SYSTEMS to manage and minimize elevated flows as a result of increased inflow and infiltration due to climate change-induced storms	Ongoing	<ul style="list-style-type: none"> In 2019, focused education on basement flooding prevention and supported a pilot to identify root causes of inflow and infiltration in Oak Bay. In 2020, plan to support customized inflow and infiltration pilot projects in Esquimalt and Victoria. 	<ul style="list-style-type: none"> Local governments in the capital region, including District of Oak Bay, City of Victoria and Township of Esquimalt
7-4. INCORPORATE CLIMATE-RELATED DISASTER PLANNING AND COMMUNICATIONS INTO PUBLIC OUTREACH ACTIVITIES	 In progress	<ul style="list-style-type: none"> Received grant funds to pursue FireSmart activities. 	<ul style="list-style-type: none"> Federation of Canadian Municipalities Funding: \$50,000
	Ongoing	<ul style="list-style-type: none"> Maintain and promote PrepareYourself.ca. 	







Goal 7 | Communities are prepared for, and resilient to, the impacts of climate change

RCAS Action	Status	Action / Project Description	External Partners
7-5. WORK WITH THE PROVINCE AND THE REGIONAL EMERGENCY MANAGEMENT PARTNERSHIP TO REDUCE THE RISK OF INTERFACE FOREST FIRES	 In progress	<ul style="list-style-type: none"> Applied for Community Resilience Fund to build regional and Galiano's ability to prevent and respond to wildfire. Project delivery planned for 2020-2021. 	<ul style="list-style-type: none"> Government of Canada, Galiano Electoral Area Funding: \$84,000
	Ongoing	<ul style="list-style-type: none"> Collaboration with Community Wildfire Working Group & Juan de Fuca. Meetings include climate lens. 	<ul style="list-style-type: none"> BC Wildfire; Parks Canada, local governments and electoral areas
	Ongoing	<ul style="list-style-type: none"> Maintain and promote PrepareYourself.ca. 	
7-6. INTEGRATE AVAILABLE INFORMATION ON CLIMATE CHANGE RISKS AND VULNERABILITIES INTO JUAN DE FUCA ELECTORAL AREA OCP development and educate residents on how to avoid or reduce damage and personal injury from storms and flooding (e.g., preparing buildings)	 Planned	<ul style="list-style-type: none"> Timing to be determined. 	
7-7. DEVELOP, DELIVER AND SUPPORT EDUCATIONAL PROGRAMS AND INITIATIVES THAT PROMOTE LOCAL FOOD SYSTEMS	 In progress	<ul style="list-style-type: none"> Develop a feasibility study for a regional foodlands trust. 	<ul style="list-style-type: none"> Municipalities, Juan de Fuca electoral area, Regional Food Agriculture Task Force
	 Planned	<ul style="list-style-type: none"> In 2020, support planning for Indigenous Foods Conference. 	
	 Planned	<ul style="list-style-type: none"> In 2020, present chemical analysis of seaweed harvest sites data to First Nations to interpret information as it applies to food security. 	<ul style="list-style-type: none"> Washington, Mainland BC and Vancouver Island
	Ongoing	<ul style="list-style-type: none"> Implement the regional food and agriculture strategy through the regional food and agriculture task force. 	<ul style="list-style-type: none"> Regional Food Agriculture Task Force

Goal 7 | Communities are prepared for, and resilient to, the impacts of climate change (cont.)

RCAS Action	Status	Action / Project Description	External Partners
PERFORMANCE INDICATORS			
<ul style="list-style-type: none"> Completion of Green Infrastructure Common Design Guidelines 	 Complete		
<ul style="list-style-type: none"> Incorporation of climate adaptation into emergency preparedness 	In progress		
<ul style="list-style-type: none"> Number of partnerships focused on local food education 		<ul style="list-style-type: none"> None reported. 	
<ul style="list-style-type: none"> Number of high priority stormwater discharges 		<ul style="list-style-type: none"> 50 wet weather related sewer volume permit exceedance events 	
<ul style="list-style-type: none"> Number of shoreline closure days and locations 		<ul style="list-style-type: none"> 37 closure days (combined from four locations). 	
<ul style="list-style-type: none"> Length of staged water restrictions 		<ul style="list-style-type: none"> May 1- Sept 30 (CRD Stage 1). 	



Goal 8 | Natural assets are resilient to the impacts of climate change

RCAS Action	Status	Action / Project Description	External Partners
8-1. DEVELOP A REGIONAL BIODIVERSITY STRATEGY WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS that includes a species inventory, planting guidelines and planning for natural areas. The Strategy should reflect regional climate change projections and adaptation priorities (e.g., sea level rise, flood inundation) and advocate to senior levels of government to protect biodiversity	 In progress	<ul style="list-style-type: none"> GVWSA Species-at-Risk Wildlife Habitat 	
8-2. FOSTER THE REGION'S NATURAL AREAS RESILIENCY TO CLIMATE-INDUCED CHANGE (e.g., sea level rise, flood inundation) in collaboration with stakeholders and interested First Nations	 Complete	<ul style="list-style-type: none"> Incorporated watershed warden activities into existing school programs. 	
	 Complete	<ul style="list-style-type: none"> Include invasive plant education in community event outreach, workshops and static displays. 	
	 In progress	<ul style="list-style-type: none"> See 6-1 (Coastal Flood Mapping Project). 	
	 Planned	<ul style="list-style-type: none"> In 2020, support SNIDÇEŁ resiliency project at Tod Inlet, removing invasive species and building local connections. 	<ul style="list-style-type: none"> SNIDÇEŁ
8-3. INCLUDE THE VALUE OF NATURAL AREAS IN REGIONAL CLIMATE ADAPTATION IN ALL CRD LAND MARINE MANAGEMENT, ASSET MANAGEMENT AND ACQUISITION DECISIONS , and work collaboratively with stakeholders and interested First Nations	 In progress	<ul style="list-style-type: none"> Distribute Watershed Warden badges to youth who participated in watershed stewardship actions including beach clean-ups, learning about local watershed and benefits of source control, creek restoration and marking stormdrains. 	
		<ul style="list-style-type: none"> As part of the Summit at Quadra Village project, allocated a significant area for urban allotment gardens. In 2020, prepare the space for a community-based association to operate and develop gardens. 	
8-4. ADVOCATE FOR INCREASED GROUNDWATER PROTECTION		<ul style="list-style-type: none"> No actions reported. (See past annual reports.) 	

Goal 8 | Natural assets are resilient to the impacts of climate change (cont.)

RCAS Action	Status	Action / Project Description	External Partners
8-5. CONTINUE TO USE ENVIRONMENTAL DEVELOPMENT PERMIT AREAS, COVENANTS and other mechanisms to improve the resiliency of shoreline and marine habitats in the Juan de Fuca electoral area		<ul style="list-style-type: none"> No actions reported. (See past annual reports.) 	
PERFORMANCE INDICATORS			
<ul style="list-style-type: none"> Completion of a regional biodiversity strategy 		<ul style="list-style-type: none"> Not complete. 	
<ul style="list-style-type: none"> Percentage change in the amount of tree canopy cover 		<ul style="list-style-type: none"> Data unavailable. 	
<ul style="list-style-type: none"> Watershed evaluations that incorporate environmental and hydrological monitoring 		<ul style="list-style-type: none"> Evaluated water quality extensively in three watersheds. Hydrological monitoring in six watersheds. Water quality and hydrological monitoring in one watershed. Also evaluated bacterial measurements of approximately 500 discharge points, of which 50 were creeks. 	<ul style="list-style-type: none"> Sooke municipal staff, Environmental Monitoring Programs
<ul style="list-style-type: none"> Number of volunteer hours leveraged in restoration or stewardship activities 		<ul style="list-style-type: none"> CRD Parks - 1,877 hours by 352 volunteers. CRD Environmental Protection - 1,150 hours per year 	


Additional | Regional climate action

RCAS Action	Status	Action / Project Description	External Partners
A-1. FACILITATE REGIONAL CLIMATE ACTION EFFORTS AND SHARE INFORMATION ON THE BROAD RANGE OF CLIMATE ACTION TOPICS	 Complete	<ul style="list-style-type: none"> Developed an advocacy strategy. 	
	 In progress	<ul style="list-style-type: none"> Successfully awarded BC Hydro Community Energy Manager Staff Support grant. Increased its staff capacity by one FTE for a two-year term to support its community energy and emissions portfolio. Increased the climate action service requisition by \$95,000 for two years to accommodate the new position and key projects. 	<ul style="list-style-type: none"> BC Hydro Funding: \$50,000 per year for two years
	Ongoing	<ul style="list-style-type: none"> Continue to administer the CRD Climate Action Inter-Municipal Working Group (staff) and Task Force (elected officials). In 2019, increased frequency of Task Force meetings to quarterly. 	<ul style="list-style-type: none"> Municipalities and electoral area
	Ongoing	<ul style="list-style-type: none"> Continue to develop and distribute a monthly climate action e-newsletter to local governments. 	
	Ongoing	<ul style="list-style-type: none"> Developed new collaboration websites to support ongoing coordination and communication for members of the inter-municipal committees. 	
	Ongoing	<ul style="list-style-type: none"> Host the Resilient Region Exchange Breakfast designed to bring together regional stakeholders working on climate and sustainability issues in the region. In 2020, review the Resilient Region Exchange Series model. 	
	Ongoing	<ul style="list-style-type: none"> Added climate action initiatives to the CRD Chief Administrative Officer quarterly updates. 	

Appendix B







Goal 1 | Climate lens

Use a Climate Lens for Board decision-making that demonstrates how decisions align with the CRD's greenhouse gas reduction target, climate action objectives and strategic priorities

Action	Timing	Status	Action / Project Description
1-1. IMPLEMENT THE CLIMATE LENS TEMPLATE TO PROVIDE A CLIMATE LENS REVIEW ON CAPITAL PROJECTS	2017	 Complete	<ul style="list-style-type: none">The CRD has implemented a climate lens on all capital projects greater than \$100,000 in value, and all capital projects 'in scope' for GHG reporting. The climate lens review is conducted during the capital budgeting and planning cycle, and elected officials are provided ongoing updates on CRD's climate policy and Corporate Climate Action Strategy during the annual Climate Action Revenue Incentive Program reporting. Where appropriate, climate lens implications are incorporated into staff reports to the CRD Board and Committees.
1-2. PROVIDE MEMBERSHIP OF ALL COMMITTEES AND COMMISSIONS WITH AN ORIENTATION TO THE CRD'S CORPORATE CLIMATE POLICY AT THE START OF EACH NEW SESSION	Each new session	Ongoing	
1-3. INCLUDE CLIMATE LENS CONSIDERATIONS WITHIN STAFF REPORTS TO THE CRD BOARD AND COMMITTEES	Ongoing	Ongoing	





Goal 2 | Management & operational decision-making

Integrate climate change considerations into CRD management and operational decision-making

Action	Timing	Status	Action / Project Description
2-1. INCORPORATE CLIMATE CHANGE CONSIDERATIONS INTO BUDGET PLANNING CYCLE	<i>Annually with service planning</i>	Ongoing	<ul style="list-style-type: none"> The CRD continues to integrate climate change considerations into CRD management and operational decision-making. The CRD Corporate Asset Management Policy and Strategy, endorsed by the CRD Board in spring 2019, incorporates a climate change lens to ensure the CRD's climate policies are considered throughout the asset's lifecycle (ongoing operations and maintenance, and at the time of asset renewal and replacement). In 2019, the asset management strategy integrated all related actions listed in the corporate climate action strategy. The Sustainable Service-Delivery Plan Template (Strategic Asset Management Plans) incorporates the climate mitigation and adaptation risk assessments as a standard component in the template and will be carried out to all services when they are developed. The risk assessment framework for climate adaptation is currently underway and scheduled to be completed in mid 2021. The CRD has incorporated climate change considerations into regional and corporate strategic planning and included the climate lens into the capital planning template. All of these actions are resulting in recognition for the CRD. In 2019, the CRD was recognized as one of Canada's greenest employers.
2-2. PREPARE AN ANNUAL SUMMARY ACROSS DIVISIONS to present to senior management prior to service plan reviews	<i>Annually with service planning</i>	Ongoing	
2-3. UPDATE THE PROJECT MANAGEMENT PROCESS TO INCORPORATE CLIMATE ACTION POLICY into project requirements documents and project level decision-making	<i>TBD</i>	On hold	
2-4. UPDATE THE ASSET MANAGEMENT PROCESS to incorporate evaluation of most energy-efficient and/or low-carbon technologies at time of renewal	<i>2019</i>	 In progress	
2-5. INCLUDE CLIMATE CHANGE POLICY AND TARGET CONSIDERATIONS DURING CAPITAL PROJECT INITIATION PROCESS	<i>Ongoing</i>	 Complete	
2-6. DEVELOP A MECHANISM TO PROVIDE FINANCING (SEED FUNDING) FOR STUDIES or components of capital projects that support the CRD's corporate climate action policy	<i>2018</i>	 Complete	
2-7. 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	<i>2017- 2020</i>	 In progress	
2-8. ESTABLISH A STAFF CLIMATE ACTION ENGAGEMENT PROGRAM including a climate action recognition program that acknowledges climate leadership among CRD employees	<i>2018</i>	 In progress	
2-9. ESTABLISH AN ONGOING STAFF CLIMATE ACTION WORKING GROUP TO SHARE KNOWLEDGE ACROSS THE ORGANIZATION and continually evaluate best opportunities for accelerating climate action	<i>Ongoing</i>	 In progress	
2-10. UPDATE THE PROCUREMENT POLICY TO ALIGN PROCUREMENT AND VENDOR SELECTION WITH THE CRD'S CORPORATE CLIMATE POLICY and develop supporting decision criteria and matrix	<i>TBD</i>	On hold	





Goal 3 | Metrics & reporting

Monitor, report and communicate metrics to enhance continuous improvement across the organization

Action	Timing	Status	Action / Project Description
3-1. 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's GHG target contextual information on changes in level of service, e.g., total corporate GHG emissions; GHG emissions/square foot of buildings operated by CRD	2019	 In progress	<ul style="list-style-type: none"> Accurate GHG emissions measurement is required to achieve significant reductions in emissions. Since 2016, the CRD has been using an energy management system to track and consolidate utility billing information (natural gas, hydro and water) at the facility level. This information allows for easier GHG reporting, and also helps facility managers identify when a building isn't performing as expected. Working with the corporate climate action working group, the CRD shares, communicates, and responds to real-time energy monitoring through PRSIM software.
3-2. ESTABLISH A PROCESS TO COLLECT THE GHG EMISSIONS FOR ALL CONTRACTED SERVICES CONSIDERED "IN SCOPE" FOR GHG REPORTING	Ongoing	 In progress	<ul style="list-style-type: none"> In 2019, with BC Hydro support, the CRD began a development of a Strategic Energy Management Plan for the corporation. Planned completion is late 2020. The CRD also continued the Zero Emissions fleet Initiative and will implement recommendations over time.
3-3. 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	2017 - 2019	 In progress	<ul style="list-style-type: none"> Annually, the CRD participates in the Climate Action Revenue Incentive Program (CARIP) and additionally reports out on climate actions through the Climate Action Annual Report.
3-4. INCORPORATE OUTCOMES OF ENERGY MANAGEMENT MONITORING INTO AN ADAPTIVE MANAGEMENT PROCESS to ensure continuous improvement	2018	Ongoing	
3-5. DEVELOP A COMMUNICATIONS PLAN TO SHARE CORPORATE PROGRESS ON CLIMATE ACTION with staff and public	2017	 Complete	
3-6. COORDINATE THE ANNUAL CARIP REPORTING REQUIREMENTS , on behalf of the organization	Annually	Ongoing	






Goal 4 | Adaptation

Accelerate corporate climate adaptation activities to enhance resilience and prepare for future climate change impacts




Action	Timing	Status	Action / Project Description
4-1. COMPLETE DOWNSCALED CLIMATE PROJECTIONS REPORT AND IDENTIFY POTENTIAL IMPACTS OF CLIMATE CHANGE FOR THE REGION	2017	 Complete	<ul style="list-style-type: none"> The Climate Projections for the Capital Region Report, completed in 2017, identifies that temperatures in the capital region are warming. Global climate models project an average annual warming of about 3°C in our region by the 2050s. While that may seem like a small change, it is comparable to the difference between the warmest and coldest years of the past. To prepare for these changes, the CRD has included a climate adaptation policy and considerations into the climate lens review that is conducted on capital projects. In 2019, the CRD scoped the development of a corporate adaptation plan to meet the organization's adaptation goal of accelerating corporate climate change adaptation activities to enhance resilience and prepare for future climate change impacts. The plan (to be developed in 2020) will address the assets (natural and engineered) and infrastructure that support service delivery and integrate with existing business practices, including asset management, risk management, business continuity and emergency management. The CRD also began a coastal flood hazard mapping and modelling project, which will show coastal flood hazards due to sea level rise and tsunamis. Deliverables will support future asset climate risk assessments. Deliverables will be available in mid-2020.
4-2. IDENTIFY POTENTIAL IMPACTS OF SEA LEVEL RISE ON CRD ASSETS	2018	 In progress	
4-3. DEVELOP A CORPORATE CLIMATE ADAPTATION PLAN FOR THE CRD	2019	 In progress	
4-4. CONSIDER IDENTIFIED CLIMATE IMPACTS WITHIN RISK REGISTERS in the enterprise risk management process and potential impacts of climate change for the region	2019	Ongoing	
4-5. CONSIDER CLIMATE ADAPTATION IN ALL NEW CAPITAL PROJECTS THROUGH THE CLIMATE LENS review template	Ongoing	Ongoing	
4-6. 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	2018-2020	 In progress	

Goal 5 | Fleet management

Achieve continuous, significant reductions in greenhouse gas emissions from the fleet and strive towards zero emissions for new fleet vehicles



Action	Timing	Status	Action / Project Description
5-1. 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	Ongoing	Ongoing	<ul style="list-style-type: none"> The CRD's goal of achieving continuous, significant reductions in GHG emissions from the fleet is being implemented through the Zero Emissions Fleet Initiative. In partnership with researchers at the Institute for Integrated Energy Systems at the University of Victoria, the CRD is working to reduce GHG emissions in the CRD fleet by: <ul style="list-style-type: none"> Conducting a smart fleet analysis to develop a suite of tools for fleet optimization; Continued electric bike (E-bike) pilot with additional staff training; Support for anticipated 2020 trial of hydrogen fuel cell electric vehicles; Testing and comparing the use of other zero emissions alternatives, including battery electric vehicles and E-bikes, where operationally appropriate; Investigating opportunities to use electric vehicles as an emergency power source.
5-2. IDENTIFY, DEVELOP OR PROCURE A TOOL TO SUPPORT SELECTION OF NEW VEHICLES based on utilization, operational needs, potential for electric vehicles and right-sizing	Ongoing	Ongoing	
5-3. 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)	2017	 Complete	
5-4. BETTER UTILIZE SAP ASSET MANAGEMENT SYSTEM to support preventative maintenance program and track all costs (including purchase-card purchases) associated with each fleet unit	TBD	On hold	
5-5. 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	2017-2020	 In progress	
5-6. IDENTIFY, DEVELOP OR PROCURE A TOOL TO SUPPORT PREPARATION OF HIGH-LEVEL BUSINESS CASES that demonstrate lifecycle costs and payback (fuel and maintenance) for investing in efficient vehicles	2017-2020	 In progress	
5-7. INSTITUTE FLEET MANAGEMENT BEST PRACTICES by: engaging all fleet vehicle operators in energy-efficient driver training program, recognizing staff who demonstrate efficient driving practices as part of the climate action recognition program	2017-2020	 In progress	
5-8. 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 lifecycle costs and GHG emissions impacts as priorities during fleet purchasing process	2017-2020	 In progress	

Goal 5 | Fleet management (cont.)

Action	Timing	Status	Action / Project Description
5-9. RECOGNIZING STAFF WHO DEMONSTRATE EFFICIENT DRIVING PRACTICES as part of the climate action recognition program	2017-2020	 In progress	
5-10. 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	2017-2020	 In progress	
5-11. TEST HYDROGEN FUEL CELL ELECTRIC VEHICLES to replace existing gas-/diesel-powered vehicles that are used for longer trips and heavier-duty applications	2017-2020	 In progress	
5-12. MOVE TOWARDS CENTRALIZED RESPONSIBILITIES FOR FLEET VEHICLE ACQUISITION, USE AND MAINTENANCE while maintaining a distributed approach to day-to-day operational activities (scheduling, fuelling, determining local needs and performing maintenance and repairs), based on a renewed corporate fleet policy	TBD	On hold	

Goal 6 | Existing buildings, facilities & infrastructure

Accelerate a reduction in energy use and greenhouse gas emissions in existing buildings, facilities and infrastructure

Action	Timing	Status	Action / Project Description
6-1. INCORPORATE ENERGY EFFICIENCY INTO ALL REGIONAL WATER SUPPLY INFRASTRUCTURE RENEWAL PROJECTS through strategic asset management plans	Ongoing	Ongoing	<ul style="list-style-type: none"> The CRD continues to address operational GHG emissions, with a focus on the facilities that produce the greatest operational GHG emissions, including Panorama and SEAPARC recreation centers, and the Figgard Headquarters building.
6-2. 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	2018-2020	 In progress	<ul style="list-style-type: none"> In 2019, the CRD continued to assess recommendations from the Panorama and SEAPARC energy assessments that minimize GHG emissions and energy use, including upgrading to high-efficiency natural gas boilers, and investigating the waste heat recovery opportunity at Panorama and will seek funding in future for implementation. SEAPARC's New Fitness Gym and Multi-purpose Space Waste Heat Recovery Project has completed a climate lens review and an energy model study has been conducted to determine the best design measures to minimize energy usage. The building is designed with maximum solar shading to minimize heat accumulation effect during summer months. This project has applied to the Climate Action Reserve Fund to fund the incremental cost for a custom air-handling unit coupled with an outdoor water to air heat pump system. The CRD also investigated the feasibility of ice plant heat recovery at SEAPARC Recreation Centre (potential to reduce CO₂-e by 40 tonnes).
6-3. REDUCE GHG EMISSIONS THROUGH FUEL SWITCHING TO RENEWABLE NATURAL GAS (RNG), AND CONDUCT A BUSINESS CASE ANALYSIS TO PRODUCE RNG	2018-2020	On hold	
6-4. DEVELOP CONSERVATION DEMAND MANAGEMENT PROGRAM FOR STAFF TO RAISE AWARENESS ABOUT ENERGY-SAVING HABITS AND BEHAVIOURS	TBD	On hold	
6-5. COMPLETE A REVIEW OF THE 15 LARGEST ENERGY CONSUMING BUILDINGS AND FACILITIES every four years to develop a list of priority opportunities for energy and GHG emissions reductions and incorporate opportunities into service plans	2018	 In progress	<ul style="list-style-type: none"> In 2018-2019, staff also conducted a business case analysis on the generation of renewable natural gas from waste landfill gas. Renewable natural gas is generated when biological sources of methane are captured and repurposed as Renewable Natural Gas, rather than being released directly into the atmosphere. By capturing and repurposing methane, rather than adding new methane (fossil fuels) into the carbon cycle, renewable natural gas has a low global warming potential and contributes no (or very little) net CO₂-e into the atmosphere. The CRD Board will make a decision on the future of landfill gas utilization in 2020.

Goal 7 | New buildings, facilities & infrastructure

Achieve high-performance standards and strive towards net-zero energy for all new construction

Action	Timing	Status	Action / Project Description
7-1. 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	<i>TBD</i>	On hold	<ul style="list-style-type: none"> The best time to address energy consumption and GHG emissions is at the very beginning of new capital projects. Through the climate lens, the CRD is working to ensure that every new capital project meets the policy, targets and objectives identified within the corporate climate action strategy.
7-2. DESIGN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS THAT MINIMIZE THE USE OF FOSSIL FUELS (heating oil and natural gas) and consider renewable energy sources	<i>N/A</i>	Ongoing	
7-3. INCORPORATE LIFE CYCLE COSTING TO CALCULATE THE BUSINESS CASE FOR ALL CAPITAL PROJECTS OVER \$100,000 IN VALUE	<i>TBD</i>	On hold	
7-4. UPDATE THE PROJECT MANAGEMENT PROCESS TO REQUIRE COMMISSIONING OF ALL NEW BUILDINGS to ensure they are operating at maximum efficiency	<i>TBD</i>	On hold	
7-5. INCLUDE CLIMATE ACTION CONSIDERATIONS IN THE CAPITAL PROJECT INITIATION PROCESS (SEE PAGE 46 OF THE CORPORATE CLIMATE ACTION STRATEGY)	<i>TBD</i>	On hold	