

# Capital Regional District 2020 Climate Action Annual Report



CRD

Making a difference...together





## 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  
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# Overview

**This report summarizes all of the climate action related activities undertaken by the Capital Regional District (CRD) in 2020 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, 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, are signatories of the **BC Climate Action Charter**. 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
- United with more than 350 Canadian local governments, the CRD is a member of the **Partners for Climate Protection Program**, from the Federation of Canadian Municipalities and ICLEI - Local Governments for Sustainability, affirming its ambitious GHG reductions and participating in a five-milestone planning, implementation and reporting framework.



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. The CRD Board has embedded the declaration and leadership intentions to greatly accelerate greenhouse gas emissions reductions in the 2019-2022 CRD Board priorities.

# 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 includes policies, actions and targets for the reduction of greenhouse gas emissions. The current RGS was adopted in 2018. The full strategy can be found at [www.crd.bc.ca/rgs](http://www.crd.bc.ca/rgs).

## Regional Climate Action Strategy

In 2017, the CRD Board approved the **Regional Climate Action Strategy (RCAS)**, which guided the CRD's services to support community-focused climate mitigation and adaptation action over the following five years. The RCAS built upon work that is already being done by residents, businesses, non-profits, local governments and First Nations, by federal and provincial governments, and the direction provided in the RGS.

## 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 until the end of 2020. The CCAS reflects on what the CRD has accomplished to date and renews corporate climate action efforts through seven long-term goals.

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](http://www.crd.bc.ca/climate).



## Updating our Climate Action Strategy

The CRD is developing a renewed climate action strategy which will be confirmed in late 2021. The new strategy will build upon and ultimately replace the existing CRD climate action strategies, and reflect existing Board priorities (including the climate emergency declaration) to provide a clear path forward for how the CRD, under its service mandates, will show leadership on climate action, both for the CRD's corporate operations and for its community focused services. The plan will address both climate adaptation and mitigation efforts.



# CLIMATE MITIGATION

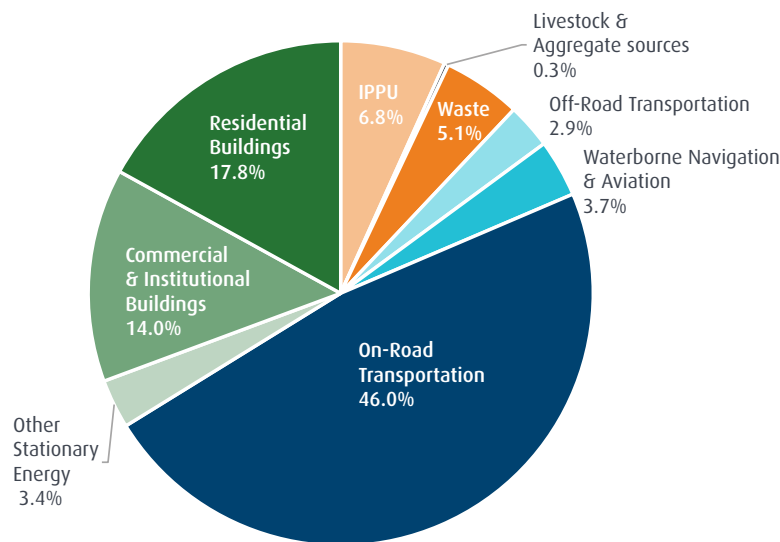
## Reduce Greenhouse Gas Emissions

### Capital Region Community Greenhouse Gas Emissions

In 2020, the CRD completed a community energy and emissions inventory to provide a more complete picture of the region's energy and greenhouse gas (GHG) emissions consumption. This followed the Global Protocol Community-Scale Greenhouse Gas Emission Inventories BASIC+ Framework, and included GHG emissions from: stationary energy (e.g., buildings), transportation (e.g., commuter vehicles), waste (e.g., landfills), industrial processes and product use (IPPU) (e.g., chemical industry), and agriculture, forestry and other land use (e.g., fertilizer application).

The study conducted for the 2018 year shows that the capital region emits approximately 1.7 million tonnes of CO<sub>2</sub> emissions annually. Although this does not represent a significant reduction from the 2007 baseline, the total per capita GHG emissions (tCO<sub>2</sub>e / Capita) has decreased by 14.4%. Transportation and buildings account for the vast majority of regional emissions - almost 80%.

#### 2018 Capital Region Community Energy Emissions



*The Regional Growth Strategy identifies a target for the capital region to reduce greenhouse gas emissions by 61%\* by 2038. This ambitious target will require a decrease of almost one million tonnes of CO<sub>2</sub>e. This means reducing emissions from approximately 4.2 tCO<sub>2</sub>e per person to 2.6 tCO<sub>2</sub>e per person.*

\*from 2007 levels

# Corporate Greenhouse Gas Emissions and Targets

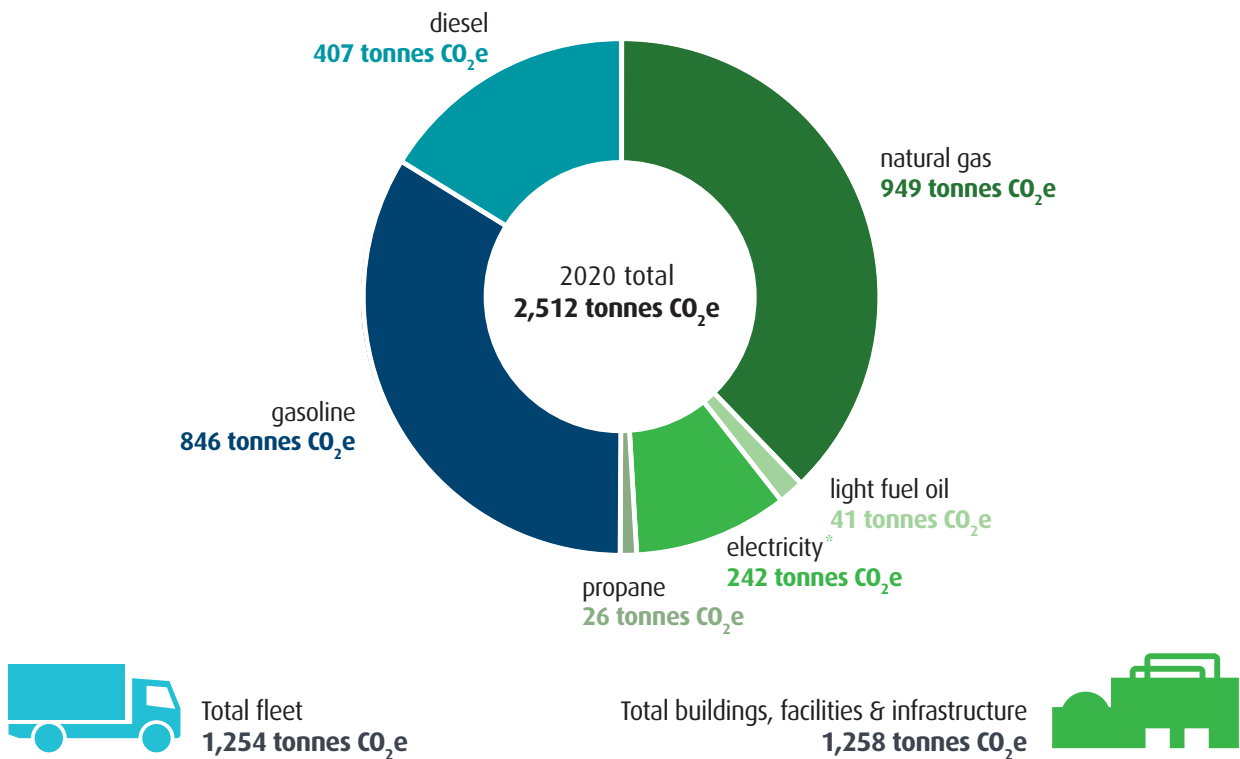
In 2008, the CRD Board set a target to reduce operational GHG emissions **33% below 2007 levels by 2020**. Since 2012, the CRD has completed an annual GHG inventory and reported GHG emissions through the provincial Climate Action Revenue Incentive Program, following the guidance provided by the provincial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

**In 2020, CRD operations produced 2,512 tonnes CO<sub>2</sub>e. This represents a 10% reduction compared to 2007 levels.** As such, the CRD did not meet its 2020 corporate GHG emissions reductions target. This was due, in part, to delays in electric vehicle technologies for the corporate fleet, lack of renewable gas supply for use of corporate buildings, inability to source funding for key retrofit projects and an expansion in CRD services over this time (which resulted in an approximate 24% increase in fleet size and 19% in staffing). With the McLaughlin Point Wastewater Treatment Plant coming on line, this trend will continue.

In 2021, the creation of the new climate action strategy will reflect on achievements and barriers to date, create new targets and design pathways for achieving greenhouse gas emissions reductions within the corporate operations of the CRD.

The CRD has been carbon neutral, under the provincial reporting framework, in its operation since 2012. In 2020, 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 Corporate Climate Action Strategy (*see Appendix B* for 2020 actions).

2020 Operational Greenhouse Gas Emissions by Source



\*Currently, electric vehicle charging is included in building electricity use



# CLIMATE ADAPTION

## Build Resilience

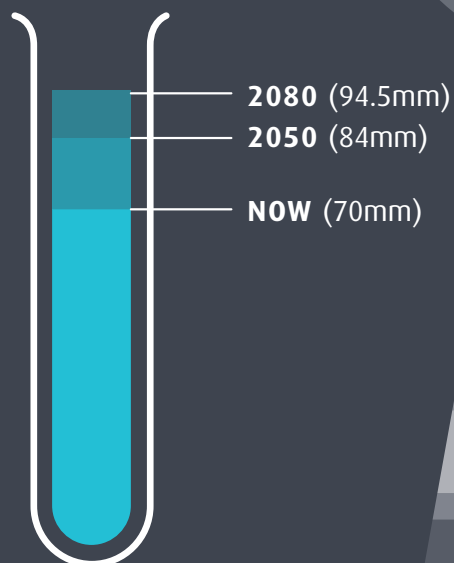
In 2017, the CRD worked with the Pacific Climate Impacts Consortium to undertake a comprehensive assessment of the projections of global climate models for the capital region.

This assessment shows, as a result of global warming, the capital region will experience:

- **More extreme climate events** (such as long hot and dry summers)
- **An increase in rainfall** in fall, winter and spring; and a decrease in rainfall in summer
- **More intense, longer-lasting, and more frequent rainfall** events
- **Frequent heavy snowfalls** and rain on snow events in the short-term, less snow in the future
- **Hotter summers** and less days with freezing in winter
- Increased likelihood of **variability** of climate within and between years

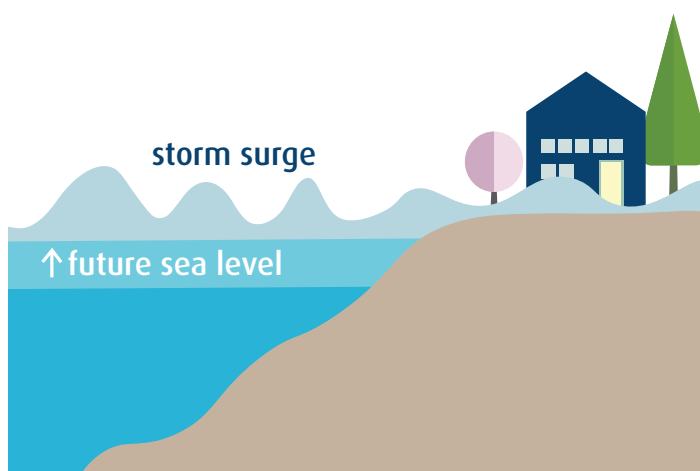
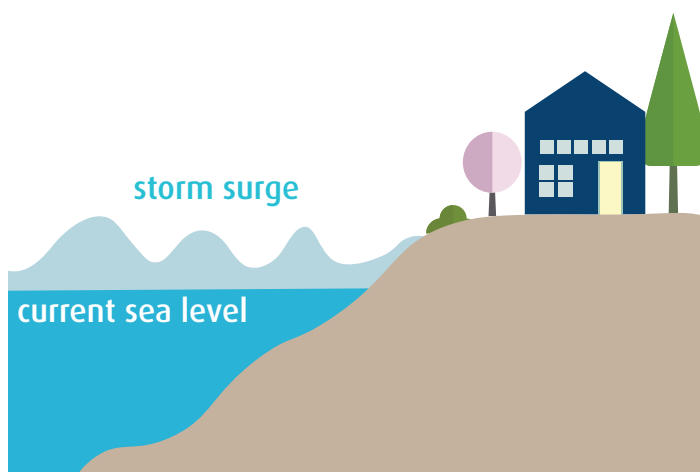
Rainstorms will grow more intense.

Maximum one-day rainfall



The capital region will need to adapt to a changing climate. A warming climate will impact our ecosystems, watersheds, agriculture and communities.





## Capital Region Coastal Flood Inundation Mapping

In 2019/2020, working with local governments, the CRD commissioned the **Capital Region Coastal Flood Inundation Mapping Project** to provide the region and local governments with a comprehensive picture of projected coastal flooding due to rising sea levels and tsunamis.

**Results found that low-lying areas in the region are susceptible to coastal storm flooding – which are set to increase significantly over time, due to sea level rise.**

To access further information on climate projections related to precipitation, temperature and future sea level rise visit: [www.crd.bc.ca/about/data/climate-change](http://www.crd.bc.ca/about/data/climate-change).

As new science and global climate projections advance, the CRD will continue to build on its local climate projection studies to understand climate changes and their impacts and adjust responses accordingly.

Effects of sea level rise over time combined with storm surges.



# 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 2020, the program operated on an annual budget of approximately \$577,000, which included three full-time employees and one two-year, full-time term position (co-funded by BC Hydro Sustainable Communities) which will likely be renewed in 2021.

In addition, the corporation provides an annual stipend of \$100,000 towards a fund to support key corporate focused climate action planning activities. The program's core budget is provided through an annual requisition from all of the municipalities and electoral areas, and supplemental funding from corporate services. The program also relies on external grants and partnerships to undertake community climate action programming. In 2020, external sources accounted for approximately \$485,000 in additional funding to support staffing and completion of key projects.

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

See *Appendices A and B* for accomplishments.







# 2020 Climate Action Highlights

The CRD completed and supported a number of climate actions throughout 2020 listed in *Appendix A – CRD Regional Climate Action Strategy Actions* and *Appendix B – Corporate Climate Action Strategy Actions*. Some highlights are:

## Solid Waste Management Plan

The CRD is developing a new Solid Waste Management Plan to reduce how much material is sent to Hartland Landfill and guide how the region's waste is managed in a safe, secure and sustainable way now and in the future. The plan aims to extend the life of Hartland Landfill by prioritizing reduce, reuse and recycling-focused actions and incorporating climate action and sustainability considerations wherever possible. The draft plan was released in 2020 for a second round of public engagement and input, including feedback from local First Nations, municipalities, industry and residents. The final plan will be presented to the CRD Board for approval in spring 2021.

## Hartland Landfill Renewable Natural Gas Utilization

In April 2020, the CRD announced approval in principle of an agreement to sell renewable natural gas (RNG) to FortisBC for beneficial use. Blending seamlessly with conventional natural gas, RNG is a carbon-neutral energy made from capturing and upgrading the biogas released from decomposing organic waste in the landfill. Converting the biogas generated at Hartland Landfill to RNG will reduce our region's emissions by approximately 264,000 tonnes of carbon dioxide over the life of the project—the equivalent to removing 2,240 cars from the road. A lifecycle greenhouse gas assessment found that decommissioning the electricity plant, a facility nearing the end of its life, and building a new RNG facility at Hartland Landfill is a more effective beneficial use of this resource from a climate change perspective.

## 2020 Canada's Greenest Employers



For the third year in a row, 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 Corporate Climate Action Strategy aims to integrate climate action into everyday business across the CRD's departments, divisions and services.

## Transitioning CRD's Fleet to Low Emission

In 2020, the CRD began piloting a new procedure to better facilitate procurement of low emissions vehicles across its various services. Learnings informed the development of a new green fleet policy which is planned for finalization in 2021. Also in late 2020, the CRD received two hydrogen fuel cell vehicles to pilot in the fleet over a six month period as part of commitments under the CRD's **Zero Emission Fleet Initiative**, co-funded by a *Federation of Canadian Municipalities (FCM) Green Municipal Fund* grant.

The CRD now has nine e-bikes for staff use at CRD Headquarters and Regional Parks. In addition, staff bike parking was greatly expanded at CRD Headquarters to accommodate staff commuters with e-bikes and cargo bikes.

## Regional Data and Indicators

In 2020, the CRD completed a number of regional research initiatives to support the CRD, local governments, First Nations and other key stakeholders in their climate action planning efforts. This includes:

- **Regional and Local Greenhouse Gas Inventory:** To better understand the sources and trends of greenhouse gas (GHG) emissions within the capital region, the CRD produced a GHG Inventory Study which will serve as a resource for the CRD and municipalities to plan for effective climate action.
- **Coastal Flood Inundation Mapping Project:** This report provides planners and emergency managers a comprehensive picture of the risks of coastal flooding due to rising sea levels and tsunamis.
- **Forest Sequestration Project:** This first phase project utilized a carbon budget model to quantify the forest carbon sequestration potential of the region's forest lands and offer recommendations on forest management.
- **Regional Energy Benchmarking Roadmap:** The CRD worked with a University of British Columbia Sustainability Scholar to undertake research to develop recommendations for enabling a regional benchmarking program for complex buildings in the capital region.



## Regional Residential Energy Retrofits

In 2020, working a number of local government partners, the CRD completed the *FCM Transition 2050* funded **Residential Retrofit Project**. This work developed a regional energy retrofit strategy, led industry engagement and capacity building events, completed key local research and supported the Bring It Home 4 the Climate pilot program. In the first five months, this pilot program engaged 300 homeowners, completed 54 subsidized Virtual Home Check-ups, and 78 subsidized *EnerGuide Assessments* and hosted two public webinars on understanding heat pumps. The feedback on the program has been universally positive to date and staff have worked with our partner organization to extend the pilot into 2021. Learnings from this work will directly inform future work in 2021.

To encourage residents to switch to electric heat pumps from fossil fuel heating systems, between September 2018 and December 2020, 415 CRD \$350 top-up incentives (80% from oil, 17% from natural gas and 3% from propane heating) have been processed. The CRD is supporting continued promotions, and have seeded a Group Purchase Rebate Code which offers an additional rebate opportunity to qualifying regional homeowners.

## McLoughlin Point Wastewater Treatment Plant

In late 2020, the new McLoughlin Point Wastewater Treatment Plant became operational. Although the operation of this plant is expected to increase the CRD's corporate emissions, the facility has been built with climate considerations in mind, including features that promote sustainability and energy efficiency. The operations and management building has been built to *LEED Gold* design standards and features a green roof which will help mitigate storm water runoff and provide wildlife habitat. The plant itself features a heat recovery mechanism that will provide heating for the building.





# Looking Ahead - 2021

The CRD will continue to show a leadership role, support collaborative efforts, pursue strategic partnerships, external funding sources, and respond to opportunities as local and senior levels of governments advance their efforts.

Some activities planned for 2021 include:

- **Update the Climate Action Strategy:** In 2021, the CRD will be undertaking a planning exercise to review and update its existing climate action strategies. The planning process will endeavor to identify opportunities to accelerate actions as a response to the CRD's climate emergency declaration and targets. The renewed CRD Climate Action Strategy will be presented to the Board in fall 2021.
- **Regional Energy Retrofit Programming:** Through the development of a business case, the CRD will investigate the feasibility and benefits of a regional energy retrofit program to help residents implement retrofits and access rebates. If successful, further work will be completed with regional partners through the Federation of Canadian Municipalities Community Efficiency Financing grant.
- **Electric Vehicle Infrastructure Road Map:** To support CRD and local government planning efforts, this project aims to better understand future charging station user needs and designs, and to find the opportunities for collaboration between regional fleet owners and other key stakeholders.
- **Cool It! Climate Leadership Program:** The CRD will continue its support of the BC Sustainable Energy Association Cool it! Program, offering interactive workshops throughout the region where grade 4-5 students learn about climate change and participate in the Cool It! Challenge to learn climate-friendly behaviours.
- **Solid Waste Management Planning:** Pending Board approval in spring 2021, staff will begin strategy development in a number of key areas of the new Solid Waste Management Plan — including multi-family housing, construction, renovation and demolition waste and diversion opportunities for the industrial, commercial and institutional (ICI) sector. After the CRD and FortisBC submit a supply contract to the British Columbia Utilities Commission, staff will issue a Request for Qualifications seeking submissions for the design and construction of the new CRD facility that will upgrade the biogas generated at Hartland Landfill to renewable natural gas.
- **Regional Transportation Committee:** In late 2020, the CRD board directed staff to work with municipalities, the Province and BC Transit to create list of regional transportation priorities for coordinated advocacy, with a climate emergency lens. This work will continue in 2021.
- **Corporate Green Fleet Policy and Electric Vehicle Charging Planning:** This new policy will help prioritize low emission vehicles in CRD procurement, and will be finalized in 2021. Further technical work related to electric vehicle charging will be completed to support the ongoing transition of CRD's fleet to low carbon.

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# Appendix A:

## Goal 1 | Developed urban areas are compact and complete






RCAS Action	Status	2020 Action / Projects	External Partners
1-1. <b>IDENTIFY OPPORTUNITIES TO SUPPORT LOCAL GOVERNMENTS</b> and interested First Nations governments with transit-oriented development	 Complete	<ul style="list-style-type: none"> <li>Considered in context of Regional Growth Strategy (RGS) and policies to support urban containment.</li> </ul>	<ul style="list-style-type: none"> <li>Municipalities, Juan de Fuca Electoral Area</li> </ul>
1-2. <b>DEVELOP TOOLS AND UNDERTAKE RESEARCH</b> to support local governments and interested First Nations governments in creating compact and complete urban areas		<ul style="list-style-type: none"> <li>No actions reported.</li> </ul>	
1-3. <b>MANAGE COMPLIANCE WITH REGIONAL GROWTH STRATEGY (RGS)</b>	Ongoing	<ul style="list-style-type: none"> <li>RGS was adopted in March 2018. All new CRD bylaws and services must be consistent with RGS.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Liaised with CRD Development and Planning Advisory Committee to manage compliance with RGS.</li> </ul>	<ul style="list-style-type: none"> <li>Municipalities, Juan de Fuca Electoral Area</li> </ul>
1-3-1. <b>Review Regional Context Statements</b> for alignment with the RGS	 Complete	<ul style="list-style-type: none"> <li>Board has accepted all Regional Context Statements.</li> </ul>	<ul style="list-style-type: none"> <li>Municipalities</li> </ul>
1-3-2. <b>Continue to adopt Official Community Plans (OCP)</b> for the Juan de Fuca Electoral Area that are consistent with the RGS.		<ul style="list-style-type: none"> <li>See Action 1-3 (Juan de Fuca Official Community Plans).</li> </ul>	
1-3-3. <b>Monitor and report on RGS commitments</b>	 Planned	<ul style="list-style-type: none"> <li>Completed annual RGS indicator report.</li> </ul>	
1-4. <b>CONTINUE TO DEVELOP GHG-RELATED TARGETS</b> , policies and actions for the Juan de Fuca electoral area OCP	 Planned	<ul style="list-style-type: none"> <li>Likely to initiate update for Port Renfrew Official Community Plan.</li> </ul>	
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Percentage of new dwelling units within the Growth Policy Area</li> </ul>		<ul style="list-style-type: none"> <li>96.5% = percentage of new dwelling units within the Urban Containment Policy Area (target is 95%).</li> <li>20% (2016-2019) = percentage of growth in new dwelling units in areas with greater than 45% active transportation.</li> </ul>	




## Goal 2 | Multi-modal transportation systems are low carbon

RCAS Action	Status	2020 Action / Projects	External Partners
2-1. <b>ESTABLISH A CRD TRANSPORTATION SERVICE TO FULFILL THE MULTI-MODAL VISION OF THE REGIONAL TRANSPORTATION PLAN.</b>	 In progress	<ul style="list-style-type: none"> <li>In late 2020, the CRD board directed staff to work with municipalities, the Province, and BC Transit to create list of regional transportation priorities for coordinated advocacy.</li> </ul>	
2-1-1. Consolidate CRD transportation functions			
2-1-2. Apply for external funding			
2-1-3. Requisition for future infrastructure projects			
2-2. <b>IMPLEMENT THE REGIONAL TRANSPORTATION PLAN AND THE PEDESTRIAN AND CYCLING MASTER PLAN.</b>	Ongoing	<ul style="list-style-type: none"> <li>CRD provided data and technical expertise to a number of project-based working groups to ensure that multi-modal infrastructure is integrated into transportation projects.</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Transportation and Infrastructure, BC Transit, partner municipalities and electoral areas, BC Ferries</li> </ul>
	Ongoing	<ul style="list-style-type: none"> <li>Continued offering Ready Step Roll program to provide active school travel planning for up to five schools per year.</li> </ul>	<ul style="list-style-type: none"> <li>School boards, schools, municipalities and electoral areas, public health, local law enforcement agencies, parents, students and school administration, ICBC Road Safety, Greater Victoria Bike to Work Society, CRD Traffic Safety Commission, Island Health, Ministry of Transportation and Infrastructure</li> </ul>
2-3. <b>IMPLEMENT PRIORITY PROJECTS IDENTIFIED IN THE REGIONAL TRAILS MANAGEMENT PLAN TO SUPPORT ACTIVE TRANSPORTATION.</b>	Ongoing	<ul style="list-style-type: none"> <li>Continued to monitor external project implementation funding opportunities to implement the Gulf Islands Regional Trails Plan.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>E&amp;N Rail Trail Phase 3 is in progress with plans to be completed in summer 2021.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Public engagement ongoing of design lighting options put forth in the regional trail widening or separation feasibility study.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Planning new regional trails on the Gulf Islands: Main Island Regional Trail (2.3 km of trail). Planned to be complete in 2023.</li> </ul>	

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

RCAS Action	Status	2020 Action / Projects	External Partners
2-4. <b>IDENTIFY OPPORTUNITIES TO WORK WITH BC TRANSIT</b> as they develop policies and plans for rapid transit, frequent transit and increased accessibility.	Ongoing	<ul style="list-style-type: none"> <li>Provided ongoing modelling, data and planning support.</li> </ul>	
2-5. <b>FACILITATE DELIVERY OF THE SALT SPRING ISLAND (SSI) COMMUNITY TRANSIT SERVICE AND IMPLEMENT MULTI-MODAL TRANSPORTATION PROJECTS</b> , including recommendations from the Pedestrian and Cycling Master Plan: SSI Edition	 In progress	<ul style="list-style-type: none"> <li>Salt Spring Island Parks and Recreation Commission 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, brush clearing was initiated with construction to take place in the spring of 2021.</li> </ul>	
2-6. <b>SUPPORT ELECTRIC VEHICLE (EV) AND ELECTRIC BICYCLE (E-BIKE) ADOPTION AND INFRASTRUCTURE DEPLOYMENT (INCLUDING BATTERY PLUG-IN AND FUEL CELL EV INFRASTRUCTURE)</b> in coordination with the Province, local governments and private sector.	 Complete	<ul style="list-style-type: none"> <li>Undertook a study to understand electric vehicle (EV) charging performance standards for local government bylaws. Developed a technical brief and provided to staff.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Began project to create and EV Charging Roadmap to identify coordination opportunities for EV charging infrastructure in the region. Engaged with various regional stakeholders. Work will continue into 2021.</li> </ul>	<ul style="list-style-type: none"> <li>BC Hydro, local and regional governments</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>Install EV chargers at Portlock Park and Rainbow Pool.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>EV awareness campaign planned for spring 2021.</li> </ul>	<ul style="list-style-type: none"> <li>Emotive BC, municipal partners</li> </ul>
2-7. <b>DEVELOP, DELIVER AND SUPPORT EDUCATION PROGRAMS AND INITIATIVES</b> that achieve reductions in transportation related GHGe.	Ongoing	<ul style="list-style-type: none"> <li>Supported delivery of Cool It! Climate Leadership workshops in 39 grade 4-5 classrooms throughout the capital region and provided tools for behaviour change. Worked with BC Sustainable Energy Association (BCSEA) and municipal partners to update workshop content to incorporate more regional context. In 2021, support delivery of workshops in 45 grade 4-5 classrooms throughout the capital region.</li> </ul>	<ul style="list-style-type: none"> <li>BC Sustainable Energy Association, municipal partners</li> <li>Funders: District of Saanich, City of Victoria, District of North Saanich</li> </ul>




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

RCAS Action	Status	2020 Action / Projects	External Partners
2-7. <b>DEVELOP, DELIVER AND SUPPORT EDUCATION PROGRAMS AND INITIATIVES</b> that achieve reductions in transportation related GHGe.	 Complete	<ul style="list-style-type: none"> <li>Supported BCSEA in the development and pilot of a high school climate action program.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>4th annual Walk and Wheel to School Week. Adjusted offering due to COVID-19. Participating schools were not required to report on activities to reduce stress on teachers during COVID-19 restrictions. Thirteen schools requested and received program packages.</li> </ul>	<ul style="list-style-type: none"> <li>Island Health, CRD Traffic Safety Commission, schools</li> </ul>
2-8. <b>DEMONSTRATE LEADERSHIP</b> by implementing the CCAS corporate fleet actions and policy.	Ongoing	<ul style="list-style-type: none"> <li>See Appendix B.</li> </ul>	

PERFORMANCE INDICATORS	
<ul style="list-style-type: none"> <li>Reductions in GHGe from personal vehicle transportation</li> </ul>	<ul style="list-style-type: none"> <li>Regional Greenhouse Gas Inventory Study (2018): In-boundary on-road transportation - 871,571 tCO<sub>2</sub> (4% decrease compared to 2007 baseline).</li> </ul>
<ul style="list-style-type: none"> <li>Increase in active transportation infrastructure kilometres</li> </ul>	<ul style="list-style-type: none"> <li>Not currently available.</li> </ul>
<ul style="list-style-type: none"> <li>Percentage of all trips made by walking, biking or transit</li> </ul>	<ul style="list-style-type: none"> <li>Not currently available.</li> </ul>
<ul style="list-style-type: none"> <li>Total kilometers of the Regional trail network completed</li> </ul>	<ul style="list-style-type: none"> <li>96 km (55km Galloping Goose; 29km Lochside; 12 km E&amp;N).</li> </ul>








# Goal 3 | Buildings are high performing and low carbon

RCAS Action	Status	2020 ACTION / PROJECTS	External Partners
3-1. <b>SUPPORT THE TRANSITION FROM OIL HEATING TO HIGH EFFICIENCY, LOW EMISSIONS HEATING SYSTEMS</b>	Ongoing	<ul style="list-style-type: none"> <li>Continue to coordinate and develop promotional and display materials.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Coordinate CRD and local government top-up incentives to the provincial CleanBC program offering homeowners incentives to switch from fossil fuel heating systems to electric heat pumps. Between September 2018 and December 2020, 415 CRD \$350 top-up incentives (80% from oil, 17% from natural gas and 3% from propane heating) have been processed. The CRD continues to support continued promotions, and seed Group Purchase Rebate Codes on a rolling basis which offers an additional rebate opportunity to qualifying regional homeowners.</li> </ul>	<ul style="list-style-type: none"> <li>Government of Canada, Province of British Columbia, local governments, BC Hydro and Fortis BC, City Green Solutions</li> <li>Funders: District of Central Saanich, Township of Esquimalt, District of North Saanich, District of Saanich, City of Victoria</li> </ul>
	 Complete	<ul style="list-style-type: none"> <li>Between 2018-2020, supported development and implementation of Federation of Canadian Municipalities (FCM) grant-funded Transition 2050: Residential Retrofit Acceleration Project; included strategies, marketing, industry engagement and pilot projects.</li> </ul>	<ul style="list-style-type: none"> <li>City Green Solutions. Home Performance Stakeholder Council, City of Victoria, District of Saanich, District of Central Saanich, Township of Esquimalt</li> <li>Funders: Federation of Canadian Municipalities</li> </ul>
	Ongoing	<ul style="list-style-type: none"> <li>In 2020, support pilot project Bring it Home 4 the Climate aimed at supporting energy audits and expert coaching, the pilot will be designed to overcome various barriers. Due to popularity, the pilot has been extended into 2021.</li> </ul>	<ul style="list-style-type: none"> <li>City Green Solutions. Home Performance Stakeholder Council, City of Victoria, District of Saanich, District of Central Saanich, Township of Esquimalt</li> <li>Funders: Federation of Canadian Municipalities</li> </ul>
	 Complete/ Planned	<ul style="list-style-type: none"> <li>In 2020, applied for FCM community efficiency financing grant to create a design study for a regional energy retrofit program. In 2021, complete a business case to investigate the feasibility and benefits of a regional energy retrofit service to help residents support home retrofits. Expand on this work with local governments if successful with FCM grant.</li> </ul>	
3-2. <b>EDUCATE AND PROVIDE REGIONAL COORDINATION FOR NATIONAL AND PROVINCIAL INITIATIVES.</b>	Ongoing	<ul style="list-style-type: none"> <li>Supporting regional local governments in information sharing and coordination around BC Energy Step Code, electric vehicle charging policy and incentive programs.</li> </ul>	
3-2-1. <b>Opt-in regulations</b> (e.g. the Energy Step Code, a tiered energy performance standard beyond Building Code)	 Complete	<ul style="list-style-type: none"> <li>Hosted a local government staff workshop on energy step code to further understand regional needs and opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> </ul>

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

RCAS Action	Status	2020 ACTION / PROJECTS	External Partners
3-2-2. <b>Energy literacy initiatives</b> such as energy benchmarking and, voluntary and mandatory energy labeling programs for buildings	 Complete	<ul style="list-style-type: none"> <li>Obtained a grant funded a University of British Columbia intern to complete research to develop a regional energy benchmarking roadmap for Part 3 buildings.</li> </ul>	<ul style="list-style-type: none"> <li>BC Hydro, University of British Columbia</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>Continue to circulate the building energy literacy materials and Climate Action To Go Kits. Co-supported the development of heat pump display for recreation centers. In 2020, in person outreach was limited due to COVID-19, so increased social media engagement.</li> </ul>	<ul style="list-style-type: none"> <li>Libraries in the region, local governments</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>See Action 3-1 (CleanBC, Bring it Home 4 the Climate).</li> </ul>	
3-3. <b>DEVELOP, DELIVER AND SUPPORT EDUCATIONAL PROGRAMS AND INITIATIVES</b> That achieve reductions in building-related GHGe and, water and energy use.	 Planned	<ul style="list-style-type: none"> <li>Developed new drinking water school education programming.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>A similar project to the Hotel Water, Energy, and Greenhouse Gas Savings program is planned to help eight groceries stores reduce energy and water consumption.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Drinking water cart events postponed due to COVID-19.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Fix a Leak Week disrupted due to COVID-19. Some kits distributed to community associations. In 2021, planning for modified Fix a Leak Week using community associations and recreation centers if open.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Create an introduction video for water conservation and watershed protection education workshops.</li> </ul>	<ul style="list-style-type: none"> <li>Swan Lake Nature Sanctuary</li> </ul>
	On hold	<ul style="list-style-type: none"> <li>Residential native plant gardening workshops planned for 2020 and 2021 have been delayed due COVID-19.</li> </ul>	


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

RCAS Action	Status	2020 ACTION / PROJECTS	External Partners
3-3. <b>DEVELOP, DELIVER AND SUPPORT EDUCATIONAL PROGRAMS AND INITIATIVES</b> that achieve reductions in building-related GHGe and, water and energy use.	 Complete	<ul style="list-style-type: none"> <li>To increase online engagement and replace in person opportunities disrupted by COVID-19, a series of six water conservation videos were created that incorporate climate impacts (part of Summer Yard Maintenance Stewardship series).</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Launched Aerator Replacement Program for businesses offering free replacements to reduce water consumption. Water and energy savings expected.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Investigate the possibility of thermal imaging camera kits to distribute through regions libraries.</li> </ul>	<ul style="list-style-type: none"> <li>District of Saanich</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>See Action 2-7 (Cool It! program).</li> </ul>	
3-4. <b>PROVIDE RESEARCH, DATA AND ANALYSIS TO LOCAL GOVERNMENTS AND INTERESTED FIRST NATION GOVERNMENTS</b> on high performing, resilient and low carbon buildings.	Ongoing	<ul style="list-style-type: none"> <li>Participated in the provincial local government step code peer network and share learnings with capital region local governments.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>See Action 3-2.</li> </ul>	
3-5. <b>SUPPORT AND DEVELOP PROGRAMS THAT INCREASE THE USE OF RENEWABLE ENERGY, GREEN INNOVATION AND SMART TECHNOLOGY IN BUILDINGS.</b>	 Planned	<ul style="list-style-type: none"> <li>Oak Bay Lodge redevelopment, initial planning of long-term care facility with climate mitigation considered. Considering energy efficiency in all new buildings.</li> <li>See Action 3-1 (Clean BC Better Homes, Bring it Home 4 the Climate, Residential Energy Retrofit Business Case).</li> </ul>	

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



RCAS Action	Status	2020 ACTION / PROJECTS	External Partners
3-6. <b>BUILD CAPACITY AMONG BUILDING OFFICIALS AND INDUSTRY IN THE REGION BY:</b>			
3-6-1. <b>Sharing and promoting resources at monthly South Vancouver Island Building Officials meetings.</b>	Ongoing	<ul style="list-style-type: none"> <li>See Action 3-2 (Energy Step Code Program).</li> </ul>	
3-6-2. <b>Supporting ongoing education of building officials and industry</b>	 In progress	<ul style="list-style-type: none"> <li>See Action 3-1 (CleanBC Better Buildings &amp; Homes).</li> </ul>	
3-7. <b>DEMONSTRATE LEADERSHIP BY IMPLEMENTING THE CCAS POLICY AND ACTIONS</b> related to existing and new corporate buildings.	Ongoing	<ul style="list-style-type: none"> <li>See Appendix B.</li> </ul>	
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Reductions in residential and commercial building GHGe and energy use</li> </ul>		<ul style="list-style-type: none"> <li>Regional Greenhouse Gas Inventory Study (2018): Residential buildings - 338,796 tCO<sub>2</sub>e (16% decrease compared to 2007 baseline).</li> <li>Commercial &amp; institutional buildings - 265,424 tCO<sub>2</sub>e (7% increase compared to 2007 baseline).</li> </ul>	
<ul style="list-style-type: none"> <li>Volume of water used in the Greater Victoria Water Supply Area</li> </ul>		<ul style="list-style-type: none"> <li>48.384 M m<sup>3</sup> of drinking water was delivered through the regional water supply system.</li> </ul>	

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




RCAS Action	Status	2020 Action / Projects	External Partners
4-1. <b>WORKING WITH PARTNERS, UPDATE THE REGIONAL INVENTORY OF LAND COVER.</b>	 In progress	<ul style="list-style-type: none"> <li>Updating regional inventory of land cover. This will include change in canopy and impervious surfaces based on jurisdictional boundaries and watershed. To be completed in 2021.</li> </ul>	<ul style="list-style-type: none"> <li>Local municipalities, core area, Saanich Peninsula, electoral areas</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>The 2020–2021 Land Acquisition Strategy was approved in May 2020. The proposed priority acquisitions are primarily additions to existing regional parks and will enhance the environmental values of a park, expand the regional park system, and will help protect existing natural areas within the parks. Climate change mitigation and adaptation values are factored into land acquisition criteria. The information from the landscape evaluation analysis will be used in the update of the 2012–2021 Regional Parks Strategic Plan.</li> </ul>	
4-2. <b>COLLABORATE WITH LOCAL GOVERNMENTS AND INTERESTED FIRST NATIONS GOVERNMENTS</b> to develop and implement a strategy to improve, increase area of, and protect rural, suburban and urban tree canopy and root space.	 Complete	<ul style="list-style-type: none"> <li>Land Acquisition Strategy renewed.</li> </ul>	<ul style="list-style-type: none"> <li>Local municipalities, core area, Saanich Peninsula, electoral areas</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>Land cover classification project will report on changes in canopy cover since 1985. Deliverables will include suitable tree planting areas on private and public land to help municipalities with planning projects.</li> </ul>	
4-3. <b>CONSIDER CARBON SEQUESTRATION AND STORAGE IN ALL CRD LAND, MARINE MANAGEMENT, ASSET MANAGEMENT AND ACQUISITION DECISIONS</b> to reduce community GHGe in collaboration with stakeholders and First Nations governments.	Ongoing	<ul style="list-style-type: none"> <li>Consider carbon sequestration in all park land acquisition decisions.</li> </ul>	<ul style="list-style-type: none"> <li>University of Victoria, Natural Resources Canada, Canadian Forest Service, ESSA Consultants</li> <li>Funding: Alliance Grant from the National Science and Engineering Research Council</li> </ul>
	 Planned	<ul style="list-style-type: none"> <li>Current two-year Land Acquisition Strategy concluded in 2019. Developing a new two-year strategy going forward.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>A collaborative research project, Balancing Forest, Wildfire and Carbon Management Strategies in a Changing Climate Project, seeks to model changes in forest composition and structure in the Greater Victoria Water Supply Area (GVWSA); associated changes to wildfire fuel types, crown fire initiation and burn probability; the effects of these potential changes on the carbon budget of the forests; and how forest fuel management activities could reduce potential threats to the forest.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>GVWSA Land Acquisition Priorities developed and approved by the Regional Water Supply Commission.</li> </ul>	





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

RCAS Action	Status	2020 Action / Projects	External Partners
4-3. <b>CONSIDER CARBON SEQUESTRATION AND STORAGE IN ALL CRD LAND, MARINE MANAGEMENT, ASSET MANAGEMENT AND ACQUISITION DECISIONS</b> to reduce community GHGe in collaboration with stakeholders and First Nations governments.	 Complete	<ul style="list-style-type: none"> <li>Utilizing a Pacific Institute for Climate Solutions grant funded student intern and support from staff at the Natural Resources Canada (NRCan) Pacific Forestry Centre, CRD completed a project that assessed the forest carbon sequestration potential of the region's forest lands. This first phase project utilized NRCan's carbon budget model to quantify potential and offer recommendations on forest management, considering carbon sequestration only. Staff hosted a webinar for interested local government and CRD staff to share key insights. Staff will continue to look for opportunities to further investigate this topic.</li> </ul>	<ul style="list-style-type: none"> <li>Pacific Institute for Climate Solutions</li> </ul>
	Ongoing	<ul style="list-style-type: none"> <li>Continue to implement Official Community Plan permit system for areas with sensitive ecosystems.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Acquisition of 145 acres of private forest land for protection of the Sooke Lake Reservoir watershed.</li> </ul>	
4-4. <b>DEVELOP A SILVICULTURE WORKING GROUP FOR THE JUAN DE FUCA ELECTORAL AREA</b> in collaboration with landowners.	On hold	<ul style="list-style-type: none"> <li>Not a priority at this time.</li> </ul>	
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Completion of the regional inventory of land cover</li> </ul>		<ul style="list-style-type: none"> <li>Planned completion in 2021.</li> </ul>	
<ul style="list-style-type: none"> <li>Number of hectares of protected areas, forest land and tree cover</li> </ul>		<ul style="list-style-type: none"> <li>53.1 = hectares of protected areas acquired.</li> </ul>	

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

RCAS Action	Status	2020 Action / Projects	External Partners
5-1. <b>MINIMIZE COMMUNITY GHGE</b> by completing the CRD Solid Waste Management Plan.	 In progress	<ul style="list-style-type: none"> <li>Draft Solid Waste Management Plan completed. Public engagement process was conducted and input is being incorporated.</li> </ul>	
5-2. <b>WORK WITH LOCAL GOVERNMENTS TO PLAN WASTE REDUCTION STRATEGIES</b> based on waste composition study results.	 In progress	<ul style="list-style-type: none"> <li>See Action 5-1.</li> </ul>	
5-3. <b>DEVELOP AND DELIVER PROGRAMS TO PROMOTE THE 3RS</b> (reduce, reuse, recycle) and zero waste approaches to reduce the amount of community solid waste (e.g. food preservation).	Ongoing	<ul style="list-style-type: none"> <li>Maintaining and promoting use of MyRecyclopedia online diversion directory.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Support curbside recycling education (e.g. subscription for service reminders and updates, seasonal diversion, “extra material”, warm weather tips education).</li> </ul>	
	On hold	<ul style="list-style-type: none"> <li>No water cart events were held in 2020 because of COVID-19 restrictions.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>In an effort to reduce household food waste in the capital region, the CRD joined Love Food Hate Waste Canada as a campaign partner in 2018. In 2020, the CRD shared promotional videos and food-saving tips through its social media platforms, YouTube channel and website, participated in Waste Reduction Week — promoting Food Waste Friday — and provided relevant content for two advertorial news articles and nine community association newsletters. The CRD also participates in quarterly campaign partner meetings. For more information visit: <a href="http://www.crd.bc.ca/lovefood">www.crd.bc.ca/lovefood</a>.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>The InfoLine is an essential part of education and outreach programs. This service responds to waste reduction, waste management and general Hartland Landfill inquiries.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>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 Managements 2020 Progress Report.</li> </ul>	


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

RCAS Action	Status	2020 Action / Projects	External Partners
5-3. <b>DEVELOP AND DELIVER PROGRAMS TO PROMOTE THE 3RS</b> (reduce, reuse, recycle) and zero waste approaches to reduce the amount of community solid waste (e.g. food preservation).	Ongoing	<ul style="list-style-type: none"> <li>MyRecyclopedia.ca tool was developed to encourage sustainable practices and to reinforce the 3Rs of reduce, reuse and recycle. Items listed received 246,440 web visits in 2020.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>10 organizations participated in the diversion funding program.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Partners with five non-profit organizations for the management of donated items received at the Hartland depot.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Hartland Public Drop Off Depot - Over 80 items from 28 product categories are accepted for recycling.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Under agreement with Recycle BC, the CRD provided 128,830 single family dwellings with curbside recycling service for packaging and paper products. Since the program's inception in 1989 over 505,967 tonnes of recyclables have been collected.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>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.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>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.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Supported industry-led product stewardship. Continued to have one of the highest medication return rates per capita amongst regional districts in the province and total of 19,459 tonnes of packaging and paper products was collected through CRD programs.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>In 2020, 5,476 tonnes of source-separated yard and garden material and wood waste was received, ground and utilized for Hartland operations and capital improvements.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Delivered waste education programming (three community programs, 26 school program and tours). Workshops disrupted by COVID-19.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Improved and developed new online resources, lesson plans and activities for virtual engagement on waste diversion. Piloted virtual live tour of landfill.</li> </ul>	

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




RCAS Action	Status	2020 Action / Projects	External Partners
5-3. <b>DEVELOP AND DELIVER PROGRAMS TO PROMOTE THE 3RS</b> (reduce, reuse, recycle) and zero waste approaches to reduce the amount of community solid waste (e.g. food preservation).	 Planned	<ul style="list-style-type: none"> <li>Virtual live tour of landfill planned for various schools for Earth Day.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>See Action 2-7 (Cool It! program).</li> </ul>	
5-4. <b>PROMOTE ORGANIC MATERIAL DIVERSION</b> (kitchen scraps, yard and garden waste) and facilitate the responsible recovery of resources locally.	 Planned	<ul style="list-style-type: none"> <li>Implementation of mobile incineration unit for disposal for select invasives is planned for 2021.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>See Action 5-3 (Love Food Hate Waste).</li> </ul>	
5-5. <b>IDENTIFY AND EVALUATE ADDITIONAL OPPORTUNITIES TO OPTIMIZE LANDFILL GAS RECOVERY AND ENERGY PRODUCTION FROM ORGANIC WASTE.</b>	 In progress	<ul style="list-style-type: none"> <li>Monthly speciation will support landfill gas utilization and operations.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Updated landfill gas quantification of fugitive emissions (wet and dry season).</li> </ul>	
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Completion of the CRD Integrated Solid Waste and Resource Management Plan</li> </ul>		<ul style="list-style-type: none"> <li>In-progress.</li> </ul>	
<ul style="list-style-type: none"> <li>Percentage of methane gas captured at Hartland Landfill</li> </ul>		<ul style="list-style-type: none"> <li>67% percentage of methane gas captured at Hartland Landfill.</li> </ul>	
<ul style="list-style-type: none"> <li>Per capita waste disposal rate</li> </ul>		<ul style="list-style-type: none"> <li>395 kg/per capita waste disposal rate. In 2018, BC's average was 505 kg per capita.</li> </ul>	

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

RCAS Action	Status	2020 Action / Projects	External Partners
6-1. <b>CONTINUE AND EXPAND DATA COLLECTION AND MAPPING EFFORTS TO IDENTIFY VULNERABILITIES TO THE IMPACTS OF CLIMATE CHANGE AND ACQUIRE RESOURCES</b> to help prepare for a changing climate (e.g. Light Detection and Ranging data).	 Complete	<ul style="list-style-type: none"> <li>Installed additional hydrology monitoring stations in the Leech Water Supply Area.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Harbours Inventory update for core area planned to be completed in 2021.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Update planned for this year for orthophoto project. Port Renfrew taking part in ground cover mapping project.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Greater Victoria Water Supply Area Forest Fuel Management - 55 Rithet North Fuel Break.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Purchased Post Wildfire Debris Flow Mitigation Supplies.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Working with regional partners to identify tsunami inundation safe zones and educate the public.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Additional hydrology monitoring in the Sooke and Goldstream Water Supply Areas.</li> </ul>	<ul style="list-style-type: none"> <li>Forest Technology Solutions</li> </ul>
	 Planned	<ul style="list-style-type: none"> <li>An intertidal olympia oyster survey is ongoing and will be included in the Harbours Inventory. To be completed 2021.</li> </ul>	<ul style="list-style-type: none"> <li>World Fisheries Trust</li> </ul>
	 Complete	<ul style="list-style-type: none"> <li>Completed Capital Region Coastal Flood Inundation Mapping Project to model and map various scenarios related to sea level rise and tsunamis. Shared results with local governments, First Nations and other partners.</li> </ul>	<ul style="list-style-type: none"> <li>Inter-Municipal Climate Action Working Group, Local Government Emergency Managers Advisory Committee</li> <li>Funders: Province of BC, Government of Canada (National Disaster Mitigation Fund)</li> </ul>









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

RCAS Action	Status	2020 Action / Projects	External Partners
6-2. <b>CONDUCT REGION-WIDE CLIMATE RISK AND VULNERABILITY ASSESSMENTS FOR NATURAL AND SOCIAL IMPACTS</b> (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"> <li>Bowker Creek Daylighting Feasibility Study is complete and report is being shared with municipalities for endorsement. Bowker Creek Blueprint Implementation Framework has been completed to operationalize improved hydrological function and greenways. Next steps include an inter-municipal committee to create watershed-wide standards.</li> </ul>	<ul style="list-style-type: none"> <li>City of Victoria, District of Saanich, District of Oak Bay</li> </ul>
	Ongoing	<ul style="list-style-type: none"> <li>Greenshore Training Level 1 course offered in 2020 and another course is planned for 2021.</li> </ul>	<ul style="list-style-type: none"> <li>Core local governments</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Updating the Regional Outcomes Monitoring Group as needed or as information becomes available. Collect and share data and indicators around the social determinants of health.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>
	 Complete	<ul style="list-style-type: none"> <li>Helped external group environmental group connect Craigflower Creek to online hydrological data tracking system.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>In 2021, contract consultant to implement better calibration on the seven creek data collecting systems to acquire improved flow data.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>As part of the Bowker Creek Daylighting Feasibility Study, looking at greenways for connectivity opportunities to rest of trail system. Updating the blueprint to incorporate updated greenways routing proposals.</li> </ul>	<ul style="list-style-type: none"> <li>District of Saanich, District of Oak Bay, City of Victoria</li> </ul>

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

RCAS Action	Status	2020 Action / Projects	External Partners
6-3. <b>CONVENE APPROPRIATE PARTNERS TO IDENTIFY AND FILL GAPS IN MARINE MONITORING PROGRAMS</b> , 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"> <li>Ongoing seafloor monitoring. Added new stations to cover the footprint of the new McLoughlin Point Wastewater Treatment Plant outfall. All stations should provide enhanced spatial coverage to detect any climate or broader environmental changes relative to our outfall impacts.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>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.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Monitoring program staff maintain connections with local academics and federal researchers to keep abreast of others' research into this topic. In 2020, staff attended the virtual Salish Sea Ecosystem Conference. In 2021, increase involvement in the Canadian Water and Wastewater Association.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Establish a Peninsula Harbour service to identify marine issues and determine solutions.</li> </ul>	<ul style="list-style-type: none"> <li>District of Central Saanich, District of Saanich, Town of Sidney</li> </ul>
6-4. <b>AS THE LATEST CLIMATE DATA BECOMES AVAILABLE, SHARE WITH STAKEHOLDERS AND FIRST NATIONS GOVERNMENTS</b> , and facilitate the updating of regional climate projections.	 Complete	<ul style="list-style-type: none"> <li>Hosted and coordinated invasive species best practices and management workshops.</li> <li>See Goal 6-1 (Coastal Flood Mapping Project).</li> </ul>	
6-5. <b>COMPILE RESEARCH ON ECOSYSTEM SHIFTS FOR STAKEHOLDERS, AND INTERESTED FIRST NATIONS, TO INCLUDE IN NATURAL AREA AND WATERSHED MANAGEMENT PLANNING</b> (e.g. watershed report cards).	Ongoing	<ul style="list-style-type: none"> <li>Continue partnership in the Climate Related Monitoring Program with BC Hydro, RioTinto, MetroVan and others.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Received hydrological survey, and watershed management plan and it is now complete.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Implementation of residential based nutrient reduction identified in the watershed management plan.</li> </ul>	

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







RCAS Action	Status	2020 Action / Projects	External Partners
6-5. <b>COMPILE RESEARCH ON ECOSYSTEM SHIFTS FOR STAKEHOLDERS, AND INTERESTED FIRST NATIONS, TO INCLUDE IN NATURAL AREA AND WATERSHED MANAGEMENT PLANNING</b> (e.g. watershed report cards).	 Planned	<ul style="list-style-type: none"> <li>Design of oxygenation system planned to reduce nutrient leaching from sediment and reduce algae blooms. Planned to be in operation by spring 2022.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Develop watershed assessment tool for Bowker Creek, Colquitz Creek, and Elk/Beaver Lake.</li> </ul>	
6-6. <b>COLLABORATE WITH LOCAL GOVERNMENTS, AND INTERESTED FIRST NATIONS GOVERNMENTS, TO INCLUDE REGIONAL CLIMATE CHANGE PROJECTIONS IN INFRASTRUCTURE PLANNING STANDARDS</b> (e.g. revise design storms, Intensity Duration Frequency curves).		<ul style="list-style-type: none"> <li>No actions reported.</li> </ul>	
6-7. <b>INCLUDE REGIONAL CLIMATE PROJECTIONS IN HAZARD, RISK AND VULNERABILITY ASSESSMENTS FOR THE THREE ELECTORAL AREAS'</b> Emergency Operations Work Plans and share regional climate change projections with local authorities' emergency programs.	 Complete	<ul style="list-style-type: none"> <li>Utilized grant funds to support equipment procurement and training to assist electoral areas in wildfire response planning.</li> </ul>	<ul style="list-style-type: none"> <li>Electoral areas' volunteer fire departments, North Galiano, Otter Point, Shirley and Port Renfrew</li> <li>Funding: \$117,000</li> </ul>
	 Planned	<ul style="list-style-type: none"> <li>Renew Electoral Area Community Wildfire Resiliency Plans.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Search for new location for an Emergency Operation Center on Salt Spring Island still ongoing.</li> </ul>	
6-8. <b>DEMONSTRATE LEADERSHIP BY DEVELOPING A CORPORATE CLIMATE ADAPTATION PLAN.</b>	 In progress	<ul style="list-style-type: none"> <li>See Appendix B.</li> </ul>	








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

RCAS Action	Status	2020 Action / Projects	External Partners
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Number of stakeholders and residents engaged through educational programming and outreach.</li> </ul>		<ul style="list-style-type: none"> <li>Data not available for 2020.</li> </ul>	
<ul style="list-style-type: none"> <li>Completion of the Climate Projections for the Capital Region report and integration of the results into CRD plans, strategies and processes</li> </ul>		<ul style="list-style-type: none"> <li>Study complete in 2017. Ongoing integration.</li> </ul>	
<ul style="list-style-type: none"> <li>Completion of an updated list of Species at Risk and critical habitats in regional parks</li> </ul>		<ul style="list-style-type: none"> <li>Regional Parks applying for a grant to support species at risk inventory and management which will help inform an updated list.</li> </ul>	
<ul style="list-style-type: none"> <li>Updated habitat survey for core area harbours</li> </ul>		<ul style="list-style-type: none"> <li>Harbours Inventory update for core area planned to be complete in 2021.</li> </ul>	
<ul style="list-style-type: none"> <li>Number of streams with water quality and flow monitoring stations</li> </ul>		<ul style="list-style-type: none"> <li>10 (including hydrometric). In addition, helped external group environmental group connect Craigflower Creek to online hydrological data tracking system.</li> </ul>	

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




RCAS Action	Status	2020 Action / Projects	External Partners
7-1. <b>COLLABORATE AND COORDINATE WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS GOVERNMENTS</b> to include climate change projections and risks in strategies, plans and policies.	 In progress	<ul style="list-style-type: none"> <li>Participated with seven other local and regional governments on Vancouver Island in the ICLEI Canada Together for Climate Initiative.</li> </ul>	<ul style="list-style-type: none"> <li>ICLEI Canada</li> <li>Funders: Real Estate Foundation of BC (via ICLEI)</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>Supported development of the Vancouver Island Agricultural Climate Adaptation Strategy.</li> </ul>	<ul style="list-style-type: none"> <li>BC Agriculture &amp; Food Climate Action Initiative, Province of BC, other Vancouver Island Regional Districts</li> </ul>
	 Complete	<ul style="list-style-type: none"> <li>Supported the TETACES / Gulf Islands Climate Action and Education Project. The project developed and delivered three, five-day intensive educational programs that combined current climate science with traditional knowledge of the WSANEC people to inform and support decision-making on land use and climate action at both the local and regional levels. The final report was completed in July 2020.</li> </ul>	
7-2. <b>WORK WITH STAKEHOLDERS, AND INTERESTED FIRST NATIONS GOVERNMENTS</b> , on an Integrated Watershed Management approach to changes in flows, groundwater storage and other stressors due to climate change.	 Planned	<ul style="list-style-type: none"> <li>Will incorporate information from upcoming climate adaptation plan into new Official Community Plans.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Culvert replacements considering climate change peak flow for Sooke Water Supply Area complete.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Update Bowker Creek Blueprint using Greenways, Watershed implementation study and daylighting feasibility inputs.</li> </ul>	

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

RCAS Action	Status	2020 Action / Projects	External Partners
7-3. <b>WORK WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS GOVERNMENTS</b> 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"> <li>Supporting customized inflow and infiltration pilot projects in Oak Bay and Esquimalt to educate on basement flooding prevention and identifying root causes. To be completed in 2021.</li> </ul>	<ul style="list-style-type: none"> <li>District of Oak Bay, Township of Esquimalt</li> </ul>
7-4. <b>INCORPORATE CLIMATE-RELATED DISASTER PLANNING AND COMMUNICATIONS INTO PUBLIC OUTREACH ACTIVITIES.</b>	 In progress	<ul style="list-style-type: none"> <li>Utilizing grant funds to promote FireSmart activities in electoral areas to minimize potential for wildfires.</li> </ul>	<ul style="list-style-type: none"> <li>Federation of Canadian Municipalities</li> <li>Funding: \$50,000</li> </ul>
	 Planned	<ul style="list-style-type: none"> <li>Protective Services is leading a series of community forums for each major island and CRD electoral area to increase awareness of climate-related emergencies such as wildfire and tsunami inundation. These forums will be held online in 2022 and will include local first responders, subject matter experts, emergency program, and stakeholders. Participation will be open to all residents and permit open discussion and questions with the goal of increasing preparedness and resiliency to future climate-related disasters.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>New public alert system being evaluated.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Maintain and promote PrepareYourself.ca.</li> </ul>	
7-5. <b>WORK WITH THE PROVINCE AND THE REGIONAL EMERGENCY MANAGEMENT PARTNERSHIP TO REDUCE THE RISK OF INTERFACE FOREST FIRES.</b>	 In progress	<ul style="list-style-type: none"> <li>Construction of the South Galiano Fire Hall is in progress.</li> </ul>	<ul style="list-style-type: none"> <li>Government of Canada, Southern Gulf Islands Electoral Area</li> <li>Funding: \$84,000</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>A regional FireSmart Committee has been established with representatives from local governments, fire departments, and stakeholders from across the capital region.</li> </ul>	<ul style="list-style-type: none"> <li>Government of Canada, Salt Spring Island, Pender Island, Juan de Fuca emergency program, Saturna FireSmart</li> <li>Funding: \$100,000</li> </ul>



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

RCAS Action	Status	2020 Action / Projects	External Partners
7-6. <b>INTEGRATE AVAILABLE INFORMATION ON CLIMATE CHANGE RISKS AND VULNERABILITIES INTO JUAN DE FUCA ELECTORAL AREA OCP DEVELOPMENT</b> 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"> <li>No actions reported.</li> </ul>	
7-7. <b>DEVELOP, DELIVER AND SUPPORT EDUCATIONAL PROGRAMS AND INITIATIVES THAT PROMOTE LOCAL FOOD SYSTEMS.</b>	On hold	<ul style="list-style-type: none"> <li>The seaweed harvest sites project is on hold due to COVID-19.</li> </ul>	<ul style="list-style-type: none"> <li>Washington, Mainland BC and Vancouver Island</li> </ul>
	 In progress	<ul style="list-style-type: none"> <li>Support planning for Indigenous Foods Conference. Due to disruption by COVID-19, the conference will be adapted to a video presentation.</li> </ul>	
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Incorporation of climate adaptation into emergency preparedness</li> </ul>	Ongoing		
<ul style="list-style-type: none"> <li>Completion of Green Infrastructure Common Design Guidelines</li> </ul>	 Complete		
<ul style="list-style-type: none"> <li>Number of partnerships focused on local food education</li> </ul>		<ul style="list-style-type: none"> <li>None reported.</li> </ul>	
<ul style="list-style-type: none"> <li>Number of high priority stormwater discharges</li> </ul>		<ul style="list-style-type: none"> <li>46 wet weather related sewer volume permit exceedances.</li> </ul>	
<ul style="list-style-type: none"> <li>Number of shoreline closure days and locations</li> </ul>		<ul style="list-style-type: none"> <li>108 closure days (combined from four locations).</li> </ul>	
<ul style="list-style-type: none"> <li>Length of staged water restrictions</li> </ul>		<ul style="list-style-type: none"> <li>May 1-Sept 30 (CRD Stage 1).</li> </ul>	




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

RCAS Action	Status	2020 Action / Projects	External Partners
8-1. <b>DEVELOP A REGIONAL BIODIVERSITY STRATEGY WITH STAKEHOLDERS AND INTERESTED FIRST NATIONS THAT INCLUDES A SPECIES INVENTORY, PLANTING GUIDELINES AND PLANNING FOR NATURAL AREAS.</b> 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.	 Planned	<ul style="list-style-type: none"> <li>Planned biodiversity inventory in development as a precursor to the strategy.</li> </ul>	
8-2. <b>FOSTER THE REGION'S NATURAL AREAS RESILIENCY TO CLIMATE-INDUCED CHANGE</b> (e.g. sea level rise, flood inundation) in collaboration with stakeholders and interested First Nations.	 In progress	<ul style="list-style-type: none"> <li>See Action 6-1 (Coastal Flood Mapping Project).</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Support <b>SNIDØEL</b> resiliency project at Tod Inlet, removing invasive species and building local connections. Planned completion in 2021.</li> </ul>	
	 Planned	<ul style="list-style-type: none"> <li>Planning an online symposium on invasive species with municipal partners, land managers and other stakeholders.</li> </ul>	
8-3. <b>INCLUDE THE VALUE OF NATURAL AREAS IN REGIONAL CLIMATE ADAPTATION IN ALL CRD LAND AND MARINE MANAGEMENT, ASSET MANAGEMENT AND ACQUISITION DECISIONS,</b> and work collaboratively with stakeholders and interested First Nations.	Ongoing	<ul style="list-style-type: none"> <li>Prepared the space for a community-based association to operate and develop gardens.</li> </ul>	
8-4. <b>ADVOCATE FOR INCREASED GROUNDWATER PROTECTION.</b>		<ul style="list-style-type: none"> <li>No actions reported.</li> </ul>	
8-5. <b>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.</b>		<ul style="list-style-type: none"> <li>No actions reported.</li> </ul>	

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

RCAS Action	Status	2020 Action / Projects	External Partners
<b>PERFORMANCE INDICATORS</b>			
<ul style="list-style-type: none"> <li>Completion of a regional biodiversity strategy</li> </ul>		<ul style="list-style-type: none"> <li>Not complete.</li> </ul>	
<ul style="list-style-type: none"> <li>Percentage change in the amount of tree canopy cover</li> </ul>		<ul style="list-style-type: none"> <li>Data unavailable.</li> </ul>	
<ul style="list-style-type: none"> <li>Watershed evaluations that incorporate environmental and hydrological monitoring</li> </ul>		<ul style="list-style-type: none"> <li>Evaluated water quality extensively in three watersheds. Took water quality measurements (dissolved oxygen, pH, conductivity, temperature, orthophosphorus, nitrate, turbidity, E.coli) at the mouth of 25 other creeks. Measured just E.coli in approximately 10 others.</li> </ul>	
<ul style="list-style-type: none"> <li>Number of volunteer hours leveraged in restoration or stewardship activities</li> </ul>		<ul style="list-style-type: none"> <li>CRD Parks - 2176 hours by 344 volunteers.</li> </ul>	


## Additional | Regional climate action

RCAS Action	Status	2020 Action / Projects	External Partners
A-1. <b>FACILITATE REGIONAL CLIMATE ACTION EFFORTS AND SHARE INFORMATION ON THE BROAD RANGE OF CLIMATE ACTION TOPICS.</b>	Ongoing	<ul style="list-style-type: none"> <li>Continue to administer the CRD Climate Action Inter-Municipal Working Group and Task Force.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Continue to develop and distribute a monthly climate action e-newsletter to local governments.</li> </ul>	
	Ongoing	<ul style="list-style-type: none"> <li>Maintain collaboration websites to support ongoing coordination and communication for members of the inter-municipal committees.</li> </ul>	
		<ul style="list-style-type: none"> <li>Discontinued the Resilient Region Exchange Series model in light of COVID-19.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Completed first year of two year BC Hydro co-funded community energy specialist position.</li> </ul>	
	 In progress	<ul style="list-style-type: none"> <li>Provided quarterly updates on climate action activities through corporate dashboard and Chief Administrative Officer Progress report.</li> </ul>	
	 Complete	<ul style="list-style-type: none"> <li>Various CRD staff provided input and data into the Transition Salt Spring Climate Action Plan 2.0.</li> </ul>	<ul style="list-style-type: none"> <li>Transition Salt Spring</li> </ul>

# 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. <b>IMPLEMENT THE CLIMATE LENS TEMPLATE TO PROVIDE A CLIMATE LENS REVIEW ON CAPITAL PROJECTS</b>	2017	 Complete	<ul style="list-style-type: none"><li>The CRD implemented a climate lens on all capital projects greater than \$100,000 in value, and all capital projects 'in scope' for greenhouse gas reporting. The climate lens review is conducted during the capital budgeting and planning cycle. Staff will be reviewing this procedure as part of the renewal of the climate action strategy, which will inform future implementation phases of the climate lens policy.</li></ul>
1-2. <b>PROVIDE MEMBERSHIP OF ALL COMMITTEES AND COMMISSIONS WITH AN ORIENTATION TO THE CRD'S CORPORATE CLIMATE POLICY AT THE START OF EACH NEW SESSION</b>	Each new session	Ongoing	<ul style="list-style-type: none"><li>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. For example, this was included in the Hartland Landfill Gas Utilization reporting to inform Board decision making.</li></ul>
1-3. <b>INCLUDE CLIMATE LENS CONSIDERATIONS WITHIN STAFF REPORTS TO THE CRD BOARD AND COMMITTEES</b>	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. <b>INCORPORATE CLIMATE CHANGE CONSIDERATIONS INTO BUDGET PLANNING CYCLE</b>	<i>Annually with service planning</i>	Ongoing	<ul style="list-style-type: none"> <li>The CRD continues to integrate climate change considerations into CRD management and operational decision-making.</li> <li>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).</li> <li>Since 2018, the Climate Action Reserve Fund has supported corporate climate action feasibility, energy studies, and related planning activities to corporate operations. 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 complete in mid-2021.</li> <li>The CRD incorporated climate change considerations into regional and corporate strategic planning and included the climate lens into the capital planning template.</li> <li>A corporate climate action fleet and facilities working group meets quarterly to identify and coordinate key policy procedures and projects across the organization.</li> <li>All of these actions resulted in recognition for the CRD. In 2020, the CRD was recognized as one of Canada's greenest employers.</li> </ul>
2-2. <b>PREPARE AN ANNUAL SUMMARY ACROSS DIVISIONS</b> to present to senior management prior to service plan reviews	<i>Annually with service planning</i>	Ongoing	
2-3. <b>UPDATE THE PROJECT MANAGEMENT PROCESS TO INCORPORATE CLIMATE ACTION POLICY</b> into project requirements documents and project level decision-making	<i>TBD</i>	On hold	
2-4. <b>UPDATE THE ASSET MANAGEMENT PROCESS</b> to incorporate evaluation of most energy-efficient and/or low-carbon technologies at time of renewal	<i>2019</i>	 In progress	
2-5. <b>INCLUDE CLIMATE CHANGE POLICY AND TARGET CONSIDERATIONS DURING CAPITAL PROJECT INITIATION PROCESS</b>	<i>Ongoing</i>	 Complete	
2-6. <b>DEVELOP A MECHANISM TO PROVIDE FINANCING (SEED FUNDING) FOR STUDIES</b> or components of capital projects that support the CRD's corporate climate action policy	<i>2018</i>	 Complete	
2-7. <b>INTEGRATE A REQUIREMENT TO DOCUMENT ALIGNMENT WITH THE CRD'S CORPORATE CLIMATE ACTION POLICY INTO STRATEGIC ASSET MANAGEMENT PLANS</b> for new and retrofit facilities and infrastructure	<i>2020</i>	 In progress	
2-8. <b>ESTABLISH A STAFF CLIMATE ACTION ENGAGEMENT PROGRAM</b> including a climate action recognition program that acknowledges climate leadership among CRD employees	<i>2018</i>	 In progress	
2-9. <b>ESTABLISH AN ONGOING STAFF CLIMATE ACTION WORKING GROUP TO SHARE KNOWLEDGE ACROSS THE ORGANIZATION</b> and continually evaluate best opportunities for accelerating climate action	<i>Ongoing</i>	 In progress	
2-10. <b>UPDATE THE PROCUREMENT POLICY TO ALIGN PROCUREMENT AND VENDOR SELECTION WITH THE CRD'S CORPORATE CLIMATE POLICY</b> 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. <b>ESTABLISH A CORPORATE ENERGY MANAGEMENT PROCESS FOR BUILDINGS, FACILITIES AND INFRASTRUCTURE</b> 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"> <li>Accurate greenhouse gas (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.</li> <li>In light of COVID-19, the Province waived Climate Action Revenue Incentive Program reporting requirements for 2019 but the CRD was still able to complete the report and a 2019 Climate Action Annual Report.</li> <li>In 2020, the CRD started using a different GHG reporting tool as the province discontinued the SMARTTool and have been onboarding historical data into a new GHG accounting tool. CRD is participating in a BC Hydro corporate energy management program and is accessing support for planning activities and energy audits. Various sites have been approved to complete American Society of Heating, Refrigerating and Air-Conditioning Engineers Energy Audits.</li> </ul>
3-2. <b>ESTABLISH A PROCESS TO COLLECT THE GHG EMISSIONS FOR ALL CONTRACTED SERVICES CONSIDERED "IN SCOPE" FOR GHG REPORTING</b>	Ongoing	On hold	
3-3. <b>ESTABLISH A FLEET MANAGEMENT SYSTEM</b> 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	On hold	<ul style="list-style-type: none"> <li>The CRD also continued the Zero Emissions fleet Initiative and will implement recommendations overtime.</li> </ul>
3-4. <b>INCORPORATE OUTCOMES OF ENERGY MANAGEMENT MONITORING INTO AN ADAPTIVE MANAGEMENT PROCESS</b> to ensure continuous improvement	2018	Ongoing	
3-5. <b>DEVELOP A COMMUNICATIONS PLAN TO SHARE CORPORATE PROGRESS ON CLIMATE ACTION</b> with staff and public	2017	 Complete	
3-6. <b>COORDINATE THE ANNUAL CARIP REPORTING REQUIREMENTS</b> , 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. <b>COMPLETE DOWNSCALED CLIMATE PROJECTIONS REPORT AND IDENTIFY POTENTIAL IMPACTS OF CLIMATE CHANGE FOR THE REGION</b>	2017	 Complete	<ul style="list-style-type: none"> <li>The Climate Projections for the Capital Region Report, completed in 2017, identified that temperatures in the capital region are warming, and the region would experience more frequent and wetter storms and be susceptible to sea level rise. To prepare for these changes, the CRD has included climate adaptation policy and considerations into the climate lens review that is conducted on capital projects. In 2020, the CRD completed a coastal flood hazard mapping and modelling project, which investigated coastal flood hazards due to sea level rise and tsunamis. Deliverables will support future asset climate risk assessments of CRD assets.</li> <li>Also in 2020, the CRD initiated a corporate climate adaptation planning process which will be complete in 2021. It 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 Zero Emissions Fleet Initiative has an emergency resilience component and the CRD has engaged with a masters student from the University of Victoria Institute for Integrated Energy Systems to complete a research project on the role of electric vehicles in a local disaster scenario.</li> </ul>
4-2. <b>IDENTIFY POTENTIAL IMPACTS OF SEA LEVEL RISE ON CRD ASSETS</b>	2018	 In progress	
4-3. <b>DEVELOP A CORPORATE CLIMATE ADAPTATION PLAN FOR THE CRD</b>	2019	 In progress	
4-4. <b>CONSIDER IDENTIFIED CLIMATE IMPACTS WITHIN RISK REGISTERS</b> in the enterprise risk management process and potential impacts of climate change for the region	2019	Ongoing	
4-5. <b>CONSIDER CLIMATE ADAPTATION IN ALL NEW CAPITAL PROJECTS THROUGH THE CLIMATE LENS</b> review template	Ongoing	Ongoing	
4-6. <b>IDENTIFY OPPORTUNITIES FOR GREATER REGIONAL RESILIENCE</b> 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. <b>CONTINUE TO REPLACE END-OF-LIFE GAS AND DIESEL VEHICLES WITH ZERO EMISSIONS VEHICLES</b> when possible, including adding more battery electric vehicles to the fleet	Ongoing	Ongoing	<ul style="list-style-type: none"> <li>The CRD's goal of achieving continuous, significant reductions in greenhouse gas emissions from the fleet is being implemented through the Zero Emissions Fleet Initiative (ZEFI).</li> <li>The CRD's goal of achieving continuous reductions in fleet related GHG emissions is being implemented through ZEFI. The CRD continues to acquire plug-in hybrid electric vehicles (PHEVs), electric vehicles (EVs) and hybrid vehicles to reduce fleet emissions. In late 2020, we received two hydrogen vehicles to pilot in the fleet over a six month period as per ZEFI commitments. In 2019, 8% of new light vehicles procured were EVs. In 2020, of all new light vehicles procured: 10% were EVs, 10% were PHEVs, and 20% were hybrids. The whole light duty fleet is: 3% EVs, 1.4% PHEVs, 4.7% hybrids.</li> <li>The Corporate Green Fleet Policy is due to be completed in 2021 and will help prioritize low emission vehicles in CRD procurement. Staff will also be pursuing technical studies to support additional EV charging of fleet vehicles.</li> <li>In 2020, the CRD completed a corporate electric bike procedure and expanded e-bike fleet within corporate CRD Headquarters and CRD Parks to a total of nine e-bikes, and trained an additional 36 staff members in their use. Expanded bike and e-bike parking was added at CRD Headquarters for staff commuters.</li> </ul>
5-2. <b>IDENTIFY, DEVELOP OR PROCURE A TOOL TO SUPPORT SELECTION OF NEW VEHICLES</b> based on utilization, operational needs, potential for electric vehicles and right-sizing	Ongoing	Ongoing	
5-3. <b>REVIEW AND IDENTIFY PATH TO MEETING HIGHEST LEVEL OF THE WEST COAST ELECTRIC FLEET PLEDGE</b> (striving towards purchasing at least 10% zero emissions vehicles for all new light-duty fleet purchases)	2017	 Complete	
5-4. <b>BETTER UTILIZE SAP ASSET MANAGEMENT SYSTEM</b> to support preventative maintenance program and track all costs (including purchase-card purchases) associated with each fleet unit	TBD	On hold	
5-5. <b>CONDUCT AN IN-DEPTH ANALYSIS OF THE ENTIRE CRD FLEET</b> to identify ways to optimize fleet utilization and efficiency and to reduce emissions and cut costs	2017-2020	 In progress	
5-6. <b>IDENTIFY, DEVELOP OR PROCURE A TOOL TO SUPPORT PREPARATION OF HIGH-LEVEL BUSINESS CASES</b> that demonstrate lifecycle costs and payback (fuel and maintenance) for investing in efficient vehicles	2017-2020	 In progress	
5-7. <b>INSTITUTE FLEET MANAGEMENT BEST PRACTICES</b> 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. <b>RENEW THE DRAFT CORPORATE FLEET POLICY (2007) AND DEVELOP OR IDENTIFY TOOLS TO SUPPORT IMPLEMENTATION OF THE POLICY</b> , 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. <b>ADD TWO ADDITIONAL BATTERY ELECTRIC VEHICLES TO THE CRD FLEET</b> to be available for staff to test and determine the locations and uses where a battery electric vehicle is a good fit to replace gas or diesel vehicles.	2018	 Complete	
5-10. <b>TEST THE USE OF ELECTRIC BIKES FOR THE SOURCE CONTROL PROGRAM INSPECTIONS</b> to replace existing gas-powered vehicle use, and evaluate opportunities for other downtown or short trip applications	2017-2020	 Complete	
5-11. <b>TEST HYDROGEN FUEL CELL ELECTRIC VEHICLES</b> to replace existing gas-/diesel-powered vehicles that are used for longer trips and heavier-duty applications	2017-2020	 In progress	
5-12. <b>MOVE TOWARDS CENTRALIZED RESPONSIBILITIES FOR FLEET VEHICLE ACQUISITION, USE AND MAINTENANCE</b> 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. <b>INCORPORATE ENERGY EFFICIENCY INTO ALL REGIONAL WATER SUPPLY INFRASTRUCTURE RENEWAL PROJECTS</b> through strategic asset management plans		Ongoing	<ul style="list-style-type: none"> <li>In 2020, the CRD approved, in principle, an agreement where FortisBC will purchase Renewable Natural Gas (RNG) generated from Hartland Landfill for beneficial use in its natural gas distribution system. The project is expected to reduce the region's greenhouse gas (GHG) emissions by approximately 264,000 tonnes of carbon dioxide equivalent over the 25-year project life. The CRD hopes to be able to access some of the RNG for their corporate use in the future as well.</li> <li>The energy consumption of CRD buildings and facilities will be reviewed as part of the BC Hydro supported strategic energy management plan and associated American Society of Heating, Refrigerating and Air-Conditioning Engineers Audits.</li> <li>In 2020, CRD submitted a provincial grant application for up to \$1.9 million to support a heat recovery project at Panorama Recreation Centre. This is would significantly reduce the facility's GHG emissions. A grant decision is expected in spring 2021.</li> </ul>
6-2. <b>COMPLETE RECOMMENDATIONS FROM THE PANORAMA AND SEAPARC ENERGY ASSESSMENTS</b> 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	
6-3. <b>REDUCE GHG EMISSIONS THROUGH FUEL SWITCHING TO RENEWABLE NATURAL GAS (RNG), AND CONDUCT A BUSINESS CASE ANALYSIS TO PRODUCE RNG</b>	2018-2020	 In progress	
6-4. <b>DEVELOP CONSERVATION DEMAND MANAGEMENT PROGRAM FOR STAFF TO RAISE AWARENESS ABOUT ENERGY-SAVING HABITS AND BEHAVIOURS</b>	TBD	On hold	
6-5. <b>COMPLETE A REVIEW OF THE 15 LARGEST ENERGY CONSUMING BUILDINGS AND FACILITIES</b> 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	

# 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. <b>ESTABLISH TECHNICAL STANDARDS FOR NEW CONSTRUCTION TO ENSURE HIGH ENERGY PERFORMANCE AND LOW-CARBON CRITERIA ARE INCORPORATED INTO DESIGN OF NEW FACILITIES</b> , 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"> <li>The best time to address energy consumption and greenhouse gas (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. Asset management has applied for a grant to develop a template for a corporate business case analysis to include lifecycle considerations. In 2021, staff also intend to develop a new corporate green buildings policy which will include GHG emissions considerations.</li> </ul>
7-2. <b>DESIGN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS THAT MINIMIZE THE USE OF FOSSIL FUELS</b> (heating oil and natural gas) and consider renewable energy sources		Ongoing	
7-3. <b>INCORPORATE LIFE CYCLE COSTING TO CALCULATE THE BUSINESS CASE FOR ALL CAPITAL PROJECTS OVER \$100,000 IN VALUE</b>	<i>TBD</i>	On hold	
7-4. <b>UPDATE THE PROJECT MANAGEMENT PROCESS TO REQUIRE COMMISSIONING OF ALL NEW BUILDINGS</b> to ensure they are operating at maximum efficiency	<i>TBD</i>	On hold	
7-5. <b>INCLUDE CLIMATE ACTION CONSIDERATIONS IN THE CAPITAL PROJECT INITIATION PROCESS</b> (see page 46 of the Corporate Climate Action Strategy)	<i>TBD</i>	On hold	