



# 2024 Climate Action Report



11/18/2024

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## INTRODUCTION

This report provides a summary of the current achievements towards climate action for the Township of Esquimalt, with a focus on the 2023 actions. It is the first report since the “2019 Township of Esquimalt Climate Action Progress Report” to provide a local analysis of corporate action and community progress towards greenhouse gas emissions reduction. It also includes a statement on the Township’s progress towards corporate adaptation and community climate change resilience.

### **The 2023 Global Situation**

The need for climate action has never been more urgent with [2023 being “the warmest year in the 174-year observational record”](#). According to the World Meteorological Organization (WMO) in 2023,

“heatwaves, floods, droughts, wildfires, and rapidly intensifying tropical cyclones caused misery and mayhem, upending everyday life for millions and inflicting many billions of dollars in economic losses” ([March, 2024](#)).

[In BC, the hottest, driest year devastated people and communities](#) and resulted in record spending on wildfire firefighting ([August, 2024](#)). In many communities, including Esquimalt, the unprecedented heat and smoke impacted people’s health and well-being. A study commissioned by Health Canada found that [78 percent of Canadian youth reported climate change negatively impacts their mental health](#) with 56 percent reporting feeling afraid, sad, anxious, and powerless ([January, 2023](#)).

According to the [United Nations](#),

“it has become increasingly critical to develop local climate plans where cities commit to strengthening their climate resilience, raising adaptive capacity, reducing their emissions, improving their disaster preparedness, upgrading response strategies, and adopting stronger adaptation and mitigation measures” ([June, 2024](#)).

The success of current emissions reduction efforts is crucial to preventing the worst future scenarios of the climate crisis. Adaptation to these impacts is essential as global temperatures will continue to increase and remain at threatening levels for considerable time, even if we were to eliminate all greenhouse gas (GHG) emissions today.

Since approximately half of BC’s GHG emissions are under the direct or indirect control of municipal governments, the province has recognized that action at the local government level is crucial to meeting its own GHG emission reduction target of 80 percent below 2007 levels by 2050.

## **BC Climate Action Charter**

The Township of Esquimalt signed on to the BC Climate Action Charter (Charter) in October of 2008. The Climate Action Charter is a voluntary agreement between the BC government, Union of BC Municipalities (UBCM), and each local government signatory to take action on climate change. The Charter was launched at the 2007 UBCM Convention and since then, almost every local government in BC has signed. Under the Charter, local government signatories commit to:

- Becoming carbon neutral in their corporate operations
- Measuring and reporting their community's greenhouse gas emissions
- Creating complete, compact, more energy efficient communities.

As part of this commitment the Township completes the Local Government Climate Action Program (LGCAP) survey requirements yearly.

## **Esquimalt Official Community Plan Targets**

The Township has also set targets within the Official Community Plan for greenhouse gas reduction. These are outlined in section 13.3 of the OCP as follows:

- Take action to reduce community greenhouse gas (GHG) emissions by at least 38 percent by 2030, compared to 2007 levels.
- Strive for the ultimate objective of carbon neutrality by realizing zero net community GHG emissions by 2050.

## **Esquimalt Climate Action Plans**

On July 11, 2022, Council approved the Esquimalt Climate Action Plan, Community Climate Mitigation Plan, and the Adaptation Planning Guide. These [three plans](#) provide objectives and strategies to guide Council and staff towards actions and projects that will, if successful, ultimately achieve the Township's climate targets, and provide greater resiliency for residents and the organization.

The Township of Esquimalt Mitigation Plan was written with guidance from the Community Energy Association (CEA), a respected climate action leading organization in BC. The community was engaged to choose climate actions that would be appropriate for Esquimalt to carve a pathway towards a low carbon future and meet the emissions reduction target of 38% below 2007 levels by 2030. The strategies and actions are grouped into the seven Big Moves: Retrofit Existing Buildings, Decarbonize New Buildings, Shift Beyond the Car, Electrify Passenger Transport, Decarbonize Commercial Transport, Close the Loop on Waste, and Organizational Leadership.

The Township of Esquimalt Adaptation Planning Guide was developed in 2020 with the support of ICLEI Canada, a leading authority in the field of climate change adaptation and resilience for local governments. The guide provides six adaptation objectives to improve Esquimalt's community resilience: Integrate Climate Change Thinking and Response, Strengthen Infrastructure Resiliency, Reduce Risk to Buildings and Property, Protect Biodiversity and Enhance Ecosystem Functions, Build Community Resilience, and Protect Public Health and Safety.

The Climate Action Plan was created by staff as a working document and contains the “Big Moves”, Objectives, Strategies, and Actions from both the Mitigation Plan and the Adaptation Guide, plus further sub-actions that staff identified as a step towards completion of the larger actions.

Also, adopted in 2022 was the Active Transportation Network Plan (ATNP) which provides direction to improving how people walk, ride, and roll within and through the Township. With transportation contributing 45 percent of community GHG emissions in 2022, improvements to climate-friendly transportation will be essential in lowering community emissions and meeting local and global emission targets.

With these four documents as guidance staff have been collaborating with other regional partners to implement the strategies and actions, as a step to realizing the climate objectives and targets.

## LGCAP and CARIP

From 2012 - 2021, the Township participated in the BC Climate Action Revenue Incentive Program (CARIP), a conditional grant program that provided funding to local government Charter signatories in the amount of 100 percent of the carbon tax that they pay directly. After the pandemic (since 2022) the province changed their program to the Climate Action Revenue Incentive Program (LGCAP), which replaced the CARIP and bases funding on population levels and participation in the program.

Under CARIP staff would calculate the amount of carbon tax paid for corporate ‘core’ business operations, submit the amount to the province along with a report detailing the actions taken during the reporting year to reduce GHG emissions, and post the results on the municipal website. Under LGCAP staff calculate GHG emissions from core business operations, estimate the emissions produced by the Township's contracted services, complete the LGCAP survey detailing mitigation and adaptation actions and post it to the website, [Esquimalt.ca](https://www.esquimalt.ca). The scope of contractor associated emissions that are counted are limited to regular services and do not include new construction, administration, governance, or stationary sources

(buildings). Police services emissions are not included in the inventory, but library services are.

### **Carbon Tax and Sustainability Reserve Fund**

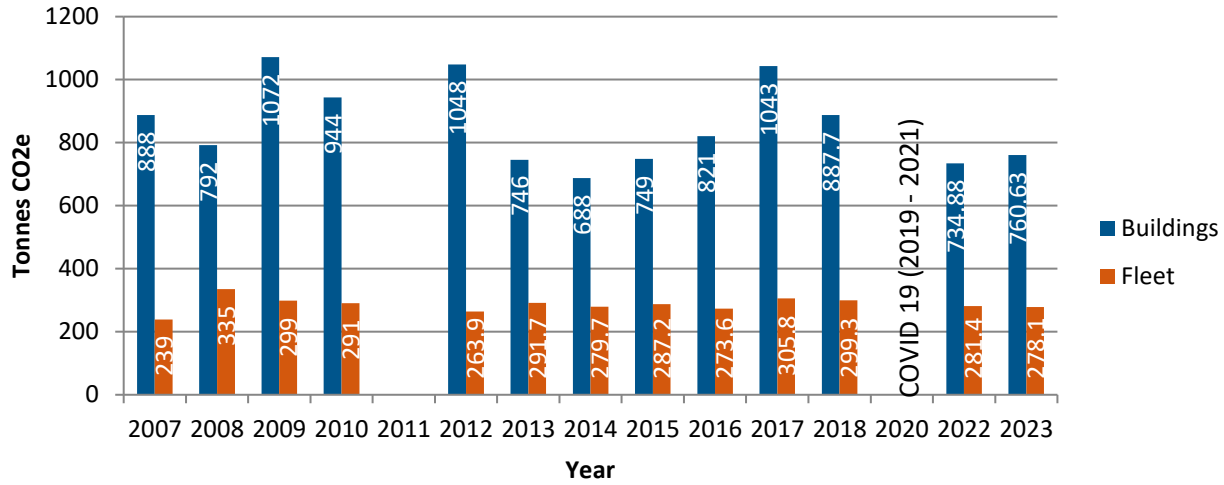
The Township has been depositing the carbon tax refund into the Sustainability Reserve Fund and using this funding for projects related to climate action. The funds must be used towards [CleanBC Roadmap to 2030 and/or Climate Preparedness and Adaptation Strategy](#) objectives.

## **CORPORATE GHG EMISSIONS INVENTORY**

Staff have calculated the Township’s corporate GHG emissions annually from 2007-2019, 2022, and 2023 with a break during the COVID19 pandemic (2019-2021). This inventory is reported each July for the preceding year, to the province and made public, as required under the Climate Action Charter. The data for the inventory is obtained primarily from utility billing information and fuel purchases. All local governments are asked to use the provincial methodology, unless they have been using a previously endorsed methodology. Esquimalt staff use the provincial CleanBC scope and calculators. The inventory includes GHG emissions produced by municipal buildings, infrastructure, fleet and tools, staff travel to conduct regular business, and recently includes the emissions attributed to the municipality’s contractors (contracted emissions). The scope and methodology have been refined over the years by the province and by staff, so figures from year to year are not fully comparable but they do provide an indication of where reductions have been made and where future improvements need to occur.

Figure 1 (next page) shows the stationary (buildings and infrastructure) and mobile (fleet) emissions for the corporation since 2007.

**Figure 1. Corporate GHG Emissions 2007-2023**

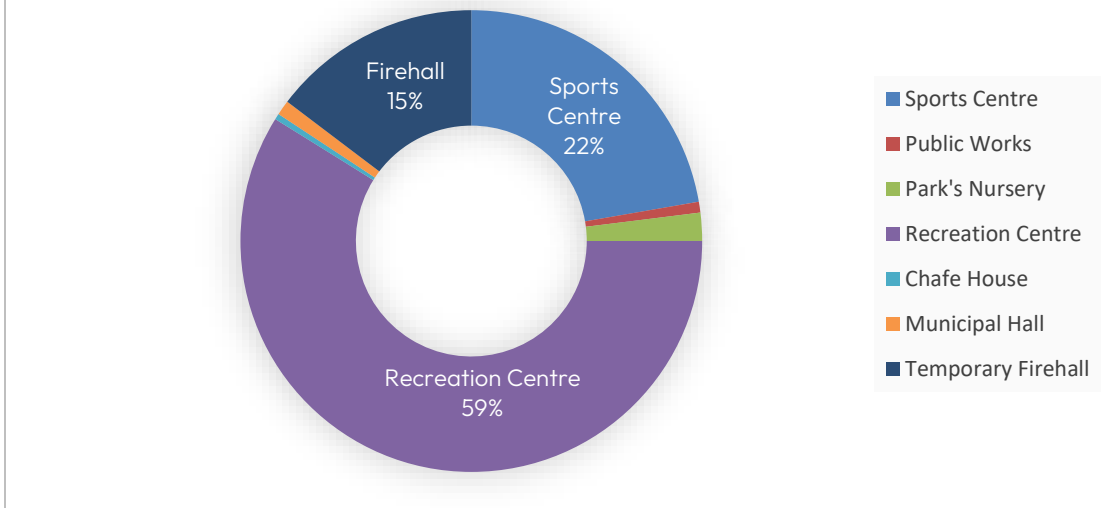


Corporate emissions have ranged from a high of 1371 tCO<sub>2</sub>e (2009) to 968 tCO<sub>2</sub>e in 2014. Some of the year-to-year variability can be accounted for by the introduction of new emissions factors for different fuel types as the GHG emissions reporting became more refined. Other influences include weather variability, new vehicle purchases (a full-size dump truck in 2023), projects undertaken, facility usage levels, maintenance closures, and staffing changes. During the COVID19 pandemic the province did not request GHG emissions reporting, just carbon tax payment reporting. With facility/program closures and usage changes these years would have introduced even greater variability into the reporting. Parks and Recreation facility usage did not reach peak pre-pandemic levels again until 2023. Globally, GHG emissions accounting is working towards the standardization required in financial accounting but has a way to go.

The proportion of mobile (fleet) emissions to building emissions has increased over time with the increase in number of vehicles owned by the municipality, and the sale, demolition or retrofitting of municipal buildings. With the Recreation Centre open to the public 17 hours per day, the pool operating systems running 24 hours per day, and the Sports Centre ice and dehumidification systems running 24 hours a day during the ice season (September-April), it is not surprising that the majority of building emissions are from these facilities.

Figure 2 (next page) illustrates the percent of GHG emissions from the operation of the various municipal buildings based on natural gas usage.

**Figure 2. 2023 Corporate Building GHG Emissions**



## CORPORATE PROGRESS ON GHG REDUCTION

The Township is a growing community. Reaching its Charter commitments while providing the expected level of municipal services to a growing population will be a challenge. While the fleet emissions are holding steady, staff began working on a [Fleet Electrification Plan](#) in 2023, that was endorsed by Council in 2024. As electric vehicles become more readily available in the near future, the replacement of existing gasoline and diesel vehicles is expected to significantly impact overall corporate emissions. Some of the largest emitters will however be difficult and costly to replace until the technology and the rate of production is increased by industry.

Some progress towards energy efficiency has been made in the buildings and streetlights with the introduction of LED fixtures throughout the Township. In 2023, two new high-efficiency boilers replaced the 50-year-old boilers at the recreation centre and the municipal hall received new roof insulation. Staff also began working on a 'Roadmap' towards emissions reduction that will model the best future retrofits to reduce GHG emissions while maintaining/improving access to services for residents. More 2023 actions undertaken towards climate mitigation and adaptation can be viewed in the matrix found in 'Appendix A - Climate Action Plan 2023 report'.

## COMMUNITY GHG EMISSIONS INVENTORY

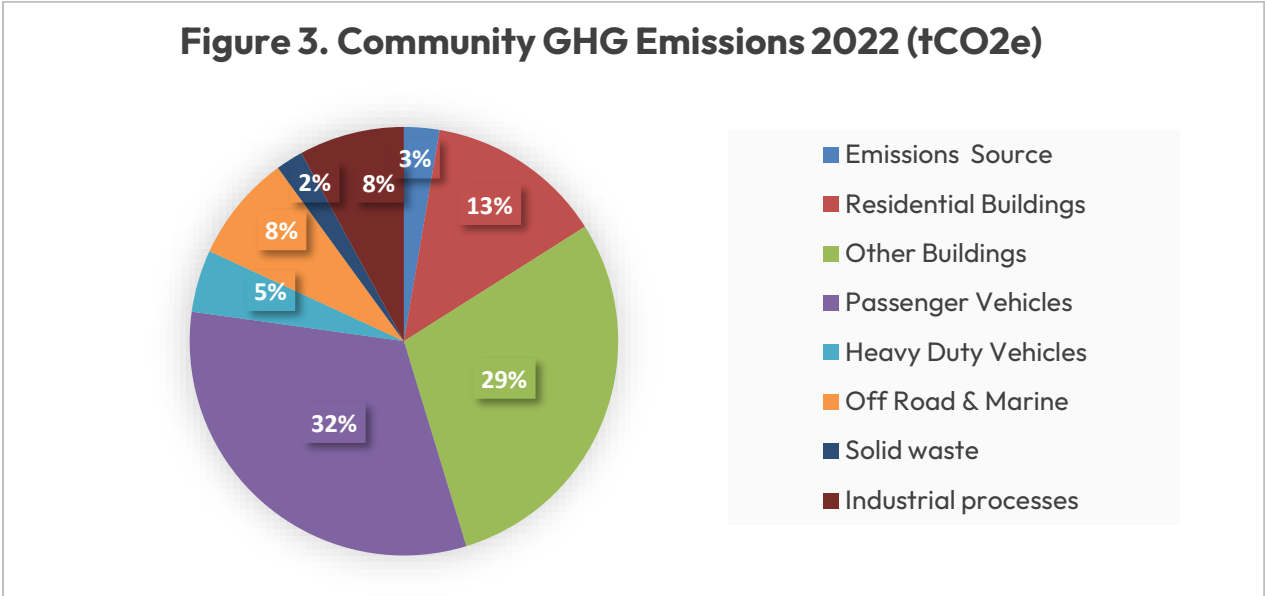
The community GHG inventory has been provided for the Township by the Capital Regional District (CRD) for the years 2018, 2020, and 2022 using the GPC Protocol BASIC or BASIC+



reporting requirements. The CRD region has historically (2007, 2010, and 2012) relied on the provincial Community Energy and Emissions Inventories (CEEI) to baseline and track community GHG emissions. However, there have been some limitations to the CEEI which has resulted in Stantec using GPC BASIC+ to prepare the [CRD regional inventory](#). The [BASIC+](#) protocol meets the reporting standard for local governments that have committed to the Global Covenant of Mayors—an agreement led by community networks to undertake a transparent and supportive approach to measure GHG emissions community-wide.

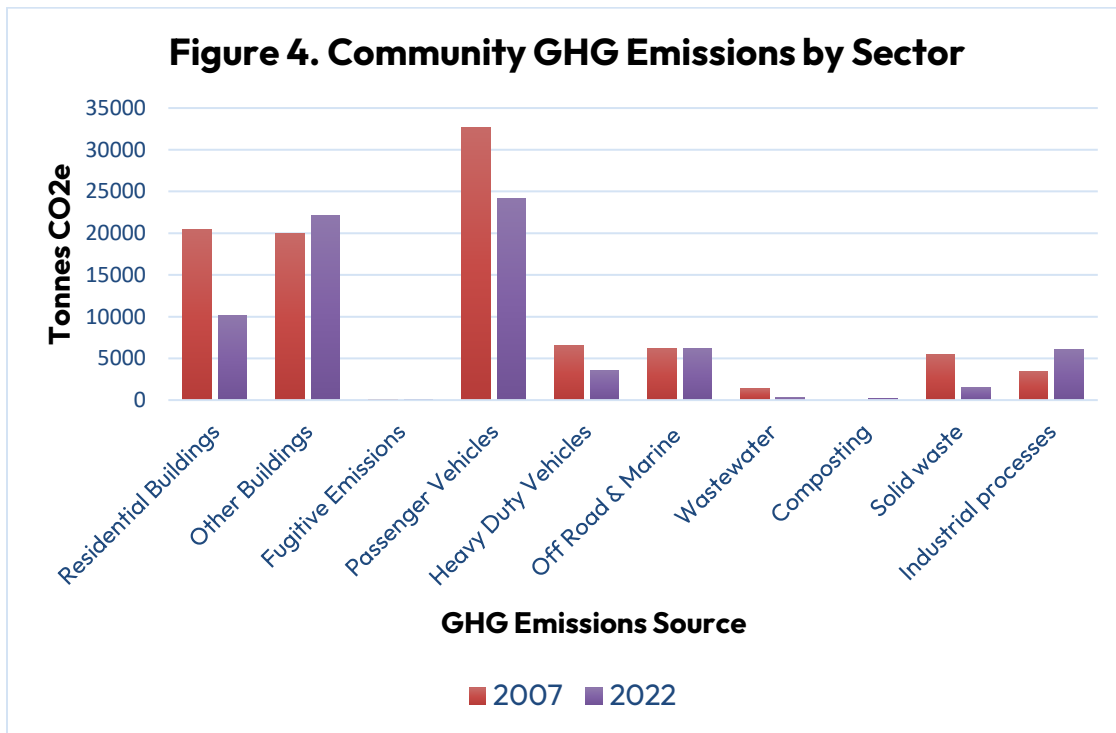
The community GHG inventory is an estimate of the GHG emissions from all of the activities within the municipality as a whole. The community inventory includes direct emissions such as combustion of fossil fuels for heating buildings, as well as transboundary emission sources generated by community activities. For example, on-road transportation was calculated using fuel consumption and vehicle kilometres travelled data for vehicles registered within the Township’s boundaries, although some of this travel is obviously outside Esquimalt. The Township’s solid waste figures were estimated on a per capita basis from CRD solid waste data.

The Township’s community emissions profile in 2022 showed that transportation accounts for about 45 percent of the emissions and buildings produce about 42 percent of the total emissions (Figure 3). Waste now accounts for about 2 percent of the total emissions. This profile is typical of many other urban municipalities. The total number of GHGs from all three sources was 74,246 tCO<sub>2</sub>e for a population of 19,536, living in 9438 dwellings, and owning 11,245 registered vehicles.



## COMMUNITY GHG EMISSIONS PROGRESS

Figure 4 illustrates the change in GHG emissions levels for each sector source from the years 2007 compared to 2022. The greatest emissions reductions are seen in the solid waste at 71.6 percent reduction, largely due to the implementation of the recycling program. Residential buildings have seen an emissions reduction of 67 percent, largely due to the adoption of electric heat pumps and reduced fuel oil consumption. Passenger vehicles have seen a 13 percent emissions reduction from 2007 compared to 2022, which can be attributed to improvements to active transportation infrastructure leading to increased bicycling and walking participation.



The Township has taken a considerable number of actions to reduce GHG emissions in the community including supporting active transportation and building electrification. The latest actions can be found in 'Appendix A - Climate Action Plan 2023 report'. Previous actions can be found at the back of the Climate Action Plan, adopted by Council in 2022.

## ADAPTATION AND RESILIENCE

Despite recent and widespread global mitigation efforts, it is now acknowledged that we are experiencing and will continue to experience serious climate change impacts. Proactively

planning for and changing the way we build our systems is prudent from both a financial (avoided cost) perspective as well as a social and environmental perspective.

The climate trends in Canada depict a steady rise in both seasonal and annual temperatures, altered precipitation patterns, and an increase in the frequency, intensity, and duration of extreme weather. For B.C. these changes generally mean hotter, drier summers, more frequent and intense heat waves, more frequent and intense rainfall events, increased wind and storms, and sea level rise.

In 2020, the Township through the Together for Climate Project developed a climate change adaptation plan – [The Adaptation Planning Study](#). The purpose of a study was to mainstream adaptation actions into Township operations and to reduce the risks climate change poses to the community’s physical, economic, social, and ecological systems. This involved:

- Identifying locally relevant climate change impacts
- Completing organizational vulnerability and risk assessments
- Establishing long-term adaptation vision and goals
- Identifying relevant adaptation actions, and
- Developing an implementation action plan.

This process resulted in a list of 26 potential impacts from climate change. From there six objectives, 18 strategies and 35 actions were identified through a series of workshops. The six objectives are:

1. Integrate Climate Change Thinking and Response
2. Strengthen Infrastructure Resiliency
3. Reduce Risk to Buildings and Property
4. Protect Biodiversity and Enhance Ecosystem Functions
5. Build Community Resilience
6. Protect Public Health and Safety.

The actions are designed to be implementable within the Township, address the priority impacts of climate change and extreme weather, and involve non-municipal partners in their planning and implementation, where possible. The actions were incorporated into the Climate Action Plan with staff identifying further sub-actions that could make the implementation more feasible. Recent progress (2023) on the actions can be found in ‘Appendix A - Climate Action Plan 2023 report’.

## HIGHLIGHTS OF 2023 - THE BIG MOVES

A few actions taken by the Township deserve special mention for their potential long-term impact:

1. Esquimalt Council adopted the BC Energy Step Code, and the new Zero Carbon Step Code with an accelerated timeline for implementation. This was made possible through collaboration with neighbouring municipalities, the CRD, and with the support of a group of community members. Starting in January 2024, proposed buildings have had to show they will be able to operate with near zero carbon emissions.
2. Active Transportation Network Plan (ATNP) – First projects implemented in 2023, including 2 kilometres of new bike lanes (mostly separated), improved crosswalks with pedestrian activated flashing beacons, and sidewalk improvements along the Lampson-Tillicum corridor, Lyall Street, Munro Street, and Head Street.
3. Township’s own corporate buildings benchmarked, retrofitted, and solar panels operationalized. Two new high efficiency boilers at the Recreation Centre to replace the 50-year-old boilers. The Municipal Hall received upgraded insulation with a new roof. And the Gorge Pavilion’s photovoltaic system became fully operational. The Township continue to track and disclose the emissions from four municipal buildings through Benchmark B.C.

## CONCLUSION

The urgency to mitigate global warming and adapt to the increasingly unpredictable climate impacts can not be overstated. The Township, like many municipalities is slowly implementing climate action as a lens through which every project and purchase is evaluated for its impact and priority among competing priorities. Many actions marked ‘ongoing’ in the Climate Action Plan are multi-year initiatives that will expand and change as some parts of the action is realized, enabling future actions to be identified and implemented. With diligent progress towards Council’s climate targets, we remain hopeful that the youth of today will have all the opportunities that were available to their parents.

# APPENDIX A - CLIMATE ACTION PLAN—2023 ACTIVITY REPORT

## Action implementation tables for 2023 annual climate reporting

This is a modified version of the existing climate action plan that was edited for the purpose of reporting on 2023 climate action activities.

### How this document is used for climate reporting against the Township of Esquimalt Climate Action Plan

This report reflects actions from the climate action plan that took place in 2023 and were expected to be completed in 2023 (or are ‘ongoing’). If no activities were made, they are not reflected here.

CS=Corporate Services DS=Development Services EPW=Engineering & Public Works PR=Parks & Recreation CM= Communications FIN=Financial Services

## Mitigation Actions – The Seven Big Moves

### Objective (BIG MOVE) 1: Retrofit Existing Buildings

EXISTING BUILDINGS 1: Improve Energy Efficiency and Enable Fuel Switching							
	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
1.1	Encourage and enable deep energy retrofits.	X	DS	CM	\$\$\$	Low	Ongoing
<b>Actions taken in 2023:</b> <ul style="list-style-type: none"> <li>Continued collaborating with CRD and municipal partners, other levels of government to support incentives</li> <li>Two new high efficiency gas boilers were installed at the Recreation Centre replacing two 50-year-old gas boilers</li> <li>Replaced 141 High-Pressure Sodium (HPS) streetlights with LEDs.</li> <li>Reroofing of municipal hall in 2023 included additional insulation value (from R-10 to R-15) to reduce energy spend on heating and cooling</li> </ul>							

Action		Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
2.1	Encourage and enable building electrification or renewable gas	X	DS	CM	\$\$	Low	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Continued supporting the oil to electric heat pump grant program through online promotions</li> <li>Added information to website and property tax mailouts</li> <li>Purchased an electric desiccant for the Sports Centre to replace gas desiccant in 2024</li> <li>EPW and PR transitioning to electric equipment as available</li> </ul>							
<b>EXISTING BUILDINGS 3: Build Industry Capacity and Increase Demand</b>							
3.1	Establish a long-term marketing campaign	X	CM	DS	\$	Low	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Used website/ social media pages to promote Home Energy Navigator program to encourage low-carbon heating</li> <li>Provided brochures at municipal hall front counter and include in property tax mailouts</li> </ul>							
3.2	Build industry capacity	X	DS	CRD, CM	\$	Low	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Collaborated with CRD and province to promote educational opportunities for building owners, managers, construction, development, and inspection professions</li> </ul>							

## Objective (BIG MOVE) 2: Decarbonize New Buildings

Strategy 1: Prioritize a low carbon approach							
Action		Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
1.1	Encourage low carbon heating in new buildings.	X	DS	CRD	\$	Low	Ongoing
<b>Actions taken in 2023</b>							
<ul style="list-style-type: none"> <li>Continued collaborating with CRD and municipal partners, other levels of government to support incentives</li> </ul>							

## Objective (BIG MOVE) 3: Shift Beyond the Car

Strategy (SHIFT) 2: Increase walking, cycling, and other forms of zero emission mobility							
	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
2.1	Enable active transportation through plans and policies		EPW	DS	\$\$	Moderate	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Implemented the Active Transportation Network Plan                             <ul style="list-style-type: none"> <li>National Active Transportation Fund and BC Active Transportation grants received for Tillicum</li> <li>Conducted public engagement for a new parking bylaw</li> <li>Update Subdivision and Development Bylaw to include requirements for sidewalks and bike lanes</li> </ul> </li> </ul>							

2.2	Build safe routes for walking, cycling, and other forms of zero emission mobility		EPW	DS, PR	\$\$\$	Moderate	Ongoing
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**Actions taken in 2023:**

Implementation of the Active Transportation Network Plan

- Pedestrian Facilities
  - A new sidewalk in the Archie Browning Sports Centre parking lot with pedestrian friendly driveway improvements on Lyall Street
  - Traffic calming and pedestrian improvements on Lyall Street from Lampson to the east, including 5 Rapid Rectangular Flashing Beacon (RRFB) crosswalks
  - Portions of a new sidewalk on Munro Street between Plaskett Place and Kinver Street
  - 7 new RRFB crosswalks installed or underway on the Tillicum and Lampson corridor
  - Asphalt sidewalk replaced with a wider concrete sidewalk on Head Street between Dunsmuir Road and Wollaston Street
- Cycling Facilities
  - Protected bike lanes installed or underway on the Tillicum and Lampson corridor
- Lowering Speeds
  - Traffic calming improvements at various locations using temporary materials
  - Engagement completed on speed limit reductions to lower speed limits on Major Roads to 40km/hr and all over roads to 30km/hr
- Negotiated a new pedestrian access from Carlisle Avenue to Lyall Street with a development application, which will further the “Art Walk” from the Town Square in the future.

2.3	Develop + deliver an active transportation outreach strategy		CM	DS, EPW	\$	Low	2023
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**Actions taken in 2023**

- Collaborated with CRD and municipal partners to support education and promotion of active transportation including Go By Bike Week
- Include cycling and walking maps in new resident information packages and have available at municipal hall front counter

**Strategy (SHIFT) 3: Promote transit ridership and support a zero-emissions transit network**

	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
3.1	Collaborate with transit providers to promote transit ridership		DS	CRD, CM, EPW	\$	Low	Ongoing

**Actions taken in 2023**

- Worked with BC Transit on their new Regional Corridor Strategy project



## Objective (BIG MOVE) 4: Electrify Passenger Transport

Strategy (ELECTRIFY) 1: Enable charging “on-the-go”							
	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
1.1	Design, fund, and build a public EV charging network		EPW	DS, PR	\$\$	Low	Ongoing
<b>Actions taken in 2023:</b> <ul style="list-style-type: none"> <li>Applied for grant through CRD on Regional Charging Network</li> <li>New EV charger added to Esquimalt Gorge Park</li> <li>Two EV chargers purchased for Parks yard for future install</li> </ul>							
Strategy (ELECTRIFY) 2: Enable charging at home and work							
2.2	Enable EV charging in existing residential and commercial buildings		DS	CM	\$	Low	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Worked with the CRD on securing grants for an enhanced regional electric vehicle charging network.</li> </ul>							
Strategy (ELECTRIFY) 3: Encourage EVs through outreach and supportive policies							
3.1	Develop and deliver an EV outreach strategy		DS	CM, PR, EPW	\$	Low	2023
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Website provides links to available grant opportunities</li> <li>Development services staff assist building owners to find grant information</li> </ul>							

## Objective (BIG MOVE) 7: Organizational Leadership

### 7.1 Leading by Example

Strategy 1: Shift Beyond the Car							
	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time Involved	Timing
1.1	Provide bicycle and e-bike parking for employees and access to showers		EPW	PR	\$	Low	Ongoing
<ul style="list-style-type: none"> <li>Complete</li> </ul>							
1.2	Participate in Go By Bike Week.		CM	All	\$	Low	Annual
<b>Actions taken in 2023:</b> <ul style="list-style-type: none"> <li>Continued the relationship with regional Go By Bike chapter and provided in-kind location space (Archie Browning parking lot) and event promotion</li> <li>Had a staff committee to collaborate on a staff participation campaign</li> </ul>							
1.3	Provide transit passes to employees.		CS	All	\$\$	Low	2023
<b>Actions taken in 2023:</b> <ul style="list-style-type: none"> <li>Day passes are available to attend regional meetings</li> </ul>							
Strategy 2: Electrify Passenger Transportation							
	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
2.1	Invest in EVs for light-duty fleet.		EPW	PR	\$\$	Low	Ongoing
<b>Actions taken in 2023:</b> <ul style="list-style-type: none"> <li>Parks purchased an electric truck (delivery expected in 2024)</li> <li>Consultant hired to develop a plan to transition municipal fleet to electric (plan completion in 2024)</li> </ul>							

2.3	Develop a vehicle purchasing policy that prioritizes low carbon options when feasible.		EPW	CS, DS, PR	\$	Low	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Consultant hired to develop a plan to transition municipal fleet to electric (plan completion in 2024)</li> </ul>							
<b>Strategy 3: Decarbonize New Buildings</b>							
3.1	Adopt a high-performance building policy for all new civic buildings that includes energy and GHG metrics, optimized siting and orientation, and other green building features.	X	CS	EPW, DS, PR	\$	Low	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>OCP policy and guidelines support energy efficient, low GHG construction</li> <li>Gorge Park pavilion met this strategy; solar panels are online and reducing hydro needs</li> <li>Public safety building complies with this strategy</li> </ul>							

## 7.2 Integration Across the Organization

<b>Strategy 1: Incorporate - Embed climate action into other planning documents such as the OCP, bylaws and policies, and departmental/master plans. Incorporate into other documents and processes.</b>							
	Action	Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
1.1	Update Council report templates to include climate action (mitigation and adaptation) considerations	X	All	Council	\$	Low	2023
<b>Actions taken in 2023</b>							
<ul style="list-style-type: none"> <li>Complete</li> </ul>							
1.4	Identify which departments and staff are responsible for implementing aspects of this plan	X	DS	All	\$	Low	Ongoing
<b>Actions taken in 2023</b>							
<ul style="list-style-type: none"> <li>Fulfilled Local Government Climate Action Program (LGCAP) requirements to obtain yearly Provincial funding</li> </ul>							

**Strategy 2: Budget - Embed climate action into the budgeting process.**

Action		Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
2.1	Update Budgeting process and criteria to increase priority to climate action.	X	CS, FIN	All	\$	Low	2023

**Actions taken in 2023:**

- Already top of mind in budgeting process

**Strategy 4: Convene - Host regular meetings to discuss implementation with internal and/or external stakeholders.**

4.1	Formalize the internal staff climate action working group	X	DS	CM, PR, EPW	\$	Low	Ongoing
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**Actions taken in 2023:**

- Working group met 4 times in 2023

4.2	Formalize Environmental Advisory Committee as the external implementation advisory group	X	CS	DS	\$	Low	Ongoing
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**Actions taken in 2023:**

- It is within the Environment, Parks & Recreation AC's current mandate to provide advice to Council and staff on environmental issues.

**Strategy 5: Report - Report regularly to Council on progress and accomplishments. (Annual reporting is recommended)**

Action		Adaptation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
5.1	Develop an annual progress report that ties to specific strategies and targets in this plan.	X	All	CM	\$	Low	2023

**Actions taken in 2023**

- Created target to include 2023 in annual report
- Fulfilled Local Government Climate Action Program (LGCAP) requirements to obtain yearly Provincial funding

**Strategy 6: Renew - Prepare for climate plan renewal approximately every five years.**

6.1	Set out a renewal schedule that includes annual progress reporting, updates every 2 years to monitor and incorporate new opportunities, and a full renewal every 5 years.	X	DS	All	\$	Low	2023
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**Actions taken in 2023**

- Internal Climate Action Working Group met four times in 2023

## Adaptation Actions

### Objective 2: Strengthen Infrastructure Resiliency

**Strategy 2.1: Ensure infrastructure is designed and maintained for up-to-date climate projections.**

	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
2.1a	Identify infrastructure most at risk for extreme weather impacts.		EPW	PR, IT, CRD	\$\$\$	Moderate	Ongoing

**Actions taken in 2023:**

- Development of a Sewer Asset Management Plan underway
- Inspections completed on all sewer pump stations

2.1b	Continually upgrade stormwater and sanitary systems to prevent inflow and infiltration.		EPW	Contractors & private property owners	\$\$\$\$\$	High	Ongoing
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**Actions taken in 2023:**

- 35m of storm main replaced on Lampson Street
- Replacement or new installation of 38 storm and sanitary sewer service connections completed
- CCTV inspection program on storm and sanitary sewer mains continued

2.1c	Ensure public works has the capacity to respond to extreme rainfall events that occur more frequently.		EPW	CS, PR	\$\$\$\$	High	2023 & Ongoing
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**Actions taken in 2023:**

- No additional actions taken outside of regular operating procedures

### Objective 3: Reduce Risk to Buildings and Property

#### Strategy 3.1: Prepare building stock for effects of more severe weather.

	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
3.1a	Encourage residents and building owners to maintain and upgrade their buildings to be more resilient to extreme weather events such as wind and rainstorms.	X	DS	EPW, CM, DS	\$	Low	Ongoing

**Actions taken in 2023:**

- Continued to encourage developers of new buildings to use resilient materials through the Development Permit process.

#### Strategy 3.2: Prepare for the impacts of rising sea levels.

3.2a	Increase knowledge about the localized effects of sea-level rise and storm surges with Esquimalt residents and staff.		DS	CM, CSS, PR, CRD	\$	Low	2023
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**Actions taken in 2023:**

- Promoted CRD's latest flood inundation mapping to the public along with educational resources

3.2c	Ensure that municipal structures and facilities near water are built to withstand predicted conditions.		EPW	PR	\$\$\$\$	Moderate	2023
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**Actions taken in 2023:**

- Buildings have been assessed; no specific actions needed

## Objective 4: Protect Biodiversity and Enhance Ecosystem Functions

Strategy 4.1: Protect and expand the existing urban forest.							
	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
4.1a	Explore new ways of ensuring tree protection for new developments.	X	PR	DS, EPW	\$\$	Moderate	2022 -2023
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Continued to encourage developers to keep existing trees and plant new trees, particularly native tree species through the Development Permit process</li> </ul>							
4.1b	Continue to implement the recommendations of the Esquimalt Urban Forest Management Plan.	X	PR	DS	\$\$	Low	Ongoing
<b>Sub-actions to enable this action:</b>							
<ul style="list-style-type: none"> <li>Urban Forest Management Plan is referred to regularly by staff.</li> </ul>							
4.1c	Expand boulevard tree and Parks planting and watering program to double the number of trees planted and maintained per year.	X	PR	EPW	\$\$	Low	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Converted irrigation controls to blue tooth in all parks, islands, gardens to allow for more efficient use of water</li> </ul>							

Strategy 4.4: Prevent the spread of invasive species.							
	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
4.4a	Continue to manage existing areas of invasive species within Esquimalt parks and public spaces.		PR	GVGT, volunteers	\$	Moderate	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Removed 446 cubic metres of invasive species from parks</li> </ul>							

4.4b	Be proactive in managing emerging invasive species threats as they appear.		CRD	PR	\$\$	Low	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Attended Capital Region Invasive Species Partnership-Intergovernmental Working Group (CRISP - IWG) – Leads in identifying and providing education, tools, and contractors (is chaired and coordinated by the CRD)</li> </ul>							
<b>Strategy 4.5: Encourage community stewardship within natural areas in the Township.</b>							
4.5a	Collaborate with the Esquimalt and Songhees Nations, ENGOs, and community groups for ecological restoration.	X	PR	CS, CM	\$	Low	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Continued to work with GV Green team (recruits volunteers), and Earth Day activities with schools and residents</li> <li>Installed nature education sign as part of salt marsh project at Gorge Park.</li> <li>Continued working with Gorge Waterway Action society, and World Fisheries trust in nature house, nature walks, restoration events, interns</li> </ul>							
<b>Strategy 4.6: Manage water quality runoff to reduce potential for algae blooms.</b>							
4.6a	Work together with other local government and the CRD to reduce the factors that could cause poor water quality in the Gorge.	X	EPW	CM, CRD, DS	\$\$	Moderate	Ongoing
<b>Actions taken in 2023:</b>							
<ul style="list-style-type: none"> <li>Continue to work with CRD Source Control Program</li> </ul>							



## Objective 5: Build Community Resilience

<b>Strategy 5.1: Empower and engage with Esquimalt residents and businesses on ways they can adapt to climate change and reduce their reliance on outside support and emergency responders during crises.</b>							
	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
5.1a	Encourage community social connectedness.		DS, PR	CM	\$	Low	Ongoing
<b>Actions taken in 2023</b>							
<ul style="list-style-type: none"> <li>Encourage Emergency preparedness education on social media</li> <li>Had informational booth at CFB Esquimalt Health Fair (March) and at Esquimalt Recreation Centre (May)</li> </ul>							
5.1b	Look for opportunities to increase access to locally grown food.	X	PR	DS, EPW, CM	\$	Low	Ongoing
<b>Actions taken in 2023</b>							
<ul style="list-style-type: none"> <li>Added four additional garden beds to the Anderson Park Community Gardens, including an accessible bed.</li> <li>Continue to work with Esquimalt Farmer's Market society and Esquimalt Community Gardens Society</li> <li>Work with CRD and neighbouring municipalities to support regional initiatives</li> </ul>							

## Objective 6: Protect Public Health and Safety

<b>Strategy 6.1: Ensure all residents have access to outdoor areas for cooling during extreme heat events.</b>							
	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
6.1b	Set goals for parkland per capita or within 15-minute walk of residential development.		PR	DS	\$\$\$\$\$	Moderate	2023
<b>Actions taken in 2023</b>							
<ul style="list-style-type: none"> <li>Took part in the CRD lead report "A Hot Topic" to understand the impacts of heat waves on the local population</li> <li>Created public map of available public buildings with climate control and water fountains</li> </ul>							

Strategy 6.2: Ensure new residential buildings are climate ready							
6.2a	Encourage the use of passive design techniques in new residential developments.	X	DS	Council	\$	Low	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Esquimalt Council adopted the BC Energy Step Code, and the new Zero Carbon Step Code with an accelerated timeline for implementation</li> </ul>							
	Action	Mitigation co-benefit	Lead	Supporting	Financial resources	Time involved	Timing
6.2b	Encourage deep home retrofits of existing buildings to improve both efficiency and comfort for residents.	X	DS	CM	\$\$	Moderate	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Continue working with CRD, municipal partners, other levels of government to support incentives</li> <li>Link to retrofit resources off Esquimalt website and include reference to retrofit options in materials for new residents or businesses and/or property tax information mailout</li> </ul>							
Strategy 6.4: Support efforts to reduce urban air pollution.							
6.4	Advocate and support low emission transportation modes including active and public transportation as well as vehicle electrification.	X	DS	EPW, CM, PR	\$\$	Moderate	Ongoing
<b>Actions taken in 2023</b> <ul style="list-style-type: none"> <li>Implemented the Active Transportation Network Plan</li> <li>Developers of new buildings were encouraged to provide electric bike charging, bike parking for all sizes of bikes, transit passes for new owners, car sharing</li> <li>Continue with Transportation Demand Management to reduce parking needs</li> <li>Completed the Integrated Parking Strategy – consider locations for paid parking</li> </ul>							
Strategy 6.5: Reduce potential habitat for vectors that cause disease.							
6.5	Utilize best management practices for vector borne disease prevention in municipally owned infrastructure.		EPW	CSS, PR	\$	Low	Ongoing
<b>Actions taken in 2023:</b> <ul style="list-style-type: none"> <li>Continued maintenance of municipal infrastructure</li> </ul>							