

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, MARCH 20, 2024**

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**SUBJECT**     **Climate Projections for the Capital Region**

**ISSUE SUMMARY**

To present the updated report, *Climate Projections for the Capital Region (2024)*.

**BACKGROUND**

In 2017, the CRD Climate Action service engaged the Pacific Climate Impacts Consortium (PCIC) to complete the first scientific analysis of downscaled climate projections for the capital region. In 2023, the PCIC was reengaged to update the downscaled regional climate projections and results are provided in an updated report *Climate Projections for the Capital Region (2024)* (see Appendix A).

Climate science has been evolving since the CRD published the first climate projections report, and new information is now available to reevaluate the projections and provide the most up-to-date information on how the region's climate may change by the middle and end of this century. The report provides a common understanding of how projected changes in temperature and precipitation will play out locally, how impacts will differ throughout the seasons, and what the effect could be of new climate extremes. The report identifies some potential impacts of climate change on different sectors of the region, based on consultation with CRD and municipal staff.

The report is based on new scientific modelling and includes new indices for extreme heat, as well as a new guidance section to support users of the report and accompanying data. The report, along with other data and modelling efforts completed by the PCIC, will serve as a resource for local and regional planners, engineers, land managers, policymakers and decision makers to make better-informed decisions.

At a high level, the results of this study show that in the coming decades, the capital region can expect:

- warmer summer temperatures, with more extreme heat days and heatwaves
- warmer nights and a longer growing season
- less rain and more dry days in the summer months
- warmer winter temperatures and less frequent frost
- more precipitation falling in fall, winter and spring
- less snowfall and more rain in the colder months
- more rain delivered in extreme rainfall events

**Next Steps**

The CRD Climate Action service will continue to support regional climate adaptation planning efforts. Near-term actions include:

- Sharing the report results with CRD and local government staff, First Nations and other regional stakeholders.
- Developing public educational materials linking report results with associated actions for use by the CRD, local governments and other regional stakeholders.

- Supporting future climate adaptation planning efforts, including identifying data gaps and costs associated with future local or regional studies and programming, with municipal/electoral area governments (i.e., the CRD's Climate Action Inter-Municipal Working and Task Force).
- Supporting the completion of other climate adaptation-related actions identified in the CRD's Climate Action Strategy (2021).

Furthermore, the CRD will consider the results for regional service delivery in operational plans and long-range infrastructure planning.

## **ALTERNATIVES**

### *Alternative 1*

The Environmental Services Committee recommends to the Capital Regional District Board: That the *Climate Projections for the Capital Region (2024)* report be referred to municipal councils, the Electoral Areas Committee and First Nations for information.

### *Alternative 2*

That this report be referred back to staff for additional information.

## **IMPLICATIONS**

### *Alignment with Board & Corporate Priorities*

The recommendations align with the Board's priority Climate Action & Environment initiative 3c to increase resilience, community and adaptation planning to address climate-related risks and disasters.

### *Alignment with Existing Plans & Strategies*

The recommendations align with goal 2 of the CRD Climate Action Strategy to support the region on its pathway to livable, affordable and low-carbon communities that are prepared for climate change, and specifically contributes to the completion of action 2-4d to expand data collection and mapping efforts to identify vulnerabilities to the impacts of climate change.

### *Intergovernmental Implications*

The data and mapping components can help local authorities prepare for climate impacts. By examining climate projections, community planners and emergency managers can better inform planning and policy initiatives. The data can also be used when updating local hazard, risk and vulnerability analyses (i.e., HRVAs). CRD staff will continue to engage the region's local governments through the CRD's Climate Action Inter-Municipal Working and Task Force on better understanding new climate adaptation related policy approaches and supporting implementation of existing programs and policies in a collaborative manner.

## **CONCLUSION**

The recently completed report, *Climate Projections for the Capital Region (2024)*, expands upon climate change data analysis previously undertaken by the Pacific Climate Impacts Consortium and the CRD. Using the most recent scientific information, the study updated high-resolution climate projections for the capital region to better understand how our climate may change by the 2030s, 2050s and 2080s. The report is based on the work undertaken by the Pacific Climate Impacts Consortium, with support from the CRD, and was developed in consultation with CRD and municipal staff working groups. The report benefits multiple services within the CRD, as well as all local and First Nations governments and community partners in the region in becoming resilient to a changing climate.



**RECOMMENDATION**

The Environmental Services Committee recommends to the Capital Regional District Board:  
That the *Climate Projections for the Capital Region (2024)* report be referred to municipal councils, the Electoral Areas Committee and First Nations for information.

|               |  |
|---------------|--|
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**ATTACHMENT**

Appendix A: Climate Projections for the Capital Region Report (2024) – Pacific Climate Impacts Consortium





# Climate Projections for the Capital Region

2024



## EXECUTIVE SUMMARY

The Earth's climate system is warming, and signs of climate change are becoming evident across the planet. The capital region, located on Southern Vancouver Island and Gulf Islands of British Columbia (BC), is no exception. The Capital Regional District (CRD) has partnered with the Pacific Climate Impacts Consortium (PCIC) to produce high-resolution regional projections for temperature, precipitation, and related indices of extremes. These projections use the most up-to-date global modeling data (i.e., the Sixth Coupled Model Intercomparison Project, CMIP6) to illustrate how the region's climate may change by the middle of this century. Information provided by this report and the accompanying data is intended to support decision makers and community partners in the region with an improved understanding of projected local climate change and related impacts.

At a high level, the results of this study show that in the coming decades, the capital region can expect:

- Hotter summer temperatures, with more extreme heat days and heatwaves;
- Warmer nights and a longer growing season;
- Warmer winter temperatures and less frequent frost;
- Less rain and more dry days in the summer months;
- More precipitation falling in fall, winter and spring;
- Less snowfall in the colder months;
- Extreme rainfall events becoming wetter.

More specifically, warming temperatures will shift seasonal patterns, prompting a longer growing season and greater cooling demand across the region. Extreme temperatures will continue to get hotter, with heat waves becoming longer and more frequent. By the 2050s, the capital region can expect the number of summer days exceeding 25°C to triple, going from an average of 10 days per year to 32 days per year. Nighttime temperatures in the summer will also increase. Nights where the temperature stays above 16°C (the lower threshold for heat alerts for Southern Vancouver Island) are projected to occur around 8 times per year. The temperature for the 1-in-20-year hottest is projected to increase from 32°C to 36°C.

By the end of this century, annual precipitation is projected to increase modestly (4% increase by the 2050s and 11% by the 2080s). However, these changes will not occur evenly across seasons. In the colder months, rainfall increases notably because of warmer temperatures that convert more snow into rain. (By the 2050s, total rainfall in the winter increases by 25%, while

total snowfall drops by nearly 60%.) Much of the rainfall in the colder months will occur during extreme events, with the very wet days becoming wetter by mid-century. In contrast to the fall, winter and spring, the summer months will become increasingly dry. Total rainfall in the summer is projected to decrease by roughly 15% by the 2050s with the duration of dry spells becoming longer.

Many of the projected climate changes described in this report will be felt uniformly across the region. However, the magnitude of some variables will be accentuated by the existing West-to-East climatic gradient in the capital region. For example, the Western region is typically wetter and cooler compared to the Eastern Region, where conditions are typically warmer and drier. In addition, temperatures may be warmer or cooler in specific areas due to other factors including tree canopy cover (or a lack thereof), paved surfaces, and buildings density.

The projected warming for the capital region will have implications for regional ecosystems, watersheds, agriculture and horticulture, housing, energy demand, infrastructure, and community health and safety. Chapter 7 provides a high-level overview of some of the impacts that might be expected from the projected changes in this assessment. This chapter was informed by input from local government staff during a workshop in October 2023 and is not a comprehensive assessment of regional impacts. It is intended to support further discussion and analysis for how climate change may impact the capital region.

The CRD and PCIC also collected input from local government staff to understand how these climatic changes may impact the region as whole. Across the capital region, communities are already witnessing and experiencing varied impacts of climate change. These impacts will persist and, in many cases, intensify over the coming decades based on the future global greenhouse gas emissions trajectory. These impacts will not be experienced equally across the region. People facing the greatest burdens are often the ones who are most affected by climate change, particularly for impacts that are compounding.

Information within this report and the accompanying data provides the region's decision makers, community planners, and community partners with an improved understanding of projected local climate change and related impacts.

## **CONTRIBUTING AUTHORS**

Charles Curry and Stephen Sobie from Pacific Climate Impacts Consortium (PCIC) conducted climate model downscaling, data analysis and interpretation and generated all data products, including maps, figures, and tables, for the report. Charles Curry and Izzy Farmer (PCIC) served as lead authors of this report, with advice and guidance from CRD staff.

## **ACKNOWLEDGMENTS**

We would like to acknowledge the effort and input received from CRD staff, municipal staff, and the CRD Climate Action Inter-Municipal Working Group in the development of this report. Working together ensures that we share knowledge and build on each other's success to create a more resilient region.

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# 1. INTRODUCTION

Over the last 150 years, the global average temperature has increased by over 1°C and this warming has been clearly linked to the emission of greenhouse gases (GHGs), aerosols, and other aspects of human development. This warming is expected to continue unless we make significant cuts to GHG emissions globally. Understanding, monitoring, and preparing for the regional and local manifestations of climate change is important for supporting safe and resilient communities in the decades to come.

The Capital Regional District (CRD) has undertaken this study to better understand how the climate of our region is expected to change over the coming decades. British Columbia's capital region spans an area of 2,340 km<sup>2</sup> and an elevation range of 1 to 1,100 m above sea level (Figure 1). Since 1950, air temperature observations for Vancouver Island have been increasing by 0.26 ± 0.07 °C per decade.<sup>2</sup> Both global and regional warming are expected to influence other climate variables, such as rainfall.

To explore the changes that may be in store for our region, the CRD has partnered with the Pacific Climate Impacts Consortium (PCIC) to produce high-resolution climate projections for the capital region. These projections are based on the latest generation of comprehensive global climate models (CMIP6). Like other populated areas worldwide, the region requires up-to-date, science-based, high-resolution information to enable effective planning and policy decisions in a changing climate. This information will be used with other resources to help prepare the capital region for the impacts of climate change.

A selected number of climate indicators are provided in this report to demonstrate how our climate is expected to change over time. In the first section, Chapter 2 provides a brief description of the study methodology and includes support for interpreting the figures and tables. Chapters 3 through 6 provide an analysis of selected climate indicators for the region, including information about summer temperatures, winter temperatures, precipitation, and climate extremes. Each section includes a description of each indicator and a summary of how it is projected to change over time.

In the second section, Chapter 7 identifies potential impacts from climate change expected across the capital region. These impacts are categorized by different sectors, including health and wellbeing, water supply and demand, rainwater management and sewerage, ecosystems and species, buildings and energy systems, transportation, food and agriculture, and recreation and tourism.

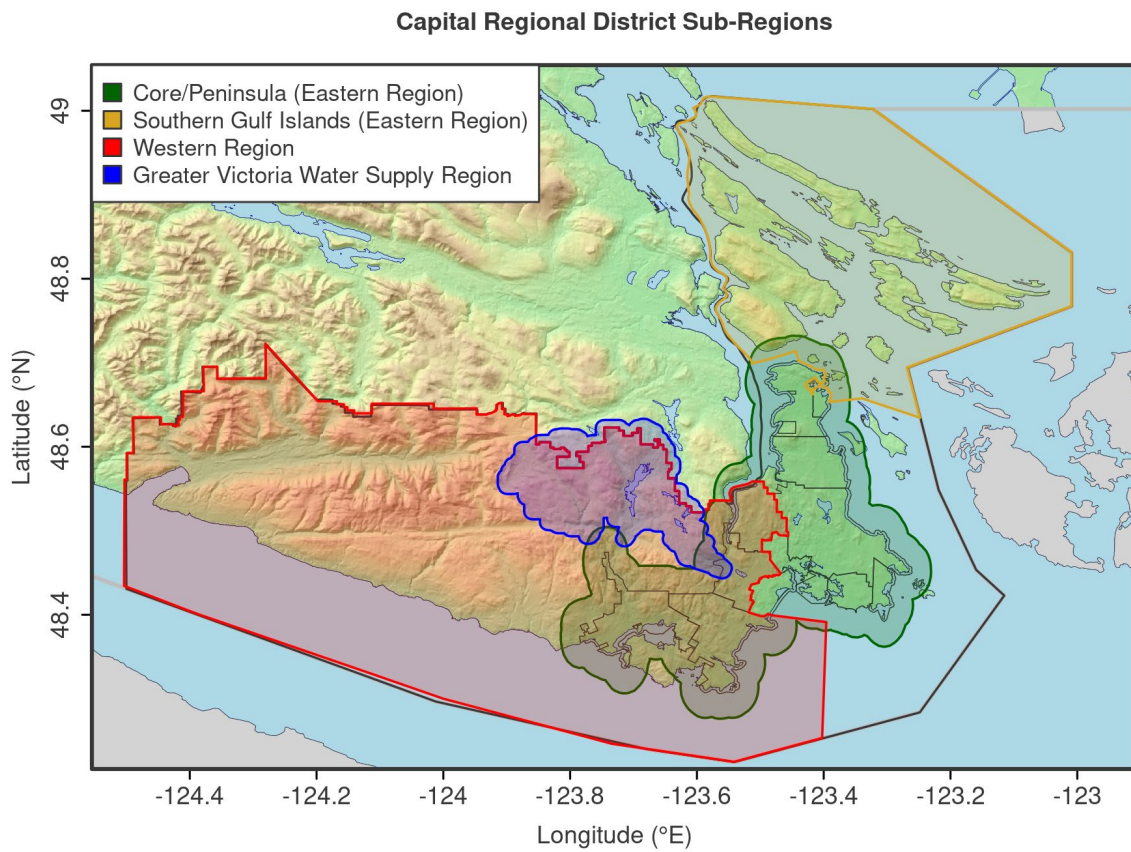
It should be noted that the information provided in this report is limited to changes in temperature and precipitation only. Other climate-related phenomena, like surface hydrology, wind, humidity, sea level rise and storm surge require different modelling techniques and are not included in the scope of this report. Therefore, the report should be used alongside other resources to help prepare our region for the impacts of climate change. For example, in 2021, working with and on behalf of municipal partners, the CRD undertook a coastal flood inundation mapping project, which includes an analysis of current and future storm surge due to sea level rise. Since that time, some municipalities in the region have been undertaking efforts to build upon this work.

This report and the supplementary data that accompany it are intended to support climate-focused decision making throughout the region and help community partners better understand how their work may be affected by our changing climate. The information provided here should be used with careful consideration for the local context. For guidance on how climate information can be used to support adaptation planning, see the appendices appearing at the end of this report.

<sup>1</sup> IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001.

<sup>2</sup> Results of an analysis conducted by PCIC for the annual "State of the Pacific Ocean" report; see Curry, C.L. and Lao, L., "Land temperature and hydrological conditions in 2022," pp 17-21. In: Boldt, J.L., Joyce, E., Tucker, S., and Gauthier, S. (Eds.), State of the physical, biological and selected fishery resources of Pacific Canadian marine ecosystems in 2022. Can. Tech. Rep. Fish. Aquat. Sci. 3542: viii + 312 p. (2023). The nearby Lower Fraser Valley displays a larger trend of magnitude 0.42 ± 0.07 °C per decade, which may be more similar to what the capital region has experienced.





**Figure 1.** Domain of interest, the Capital Regional District, with background relief map and four sub-regions of interest. In several of the tables in the report, results for the Core/Peninsula and Southern Gulf Islands are combined into a single Eastern Region.

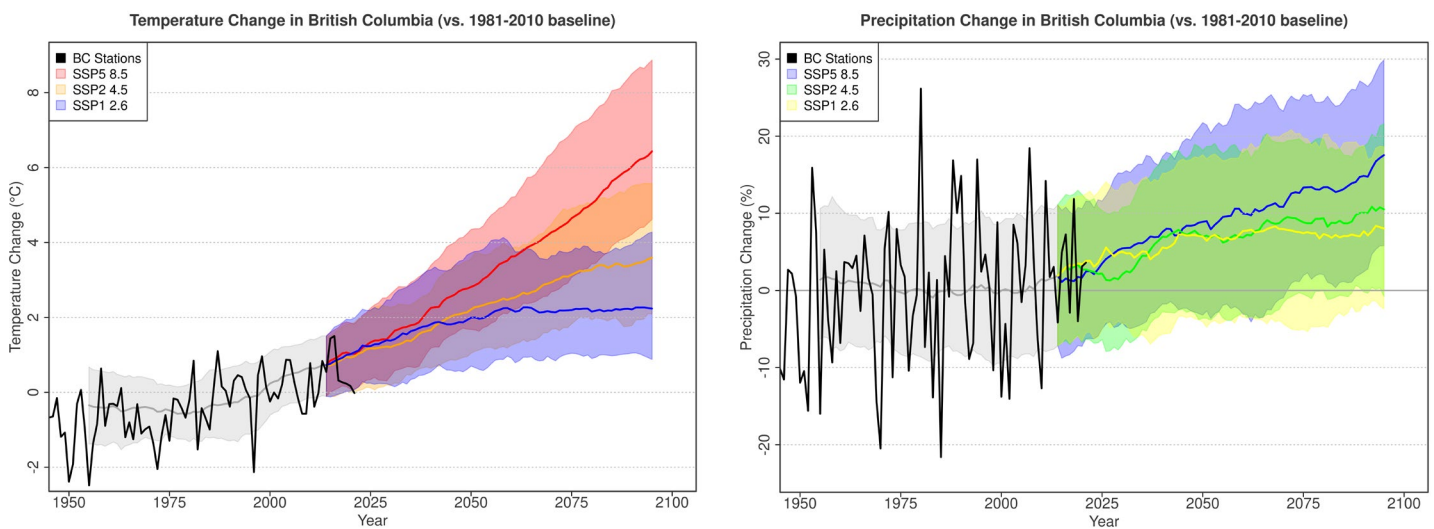
## 2. METHODS AND PRESENTATION

### 2.1 Climate Model Projections

The climate projections are based on an ensemble of 9 global climate models (GCMs) drawn from a larger collection of models developed during the Sixth Coupled Model Intercomparison Project (CMIP6), coordinated by the World Climate Research Programme. The climate projections presented here are based on a high greenhouse gas emissions scenario, known as the Shared Socioeconomic Pathway 5-8.5 (SSP585), which describes a trajectory of future emissions spurred by continued and expanded use of fossil-fuels worldwide. Two other scenarios are also presented in the data package accompanying this

report: a medium-intensity emissions pathway, SSP245, and a low-intensity pathway, SSP126, which covers the possibility of a low-carbon technology transformation of worldwide energy systems.<sup>3</sup> Planning based on climate projections under SSP585 could be considered a “no regrets” strategy for adaptation. By the 2090s under SSP585, global mean surface air temperature reaches a level 4.3°C higher than the 1850-1900 average. The evolution of air temperature and precipitation under the three SSPs, for BC specifically, is shown in Figure 2.

Each GCM represents the climate system using a global, horizontal grid with a limiting resolution between 100 km and 250 km, depending on the model. These coarse-grained data are first bias-corrected against available observations (spanning 1950-2012) and then statistically downscaled to 10 km resolution.<sup>4</sup>



**Figure 2.** Changes in annual mean air temperature (left) and total precipitation (right) relative to their values in 1981-2010, averaged over all of BC. The black curves show historical values obtained from the station data in BC from 1948-2021, while the coloured curves show median GCM projections under the three development pathways (SSPs) from 2015-2100. The shaded areas show the 10th-90th percentile range in model-simulated results over the historical and future periods, for each SSP.

<sup>3</sup> An accessible description of the SSPs may be found at <https://climatedata.ca/resource/understanding-shared-socio-economic-pathways-ssps/>.

<sup>4</sup> Details on the downscaling methods used at PCIC may be found on the Data Portal section of our website, [pacificclimate.org](http://pacificclimate.org).



In a second downscaling step, the model data are further downscaled to a resolution of 800 m using fine-scale climatological maps. It should be recognized, however, that while the latter account for fine-scale topography, important features of, and influences on, local daily climate are not represented in the dataset.<sup>5</sup>

Downscaled climate model results are presented for three 30-year periods: the historical reference period, 1981-2010 (referred to as the “Past” or “1990s” for short), the near future, 2021-2050 (the “2030s”), mid-century, 2041-2070 (the “2050s”) and the end-of-century, 2071-2100 (the “2080s”). These 30-year periods are chosen both to smooth out year-to-year climate variability, and to provide a long enough period to characterize the behaviour of fairly rare events. The seasonal definitions used are “meteorological” seasons: i.e., winter (December 1 to February 28), spring (March 1 to May 31), summer (June 1 to August 31) and fall (September 1 to November 30). A range of indices are computed from daily temperature and precipitation to describe various aspects of the climate. For projections, median estimates from the climate model ensemble are typically emphasized, with the 10<sup>th</sup> to 90<sup>th</sup> percentile ranges over the ensemble also provided where appropriate.

It is important to recognize that not all projected changes emerging from the climate model ensemble are necessarily substantial. For a given variable, location, and emissions pathway, each model produces a projected future climate, resulting in a range of possible outcomes. Since no single model is “right,” the median value of the ensemble can be used as a practical best-guess projection, with the 10th to 90th percentile spread indicating the uncertainty amongst the models. *If the spread includes zero change, meaning that not all models agree on the sign of the change, then relatively low confidence should be placed in the median value.* In the relatively rare cases when less than half of the models agree on the sign of change, users are alerted to the reduced confidence via a printed message on the maps.

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<sup>5</sup> Examples of these being realistic day-to-day variability and co-variability between nearby locations, and fine-scale land cover type, for example. It should also be recognized that since the models are bias-corrected to daily observations spanning a specific time period, here 1981-2010, more recent observations will not be reflected in results displayed for the “Past.”



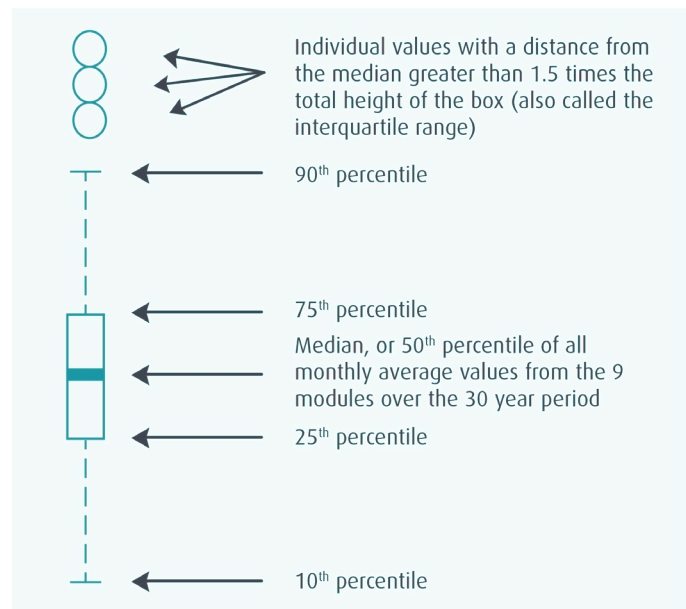
## 2.2 Interpreting Figures and Tables

The data deliverables for the project comprise: (i) maps of climate variables over the region in Past and Future periods, for each of the three scenarios; and (ii) tables (Excel spreadsheets) of area-averaged results for the same. Results for absolute or relative difference are also provided, where appropriate. References to the tables are occasionally made in the report. Most of the figures presented below are maps, showing the capital region and the surrounding area. Colour contours indicate values of the indicated variable, with a nominal limiting resolution of 800 m. *Due to the limitations of the downscaling methodology mentioned above, along with the inherent uncertainty in future outcomes, the exact position of contours on the maps should not be taken literally.* On each map, the area average shown at bottom left is computed over the capital region only (area inside the black curve).

This report presents results for a number of key indicators, derived from the model-simulated daily temperature and precipitation, representing a “highlight reel” of the much more extensive set of climate indices delivered for this project. In consultation with CRD staff, they were selected either because they have implications for a range of climate-related impacts, because they feature particularly large changes from recent historical conditions, or both. In the next few chapters, a plain language definition is provided for each indicator, followed by a summary of its projected change for the 2030s, 2050s, and 2080s, under the high (SSP585) emissions scenario. Detailed definitions of all indicators are provided in the Appendix.

There are two types of maps: single period and future change. Single period maps, e.g., “Past: 1990s” or “Projection: 2050s,” show actual values of a variable, e.g., temperature in °C. Future change maps, e.g., “Projected Change: 2050s - 1990s,” show differences between historical and future-simulated periods, and may be in the units of the variable or in relative terms, e.g., percent change in precipitation. In the interest of concision, all future change maps shown in this summary report are for the 2050s under the high emissions (SSP585) pathway. For most indicators, the magnitude of these changes should be roughly comparable to that projected for the 2080s under the moderate emissions scenario (i.e., SSP245).

Other figures in the report use area-averages for the capital region while expressing the range of projected values over models and years for a certain variable. An example of this



**Figure 3.** Explanatory schematic of a box-and-whisker plot.

type of presentation, the “box-and-whisker” plot, is shown in Figures 6 and 9, and an aid to their interpretation is given below. Note that, in these figures, the range shown by the whiskers reflects both year-to-year and model-to-model variability. Finally, note that when cited in the text, values from the spreadsheets are often rounded to indicate the likely precision of the quantity being discussed, given the known model uncertainties. For example, a temperature of 29.8°C would be cited as 30°C, while 2717 degree-days become 2715 degree-days. The tables contain median values with ranges given in parentheses (10th – 90th percentile of different model projections). Usually medians are cited in the text; but ranges encompass the range of possible behaviour, and should not be ignored, especially when the climate variable in question might enter into critical decision-making.

Values in tables are averaged over the capital region (within the regional boundary shown on the maps), unless labeled as *Eastern Region* (Greater Victoria and Southern Gulf Islands), *Western Region*, or *Greater Victoria Water Supply Area*.



## 3. GENERAL CLIMATE PROJECTIONS

### 3.1 Warmer Temperatures

We begin by examining future temperature change over the region. *Daytime High and Nighttime Low Temperatures* are averaged over each season and annually in the tables and maps below.

In concert with global and regional warming, both daytime and nighttime temperatures are projected to increase in the capital region in future, as detailed in the tables (all changes shown are positive). The accompanying maps show the spatial pattern of Past and future-projected temperatures throughout the region.

#### *Projections*

In the Past, winter daytime high temperatures in the region averaged around 6°C, while winter nighttime low temperatures averaged around 1°C. The median future-projected TX increases to around 8°C by the 2050s and to 9.5°C by the 2080s. The median future-projected TN reaches around 3°C by the 2050s and 4.5°C by the 2080s. Since the likelihood of snowfall rapidly decreases as temperatures rise above 0°C, we can anticipate that this local warming will affect the frequency of snowfall in the region, as detailed further below.

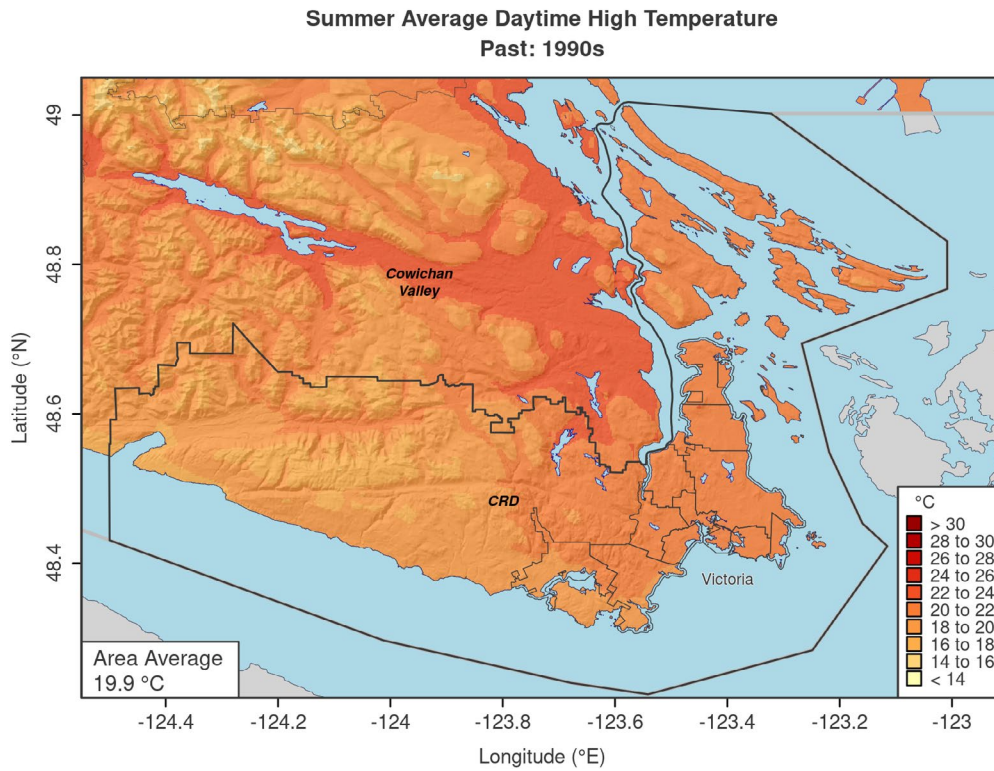


**Table 1: Regional Average Daytime High Temperature (TX)**

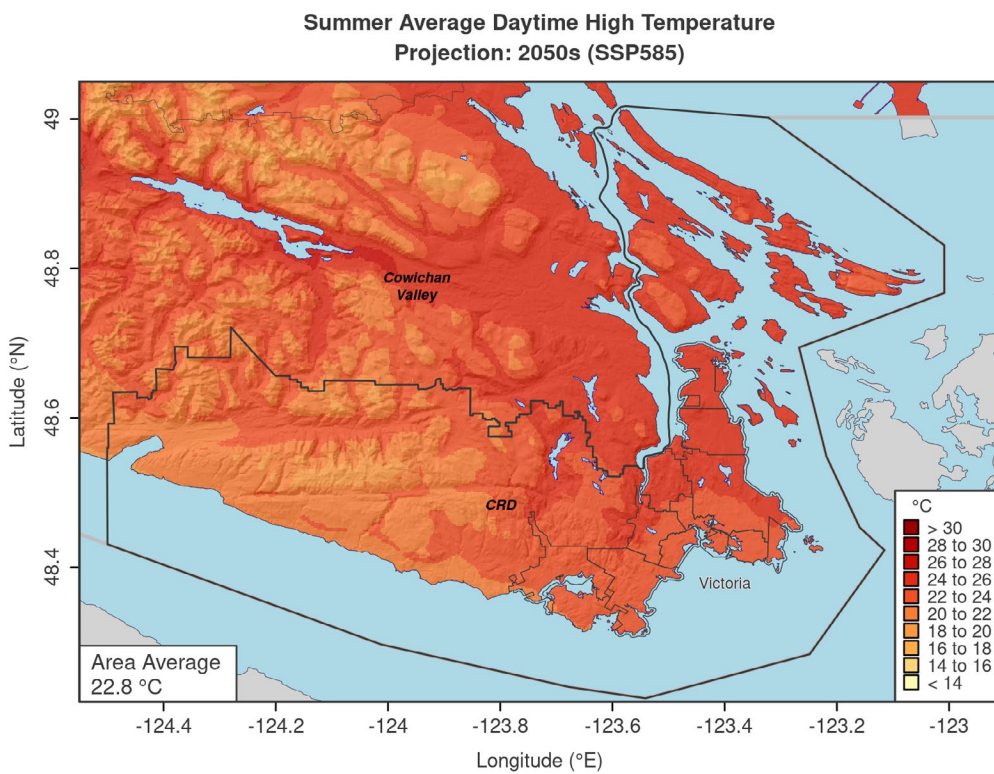
|        | Past (°C) | 2050s Change (°C) | 2080s Change (°C) |
|--------|-----------|-------------------|-------------------|
| Winter | 6         | 2.1 (1.6 to 3.5)  | 3.5 (2.8 to 6.5)  |
| Spring | 12        | 2.1 (1.4 to 4.0)  | 3.5 (2.6 to 6.3)  |
| Summer | 20        | 2.9 (2.3 to 5.1)  | 4.7 (4.1 to 8.7)  |
| Fall   | 13        | 2.7 (2.2 to 4.6)  | 4.0 (3.6 to 7.2)  |
| Annual | 13        | 2.5 (2.0 to 4.4)  | 3.9 (3.4 to 7.0)  |

**Table 2: Regional Average Nighttime Low Temperature (TN)**

|        | Past (°C) | 2050s Change (°C) | 2080s Change (°C) |
|--------|-----------|-------------------|-------------------|
| Winter | 1         | 2.0 (1.8 to 3.8)  | 3.6 (3.2 to 6.8)  |
| Spring | 4         | 2.2 (1.5 to 3.5)  | 3.2 (2.8 to 5.6)  |
| Summer | 10        | 2.8 (2.3 to 4.3)  | 4.6 (3.9 to 7.4)  |
| Fall   | 5         | 2.9 (2.1 to 4.7)  | 4.2 (3.6 to 7.3)  |
| Annual | 5         | 2.3 (2.0 to 4.2)  | 3.9 (3.5 to 6.6)  |

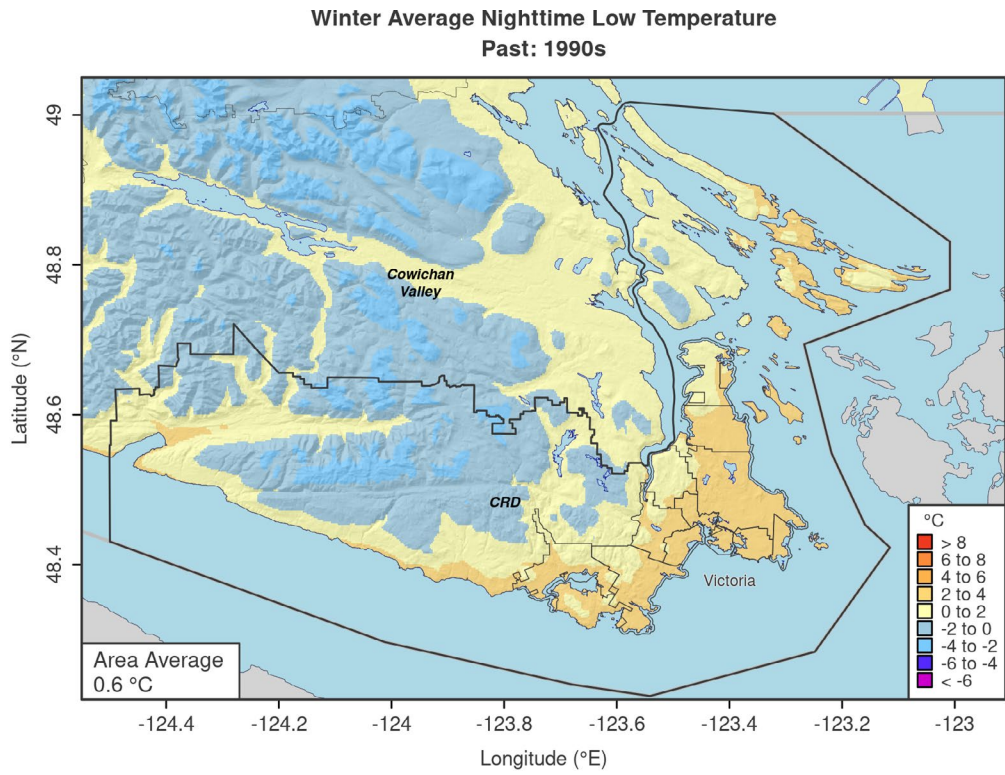


**Figure 4a:** Summer average daytime high temperature in the Past.

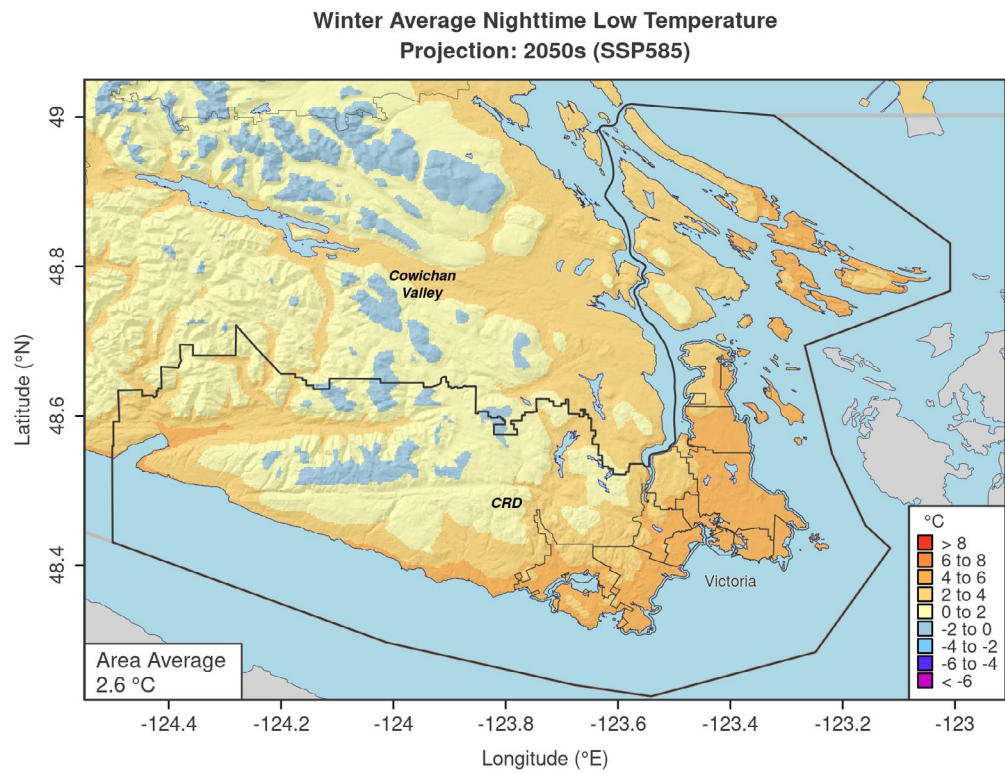


**Figure 4b:** Projected summer average daytime high temperature in the 2050s.





*Figure 5a: Winter average daytime high temperature in the Past.*



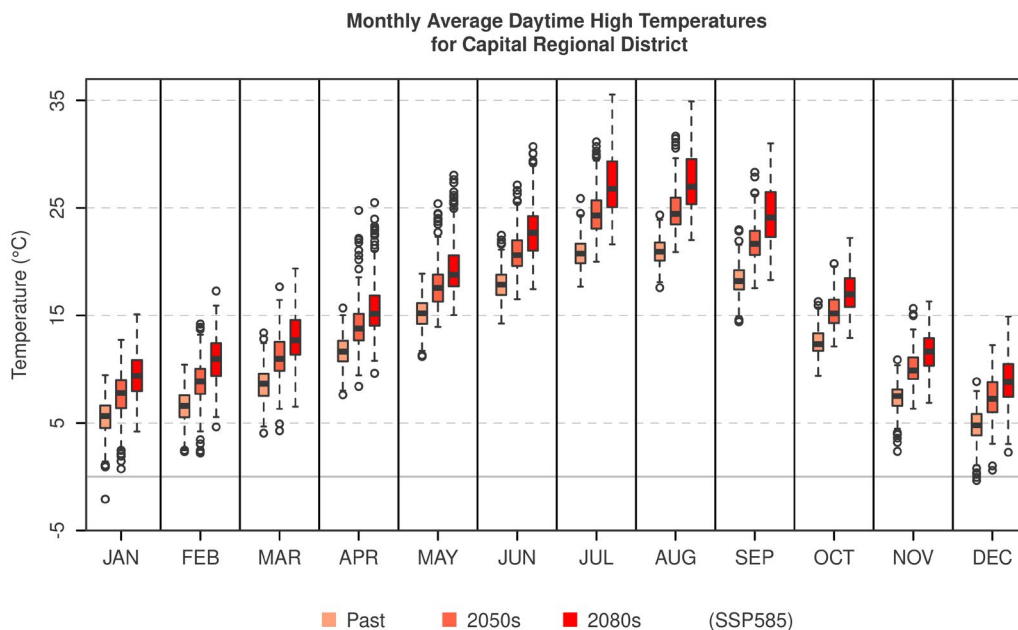
*Figure 5b: Projected winter average daytime high temperature in the 2050s.*

### 3.2 Seasonal Temperature Change and Variability

Future-projected temperatures are compared with Past temperatures on a monthly basis in the figure below. The box-and-whisker plots reflect both year-to-year and model-to-model variability in all 30 Januarys, Februarys, etc., over the Past and Future periods.

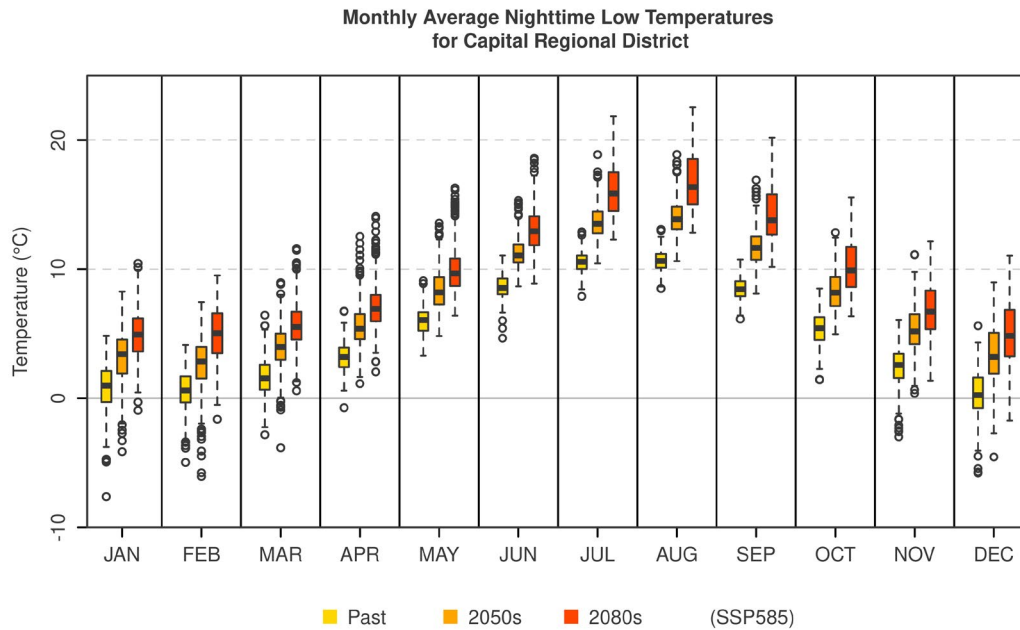
Some features worth noting are:

- Freezing temperatures in the cold months become increasingly rare in the Future.
- Spring—loosely defined as the beginning of the growing season, when daily mean temperature  $T_m$  consistently exceeds 5°C; see Temperature Indicators—begins earlier in the Future, while Fall—defined similarly as the end of the growing season—ends later, resulting in an effectively shorter winter season.
- The frequency of high extremes in summer increases notably, with July and August average daytime high temperatures exceeding 23°C in about three-quarters of models and years by the 2050s.



**Figure 6a.** Annual cycle of monthly mean daytime high temperature in the Past, 2050s and 2080s periods under the SSP585 scenario.





**Figure 6b.** Annual cycle of monthly mean nighttime low temperature in the Past, 2050s and 2080s periods under the SSP585 scenario.

### 3.3 Wetter Winters, Drier Summers

*Precipitation* is the sum of rainfall and snowfall (expressed as water equivalent). Precipitation in the capital region has a strong seasonality, characterized by wet winters and dry summers. In the future projections, this behaviour is reinforced, so that winter becomes wetter (as do spring and fall) while summer becomes drier.

#### Projections

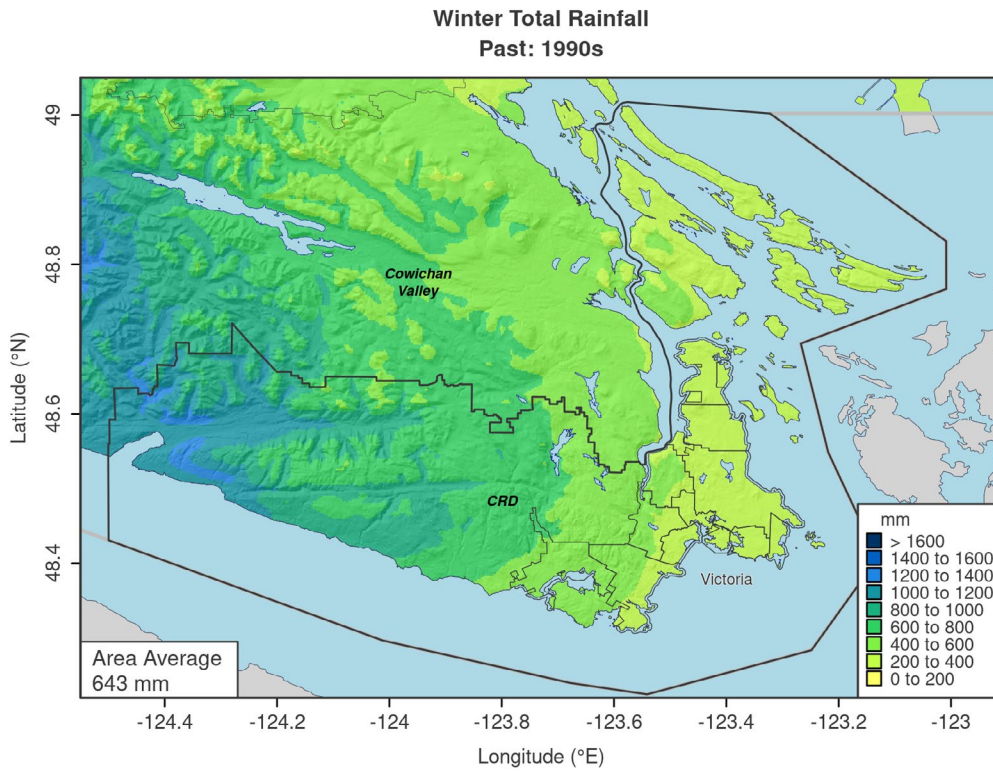
In tandem with the higher summer temperatures mentioned above—which increase potential evaporation—reduced summer rainfall heightens the possibility of drought conditions. Rainfall increases are highest in winter, displaying a 25% increase in the 2050s region-wide, considerably higher in the west (+145 mm in the Western Region) than in the east (+25 mm in the Gulf Islands). Since the median increase in total winter precipitation by then is only +1%, we conclude that this is primarily due to the conversion of snow to rain under warmer winter conditions. While snowfall comprised about 15% of total precipitation in the Past, it amounts to only 5% in the 2050s. By the 2080s, the capital region should receive as little snowfall annually as it did in spring alone in the Past.



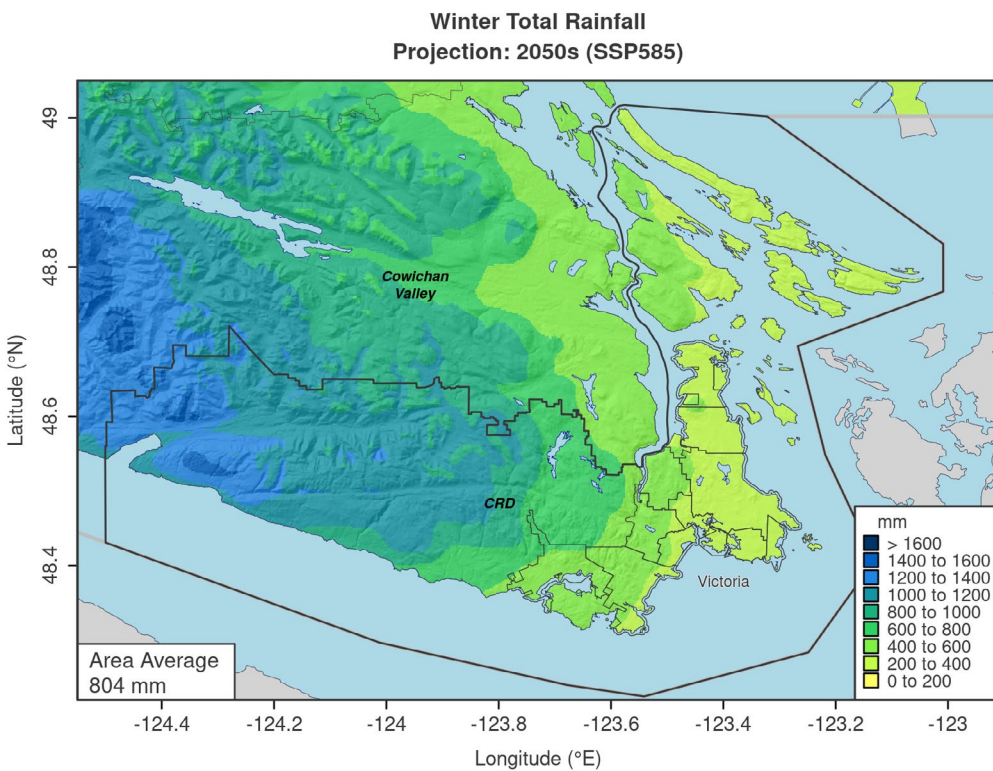
Table 3: Average Precipitation (Rain and Snow) over the Region

|                                  | Past (mm) | 2050s (mm) | 2080s (mm) | 2050s Change (%)    | 2080s Change (%)     |
|----------------------------------|-----------|------------|------------|---------------------|----------------------|
| <b>Winter</b>                    |           |            |            |                     |                      |
| Rain                             | 643       | 804        | 864        | 25<br>(11 to 39)    | 34<br>(19 to 54)     |
| Snow                             | 197       | 83         | 36         | -58<br>(-85 to -45) | -82<br>(-97 to -75)  |
| <b>Spring</b>                    |           |            |            |                     |                      |
| Rain                             | 409       | 460        | 477        | 12<br>(7 to 21)     | 17<br>(3 to 26)      |
| Snow                             | 37        | 10         | 2          | -73<br>(-95 to -44) | -95<br>(-100 to -78) |
| <b>Summer</b>                    |           |            |            |                     |                      |
| Rain                             | 159       | 135        | 129        | -15<br>(-32 to -2)  | -19<br>(-46 to -4)   |
| <b>Fall</b>                      |           |            |            |                     |                      |
| Rain                             | 620       | 710        | 770        | 15<br>(9 to 22)     | 24<br>(13 to 34)     |
| Snow                             | 38        | 8          | 4          | -79<br>(-95 to -62) | -89<br>(-99 to -83)  |
| <b>Annual</b>                    |           |            |            |                     |                      |
| Rain                             | 1827      | 2102       | 2279       | 15<br>(9 to 25)     | 25<br>(12 to 28)     |
| Snow                             | 274       | 109        | 40         | -60<br>(-88 to -50) | -85<br>(-97 to -78)  |
| <b>Precipitation<sup>6</sup></b> | 2101      | 2179       | 2325       | 4<br>(0 to 12)      | 11<br>(-1 to 13)     |

<sup>6</sup> Note that in future, the summed medians of rain and snow may not equal the median precipitation, since the distribution of the two quantities may vary across the model ensemble.

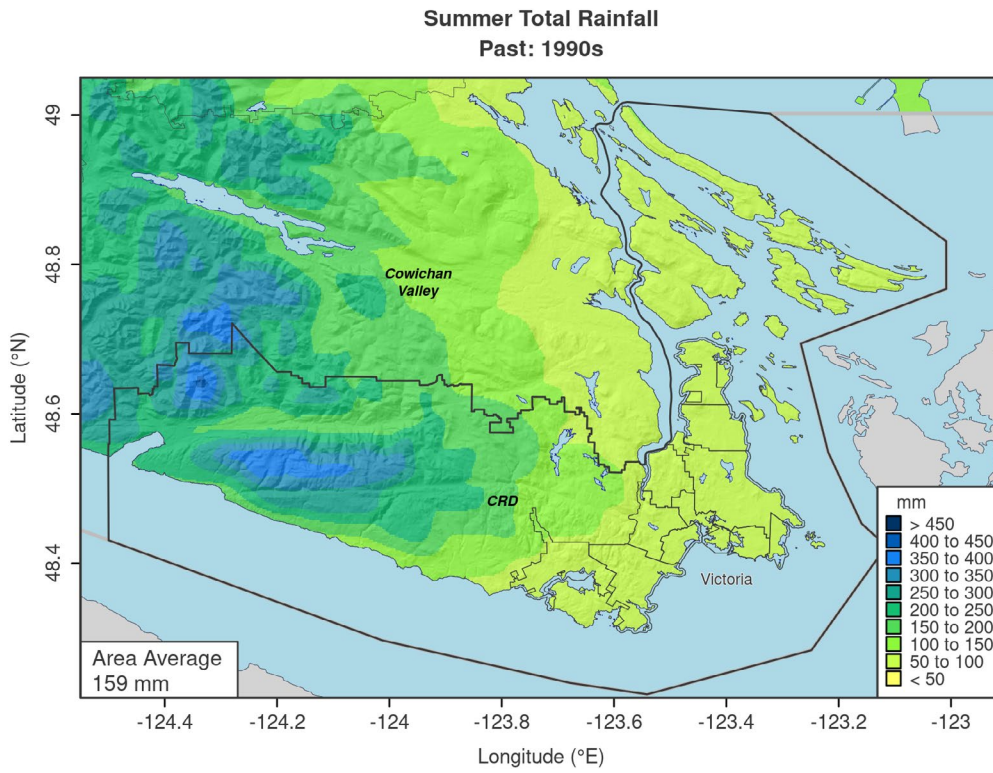


**Figure 7a.** Winter rainfall in the Past.

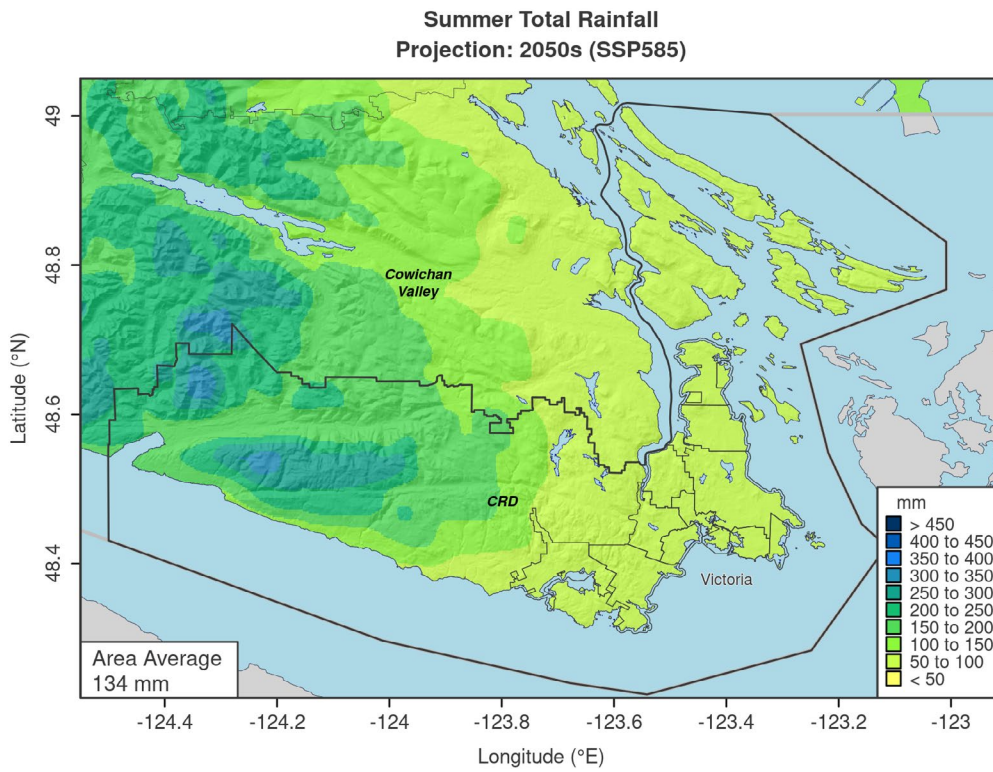


**Figure 7b.** Projected winter rainfall in the 2050s.





**Figure 8a.** Summer rainfall in the Past.

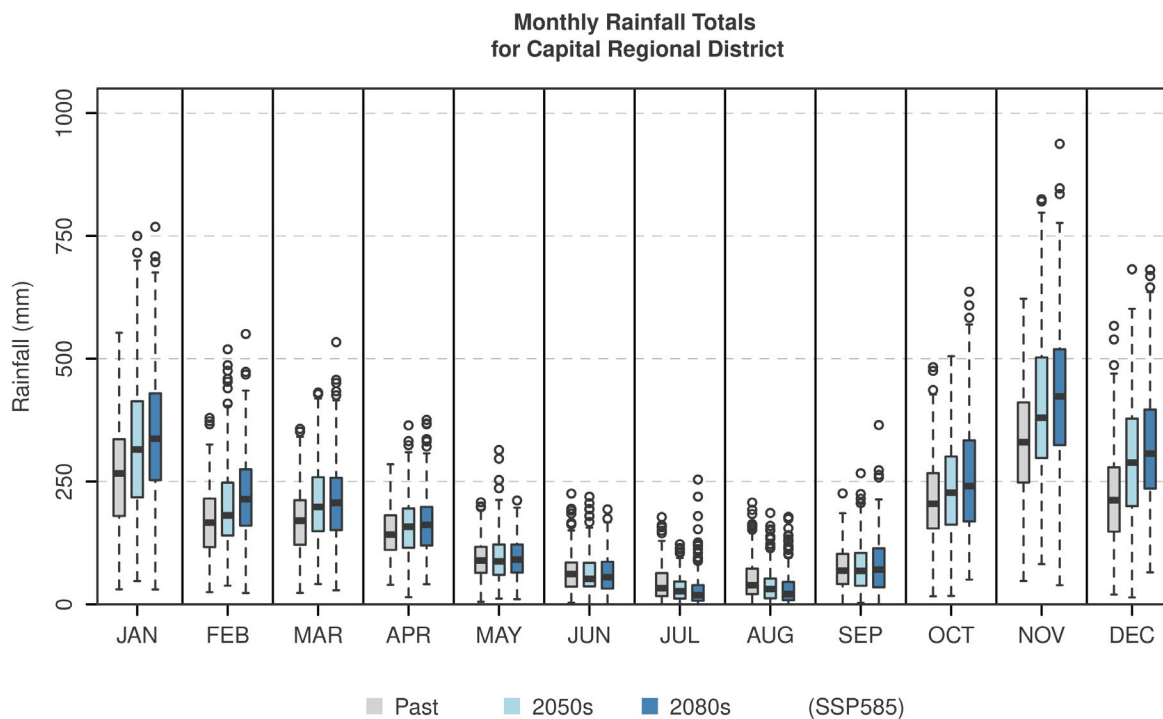


**Figure 8b.** Summer rainfall in the 2050s.

### 3.4 Seasonal Precipitation Change and Variability

While precipitation in the capital region exhibits a notable seasonality, with far larger amounts in the colder months, this occurs against the background of high year-to-year variability. As a result, a climate change signal is more difficult to distinguish in precipitation than in temperature. One exception is the projected strong decline in snowfall, summarized in Table 3 and Figure 17. Combined with an increase in annual total precipitation of +4%, the resulting median projection of annual total rainfall for the entire region in the 2050s is +15%.

The figure below shows model estimates of monthly total rainfall in the Past and both Future periods. While median values increase in the colder months throughout the century, what is more striking are the changes in variability (occurring across both individual models and years, as shown for temperature above). For example, we note the occurrence of higher extreme monthly rainfall amounts in future periods, especially during the autumn months; some November rainfall totals could exceed 750 mm in future, compared to around 600 mm in the Past.<sup>7</sup>



**Figure 9.** Annual cycle of total monthly rainfall in the Past, 2050s and 2080s periods.

<sup>7</sup> 90<sup>th</sup> percentile values are cited. These totals are averaged across the region, with Past November values spanning a large range from the wetter Western Region (~650 mm) to the drier Gulf Islands Region (~300 mm). For reference, the highest recorded November precipitation at Victoria International Airport is 316 mm (in 2021).

## 4. WINTER TEMPERATURE INDICATORS

### 4.1 Warmest Winter Day, Coldest Winter Night

The *Warmest Winter Day* is the highest daily maximum temperature recorded during the winter months, in an average year. When considered along with the *Coldest Winter Night* (i.e., lowest daily minimum temperature), these indicators describe the projected “new normal” for winters in our region.

#### *Projections*

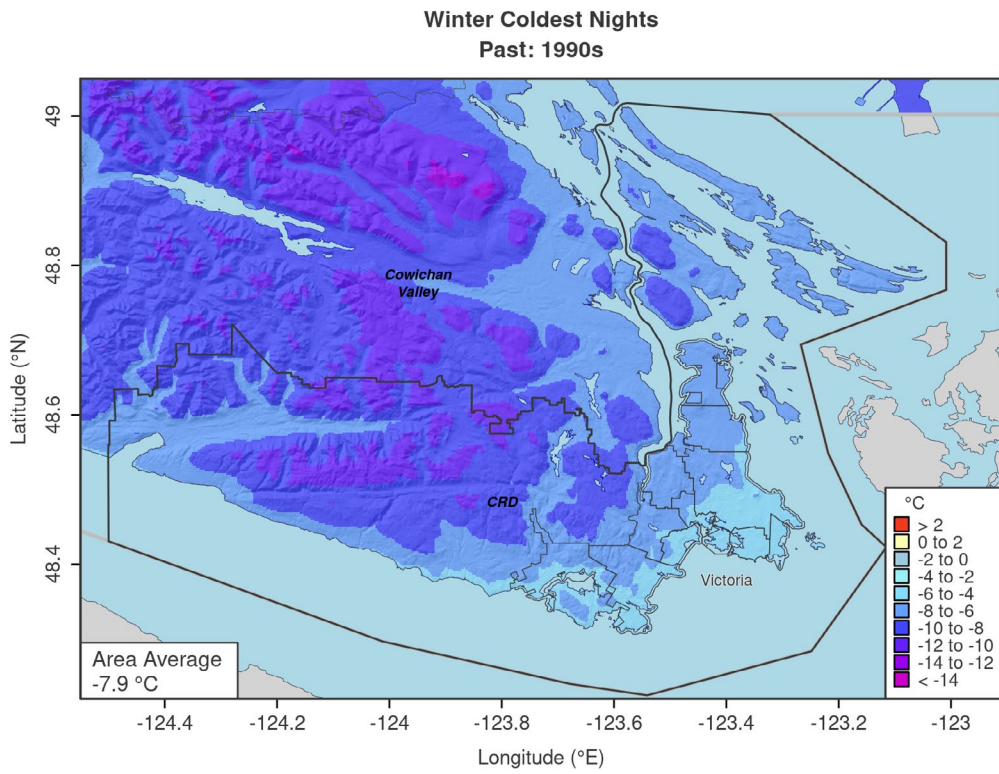
By the 2050s, we can expect to see the warmest winter daytime temperature to rise from its Past value of 11°C to about 13°C, with a further increase to about 15°C by the 2080s.

In the Past, the coldest winter night had a temperature of about -8°C. Models project winter lows to increase by roughly 3.5°C by the 2050s, to -4.5°C, and by 6.5°C by the 2080s, to -1.5°C. The maps below illustrate that in the future, temperatures below freezing will usually occur only at the highest elevations in the region.

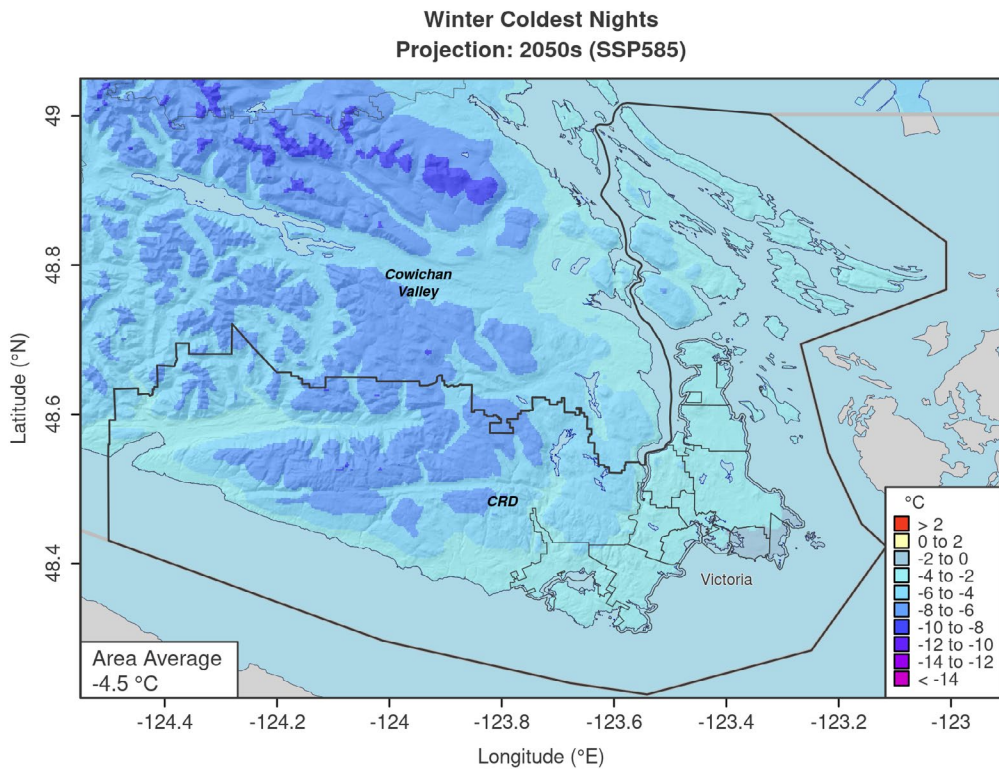
Warming winter temperatures will lead to an increased fraction of precipitation falling as rain instead of snow. Snow accumulation events, which typically occur a few times each winter in the region, will still occur, but less frequently.







**Figure 10a.** Coldest winter night in the Past.



**Figure 10b.** Projected coldest winter night in the 2050s.

## 4.2 1-in-20 Year Coldest Nighttime Low Temperature

This indicator describes extreme cold temperatures so low that they are expected to occur only once every 20 years in the historical climate. Equivalently, in the recent past the *1-in-20 Year Coldest Night* had a 5% chance of occurring in any given year.<sup>8</sup>

### Projections

In the Past, the 1-in-20 year coldest night had a temperature of -15°C. In the Future, the 1-in-20 year coldest night across the region will increase by about 5°C by the 2050s and by about 8.5°C by the 2080s.

<sup>8</sup> Note that the occurrence of such an event in one year doesn't preclude its occurrence in the following years, which is why the annual exceedance probability (i.e. 5% chance, in this case) is a helpful equivalent measure.

## 4.3 Frost Days and Ice Days

*Frost Days* is an annual count of days when the daily minimum temperature is less than 0°C which may result in frost at ground level. This indicator is useful to help predict how changes in the number of days with minimal temperatures below freezing could affect native and agricultural plant species.

*Ice Days* occur when daytime high temperatures do not exceed 0°C. While some of the same effects are expected as for frost days, these freezing temperatures may also affect transportation via the increased chance of icy road conditions.

### Projections

In the Past, the capital region experienced an average of 60 frost days and 6 ice days per year. In the 2050s, we should expect far fewer such days: around half as many frost days by the 2050s and only around one-fifth as many by the 2080s. Ice days may be very rare by the mid- to late-century.

**Table 4: Warmer Winter Extreme Temperatures**

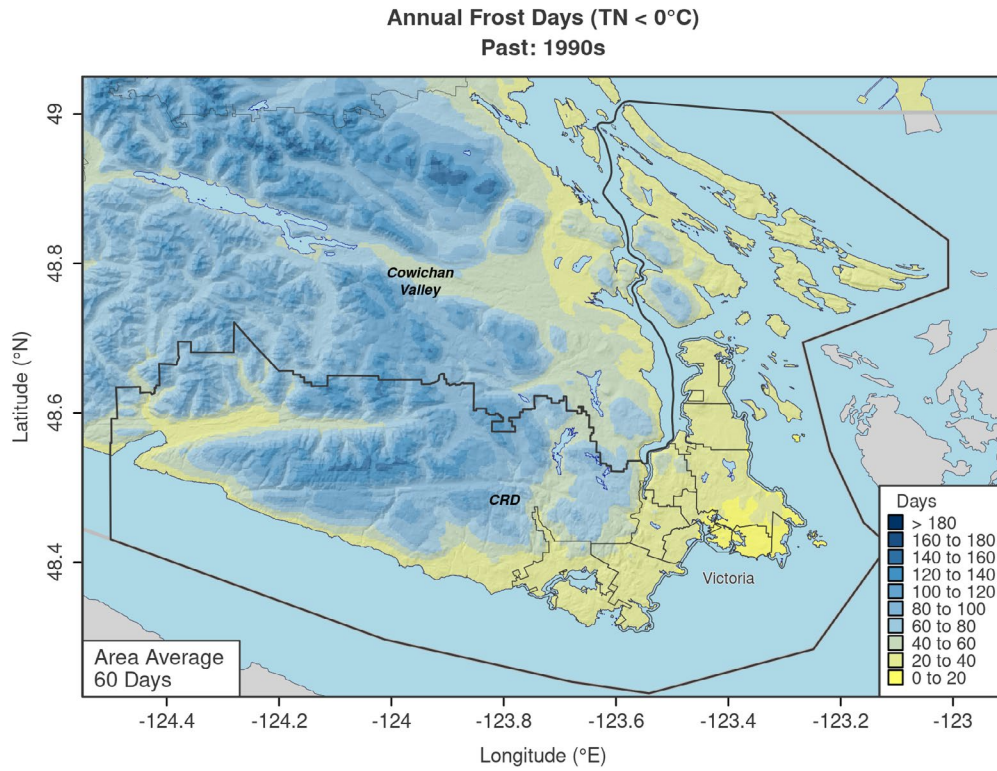
|                                    | Past (°C) | 2050s (°C) | 2080s (°C) | 2050s Change (°C)   | 2080s Change (°C)    |
|------------------------------------|-----------|------------|------------|---------------------|----------------------|
| Warmest Winter Day                 | 11        | 13         | 15         | 2.4<br>(1.7 to 4.2) | 4.2<br>(3.2 to 6.9)  |
| Coldest Winter Night               | -8        | -4.5       | -1.3       | 3.4<br>(2.9 to 5.5) | 6.6<br>(5.4 to 10.4) |
| 1-in-20 Year Coldest Nighttime Low | -15       | -10        | -6.5       | 5.0<br>(3.2 to 7.2) | 8.5<br>(7.5 to 13)   |

**Table 5: Annual Frost and Ice Days**

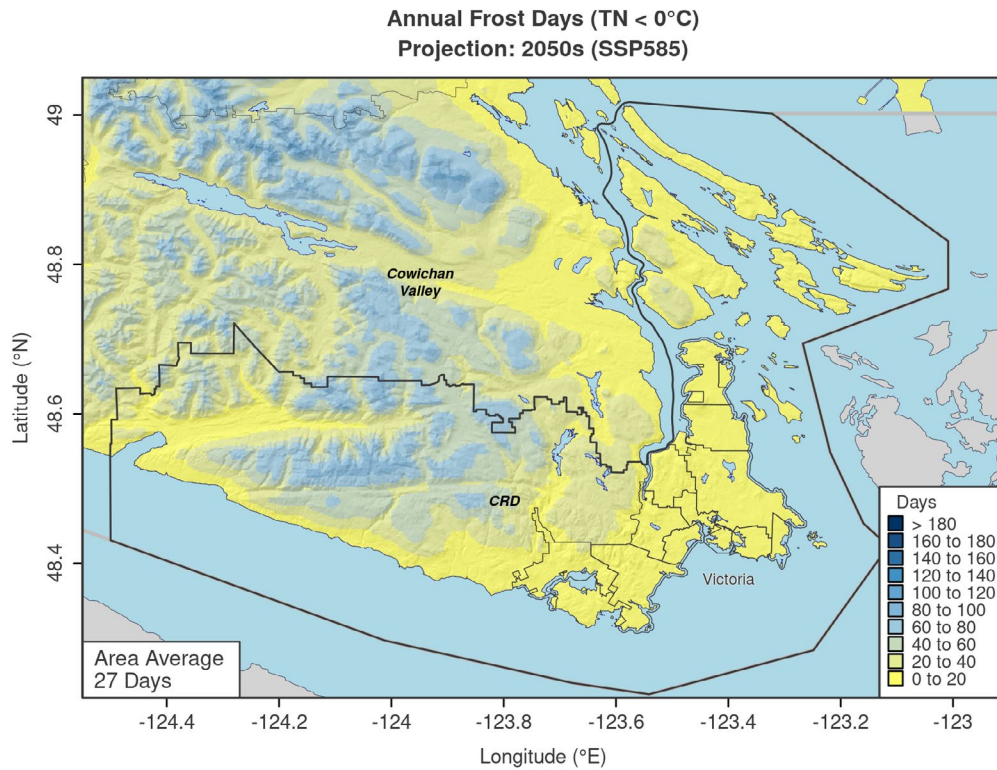
|                                 | Past (days) | 2050s (days) | 2080s (days) | 2050s Change (days) | 2080s Change (days) |
|---------------------------------|-------------|--------------|--------------|---------------------|---------------------|
| <b>Frost Days (TN &lt;0 °C)</b> |             |              |              |                     |                     |
| Region                          | 60          | 27           | 12           | -33<br>(-51 to -27) | -48<br>(-58 to -45) |
| Eastern Region*                 | 30          | 11           | 3            | -19<br>(-28 to -16) | -27<br>(-30 to -23) |
| Water Supply Area               | 80          | 38           | 17           | -42<br>(-67 to -36) | -63<br>(-76 to -59) |
| <b>Ice Days (TX &lt;0 °C)</b>   |             |              |              |                     |                     |
| Region                          | 6           | 2            | 0            | -4<br>(-6 to -3)    | -6<br>(-7 to -5)    |

\*The Eastern Region encompasses both the Southern Gulf Islands and Core/Peninsula subregions (Figure 1).





**Figure 11a.** Number of annual frost days in the Past.



**Figure 11b.** Projected frost days in the 2050s.

## 4.4 Heating Degree Days

*Heating Degree Days* (HDD) are calculated by summing the number of degrees that the daily mean temperature falls below 18°C for every day in a year.<sup>9</sup> This measure is commonly used to estimate the heating demand for buildings in the cooler months.

### Projections

In the Past, the capital region had a median of roughly 3405 HDD.<sup>10</sup> The median future-projected HDD decreases to 2644 (a 22% decrease) by the 2050s and to 2215 (a 35% decrease) by the 2080s. Due to its cumulative nature, a reduction in HDD is amongst the clearest indicators of warming, both in recent historical observations and in model projections. In addition, it should be noted that HDD varies considerably from west (higher values) to east (lower values) over the region.

Note that while mean winter temperatures will warm throughout the coming decades, the region’s continued exposure to easterly polar outflows from Northwestern Canada through the Cascade Range suggests that the potential for multi-day cold snaps will persist in the future, though they should be less frequent. For this reason, building heating systems will still need to be responsive to occasional sub-zero winter temperatures.



**Table 6: Heating Degree Days**

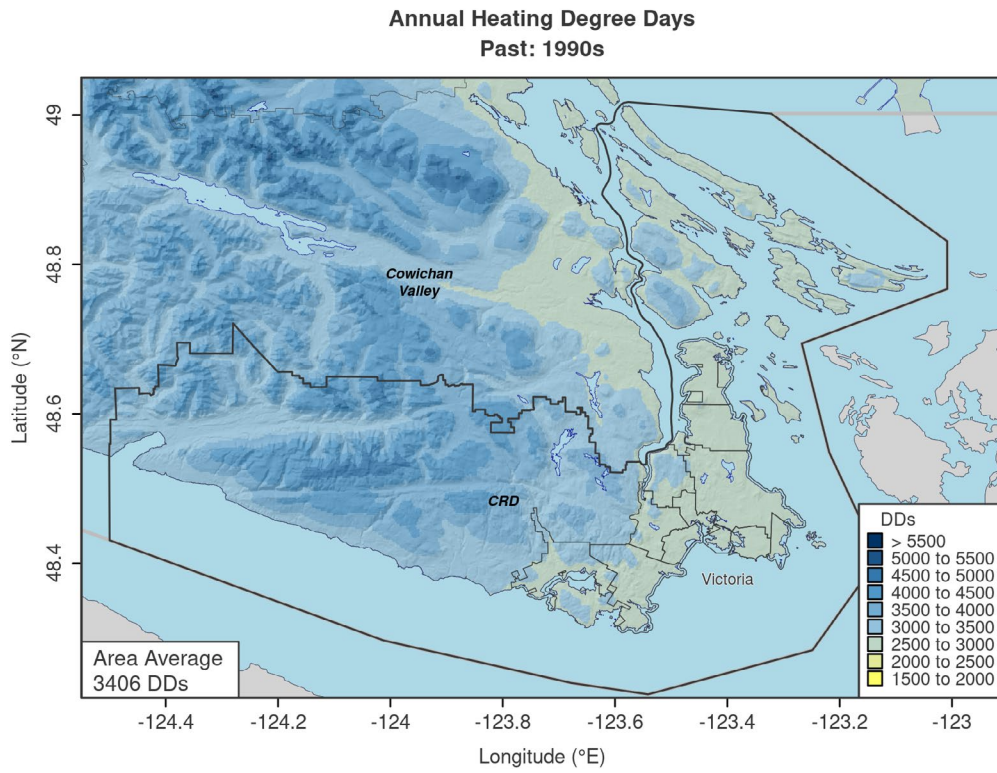
|                       | Past<br>(°C-days) | 2050s<br>(°C-days) | 2080s<br>(°C-days) | 2050s Change (%)    | 2080s Change (%)    |
|-----------------------|-------------------|--------------------|--------------------|---------------------|---------------------|
| Region                | 3405              | 2644               | 2125               | -22<br>(-40 to -19) | -35<br>(-56 to -32) |
| Southern Gulf Islands | 2836              | 2114               | 1755               | -25<br>(-45 to -22) | -38<br>(-63 to -35) |
| Core / Peninsula      | 2904              | 2164               | 1773               | -25<br>(-44 to -22) | -39<br>(-62 to -35) |
| Western Region        | 3387              | 2613               | 2158               | -23<br>(-41 to -20) | -36<br>(-57 to -33) |

<sup>9</sup> For example, if the daily mean temperature on January 1 is 10°C, followed by one day of 4°C, two days of -1°C and three days of 0°C, then HDD for that week are calculated as:  $(18-10) + (18-4) + 2 \times (18-(-1)) + 3 \times (18-0) = 114$  degree-days. Note that days with a temperature equal to or greater than 18°C are not counted.

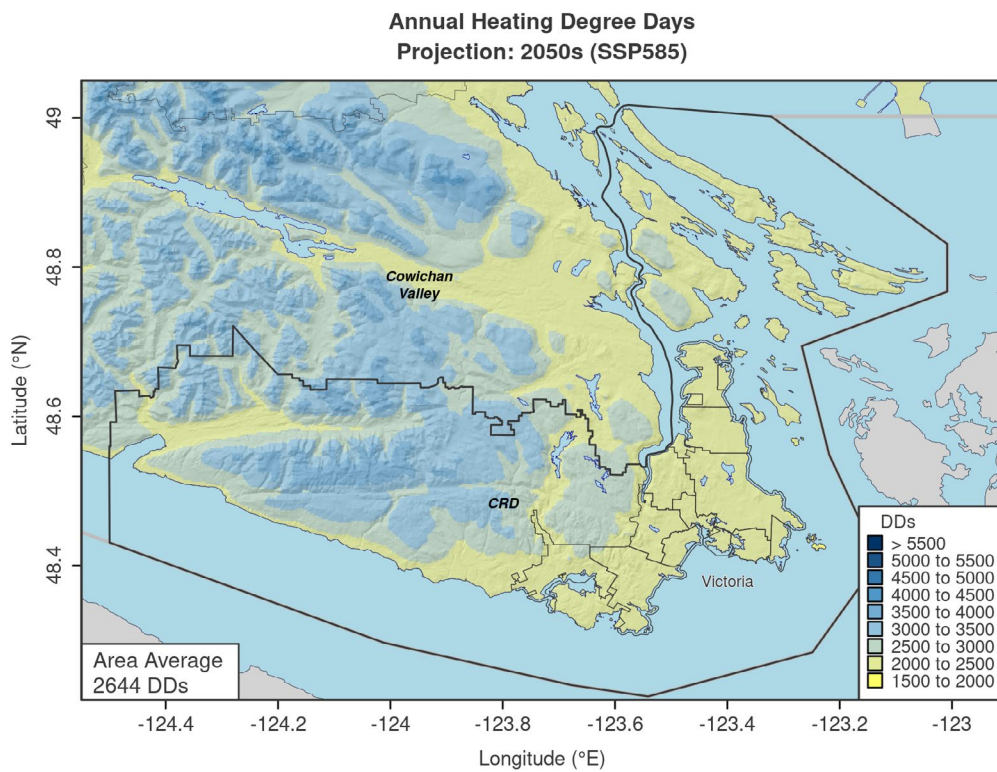
<sup>10</sup> Someone consulting the tables for the National Building Code of Canada (NBCC, 2015) will see different values of HDD listed for Victoria locations than the Past values cited in Table 6. One reason for this is the larger area covered by

our Core/Peninsula subregion. Another is the different methodology and period of observations used to calculate HDD in the NBCC. As our estimate depends to some extent on coarse-grained climate models, while the NBCC employs interpolated station data, the NBCC value would normally be considered more reliable in this subregion (which contains several meteorological stations). For those interested in future HDD estimates, the relative differences from Past values can be used for HDD projections, regardless of which baseline value is used.





**Figure 12a.** Heating Degree Days in the Past.



**Figure 12b.** Projected (decreased) HDD in the 2050s



## 5. SUMMER TEMPERATURE INDICATORS

### 5.1 Growing Season Length

*Growing Season Length (GSL)* is an annual measure indicating the period when temperatures are warm enough for most vegetation to grow. The GSL is the number of days between the first span of at least 6 consecutive days with daily average temperatures above 5°C, and the first span, after July 1, of six days with temperatures below 5°C. This measure helps to highlight how urban forests, agricultural and landscaped areas, grasses, weeds (and their pollens) may be affected by climate change.

#### *Projections*

In the Past, the growing season lasted roughly 270 days in the region. The median future-projected growing season increases by 47 days to 318 days by the 2050s and by 68 days to 339 days by the 2080s.

Other things being equal, a longer GSL implies potentially more productive vegetation in the future. However, since GSL uses only a lower temperature threshold (and not an upper threshold to account for heat stress) and ignores changes in precipitation (reduced rainfall in the warm season—Section 3.3, Table 3), it should be considered an upper limit for estimates of future productivity.

A related measure to GSL is the length of the frost-free season, which uses a lower threshold of 0°C for minimum daily temperature. As mentioned above, frost days will become increasingly rare in the future, resulting in frost-free conditions nearly year-round in the region by the 2080s.

**Table 7: Growing Season Length**

|                   | Past (days) | 2050s (days) | 2080s (days) | 2050s Change (days) | 2080s Change (days) |
|-------------------|-------------|--------------|--------------|---------------------|---------------------|
| Region            | 271         | 318          | 339          | 47<br>(39 to 71)    | 68<br>(60 to 86)    |
| Eastern Region    | 315         | 348          | 358          | 33<br>(25 to 42)    | 44<br>(37 to 49)    |
| Western Region    | 283         | 324          | 344          | 41<br>(35 to 64)    | 61<br>(53 to 76)    |
| Water Supply Area | 245         | 301          | 329          | 56<br>(45 to 90)    | 84<br>(75 to 112)   |



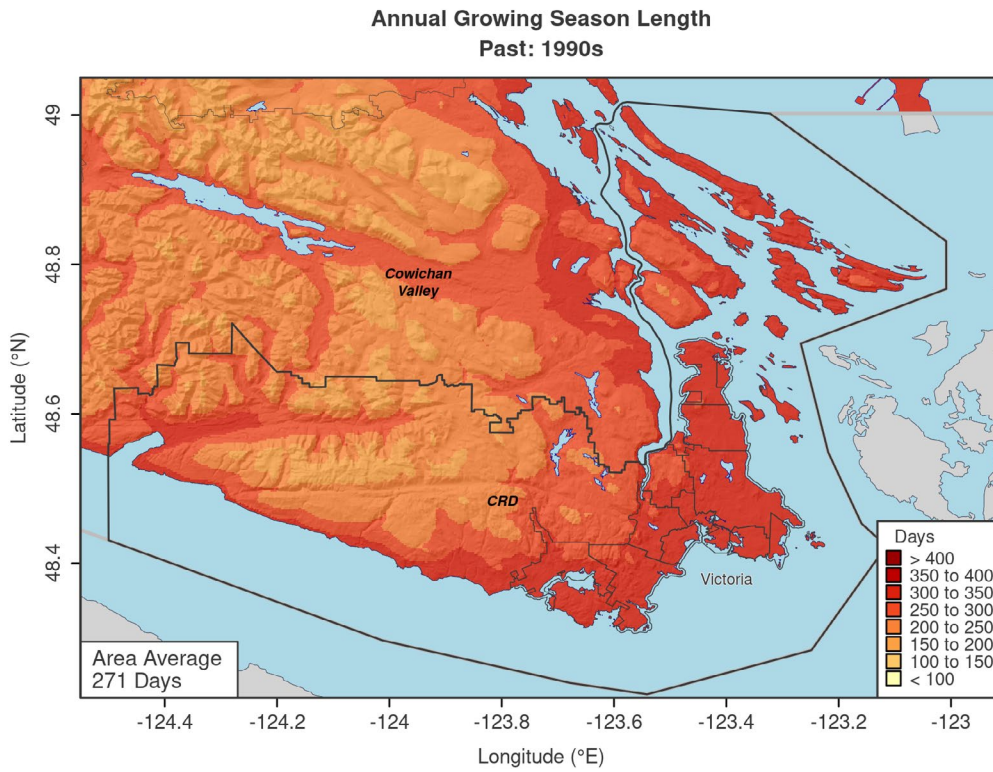


Figure 13a. Growing season length in the past

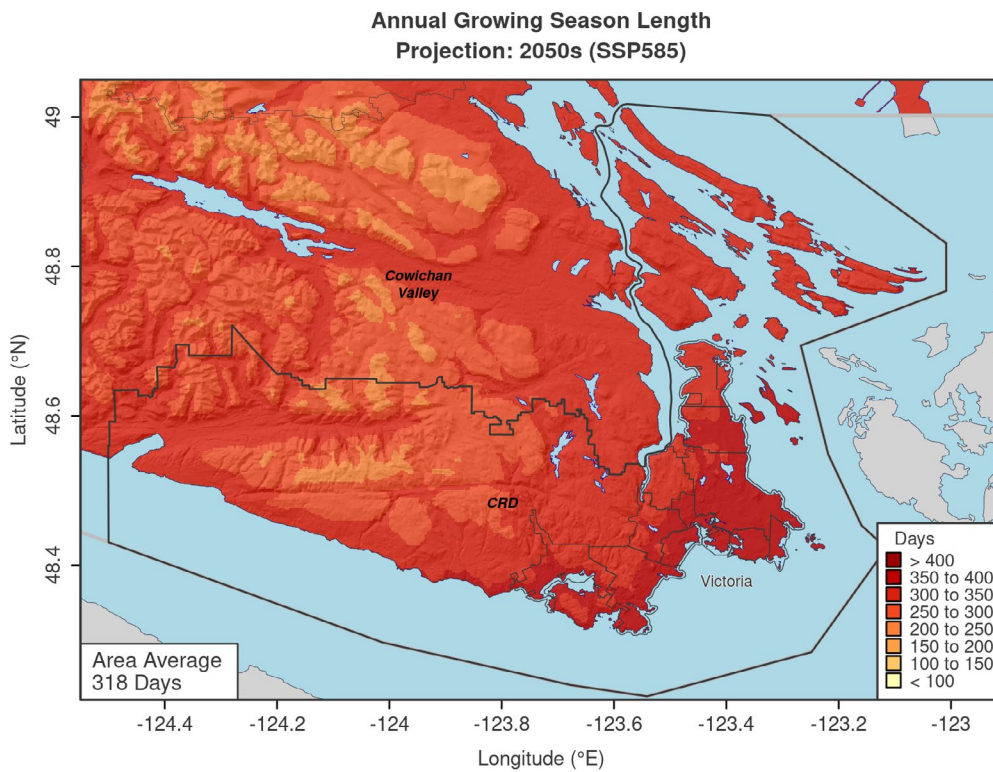


Figure 13b. Projected (increased) growing season length by the 2050s

## 5.2 Cooling Degree Days

The opposite of HDD, *Cooling Degree Days* are calculated by summing the number of degrees that the daily mean temperature exceeds 18°C for every day in a year.<sup>11</sup> This measure is commonly used to estimate the demand for mechanical cooling (i.e., air conditioning) in buildings in the warmer months.

### Projections

In the Past, the capital region typically had around 17 cooling degree days, with the vast majority of such days occurring in summer. The median future-projected cooling degree days increase to about 119 (a 7-fold increase) by the 2050s and to nearly 240 (a 14-fold increase) by the 2080s. While most such days will continue to occur in summer, they will increasingly occur during late spring and early fall.

Like the projected decrease in HDD, an increase in cooling degree days is among the clearest indicators of warming, both in recent historical observations and model projections. Moreover, the magnitude of increase varies strongly from west (lower values) to east (higher values) across the capital region. To the extent that this index correlates with demand for cooling, new buildings may need to be designed differently to maintain thermal comfort.



**Table 8: Cooling Degree Days**

|                       | Past<br>(°C-days) | 2050s<br>(°C-days) | 2080s<br>(°C-days) | 2050s Change<br>(°C-days) | 2080s Change<br>(°C-days) |
|-----------------------|-------------------|--------------------|--------------------|---------------------------|---------------------------|
| Region                | 17                | 119                | 237                | 102<br>(62 to 235)        | 220<br>(176 to 592)       |
| Southern Gulf Islands | 38                | 227                | 392                | 189<br>(119 to 385)       | 354<br>(297 to 820)       |
| Core / Peninsula      | 25                | 169                | 317                | 144<br>(87 to 310)        | 292<br>(234 to 716)       |
| Western Region        | 10                | 83                 | 185                | 73<br>(41 to 185)         | 175<br>(135 to 525)       |

<sup>11</sup> For example, if the daily mean temperature on July 1 is 20°C, followed by three days of 21°C, one day of 25°C and two days of 16°C, then the cooling degree days for that week are calculated as: (20-18) + 3 × (21-18) + (25-18) = 18 degree-days.

Note that days with temperature equal to or less than 18°C are not counted.

### 5.3 Warm Summer Days and Nights, Annual Hottest Day and Heatwaves

These indicators highlight the most extreme warm temperatures occurring in the region. The results in the table below are for the Core/Peninsula subregion (see Figure 1) which has the highest population and therefore the highest exposure to many heat-related impacts (values for the Southern Gulf Islands are very similar). Three single-day extreme heat measures are included in the table: the peak temperature of the hottest day of the year (not necessarily occurring during a heatwave), the number of days with TX > 25°C (*Summer Days*), and the number of nights with TN > 16°C (*Temperate Nights*). Episodes of multi-day extreme heat, which were rare in the Past, are captured by several heatwave (HW) indicators defined in the Appendix. These are partly based on threshold temperatures for emergency health alerts used specifically in BC.<sup>12</sup> As with the variables discussed above, each of the indices describes a typical year within the indicated 30-year period.

### Projections

In the Past, there were typically around 12 days per year with a high temperature exceeding 25°C, and rarely did nighttime temperatures rise above 16°C. The median future-projected number of Summer Days increases to roughly 40 per year by the 2050s and 62 per year by the 2080s, while Temperate Nights begin to occur by the 2030s, with a frequency of 15 per year in the 2050s and 52 per year in the 2080s.

When it comes to heatwaves, in the Past, there was usually one HW per year, lasting up to 3 days and having a peak daily temperature of around 30°C. The median future-projected number of HWs increases to roughly 3 per year by the 2050s and 5 per year by the 2080s. HWs are also projected to increase in length in the future (approaching 9 consecutive days or more by the 2080s) and will feature both warmer daytime and nighttime temperatures. It is clear that residents of the area will need to adapt to more frequent, longer, and intense HWs in future.

**Table 9: Measures of extreme heat (Core/Peninsula subregion)**

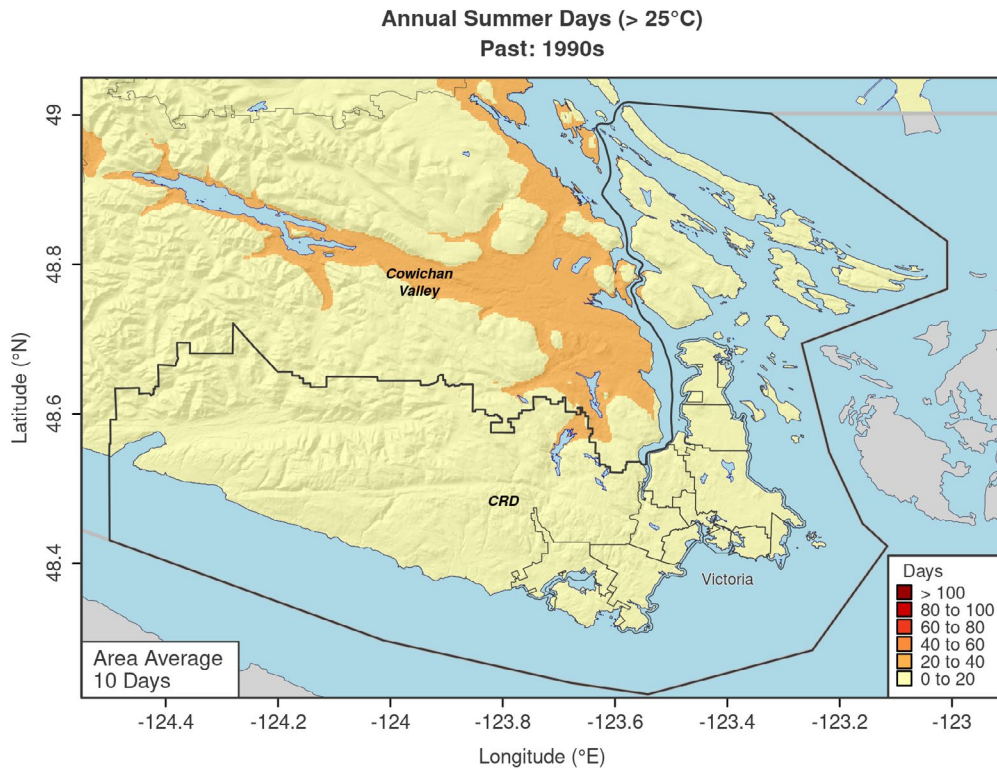
| Core/Peninsula subregion: Heatwave (HW) Indices, Hot Summer Days and Warm Nights* |  |      |                  |                  |                   |
|---|--|------|------------------|------------------|-------------------|
| Index   | Description                            | Past | 2030s            | 2050s            | 2080s             |
| HWD   | HW days (days)                         | 1    | 4<br>(3 to 11)   | 10<br>(6 to 27)  | 23<br>(17 to 74)  |
| HWXL  | HW Maximum length (days) <sup>13</sup> | 3    | 4<br>(3 to 5)    | 4.5<br>(4 to 10) | 8.5<br>(6 to 43)  |
| HWN   | Annual number HWs                      | 1    | 2<br>(1 to 4)    | 3<br>(2 to 5)    | 5<br>(4 to 7)     |
| TXHX  | Avg. TX in most extreme annual HW (°C) | 30   | 31<br>(30 to 32) | 31<br>(31 to 33) | 32<br>(32 to 34)  |
| TNHX  | Avg. TN in most extreme annual HW (°C) | 15   | 16<br>(15 to 16) | 17<br>(16 to 18) | 19<br>(18 to 21)  |
| TXX   | TX on hottest day of year (°C)         | 29   | 31<br>(30 to 32) | 32<br>(32 to 35) | 35<br>(33 to 38)  |
| SU  | Number of days reaching TX >25 °C      | 12   | 28<br>(22 to 41) | 40<br>(30 to 70) | 62<br>(57 to 111) |
| TR16C   | Number of nights reaching TN >16°C     | 0    | 4<br>(3 to 13)   | 15<br>(9 to 47)  | 52<br>(36 to 108) |

\*Upper values in each table cell are the ensemble median, with values in parentheses giving the 10<sup>th</sup> to 90<sup>th</sup> percentile range over the model ensemble.

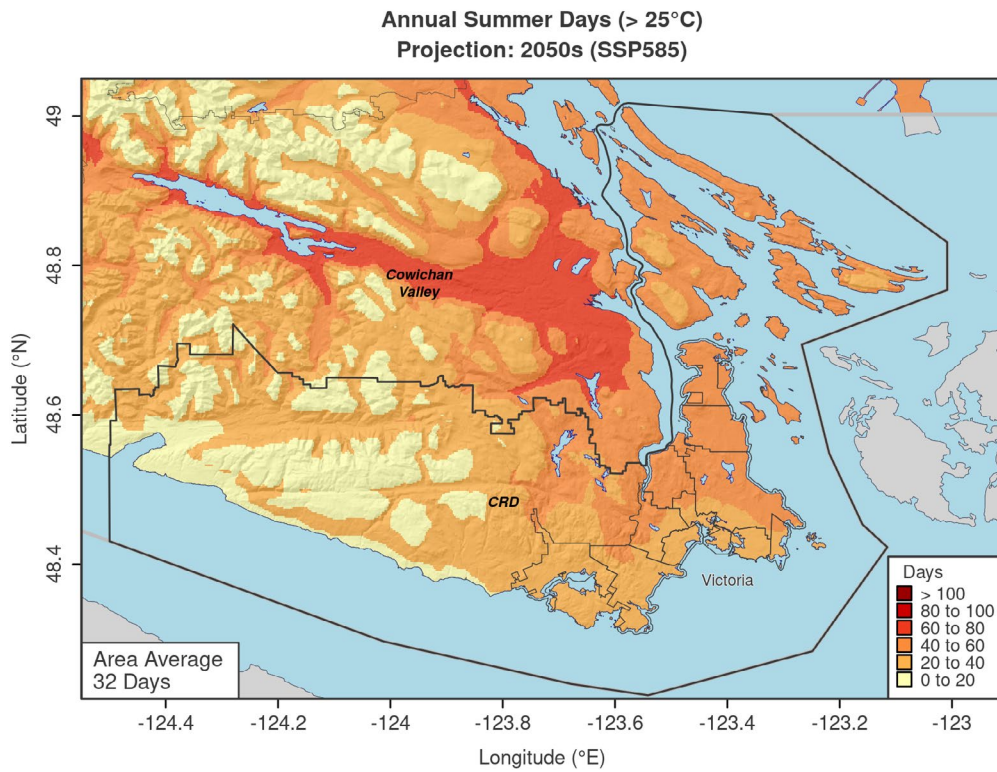
<sup>12</sup> See the report, BC Provincial Heat Alert and Response System (BC HARS): 2023, May 2023. Available at: <http://www.bccdc.ca/health-professionals/professional-resources/heat-event-response-planning>. The lower threshold temperatures used in our HW definition, which is intended for use throughout BC, are TX = 28°C and TN = 13°C. In addition, a HW must: 1) last at least 2 full days; and 2) have TX and TN exceeding their 95<sup>th</sup> percentile values in the Past.

<sup>13</sup> It may seem strange that HWD < HWXL in the Past, but this is an artifact of small number statistics. Some years in the Past contained no HWs, leading to a mean annual value of 0.4 for HWD (rounded to 1 in the table, since some years had a HW). Nevertheless, one or more years had HW lengths of 2 or 3 days, leading to the mean HWXL = 2.5 days (rounded to 3) over the 30-year period. As the number of HWs increases in future years of the simulations, the expected behaviour HWD > HWXL emerges.





**Figure 14a.** Annual count of summer days in the Past



**Figure 14b.** Projected number of annual summer days by the 2050s



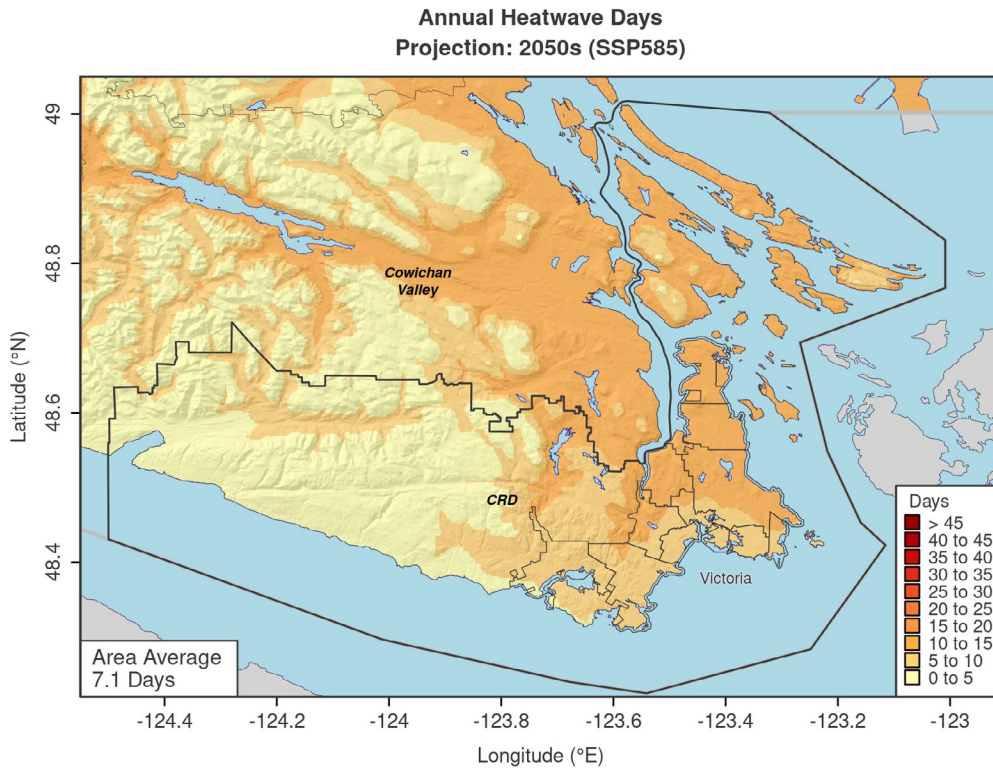


Figure 15a. Projected annual count of heatwave days in the 2050s.

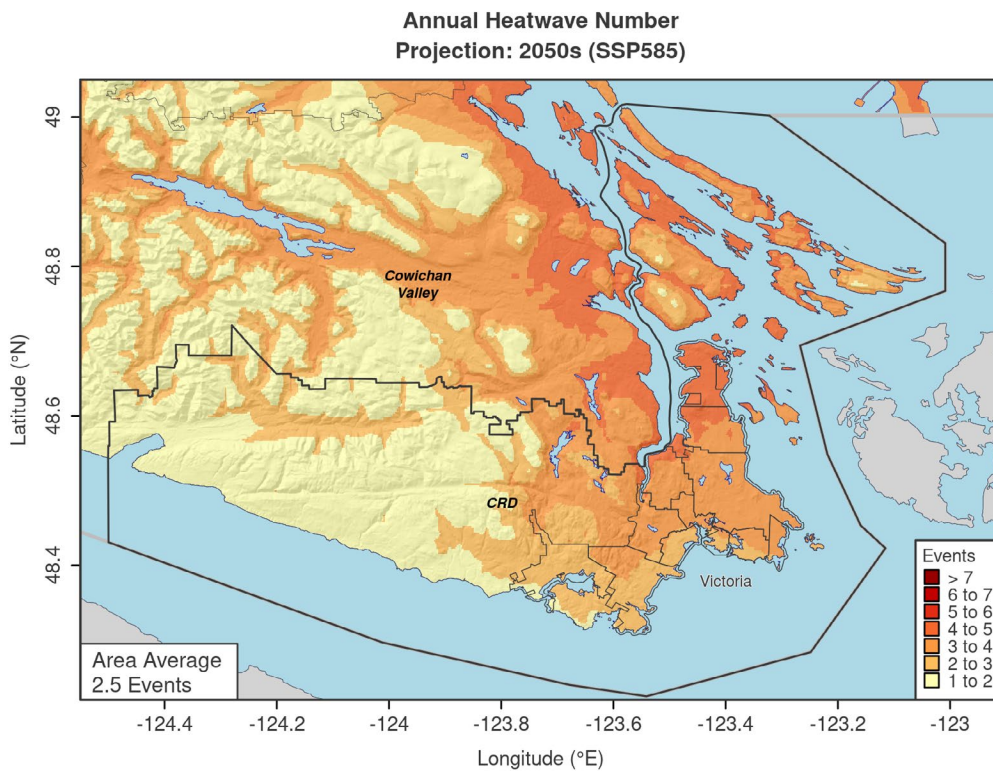


Figure 15b. Projected number of annual heatwaves in the 2050s.

Note that: (i) for both measures, counts in the Past are very low (about 1 per year) and uniform throughout the capital region; and (ii) average values for Core/ Peninsula (Table 9) are larger than capital region averages shown on the maps.

## 5.4 The 1-in-20-Year Annual Hottest Day

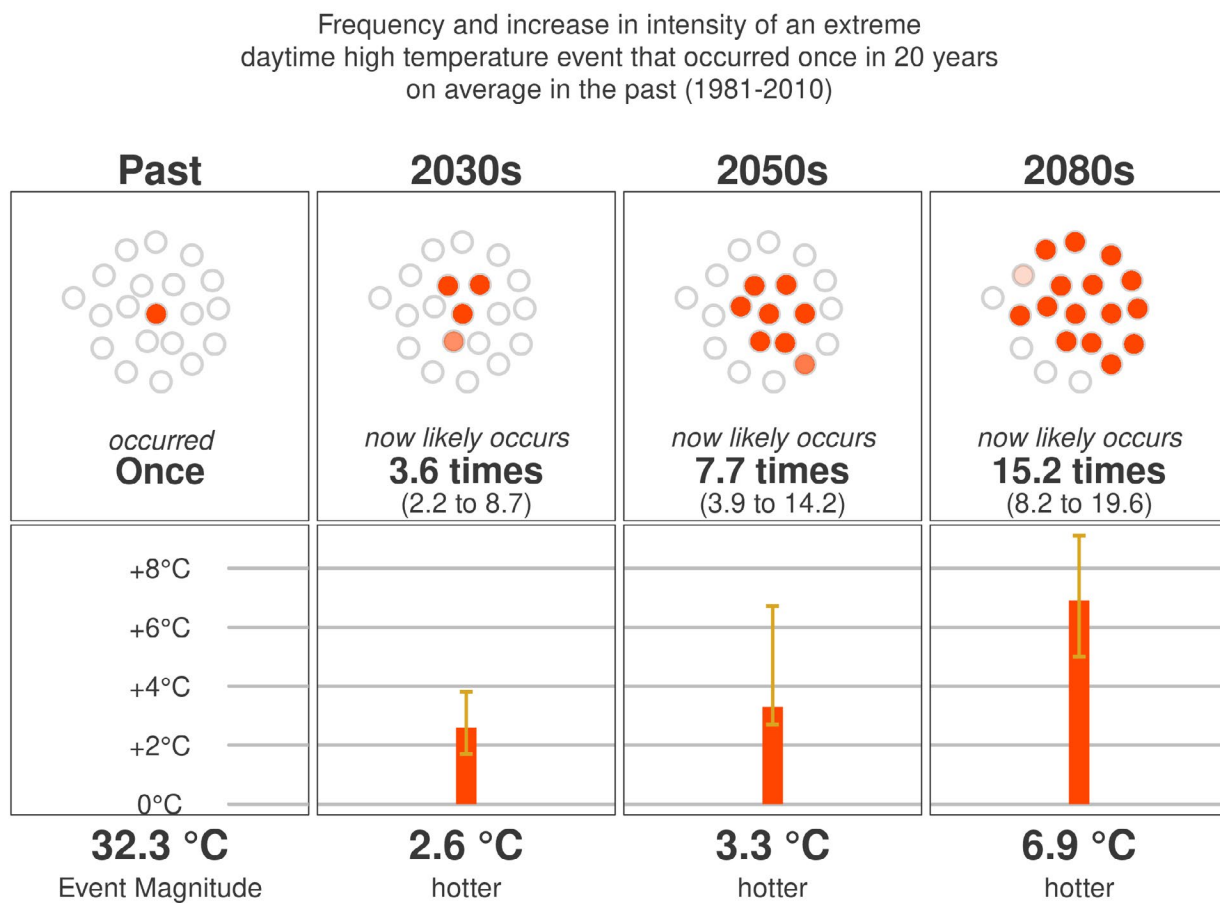
This indicator describes extreme daily high temperatures so warm, they are expected to occur only once every 20 years in the historical climate. In other words, the *1-in-20 Year Hottest Day* presently has a 5% chance of occurring in any given year.

### Projections

The figure below shows the projected changes in this type of event in two ways: first, in terms of how frequently an event of the same TX value occurs in the future; and second, in terms

of how much TX increases for an event occurring with the same frequency (or annual probability) in the future.

For example, in the Past, a daily maximum temperature of 32°C or higher occurred once every 20 years or so in the capital region, or with a 5% annual exceedance probability (AEP). In the projections for the 2050s, this temperature is exceeded around 8 times in a 20-year period, or with a 40% AEP. Alternatively, one can say based on the same projections that in the 2050s, the magnitude of a 1-in-20 year (5% AEP) event increases to around 35.5°C (see the 'Return Levels' tab in the SSP585 Summary Table).



**Figure 16.** Upper panels: Frequency of a 1-in-20 year daily maximum temperature (TX) event in the Past and projected frequency of the same magnitude event (i.e. TX = 32°C) in the three future periods. Lower panels: Increase in magnitude of a 1-in-20 year TX event from the Past to Future periods. Figure design is taken from similar infographics in the IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3-32, doi:10.1017/9781009157896.001.



## 6. PRECIPITATION INDICATORS

### 6.1 Dry Spells

The *Consecutive Dry Days* indicator tracks the annual longest string of days with less than 1 mm of precipitation.

#### *Projections*

In the Past, the median dry spell length in the capital region was 24 days. The median future-projected dry spell length increases by 8% to 26 days (range 24 - 34 days) by the 2050s and by 21% to 29 days (range 26 - 47 days) by the 2080s.

The increase in dry spell length is consistent with the higher summer temperatures and reduced summer rainfall highlighted in the previous chapters. The map of consecutive dry days (not shown) is quite uniform throughout the region, as are its changes in the future periods.

### 6.2 Snowfall

*Snowfall* is inferred from the downscaled total daily precipitation and temperature, using a widely validated empirical relationship.<sup>14</sup>

#### *Projections*

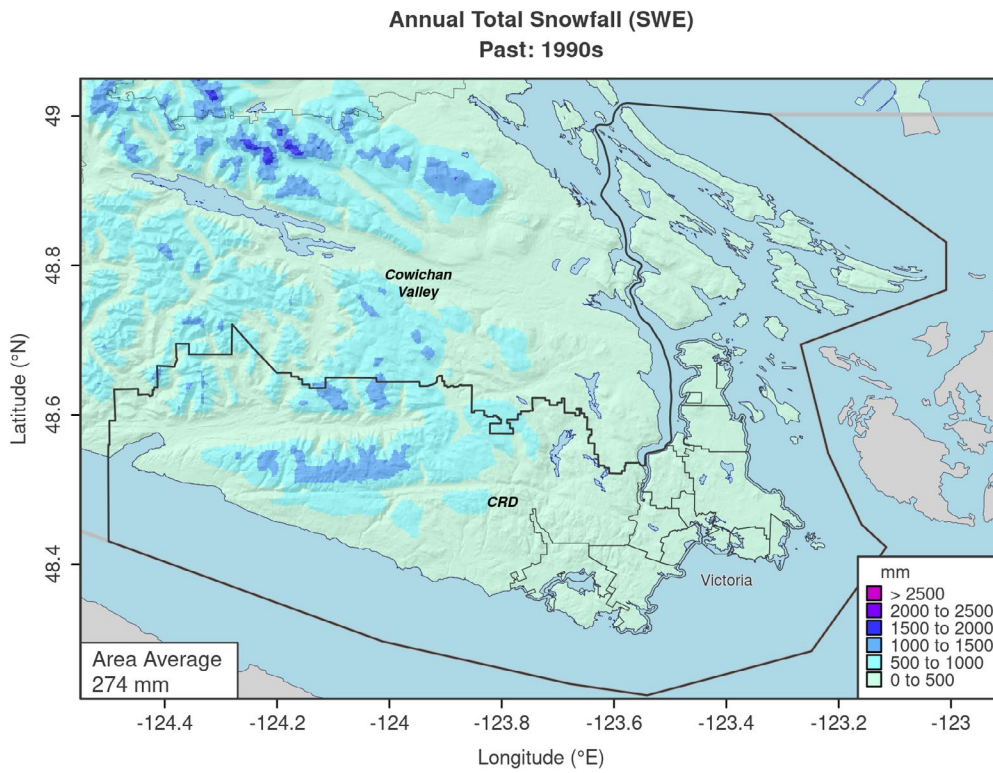
In the Past, the median annual snowfall in the capital region was around 275 mm (snow water equivalent, or SWE). The median future-projected snowfall decreases by 60% to around 110 mm (range 32 to 134 mm) by the 2050s and by 85% to just 40 mm (range 7 to 60 mm) by the 2080s. Due to the robust projection of an increase in cold season temperature (Chapters 3 and 4), the expectation of a smaller fraction of precipitation falling as snow in future decades is reasonable, even if its magnitude is somewhat uncertain.

Of more concern is the limited model ability to simulate the unique meteorological conditions that lead to the rare, but sometimes heavy, snowfalls in southwest BC. The CMIP6 models used in this study are probably not able to capture this behaviour very well, meaning that the change in frequency of winter storms resulting in heavy snowfall is largely unknown.

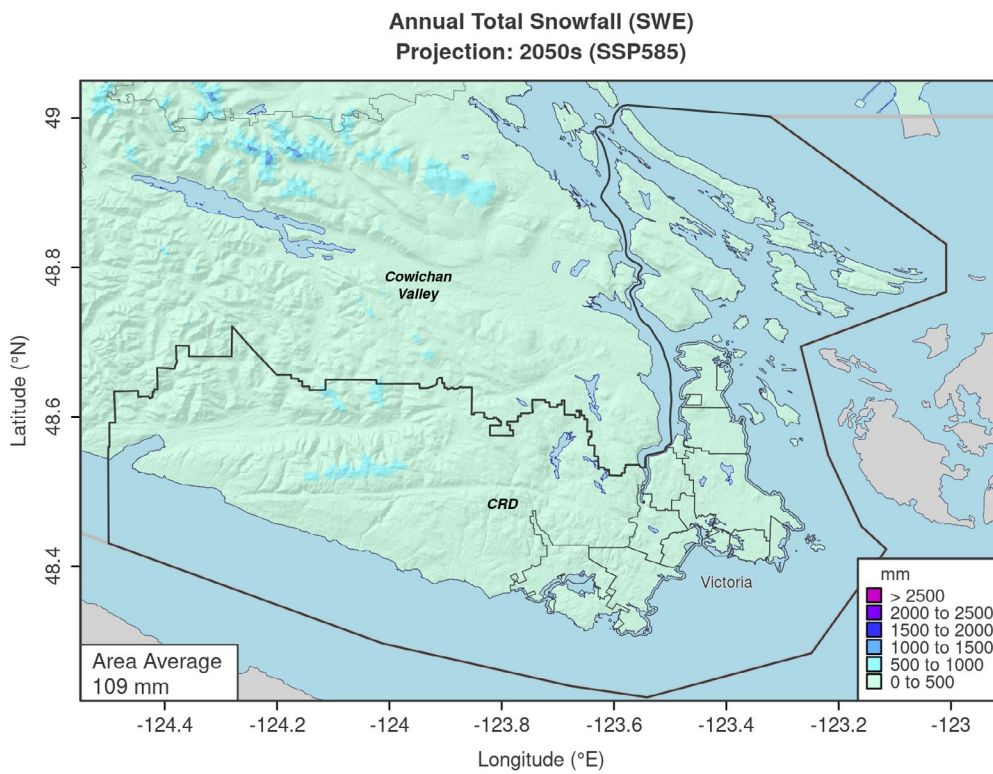
<sup>14</sup> Dai, A. (2008). "Temperature and pressure dependence of the rain-snow phase transition over land and ocean," *Geophysical Research Letters*, 35(12). Snowfall projections should be taken with special caution, for two reasons. First, the amount of total precipitation that falls as snow is a sensitive function

of local temperature, so whatever temperature biases remain after the downscaling procedure result in uncertainty in snowfall. Over time, however, as local temperatures exceed 0°C more often in winter, this uncertainty decreases.





**Figure 17a.** Annual total snowfall in the Past.



**Figure 17b.** Projected snowfall in the 2050s.

## 6.3 Annual Maximum One-Day and 5-Day Precipitation and 95th-percentile Wettest Days

These indicators describe the largest precipitation events of the year. The *Annual Maximum One-Day Precipitation* (RX1DAY) is self-explanatory, while the *Annual Maximum 5-Day Precipitation* (RX5DAY) tracks the accumulated amount over consecutive 5-day periods during the year. If we compute the 95<sup>th</sup> percentile of daily precipitation over all wet days in the Past (i.e. those with a daily amount of at least 1 mm), and then sum the amounts over that threshold that fell on especially wet days, then we obtain the 95<sup>th</sup>-percentile Wettest Days (R95P) index.

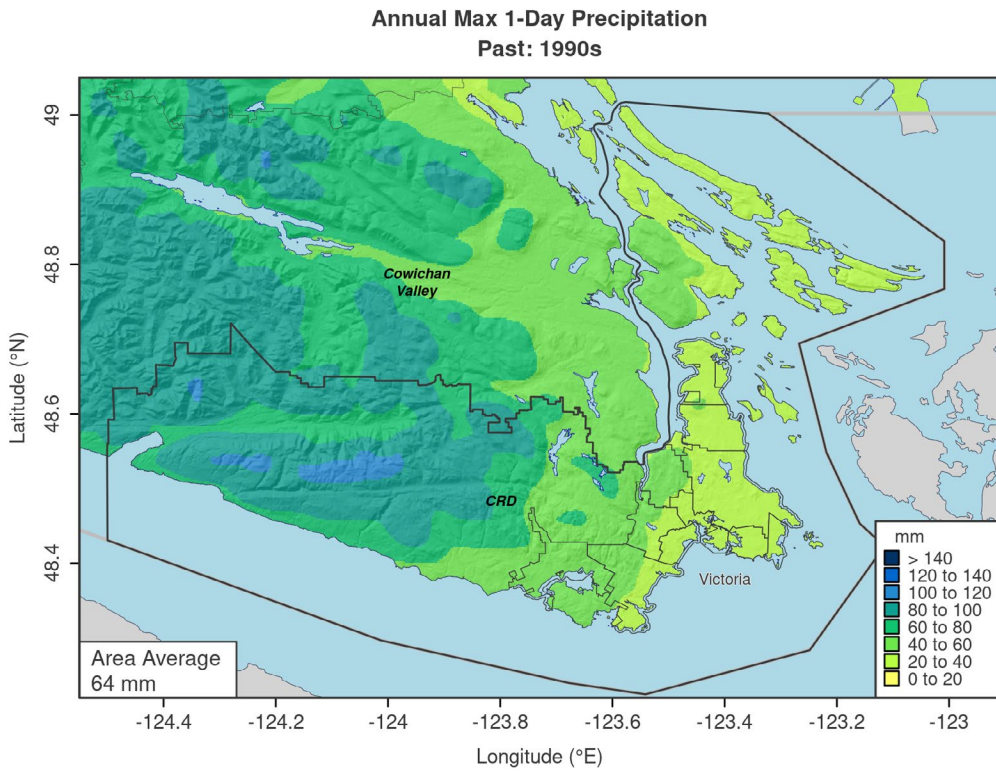
Note that R95P is potentially composed of several large precipitation events in a typical year, and does not (usually) describe single storms.

All amounts in the table below reflect the systematic difference in precipitation amount from west (high) to east (low) across the capital region. Across the region, percent increases for the 2050s differ somewhat for each index: from 10-16% for RX1DAY, to around 10% for RX5DAY to around 30% for R95P. Changes for the 2080s are correspondingly higher, as shown in the table.

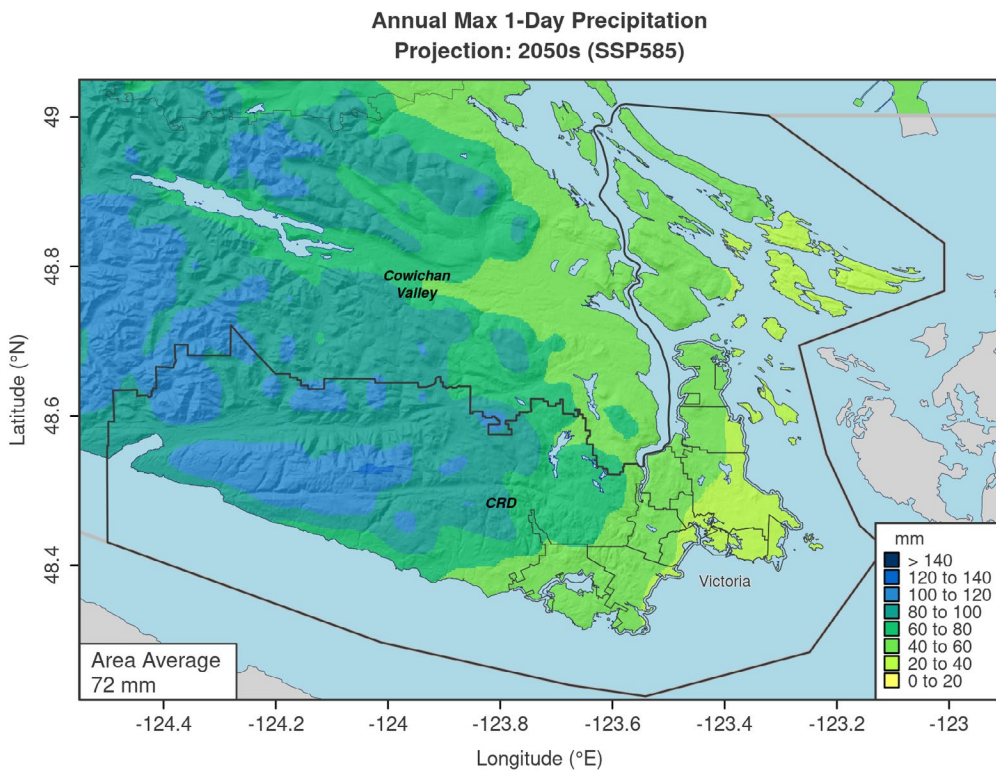
**Table 10: Annual Extreme Precipitation Indices**

|   | Past (mm) | 2050s(mm) | 2080s(mm) | 2050s Change (%) | 2080s Change (%) |
|---|-----------|-----------|-----------|------------------|------------------|
| <b>One-day maximum precipitation (RX1DAY)</b>         |           |           |           |                  |                  |
| Region  | 63        | 72        | 77        | 14<br>(4 to 24)  | 22<br>(17 to 29) |
| Western Region*                                       | 67        | 74        | 80        | 10<br>(4 to 24)  | 19<br>(17 to 30) |
| Eastern Region  | 37        | 43        | 45        | 16<br>(5 to 26)  | 22<br>(17 to 33) |
| <b>5-Day maximum precipitation (RX5DAY)</b>           |           |           |           |                  |                  |
| Region  | 163       | 179       | 187       | 10<br>(6 to 21)  | 15<br>(12 to 33) |
| Western Region  | 172       | 188       | 197       | 9<br>(6 to 20)   | 15<br>(13 to 24) |
| Eastern Region  | 88        | 97        | 101       | 10<br>(5 to 23)  | 15<br>(12 to 23) |
| <b>95<sup>th</sup> Percentile Wettest Days (R95P)</b> |           |           |           |                  |                  |
| Region  | 402       | 527       | 590       | 31<br>(16 to 46) | 47<br>(30 to 77) |
| Western Region  | 423       | 553       | 622       | 31<br>(16 to 46) | 47<br>(30 to 79) |
| Eastern Region  | 193       | 245       | 276       | 26<br>(10 to 41) | 43<br>(23 to 64) |

\*Values for Water Supply Area and the entire region are slightly lower than those for the Western Region, and well within the spread of model results, so are not shown. Consult the data deliverable spreadsheets for values in all subregions.

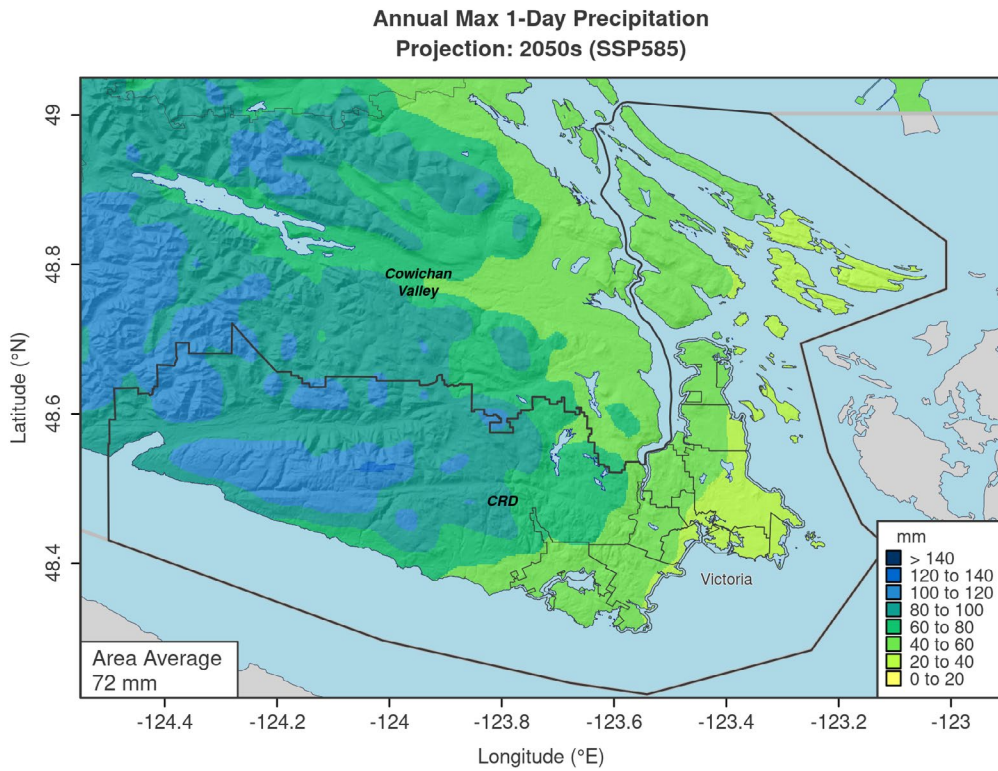


**Figure 18a.** Annual maximum 1-day precipitation in the Past.

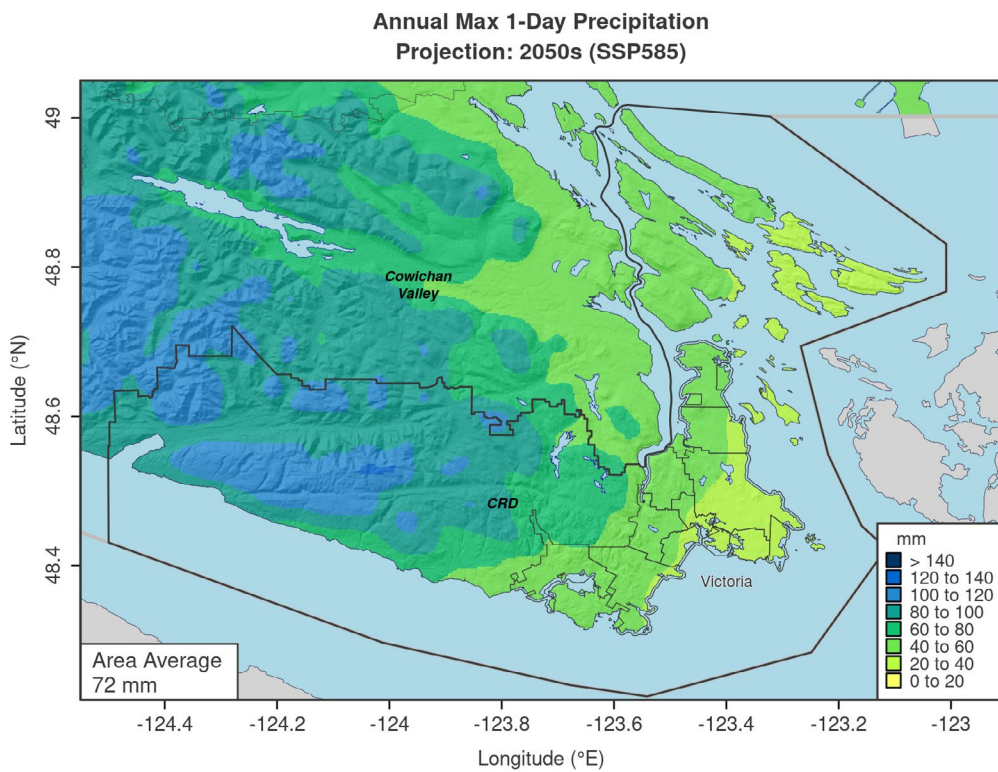


**Figure 18b.** Projected Annual maximum 1-day precipitation in the 2050s.





**Figure 19a.** 1-in-20 year, maximum 5-day rainfall in the Past.



**Figure 19b.** 1-in-20 year, maximum 5-day rainfall in the 2050s.

## 6.4 The 1-in-20 Year Wettest Day and 1-in-20 Year Wettest 5-Day Period

These indicators describe rainfall events so extreme, they are expected to occur only once every 20 years in the Past climate. In other words, the *1-in-20 Year Wettest Day* and *Wettest 5 Days* have a 5% chance of occurring in any given year in the Past.

### Projections

In the Past, the median 1-in-20 Year, single-day rainfall in the capital region was around 100 mm, while the median 1-in-20 year, 5-day rainfall was about 230 mm. The median Future-projected 1-in-20 year, single-day rainfall increases by 15% to around 115 mm by the 2050s and by 25% to about 125 mm

by the 2080s. The median future-projected 1-in-20 year, 5-day rainfall increases by 15% to around 270 mm by the 2050s and by 20% to about 280 mm by the 2080s. As shown in the maps above, the absolute rainfall amounts for both indices are considerably larger in the west of the region compared to the east.

By comparing these results with those shown in Table 3 of Chapter 3, it is evident that the relative changes in extreme rainfall indices are larger than those for seasonal or annual mean rainfall. Table 12, which gathers relevant results from other tables above, reinforces this point. This behaviour occurs due to the different mechanisms that control how extreme (e.g., daily) and average (e.g., monthly to annual) precipitation respond to warming.

As in the case of rare temperature events, one may express these changes in extreme rainfall in a more visually compelling way, as in the diagram on the following page.

**Table 11: 20-Year Return Level Rainfall**

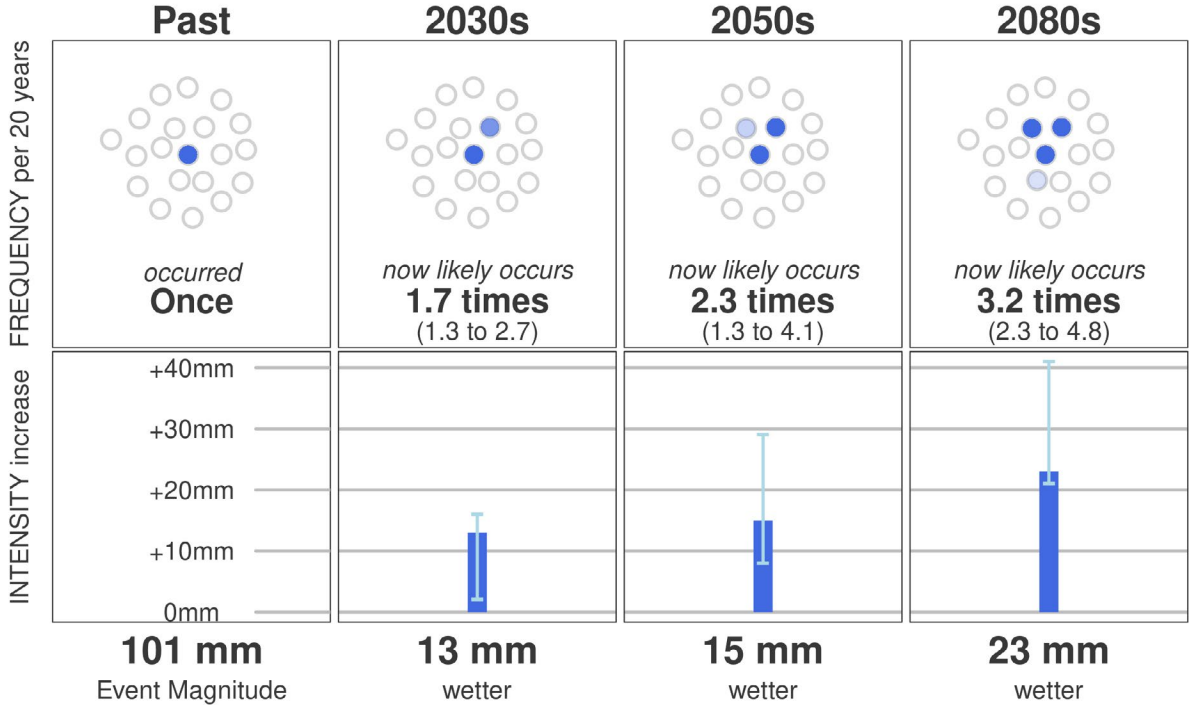
|                                       | Past (mm) | 2050s (mm) | 2080s (mm) | 2050s Change (%) | 2080s Change (%) |
|---------------------------------------|-----------|------------|------------|------------------|------------------|
| 1-in-20 Year Maximum One-Day Rainfall |           |            |            |                  |                  |
| Region                                | 101       | 116        | 124        | 15<br>(9 to 30)  | 24<br>(22 to 42) |
| Western Region <sup>1</sup>           | 105       | 122        | 129        | 16<br>(9 to 28)  | 23<br>(21 to 39) |
| Eastern Region                        | 62        | 72         | 79         | 16<br>(10 to 23) | 27<br>(23 to 42) |
| 1-in-20 Year Maximum 5-Day Rainfall   |           |            |            |                  |                  |
| Region                                | 232       | 268        | 281        | 14<br>(3 to 31)  | 21<br>(11 to 27) |
| Western Region                        | 243       | 274        | 297        | 13<br>(2 to 32)  | 22<br>(11 to 27) |
| Eastern Region                        | 132       | 155        | 159        | 17<br>(0 to 32)  | 20<br>(10 to 27) |

**Table 12: Change in various precipitation indices: Means versus extremes**

|                | Region           |                  | Western Region   |                  | Eastern Region   |                  |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                | 2050s Change (%) | 2080s Change (%) | 2050s Change (%) | 2080s Change (%) | 2050s Change (%) | 2080s Change (%) |
| Annual Mean    | 4                | 11               | 2                | 8                | 5                | 11               |
| RX1DAY         | 14               | 22               | 10               | 19               | 15               | 22               |
| RX5DAY         | 10               | 15               | 9                | 15               | 11               | 15               |
| R95P           | 31               | 47               | 31               | 47               | 26               | 43               |
| 1-in-20 RX1DAY | 15               | 24               | 16               | 23               | 16               | 27               |
| 1-in-20 RX5DAY | 14               | 21               | 13               | 22               | 17               | 20               |

## 20-Year Event

Frequency and increase in intensity of an extreme rainfall event that occurred once in 20 years on average in the past (1981-2010)



**Figure 20.** Upper panels: Frequency of a 1-in-20 year daily maximum rainfall event in the Past and projected frequency of the same magnitude event (i.e. 101 mm) in the three future periods. Lower panels: Increase in magnitude of a 1-in-20 year single-day rainfall event from the Past to Future periods. Figure design is taken from similar infographics in the IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3-32, doi:10.1017/9781009157896.001.



## 7. REGIONAL IMPACTS

Communities across the capital region are already witnessing and experiencing impacts from climate change. These impacts are likely to persist and, in many cases, intensify over the coming decades based on projected global GHG emissions trajectories. Collective efforts to reduce emissions and thereby slow the rate of global warming will be necessary to lessen the severity of these impacts. Equally important will be action on climate adaptation and preparing for the environment as it will be in the future, not as it was in the past.

Investing in climate adaptation has the potential to support thriving communities and economies for generations to come. Adaptation actions can safeguard communities and their critical infrastructure from extreme weather events, protect and sustain natural ecosystems, increase the resiliency of food systems, and improve the efficiency of energy and water use. Importantly, there is no “one-size-fits-all-solution”; adaptation can take many forms depending on the unique context of the community.

By the 2050s, the capital region can expect a climate that has diverged from that of the past, with warmer year-round temperatures, shifting precipitation patterns, and more noticeable climate extremes. Due to climate variability, these changes may not occur evenly from one year to the next. Although winters will generally become warmer and wetter, it’s important to be prepared for some winters in the future to be colder and drier, especially in the near term. Similarly, while summers will become increasingly hot and dry, there will be summers that are cooler and wetter than the average summer in the future. Adaptation strategies must consider the inherent complexity and variability of projected changes to the regional climate.

This section provides a brief overview of the multiple, intersecting climate impacts expected across various sectors in the capital region. **It is not a comprehensive assessment of the impacts that can be expected from the projected changes outlined in this report.** Rather, this chapter reflects a discussion of regional climate impacts that took place among local government staff, emergency planners and environmental scientists in October 2023. It is intended to spark deeper discussion that explores how to prepare for the interrelated climate impacts facing the region.

While the development of this report did not actively involve First Nations in the capital region, it’s crucial to recognize that Indigenous Peoples and their traditional territories bear a disproportionate impact from climate change compared to other groups in Canada.<sup>15</sup> Indigenous knowledge systems play a pivotal role in comprehending ecological resilience, monitoring local and regional impacts, and effectively responding to climate change challenges. Future initiatives aimed at exploring and mitigating the impacts of climate change should prioritize meaningful engagement with First Nations throughout the region.

The case for investing in climate adaptation is clear: for every \$1 spent on adaptation measures today, \$13 to \$15 is estimated to be returned in future years through direct and indirect benefits.<sup>16</sup>

By the 2050s\*, on average:



\* under a high emissions scenario

**Figure 21.** Infographic summarizing key projections for the 2050s time period.

<sup>15</sup> BC Centre for Disease Control. Climate Change and Health. <http://www.bccdc.ca/health-info/prevention-public-health/climate-change-health>

<sup>16</sup> Swayer, D., Ness, R., Lee, C., and Miller, S. (2022). Damage control: Reducing the costs of climate impacts in Canada. Climate Risk Institute.

## Climate Equity

The impacts discussed in this chapter will not be experienced the same way by all residents of the region. People facing the greatest economic and social challenges are often the ones most affected by climate change, particularly for impacts that are compounding (see below). During and after climate-related events, some people and communities experience disproportionate impacts because of existing vulnerabilities that often overlap, including:<sup>15</sup>

- People who experience poverty, colonization, racism, inadequate housing, and a lack of access to health care,
- People who are most likely to be exposed to climate impacts because of where and how they live and work,
- People living with disabilities, chronic diseases, and mental illnesses, and
- Babies in the womb, pregnant people, infants, children, and older adults.

Climate equity can be woven into broader efforts to address the socioeconomic, sociocultural, and physical impacts of climate change. This will require collaboration across various sectors to understand where climate change intersects with other crises (e.g., housing, mental health), and to address these issues holistically.

Climate equity<sup>17</sup> is the goal of recognizing and addressing the unequal burdens made worse by climate change, while ensuring that all people share the benefits of climate action efforts. Achieving climate equity means that all people in our region have access to a safe, healthy, and fair environment.

### Impacts

The impacts examined in this chapter occur within a dynamic and increasingly complex global system. As a result, the impacts from projected climate change may be more severe due to the collective impact of multiple drivers. Examples of compounding interactions include, but are not limited to:



- In the warmer months, high temperatures combined with less rainfall can make drought conditions more likely.<sup>18</sup>
- Extended periods of drought can change soil conditions and reduce infiltration of heavy rainfall, exacerbating localized flooding.<sup>19</sup>
- Warmer water temperatures and increased stormwater runoff can promote conditions for algal blooms year-round.<sup>19</sup>
- Wildfire smoke during extreme heat events can aggravate pre-existing health conditions and cause exposure to poor air quality for residents seeking relief from the heat outdoors.<sup>19</sup>
- Ongoing emergency response associated with consecutive extreme events can overwhelm staff capacity and deplete emergency management resources.

<sup>17</sup> United States Environmental Protection Agency. Climate Equity. <https://www.epa.gov/climateimpacts/climate-equity>

<sup>18</sup> Intergovernmental Panel on Climate Change [IPCC]. 2023. Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: 10.59327/IPCC/AR6-9789291691647

<sup>19</sup> Yumaguloca et al. 2022. Lived experience of extreme heat in BC: Final report to the Climate Action Secretariat. Government of BC.

## Health and Well-Being

The capital region has a growing and aging population. By 2038, the population is expected to grow by 20% and the number of people aged 65+ is expected to increase by over 50%.<sup>20</sup> Historically, the region has had excellent air quality and comfortable temperatures, with nights cooling off in the summer. In recent years, wildfire smoke and periods of extreme heat during the warmer months have forced residents to seek refuge indoors. Higher temperatures are typically experienced in the eastern parts of the region and in urban areas further from the coast. Developed areas are typically hotter due to the urban heat island effect, which describes how closely packed buildings and widespread paved surfaces in urban areas absorb and re-emit heat more effectively than natural ecosystems and areas shaded by trees and vegetation.<sup>21</sup>

### Impacts

In recent years, extreme weather events made worse by climate change have negatively impacted human health and well-being in the capital region. Climate change has the potential to undermine health determinants such as air quality, water supply, food security, cultural practices, and access to a safe environment. Climate change can also place additional strain on healthcare and social systems that are necessary for good health and well-being.

By the 2050s, the capital region can anticipate more multi-day extreme heat events that become longer and more intense by mid-century. The region can also expect hotter summer temperatures, with more days exceeding 25°C and more “temperate nights” where the temperature stays above 16°C.<sup>22</sup> These projected changes will increase the risk of heat-related illnesses and mortality and worsen pre-existing health conditions, particularly among equity-denied populations who do not have access to a cool indoor environment. Notably, these risks are heightened for the region’s growing population of older adults.

Warming temperatures and shifting precipitation patterns may worsen air quality in the region. Across the Pacific Northwest, hotter and drier conditions can increase the likelihood of wildfire ignition. This may cause more frequent episodes of wildfire smoke in the capital region, which can irritate the lungs, cause inflammation, and alter immune function, particularly for people with pre-existing conditions.<sup>24</sup> The projected changes in temperature, precipitation and heat wave occurrence may also exacerbate other air pollutants that influence human health such as pollen, mould, and ground-level ozone.

Living through an extreme weather event, or grappling with uncertainty about the future, can impact mental health and wellbeing, often manifesting as stress, anxiety, fear, and exhaustion. During and after an extreme event, people who face property loss or displacement may endure significant and lasting trauma.

In June 2021, an unprecedented<sup>23</sup> “heat dome” event in the Pacific Northwest caused extended periods of record-breaking high temperatures that had severe implications for health and well-being. Over 600 heat-related deaths were recorded across BC, particularly among people with pre-existing medical conditions (including schizophrenia), older adults, people living alone, and people living in socially deprived areas<sup>21</sup>. In response to this event, numerous projects have been launched across the capital region to better understand extreme heat vulnerability and to build resilience towards extreme heat in the future. For more information, see Appendix D: Further Resources.

<sup>20</sup> BC Statistics. 2019. Capital Regional District 2019-2038 Population, Dwelling Units and Employment Projection Report.

<sup>21</sup> British Columbia Coroners Service. 2022. Extreme heat and human mortality: A review of heat-related deaths in BC in Summer 2021.

<sup>22</sup> The number of temperate nights is an important public health measure that reflects the lower temperature threshold for emergency health alerts used in the capital region. For more, see: Government of British Columbia. 2023. BC Provincial Heat Alert and Response System (BC HARS).

<sup>23</sup> The unprecedented nature of the June 2021 heat dome makes it difficult to estimate its return period (or annual probability of occurrence). Based on analysis of historical data, it was estimated as a 1-in-300-year (or 0.3% annually)

at Seattle-Tacoma Airport to a 1-in-1000-year event (or 0.1% annually) in New Westminster (Philip et al., 2022; doi: 10.5194/esd-13-1689-2022). While the capital region can expect more frequent extreme temperatures in the future, estimates for how often an event of this magnitude will occur are difficult because historical records are far shorter than the estimated return periods for this event.

<sup>24</sup> Berry, P., and Schnitter, R. 2022. Health of Canadians in a changing climate. Government of Canada.



## Water Supply and Demand

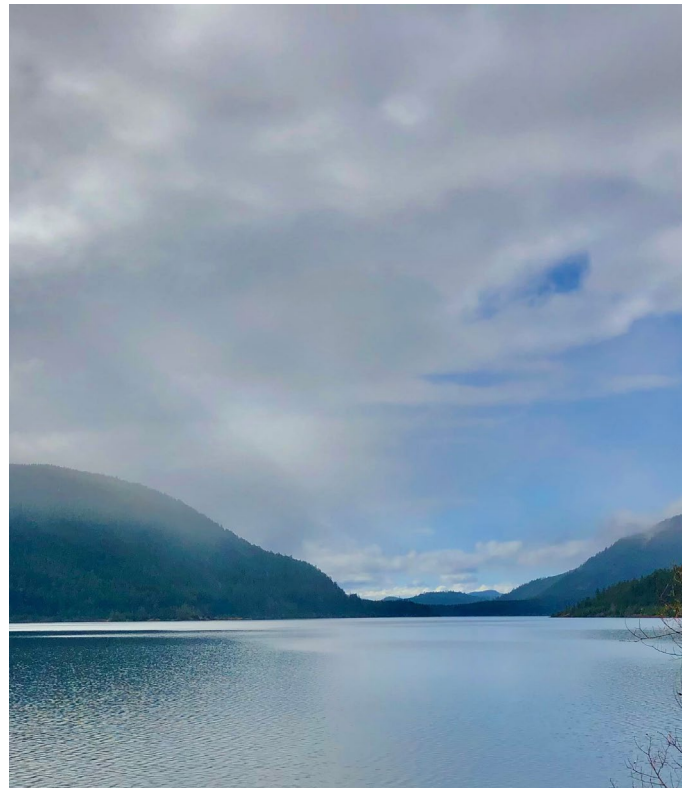
The CRD supplies drinking water to over 390,000 customers from large reservoirs in the Sooke, Leech and Goldstream watersheds that make up the protected Greater Victoria Water Supply Area (GVWSA). The CRD also provides water to small service areas in the Southern Gulf Islands and the western portion of the region through surface water and groundwater systems. Similar privately owned systems provide water in other areas. In some rural and less developed areas, residents rely on groundwater wells on their properties. Residential water use accounts for the largest portion of water use in the region (60%). Water supplies across Southern Vancouver Island are almost entirely replenished from rainwater in the late fall, winter, and early spring (the wet season). Snow melt runoff contributes to groundwater recharge and is needed to sustain summer flows.

### Impacts

By the 2050s, less summer rainfall and longer dry spells will increase the risk of drought during the summer and into the early fall. At the same time, hotter temperatures and more extreme heat events will intensify water demand as residents consume more water to keep cool and stay hydrated. Hotter and drier conditions will also increase evaporation and evapotranspiration, raising outdoor watering demand. Water conservation initiatives will remain a priority in the region, given the growing population and the potential for the seasonal decline in water supplies to become more pronounced in the future. Greater densification and anticipated increases in peak demand may also trigger the need for more storage, supplements to existing water supplies, larger capacity infrastructure, and balancing reservoirs in water distribution systems.

Hotter and drier summer conditions will be particularly challenging for those who rely on groundwater wells or small reservoirs that may not recharge sufficiently. In some instances, these systems may reach dangerously low levels or may even deplete completely. In coastal areas, overdrawing groundwater can lead to saltwater intrusion – an impact that is compounded by rising sea levels.

Hotter and drier conditions also increase the threat of wildfire in the GVWSA and other forested areas that supply water to



residents of the region. Although fire is a natural and essential process in forest ecosystems, severe wildfire occurring in water supply areas can affect water quality and supply by increasing erosion during the following rainy season.<sup>25</sup> As the threat of wildfire increases in rural areas, water needs for wildfire protection will gain increasing importance in water conservation planning.

During the wet season, heavier rainfall may increase erosion of saturated slopes, leading to more fine sediment and organic material in streams entering water supply reservoirs. Increased turbidity from fine sediment can interfere with water disinfection and treatment, while excess organic material can promote algal blooms that produce cyanotoxins, cause taste and odour issues, and compromise disinfection and filterability. Where unprotected water supply catchment areas have been developed, more intense rainfall and runoff can lead to greater undesirable substances (pollutants) entering wells and surface reservoirs. Heavy rainfall and increased water inflows also pose a risk to dam safety. To support safe and resilient water supply through a changing climate, the potential for more intense rainfall events (see next section) will need to be considered in the planning and management of water supply systems.

<sup>25</sup> Brown et al. 2019. Long-term climate, vegetation and fire regime change in a managed municipal water supply area, *SAGE Journals*, 29(9), 1411-12.

## Rainwater Management and Sewerage

A myriad of rainwater management and sewerage infrastructure aims to protect quality of life, property, and aquatic ecosystems across the capital region. Local governments in British Columbia are responsible for managing drainage; as a result, much of the region's drainage infrastructure (hard and soft) is integrated into local land use and infrastructure planning and processes. Historically, stormwater infrastructure was designed to move water away from the built environment, channeling high volumes of rainwater into creeks and streams. Recently, local governments are shifting towards the use of green infrastructure, which mimics natural drainage systems that play a crucial role in rainwater management. Natural drainage systems (i.e., creeks and wetlands) slow runoff through water retention, helping to reduce flood magnitude and filter out substances that impact water quality. The use of green infrastructure is particularly important in areas with increasing urbanization and development, where greater impermeable surfaces (i.e., roads, parking lots and buildings) contribute to additional runoff.

### Impacts

In the past, flooding from extreme events has occasionally overwhelmed stormwater and sanitary systems in the region. With extreme precipitation events becoming wetter in the future, the region can expect aging and undersized infrastructure to continue to be overwhelmed, amplifying stressors on the receiving environment. During high intensity rain events, creeks may overflow and soils may become saturated, intensifying runoff, and increasing the chance of flooding in low-lying areas. This combination can increase erosion, decrease slope stability, and flood wetlands and lakes, impacting public infrastructure, drinking water quality, and surrounding aquatic ecosystems. Heavy rainfall events can also cause inflow and infiltration of rainwater into the sanitary system in crossover areas, increasing the likelihood of highly diluted sewage entering waterways.

When heavy rainfall occurs after prolonged periods of dry weather, the "first flush" of surface runoff typically contains high levels of contaminants that have accumulated on hard surfaces. This runoff makes its way into surface waters that are home to aquatic ecosystems. When paired with warmer water temperatures, increased stormwater runoff of nutrients can make conditions more favorable for algal blooms year-round – a growing issue in that region – that impacts water quality, ecosystems, recreation, and human health.



*Malahat washout during November 2021 extreme rain event (Credit: Emcon Services Inc.)*

Certain areas in the region are at increased risk of flooding during heavy rainfall events due to flat terrain and proximity to the ocean, particularly when these events occur simultaneously with high tides and onshore winds. The CRD Coastal Flood Inundation Mapping Project (2021) may be used in conjunction with the projected changes outlined in this report, to understand how these factors, along with sea level rise, will influence future flood risk for lower-lying areas near the coast.

The projected increase in heavy rainfall may lead to a higher volume of runoff than the current capacity of infrastructure is able to handle. Green infrastructure, low impact development and multijurisdictional watershed management approaches will remain important strategies for reducing the flooding, runoff and pollution associated with extreme precipitation events. Designers of stormwater infrastructure (i.e., culverts, storm drains, etc.) will also need to plan for higher single- and multi-day rainfall amounts. For more information about how future precipitation is estimated using climate model projections, including the adjustment of Intensity-Duration-Frequency (IDF) curves in a future climate, see Appendix D: Further Resources.



## Ecosystems and Species

The capital region is home to various ecosystems, including Douglas-fir forests, Garry oak meadows, riparian zones, wetlands, estuaries, shorelines, and more. The diversity in the region brings with it a wide range of flora and fauna, including many species at risk that need protection. Natural assets providing connectivity and ecosystem services are essential for supporting climate resilience. Forests in the GVWSA contribute to the high quality of water in supply reservoirs, and green spaces in urban and suburban areas provide natural cooling capacity, stormwater retention, and help reduce air and water pollution.

### *Impacts*

Warming year-round temperatures and seasonal changes in precipitation will have important impacts on the ecosystems, native species and associated ecological relationships and processes existing in the capital region. Because ecological systems are highly complex, it will be difficult to make specific predictions for how they will be impacted by a changing climate. In general, the speed and scale of climate change may threaten the capability of many species to adapt, altering the ecological landscape. Shifting seasonal patterns, characterized by an earlier onset of spring or a later start to fall, may threaten processes that rely on temperature cues, including predator/prey, parasite/host, and pollinator dynamics. This may cause population declines for certain species, and/or outbreaks of species that are considered pests. Specialist species may be particularly vulnerable, which may threaten regional biodiversity and create new opportunities for invasive species to thrive.

Climate change not only impacts ecosystems and species directly; it also interacts with environmental changes from human development.<sup>26</sup> Impacts from climate change may be amplified for ecosystems where land-use changes have caused fragmentation and, as a result, weakened resiliency. For example, the Bowker Creek watershed – covering 1,028 hectares of the capital region – historically supported coho and chum salmon and cutthroat trout. Today, Bowker Creek is highly urbanized, with roughly 50% now composed of impervious surfaces that cause low summer base flows and reduced water quality for aquatic ecosystems. Long range, multijurisdictional efforts are in place to protect its natural characteristics and reduce impacts from a changing climate.<sup>27</sup>



In the summer, hotter and drier conditions will continue to stress trees and other terrestrial and riparian (streamside) vegetation, particularly for species that are sensitive to drought such as the Western red cedar. Drought conditions can slow decomposition in below-ground communities consisting of bacteria, fungi, and other soil organisms, thereby reducing available nutrients. When plants undergo stress, they become more susceptible to competition with other plants and to damage from insects and diseases.

Warmer year-round temperatures will also raise water temperatures in aquatic ecosystems, which may be problematic for species that require cool water to thrive. In extreme cases, warm water can cause low oxygen levels and mortality, particularly when these conditions are compounded by low water levels and occur during critical life stages such as spawning, rearing, or hatching. Heavy rainfall can also disrupt critical ecological processes. For example, during an atmospheric river event in November 2021, increased channel erosion and sediment deposition resulting from high stream flows severely impacted salmon spawning beds.<sup>28</sup>

<sup>26</sup> IPCC. 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group, II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [H.-O. Pörtner et al. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi: 10.1017/9781009325844.59327/IPCC/AR6-9789291691647

<sup>27</sup> Bowker Creek Initiative. 2012. Bowker creek blueprint: A 100-year action plan to restore Bowker Creek Watershed.

<sup>28</sup> CBC. 2021, 21 November. For B.C.'s salmon, floods represent another challenge to survival.



## Buildings and Energy Systems

Energy use in buildings accounts for roughly one third of GHG emissions in the region. In the past climate, most buildings and homes in the capital region did not require active cooling capacity. During the 2021 heat dome, 98% of heat-related deaths in BC occurred in private residences, highlighting an urgency to implement cooling measures in homes across the region.<sup>21</sup> Retrofit programs and new building policies not only support the transition to renewable energy and energy efficient technologies but are leading to building envelope considerations and a greater adoption of low emission heat pumps that support thermal comfort. In both urban and rural communities across the region, many homes and other buildings are in coastal and riverine areas where flooding may be a concern.

### *Impacts*

As the climate warms and precipitation patterns change, the case for investing in well-designed, resilient buildings improves. Heavier rainfall events may increase the risk of flooding in the fall and winter, which can cause property damage, personal injury, and economic losses, particularly where development is located on flood plains. More episodes of multi-day extreme heat can also stress foundations and building materials, and potentially affect the functioning of heating, ventilation, and air conditioning (HVAC) systems.

Across the region, warmer year-round temperatures and more days going above 25°C in the summer will shift seasonal and long-term energy demands. Whereas heating demand is expected to decrease in the colder months, hotter temperatures and more multi-day extreme heat events during the warmer months will generate cooling demand where it did not exist previously. In the past, buildings and homes have relied on the region's cool summer nights to support thermal comfort during the warmer months. In the future, an increasing number of "temperate nights" (i.e., nights when the temperature stays above 16°C) will heighten the risk of buildings overheating.

Adaptive design strategies, such as passive cooling, outdoor shading, rainwater capture and reuse, green roofs, resilient landscaping, and rain gardens, can help address challenges from heat, drought, and overland flooding. In addition, concentrating development in already developed areas, balanced with access to urban greenspace, can protect opportunities for the surrounding natural ecosystems to buffer changes to our climate.



The projected increase in cooling degree days by mid-century will require that most buildings have some form of active cooling to maintain thermal comfort and prevent overheating. Certain units, such as older, multi-unit residences, often lack air conditioning and are not designed to handle hot temperatures, leaving occupants at greater risk of heat-related illnesses and mortality. The use of energy efficient technologies like heat pumps will play an important role in aligning with efforts to reduce GHG emissions while avoiding additional costs to residents. Authorities with jurisdiction over building codes should consider how to proactively integrate future climate considerations into the design of new and existing buildings.

## Transportation

The region's transportation network includes many local and arterial corridors, three major highway corridors (Highways 1, 14 and 17), two provincial and two international ferry corridors, a regional transit network, international and harbour airports, cruise ship and ferry terminals, and many active and multi-use trails. Regional transportation priorities include full realization of a multi-modal transportation network to help shift away from private vehicles to public transport, walking and cycling. As a coastal community, the capital region is vulnerable to significant transportation disruptions that complicate responses to emergencies and extreme events, and can interrupt the local supply chain.

### Impacts

The projected increase in heavy rainfall may intensify flooding across the region, potentially causing more frequent road closures, vehicle collisions and construction delays. Some communities, such as Sooke, have already seen recurrent road closures due to flooding and may be particularly vulnerable to heavy rainfall.<sup>29</sup> Extreme precipitation events may also impede the reliability of major transportation corridors. In November 2021, extreme rainfall and runoff from a landfalling atmospheric river caused extensive damage to the Malahat Highway (Highway 1), prompting its temporary closure. This disruption reverberated through the local supply chain, resulting in shortages of fuel and other essential goods and services across the region. Like flooding from heavy rainfall events, wildfires also pose risk to the closure of regional highways and roads. In the future, hotter temperatures and less rainfall occurring in the warmer months will increase fire danger. Wildfire damage along hillslopes near roadways may also heighten the risk of landslides during the subsequent rainy season.

The effects of extreme weather on transportation may be particularly challenging for some equity-denied groups. Residents may find themselves unprepared to leave their homes, hindering their ability to access essential supplies and services.



By the 2050s, a shorter winter season characterized by less snowfall and fewer freezing days may lower the costs associated with snow removal and the repair of cracked roads from freeze-thaw cycles. However, equipment to manage severe winter conditions will need to be maintained as changes to the frequency of heavy snowfall events remains largely unknown because they are driven by “Arctic outflow” events from Northern BC.

Warming temperatures may enhance the appeal of active transportation (walking, cycling and transit use) during the colder months. Conversely, high temperatures, multi-day extreme heat events, and poor air quality from wildfires in nearby regions may deter residents from choosing active transportation methods in the summer and early fall. Active transportation routes may also be interrupted by heavy rainfall, which can cause localized flooding and erosion along trails and pathways.

To safeguard transportation across the region, projected changes to temperature and precipitation should be considered in the design and retrofit of transportation infrastructure. These changes should also be considered against the backdrop of other existing weather hazards that will continue to affect the region (e.g., windstorms). Efforts to reduce GHG emissions across the region will rely on a resilient active transportation network. Strategies to support active transportation may involve installing adequate cooling infrastructure (i.e., trees, benches, shade structures, misting stations and water fountains) and supporting nature's capacity to buffer climate impacts through stewardship and community engagement.

<sup>29</sup> Chek News. 2021. Heavy flooding and road closures forces Sooke into temporary isolation.



## Food and Agriculture

Food and agriculture are fundamental elements of the long-term sustainability, resilience and health and wellbeing of the capital region. In recent years, changes in climate, energy costs, water availability and agricultural production have drawn attention to the ongoing resilience of the region's food system. Ensuring a stable local food system requires management of changing wildlife populations, flooding and drainage concerns, water availability, as well as the amount of agricultural land in food crop production. The average age of farmers in the capital region remains higher than the Canadian average and represents a warning sign for the future of food production in the region.<sup>30</sup>

### *Impacts*

Increasing year-round temperatures will lead to fewer frost days, an earlier start to spring, and extended summer-like weather into the fall. These changes will result in a longer and warmer growing season that could enhance agricultural productivity in the region. However, climate change is also expected to introduce greater uncertainty for growers, as temperatures become hotter in the warmer months and precipitation patterns change. The projected increase in growing season length by 2050 (estimated to be roughly 17%) should be considered an upper limit for estimates of future productivity. This measure uses only a lower temperature threshold and does not account for reduced summer precipitation, which increases the risk of drought. In addition, shifting seasonal conditions from warming temperatures may cause pollinating species to emerge at misaligned times, limiting potential crop yields.

During the growing season, reduced water availability and extended dry periods leading to drought could have significant impacts on agriculture in the region. Less total rainfall in the summer will reduce water levels in ponds, wetlands and streams used for irrigation, while hotter temperatures will promote further evaporation and evapotranspiration. These conditions can increase heat stress and sun scald, competition for water resources, and may create opportunities for invasive species, pests, and plant diseases to flourish. Increased demand for irrigation strains water supply systems with competing demands, and negatively impacts ecosystems in water bodies, wetlands, and streams. Addressing these challenges will require innovative strategies that improve the efficiency of agricultural irrigation and transition to crops requiring less water. Growers may need to consider alternative soil-management approaches,



as changes to soil moisture and composition may accompany the projected changes to the region.

In the fall, heavy rainfall events may impact crop harvest by increasing the risk of flooding and creating more opportunities for diseases and pests. Extreme precipitation can also lead to more runoff onto and off agricultural land, leading to erosion, soil nutrient leaching, and crop loss and damage. For low-lying agricultural areas near the coast, these impacts may be compounded by high tides, storm damage, and saltwater intrusion from rising sea levels.

<sup>30</sup> Capital Regional District. 2018. Regional Growth Strategy.



## Recreation and Tourism

With its mild climate, beautiful coastlines, and abundant ecosystems, the capital region continues to be a sought-after destination for visitors from across the globe and tourism remains a key local industry. Tourism is an estimated \$1.9 billion dollar industry in Greater Victoria with more than three million visitors to the region annually.<sup>31</sup> The region boasts plenty of outdoor recreation, with more than 26,000 hectares of national, provincial, regional, and municipal parks and ecological reserves and four regional trails on southern Vancouver Island and the Gulf Islands.<sup>32</sup> In 2021, regional trails received over 3.7 million visits and regional parks received over 5 million visits from local residents and tourists. These areas contribute to the cultural, social, and economic vitality of the region.

### *Impacts*

By the 2050s, warmer year-round temperatures could lead to a longer season for summer recreation, providing more opportunities for outdoor activities and potentially boosting economic productivity. However, the rise in the number of hot summer days and multi-day extreme heat events may encourage more people to seek relief near lakes and coastlines, which can place additional stress on freshwater, marine and shoreline ecosystems. Careful protection and monitoring of recreational sites will be important to ensuring ecological health in areas where visitor use may increase.

The projected changes in temperature and precipitation may also influence the access and safety of recreation and tourism across the region. Less summer rainfall and longer dry spells may result in longer and more frequent campfire bans. Increasing fire danger may also result in the closure of parks and campgrounds due to wildfire risk. During the wet season, heavier rainfall may impact trail access and safety, and increase the costs associated with the maintenance of recreational infrastructure. At all times of the year, the potential increase in algal blooms may pose challenges to recreational water users, fishing, and tourism. Ensuring climate-resilient design of new and existing infrastructure and supporting ecosystem health and integrity through a changing climate can benefit both the economy and the physical, mental, and spiritual health of people across the region.



<sup>31</sup> Greater Victoria Chamber of Commerce. Destination Greater Victoria. <https://www.tourismvictoria.com/>

<sup>32</sup> Capital Regional District. 2023. Regional Parks and Trails Strategic Plan.

## Summary and Recommendations

This report uses the most up-to-date climate model projections to examine how climate change may unfold across the capital region in the coming decades. The region can expect an increase in daytime and nighttime temperatures throughout the year. In the summer months, this implies hotter daily highs, warmer nights, and more numerous and longer multi-day heatwaves. By the 2050s, winters will become milder overall with a steep reduction in frost days and snowfall.

The capital region can expect a modest increase in annual precipitation by the 2050s that will be distributed unevenly across the seasons. Whereas rainfall is projected to increase notably in the colder months, summers will become drier. Warmer cold season temperatures will result in less snowfall and increased rainfall, especially in winter. In the warmer months, longer dry spells are expected due to the combination of less rainfall and warmer temperatures. The magnitude and character of these changes will vary locally across the region.

Early action on climate adaptation will enable the region to best prepare for the changes ahead and increase climate resilience. The information provided in this chapter is intended to guide further discussion among decision makers and community partners across the region. Importantly, adaptation can take many forms depending on the unique context of each community. The regional impacts outlined in this report should be considered a starting point for further analysis of climate impacts and adaptation planning that engages relevant stakeholders and is tailored to the local context.

The CRD will continue to use these projections to incorporate climate change adaptation into planning cycles and ongoing activities. Adaptation planning is complex and requires consideration of multiple factors and compounding drivers. As such, continued data collection and monitoring will be important to establish baselines, monitor changes and ensure that adaptation actions are appropriate to the local context. Some examples of how the future climate projections provided in this assessment can be used to support climate adaptation include:

- Raising awareness about how climate change will impact the region
- Informing strategic and long-range planning
- Informing strategic planning for emergency responses to extreme events
- Conducting vulnerability and risk assessments to inform policy, planning, research, and monitoring
- Designing infrastructure that considers the future climate

This report highlights regional projections for the 2050s under a high emissions scenario, but alternative scenarios were also considered for this project. The complete data package includes information for low, moderate, and high emissions scenarios for the 2030s, 2050s and 2080s. It also includes separate assessments for four smaller sub-regions within the capital region. The report Appendices point to further online resources and general guidance for understanding and using climate projections.



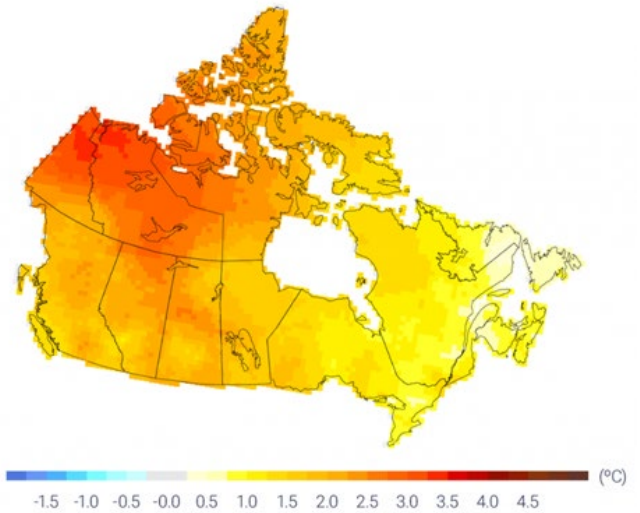


# Appendix A

## BACKGROUND ON FUTURE CLIMATE DATA

The Earth's climate is changing due to the burning of fossil fuels, which emit greenhouse gases (GHGs) and aerosols into the atmosphere. Over the past century, these emissions have raised atmospheric GHG concentrations well above preindustrial levels, which has led to widespread warming over Earth's surface.

The global average temperature has increased by over 1°C to date, and Canada is warming even faster (Figure A1). This warming has resulted in widespread impacts in Canada and across the globe, and it is directly proportional to the total amount of GHGs emitted since the beginning of the industrial era. While a 1°C temperature change at your location may not feel like much, changes of only 1 or 2°C on a global scale are very substantial because they are averaged over the globe and a long period of time.

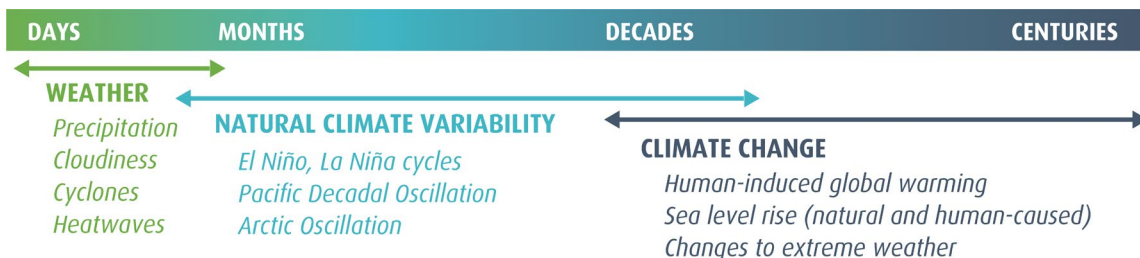


**Figure A1.** Warming in Canada between 1948-2018.

## Understanding Weather, Climate, Natural Variability and Climate Change

To understand climate change, it is important to distinguish between weather and climate, and the natural and human influences that affect the climate on different time scales:

- Weather is what we experience when we step outside. It consists of short-term (minutes to days) variations in the atmosphere.
- Climate is the general state of weather, including its extremes, over periods ranging from months to many years. Climate can be thought of as the statistics of weather. Descriptions of normal climate conditions at a particular location are often derived from nearby weather observations and collected over long time periods – typically 30 years or more.
- Natural climate variability causes fluctuations in climate conditions that can span a few months to a few decades or longer. Natural climate variability is not influenced by human activity, but its influence can either mask or enhance human-induced climate change for the periods over which it occurs. Natural climate variability can also affect seasonal weather (e.g., El Niño/La Niña cycles).
- Climate change refers to changes in the state of the climate that persist over an extended period. Both natural processes and human influence can result in changes in climate. Climate science indicates that human influence is the unequivocal cause of the global warming that has been observed since the beginning of the 20th century.



**Figure A2.** Timescales for weather, climate, natural climate variability, and climate change.



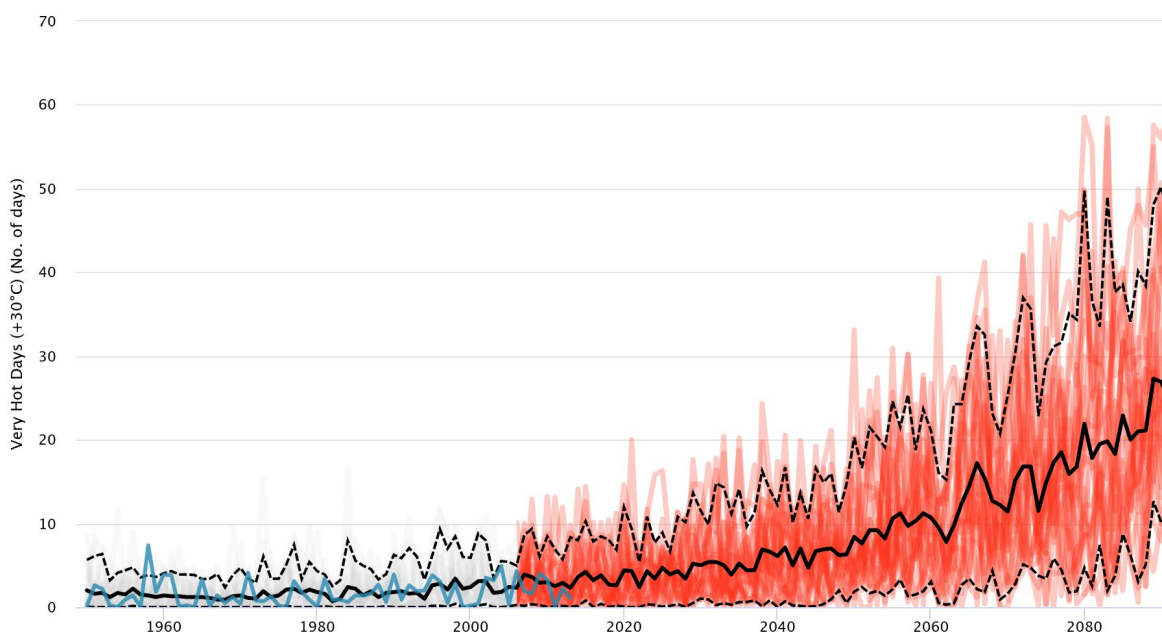
## What is Future Climate Data?

In the context of a changing climate, historical climate observations are no longer suitable for assessing future climate-related risks. As a result, engineers, planners, and decision-makers are increasingly using future climate data to estimate the growing risks associated with climate change. Practitioners and decision-makers want to know how much climate change (and risk associated with that change) they can expect to encounter over the coming decades.

The extent of further warming depends on how global emissions change in the future. Unfortunately, it is impossible to predict the exact societal conditions of the future that will directly influence global emissions. Therefore, a range of potential futures, or scenarios, can be used to plan for the changes associated with rising global temperatures. These scenarios are based on assumptions about population growth, climate policy, land use

changes, energy intensity, economic activity, and more, that lead to different levels of global GHG emissions. The scenarios used in this assessment are known as Shared Socio-economic Pathways, or SSPs for short – but more on that later.

To understand the future climate, scientists develop global climate models (GCMs) to simulate Earth's future climate in detail under each of the various scenarios. GCMs are extensively tested against historical observations and compared to one another. Through the Coupled Model Intercomparison Project (CMIP), we can construct an ensemble of different GCMs that describes a range of plausible climate futures. In Figure A2 below, each red line represents an individual GCM projection, developed by research groups from around the world. The solid black line in this case represents the ensemble median, with the lower and upper dotted lines showing the 10th to 90th percentile range of the model ensemble.



**Figure A3.** Example of a GCM ensemble.<sup>1</sup> Each red line represents a single GCM projection for the number of annual days with a maximum temperature exceeding 30°C in British Columbia. The solid black line is the median and the dotted lines are the 10th (lower range) and 90th (upper range) percentile values across all GCMs in the ensemble.

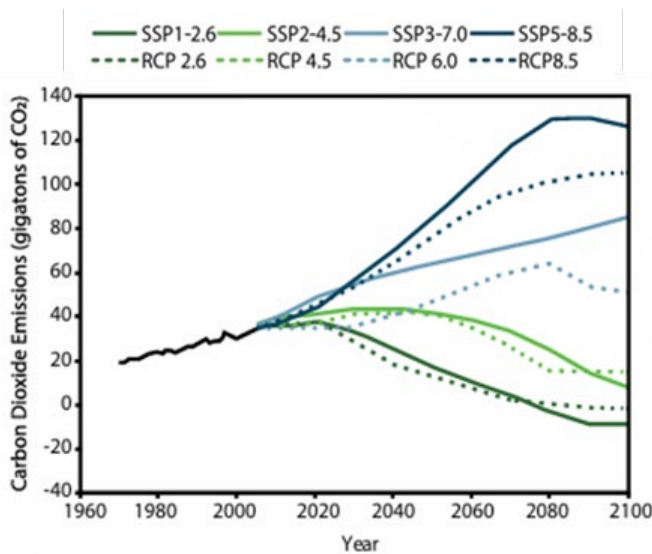
<sup>1</sup>Retrieved from ClimateAtlas.ca, using modeled data from PCIC.

## Understanding Shared Socio-Economic Pathways

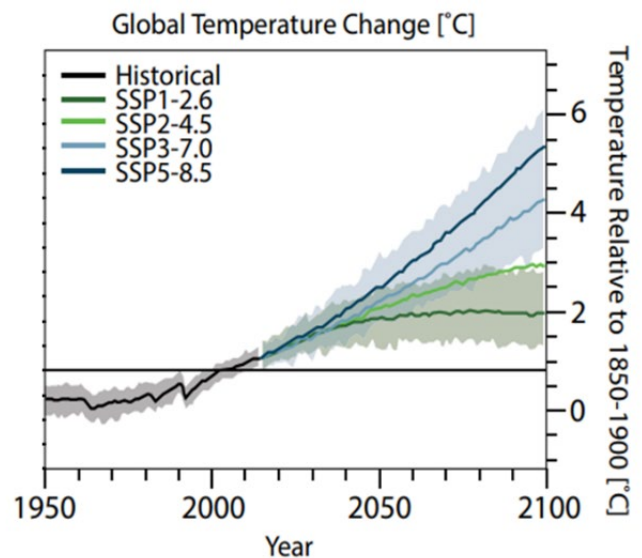
As noted above, to project the future climate, GCMs need input about the amount of future industrial emissions. Shared socio-economic pathways (or SSPs, Figure A3a) are such inputs, providing emissions scenarios based on assumptions of various societal decisions, including:

1. How population, education, energy use, technology – and more – may change over the next century, and;
2. The level of ambition for mitigating climate change globally.

The SSPs used in CMIP6 simulations are a set of five main socioeconomic pathways (SSP1 through SSP5) that illustrate different ways in which global societies may develop. They are the successors to the previous emissions scenarios used in CMIP5 called Representative Concentration Pathways, or RCPs. Figures A4a and A4b illustrate projections for GHG emissions and temperature under various SSPs. Here, it is important to note that global temperature projections for the near future are similar across different SSPs. The projections begin to diverge more meaningfully around 2050 (Figure A4b).



**Figure A4a.** SSP scenarios used by CMIP6 models for global CO<sub>2</sub> emissions by the end of this century. The scenarios used for CMIP5 (RCPs) are also shown.



**Figure A4b.** Historical and future temperature change from 1950-2100, relative to 1850-1900. After 2014, models are driven by the SSP scenarios indicated, with ranges shown for SSP1-2.6 and SSP3-7.0. The horizontal line shows temperature change that has occurred up to 1995-2014 (about +0.85°C).

## Future Climate Uncertainty

While we know the future climate will be different from the climate of the past, we cannot precisely predict what the future climate will look like. There are three main sources of uncertainty inherent in future climate data: natural climate variability, model uncertainty, and scenario uncertainty. In the following sections, we provide support for making decisions in the presence of scenario uncertainty.

- **Natural climate variability** (as discussed above) refers to climatic fluctuations that occur without any human influence (i.e., independent of GHG emissions). Natural climate variability is largely unpredictable and can mask or enhance human-induced climate change.
- **Model uncertainty** arises because models can only represent the climate and earth system to a certain degree. Although they are highly sophisticated tools, GCMs can differ from reality. Furthermore, not all models represent the system processes in the same way, nor do all include the same processes. To help address model uncertainty, it is best practice to use an ensemble (i.e., a set of multiple GCMs), to display a range of possible futures. PCIC uses an ensemble of 9 GCMs that are best suited to analyses focused on British Columbia.
- **Scenario uncertainty** arises because different emissions scenarios lead to different levels of climate response, and it is not possible to know what global emissions will be in the future. The emissions pathway of the future depends on a wide range of policy decisions and socioeconomic factors that are impossible to predict. To help address scenario uncertainty, it is best to evaluate future projections under more than one emissions pathway.

**Uncertainty should not stand in the way of action.**

Decision makers should use climate projections as a guide to the future but should not discount the possibility of changes occurring outside the projected range when managing risk. In the following sections, we provide support for making decisions in the presence of scenario uncertainty.



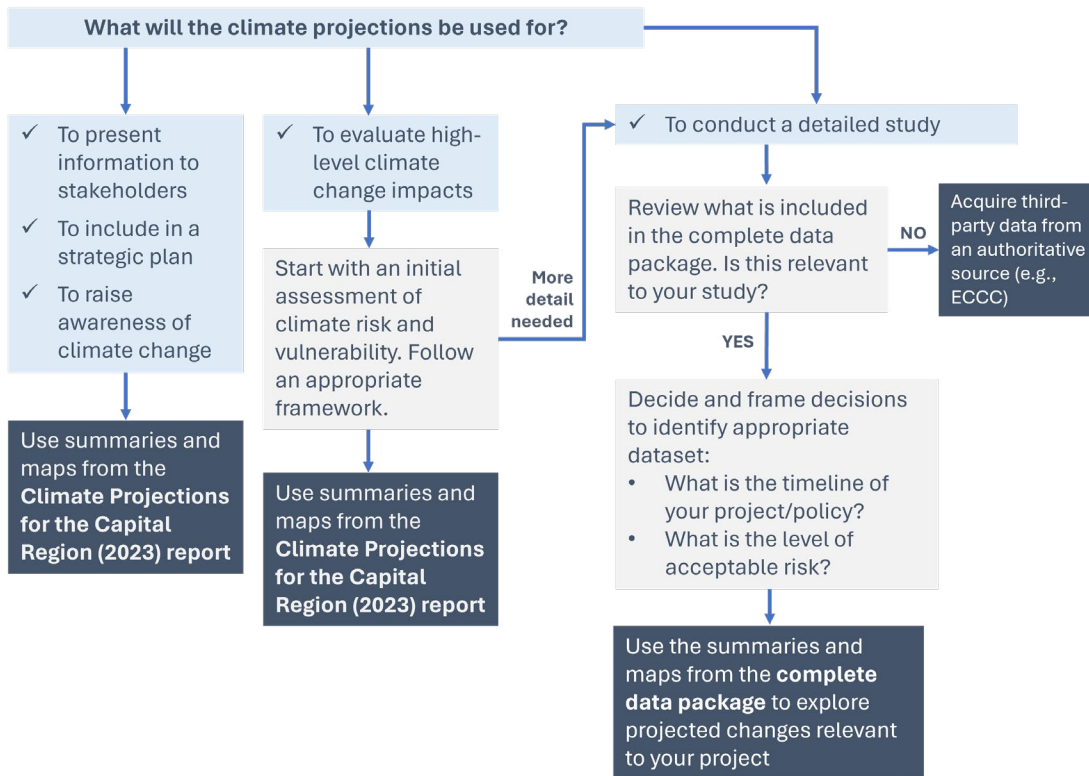


# Appendix B

## WHAT DATA SHOULD I USE?

The decision tree shown in Figure B1 can help determine which data and information from this assessment might be most useful for a given application. Before using climate projections, it is important to do appropriate background reading, identify relevant stakeholders and determine the appropriate level of stakeholder engagement. Stakeholder engagement is important for ensuring that the projected changes are both meaningful and well-suited to your context.

**Users accessing the complete data package should reference the Data Descriptor Document.** Contact [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca) for more information.



**Figure B1.** Decision tree for using climate projections data. This decision tree has been adapted from the Victoria (Australia) Climate Projections 2019 Technical Report (Clarke et al., 2019).

## What is Provided in the Complete Data Package?

The Climate Projections for the Capital Region 2023 report highlights projected changes for a host of indices derived from temperature and precipitation under the highest emissions scenario (SSP5-8.5), mostly for the 2050s. The complete data package contains summary tables (Excel XLSX) and maps (PNG) for the following additional time periods, scenarios and sub-regional breakdowns:

### The capital region and four smaller sub-regions.

(see Figure B2 below)

- “Core/Peninsula” (Green)
- “Western Region” (Red)
- “Southern Gulf Islands” (Yellow) and
- “Greater Victoria Water Supply Region” (Blue)

### Four time periods.

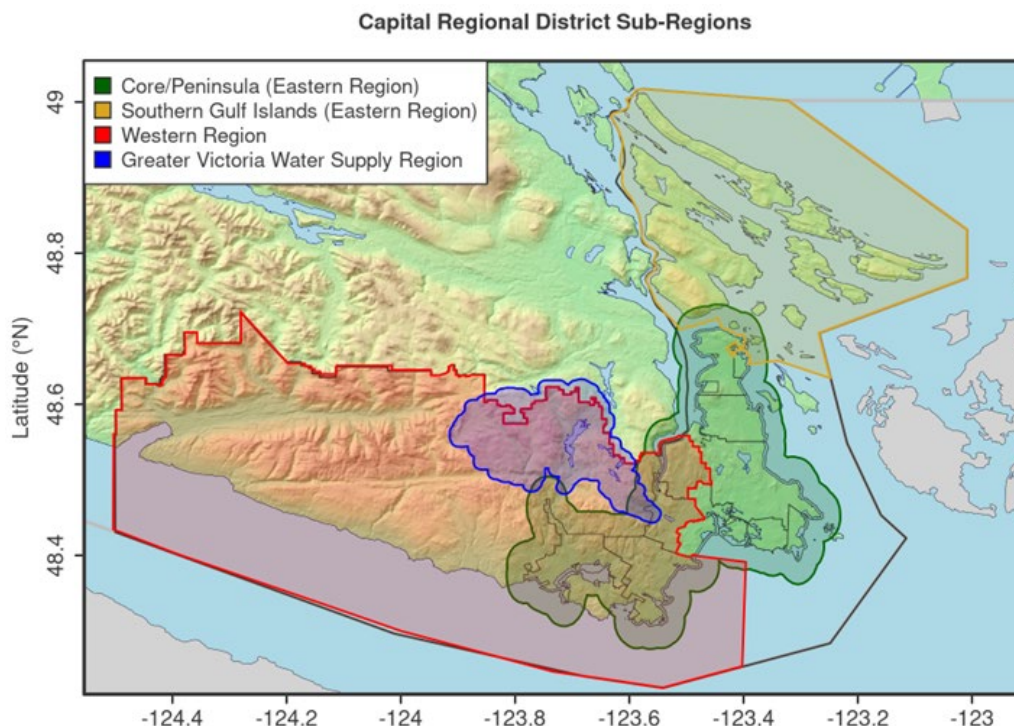
- 1981-2010 or “1990s” (baseline period)
- 2021-2050 or “2030s”
- 2041-2070 or “2050s”, and
- 2071-2100 or “2080s”,

### Three emissions scenarios.

- Low: SSP1-2.6
- Moderate: SSP2-4.5, and
- High: SSP5-8.5.

### 77 indices derived from temperature and precipitation. (see Appendix F for a complete list)

Gridded data (NetCDF) is also available for all 77 climate indices projected to the 2050s under a high emissions scenario (SSP5-8.5). Contact [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca) to access the complete data package and/or the gridded data.



**Figure B2.** The capital region and four sub-regions. Separate Excel files are available for each sub-region and for the region as a whole.

# Appendix C

## GUIDANCE FOR USING CLIMATE PROJECTIONS

### Key Messages

- ✓ Projections of future climate are complex, and you will likely need advice and guidance from experts in the field. Allow adequate time for consultation.
- ✓ The climate has always been naturally variable. This variability now occurs on top of greenhouse-gas/aerosol forced trends. Over shorter time scales, climate variability can mask long-term trends.
- ✓ Since we do not know what future global emissions will be, climate projections are produced for a number of possible scenarios. In the CMIP6 ensemble, near-term projections are similar and diverge more clearly by the middle of this century (e.g., the 2050s).
- ✓ This assessment provides downscaled climate projections for variables derived from temperature and precipitation only. Variables related to other climate-related hazards, such as sea level rise or windstorms, are not provided. For supplemental resources, see Appendix D: Further Resources
- ✓ While climate models are run under different emissions scenarios, there is no such thing as a 'most likely' scenario. Selecting an emissions scenario is highly context-dependent and will depend on considerations such as risk tolerance and the life cycle of your project or policy.
- ✓ Consider multiple climate variables or indices to get a more complete picture for different manifestations of change. Review annual and seasonal projections to get a sense of how projections vary depending on the time of year.
- ✓ In many cases, using only the median climate projections will not be appropriate. Ensure the ranges of projected change (10th and 90th percentiles) are adequately accounted for in your assessment. Do not entirely discount changes above or below the projected range when managing risk – especially for high-impact, low-likelihood events.



## Understanding Climate Risk

As shown in Figure C1, climate risk depends on the complex interaction between hazards affected by climate change and natural climate variability, exposure to these hazards, and the vulnerability of the exposed elements. For example, a hazard (e.g., extreme heat) may impact a community more due to its exposure (e.g., occurring in a densely populated area) and/or vulnerability (e.g., demographic factors influencing heat sensitivity).

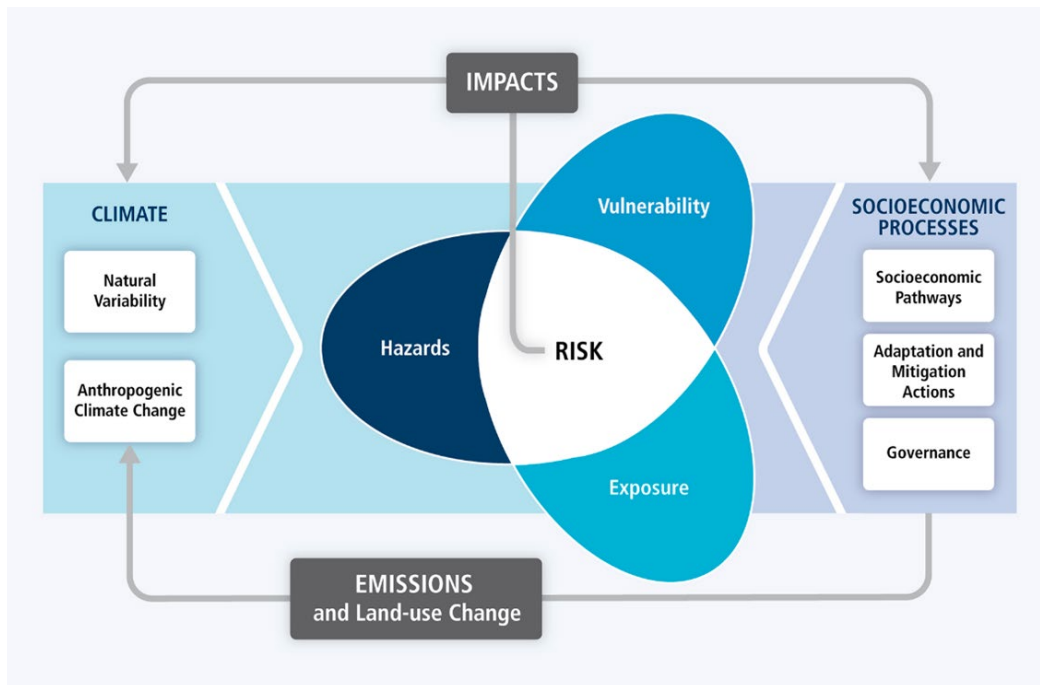
While future climate data can support the assessment of hazards affected by future climate change, there are different approaches to understanding climate risk. Decision-making about climate risk often involves a combination of top-down and bottom-up approaches.



**Top-down** approaches start with an analysis of potential climate change that can be used to guide actions and decisions.

**Bottom-up** approaches start with the project, policy or activity of interest and analyze the factors and conditions that impact the exposure, vulnerability and resilience of systems. These approaches look for pathways to reduce exposure and vulnerability while increasing the capacity to cope (irrespective of the future climate hazard).

Hence, **future climate data can be used to inform a top-down approach** to assessing climate risk.



**Figure C1.** Climate risk envisioned as the overlap of hazard, exposure, and vulnerability.<sup>2</sup>

<sup>2</sup>IPCC, 2014: Summary for policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B.

Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.

## Which Emissions Scenario(s) Should I Use?

Climate projections are generated by different climate models and using a range of emissions scenarios. Differences in the projections due to the use of different climate models reflect the fact that we still have an incomplete understanding of how the climate system functions, and differences due to the choice of emissions scenarios reflect the fact that we have only imperfect knowledge of how society, its land use practices, and its emissions may change in the future. Given these diverse sources of uncertainty, it is best to examine a range of possible futures as represented by different climate models and emissions scenarios.

To reduce climate model uncertainty, PCIC has selected a range of climate models that are best suited to regions in BC. Ultimately, deciding on which emissions scenario(s) to assess will depend on the context of your project or policy, including your risk tolerance and time horizon, as discussed next.

## Time Horizon

Users of climate projections should consider the time horizon, or life cycle, relevant to their project or policy before selecting a future scenario. This could be the expected lifetime of a given piece of infrastructure, or a policy that needs to be responsive to changing external conditions. As highlighted above in *Understanding Shared Socioeconomic Pathways*, in the near term – up to a few decades into the future – climate projections do not differ meaningfully across SSP scenarios. This is true at both the global regional scales. Hence, if there is a recurring opportunity to review a given decision every two to three decades, then the choice of emissions scenario may be less relevant. An example of a recurring decision might be the choice of paving material to use when repaving a roadway.

On the other hand, if an infrastructure element is expected to last 50 to 75 years, the choice of scenario becomes more critical because projected changes from different scenarios will differ substantially by the end-of-life of the structure. An example of a long-term infrastructure design decision might be determining the capacity of an upgraded storm sewer. Hence, planners and designers may be able to minimize the role of scenario uncertainty in adaptation planning by first determining the decision-making time-frame.

## Level of Acceptable Risk

Climate scientists can help practitioners and decision makers understand how climate-related hazards that affect the assets they are responsible for (i.e., systems, infrastructure, or policy) may change in the future. This requires dialog among practitioners, decision makers and climate scientists to understand and describe the potential impacts of projected climate change under different emissions scenarios. Because climate scientists are not experts on how risk to assets will materialize, it remains the responsibility of practitioners and decision makers to manage future climate-related risks to their assets.

When assessing future scenarios, decision makers should consider four questions:

1. “What components of my project are vulnerable to climate change?”
2. “How likely is it that society will follow a future emissions pathway that will intensify the hazards to which my assets will be exposed?”
3. “What level of risk am I comfortable assuming?”
4. “What is the trade-off between risk and cost?”

Regardless of the rationale used, understanding the level of risk that is appropriate to your work is complex. It will undoubtedly require engagement with diverse partners and stakeholder groups to understand the range of potential impacts.

## Scenario Choice

Ideally, public assets should be managed in a way that limits their vulnerability to plausible future hazards. Climate science has not yet ruled out the plausibility of any of the main socio-economic pathway scenarios that were considered in the most recent IPCC assessment. The choice of scenario will depend critically on the climate hazards that would affect the asset of interest. This is because some hazards will likely decline, such as extreme snow loads on buildings that could cause building collapse, while others, related to heat stress, intense rainfall, and flash flooding, will increase. If an asset is affected by both decreasing and increasing hazards, then the approach that would most completely limit vulnerability to future hazards would involve using a no change (historical climate) scenario for declining hazards, and a rapid change, high emissions scenario (e.g., SSP5-8.5) for increasing hazards.

## Tips for Using Climate Data

### ✓ View multiple variables (indices) within each category

To get a more complete understanding of projected changes, users should consider multiple climate variables. For example, if you want to know how precipitation will change in your region, review both a frequency-based variable (e.g., Number of Wet Days > 20 mm) and a volume-based variable (e.g., Total Precipitation). The Hazard Reference Tables (Appendix E) can help users identify which climate variables may be best suited to a particular context or application.

### ✓ Review both annual and seasonal data

Annual mean changes can mask important seasonal behaviour. For example, a small annual mean precipitation projection might contain a substantial reduction in the summer along with a projected increase in the fall, winter, or spring. Therefore, users should assess both annual and seasonal projections for certain climate variables.

### ✓ Select a relevant time period

The complete data package offers projections for the “2030s” (2021-2050), “2050s” (2041-2070) and “2080s” (2071-2100). As highlighted above, users should select the period that is most appropriate to the entire life cycle of their project or policy.

### ✓ Determine an appropriate emissions scenario(s)

There is no right or wrong emissions scenario to use in decision-making: all scenarios represent possible futures and decision-making is highly context dependent. Selecting a scenario requires consideration of risk tolerance, sensitivity to climate impacts and extreme events, the time horizon of the project, and more. It can be useful to remember that planning for a high emissions scenario can help ensure that adaptation measures are resilient for a longer period of time if, in fact, a lower emissions scenario were to play out.

### ✓ Examine both means and extremes

The median, 10th percentile, and 90th percentile values have been provided in all summary tables for this assessment. Depending on the application, one, two or all three of these values may be important. For instance, if one were designing a building for general use (e.g., retail space, detached home) with an anticipated lifetime of 50 years or so, then the change in the median of Cooling Degree Days (CDDcool18C) under SSP5-8.5 might be appropriate to consider. Alternatively, if the building were classified as critical, long-lived infrastructure (e.g., a hospital, or power plant) then it might be more appropriate to design to the 90th percentile value for that climate index, to capture the upper range of possibility.



# Appendix D

## FURTHER RESOURCES

There are a growing number of guidance materials, learning resources, and data tools available to support the use of climate projections for regional assessments. Below is a non-exhaustive list of open access resources suited to a broad range of users. For additional guidance, contact PCIC ([climate@uvic.ca](mailto:climate@uvic.ca)) or the CRD Climate Action Program ([climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca)).

### Additional Climate Projections Tools and Resources

|   |
|---|
| <b>ClimateData.ca</b>   |
| User-friendly tool for exploring climate projections and related data   |
| Developed and maintained by the Canadian Centre for Climate Services, a team of information and outreach specialists at Environment and Climate Change Canada (ECCC), ClimateData.ca is an online, user-friendly data portal providing future climate projections for regions across Canada. Users can explore gridded data at small scales or aggregated by watershed, census subdivision, or health region. ClimateData.ca provides plain language descriptions for all climate variables and has various options for visualizing and analyzing climate data. Temperature and precipitation-based variables (the same as those provided by PCIC) as well as humidex, relative sea level change and climate change-scaled IDF data are available.<br><br>ClimateData.ca also includes a comprehensive learning zone ( <a href="http://climatedata.ca/learn">climatedata.ca/learn</a> ) that is regularly updated to support climate data users in a variety of applications, including some sector-specific information, as well as a Climate Services Support Desk for general or technical inquiries. The site is continuously evolving with more content and features in development. |
| <b>PCIC Climate Explorer</b>  |
| <i>Useful for intermediate or advanced users analyzing a specific location</i>  |
| PCIC Climate Explorer (PCEX) is an online map-based tool for viewing gridded historical climate data and future projections at any location of interest across Canada. Users can select an arbitrary region on the map, compare climate variables for that region, and download the results in Excel formats. Additional variables for extreme precipitation and streamflow are also available.   |
| <b>ClimateAtlas.ca</b>  |
| <i>Useful for creating communications materials and learning more about climate adaptation</i>  |
| ClimateAtlas.ca is an interactive tool combining climate projections (again using PCIC's data), mapping, and storytelling to inspire local, regional, and national action and solutions. Users can explore videos, articles, educator resources, and various topic including Indigenous knowledges, agriculture, and health.  |

### Spatial Analogues Tool\* (ClimateData.ca)

*Useful for visualizing the future climate at a target location*

With this tool, starting with a target city of interest\*\*, users can search for other cities whose historical climate closely matches the future-projected climate of the target city. Users can search for spatial analogues under a low or high emissions scenario and considering up to four different climate indices. For example, one combination of indices suggests that by the 2050s, Quebec City may have a climate similar to present-day Boston. By examining how Boston has adapted to its current climate, planners in Quebec City might gain insights on how to prepare and adapt to climate change.

\*This tool is a beta app, meaning it is a new tool being carefully monitored and is still under development.

\*\*Target cities for British Columbia are presently limited to: Victoria, Vancouver, Abbotsford, Kelowna, and Prince George.

## Infrastructure Design Resources

### PCIC Design Value Explorer (DVE)

*Engineering design professionals can access future-projected climatic design values*

The DVE is an online, open-access technical tool for assessing 19 climate design values based on observed data and projections of how they may change in the future. It provides engineers, architects, planners, and other professionals with quantitative, fine-scale historical and future-projected climate information for designing buildings and infrastructure.

### PCIC Future-Shifted Weather Files

*Energy Modelers can access future-projected weather files*

Weather data adjusted for climate change has been produced for three time periods (2020s, 2050s, and 2080s) using the high emissions pathway RCP8.5 (CMIP5). Data are available for several hundred weather stations across Canada. Future-shifted weather files can help building designers simulate building performance under a changing climate, supporting resilient design. Further work is underway to update the weather files for CMIP6-SSPs and to create weather files that capture both mean change and extreme events.

### CSA PLUS 4013-19: Development, interpretation, and use of rainfall intensity-duration-frequency (IDF) information: Guideline for Canadian water resource practitioners\*

*Guidance for Canadian water resource practitioners to better incorporate climate change into IDF information*

Technical guidance from the Canadian Standards Association (CSA)—informed by scientists at ECCC and other subject matter experts—for the development, interpretation, and use of rainfall intensity-duration-frequency (IDF) information. Chapters 5 and 6 include guidance for how to incorporate climate change into the formulation and application of IDF information.

\*Access fee required

## Short-Duration Rainfall IDF Data (ClimateData.ca)

*Users can explore historical and climate change-scaled IDF information for weather stations across Canada*

ClimateData.ca offers easy access to historical short-duration rainfall IDF data (from 1 to 24 hours) and projected rainfall amounts under low, moderate, and high emissions scenarios at locations across Canada (12 locations within the capital region). This IDF information is consistent with the above-mentioned CSA guidance. Users can download a zip file containing all the historical and future estimated values.


In addition, the Learning Zone on ClimateData.ca has a topic dedicated to using IDF rainfall data to account for a changing climate. For more information on this product and about designing future-ready buildings, visit [ClimateData.ca/learn/](https://climatedata.ca/learn/)




# Appendix E

## HAZARD REFERENCE TABLES

The Hazard Reference Tables help users identify which climate variables included in the complete data package may be best suited to a particular context or application. Users should use the short name (left column) to navigate to the appropriate variable in the complete data package.

| Seasonal Patterns and Climate Change   |  |
|--|--|
| <ul style="list-style-type: none"> <li>✓ Increasing temperatures year-round</li> <li>✓ Fewer frost days and a longer growing season</li> <li>✓ Shifting heating and cooling demands</li> </ul> <p><b>Key sectors:</b> Agriculture, Biodiversity, Parks, Infrastructure</p> |  |
|   |  |
| Temperature  |  |
| <b>TX</b>  | Daytime high temperature, averaged over all days in a year or season   |
| <b>TM</b>  | Mean daily temperature, averaged over all days in a year or season   |
| <b>TN</b>  | Daytime low temperature, averaged over all days in a year or season  |
| Seasonal   |  |
| <b>FD</b><br>Frost Days  | Number of days in a year when the minimum temperature is below 0°C   |
| <b>ID</b><br>Ice Days  | Number of days in a year when the maximum temperature is below 0°C   |
| <b>GSL</b><br>Growing Season Length  | Number of days between: (i) the first span of 6 or more days in the year with a daily minimum temperature > 5°C and (ii) the first span after July 1st of 6 or more days with a daily minimum temperature < 5°C.   |
| <b>WSDI</b><br>Warm Spells   | A “warm spell” is defined as 6 or more consecutive days when the daily maximum temperature exceeds the 90th percentile value of the historical baseline. This index measures the number of days in a typical year that a warm spell occurs. (A warm spell can occur at any time of year).      |
| <b>CSDI</b><br>Cold Spells   | A “cold spell” is defined as 6 or more consecutive days when the daily minimum temperature is less than the 10th percentile value of the historical baseline. This index measures the number of days in a typical year that a cold spell occurs. (A cold spell can occur at any time of year). |
| Design   |  |
| <b>HDDheat18C</b><br>Heating Degree Days   | Number of degree days below 18°C in a year. A rough estimate for the energy demand needed to heat a building in a typical year.  |
| <b>CDDcold18C</b><br>Cooling Degree Days   | Number of degree days above 18°C in a year. A rough estimate for the energy demand needed to cool a building in a typical year.  |

| <b>Increasing Temperatures and Extreme Heat</b>   |  |
|---|--|
| <ul style="list-style-type: none"> <li>✓ Hotter daytime temperatures</li> <li>✓ Warmer nighttime temperatures</li> <li>✓ Heat waves becoming hotter and more frequent</li> </ul> <p><b>Key sectors:</b> Emergency Management, Health, Biodiversity, Watershed</p> |  |
|    |  |
| Daytime Temperatures  |  |
| <b>TX</b>   | Daytime high temperature, averaged over all days in a year or season   |
| <b>TXx</b>  | Hottest daytime high temperature in a year or season   |
| <b>SU</b><br>Summer Days  | Number of days in a typical year when the daytime high is above 25°C   |
| <b>SU30</b><br>Hot Summer Days  | Number of days in a typical year when the daytime high is above 30°C   |
| Nighttime Temperatures  |  |
| <b>TN</b>   | Daily minimum temperature in a typical year or season  |
| <b>TNx</b>  | Warmest nighttime low temperature in a typical year or season  |
| <b>TR16C</b><br>Temperate Nights  | Number of days in a year when the nighttime low stays above 16°C   |
| <b>TR</b><br>Tropical Nights  | Number of days in a year when the nighttime low stays above 20°C   |
| Heat Extremes   |  |
| <b>HWD</b><br>Heat Wave Days  | Number of days in a typical year classified as a “heat wave”   |
| <b>HWN</b><br>Heatwave Number   | Number of distinct heat wave events in a typical year  |
| <b>HWXL</b><br>Heatwave Length  | Length (in days) of the longest heat wave in a typical year  |
| <b>TXH</b><br>Heatwave Intensity (Day)  | Daytime high temperature averaged across all heat waves in a typical year  |
| <b>TNH</b><br>Heatwave Intensity (Night)  | Nighttime low temperature averaged across all heat waves in a typical year                                       |
| <b>TXHX</b>   | Daytime high temperature during the most extreme heat wave in a year   |
| <b>TNHX</b>   | Nighttime low temperature during the most extreme heat wave in a year  |
| <b>Return Periods</b><br>(various)  | The data package provides return levels and return period changes for the 5-, 10-, 20-, and 30-year Hottest Day. |

| Precipitation                      |  |
|------------------------------------|--|
| <b>PR</b><br>Total Precipitation   | Total precipitation in a typical year or season  |
| <b>Rain</b><br>Total Rainfall      | Total rainfall in a typical year or season   |
| <b>Snow</b><br>Summer Days         | Total snowfall in a typical year or season   |
| Rainfall Extremes                  |  |
| <b>RX1DAY</b>                      | Maximum amount of precipitation (in mm) occurring in a single day in a typical year  |
| <b>RX5DAY</b>                      | Maximum amount of precipitation (in mm) occurring over a 5-day period in a typical year  |
| <b>R10MM</b>                       | Number of days in a typical year that receive more than 10mm of total precipitation  |
| <b>R20MM</b>                       | Number of days in a typical year that receive more than 20mm of total precipitation  |
| <b>R95P / R95DAYS</b>              | Amount of precipitation over the year that exceeds the 95th percentile of historical (baseline) daily precipitation / Number of days in a typical year that exceed this amount.                                    |
| <b>R99P / R99DAYS</b>              | Amount of precipitation over the year that exceeds the 99th percentile of historical (baseline) daily precipitation / Number of days in a typical year that exceed this amount.                                    |
| <b>Return Periods</b><br>(Various) | The data package provides 5-, 10-, 20-, 30-, and 50-year return periods for annual wettest 1-, 2-, and 5-day rainfall events. It also provides changes to rainfall return periods for an event of given magnitude. |

### Extreme Precipitation and Flooding


In this data package, there are no direct indices for flooding.  
Rainfall extremes may trigger flooding under certain circumstances.


- ✓ More precipitation occurring over short time periods
- ✓ More days with heavy rainfall

**Key sectors:** Public Works/Engineering, Infrastructure, Biodiversity, Health, Agriculture, Watershed





|   |  |   |
|---|--|---|
| <p><b>Drought</b></p> <p><i>In this data package, there are no direct drought variables. Hotter temperatures, less rainfall and reduced snowpack may lead to drought conditions in the warmer months.</i></p> <p><b>Key sectors:</b> Agriculture, Biodiversity, Health, Watershed</p> |  |  |
| <b>Precipitation</b>  |  |   |
| <p><b>PR – Summer</b><br/>Total Precipitation in Summer</p>   | Total precipitation in a typical summer (may also be important to consider PR for spring and fall)   |   |
| <p><b>SNOW</b><br/>Total Snowfall</p>   | Total snowfall (fall-winter-spring)  |   |
| <p><b>CDD</b><br/>Consecutive Dry Days</p>  | Number of days comprising the longest “dry spell” in a typical year. Dry spells are defined as consecutive days with less than 1mm of total precipitation. |   |
| <b>Temperature</b>  |  |   |
| <p><b>TX</b></p>  | Daytime high temperature in a typical year or season   |   |
| <p><b>TXx</b></p>   | Hottest daytime high temperature in a typical year or season   |   |
| <p><b>SU</b><br/>Summer Days</p>  | Number of days in a typical year when the daytime high is above 25°C   |   |

|  |  |   |
|--|--|---|
| <p><b>Wildfire and Air Quality</b></p> <p><i>In this data package, there are no direct wildfire variables. Hotter temperatures and less rainfall in the warmer months may lead to more favourable conditions for wildfire.</i></p> <p><b>Key Sectors:</b> Health, Biodiversity, Infrastructure, Agriculture</p>  |  |  |
| <p>Variables listed under Drought (see above) can also be considered as informative for Wildfire. Additional variables such as humidity, wind speed, and wind direction must also be considered in order to establish favourable conditions for Wildfire. The Canadian Forest Service has analyzed such historical data to develop Fire Weather Normals, which provide insight into how “fire weather” varies spatially and throughout the year. See <a href="https://cwfis.cfs.nrcan.gc.ca/ha/fwnormals">https://cwfis.cfs.nrcan.gc.ca/ha/fwnormals</a> for more.</p> <p>Future-projected temperature and precipitation conditions that may be favourable to increased incidence of Wildfire may be obtained from other regional climate projections reports in BC, including:</p> <ul style="list-style-type: none"> <li>• Climate Projections for BC Northeast Region</li> <li>• Climate Projections for the Okanagan Region</li> <li>• Climate Projections for the Cowichan Valley Regional District</li> <li>• Climate Projections for Metro Vancouver</li> </ul> |  |   |

# Appendix F

## COMPLETE LIST OF CLIMATE INDICES

| Name                              | Variable                                      | Definition   | Units      |
|-----------------------------------|---|--|------------|
| <b>Standard</b>                   |   |  |            |
| <b>PR</b>                         | Precipitation                                 | Annual/seasonal precipitation totals   | mm         |
| <b>RAIN</b>                       | Rainfall                                      | Annual/seasonal rainfall portion of precipitation using temperature-based rain-snow partitioning   | mm         |
| <b>SNOW</b>                       | Snowfall                                      | Annual/seasonal snowfall (snow water equivalent) portion of precipitation  | mm (H2Oeq) |
| <b>TM</b>                         | Daily Average Temperature                     | Annual/seasonal daily average temperature  | °C         |
| <b>TX</b>                         | Daily Maximum Temperature                     | Annual/seasonal average daily maximum temperature  | °C         |
| <b>TN</b>                         | Daily Minimum Temperature (usually overnight) | Annual/seasonal average daily minimum temperature  | °C         |
| Name                              | Variable                                      | Definition   | Units      |
| <b>CLIMDEX: Temperature Based</b> |   |  |            |
| <b>TXX</b>                        | Maximum TX                                    | Annual/seasonal maximum of TX  | °C         |
| <b>TNN</b>                        | Minimum TN                                    | Annual/seasonal minimum of TN  | °C         |
| <b>TXN</b>                        | Minimum TX                                    | Annual/seasonal minimum of TX  | °C         |
| <b>TNX</b>                        | Maximum TN                                    | Annual/seasonal maximum of TN  | °C         |
| <b>TX90P</b>                      | Hot Days                                      | Annual percentage of days with TX > 90th historical percentile   | %          |
| <b>TX10P</b>                      | Cool Days                                     | Annual percentage of days with TX < 10th historical percentile   | %          |
| <b>TN90P</b>                      | Warm Nights                                   | Annual percentage of days with TN > 90th historical percentile   | %          |
| <b>TN10P</b>                      | Cold Nights                                   | Annual percentage of days with TN < 10th historical percentile   | %          |
| <b>DTR</b>                        | Diurnal Temperature Range                     | Annual/seasonal diurnal temperature range, TX – TN   | °C         |
| <b>SU</b>                         | Summer Days                                   | Annual number of days with TX > 25 °C  | days       |
| <b>SU30</b>                       | Hot Summer Days                               | Annual number of days with TX > 30 °C  | days       |
| <b>TR</b>                         | Tropical Nights                               | Annual number of days with TN > 20 °C  | days       |
| <b>TR16C</b>                      | Temperate Nights                              | Annual number of days with TN > 16 °C  | days       |
| <b>ID</b>                         | Ice Days                                      | Annual number of days with TX < 0 °C   | days       |
| <b>FD</b>                         | Frost Days                                    | Annual number of days with TN < 0 °C   | days       |
| <b>CSDI</b>                       | Cold Spells                                   | Annual count of days with at least 6 consecutive days when TN < 10th historical percentile   | days       |
| <b>WSDI</b>                       | Warm Spells                                   | Annual count of days with at least 6 consecutive days when TX > 90th historical percentile   | days       |
| <b>GSL</b>                        | Growing Season Length                         | Growing season length (number of days between first span of at least 6 days with TM >5°C and first span after July 1st of 6 days with TM <5°C) | days       |

| Name                                | Variable                                   | Definition   | Units   |
|-------------------------------------|--|--|---------|
| <b>CLIMDEX: Precipitation-Based</b> |  |  |         |
| <b>CDD</b>                          | Consecutive Dry Days                       | Annual maximum length of consecutive dry days (PR < 1 mm)  | days    |
| <b>CWD</b>                          | Consecutive Wet Days                       | Annual maximum length of consecutive wet days (PR ≥ 1 mm)  | days    |
| <b>SDII</b>                         | Simple Daily Precipitation Intensity Index | Annual average PR on days with PR ≥ 1 mm   | mm      |
| <b>R1MM</b>                         | Precipitation ≥ 1 mm                       | Annual count of days with PR ≥ 1 mm  | days    |
| <b>R10MM</b>                        | Precipitation ≥ 10 mm                      | Annual count of days with PR ≥ 10 mm   | days    |
| <b>R20MM</b>                        | Precipitation ≥ 20 mm                      | Annual count of days with PR ≥ 20 mm   | days    |
| <b>RX1DAY</b>                       | Maximum 1-Day PR                           | Annual/seasonal maximum 1-day PR   | mm      |
| <b>RX2DAY</b>                       | Maximum 2-Day PR                           | Annual/seasonal maximum 2-day PR   | mm      |
| <b>RX5DAY</b>                       | Maximum 5-Day PR                           | Annual/seasonal maximum 5-day PR   | mm      |
| <b>RN1DAY</b>                       | Maximum 1-Day RAIN                         | Annual/seasonal maximum 1-day rainfall   | mm      |
| <b>RN2DAY</b>                       | Maximum 2-Day RAIN                         | Annual/seasonal maximum 2-day rainfall   | mm      |
| <b>RN5DAY</b>                       | Maximum 5-Day RAIN                         | Annual/seasonal maximum 5-day rainfall   | mm      |
| <b>R95P</b>                         | Very Wet Day PR                            | Annual total PR when PR > 95th percentile of daily PR in historical period   | mm      |
| <b>R95DAYS</b>                      | Very Wet Days                              | Annual number of days when PR > 95th percentile of daily PR in historical period   | days    |
| <b>R99P</b>                         | Extreme Wet Day PR                         | Annual total PR when PR > 99th percentile of daily PR in historical period   | mm      |
| <b>R99DAYS</b>                      | Extreme Wet Days                           | Annual number of days when PR > 99th percentile of daily PR in historical period   | days    |
| Name                                | Variable                                   | Definition   | Units   |
| <b>Degree Days</b>                  |  |  |         |
| <b>CDDcold18C</b>                   | Cooling Degree Days                        | Annual, cumulative TM difference above 18 °C   | °C-days |
| <b>GDDgrow5C</b>                    | Growing Degree Days                        | Annual, cumulative TM difference above 5 °C  | °C-days |
| <b>HDDheat18C</b>                   | Heating Degree Days                        | Annual, cumulative TM difference below 18 °C   | °C-days |
| <b>FDDfreeze0C</b>                  | Freezing Degree Days                       | Annual, cumulative TM difference below 0 °C  | °C-days |
| Name                                | Variable                                   | Definition   | Units   |
| <b>Heatwave Indices</b>             |  |  |         |
| <b>HWD</b>                          | Heatwave (HW) days                         | Annual count of HW days, where a HW is defined as both TX and TN exceeding: 1) their 95th percentiles (historical), AND; 2) BC HARS thresholds <sup>3</sup> for at least 2 consecutive days. | days    |
| <b>HWN</b>                          | HW number                                  | Annual number of distinct HWs  | #       |
| <b>HWXL</b>                         | HW duration                                | Annual maximum HW length   | days    |
| <b>TNH</b>                          | HW intensity (night)                       | Average TN over all HWs in a year  | °C      |
| <b>TXH</b>                          | HW intensity (day)                         | Average TX over all HWs in a year  | °C      |
| <b>TNHX</b>                         | Maximum TNH                                | Average TN during most extreme HW in a year  | °C      |
| <b>TXHX</b>                         | Minimum TNH                                | Average TX during most extreme HW in a year  | °C      |
| <b>HWDD</b>                         | HW degree days                             | Annual, cumulative TM difference above HW threshold  | °C-days |

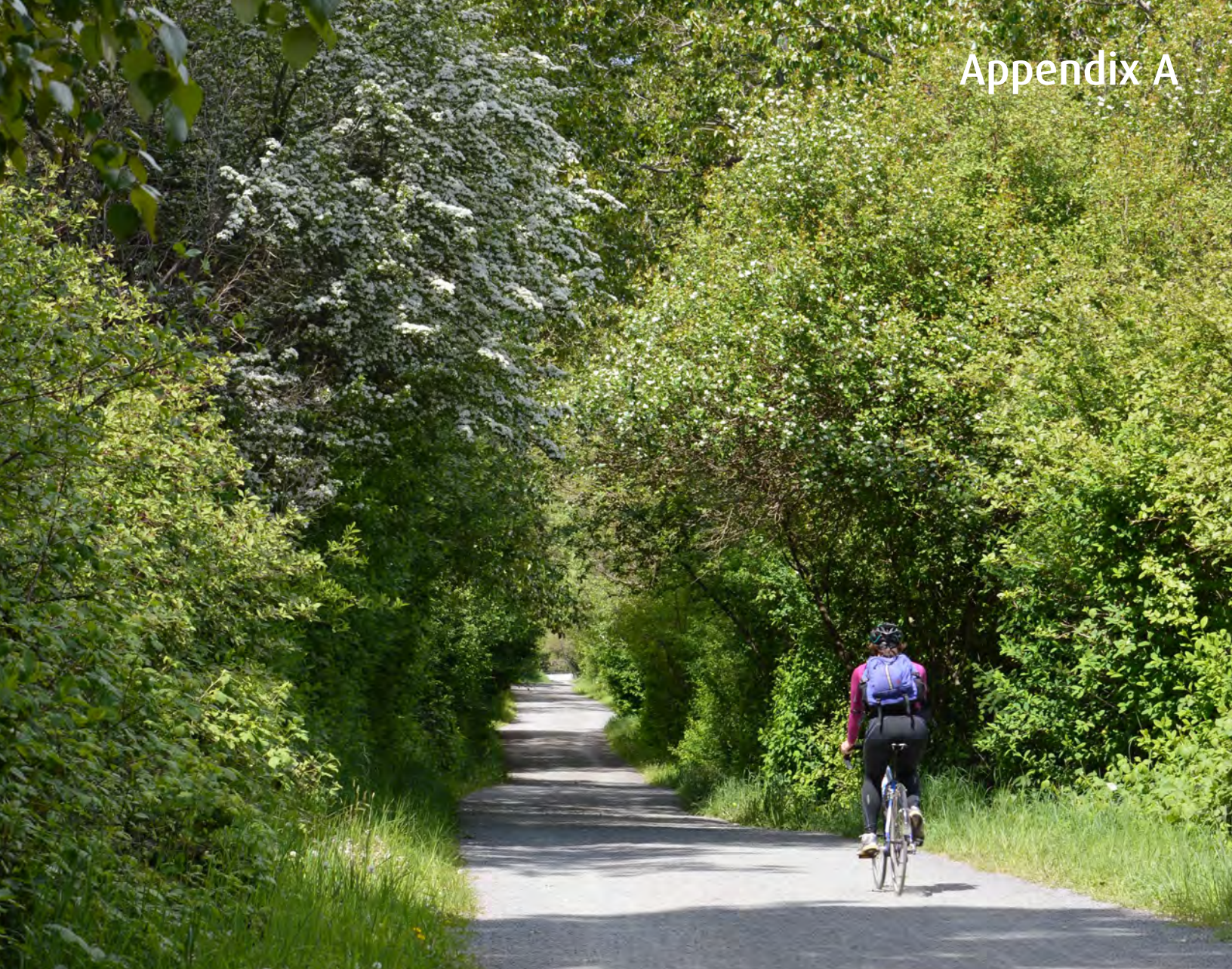
<sup>3</sup> The lower threshold temperatures used in our HW definition, which is intended for use throughout BC, are TX = 28°C and TN = 13°C. These are the lowest temperatures found in any region of the map in Figure 3, page 14 of

the 2023 report, BC Provincial Heat Alert and Response System (BC HARS): 2023, May 2023. Available at: <http://www.bccdc.ca/health-professionals/professional-resources/heat-event-response-planning>.



| Name                 | Variable                       | Definition                     | Units |
|----------------------|--------------------------------|--------------------------------|-------|
| <b>Return Levels</b> |                                |                                |       |
| <b>TX_RP5</b>        | 5-Year return level of TX      | 5-Year return level of TX      | °C    |
| <b>TX_RP10</b>       | 10-Year return level of TX     | 10-Year return level of TX     | °C    |
| <b>TX_RP20</b>       | 20-Year return level of TX     | 20-Year return level of TX     | °C    |
| <b>TX_RP25</b>       | 25-Year return level of TX     | 25-Year return level of TX     | °C    |
| <b>TX_RP30</b>       | 30-Year return level of TX     | 30-Year return level of TX     | °C    |
| <b>TN_RP5</b>        | 5-Year return level of TN      | 5-Year return level of TN      | °C    |
| <b>TN_RP10</b>       | 10-Year return level of TN     | 10-Year return level of TN     | °C    |
| <b>TN_RP20</b>       | 20-Year return level of TN     | 20-Year return level of TN     | °C    |
| <b>TN_RP25</b>       | 25-Year return level of TN     | 25-Year return level of TN     | °C    |
| <b>TN_RP30</b>       | 30-Year return level of TN     | 30-Year return level of TN     | °C    |
| <b>RN1_RP5</b>       | 5-Year return level of RN1DAY  | 5-Year return level of RN1DAY  | mm    |
| <b>RN1_RP10</b>      | 10-Year return level of RN1DAY | 10-Year return level of RN1DAY | mm    |
| <b>RN1_RP20</b>      | 20-Year return level of RN1DAY | 20-Year return level of RN1DAY | mm    |
| <b>RN1_RP30</b>      | 30-Year return level of RN1DAY | 30-Year return level of RN1DAY | mm    |
| <b>RN1_RP50</b>      | 50-Year return level of RN1DAY | 50-Year return level of RN1DAY | mm    |
| <b>RN2_RP5</b>       | 5-Year return level of RN2DAY  | 5-Year return level of RN2DAY  | mm    |
| <b>RN2_RP10</b>      | 10-Year return level of RN2DAY | 10-Year return level of RN2DAY | mm    |
| <b>RN2_RP20</b>      | 20-Year return level of RN2DAY | 20-Year return level of RN2DAY | mm    |
| <b>RN2_RP30</b>      | 30-Year return level of RN2DAY | 30-Year return level of RN2DAY | mm    |
| <b>RN2_RP50</b>      | 50-Year return level of RN2DAY | 50-Year return level of RN2DAY | mm    |
| <b>RN5_RP5</b>       | 5-Year return level of RN5DAY  | 5-Year return level of RN5DAY  | mm    |
| <b>RN5_RP10</b>      | 10-Year return level of RN5DAY | 10-Year return level of RN5DAY | mm    |
| <b>RN5_RP20</b>      | 20-Year return level of RN5DAY | 20-Year return level of RN5DAY | mm    |
| <b>RN5_RP30</b>      | 30-Year return level of RN5DAY | 30-Year return level of RN5DAY | mm    |
| <b>RN5_RP50</b>      | 50-Year return level of RN5DAY | 50-Year return level of RN5DAY | mm    |





# Climate Projections for the Capital Region

2024



## EXECUTIVE SUMMARY

The Earth's climate system is warming, and signs of climate change are becoming evident across the planet. The capital region, located on Southern Vancouver Island and Gulf Islands of British Columbia (BC), is no exception. The Capital Regional District (CRD) has partnered with the Pacific Climate Impacts Consortium (PCIC) to produce high-resolution regional projections for temperature, precipitation, and related indices of extremes. These projections use the most up-to-date global modeling data (i.e., the Sixth Coupled Model Intercomparison Project, CMIP6) to illustrate how the region's climate may change by the middle of this century. Information provided by this report and the accompanying data is intended to support decision makers and community partners in the region with an improved understanding of projected local climate change and related impacts.

At a high level, the results of this study show that in the coming decades, the capital region can expect:

- Hotter summer temperatures, with more extreme heat days and heatwaves;
- Warmer nights and a longer growing season;
- Warmer winter temperatures and less frequent frost;
- Less rain and more dry days in the summer months;
- More precipitation falling in fall, winter and spring;
- Less snowfall in the colder months;
- Extreme rainfall events becoming wetter.

More specifically, warming temperatures will shift seasonal patterns, prompting a longer growing season and greater cooling demand across the region. Extreme temperatures will continue to get hotter, with heat waves becoming longer and more frequent. By the 2050s, the capital region can expect the number of summer days exceeding 25°C to triple, going from an average of 12 days per year to around 40. Nighttime temperatures in the summer will also increase. Nights where the temperature stays above 16°C (the lower threshold for heat alerts for Southern Vancouver Island) are projected to occur up to 29 times per year by mid-century. The temperature for the 1-in-20-year hottest is projected to increase from 32°C to 36°C.

By the end of this century, annual precipitation is projected to increase modestly (4% increase by the 2050s and 11% by the 2080s). However, these changes will not occur evenly across seasons. In the colder months, rainfall increases notably because of warmer temperatures that convert more snow into rain. (By the 2050s, total rainfall in the winter increases by 25%, while

total snowfall drops by nearly 60%.) Much of the rainfall in the colder months will occur during extreme events, with the very wet days becoming wetter by mid-century. In contrast to the fall, winter and spring, the summer months will become increasingly dry. Total rainfall in the summer is projected to decrease by roughly 15% by the 2050s with the duration of dry spells becoming longer.

Many of the projected climate changes described in this report will be felt uniformly across the region. However, the magnitude of some variables will be accentuated by the existing West-to-East climatic gradient in the capital region. For example, the Western region is typically wetter and cooler compared to the Eastern Region, where conditions are typically warmer and drier. In addition, temperatures may be warmer or cooler in specific areas due to other factors including tree canopy cover (or a lack thereof), paved surfaces, and buildings density.

The projected warming for the capital region will have implications for regional ecosystems, watersheds, agriculture and horticulture, housing, energy demand, infrastructure, and community health and safety. Chapter 7 provides a high-level overview of some of the impacts that might be expected from the projected changes in this assessment. This chapter was informed by input from local government staff during a workshop in October 2023 and is not a comprehensive assessment of regional impacts. It is intended to support further discussion and analysis for how climate change may impact the capital region.

The CRD and PCIC also collected input from local government staff to understand how these climatic changes may impact the region as whole. Across the capital region, communities are already witnessing and experiencing varied impacts of climate change. These impacts will persist and, in many cases, intensify over the coming decades based on the future global greenhouse gas emissions trajectory. These impacts will not be experienced equally across the region. People facing the greatest burdens are often the ones who are most affected by climate change, particularly for impacts that are compounding.

Information within this report and the accompanying data provides the region's decision makers, community planners, and community partners with an improved understanding of projected local climate change and related impacts.

## **CONTRIBUTING AUTHORS**

Charles Curry and Stephen Sobie from Pacific Climate Impacts Consortium (PCIC) conducted climate model downscaling, data analysis and interpretation and generated all data products, including maps, figures, and tables, for the report. Charles Curry and Izzy Farmer (PCIC) served as lead authors of this report, with advice and guidance from CRD staff.

## **ACKNOWLEDGMENTS**

We would like to acknowledge the effort and input received from CRD staff, municipal staff, and the CRD Climate Action Inter-Municipal Working Group in the development of this report. Working together ensures that we share knowledge and build on each other's success to create a more resilient region.



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# 1. INTRODUCTION

Over the last 150 years, the global average temperature has increased by over 1°C and this warming has been clearly linked to the emission of greenhouse gases (GHGs), aerosols, and other aspects of human development. This warming is expected to continue unless we make significant cuts to GHG emissions globally. Understanding, monitoring, and preparing for the regional and local manifestations of climate change is important for supporting safe and resilient communities in the decades to come.

The Capital Regional District (CRD) has undertaken this study to better understand how the climate of our region is expected to change over the coming decades. British Columbia's capital region spans an area of 2,340 km<sup>2</sup> and an elevation range of 1 to 1,100 m above sea level (Figure 1). Since 1950, air temperature observations for Vancouver Island have been increasing by 0.26 ± 0.07 °C per decade.<sup>2</sup> Both global and regional warming are expected to influence other climate variables, such as rainfall.

To explore the changes that may be in store for our region, the CRD has partnered with the Pacific Climate Impacts Consortium (PCIC) to produce high-resolution climate projections for the capital region. These projections are based on the latest generation of comprehensive global climate models (CMIP6). Like other populated areas worldwide, the region requires up-to-date, science-based, high-resolution information to enable effective planning and policy decisions in a changing climate. This information will be used with other resources to help prepare the capital region for the impacts of climate change.

A selected number of climate indicators are provided in this report to demonstrate how our climate is expected to change over time. In the first section, Chapter 2 provides a brief description of the study methodology and includes support for interpreting the figures and tables. Chapters 3 through 6 provide an analysis of selected climate indicators for the region, including information about summer temperatures, winter temperatures, precipitation, and climate extremes. Each section includes a description of each indicator and a summary of how it is projected to change over time.

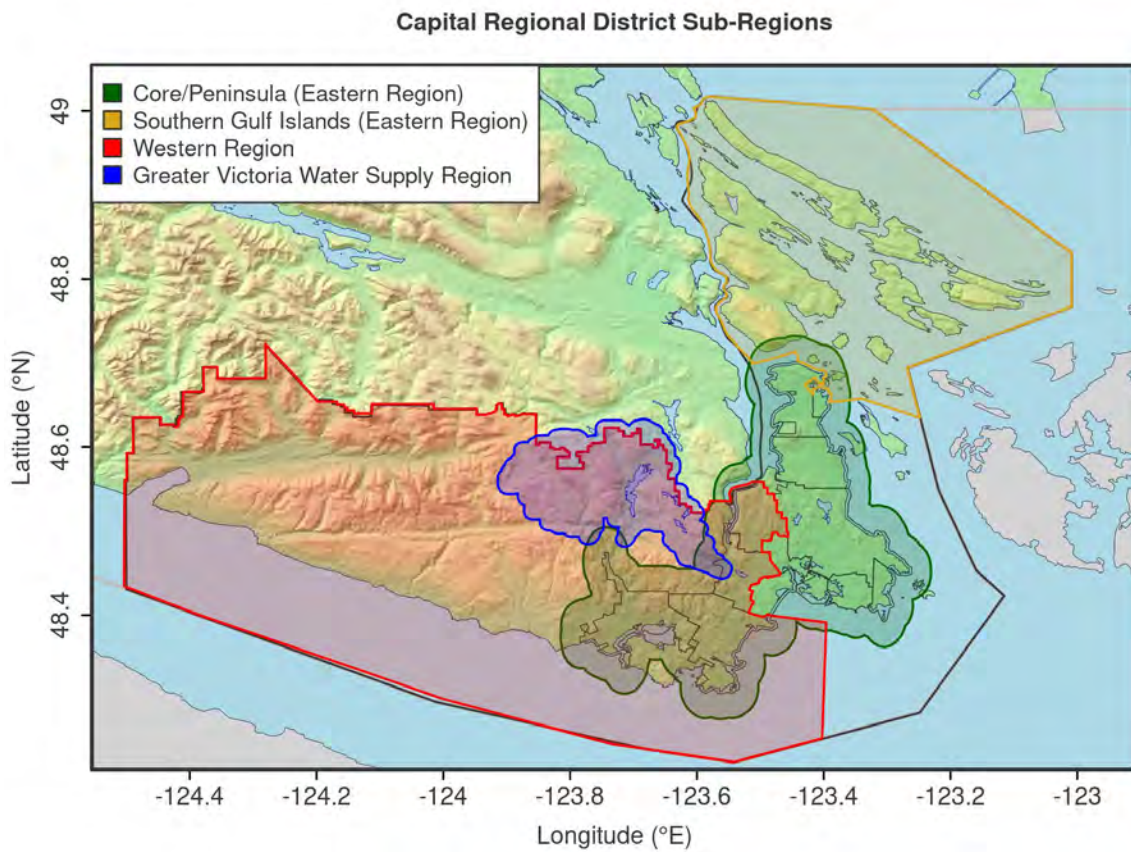
In the second section, Chapter 7 identifies potential impacts from climate change expected across the capital region. These impacts are categorized by different sectors, including health and wellbeing, water supply and demand, rainwater management and sewerage, ecosystems and species, buildings and energy systems, transportation, food and agriculture, and recreation and tourism.

It should be noted that the information provided in this report is limited to changes in temperature and precipitation only. Other climate-related phenomena, like surface hydrology, wind, humidity, sea level rise and storm surge require different modelling techniques and are not included in the scope of this report. Therefore, the report should be used alongside other resources to help prepare our region for the impacts of climate change. For example, in 2021, working with and on behalf of municipal partners, the CRD undertook a coastal flood inundation mapping project, which includes an analysis of current and future storm surge due to sea level rise. Since that time, some municipalities in the region have been undertaking efforts to build upon this work.

This report and the supplementary data that accompany it are intended to support climate-focused decision making throughout the region and help community partners better understand how their work may be affected by our changing climate. The information provided here should be used with careful consideration for the local context. For guidance on how climate information can be used to support adaptation planning, see the appendices appearing at the end of this report.

<sup>1</sup> IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001.

<sup>2</sup> Results of an analysis conducted by PCIC for the annual "State of the Pacific Ocean" report; see Curry, C.L. and Lao, I., "Land temperature and hydrological conditions in 2022," pp 17-21. In: Boldt, J.L., Joyce, E., Tucker, S., and Gauthier, S. (Eds.), State of the physical, biological and selected fishery resources of Pacific Canadian marine ecosystems in 2022. Can. Tech. Rep. Fish. Aquat. Sci. 3542: viii + 312 p. (2023). The nearby Lower Fraser Valley displays a larger trend of magnitude 0.42 ± 0.07 °C per decade, which may be more similar to what the capital region has experienced.



**Figure 1.** Domain of interest, the Capital Regional District, with background relief map and four sub-regions of interest. In several of the tables in the report, results for the Core/Peninsula and Southern Gulf Islands are combined into a single Eastern Region.

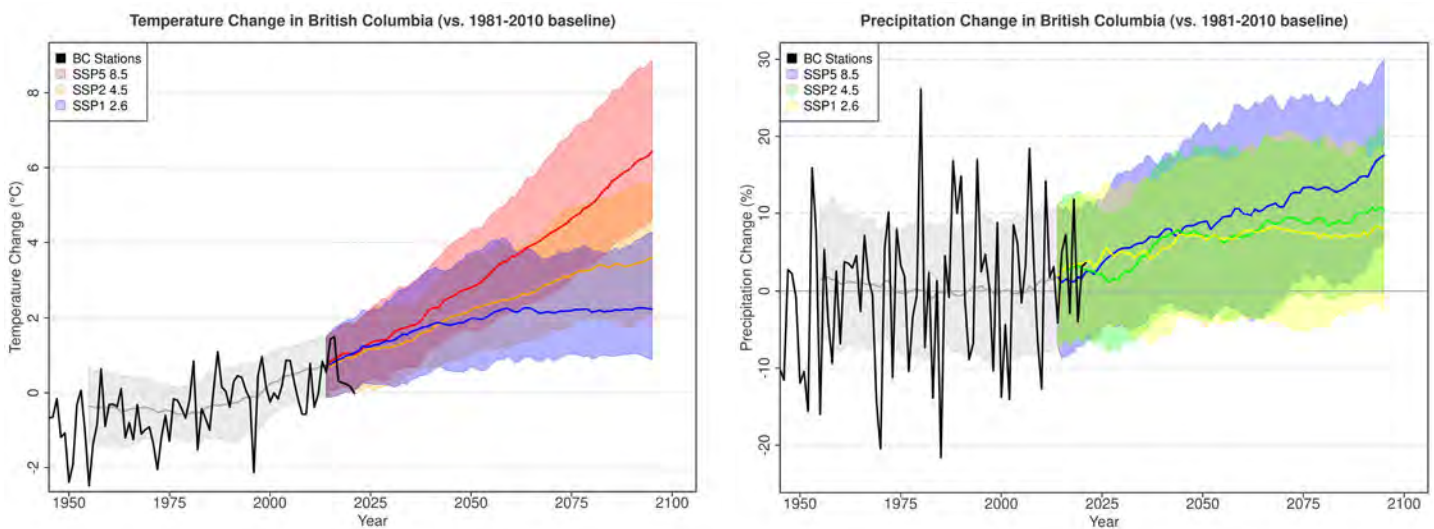
## 2. METHODS AND PRESENTATION

### 2.1 Climate Model Projections

The climate projections are based on an ensemble of 9 global climate models (GCMs) drawn from a larger collection of models developed during the Sixth Coupled Model Intercomparison Project (CMIP6), coordinated by the World Climate Research Programme. The climate projections presented here are based on a high greenhouse gas emissions scenario, known as the Shared Socioeconomic Pathway 5-8.5 (SSP585), which describes a trajectory of future emissions spurred by continued and expanded use of fossil-fuels worldwide. Two other scenarios are also presented in the data package accompanying this

report: a medium-intensity emissions pathway, SSP245, and a low-intensity pathway, SSP126, which covers the possibility of a low-carbon technology transformation of worldwide energy systems.<sup>3</sup> Planning based on climate projections under SSP585 could be considered a “no regrets” strategy for adaptation. By the 2090s under SSP585, global mean surface air temperature reaches a level 4.3°C higher than the 1850-1900 average. The evolution of air temperature and precipitation under the three SSPs, for BC specifically, is shown in Figure 2.

Each GCM represents the climate system using a global, horizontal grid with a limiting resolution between 100 km and 250 km, depending on the model. These coarse-grained data are first bias-corrected against available observations (spanning 1950-2012) and then statistically downscaled to 10 km resolution.<sup>4</sup>



**Figure 2.** Changes in annual mean air temperature (left) and total precipitation (right) relative to their values in 1981-2010, averaged over all of BC. The black curves show historical values obtained from the station data in BC from 1948-2021, while the coloured curves show median GCM projections under the three development pathways (SSPs) from 2015-2100. The shaded areas show the 10th-90th percentile range in model-simulated results over the historical and future periods, for each SSP.

<sup>3</sup> An accessible description of the SSPs may be found at <https://climatedata.ca/resource/understanding-shared-socio-economic-pathways-ssps/>.

<sup>4</sup> Details on the downscaling methods used at PCIC may be found on the Data Portal section of our website, [pacificclimate.org](http://pacificclimate.org).



In a second downscaling step, the model data are further downscaled to a resolution of 800 m using fine-scale climatological maps. It should be recognized, however, that while the latter account for fine-scale topography, important features of, and influences on, local daily climate are not represented in the dataset.<sup>5</sup>

Downscaled climate model results are presented for three 30-year periods: the historical reference period, 1981-2010 (referred to as the “Past” or “1990s” for short), the near future, 2021-2050 (the “2030s”), mid-century, 2041-2070 (the “2050s”) and the end-of-century, 2071-2100 (the “2080s”). These 30-year periods are chosen both to smooth out year-to-year climate variability, and to provide a long enough period to characterize the behaviour of fairly rare events. The seasonal definitions used are “meteorological” seasons: i.e., winter (December 1 to February 28), spring (March 1 to May 31), summer (June 1 to August 31) and fall (September 1 to November 30). A range of indices are computed from daily temperature and precipitation to describe various aspects of the climate. For projections, median estimates from the climate model ensemble are typically emphasized, with the 10<sup>th</sup> to 90<sup>th</sup> percentile ranges over the ensemble also provided where appropriate.

It is important to recognize that not all projected changes emerging from the climate model ensemble are necessarily substantial. For a given variable, location, and emissions pathway, each model produces a projected future climate, resulting in a range of possible outcomes. Since no single model is “right,” the median value of the ensemble can be used as a practical best-guess projection, with the 10th to 90th percentile spread indicating the uncertainty amongst the models. *If the spread includes zero change, meaning that not all models agree on the sign of the change, then relatively low confidence should be placed in the median value.* In the relatively rare cases when less than half of the models agree on the sign of change, users are alerted to the reduced confidence via a printed message on the maps.

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<sup>5</sup> Examples of these being realistic day-to-day variability and co-variability between nearby locations, and fine-scale land cover type, for example. It should also be recognized that since the models are bias-corrected to daily observations spanning a specific time period, here 1981-2010, more recent observations will not be reflected in results displayed for the “Past.”





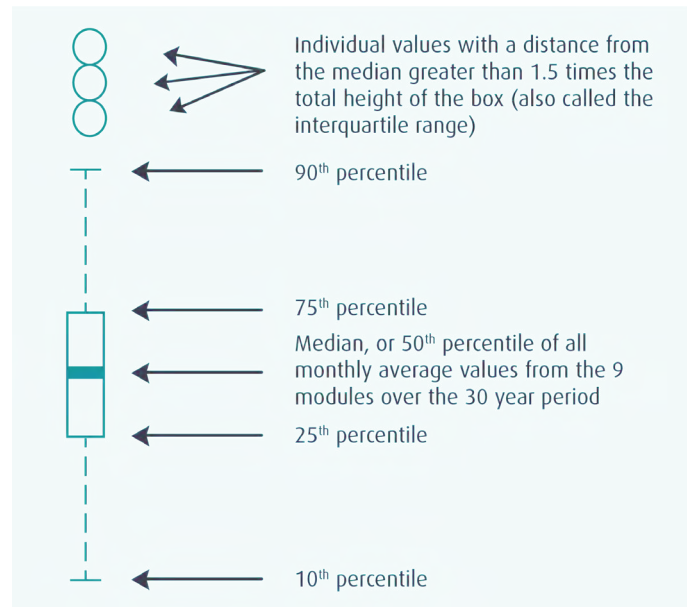
## 2.2 Interpreting Figures and Tables

The data deliverables for the project comprise: (i) maps of climate variables over the region in Past and Future periods, for each of the three scenarios; and (ii) tables (Excel spreadsheets) of area-averaged results for the same. Results for absolute or relative difference are also provided, where appropriate. References to the tables are occasionally made in the report. Most of the figures presented below are maps, showing the capital region and the surrounding area. Colour contours indicate values of the indicated variable, with a nominal limiting resolution of 800 m. *Due to the limitations of the downscaling methodology mentioned above, along with the inherent uncertainty in future outcomes, the exact position of contours on the maps should not be taken literally.* On each map, the area average shown at bottom left is computed over the capital region only (area inside the black curve).

This report presents results for a number of key indicators, derived from the model-simulated daily temperature and precipitation, representing a “highlight reel” of the much more extensive set of climate indices delivered for this project. In consultation with CRD staff, they were selected either because they have implications for a range of climate-related impacts, because they feature particularly large changes from recent historical conditions, or both. In the next few chapters, a plain language definition is provided for each indicator, followed by a summary of its projected change for the 2030s, 2050s, and 2080s, under the high (SSP585) emissions scenario. Detailed definitions of all indicators are provided in the Appendix.

There are two types of maps: single period and future change. Single period maps, e.g., “Past: 1990s” or “Projection: 2050s,” show actual values of a variable, e.g., temperature in °C. Future change maps, e.g., “Projected Change: 2050s - 1990s,” show differences between historical and future-simulated periods, and may be in the units of the variable or in relative terms, e.g., percent change in precipitation. In the interest of concision, all future change maps shown in this summary report are for the 2050s under the high emissions (SSP585) pathway. For most indicators, the magnitude of these changes should be roughly comparable to that projected for the 2080s under the moderate emissions scenario (i.e., SSP245).

Other figures in the report use area-averages for the capital region while expressing the range of projected values over models and years for a certain variable. An example of this



**Figure 3.** Explanatory schematic of a box-and-whisker plot.

type of presentation, the “box-and-whisker” plot, is shown in Figures 6 and 9, and an aid to their interpretation is given below. Note that, in these figures, the range shown by the whiskers reflects both year-to-year and model-to-model variability. Finally, note that when cited in the text, values from the spreadsheets are often rounded to indicate the likely precision of the quantity being discussed, given the known model uncertainties. For example, a temperature of 29.8°C would be cited as 30°C, while 2717 degree-days become 2715 degree-days. The tables contain median values with ranges given in parentheses (10<sup>th</sup> – 90<sup>th</sup> percentile of different model projections). Usually medians are cited in the text; but ranges encompass the range of possible behaviour, and should not be ignored, especially when the climate variable in question might enter into critical decision-making.

Values in tables are averaged over the capital region (within the regional boundary shown on the maps), unless labeled as *Eastern Region* (Greater Victoria and Southern Gulf Islands), *Western Region*, or *Greater Victoria Water Supply Area*.

## 3. GENERAL CLIMATE PROJECTIONS

### 3.1 Warmer Temperatures

We begin by examining future temperature change over the region. *Daytime High and Nighttime Low Temperatures* are averaged over each season and annually in the tables and maps below.

In concert with global and regional warming, both daytime and nighttime temperatures are projected to increase in the capital region in future, as detailed in the tables (all changes shown are positive). The accompanying maps show the spatial pattern of Past and future-projected temperatures throughout the region.

#### *Projections*

In the Past, winter daytime high temperatures in the region averaged around 7°C, while winter nighttime low temperatures averaged around 1.7°C. The median future-projected TX increases to around 9°C by the 2050s and to 11°C by the 2080s. The median future-projected TN reaches around 4°C by the 2050s and to 5.5°C by the 2080s. Since the likelihood of snowfall rapidly decreases as temperatures rise above 0°C, we can anticipate that this local warming will affect the frequency of snowfall in the region, as detailed further below.

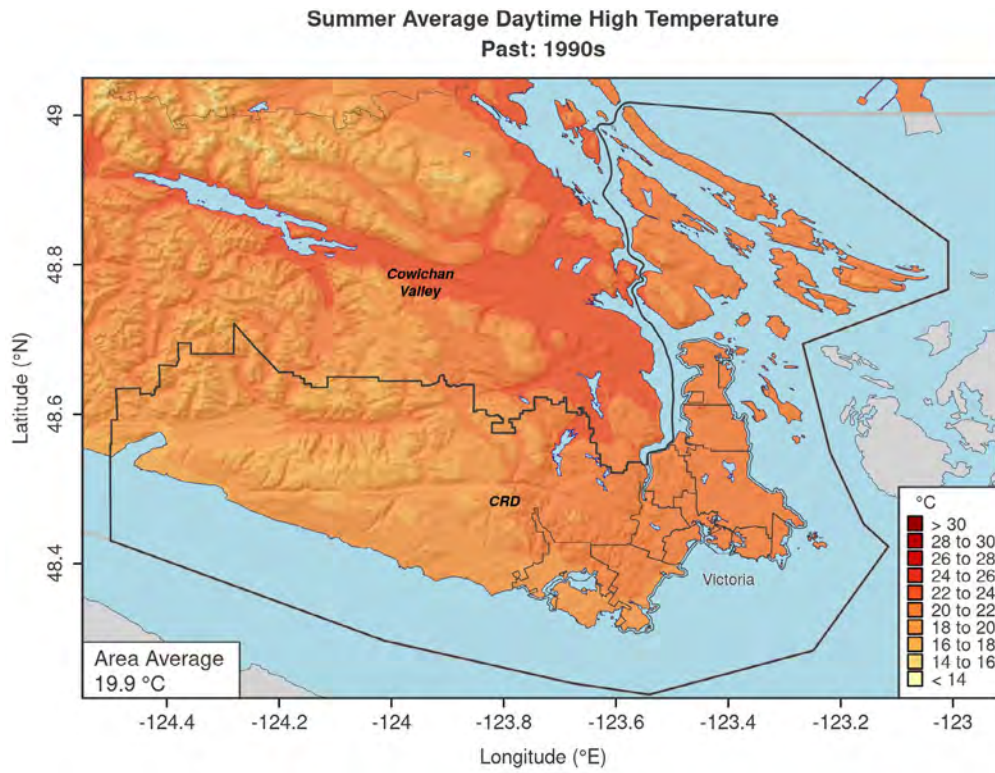


**Table 1: Regional Average Daytime High Temperature (TX)**

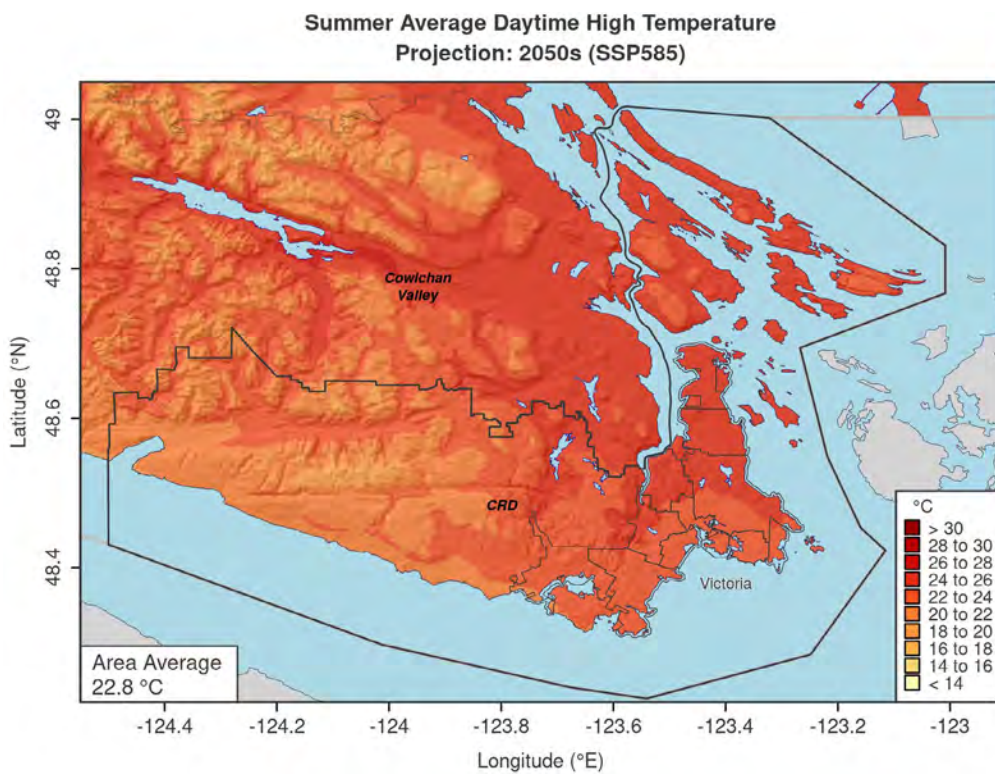
|        | Past (°C) | 2050s Change (°C) | 2080s Change (°C) |
|--------|-----------|-------------------|-------------------|
| Winter | 6         | 2.1 (1.6 to 3.5)  | 3.5 (2.8 to 6.5)  |
| Spring | 12        | 2.1 (1.4 to 4.0)  | 3.5 (2.6 to 6.3)  |
| Summer | 20        | 2.9 (2.3 to 5.1)  | 4.7 (4.1 to 8.7)  |
| Fall   | 13        | 2.7 (2.2 to 4.6)  | 4.0 (3.6 to 7.2)  |
| Annual | 13        | 2.5 (2.0 to 4.4)  | 3.9 (3.4 to 7.0)  |

**Table 2: Regional Average Nighttime Low Temperature (TN)**

|        | Past (°C) | 2050s Change (°C) | 2080s Change (°C) |
|--------|-----------|-------------------|-------------------|
| Winter | 1         | 2.0 (1.8 to 3.8)  | 3.6 (3.2 to 6.8)  |
| Spring | 4         | 2.2 (1.5 to 3.5)  | 3.2 (2.8 to 5.6)  |
| Summer | 10        | 2.8 (2.3 to 4.3)  | 4.6 (3.9 to 7.4)  |
| Fall   | 5         | 2.9 (2.1 to 4.7)  | 4.2 (3.6 to 7.3)  |
| Annual | 5         | 2.3 (2.0 to 4.2)  | 3.9 (3.5 to 6.6)  |

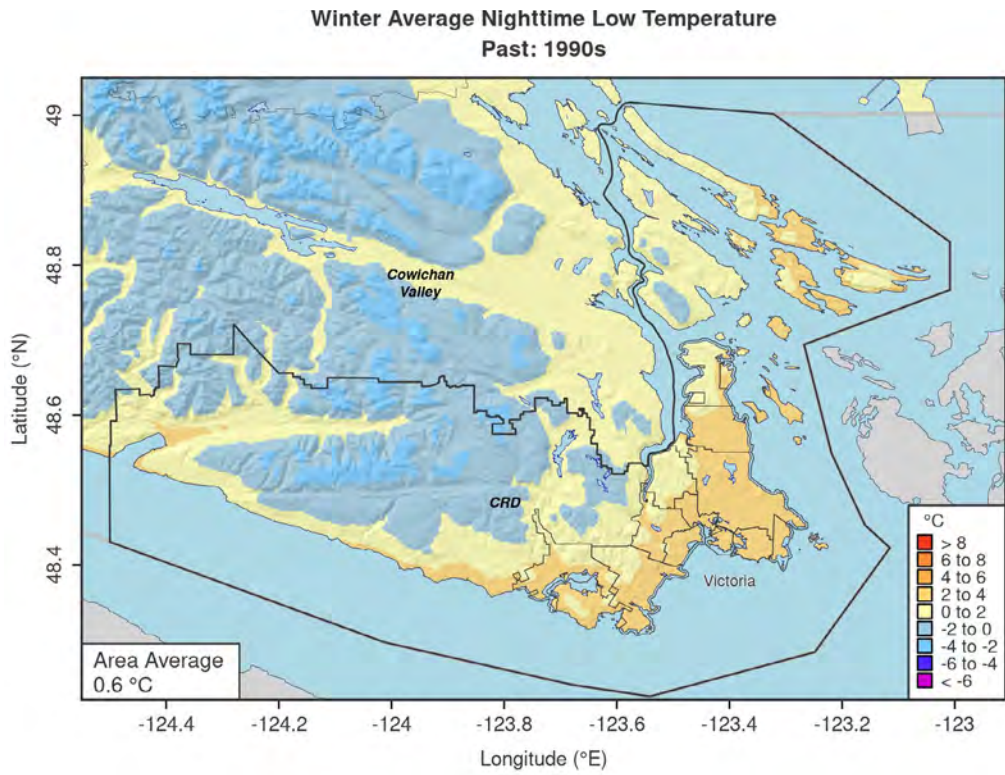


**Figure 4a:** Summer average daytime high temperature in the Past.

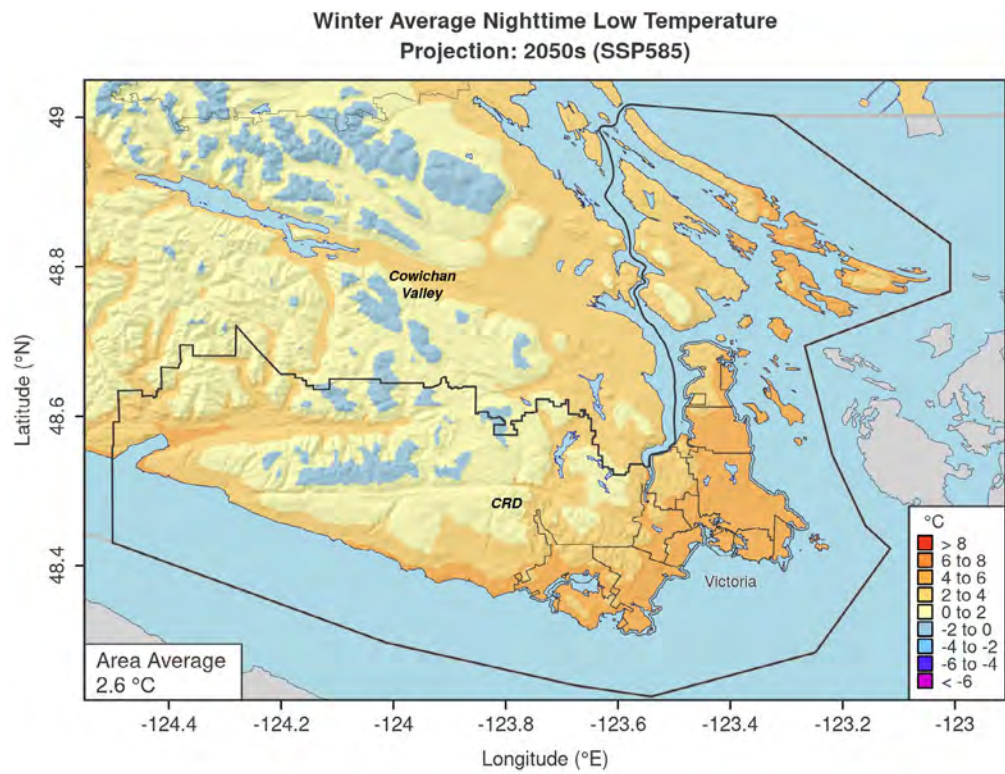


**Figure 4b:** Projected summer average daytime high temperature in the 2050s.





*Figure 5a: Winter average daytime high temperature in the Past.*



*Figure 5b: Projected winter average daytime high temperature in the 2050s.*

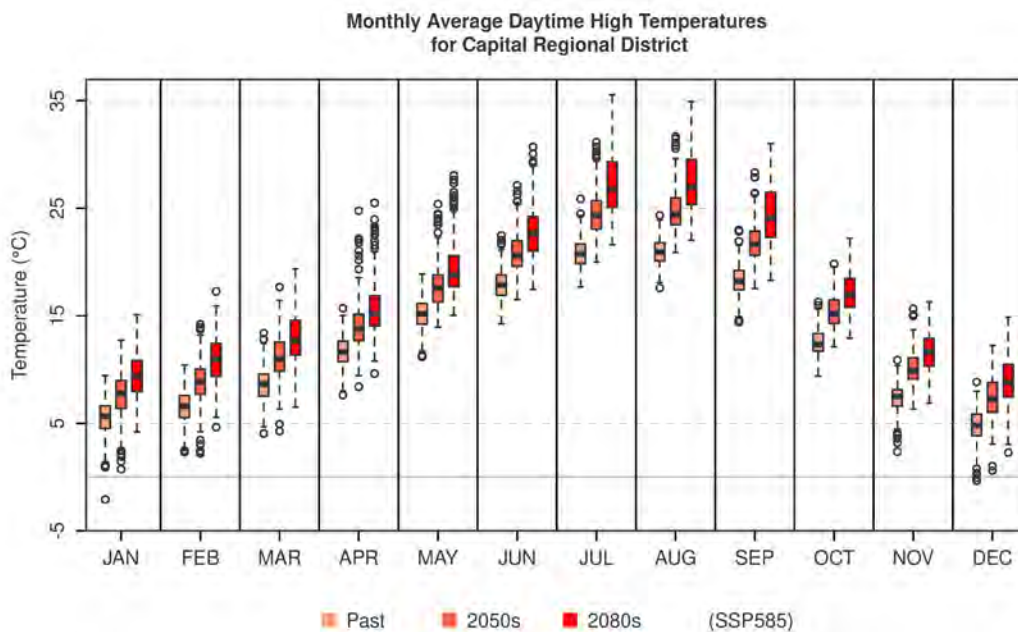
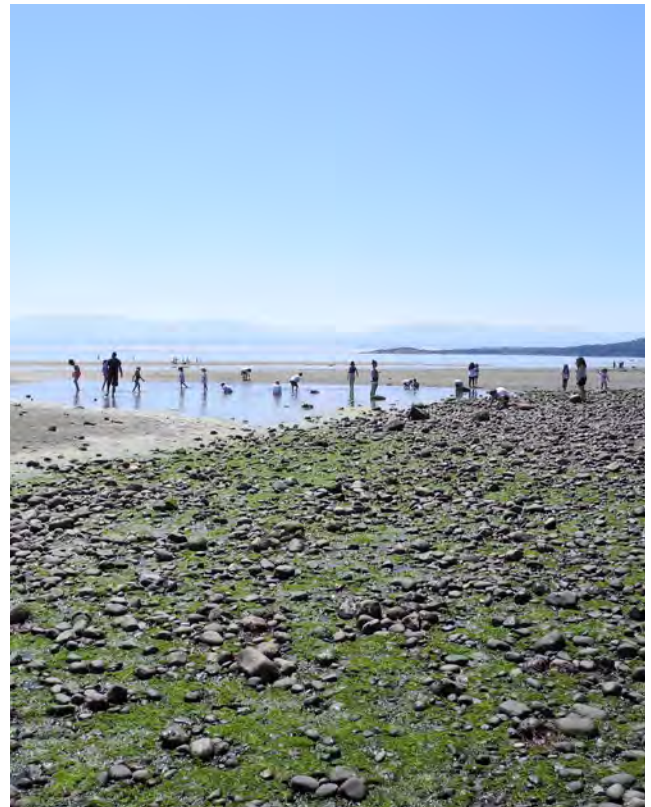


### 3.2 Seasonal Temperature Change and Variability

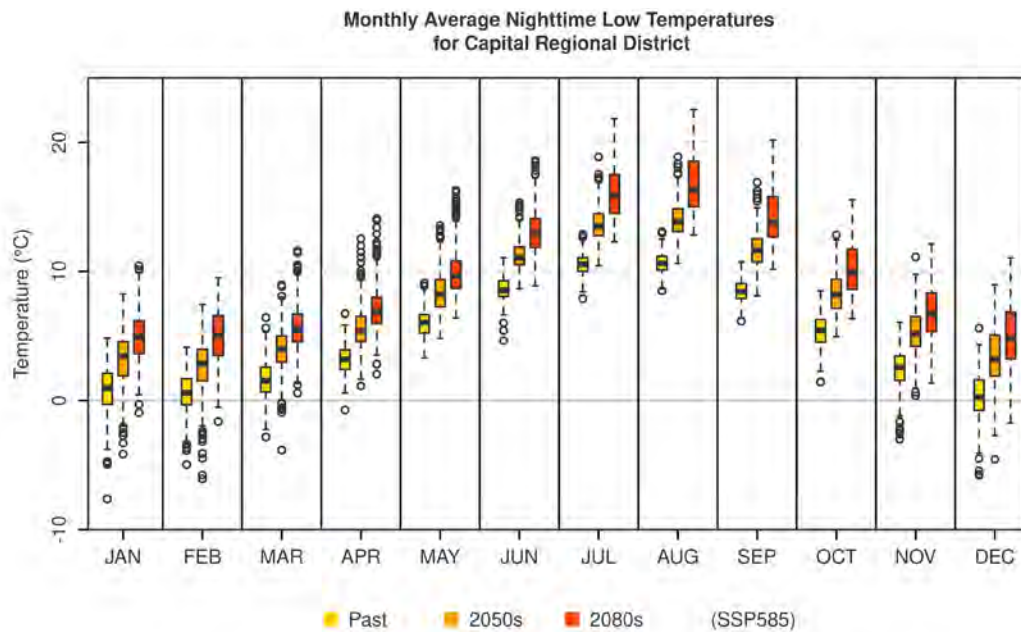
Future-projected temperatures are compared with Past temperatures on a monthly basis in the figure below. The box-and-whisker plots reflect both year-to-year and model-to-model variability in all 30 Januarys, Februarys, etc., over the Past and Future periods.

Some features worth noting are:

- Freezing temperatures in the cold months become increasingly rare in the Future.
- Spring—loosely defined as the beginning of the growing season, when daily mean temperature  $T_m$  consistently exceeds 5°C; see Temperature Indicators—begins earlier in the Future, while Fall—defined similarly as the end of the growing season—ends later, resulting in an effectively shorter winter season.
- The frequency of high extremes in summer increases notably, with July and August average daytime high temperatures exceeding 23°C in about three-quarters of models and years by the 2050s.



**Figure 6a.** Annual cycle of monthly mean daytime high temperature in the Past, 2050s and 2080s periods under the SSP585 scenario.



**Figure 6b.** Annual cycle of monthly mean nighttime low temperature in the Past, 2050s and 2080s periods under the SSP585 scenario.

### 3.3 Wetter Winters, Drier Summers

*Precipitation* is the sum of rainfall and snowfall (expressed as water equivalent). Precipitation in the capital region has a strong seasonality, characterized by wet winters and dry summers. In the future projections, this behaviour is reinforced, so that winter becomes wetter (as do spring and fall) while summer becomes drier.

#### *Projections*

In tandem with the higher summer temperatures mentioned above—which increase potential evaporation—reduced summer rainfall heightens the possibility of drought conditions. Rainfall increases are highest in winter, displaying a 25% increase in the 2050s region-wide, considerably higher in the west (+145 mm in the Western Region) than in the east (+25 mm in the Gulf Islands). Since the median increase in total winter precipitation by then is only +1%, we conclude that this is primarily due to the conversion of snow to rain under warmer winter conditions. While snowfall comprised about 15% of total precipitation in the Past, it amounts to only 5% in the 2050s. By the 2080s, the capital region should receive as little snowfall annually as it did in spring alone in the Past.



Table 3: Average Precipitation (Rain and Snow) over the Region

|                                  | Past (mm) | 2050s (mm) | 2080s (mm) | 2050s Change (%)    | 2080s Change (%)     |
|----------------------------------|-----------|------------|------------|---------------------|----------------------|
| <b>Winter</b>                    |           |            |            |                     |                      |
| Rain                             | 643       | 804        | 864        | 25<br>(11 to 39)    | 34<br>(19 to 54)     |
| Snow                             | 197       | 83         | 36         | -58<br>(-85 to -45) | -82<br>(-97 to -75)  |
| <b>Spring</b>                    |           |            |            |                     |                      |
| Rain                             | 409       | 460        | 477        | 12<br>(7 to 21)     | 17<br>(3 to 26)      |
| Snow                             | 37        | 10         | 2          | -73<br>(-95 to -44) | -95<br>(-100 to -78) |
| <b>Summer</b>                    |           |            |            |                     |                      |
| Rain                             | 159       | 135        | 129        | -15<br>(-32 to -2)  | -19<br>(-46 to -4)   |
| <b>Fall</b>                      |           |            |            |                     |                      |
| Rain                             | 620       | 710        | 770        | 15<br>(9 to 22)     | 24<br>(13 to 34)     |
| Snow                             | 38        | 8          | 4          | -79<br>(-95 to -62) | -89<br>(-99 to -83)  |
| <b>Annual</b>                    |           |            |            |                     |                      |
| Rain                             | 1827      | 2102       | 2279       | 15<br>(9 to 25)     | 25<br>(12 to 28)     |
| Snow                             | 274       | 109        | 40         | -60<br>(-88 to -50) | -85<br>(-97 to -78)  |
| <b>Precipitation<sup>6</sup></b> | 2101      | 2179       | 2325       | 4<br>(0 to 12)      | 11<br>(-1 to 13)     |

<sup>6</sup> Note that in future, the summed medians of rain and snow may not equal the median precipitation, since the distribution of the two quantities may vary across the model ensemble.



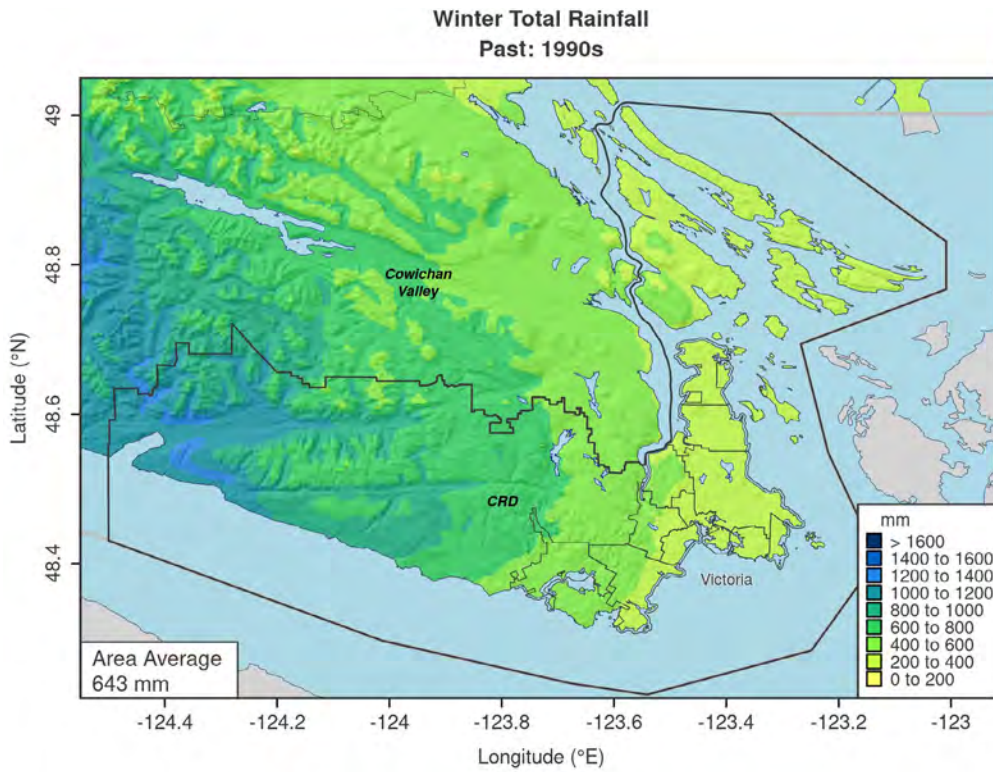


Figure 7a. Winter rainfall in the Past.

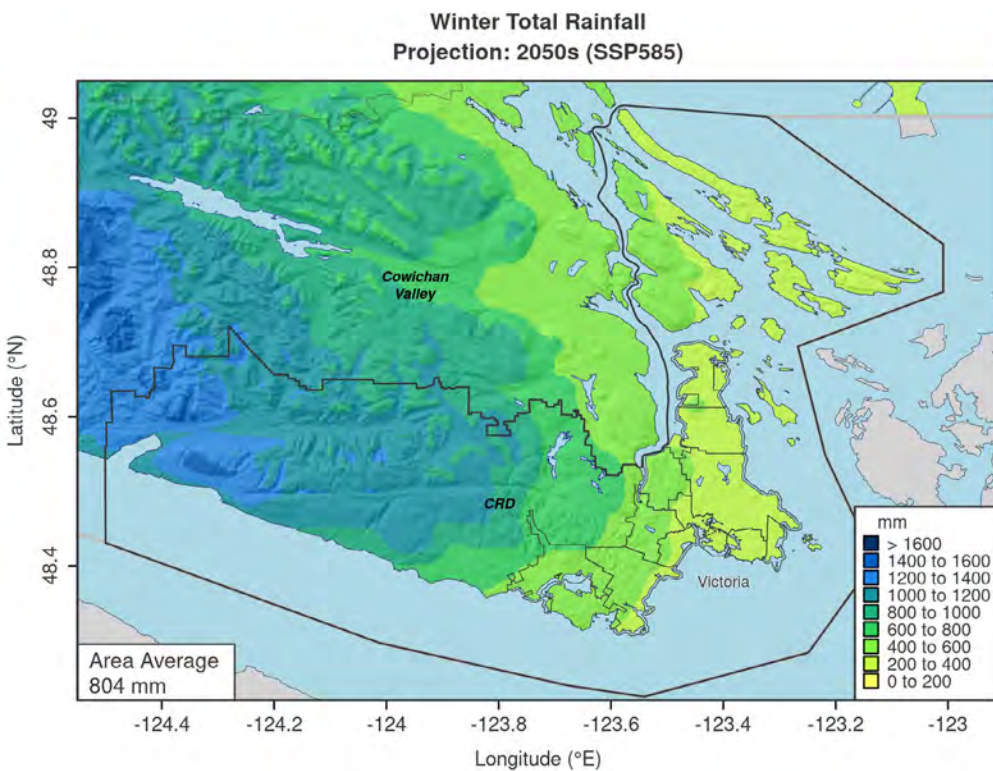


Figure 7b. Projected winter rainfall in the 2050s.

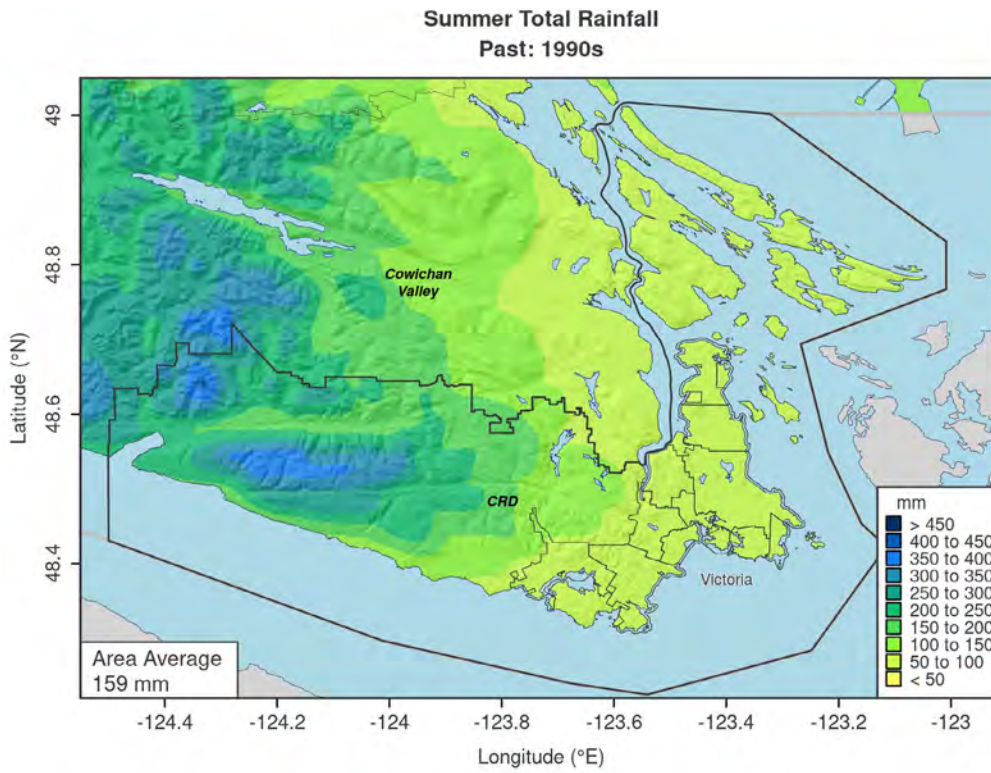


Figure 8a. Summer rainfall in the Past.

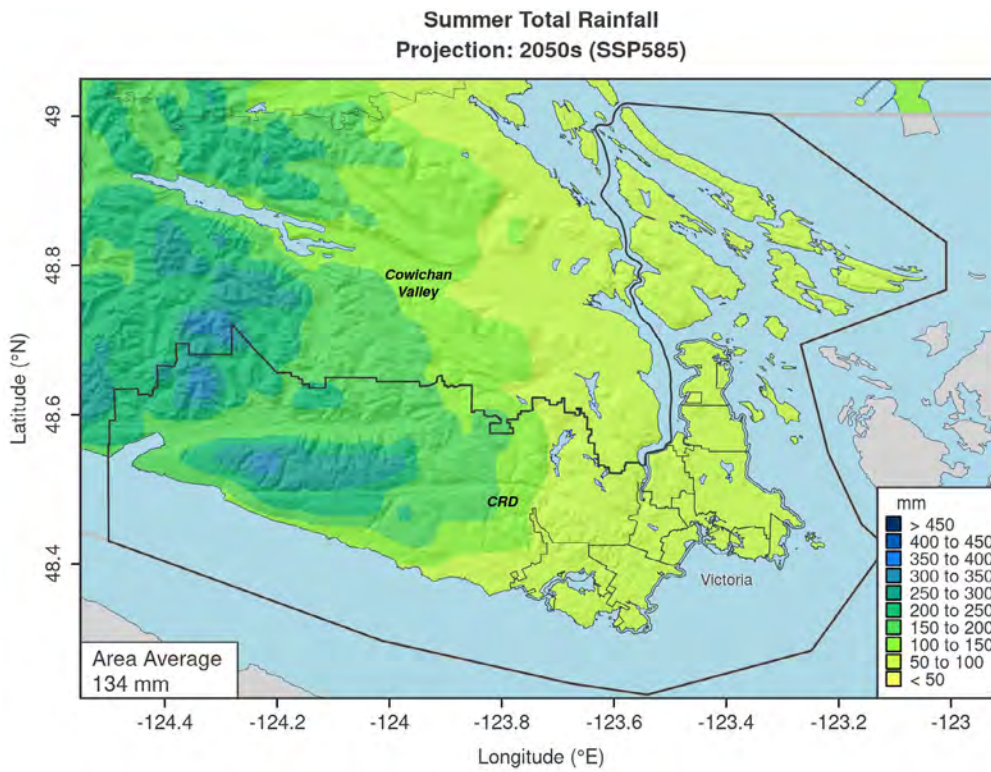


Figure 8b. Summer rainfall in the 2050s.



### 3.4 Seasonal Precipitation Change and Variability

While precipitation in the capital region exhibits a notable seasonality, with far larger amounts in the colder months, this occurs against the background of high year-to-year variability. As a result, a climate change signal is more difficult to distinguish in precipitation than in temperature. One exception is the projected strong decline in snowfall, summarized in Table 3 and Figure 17. Combined with an increase in annual total precipitation of +4%, the resulting median projection of annual total rainfall for the entire region in the 2050s is +15%.

The figure below shows model estimates of monthly total rainfall in the Past and both Future periods. While median values increase in the colder months throughout the century, what is more striking are the changes in variability (occurring across both individual models and years, as shown for temperature above). For example, we note the occurrence of higher extreme monthly rainfall amounts in future periods, especially during the autumn months; some November rainfall totals could exceed 750 mm in future, compared to around 600 mm in the Past.<sup>7</sup>

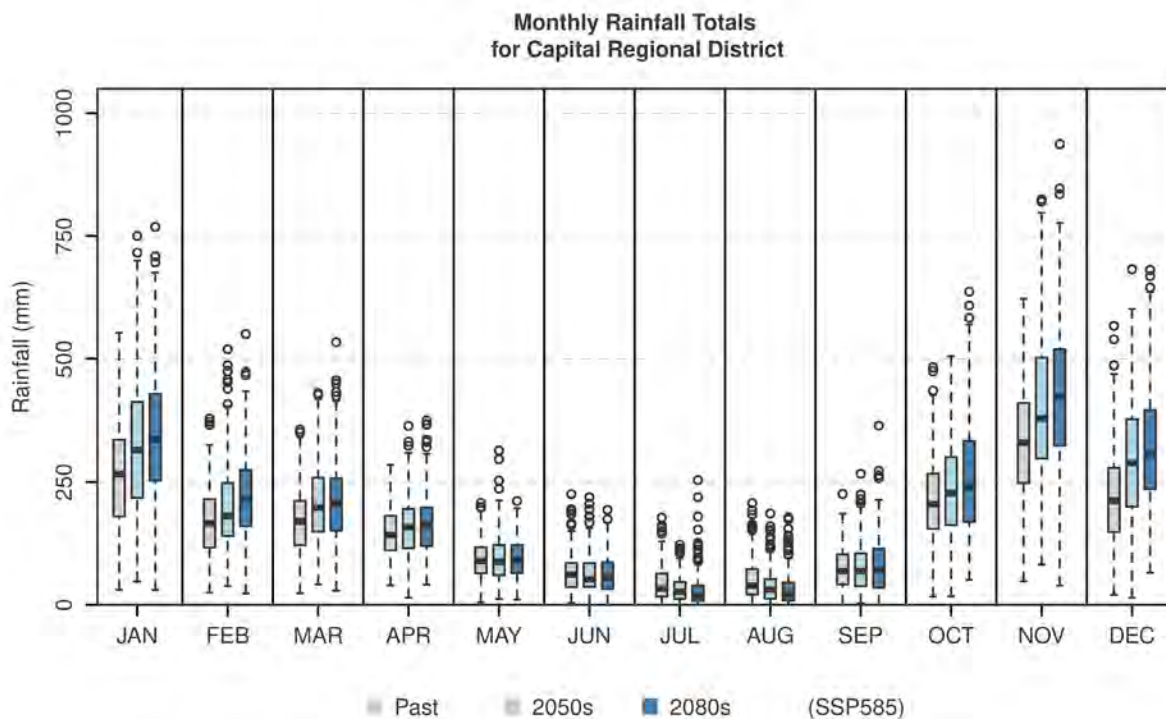


Figure 9. Annual cycle of total monthly rainfall in the Past, 2050s and 2080s periods.

<sup>7</sup> 90<sup>th</sup> percentile values are cited. These totals are averaged across the region, with Past November values spanning a large range from the wetter Western Region (~650 mm) to the drier Gulf Islands Region (~300 mm). For reference, the highest recorded November precipitation at Victoria International Airport is 316 mm (in 2021).



## 4. WINTER TEMPERATURE INDICATORS

### 4.1 Warmest Winter Day, Coldest Winter Night

The *Warmest Winter Day* is the highest daily maximum temperature recorded during the winter months, in an average year. When considered along with the *Coldest Winter Night* (i.e., lowest daily minimum temperature), these indicators describe the projected “new normal” for winters in our region.

#### *Projections*

By the 2050s, we can expect to see the warmest winter daytime temperature to rise from its Past value of 11°C to about 13°C, with a further increase to about 15°C by the 2080s.

In the Past, the coldest winter night had a temperature of about -8°C. Models project winter lows to increase by roughly 3.5°C by the 2050s, to -4.5°C, and by 6.5°C by the 2080s, to -1.5°C. The maps below illustrate that in the future, temperatures below freezing will usually occur only at the highest elevations in the region.

Warming winter temperatures will lead to an increased fraction of precipitation falling as rain instead of snow. Snow accumulation events, which typically occur a few times each winter in the region, will still occur, but less frequently.



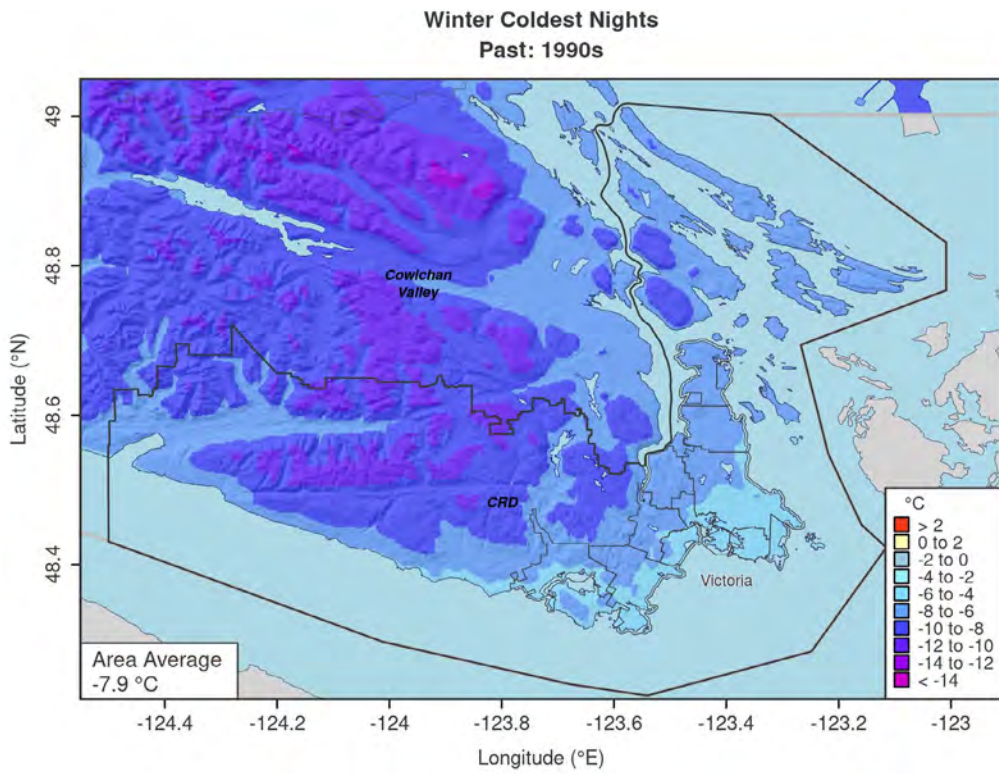


Figure 10a. Coldest winter night in the Past.

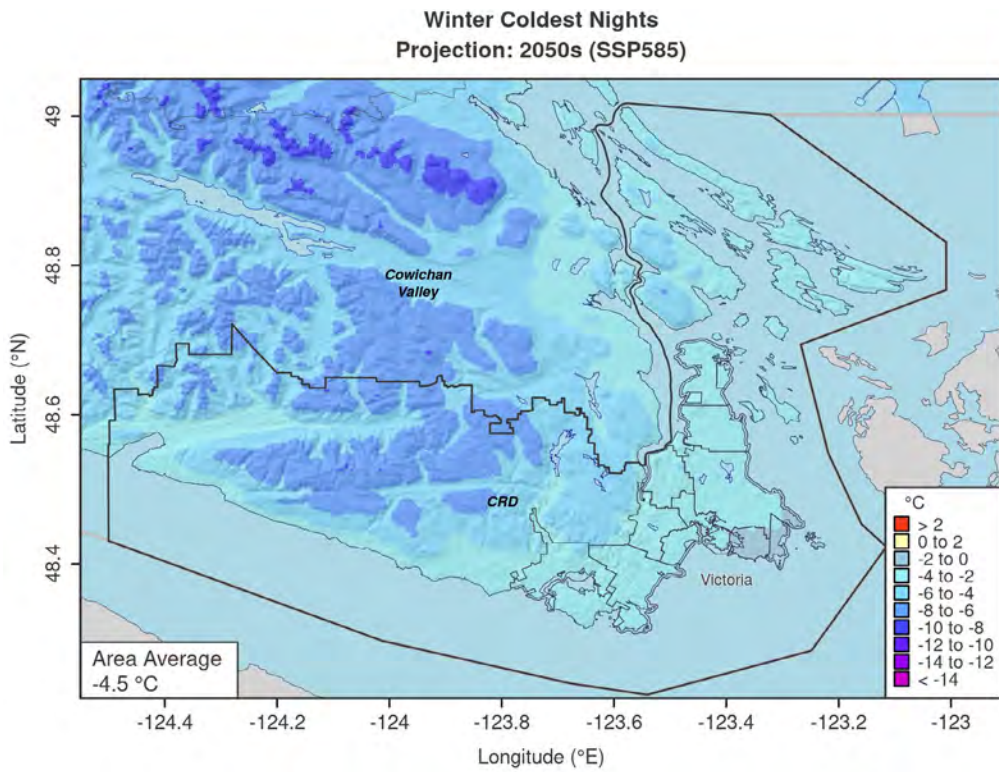


Figure 10b. Projected coldest winter night in the 2050s.

## 4.2 1-in-20 Year Coldest Nighttime Low Temperature

This indicator describes extreme cold temperatures so low that they are expected to occur only once every 20 years in the historical climate. Equivalently, in the recent past the *1-in-20 Year Coldest Night* had a 5% chance of occurring in any given year.<sup>8</sup>

### Projections

In the Past, the 1-in-20 year coldest night had a temperature of -15°C. In the Future, the 1-in-20 year coldest night across the region will increase by about 5°C by the 2050s and by about 8.5°C by the 2080s.

<sup>8</sup> Note that the occurrence of such an event in one year doesn't preclude its occurrence in the following years, which is why the annual exceedance probability (i.e. 5% chance, in this case) is a helpful equivalent measure.

## 4.3 Frost Days and Ice Days

*Frost Days* is an annual count of days when the daily minimum temperature is less than 0°C which may result in frost at ground level. This indicator is useful to help predict how changes in the number of days with minimal temperatures below freezing could affect native and agricultural plant species.

*Ice Days* occur when daytime high temperatures do not exceed 0°C. While some of the same effects are expected as for frost days, these freezing temperatures may also affect transportation via the increased chance of icy road conditions.

### Projections

In the Past, the capital region experienced an average of 60 frost days and 6 ice days per year. In the 2050s, we should expect far fewer such days: around half as many frost days by the 2050s and only around one-fifth as many by the 2080s. Ice days may be very rare by the mid- to late-century.

**Table 4: Warmer Winter Extreme Temperatures**

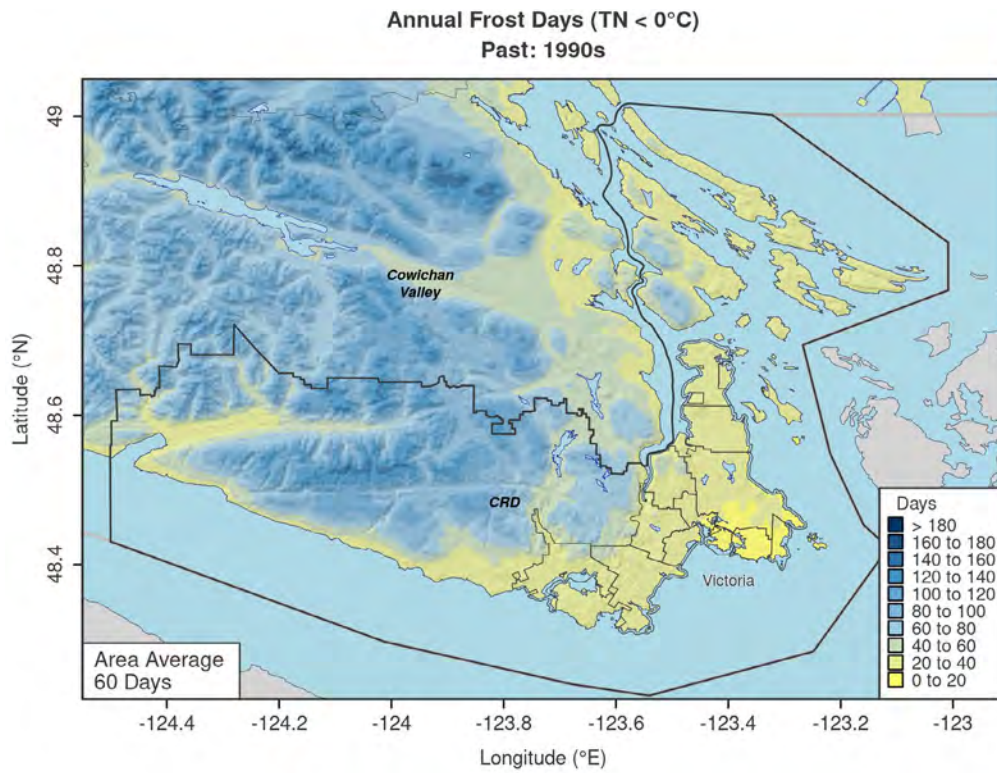
|                                    | Past (°C) | 2050s (°C) | 2080s (°C) | 2050s Change (°C)   | 2080s Change (°C)    |
|------------------------------------|-----------|------------|------------|---------------------|----------------------|
| Warmest Winter Day                 | 11        | 13         | 15         | 2.4<br>(1.7 to 4.2) | 4.2<br>(3.2 to 6.9)  |
| Coldest Winter Night               | -8        | -4.5       | -1.3       | 3.4<br>(2.9 to 5.5) | 6.6<br>(5.4 to 10.4) |
| 1-in-20 Year Coldest Nighttime Low | -15       | -10        | -6.5       | 5.0<br>(3.2 to 7.2) | 8.5<br>(7.5 to 13)   |

**Table 5: Annual Frost and Ice Days**

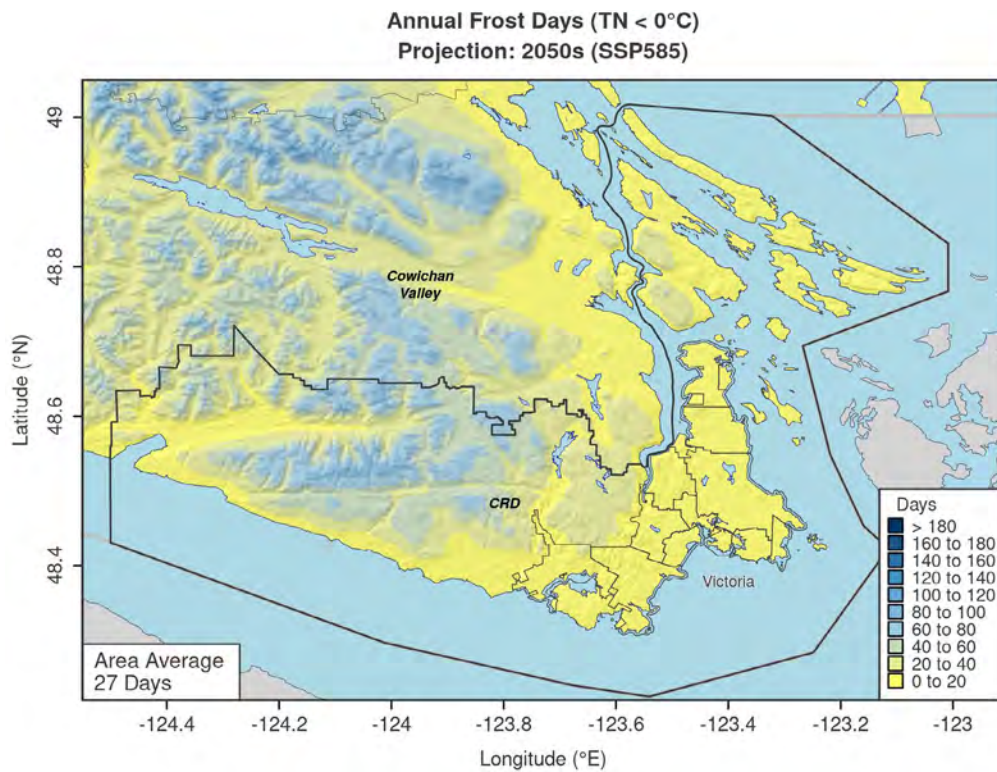
|                                 | Past (°C) | 2050s (°C) | 2080s (°C) | 2050s Change (°C)   | 2080s Change (°C)   |
|---------------------------------|-----------|------------|------------|---------------------|---------------------|
| <b>Frost Days (TN &lt;0 °C)</b> |           |            |            |                     |                     |
| Region                          | 60        | 27         | 12         | -33<br>(-51 to -27) | -48<br>(-58 to -45) |
| Eastern Region*                 | 30        | 11         | 3          | -19<br>(-28 to -16) | -27<br>(-30 to -23) |
| Water Supply Area               | 80        | 38         | 17         | -42<br>(-67 to -36) | -63<br>(-76 to -59) |
| <b>Ice Days (TX &lt;0 °C)</b>   |           |            |            |                     |                     |
| Region                          | 6         | 2          | 0          | -4<br>(-6 to -3)    | -6<br>(-7 to -5)    |

\*The Eastern Region encompasses both the Southern Gulf Islands and Core/Peninsula subregions (Figure 1).





**Figure 11a.** Number of annual frost days in the Past.



**Figure 11b.** Projected frost days in the 2050s.

## 4.4 Heating Degree Days

*Heating Degree Days* (HDD) are calculated by summing the number of degrees that the daily mean temperature falls below 18°C for every day in a year.<sup>9</sup> This measure is commonly used to estimate the heating demand for buildings in the cooler months.

### Projections

In the Past, the capital region had a median of roughly 3405 HDD.<sup>10</sup> The median future-projected HDD decreases to 2644 (a 22% decrease) by the 2050s and to 2215 (a 35% decrease) by the 2080s. Due to its cumulative nature, a reduction in HDD is amongst the clearest indicators of warming, both in recent historical observations and in model projections. In addition, it should be noted that HDD varies considerably from west (higher values) to east (lower values) over the region.

Note that while mean winter temperatures will warm throughout the coming decades, the region’s continued exposure to easterly polar outflows from Northwestern Canada through the Cascade Range suggests that the potential for multi-day cold snaps will persist in the future, though they should be less frequent. For this reason, building heating systems will still need to be responsive to occasional sub-zero winter temperatures.



Table 6: Heating Degree Days

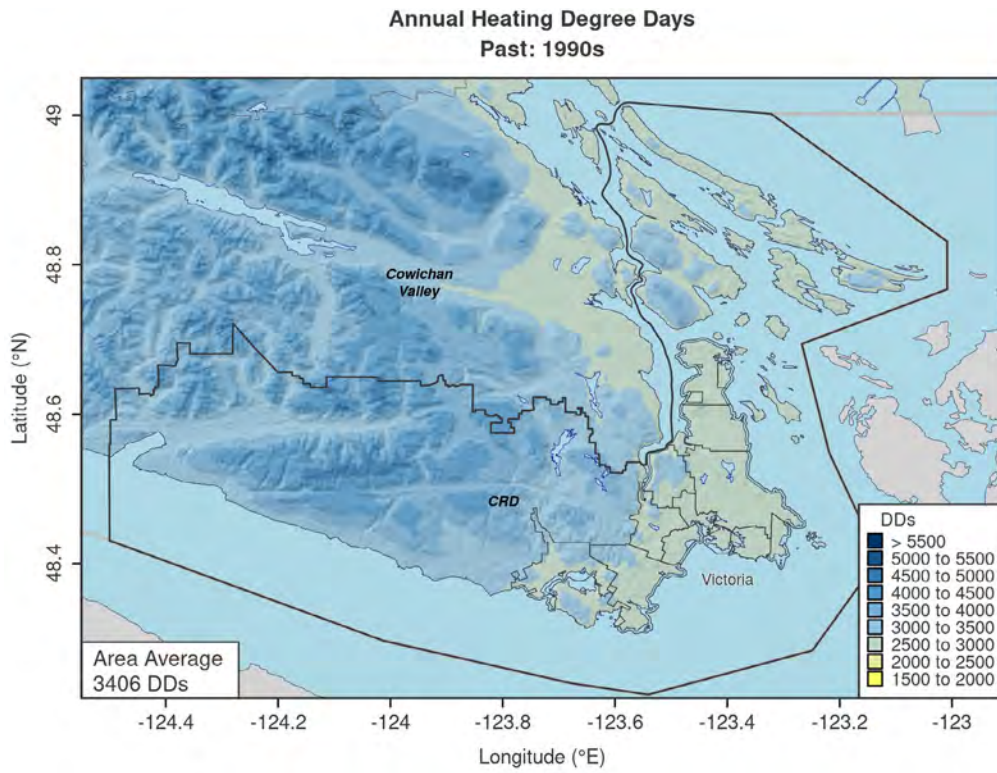
|                       | Past (°C) | 2050s (°C) | 2080s (°C) | 2050s Change (°C)   | 2080s Change (°C)   |
|-----------------------|-----------|------------|------------|---------------------|---------------------|
| Region                | 3405      | 2644       | 2125       | -22<br>(-40 to -19) | -35<br>(-56 to -32) |
| Southern Gulf Islands | 2836      | 2114       | 1755       | -25<br>(-45 to -22) | -38<br>(-63 to -35) |
| Core / Peninsula      | 2904      | 2164       | 1773       | -25<br>(-44 to -22) | -39<br>(-62 to -35) |
| Western Region        | 3387      | 2613       | 2158       | -23<br>(-41 to -20) | -36<br>(-57 to -33) |

<sup>9</sup> For example, if the daily mean temperature on January 1 is 10°C, followed by one day of 4°C, two days of -1°C and three days of 0°C, then HDD for that week are calculated as: (18-10) + (18-4) + 2 × (18-(-1)) + 3 × (18-0) = 114 degree-days. Note that days with a temperature equal to or greater than 18°C are not counted.

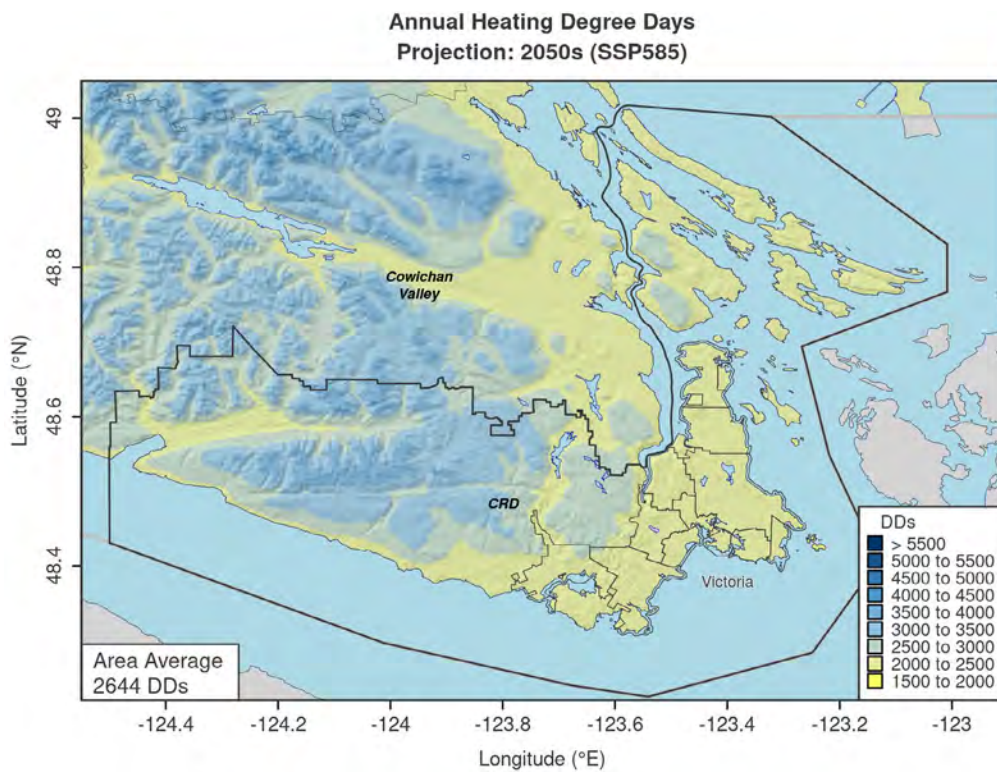
<sup>10</sup> Someone consulting the tables for the National Building Code of Canada (NBCC, 2015) will see different values of HDD listed for Victoria locations than the Past values cited in Table 6. One reason for this is the larger area covered by

our Core/Peninsula subregion. Another is the different methodology and period of observations used to calculate HDD in the NBCC. As our estimate depends to some extent on coarse-grained climate models, while the NBCC employs interpolated station data, the NBCC value would normally be considered more reliable in this subregion (which contains several meteorological stations). For those interested in future HDD estimates, the relative differences from Past values can be used for HDD projections, regardless of which baseline value is used.





**Figure 12a.** Heating Degree Days in the Past.



**Figure 12b.** Projected (decreased) HDD in the 2050s





## 5. SUMMER TEMPERATURE INDICATORS

### 5.1 Growing Season Length

*Growing Season Length* (GSL) is an annual measure indicating the period when temperatures are warm enough for most vegetation to grow. The GSL is the number of days between the first span of at least 6 consecutive days with daily average temperatures above 5°C, and the first span, after July 1, of six days with temperatures below 5°C. This measure helps to highlight how urban forests, agricultural and landscaped areas, grasses, weeds (and their pollens) may be affected by climate change.

#### *Projections*

In the Past, the growing season lasted roughly 270 days in the region. The median future-projected growing season increases by 47 days to 318 days by the 2050s and by 68 days to 339 days by the 2080s.

Other things being equal, a longer GSL implies potentially more productive vegetation in the future. However, since GSL uses only a lower temperature threshold (and not an upper threshold to account for heat stress) and ignores changes in precipitation (reduced rainfall in the warm season—Section 3.3, Table 3), it should be considered an upper limit for estimates of future productivity.

A related measure to GSL is the length of the frost-free season, which uses a lower threshold of 0°C for minimum daily temperature. As mentioned above, frost days will become increasingly rare in the future, resulting in frost-free conditions nearly year-round in the region by the 2080s.

**Table 7: Growing Season Length**

|                   | Past (°C) | 2050s (days) | 2080s (days) | 2050s Change (days) | 2080s Change (days) |
|-------------------|-----------|--------------|--------------|---------------------|---------------------|
| Region            | 271       | 318          | 339          | 47<br>(39 to 71)    | 68<br>(60 to 86)    |
| Eastern Region    | 315       | 348          | 358          | 33<br>(25 to 42)    | 44<br>(37 to 49)    |
| Western Region    | 283       | 324          | 344          | 41<br>(35 to 64)    | 61<br>(53 to 76)    |
| Water Supply Area | 245       | 301          | 329          | 56<br>(45 to 90)    | 84<br>(75 to 112)   |

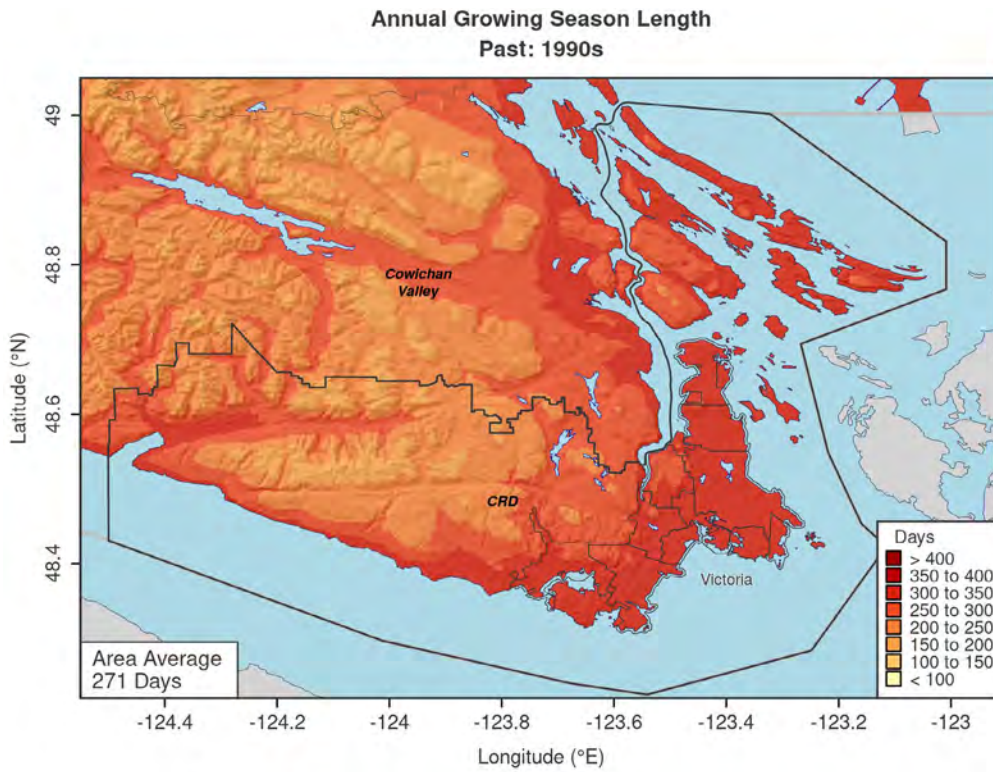


Figure 13a. Growing season length in the past

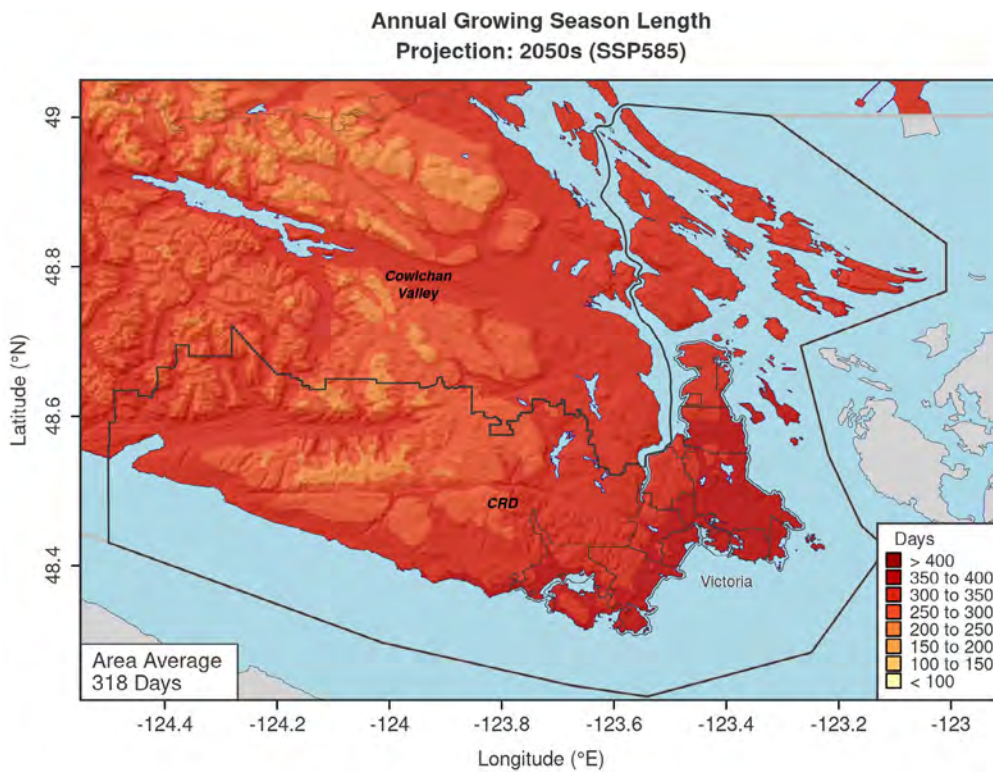


Figure 13b. Projected (increased) growing season length by the 2050s



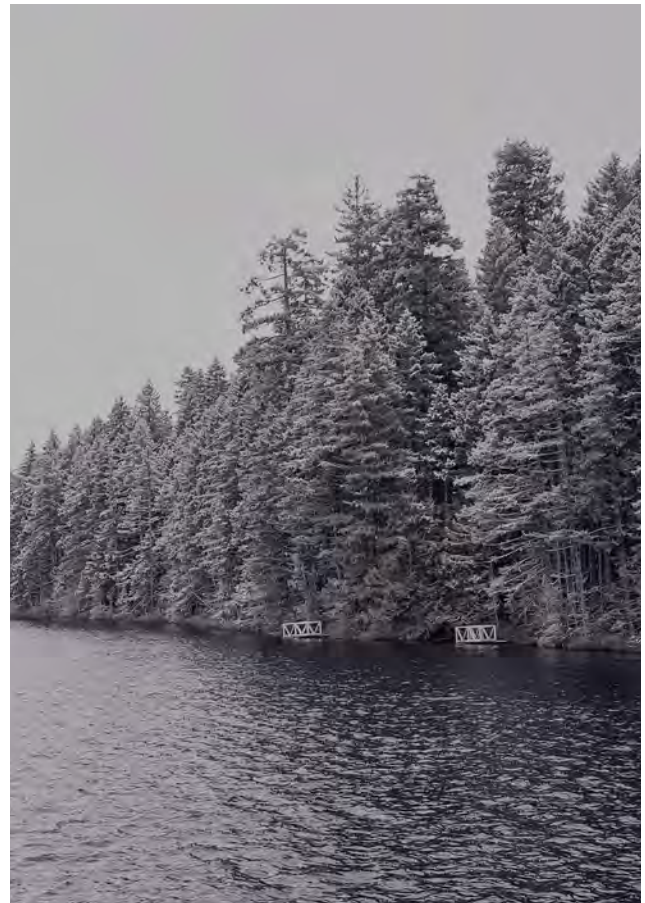
## 5.2 Cooling Degree Days

The opposite of HDD, *Cooling Degree Days* are calculated by summing the number of degrees that the daily mean temperature exceeds 18°C for every day in a year.<sup>11</sup> This measure is commonly used to estimate the demand for mechanical cooling (i.e., air conditioning) in buildings in the warmer months.

### Projections

In the Past, the capital region typically had around 17 cooling degree days, with the vast majority of such days occurring in summer. The median future-projected cooling degree days increase to about 119 (a 7-fold increase) by the 2050s and to nearly 240 (a 14-fold increase) by the 2080s. While most such days will continue to occur in summer, they will increasingly occur during late spring and early fall.

Like the projected decrease in HDD, an increase in cooling degree days is among the clearest indicators of warming, both in recent historical observations and model projections. Moreover, the magnitude of increase varies strongly from west (lower values) to east (higher values) across the capital region. To the extent that this index correlates with demand for cooling, new buildings may need to be designed differently to maintain thermal comfort.



**Table 8: Cooling Degree Days**

|                       | Past<br>(deg-days) | 2050s<br>(deg-days) | 2080s<br>(deg-days) | 2050s Change<br>(deg-days) | 2080s Change<br>(deg-days) |
|-----------------------|--------------------|---------------------|---------------------|----------------------------|----------------------------|
| Region                | 17                 | 119                 | 237                 | 102<br>(62 to 235)         | 220<br>(176 to 592)        |
| Southern Gulf Islands | 38                 | 227                 | 392                 | 189<br>(119 to 385)        | 354<br>(297 to 820)        |
| Core / Peninsula      | 25                 | 169                 | 317                 | 144<br>(87 to 310)         | 292<br>(234 to 716)        |
| Western Region        | 10                 | 83                  | 185                 | 73<br>(41 to 185)          | 175<br>(135 to 525)        |

<sup>11</sup> For example, if the daily mean temperature on July 1 is 20°C, followed by three days of 21°C, one day of 25°C and two days of 16°C, then the cooling degree days for that week are calculated as:  $(20-18) + 3 \times (21-18) + (25-18) = 18$  degree-days.

Note that days with temperature equal to or less than 18°C are not counted.



### 5.3 Warm Summer Days and Nights, Annual Hottest Day and Heatwaves

These indicators highlight the most extreme warm temperatures occurring in the region. The results in the table below are for the Core/Peninsula subregion (see Figure 1) which has the highest population and therefore the highest exposure to many heat-related impacts (values for the Southern Gulf Islands are very similar). Three single-day extreme heat measures are included in the table: the peak temperature of the hottest day of the year (not necessarily occurring during a heatwave), the number of days with TX > 25°C (*Summer Days*), and the number of nights with TN > 16°C (*Temperate Nights*). Episodes of multi-day extreme heat, which were rare in the Past, are captured by several heatwave (HW) indicators defined in the Appendix. These are partly based on threshold temperatures for emergency health alerts used specifically in BC.<sup>12</sup> As with the variables discussed above, each of the indices describes a typical year within the indicated 30-year period.

### Projections

In the Past, there were typically around 12 days per year with a high temperature exceeding 25°C, and rarely did nighttime temperatures rise above 16°C. The median future-projected number of Summer Days increases to roughly 40 per year by the 2050s and 62 per year by the 2080s, while Temperate Nights begin to occur by the 2030s, with a frequency of 15 per year in the 2050s and 52 per year in the 2080s.

When it comes to heatwaves, in the Past, there was usually one HW per year, lasting up to 3 days and having a peak daily temperature of around 30°C. The median future-projected number of HWs increases to roughly 3 per year by the 2050s and 5 per year by the 2080s. HWs are also projected to increase in length in the future (approaching 9 consecutive days or more by the 2080s) and will feature both warmer daytime and nighttime temperatures. It is clear that residents of the area will need to adapt to more frequent, longer, and intense HWs in future.

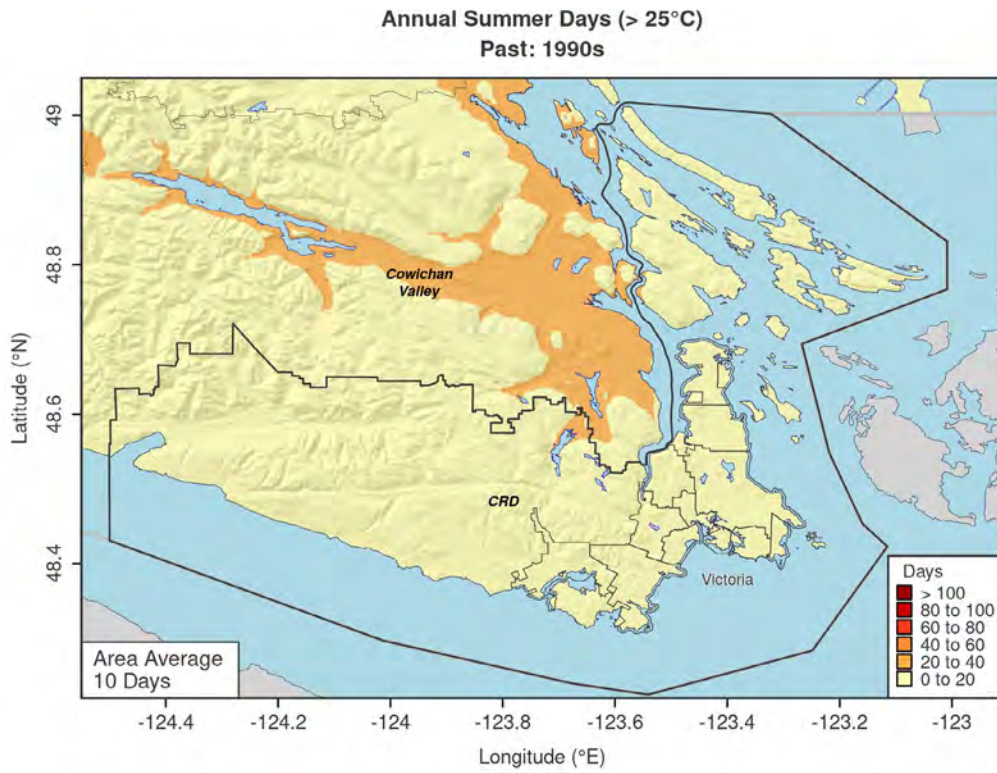
**Table 9: Measures of extreme heat (Core/Peninsula subregion)**

| Core/Peninsula subregion: Heatwave (HW) Indices, Hot Summer Days and Warm Nights* |  |      |                  |                  |                   |
|---|--|------|------------------|------------------|-------------------|
| Index   | Description                            | Past | 2030s            | 2050s            | 2080s             |
| HWD   | HW days (days)                         | 1    | 4<br>(3 to 11)   | 10<br>(6 to 27)  | 23<br>(17 to 74)  |
| HWXL  | HW Maximum length (days) <sup>13</sup> | 3    | 4<br>(3 to 5)    | 4.5<br>(4 to 10) | 8.5<br>(6 to 43)  |
| HWN   | Annual number HWs                      | 1    | 2<br>(1 to 4)    | 3<br>(2 to 5)    | 5<br>(4 to 7)     |
| TXHX  | Avg. TX in most extreme annual HW (°C) | 30   | 31<br>(30 to 32) | 31<br>(31 to 33) | 32<br>(32 to 34)  |
| TNHX  | Avg. TN in most extreme annual HW (°C) | 15   | 16<br>(15 to 16) | 17<br>(16 to 18) | 19<br>(18 to 21)  |
| TXX   | TX on hottest day of year (°C)         | 29   | 31<br>(30 to 32) | 32<br>(32 to 35) | 35<br>(33 to 38)  |
| SU  | Number of days reaching TX > 25 °C     | 12   | 28<br>(22 to 41) | 40<br>(30 to 70) | 62<br>(57 to 111) |
| TR16C   | Number of nights reaching TN > 16°C    | 0    | 4<br>(3 to 13)   | 15<br>(9 to 47)  | 52<br>(36 to 108) |

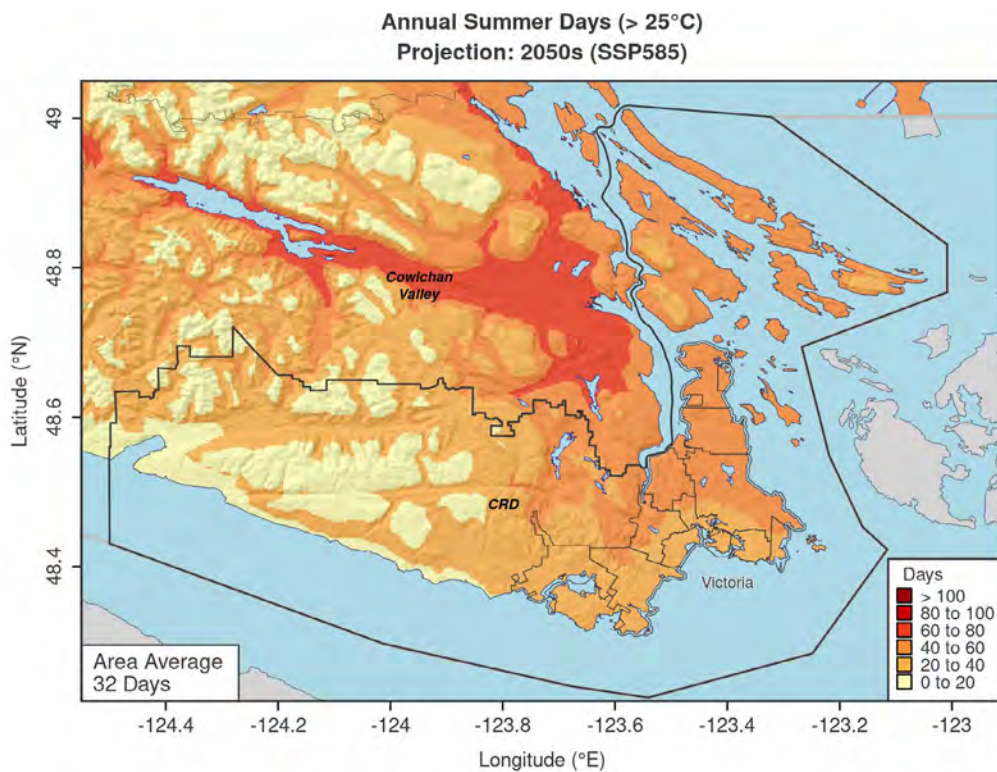
\*Upper values in each table cell are the ensemble median, with values in parentheses giving the 10<sup>th</sup> to 90<sup>th</sup> percentile range over the model ensemble.

<sup>12</sup> See the report, BC Provincial Heat Alert and Response System (BC HARS): 2023, May 2023. Available at: <http://www.bccdc.ca/health-professionals/professional-resources/heat-event-response-planning>. The lower threshold temperatures used in our HW definition, which is intended for use throughout BC, are TX = 28°C and TN = 13°C. In addition, a HW must: 1) last at least 2 full days; and 2) have TX and TN exceeding their 95<sup>th</sup> percentile values in the Past.

<sup>13</sup> It may seem strange that HWD < HWXL in the Past, but this is an artifact of small number statistics. Some years in the Past contained no HWs, leading to a mean annual value of 0.4 for HWD (rounded to 1 in the table, since some years had a HW). Nevertheless, one or more years had HW lengths of 2 or 3 days, leading to the mean HWXL = 2.5 days (rounded to 3) over the 30-year period. As the number of HWs increases in future years of the simulations, the expected behaviour HWD > HWXL emerges.



**Figure 14a.** Annual count of summer days in the Past



**Figure 14b.** Projected number of annual summer days by the 2050s



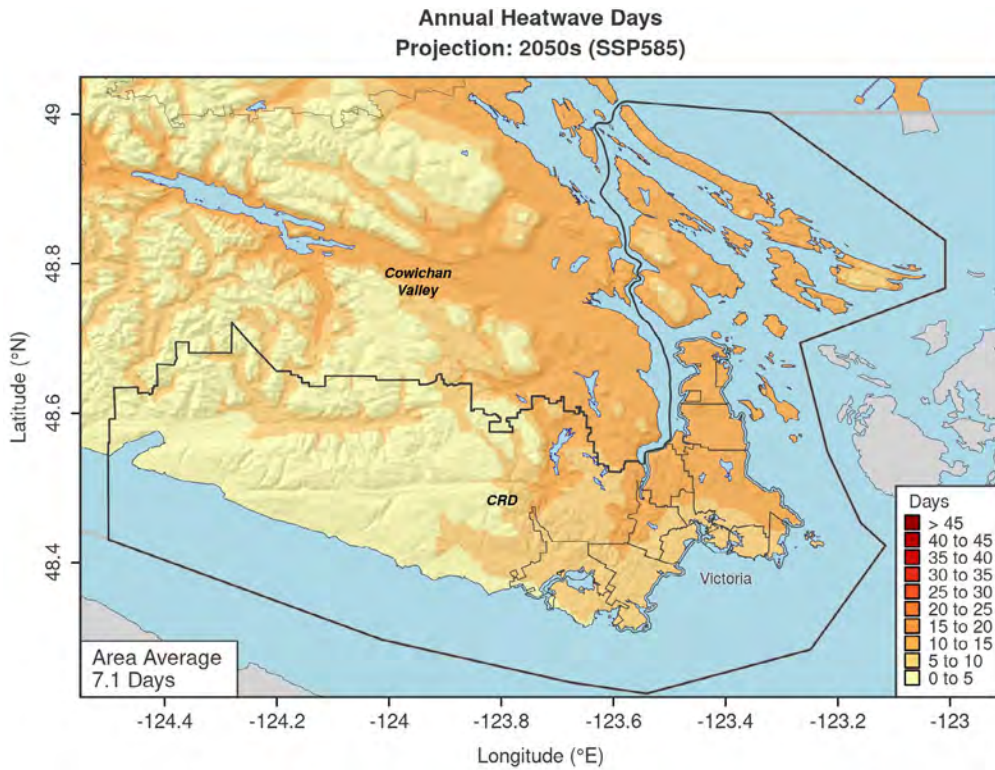


Figure 15a. Projected annual count of heatwave days in the 2050s.

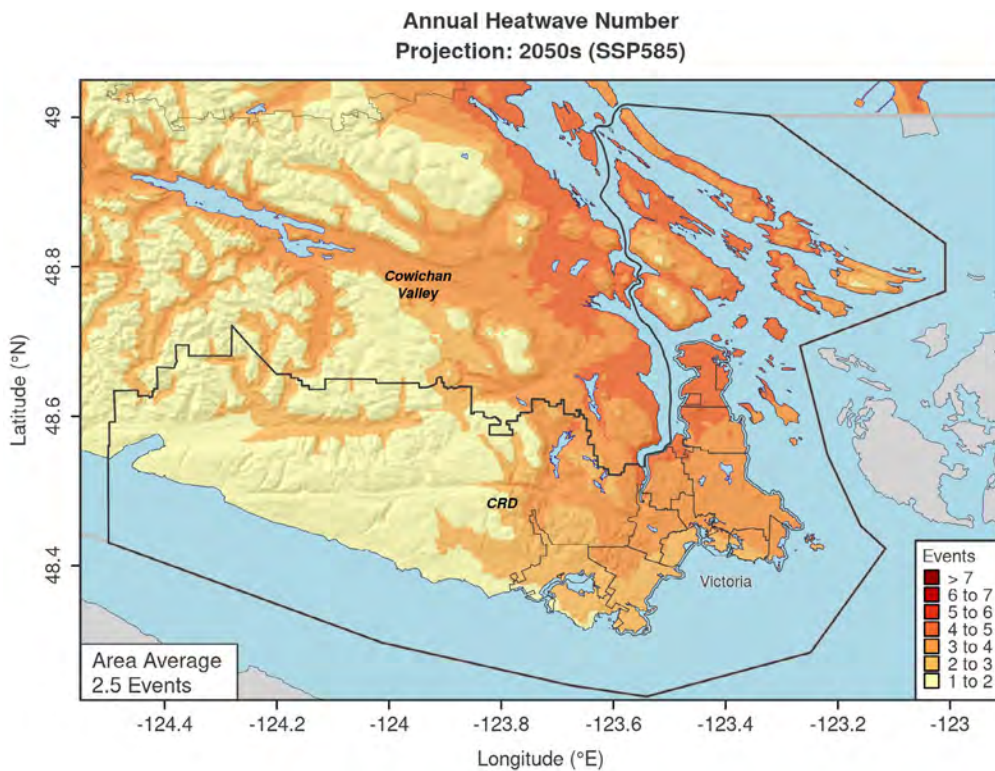


Figure 15b. Projected number of annual heatwaves in the 2050s.

Note that: (i) for both measures, counts in the Past are very low (about 1 per year) and uniform throughout the capital region; and (ii) average values for Core/Peninsula (Table 9) are larger than capital region averages shown on the maps.



## 5.4 The 1-in-20-Year Annual Hottest Day

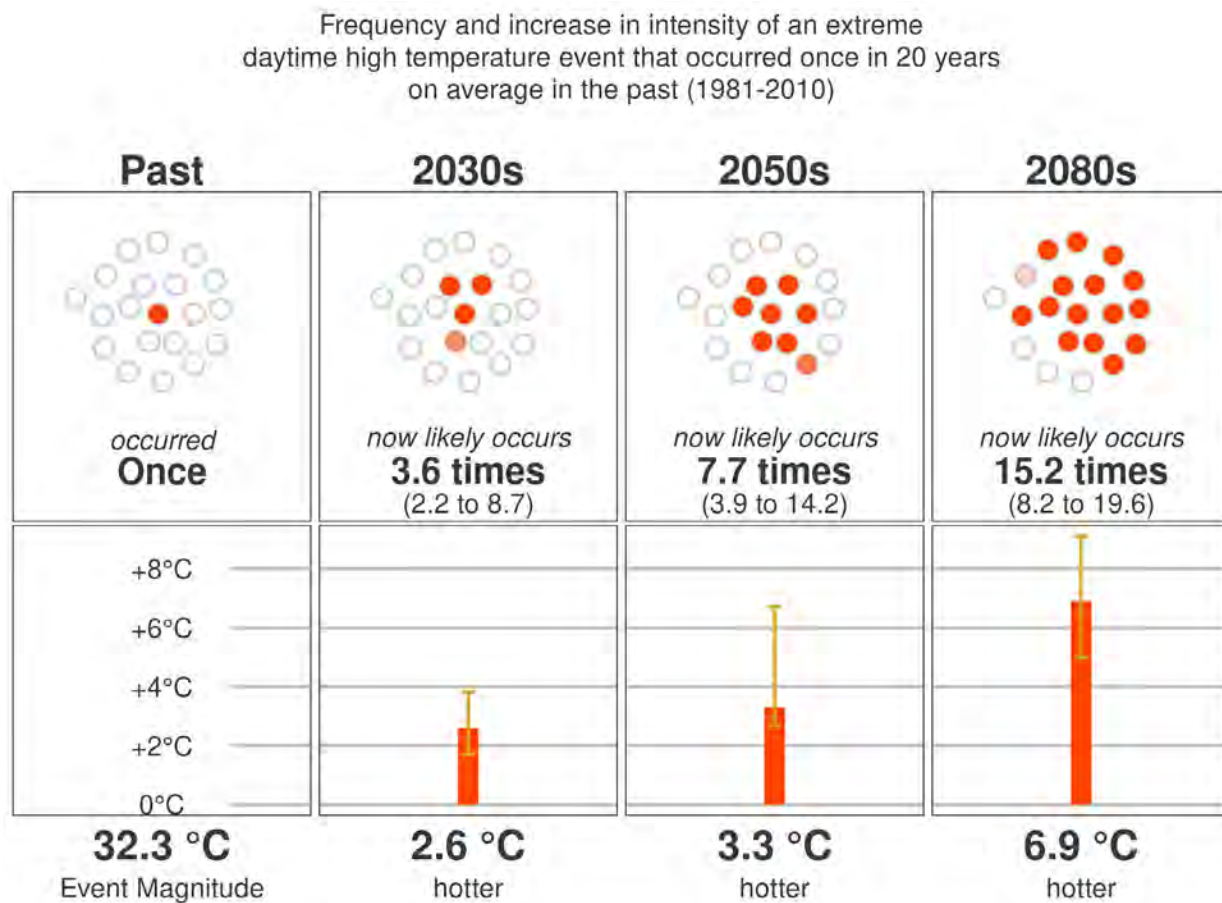
This indicator describes extreme daily high temperatures so warm, they are expected to occur only once every 20 years in the historical climate. In other words, the *1-in-20 Year Hottest Day* presently has a 5% chance of occurring in any given year.

### Projections

The figure below shows the projected changes in this type of event in two ways: first, in terms of how frequently an event of the same TX value occurs in the future; and second, in terms

of how much TX increases for an event occurring with the same frequency (or annual probability) in the future.

For example, in the Past, a daily maximum temperature of 32°C or higher occurred once every 20 years or so in the capital region, or with a 5% annual exceedance probability (AEP). In the projections for the 2050s, this temperature is exceeded around 8 times in a 20-year period, or with a 40% AEP. Alternatively, one can say based on the same projections that in the 2050s, the magnitude of a 1-in-20 year (5% AEP) event increases to around 35.5°C (see the 'Return Levels' tab in the SSP585 Summary Table).



**Figure 16.** Upper panels: Frequency of a 1-in-20 year daily maximum temperature (TX) event in the Past and projected frequency of the same magnitude event (i.e. TX = 32°C) in the three future periods. Lower panels: Increase in magnitude of a 1-in-20 year TX event from the Past to Future periods. Figure design is taken from similar infographics in the IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3-32, doi:10.1017/9781009157896.001.



## 6. PRECIPITATION INDICATORS

### 6.1 Dry Spells

The *Consecutive Dry Days* indicator tracks the annual longest string of days with less than 1 mm of precipitation.

#### *Projections*

In the Past, the median dry spell length in the capital region was 24 days. The median future-projected dry spell length increases by 8% to 26 days (range 24 - 34 days) by the 2050s and by 21% to 29 days (range 26 - 47 days) by the 2080s.

The increase in dry spell length is consistent with the higher summer temperatures and reduced summer rainfall highlighted in the previous chapters. The map of consecutive dry days (not shown) is quite uniform throughout the region, as are its changes in the future periods.

### 6.2 Snowfall

*Snowfall* is inferred from the downscaled total daily precipitation and temperature, using a widely validated empirical relationship.<sup>14</sup>

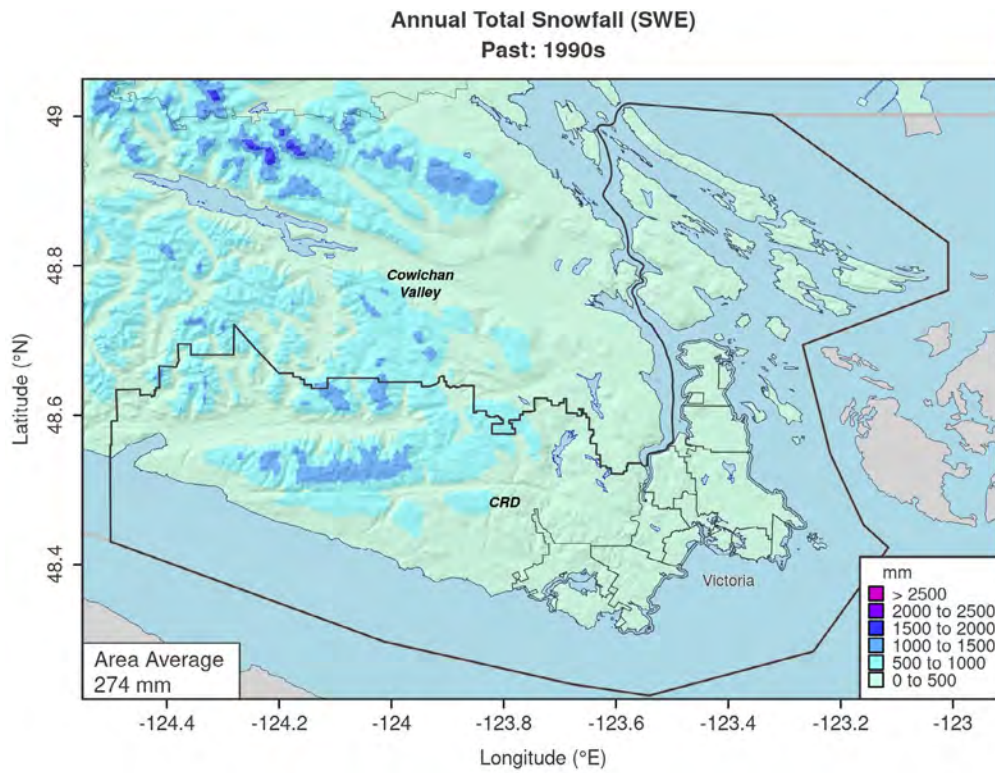
#### *Projections*

In the Past, the median annual snowfall in the capital region was around 275 mm (snow water equivalent, or SWE). The median future-projected snowfall decreases by 60% to around 110 mm (range 32 to 134 mm) by the 2050s and by 85% to just 40 mm (range 7 to 60 mm) by the 2080s. Due to the robust projection of an increase in cold season temperature (Chapters 3 and 4), the expectation of a smaller fraction of precipitation falling as snow in future decades is reasonable, even if its magnitude is somewhat uncertain.

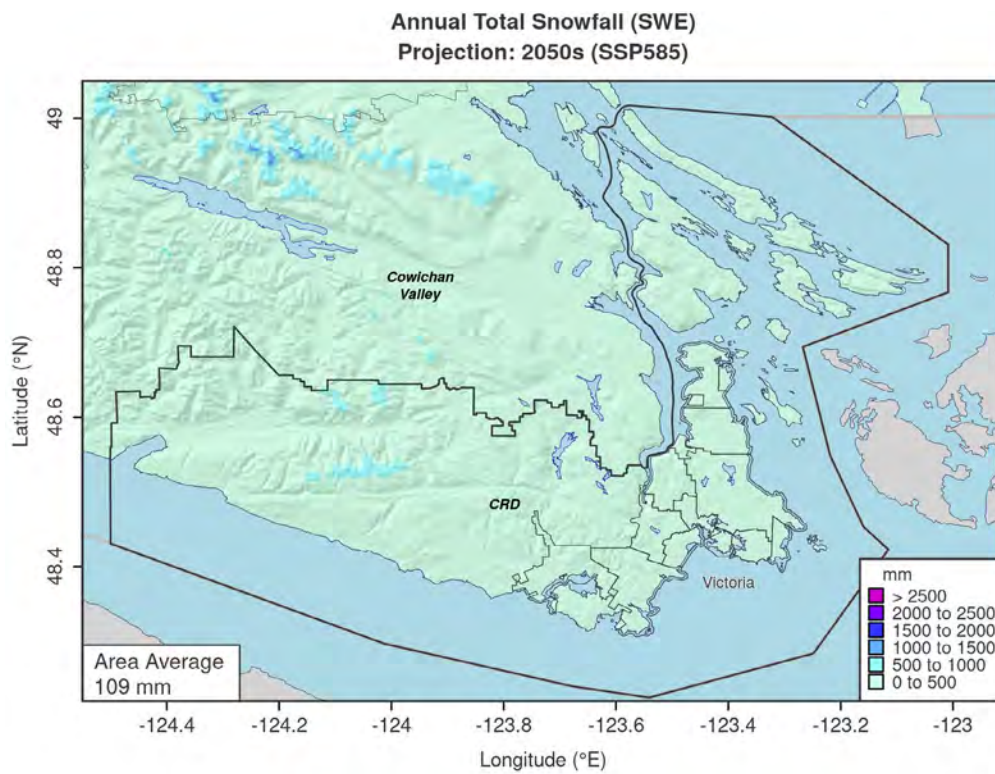
Of more concern is the limited model ability to simulate the unique meteorological conditions that lead to the rare, but sometimes heavy, snowfalls in southwest BC. The CMIP6 models used in this study are probably not able to capture this behaviour very well, meaning that the change in frequency of winter storms resulting in heavy snowfall is largely unknown.

<sup>14</sup> Dai, A. (2008). "Temperature and pressure dependence of the rain-snow phase transition over land and ocean," *Geophysical Research Letters*, 35(12). Snowfall projections should be taken with special caution, for two reasons. First, the amount of total precipitation that falls as snow is a sensitive function

of local temperature, so whatever temperature biases remain after the downscaling procedure result in uncertainty in snowfall. Over time, however, as local temperatures exceed 0°C more often in winter, this uncertainty decreases.



**Figure 17a.** Annual total snowfall in the Past.



**Figure 17b.** Projected snowfall in the 2050s.



## 6.3 Annual Maximum One-Day and 5-Day Precipitation and 95th-percentile Wettest Days

These indicators describe the largest precipitation events of the year. The *Annual Maximum One-Day Precipitation* (RX1DAY) is self-explanatory, while the *Annual Maximum 5-Day Precipitation* (RX5DAY) tracks the accumulated amount over consecutive 5-day periods during the year. If we compute the 95<sup>th</sup> percentile of daily precipitation over all wet days in the Past (i.e. those with a daily amount of at least 1 mm), and then sum the amounts over that threshold that fell on especially wet days, then we obtain the 95<sup>th</sup>-percentile Wettest Days (R95P) index.

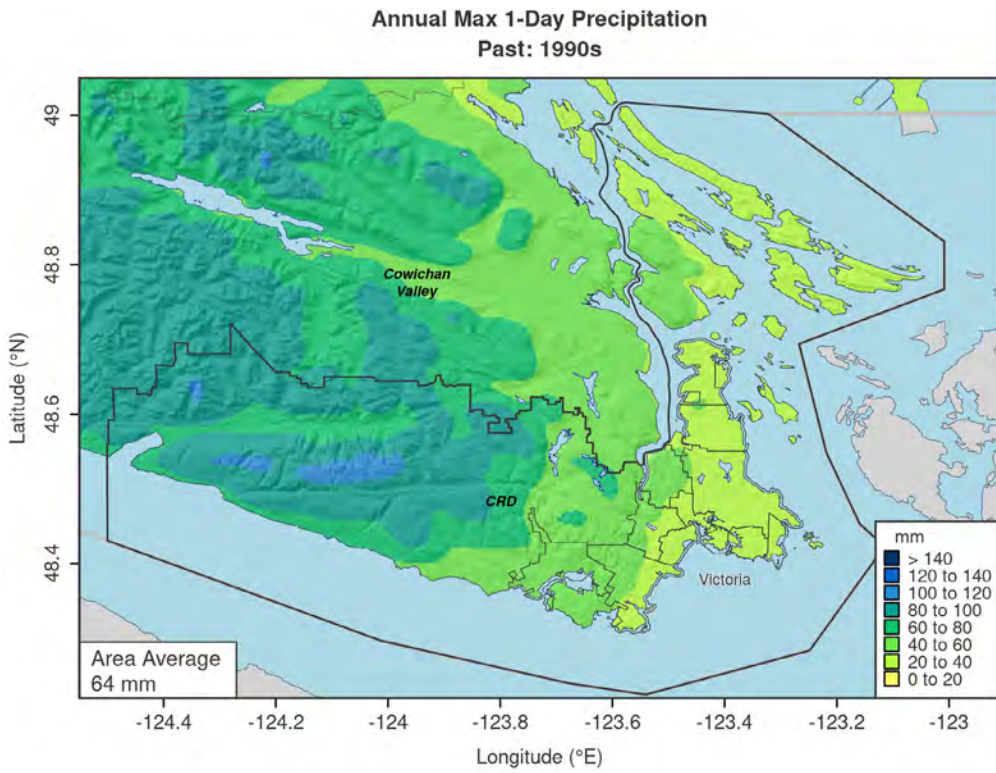
Note that R95P is potentially composed of several large precipitation events in a typical year, and does not (usually) describe single storms.

All amounts in the table below reflect the systematic difference in precipitation amount from west (high) to east (low) across the capital region. Across the region, percent increases for the 2050s differ somewhat for each index: from 10-16% for RX1DAY, to around 10% for RX5DAY to around 30% for R95P. Changes for the 2080s are correspondingly higher, as shown in the table.

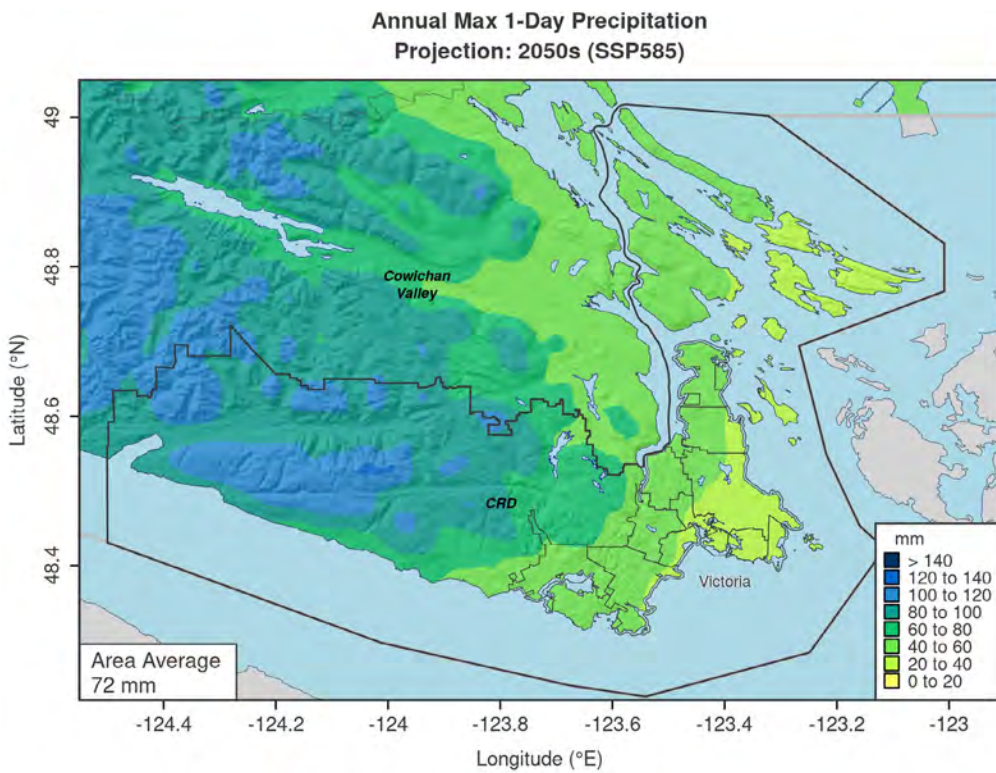
**Table 10: Annual Extreme Precipitation Indices**

|   | Past (mm) | 2050s(mm) | 2080s(mm) | 2050s Change (%) | 2080s Change (%) |
|---|-----------|-----------|-----------|------------------|------------------|
| <b>One-day maximum precipitation (RX1DAY)</b>         |           |           |           |                  |                  |
| Region  | 63        | 72        | 77        | 14<br>(4 to 24)  | 22<br>(17 to 29) |
| Western Region*                                       | 67        | 74        | 80        | 10<br>(4 to 24)  | 19<br>(17 to 30) |
| Eastern Region  | 37        | 43        | 45        | 16<br>(5 to 26)  | 22<br>(17 to 33) |
| <b>5-Day maximum precipitation (RX5DAY)</b>           |           |           |           |                  |                  |
| Region  | 163       | 179       | 187       | 10<br>(6 to 21)  | 15<br>(12 to 33) |
| Western Region  | 172       | 188       | 197       | 9<br>(6 to 20)   | 15<br>(13 to 24) |
| Eastern Region  | 88        | 97        | 101       | 10<br>(5 to 23)  | 15<br>(12 to 23) |
| <b>95<sup>th</sup> Percentile Wettest Days (R95P)</b> |           |           |           |                  |                  |
| Region  | 402       | 527       | 590       | 31<br>(16 to 46) | 47<br>(30 to 77) |
| Western Region  | 423       | 553       | 622       | 31<br>(16 to 46) | 47<br>(30 to 79) |
| Eastern Region  | 193       | 245       | 276       | 26<br>(10 to 41) | 43<br>(23 to 64) |

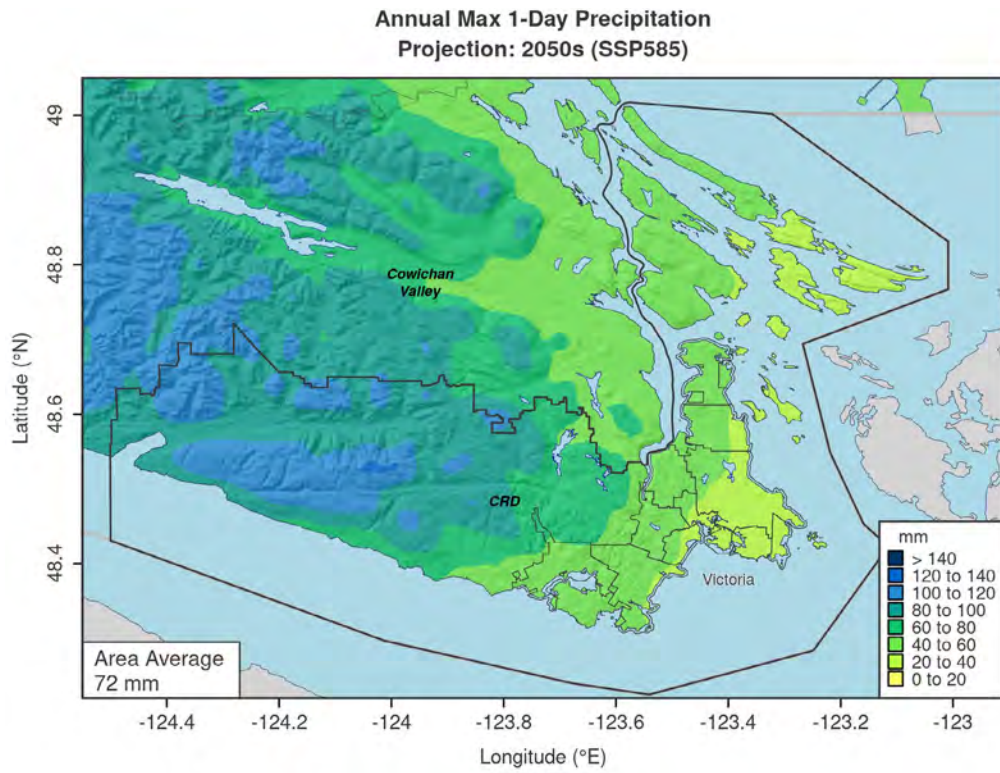
\*Values for Water Supply Area and the entire region are slightly lower than those for the Western Region, and well within the spread of model results, so are not shown. Consult the data deliverable spreadsheets for values in all subregions.



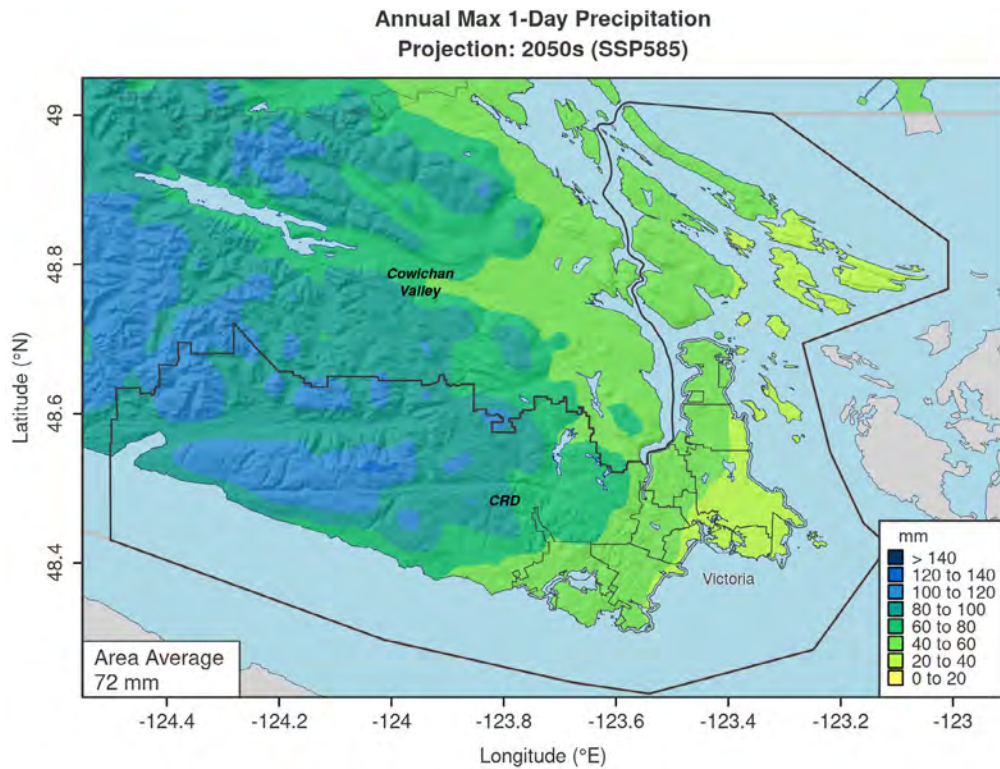
**Figure 18a.** Annual maximum 1-day precipitation in the Past.



**Figure 18b.** Projected Annual maximum 1-day precipitation in the 2050s.



**Figure 19a.** 1-in-20 year, maximum 5-day rainfall in the Past.



**Figure 19b.** 1-in-20 year, maximum 5-day rainfall in the 2050s.



## 6.4 The 1-in-20 Year Wettest Day and 1-in-20 Year Wettest 5-Day Period

These indicators describe rainfall events so extreme, they are expected to occur only once every 20 years in the Past climate. In other words, the *1-in-20 Year Wettest Day* and *Wettest 5 Days* have a 5% chance of occurring in any given year in the Past.

### Projections

In the Past, the median 1-in-20 Year, single-day rainfall in the capital region was around 100 mm, while the median 1-in-20 year, 5-day rainfall was about 230 mm. The median Future-projected 1-in-20 year, single-day rainfall increases by 15% to around 115 mm by the 2050s and by 25% to about 125 mm

by the 2080s. The median future-projected 1-in-20 year, 5-day rainfall increases by 15% to around 270 mm by the 2050s and by 20% to about 280 mm by the 2080s. As shown in the maps above, the absolute rainfall amounts for both indices are considerably larger in the west of the region compared to the east.

By comparing these results with those shown in Table 3 of Chapter 3, it is evident that the relative changes in extreme rainfall indices are larger than those for seasonal or annual mean rainfall. Table 12, which gathers relevant results from other tables above, reinforces this point. This behaviour occurs due to the different mechanisms that control how extreme (e.g., daily) and average (e.g., monthly to annual) precipitation respond to warming.

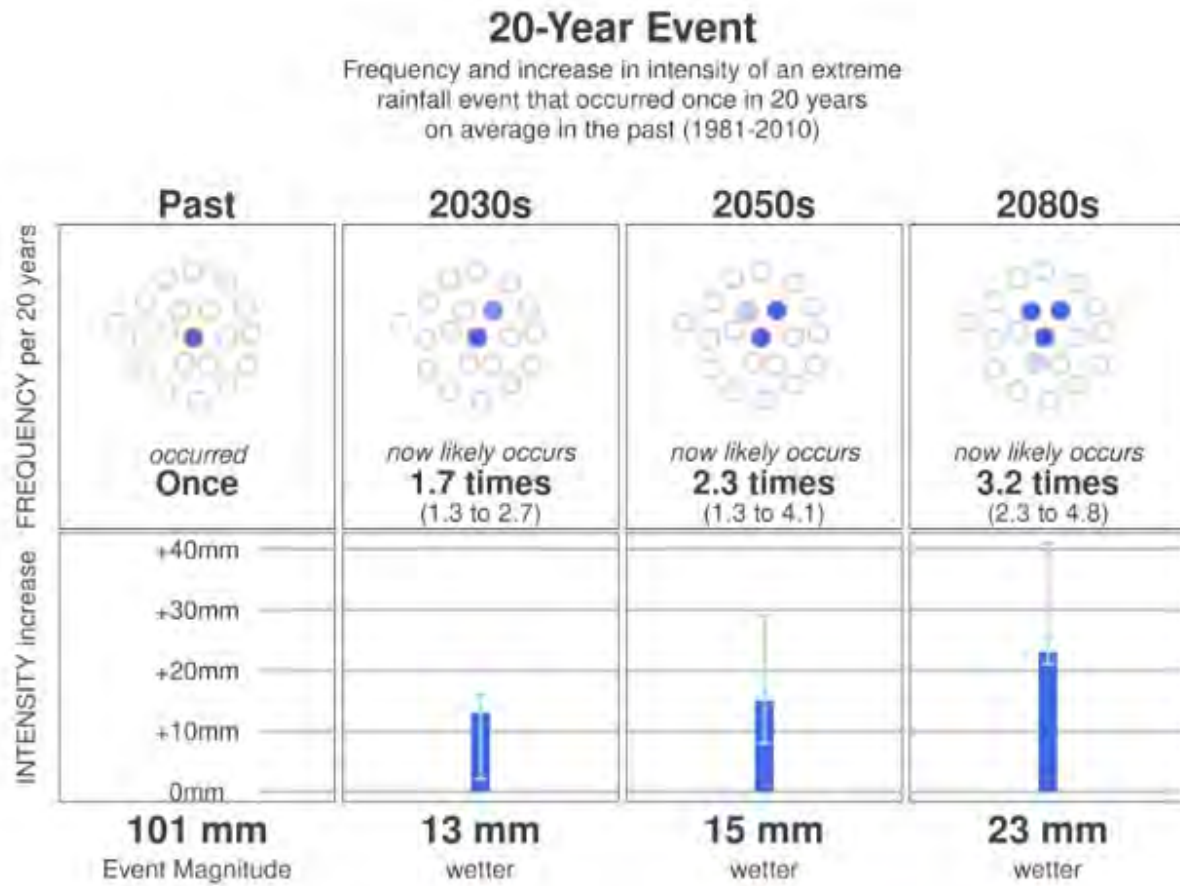
As in the case of rare temperature events, one may express these changes in extreme rainfall in a more visually compelling way, as in the diagram on the following page.

**Table 11: 20-Year Return Level Rainfall**

|                                       | Past (mm) | 2050s(mm) | 2080s(mm) | 2050s Change (%) | 2080s Change (%) |
|---------------------------------------|-----------|-----------|-----------|------------------|------------------|
| 1-in-20 Year Maximum One-Day Rainfall |           |           |           |                  |                  |
| Region                                | 101       | 116       | 124       | 15<br>(9 to 30)  | 24<br>(22 to 42) |
| Western Region <sup>1</sup>           | 105       | 122       | 129       | 16<br>(9 to 28)  | 23<br>(21 to 39) |
| Eastern Region                        | 62        | 72        | 79        | 16<br>(10 to 23) | 27<br>(23 to 42) |
| 1-in-20 Year Maximum 5-Day Rainfall   |           |           |           |                  |                  |
| Region                                | 232       | 268       | 281       | 14<br>(3 to 31)  | 21<br>(11 to 27) |
| Western Region                        | 243       | 274       | 297       | 13<br>(2 to 32)  | 22<br>(11 to 27) |
| Eastern Region                        | 132       | 155       | 159       | 17<br>(0 to 32)  | 20<br>(10 to 27) |

**Table 12: Change in various precipitation indices: Means versus extremes**

|                | Region           |                  | Western Region   |                  | Eastern Region   |                  |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                | 2050s Change (%) | 2080s Change (%) | 2050s Change (%) | 2080s Change (%) | 2050s Change (%) | 2080s Change (%) |
| Annual Mean    | 4                | 11               | 2                | 8                | 5                | 11               |
| RX1DAY         | 14               | 22               | 10               | 19               | 15               | 22               |
| RX5DAY         | 10               | 15               | 9                | 15               | 11               | 15               |
| R95P           | 31               | 47               | 31               | 47               | 26               | 43               |
| 1-in-20 RX1DAY | 15               | 24               | 16               | 23               | 16               | 27               |
| 1-in-20 RX5DAY | 14               | 21               | 13               | 22               | 17               | 20               |



**Figure 20.** Upper panels: Frequency of a 1-in-20 year daily maximum rainfall event in the Past and projected frequency of the same magnitude event (i.e. 101 mm) in the three future periods. Lower panels: Increase in magnitude of a 1-in-20 year single-day rainfall event from the Past to Future periods. Figure design is taken from similar infographics in the IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3-32, doi:10.1017/9781009157896.001.

## 7. REGIONAL IMPACTS

Communities across the capital region are already witnessing and experiencing impacts from climate change. These impacts are likely to persist and, in many cases, intensify over the coming decades based on projected global GHG emissions trajectories. Collective efforts to reduce emissions and thereby slow the rate of global warming will be necessary to lessen the severity of these impacts. Equally important will be action on climate adaptation and preparing for the environment as it will be in the future, not as it was in the past.

Investing in climate adaptation has the potential to support thriving communities and economies for generations to come. Adaptation actions can safeguard communities and their critical infrastructure from extreme weather events, protect and sustain natural ecosystems, increase the resiliency of food systems, and improve the efficiency of energy and water use. Importantly, there is no “one-size-fits-all-solution”; adaptation can take many forms depending on the unique context of the community.

By the 2050s, the capital region can expect a climate that has diverged from that of the past, with warmer year-round temperatures, shifting precipitation patterns, and more noticeable climate extremes. Due to climate variability, these changes may not occur evenly from one year to the next. Although winters will generally become warmer and wetter, it’s important to be prepared for some winters in the future to be colder and drier, especially in the near term. Similarly, while summers will become increasingly hot and dry, there will be summers that are cooler and wetter than the average summer in the future. Adaptation strategies must consider the inherent complexity and variability of projected changes to the regional climate.

This section provides a brief overview of the multiple, intersecting climate impacts expected across various sectors in the capital region. **It is not a comprehensive assessment of the impacts that can be expected from the projected changes outlined in this report.** Rather, this chapter reflects a discussion of regional climate impacts that took place among local government staff, emergency planners and environmental scientists in October 2023. It is intended to spark deeper discussion that explores how to prepare for the interrelated climate impacts facing the region.

While the development of this report did not actively involve First Nations in the capital region, it’s crucial to recognize that Indigenous Peoples and their traditional territories bear a disproportionate impact from climate change compared to other groups in Canada.<sup>15</sup> Indigenous knowledge systems play a pivotal role in comprehending ecological resilience, monitoring local and regional impacts, and effectively responding to climate change challenges. Future initiatives aimed at exploring and mitigating the impacts of climate change should prioritize meaningful engagement with First Nations throughout the region.

The case for investing in climate adaptation is clear: for every \$1 spent on adaptation measures today, \$13 to \$15 is estimated to be returned in future years through direct and indirect benefits.<sup>16</sup>

By the 2050s\*, on average:



\* under a high emissions scenario

**Figure 21.** Infographic summarizing key projections for the 2050s time period.

<sup>15</sup> BC Centre for Disease Control. Climate Change and Health. <http://www.bccdc.ca/health-info/prevention-public-health/climate-change-health>

<sup>16</sup> Swayer, D., Ness, R., Lee, C., and Miller, S. (2022). Damage control: Reducing the costs of climate impacts in Canada. Climate Risk Institute.



## Climate Equity

The impacts discussed in this chapter will not be experienced the same way by all residents of the region. People facing the greatest economic and social challenges are often the ones most affected by climate change, particularly for impacts that are compounding (see below). During and after climate-related events, some people and communities experience disproportionate impacts because of existing vulnerabilities that often overlap, including:<sup>15</sup>

- People who experience poverty, colonization, racism, inadequate housing, and a lack of access to health care,
- People who are most likely to be exposed to climate impacts because of where and how they live and work,
- People living with disabilities, chronic diseases, and mental illnesses, and
- Babies in the womb, pregnant people, infants, children, and older adults.

Climate equity can be woven into broader efforts to address the socioeconomic, sociocultural, and physical impacts of climate change. This will require collaboration across various sectors to understand where climate change intersects with other crises (e.g., housing, mental health), and to address these issues holistically.

Climate equity<sup>17</sup> is the goal of recognizing and addressing the unequal burdens made worse by climate change, while ensuring that all people share the benefits of climate action efforts. Achieving climate equity means that all people in our region have access to a safe, healthy, and fair environment.

### Impacts

The impacts examined in this chapter occur within a dynamic and increasingly complex global system. As a result, the impacts from projected climate change may be more severe due to the collective impact of multiple drivers. Examples of compounding interactions include, but are not limited to:



- In the warmer months, high temperatures combined with less rainfall can make drought conditions more likely.<sup>18</sup>
- Extended periods of drought can change soil conditions and reduce infiltration of heavy rainfall, exacerbating localized flooding.<sup>19</sup>
- Warmer water temperatures and increased stormwater runoff can promote conditions for algal blooms year-round.<sup>19</sup>
- Wildfire smoke during extreme heat events can aggravate pre-existing health conditions and cause exposure to poor air quality for residents seeking relief from the heat outdoors.<sup>19</sup>
- Ongoing emergency response associated with consecutive extreme events can overwhelm staff capacity and deplete emergency management resources.

<sup>17</sup> United States Environmental Protection Agency. Climate Equity. <https://www.epa.gov/climateimpacts/climate-equity>

<sup>18</sup> Intergovernmental Panel on Climate Change [IPCC]. 2023. Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: 10.59327/IPCC/AR6-9789291691647

<sup>19</sup> Yumaguloca et al. 2022. Lived experience of extreme heat in BC: Final report to the Climate Action Secretariat. Government of BC.

## Health and Well-Being

The capital region has a growing and aging population. By 2038, the population is expected to grow by 20% and the number of people aged 65+ is expected to increase by over 50%.<sup>20</sup> Historically, the region has had excellent air quality and comfortable temperatures, with nights cooling off in the summer. In recent years, wildfire smoke and periods of extreme heat during the warmer months have forced residents to seek refuge indoors. Higher temperatures are typically experienced in the eastern parts of the region and in urban areas further from the coast. Developed areas are typically hotter due to the urban heat island effect, which describes how closely packed buildings and widespread paved surfaces in urban areas absorb and re-emit heat more effectively than natural ecosystems and areas shaded by trees and vegetation.<sup>21</sup>

### Impacts

In recent years, extreme weather events made worse by climate change have negatively impacted human health and well-being in the capital region. Climate change has the potential to undermine health determinants such as air quality, water supply, food security, cultural practices, and access to a safe environment. Climate change can also place additional strain on healthcare and social systems that are necessary for good health and well-being.

By the 2050s, the capital region can anticipate more multi-day extreme heat events that become longer and more intense by mid-century. The region can also expect hotter summer temperatures, with more days exceeding 25°C and more “temperate nights” where the temperature stays above 16°C.<sup>22</sup> These projected changes will increase the risk of heat-related illnesses and mortality and worsen pre-existing health conditions, particularly among equity-denied populations who do not have access to a cool indoor environment. Notably, these risks are heightened for the region’s growing population of older adults.

Warming temperatures and shifting precipitation patterns may worsen air quality in the region. Across the Pacific Northwest, hotter and drier conditions can increase the likelihood of wildfire ignition. This may cause more frequent episodes of wildfire smoke in the capital region, which can irritate the lungs, cause inflammation, and alter immune function, particularly for people with pre-existing conditions.<sup>24</sup> The projected changes in temperature, precipitation and heat wave occurrence may also exacerbate other air pollutants that influence human health such as pollen, mould, and ground-level ozone.

Living through an extreme weather event, or grappling with uncertainty about the future, can impact mental health and wellbeing, often manifesting as stress, anxiety, fear, and exhaustion. During and after an extreme event, people who face property loss or displacement may endure significant and lasting trauma.

In June 2021, an unprecedented<sup>23</sup> “heat dome” event in the Pacific Northwest caused extended periods of record-breaking high temperatures that had severe implications for health and well-being. Over 600 heat-related deaths were recorded across BC, particularly among people with pre-existing medical conditions (including schizophrenia), older adults, people living alone, and people living in socially deprived areas<sup>21</sup>. In response to this event, numerous projects have been launched across the capital region to better understand extreme heat vulnerability and to build resilience towards extreme heat in the future. For more information, see Appendix D: Further Resources.

<sup>20</sup> BC Statistics. 2019. Capital Regional District 2019-2038 Population, Dwelling Units and Employment Projection Report.

<sup>21</sup> British Columbia Coroners Service. 2022. Extreme heat and human mortality: A review of heat-related deaths in BC in Summer 2021.

<sup>22</sup> The number of temperate nights is an important public health measure that reflects the lower temperature threshold for emergency health alerts used in the capital region. For more, see: Government of British Columbia. 2023. BC Provincial Heat Alert and Response System (BC HARS).

<sup>23</sup> The unprecedented nature of the June 2021 heat dome makes it difficult to estimate its return period (or annual probability of occurrence). Based on analysis of historical data, it was estimated as a 1-in-300-year (or 0.3% annually)

at Seattle-Tacoma Airport to a 1-in-1000-year event (or 0.1% annually) in New Westminster (Philip et al., 2022; doi: 10.5194/esd-13-1689-2022). While the capital region can expect more frequent extreme temperatures in the future, estimates for how often an event of this magnitude will occur are difficult because historical records are far shorter than the estimated return periods for this event.

<sup>24</sup> Berry, P., and Schnitter, R. 2022. Health of Canadians in a changing climate. Government of Canada.

## Water Supply and Demand

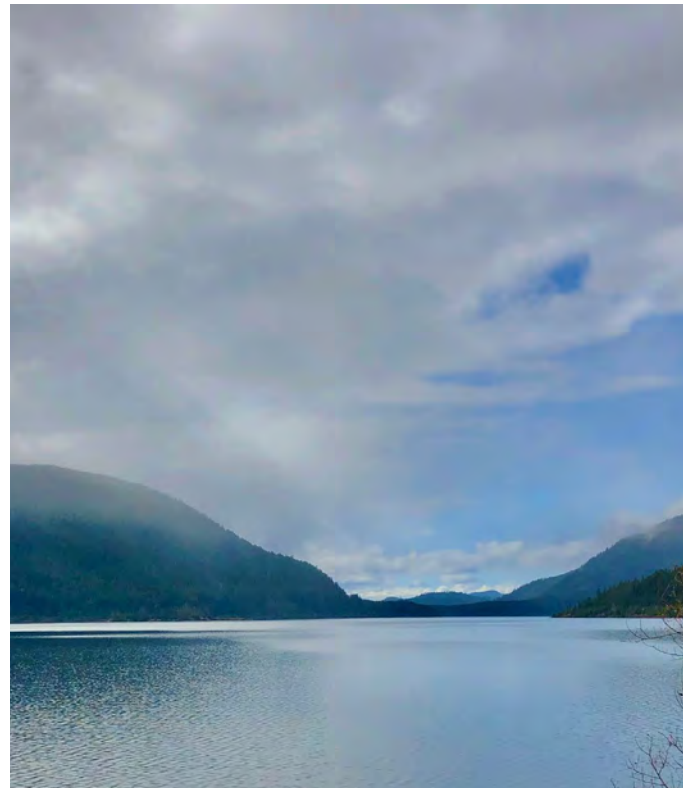
The CRD supplies drinking water to over 390,000 customers from large reservoirs in the Sooke, Leech and Goldstream watersheds that make up the protected Greater Victoria Water Supply Area (GVWSA). The CRD also provides water to small service areas in the Southern Gulf Islands and the western portion of the region through surface water and groundwater systems. Similar privately owned systems provide water in other areas. In some rural and less developed areas, residents rely on groundwater wells on their properties. Residential water use accounts for the largest portion of water use in the region (60%). Water supplies across Southern Vancouver Island are almost entirely replenished from rainwater in the late fall, winter, and early spring (the wet season). Snow melt runoff contributes to groundwater recharge and is needed to sustain summer flows.

### Impacts

By the 2050s, less summer rainfall and longer dry spells will increase the risk of drought during the summer and into the early fall. At the same time, hotter temperatures and more extreme heat events will intensify water demand as residents consume more water to keep cool and stay hydrated. Hotter and drier conditions will also increase evaporation and evapotranspiration, raising outdoor watering demand. Water conservation initiatives will remain a priority in the region, given the growing population and the potential for the seasonal decline in water supplies to become more pronounced in the future. Greater densification and anticipated increases in peak demand may also trigger the need for more storage, supplements to existing water supplies, larger capacity infrastructure, and balancing reservoirs in water distribution systems.

Hotter and drier summer conditions will be particularly challenging for those who rely on groundwater wells or small reservoirs that may not recharge sufficiently. In some instances, these systems may reach dangerously low levels or may even deplete completely. In coastal areas, overdrawing groundwater can lead to saltwater intrusion – an impact that is compounded by rising sea levels.

Hotter and drier conditions also increase the threat of wildfire in the GVWSA and other forested areas that supply water to



residents of the region. Although fire is a natural and essential process in forest ecosystems, severe wildfire occurring in water supply areas can affect water quality and supply by increasing erosion during the following rainy season.<sup>25</sup> As the threat of wildfire increases in rural areas, water needs for wildfire protection will gain increasing importance in water conservation planning.

During the wet season, heavier rainfall may increase erosion of saturated slopes, leading to more fine sediment and organic material in streams entering water supply reservoirs. Increased turbidity from fine sediment can interfere with water disinfection and treatment, while excess organic material can promote algal blooms that produce cyanotoxins, cause taste and odour issues, and compromise disinfection and filterability. Where unprotected water supply catchment areas have been developed, more intense rainfall and runoff can lead to greater undesirable substances (pollutants) entering wells and surface reservoirs. Heavy rainfall and increased water inflows also pose a risk to dam safety. To support safe and resilient water supply through a changing climate, the potential for more intense rainfall events (see next section) will need to be considered in the planning and management of water supply systems.

<sup>25</sup> Brown et al. 2019. Long-term climate, vegetation and fire regime change in a managed municipal water supply area, *SAGE Journals*, 29(9), 1411-12.



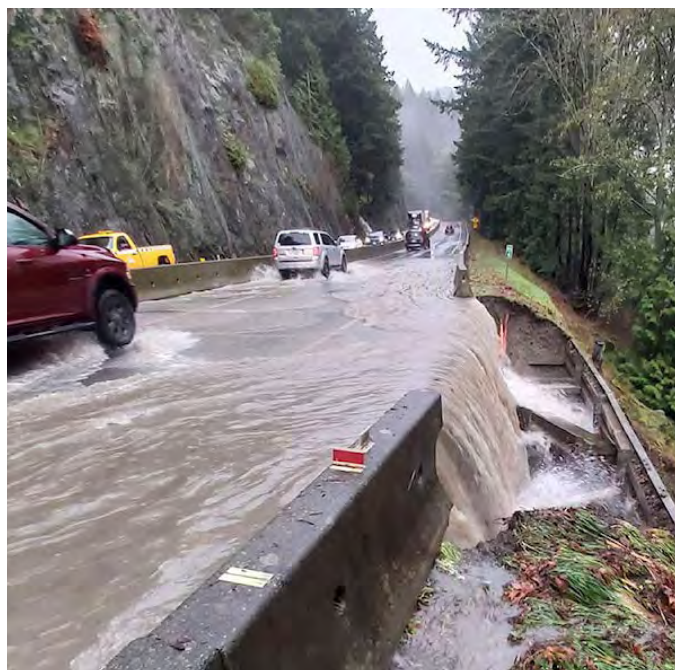
## Rainwater Management and Sewerage

A myriad of rainwater management and sewerage infrastructure aims to protect quality of life, property, and aquatic ecosystems across the capital region. Local governments in British Columbia are responsible for managing drainage; as a result, much of the region's drainage infrastructure (hard and soft) is integrated into local land use and infrastructure planning and processes. Historically, stormwater infrastructure was designed to move water away from the built environment, channeling high volumes of rainwater into creeks and streams. Recently, local governments are shifting towards the use of green infrastructure, which mimics natural drainage systems that play a crucial role in rainwater management. Natural drainage systems (i.e., creeks and wetlands) slow runoff through water retention, helping to reduce flood magnitude and filter out substances that impact water quality. The use of green infrastructure is particularly important in areas with increasing urbanization and development, where greater impermeable surfaces (i.e., roads, parking lots and buildings) contribute to additional runoff.

### Impacts

In the past, flooding from extreme events has occasionally overwhelmed stormwater and sanitary systems in the region. With extreme precipitation events becoming wetter in the future, the region can expect aging and undersized infrastructure to continue to be overwhelmed, amplifying stressors on the receiving environment. During high intensity rain events, creeks may overflow and soils may become saturated, intensifying runoff, and increasing the chance of flooding in low-lying areas. This combination can increase erosion, decrease slope stability, and flood wetlands and lakes, impacting public infrastructure, drinking water quality, and surrounding aquatic ecosystems. Heavy rainfall events can also cause inflow and infiltration of rainwater into the sanitary system in crossover areas, increasing the likelihood of highly diluted sewage entering waterways.

When heavy rainfall occurs after prolonged periods of dry weather, the "first flush" of surface runoff typically contains high levels of contaminants that have accumulated on hard surfaces. This runoff makes its way into surface waters that are home to aquatic ecosystems. When paired with warmer water temperatures, increased stormwater runoff of nutrients can make conditions more favorable for algal blooms year-round – a growing issue in that region – that impacts water quality, ecosystems, recreation, and human health.



*Malahat washout during November 2021 extreme rain event (Credit: Emcon Services Inc.)*

Certain areas in the region are at increased risk of flooding during heavy rainfall events due to flat terrain and proximity to the ocean, particularly when these events occur simultaneously with high tides and onshore winds. The CRD Coastal Flood Inundation Mapping Project (2021) may be used in conjunction with the projected changes outlined in this report, to understand how these factors, along with sea level rise, will influence future flood risk for lower-lying areas near the coast.

The projected increase in heavy rainfall may lead to a higher volume of runoff than the current capacity of infrastructure is able to handle. Green infrastructure, low impact development and multijurisdictional watershed management approaches will remain important strategies for reducing the flooding, runoff and pollution associated with extreme precipitation events. Designers of stormwater infrastructure (i.e., culverts, storm drains, etc.) will also need to plan for higher single- and multi-day rainfall amounts. For more information about how future precipitation is estimated using climate model projections, including the adjustment of Intensity-Duration-Frequency (IDF) curves in a future climate, see Appendix D: Further Resources.

## Ecosystems and Species

The capital region is home to various ecosystems, including Douglas-fir forests, Garry oak meadows, riparian zones, wetlands, estuaries, shorelines, and more. The diversity in the region brings with it a wide range of flora and fauna, including many species at risk that need protection. Natural assets providing connectivity and ecosystem services are essential for supporting climate resilience. Forests in the GVWSA contribute to the high quality of water in supply reservoirs, and green spaces in urban and suburban areas provide natural cooling capacity, stormwater retention, and help reduce air and water pollution.

### *Impacts*

Warming year-round temperatures and seasonal changes in precipitation will have important impacts on the ecosystems, native species and associated ecological relationships and processes existing in the capital region. Because ecological systems are highly complex, it will be difficult to make specific predictions for how they will be impacted by a changing climate. In general, the speed and scale of climate change may threaten the capability of many species to adapt, altering the ecological landscape. Shifting seasonal patterns, characterized by an earlier onset of spring or a later start to fall, may threaten processes that rely on temperature cues, including predator/prey, parasite/host, and pollinator dynamics. This may cause population declines for certain species, and/or outbreaks of species that are considered pests. Specialist species may be particularly vulnerable, which may threaten regional biodiversity and create new opportunities for invasive species to thrive.

Climate change not only impacts ecosystems and species directly; it also interacts with environmental changes from human development.<sup>26</sup> Impacts from climate change may be amplified for ecosystems where land-use changes have caused fragmentation and, as a result, weakened resiliency. For example, the Bowker Creek watershed – covering 1,028 hectares of the capital region – historically supported coho and chum salmon and cutthroat trout. Today, Bowker Creek is highly urbanized, with roughly 50% now composed of impervious surfaces that cause low summer base flows and reduced water quality for aquatic ecosystems. Long range, multijurisdictional efforts are in place to protect its natural characteristics and reduce impacts from a changing climate.<sup>27</sup>



In the summer, hotter and drier conditions will continue to stress trees and other terrestrial and riparian (streamside) vegetation, particularly for species that are sensitive to drought such as the Western red cedar. Drought conditions can slow decomposition in below-ground communities consisting of bacteria, fungi, and other soil organisms, thereby reducing available nutrients. When plants undergo stress, they become more susceptible to competition with other plants and to damage from insects and diseases.

Warmer year-round temperatures will also raise water temperatures in aquatic ecosystems, which may be problematic for species that require cool water to thrive. In extreme cases, warm water can cause low oxygen levels and mortality, particularly when these conditions are compounded by low water levels and occur during critical life stages such as spawning, rearing, or hatching. Heavy rainfall can also disrupt critical ecological processes. For example, during an atmospheric river event in November 2021, increased channel erosion and sediment deposition resulting from high stream flows severely impacted salmon spawning beds.<sup>28</sup>

<sup>26</sup> IPCC. 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group, II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [H.-O. Pörtner et al. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi: 10.1017/9781009325844.59327/IPCC/AR6-9789291691647

<sup>27</sup> Bowker Creek Initiative. 2012. Bowker creek blueprint: A 100-year action plan to restore Bowker Creek Watershed.

<sup>28</sup> CBC. 2021, 21 November. For B.C.'s salmon, floods represent another challenge to survival.



## Buildings and Energy Systems

Energy use in buildings accounts for roughly one third of GHG emissions in the region. In the past climate, most buildings and homes in the capital region did not require active cooling capacity. During the 2021 heat dome, 98% of heat-related deaths in BC occurred in private residences, highlighting an urgency to implement cooling measures in homes across the region.<sup>21</sup> Retrofit programs and new building policies not only support the transition to renewable energy and energy efficient technologies but are leading to building envelope considerations and a greater adoption of low emission heat pumps that support thermal comfort. In both urban and rural communities across the region, many homes and other buildings are in coastal and riverine areas where flooding may be a concern.

### *Impacts*

As the climate warms and precipitation patterns change, the case for investing in well-designed, resilient buildings improves. Heavier rainfall events may increase the risk of flooding in the fall and winter, which can cause property damage, personal injury, and economic losses, particularly where development is located on flood plains. More episodes of multi-day extreme heat can also stress foundations and building materials, and potentially affect the functioning of heating, ventilation, and air conditioning (HVAC) systems.

Across the region, warmer year-round temperatures and more days going above 25°C in the summer will shift seasonal and long-term energy demands. Whereas heating demand is expected to decrease in the colder months, hotter temperatures and more multi-day extreme heat events during the warmer months will generate cooling demand where it did not exist previously. In the past, buildings and homes have relied on the region's cool summer nights to support thermal comfort during the warmer months. In the future, an increasing number of "temperate nights" (i.e., nights when the temperature stays above 16°C) will heighten the risk of buildings overheating.

Adaptive design strategies, such as passive cooling, outdoor shading, rainwater capture and reuse, green roofs, resilient landscaping, and rain gardens, can help address challenges from heat, drought, and overland flooding. In addition, concentrating development in already developed areas, balanced with access to urban greenspace, can protect opportunities for the surrounding natural ecosystems to buffer changes to our climate.



The projected increase in cooling degree days by mid-century will require that most buildings have some form of active cooling to maintain thermal comfort and prevent overheating. Certain units, such as older, multi-unit residences, often lack air conditioning and are not designed to handle hot temperatures, leaving occupants at greater risk of heat-related illnesses and mortality. The use of energy efficient technologies like heat pumps will play an important role in aligning with efforts to reduce GHG emissions while avoiding additional costs to residents. Authorities with jurisdiction over building codes should consider how to proactively integrate future climate considerations into the design of new and existing buildings.



## Transportation

The region's transportation network includes many local and arterial corridors, three major highway corridors (Highways 1, 14 and 17), two provincial and two international ferry corridors, a regional transit network, international and harbour airports, cruise ship and ferry terminals, and many active and multi-use trails. Regional transportation priorities include full realization of a multi-modal transportation network to help shift away from private vehicles to public transport, walking and cycling. As a coastal community, the capital region is vulnerable to significant transportation disruptions that complicate responses to emergencies and extreme events, and can interrupt the local supply chain.

### Impacts

The projected increase in heavy rainfall may intensify flooding across the region, potentially causing more frequent road closures, vehicle collisions and construction delays. Some communities, such as Sooke, have already seen recurrent road closures due to flooding and may be particularly vulnerable to heavy rainfall.<sup>29</sup> Extreme precipitation events may also impede the reliability of major transportation corridors. In November 2021, extreme rainfall and runoff from a landfalling atmospheric river caused extensive damage to the Malahat Highway (Highway 1), prompting its temporary closure. This disruption reverberated through the local supply chain, resulting in shortages of fuel and other essential goods and services across the region. Like flooding from heavy rainfall events, wildfires also pose risk to the closure of regional highways and roads. In the future, hotter temperatures and less rainfall occurring in the warmer months will increase fire danger. Wildfire damage along hillslopes near roadways may also heighten the risk of landslides during the subsequent rainy season.

The effects of extreme weather on transportation may be particularly challenging for some equity-denied groups. Residents may find themselves unprepared to leave their homes, hindering their ability to access essential supplies and services.



By the 2050s, a shorter winter season characterized by less snowfall and fewer freezing days may lower the costs associated with snow removal and the repair of cracked roads from freeze-thaw cycles. However, equipment to manage severe winter conditions will need to be maintained as changes to the frequency of heavy snowfall events remains largely unknown because they are driven by “Arctic outflow” events from Northern BC.

Warming temperatures may enhance the appeal of active transportation (walking, cycling and transit use) during the colder months. Conversely, high temperatures, multi-day extreme heat events, and poor air quality from wildfires in nearby regions may deter residents from choosing active transportation methods in the summer and early fall. Active transportation routes may also be interrupted by heavy rainfall, which can cause localized flooding and erosion along trails and pathways.

To safeguard transportation across the region, projected changes to temperature and precipitation should be considered in the design and retrofit of transportation infrastructure. These changes should also be considered against the backdrop of other existing weather hazards that will continue to affect the region (e.g., windstorms). Efforts to reduce GHG emissions across the region will rely on a resilient active transportation network. Strategies to support active transportation may involve installing adequate cooling infrastructure (i.e., trees, benches, shade structures, misting stations and water fountains) and supporting nature's capacity to buffer climate impacts through stewardship and community engagement.

<sup>29</sup> Chek News. 2021. Heavy flooding and road closures forces Sooke into temporary isolation.

## Food and Agriculture

Food and agriculture are fundamental elements of the long-term sustainability, resilience and health and wellbeing of the capital region. In recent years, changes in climate, energy costs, water availability and agricultural production have drawn attention to the ongoing resilience of the region's food system. Ensuring a stable local food system requires management of changing wildlife populations, flooding and drainage concerns, water availability, as well as the amount of agricultural land in food crop production. The average age of farmers in the capital region remains higher than the Canadian average and represents a warning sign for the future of food production in the region.<sup>30</sup>

### *Impacts*

Increasing year-round temperatures will lead to fewer frost days, an earlier start to spring, and extended summer-like weather into the fall. These changes will result in a longer and warmer growing season that could enhance agricultural productivity in the region. However, climate change is also expected to introduce greater uncertainty for growers, as temperatures become hotter in the warmer months and precipitation patterns change. The projected increase in growing season length by 2050 (estimated to be roughly 17%) should be considered an upper limit for estimates of future productivity. This measure uses only a lower temperature threshold and does not account for reduced summer precipitation, which increases the risk of drought. In addition, shifting seasonal conditions from warming temperatures may cause pollinating species to emerge at misaligned times, limiting potential crop yields.

During the growing season, reduced water availability and extended dry periods leading to drought could have significant impacts on agriculture in the region. Less total rainfall in the summer will reduce water levels in ponds, wetlands and streams used for irrigation, while hotter temperatures will promote further evaporation and evapotranspiration. These conditions can increase heat stress and sun scald, competition for water resources, and may create opportunities for invasive species, pests, and plant diseases to flourish. Increased demand for irrigation strains water supply systems with competing demands, and negatively impacts ecosystems in water bodies, wetlands, and streams. Addressing these challenges will require innovative strategies that improve the efficiency of agricultural irrigation and transition to crops requiring less water. Growers may need to consider alternative soil-management approaches,



as changes to soil moisture and composition may accompany the projected changes to the region.

In the fall, heavy rainfall events may impact crop harvest by increasing the risk of flooding and creating more opportunities for diseases and pests. Extreme precipitation can also lead to more runoff onto and off agricultural land, leading to erosion, soil nutrient leaching, and crop loss and damage. For low-lying agricultural areas near the coast, these impacts may be compounded by high tides, storm damage, and saltwater intrusion from rising sea levels.

<sup>30</sup> Capital Regional District. 2018. Regional Growth Strategy.



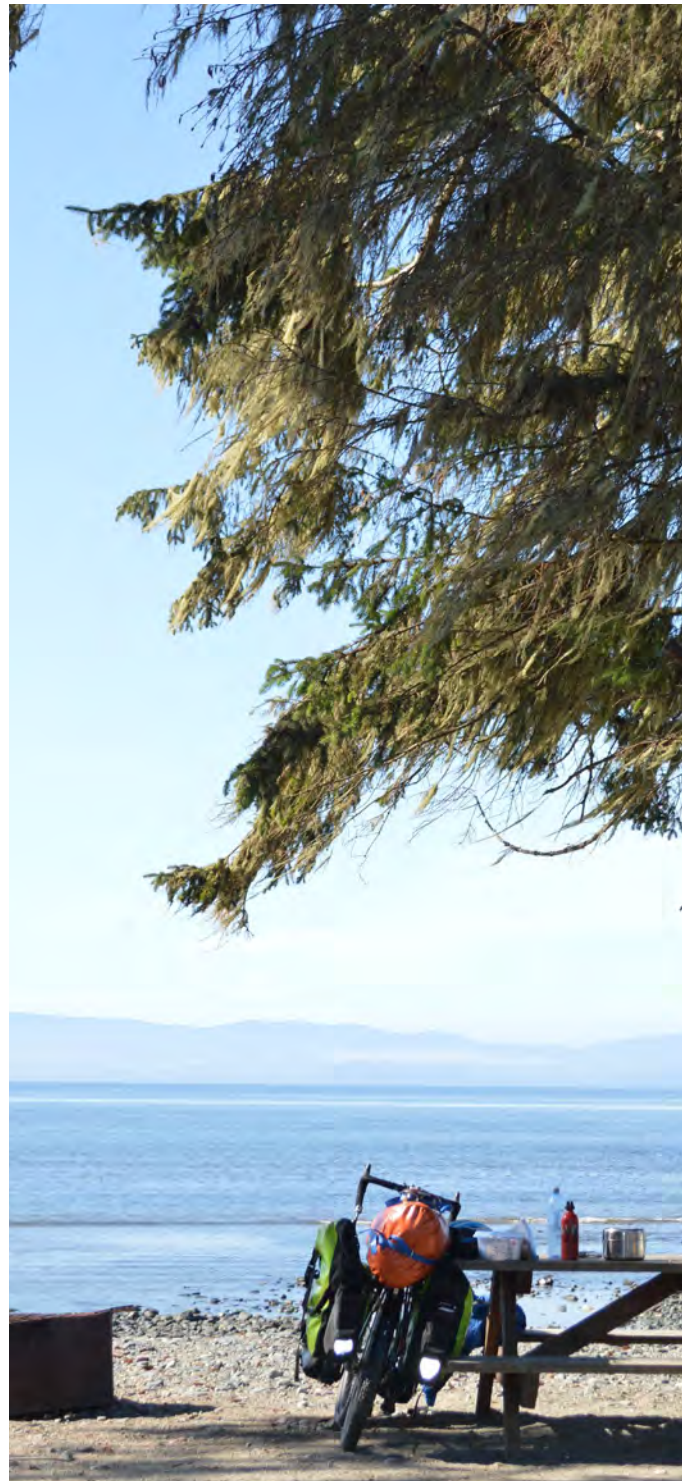
## Recreation and Tourism

With its mild climate, beautiful coastlines, and abundant ecosystems, the capital region continues to be a sought-after destination for visitors from across the globe and tourism remains a key local industry. Tourism is an estimated \$1.9 billion dollar industry in Greater Victoria with more than three million visitors to the region annually.<sup>31</sup> The region boasts plenty of outdoor recreation, with more than 26,000 hectares of national, provincial, regional, and municipal parks and ecological reserves and four regional trails on southern Vancouver Island and the Gulf Islands.<sup>32</sup> In 2021, regional trails received over 3.7 million visits and regional parks received over 5 million visits from local residents and tourists. These areas contribute to the cultural, social, and economic vitality of the region.

### *Impacts*

By the 2050s, warmer year-round temperatures could lead to a longer season for summer recreation, providing more opportunities for outdoor activities and potentially boosting economic productivity. However, the rise in the number of hot summer days and multi-day extreme heat events may encourage more people to seek relief near lakes and coastlines, which can place additional stress on freshwater, marine and shoreline ecosystems. Careful protection and monitoring of recreational sites will be important to ensuring ecological health in areas where visitor use may increase.

The projected changes in temperature and precipitation may also influence the access and safety of recreation and tourism across the region. Less summer rainfall and longer dry spells may result in longer and more frequent campfire bans. Increasing fire danger may also result in the closure of parks and campgrounds due to wildfire risk. During the wet season, heavier rainfall may impact trail access and safety, and increase the costs associated with the maintenance of recreational infrastructure. At all times of the year, the potential increase in algal blooms may pose challenges to recreational water users, fishing, and tourism. Ensuring climate-resilient design of new and existing infrastructure and supporting ecosystem health and integrity through a changing climate can benefit both the economy and the physical, mental, and spiritual health of people across the region.



<sup>31</sup> Greater Victoria Chamber of Commerce. Destination Greater Victoria. <https://www.tourismvictoria.com/>

<sup>32</sup> Capital Regional District. 2023. Regional Parks and Trails Strategic Plan.



## Summary and Recommendations

This report uses the most up-to-date climate model projections to examine how climate change may unfold across the capital region in the coming decades. The region can expect an increase in daytime and nighttime temperatures throughout the year. In the summer months, this implies hotter daily highs, warmer nights, and more numerous and longer multi-day heatwaves. By the 2050s, winters will become milder overall with a steep reduction in frost days and snowfall.

The capital region can expect a modest increase in annual precipitation by the 2050s that will be distributed unevenly across the seasons. Whereas rainfall is projected to increase notably in the colder months, summers will become drier. Warmer cold season temperatures will result in less snowfall and increased rainfall, especially in winter. In the warmer months, longer dry spells are expected due to the combination of less rainfall and warmer temperatures. The magnitude and character of these changes will vary locally across the region.

Early action on climate adaptation will enable the region to best prepare for the changes ahead and increase climate resilience. The information provided in this chapter is intended to guide further discussion among decision makers and community partners across the region. Importantly, adaptation can take many forms depending on the unique context of each community. The regional impacts outlined in this report should be considered a starting point for further analysis of climate impacts and adaptation planning that engages relevant stakeholders and is tailored to the local context.

The CRD will continue to use these projections to incorporate climate change adaptation into planning cycles and ongoing activities. Adaptation planning is complex and requires consideration of multiple factors and compounding drivers. As such, continued data collection and monitoring will be important to establish baselines, monitor changes and ensure that adaptation actions are appropriate to the local context. Some examples of how the future climate projections provided in this assessment can be used to support climate adaptation include:

- Raising awareness about how climate change will impact the region
- Informing strategic and long-range planning
- Informing strategic planning for emergency responses to extreme events
- Conducting vulnerability and risk assessments to inform policy, planning, research, and monitoring
- Designing infrastructure that considers the future climate

This report highlights regional projections for the 2050s under a high emissions scenario, but alternative scenarios were also considered for this project. The complete data package includes information for low, moderate, and high emissions scenarios for the 2030s, 2050s and 2080s. It also includes separate assessments for four smaller sub-regions within the capital region. The report Appendices point to further online resources and general guidance for understanding and using climate projections.

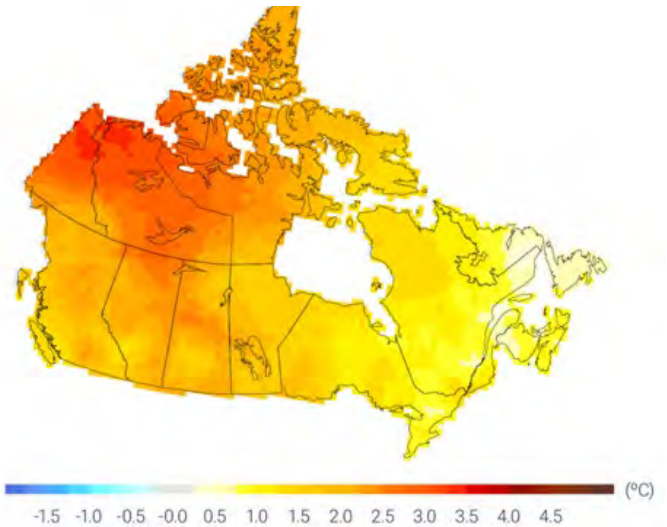


# Appendix A

## BACKGROUND ON FUTURE CLIMATE DATA

The Earth's climate is changing due to the burning of fossil fuels, which emit greenhouse gases (GHGs) and aerosols into the atmosphere. Over the past century, these emissions have raised atmospheric GHG concentrations well above preindustrial levels, which has led to widespread warming over Earth's surface.

The global average temperature has increased by over 1°C to date, and Canada is warming even faster (Figure A1). This warming has resulted in widespread impacts in Canada and across the globe, and it is directly proportional to the total amount of GHGs emitted since the beginning of the industrial era. While a 1°C temperature change at your location may not feel like much, changes of only 1 or 2°C on a global scale are very substantial because they are averaged over the globe and a long period of time.



**Figure A1.** Warming in Canada between 1948-2018.

## Understanding Weather, Climate, Natural Variability and Climate Change

To understand climate change, it is important to distinguish between weather and climate, and the natural and human influences that affect the climate on different time scales:

- Weather is what we experience when we step outside. It consists of short-term (minutes to days) variations in the atmosphere.
- Climate is the general state of weather, including its extremes, over periods ranging from months to many years. Climate can be thought of as the statistics of weather. Descriptions of normal climate conditions at a particular location are often derived from nearby weather observations and collected over long time periods – typically 30 years or more.
- Natural climate variability causes fluctuations in climate conditions that can span a few months to a few decades or longer. Natural climate variability is not influenced by human activity, but its influence can either mask or enhance human-induced climate change for the periods over which it occurs. Natural climate variability can also affect seasonal weather (e.g., El Niño/La Niña cycles).
- Climate change refers to changes in the state of the climate that persist over an extended period. Both natural processes and human influence can result in changes in climate. Climate science indicates that human influence is the unequivocal cause of the global warming that has been observed since the beginning of the 20th century.



**Figure A2.** Timescales for weather, climate, natural climate variability, and climate change.

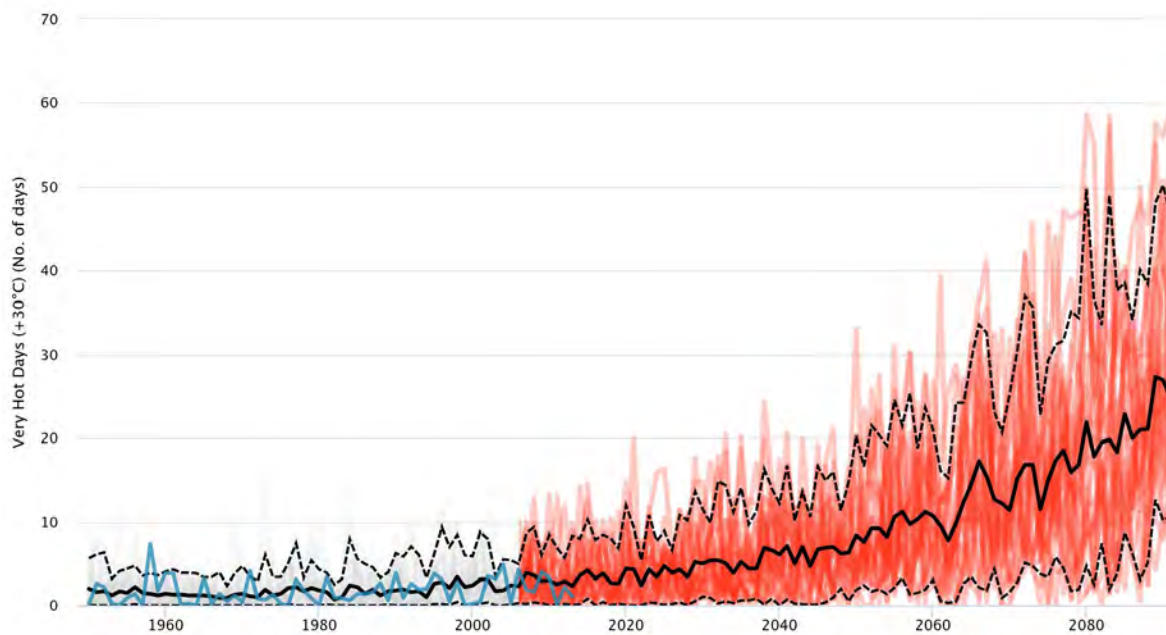
## What is Future Climate Data?

In the context of a changing climate, historical climate observations are no longer suitable for assessing future climate-related risks. As a result, engineers, planners, and decision-makers are increasingly using future climate data to estimate the growing risks associated with climate change. Practitioners and decision-makers want to know how much climate change (and risk associated with that change) they can expect to encounter over the coming decades.

The extent of further warming depends on how global emissions change in the future. Unfortunately, it is impossible to predict the exact societal conditions of the future that will directly influence global emissions. Therefore, a range of potential futures, or scenarios, can be used to plan for the changes associated with rising global temperatures. These scenarios are based on assumptions about population growth, climate policy, land use

changes, energy intensity, economic activity, and more, that lead to different levels of global GHG emissions. The scenarios used in this assessment are known as Shared Socio-economic Pathways, or SSPs for short – but more on that later.

To understand the future climate, scientists develop global climate models (GCMs) to simulate Earth's future climate in detail under each of the various scenarios. GCMs are extensively tested against historical observations and compared to one another. Through the Coupled Model Intercomparison Project (CMIP), we can construct an ensemble of different GCMs that describes a range of plausible climate futures. In Figure A2 below, each red line represents an individual GCM projection, developed by research groups from around the world. The solid black line in this case represents the ensemble median, with the lower and upper dotted lines showing the 10th to 90th percentile range of the model ensemble.



**Figure A3.** Example of a GCM ensemble.<sup>1</sup> Each red line represents a single GCM projection for the number of annual days with a maximum temperature exceeding 30°C in British Columbia. The solid black line is the median and the dotted lines are the 10th (lower range) and 90th (upper range) percentile values across all GCMs in the ensemble.

<sup>1</sup>Retrieved from ClimateAtlas.ca, using modeled data from PCIC.

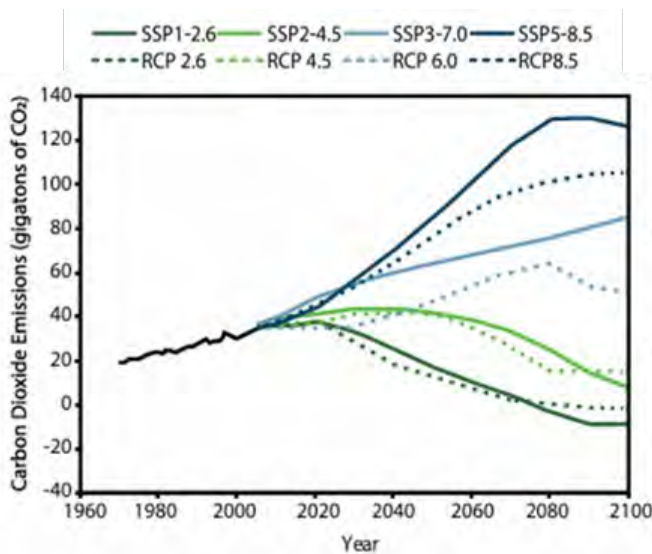


## Understanding Shared Socio-Economic Pathways

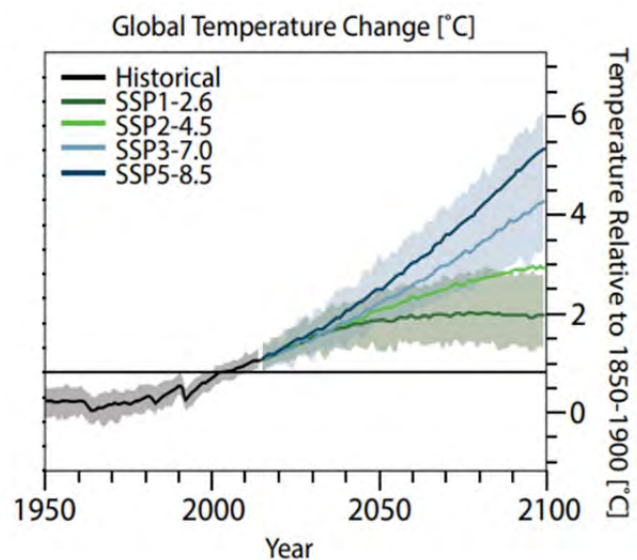
As noted above, to project the future climate, GCMs need input about the amount of future industrial emissions. Shared socio-economic pathways (or SSPs, Figure A3a) are such inputs, providing emissions scenarios based on assumptions of various societal decisions, including:

1. How population, education, energy use, technology – and more – may change over the next century, and;
2. The level of ambition for mitigating climate change globally.

The SSPs used in CMIP6 simulations are a set of five main socioeconomic pathways (SSP1 through SSP5) that illustrate different ways in which global societies may develop. They are the successors to the previous emissions scenarios used in CMIP5 called Representative Concentration Pathways, or RCPs. Figures A4a and A4b illustrate projections for GHG emissions and temperature under various SSPs. Here, it is important to note that global temperature projections for the near future are similar across different SSPs. The projections begin to diverge more meaningfully around 2050 (Figure A4b).



**Figure A4a.** SSP scenarios used by CMIP6 models for global CO<sub>2</sub> emissions by the end of this century. The scenarios used for CMIP5 (RCPs) are also shown.



**Figure A4b.** Historical and future temperature change from 1950-2100, relative to 1850-1900. After 2014, models are driven by the SSP scenarios indicated, with ranges shown for SSP1-2.6 and SSP3-7.0. The horizontal line shows temperature change that has occurred up to 1995-2014 (about +0.85°C).

## Future Climate Uncertainty

While we know the future climate will be different from the climate of the past, we cannot precisely predict what the future climate will look like. There are three main sources of uncertainty inherent in future climate data: natural climate variability, model uncertainty, and scenario uncertainty. In the following sections, we provide support for making decisions in the presence of scenario uncertainty.

- **Natural climate variability** (as discussed above) refers to climatic fluctuations that occur without any human influence (i.e., independent of GHG emissions). Natural climate variability is largely unpredictable and can mask or enhance human-induced climate change.
- **Model uncertainty** arises because models can only represent the climate and earth system to a certain degree. Although they are highly sophisticated tools, GCMs can differ from reality. Furthermore, not all models represent the system processes in the same way, nor do all include the same processes. To help address model uncertainty, it is best practice to use an ensemble (i.e., a set of multiple GCMs), to display a range of possible futures. PCIC uses an ensemble of 9 GCMs that are best suited to analyses focused on British Columbia.
- **Scenario uncertainty** arises because different emissions scenarios lead to different levels of climate response, and it is not possible to know what global emissions will be in the future. The emissions pathway of the future depends on a wide range of policy decisions and socioeconomic factors that are impossible to predict. To help address scenario uncertainty, it is best to evaluate future projections under more than one emissions pathway.



**Uncertainty should not stand in the way of action.**

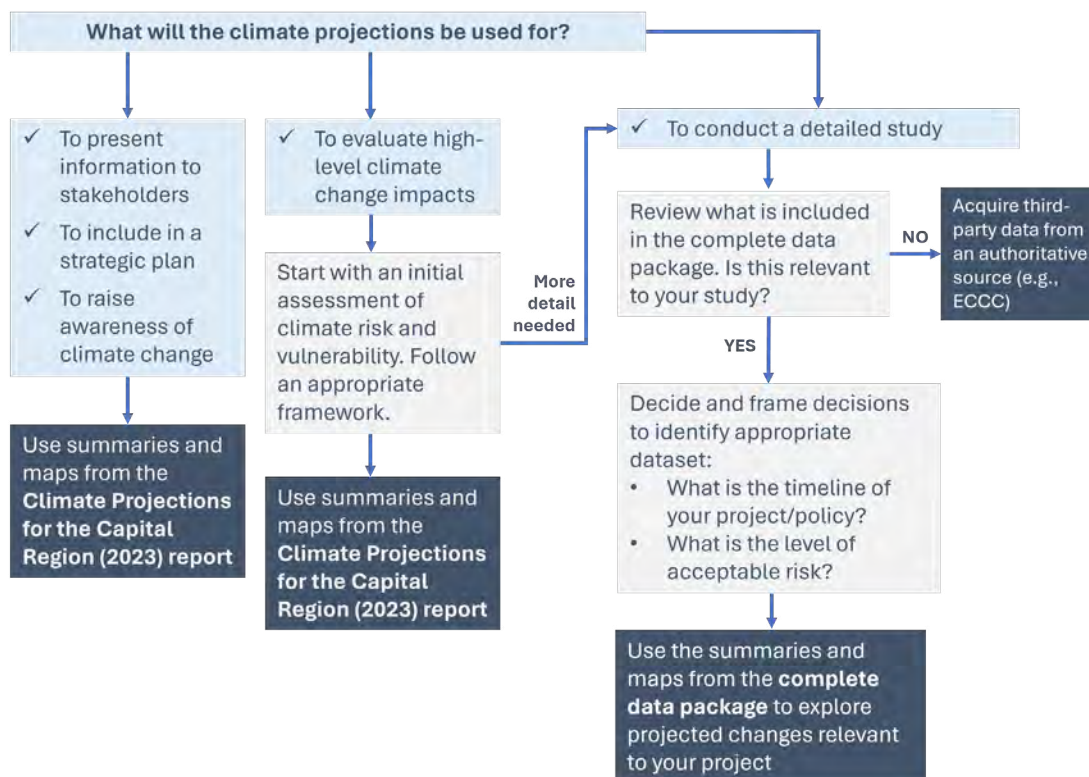
Decision makers should use climate projections as a guide to the future but should not discount the possibility of changes occurring outside the projected range when managing risk. In the following sections, we provide support for making decisions in the presence of scenario uncertainty.

# Appendix B

## WHAT DATA SHOULD I USE?

The decision tree shown in Figure B1 can help determine which data and information from this assessment might be most useful for a given application. Before using climate projections, it is important to do appropriate background reading, identify relevant stakeholders and determine the appropriate level of stakeholder engagement. Stakeholder engagement is important for ensuring that the projected changes are both meaningful and well-suited to your context.

**Users accessing the complete data package should reference the Data Descriptor Document.** Contact [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca) for more information.



**Figure B1.** Decision tree for using climate projections data. This decision tree has been adapted from the Victoria (Australia) Climate Projections 2019 Technical Report (Clarke et al., 2019).



## What is Provided in the Complete Data Package?

The Climate Projections for the Capital Region 2023 report highlights projected changes for a host of indices derived from temperature and precipitation under the highest emissions scenario (SSP5-8.5), mostly for the 2050s. The complete data package contains summary tables (Excel XLSX) and maps (PNG) for the following additional time periods, scenarios and sub-regional breakdowns:

### The capital region and four smaller sub-regions.

(see Figure B2 below)

- “Core/Peninsula” (Green)
- “Western Region” (Red)
- “Southern Gulf Islands” (Yellow) and
- “Greater Victoria Water Supply Region” (Blue)

### Four time periods.

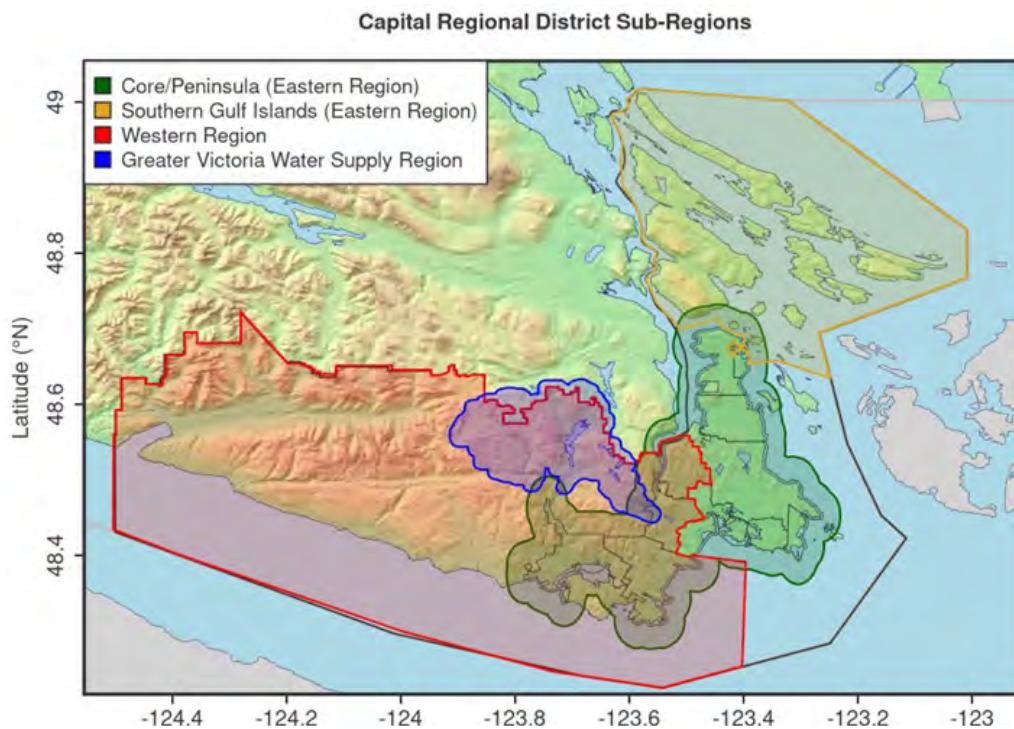
- 1981-2010 or “1990s” (baseline period)
- 2021-2050 or “2030s”
- 2041-2070 or “2050s”, and
- 2071-2100 or “2080s”,

### Three emissions scenarios.

- Low: SSP1-2.6
- Moderate: SSP2-4.5, and
- High: SSP5-8.5.

### 77 indices derived from temperature and precipitation. (see Appendix F for a complete list)

Gridded data (NetCDF) is also available for all 77 climate indices projected to the 2050s under a high emissions scenario (SSP5-8.5). Contact [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca) to access the complete data package and/or the gridded data.



**Figure B2.** The capital region and four sub-regions. Separate Excel files are available for each sub-region and for the region as a whole.

# Appendix C

## GUIDANCE FOR USING CLIMATE PROJECTIONS

### Key Messages

- ✓ Projections of future climate are complex, and you will likely need advice and guidance from experts in the field. Allow adequate time for consultation.
- ✓ The climate has always been naturally variable. This variability now occurs on top of greenhouse-gas/aerosol forced trends. Over shorter time scales, climate variability can mask long-term trends.
- ✓ Since we do not know what future global emissions will be, climate projections are produced for a number of possible scenarios. In the CMIP6 ensemble, near-term projections are similar and diverge more clearly by the middle of this century (e.g., the 2050s).
- ✓ This assessment provides downscaled climate projections for variables derived from temperature and precipitation only. Variables related to other climate-related hazards, such as sea level rise or windstorms, are not provided. For supplemental resources, see Appendix D: Further Resources
- ✓ While climate models are run under different emissions scenarios, there is no such thing as a 'most likely' scenario. Selecting an emissions scenario is highly context-dependent and will depend on considerations such as risk tolerance and the life cycle of your project or policy.
- ✓ Consider multiple climate variables or indices to get a more complete picture for different manifestations of change. Review annual and seasonal projections to get a sense of how projections vary depending on the time of year.
- ✓ In many cases, using only the median climate projections will not be appropriate. Ensure the ranges of projected change (10th and 90th percentiles) are adequately accounted for in your assessment. Do not entirely discount changes above or below the projected range when managing risk – especially for high-impact, low-likelihood events.

## Understanding Climate Risk

As shown in Figure C1, climate risk depends on the complex interaction between hazards affected by climate change and natural climate variability, exposure to these hazards, and the vulnerability of the exposed elements. For example, a hazard (e.g., extreme heat) may impact a community more due to its exposure (e.g., occurring in a densely populated area) and/or vulnerability (e.g., demographic factors influencing heat sensitivity).

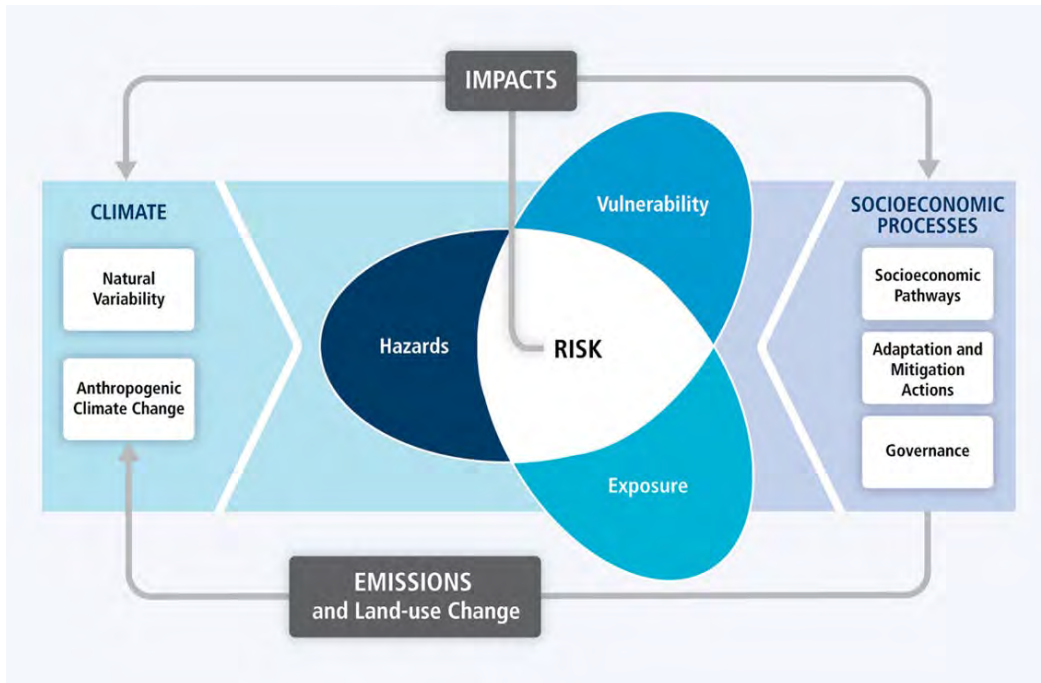
While future climate data can support the assessment of hazards affected by future climate change, there are different approaches to understanding climate risk. Decision-making about climate risk often involves a combination of top-down and bottom-up approaches.



**Top-down** approaches start with an analysis of potential climate change that can be used to guide actions and decisions.

**Bottom-up** approaches start with the project, policy or activity of interest and analyze the factors and conditions that impact the exposure, vulnerability and resilience of systems. These approaches look for pathways to reduce exposure and vulnerability while increasing the capacity to cope (irrespective of the future climate hazard).

Hence, **future climate data can be used to inform a top-down approach** to assessing climate risk.



**Figure C1.** Climate risk envisioned as the overlap of hazard, exposure, and vulnerability.<sup>2</sup>

<sup>2</sup>IPCC, 2014: Summary for policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B.

Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.



## Which Emissions Scenario(s) Should I Use?

Climate projections are generated by different climate models and using a range of emissions scenarios. Differences in the projections due to the use of different climate models reflect the fact that we still have an incomplete understanding of how the climate system functions, and differences due to the choice of emissions scenarios reflect the fact that we have only imperfect knowledge of how society, its land use practices, and its emissions may change in the future. Given these diverse sources of uncertainty, it is best to examine a range of possible futures as represented by different climate models and emissions scenarios.

To reduce climate model uncertainty, PCIC has selected a range of climate models that are best suited to regions in BC. Ultimately, deciding on which emissions scenario(s) to assess will depend on the context of your project or policy, including your risk tolerance and time horizon, as discussed next.

## Time Horizon

Users of climate projections should consider the time horizon, or life cycle, relevant to their project or policy before selecting a future scenario. This could be the expected lifetime of a given piece of infrastructure, or a policy that needs to be responsive to changing external conditions. As highlighted above in *Understanding Shared Socioeconomic Pathways*, in the near term – up to a few decades into the future – climate projections do not differ meaningfully across SSP scenarios. This is true at both the global regional scales. Hence, if there is a recurring opportunity to review a given decision every two to three decades, then the choice of emissions scenario may be less relevant. An example of a recurring decision might be the choice of paving material to use when repaving a roadway.

On the other hand, if an infrastructure element is expected to last 50 to 75 years, the choice of scenario becomes more critical because projected changes from different scenarios will differ substantially by the end-of-life of the structure. An example of a long-term infrastructure design decision might be determining the capacity of an upgraded storm sewer. Hence, planners and designers may be able to minimize the role of scenario uncertainty in adaptation planning by first determining the decision-making time-frame.

## Level of Acceptable Risk

Climate scientists can help practitioners and decision makers understand how climate-related hazards that affect the assets they are responsible for (i.e., systems, infrastructure, or policy) may change in the future. This requires dialog among practitioners, decision makers and climate scientists to understand and describe the potential impacts of projected climate change under different emissions scenarios. Because climate scientists are not experts on how risk to assets will materialize, it remains the responsibility of practitioners and decision makers to manage future climate-related risks to their assets.

When assessing future scenarios, decision makers should consider four questions:

1. “What components of my project are vulnerable to climate change?”
2. “How likely is it that society will follow a future emissions pathway that will intensify the hazards to which my assets will be exposed?”
3. “What level of risk am I comfortable assuming?”
4. “What is the trade-off between risk and cost?”

Regardless of the rationale used, understanding the level of risk that is appropriate to your work is complex. It will undoubtedly require engagement with diverse partners and stakeholder groups to understand the range of potential impacts.

## Scenario Choice

Ideally, public assets should be managed in a way that limits their vulnerability to plausible future hazards. Climate science has not yet ruled out the plausibility of any of the main socio-economic pathway scenarios that were considered in the most recent IPCC assessment. The choice of scenario will depend critically on the climate hazards that would affect the asset of interest. This is because some hazards will likely decline, such as extreme snow loads on buildings that could cause building collapse, while others, related to heat stress, intense rainfall, and flash flooding, will increase. If an asset is affected by both decreasing and increasing hazards, then the approach that would most completely limit vulnerability to future hazards would involve using a no change (historical climate) scenario for declining hazards, and a rapid change, high emissions scenario (e.g., SSP5-8.5) for increasing hazards.

## Tips for Using Climate Data

### ✓ View multiple variables (indices) within each category

To get a more complete understanding of projected changes, users should consider multiple climate variables. For example, if you want to know how precipitation will change in your region, review both a frequency-based variable (e.g., Number of Wet Days > 20 mm) and a volume-based variable (e.g., Total Precipitation). The Hazard Reference Tables (Appendix E) can help users identify which climate variables may be best suited to a particular context or application.

### ✓ Review both annual and seasonal data

Annual mean changes can mask important seasonal behaviour. For example, a small annual mean precipitation projection might contain a substantial reduction in the summer along with a projected increase in the fall, winter, or spring. Therefore, users should assess both annual and seasonal projections for certain climate variables.

### ✓ Select a relevant time period

The complete data package offers projections for the “2030s” (2021-2050), “2050s” (2041-2070) and “2080s” (2071-2100). As highlighted above, users should select the period that is most appropriate to the entire life cycle of their project or policy.

### ✓ Determine an appropriate emissions scenario(s)

There is no right or wrong emissions scenario to use in decision-making: all scenarios represent possible futures and decision-making is highly context dependent. Selecting a scenario requires consideration of risk tolerance, sensitivity to climate impacts and extreme events, the time horizon of the project, and more. It can be useful to remember that planning for a high emissions scenario can help ensure that adaptation measures are resilient for a longer period of time if, in fact, a lower emissions scenario were to play out.

### ✓ Examine both means and extremes

The median, 10th percentile, and 90th percentile values have been provided in all summary tables for this assessment. Depending on the application, one, two or all three of these values may be important. For instance, if one were designing a building for general use (e.g., retail space, detached home) with an anticipated lifetime of 50 years or so, then the change in the median of Cooling Degree Days (CDDcool18C) under SSP5-8.5 might be appropriate to consider. Alternatively, if the building were classified as critical, long-lived infrastructure (e.g., a hospital, or power plant) then it might be more appropriate to design to the 90th percentile value for that climate index, to capture the upper range of possibility.

# Appendix D

## FURTHER RESOURCES

There are a growing number of guidance materials, learning resources, and data tools available to support the use of climate projections for regional assessments. Below is a non-exhaustive list of open access resources suited to a broad range of users. For additional guidance, contact PCIC ([climate@uvic.ca](mailto:climate@uvic.ca)) or the CRD Climate Action Program ([climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca)).

### Additional Climate Projections Tools and Resources

|   |
|---|
| <b>ClimateData.ca</b>   |
| User-friendly tool for exploring climate projections and related data   |
| Developed and maintained by the Canadian Centre for Climate Services, a team of information and outreach specialists at Environment and Climate Change Canada (ECCC), ClimateData.ca is an online, user-friendly data portal providing future climate projections for regions across Canada. Users can explore gridded data at small scales or aggregated by watershed, census subdivision, or health region. ClimateData.ca provides plain language descriptions for all climate variables and has various options for visualizing and analyzing climate data. Temperature and precipitation-based variables (the same as those provided by PCIC) as well as humidex, relative sea level change and climate change-scaled IDF data are available.<br><br>ClimateData.ca also includes a comprehensive learning zone ( <a href="http://climatedata.ca/learn">climatedata.ca/learn</a> ) that is regularly updated to support climate data users in a variety of applications, including some sector-specific information, as well as a Climate Services Support Desk for general or technical inquiries. The site is continuously evolving with more content and features in development. |
| <b>PCIC Climate Explorer</b>  |
| <i>Useful for intermediate or advanced users analyzing a specific location</i>  |
| PCIC Climate Explorer (PCEX) is an online map-based tool for viewing gridded historical climate data and future projections at any location of interest across Canada. Users can select an arbitrary region on the map, compare climate variables for that region, and download the results in Excel formats. Additional variables for extreme precipitation and streamflow are also available.   |
| <b>ClimateAtlas.ca</b>  |
| <i>Useful for creating communications materials and learning more about climate adaptation</i>  |
| ClimateAtlas.ca is an interactive tool combining climate projections (again using PCIC's data), mapping, and storytelling to inspire local, regional, and national action and solutions. Users can explore videos, articles, educator resources, and various topic including Indigenous knowledges, agriculture, and health.  |



### Spatial Analogues Tool\* (ClimateData.ca)

*Useful for visualizing the future climate at a target location*

With this tool, starting with a target city of interest\*\*, users can search for other cities whose historical climate closely matches the future-projected climate of the target city. Users can search for spatial analogues under a low or high emissions scenario and considering up to four different climate indices. For example, one combination of indices suggests that by the 2050s, Quebec City may have a climate similar to present-day Boston. By examining how Boston has adapted to its current climate, planners in Quebec City might gain insights on how to prepare and adapt to climate change.

\*This tool is a beta app, meaning it is a new tool being carefully monitored and is still under development.

\*\*Target cities for British Columbia are presently limited to: Victoria, Vancouver, Abbotsford, Kelowna, and Prince George.

## Infrastructure Design Resources

### PCIC Design Value Explorer (DVE)

*Engineering design professionals can access future-projected climatic design values*

The DVE is an online, open-access technical tool for assessing 19 climate design values based on observed data and projections of how they may change in the future. It provides engineers, architects, planners, and other professionals with quantitative, fine-scale historical and future-projected climate information for designing buildings and infrastructure.

### PCIC Future-Shifted Weather Files

*Energy Modelers can access future-projected weather files*

Weather data adjusted for climate change has been produced for three time periods (2020s, 2050s, and 2080s) using the high emissions pathway RCP8.5 (CMIP5). Data are available for several hundred weather stations across Canada. Future-shifted weather files can help building designers simulate building performance under a changing climate, supporting resilient design. Further work is underway to update the weather files for CMIP6-SSPs and to create weather files that capture both mean change and extreme events.

### CSA PLUS 4013-19: Development, interpretation, and use of rainfall intensity-duration-frequency (IDF) information: Guideline for Canadian water resource practitioners\*

*Guidance for Canadian water resource practitioners to better incorporate climate change into IDF information*

Technical guidance from the Canadian Standards Association (CSA)—informed by scientists at ECCC and other subject matter experts—for the development, interpretation, and use of rainfall intensity-duration-frequency (IDF) information. Chapters 5 and 6 include guidance for how to incorporate climate change into the formulation and application of IDF information.

\*Access fee required

## Short-Duration Rainfall IDF Data (ClimateData.ca)

*Users can explore historical and climate change-scaled IDF information for weather stations across Canada*

ClimateData.ca offers easy access to historical short-duration rainfall IDF data (from 1 to 24 hours) and projected rainfall amounts under low, moderate, and high emissions scenarios at locations across Canada (12 locations within the capital region). This IDF information is consistent with the above-mentioned CSA guidance. Users can download a zip file containing all the historical and future estimated values.

In addition, the Learning Zone on ClimateData.ca has a topic dedicated to using IDF rainfall data to account for a changing climate. For more information on this product and about designing future-ready buildings, visit [ClimateData.ca/learn/](https://ClimateData.ca/learn/)


# Appendix E

## HAZARD REFERENCE TABLES

The Hazard Reference Tables help users identify which climate variables included in the complete data package may be best suited to a particular context or application. Users should use the short name (left column) to navigate to the appropriate variable in the complete data package.

| Seasonal Patterns and Climate Change   |  |
|--|--|
| <ul style="list-style-type: none"> <li>✓ Increasing temperatures year-round</li> <li>✓ Fewer frost days and a longer growing season</li> <li>✓ Shifting heating and cooling demands</li> </ul> <p><b>Key sectors:</b> Agriculture, Biodiversity, Parks, Infrastructure</p> |  |
|   |  |
| Temperature  |  |
| <b>TX</b>  | Daytime high temperature, averaged over all days in a year or season   |
| <b>TM</b>  | Mean daily temperature, averaged over all days in a year or season   |
| <b>TN</b>  | Daytime low temperature, averaged over all days in a year or season  |
| Seasonal   |  |
| <b>FD</b><br>Frost Days  | Number of days in a year when the minimum temperature is below 0°C   |
| <b>ID</b><br>Ice Days  | Number of days in a year when the maximum temperature is below 0°C   |
| <b>GSL</b><br>Growing Season Length  | Number of days between: (i) the first span of 6 or more days in the year with a daily minimum temperature > 5°C and (ii) the first span after July 1st of 6 or more days with a daily minimum temperature < 5°C.   |
| <b>WSDI</b><br>Warm Spells   | A “warm spell” is defined as 6 or more consecutive days when the daily maximum temperature exceeds the 90th percentile value of the historical baseline. This index measures the number of days in a typical year that a warm spell occurs. (A warm spell can occur at any time of year).      |
| <b>CSDI</b><br>Cold Spells   | A “cold spell” is defined as 6 or more consecutive days when the daily minimum temperature is less than the 10th percentile value of the historical baseline. This index measures the number of days in a typical year that a cold spell occurs. (A cold spell can occur at any time of year). |
| Design   |  |
| <b>HDDheat18C</b><br>Heating Degree Days   | Number of degree days below 18°C in a year. A rough estimate for the energy demand needed to heat a building in a typical year.  |
| <b>CDDcold18C</b><br>Cooling Degree Days   | Number of degree days above 18°C in a year. A rough estimate for the energy demand needed to cool a building in a typical year.  |



| <b>Increasing Temperatures and Extreme Heat</b>   |  |
|---|--|
| <ul style="list-style-type: none"> <li>✓ Hotter daytime temperatures</li> <li>✓ Warmer nighttime temperatures</li> <li>✓ Heat waves becoming hotter and more frequent</li> </ul> <p><b>Key sectors:</b> Emergency Management, Health, Biodiversity, Watershed</p> |  |
|    |  |
| Daytime Temperatures  |  |
| <b>TX</b>   | Daytime high temperature, averaged over all days in a year or season   |
| <b>TXx</b>  | Hottest daytime high temperature in a year or season   |
| <b>SU</b><br>Summer Days  | Number of days in a typical year when the daytime high is above 25°C   |
| <b>SU30</b><br>Hot Summer Days  | Number of days in a typical year when the daytime high is above 30°C   |
| Nighttime Temperatures  |  |
| <b>TN</b>   | Daily minimum temperature in a typical year or season  |
| <b>TNx</b>  | Warmest nighttime low temperature in a typical year or season  |
| <b>TR16C</b><br>Temperate Nights  | Number of days in a year when the nighttime low stays above 16°C   |
| <b>TR</b><br>Tropical Nights  | Number of days in a year when the nighttime low stays above 20°C   |
| Heat Extremes   |  |
| <b>HWD</b><br>Heat Wave Days  | Number of days in a typical year classified as a “heat wave”   |
| <b>HWN</b><br>Heatwave Number   | Number of distinct heat wave events in a typical year  |
| <b>HWXL</b><br>Heatwave Length  | Length (in days) of the longest heat wave in a typical year  |
| <b>TXH</b><br>Heatwave Intensity (Day)  | Daytime high temperature averaged across all heat waves in a typical year  |
| <b>TNH</b><br>Heatwave Intensity (Night)  | Nighttime low temperature averaged across all heat waves in a typical year                                       |
| <b>TXHX</b>   | Daytime high temperature during the most extreme heat wave in a year   |
| <b>TNHX</b>   | Nighttime low temperature during the most extreme heat wave in a year  |
| <b>Return Periods</b><br>(various)  | The data package provides return levels and return period changes for the 5-, 10-, 20-, and 30-year Hottest Day. |

| Precipitation                      |  |
|------------------------------------|--|
| <b>PR</b><br>Total Precipitation   | Total precipitation in a typical year or season  |
| <b>Rain</b><br>Total Rainfall      | Total rainfall in a typical year or season   |
| <b>Snow</b><br>Summer Days         | Total snowfall in a typical year or season   |
| Rainfall Extremes                  |  |
| <b>RX1DAY</b>                      | Maximum amount of precipitation (in mm) occurring in a single day in a typical year  |
| <b>RX5DAY</b>                      | Maximum amount of precipitation (in mm) occurring over a 5-day period in a typical year  |
| <b>R10MM</b>                       | Number of days in a typical year that receive more than 10mm of total precipitation  |
| <b>R20MM</b>                       | Number of days in a typical year that receive more than 20mm of total precipitation  |
| <b>R95P / R95DAYS</b>              | Amount of precipitation over the year that exceeds the 95th percentile of historical (baseline) daily precipitation / Number of days in a typical year that exceed this amount.                                    |
| <b>R99P / R99DAYS</b>              | Amount of precipitation over the year that exceeds the 99th percentile of historical (baseline) daily precipitation / Number of days in a typical year that exceed this amount.                                    |
| <b>Return Periods</b><br>(Various) | The data package provides 5-, 10-, 20-, 30-, and 50-year return periods for annual wettest 1-, 2-, and 5-day rainfall events. It also provides changes to rainfall return periods for an event of given magnitude. |

### Extreme Precipitation and Flooding

In this data package, there are no direct indices for flooding.  
Rainfall extremes may trigger flooding under certain circumstances.

- ✓ More precipitation occurring over short time periods
- ✓ More days with heavy rainfall




**Key sectors:** Public Works/Engineering, Infrastructure, Biodiversity, Health, Agriculture, Watershed

**Drought**

*In this data package, there are no direct drought variables. Hotter temperatures, less rainfall and reduced snowpack may lead to drought conditions in the warmer months.*

**Key sectors:** Agriculture, Biodiversity, Health, Watershed



**Precipitation**

|   |  |
|---|--|
| <b>PR – Summer</b><br>Total Precipitation in Summer | Total precipitation in a typical summer (may also be important to consider PR for spring and fall)   |
| <b>SNOW</b><br>Total Snowfall                       | Total snowfall (fall-winter-spring)  |
| <b>CDD</b><br>Consecutive Dry Days                  | Number of days comprising the longest “dry spell” in a typical year. Dry spells are defined as consecutive days with less than 1mm of total precipitation. |

**Temperature**

|                          |  |
|--------------------------|--|
| <b>TX</b>                | Daytime high temperature in a typical year or season                 |
| <b>TXx</b>               | Hottest daytime high temperature in a typical year or season         |
| <b>SU</b><br>Summer Days | Number of days in a typical year when the daytime high is above 25°C |

**Wildfire and Air Quality**

*In this data package, there are no direct wildfire variables. Hotter temperatures and less rainfall in the warmer months may lead to more favourable conditions for wildfire.*

**Key Sectors:** Health, Biodiversity, Infrastructure, Agriculture



Variables listed under Drought (see above) can also be considered as informative for Wildfire. Additional variables such as humidity, wind speed, and wind direction must also be considered in order to establish favourable conditions for Wildfire. The Canadian Forest Service has analyzed such historical data to develop Fire Weather Normals, which provide insight into how “fire weather” varies spatially and throughout the year. See <https://cwfis.cfs.nrcan.gc.ca/ha/fwnormals> for more.

Future-projected temperature and precipitation conditions that may be favourable to increased incidence of Wildfire may be obtained from other regional climate projections reports in BC, including:

- Climate Projections for BC Northeast Region
- Climate Projections for the Okanagan Region
- Climate Projections for the Cowichan Valley Regional District
- Climate Projections for Metro Vancouver



# Appendix F

## COMPLETE LIST OF CLIMATE INDICES

| Name                              | Variable                                      | Definition   | Units      |
|-----------------------------------|---|--|------------|
| <b>Standard</b>                   |   |  |            |
| <b>PR</b>                         | Precipitation                                 | Annual/seasonal precipitation totals   | mm         |
| <b>RAIN</b>                       | Rainfall                                      | Annual/seasonal rainfall portion of precipitation using temperature-based rain-snow partitioning   | mm         |
| <b>SNOW</b>                       | Snowfall                                      | Annual/seasonal snowfall (snow water equivalent) portion of precipitation  | mm (H2Oeq) |
| <b>TM</b>                         | Daily Average Temperature                     | Annual/seasonal daily average temperature  | °C         |
| <b>TX</b>                         | Daily Maximum Temperature                     | Annual/seasonal average daily maximum temperature  | °C         |
| <b>TN</b>                         | Daily Minimum Temperature (usually overnight) | Annual/seasonal average daily minimum temperature  | °C         |
| Name                              | Variable                                      | Definition   | Units      |
| <b>CLIMDEX: Temperature Based</b> |   |  |            |
| <b>TXX</b>                        | Maximum TX                                    | Annual/seasonal maximum of TX  | °C         |
| <b>TNN</b>                        | Minimum TN                                    | Annual/seasonal minimum of TN  | °C         |
| <b>TXN</b>                        | Minimum TX                                    | Annual/seasonal minimum of TX  | °C         |
| <b>TNX</b>                        | Maximum TN                                    | Annual/seasonal maximum of TN  | °C         |
| <b>TX90P</b>                      | Hot Days                                      | Annual percentage of days with TX > 90th historical percentile   | %          |
| <b>TX10P</b>                      | Cool Days                                     | Annual percentage of days with TX < 10th historical percentile   | %          |
| <b>TN90P</b>                      | Warm Nights                                   | Annual percentage of days with TN > 90th historical percentile   | %          |
| <b>TN10P</b>                      | Cold Nights                                   | Annual percentage of days with TN < 10th historical percentile   | %          |
| <b>DTR</b>                        | Diurnal Temperature Range                     | Annual/seasonal diurnal temperature range, TX – TN   | °C         |
| <b>SU</b>                         | Summer Days                                   | Annual number of days with TX > 25 °C  | days       |
| <b>SU30</b>                       | Hot Summer Days                               | Annual number of days with TX > 30 °C  | days       |
| <b>TR</b>                         | Tropical Nights                               | Annual number of days with TN > 20 °C  | days       |
| <b>TR16C</b>                      | Temperate Nights                              | Annual number of days with TN > 16 °C  | days       |
| <b>ID</b>                         | Ice Days                                      | Annual number of days with TX < 0 °C   | days       |
| <b>FD</b>                         | Frost Days                                    | Annual number of days with TN < 0 °C   | days       |
| <b>CSDI</b>                       | Cold Spells                                   | Annual count of days with at least 6 consecutive days when TN < 10th historical percentile   | days       |
| <b>WSDI</b>                       | Warm Spells                                   | Annual count of days with at least 6 consecutive days when TX > 90th historical percentile   | days       |
| <b>GSL</b>                        | Growing Season Length                         | Growing season length (number of days between first span of at least 6 days with TM >5°C and first span after July 1st of 6 days with TM <5°C) | days       |

| Name                                | Variable                                   | Definition   | Units   |
|-------------------------------------|--|--|---------|
| <b>CLIMDEX: Precipitation-Based</b> |  |  |         |
| <b>CDD</b>                          | Consecutive Dry Days                       | Annual maximum length of consecutive dry days (PR < 1 mm)  | days    |
| <b>CWD</b>                          | Consecutive Wet Days                       | Annual maximum length of consecutive wet days (PR ≥ 1 mm)  | days    |
| <b>SDII</b>                         | Simple Daily Precipitation Intensity Index | Annual average PR on days with PR ≥ 1 mm   | mm      |
| <b>R1MM</b>                         | Precipitation ≥ 1 mm                       | Annual count of days with PR ≥ 1 mm  | days    |
| <b>R10MM</b>                        | Precipitation ≥ 10 mm                      | Annual count of days with PR ≥ 10 mm   | days    |
| <b>R20MM</b>                        | Precipitation ≥ 20 mm                      | Annual count of days with PR ≥ 20 mm   | days    |
| <b>RX1DAY</b>                       | Maximum 1-Day PR                           | Annual/seasonal maximum 1-day PR   | mm      |
| <b>RX2DAY</b>                       | Maximum 2-Day PR                           | Annual/seasonal maximum 2-day PR   | mm      |
| <b>RX5DAY</b>                       | Maximum 5-Day PR                           | Annual/seasonal maximum 5-day PR   | mm      |
| <b>RN1DAY</b>                       | Maximum 1-Day RAIN                         | Annual/seasonal maximum 1-day rainfall   | mm      |
| <b>RN2DAY</b>                       | Maximum 2-Day RAIN                         | Annual/seasonal maximum 2-day rainfall   | mm      |
| <b>RN5DAY</b>                       | Maximum 5-Day RAIN                         | Annual/seasonal maximum 5-day rainfall   | mm      |
| <b>R95P</b>                         | Very Wet Day PR                            | Annual total PR when PR > 95th percentile of daily PR in historical period   | mm      |
| <b>R95DAYS</b>                      | Very Wet Days                              | Annual number of days when PR > 95th percentile of daily PR in historical period   | days    |
| <b>R99P</b>                         | Extreme Wet Day PR                         | Annual total PR when PR > 99th percentile of daily PR in historical period   | mm      |
| <b>R99DAYS</b>                      | Extreme Wet Days                           | Annual number of days when PR > 99th percentile of daily PR in historical period   | days    |
| Name                                | Variable                                   | Definition   | Units   |
| <b>Degree Days</b>                  |  |  |         |
| <b>CDDcold18C</b>                   | Cooling Degree Days                        | Annual, cumulative TM difference above 18 °C   | °C-days |
| <b>GDDgrow5C</b>                    | Growing Degree Days                        | Annual, cumulative TM difference above 5 °C  | °C-days |
| <b>HDDheat18C</b>                   | Heating Degree Days                        | Annual, cumulative TM difference below 18 °C   | °C-days |
| <b>FDDfreeze0C</b>                  | Freezing Degree Days                       | Annual, cumulative TM difference below 0 °C  | °C-days |
| Name                                | Variable                                   | Definition   | Units   |
| <b>Heatwave Indices</b>             |  |  |         |
| <b>HWD</b>                          | Heatwave (HW) days                         | Annual count of HW days, where a HW is defined as both TX and TN exceeding: 1) their 95th percentiles (historical), AND; 2) BC HARS thresholds <sup>3</sup> for at least 2 consecutive days. | days    |
| <b>HWN</b>                          | HW number                                  | Annual number of distinct HWs  | #       |
| <b>HWXL</b>                         | HW duration                                | Annual maximum HW length   | days    |
| <b>TNH</b>                          | HW intensity (night)                       | Average TN over all HWs in a year  | °C      |
| <b>TXH</b>                          | HW intensity (day)                         | Average TX over all HWs in a year  | °C      |
| <b>TNHX</b>                         | Maximum TNH                                | Average TN during most extreme HW in a year  | °C      |
| <b>TXHX</b>                         | Minimum TNH                                | Average TX during most extreme HW in a year  | °C      |
| <b>HWDD</b>                         | HW degree days                             | Annual, cumulative TM difference above HW threshold  | °C-days |

<sup>3</sup> The lower threshold temperatures used in our HW definition, which is intended for use throughout BC, are TX = 28°C and TN = 13°C. These are the lowest temperatures found in any region of the map in Figure 3, page 14 of

the 2023 report, BC Provincial Heat Alert and Response System (BC HARS): 2023, May 2023. Available at: <http://www.bccdc.ca/health-professionals/professional-resources/heat-event-response-planning>.

| Name                 | Variable                       | Definition                     | Units |
|----------------------|--------------------------------|--------------------------------|-------|
| <b>Return Levels</b> |                                |                                |       |
| <b>TX_RP5</b>        | 5-Year return level of TX      | 5-Year return level of TX      | °C    |
| <b>TX_RP10</b>       | 10-Year return level of TX     | 10-Year return level of TX     | °C    |
| <b>TX_RP20</b>       | 20-Year return level of TX     | 20-Year return level of TX     | °C    |
| <b>TX_RP25</b>       | 25-Year return level of TX     | 25-Year return level of TX     | °C    |
| <b>TX_RP30</b>       | 30-Year return level of TX     | 30-Year return level of TX     | °C    |
| <b>TN_RP5</b>        | 5-Year return level of TN      | 5-Year return level of TN      | °C    |
| <b>TN_RP10</b>       | 10-Year return level of TN     | 10-Year return level of TN     | °C    |
| <b>TN_RP20</b>       | 20-Year return level of TN     | 20-Year return level of TN     | °C    |
| <b>TN_RP25</b>       | 25-Year return level of TN     | 25-Year return level of TN     | °C    |
| <b>TN_RP30</b>       | 30-Year return level of TN     | 30-Year return level of TN     | °C    |
| <b>RN1_RP5</b>       | 5-Year return level of RN1DAY  | 5-Year return level of RN1DAY  | mm    |
| <b>RN1_RP10</b>      | 10-Year return level of RN1DAY | 10-Year return level of RN1DAY | mm    |
| <b>RN1_RP20</b>      | 20-Year return level of RN1DAY | 20-Year return level of RN1DAY | mm    |
| <b>RN1_RP30</b>      | 30-Year return level of RN1DAY | 30-Year return level of RN1DAY | mm    |
| <b>RN1_RP50</b>      | 50-Year return level of RN1DAY | 50-Year return level of RN1DAY | mm    |
| <b>RN2_RP5</b>       | 5-Year return level of RN2DAY  | 5-Year return level of RN2DAY  | mm    |
| <b>RN2_RP10</b>      | 10-Year return level of RN2DAY | 10-Year return level of RN2DAY | mm    |
| <b>RN2_RP20</b>      | 20-Year return level of RN2DAY | 20-Year return level of RN2DAY | mm    |
| <b>RN2_RP30</b>      | 30-Year return level of RN2DAY | 30-Year return level of RN2DAY | mm    |
| <b>RN2_RP50</b>      | 50-Year return level of RN2DAY | 50-Year return level of RN2DAY | mm    |
| <b>RN5_RP5</b>       | 5-Year return level of RN5DAY  | 5-Year return level of RN5DAY  | mm    |
| <b>RN5_RP10</b>      | 10-Year return level of RN5DAY | 10-Year return level of RN5DAY | mm    |
| <b>RN5_RP20</b>      | 20-Year return level of RN5DAY | 20-Year return level of RN5DAY | mm    |
| <b>RN5_RP30</b>      | 30-Year return level of RN5DAY | 30-Year return level of RN5DAY | mm    |
| <b>RN5_RP50</b>      | 50-Year return level of RN5DAY | 50-Year return level of RN5DAY | mm    |



## REVISIONS FROM CONSULTANT

### **TO CLIMATE PROJECTIONS FOR THE CAPITAL REGION REPORT – 2024 after it was approved by CRD Environmental Services Committee on March 20, 2024**

1. Page 2, Executive Summary, 3<sup>rd</sup> paragraph:  
By the 2050s, the capital region can expect the number of summer days exceeding 25°C to triple, going from an average of ~~12~~ 10 days per year to ~~around 40~~ 32 days per year. Nighttime temperatures in the summer will also increase. Nights where the temperature stays above 16°C (the lower threshold for heat alerts for Southern Vancouver Island) are projected to occur ~~up to 29 times per year by mid-century~~ around 8 times per year.
2. Page 12, Section 3.1 under *Projections*:  
In the Past, winter daytime high temperatures in the region averaged around ~~7~~ 6°C, while winter nighttime low temperatures averaged around ~~1.7~~ 1°C. The median future-projected TX increases to around ~~9~~ 8°C by the 2050s and to ~~11~~ 9.5°C by the 2080s. The median future-projected TN reaches around ~~-4.3~~ °C by the 2050s and to ~~5.5~~ 4.5°C by the 2080s.
3. Page 23, Table 5: the units in the first row have been corrected from “°C” to “days”.
4. Page 25:
  - The photo has been changed to better reflect the Heat Degree Days indicator.
  - Table 6: the units in the first row have been corrected from “°C” to “°C-days” in columns one, two and three and from “°C” to “%” in columns four and five.
5. Page 27, Table 7: the unit in the first column has been corrected from “°C” to “days”.
6. Page 29:
  - The photo has been changed to better reflect the Cooling Degree Days indicator.
  - In Table 8, the units in the first row have been changed from “deg-days” to “°C-days” for consistency with previous tables.

# Climate Projections for the Capital Region (2024)

Nikki Elliott, Manager, Climate Action Programs  
March 20, 2024



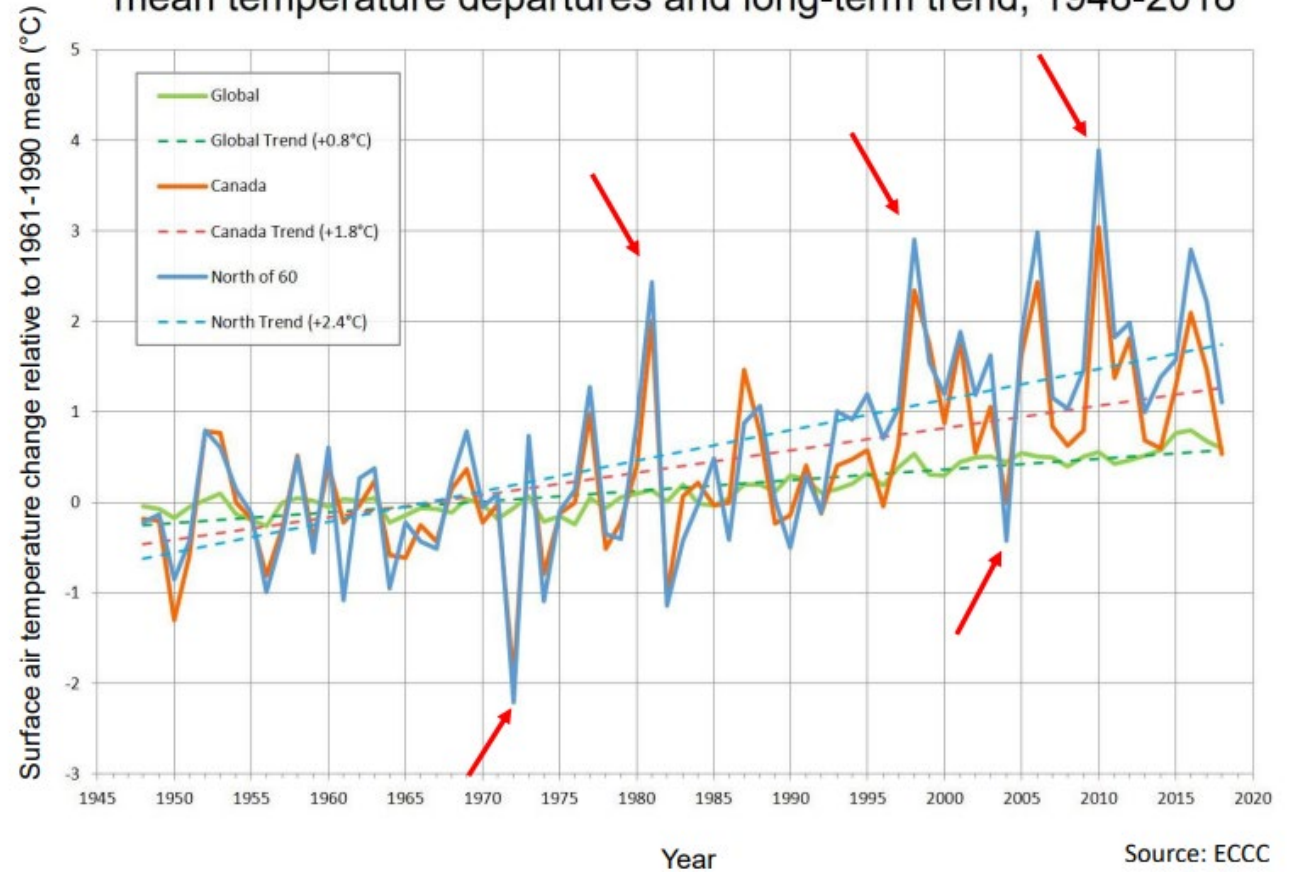
# Climate Change Trends

Climate change is both:

(1) Changes in average conditions over long periods of time, and

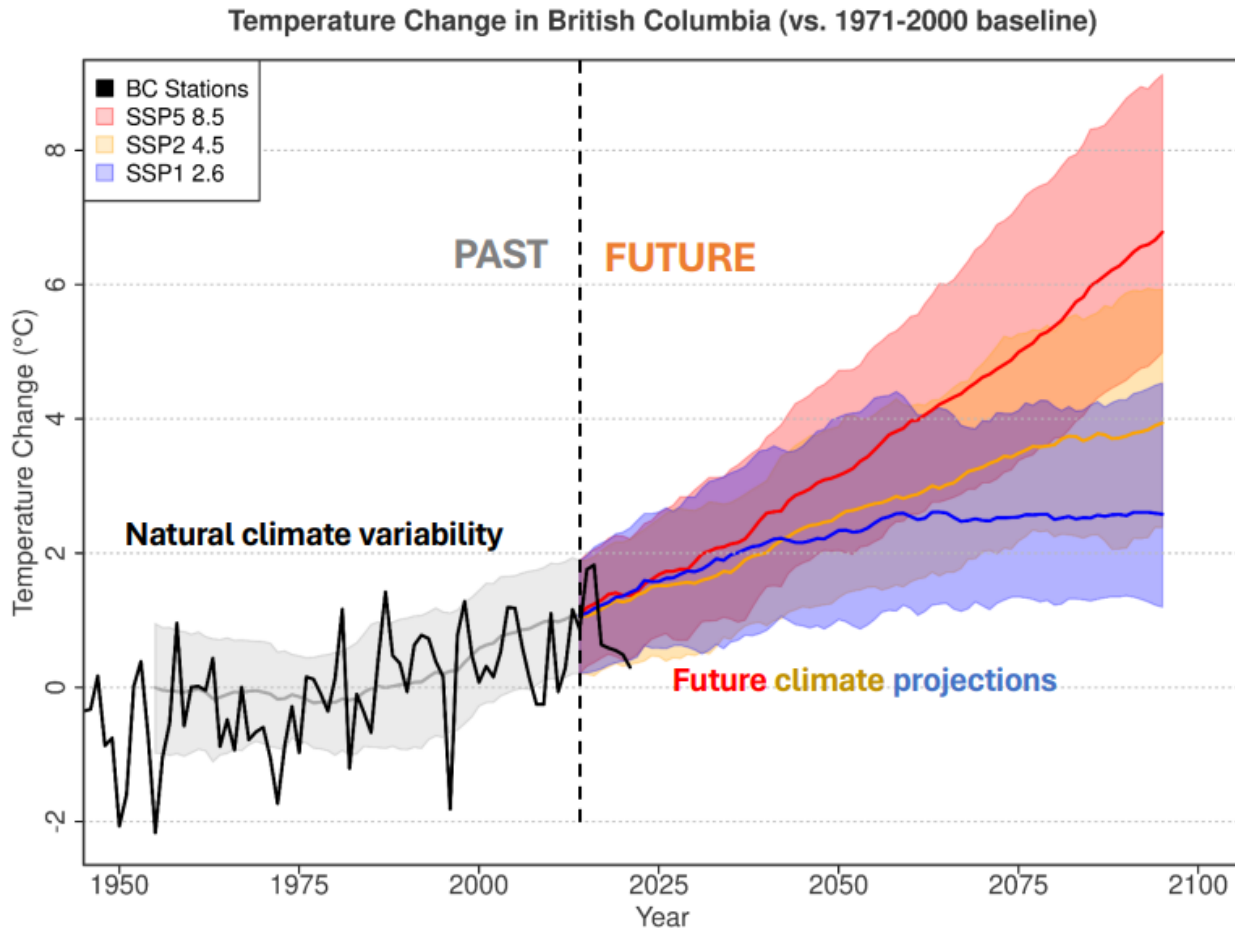
(2) Changes in the frequency and intensity of extreme events

Annual Global, National, and Northern Canada mean temperature departures and long-term trend, 1948-2018





# Future Warming in BC



Climate projections are simulations of the future climate based on greenhouse gas 'scenarios'

Source: PCIC (2024)

# Update Purpose

- Provide updated climate projections for the 2050s and 2080s
- Translate new global climate change projections to the regional and local scale
- Interpret what the projections imply for capital region
- Support and guide local planning and build local government staff capacity
- Provide a foundation of understanding for future, impacts-centered work

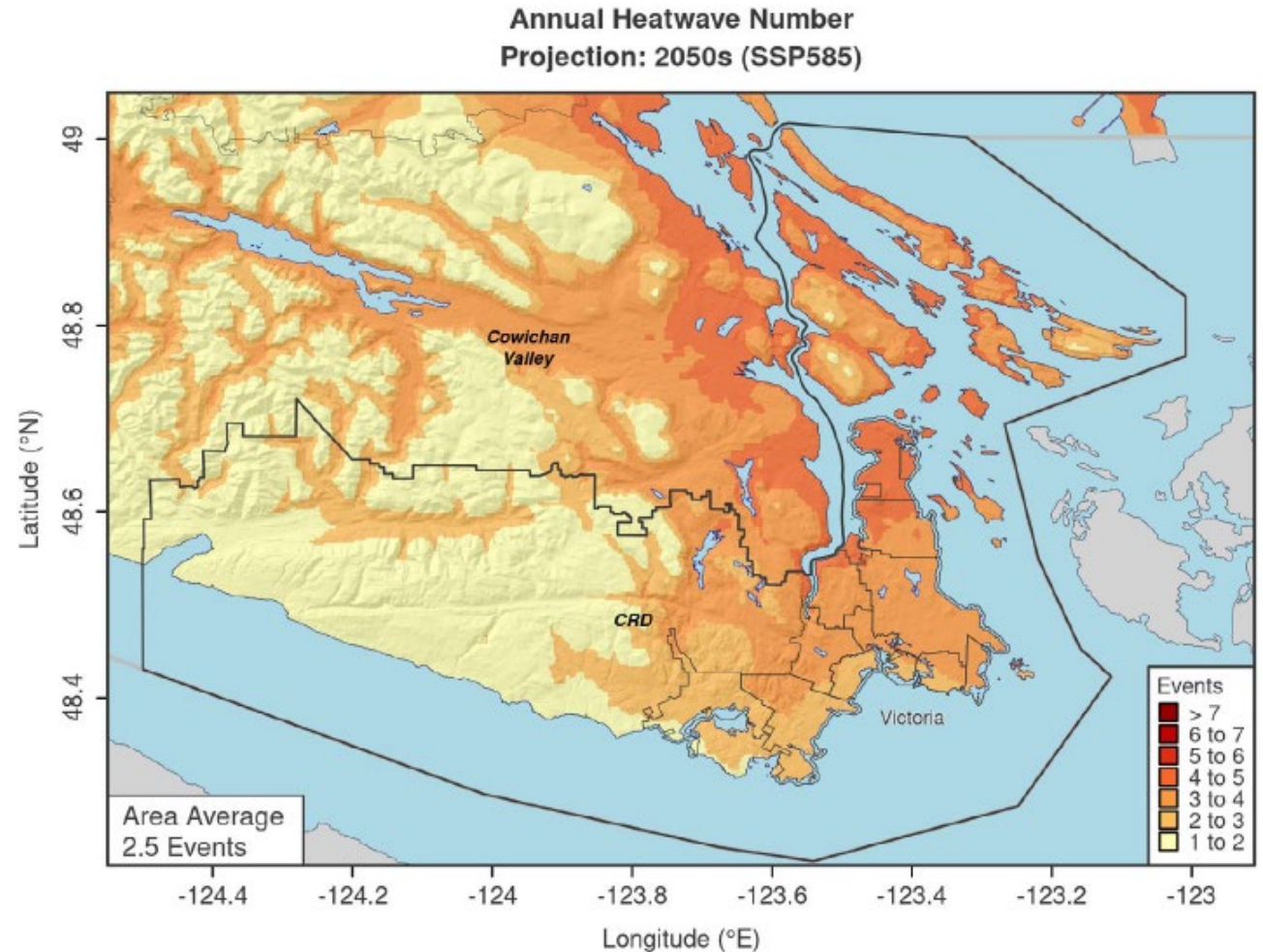


## Climate Projections for the Capital Region

2024

## New in 2024

- ✓ Updated modelling
- ✓ New indices for extreme heat
- ✓ Updated 'Regional Impacts' informed by local government staff
- ✓ New guidance section to support users
- ✓ GIS layers



**Figure 15b.** Projected number of annual heatwaves in the 2050s.



# What about other climate variables?

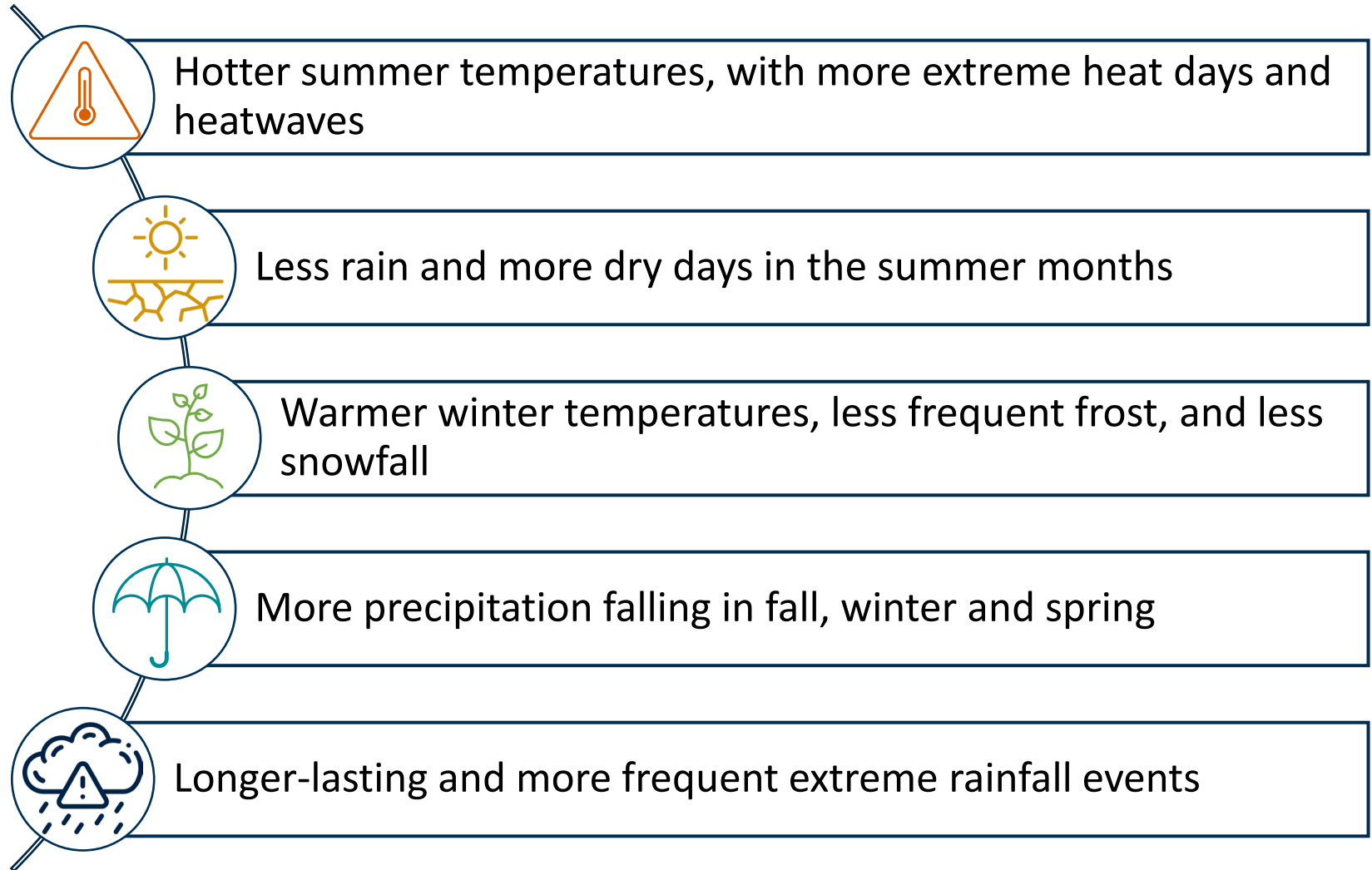
## Climate projections

|                   |  |  |
|-------------------|--|--|
| High confidence   | Temperature, Extreme Heat                  | <ul style="list-style-type: none"> <li>Hot Days</li> <li>Days above 25°C, 30°C</li> <li>Maximum Temperature</li> </ul>     |
| Medium confidence | Precipitation                              | <ul style="list-style-type: none"> <li>Wet Days</li> <li>Total Precipitation</li> <li>Max one-day precipitation</li> </ul> |
| Low confidence    | Wind, storms, snow accumulation, hydrology | <ul style="list-style-type: none"> <li>Storminess</li> <li>Storm Surges</li> <li>Wind</li> </ul>                           |

## Coastal Flood Inundation Mapping



# High Level Results



# Warmer Temperatures

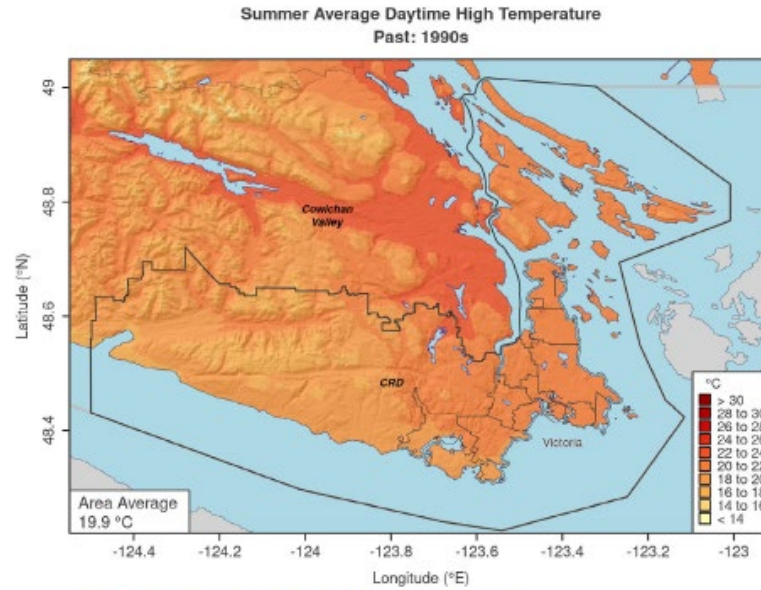


Figure 4a: Summer average daytime high temperature in the Past.

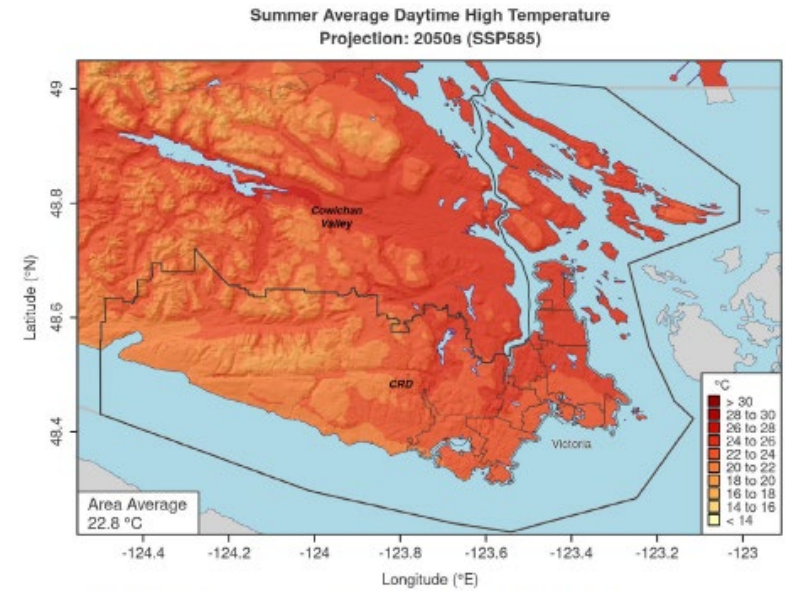


Figure 4b: Projected summer average daytime high temperature in the 2050s.

Table 1: Regional Average Daytime High Temperature (TX)

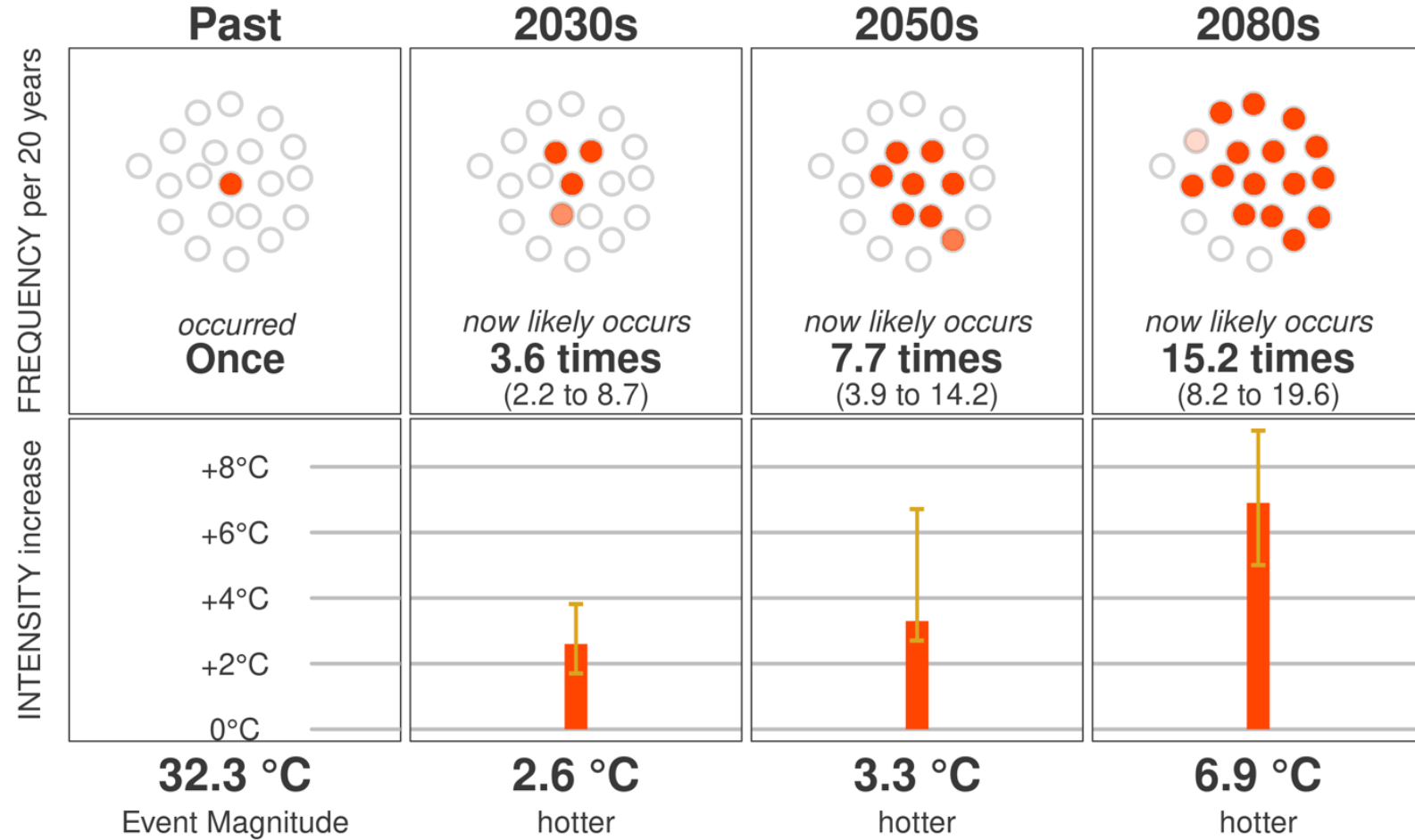
|        | Past (°C) | 2050s Change (°C) | 2080s Change (°C) |
|--------|-----------|-------------------|-------------------|
| Winter | 6         | 2.1 (1.6 to 3.5)  | 3.5 (2.8 to 6.5)  |
| Spring | 12        | 2.1 (1.4 to 4.0)  | 3.5 (2.6 to 6.3)  |
| Summer | 20        | 2.9 (2.3 to 5.1)  | 4.7 (4.1 to 8.7)  |
| Fall   | 13        | 2.7 (2.2 to 4.6)  | 4.0 (3.6 to 7.2)  |
| Annual | 13        | 2.5 (2.0 to 4.4)  | 3.9 (3.4 to 7.0)  |



# Heat

## 20-Year Event

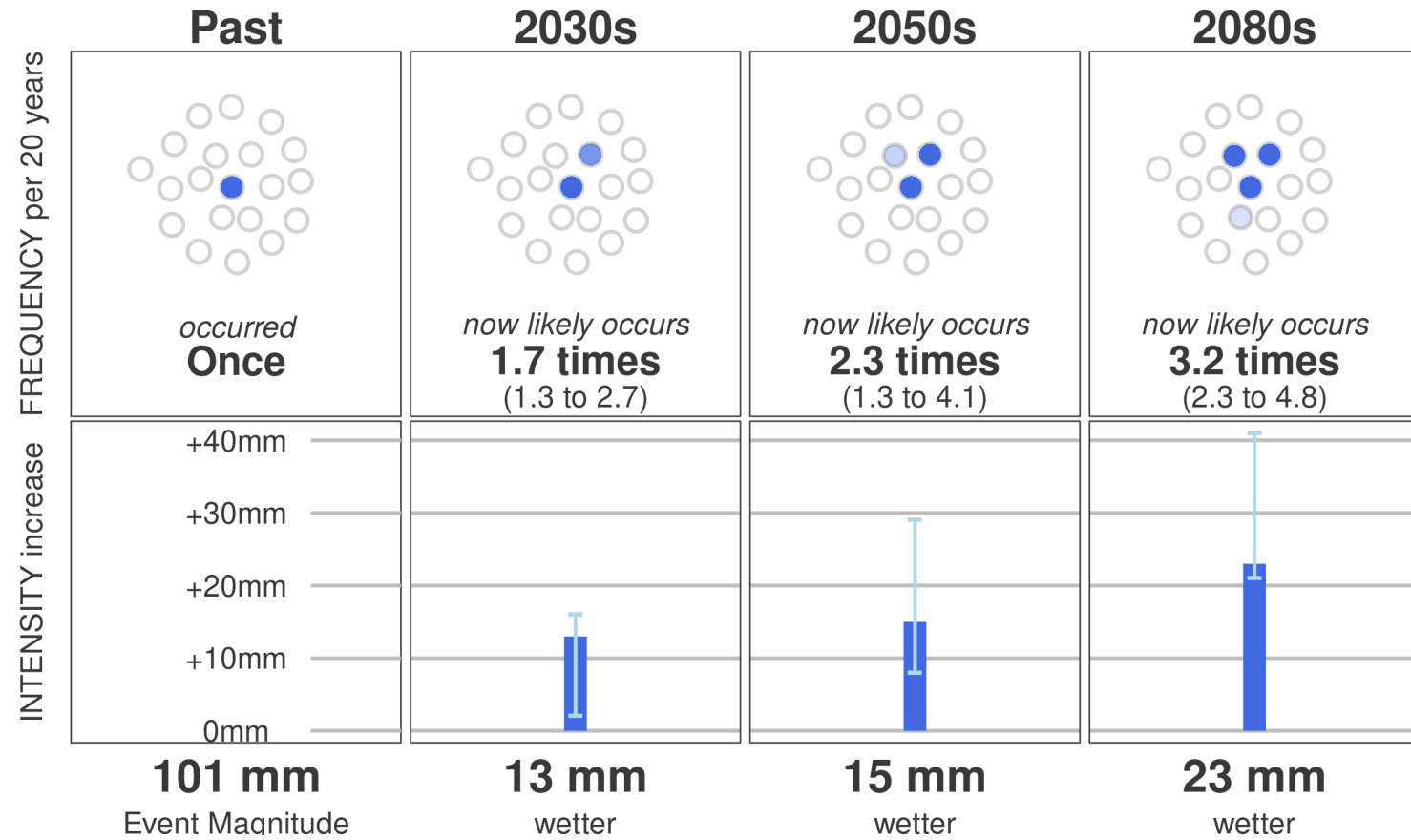
Frequency and increase in intensity of an extreme daytime high temperature event that occurred once in 20 years on average in the past (1981-2010)



# Precipitation

## 20-Year Event

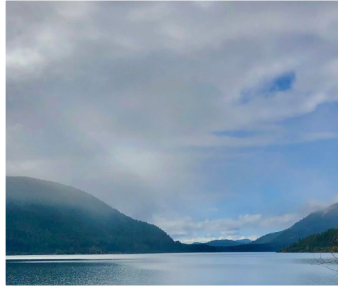
Frequency and increase in intensity of an extreme rainfall event that occurred once in 20 years on average in the past (1981-2010)



# Regional impacts



Health and Wellbeing



Water Supply and Demand



Rainwater Management and Sewerage



Ecosystems and Species



Buildings and Energy Systems



Transportation



Food and Agriculture



Recreation and Tourism




# Guidance for Users

**Seasonal Patterns and Climate Change**

- ✓ Increasing temperatures year-round
- ✓ Fewer frost days and a longer growing season
- ✓ Shifting heating and cooling demands

**Key sectors:** Agriculture, Biodiversity, Parks, Infrastructure



**Temperature**


|    |    |
|----|----|
| TX | Da |
| TM | Me |
| TN | Da |

**Extreme Precipitation and Flooding**

*In this data package, there are no direct indices for flooding. Rainfall extremes may trigger flooding under certain circumstances.*

- ✓ More precipitation occurring over short time periods
- ✓ More days with heavy rainfall

**Key sectors:** Public Works/Engineering, Infrastructure, Biodiversity, Health, Agriculture, Watershed




**Precipitation**

|      |                 |
|------|-----------------|
| PR   | Total Precipita |
| Rain | Total Rainfa    |
| Snow |                 |

**Increasing Temperatures and Extreme Heat**

- ✓ Hotter daytime temperatures
- ✓ Warmer nighttime temperatures
- ✓ Heat waves becoming hotter and more frequent

**Key sectors:** Emergency Management, Health, Biodiversity, Watershed



**Daytime Temperatures**

|                   |  |
|-------------------|--|
| TX                | Daytime high temperature, averaged over all days in a year or season |
| TXx               | Hottest daytime high temperature in a year or season                 |
| SU<br>Summer Days | Number of days in a typical year when the daytime high is above 25°C |

## Next Steps – Share Results

| Climate Projections for the Capital Region report  | Complete data package (maps, tables, GIS files)  |
|--|--|
| <ul style="list-style-type: none"><li>✓ Raise awareness about climate change</li><li>✓ Present information to stakeholders</li><li>✓ Include in a strategic plan</li><li>✓ Evaluate high-level climate impacts</li></ul> | <ul style="list-style-type: none"><li>✓ Conduct a detailed study</li><li>✓ Hazard, Vulnerability &amp; Risk Assessments</li><li>✓ Specific design variables (e.g., emissions scenario, time period, subregion of interest)</li></ul> |



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## REPORT TO GOVERNANCE COMMITTEE MEETING OF WEDNESDAY, APRIL 03, 2024

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**SUBJECT**     **Freedom of Information and Protection of Privacy Act (FOIPPA) 2023  
Overview**

### **ISSUE SUMMARY**

The purpose of this report is to provide an annual year-end update on the key metrics of Freedom of Information (FOI) requests received in 2023 and provide an overview of privacy-related activities led by the Privacy and Information Services Division in 2023.

### **BACKGROUND**

The *Freedom of Information & Protection of Privacy Act* (the Act) requires all public bodies to be accountable to the public and to protect personal privacy by providing a right of access to records in the custody or control of a public body, including records containing personal information about the applicant.

#### ***Access (FOI) Requests for 2023***

In 2023, the Capital Regional District (CRD) processed 284 requests for information under the Act, increasing by 36 requests or approximately 13% over last year. The Planning and Protective Services Department and Building Inspection Division continue as the service areas most subject to FOI requests. The average size of each request increased from previous years, as has the overall complexity and effort required to process each request.

Records retrieved are categorized by department under the following themes:

#### **Planning and Protective Services** (249 Requests):

- **Building Inspection** (201 requests) – building and property inspection records;
- **Bylaw Enforcement** (41 requests) – animal control incidents, complaint files (including audio-visual files), permits and inspection records;
- **Fire Incidents** (1 request) – Fire Department incident response records;
- **Regional Housing** (5 requests) – Committee records, planning & policy, funding and grant records;
- **JdF Planning** (1 request) – Committee meeting records, reports, statistics, and surveys.

**Corporate Services** (6 requests) – contracts, agreements, bylaws and related records.

**Executive Services and Human Resources** (6 requests) – Board and committee meeting records and correspondence, personnel records.

**Integrated Water Services** (8 requests) – watershed protection, waste management, water servicing, electronic vehicles and related records.

**Parks & Environmental Services** (13 requests) – Wildlife and environmental resource



management, strategic planning records about parks and trails, video surveillance footage from recreational facilities.

**Finance & Technology** (2 requests) – Financial service records.

In 2023, Privacy and Information Services staff processed an unprecedented number of audio-visual files (both audio and video recordings), including 348 videos. Most of these records were responsive to bylaw enforcement FOI requests, which is a new trend in FOI work.

In previous years, the only video files that were commonly requested and released are video surveillance footage from CRD facilities, usually requested to support police/RCMP investigations. Typically, such footage is not severed, as in these cases, requesting law enforcement agencies have legal authority to receive unredacted surveillance footage records.

This new trend reflects society's increased use of mobile devices, including camera and audio recording technology, coupled with increased file storage and file sharing options. This shift resulted in a higher accumulation, storage, and use of these rich media file formats as records, including for personal use, and within organizations. For bylaw complaints, it is becoming commonplace for the public to collect and submit audio and video evidence of bylaw incidents and issues for an investigation file. Parties to an investigation are often aware, or suspect, that audio/video evidence exists and subsequently request these record types through the FOI process.

In FOI work, audio-visual files are complex to redact and are significantly more time-consuming to process compared to written records, electronic documents, photos, and other file types. Privacy and Information Services is quickly adapting to meet this new demand, learning new technology and innovating processes to properly redact, annotate, and release these requested digital formats in compliance with the Act. Given that many public bodies do not have the capability (i.e., required tools and/or technical knowledge) to address audio-visual files yet, we may be leaders in this area.

Request metrics are further broken down in the Tables in Appendix A. Tables 1 and 2 outline the type of requestors and the number of requests broken down by CRD department area. The effort required to address each request varies significantly based on the scope and nature of what the applicant is looking for. Table 3 sets out the cumulative total number of pages staff reviewed and released over the year. This metric does not include other forms of processed records, including audio-video files. Table 4 outlines how many requests were subject to fees, how much was issued in fee estimates compared to how much was collected in fee payments, how many of the requests involving fees were commercial applicants compared to non-commercial applicants (i.e. individuals) and how many requests were not processed due to fees.

**Privacy Impact Assessments (PIAs)** - In 2023, Privacy and Information Services staff worked on over 54 PIAs, compared to 35 PIAs in 2022. Several PIAs carried over from 2022, of which a few are still in progress. As PIAs have been mandatory since November 2021, corporate training, communications, and practices continue to raise awareness throughout the organization. Besides volume increases, in 2023, staff experienced increases in the complexity, depth and scope of PIA work through numerous information technology (IT) and system upgrades and corporate change initiatives. Many legacy IT systems and processes, which never initially went through the PIA process, are now being assessed due to a major system upgrade or change.

PIAs completed in 2023 can be categorized under the following themes:

- **Public or Internal Stakeholder Consultation and Surveys** (18 PIAs) – Employee engagement survey, arts & culture community engagement, electronic water station booking form, Magic Lake community issues assessment, Housing Agreement Program (HAP) engagement project, 2023 resident survey (Malatest), volunteer satisfaction survey, Indigenous relations coaching program questionnaire, First Nations Relations Forum of All Councils feedback, Project portfolio management survey (internal), Accessibility feedback form (internal), CRD Evolves Survey (internal), Annual survey on climate action progress.
- **New or Updates to Corporate Technologies & Major Change Initiatives** (25 PIAs) – Video surveillance systems changes or updates, corporate safety systems for Prismatic and ProTELEC Checkmate software, SharePoint collaboration sites (various), First Due (Fire Departments records management software), water billing web tool, M365 Teams Presence, PlayBuilder lesson planning software, SuccessFactors (Human Resource Information System, HRIS), Propulso (Royal Oak golf course visitor use), JIRA project management software, telecommunications and automation drone, archaeology field mapping application.
- **Internal Projects** (10 PIAs) – United Way campaign, Alternative Work Options, Equity, Diversity & Inclusion working group, routine disclosure of environmental hazard data, environmental stewardship & protection webinars (LiveGreen), Google street view image capture and mapping of CRD trails, employee recognition through Kudos and E-Cards.
- **Provincial / Multi-Jurisdictional Partnerships or Projects** (2 PIAs) – Extreme Heat Information Portal (CRD and GeoBC), Homeless Individuals and Families Information System project (HIFIS, involving CRD, BC Housing, other various parties).
- **External Studies and Research** (1 PIA) – Western Painted Turtle identification and monitoring.

PIAs can differ greatly across initiatives which require them. The time and effort required to write, review, and complete a PIA heavily depends on the scope, scale and complexity of an initiative. Key considerations include the type and sensitivity of the information involved, the initiative's privacy impacts and mitigation requirements, the physical, technical and security measures used, the processes, systems and stakeholders involved, and timing. Large initiatives may require multiple PIAs to address the different components or may require multiple years to complete. Business areas lack the privacy subject matter expertise to complete PIAs on their own and need guidance for their initiatives to be privacy compliant, which the PIA process provides. Further, PIAs for technology initiatives may also require input and review by Information Technology staff, particularly security.

Initiatives involving a service provider or external stakeholder typically include the third party/parties in the PIA process. Components of the assessment may require external input, such as the technical security measures used to protect information collected and stored by a third party. The process helps apprise service providers of the CRD's obligations under FOIPPA.

PIAs are often time sensitive for the program area submitting them for review, which is challenging for the Manager, FOI and Privacy since they have concurrent FOIs and PIAs to

manage and complete, along with other responsibilities. This is resulting in PIAs which cannot be completed before an initiative is implemented, or some PIAs are not completed, though certain FOIPPA requirements, like collection notice statements on surveys, are still addressed. A risk-based approach is taken in this regard, and a new senior privacy analyst FTE position has been approved for 2024, to further support this work.

**Privacy Management Program (PMP) and Training** – Privacy and Information Services provides regular mandatory FOI and privacy training for all CRD employees, which must be completed within six months of employment. In 2023, Privacy and Information Services trained approximately 134 employees, over seven training sessions.

**Privacy Breach Reporting** – In 2023, Privacy and Information Services were notified of six privacy incidents; none of which resulted in any significant harm to affected individuals, and all were quickly remediated. Two privacy-related complaints involved the Office of the Information and Privacy Commissioner (OIPC) for BC. The CRD was upheld in the first complaint review, while the second complaint has not yet been reviewed by an OIPC investigator.

The number of privacy breaches that occur annually is relatively low, and generally manageable, but could be very impactful on workload should a large incident occur, involving sensitive personal information. Privacy staff coordinate closely with IT security on areas of common interest, including PIAs, risk management, incident management, policies, training, and support.

*Alignment with Board & Corporate Priorities*

Access to information and privacy impact assessments fall under the Community Need for Open Government. These activities also support legislative compliance, transparency and business systems and processes in the Corporate Plan and are important for good governance.

**CONCLUSION**

The number of FOIs and PIAs has continued to grow in 2023. It is anticipated that this trend will continue in both areas, especially with respect to PIAs given the objectives of the recent IT Strategic Plan. Further work is planned in 2024 to create publicly accessible data categories for certain record types (i.e., building inspection, environmental hazard data) in support of open government.

**RECOMMENDATION**

There is no recommendation. This report is for information only.

|               |   |
|---------------|---|
| Submitted by: | Kelsey Dupuis, Manager, FOI & Privacy   |
| Concurrence:  | Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                   |

**ATTACHMENT(S)**

Appendix A: 2023 FOI Request Metrics Tables 1 - 4

**Table 1 – Types of Requestors**

| Type of Requestor           | Requests by Year |            |            |
|-----------------------------|------------------|------------|------------|
|                             | 2023             | 2022       | 2021       |
| Individuals                 | 156              | 134        | 172        |
| Realtors                    | 81               | 66         | 24         |
| Law Firms                   | 11               | 23         | 10         |
| Other Commercial/Businesses | 14               | 12         | 12         |
| Associations and Societies  | 5                | 2          | 2          |
| Federal/Provincial*         | 6                | 5          | 5          |
| Local Governments*          | 3                | 4          | 13         |
| RCMP and Police             | 7                | 1          | 0          |
| Media                       | 1                | 1          | 1          |
| <b>Total</b>                | <b>284</b>       | <b>248</b> | <b>239</b> |

\*These account for consultation requests submitted by government bodies under FOIPPA. Consultation requests require similar administration and processing efforts to other FOIs for reporting purposes.

**Table 2 – Requests by Department**

| Requests by Department                           | Requests by Year |            |            |
|--|------------------|------------|------------|
|  | 2023             | 2022       | 2021       |
| Planning and Protective Services                 | 244              | 213        | 192        |
| Parks and Environmental Services                 | 13               | 12         | 15         |
| Executive Services                               | 6                | 6          | 8          |
| Corporate Services                               | 6                | 7          | 5          |
| Finance & Technology                             | 2                | 0          | 4          |
| Integrated Water Services                        | 8                | 4          | 4          |
| Capital Regional Housing Corp / Regional Housing | 5                | 6          | 11         |
| <b>Total</b>                                     | <b>284</b>       | <b>248</b> | <b>239</b> |

**Table 3 – Summary of Documentation Released**

| Year        | Requests   | Pages Reviewed | Pages Released | Average Review | Average Release | 30 Day Extension |
|-------------|------------|----------------|----------------|----------------|-----------------|------------------|
| <b>2023</b> | <b>284</b> | 14,306*        | 10,355         | 50             | 36              | 8                |
| <b>2022</b> | <b>248</b> | 8,730          | 6,344          | 35             | 26              | 2                |
| <b>2021</b> | <b>239</b> | 10,771         | 7,679          | 45             | 32              | 0                |

\* This figure does not include 348 audio-video records that were also reviewed in 2023 .



**Table 4 – Summary of Fee Estimates Issued and Fees Collected**

| Year        | Requests   | Total Requests with Fees | Total Fee Estimates Issued | Total Fees Collected (Paid) | Total Commercial Requests (Paid Fees) | Total Non-Commercial Requests (Paid Fees) | Total Requests Abandoned (Not Paid) |
|-------------|------------|--------------------------|----------------------------|-----------------------------|---------------------------------------|---|-------------------------------------|
| <b>2023</b> | <b>284</b> | 7                        | \$2,110.80                 | \$349.79                    | 1                                     | 3   | 3                                   |
| <b>2022</b> | <b>248</b> | 8                        | \$3,002.05                 | \$1134.99                   | 2                                     | 3   | 3                                   |
| <b>2021</b> | <b>239</b> | 5                        | \$1,042.59                 | \$562.59                    | 3                                     | 1   | 1                                   |



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## REPORT TO GOVERNANCE COMMITTEE MEETING OF WEDNESDAY, APRIL 03, 2024

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**SUBJECT**     **Update to Implications Section of Staff Reports**

### **ISSUE SUMMARY**

To present new Climate, First Nations, and Equity, Diversity, and Inclusion Guidance documents to support staff report writers in completing these implication sections in the staff report template.

### **BACKGROUND**

The CRD Board's 2023-2026 Board Priorities includes the Governance initiative 5b to "*Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses.*" These three new implication sections were introduced to the staff report template in late 2023. At this time, divisional leads in Climate Action (CA), First Nations Relations (FNR), and People, Safety & Culture (PSC) came together with Legislative Services to discuss how to provide effective guidance to staff on how to address these new and emerging implications that are increasingly affecting the decisions and work that the CRD is undertaking.

The Executive Leadership Team (ELT) approved the development of tools to assist staff in undertaking the relevant considerations and assessments that would allow report writers to highlight for Committees and the Board the potential implications associated with each of these areas. The three guidance documents on Climate, First Nations, and Equity, Diversity and Inclusion are attached as Appendices A, B and C to this report and described further below. These new implication sections will be considered and utilized by report writers along with other implications currently used in staff reports, including Environmental, Intergovernmental, Social and Financial.

### **IMPLICATIONS**

The Climate Implications Guidance document (Appendix A) provides guidance to staff as they consider climate change implications (mitigation and adaptation) for staff reports and resulting projects. The guide identifies relevant CRD targets and strategies, policies, and technical resources to support climate-informed planning processes. It is intended to be a living document that will consider and implement user feedback over time.

The First Nations Implications Guidance document (Appendix B) assists staff in identifying and addressing First Nations implications related to project planning, implementation and staff reports. It provides overarching principles to promote positive relations with First Nations, provides guidance for incorporating a First Nations lens, offers examples of how First Nations' implications that can be addressed in staff reports, and provides relevant resources.

The Equity, Diversity and Inclusion (EDI) Implications Guidance document (Appendix C) establishes common definitions of the terms equity, diversity, inclusion and accessibility, provides examples of types of CRD work which may benefit from applying an EDI lens, and prompts staff report writers to consider specific ways that an EDI lens may be applied to considerations such

as the overall staff report, project design, engagement, impacts, communications, accessibility and feedback. It is intended to be a living document that will be revised in the future based on user feedback and as the organization develops in its EDI journey.

*Alignment with Board & Corporate Priorities*

The guidance documents support staff with understanding and implementing the Board’s priorities related to climate action, First Nations reconciliation, and EDI, and how to reference these considerations in staff reports.

To meaningfully demonstrate that these lenses are being applied, it will be critical that project planning considers these factors well before a staff report is written. Offering foundational guidance and training to report writers will support the integration of these implications into projects early enough in the planning process to be meaningful.

In recognition of the complexity of these implications, training will be provided to staff and ELT on navigating the new guidance documents. Expectations related to the new implications sections will be rolled out with a post on our internal intranet site for staff, CRD Central, and several training sessions will be offered through the staff training calendar. The guides will not eliminate the need for staff to consult with divisional leads in CA, FNR, and PSC on specific projects or initiatives but they will hopefully provide a common baseline of understanding in these priority areas and bring a level of consistency to how these implications are addressed in staff reports.

**CONCLUSION**

Three new implications sections have been added to the staff report template: Climate, First Nations, and Equity, Diversity & Inclusion (EDI). The newly developed implications guidance documents will provide support for staff and the Executive Leadership Team (ELT) to identify and address these priority considerations across project planning and implementation and when writing staff reports. Additional support will be provided through targeted training for staff and ELT.

**RECOMMENDATION**

There is no recommendation. This report is for information only.

|               |   |
|---------------|---|
| Submitted by: | Marlene Lagoa, MPA, Manager, Legislative Services & Deputy Corporate Officer  |
| Concurrence:  | Chris Neilson, MBA, CPHR, Senior Manager Human Resources & Corporate Safety   |
| Concurrence:  | Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer |
| Concurrence:  | Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services    |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                   |

**ATTACHMENT(S)**

- Appendix A: Climate Implications Guidance Document
- Appendix B: First Nations Implications Guidance Document
- Appendix C: Equity, Diversity and Inclusion Implications Guidance Document

# Climate Implications Guidance Document

Climate Action Program | March 2024

This document provides guidance to CRD staff as they consider climate change implications for staff reports and resulting projects. It identifies relevant CRD targets and strategies, policies, technical resources to support climate-informed planning processes.

This is intended to be a living document that considers and implements user feedback. Please contact the CRD Climate Action Program ([climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca)) with any questions or comments about this guide.



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## Introduction to this Tool

In 2019, the Capital Regional District (CRD) Board declared a Climate Emergency. In 2021, the Board renewed the CRD's Climate Action Strategy (CAS) which includes an overarching goal to integrate climate action priorities into decision making processes across the organization. This was re-affirmed in the 2023 – 2026 Board Priorities which includes a governance initiative (5b) to: “strengthen Board decision-making frameworks to include a climate action lens (along with First Nations reconciliation and equity, diversity, and inclusion)”. In response, staff must consider climate change implications (mitigation of emissions and adaptation to climate impacts) in the planning and development of CRD projects and policies. This information should be included in the ‘Climate Action’ implications section of staff reports. This guidance document has been developed to assist staff with identifying and addressing climate change implications in their **project** planning and implementation.

**PROJECT**– Any study, plan, policy, or capital project can use this document

Prior to proceeding, staff should review the following section to ensure understanding of the two components to climate action: **mitigation** and **adaptation**.

Resources and tools listed in this document can all be found on the [Climate Action SharePoint](#). Additional assistance can be provided by CRD Climate Action team members.

## OVERVIEW: Climate Change Implications

The first step to implementing a climate lens is to establish whether the project has implications for climate change. This may include impacts on climate mitigation, climate adaptation, or both. These concepts are defined below and examples of projects with implications for each are provided.

MITIGATION involves measures to reduce or prevent the emission of greenhouse gases (GHGs) into the atmosphere.

ADAPTATION involves taking a risk management approach to prepare for, anticipate, withstand, respond to, and recover from climate change related impacts.

### When should I consider **Climate Mitigation** Implications?

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Projects should consider climate mitigation implications if they reduce, prevent, or modify regional GHG emissions. This includes (but is not limited to) projects that:

- Impact on corporate or regional energy systems (electricity, natural gas, propane, district energy),
- Involve fuel-burning equipment or vehicles,
- Divert waste,
- Preserve natural assets.

### When should I consider **Climate Adaptation** Implications?

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Climate adaptation can be understood as the process of adjusting to the current and future effects of climate change. CRD projects should consider climate adaptation implications if they will be impacted by climate-related events, or if they support or reduce the resiliency of the region in the face of climate related impacts. This includes (but is not limited to):

- Projects that are exposed to or affected by climate or weather events.
- Projects with shoreline related work, infrastructure or planning projects, projects relating to water, storm water or wastewater management, work related to outdoor public spaces, conservation / acquisition / remediation of natural assets, and long-term studies or master planning reports.

While climate mitigation and adaptation are defined as distinct concepts above, they often overlap in practice. Examples of actions that meet both goals are illustrated in Figure 1:

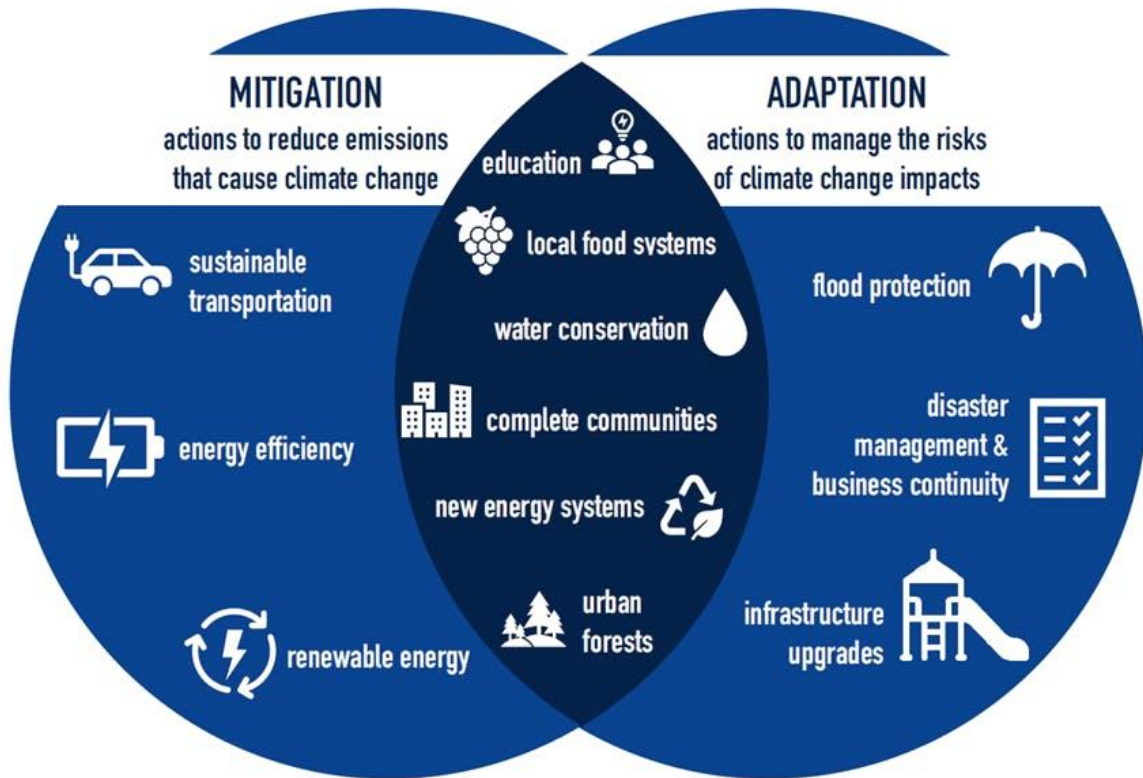


Figure 1: Examples of actions that address climate mitigation, climate adaptation, or both.

Please review this document in full to determine whether your project should consider implications for climate mitigation, climate adaptation, or both.



## OVERVIEW: CRD Climate Action Strategy & Board Priorities

In 2021, the Board renewed its five-year Climate Action Strategy with six goal areas that provides 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 six goal areas of the Climate Action Strategy are listed in Figure 2:

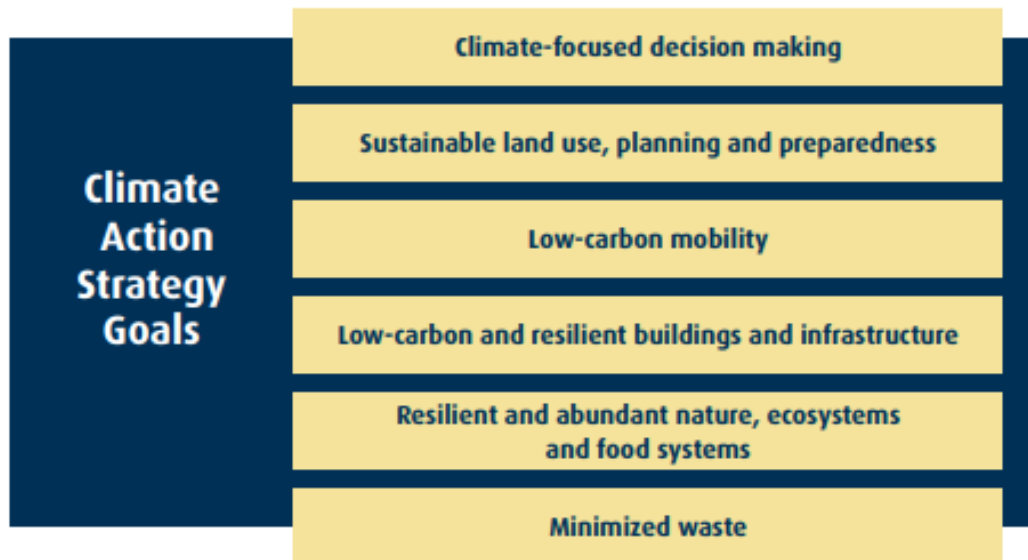


Figure 2: The six Climate Action Strategy goal areas

The Climate Action Strategy includes 126 actions with various departmental/divisional responsibilities for completion through 2025. Review the action summary for your department to determine the relevant goal(s), action(s), and sub-action(s) from the CRD Climate Action Strategy using the links provided below. For a complete list of all actions and sub-actions, see Appendix C of the [Climate Action Strategy](#).

### Department Action Summaries

- [Corporate Services](#)
- [Executive Services](#)
- [Finance & Technology](#)
- [Integrated Water Services](#)
- [Parks & Environmental Services](#)
- [Planning & Protective Services](#)

## Board Priorities and Corporate Plan

Several of the 2023-2026 [Board Priority Initiatives](#) include strong directives related to climate action:

- **Transportation 1b:** Support investments, expansion, and equitable access to active and low carbon transportation.
- **Climate Action & Environment 3c:** Increase resilience, community and adaptation planning to address climate related risks and disasters.
- **Climate Action & Environment 3d:** Support energy efficient and low carbon buildings across the region.
- **Governance 5b:** Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses.

Staff are encouraged to review the relevant sections of the [CRD 2023 – 2026 Corporate Plan](#) for additional climate action related initiatives (many of which align with the Climate Action Strategy).

If your project aligns with any of the goal(s), action(s) and/or sub-action(s) outlined in the CRD Climate Action Strategy or the Board Priorities/Corporate Plan, include this information in the "*Alignment with Existing Plans & Strategies*" and "*Alignment with Board & Corporate Priorities*" sections of your staff report.

Note: The CRD Climate Action Strategy overlaps with other CRD strategic plans. Specific departments may have other strategic plans that are connected to this which should be highlighted.

## OVERVIEW: CRD Emissions Reductions Targets

The CRD has developed corporate and regional GHG emissions targets as part of our commitment to reducing GHG emissions in the capital region (see Figure 3). These targets are outlined in detail in the CRD Climate Action Strategy.

These targets support global efforts to limit global temperature increases to within 1.5°C above pre-industrial levels. Projects that directly or indirectly reduce or modify GHG emissions in the capital region influence whether we are successful in achieving these targets.

The targets for corporate versus regional GHG emissions have specific reporting boundaries that are defined by GHG accounting guidelines. If your project or policy impacts GHG emissions in the capital region, use the table below to determine which boundary they fall within.

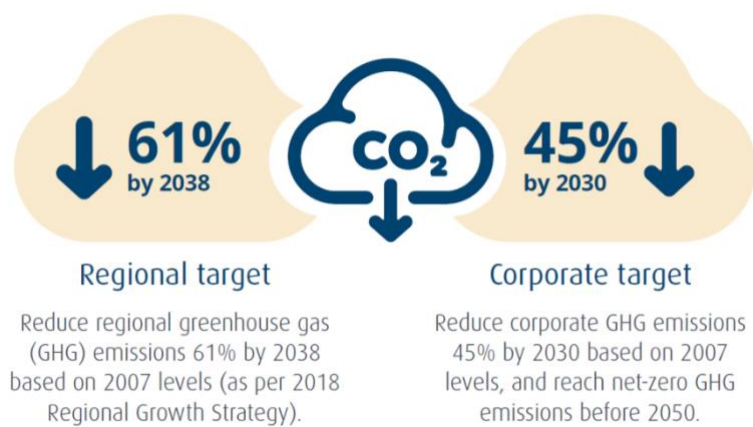


Figure 3: CRD's regional and corporate GHG emissions reduction targets

Table 1: CRD Corporate and Regional GHG Emissions Reporting Boundaries

| CRD Corporate Emissions   | CRD Regional Emissions   |
|---|--|
| <p><u>2023 emissions:</u> 2,956 t CO<sub>2</sub>e<br/>Completed annually.</p> <p>This GHG inventory includes all energy consumed by CRD buildings, facilities, infrastructure, vehicles and equipment. Some contracted services such as waste hauling and transfer are also included.</p> <p>Note: Hartland Landfill and Capital Region Housing Corporation operational emissions are excluded from this inventory (as per provincial guidelines) but are captured in the Regional Emissions Inventory.</p> | <p><u>2022 emissions:</u> 1.86m t CO<sub>2</sub>e<br/>Completed every two years.</p> <p>This GHG inventory represents the best available information for emissions from the community. Following the GPC BASIC + protocol, the scope of emissions includes stationary energy (e.g., buildings, construction, energy industry), transportation, waste, industrial process and product use, agriculture, forestry, and other land use.</p> |

## OVERVIEW: CRD Climate Action Policies

There are currently three (3) CRD Climate Action Policies that apply to corporate projects to apply a 'climate lens' and support corporate GHG emission reductions. The boundaries for each of these policies are defined below. If the project falls within any of these policy boundaries, review the links provided in Table 2 to ensure that the project complies with the given policy. Include this information under the "Climate Change Implications" section of your staff report.

Table 2: CRD's Climate Action Policies

| Policy                                | Description   |
|---------------------------------------|---|
| <a href="#">Green Fleet Policy</a>    | Applies to vehicle purchases of all types.  |
| <a href="#">Green Building Policy</a> | Applies to any new construction and all major retrofits. Please use the pre-screening checklist in Schedule 1 of the policy to determine if the project qualifies as a major retrofit.  |
| <a href="#">Carbon Price Policy</a>   | Applies to all options analyses that use life-cycle cost analysis involving the following assets and operations: fleet purchases, new buildings, building retrofits, fuel-burning equipment and energy purchases. This policy should also be used in situations where the project manager is interested in incorporating an internal cost of carbon during project planning. For additional information, please review the <a href="#">Carbon Price FAQ</a> . |

If you require assistance with the Climate Action Policies, please contact Keegan Hardy, CRD Corporate Energy Specialist, [kjhardy@crd.bc.ca](mailto:kjhardy@crd.bc.ca).



## GUIDANCE: Examples in CRD Staff Reports

A 'climate lens' will need to be integrated into a project at multiple stages of project delivery. Integrating the climate lens **as early as possible** will help projects to become more resilient, environmentally friendly, and contribute positively to climate change mitigation and adaptation efforts.

Key tasks in each project stage are categorized below, with basic examples provided in italics. Additional information for each of these tasks are further detailed in the appendices of this document.

### Project Planning & Initiation

- **Identification of goals, actions, and sub-actions from the [CRD Climate Action Strategy](#) that the project supports.**  
This project directly supports Action 4-3, sub-action B - "Conduct Saanich Peninsula District Energy System Expansion Study" of the Climate Action Strategy.
- **Identification of [Climate Adaptation](#) impacts to the project, and how adaptation strategies will be incorporated into the project.**  
This project has been identified to be in an area of high risk due to sea level rise caused by climate change, and risks and mitigation strategies will be included in the scope of work.
- **Adherence to applicable [CRD Climate Policies](#).**  
This project will be developed in accordance with the CRD Green Building Policy, and the scope of work will include all mandatory requirements of the policy.
- **Identification of the [CRD Emissions Reductions Targets](#) which the project supports, and whether any calculations will be completed in-house or externally.**  
This project is estimated to save significant emissions from the CRD Corporate Inventory and will contribute towards the Corporate GHG Reduction Target. GHG reduction calculations will be completed by the consultant.
- **Identification of climate-related tasks to obtain specific incentives or grants.**  
An external Climate Change Risk Assessment will need to be included in this scope of work to meet Infrastructure Canada grant requirements.

### Project Design Phase

1. **Selection of equipment or options based on Climate Lens**  
Through a life-cycle cost analysis, option B has been identified as having the lowest cost over a 25-year life cycle, and the lowest lifetime emissions. The recommendation is to proceed with Option B for the final design, even though it has a higher capital cost.
2. **Changes to the scope of work based on assessment of Climate impacts and supporting [CRD Climate Action Strategy](#) goals, if applicable.**  
Additional design considerations to accommodate for high rainfall quantities in 2030s-2040s have been added in the updated cost estimate. This directly supports the Action 4-6, sub-action A – "Consider climate change impacts when undertaking risk

assessments associated with the water supply and wastewater systems and infrastructure management decision making and plans.”

**3. Confirmation that no significant climate risks for the project.**

An internal climate change risk assessment has been completed for this project, and no significant risks have been identified. Minor risks will be mitigated.

## GUIDANCE: Climate Action Team

The Climate Action Team is always at your service. We are committed to providing assistance and support specifically tailored to integrate the climate lens into your initiatives. Whether you are navigating the complexities of emissions analysis, sustainability strategies, or seeking guidance on climate-conscious project development, our team is here to empower you every step of the way. Connect with us early in your planning process to ensure your projects align seamlessly with climate objectives, contributing to a sustainable and resilient future.

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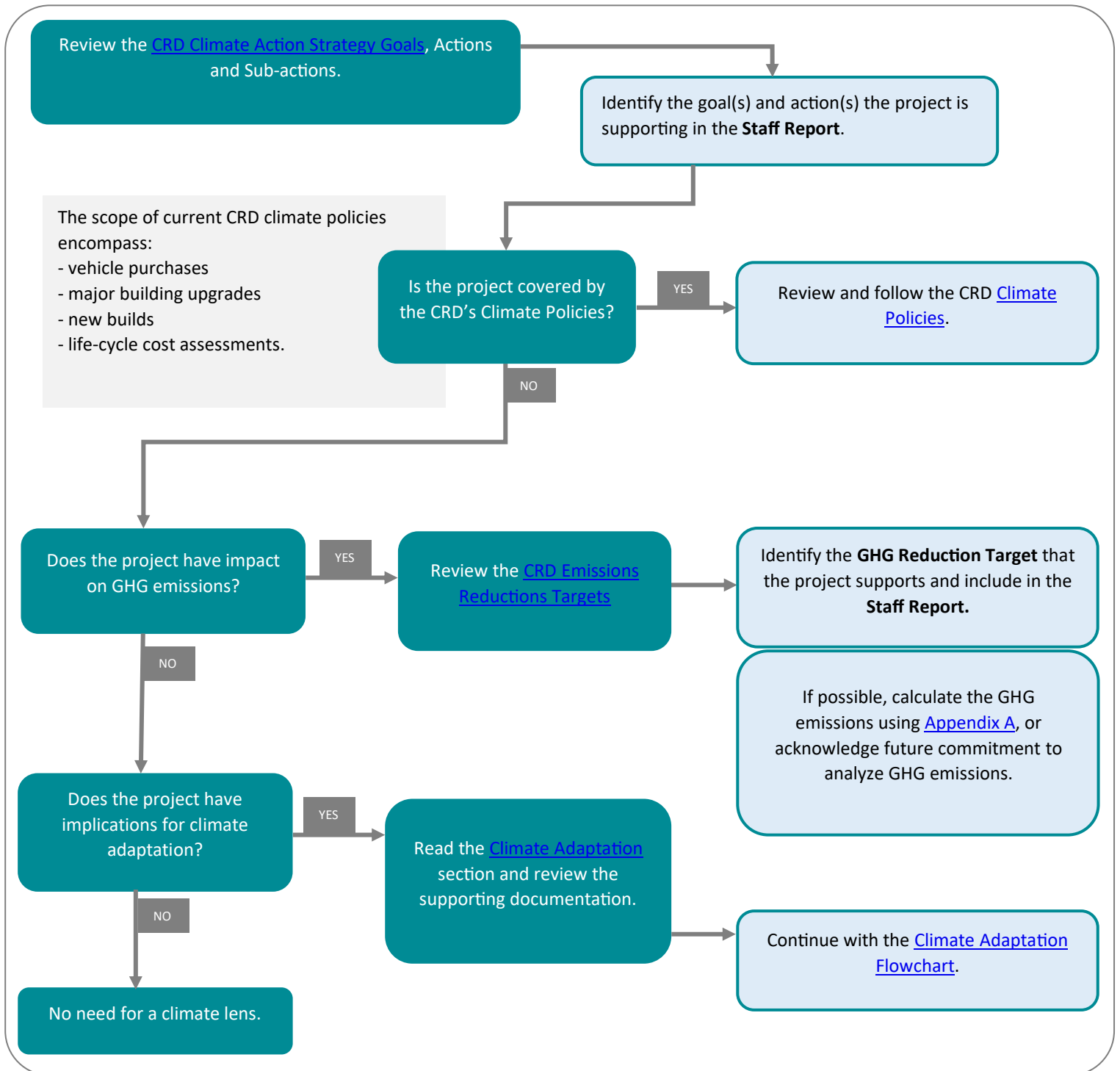
## RESOURCE: Climate Action Reserve Fund (CARF)

The Climate Action Reserve Fund is a mechanism to provide seed funding for projects that support CRD's corporate climate action strategy. Climate Action Program staff work with members of the CRD Fleet and Facilities Climate Action Working Group to identify and execute projects. Generally, the scope of the fund is to conduct feasibility analysis, energy efficiency or emissions savings studies, business case analysis, and climate lens reviews and fund corporate activities and actions that align with the Climate Action Strategy.

**Have an idea that needs funding? Contact [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca)**

## GUIDANCE: Overall Process Flowchart

The following flowchart presents an overview of climate action tools and resources that should be reviewed. This visual guide is connected to supplementary resources within this document, along with annotations indicating when it is appropriate to incorporate language into CRD staff reports.





## Appendix A: Calculating GHG Emissions

Most funding agencies necessitate GHG emissions analysis, a process that can be managed internally for simpler tasks like lighting retrofits or minor equipment swaps. However, when dealing with substantial capital projects, particularly those seeking support from federal and provincial grant programs, engaging an external consultant may be essential. It is important to note that for projects with material impacts, GHG emissions analysis should be conducted and provided to the Climate Action Service to include in annual reporting.

GHG analysis may also be included in a study, options analysis, or an energy audit prior to proceeding with major capital projects.

### Non-quantifiable GHGs

In many instances, challenges arise due to limitations in data availability or the absence of clear frameworks for precise emission calculations. This is particularly evident in projects such as tree planting, recycling initiatives, land use projects, and trail widening. To address such situations, it is recommended to liaise with CRD Climate Action staff to explore alternative approaches.

### GHG Emissions Inventory Scopes

GHG emissions are divided into three (3) categories: Scope 1, Scope 2, and Scope 3.

**Scope 1:** Emissions directly generated by owned or purchased resources  
e.g., Burning natural gas, propane or other fossil fuels; fuel-powered vehicles and equipment; fugitive emissions from refrigerants; process emissions

**Scope 2:** Indirect emissions from the generation of purchased energy, in most cases from a utility provider.  
e.g., GHG emissions associated with purchased electricity or district energy

**Scope 3:** All indirect emissions that are not captured by Scope 1 or 2. Also known as the embodied carbon of a material or good.  
e.g., GHG emissions associated with a material or good from production to disposal, including resource extraction, any required agriculture, manufacturing, packaging, shipping, and disposal.

### Calculating Scope 1 and 2 Emissions

Scope 1 and 2 emissions can be quantified within the CRD for many projects. The BC Government has produced the [2022 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions](#), a detailed guide on the quantifying and calculating of GHG emissions. Once a quantity of energy is known,

it can be converted to GHG emissions by using the specified emission factor for that energy type in Table 3. The **key emission factors** have been extracted from the B.C. Best Practices document and can be found below.

Note: If you do not feel comfortable completing these calculations yourself, or if wish to have your calculations reviewed, please contact the Climate Action team at [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca).

### Calculating Scope 3 Emissions

Scope 3 emissions are more complex because standardized methodologies remain an active topic for research and development in the field. The CRD has limited resources for calculation Scope 3 emissions, so consultants are often engaged for this work. If you believe your project requires Scope 3 calculations, please reach out to the Climate Action Team for further discussion.

Table 3: Common Emission Factors

| Energy Source  | Emission Factor | Unit              | Source   | Last Updated |
|----------------|-----------------|-------------------|--|--------------|
| Electricity    | 11.5            | t CO2e/<br>GWh    | <a href="#">BC Government Grid Factors (2022)</a>                    | Sept/23      |
| Natural Gas    | 1.996           | kg/m <sup>3</sup> | <a href="#">National Inventory Report 1990 –2020 (table A6.1-1)</a>  | Sept/23      |
| Propane        | 1.515           | kg/L              | <a href="#">National Inventory Report 1990 –2020 (table A6.1-4)</a>  | Sept/23      |
| Light Fuel Oil | 2.753           | kg/L              | <a href="#">National Inventory Report 1990 –2020 (table A6.1-5)</a>  | Sept/23      |
| Heavy Fuel Oil | 3.156           | kg/L              | <a href="#">National Inventory Report 1990 –2020 (table A6.1-5)</a>  | Sept/23      |
| Diesel Fuel    | 2.681           | kg/L              | <a href="#">National Inventory Report 1990 –2020 (table A6.1-5)</a>  | Sept/23      |
| Gasoline       | 2.307           | kg/L              | <a href="#">National Inventory Report 1990 –2020 (table A6.1-5)</a>  | Sept/23      |
| Biodiesel      | 2.472           | kg/L              | <a href="#">National Inventory Report 1990 –2020 (table A6.1-14)</a> | Sept/23      |

## Appendix B: Understanding Climate Risks (Adaptation)

Changes to our climate are already noticeable. Extreme weather events like droughts, floods, heat waves and fires are happening more often and these changes are projected to increase in frequency and severity over the coming decades.

Climate adaptation involves **identifying and managing the risks** associated with climate change. A key question that should be asked for any project is “**What climate impacts are of concern for this project?**” Climate impacts should be considered for the entire lifetime of the planned project or policy.

Similarly, if accessing large provincial/federal capital grant funds, the project may need to utilize the federal climate lens framework for resilience: [Infrastructure Canada Climate Lens - General Guidance](#).

To support internal analysis, the **Climate Change Risk Assessment Framework** is designed to provide CRD staff with the ability to conduct their own climate change risk assessments, with the goal of embedding the outcomes in Sustainable Service Delivery Plans (SSD) and the Corporate Risk Register. Building off of the Corporate Climate Change Risk Assessment (2021), this climate change risk assessment process follows best practices, including the federal climate lens requirements.

- [Climate Change Risk Assessment Framework](#)
- [Climate Change Risk Assessment Excel Workbook](#)

Furthermore, the CRD Climate Action team has developed several reports and tools to illustrate how climate change will impact our region. These may be utilized to understand potential climate risks:

[Climate Projections for the Capital Region](#) (2024)

Highlights projected changes for temperature, precipitation, and indices of extremes due to climate change by the 2050s and 2080s in the capital region.

[Capital Region Coastal Flood Inundation Mapping Project](#) (2021)

Illustrates a comprehensive picture of coastal flooding due to rising sea levels and tsunamis.

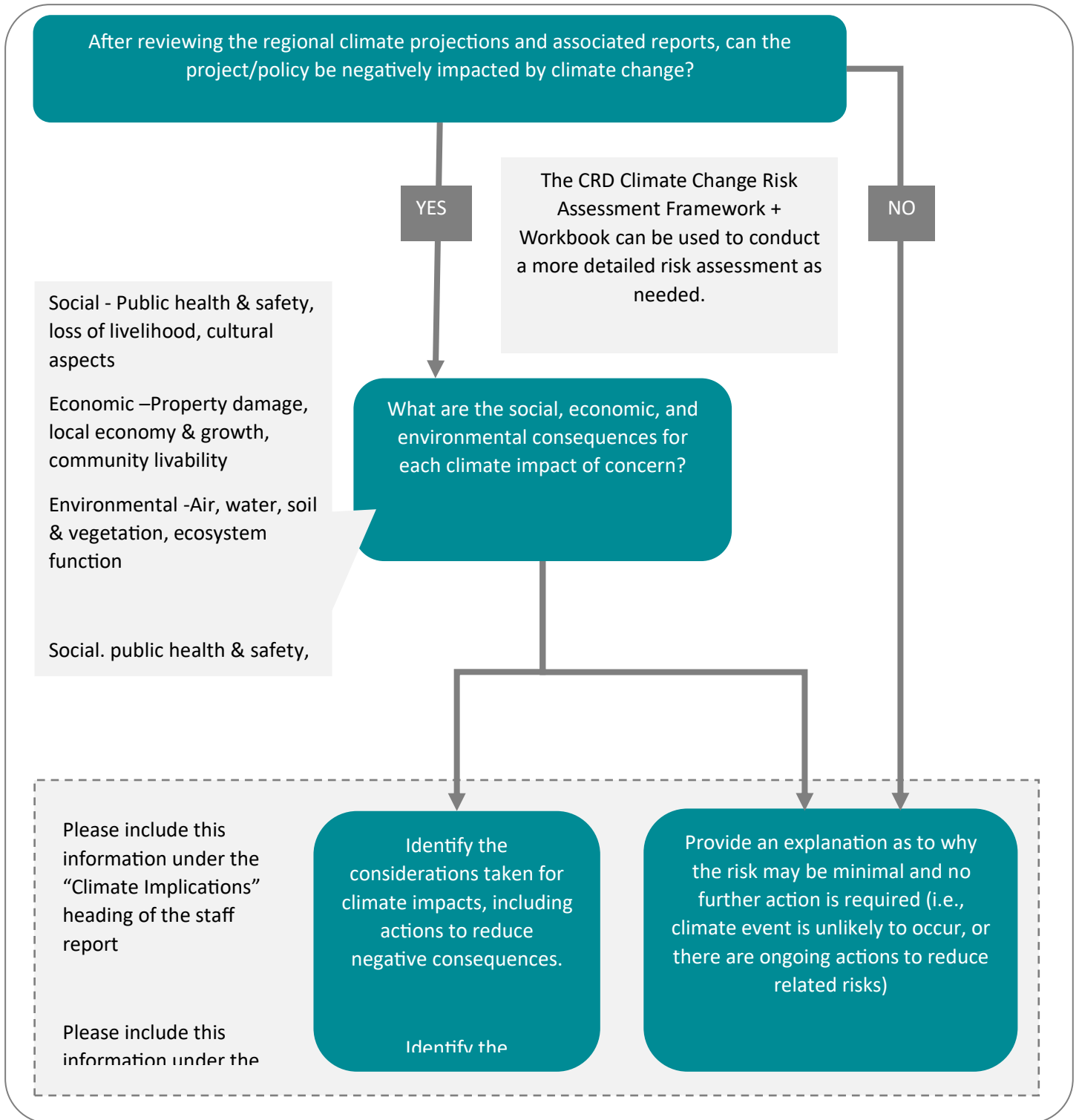
[Capital Region Extreme Heat Information Portal](#) (2024)

Hosts information and maps to help understand the region's vulnerability to extreme heat, including the impact of various socio-demographic and building-specific factors on vulnerability.

For access to the data packages (including GIS layers) of any of the above projects, please contact [climateaction@crd.bc.ca](mailto:climateaction@crd.bc.ca).

## Climate Adaptation Process Flowchart

The following flowchart presents a general overview of the reviewing a project while considering climate adaptation impacts.





# First Nations Implications Guidance Document

First Nations Relations Division | March 2024

This document provides guidance to Capital Regional District (CRD) staff as they consider First Nations implications for CRD projects and staff reports. It provides principles to promote positive relations with First Nations, outlines considerations for incorporating a First Nations' lens, offers examples of how First Nations' implications can be addressed in staff reports, and provides relevant resources.

This is a living document that will be updated over time based on feedback from users and as we learn more about building respectful relationships with First Nations. Please contact the First Nations Relations Division with any questions or comments about this guide at [FirstNationsRelations@crd.bc.ca](mailto:FirstNationsRelations@crd.bc.ca).

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## Introduction to this Tool

Building and strengthening positive working relationships with First Nations has been a priority of the CRD Board since 2015. The Board adopted a Statement of Reconciliation in 2018, and First Nations relations have been strategic priorities of the Board ever since.

This guidance document was developed to assist staff with identifying and addressing First Nations' implications in project planning and implementation. Use this document to apply a First Nations lens on any study, plan policy, project or initiative.

Note that every staff report is not expected to include First Nations' implications. As the CRD navigates the complexities of First Nations engagement, this guidance will provide staff with a foundation for meaningful and respectful collaboration aligned with the CRD Statement of Reconciliation.

Please contact the First Nations Relations Division with any questions or comments about this guide at [FirstNationsRelations@crd.bc.ca](mailto:FirstNationsRelations@crd.bc.ca).

**PROJECT**– Any study, plan, policy, or capital project can use this document

Resources and tools listed in this document can all be found on the [First Nations Relations SharePoint](#). First Nations Relations team members can provide additional assistance.

## OVERVIEW: CRD's Commitment to Reconciliation

### Territorial Acknowledgement

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The CRD conducts its business within the traditional territories of many First Nations, including but not limited to BOKÉCEN (Pauquachin), MÁLEXEŁ (Malahat), paaʔčiidʔatx (Pacheedaht), Spune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, SʔÁUTW (Tsawout), T'Sou-ke, WJOLEŁP (Tsartlip), WSIKEM (Tseycum), and x<sup>w</sup>sepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.

Many additional First Nations also have territory within the capital region and a relationship with the land and waters that continues today. [This map of First Nations with territory in the region](#) indicates where the colonial governments moved First Nations onto reserves; however, their traditional territories extend throughout the entire region.

### CRD Board Priorities

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The CRD Board Priorities envision strong relationships with First Nations based on trust and mutual respect, partnerships, and working together on shared goals. The Priorities are grounded in a recognition that 'it is important to acknowledge historic harms, overcome current inequities, and respect local Indigenous laws and culture.' Several of the [2023-2026 Board Priorities](#) are focused on relationships with First Nations:

- 4a Develop mechanisms to hear more from First Nations' governments as how they would like the CRD to approach reconciliation.
- 4b Collaborate with First Nations to build and strengthen new processes for respectful, reciprocal government-to-government decision-making and service delivery that uplift Indigenous self-determination.
- 4c Invite, respect and incorporate Indigenous leadership and traditional knowledge to enhance initiatives and strategies that support other priorities in the plan.
- 4d Support shared prosperity by enhancing economic opportunities, in partnership with First Nations.

Staff are encouraged to review the relevant sections of the [2023-2026 Corporate Plan](#) for additional First Nations relations initiatives.



## Statement of Reconciliation

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The CRD's boundaries span the Traditional Territories of over 20 First Nations, whose ancestors have been taking care of the land since time immemorial. The CRD believes that a positive working relationship with First Nations is good for the whole region. For the CRD to have a positive relationship with First Nations we need to acknowledge, respect and complement their Indigenous laws, customs and systems of governance. The CRD is part of a national movement towards Reconciliation with Canada's Indigenous peoples, informed by:

- The Truth and Reconciliation Commission's Calls to Action
- The United Nations Declaration on the Rights of Indigenous Peoples
- Sec. 35 of the Canadian Charter of Rights and Freedoms
- The Douglas Treaties and the BC Modern Treaty process

### **The CRD's path to Reconciliation focuses on three recurring themes:**

- Self-Determination

The CRD acknowledges the fundamental right of self-determination to Indigenous peoples. In the spirit and intent of inclusivity, the CRD is committed to working with First Nations through the governance systems they choose. When First Nations wish to participate in our decision-making process then we will support them. The CRD will look to First Nations for leadership in understanding how to create new decision-making systems together on their Traditional Territories.

- Shared Prosperity

The CRD recognizes the gap in wealth between First Nations and settler governments. The CRD will work towards a prosperous economic future for all of its residents and believes that improving the lives of the most vulnerable citizens creates a stronger and more resilient region for everyone. The CRD will seek partnerships, share information and deliver fair and equitable services in working with First Nations on achieving their economic goals.

- Relationship with the Land and Water

The CRD recognizes the integral relationship First Nations have with the land; often the names for the people of the land and the land itself were one and the same. The CRD will work with First Nations on taking care of the land while providing space for cultural and ceremonial use, food and medicine harvesting, traditional management practices and reclaiming Indigenous place names.

### **About the Statement**

The work of Reconciliation falls to all segments of Canadian society. The Capital Regional District (CRD) is committed to Reconciliation with Indigenous peoples. It is understood that a commitment alone is not enough, and that action is needed to show that the CRD is taking measurable steps towards a better relationship with Indigenous peoples.

This statement of commitment to Reconciliation can guide decision making for the organization for many years to come. It is understood that Reconciliation is a long-term goal with no defined end point.

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is the reference framework for the CRD's commitment to Reconciliation, which aims to address activities within the scope of the CRD's authority. This statement is a work in progress which acknowledges that mistakes will be made and provides for adjustments to accommodate emergent practices.

## First Nations Relations Division

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The CRD's First Nations Relations (FNR) Division guides and supports CRD staff in fostering respectful relations with First Nations and contributes to building and strengthening government-to-government relationships between the CRD Board and First Nations. The First Nations Relations Division also supports the education, policy development, and organizational transformation required to integrate First Nations' aspirations and interests into CRD planning, operations, and governance.

The First Nations Relations Division provides resources and support to enhance understanding and implementation of the CRD's commitments to reconciliation. This includes organizing cultural perspectives training sessions for staff, facilitating opportunities for direct learning from local Nations, and providing advice, coaching, and support to CRD divisions and executive leadership on matters related to First Nations relations and engagement.

The First Nations Relations Division collaborates with relevant CRD divisions by sharing feedback, requests, and input received from First Nations, providing context to enhance understanding of these inputs, and works closely with divisions to encourage, support, and operationalize new approaches that integrate First Nations' aspirations. This includes collaborating with CRD divisions, leadership, and First Nations to develop and implement Memorandums of Understanding (MOUs), protocol agreements, and partnership agreements with Nations.

## GUIDANCE: Principles to Promote Positive Relations with First Nations

- A diverse range of projects, plans, and initiatives can impact First Nations' interests and well-being. Integrating a 'First Nations lens' into a project as early as possible will help projects provide positive opportunities that contribute towards implementing the CRD's commitment to reconciliation.
- Don't make things up! Do not include First Nations implications in your staff report unless you have engaged the First Nations Relations Division in your project and are confident of what should be communicated. Legal, reputational, and operational risks can arise from mischaracterizing the CRD's relationship with First Nations.
- Respect timeframes and capacity constraints related to First Nations engagement. Nations have many competing priorities, small staff teams, and are often stretched to be able to respond quickly. Support their involvement by engaging early, providing sufficient and accessible information, and, where possible, supporting with capacity funding.
- Engage the First Nations Relations Division early in your project planning and implementation. Providing ample time for input from the First Nations Relations Division looks like reaching out well in advance, preferably with weeks of notice, to enable thorough consideration and collaboration amidst multiple competing priorities.
- Consult available First Nations Relations resources and incorporate the guidance into project work and staff reports. Use Indigenous spelling of the Nations' names.
- Refrain from speaking on behalf of First Nations and instead prioritize creating opportunities for First Nations to express their perspectives and needs directly.
- Refrain from implying benefits to Nations unless they have expressly stated them.
- Prioritize transparency, respect for cultural practices, inclusivity, and meaningful collaboration with First Nations.
- Foster an organizational learning culture by acknowledging errors and learning from them to inform future interactions with First Nations.

## GUIDANCE: First Nations Implications

The following questions and considerations guide incorporating a First Nations’ lens into staff reports and other phases of project design and implementation.

| CONSIDERATION   | QUESTIONS TO ASK  |
|---|---|
| <b>PROJECT/INITIATIVE INITIATION AND PLANNING</b>                 | <ul style="list-style-type: none"> <li>• Does the project design (e.g., artwork, architecture, wayfinding), planning (e.g., review of background information, reports, permit applications, referral documentation, management plans, etc.) and budgeting (e.g., technical review, meetings, cultural monitors, elders) consider a First Nations’ lens?</li> <li>• Does your project include or trigger archaeological or First Nations engagement requirements?</li> <li>• Have you included provisions for capacity funding, technical review, cultural workers' compensation, and/or honoraria, if applicable?</li> </ul>  |
| <b>EXISTING INFORMATION</b>                                       | <ul style="list-style-type: none"> <li>• What information is already available at the CRD about whether and how the program, service or initiative is relevant to and/or impacts (positively or negatively) First Nations?</li> <li>• Have you looked beyond your division to gather relevant information from other divisions regarding previous input that First Nations have provided to similar initiatives?</li> </ul>   |
| <b>INDIGENOUS SELF-DETERMINATION</b>                              | <ul style="list-style-type: none"> <li>• Do Nations consider this project an opportunity to further their Indigenous self-determination?</li> <li>• Does the project provide any opportunities to involve the Nations in planning, operations, or decision-making?</li> <li>• Have Board Directors and First Nations’ leadership discussed the project through Government-to-Government meetings?</li> <li>• Does the project help implement an MOU or protocol agreement with a Nation? Is the project related to a Priority Topic in an MOU Implementation Workplan?</li> <li>• Is the project related to a request made by a Nation through treaty or reconciliation negotiations?</li> <li>• Does the project invite, respect and incorporate Indigenous leadership and traditional knowledge?</li> </ul> |
| <b>SHARED PROSPERITY: ECONOMIC &amp; EMPLOYMENT OPPORTUNITIES</b> | <ul style="list-style-type: none"> <li>• How does the project contribute to First Nation communities' economic development, employment, and training opportunities?</li> <li>• Is there an opportunity to procure services or materials from Indigenous businesses (e.g., unbundle larger contracts or encourage</li> </ul>   |



|   |   |
|---|---|
|   | <p>vendors to provide opportunities for Indigenous employees and companies)?</p> <ul style="list-style-type: none"> <li>• Has capacity funding been considered to support Indigenous involvement (e.g., technical reviews, traditional knowledge, or cultural representatives' participation during land-altering works)?</li> <li>• Are there opportunities to share resources with Nations, such as gravel or wood?</li> </ul>  |
| <p><b>TAKING CARE OF LAND AND WATER</b></p> | <ul style="list-style-type: none"> <li>• Does the project recognize and support First Nations' integral relationship with the land and water (past, present, and future)?</li> <li>• Is there physical space provided for cultural and ceremonial use, food and medicine harvesting, and traditional management practices?</li> <li>• Have First Nations expressed interest in revitalizing and making Indigenous place names known to the public through signage, educational materials, or other means?</li> <li>• How does the project align with existing First Nations' land use plans or community visions for the area?</li> <li>• Are there opportunities for First Nations to lead or participate in stewardship initiatives?</li> </ul>             |
| <p><b>COMMUNICATIONS</b></p>                | <ul style="list-style-type: none"> <li>• Have you had initial discussions with First Nations regarding the project, and is there an ongoing plan for meaningful engagement throughout the project lifecycle?</li> <li>• Are there mechanisms in place to share relevant project information and updates in a timely and accessible manner?</li> <li>• Have you consulted the CRD First Nations Communications Framework to align communications and engagement strategies with established guidelines and protocols? Transparency and a commitment to adapting communication practices based on the preferences and guidance of the involved First Nations are encouraged.</li> <li>• Are you using the Indigenous spelling of the Nation's names?</li> </ul> |
| <p><b>RISKS &amp; OPPORTUNITIES</b></p>     | <ul style="list-style-type: none"> <li>• Are you considering legal, operational, and reputational risks for your project and the CRD due to possible First Nations concerns about your project?</li> <li>• Are you also thinking creatively about identifying opportunities for First Nations associated with your project?</li> <li>• Is there sufficient time in the project schedule to engage meaningfully with First Nations?</li> </ul>   |

|                 |  |
|-----------------|--|
|                 | <ul style="list-style-type: none"> <li>• Is there sufficient budget to engage meaningfully with First Nations?</li> </ul>  |
| <b>FEEDBACK</b> | <ul style="list-style-type: none"> <li>• Does the project foster a culture of continuous improvement, where feedback from First Nations is viewed as an opportunity for learning and enhancement?</li> <li>• How will you receive and incorporate feedback into your project planning, design, or operations if First Nations or the First Nations Relations Division raises concerns?</li> <li>• Does the project have adaptive risk management strategies that allow for the reassessment and adjustment of approaches based on feedback from First Nations?</li> <li>• If the project is not able to meet the expectations of First Nations, have you discussed with the First Nations Relations Division or other advisors to mitigate organizational and reputational/relationship risk?</li> <li>• How is the project prepared to pivot or modify its plans in response to changing circumstances or unforeseen challenges related to First Nations engagement?</li> </ul> |
| <b>LEARNING</b> | <ul style="list-style-type: none"> <li>• If First Nations are involved in your project, how will you share any learnings with CRD staff and leadership?</li> </ul>   |

## GUIDANCE: Examples of First Nations’ Implications in a CRD Staff Report

This section outlines common CRD projects, plans and initiatives that have First Nations implications, *with basic staff report examples provided in italics.*

| CRD PROJECT, PLAN OR INITIATIVE   | FIRST NATIONS IMPLICATIONS  |
|---|---|
| <p><b>ANYTHING REQUIRING A CROWN PERMIT OR REGULATORY AUTHORIZATION</b></p> | <p>Acquiring a Crown permit or regulatory authorization involves consultation and requires that regulatory referrals be sent to First Nations.</p> <p><i>As required before obtaining a provincial permit to proceed with this project, staff will send a regulatory referral out to all First Nations with interests in this location, requesting their input and feedback on the project. Staff will use the Consultative Areas Database to determine which First Nations to reach out to, document and respond to any concerns from the Nations, and provide a summary of feedback and any accommodation measures to the provincial ministry.</i></p>  |
| <p><b>PROJECTS INVOLVING LAND ACQUISITION</b></p>                           | <p>First Nations were moved onto small reserves through colonization and lost access to their ancestral lands. Many Nations are actively seeking to get their land back. The CRD Board has directed staff to notify First Nations before acquiring new land for Regional Parks. Please check with First Nations Relations Division staff regarding other types of land acquisition, as similar notifications may also be required.</p> <p><i>Prior to finalizing a land acquisition, staff will notify First Nations with interests in the area regarding CRD’s proposed acquisition of this property. Any input from the Nations will be brought to the Board for consideration of the next steps.</i></p>   |
| <p><b>LAND ALTERING WORKS/GROUND DISTURBANCE</b></p>                        | <p>Whenever the CRD undertakes ground disturbance, the Protection and Conservation of Heritage Sites policy (ADM83) applies, in order to implement the BC Heritage Conservation Act, strengthen collaborative relationships, and promote cooperative management of archaeological sites and areas of cultural importance to First Nations. Nations frequently request cultural representatives to be present during land-altering works funded through the project budget.</p> <p><i>The project team is working closely with First Nations Relations Division to bring land altering works to involved First Nations prior to project implementation, to support collaboration with the Nations regarding heritage conservation and to support provincial permitting as required. This work will help mitigate risks of operational delays, enabling project schedules and budgets to stay on track.</i></p> <p><i>Project budget includes funding for First Nations’ cultural workers to be</i></p> |

|   |  |
|---|--|
| <b>STRATEGIC PLANS &amp; MANAGEMENT PLANS</b> | <p><i>present during ground disturbance.</i></p>   |
|   | <p>First Nations are interested to incorporate recognition of their perspectives, rights and interests into CRD management plans and strategic plans and have requested that they are involved early to contribute to the development of these plans. First Nations are governments, thus any engagement needs to be separate from a public engagement process.</p> <p><i>A consultant has been brought on to develop and lead the First Nations engagement for this strategic plan, in close coordination with the lead division and First Nations Relations staff. First Nations engagement is happening in advance of the public engagement process, and with a long timeframe to facilitate respectful and meaningful engagement. Capacity funding will be offered to involve First Nations to support their review of the Strategic Plan. Opportunities for First Nations input, and involvement will include in-person meetings, online meetings, written submissions, or other formats as requested by specific Nations.</i></p>  |
| <b>LAND USE PLANS AND REFERRALS</b>           | <p>Development proposals in the Juan de Fuca (JDF) Electoral Area are referred out to First Nations as part of the CRD land use referral process.</p> <p><i>The CRD-Pacheedaht First Nation Memorandum of Understanding (2024) includes Land Use Referrals as a priority topic for collaboration. As per the process outlined in the MOU Implementation Workplan, JDF Land Use Planning staff have engaged with Pacheedaht regarding this proposed development and have incorporated the Nation's feedback into the recommended approach.</i></p>  |
|   | <p>Co-creating new and collaborative approaches to taking care of land and water is a priority for many First Nations. Requests for co-management arrangements are common. Much of CRD service delivery has implications related to land and water, and by extension to the ability of First Nations to access land for harvesting, hunting, food security, ceremonial purposes, housing, economic development, or other purposes.</p> <p><i>The intertidal harbours inventory is actively partnering with marine stewardship staff from X and Y First Nations. The Nation's staff have provided input on priority geographic locations and are accompanying CRD staff for the field work.</i></p> <p><i>Stormwater quality monitoring is of high interest to First Nations as it impacts their ability to harvest shellfish. CRD staff meet regularly with X and Y Nations to share information and document feedback.</i></p> <p><i>The ecological restoration program will focus on restoring species that are of importance for cultural and medicinal purposes, as has been requested</i></p> |



|  |  |
|--|--|
|  | <p><i>through dialogue with involved Nations. The restoration project is in an area of cultural heritage sensitivity, so cultural representatives from the Nation will be onsite during the plantings.</i></p> <p><i>The proponent of this potential wind project in the Watershed has reached out to First Nations with interests in the area. As an initial step, one Nation has requested access to the watershed to conduct environmental assessment and monitoring related to the proposed project. Staff are working with the Nation to facilitate this.</i></p> <p><i>X Nation has requested that their Guardians ride along with CRD Regional Park Rangers, to jointly patrol and monitor their territory. As an initial step towards this goal, Regional Parks is offering a training for Indigenous Guardians on topics that are co-developed with the Nation. This will support the relationship building needed to facilitate next steps and deeper collaboration.</i></p>   |
| <p><b>GOVERNANCE &amp; DECISION-MAKING</b></p>     | <p>First Nations are requesting to be involved in decisions impacting their territories.</p> <p><i>This project is a priority topic for X Nation, as outlined in the Government-to-Government MOU priority topics for collaboration. A letter sent by the Nation’s elected Chief to the CRD Board outlines the Nation’s interests and concerns in relation to this project and has informed the recommended approach.</i></p>  |
| <p><b>ECONOMIC OPPORTUNITIES / PROCUREMENT</b></p> | <p>Economic opportunities are a priority of local First Nations, and it is a Board priority to enhance economic opportunities in partnership with First Nations. Any procurement is an opportunity to do so. The procurement policy was updated in 2022 to enable greater procurement from Indigenous businesses. The South Island Indigenous Business Directory provides a growing list of local Indigenous businesses.</p> <p><i>The RFP has been unbundled in order to support increased procurement from Indigenous businesses, and the RFP encourages vendors to outline steps being taken to support Indigenous partnerships and employment. Doing so supports the Board Priority of shared prosperity through enhancing economic opportunities in partnership with First Nations.</i></p> <p><i>The project budget includes funds to commission an art piece by a local First Nation.</i></p> <p><i>The preferred vendor has a joint venture with X First Nation, and a commitment to involving Indigenous employees as part of project implementation.</i></p> |
| <p><b>HOUSING</b></p>                              | <p>Housing is a priority of all Nations in the region. Populations are growing,</p>  |

|                                 |   |
|---------------------------------|---|
|                                 | <p>and housing on reserves is over-crowded.</p> <p><i>Staff will reach out to First Nations regarding this affordable housing initiative and will engage in dialogue about how CRHC can support the affordable housing needs of Indigenous peoples.</i></p> <p><i>Funding was provided to support this Indigenous-led housing initiative, in alignment with the Board priority of supporting shared prosperity.</i></p>   |
| <p><b>EMPLOYMENT</b></p>        | <p>Many First Nations have expressed that employment for their members is a key priority. Supporting Indigenous employment is also important from an Equity, Diversity and Inclusion perspective. Prospective Indigenous employees may be members of local First Nations or part of the broader urban Indigenous population in the region. A recent Indigenous Employment Scoping Project outlined several recommendations for next steps. All divisions can play a role in enhancing cultural safety and promoting Indigenous employment.</p> <p><i>The RFP scoring criteria encourage vendors to hire Indigenous employees and/or businesses.</i></p> <p><i>Project staff will participate in a cultural safety awareness workshop to identify steps that can be taken towards cultural safety in the workplace.</i></p> <p><i>Division staff will participate at First Nations' career fairs, to build awareness of CRD initiatives and to recruit Indigenous employees.</i></p> |
| <p><b>SHARING RESOURCES</b></p> | <p>Resource sharing with First Nations as resources are made available through CRD works has included logs for firewood, logs for carving, gravel for Nation-led infrastructure projects, and deceased eagles for ceremonial purposes.</p> <p><i>First Nations have requested the sharing of trees for firewood as well as carving and cultural purposes. The trees taken down as part of project implementation will be made available to First Nations. The project budget will cover the cost of delivering the logs.</i></p>  |

## RESOURCES: First Nations Relations Division Support

[The First Nations Relations Division SharePoint](#) provides resources and contact information. Many resources are listed here for your convenience. Beyond the provided materials, we encourage you to delve into additional readings, engage in community discussions, and seek firsthand knowledge to enrich your understanding of the unique histories, traditions, and perspectives of each First Nation. Taking this proactive step fosters relationships built on genuine understanding and respect.

### First Nations Relations Team

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|                                  |              |
|----------------------------------|--------------|
| Manager, First Nations Relations | 250-360-3156 |
| Manager, Archaeology             | 250-360-3622 |
| First Nations Relations Advisor  | 250-360-3640 |
| Administrative Support Clerk     | 250-360-3236 |

### Training

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- Cultural Perspectives training. See HR Learning and Development Calendar.
- Archaeology, Heritage Site Conservation, and Chance Find Management training. Any staff who puts a shovel in the ground is strongly recommended to take Chance Find training, and anyone leading projects involving land-altering works is advised to take the broader archaeology training. See the HR Learning and Development Calendar or contact the Archaeology Manager directly.
- Check with HR or the First Nations Relations Division regarding upcoming training opportunities.
- The First Nations Relations Division supports and facilitates opportunities for staff to learn directly from First Nations in the community and on the land, wherever possible. This includes site visits and gatherings involving staff and First Nations representatives related to heritage conservation, the role of cultural workers, ecosystem restoration, park management planning, and more.

### Resources

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- [Map of First Nations with territory within the region](#)
- First Nations [Community Profiles](#), with links to the Nations' websites
- [CRD Territorial Acknowledgement Guide](#)
- [First Nations Relations Communications Framework](#)
- [Working with Indigenous Elders Guidance Document](#)
- [Cultural Honoraria Policy and Guidelines](#)
- [Procurement Policy](#)
- [South Island Indigenous Business Directory](#)

- [Conservation and Protection of Heritage Sites Policy](#) (please note this is not publicly available and that we are working on revisions to align the policy with upcoming changes to the Heritage Conservation Act as well as feedback from First Nations)
- [Archaeological Chance Find Guidelines](#) (not public)
- [Special Task Force on First Nations Relations Final Report](#), contains the CRD Statement of Reconciliation
- Indigenous Employment Project [Summary Report](#); [Findings and Recommendations Report](#); [Wise Practices Report](#)
- [First Nations Feedback on the Interim Regional Parks and Trails Strategic Plan](#), June 2023
- 2023 [Forum of All Councils Summary Report](#)

The First Nations Relations Division shares context, resources and learning opportunities around days such as Red Dress Day, Indigenous Peoples Day and Truth and Reconciliation Day.

The [FNR Division SharePoint](#) page also provides links to external learning resources. If you have recommendations for additional resources, please send them to the First Nations Relations team.



# Equity, Diversity and Inclusion (EDI) Guidance Document

People, Safety & Culture | March 2024

This document provides guidance to CRD staff as they consider Equity, Diversity and Inclusion (EDI) implications for staff reports and resulting projects. Note that it is not expected that every staff report and project will include EDI Implications.

This is intended to be a living document that considers and implements user feedback. Please contact the People, Safety & Culture division ([edi@crd.bc.ca](mailto:edi@crd.bc.ca)) with any questions or comments about this guide.

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## Introduction to this Tool

This document provides guidance to CRD staff regarding how to implement an equity, diversity and inclusion (EDI) lens as they develop programs, projects, services and initiatives for the public as well as internally to the CRD. Specifically, the Guidance provides information about how to complete the “EDI Implications” section of a staff report.

Note that it is not expected that every staff report will include EDI Implications. Be thoughtful and intentional when considering EDI implications to ensure that the efforts are meaningful and effective.

This is intended to be a living document, with the expectation that it will evolve and change over time. Please contact the People, Safety & Culture division at [edi@crd.bc.ca](mailto:edi@crd.bc.ca) with any questions or comments about this guide.

## OVERVIEW: Context

The purpose of a staff report is to provide essential information in a concise format to the CRD Board, Committees and Commissions so they can make informed decisions. The EDI Implication section of staff reports provides an opportunity to highlight any considerations related to equity, diversity and inclusion which would assist the Board in decision making.

### Board Priorities

Several of the 2023-2026 [Board Priority Initiatives](#) include strong directives related to Equity, Diversity and Inclusion:

- **Governance 5b:** Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses.
- **Governance 5c:** Develop an understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies.
- **Governance 5d:** Foster greater civic participation among diverse community members.

### Corporate Plan

The Corporate Plan includes the following Commitment to Equity, Diversity & Inclusion:

At the CRD, we are committed to creating an inclusive workplace culture that celebrates the uniqueness of individuals – where differences are recognized, appreciated and responded to in ways that fully respect each person’s background, lived experiences, talents and strengths. We value equity, diversity, and inclusion and are committed to listening, learning and evolving on this journey to improve the sense of belonging for everyone at the CRD.

Staff are encouraged to review the relevant sections of the [2023 – 2026 Corporate Plan](#) for

additional EDI-related initiatives.

If your project aligns with any of the goal(s), action(s) and/or sub-action(s) outlined in the CRD Board Priorities/Corporate Plan, include this information in the "*Alignment with Existing Plans & Strategies*" and "*Alignment with Board & Corporate Priorities*" sections of your staff report.

## OVERVIEW: Key Definitions

The following definitions can be used to create a common understanding of the meaning of the terms equity, diversity, inclusion and accessibility.

### Equity

Equity is about treating individuals according to their diverse needs in a way that enables everyone to participate, perform, and engage to the same extent. Whereas equality treats everyone the same regardless of their circumstances, equity acknowledges that individuals may require different levels of support or resources to achieve the same outcomes and takes into account historical and systemic barriers to power and access, striving to level the playing field and promote fairness for all.

### Diversity

Diversity refers to the variety of unique dimensions, qualities, characteristics that an individual possesses, and the mix that occurs in a community or a group of people. It extends beyond just visible attributes like race and ethnicity to include factors such as race, ethnicity, language, age, gender identity and expression, sexual orientation, culture, religion, belief system, marital and family status, socioeconomic status, physical and intellectual abilities, mental health, work status, life experiences and thinking style.

### Inclusion

Inclusion creates an environment which embraces, respects, accepts and values diversity. With inclusion, all individuals have a sense of belonging and are recognized as valued and contributing members of society.



## GUIDANCE: Applying an EDI Lens - Examples

By applying an EDI lens to the work of the CRD, we can generate better solutions by incorporating diverse perspectives and removing barriers. This approach fosters the development of a workplace that is more welcoming to all individuals, while also promoting greater accountability and engagement with the public.

The following are some examples of types of CRD work which may benefit from applying an EDI lens.

Note that it is not expected that every staff report will include EDI Implications. Be thoughtful and intentional when considering EDI implications to ensure that the efforts are meaningful and effective.

- **Policies** – Analyzing the impact of policy positions and processes on diverse and equity-seeking individuals and groups, with a view to identifying and reducing or eliminating barriers to service access where possible.
- **Programs** - Consideration of how diversity factors in the demographics within the populations that the project seeks to reach or serve can inform program design, outreach and delivery.
- **Service Delivery** – Ensuring that delivery of services takes into consideration the needs of diverse individuals and groups and that front-line service workers have received EDI training so they are better able to respond to emerging needs.
- **Public Engagement Initiatives** – Development of an outreach plan that specifically targets diverse groups, use of multiple methods for obtaining information or engaging with the public, and leveraging community networks to reach diverse groups.
- **Communications** – Considerations include using clear, plain inclusive language; communicating key messages in languages other than English if/when needed; using diverse representation in images and symbols; and identifying ways to reach specific populations who may be at risk of not otherwise receiving communications materials.
- **Research** – Identifying and mitigating any assumptions, biases or systemic barriers underlying research methodology and subjects, composition of research team and participation of diverse individuals and groups in conducting research.
- **Grants, Funding and Procurement** – Ensuring equitable access to grants, funding opportunities, and the procurement process, including considerations related to accessibility of the application process and supporting underserved or underrepresented individuals or groups.
- **Buildings** – Identifying opportunities and constraints related to inclusive design, accessibility, gender inclusivity and cultural considerations for facility design and renovation.

## GUIDANCE: EDI Considerations

| Consideration  | Questions to Ask   |
|----------------|--|
| Overall        | <p>Are you using inclusive language in your staff report (whether or not your report includes EDI Implications)?</p> <p>See inclusive language references in Additional Resources section for further information.</p>   |
| Design         | <p>Equity: In what ways does the design of this program, service or initiative increase equitable access by removing barriers?</p> <p>Diversity: In what ways does the design of this program, service or initiative intentionally increase representation and/or participation of diverse people?</p> <p>Inclusion: In what ways does the design of this program, service or initiative foster a sense of belonging for diverse people?</p>   |
| Engagement     | <p>How are you including the voices and perspectives of diverse individuals as part of your invested party or interest holder engagement? What groups of people are impacted by this initiative? Why would they benefit from knowing about the initiative or process?</p> <p>Whose voices or perspectives have you not heard from, and why? What are potential barriers to participation and how will you identify and address them?</p> <p>Additional guidance from Corporate Communications regarding Engagement: Explain the objective (what you want to achieve) through public engagement as well as what the promise to the public is for each objective. Refer to the <a href="#">engagement decision tree</a> and <a href="#">IAP2 Spectrum of Participation</a> for guidance.</p> |
| Impacts        | <p>How will this program, service or initiative differently affect particular individuals and communities, in relation to different aspects of their identities? Consider: race, ethnicity, colour, ancestry, place of origin, political belief, religion, marital status, family status, physical disability, mental disability, sex, gender identity or expression, sexual orientation, age, class, socioeconomic status, and any other relevant aspects of identity.</p> <p>How will the program, service or initiative be responsive to emerging unintended consequences as they may arise?</p>  |
| Communications | <p>What language, images or messages associated with this program, service or initiative could be used to cultivate inclusion?</p>   |

|               |   |
|---------------|---|
|               | <p>Are there any language, images or messages that reinforce stereotyped narratives or dominant cultural norms? If so, how will these be assessed and remediated?</p> <p>Is there a need for communications materials (i.e. safety information, posters, brochures, etc.) to be translated into languages other than English?</p> |
| Accessibility | <p>What accessibility considerations need to be addressed to ensure equitable access for all people?</p> <p>In what ways does this program, service or initiative meet or exceed accessibility regulatory requirements?</p>   |
| Feedback      | <p>How will you receive and incorporate feedback if there are concerns related to equity, diversity and inclusion?</p>  |

*Note: This Guidance chart was adapted from the University of British Columbia’s [Activating Inclusion Toolkit](#) “Using an Equity and Anti-Racism Lens in Decision Making”, UBC Equity & Inclusion Office, November 2023.*

## RESOURCE: Additional Guides

[CRD Corporate Writing Style Guide](#)

[Words Matter - Guidelines on Using Inclusive Language in the Workplace \(gov.bc.ca\)](#)

[A Way with Words and Images: Suggestions for the Portrayal of People with Disabilities \(Canada.ca\)](#)

## RESOURCE: Further Assistance

Please contact the People, Safety & Culture division at [edi@crd.bc.ca](mailto:edi@crd.bc.ca) for additional assistance or with any questions or comments about this guide.



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## REPORT TO GOVERNANCE COMMITTEE MEETING OF WEDNESDAY, APRIL 03, 2024

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**SUBJECT**     **Board Code of Conduct Bylaw – Complaint Process Flowchart**

### **ISSUE SUMMARY**

To review a one-page flowchart on the process for filing complaints under Bylaw No. 4605, “Capital Regional District Board Code of Conduct Bylaw No. 1, 2024”,

### **BACKGROUND**

On December 13, 2023, the CRD Board endorsed the development of a Code of Conduct bylaw and provided staff with direction on the provisions to be included.

On February 14, 2024, the CRD Board endorsed finalization of a draft Code of Conduct Bylaw and directed it be brought back for adoption at the March Board meeting. The Board further endorsed the following motion arising at the Governance Committee:

- *That staff be directed to include a separate one-page flowchart of the Board Code of Conduct for easy Board reference.*

On March 13, 2024, the CRD Board gave three readings and adopted Bylaw No. 4605, “Capital Regional District Board Code of Conduct Bylaw, No. 1, 2024” (Appendix A).

The purpose of this report is to bring forward the one-page flowchart outlining the CRD Board Code of Conduct Bylaw complaint process, attached as Appendix B.

### **ALTERNATIVES**

#### *Alternative 1*

The Governance Committee recommends to the Capital Regional District Board:  
That the CRD Board Code of Conduct Bylaw Complaint Process Flowchart attached as Appendix B be approved.

#### *Alternative 2*

That the CRD Board Code of Conduct Bylaw Complaint Process Flowchart be referred back to staff for additional information based on Governance Committee direction.

### **IMPLICATIONS**

#### ***Complaint Process Flowchart***

Part 2 of the Code of Conduct Bylaw sets out the process for resolving complaints, including investigation, adjudication, final decision, and post-decision release of reports. The flowchart is structured to illustrate the four distinct phases of the complaint process: preliminary assessment; informal resolution; formal resolution, and final determination. The goal is that most complaints will be dealt with in the first two stages and will rarely progress to a formal resolution. Where there



is an opportunity for early resolution identified in the bylaw, it is identified in the flowchart as a path to close the complaint. The flowchart also identifies relevant time periods that correlate to specific steps in the process.

The flowchart starts off in the Preliminary Steps section with the witness of a potential code breach. Once a potential code breach is observed, the Complainant should attempt to resolve the issue directly with the Respondent to which the complaint is either resolved or unresolved. If a complaint is unresolved at this stage, a written complaint may then be submitted to the Chief Administrative Officer (CAO) and CRD Board Chair. Upon receipt of the complaint, which must be received within 60 days of a breach, the CAO and CRD Board Chair will conduct an initial assessment to determine if the complaint progresses onto the next section. During the initial assessment, the CAO and CRD Board Chair will assess the complaint against a strict criterion and if one of those criteria is met then the complaint may be rejected, closed or sent back to the Complainant to address the missing criteria. If a complaint progresses through the initial assessment, it will be referred to the Informal Resolution stage.

The Informal Resolution section is the next section on the flowchart and starts with the determination of a complaint as to whether it is a prospect for Informal Resolution. This determination is made by a Solicitor at their discretion. If the Complainant and/or Respondent declines to participate in the Informal Resolution process at any point, the complaint will go directly to Formal Resolution, bypassing the Informal Resolution process entirely. On the other hand, if the Solicitor determines the complaint can proceed through the Informal Resolution process, the Solicitor can attempt to reach a resolution and has the option of enlisting the assistance of the CRD Board Chair, CRD Vice-Chair, a Mediator, or any staff who may be able to assist. If a complaint can be resolved during the Informal Resolution process, it will then be closed. However, if a complaint cannot be resolved by the Informal Resolution process, it will be referred to the Formal Resolution process.

The Formal Resolution section is the third section on the flowchart and begins with a Formal Resolution Investigation by a Third-Party Investigator. Next, the Investigator will investigate the complaint and provide a written report on the findings and remedy, if applicable. From the start of the Informal Resolution process to when the Investigator provides a written findings report there is a 90-day period for completion. The findings report will first be sent to the Respondent and then 48 hours later, to the CRD Board. After the Respondent and CRD Board have received the findings report, the complaint will progress into the Final Determination section.

The Final Determination section starts off with the CRD Board having 30 days to consider the findings report received in the Formal Resolution section. At this point, the Respondent has the opportunity to address the Board. Once the Board has considered the report and any submissions from the Respondent, it will render a decision and impose a remedy, if applicable. Within 30 days of the Board rendering a decision and imposing a remedy, if applicable, the Board must release a summary of the decision to the public. Once the report has been released, the complaint will then be closed.

The flowchart is meant to be a quick reference tool to supplement the long-form description of the process as set out in the bylaw. Directors should refer to the bylaw itself for a more comprehensive understanding of the complaint resolution process.

***Communication Plan***

Following Board approval of the Complaint Process Flowchart, it will be distributed along with the Board Code of Conduct Bylaw and the Member Statement of Commitment to all CRD elected officials who are subject to the requirements of the bylaw.

The Corporate Officer will collaborate with committee and commission staff on the best method for bringing forward the new bylaw and supporting materials to their elected members attention.

**CONCLUSION**

On March 13, 2024, the CRD Board adopted the Board Code of Conduct Bylaw No. 4605 and approved the Member Statement of Commitment. The Governance Committee requested the development of a one-page flowchart outlining the complaint process in the Code of Conduct Bylaw as a quick reference. The CRD Board Code of Conduct Complaint Process Flowchart attached as Appendix B to this report, will form part of the package that is distributed to all CRD elected officials who are subject to the requirements of the bylaw.

**RECOMMENDATION**

The Governance Committee recommends to the Capital Regional District Board:  
That the CRD Board Code of Conduct Bylaw Complaint Process Flowchart attached as Appendix B be approved.

|               |   |
|---------------|---|
| Submitted by: | Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                   |

**ATTACHMENT(S)**

- Appendix A: Bylaw No. 4605
- Appendix B: Board Code of Conduct – Complaint Process Flowchart

**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4605**

\*\*\*\*\*

**A BYLAW TO REGULATE THE CONDUCT OF BOARD MEMBERS**

\*\*\*\*\*

**WHEREAS**

- A. Board Members are charged with serving their community and must therefore uphold the highest standards of ethical behaviour in order to maintain the public’s trust and confidence in local government;
- B. It is to the benefit of the community for Board Members to conduct themselves and their business in accordance with the guiding principles of integrity, accountability, leadership, respect, transparency and collaboration; and
- C. A Code of Conduct bylaw establishes shared standards and expectations with respect to the conduct expected of Board Members.

**NOW THEREFORE**, the Board of the Capital Regional District in open meeting assembled hereby enacts as follows:

**PART ONE – ETHICAL CONDUCT**

**Division 1 – Interpretation and Application**

**Citation**

- 1. This Bylaw may be cited as “Capital Regional District Board Code of Conduct Bylaw No. 1, 2024”.

**Definitions**

- 2. In this Bylaw:

“**Board**” means the Board of the Capital Regional District;

“**Board Member**” means all Directors and Alternate Directors of the Regional District, Municipal Elected Officials appointed to a Regional District committee or commission, and members of the Local Community Commission on Salt Spring Island;

“**CAO**” means the Chief Administrative Officer for the Regional District;

“**Chair**” means the Chair of the Capital Regional District Board;

“**Corporate Officer**” means the Corporate Officer appointed by the Board pursuant to section 236 of the *Local Government Act*;

**“Executive Leadership Team”** means the CAO, Chief Financial Officer, the Corporate Officer, or a General Manager for the Regional District;

**“FIPPA”** means the *Freedom of Information and Protection of Privacy Act* (British Columbia);

**“Investigator”** means the investigator appointed in section 24;

**“Municipal Elected Official”** means a Mayor or Councillor duly elected in a municipality of the Regional District appointed to serve on a CRD committee or commission;

**“Regional District”** means the Capital Regional District;

**“Solicitor”** means the Regional District’s external solicitor;

**“Staff”** means an officer or employee of the Regional District, but does not include contractors;

**“Vice-Chair”** means the Vice-Chair of the Capital Regional District Board.

### **Interpretation**

3. (1) This Bylaw is to be interpreted broadly and in a manner that is consistent with the *Local Government Act* and the *Community Charter*.
- (2) The intention of the Board in enacting this Code is not to stifle Board Members or to limit their ability to fully perform the governmental and advocacy functions that their position entails, with all the vigour, flair and freedom that is typical of a well-functioning democratic institution, but instead to guide Board Members to undertake those functions in a manner that accords with sound ethical principles.
- (3) The foundational principles in section 4 are to inform the interpretation of the substantive provisions of this Bylaw and shall not form stand-alone basis for complaints.
- (4) Nothing in this Bylaw is intended to preclude Board Members, prior to the filing of a complaint, from speaking to each other in order to resolve matters which may otherwise be captured by this Bylaw.

### **Foundational Principles**

4. (1) Responsible conduct is based on the following foundational principles:
  - (a) Integrity: Board Members are keepers of the public trust, and they must uphold the highest standards of ethical behaviour including by acting lawfully, being free from undue influence, and making decisions that benefit the community;



- (b) Accountability: Board Members are trusted to act competently, diligently and responsibly and be accountable to the public for their actions and decisions;
- (c) Leadership: Board Members must demonstrate and promote the key principles of the Code of Conduct through their decisions, actions and behaviour, including by demonstrating behaviour that builds and inspires the public's trust and confidence in the Regional District;
- (d) Respect: Board Members must conduct themselves in a respectful manner and be courteous and civil with each other and others;
- (e) Transparency: Board Members must conduct their duties in an open and transparent manner, except where this conflicts with their duties to protect confidential information; and
- (f) Collaboration: Board Members shall seek to collaborate whenever possible and appropriate, as the social fabric of communities and the wellbeing of residents depends on solid and sustainable community partnerships.

### **Application**

- 5. (1) This Bylaw applies to all Board Members, inclusive of their actions in their capacity as members of the Board, committees, and other Regional District discretionary appointments.
- (2) Unless otherwise provided, this Bylaw does not apply to a Board Member's conduct in their personal life, except to the extent that such conduct brings the reputation of the Regional District into disrepute or reasonably undermines public confidence in local governance.
- (3) For clarity, the provisions of this Bylaw apply to a Board Member's use of personal and professional social media accounts.
- (4) In the event of a conflict between this Bylaw and another Regional District Bylaw or policy governing Board Member conduct, this Bylaw prevails.

## **Division 2 – Conduct Regulations**

### **Comply with all Laws**

- 6. (1) Board Members shall comply with all applicable federal, provincial and municipal laws in the performance of their public duties, including but not limited to:
  - (a) the *Local Government Act*;
  - (b) the *Community Charter*;

- (c) *FIPPA*;
- (d) the *Financial Disclosure Act*; and
- (e) all bylaws and policies of the Regional District.

### **General Conduct**

- 7. (1) Board Members shall not:
  - (a) engage with others, including Staff, members of the public and other Board Members, in a manner that is abusive, bullying, intimidating or derogatory; or
  - (b) use their office to attempt to gain personal or financial benefits for themselves or their family members, friends or business interests.

### **Respect for Process**

- 8. Board Members shall perform their duties in accordance with the policies, procedures and rules of order established by the Board from time to time.

### **Interactions with Staff**

- 9. (1) Board Members shall not:
  - (a) interfere with, hinder, or obstruct Staff in the exercise or performance of their roles, responsibilities, powers, duties, or functions in accordance with section 153 of the *Community Charter*, nor impair the ability of Staff to implement the Board's policy decisions;
  - (b) request or require that Staff undertake personal or private work for or on behalf of a Board Member; or
  - (c) request or require that Staff engage in political activities, or subject them to reprisal of any kind for refusing to engage in such activities.
- (2) If a Board Member is unsure where to direct a question or inquiry regarding a departmental issue or other work-related item, or regarding a personal item that requires interactions with the regulatory functions of the Regional District, they shall direct the question or inquiry to the CAO or to someone on the Executive Leadership Team.

### **Interactions with the Public and Media**

- 10. (1) Board Members shall not publicly:
  - (a) misrepresent a decision of the Board, even if they disagree with that decision; or

- (b) make disparaging comments about other Board Members.
- (2) When presenting their individual opinions and positions on matters that are within the Board's jurisdiction, Board Members shall take all reasonable measures to ensure that, unless they are the designated spokesperson on a matter, they clearly state that their opinions and positions represent their own personal views and not those of the Board or the Regional District.
- (3) For opinions and positions presented on a social media account, subsection (2) may be satisfied through a statement on the Board Member's profile.

### **Conduct of Meetings**

- 11. (1) Board Members shall conduct themselves with decorum at meetings, including by:
  - (a) complying with all conduct provisions set out in Bylaw No. 3828, "Capital Regional District Board Procedures Bylaw, 2012";
  - (b) adequately preparing for meetings;
  - (c) using respectful language;
  - (d) not using offensive gestures or signs;
  - (e) listening courteously and attentively to all discussions before the body, and focusing on the business at hand;
  - (f) not making comments not germane to the business of the body;
  - (g) not interrupting other speakers, except to raise a point of order; and
  - (h) not otherwise interfering with the orderly conduct of a meeting.

### **Handling of Confidential Information**

- 12. (1) Board Members shall keep information and records prohibited from release under section 117 of the *Community Charter* in strict confidence.
- (2) Without limiting the generality of subsection (1), Board Members shall not disclose:
  - (a) information or records concerning the property, personnel, legal affairs, or other information of the Regional District distributed for the purposes of, or considered in, a closed Board meeting;
  - (b) resolutions or Staff report contents from a closed meeting of the Board unless and until a Board decision has been made for the information to become public; or

- (c) details on the Board's closed meeting deliberations or how individual Board Members voted on a question in a closed meeting.
- (3) Board Members shall not use confidential information to advance, directly or indirectly, their own personal, financial or other private interests.

### **Conflict of Interest**

- 13. (1) Board Members shall not participate in discussion of a matter, or vote on a question in respect of that matter, if they have a conflict of interest.
- (2) In respect of each matter before the Board, Board Members shall:
  - (a) assess whether they have a conflict of interest; and
  - (b) determine whether it is necessary to seek independent legal advice at their own cost, except where the CAO approves the cost, with respect to any situation that may result in a conflict of interest.
- (3) If a Board Member believes that they have a conflict of interest in respect of a matter in a Board or committee meeting, the Board Member shall:
  - (a) prior to the matter's consideration, notify the Chair of the meeting that they have a conflict of interest, stating in general terms why they consider that to be the case;
  - (b) leave any meeting if the matter is discussed and not return until the discussion has ended or voting has been concluded;
  - (c) refrain from discussing the matter with any other Board Member publicly or privately; and
  - (d) refrain from attempting in any way to influence the voting on any question in respect of the matter.

### **Gifts**

- 14. (1) Board Members shall not accept a gift or personal benefit, except in accordance with section 105 of the *Community Charter*.
- (2) Board Members shall disclose a gift or personal benefit, received in accordance with section 105 of the *Community Charter*, as per section 106 of the *Community Charter*.

### **Use of Public Resources**

- 15. (1) Board Members shall not use resources provided to them by the Regional District, including but not limited to:



- (a) Staff time;
  - (b) equipment;
  - (c) technology;
  - (d) supplies;
  - (e) facilities; or
  - (f) other property,
- for personal gain or election-related purposes.
- (2) Board Members shall not undertake municipal election campaign related activities at the Regional District office or on other premises owned by the Regional District during regular working hours unless such activities are organized by the Regional District.

## **PART TWO – INVESTIGATION, COMPLIANCE AND ENFORCEMENT**

### **Division 1 – Implementation and Preliminary Steps**

#### **Implementation**

16. (1) As an expression of the standards of conduct for Board Members expected by the Regional District, this Code is intended to be self-enforcing.
- (2) This Code is most effective when Board Members are thoroughly familiar with it and embrace its provisions. For this reason, this Bylaw shall be provided as information to candidates for the Board.
- (3) On adoption of this Code, and thereafter at the start of each Board term following the General Local Election, Board Members will sign a statement of commitment acknowledging they have read and understood the Code.

#### **Preliminary Steps**

17. If a Board Member believes that they have observed another Board Member engaging in conduct that would breach this Bylaw, they must attempt to resolve the complaint directly with the other Board Member, if possible, prior to submitting a complaint under section 18.

## **Division 2 – Complaint Intake**

### **Complaint Procedure**

18. (1) Subject to section 17, a Board Member may submit a complaint to the Chair and CAO.
- (2) A complaint must be in writing, must be submitted within 60 days of the alleged breach, and must include, with sufficient detail:
  - (a) the name of the complainant;
  - (b) the name of the respondent Board Member(s);
  - (c) the conduct that the complainant alleges was in breach of the Code;
  - (d) the date of the alleged conduct;
  - (e) the parts of the Code the alleged conduct breached;
  - (f) the basis for the complainant's knowledge of the conduct; and
  - (g) whether there was any attempt to resolve the complaint informally under section 17.
- (3) A complaint may be accepted notwithstanding that it does not comply with every requirement in subsection (2), if the Chair and CAO determines that there has been substantial compliance or if the circumstances otherwise warrant acceptance.
- (4) A complaint submitted outside the time limits set out in subsection (2) must be rejected.
- (5) In an election year, a complaint submitted within 90 days of the general voting day must be accepted and held in abeyance until after the new Board has taken office, at which time the complaint shall only proceed if it relates to a Board Member who was re-elected in that election year or in the case of a Board Member that is a municipal director is reappointed to the Board.
- (6) For certainty, if the Board Member who is the subject of a complaint held in abeyance pursuant to subsection (5) is not re-elected or re-appointed to the Board, the complaint must be rejected.

### **Preliminary Assessment**

19. (1) On receipt of a complaint, the Chair and CAO shall conduct a preliminary assessment of the complaint or forward the complaint to the Solicitor to conduct a preliminary assessment.

- (2) If the Chair, CAO, or Solicitor determines that any of the following circumstances apply, they must notify the complainant and respondent Board Member in writing that the complaint will be closed, stating the reasons for the closure:
  - (a) the complaint is not with respect to a breach of this Bylaw;
  - (b) the complaint is frivolous, vexatious, or not made in good faith;
  - (c) the complaint would be more appropriately addressed through another process;
  - (d) the complaint is not in compliance with section 18(2) and the respondent Board Member will be prejudiced by the complainant's failure to comply;
  - (e) the complaint concerns the same subject matter as a previous complaint that has already been accepted under this section, and it is not necessary to expand that original complaint or add the new complainant;
  - (f) the complainant wishes to withdraw the complaint, and it would be appropriate to allow the complaint to be withdrawn;
  - (g) the complaint was submitted by a Board Member, and the Board Member ought to have first attempted to resolve the complaint informally under section 17; or
  - (h) there are no possible grounds on which to conclude that a violation of this Bylaw has occurred.
- (3) In completing the preliminary assessment, the Solicitor may request further information from the complainant before determining whether there are sufficient grounds to believe that a breach of this Bylaw may have occurred.
- (4) If the Solicitor receives multiple complaints concerning the same matter, the Solicitor must proceed with the first complaint accepted, but may expand the complaint and/or add complainants for the purpose of seeking resolution of the complaint.

### **Criminal Conduct**

20. (1) If, at any stage in the complaint procedure, the CAO, Corporate Officer, Solicitor or Investigator determines that there are reasonable grounds to believe that there has been a contravention of the *Criminal Code*, or learns that there is an ongoing police investigation into the conduct that gave rise to the complaint, then they must immediately refer the matter to the appropriate authorities and suspend any investigation into the complaint until any resulting police investigation and charge have been finally disposed of, and shall report the suspension to the Board, the complainant, and the respondent Board Member.

- (2) For certainty, a complaint must be suspended while the Board Member is on a mandatory leave of absence under section 109.3(1) of the *Community Charter*, and may be re-commenced only once the mandatory leave of absence ends pursuant to section 109.3(1)(b) of the *Community Charter*.

### **Disqualification Proceedings**

21. (1) If, at any stage in the complaint procedure, the CAO, Corporate Officer, Solicitor or Investigator determines that:
  - (a) the subject-matter of the complaint is being addressed in a disqualification proceeding commenced under section 111 of the *Community Charter*; or
  - (b) the complainant could commence a disqualification proceeding under section 111 of the *Community Charter* in relation to the matter that is the subject of the complaint;

the complaint must immediately be suspended until the proceeding under subsection (a) has concluded or the time-period within which the complainant could commence a proceeding under subsection (b) has expired.

- (2) If a complaint has been suspended under subsection (1), it may be re-commenced upon the conclusion of a disqualification proceeding, or the time-period within which a disqualification proceeding could be filed has expired, if:
  - (a) the Board Member who is subject to the complaint has not been disqualified from office by the British Columbia Supreme Court; and
  - (b) it would be in the public interest to do so.

### **Division 3 – Resolution Procedures & Investigations**

#### **Informal or Formal Resolution**

22. (1) After a complaint is accepted under section 19(1),
  - (a) the Corporate Officer or CAO must refer the complaint to the Solicitor, if not already referred under section 19(1), for a determination under subsection (b); and
  - (b) the Solicitor must then determine whether the complaint requires a formal investigation or whether the complaint may be resolved informally.
- (2) When determining whether the complaint may be resolved informally, the Solicitor:



- (a) may consider culturally appropriate or transformative or restorative justice approaches, and may engage a third-party mediator or facilitator to assist for this purpose; and
  - (b) shall give strong preference to the informal resolution process where possible.
- (3) The complainant or respondent Board Member may decline to participate in an informal resolution at any time.

### **Informal Resolution**

23. (1) Where the Solicitor has determined that the complaint may be resolved informally, the Solicitor may, at their discretion, either attempt to resolve the complaint directly, or refer the complaint to the Chair, unless the complaint is against the Chair, in which case the complaint will be referred to the Vice-Chair of the Board.
- (2) Where the Solicitor has referred the complaint in subsection (1), the Chair or Vice-Chair, as the case may be, may agree to assist in resolving the complaint directly.
- (3) Where the Chair, Vice-Chair or a third-party mediator or facilitator is engaged to assist in the informal resolution of a complaint, they shall assess the suitability for settlement or resolution on an ongoing basis and may decline to assist at any point.
- (4) If the complaint is resolved informally by someone other than the Solicitor, the person assisting in resolving the complaint must notify the Solicitor in writing of the terms of the resolution, upon receipt of which, the Solicitor must close the complaint.
- (5) If the person assisting in the informal resolution of a complaint declines to assist, the complainant or respondent Board Member declines to participate, or 30 days has passed since the determination in section 22(1)(b) was made by the Solicitor to resolve the complaint informally, then the complaint shall be referred in accordance with section 24.

### **Referral to Third-Party Investigator**

24. (1) If the Solicitor determines that the complaint requires a formal investigation under section 22(1)(b), or in the event that informal resolution is unsuccessful, they shall refer the complaint to a neutral and independent third-party Investigator to conduct an investigation and notify the complainant and respondent Board Member of the referral.
- (2) The Investigator shall, at all times during an investigation, have the power to:
- (a) dismiss a complaint on a preliminary basis as set out in section 19; and
  - (b) attempt to resolve the complaint informally if the Investigator considers it appropriate in the circumstances.

- (3) The Investigator, once retained, may only be dismissed for cause.

### **Formal Resolution**

25. (1) Once retained, the Investigator shall deliver the complaint to the respondent Board Member, along with a request that the respondent Board Member provide a written response to the complaint, together with any submissions that the respondent chooses to make, within 10 days, subject to the Investigator's discretion to reasonably extend the timeline.
- (2) The Investigator may, at their discretion, deliver the respondent Board Member's written response and submissions to the complainant and request a reply in writing within 10 days, subject to the Investigator's discretion to reasonably extend the timeline.
- (3) The Investigator may:
  - (a) speak to anyone relevant to the complaint;
  - (b) request disclosure of documents relevant to the complaint, including closed meeting minutes; and
  - (c) access any record in the custody or control of the Regional District, within the meaning of *FIPPA*, with the exception of records subject to solicitor-client privilege.
- (4) The Investigator has discretion to conduct the investigation as they see fit but must ensure that the investigation complies with the rules of procedural fairness and natural justice required in the circumstances of the complaint.

### **Confidentiality**

26. (1) The CAO, Corporate Officer, Solicitor and Investigator must make all reasonable efforts to process and investigate complaints in a confidential manner.
- (2) The Investigator and every person acting under the Investigator's instructions must preserve confidentiality with respect to all matters that come into the Investigator's knowledge in the course of any investigation or complaint, except as otherwise required by law.
- (3) Board Members must make all reasonable efforts to keep complaints and all matters pertaining to complaints under this Bylaw, at any stage, confidential, except as otherwise provided in this Bylaw.

### **Obstruction**

27. (1) A Board Member must not obstruct any person in relation to the administration of this Bylaw or the investigation of a complaint.

- (2) Without limitation, the following shall constitute obstruction:
  - (a) uttering of threats or undertaking any reprisal against any person involved in the complaint;
  - (b) destruction of relevant records or documents; and
  - (c) refusal to cooperate with the Investigator.

### **Frivolous and Vexatious Complaints**

28. Any Board Member who is found to have obstructed any person contrary to section 27, or who makes a complaint that is subsequently found to have been made in a deliberately frivolous, vexatious or malicious manner, or otherwise made in bad faith, will be subject to appropriate disciplinary action, which may include, but is not limited to the sanctions and remedies as described in section 31.

## **Division 4 – Adjudication and Reporting**

### **Final Determination by Investigator**

29. (1) The Investigator must conclude the investigation and make a determination regarding the alleged breach within 90 days of referral under section 23(1), unless the Investigator determines that doing so is not practicable, in which case the Investigator must notify the complainant and respondent Board Member of the delay and provide a revised decision date, which may be extended by periods of up to 30 days at a time on provision of written notice to the complainant and respondent Board Member.
- (2) If, after reviewing all the material information, the Investigator determines that a Board Member did not violate this Bylaw, then the Investigator shall:
  - (a) prepare a written investigation report providing reasons for their determination, which shall include a determination of whether the complaint was submitted frivolously, vexatiously or in bad faith;
  - (b) deliver a summary of the investigation report to the complainant; and
  - (c) deliver a copy of the investigation report to the respondent Board Member and the Board.
- (3) If, after reviewing all the material information, the Investigator determines that a Board Member did violate this Bylaw, then the Investigator shall:
  - (a) prepare a written investigation report providing reasons for their determination, which must include:

- (i) a summary of the factual findings of the Investigator;
  - (ii) an application of this Bylaw, and any other applicable law, to the facts;
  - (iii) a recommendation of the appropriate sanction, subject to subsection (iv);  
and
  - (iv) if applicable, a determination of whether the respondent Board Member took all reasonable steps to avoid the breach or whether the breach was trivial, inadvertent or due to an error in judgment made in good faith, in which case the Investigator may recommend that no sanction be imposed;
- (b) notify the complainant that the investigation is complete and inform them that the investigation report, or a summary thereof, will be subsequently released by the Board in accordance with section 30(4);
  - (c) deliver a copy of the investigation report to the respondent Board Member;  
and
  - (d) 48 hours after the delivery of the investigation report to the respondent Board Member, deliver a copy of the investigation report to the Board.
- (4) The Investigator may choose to distribute the investigation report to the Board under this section through the Corporate Officer.

#### **Final Determination by the Board**

- 30. (1) The Board must, within 30 days of the Investigator's delivery of the investigation report, decide on the appropriate measures, if any, that are warranted by a breach of this Bylaw.
- (2) Prior to making any decision regarding the findings and recommendations set out in the investigation report, the respondent Board Member must be provided with an opportunity, in person and in writing, to comment to the Board on the Investigator's determinations and recommendations.
- (3) An investigation report may be considered in a closed meeting, if the circumstances warrant and there is a valid reason to close the meeting under section 90 of the *Community Charter*.
- (4) Within 30 days of receiving the investigation report under section 29(2)(c) or section 29(3)(d), the Board must, subject to the Regional District's obligations under *FIPPA*, release to the public the investigation report, or a summary thereof, along with a summary of the Board's decision, if applicable.



## Remedies

31. (1) The Board may impose the following remedies for a violation of this Bylaw:
  - (a) a letter of reprimand from the Board, addressed to the respondent Board Member;
  - (b) a request from the Board that the respondent Board Member issue a letter of apology;
  - (c) the publication of the letters contemplated in subsections (a) and (b), along with the respondent Board Member's response, if any;
  - (d) directions to the CAO regarding the method of providing documents that contain confidential information to the respondent Board Member;
  - (e) a recommendation that the respondent Board Member:
    - (i) attend specific training or counselling;
    - (ii) complete a specified number of volunteer hours; or
    - (iii) make a charitable donation of a specified or unspecified amount to a particular charity;
  - (f) limitations on access to certain Regional District facilities;
  - (g) prohibition from representing the Regional District at events and/or attending conferences or seminars;
  - (h) suspension or removal of the respondent Board Member from the position of chair or vice-chair on committees;
  - (i) suspension or removal of the respondent Board Member from committees;
  - (j) public censure of the respondent Board Member; or
  - (k) any other sanction recommended by the Investigator, so long as that sanction is within the authority of the Board.
- (2) The Board must consider the following factors when determining whether to impose a remedy on a Board Member:
  - (a) the degree and nature of the conduct;
  - (b) whether the contravention was a single or repeated act;
  - (c) whether the Board Member knowingly contravened this Bylaw;

- (d) whether the Board Member took steps to mitigate or remedy the contravention;
  - (e) the Board Member's history of other contraventions; and
  - (f) if applicable, the Investigator's finding that the respondent Board Member took all reasonable steps to avoid the breach, or that the breach was trivial or done inadvertently or because of an error in judgment.
- (3) When the Board imposes a remedy pursuant to subsection(1), it may include secondary remedies to take effect on a date set by the Board in the event that the Board Member fails to comply.

### **Division 5 – Post-Decision Matters**

#### **Reimbursement of Costs**

32. (1) For clarity, the reimbursement rules set out in this section apply despite any other indemnification bylaw or policy.
- (2) A Board Member may make a request to the Board for reimbursement of the costs of legal advice and representation in responding to the formal complaint process outlined in this Bylaw.
- (3) If appropriate, after considering all of the circumstances, the Board may resolve to reimburse legal fees reasonably incurred by a Board Member, provided that all of the following are met:
- (a) the Board Member has not previously been found to have breached this Bylaw;
  - (b) the Board Member has not previously been reimbursed under this section;
  - (c) the amount claimed does not exceed \$10,000; and
  - (d) the Board Member did not engage in dishonest, grossly negligent, or malicious conduct.

|                         |                  |        |        |      |
|-------------------------|------------------|--------|--------|------|
| READ A FIRST TIME THIS  | 13 <sup>th</sup> | day of | March, | 2024 |
| READ A SECOND TIME THIS | 13 <sup>th</sup> | day of | March, | 2024 |
| READ A THIRD TIME THIS  | 13 <sup>th</sup> | day of | March, | 2024 |
| ADOPTED THIS            | 13 <sup>th</sup> | day of | March, | 2024 |

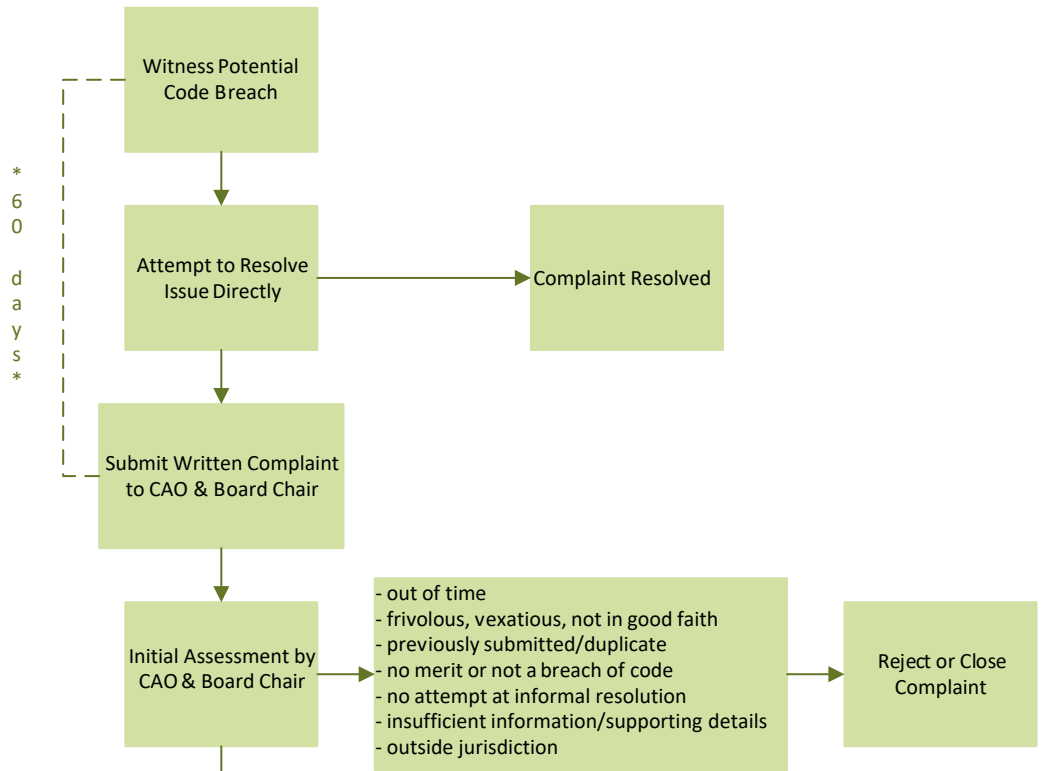
  
\_\_\_\_\_  
CHAIR

  
\_\_\_\_\_  
CORPORATE OFFICER

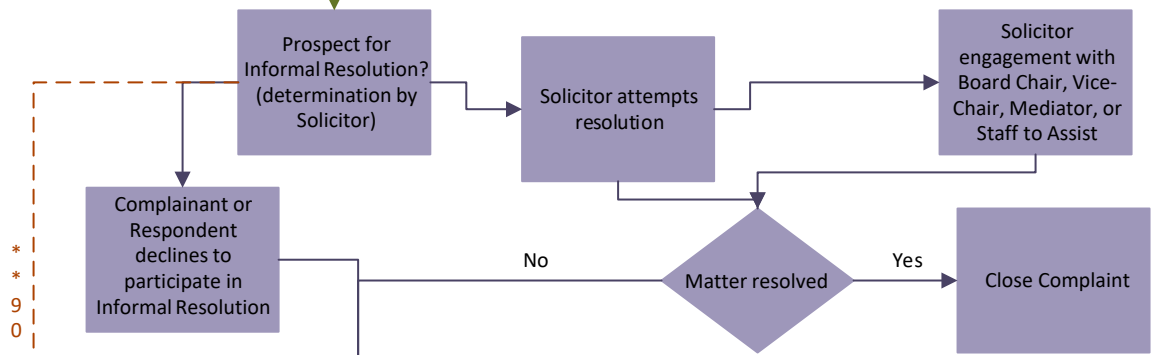
# CRD Board Code of Conduct - Complaint Process Flowchart

## Preliminary Steps

\*Complaint must be received within 60 days of the breach\*



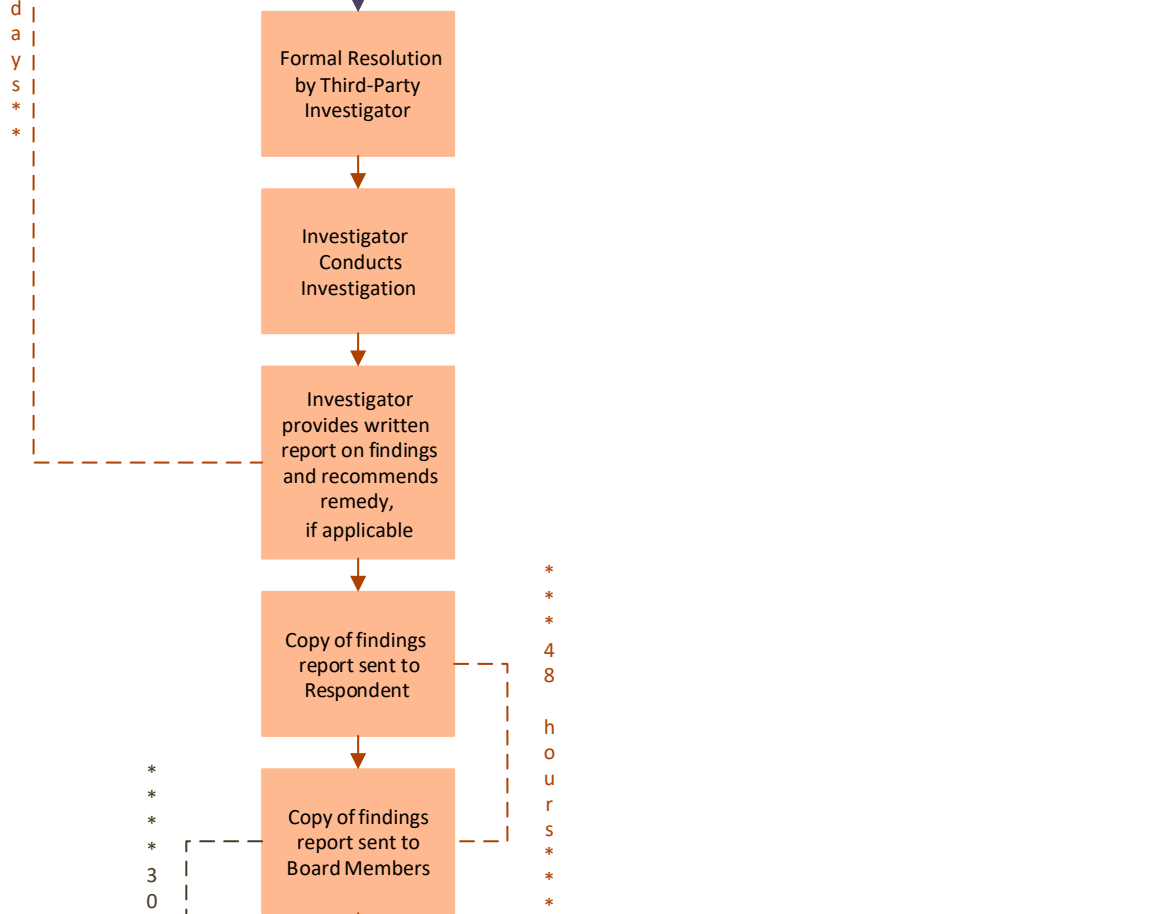
## Informal Resolution



## Formal Resolution

\*\* Investigation must be completed within 90 days of the start of the Informal Resolution process\*\*

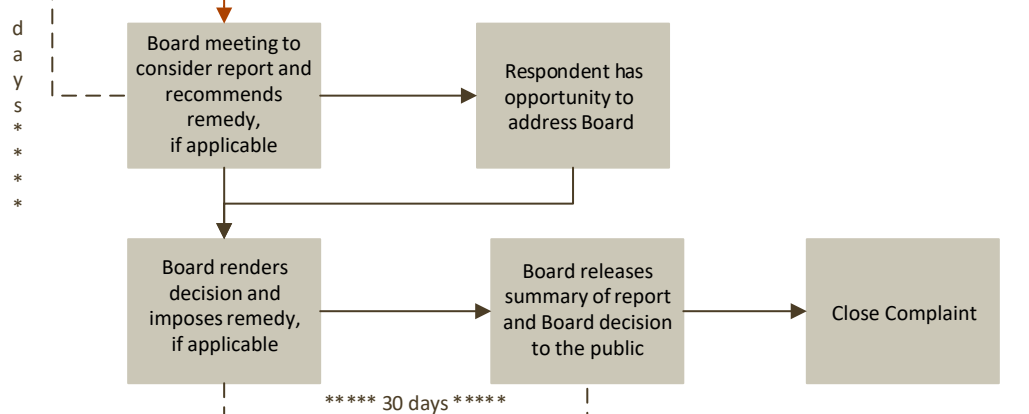
\*\*\*48 hours after the Respondent has received the findings report, it is sent to the Board\*\*\*



## Final Determination

\*\*\*\*Within 30 days of receiving the findings report, the Board must consider the report and recommend remedies, if applicable\*\*\*\*

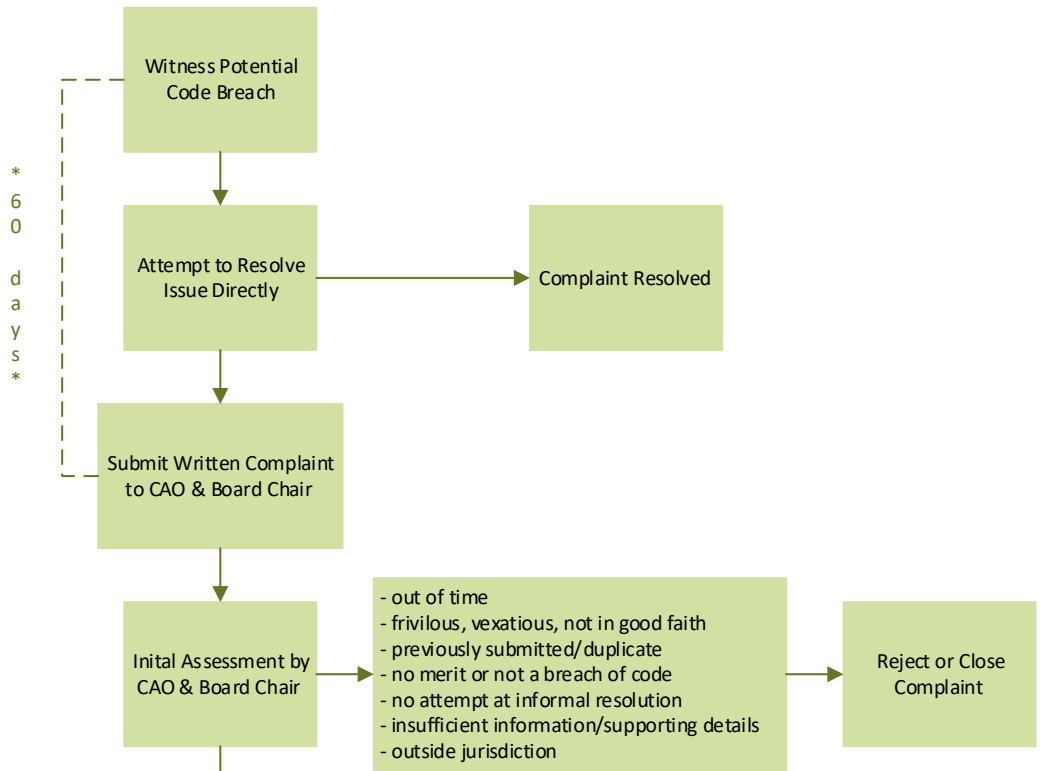
\*\*\*\*\*Within 30 days of the Board rendering a decision and imposing the remedy, the summary of report and decision is to be made public\*\*\*\*\*



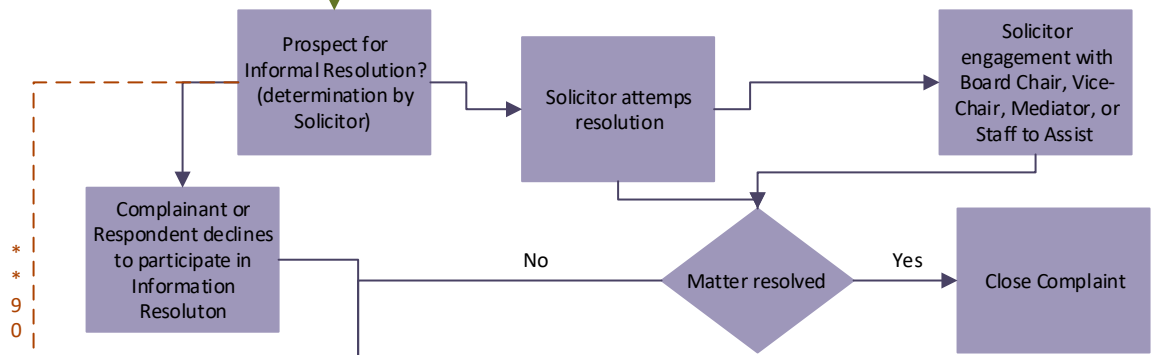
# CRD Board Code of Conduct - Complaint Process Flowchart

## Preliminary Steps

\*Complaint must be received within 60 days of the breach\*



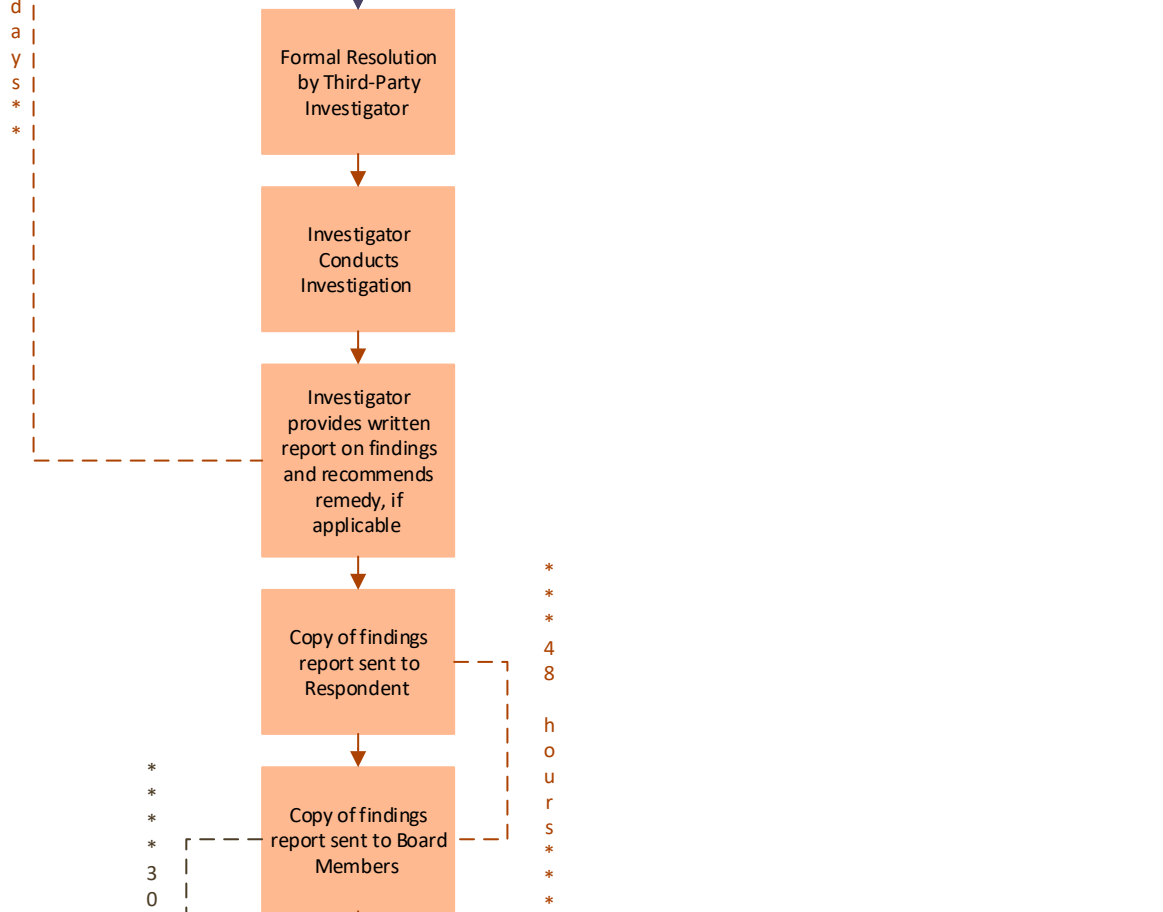
## Informal Resolution



## Formal Resolution

\*\* Investigation must be completed within 90 days of the start of the Informal Resolution process\*\*

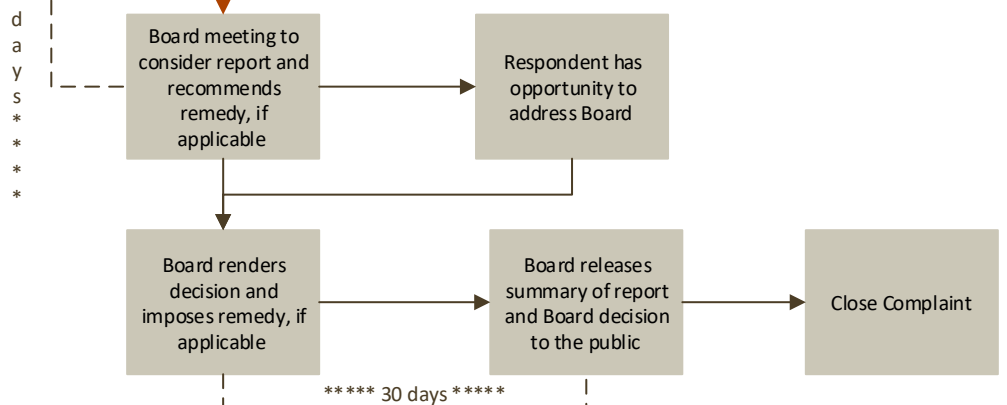
\*\*\*48 hours after the Respondent has received the findings report, it is sent to the Board\*\*\*



## Final Determination

\*\*\*\*Within 30 days of receiving the findings report, the Board must consider the report and recommend remedies, if applicable\*\*\*\*

\*\*\*\*\*Within 30 days of the Board rendering a decision and imposing the remedy, the summary of report and decision is to be made public\*\*\*\*\*







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**REPORT TO GOVERNANCE COMMITTEE  
MEETING OF WEDNESDAY, APRIL 03, 2024**

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**SUBJECT**    **Board Chair Voting Rights on Standing Committees**

**ISSUE SUMMARY**

To provide information on the Board Chair's voting rights as an ex-officio Member on Board Standing Committees.

**BACKGROUND**

On February 14, 2024, the CRD Board carried the following motion with notice from the Electoral Areas Committee:

*That staff report to CRD Governance Committee regarding the implications and process for amending the Board Procedures Bylaw so that the CRD Board Chair participates in the Electoral Areas Committee on a voice without vote basis.*

Board standing committees are established by the Board Chair to consider matters that would be better dealt with by committee. After consideration of a matter, the committee makes recommendations to the Board for final consideration. The CRD Board's meeting practice is to consider the committee recommendation first; however, the Board has no obligation to move or vote in favour of the committee's recommendation. The Board may amend the committee recommendation further, or may instead endorse the staff report recommendation or one of the report alternatives, or may raise an entirely new alternative motion for consideration.

The *CRD Board Procedures Bylaw* enables the Chair to vote on all standing committee matters. At Section 33. (2):

33. (2)(a) *The Chair shall be a Member of all Committees and entitled to vote on all matters.*

(b) *Despite section 33(2)(a) the Chair, when in attendance, may be counted as one Member for the purpose of constituting a quorum.*

The ability for the CRD Board Chair to participate as ex-officio on all Board Standing Committees is consistent with the *Local Government Act*:

*218 (2) The chair may establish standing committees for matters the chair considers would be better dealt with by committee and may appoint persons to those committees.*

The *CRD Board Procedures Bylaw* on the matter of Board Standing Committees echoes the provisions of the *Local Government Act* and states:

*26. (1) The Chair may establish a Board Standing Committee as a regular permanent committee whose mandate will be in relation to a CRD service*

*or potential service.*

(2) *The Chair shall appoint only Board Members to a Board Standing Committee with the following exceptions:*

- (a) Unless the authorizing legislation or Letters Patent for the Board Standing Committee defines its membership; and*
- (b) Where a Board Standing Committee Terms of Reference allow a First Nation Member to participate.*

The Terms of Reference for all CRD Board Standing Committees share the following clauses:

*2.0 b) The Board Chair will appoint the Committee Chair, Vice Chair and Committee members annually.*

*3.0 b) All Board members are permitted to participate in standing committee meetings, but not vote, in accordance with the CRD Board Procedures Bylaw.*

## **IMPLICATIONS**

The Newly Revised Robert's Rules of Order (RRO) apply to the proceedings of the Board and its committees to the extent that they are not inconsistent with the *Local Government Act*, *Community Charter*, and *Board Procedures Bylaw*. Under RRO, an ex-officio member of a committee, "*has the same rights as the other committee members but is not obligated to attend meetings of the committee and is not counted in determining the number required for a quorum.*" The drafting of section 33 of the *CRD Board Procedures Bylaw*, while not specifically calling the position ex-officio is consistent with ex-officio standing.

Regional District bylaws, policies and procedures must not conflict with provincial legislation. As the power for establishing standing committees and appointing Board Members to those committees is within the purview of the elected Board Chair, it is not possible for the CRD Board Procedure Bylaw or standing committee terms of reference to limit the Board Chair's power that are prescribed by *Local Government Act* section 218(2). The decision to establish, make appointments, and vote on Board standing committee matters is up to the Board Chair who is elected annually each November.

While in theory it is possible to change the *CRD Board Procedure Bylaw* with an amending bylaw to eliminate section 33(2)(a) and (b) (which spell out the power of the Board Chair to vote at standing committees), there is no point in doing so when the Board Chair retains the power to decide which committees to convene any given year and to assign membership of those committees. Without sections 33(2)(a) and (b) the Chair can still choose to appoint themselves to any standing committee with full membership rights, including voting.

## **CONCLUSION**

Staff were directed to report to the Governance Committee regarding the implications and process for amending the *CRD Board Procedures Bylaw* so that the CRD Board Chair participates in the Electoral Areas Committee on a voice without vote basis. The *Local Government Act* section 218(2) prescribes the power of the Board Chair to establish standing committees and appoint

persons to those committees. Regional District bylaws, policies and procedures must not conflict with provincial legislation. Procedure bylaws can expand upon the powers conferred by legislation, but cannot restrict them. As the power for establishing standing committees and appointing Board Members is within the purview of the elected Board Chair, it is not possible for the *CRD Board Procedure Bylaw* or standing committee terms of reference to limit the Board Chair's ability to vote at Electoral Areas Committee if the Chair chooses to appoint themselves as a committee member.

**RECOMMENDATION**

There is no recommendation. This report is for information only.

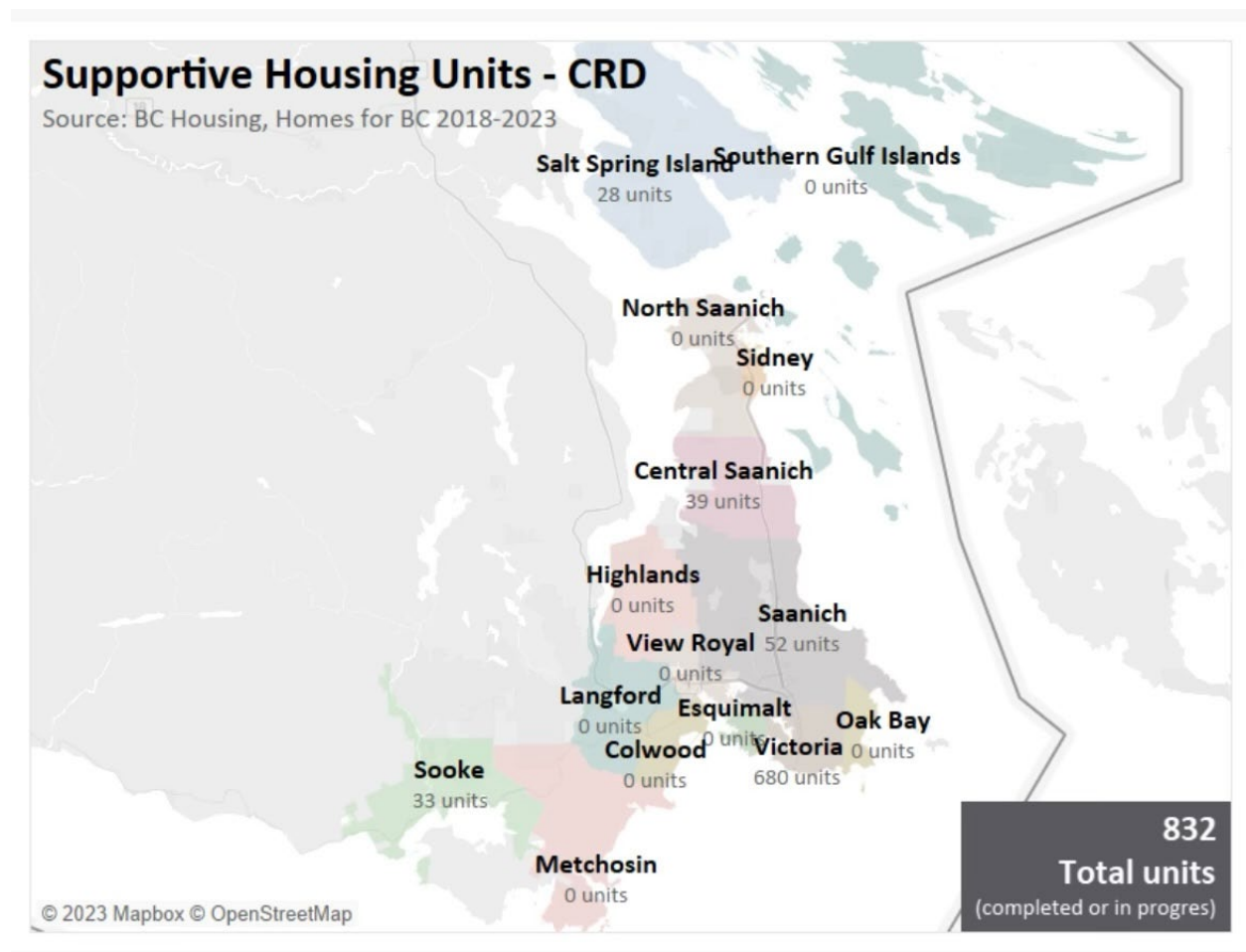
|               |   |
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| Submitted by: | Marlene Lagoa, MPA, Manager, Legislative Services & Deputy Corporate Officer  |
| Concurrence:  | Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                   |

**Motion:**

The Hospitals and Housing Committee recommends to the CRD Board:

That the Board direct staff to work with the Reaching Home Program’s Community Advisory Board and/or the Alliance to End Homelessness in Greater Victoria to undertake studies, reports, or analyses on the following topics related to supportive housing across the Capital Region:

- A high-level regional resource inventory on services and supports within each jurisdiction that aid unhoused people (e.g. food banks, support services, indoor shelters, and so on.)
- An analysis of the parks, public spaces, or campgrounds available for overnight sheltering for unhoused people across the region;
- In light of the Province handing down supportive housing targets for all jurisdictions over a certain population, an assessment of the potential role for the CRD to play, in collaboration with local governments and BC Housing, in advancing regional supportive housing and sheltering objectives.





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## REPORT TO PLANNING AND PROTECTIVE SERVICES COMMITTEE MEETING OF WEDNESDAY, MARCH 20, 2024

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**SUBJECT** District of Saanich Regional Context Statement

### **ISSUE SUMMARY**

To review the District of Saanich regional context statement (RCS) in relation to the Capital Regional District's (CRD) Regional Growth Strategy (RGS) Bylaw (Bylaw No. 4017).

### **BACKGROUND**

On March 14, 2018, the CRD Board adopted the RGS (Bylaw No. 4017). On April 14, 2021, the CRD Board amended the RGS with updated population projections (Bylaw No. 4328).

An RCS, adopted within a local government's Official Community Plan (OCP), relates OCP provisions to the RGS. Per section 446 of the *Local Government Act* (the *Act*), an OCP in a local government to which an RGS applies must include an accepted RCS. The *Act* stipulates that upon receipt of a proposed RCS, the CRD Board must respond by resolution within 120 days to the municipal council to indicate whether or not it accepts the RCS. The Board is deemed to have accepted the RCS if it does not respond within the 120-day period.

On April 11, 2018, the CRD Board approved a framework to guide the evaluation of regional context statements.

On December 12, 2023, the District of Saanich submitted an RCS for Board acceptance (see Appendix A). The RCS was prepared to reflect the content of a new 2023 District of Saanich OCP in relation to the 2018 RGS. The CRD Board has until April 10, 2024, to review and respond to the District of Saanich RCS. The CRD Board approved Saanich's previous RCS on March 11, 2020.

CRD Regional and Strategic Planning staff have evaluated the District of Saanich RCS in accordance with the Board-approved "Regional Context Statement Framework". This framework identifies three criteria against which staff should evaluate an RCS:

- 1) **All relevant content is included:** The RCS addresses all RGS content relevant to the OCP. Content that is not applicable in the context of the OCP should be identified as "not applicable".
- 2) **Clearly articulates relevant content:** The RCS provides a sufficient level of detail to convey how the specific OCP content relates to the RGS.
- 3) **Plan to be consistent over time:** The RCS identifies how the OCP will become consistent with the RGS over time if content is not immediately consistent.

Appendix B presents a summary of the evaluation.



## **ALTERNATIVES**

### *Alternative 1*

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That the District of Saanich regional context statement be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and be accepted in accordance with the requirements of section 448 of the *Local Government Act*.

### *Alternative 2*

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That the District of Saanich regional context statement be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and not be accepted in accordance with the requirements of section 448 of the *Local Government Act*.

### *Alternative 3*

That the District of Saanich regional context statement report be referred back to staff for additional information based on Planning and Protective Services Committee direction.

## **IMPLICATIONS**

### *Service Delivery Implications*

Reviewing RCSs for consistency with the RGS is an ongoing standard procedure completed for all updated OCPs in accordance with section 448 of the *Local Government Act*.

### *Intergovernmental Implications*

Board acceptance of the RCS is a key RGS implementation tool as the context statement relates a local government's OCP to the RGS. The OCP provides policies that guide decisions related to land use, infrastructure, mobility, housing, parks, and other content under the authority of a local government. The District of Saanich has submitted a proposed RCS to fulfill its statutory obligation to have an accepted RCS that demonstrates the relationship of its new OCP to the RGS. An accepted RCS is necessary for Saanich to adopt its new OCP.

### *Regional Growth Strategy Implications*

The District of Saanich's proposed RCS demonstrates a strong relationship to the RGS that will work toward achieving the RGS vision and objectives, based on CRD staff's analysis against the RCS evaluation criteria. The RCS fully captures all relevant OCP content (*criteria #1*) and identifies how the OCP relates to the RGS (*criteria #2*). The RCS does not identify the need for any OCP areas to become consistent with the RGS over time (*criteria #3*).

As outlined in Appendix B, the RCS addresses population projections and RGS objectives for growth management, environment and infrastructure, housing and community, transportation, economic development, food systems and climate action. The District of Saanich will direct the majority of future growth into the Uptown Core, urban centres of McKenzie and Quadra, Shelbourne, Royal Oak and Burnside and Tillicum, and growth corridors along McKenzie Avenue, Quadra Street, and Shelbourne Street. These areas are aligned with the RGS growth management plan described in RGS Maps 3a and 3b. OCP policies on the Urban Containment Policy Area are aligned with the RGS and is consistent with the RGS objectives to keep urban settlement compact.

*Environmental & Climate Implications*

The CRD Climate Action Strategy identifies sustainable land use, planning, and preparedness as an important goal area to reduce greenhouse gas (GHG) emissions. RGS implementation, including the approval of RCSs that will help reduce community-based GHG emissions, is a key action. As shown in Appendix B, the District of Saanich RCS demonstrates a strong relationship to the RGS by prioritizing compact development, supporting climate adaptive agriculture, protection of rural lands and natural areas, adopting energy efficiency for building performance and municipal infrastructure, transportation policies that support transit and active transportation options, adopting policies focused on reducing carbon emissions by 2030 and eliminating emissions by 2050, increasing renewable energy use, and integrating climate action and adaptation into local government decision-making.

**CONCLUSION**

Provincial legislation requires that a municipal OCP contain an accepted RCS. Board acceptance of the RCS is a key tool for RGS implementation. Staff have reviewed the District of Saanich’s proposed RCS in accordance with the Board-approved evaluation framework. The District of Saanich’s RCS demonstrates a strong relationship to the RGS and will work toward achieving RGS vision and objectives.

**RECOMMENDATION**

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That the District of Saanich regional context statement be considered in relation to the 2018 Regional Growth Strategy (Bylaw No. 4017) and be accepted in accordance with the requirements of section 448 of the *Local Government Act*.

|               |  |
|---------------|--|
| Submitted by: | Emily Sinclair, MCIP, RPP, Senior Manager, Regional and Strategic Planning   |
| Concurrence:  | Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                  |

**ATTACHMENTS**

- Appendix A: Saanich Regional Context Statement Referral
- Appendix B: Regional Context Statement Evaluation

District of Saanich  
Legislative Services Division t. 250-475-5501  
770 Vernon Ave. f. 250-475-5440  
Victoria BC V8X 2W7 saanich.ca



File: 2330-25

December 12, 2023

Via email: kmorley@crd.bc.ca

Kristen Morley  
General Manager, Corporate Services/  
Corporate Officer  
Capital Regional District  
625 Fisgard Street  
Victoria BC V8W 1R7

Dear Ms. Morley:

**RE: PROPOSED UPDATED OFFICIAL COMMUNITY PLAN (REGIONAL CONTEXT STATEMENT)**

This letter confirms that at their meeting held December 11, 2023, Saanich Council considered the Report of the Director of Planning dated December 1, 2023 regarding the proposed updated Official Community Plan and resolved as follows:

"That:

1. Council refer consideration of first reading of Official Community Plan Bylaw, 2023, No. 10000 to the December 11, 2023 Special Council meeting;
2. **Council direct staff to refer the Official Community Plan Regional Context Statement to the Capital Regional District for acceptance in accordance with the *Local Government Act* (s. 448);**
3. Council direct staff to prepare a report to Council for consideration of the proposed Official Community Plan in conjunction with the financial plan and applicable waste management plans in accordance with the *Local Government Act* (s. 477 (3)(a));
4. Council direct staff to refer the proposed Official Community Plan to the Agricultural Land Commission in accordance with the *Local Government Act* (s. 477 (3)(b)); and
5. A Public Hearing be called to further consider the proposed Official Community Plan."

As well, Council gave First Reading to Official Community Plan Bylaw, 2023, No. 10000.

Please find attached the Report of the Director of Planning and a copy of the Regional Context Statement for your consideration in accordance with the *Local Government Act*.

Should you have any questions, I can be reached at 250-475-5501.

Sincerely,



Sharon Froud  
Deputy Corporate Officer

Attachments

cc: Brent Reems (CAO)  
Lindsay Chase, Director of Planning  
Bob Lapham, Strategic Advisor – Housing Supply  
Cameron Scott, Manager of Community Planning  
Amber Walker, Senior Planner



## 16.0 Regional Context Statement

As a one of the core municipalities within the Capital Regional District (CRD), Saanich works collaboratively with 12 member municipalities and an electoral area to achieve regional objectives. The Regional Growth Strategy (RGS), adopted by the CRD Board in March 2018, provides a framework to achieve a regional vision for growth and change that enhances quality of life, sustainability and social well-being.

The RGS framework specifies ten interconnected objectives supported by principles, policies and 2038 targets to achieve regional sustainability:

1. Keep urban settlement compact;
2. Protect the integrity of rural communities;
3. Protect, conserve and manage ecosystem health;
4. Manage regional infrastructure services sustainably;
5. Create safe and complete communities;

6. Improve housing affordability;
7. Improve multi-modal connectivity and mobility;
8. Realize the region's economic potential;
9. Foster a resilient food and agriculture system; and
10. Significantly reduce community-based greenhouse gas emissions.

As required under Sections 446 and 447 of the "Local Government Act", CRD member municipalities collectively support the RGS by preparing regional context statements identifying the relationship between the OCP and RGS. The following demonstrates how the Saanich OCP aligns with and achieves the objectives of the RGS.



## Objective 1: Keep Urban Settlement Compact

The land use characteristics and development patterns in Saanich are largely influenced by its central location in the region and its unique context with both urban neighbourhoods and rural agriculture lands. Within this context, Saanich plays an important role in the Capital Regional District as the municipality with the highest population and the largest area.

Saanich has adopted growth management policies and strategies in the OCP aimed at limiting urban sprawl while creating opportunities to develop more complete, compact and sustainable communities with access to a range of housing choices, close to employment, amenities and services. The OCP supports concentrating growth within the Urban Containment Boundary as a principal tool of growth management which contributes to the RGS target of accommodating 95% of new dwelling units within the Containment Area by 2038 (see Policy 7.1.2).

Given that Saanich is a well-established community with a strong commitment to sustainability, growth for the most part will come from redevelopment and infill. The majority of future growth is focused on walkable, mixed use Primary Growth Areas with opportunities for new multiple family residential, commercial, institutional and civic development (see Section 7.3). Residential infill in established neighbourhoods within the Urban Containment Boundary will also continue to take place to increase housing options for residents. The OCP contains infill development policies supporting secondary suites, garden suites, houseplexes, multi-family residential and mixed-use development (see Section 7.4).

The OCP population and housing supply projections, described in Section 2.2, are generally consistent with the RGS sub-regional core area population projections. The Saanich projected short-and- long-term population growth is 136,800 people by 2031 and 152,000 people by 2046. To support this population growth an additional 15,400 net housing units will be needed by 2046.

## Objective 2: Protect the Integrity of Rural Communities

Rural Saanich is valued for its natural beauty, diverse environments, high biological diversity, agriculture, forested lands and rural lifestyle. Policies and environmental protection measures in the OCP help retain the character of rural communities, maintain the health of its natural systems and demonstrates Saanich's commitment to the preservation and strengthening of rural areas. Future development is expected to be consistent with the rural scale and character, contributing to the RGS goal to limit new dwelling units to a maximum of 5% outside of the Urban Containment Policy Area and within the Rural/Rural Residential Policy Area (see Section 7.7).

Containing and concentrating growth within the Urban Containment Boundary is key to better protection and retention of rural, agriculture and environmentally significant lands. Furthermore, limiting urban sprawl and the extent of rural development and subdivision is achieved through policies to maintain farming, food production and rural residential as predominate land uses. Large lot sizes are appropriate for these land uses. Most of the parcels are designated A-1 and A-4 Rural Zones which require a minimum lot size of 2.0 and 4.0 hectares, respectfully, which is reinforced through policy in the OCP (see Policy 7.7.3). The OCP also aims to minimize conflicts between rural and urban uses through the clear delineation of land uses and buffering rural and agricultural lands from adjacent urban residential development as part of redevelopment and subdivision proposals, where appropriate (see Policy 12.1.9).

Infrastructure services in rural areas includes on-site services which is in keeping with the rural character and helps limit development to the scale, form and density consistent with the intent of the rural land use designations. The OCP also limits consideration for a Sewer Service Area extension outside the Urban Containment Boundary, only as a means to resolve current health problems if no reasonable alternative is feasible or for public facilities or parks, where there would be significant community benefit (see Policy 10.2.2).

### Objective 3: Protect, Conserve and Manage Ecosystem Health

The RGS aims to protect the landscape character, ecological integrity, and biodiversity of the Capital Region. Saanich's OCP reinforces the RGS by emphasizing the importance of preserving, protecting and managing its diverse natural environment and ecosystems for the well-being of the community and the region. Saanich's natural environment is comprised of designated environmentally sensitive areas, urban forests, watersheds, water courses, floodplains, parks, open space and trails (see Maps 1, 15 and 16).

Regionally significant parks, identified in the RGS as Capital Green Lands, represent a diverse range of recreation and natural areas and include PKLOS (Mount Douglas Park), Swan Lake Christmas Hill Nature Sanctuary, Rithet's Bog Conservation Area, Elk/Beaver Lake Regional Parks and Francis King Regional Park. Additional regionally significant parks are found throughout the municipality in both urban and rural areas (see Map 15).

Saanich's OCP supports policies related to protecting and restoring habitat and ecosystems; connecting environmentally sensitive areas and green spaces with "greenways"; promoting conservation of existing and additional tree cover; requiring restoration plans as a result of disturbance; and, prioritizing condition assessments for streams, riparian and wetland areas (see Sections 6.1-6.3).

Ongoing stewardship is seen as a foundational and fundamental tool for preserving and enhancing Saanich's natural heritage. Policies encourage habitat creation and biodiversity improvements, focus on principles of Naturescaping and landscaping that utilizes native species and climate resistant plants on both public and private public lands (See Policy 6.1.9). Policies in the OCP recognize the importance of partnerships with CRD, First Nations, local and senior governments and other stakeholders to promote stewardship of our watercourses, groundwater and marine environments, and education initiatives (see Section 6.5).

Through partnerships to improve source control and reduce contamination entering our watercourse and marine environment as well as policies that support an integrated planning approach to restoration of and management of watercourses, surface water, drainage and

groundwater, the OCP supports the RGS objective to protect, conserve and manage ecosystem health (see Policies 6.3.1 and 10.3.1).

Through comprehensive environmental master plans and implementation tools that inform land use decisions, such as the Biodiversity Conservation Strategy and the Urban Forest Strategy (both in progress), Saanich is equipped to maintain the integrity of the natural environment. Development Permit Area (DPA) Guidelines provide guidance on land use issues in and around sensitive ecosystems and within hazard areas such as flood plains and areas susceptible to wildfires (See Schedule B). DPAs also provide guidance on conservation of water and energy, improvements to storm water management, and reduction of greenhouse gas emissions. In particular, the Streamside and Floodplain DPAs are significant contributors to addressing the protection of environmentally sensitive landscapes during development and support the RGS target to reduce contaminants in water bodies. Within rural Saanich, environmentally sensitive areas and green spaces are better protected by focusing growth within the Urban Containment Boundary (See Policy 7.1.2).

## Objective 4: Manage Regional Infrastructure Services Sustainably

In order to accommodate the anticipated population increase in the region, the RGS supports long-term sustainable planning and management of regional infrastructure services that take into consideration the conservation of land, water and energy resources and the impacts of climate change and natural hazards. Regional infrastructure services include drinking water, liquid and solid waste while services in Saanich supplement this infrastructure with collection and distribution systems.

The OCP supports the RGS target of preparing long-term capital plans for CRD utilities that are cost-effective and efficient to serve. Section 7.9 of the OCP also supports the development and implementation of an asset management strategy for the District to guide the effective stewardship of assets and to provide satisfactory and sustainable levels of service to the public.

Saanich growth management strategies promote efficient and cost-effective infrastructure planning and management through compact land use patterns, concentrating growth in Primary Growth Areas. This allows investments to be directed towards maintenance and improvements to existing infrastructure, rather than on new infrastructure (see Policy 7.3.1). This is also supported through policies that restrict major infrastructure extensions (see Sections 10.2 and 10.4).

Buildings themselves also have a profound effect on the environment and health, as they consume large quantities of energy, water, and materials, and emit significant levels of greenhouse gases and generate other waste. These impacts can be significantly reduced by encouraging zero carbon and sustainable building practices. For example, the OCP includes policies and implementation tools for future development, requiring building and site design to reduce impervious surfaces and incorporate features that will encourage ground water recharge through methods such as green roofs, vegetated swales and pervious paving materials (Section 7.8).

Other policies contribute to sustainable infrastructure by: 1) encouraging reduced consumption of non-renewable resources; and 2) by supporting CRD initiatives to reduce solid

waste and develop efficient and environmentally acceptable long-term waste disposal solutions, working towards Zero Waste generation (see Section 10.6).

Within rural areas, OCP policies emphasize low impact and low-density development approaches that help conserve environmentally significant lands and reduce public infrastructure needs with requirements for on-site services (see Section 7.7).

The OCP limits consideration for a Sewer Service Area extension outside the Urban Containment Boundary, only as a means to resolve current health problems if no reasonable alternative is feasible or, for public facilities or parks, where there would be a significant community benefit (see Section 10.2). The OCP also limits consideration of water extensions outside the Urban Containment Boundary to those that are in keeping with RGS principles and that address pressing public health and environmental concerns, provide fire suppression, or service agriculture (see Section 10.4). Additionally, the OCP supports opportunities to improve water quality and enhance environmental features through retaining open-channel stormwater drainage system comprising of watercourses, ditches, flood plains and other water retention and detention features (see Section 10.3).

## Objective 5: Create Safe and Complete Communities

The OCP emphasizes the importance of building complete communities with access to a diverse range of housing types and tenure, employment options, shops, services, community amenities, and public open spaces (see Section 7.0). As part of the 2023 update, Saanich incorporated the 15-minute community concept into its planning approach which builds on the complete community approach in the 2008 version (Section 7.0, Objective F and Strategic Land Use Directions). An important element in the development of complete communities is to provide mobility options that support walking, cycling and transit, and foster healthy lifestyles and safe neighbourhoods (Policy 9.1.3).

A key tool to creating complete communities is to focus future growth in mixed use Primary Growth Areas within the Urban Containment Boundary. Through the integration of transportation planning, land use and urban design, “Centres”, “Villages” and “Corridors” of various scales and levels of completeness help to establish vibrant places to live, work, and enjoy (see Section 7.2). These are supplemented by small-scale Hubs to support Saanich’s transition to a 15-minute community.

Centre, Corridor, and Village Plans provide a policy framework to implement the vision of the OCP and guide growth and change for neighbourhoods and Primary Growth Areas (see Section 1.2). Policies in these plans help retain neighbourhood character and a sense of place by capturing issues unique to each area and provide a higher level of detail in articulating how the broader OCP vision is implemented at the local level. OCP policies further support developing a sense of place through promoting community connections and social interactions within safe, diverse and inclusive communities (see Section 13.0).

Development Permit Guidelines (Schedule B) contribute to the development of complete communities by providing direction on how to design buildings and developments that are sensitive to the existing character of an area and add to the community through improved streetscapes, pedestrian mobility, and quality open spaces (Section 7.8). In addition, Development Permit Guidelines can minimize risk and provide guidance on land use issues in and around sensitive ecosystems, and within hazard areas such as floodplains and areas susceptible to wildfires.

Additional policies in the OCP address public safety through building community awareness and taking action. Supporting public education on emergency and disaster preparedness, the development of transportation safety infrastructure, and the implementation of crime and fire prevention programs are some examples of the means by which the OCP works to improve public safety (see Section 13.6).

## Objective 6: Improve Housing Affordability

A variety of affordable housing policies (see Section 8.0) in the OCP seek to address the RGS targets to increase the supply of more affordable housing; reduce the number of people in core housing need; and, reduce the number of people who are homeless.

The OCP recognizes there is a significant need in the community to increase affordable housing across the housing spectrum to improve quality of life, community health, and support the economy.

Policies in the OCP aim to increase the diversity of housing by type and tenure, thereby helping to ensure residents have access to housing suitable and desirable to their life stage and income, and to prioritize and incentivize those housing types that are most needed according to the District's Housing Needs Report (see Sections 8.1 and 8.4). Policies supporting residential development in Primary Growth Areas as well as residential infill in neighbourhoods, allow for increased housing diversity and supply in a way that complements the District's equity and sustainability goals by ensuring transit access, services and amenities are within walking distance and that neighbourhood areas serve a broad range of housing needs (see Sections 7.3 and 8.1).

The OCP also supports housing affordability through policies aimed at retaining, renewing, and developing all forms of rental housing across the housing spectrum and leveraging the development process as a way of gaining affordable housing units (see Section 8.2 and 8.3).

The OCP provides direction for the District of Saanich to work collaboratively with partners from the Capital Regional Housing Corporation, BC Housing, the Federal Government, non-profits, and other agencies to support the construction of supportive housing projects within Saanich and to address both immediate and long-term homelessness issues (see Section 8.5).

The District's Housing Needs Report, Housing Strategy, and Affordable Housing Fund provide a comprehensive approach to implementing the District's housing goals by providing strategies for achieving a healthy, diverse, and affordable housing supply for Saanich.

## Objective 7: Improve Multi-Modal Connectivity and Mobility

The RGS supports the development of a balanced and sustainable transportation system providing residents with reasonable and affordable multi-modal transportation choices that enhance the overall regional quality of life. From a regional perspective, the OCP recognizes the importance of working with the CRD and member municipalities to implement the regional transportation plan which outlines priorities for a regional multi-modal network (See Policy 9.1.1).

Increasing population growth in Saanich and throughout the CRD will continue to place increasing pressure on Saanich's transportation system. OCP policies seek to support a multi-modal transportation and mobility network for the community that will help create safe, convenient, effective, and sustainable mobility choices to move around the community (see Policy 9.1.5 and Maps 4 and 8-10). Transportation and mobility networks that encourage and promote a range of active travel choices, such as walking and cycling, present opportunities for significant quality of life, health, safety and economic benefits.

Land use and development patterns play a profound role in shaping how sustainable, convenient, safe and attractive active transportation is. Integrating well-designed land use and transportation systems can positively affect several factors that relate to establishing more sustainable communities with people who drive less to meet their daily needs, participate more in cost-effective and active ways of moving around the community, and actively engage in social connections. Focusing growth around well-designed Primary Growth Areas defined through formal land use planning processes, is another important contributor to making active mobility more viable (see Section 7.0).

The many actions taken by the District to promote multi-modal connectivity are backed by strong policies in the OCP (see Section 9.0). Saanich's Active Transportation Plan is an implementation strategy that establishes a vision, goals and targets to improve active transportation and to ensure that walking and cycling are accessible, comfortable, and convenient transportation choices for people of all ages and abilities. Targets set in this OCP are generally consistent with the RGS target to achieve a transportation system that would see 42% of all trips made by walking, cycling, and transit by 2038.



## Objective 8: Realize the Region's Economic Potential

As the population grows in the region, realizing diverse and economic opportunities to improve the region's economic potential is vital to achieving a sustainable economy (see Section 14.0). Comprehensive economic development policies integrated throughout the OCP, support a balanced economy by encouraging a broad range of commercial, service, research, high-tech and industrial uses and contribute to achieving the RGS target of 0.6 for the jobs to population ratio within the Core Subregion.

Policies in the OCP support focusing the majority of employment growth and mixed-use development in Saanich's Uptown Core and in other designated Primary Growth Areas. These locations prioritize access to active mobility options, promote improved access to jobs and services close to home, and create a network of vibrant, livable communities connected by an efficient transportation system (See Sections 7.3, 14.1, and 14.3).

Protecting the region's industrial land supply is imperative to accommodate the growing economy and employment. People and businesses depend on local industrial services, such as production, distribution, and repair. Industrial areas are protected and supported by OCP policies to accommodate the growing economy and employment (see Section 7.6 and 14.2). In addition, policies encourage improved utilization and intensification of industrial areas for industrial activities and ensure that the zoning and regulatory controls respecting industrial areas continue to encourage and support their economic viability (see Section 7.6).

Other major employment areas provide opportunities for increasing jobs and the economy. The OCP supports providing opportunities to new advanced technology and knowledge-based businesses by supporting expansion of Vancouver Island Technology Park, and research related activities at the University of Victoria, Camosun College, Royal Roads campuses (See Policy 14.2.6).

Within rural areas, policies encourage market diversification of agriculture by supporting specialty agri-tourism businesses on commercial farms, which are in keeping with the scale and character of rural Saanich (see Policy 14.2.7).

## Objective 9: Foster a Resilient Food and Agriculture System

Saanich has a long history of farming and retains a significant amount of agriculture and arable land within its rural areas. Applying to agricultural land in both rural and urban areas, agriculture and food security policies in the OCP (see Section 12.0), recognize agriculture as a significant contributor to the region's landscape, identity and economy.

Key tools that have assisted in protecting agricultural land for current and future generations in rural Saanich are the Agricultural Land Reserve (ALR), the Urban Containment Boundary and the Sewer Service Area. Established by the Agricultural Land Commission, ALR designated land helps to preserve agricultural value and encourage farming (see Sections 7.7 and 12.1). Focusing future growth in compact, complete and sustainable urban Primary Growth Areas helps to limit urban sprawl, protect agricultural land from the pressure of urban development, and support the protection of the Renewable Resource Lands Policy Areas (see Section 7.0).

Land use regulations and education can help protect agricultural land and increase awareness and understanding of farm operation requirements for those living adjacent or near farms while managing potential conflict between farm operations and neighbouring landowners. The OCP supports buffering rural and agricultural lands from adjacent urban residential development as part of redevelopment and subdivision proposals, where appropriate (see Policy 12.1.10). In addition, partnerships with surrounding municipalities, the CRD, non-profit organizations, and community groups, have been and will continue to be vital in enhancing agriculture and food security in Saanich and the region.

The following OCP policies for agriculture and food security (see Sections 12.1 and 12.2), directly contribute to increasing the amount of land in crop production for food by 5,000 ha by 2038, an RGS target for municipalities: 1) supporting efforts of farm operators and other agencies to enhance farmland and increase crop yield, by improving water supply and undertaking drainage improvements and improving soil capabilities, while considering environmental impact; and 2) supporting the development and operation of specialty crop farms to diversify farm production, increase economic development, increase local food production, and improve farm income.

## Objective 10: Significantly Reduce Community-Based Greenhouse Gas Emissions

In addition, opportunities for increasing food production in urban neighbourhoods are supported in the OCP (see Section 12.2). The OCP supports local sustainable agriculture by promoting urban farming initiatives that make use of private and public green spaces to produce an inexpensive, safe, and nutritious food supply. For example, the parks and open space policies consider opportunities to incorporate food producing community gardens into parks and other public open spaces, where appropriate (see Policy 11.1.6). Community gardens on private or public land can contribute to neighbourhood renewal and stability, strengthen community bonds, provide food, and create recreational and therapeutic opportunities.

The Agriculture & Food Security Plan provides a coordinated approach for implementing OCP policy directions, supporting agriculture and improving food security in Saanich.

Comprehensive policies integrated throughout the OCP address strategies to protect the community, improve Saanich's quality of life, support a diverse economy, and reduce local and global risks associated with a changing climate. The RGS emphasizes the importance of reducing community greenhouse gas (GHG) emissions to address the effects of a changing climate.

Section 4.0 of the OCP reinforces the RGS objective of reducing community-based greenhouse gas emissions through the adoption of a guiding framework and policy lens that emphasizes sustainable development. Supporting OCP policies that encourage reducing GHG emissions include: reducing impacts from public and private buildings through green building design, energy efficiency technologies, renewable energy sources and efficient energy distribution systems; creating compact and complete communities within urban areas that encourage alternative transportation options that lead to reduced vehicle emissions; and, protecting and managing the natural environment, environmentally sensitive areas, urban forests, and aquatic habitat (see Sections 6.1-6.5, 7.1-7.4, 7.8, 9.1, 9.3- 9.5, 10.1).

The RGS set targets to reduce Community Green House Gas Emissions by 33% (from 2007 levels) by 2020, and by 61% by 2038. Saanich has committed to reducing its greenhouse gas emissions with OCP targets that align with those of the RGS (see Section 5.3). One of the key implementation strategies, the *Climate Plan: 100% Renewable and Resilient Saanich*, adopted in 2020, seeks to implement more accelerated targets including:

- Reduce community-wide greenhouse gas (GHG) emissions by 50% of 2007 levels by 2030;
- Achieve net-zero GHG emissions by 2050;
- Become a 100% renewable energy community by 2050; and
- Prepare for a changing climate.

These comprehensive targets are implemented through prioritized actions established in the *Climate Plan: 100% Renewable and Resilient Saanich*; the OCP integrates both these targets as well as policies to support reaching these targets.

**REGIONAL CONTEXT STATEMENT EVALUATION**

The Regional Context Statement (RCS) has been reviewed in accordance with the evaluation framework approved by the Capital Regional District (CRD) Board on April 11, 2018. The evaluation framework relies on the three criteria shown below.

1. **All relevant content is included:** The RCS addresses all Regional Growth Strategy (RGS) content relevant to the Official Community Plan (OCP). Content that is not applicable in the context of the OCP should be identified as “not applicable”.

***Example:** The regional context statement contains headers, sections, a table, or other such format that clearly identifies each applicable RGS objective. Should an objective not apply, such as if a municipality contains no identified food or farmlands, the context statement would note that the objective does not apply.*

2. **Clearly articulates relevant content:** The regional context statement provides a sufficient level of detail to convey how the specific OCP content relates to the RGS.

***Example:** The regional context statement provides content specificity such that it is clear what the Board is accepting. An example is: “RGS Objective X is implemented by building in “...” location, at a range of “...” densities and proximate to “...” services.” A context statement with content as follows: “RGS Objective X is implemented with OCP policies A, B and C” would not be sufficiently specific.*







3. **Plan to be consistent over time:** The regional context statement identifies how the OCP will become consistent with the RGS over time if content is not immediately consistent.

***Example:** A regional context statement identifies that a municipality will undertake a population projection to determine how to align with the RGS population projections over time.*

Below is a list of acronyms used in the RCS evaluation:

| <b>Acronyms</b> |                            |
|-----------------|----------------------------|
| CRD             | Capital Regional District  |
| LGA             | Local Government Act       |
| OCP             | Official Community Plan    |
| RCS             | Regional Context Statement |
| RGS             | Regional Growth Strategy   |

**Table 1. Regional Context Statement Evaluation Framework**

| LGA   | RCS Content   | Relationship to Legislative Requirement<br>For CRD* Board consideration             |   |                                 |
|---|---|---|---|---------------------------------|
|   |   | All relevant content is included  | Clearly articulates relevant content  | Plan to be consistent over time |
| 429(2)(a)   | Identify how the OCP relates to the RGS vision on p. 1 of the RGS.              |    |    | N/A                             |
| 429(2)(b)   | Identify how the OCP relates to the projections provided in Table 1 of the RGS. |    |    | N/A                             |
| <b>Managing and Balancing Growth (Objectives 1.1 &amp; 1.2)</b> |   |   |   |                                 |
| 429(2)(c) and (d); 429(3)                                       | Identify how the OCP relates to the RGS.  |  |  | N/A                             |

**Legend:** Regional Context Statement Evaluation



Strong alignment with evaluation criteria; recommend approval







Moderate alignment with evaluation criteria; recommend approval



Weak alignment with evaluation criteria; do not recommend approval

**Relationship to Legislative Requirement**  
For CRD Board consideration

| LGA   | RCS Content  | All relevant content is included  | Clearly articulates relevant content | Plan to be consistent over time |
|---|--|---|--------------------------------------|---------------------------------|
| <b>Environment and Infrastructure</b> (Objective 2.1 & 2.2) |  |   |                                      |                                 |
|   | <p align="center"></p> <p>The RCS identifies how the OCP aligns with RGS objectives for environmental protection, sustainability, and the efficient delivery of infrastructure.</p> | <p></p> <p>The RCS supports RGS principles for sustainability and protection of Capital Green Lands Policy Area lands.</p> <p>The RCS notes OCP policies on protection of ecologically significant areas and preservation of water quality in accordance with zoning and shoreline development permit process.</p> <p>The RCS supports the RGS objective of focusing efficient and sustainable delivery of infrastructure within the Urban Containment Boundary.</p> | N/A                                  |                                 |
| <b>Housing and Community</b> (Objectives 3.1 & 3.2)         |  |   |                                      |                                 |
|   | <p align="center"></p> <p>The RCS identifies how the OCP aligns with RGS objectives for housing and complete communities.</p>   | <p></p> <p>The RCS supports a framework for growth that is consistent with the “Complete Community Criteria” set out in the RGS. This includes supporting a variety of housing types, diverse transportation options, and walkable 15-minute communities.</p> <p>The RCS references the OCP vision of guiding growth to Primary Growth Areas in “centres”, “villages”, and “corridors” (section 7.2).</p>  | N/A                                  |                                 |

**Legend:** Regional Context Statement Evaluation



Strong alignment with evaluation criteria; recommend approval



Moderate alignment with evaluation criteria; recommend approval



Weak alignment with evaluation criteria; do not recommend approval



**Relationship to Legislative Requirement**  
For CRD Board consideration

| LGA                                   | RCS Content   | All relevant content is included | Clearly articulates relevant content   | Plan to be consistent over time |
|---------------------------------------|---|----------------------------------|--|---------------------------------|
| <b>Transportation</b> (Objective 4.1) |   |                                  |  |                                 |
|                                       | The RCS identifies how the OCP aligns with RGS objectives for transportation. |                                  | The RCS references OCP policies that support the Regional Transportation Plan.   | N/A                             |
|                                       |   |                                  | The RCS states OCP policies support a multi-modal transportation network that will help create safe, convenient, effective, and sustainable mobility choices (section 9.1.5 and maps 4 and 8-10). Land use policies are integrated to shape development patterns that will achieve transportation objectives (section 7) |                                 |
|                                       |   |                                  | The RCS is aligned with the RGS goal of achieving a system by 2038 where 42% of all trips are made by walking, cycling, and transit.   |                                 |

**Legend:** Regional Context Statement Evaluation



Strong alignment with evaluation criteria; recommend approval



Moderate alignment with evaluation criteria; recommend approval



Weak alignment with evaluation criteria; do not recommend approval

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**Economic Development (Objective 5.1)**



The RCS identifies how the OCP aligns with RGS objectives for economic development.



The RCS references OCP objectives that align with RGS policies on maintaining an adequate supply of employment and industrial lands in diverse range of sectors.

The RCS expresses an intent to focus employment growth in the Uptown Corridor, as this area allows for a variety of active mobility options.

The RCS aligns with RGS policies on the conservation and management of Renewable Resource Lands Policy Area.

N/A

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**Food and Agricultural Systems (Objective 6.1)**



The RCS identifies how the OCP aligns with RGS objectives for food and agricultural systems.



The RCS aligns with the RGS objective for fostering a resilient food and agriculture system and has a strong focus on the sustainability and economic viability of agriculture in the community.

The RCS references agriculture and food security policies in the OCP and the Agriculture and Food Security Plan that support agricultural activity in the district.

N/A



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**Climate Action** (Objective 7.1)



The RCS identifies how the OCP aligns with RGS objectives for climate action.



The RCS aligns with the RGS objective and policies of reducing community-based greenhouse gas emissions.

The RCS identifies OCP policies that address the reduction of greenhouse gasses through: green building design, energy efficiency technologies, renewable energy sources and efficient energy distribution systems; compact and complete communities that encourage alternative transportation options; and, protecting and managing the natural environment, environmentally sensitive areas, urban forests, and aquatic habitat.

N/A

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## REPORT TO PLANNING AND PROTECTIVE SERVICES COMMITTEE MEETING OF WEDNESDAY, MARCH 20, 2024

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**SUBJECT**     Requirements for Consideration of Regional Growth Strategy Updates

### **ISSUE SUMMARY**

To report on key inputs and studies required prior to Capital Regional District (CRD) Board considering the need for an update of the Regional Growth Strategy (RGS) in 2026.

### **BACKGROUND**

The RGS is a vision for the future of the capital region, developed in partnership with the region's 13 local governments and the Juan de Fuca (JdF) Electoral Area. The RGS guides decision making in support of the long-term livability of the region. The CRD Board adopted the RGS in 2018 and amended the RGS with updated population projections in 2021.

On November 8, 2023 the CRD Board carried the following motion:

*“That staff report back on the timing and implications of the work required to consider an update to the Regional Growth Strategy in 2026.”*

#### *Local Government Act Requirements*

Section 429 of the *Local Government Act* specifies the required content for an RGS. An RGS must have a 20-year planning horizon and include population and employment projections. The RGS must include actions related to housing, transportation, regional district services, parks and natural areas and economic development, as well as greenhouse gas reduction targets. Additional regional matters may be included, subject to agreement of all participants.

Section 436 requires that all 13 local governments subject to the RGS accept the RGS before the CRD Board can adopt it as a bylaw.

Section 452(2) of the *Local Government Act* requires the CRD Board to consider the need for an RGS amendment once every five years. The CRD Board will make this consideration in 2026.

#### *Matters to Consider*

There are three key questions the CRD Board will need to consider when deciding whether to initiate an update of the RGS in 2026:

1. Can the RGS accommodate 95% of projected population growth within its urban containment boundary?
2. Do RGS policies provide sufficient guidance to the CRD and local governments on how to accommodate projected growth?
3. Do the CRD and local governments have the tools they need to successfully implement the RGS?

#### *Trends and Inputs*

The CRD Board will need to consider these matters against growth management trends and inputs. Current trends affecting growth management include new housing and planning legislation and revised projections signaling higher than anticipated population growth. The key task for CRD staff is to identify the policy implications of these changes to the RGS regional growth management framework.

CRD staff advise that four planning studies are needed to gather data, undertake analysis, and validate RGS policy direction. Table 1: RGS Studies lists the studies that will inform consideration of the need for an RGS update.

**Table 1: RGS Studies**

| <b>Study</b>                                 | <b>RGS Input</b>  |
|--|---|
| 1. Demographic research                      | 20-year population, dwelling unit and employment projections  |
| 2. Industrial and employment lands survey    | Spatial analysis to inform consideration of RGS mapping and policy updates related to economic development objectives       |
| 3. Collaborative planning with First Nations | Foundation for a collaborative planning process and guidance for how to better reflect First Nations communities in the RGS |

In addition, a growth and mobility study is currently underway and will provide a spatial analysis to inform consideration of RGS mapping and policy updates.

CRD Board direction is needed to confirm that these studies will inform consideration of the need to update the RGS in 2026. Study results could also be considered against existing CRD plans and strategies to validate the policy direction in those foundational documents.

## **ALTERNATIVES**

### *Alternative 1*

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That CRD staff be directed to undertake the studies listed in Table 1: RGS Studies, identify whether additional policy direction is needed, and report back to the Planning and Protective Services Committee with these findings.

### *Alternative 2*

That this report be referred back to staff for additional information.

## **IMPLICATIONS**

### *Alignment with Board & Corporate Priorities*

CRD Corporate Plan Initiative 8a-2 is to assess the need for an update to the RGS and accompanying monitoring program. Additionally, the CRD Corporate Plan identifies that the RGS covers the breadth of regional service delivery. The proposed studies connect to other Corporate Plan initiatives and will deliver the co-benefit of advancing the RGS and corporate priorities.

### *Alignment with Existing Plans & Strategies*

To implement the vision expressed in the RGS, the CRD has developed a range of plans that set policy to guide regional investment and policy. These include:

- Regional Housing Affordability Strategy (2018)
- Regional Transportation Plan (2014)
- Regional Parks and Trails Strategic Plan (2022 – 2032)
- Regional Trails Management Plan (2016)
- Solid Waste Management Plan (2021)



- Regional Water Supply Master Plan (2022)
- Climate Action Strategy (2021)
- Liquid Waste management Plans (various dates)

In considering of the need for an RGS update, CRD staff will review plans and strategies developed post-2018 for new policy direction that could be integrated into the RGS. For plans that have not been updated in the last five years, CRD staff will confirm whether new policy direction is needed and align timing as needed.

#### *Climate Action*

RGS Objective 7 is focused on Climate Action. In considering the need for an RGS update, CRD staff will review the CRD's targets and policies related to climate action. This will be informed by the CRD Climate Action Strategy, and research completed since its inception.

#### *Environmental*

RGS Objective 2 is focused on environment and infrastructure, with the goal of protecting, conserving, and managing ecosystem health. The Regional Parks and Trails Strategic Plan 2022-2032 provides direction to undertake conservation research within the regional parks system. CRD staff will review results in consideration for the need for an RGS update.

#### *Equity, Diversity & Inclusion*

Demographic data provided in the Census will be considered when the population and dwelling unit and employment projections are updated. While not forming part of the RGS, demographic data will be reviewed against RGS objectives and policies to support an equity lens analysis.

#### *Financial Implications*

Costs for studies listed in Table 1: RGS Studies will be identified through the 2025 service and financial planning processes. The regional growth strategy operating reserve would provide one-time funding for these studies. The Growth and Mobility Study is already funded through a Union of BC Municipalities Complete Communities grant. Costs to update CRD plans and strategies to seek additional policy direction would be identified, as needed, once the proposed RGS studies are complete.

#### *First Nations Reconciliation*

Currently, First Nations within the CRD are not partners in the RGS. This means that RGS objectives and policies do not apply to First Nations lands. In recent years, some First Nations have indicated an interest in seeing their communities reflected in the RGS. To better understand if and how the nations would want to be brought into the RGS framework, additional engagement is needed. A collaborative planning study undertaken in partnership with interested First Nations, would help identify the potential benefits, challenges, and risks of joining the RGS framework.

#### *Intergovernmental Implications*

RGS approval requires unanimous acceptance from all 13 local governments. Developing the RGS requires collaborative planning and decision making across the region. The proposed studies will be scoped to include technical input from the 13 local governments, JDF, province and First Nations. The Development Planning Advisory Committee, comprised of Planning Directors or their designates from the 13 local governments and the JDF, will be used to facilitate collaborative planning.

*Regional Growth Strategy Implications*

The proposed studies will advance work on the RGS according to the following principles:

1. **Values-based:** The RGS must be aligned with core CRD values as set out in the CRD mission statement.
2. **Data-informed:** The RGS must rely on data that can be validated, analyzed, and interpreted to develop robust policy responses to growth pressure.
3. **Partner-centered:** The RGS must respect local government and regional district authorities related to land use and service delivery, broadly defined.

These principles will support a working partnership approach among the CRD, 13 local governments and JDF, to ensure that the proposed studies meet partner needs.

The RGS represents how local Official Community Plans fit together in a regional context, showing planned land use and mobility patterns across the region. The studies proposed in Table 1: RGS Studies will support spatial analysis related to housing, transportation, climate action and industrial land availability. This analysis will promote shared regional understanding of the cumulative impacts of growth on communities. Study results are inputs to the RGS maps, including the Growth Management Concept Plan and the Settlement Concept. Based on study results, additional policy direction may be needed from an update to the Regional Housing Affordability Strategy and confirmation of the Regional Multi-modal Network as set out in the Regional Transportation Plan.

*Service Delivery Implications*

The existing work plan can accommodate the proposed studies.

*Social Implications*

The RGS vision is for residents to enjoy a healthy and rewarding quality of life, with a vital economy and livable communities. The proposed studies will help confirm alignment of this vision with RGS objectives and policies, to be considered when determining the need for an RGS update.

**CONCLUSION**

The RGS is a vision for the future of the capital region, with objectives and policies to guide shared regional decision-making. The CRD Board is required to consider the need for an RGS update by 2026. CRD staff propose to undertake studies to develop the inputs needed for the Board to make an informed decision about whether to update the RGS.

**RECOMMENDATION**

The Planning and Protective Services Committee recommends to the Capital Regional District Board:

That CRD staff be directed to undertake the studies listed in Table 1: RGS Studies, identify whether additional policy direction is needed, and report back to the Planning and Protective Services Committee with these findings.

|               |  |
|---------------|--|
| Submitted by: | Emily Sinclair, MCIP, RPP, Senior Manager, Regional and Strategic Planning   |
| Concurrence:  | Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                  |



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## REPORT TO REGIONAL PARKS COMMITTEE MEETING OF WEDNESDAY, MARCH 27, 2024

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**SUBJECT**     **Regional Parks and Trails Planning Process Update**

### **ISSUE SUMMARY**

To seek approval for an updated planning process to guide the development of future regional park and trail plans.

### **BACKGROUND**

The Capital Regional District (CRD) Board established a management planning process in 2006 called *The Pathway for Regional Parks and Trails Management Planning* (The Pathway) (Appendix A). The Pathway outlines eight steps for the development of regional park and trail management plans, including at what steps engagement and governance decisions are needed. It further establishes Regional Parks Management Zone Guidelines, which are applied to regional parks through a management planning process and used to provide more precise management direction for areas within individual parks, as well as provides a guide and template for writing management plans.

While The Pathway outlines a standardized planning process, it is time and resource intensive, lacks adaptability, offers little guidance on how to functionally integrate multiple priorities in the planning process, and does not allow for meaningful collaboration with First Nations, negatively impacting service delivery.

The Regional Parks and Trails Strategic Plan 2022-2032 (Strategic Plan) provides direction to update the existing planning process to improve plan development and delivery. The proposed process will guide the development of park and trail management plans, as well as other high-level Regional Parks plans (Appendix B). It has been designed to build on the planning values and principles established within The Pathway, and to be effective, adaptable and evidence based.

Regional park management zones still remain a valuable management tool. CRD staff will continue to use the zoning described within The Pathway until such time that zoning can be updated through the Stewardship Plan.

### **ALTERNATIVES**

#### *Alternative 1*

The Regional Parks Committee recommends to the Capital Regional District Board:  
That the updated planning process be adopted and implemented to develop future CRD regional park and trail plans.

#### *Alternative 2*

That the updated planning process be referred back to staff with direction for revision.

## **IMPLICATIONS**

### *Alignment with Existing Plans & Strategies*

The Strategic Plan identifies the following Climate Action & Resiliency priority actions:

- 4.4a *Implement a Park Management Planning Process that is efficient, adaptable, evidence-based and addresses service level needs, financial implications and climate mitigation measures.*
- 4.4b *Engage and involve First Nations governments, stakeholders and the public in the preparation and implementation of park management plans to ensure transparency, knowledge sharing and adaptability.*

The following indicator is to be tracked over the 10-year term of the Strategic Plan:

- 4-4 *Increase the percentage of parks with management plans less than 15 years old.*

The updated planning process addresses Strategic Plan directions and will be monitored, evaluated and revised, as necessary, to meet the annual reporting indicator.

### *Environmental & Climate Action*

A goal of revising the planning process is to be able to complete more plans for the CRD's regional parks and trails. Updating existing, or creating new plans, provides opportunities to advance Strategic Plan priority actions for Conservation and Climate Action and Resiliency.

### *First Nations Reconciliation*

Providing meaningful opportunities for First Nations to participate early and often throughout plan development is a key deliverable of this new planning process. This will ensure that interested Nations can remain informed about planning initiatives at all stages, share their values, concerns, and priorities at the onset of these initiatives, and collaborate with CRD staff to incorporate them into plan development.

The process envisions First Nations collaboration in plan development through participation in working groups. If supported, working groups will be comprised of representatives from First Nations governments with traditional territory within the region, CRD staff, and third-party facilitators, as needed. The working group format provides an opportunity for the CRD and First Nations to build trust, reciprocally share information, and collaborate so that First Nations worldviews and knowledge can inform plan direction. Some Nations may wish to participate in other ways, and these requests will continue to be accommodated to support First Nations rights on the path towards reconciliation.

### *Social Implications*

The proposed process centres evidence-based decision making through public engagement and plan development and yields an improved and refined final product. Using an iterative planning

process, public engagement is better timed to gather information and build knowledge to inform plan development. This ensures the resulting plan utilizes reliable information, is consistent with other evidence-based plans, and remains unbiased.

The more focused, iterative approach to planning creates process effectiveness and reduces the number of touchpoints with the public from three to two. The updated process also reduces governance approvals from the current four, described in the Pathways process, to two, decreasing impacts on staff and Committee/Board time on approvals for a single plan, and increasing the overall efficacy.

A staff report outlining opportunities for engagement will continue to be presented to the Board as part of planning process initiation, providing transparency and ensuring the public is aware of when and how they can participate. Additionally, the public will be able to stay informed at all subsequent project steps through regular updates posted online by staff.

#### *Equity, Diversity & Inclusion*

Public engagement methods, such as open houses, focus groups and online surveys will continue to be a part of the process. These methods help reach a broad range of park users and community groups, employ culturally sensitive communication, and create accessible platforms to ensure that diverse perspectives are not only heard but also valued.

#### *Financial Implications*

Providing additional opportunities for meaningful collaboration with First Nations is anticipated to increase the cost of plan development. The increased costs will be accounted for through the CRD's regular annual budgeting process.

#### *Service Delivery Implications*

Having a more effective planning process should increase the number of parks with approved management plans and reduce the number of parks with management plans more than 15 years old. With a more integrated approach to collect and evaluate relevant archaeological, cultural heritage, ecological, visitor use, visitor feedback and park infrastructure information, plans will be evidence based and better positioned to implement the five strategic priority areas set out in the Strategic Plan.

### **CONCLUSION**

CRD staff are seeking approval to implement an updated planning process to guide plan development across the CRD's regional parks and trails system. The updated planning process fulfills a key implementation action from the Regional Parks and Trails Strategic Plan 2022-2032. The proposed process provides new and meaningful ways to collaborate with First Nations, aims to increase the rate at which plans are developed, is adaptable and meets Strategic Plan direction. It is expected that this revised process will result in a greater number of plans being developed and implemented.



**RECOMMENDATION**

The Regional Parks Committee recommends to the Capital Regional District Board:  
That the updated planning process be adopted and implemented to develop future CRD regional park and trail plans.

|               |  |
|---------------|--|
| Submitted by: | Mike MacIntyre, Acting Senior Manager, Regional Parks                            |
| Concurrence:  | Larisa Hutcheson, P.Eng., Acting General Manager, Parks & Environmental Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                      |

**ATTACHMENTS**

Appendix A: The Pathway for Regional Parks and Trails Management Planning, 2006  
Appendix B: Regional Parks & Trails Planning Process, March 2024

**1** CRD Regional  
Parks Management  
Planning  
  
Context of Regional  
Parks Management  
Planning

**2** Regional Parks  
Management  
Planning Model

**3** Regional Parks  
Management  
Planning Process  
  
Regional Parks  
Management  
Zone Guidelines

**4** Writing the Plan  
  
Regional Parks  
Management Plan  
Template

# the pathway

MARCH 2006

## FOR REGIONAL PARKS AND TRAILS MANAGEMENT PLANNING

“Guidance for regional park management requires formal plans that clearly state goals, objectives, and standards and prescribe specific actions necessary for meeting those objectives and standards.”

## CRD Regional Parks Management Planning

### INTRODUCTION

The CRD Parks Master Plan (Master Plan) sets out broad strategic goals for regional parks. It is system-wide in scope and provides the vision and purpose of CRD Parks. The Plan establishes a framework for managing regional parks and trails through the creation of park management plans.

Park management plans describe goals, objectives, and actions for protecting the natural environment and cultural features in a regional park or regional trail. The plan also identifies the types of permitted outdoor recreation uses and where they will be allowed, the types and locations of park facilities, and types of services. Lack of a plan leaves parks without management direction. This can negatively affect the protection of natural and cultural features, visitor services, facilities management, and budgeting.

Until now, CRD Parks has not had a defined process for preparing park management plans. Although the general process and goals for park management planning is presented in the Master Plan, the specific process for preparing individual park management plans has been defined in the terms of reference for each planning project. Although this provided guidance for individual planning processes, there was no over riding specific policy about park management planning. At its June 1, 2005 meeting, the Parks Committee approved a Terms of Reference (TOR) for conducting a review of the park management planning process including:

- reviewing how other agencies conduct their planning processes
- consulting with municipal, provincial, and federal parks and planning staff
- consulting with the Parks Committee to ensure that the plans meet the committee's needs and
- consulting with the staff of CRD Parks

The Parks Committee also directed staff to report back with the results of the review and provide recommendations for a new planning process that would:

- be within the staff and financial resources of CRD Parks
- meet professional planning values
- reach for excellence in planning, and
- be efficient, effective and inclusive

The park management planning process review is now complete. CRD Parks has developed a planning process that meets the required criteria and incorporates the results of the consultation process and other agency best practices. This document highlights the key features of the recommended CRD Parks management planning process. It gives an overview of the context for and logic of park management planning and describes the planning process model, park management zones, and the framework for the planning document.

## Context of Regional Parks Management Planning

### NEED FOR PARK PLANNING

Guidance for regional park and trail management requires formal plans that clearly state goals, objectives, and standards and that prescribe specific actions necessary for meeting those objectives and standards. The park management plan translates the more general direction of the CRD Parks Master Plan into direction that guides management of individual parks and trails.

Through planning, managers can reconcile differences in management philosophy and ideas before taking actions that have long-range effects on the park resource. Good plans have a stabilizing influence on management. Consistent outcomes in park management depend on plans that establish clear, attainable, measurable, and acceptable objectives and standards for a park and the actions involved in pursuing such objectives. In the coming decades, successful park management will depend a great deal on the quality of plans that guide management actions.

### LINKS WITH OTHER PLANS

Park management plans comprise only one part of an agency's strategy for managing park systems. They roll out of strategic plans that define the overall agency mandate, purpose, vision, and focus. They

CONTINUED ON PAGE 2

also spur the development of implementation or action plans. Implementation plans describe methods for achieving objectives in the park management plan, whereas park management plans describe the basic management philosophy for the entire park unit and provide strategies for addressing issues and achieving management objectives for a ten-year period.

### PLANNING VALUES

The Canadian Institute of Planners (CIP) has adopted a set of values that provides a useful foundation for CRD Parks planning. The values of the CIP are based on the assumption that planners work for the public good; that planning includes a concern for equity, efficiency, and a respect for the land as a community resource; and that planning contributes to the conservation of natural and cultural heritage, promotes healthy communities, and improves the quality of life for all people. In order to achieve excellence in planning, CRD Parks has embedded its management planning process within these core values.

### PLANNING PRINCIPLES

In addition to the above set of core values, CRD Parks will adhere to the following set of planning principles:

- Procedural fairness
- Consultation before action
- Access to information
- Systematic procedure
- Plans address issues
- Plans are science-based
- Defined decision-making authority
- Responsive to changing conditions

These planning principles provide the foundation for the development of consistent and useful park management plans that are in line with the overall purposes of the regional park system.

### CONSULTATION

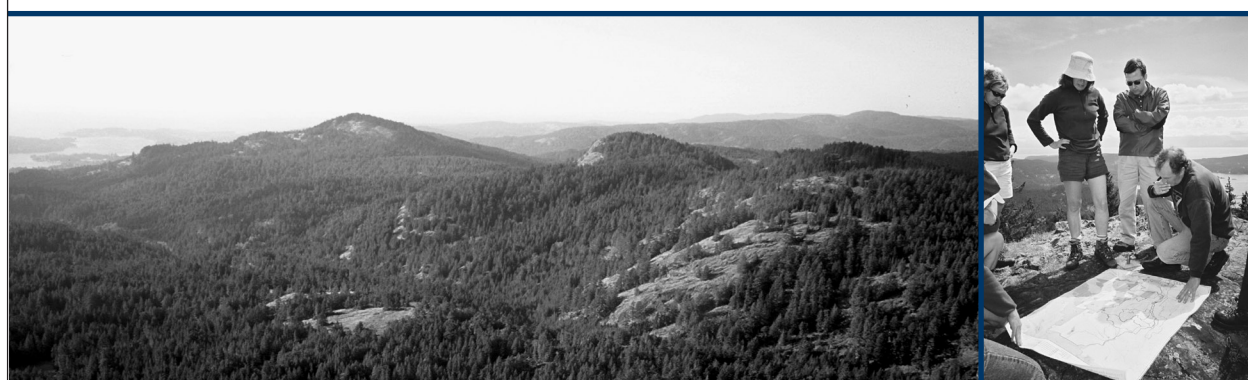
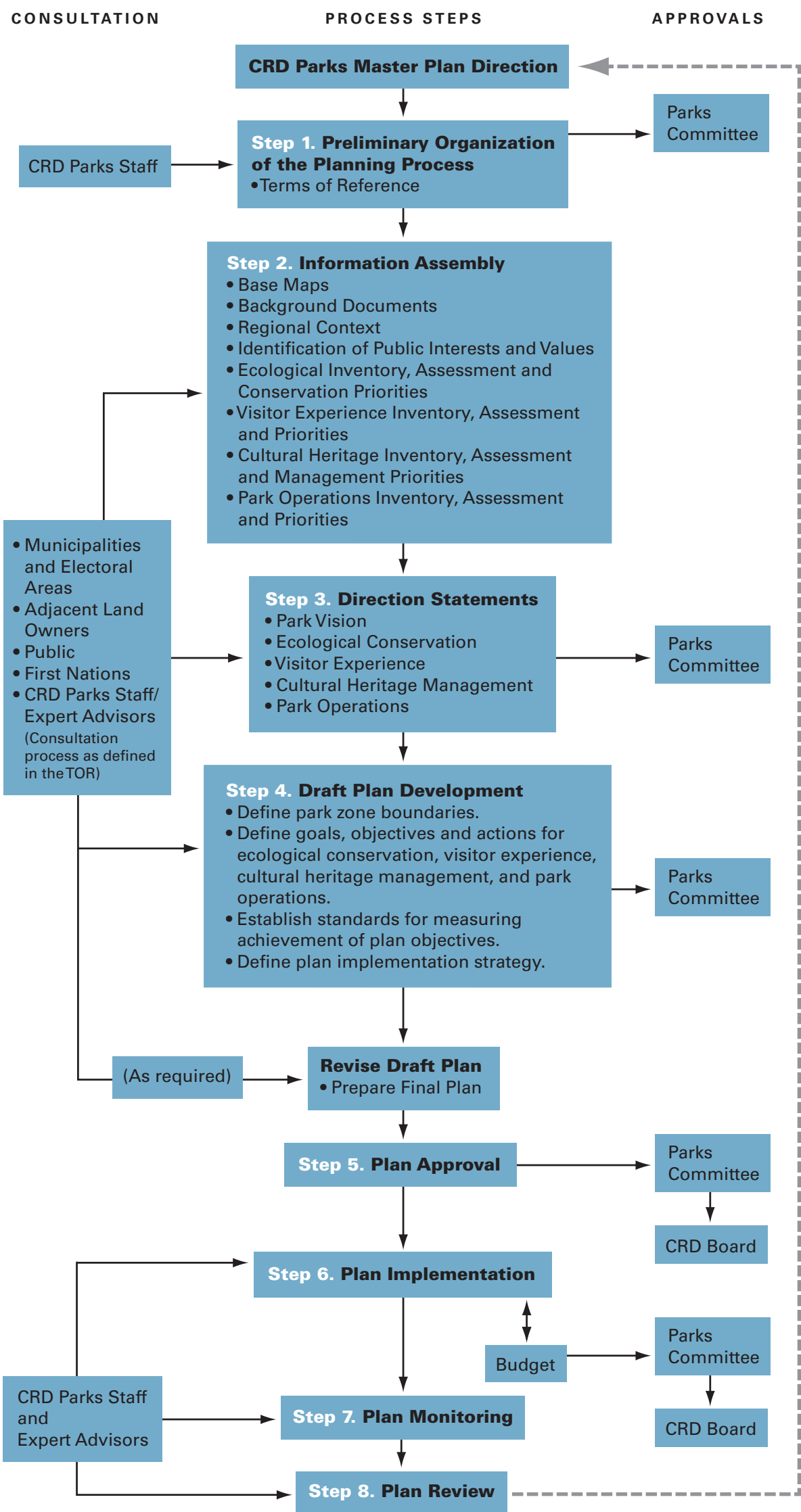
Consultation is especially important for the management of regional parks and trails. If park management plans are to have credibility and acceptance, the public must have an opportunity to help formulate these documents. Involving the public is an integral part of the CRD's park management plan decision-making process.

### FIRST NATION PARTICIPATION

CRD Parks encourages First Nations participation in its management planning processes to ensure that decisions are sensitive to aboriginal interests. It is important for CRD Parks to participate in meaningful consultation and address First Nations interests in its regional parks and trails when CRD Parks planning processes affect these interests. One of the best ways to accomplish this goal is to build solid, lasting, respectful, and mutually beneficial relationships with First Nations.

*Photographs (L to R):  
Sooke Hills; On top of  
Mt. Manuel Quimper*

## REGIONAL PARKS MANAGEMENT PLANNING MODEL





# Regional Parks Management Planning Process

CRD Parks is adopting a park management planning process based on three main activity streams: (1) consultation; (2) process steps; and (3) approvals. The CRD Parks Management Planning Model on page 2 highlights these activity streams. The Planning Model illustrates how the CRD will conduct the process of park management planning and incorporates the principle of flexibility as fundamental in designing a planning process. The principle of flexibility exists to adjust planning and public involvement procedures to suit specific situations and the requirements of various planning participants.

Each project's Terms of Reference (TOR) defines the scope of consultation. Consultation can range from simply informing the public about the planning process to full collaboration with the public in the decision-making process. Consultation may include the creation of an advisory committee. The project's TOR defines the advisory committee's selection process and decision-making authority and requires the approval of the Parks Committee. Municipalities and Electoral Areas in which the

park or trail is located will be directly involved throughout the consultation process.

First Nations consultation is important to the management planning process. The planning project's TOR will define how CRD Parks and First Nations will work together on the park management plan.

Planning projects involve CRD staff and may involve outside consultants. The project's TOR defines the nature and scope of this participation. For each project, CRD Parks will put together a core project management team and a technical team. These teams provide supervision and advice throughout the planning process and during the implementation of the plan. CRD Parks may also hire expert advisors to provide professional advice and services as required.

Consideration and approval by the Parks Committee and CRD Board is an integral component of the planning process. There are key stages in each planning process that require Committee or Board approval. The Parks Committee must approve the project's TOR, direction statements, draft plan, final plan, and

budget. The CRD Board approves the final plan and budget when recommended by the Parks Committee.

Although the steps in the planning process follow a logical sequence, the planning group may undertake a number of activities concurrently depending upon the nature of the project.

## WHAT'S KEY?

CRD Parks' planning process is distinctive in at least four fundamental ways:

- More time is spent up-front collecting information and establishing park management priorities based on science
- The public consultation process is customized to fit each planning situation in the recognition that every planning situation is unique
- Once background information and priorities have been established through consultation, the planner sets to the task of preparing the plan
- Plan implementation is built into the planning process to ensure that plan implementation is timely and efficient

# Regional Parks Management Zone Guidelines

The CRD Parks Master Plan sets out the general management direction for each regional park through park classifications. Providing more precise land management for particular areas within a park requires more detailed reviews of different areas that take into account specific environmental needs and unique features. A specific park management unit, or park management "zone," may include regional parks with natural areas that have common ecological factors. Zones define which activities the park or trail can accommodate and what type of visitor experience the management of the zone aims to provide.

| Management Zones                         | Objectives  | Environmental Values  | Visitor Experience and Activities  | Typical Infrastructure   |
|--|---|---|--|--|
| <b>Environmental Protection Zone</b>     | <ul style="list-style-type: none"> <li>• To protect ecologically significant areas within regional parks through long term science-based land stewardship</li> </ul>  | <ul style="list-style-type: none"> <li>• Areas with rare or endangered species and ecosystems needing the highest degree of ecological protection</li> <li>• In some areas, visitor access may be restricted.</li> </ul>  | <ul style="list-style-type: none"> <li>• Nature study</li> <li>• Environmental interpretation</li> <li>• Visitor experience is centered around appreciation of natural features.</li> </ul>  | <ul style="list-style-type: none"> <li>• Low-impact nature trails and other infrastructure that enhance appreciation of the natural feature(s)</li> </ul>  |
| <b>Cultural Heritage Protection Zone</b> | <ul style="list-style-type: none"> <li>• To protect culturally significant areas and features through a long term cultural resource management strategy</li> </ul>  | <ul style="list-style-type: none"> <li>• Ecological features associated with culturally significant sites may be protected as part of the culturally significant features of the park or trail (e.g. heritage orchards)</li> </ul>  | <ul style="list-style-type: none"> <li>• Cultural appreciation and interpretation</li> <li>• Historical appreciation</li> <li>• Visitor experience is one of appreciating and understanding the cultural context of the feature</li> </ul>   | <ul style="list-style-type: none"> <li>• Low-impact nature trails and other infrastructure that enhance appreciation of the cultural feature(s)</li> </ul>   |
| <b>Regional Wilderness Zone</b>          | <ul style="list-style-type: none"> <li>• To keep large natural systems functioning and provide a regional wilderness experience for park visitors</li> </ul>  | <ul style="list-style-type: none"> <li>• Contiguous land areas large enough to protect the natural values</li> <li>• Areas with outstanding natural features that create a memorable visitor experience</li> <li>• Ecosystems are functioning in a sustainable fashion</li> </ul> | <ul style="list-style-type: none"> <li>• Activities dispersed over a wide area</li> <li>• Some backcountry areas could be available for hiking, cycling, and horseback riding</li> <li>• Visitor experience is one of being in a wilderness setting</li> <li>• Backcountry camping may be permitted</li> </ul>   | <ul style="list-style-type: none"> <li>• Long distance hiking, equestrian and cycling trails</li> <li>• Trails to viewpoints</li> </ul>  |
| <b>Natural Environment Zone</b>          | <ul style="list-style-type: none"> <li>• To provide easily-accessible natural areas within the parks</li> <li>• To provide areas within the parks that can be used for more active recreational pursuits</li> </ul> | <ul style="list-style-type: none"> <li>• Areas where outdoor activities take place in conjunction with protection of natural features</li> <li>• Less remote than wilderness</li> <li>• Can act as a buffer between wilderness and recreation zones</li> </ul>                    | <ul style="list-style-type: none"> <li>• Activities less dispersed than in a wilderness zone, and more accessible to visitors</li> <li>• Horseback riding, cycling and hiking, shoreline activities</li> <li>• Visitor experience is one of participating in outdoor activities in a natural setting.</li> </ul> | <ul style="list-style-type: none"> <li>• Hiking, walking, equestrian and cycling trails</li> <li>• Viewpoints</li> <li>• Pathways</li> <li>• Picnic areas</li> <li>• Open fields</li> </ul>        |
| <b>Outdoor Recreation Zone</b>           | <ul style="list-style-type: none"> <li>• To provide areas within a regional park that can accommodate concentrated recreation use</li> </ul>  | <ul style="list-style-type: none"> <li>• Outstanding recreation features</li> <li>• Natural values may be compromised to allow higher level of activity</li> </ul>  | <ul style="list-style-type: none"> <li>• Activities more concentrated-e.g., beach activities, swimming, boating, fishing, picnicking, multi-use trails, group picnic areas</li> <li>• Visitor experience includes active participation in outdoor recreation activities</li> </ul>                               | <ul style="list-style-type: none"> <li>• Change rooms</li> <li>• Concessions,</li> <li>• Boat launch sites</li> <li>• Beaches</li> <li>• Group picnic shelters</li> <li>• Nature houses</li> </ul> |
| <b>Park Services Zone</b>                | <ul style="list-style-type: none"> <li>• To provide areas within a park needed to support park services</li> </ul>  | <ul style="list-style-type: none"> <li>• Natural values secondary to park service needs</li> <li>• Considerable landscape modification allowed</li> </ul>   | <ul style="list-style-type: none"> <li>• Visitor-oriented and park operation services</li> </ul>   | <ul style="list-style-type: none"> <li>• Parking lots</li> <li>• Storage areas</li> <li>• Washroom buildings</li> <li>• Park operations buildings</li> </ul>                                       |

# Writing the Plan

## GOAL-ACHIEVEMENT FRAMEWORK

CRD Parks has adopted a goal-achievement framework for park management. This framework emphasizes planning as a process for making decisions that will enable management to achieve clearly stated goals and objectives. Goals and objectives serve two purposes within a plan: (1) they are criteria for determining what management policies and actions are necessary, and (2) they are the targets against which to measure the effectiveness of park management.

The goal-achievement framework that CRD Parks has adopted for organizing and writing park management plans is a framework that supports a management-by-objectives approach. It features clear statements of goals and objectives followed by the management actions needed to achieve them.

## PLANNING LOGIC AND TERMINOLOGY

Regional parks and trails management planning incorporates basic planning concepts. These concepts provide a terminology for discussing the direction of management, from goals and objectives to specific actions. The relationship among the components of the framework—the planning logic—is important; for example, planned actions are the means of pursuing goals and objectives. The planning concepts are as follows:

**Goals** are general portraits of ideal ends or effects. They limit the range of potential objectives by providing direction and purpose. Goals are often lofty statements of intent.

**Objectives** are attainable in the short-term and are more specific than goals. The goals shape the objectives. Clearly stated objectives are the key to effective park management plans.

**Actions** are specific management policies and practices used to achieve objectives within the constraints of agency policy and regulations.

**Policies** are explicit expressions of intent that describe what management will do to attain objectives. Sometimes a policy describes what management will not do or otherwise prescribes constraints on management activity.

**Standards** are measurable statements—based on the objectives—that define minimally acceptable conditions. They serve as reference points that can trigger corrective management actions if conditions are not acceptable.

Most of the substantive content of CRD Regional Parks management plans will consist of goals and objectives and associated actions to achieve these objectives.

# Regional Parks Management Plan Template

CRD Parks has developed a template for writing park management plans. The intent of the template is to serve as a basis for preparing park management plans while retaining enough flexibility to adapt to the needs of a particular planning project.

As much as possible, planners will follow the template in order to make CRD Parks management plans comparable and ensure that each plan includes core information necessary to provide management direction.

## MANAGEMENT PLAN TEMPLATE

### Introduction

1. Introduction – provides a brief description of the plan area, the purpose for undertaking the plan, and the organization of the plan.

### Background

2. Relationship to the Regional Parks and Trails System – states how the park or trail fits into the overall system.
  - 2.1. Role of the Park or Trail – describes the role of the park within the regional system.
  - 2.2. Park Classification – defines the park classification according to criteria set out in the CRD Parks Master Plan.
3. Background Information – provides necessary background information on the history of the park, ecological values, visitor use, cultural resources, regional context, demographics, and other information that may affect the park.
4. Consultation – describes the consultation process.
5. First Nations Consultation – describes the process for consultation with First Nations and any agreements or Memorandums of Understanding (MOU) with First Nations.
6. Links to Other Plans – states how this park management plan links to other CRD Parks plans, including the Master Plan, conservation plan, infrastructure plan, communications plan, universal access plan, interpretive plan, and volunteer services plan. It may also link this plan to outside management plans prepared by other agencies.

### The Plan

7. Park Direction Statements – defines the management direction for ecological conservation, visitor experience, cultural heritage management, and park operations.
8. Park Vision – defines the vision for the park.

9. Planning Principles – lists the principles used to guide the planning process.
10. Park Zoning – provides a description and map of park zones.
11. Management Goals, Objectives, Actions, Policies, and Standards – the bulk of the planning document. Defines management goals, objectives, actions, policies, and standards for the following major areas.
  - 11.1. Ecological Conservation
  - 11.2. Cultural Heritage Management
  - 11.3. Visitor Experience
    - 11.3.1. Visitor Experiences and Activities
    - 11.3.2. Visitor Services
    - 11.3.3. Communications
  - 11.4. Park Operations
    - 11.4.1. Park Infrastructure
    - 11.4.2. Park Maintenance and Development
    - 11.4.3. Other Operational Issues

### Plan Implementation, Monitoring, and Review

12. Plan Implementation – describes the plan's implementation strategy.
13. Plan Monitoring and Evaluation – describes the plan's monitoring and evaluation strategy.
14. Plan Review – describes the method and time frame for reviewing the plan.

## Summary

The vision of Regional Parks is to protect our natural environment while giving us the means to remain in close touch with nature. Regional Parks will continue to serve as a leading advocate for the protection of the region's green and blue spaces, fostering in all of us a better understanding of nature, our place in the natural environment, and a healthy lifestyle through outdoor experiences and activities.



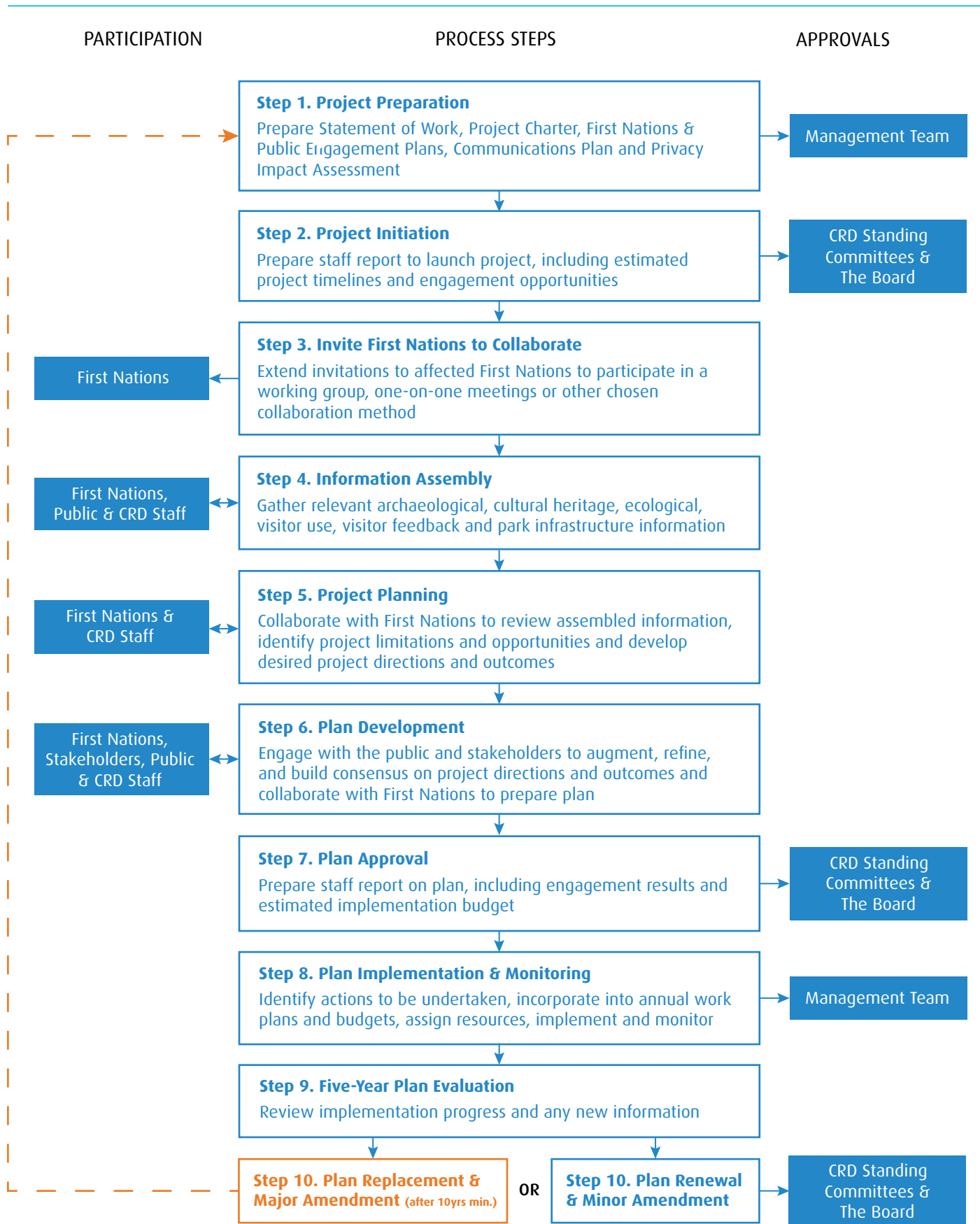
Regional Parks

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Victoria BC V9B 2Z8  
T 250.478.3344 | F 250.478.5416  
www.crd.bc.ca



# Regional Parks & Trails PLANNING PROCESS

March 2024





Making a difference...together

## REPORT TO REGIONAL PARKS COMMITTEE MEETING OF WEDNESDAY, MARCH 27, 2024

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**SUBJECT**    Regional Parks and Trails Stewardship Plan

### **ISSUE SUMMARY**

To provide information on the Capital Regional District's (CRD) Regional Parks and Trails Stewardship Plan (Stewardship Plan) and seek approval to begin engagement.

### **BACKGROUND**

CRD staff are in the process of preparing a *State of Natural Features Report*, which will complete a priority action listed within the Regional Parks and Trails Strategic Plan 2022-2032 (Strategic Plan). The report will provide a review of existing ecological knowledge, restoration activities, and research, as well as identify gaps in data and priorities for future conservation monitoring and reporting within the regional parks and trails system. A companion *State of Outdoor Recreation Report* is also being prepared, which will provide a review of existing recreation opportunities and trends, as well as identify gaps in data and priorities for future recreation monitoring and reporting within the regional parks and trails system. CRD staff intend to use the information from these reports to foster knowledge sharing with interested First Nations, with the aim of gaining additional information to provide a more complete picture of the state of regional parks and trails. The information from the two reports and collaboration with First Nations will then be used to inform the development of the Stewardship Plan.

The Stewardship Plan will provide a holistic, evidence-based approach to the management of the CRD's regional parks and trails. The plan will provide conservation and outdoor recreation management strategies in a balanced and complementary manner, to inform the development, implementation, monitoring, and review of management actions for the regional parks and trails system. The plan will be informed by continued collaboration with First Nations and input from the public and stakeholders, including the results of the 2023 Resident Survey. The updated Regional Parks & Trails Planning Process will be used to guide the development of the Stewardship Plan, and an outline of the proposed process, including a summary of engagement opportunities, is attached to this report (Appendix A).

Completion of the Stewardship Plan will achieve two priority actions listed within the Strategic Plan, completion of a Natural Areas Conservation Plan and an Outdoor Recreation Plan. Integrating system-wide direction for conservation and recreation into one plan acknowledges that exceptional ecosystems can provide good recreation value, and responsible, well-managed recreation can support the maintenance of healthy ecosystems. The plan will have a targeted planning horizon of 10 years and will be updated, as needed, to incorporate new information and evolving strategic direction and to provide an adaptive management approach.

### **ALTERNATIVES**

#### *Alternative 1*

The Regional Parks Committee recommends to the Capital Regional District Board:  
That CRD staff begin First Nations engagement for the development of a Regional Parks and Trails Stewardship Plan.

*Alternative 2*

That the engagement approach for the development of a Regional Parks and Trails Stewardship Plan be referred back to staff with direction for revision.

**IMPLICATIONS**

*Alignment with Existing Plans & Strategies*

The Strategic Plan includes direction for staff to prepare and implement a Natural Areas Conservation Plan and an Outdoor Recreation Plan. These plans are needed to support research prioritization, data collection and development of monitoring and reporting procedures to better inform how the CRD's regional parks and trails are managed. Staff received prior direction from the Regional Parks Committee to ensure that the preparation of the plans be undertaken together, so that these two aspects of parks and trails management are equally supported. Staff propose to undertake the development of these plans together, through the preparation of the Stewardship Plan, to provide a balanced and holistic approach to conservation and recreation management.

*Environmental & Climate Action*

Implementing a Stewardship Plan that emphasizes conservation efforts alongside recreational activities fosters a sense of environmental responsibility among users of parks and trails. In turn, this promotes a deeper appreciation for the natural world and connection to local ecosystems.

The Stewardship Plan will identify how to protect and restore natural systems within parks and trails. With a focus on the important role of habitat in improving ecological health and integrity, the plan will guide management and operational decisions to support ecosystem resilience and the ability of natural areas to mitigate and adapt to the impacts of climate change.

*Social Implications*

As the population within the region continues to expand, there is increased pressure on regional parks and trails to meet recreation demand, as well as increased threats to the natural environments they encapsulate from additional use. The Stewardship Plan will identify how to provide high-quality and compatible outdoor recreation opportunities that promote social cohesion, physical and mental health, environmental education and volunteerism. Providing quality outdoor recreation opportunities can have positive impacts on increasing environmental and cultural awareness, enhancing stewardship values, and promoting user etiquette. By taking a stewardship-based approach, it acknowledges the co-benefits of preserving and restoring healthy ecosystems and providing quality recreation value.

*Equity, Diversity & Inclusion*

The Stewardship Plan will provide direction for the delivery of compatible visitor experiences in regional parks and trails, ensuring equitable access to park amenities and recreation opportunities for a diverse range of users. By making the regional parks and trails system more inclusive, a greater number of community members can receive the physical and psychological benefits gained from interacting with nature.

*First Nations Reconciliation*

The Stewardship Plan has region-wide parks and trails management implications and, as such, staff will seek to collaborate with First Nations with traditional territory in the CRD to inform the

development of the plan. Staff will seek opportunities for First Nations to collaborate with the CRD at multiple project stages, and through a means that best suits each Nation’s individual capacities. Given the large number of Nations that may be interested in this project, staff will explore the formation of a multi-Nation working group to inform the development of the plan. If there is sufficient interest, the working group would be comprised of First Nations representatives, CRD staff, and a meeting facilitator, as needed. Some Nations may wish to participate in other ways, and these requests will continue to be accommodated to support First Nations rights and sovereignty on the path towards reconciliation.

*Financial Implications*

The Stewardship Plan will be developed using core budget funding.

*Service Delivery Implications*

By outlining strategies for both conservation efforts and recreational activities, the Stewardship Plan provides a balanced approach that benefits both the natural environment and park visitors. This holistic approach enhances the overall quality of service delivery by improving the caliber of outdoor recreation experiences, as well as the health and integrity of the ecosystems in which they occur.

**CONCLUSION**

CRD staff are seeking approval to begin engagement for the development of a Stewardship Plan. The plan will provide conservation and outdoor recreation management direction that will inform the development, implementation, and monitoring of management actions across the regional parks and trails system. The project meets Strategic Plan direction, will be developed in collaboration with First Nations, and will provide a basis for evidence-based management decisions.

**RECOMMENDATION**

The Regional Parks Committee recommends to the Capital Regional District Board:  
That CRD staff begin First Nations engagement for the development of a Regional Parks and Trails Stewardship Plan.

|               |   |
|---------------|---|
| Submitted by: | Mike MacIntyre, Acting Senior Manager, Regional Parks                             |
| Concurrence:  | Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                       |

**ATTACHMENT**

Appendix A: Project Steps and Tentative Timeline – CRD Regional Parks and Trails Stewardship Plan, March 2024

**PROJECT STEPS AND TENTATIVE TIMELINE**  
**CRD Regional Parks and Trails Stewardship Plan**  
**March 2024**

| PROJECT STEPS   | TENTATIVE TIMELINE  |
|---|---|
| <b>Step 1: Project Preparation</b>  |   |
| <ul style="list-style-type: none"> <li>Prepare Statement of Work, Project Charter, First Nations &amp; Public Engagement Plans, Communications Plan, and Privacy Impact Assessment</li> </ul>   | 3 <sup>rd</sup> Quarter - 4 <sup>th</sup> Quarter 2023      |
| <b>Step 2: Project Initiation</b>   |   |
| <ul style="list-style-type: none"> <li>Prepare staff report to launch project, including estimated project timelines and engagement opportunities</li> </ul>  | 1 <sup>st</sup> Quarter 2024                                |
| <ul style="list-style-type: none"> <li>Post project information on the CRD's webpage, update regularly</li> </ul>   | 2 <sup>nd</sup> Quarter 2024 +                              |
| <b>Step 3: Invite First Nations to Collaborate</b>  |   |
| <ul style="list-style-type: none"> <li>Extend invitations to participate in a working group, one-on-one meetings, or other chosen collaboration method</li> </ul>   | 2 <sup>nd</sup> Quarter 2024                                |
| <b>Step 4: Information Assembly</b>   |   |
| <ul style="list-style-type: none"> <li>Assemble relevant ecological, recreation, and visitor use information from the State of Natural Values and State of Outdoor Recreation reports, and public feedback from the 2023 Resident Survey</li> <li>Initiate collaboration with interested First Nations to inform the development of the plan</li> </ul> | 2 <sup>nd</sup> Quarter – 4 <sup>th</sup> Quarter 2024      |
| <b>Step 5: Project Planning</b>   |   |
| <ul style="list-style-type: none"> <li>Review assembled information with collaborating First Nations to identify project limitations and opportunities, as well as desired project directions and outcomes</li> </ul>   | 4 <sup>th</sup> Quarter 2024 - 1 <sup>st</sup> Quarter 2025 |
| <ul style="list-style-type: none"> <li>Identify relevant stakeholders</li> </ul>  | 4 <sup>th</sup> Quarter 2024                                |
| <b>Step 6: Plan Development</b>   |   |
| <ul style="list-style-type: none"> <li>Engage with the public via an online survey and open houses</li> <li>Conduct stakeholder focus group meetings</li> <li>Continue collaboration with interested First Nations</li> </ul>   | 1 <sup>st</sup> Quarter 2025                                |
| <ul style="list-style-type: none"> <li>Prepare Stewardship Plan</li> </ul>  | 1 <sup>st</sup> Quarter – 2 <sup>nd</sup> Quarter 2025      |
| <b>Step 7: Plan Approval</b>  |   |
| <ul style="list-style-type: none"> <li>Prepare staff report on plan, including a summary of engagement results</li> </ul>   | 2 <sup>nd</sup> Quarter 2025                                |
| <b>Step 8: Plan Implementation &amp; Monitoring</b>   |   |
| <ul style="list-style-type: none"> <li>Incorporate Stewardship Plan direction into future park and trail management planning and activities</li> </ul>  | 3 <sup>rd</sup> Quarter 2025 +                              |
| <b>Step 9: Plan Evaluation</b>  |   |
| <ul style="list-style-type: none"> <li>Review implementation progress and any new information</li> </ul>  | 3 <sup>rd</sup> Quarter 2025 +                              |
| <b>Step 10: Plan Replacement &amp; Major Amendment OR Plan Renewal &amp; Minor Amendment</b>  |   |
| <ul style="list-style-type: none"> <li>Renew Stewardship Plan as needed, consider replacement of Stewardship Plan after 10 years minimum</li> </ul>   | 3 <sup>rd</sup> Quarter 2025 +                              |



# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Capital Regional District Board

Chair: Director Plant  
Vice Chair: Director Little

## Capital Regional Hospital District Board

Chair: Director Murdoch  
Acting Chair: Director McNeil-Smith

## Capital Region Housing Corporation Board

Chair: Director de Vries  
Vice Chair: Director Caradonna

## Board of Directors

| Participant     | Director        | Alternate Director   |
|-----------------|-----------------|--|
| Central Saanich | R. Windsor      | S. Riddell   |
| Colwood         | D. Kobayashi    | I. Ward  |
| Esquimalt       | B. Desjardins   | K. Armour  |
| Highlands       | K. Williams     | K. Roessingh   |
| JDF EA          | A. Wickheim     | J. Grant   |
| Langford        | S. Goodmanson   | C. Harder, M. Wagner   |
| Langford        | L. Szpak        | C. Harder, M. Wagner   |
| Metchosin       | M. Little       | S. Epp   |
| North Saanich   | P. Jones        | C. Stock   |
| Oak Bay         | K. Murdoch      | H. Braithwaite   |
| Saanich         | S. Brice        | M. Westhaver/ N. Chambers / K. Harper / T. Phelps Bondaroff  |
| Saanich         | J. Brownoff     | T. Phelps Bondaroff / M. Westhaver / N. Chambers / K. Harper |
| Saanich         | Z. de Vries     | K. Harper / T. Phelps Bondaroff / M. Westhaver / N. Chambers |
| Saanich         | D. Murdoch      | M. Westhaver / N. Chambers / K. Harper / T. Phelps Bondaroff |
| Saanich         | C. Plant        | N. Chambers / K. Harper / T. Phelps Bondaroff / M. Westhaver |
| SGI EA          | P. Brent        | R. Fenton  |
| Sidney          | C. McNeil-Smith | C. Rintoul   |
| Sooke           | M. Tait         | J. Bateman   |
| SSI EA          | G. Holman       | Vacant   |
| Victoria        | M. Alto         | S. Kim / M. Dell / K. Loughton / S. Hammond / M. Gardiner    |
| Victoria        | J. Caradonna    | S. Kim / M. Dell / K. Loughton / S. Hammond / M. Gardiner    |
| Victoria        | C. Coleman      | S. Kim / M. Dell / K. Loughton / S. Hammond / M. Gardiner    |
| Victoria        | D. Thompson     | S. Kim / M. Dell / K. Loughton / S. Hammond / M. Gardiner    |
| View Royal      | S. Tobias       | J. Rogers  |

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Standing Committees

### Core Area Liquid Waste Management

*Membership consists of all 15 Board members from the seven municipal participants in the Core Area Liquid Waste Management Plan.*

Chair: Director Coleman

3. Director Alto
4. Director Brice
5. Director Brownoff
6. Director Caradonna
7. Director de Vries
8. Director Desjardins
9. Director Goodmanson

Vice Chair: Director Kobayashi

10. Director K. Murdoch
11. Director D. Murdock
12. Director Plant
13. Director Szpak
14. Director Thompson
15. Director Tobias

### Electoral Areas Committee

*Membership consists of all 3 Electoral Area Directors.*

Chair: Director Brent

3. Director Wickheim

Vice Chair: Director Holman

Board Chair (ex-officio)

### Environmental Services Committee

Chair: Director Desjardins

3. Director Brownoff
4. Director Caradonna
5. Director Holman
6. Director Kobayashi
7. Director Murdock

Vice Chair: Director Tobias

8. Director Tait
  9. Director Thompson
  10. Director Wickheim
- Board Chair (ex-officio)

### Finance Committee

Chair: Director Brice

3. Director Brent
4. Director Coleman
5. Director Goodmanson
6. Director Kobayashi

Vice Chair: Director Jones

7. Director Little
  8. Director Williams
  9. Director Windsor
- Board Chair (ex-officio)

### First Nations Relations Committee

Chair: Director Tait

3. Director Alto
4. Director Brent
5. Director Desjardins
6. Director Goodmanson

Vice Chair: Director Windsor

7. Director Little
  8. Director K. Murdoch
  9. Director Williams
- Board Chair (ex-officio)

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Governance Committee

Chair: Director Little

3. Director Brice
4. Director Coleman
5. Director Desjardins
6. Director Holman
7. Director Jones

Vice Chair: Director Goodmanson

8. Director K. Murdoch
  9. Director D. Murdock
  10. Director Tobias
- Board Chair (ex-officio)

## Hospitals and Housing Committee

Chair: Director Murdoch

3. Director Alto
4. Director Brent
5. Director Brice
6. Director de Vries
7. Director Holman

Vice Chair: Director Caradonna

8. Director Jones
  9. Director Kobayashi
  10. Director McNeil-Smith
  11. Director Szpak
- Board Chair (ex-officio)

## Planning & Protective Services

Chair: Director de Vries

3. Director Desjardins
4. Director Little
5. Director McNeil-Smith
6. Director Thompson

Vice Chair: Director Williams

7. Director Wickheim
  8. Director Windsor
- Board Chair (ex-officio)

## Regional Parks Committee

Chair: Director McNeil-Smith

3. Director Coleman
4. Director Goodmanson
5. Director Holman
6. Director Szpak
7. Director Tait

Vice Chair: Director Brownoff

8. Director Tobias
  9. Director Williams
  10. Director Windsor
- Board Chair (ex-officio)

## Transportation Committee

Chair: Director Murdock

3. Director Brent
4. Director Brice
5. Director Caradonna
6. Director de Vries
7. Director Desjardins
8. Director Goodmanson

Vice Chair: Director Szpak

9. Director Kobayashi
  10. Director McNeil-Smith
  11. Director Tait
  12. Director Thompson
- Board Chair (ex-officio)

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Select & Sub-Committees

### Accessibility Advisory Committee

*Governance Committee member is appointed as liaison. Term is up to two years.*

| Director        |
|-----------------|
| Director Little |

### Appointments Advisory Committee

*(reporting to the Governance Committee). Term is for one year.*

|                        |                                 |
|------------------------|---------------------------------|
| Chair: Director Little | Vice Chair: Director Goodmanson |
| Director Brice         |                                 |

### Royal and McPherson Theatres Services Advisory Committee

*(reporting to the Finance Committee). Term is for one year.*

| Participant | Board Member     |
|-------------|------------------|
| Saanich     | Colin Plant      |
|             | Susan Brice      |
| Victoria    | Jeremy Caradonna |
|             | Krista Loughton  |
| Oak Bay     | Kevin Murdoch    |

### Solid Waste Advisory Committee

*(reporting to the Environmental Services Committee).*

|                            |   |
|----------------------------|---|
| Chair: Director Desjardins | Vice Chair: Elected from amongst the membership |
| Director Plant             | Board Chair (ex-officio)                        |

### Technical and Community Advisory Committee

*Chair and Vice Chair shall be the Chair and Vice Chair of the Core Area Liquid Waste Management Committee. Term expires no later than December 31, 2024.*

| Representative                  |
|---------------------------------|
| Director Coleman (Chair)        |
| Director Kobayashi (Vice Chair) |

### Victoria Family Court and Youth Justice Committee

*(reporting to the Governance Committee) Members appointed from each of the participants. Term is two years.*

| Participant     | Member              |
|-----------------|---------------------|
| Central Saanich | Zeb King            |
| Colwood         | Cynthia Day         |
| Esquimalt       | Darlene Rotchford   |
| Highlands       | Marcie McLean       |
| Langford        | Kimberley Guiry     |
| Metchosin       | Marie-Térèse Little |
| North Saanich   | Jack McClintock     |
| Oak Bay         | Esther Paterson     |
| Saanich         | Mena Westhaver      |
| Sidney          | Terri O'Keeffe      |
| Sooke           | Jeff Bateman        |
| Victoria        | Krista Loughton     |
| View Royal      | Ron Mattson         |

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Other CRD Committees & Commissions

### Arts Commission

*Members appointed from each of the participants. Term is four years for Directors, two years for Non-Directors.*

| Participant           | Representative                 | Alternate         |
|-----------------------|--------------------------------|-------------------|
| Esquimalt             | Duncan Cavens                  | Andrea Boardman   |
| Highlands             | Karel Roessingh                | None              |
| Metchosin             | Sharie Epp                     | None              |
| Oak Bay               | Carrie Smart                   | Cairine Green     |
| Saanich               | Director Colin Plant           | Nathalie Chambers |
| Sooke                 | Dana Lajeunesse                | Jeff Bateman      |
| Southern Gulf Islands | Director Paul Brent            | None              |
| Victoria              | Director Marianne Alto (Chair) | None              |
| View Royal            | Gery Lemon                     | None              |

### Climate Action Inter-Municipal Task Force

*Task Force consists of one elected representative of each municipality and the three electoral areas. Term is for four years.*

| Local Government      | Representative         | Alternate       |
|-----------------------|------------------------|-----------------|
| Central Saanich       | Sarah Riddell          | None            |
| Colwood               | David Grove            | Cynthia Day     |
| Esquimalt             | Duncan Cavens          | None            |
| Highlands             | Ann Baird              | None            |
| Langford              | Mary Wagner            | None            |
| Metchosin             | Steve Gray             | None            |
| North Saanich         | Director Peter Jones   | All Councillors |
| Oak Bay               | Carrie Smart           | Lesley Watson   |
| Saanich               | Director Judy Brownoff | None            |
| Sidney                | Steve Duck             | Sara Duncan     |
| Sooke                 | Tony St-Pierre         | None            |
| Victoria              | Marg Gardiner          | None            |
| View Royal            | Alison MacKenzie       | Gery Lemon      |
| Salt Spring Island    | Director Gary Holman   | None            |
| Southern Gulf Islands | Director Paul Brent    | None            |
| Juan de Fuca          | Director Al Wickheim   | None            |

### Emergency Management Committee

*Board appointment of the 3 EA Directors, ELT & Senior Manager, Protective Services. Term is four years.*

| Electoral Areas       | Representative    | ELT + Management |                  |             |
|-----------------------|-------------------|------------------|------------------|-------------|
| Juan de Fuca          | Director Wickheim | Ted Robbins      | Larisa Hutcheson | Shawn Carby |
| Southern Gulf Islands | Director Brent    | Kevin Lorette    | Alicia Fraser    |             |
| Salt Spring Island    | Director Holman   | Nelson Chan      | Kristen Morley   |             |



# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Juan de Fuca Water Distribution Commission

*Members appointed from each of the participants. Term is four years.*

| Participant     | Commissioner     | Alternate                  |
|-----------------|------------------|----------------------------|
| Colwood         | David Grove      | Misty Olsen                |
| Highlands       | Gord Baird       | Karel Roessingh            |
| Juan de Fuca EA | Al Wickheim      | Jeri Grant                 |
| Langford        | Colby Harder     | Keith Yacucha, Mark Morley |
| Langford        | Mary Wagner      | Keith Yacucha, Mark Morley |
| Metchosin       | Shelly Donaldson | Steve Gray                 |
| Sooke           | Kevin Pearson    | Dana Lajeunesse            |
| View Royal      | John Rogers      | Ron Mattson                |

## Peninsula Recreation Commission

*Members appointed from each of the participants. Term is four years for Directors, two years for Non-Directors.*

| Participants    | Commissioner                | Alternate         |
|-----------------|-----------------------------|-------------------|
| Central Saanich | Niall Paltiel               | Gord Newton       |
| Central Saanich | Director Ryan Windsor       | Sarah Riddell     |
| North Saanich   | Phil DiBattista             | Kristine Marshall |
| North Saanich   | Director Peter Jones        | Celia Stock       |
| Sidney          | Scott Garnett               | Steve Duck        |
| Sidney          | Director Cliff McNeil-Smith | Chad Rintoul      |

## Regional Housing Trust Fund Commission

*One Council member is appointed by each participating municipality. The Salt Spring Island and Southern Gulf Islands Electoral Area Directors are also members. Term is two years.*

| Participant           | Commissioner          | Alternate      |
|-----------------------|-----------------------|----------------|
| Central Saanich       | Bob Thompson          | Sarah Riddell  |
| Esquimalt             | Ken Armour            | None           |
| Highlands             | Ann Baird             | None           |
| Metchosin             | Shelly Donaldson      | None           |
| North Saanich         | Celia Stock           | Irene McConkey |
| Oak Bay               | Lesley Watson         | Carrie Smart   |
| Saanich               | Director Zac de Vries | None           |
| Salt Spring Island    | Director Gary Holman  | None           |
| Sidney                | Richard Novek         | Terri O'Keeffe |
| Sooke                 | Tony St. Pierre       | None           |
| Southern Gulf Islands | Director Paul Brent   | None           |
| Victoria              | Krista Loughton       | None           |
| View Royal            | Director Sid Tobias   | None           |

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Regional Water Supply Commission

Members appointed from each of the participants. Term is four years.

| Participant     | Commissioner           | Alternate  |
|-----------------|------------------------|--|
| Central Saanich | Chris Graham           | Zeb King   |
| Colwood         | Kim Jordison           | Misty Olsen                                      |
| Esquimalt       | Tim Morrison           | Duncan Cavens                                    |
| Highlands       | Gord Baird             | Karel Roessingh                                  |
| Juan de Fuca EA | Al Wickheim            | Jeri Grant                                       |
| Langford        | Kimberly Guiry         | Colby Harder, Keith Yacucha                      |
|                 | Mary Wagner            | Colby Harder, Keith Yacucha                      |
| Metchosin       | Steve Gray             | Shelly Donaldson                                 |
| North Saanich   | Celia Stock            | Irene McConkey                                   |
| Oak Bay         | Cairine Green          | Esther Paterson                                  |
| Saanich         | Teale Phelps Bondaroff | None   |
|                 | Nathalie Chambers*     | Colin Plant, Susan Brice, Judy Brownoff          |
|                 | Zac de Vries*          | Judy Brownoff, Colin Plant, Susan Brice          |
|                 | Karen Harper*          | Susan Brice, Judy Brownoff, Colin Plant          |
|                 | Mena Westhaver*        | Susan Brice, Judy Brownoff, Colin Plant          |
| Sidney          | Sara Duncan            | Steve Duck                                       |
| Sooke           | Dana Lajeunesse        | Kevin Pearson                                    |
| Victoria        | Jeremy Caradonna       | <b>Matt Dell, Krista Loughton, Marg Gardiner</b> |
|                 | Chris Coleman          | <b>Matt Dell, Krista Loughton, Marg Gardiner</b> |
|                 | Stephen Hammond        | <b>Matt Dell, Krista Loughton, Marg Gardiner</b> |
|                 | Susan Kim              | <b>Matt Dell, Krista Loughton, Marg Gardiner</b> |
| View Royal      | John Rogers            | Ron Mattson                                      |

\*Assignment of one additional vote

## Saanich Peninsula Wastewater Commission

Members appointed from each of the participants. Term is two years.

| Participant     | Commissioner                | Alternate         |
|-----------------|-----------------------------|-------------------|
| Central Saanich | Zeb King                    | Chris Graham      |
| Central Saanich | Director Ryan Windsor       | Sarah Riddell     |
| North Saanich   | Director Peter Jones        | Celia Stock       |
| North Saanich   | Sanjiv Shrivastava          | Kristine Marshall |
| Sidney          | Director Cliff McNeil-Smith | Chad Rintoul      |
| Sidney          | Sara Duncan                 | Steve Duck        |

## Saanich Peninsula Water Commission

Members appointed from each of the participants. Term is for one year, except if CRD Directors, then term is four years.

| Participant     | Commissioner                | Alternate         |
|-----------------|-----------------------------|-------------------|
| Central Saanich | Zeb King                    | Chris Graham      |
| Central Saanich | Director Ryan Windsor       | Sarah Riddell     |
| North Saanich   | Director Peter Jones        | Celia Stock       |
| North Saanich   | Sanjiv Shrivastava          | Kristine Marshall |
| Sidney          | Director Cliff McNeil-Smith | Chad Rintoul      |
| Sidney          | Sara Duncan                 | None              |

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Salt Spring Island Local Community Commission

Membership is the Salt Spring Island Electoral Area Director, plus four commissioners elected by the local community. Term is up to four years.

| Representative       |
|----------------------|
| Director Gary Holman |
| Gayle Baker          |
| Benjamin Corno       |
| Earl Rook            |
| Brian Webster        |

## Traffic Safety Commission

Board appoints one Director as a Representative, and one Director as an Alternate. Term is two years.

| Representative      | Alternate            |
|---------------------|----------------------|
| Director D. Murdock | Director Z. de Vries |

## Appointments to External Boards

### Alliance to End Homelessness in the Capital Region

(previously Greater Victoria Coalition to End Homelessness)

For the Society Board, 3 Directors from the CRD who are also Mayors representing municipalities in the Core, Peninsula, and Westshore, with one to be nominated as the CRD Co-Chair on the Board. Corporate representation will include up to 4 others including staff. Term is two years.

| Appointed Directors:              | Corporate Member Representative:                  |
|-----------------------------------|---|
| Director McNeil-Smith (Peninsula) | Kevin Lorette, GM, Planning & Protective Services |
| Director K. Murdoch (Core)        | Don Elliott, Senior Manager, Regional Housing     |
| Director Little (Westshore)       | TBC   |

### CREST (Capital Region Emergency Service Telecommunications)

The CRD Board appoints Electoral Area Directors for shareholder votes for a four-year term. Proxies are appointed annually.

| Appointed CRD Shareholder | Proxy          |
|---------------------------|----------------|
| Director Al Wickheim      | Jeri Grant     |
| Director Gary Holman      | John Wakefield |
| Director Paul Brent       | Rob Releeder   |

### Greater Victoria Harbour Authority Board

CRD Board Chair nominates up to three CRD Board Directors to be nominated as GVHA Director for a four-year term. Board appoints Member representative *annually*.

| Member Representative<br>(One Year Term) | Member Representative<br>Alternate (One Year Term) | Board Nominee<br>(Four Year Term) |
|--|--|-----------------------------------|
| Director Goodmanson                      | Director Plant                                     | Director Brice                    |

### Community Liaison Committee - Greater Victoria Harbour Authority

GVHA Member Representative to be appointed.

| Member Representative | Member Representative - Alternate |
|-----------------------|-----------------------------------|
| Director Goodmanson   | Director Plant                    |

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## Greater Victoria Labour Relations Association

*The CRD Board appoints one Director as its representative, and one Director as alternate. Annual appointment.*

| Representative & AGM Delegate | Alternate           |
|-------------------------------|---------------------|
| Director Coleman              | Director Goodmanson |

## ICET – Island Coastal Economic Trust

*The Board appoints either the CRD Board Chair or Director as representative. Annual appointment.*

| Member Representative |
|-----------------------|
| Director P. Brent     |

## Island Corridor Foundation

*Board appoints one Director as Local Government Designated Representative annually. Board nominates one Director for election to the Foundation Board (could be the same person as the Member Representative) at its AGM, held in May, for a two-year term.*

| Member Representative | Nominee             |
|-----------------------|---------------------|
| Director Desjardins   | Director Desjardins |

## Municipal Finance Authority

*CRD Board appoints two Directors as representatives and two Directors as alternates. Annual appointment.*

| Director           | Alternate |
|--------------------|-----------|
| Director Brent     | None      |
| Director Kobayashi | None      |

## Regional Representative to the Te'mexw Treaty Advisory Committee

*Annual appointment.*

| Representative    | Alternate |
|-------------------|-----------|
| Director Wickheim | None      |

## Royal and McPherson Theatres Society Board

*Appointed by member Councils. Annual appointment.*

| Participants | Board Member           | Alternate       |
|--------------|------------------------|-----------------|
| Oak Bay      | Hazel Braithwaite      | Andrew Appleton |
| Saanich      | Teale Phelps Bondaroff | None            |
| Victoria     | Matt Dell              | None            |

## Salt Spring Island Ferry Advisory Committee

*Appointed by BC Ferries - Ferry Advisory Committee. Term is two years.*

| Representative  |
|-----------------|
| Director Holman |

## Sooke and Electoral Area Parks and Recreation Commission

*Appointed by member councils. CRD Board Directors terms are four-years. Council appointee term is two years.*

| Participants | Commissioner                           | Alternate     |
|--------------|--|---------------|
| Juan de Fuca | Director Wickheim (CRD Board Director) | Jeri Grant    |
| Sooke        | Director Tait (CRD Board Director)     | Jeff Bateman  |
| Sooke        | A. Beddows (Sooke Council Appointed)   | Kevin Pearson |

# 2024 Appointments

Board and Committee Membership  
Capital Regional District | 2024

## **Vancouver Island and Coastal Communities Climate Leadership Plan (VICC-CLP) Steering Committee**

*Elected Official(s) to be appointed for a four-year term.*

| Representative    | Alternate |
|-------------------|-----------|
| Director Thompson | None      |

## **Vancouver Island Regional Library Board**

*CRD Board appoints. Only Juan de Fuca Area participates in this service function. Annual appointment.*

| Representative    | Alternate  |
|-------------------|------------|
| Director Wickheim | Jeri Grant |





Making a difference...together

**REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE  
MEETING OF TUESDAY, MARCH 19, 2024**

---

**SUBJECT**     **Development Variance Permit for Lot 44, Section 4, Renfrew District,  
Plan VIP83894 – 3620 Piper Lane**

**ISSUE SUMMARY**

A request has been made for a development variance permit to reduce the required yard setbacks for an accessory building from 1 m to 0.83 m for a side yard and from 15 m to 0.68 m for the front yard where the distance between the principal building and the front lot line is greater than 15 m.

**BACKGROUND**

The 1.08 ha property is located at 3620 Piper Lane in Jordan River (Appendix A) and is zoned Rural Residential 2A (RR-2A) under the Juan de Fuca Land Use Bylaw 1992, Bylaw No. 2040. The parcel is surrounded by other RR-2A zoned parcels with access originating from the cul-de-sac to the south. The property has a gradual downward slope from Piper Lane towards the north. There are no development permit areas designated on the subject property.

A site plan and survey provided as part of the building permit application for a new single-family dwelling indicated that a 16.8 m<sup>2</sup> cottage/shed and a 9.8 m<sup>2</sup> shed were located on the parcel (Appendices B and C). The owner advised that the 9.8 m<sup>2</sup> shed was constructed within the front and side yard setback area to house utilities. Bylaw No. 2040 provides an exemption that allows pumphouses to project into the required yard setbacks specified in a zone. Staff consider this provision to also include small sheds to house electrical utilities such as a meter and panel where powerlines transition from overhead to underground; however, it would not extend to buildings that include additional storage space. The shed is located such that a permit to locate a building within 4.5 m of a public highway from the Ministry of Transportation and Infrastructure was also required.

Following notification that the current location of the shed does not meet siting requirements, the landowner has requested a variance to the regulations of the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, which specify a minimum side yard setback of 1 m and the minimum front yard setback of accessory buildings relative to the location of the principal building.

**ALTERNATIVES**

*Alternative 1*

The Land Use Committee recommends to the Capital Regional District Board:

That Development Variance Permit VA000161 for Lot 44, Section 4, Renfrew District, Plan VIP83894, to vary Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, to authorize the siting of a utility building as follows:

1. Part 1, Section 4.01(1)(d) to reduce the front yard requirement for an accessory building 15 m to 0.68 m; and
2. Part 1, Section 4.01(1)(h)(i) to reduce the side yard requirement for an accessory building from 1 m to 0.83 m

be approved.

*Alternative 2*

That the development variance permit be denied and the accessory building be required to comply with zoning requirements.

## **IMPLICATIONS**

### *Legislative Implications*

The Juan de Fuca Land Use Bylaw 1992, Bylaw No. 2040, Part 1, Section 4.01(1)(d) specifies that no accessory building shall be located closer to the front lot line than the principal building except that where the principal building is more than 15 m away from the front lot line, the setback for an accessory building is 15 m. The accessory building does not meet this requirement; therefore, a variance is requested.

### *Public Consultation Implications*

Pursuant to Section 499 of the *Local Government Act*, if a local government is proposing to pass a resolution to issue a development variance permit, it must give notice to each resident/tenant within a given distance as specified by bylaw. Capital Regional District Bylaw No. 3885, Fees and Procedures Bylaw, states that the Board at any time may refer an application to an agency or organization for their comment. In addition, it states that a notice of intent must be mailed to adjacent property owners within a distance of not more than 500 m. Any responses received from the public will be presented at the March 19, 2024, Land Use Committee meeting.

### *Land Use Implications*

The general regulations for accessory buildings and structures specifies the location of an accessory building relative to the position of the principal building. Where the distance between the principal building and the front lot line is greater than 15 m, the regulation states that the accessory building shall be not less than 15 m from the front lot line. In addition, accessory buildings are to be located no less than 1 m clear to the sky from side and rear lot lines on Rural Residential parcels. Since the shed is located 0.68 m from the front lot line and 0.83 m from the side lot line, variances are required.

The existing shed houses electrical services and provides additional storage (Appendix D). The landowner obtained a permit from the Ministry of Transportation and Infrastructure on June 21, 2023, authorizing siting of the accessory structure within 4.5 m of highway right-of-way (Appendix E). Upon referral of the variance request to CRD Building Inspection, the Building Inspector confirmed that the floor area of the shed and its occupancy type allow it to be exempt from the requirement for a building permit.

Staff are of the opinion that the proposal, as shown in the building plans, is considered appropriate for the site and complies with the use of the RR-2A zone. The development is not expected to adversely affect the natural environment and no development permit is required for the siting of the utility shed. The variance is not anticipated to substantially alter the use and enjoyment of adjacent land. Staff recommend approval of VA000161 subject to public notification.

## **CONCLUSION**

The applicant has requested a development variance to reduce the required front yard setback for an accessory building from 15 m to 0.68 m where the distance between the principal building and the front lot line is greater than 15 m and reduce the side yard setback requirement from 1 m to 0.83 m as outlined in the accessory building regulations within Bylaw No. 2040. The accessory building has received approval from the Ministry of Transportation regarding the Ministry's required setback from a highway and is sited in a location that is not expected to create hardship on the neighbouring properties. Development variance permit VA000161 is included in Appendix F for consideration. If the Permit is approved by the Board, the Corporate Officer will proceed to issue the Permit and register a Notice of Permit on Title.

**RECOMMENDATION**

That Development Variance Permit VA000161 for Lot 44, Section 4, Renfrew District, Plan VIP83894, to vary Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, to authorize the siting of a utility building as follows:

1. Part 1, Section 4.01(1)(d) to reduce the front yard requirement for an accessory building 15 m to 0.68 m; and
2. Part 1, Section 4.01(1)(h)(i) to reduce the side yard requirement for an accessory building from 1 m to 0.83 m

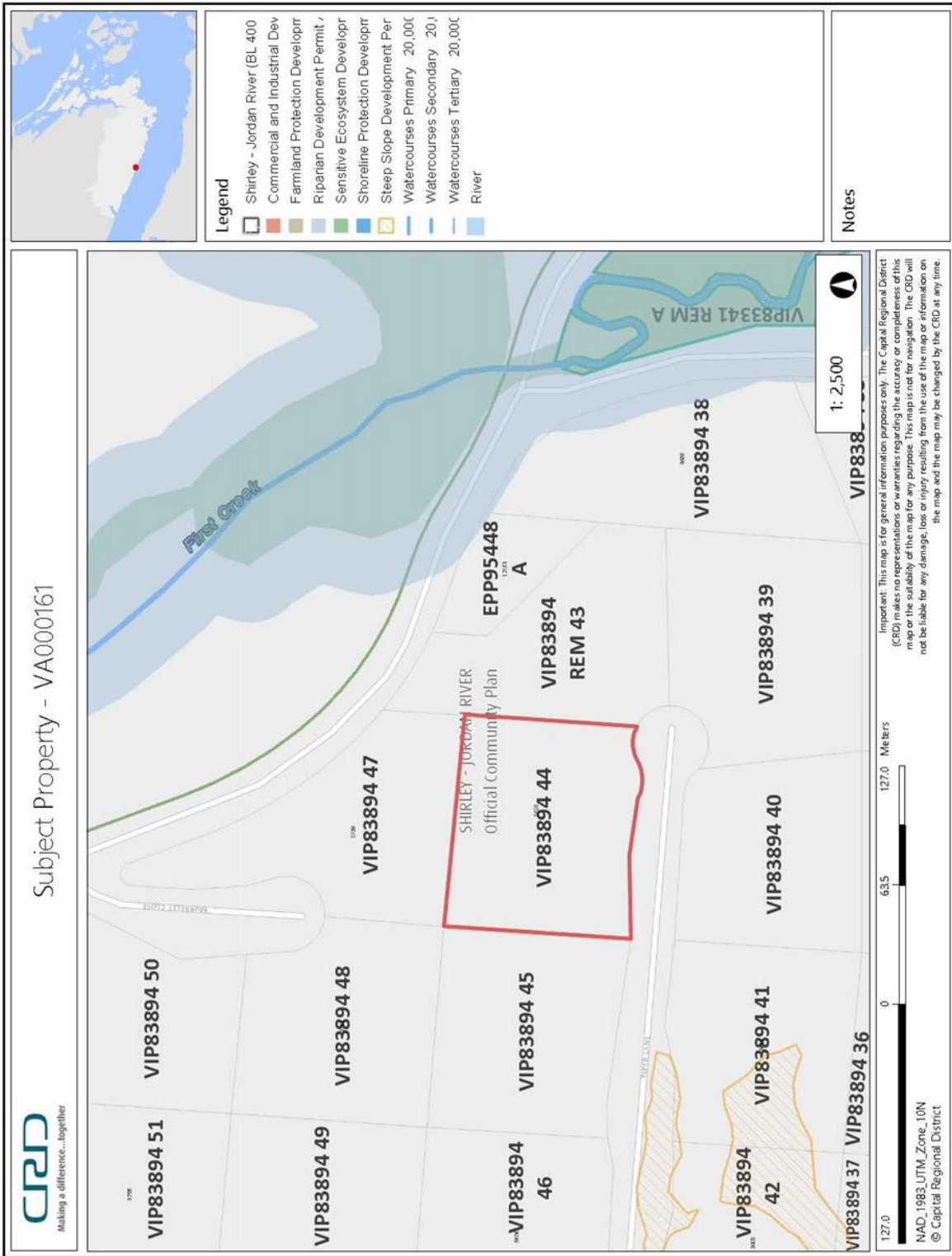
be approved.

|               |   |
|---------------|---|
| Submitted by: | Iain Lawrence, RPP, MCIP, Senior Manager, Juan de Fuca Local Area Services  |
| Concurrence:  | Kevin Lorette, P.Eng., MBA, General Manager, Planning & Protective Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                 |

**ATTACHMENTS**

- Appendix A: Subject Property Map
- Appendix B: Site Plan
- Appendix C: Survey Plan and Requested Variances
- Appendix D: Photos
- Appendix E: Ministry of Transportation permit to reduce building setback less than 4.5 metres.
- Appendix F: Permit VA000161

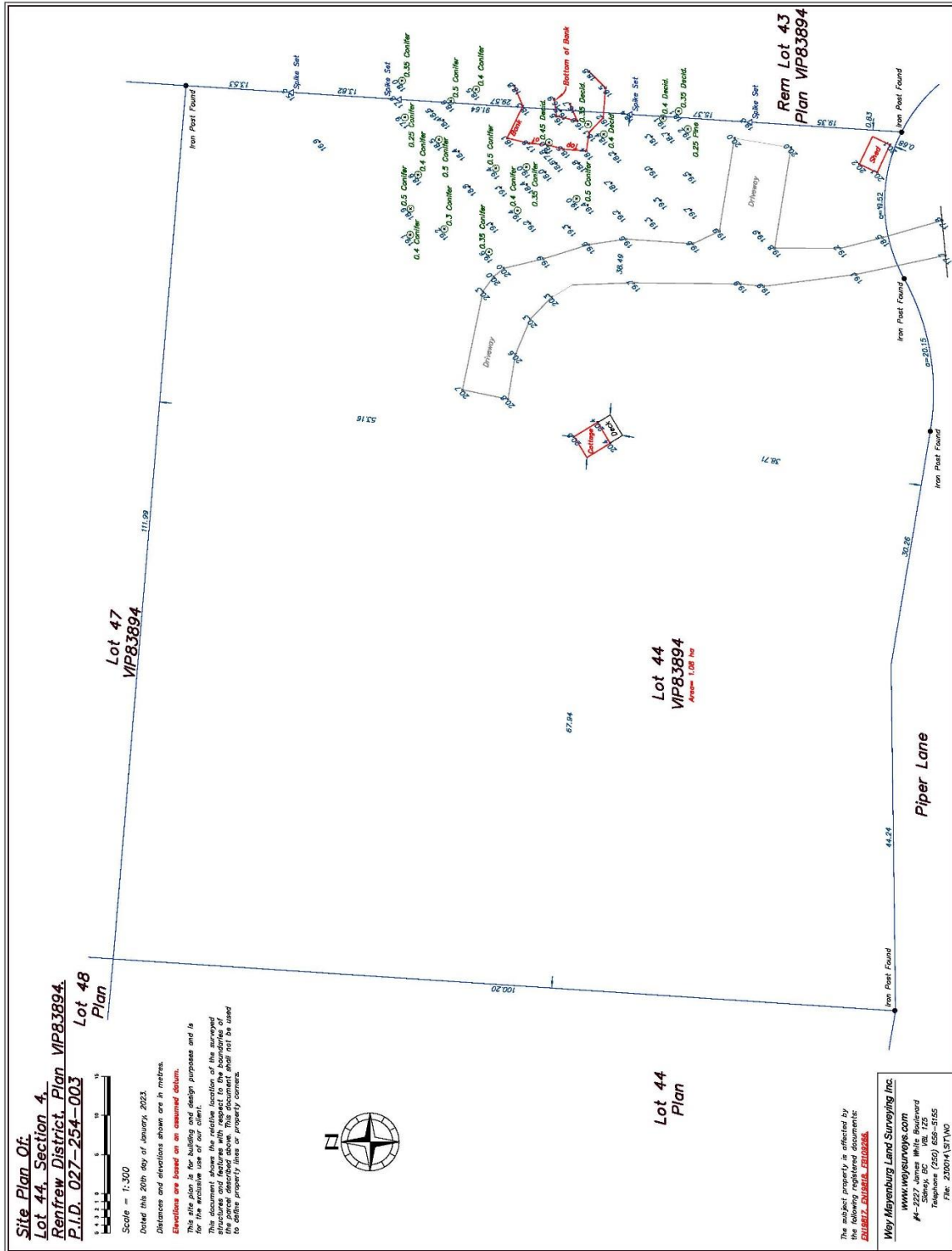
Appendix A: Subject Property Map

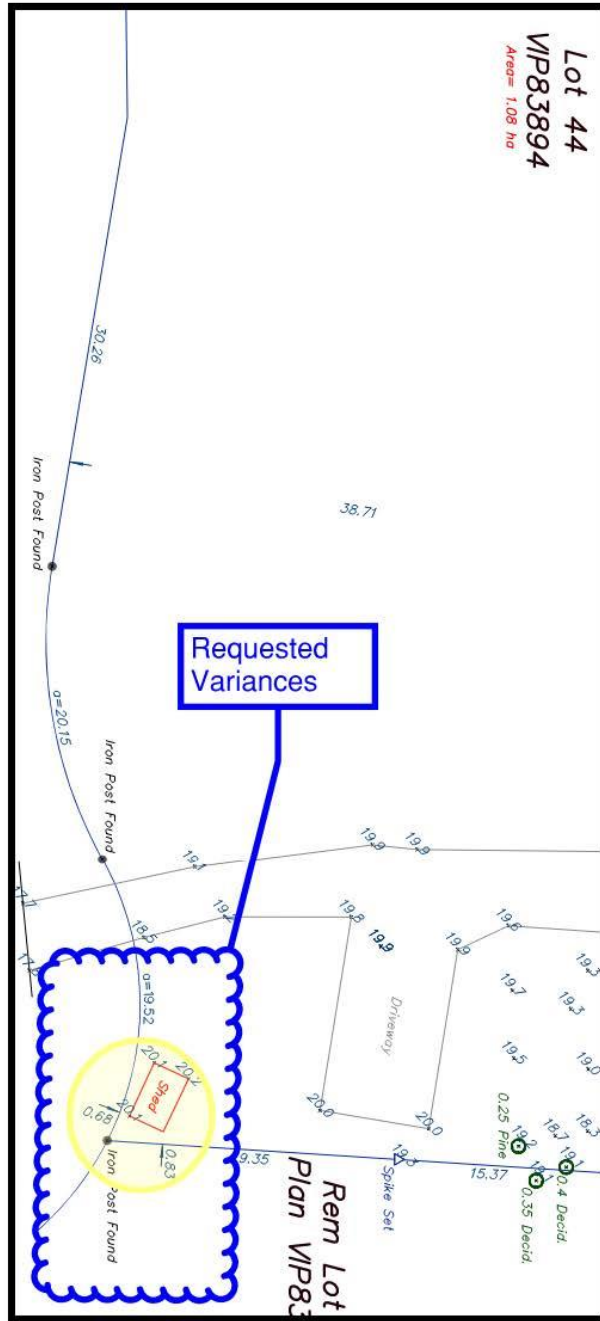






Appendix C: Survey Plan and Requested Variances







Appendix D: Photos







Appendix E: Ministry of Transportation Setback Permit



BRITISH COLUMBIA

Ministry of Transportation

Permit/File Number: 2023-02925  
Office: Saanich Area Office

**PERMIT TO REDUCE BUILDING SETBACK LESS THAN 4.5 METRES FROM THE PROPERTY LINE FRONTING A PROVINCIAL PUBLIC HIGHWAY**

**PURSUANT TO TRANSPORTATION ACT AND/OR THE INDUSTRIAL ROADS ACT AND/OR THE MOTOR VEHICLE ACT AND/OR AS DEFINED IN THE NISGA'A FINAL AGREEMENT AND THE NISGA'A FINAL AGREEMENT ACT.**

BETWEEN:

The Minister of Transportation and Infrastructure

Saanich Area Office  
240-4460 Chatterton Way  
Victoria, British Columbia V8X 5J2  
Canada

("The Minister")

AND:

[Redacted Name]

("The Permittee")

[Redacted Name]

("The Permittee")

WHEREAS:

- A. The Minister has the authority to grant permits for the auxiliary use of highway right of way, which authority is pursuant to both the Transportation Act and the Industrial Roads Act, the Motor Vehicle Act, as defined in the Nisga'a Final Agreement and the Nisga'a Final Agreement Act;
- B. The Permittee has requested the Minister to issue a permit pursuant to this authority for the following purpose:  
  

**The construction of a building, the location of which does not conform with British Columbia Regulation 513/04 made pursuant to section 90 of the Transportation Act, S.B.C. 2004, namely; to allow a 105 square foot 12 foot by 8 foot wood framed utility shed located on a concrete slab within the 4.5 meter setback from Piper Lane PID 027-254-003. As see on attached survey drawing.**
- C. The Minister is prepared to issue a permit on certain terms and conditions;

ACCORDINGLY, the Minister hereby grants to the Permittee a permit for the Use (as hereinafter defined) of highway right of way on the following terms and conditions:

- 1. This permit may be terminated at any time at the discretion of the Minister of Transportation and Infrastructure, and that the termination of this permit shall not give rise to any cause of action or claim of any nature whatsoever.
- 2. This permit in no way relieves the owner or occupier of the responsibility of adhering to all other legislation, including zoning, and other land use bylaws of a municipality or regional district.
- 3. The Permittee shall indemnify and save harmless the Ministry, its agents and employees, from and against all claims, liabilities, demands, losses, damages, costs and expenses, fines, penalties, assessments and levies made against or incurred, suffered or sustained by the Ministry, its agents and employees, or any of them at any time or times, whether before or after the expiration





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Ministry of  
Transportation

Permit/File Number: 2023-02925

Office: Saanich Area Office

- or termination of this permit, where the same or any of them are based upon or arise out of or from anything done or omitted to be done by the Permittee, its employees, agents or Subcontractors, in connection with the permit.
4. Should the said structure be destroyed, removed or dismantled, this permit is automatically cancelled and another permit will not necessarily be granted for a new similar structure.
  5. This permit is valid only for the specific works stated herein. Any alterations or additions must be covered by a separate permit.
  6. The Permittee acknowledges that the issuance of this permit by the Minister is not a representation by the Minister that this permit is the only authority needed to carry out the Use. The Permittee shall give deference to any prior permission given for use of the right of way in the vicinity of the permit area, shall obtain any other permission required by law, and shall comply with all applicable laws regardless of their legislative origin.
  7. The Permittee will at all times indemnify and save harmless Her Majesty the Queen in Right of the Province of British Columbia, as represented by the Minister of Transportation and Infrastructure, and the employees, servants, and agents of the Minister from and against all claims, demands, losses, damages, costs, liabilities, expenses, fines, fees, penalties, assessments and levies, made against or incurred, suffered or sustained by any of them, at any time or times (whether before or after the expiration or termination of this permit) where the same or any of them are sustained in any way as a result of the Use, which indemnity will survive the expiration or sooner termination of this permit.
  8. If any BCLS survey posts are removed, moved or damaged during the construction of the said Works they must be replaced by a registered BC Land Surveyor at the expense of the Permittee.
  9. Any damage to the Ministry of Transportation and Infrastructure's right-of-way as a direct result of the permitted works, shall be repaired and maintained by the Permittee in perpetuity.
  10. This permit in no way relieves the owner or occupier of the responsibility of adhering to all other legislation, including zoning, and other land use bylaws of a municipality or regional district.
  11. The Ministry of Transportation and Infrastructure and/or the Maintenance Contractor shall not be held accountable for any damage(s) to the said structure, however caused.
  12. The Permittee may not assign any part of this Agreement without the consent, in writing, of the Minister.
  13. The Permittee must ensure that the most current editions of the following standards and specifications, manuals and guides are utilized and complied with during the installation, operation and maintenance of the Works:
    - (a) Ministry Utility Policy Manual
    - (b) Ministry Traffic Control Manual for Work on Roadways
    - (c) Ministry Traffic Management Guidelines for Work on Roadways
    - (d) Ministry Standard Specification for Highway Construction
  14. It is the responsibility of the Permittee to ensure that all equipment and vehicles crossing Provincial highways or side roads have the proper approval and insurance as required and issued by the Commercial Vehicle Safety and Enforcement Division. For permits or inquiries please contact the Provincial Permit Centre at 1-800-559-9688.
  15. A copy of this permit must be on site at all times during the said works.
  16. The Permittee shall determine the location of highway right-of-way to ensure their permitted work is within Ministry jurisdiction. The Permittee is responsible for all trespass issues.
  17. This permit in no way grants exclusive use to the Permittee for any portion of the access on right-of-way.
  18. That where the said works are in the proximity of any bridge, culvert, ditch or other existing work, such work shall be properly maintained and supported in such manner as not to interfere with its proper function, and on the completion of the said works any bridge, culvert, ditch or other existing work interfered with shall be completely restored to its original condition.
  19. No further additions or improvements shall be made to the said structure without prior consent of the Ministry of Transportation and Infrastructure.
  20. The Permittee is responsible for ensuring that all works are contained to the highway right of way. Any works located within private property must have the owner's permission.
  21. The Permittee will ensure that the works do not, impair, impede or otherwise interfere with; I. public passage on the Highways; II. the provision of highway maintenance services by the Province, or by its servants, contractors, agents or authorized representatives of the Province in connection with the Highways; or III. the operation of the Highways.
  22. Permittee to be responsible for all future drainage problems as they pertain to said works.
  23. The Ministry, or its contractors, will not be responsible for installation or maintenance of the landscaping.



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Ministry of  
Transportation

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Office: Saanich Area Office

24. The Permittee to be responsible for any settlement, erosion or other damage caused as a result of this construction for a period of two years from completion of construction.
25. All costs entailed in the construction and maintenance of the works are to be borne by the Permittee.
26. This permit may be terminated at any time at the discretion of the Minister of Transportation and Infrastructure, and that the termination of this permit shall not give rise to any cause of action or claim of any nature whatsoever.
27. The rights granted under this permit and certificate are for an indefinite period.
28. If the Permittee proceeds on this permit, it is deemed they have accepted all terms and conditions.
29. The Permittee must contact the Archaeology Branch immediately at (250) 953-3334 if archaeological site deposits are encountered on the subject property. In the event that any item of archaeological, heritage, historical, cultural, or scientific interest is found on the project site, the Permittee shall have a Chance Find Procedure in place and utilize it when required.

The rights granted to the Permittee in this permit are to be exercised only for the purpose as defined in Recital B on page 1.

Dated at Victoria, British Columbia, this 21 day of June, 2023

A handwritten signature in black ink that reads "Ryan Pinches".

\_\_\_\_\_  
On Behalf of the Minister



**CAPITAL REGIONAL DISTRICT**

**DEVELOPMENT VARIANCE PERMIT NO. VA000161**

1. This Development Variance Permit is issued under the authority of Section 498 of the *Local Government Act* and subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically authorized by this Permit.
2. This Development Variance Permit applies to and only to those lands within the Regional District described below (legal description), and any and all buildings, structures, and other development thereon:  

**PID: 027-254-003;**  
**Legal Description: Lot 1, Section 32, Otter District, Plan 25866**
3. The Capital Regional District's **Bylaw No. 2040**, Part 1 is varied under Section 498 of the *Local Government Act* as follows:
  - a) Part 1, Section 4.01(1)(d) to reduce the front yard requirement for an accessory building 15 m to 0.68 m; and
  - b) Part 1, Section 4.01(1)(h)(i) to reduce the side yard requirement for an accessory building from 1 m to 0.83 mas shown on the Survey Site Plan prepared by Wey Mayenburg Land Surveying Inc., dated January 20, 2023.
4. Notice of this Permit shall be filed in the Land Title Office at Victoria as required by Section 503 of the *Local Government Act*, and the terms of this Permit (VA000161) or any amendment hereto shall be binding upon all persons who acquire an interest in the land affected by this Permit.
5. If the holder of a permit does not substantially start any construction permitted by this Permit within 2 years of the date it is issued, the permit lapses.
5. The land described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit, and any plans and specifications attached to this Permit which shall form a part hereof.
6. The following plan and specification is attached:  

Appendix A: Survey Site Plan prepared by Wey Mayenburg Land Surveying Inc., dated January 20, 2023.
7. This Permit is NOT a Building Permit.

**RESOLUTION PASSED BY THE BOARD, THE \_\_\_\_\_ day of \_\_\_\_\_, 2024.**

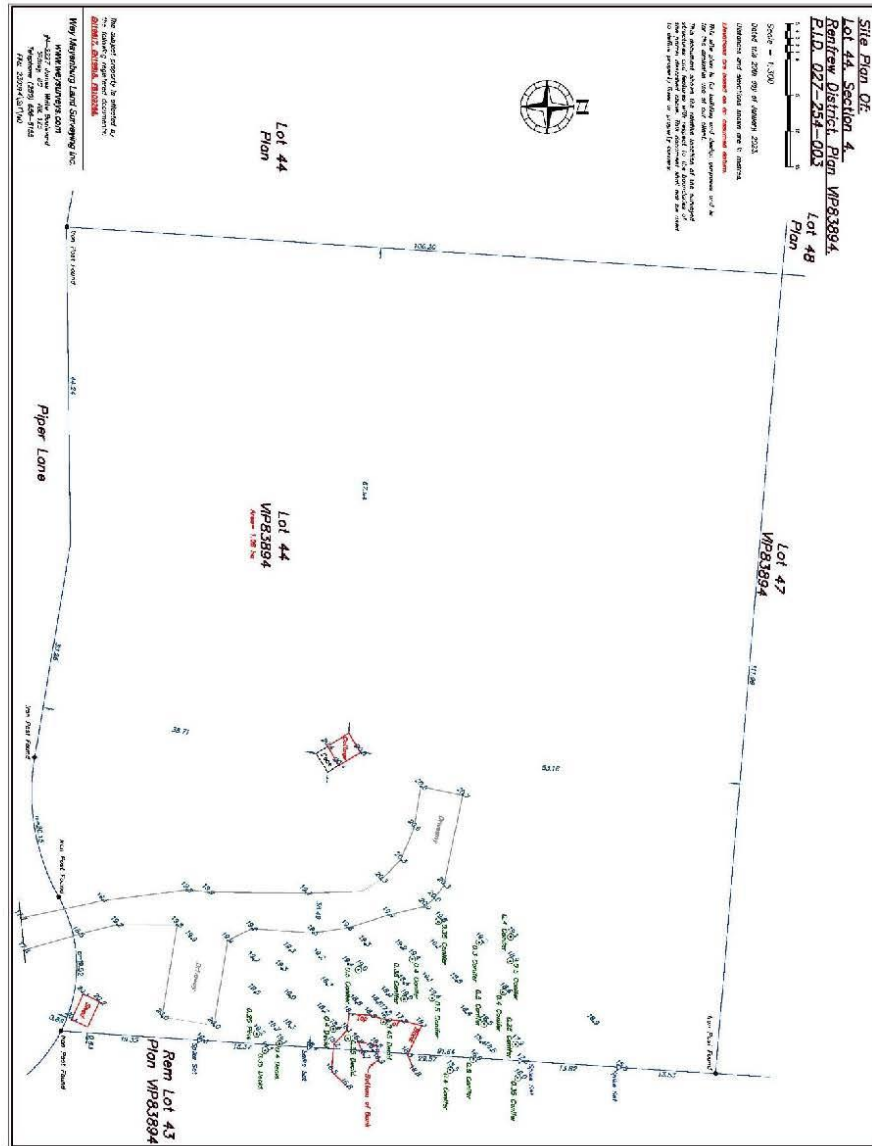
**ISSUED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024

\_\_\_\_\_  
Corporate Officer  
Kristen Morley



VA000161

Appendix A: Survey Site Plan by Wey Mayenburg Land Surveying Inc., dated January 20, 2023.





Making a difference...together

## REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD MEETING OF WEDNESDAY, APRIL 10, 2024

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**SUBJECT**    **CAO Quarterly Progress Report No. 1, 2024**

### **ISSUE SUMMARY**

To provide the Board with a quarterly update on Corporate Activities and Initiatives, progress made on the 2023-2026 Board and Corporate Priorities, Capital and Operating Budget Variances, and Human Resources and Corporate Safety statistics up to March 31, 2024.

### **BACKGROUND**

In February 2023, the Board approved the *CRD Board Strategic Priorities 2023-2026* (the “*Board Priorities*”) that identifies five strategic priorities with 16 initiatives to be advanced over the four-year term. The Board Priorities Dashboard tracks progress on the Board and Corporate strategic priorities and will be presented quarterly to the Board. Core service priorities are prepared and reviewed annually in departmental Service Plans in alignment with Board and Corporate Priorities, with corresponding KPIs and other service information that is approved by the Board. The Capital Regional District (CRD), Capital Regional Hospital District (CRHD) and Capital Region Housing Corporation (CRHC) Financial Plans are reviewed and approved annually, and staff have developed a quarterly variance report to highlight differences between budget and actual expenditures on operating budgets and capital projects over \$500,000. An update on non-confidential human resources matters, including labour relations and workforce trends is also included in this report.

### **DISCUSSION**

#### **Corporate Activities and Initiatives**

Appendix A highlights corporate activities and initiatives in the last quarter and a number of photographs have been included to present announcements and events that occurred in this quarter.

On January 16, 2024, paa?ciid?atx (Pacheedaht) First Nation and the CRD signed a Memorandum of Understanding (MOU) formalizing their government-to-government relationship. By outlining priority topics for collaboration and principles for working together, this MOU will directly support the creation of new processes for respectful and reciprocal government-to-government decision-making.

This year’s Lunar New Year celebrations began on February 10, 2024. Based on the Chinese zodiac, 2024 is the Year of the Dragon which symbolizes power, nobility, honour, luck and success. The CRD was very fortunate to have permission to share the original artwork of Bonnie Lu, who is the daughter of Lia Xu, Manager, Local Services and Corporate Grants with the CRD. Bonnie’s artwork was used in our corporate acknowledgement of Lunar New Year.

On January 17, 2024, the CRD held its first Provisional Budget Virtual Information Session inviting members of the public to an online information session about the 2024 Provisional Financial Plan. This session provided an opportunity to learn how the regional district develops budgets, makes decisions, and delivers services with consideration of community needs and impact on taxpayers. The presentation included an overview of the 2024 taxes, rates, and consolidated budget figures as well as key capital projects planned, and there was an opportunity for questions and answers.



On February 16, 2024, the federal and provincial governments, alongside the CRD and Songhees Nation announced nearly \$24 million to help create 66 below-market homes at 1502 Admirals Road, located on Songhees Nation Land. This project is the result of a partnership between the Songhees Nation, the Province, through BC Housing, the federal government, through the Canada Mortgage and Housing Corporation (CMHC) and the Capital Region Housing Corporation. The homes will be operated by M'akola Housing Society with an expected completion date in early 2025.

March 1 marked the annual recognition of National Employee Appreciation Day. To celebrate this day, we encouraged employees to take a moment to reflect on their personal achievements, strengths, and the contributions they make to the CRD. We thank them for their steadfast commitment to our region and the important work that they do. CRD employees are the backbone of our success, and we recognize that we are successful due to their dedication.

On March 21, 2024, the CRD honoured employees with 20, 25, 30 and 35 years of service at the annual Career Service Recognition event. This year 18 employees were recognized and on behalf of the CRD, we extend our congratulations and gratitude to all of these employees who have achieved these significant milestones, for their ongoing dedication and the invaluable contributions they make.

Regional Water Supply Commission members gathered for a photo at their Commission meeting in March to celebrate World Water Day. World Water Day is held annually on March 22 as a means of focusing attention on the importance of freshwater and advocating for the sustainable management of freshwater resources. It is also a day to celebrate Water Operators and Water Professionals for their dedication and tireless work in keeping water flowing and ensuring communities have a safe and clean drinking water supply.

The CRD has won the three GFOA US & Canada awards referred to as the Triple Crown. The Distinguished Budget Presentation Award, Achievement of Excellence in Financial Reporting, and the Popular Annual Financial Reporting Award. The Distinguished Budget Presentation Award recognizes local government budget documents of the highest quality that reflect both the guidelines established by the National Advisory Council on State and Local Budgeting and the GFOA's best practices on budgeting. The Achievement for Excellence in Financial Reporting encourages local governments to go beyond the minimum requirements of generally accepted accounting principles to prepare comprehensive annual financial reports that evidence the spirit of transparency and full disclosure. Finally, the Popular Annual Financial Reporting Award encourages local governments to extract information from their comprehensive annual financial reports to produce high quality and popular annual reports designed to be readily accessible and easily understandable to the general public.

### **Board Priorities and Corporate Plan Initiatives**

In April 2023, the CRD Board approved the CRD 2023 – 2026 Corporate Plan (the Corporate Plan) that identifies 134 initiatives to be advanced over the four-year term. Progress on the Board Priorities and Corporate Plan initiatives from January 2023 to date is reflected in Progress Report Q1, 2024, as Appendix B. The “Comments” section provides a summary of completed actions as well as any issues or problems that have arisen that may impact progress on the priority. The “Next Steps” section identifies future planned actions and associated timing. Attached as Appendix C is the Board Priorities Dashboard Summary of Completed Actions.

### **Board Advocacy**

On August 9, 2023, staff brought forward a report to the CRD Board with the updated CRD Advocacy Strategy, which was approved, attached as Appendix D, to form the basis for individual advocacy initiatives. An Advocacy Dashboard based on the Board's Strategic Priorities for 2023 - 2026 has been prepared which tracks the ongoing advocacy work being done by the CRD Board, partners, and staff.

Progress on advocacy is reflected in the Advocacy Dashboard Progress Report Q1, 2024 as Appendix E.

### **Operating Variance Financial Report – Q4, 2023**

The Financial Operating Variance Report details the quarterly operating variance through to the fourth quarter. The financial variance report lags by one quarter to allow time for financial reconciliation prior to reporting. The report compares year-to-date results against the annual budget for services with expenditures greater than \$1.5 million. These services constitute approximately 86% of the consolidated financial plans for the CRD, CRHD, and CRHC.

The amount of budget expended through the quarter will vary from service to service based on planned expenditures, seasonality, and transaction timing. For example, while services funded by requisition await their third quarter funding, utility and distribution services receive sales revenue spread more evenly throughout the year, subject to seasonality.

The quarterly Financial Operating Variance Report (Appendix F) highlights expense and revenue while outlining treatment of surplus or deficits at year end.

Revenue and expenses throughout 2023, as a percentage of planned budget, is largely in line with the same period and timeframe as 2022 for both revenue and expenses.

### **Capital Regional District**

In summary, the forecast shows the majority of service budgets are generally in line with the annual budgets. Many of these budgets provide essential services to our communities such as delivery of water, wastewater management, and solid waste.

Variances are forecasted in the Regional Housing Trust Fund due to timing of grant funding requests, and for Core Area Wastewater Operations due to savings on utilities, chemicals, and repairs and maintenance, as well as for Legislative and General services related to staff vacancies.

Higher than budgeted revenue has also contributed to favourable forecast variances for a select number of services, including Environmental Resource Management which is forecasting higher solid waste revenue due to refuse and biosolids volumes in 2023.

Recreation Centres at Panorama, SEAPARC and Salt Spring Island are continuing to experience higher demand for their programs and facilities, which continues to grow since the pandemic. This impacts both increased operational costs and increased revenues across these recreation services.

All of the 2023 year-end budget information was reported with the 2024 final budget package.

### **Capital Regional Hospital District**

The report highlights minor savings resulting from the deferral of feasibility studies to 2024, and lower debt costs due to timing of spending on Island Health capital projects. Otherwise, the CRHD operations continued as planned.

### **Capital Region Housing Corporation**

The actuals for CRHC are presented by portfolio and reflects the realized cost savings and revenue variances for the 2023 year.

Specific details on CRD, CRHD and CRHC expense and revenue forecasts are outlined in Appendix F.

### **Capital Variance Financial Report – Q4, 2023**

The Capital Variance Financial Report (Appendix G) highlights variances on actual expenditures from the quarterly and annual capital budgets for all entities (CRD, CRHD and CRHC). The report covers all capital projects with a budget greater than \$0.5 million.

The Capital Plan is budgeted quarterly, reflecting the scope and schedule of initiatives. Forecasts are also updated quarterly, enhancing the accuracy and detail of project updates as the year progresses and tenders are finalized. As quarters progress through the year and tenders complete, the expectation is that activities and accuracy will increase.

### **Capital Regional District**

Capital expenditures on projects greater than \$0.5 million totaled \$13.6 million in the fourth quarter, 49% below forecasted costs of \$26.6 million. The \$12.9 million variance can be largely attributed to:

- A delay in the Cell 4 liner installation at the Hartland Landfill, accounting for \$2.9 million;
- A delay in the 2023 phase of the Gas Utilization project at the Hartland Landfill, amounting to \$2.8 million;
- Delayed timing of construction of Gas Flare and Landfill Gas Blowers for Hartland Landfill, at \$1.7 million;
- Timing of completion for the Goldstream Pipe Replacement project in the Juan de Fuca Water Distribution service, now expected for the first quarter 2024, contributing \$0.8 million;
- Timing of weather-dependant construction for the Mayne Island Demonstration Trail, where completion is now expected for the third quarter 2024, contributing \$0.8 million.

Other variance contributors include design delays for the Contractor Workshop Relocation, contractor progress delays for the Aggregate Production for Internal Use and delays and timing adjustments for vehicle acquisitions within the Regional Water Supply, Juan de Fuca Water Distribution and Regional Parks services.

### **Capital Regional Hospital District**

No expenditures were recorded for hospital district projects surpassing \$0.5 million in the third quarter. The capital contribution to the Regional Housing First Program was deferred to 2024.

## **Capital Region Housing Corporation**

Capital expenditures on projects greater than \$0.5 million totaled \$9.9 million in the fourth quarter, a 27% shortfall from the \$13.6 million forecast. The primary reason for this variance was the construction draw timing for the Michigan Housing redevelopment. Additionally, excavation and foundation work for the Caledonia redevelopment occurred in the third quarter, pushing construction costs into future periods. Completion of the Caledonia redevelopment is forecast for 2025.

## **Human Resources Trends and Corporate Safety**

Appendix H provides an analysis of current and emerging trends in workforce composition, turnover, promotions, absenteeism and occupational health and safety. The CRD continuously monitors human resource organizational health, and proactively modifies and adapts its Human Resource and Corporate Safety programs and systems where trends may show challenges arising.

The CRD continues to experience increased pressures associated with economic conditions, a highly competitive labour market, and a steady number of retirements, trends that have continued into 2024. Local governments are becoming increasingly more complex as our role and responsibilities continue to evolve, and this continues to place more demand to secure more specialized labour. The CRD continues its significant efforts in engaging work strategies and organizational development initiatives, workforce planning, and impactful talent acquisition and outreach strategies, including work to modernize the work environment through our Alternative Work Options (AWO) program (earned time off and/or compressed work week alternatives), hybrid work from home, and workplace flexibility initiatives, all which were introduced and enhanced in mid-2023.

The AWO program builds upon our flexibility initiatives:

- providing employees with greater flexibility and work life balance, which in turn supports the retention of our employees and ensures the CRD is a competitive employer who takes into consideration employee circumstances including diversity, equity and inclusion, employee engagement, satisfaction, health and wellness;
- ensuring organizational and business needs are being met and are effective and efficient; and
- contributing to the CRD's climate action goals regarding sustainability including the reduction of CO2 emissions by decreasing work related travel.

Since implementation, 68% of eligible CRD employees have elected to participate in our workplace flexibility and AWO program. 67.5% of participants have been engaged in earned time off or compressed work week schedules; 24.7% in hybrid work from home arrangements; and 7.7% in other flexibility programs. A number of these AWO arrangements – approximately 20% - also involve variations in work schedules, including alternate start and end times or workdays, or other flexibility measures to balance work and personal circumstances.

Our AWO and workplace flexibility initiatives have had a positive impact in our employee engagement, retention, and recruitment initiatives. In 2023, the CRD experienced a 34% reduction in sick leave usage and a 37% reduction in employee turnover over the previous 2022 calendar year. We are seeing similar trends for 2024 and will keep monitoring further to evaluate the impact our program has on employee and workplace health. In addition, our hybrid work from home arrangements have had a direct and positive impact on our CRD Regional transportation goal of reducing congestion in the morning and afternoon peak periods by upwards of 9,300 trips since

program implementation, based on regional census journey calculations. We will continue to monitor our program on a regular basis to ensure our core targets are being met and maintained.

The CRD's proactive and positive focus on workplace health and safety remains a top of priority, and the CRD's comprehensive occupational health and safety (OHS) strategy, which is aligned with OHS best practice standards, meets or exceeds requirements of the WorkSafeBC approved municipal Certificate of Recognition (CoR) program. The CRD continues to experience a positive (merit) situation with WorkSafeBC which, when combined with our CoR program is resulting in a 43% better-than-industry Employer Rating Assessment and 43% premium reduction over industry base rates.

### **Corporate Strategies**

For the past several years, organizational development has been guided by the 2017 CRD Organizational Development Plan (ODP) which was prepared to ensure the organization as a whole was engaged, responsive, adaptive, and aligned with corporate priorities and our service delivery mandates. The ODP outlined a number of goals and actions based on input from a multitude of internal sources that were largely achieved over subsequent years.

Looking ahead, organizational development will be guided in a more focused but complementary way, through specific strategic plans prepared in each of the key organizational support divisions including, People, Safety and Culture; Corporate Communications and Engagement; Finance; and Technology and Digital Transformation. Each of the divisional strategic plans will set out a set of strategic priorities and specific initiatives and actions that will be implemented to support the priorities and anticipated needs of the division and the organization. The strategic priorities and initiatives and actions have been informed by the Corporate Plan and other corporate strategies and plans, as well as division specific situational analysis, service reviews, guiding principles, and trend scan. Although most of the initiatives and actions will be supported and delivered with existing divisional capacity, any new resources required to support implementation will be identified through the annual budget cycles. All of the plans align with and support the implementation of the Corporate Plan and will be reviewed annually and updated on a four-year cycle (2024-2027). Progress reporting will occur through the CAO Quarterly Reports to the CRD Board.

The first two divisional strategic plans have been completed:

A comprehensive People, Safety and Culture Strategic Plan has been developed and is attached as Appendix I. Aligning with the Corporate Plan and Board Strategic Priorities, significant efforts and actions will be placed on enhancing efforts around our people and culture. Included in the Plan are robust strategies and outcomes around: Equity, Diversity, Inclusion and Accessibility; Organizational Capacity; Talent Excellence; Employee Experience and Recognition; Talent Acquisition; and People, Safety and Culture Excellence. These activities ensure the organization is supported in this key service area, and the CRD remains competitive and is an employer of choice in the competitive market.

The Corporate Communications and Engagement Strategic Plan also aligns with the Corporate Plan and Board Strategic Priorities. The Corporate Communications Division supports the Board, Executive Leadership Team and the organization by providing strategic advice and support to ensure information is communicated internally and externally appropriately through various channels. This is accomplished through the development and application of guidelines, tools, and initiatives that foster engagement and provide the public and employees with access to accurate, timely and consistent information. The Corporate Communications and Engagement Strategic Plan is attached as Appendix J.



**CONCLUSION**

The CAO Quarterly Progress Report No. 1 - 2024 provides the Board with a quarterly update on Corporate Activities and Initiatives, progress made on the 2023-2026 Board and Corporate Priorities, Capital and Operating Budget Variances, and Human Resources and Corporate Safety statistics up to March 31, 2024.

**RECOMMENDATION**

There is no recommendation. This report is for information only.

|               |   |
|---------------|---|
| Submitted by: | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer |
|---------------|---|

**ATTACHMENT(S)**

- Appendix A: Photographs of Corporate Activities and Initiatives
- Appendix B: Board Priorities Dashboard Progress Q1, 2024
- Appendix C: Board Priorities Dashboard – Summary of Completed Actions
- Appendix D: Staff Report: Capital Regional District Advocacy Strategy
- Appendix E: Advocacy Dashboard Progress Q1, 2024
- Appendix F: Operating Variance Financial Report Q4, 2023
- Appendix G: Capital Variance Financial Report Q4, 2023
- Appendix H: Human Resources Trends and Corporate Safety
- Appendix I: People Safety and Culture Strategic Plan
- Appendix J: Corporate Communications and Engagement Strategic Plan

# Pacheedaht and CRD MOU Signing

CRD





# Lunar New Year

CRD



Artist Credit: Bonnie Lu

# CRD Provisional Budget Virtual Information Session

CRD



## 2024 CRD Provisional Budget Virtual Information Session

Capital Regional District  
Wednesday January 17, 2024

### 2024 Provisional Budget

### Executive Summary



#### Managing Capital Investments

capital investment is 4.2x depreciation while 7% of revenue is committed to long-term debt payments



#### Supporting Board & Corporate Priorities

advancing initiatives in alignment with community needs in the 2023-2026 corporate plan



#### Adapting to Regional Challenges

persistent economic challenges, constrained labour market, continued long-term growth in asset utilization



#### Striving for Financial Sustainability

continued revenue diversification, leveraging partnerships, developing financing strategies



# Federal Housing Announcement

CRD





# National Employee Appreciation Day

CRD





# Career Service Recognition

CRD





# World Water Day

CRD



# Government Finance Officer Awards

CRD



# Board Priorities Dashboard



## Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



Issue has arisen



Timing has changed

| Board Initiatives   | Status & Condition |             |           | Resolutions   | Comments  | Next Steps   |  |
|---|--------------------|-------------|-----------|---|---|--|--|
|   | Not Started        | In Progress | Completed |   |   | Action   | Timing   |
| <b>1a</b> Improve regional connectivity and safety across transportation modes                                      |                    |             |           | <ul style="list-style-type: none"> <li>Board, March 13, 2024</li> </ul> | <p>Traffic Safety Commission completed research and delivered a report on micromobility to Transportation Committee and CRD Board in Q1 2024.</p> <p>Advocacy to provincial government on Motor Vehicle Act amendments to allow mobility aids to operate in bike lanes.</p> | <ul style="list-style-type: none"> <li>Support advocacy requests for investments in multi-modal infrastructure and services</li> <li>Report on interim options and implications regarding the use of rigid bollards based on findings from the regional trestles renewal and trails widening and lighting project</li> </ul>   | <ul style="list-style-type: none"> <li>Ongoing</li> <li>Q1 2025</li> </ul>                                   |
| <b>1b</b> Support investments, expansion and equitable access to active and low carbon transportation               |                    |             |           |   | <p>Awaiting funding confirmation from the Province for the Juan de Fuca Active Transportation Network Plan.</p>   | <ul style="list-style-type: none"> <li>Mayne Island Regional Trail Phase 1 Development Project construction completed</li> <li>Initiate feasibility study for Salt Spring Island Regional Trail</li> <li>Develop Active Transportation Network Plan for Juan de Fuca Parks</li> <li>Initiate the regional trestles renewal and trails widening and lighting project</li> </ul> | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q2 2024</li> <li>Q3 2024</li> <li>Q3 2024</li> </ul> |
| <b>1c</b> Present options for changes in governance for transportation in the region, including the Electoral Areas |                    |             |           |   | <p>Initiated the feasibility study phase of the transportation governance initiative. Timing change due to delays in procurement of consultant services for the transportation service design and feasibility study.</p>  | <ul style="list-style-type: none"> <li>Present engagement plan for the service design and feasibility study phase of the transportation governance initiative</li> <li>Engage interest holders and present initial findings from the service design and feasibility study</li> </ul>   | <ul style="list-style-type: none"> <li>Q1-2024 Q2 2024</li> <li>Q2 2024</li> </ul>                           |



# Board Priorities Dashboard



## Housing

Residents have access to affordable housing that enhances livability.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



Issue has arisen



Timing has changed

| Board Initiatives  | Status & Condition |             |           | Resolutions   | Comments  | Next Steps   |   |
|--|--------------------|-------------|-----------|---|---|--|---|
|  | Not Started        | In Progress | Completed |   |   | Action   | Timing  |
| <p><b>2a</b> Increase supply of affordable, inclusive and adequate housing in the region</p> |                    |             |           | <ul style="list-style-type: none"> <li>Board, February 14, 2024</li> <li>Board, March 13, 2024</li> </ul> | <p>The <b>Campus View</b> redevelopment passed the District of Saanich’s public hearing, allowing the project to proceed to the next phase of planning. The <b>Village on the Green</b> redevelopment received a development permit, allowing the project to proceed to the next phase of planning. <b>Carey Lane</b> is undergoing a full building envelope remediation, as well as upgrades to the ventilation, heating and cooling systems. This work will continue into 2025. <b>Michigan Square</b>, 97 units split between two separate buildings, is set to reopen in June 2024.</p> <p>An opening announcement with the local, provincial and federal governments for Michigan Square is tentatively projected for May 2024.</p> <p>Capital Region Housing Corporation (CRHC) staff advanced the feasibility analysis and preliminary design work for the 2023 Community Housing Fund call for proposals.</p> <p><b>Media Release:</b> Province Partners with CRD and CRHC to Build 593 New Homes (March 21, 2024)</p> <p><b>Media Release:</b> Regional Alternative Approval Process launched to increase borrowing authority for housing (January 3, 2024)</p> <p><b>Media Release:</b> CRD adopts bylaw to increase borrowing authority for housing (February 15, 2024)</p> <p><b>Media Release:</b> Sixty-six affordable homes underway for Songhees Nation members (February 16, 2024)</p> <p><b>Media Release:</b> Capital Regional District Announces Acquisition to Support Future Affordable Housing (March 1, 2024)</p> | <ul style="list-style-type: none"> <li>Drilling for water at 161 Drake Road on Salt Spring Island and subsequent pump testing</li> <li>Conduct Salt Spring Island housing workshop</li> <li>Michigan Square project completion and official opening</li> </ul> | <ul style="list-style-type: none"> <li>Q2-2023 Q3 2024</li> <li>Q2 2024</li> <li>Q2 2024</li> </ul> |

# Board Priorities Dashboard



## Climate Action & Environment

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.



Making a difference...together

|                  |  |                       |  |                             |  |                  |  |                    |
|------------------|--|-----------------------|--|-----------------------------|--|------------------|--|--------------------|
| CONDITION LEGEND |  | Proceeding as planned |  | Potential or emerging issue |  | Issue has arisen |  | Timing has changed |
|                  |  |                       |  |                             |  |                  |  |                    |

| Board Initiatives   | Status & Condition |             |           | Resolutions | Comments  | Next Steps   |  |
|---|--------------------|-------------|-----------|-------------|---|--|--|
|   | Not Started        | In Progress | Completed |             |   | Action   | Timing   |
| <b>3a</b> Maximize solid waste diversion and resource recovery from waste materials                       |                    |             |           |             | Launched Phase 1 of the Hartland Landfill Waste Diversion Policies and Landfill Bans including ban on clean wood waste, changes to the tipping fee structure, introduction of the waste stream collector incentive program, increases in fine rates, reductions for early payment of fines and introduction of an education and warning ticket program. | <ul style="list-style-type: none"> <li>In April 2024 the CRD Board will consider Phase 3 of the Hartland Landfill Waste Diversion Policies, for implementation in 2026</li> <li>Launch Phase 2 of the Hartland Landfill Waste Diversion Policies and Landfill Bans including further landfill bans on treated wood waste, asphalt shingles and further changes to the tipping fee structure</li> </ul> | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q3 2024</li> </ul> |
| <b>3b</b> Explore options for a regional approach to biodiversity and the protection of ecological assets |                    |             |           |             | Maintain current service level through Climate Action Service Establishing Bylaw for 2024.  | <ul style="list-style-type: none"> <li>Refer new establishing service bylaw to local governments to create regional service for 2025</li> </ul>  | <ul style="list-style-type: none"> <li>Q4 2024</li> </ul>                  |

# Board Priorities Dashboard



## Climate Action & Environment

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



Issue has arisen



Timing has changed

| Board Initiatives  | Status & Condition |             |           | Resolutions | Comments  | Next Steps   |   |
|--|--------------------|-------------|-----------|-------------|---|--|---|
|  | Not Started        | In Progress | Completed |             |   | Action   | Timing  |
| <p><b>3c</b> Increase resilience, community and adaptation planning to address climate related risks and disasters</p> |                    |             |           |             | <p>Hosted two inter-municipal staff workshops to share information related to forthcoming renewed regional downscaled climate projections project.</p> <p>Developed Capital Region Extreme Heat Information Portal, and hosted local inter-municipal, inter-agency staff workshop to share information related to forthcoming report and tool.</p> <p>Staff secured funding and are offering several Emergency Operations Centre related training.</p> <p>Application submitted for a Union of BC Municipalities Community Emergency Preparedness Fund grant to conduct a consolidated risk assessment for the electoral areas.</p> | <ul style="list-style-type: none"> <li>Finalize new climate projections for the capital region and release to community partners</li> <li>CRD's Climate Action Inter-Municipal Working Group have prepared an Extreme Heat Final Report and Portal for presentation to the CRD Board</li> </ul>  | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q2 2024</li> </ul>  |
| <p><b>3d</b> Support energy efficient and low carbon buildings across the region</p>                                   |                    |             |           |             | <p>Ongoing promotions of Home Energy Navigator Program via in person event (e.g. Victoria Home Show) and online ads.</p> <p>Completed industry consultation on energy and carbon emissions (ECE) reporting for large buildings in the region, in conjunction with City of Victoria and the District of Saanich, and with participation from Town of Sidney, Township of Esquimalt, and City of Colwood.</p> <p>Promoted Building BenchmarkBC participation amongst Part 3 buildings owners/managers through the ECE consultations.</p> <p>Completed home retrofit financing study.</p>  | <ul style="list-style-type: none"> <li>Expand Home Energy Navigator program reach and participation</li> <li>Revamp the Home Energy Navigator Program marketing</li> <li>Renew Climate Action To Go Kits, including new thermal imaging cameras for borrowing through regional libraries</li> <li>Complete research to refine understanding of regional/local government opportunities related to ECE reporting/benchmarking program</li> <li>Complete local government level oil heating regulation study with the District of Saanich</li> </ul> | <ul style="list-style-type: none"> <li>Ongoing</li> <li>Ongoing</li> <li>Q2 2024</li> <li>Q3 2024</li> <li>Q4 2024</li> </ul> |



# Board Priorities Dashboard



## First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.



Making a difference...together

|                         |                       |                             |                  |                    |
|-------------------------|-----------------------|-----------------------------|------------------|--------------------|
| <b>CONDITION LEGEND</b> | Proceeding as planned | Potential or emerging issue | Issue has arisen | Timing has changed |
|-------------------------|-----------------------|-----------------------------|------------------|--------------------|

| Board Initiatives  | Status & Condition |             |           | Resolutions | Comments   | Next Steps  |   |
|--|--------------------|-------------|-----------|-------------|--|---|---|
|  | Not Started        | In Progress | Completed |             |  | Action  | Timing  |
| <p><b>4a</b> Develop mechanisms to hear more from First Nations’ governments as to how they would like the CRD to approach reconciliation</p>  |                    |             |           |             | <p>Through government-to-government and staff-level meetings, feedback and requests from Nations are documented and shared with involved Divisions to inform ongoing work.</p> <p>Held a site visit with T’Sou-ke Nation to discuss protected areas management and collaboration opportunities.</p> <p>Met with multiple First Nations regarding their priorities around water and wastewater servicing.</p> <p>Met with the W̱SÁNEC Leadership Council to continue negotiating a Solid Waste Partnership Agreement.</p> | <ul style="list-style-type: none"> <li>Continue to offer Indigenous Relations Coaching Program for Board Directors</li> <li>Continue to gather input from First Nations on inclusive regional governance and mechanisms to support the government-to-government relationship</li> </ul>   | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q3 2024</li> </ul>                  |
| <p><b>4b</b> Collaborate with First Nations to build and strengthen new processes for respectful, reciprocal government-to-government decision-making and service delivery that uplift Indigenous self-determination</p> |                    |             |           |             | <p>Government-to-government leadership-level meetings held with Songhees, Tsawout and Pacheedaht Nations.</p> <p>Discussions with Nations ongoing regarding interim management guidelines and future uses of the Royal Oak property.</p> <p>MOU negotiations in progress with Songhees Nation, Tsartlip and Tseycum First Nations via the W̱SÁNEC Leadership Council and Tsawout First Nation.</p> <p><b>Media Release:</b> CRD and the Pacheedaht First Nation sign Memorandum of Understanding (January 30, 2024)</p>  | <ul style="list-style-type: none"> <li>Negotiate MOU/protocol agreements with interested First Nations</li> <li>Continued participation in the joint planning process to develop a vision for the future of the island rail corridor</li> <li>Negotiate MOU/protocol agreements for Board approval with Songhees Nation, Tsawout and WLC</li> </ul> | <ul style="list-style-type: none"> <li>Ongoing</li> <li>Ongoing</li> <li>Q3 2024</li> </ul> |

# Board Priorities Dashboard



## First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



Issue has arisen



Timing has changed

| Board Initiatives  | Status & Condition |             |           | Resolutions | Comments  | Next Steps  |  |
|--|--------------------|-------------|-----------|-------------|---|---|--|
|  | Not Started        | In Progress | Completed |             |   | Action  | Timing   |
| <p><b>4c</b> Invite, respect and incorporate Indigenous leadership and traditional knowledge to enhance initiatives and strategies that support other priorities in the plan</p> |                    |             |           |             | <p>Met with WSÁNEC Leadership Council regarding the transportation governance initiative.</p> <p>Launched the healthy waters initiative a partnership between CRD, Raincoast, and the WSÁNEC Leadership Council.</p> <p>Ongoing engagement with First Nations regarding updates to the Regional Parks Land Acquisition Strategy.</p> <p>Ongoing engagement with First Nations regarding the conservation and protection of heritage sites. Working closely with involved First Nations through the planning and construction of water main upgrade projects throughout the CRD. Collaborating with First Nations on heritage conservation in park management planning. Working with involved First Nations to determine the planning and operational approach to ecological restoration work in Regional Parks.</p> <p>Partnering with T'Sou-ke Nation and the District of Sooke on the Sooke River Knotweed Control Project.</p> <p>Invited input from First Nations in the development of the HWMET'UTSUM Community Park Interim Management Approach on Salt Spring Island.</p> <p>Invited First Nations to participate in the Canada Goose Regional Working Group.</p> <p>Ongoing meetings with WSÁNEC Leadership Council to facilitate their input into the Mount Work Regional Park Management Plan.</p> | <ul style="list-style-type: none"> <li>› Continue to engage First Nations regarding updating the Land Acquisition Strategy</li> <li>› First Nations engagement on the Long-Term Biosolids Management Plan</li> <li>› Invite involvement from First Nations in the development of a Regional Parks Stewardship Plan</li> <li>› Collaborating with Pacheedaht First Nations on the Port Renfrew Official Community Plan</li> <li>› Issue RFP for an infrastructure feasibility study for Port Renfrew area, with input from Pacheedaht</li> <li>› Regional Parks developing a cultural use and safety policy</li> </ul> | <ul style="list-style-type: none"> <li>› Q1-Q3 2024</li> <li>› Q1-Q2 2024</li> <li>› Q1 2024</li> <li>› Q1 2025</li> <li>› Q2 2024</li> <li>› Q4 2024</li> </ul> |



# Board Priorities Dashboard



## First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



Issue has arisen



Timing has changed

| Board Initiatives   | Status & Condition |             |           | Resolutions | Comments  | Next Steps  |  |
|---|--------------------|-------------|-----------|-------------|---|---|--|
|   | Not Started        | In Progress | Completed |             |   | Action  | Timing   |
| <p><b>4d</b> Support shared prosperity by enhancing economic opportunities, in partnership with First Nations</p> |                    |             |           |             | <p>Met with Pauquachin First Nation and Esquimalt Nation to discuss water and wastewater service agreements.</p> <p>Met with Sc'ianew First Nation to discuss water service agreement.</p> <p>Regional Housing offered support to the Songhees Nation's affordable housing initiative, announced February 2024.</p> <p>Providing mapping support for Esquimalt Nation as requested.</p> <p>Sent a letter to Te'muxw Treaty Association confirming that the Regional Growth Strategy does not prevent water and wastewater servicing to treaty settlement lands.</p> | <ul style="list-style-type: none"> <li>▸ Establish water service agreements with Tsartlip, Tsawout, Tseycum and Pauquachin First Nations and negotiate water conveyance agreements with Central Saanich and North Saanich</li> <li>▸ Update water service agreements with Esquimalt Nation, Sc'ianew First Nation, T'Sou-ke Nation and Songhees Nation as clients of the Regional Water Service rather than the JDF Water Distribution Service</li> <li>▸ Finalize a Solid Waste Partnership Agreement with the WSÁNEC Leadership Council that may include procurement, employment and training opportunities as part of implementation of the Solid Waste Management Plan</li> <li>▸ Renew Operating Agreement with T'Sou-ke Nation for the seasonal operation of Spring Salmon Place Campground</li> <li>▸ Contracting with cultural representatives from Nations to be present during land altering works</li> </ul> | <ul style="list-style-type: none"> <li>▸ Q3 2024</li> <li>▸ Q3 2024</li> <li>▸ Q3 2024</li> <li>▸ Q4, 2024</li> <li>▸ Ongoing</li> </ul> |

# Board Priorities Dashboard



## Governance

Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



Issue has arisen



Timing has changed

| Board Initiatives   | Status & Condition |             |           | Resolutions   | Comments  | Next Steps   |   |
|---|--------------------|-------------|-----------|---|---|--|---|
|   | Not Started        | In Progress | Completed |   |   | Action   | Timing  |
| <b>5a</b> Influence regional issues and advocate in a consistent, focused way that aligns with the Board strategic priorities                             |                    |             |           |   | <b>Operationalized.</b> Advocacy Strategy has been revised and the Advocacy Dashboard will continue to be updated quarterly. A complete list of all advocacy correspondence is available at <a href="#">Board Advocacy</a>  |  |   |
| <b>5b</b> Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses |                    |             |           | <ul style="list-style-type: none"> <li>Board, March 13, 2024</li> </ul>                                   | <p>The Board approved the 2024 to 2028 Financial Plan on March 13, 2024.</p> <p><b>Media Release:</b> CRD and CRHD 2024 financial plans approved (March 14, 2024)</p> <p>The Human Resources and Corporate Safety Strategic Plan is in the final stages of design and being refined based on re-organizational planning. Completion is expected in Spring 2024.</p>   | <ul style="list-style-type: none"> <li>Board to receive Human Resources &amp; Corporate Safety Strategic Plan</li> <li>Annual Board Priorities check-in</li> </ul>   | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q2 2024</li> </ul>                  |
| <b>5c</b> Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies                             |                    |             |           | <ul style="list-style-type: none"> <li>Board, February 14, 2024</li> <li>Board, March 13, 2024</li> </ul> | <p>Board Code of Conduct Bylaw and Member Statement of Commitment approved at the March 2023 Board meeting.</p> <p>Delivered Equity Diversity and Inclusion (EDI) training seminar (Inclusion Literacy and Board Readiness) for CRD Board members January 31, 2024.</p> <p>Filled staffing vacancy for Manager of Equity, Diversity, Inclusion and Accessibility.</p> <p>Corporate Accessibility Plan reviewed by the <a href="#">Accessibility Advisory Committee</a> on March 19, 2024.</p> | <ul style="list-style-type: none"> <li>Hold follow-up training session in Spring 2024 for Directors to build upon the learning previous training</li> <li>Offer EDI training seminars to other decision-making bodies, Board alternates, and those who were not able to attend previous training</li> <li>Promote National AccessAbility Week</li> </ul> | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q4 2024</li> <li>Q2 2024</li> </ul> |

# Board Priorities Dashboard



## Governance

Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.



Making a difference...together

CONDITION LEGEND



Proceeding as planned



Potential or emerging issue



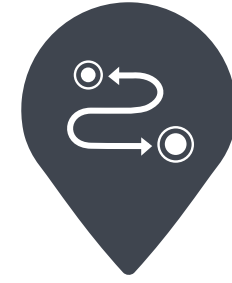
Issue has arisen



Timing has changed

| Board Initiatives  | Status & Condition |             |           | Resolutions  | Comments  | Next Steps   |  |
|--|--------------------|-------------|-----------|--|---|--|--|
|  | Not Started        | In Progress | Completed |  |   | Action   | Timing   |
| <p><b>5d</b> Foster greater civic participation among diverse community members</p>  |                    |             |           | <ul style="list-style-type: none"> <li>Board, February 14, 2024</li> </ul>   | <p>Website Redesign Project contract awarded January 2024. Creative and technical planning underway.</p> <p>Staff presented an overview of CRD Engagement practices and platforms to the February Governance Committee. The CRD has an existing engagement platform in place and is planning to review and update its public participation framework in 2024, ahead of running a competitive procurement process for online engagement solutions in 2025.</p> <p>The Strategic Communications and Engagement Plan is in the final stages of design and being refined based on re-organizational planning. Completion is expected in spring 2024.</p> <p><b>Media Release:</b> The CRD invites members of the public to learn more about the 2024 Provisional Financial Plan (January 3, 2024)</p> <p><b>Media Release:</b> Community consultation begins to determine best use for Biosolids (January 11, 2024)</p> <p><b>Media Release:</b> Have Your Say! CRD Regional Parks and Trails Resident Survey Seeks Input from Invited Residents (January 23, 2024)</p> | <ul style="list-style-type: none"> <li>Website user feedback sessions ahead of design concept approval</li> <li>Board to receive Strategic Communications and Engagement Plan</li> </ul> | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Q2 2024</li> </ul> |
| <p><b>5e</b> Explore changes to growth management approaches and identify implementation actions appropriate for local, regional and provincial implementation</p> |                    |             |           | <p>Staff brought forward a report on timing and implications of the work required to consider an update to the Regional Growth Strategy in 2026 in March 2024.</p> <p>Initiated Growth and Mobility Study (including project charter and scope of work for consultants).</p> | <ul style="list-style-type: none"> <li>Initiate work on policy white paper on proposed actions to tackle housing and development challenges</li> <li>Regional coordination on impacts of new housing legislation</li> </ul>   | <ul style="list-style-type: none"> <li>Q2 2024</li> <li>Ongoing</li> </ul>   |  |





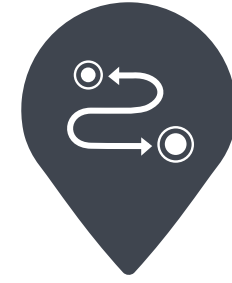
## Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.



Making a difference...together

| Board Initiatives  | Resolutions   | Summary of Completed Actions  |
|--|---|---|
| <p><b>1a</b> Improve regional connectivity and safety across transportation modes</p>                        | <ul style="list-style-type: none"> <li>• <i>Board, Feb. 8, 2023</i></li> <li>• <i>Board, August 9, 2023</i></li> <li>• <i>Board, September 13, 2023</i></li> <li>• <i>Board, December 13, 2023</i></li> </ul>   | <p>The Traffic Safety Commission has approved its 2023 priority action areas: distracted driving, speeding and impaired driving. These will be implemented through education and awareness campaigns. CRD Traffic Safety Commission provided their annual update to the CRD Transportation Committee on September 12, 2023. The Traffic Safety Commission has completed the research for the report on eMobility in the region. <b>Media Release:</b> CRD Traffic Safety Commission Awards Seventh Annual Cst. Sarah Beckett Memorial Scholarship (October 11, 2023).</p> <p>Engineering contractor retained to prepare design proposal for potential trail on Pender Island from Magic Lake Fire Hall to the island’s school. Completed the 2022 Origin Destination Household Travel Survey and presented results to the CRD Transportation Committee. <b>Media Release:</b> Household Travel Survey Shows Increase In Walking And Cycling (September 13, 2023). <b>Media Release:</b> Salt Spring Island Active Transportation Network Plan focuses on five big moves (August 8, 2023).</p>   |
| <p><b>1b</b> Support investments, expansion and equitable access to active and low carbon transportation</p> | <ul style="list-style-type: none"> <li>• <i>Transportation Committee, Mar. 15, 2023</i></li> <li>• <i>Regional Parks Committee, May 24, 2023</i></li> <li>• <i>Board, June 14, 2023</i></li> <li>• <i>Board, September 13, 2023</i></li> <li>• <i>Regional Parks Committee, September 27, 2023</i></li> <li>• <i>Board, November 8, 2023</i></li> </ul> | <p>Regional All Ages and Abilities cycling facility criteria to support consistent planning and reporting on implementation of the regional cycling network was received by the Transportation Committee on March 15, 2023. Increased Saturday transit service on Fulford Harbour to Ganges, including southbound service along Cusheon Lake Road for select trips effective May 6, 2023. Pender Island Parks and Recreation Commission Schooner Way Active Transportation project at 30% engineering design completion. Kimta E&amp;N Connector construction completed.</p> <p>CRD Regional Trails Closure Policy information report provided to Transportation Committee and CRD Board. Presented Regional Trails Widening and Lighting Project funding options and directed to accelerate by inclusion of the project in the 2024-2028 Financial Plan and that staff continue to develop partnerships, pursue grant opportunities and report back with options to generate additional funds through non-tax revenue. Selkirk Trestle upgrades and Galloping Goose Regional Trail Widening &amp; Lighting Project design and construction, loan authorization in place Q4 2023.</p> <p>Juan de Fuca Parks submitted a grant application in to develop an Active Transportation Network Plan to guide future active transportation infrastructure investments.</p> <p>The Active Transportation Infrastructure Stream – BC Active Transportation Infrastructure Grants Program approved \$500,000 for the Mayne Island Regional Trail Phase 1 Development Project. Construction continues in Q3 2023 on Project Area 1 of the Mayne Island Regional Trail project. The focus over the next few months will be completing trail support structures, culvert extensions, and placement of base and final surface materials. Negotiations to continue into the new year for the remaining Mayne Island Regional Trail statutory right-of-way.</p> |



## Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.



| Board Initiatives  | Resolutions   | Summary of Completed Actions   |
|--|---|--|
| <p><b>1c</b> Present options for changes in governance for transportation in the region, including the Electoral Areas</p> | <ul style="list-style-type: none"> <li>• <i>Transportation Committee, Mar. 15, 2023</i></li> <li>• <i>Board, April 12, 2023</i></li> <li>• <i>Transportation Committee, May 17, 2023</i></li> <li>• <i>Board, June 14, 2023</i></li> <li>• <i>Board, November 8, 2023</i></li> <li>• <i>Board, December 13, 2023</i></li> </ul> | <p>Initiated the planning required to scope regional transportation governance options with a background report to the Transportation Committee on March 15, 2023. <i>Media Release:</i> CRD to gather input on regional transportation governance (June 14, 2023).</p> <p>Initiated an engagement process with municipal councils, electoral areas and agency partners on regional transportation governance. The transportation workbook was distributed to all stakeholders earlier in the summer. The completed workbooks and feedback have been requested by September 29, 2023.</p> <p>13 municipal councils, three electoral area and two partner agencies provided input to a survey on transportation governance in the region. Two First Nations indicated interest in participating in the initiative. The CRD Board directed staff to initiate concept development and analysis for a service feasibility study and develop an engagement plan. The CRD Board also endorsed three guiding principles on transportation governance.</p> |





# Housing

Residents have access to affordable housing that enhances livability.



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| Board Initiatives  | Resolutions  | Summary of Completed Actions  |
|--|--|---|
| <p><b>2a</b> Increase supply of affordable, inclusive and adequate housing in the region</p> | <ul style="list-style-type: none"> <li>• <i>Hospitals and Housing Committee, May 3, 2023</i></li> <li>• <i>Board, May 10, 2023</i></li> <li>• <i>Board, September 13, 2023</i></li> <li>• <i>Board, October 11, 2023</i></li> <li>• <i>Board, December 13, 2023</i></li> </ul> | <p>Opened 58 units of affordable rental housing at <b>2782 Spencer Road</b> in Langford in November 2022 , in partnership with the Capital Region Housing District (CRHC) through the Community Housing Fund. Opened 72 units of affordable rental housing at <b>210 Gorge Road</b> in Victoria in February 2023, in partnership with the Cool Aid Society through the Regional Housing First Program (RHFP). <b>Media Release:</b> More than 130 affordable rental homes open in Langford (Feb 17, 2023). Opened 52 units of supportive housing at <b>2933 and 2949 Albina Street</b> in Saanich in February 2023, in partnership with BC Housing and Our Place Society through Rapid Housing Initiative (RHI) Round 1. <b>Media Release:</b> Fifty-two new homes with 24/7 services open in Saanich (Feb 10, 2023). Opened 75 units of affordable rental housing at <b>2170 Charters Road</b> in Sooke in partnership with the M’akola Housing Society through the RHFP. Project completed December 2022. Tenant move-ins began February 2023. Opened 51 units of affordable housing at <b>Prosser Place</b> (7612 East Saanich Road) in Central Saanich, in partnership with the Capital Region Housing Corporation through the RHFP. Opened 39 units of supportive housing at 1909 Prosser Road in Central Saanich, in partnership with BC Housing and Pacifica Housing through the RHI Round 2. Opened 45 units of supportive housing at <b>865 Catherine Street (House of Courage)</b> in Victoria in partnership with BC Housing and the Aboriginal Coalition to End Homelessness through the RHI Round 2. <b>Media Release:</b> B.C., Canada opening supportive housing in capital region (Mar. 31, 2023). Development Permit Application to the City of Victoria submitted through Rapid Deployment of Affordable Housing process for <b>Village on the Green</b> redevelopment, in partnership with the CRHC though the Regional Housing First Program (RHFP). After completing the District of Saanich’s Advisory Design Panel review, the <b>Campus View</b> redevelopment is proceeding with a public hearing. <b>Carey Lane</b>, an existing 22-unit CRHC townhouse complex, will undergo a full building envelope remediation as well as upgrades to the ventilation, heating, and cooling systems. The project will provide 170 units of housing for Indigenous peoples, people with low-to-moderate incomes and people with disabilities.</p> <p>Work ongoing to implement the Rural Housing Strategy.</p> <p>On August 10, 2023, a bylaw amendment to increase the annual requisition for the Land Assembly, Housing and Land Banking Service to \$85 million obtained statutory approval and the CRD may now proceed with obtaining two-thirds consent on behalf of the participating areas and consent from the Electoral Area Directors without further delay. Consent for the accompanying loan authorization bylaw for long-term borrowing will be obtained by Alternative Approval Process for the entire service area. <b>Media Release:</b> CRD to Increase Borrowing Authority for Housing (June 2, 2023). Elector approval for amendment to the Land Assembly, Housing and Land Banking Service bylaw approved at the December Board meeting.</p> <p>CRHC Chair and CAO met with Minister Kahlon, BC Housing Minister, to advise the Ministry of Housing of the CRD Board’s proposal to increase the borrowing authority (as per above) and request that the province consider providing up to \$170 million in funding to facilitate the development of approximately 2,000 affordable housing units across the region. <b>Media Release:</b> 2023 Greater Victoria Point-in-Time Count results announced (August 3, 2023).</p> <p>Throughout 2023, CRHC staff advanced the feasibility analysis and preliminary design work for potential development projects in anticipation of the 2023 Community Housing Fund call for proposals.</p> |



# Climate Action & Environment

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.



Making a difference...together

| Board Initiatives  | Resolutions  | Summary of Completed Actions   |
|--|--|--|
| <p><b>3a</b> Maximize solid waste diversion and resource recovery from waste materials</p>                             | <ul style="list-style-type: none"> <li>• <i>Environmental Services Committee, Feb. 15, 2023</i></li> <li>• <i>Board, Mar. 15, 2023</i></li> <li>• <i>Environmental Services Committee, Apr. 19, 2023</i></li> <li>• <i>Board, May 10, 2023</i></li> <li>• <i>Board, August 9, 2023</i></li> <li>• <i>Board, December 13, 2023</i></li> </ul> | <p>The CRD Board approved the new Solid Waste Management Plan to reduce how much material is sent to Hartland Landfill and guide how the region’s solid waste is managed in a safe, secure and sustainable way now and in the future. The final plan includes strategies and actions for reducing and managing all streams of solid waste—including recyclables, compostable material and garbage—with an eye to extending the life of Hartland Landfill to 2100 and beyond. <b>Media Release:</b> CRD releases report highlighting what residents and businesses are putting in the garbage (Mar 8, 2023).</p> <p>Presented proposed amendments to the Hartland Landfill Tipping Fee Bylaw, a revised tipping fee schedule and new material bans to better encourage diversion. <b>Media Release:</b> Policy changes and material stream diversion initiatives at Hartland Landfill (May 12, 2023). Remain on track to procure processing for source separated materials and submit final amended Hartland Landfill Tipping Fee Bylaw for Board consideration. Submitted final amended Hartland Landfill Tipping Fee Bylaw for final Board consideration. Initiated procurement for processing of source separated materials to be banned from the landfill in 2024, including wood waste, asphalt shingles, carpet and underlay. <b>Media Release:</b> Changes to Residential Curbside Blue Box Recycling Service Effective January 2, 2024 (October 11, 2023) <b>Media Release:</b> 2024 policy changes at Hartland Landfill (December 13, 2023).</p> |
| <p><b>3b</b> Explore options for a regional approach to biodiversity and the protection of ecological assets</p>       | <ul style="list-style-type: none"> <li>• <i>Board, October 11, 2023</i></li> <li>• <i>Board, December 13, 2023</i></li> </ul>  | <p>CRD Staff continue with internal discussions to understand the scope and breadth of a regional approach to environmental stewardship with a focus on biodiversity and the protection of ecological assets. CRD Staff are submitting a new establishing bylaw based on internal discussions related to a regional approach to environmental stewardship, with a focus on biodiversity and the protection of ecological assets. Maintain current service level through Climate Action Service Establishing Bylaw for 2024. <b>Media Release:</b> CRD Releases Greenhouse Gas Inventory (October 12, 2023).</p>  |
| <p><b>3c</b> Increase resilience, community and adaptation planning to address climate related risks and disasters</p> | <ul style="list-style-type: none"> <li>• <i>Board, October 11, 2023</i></li> </ul>   | <p>Launched capital region heat vulnerability mapping project with inter-municipal partners. Received Pacific Institute for Climate Solutions grant to hire a summer intern to support climate adaptation research. Hosted two inter-municipal workshops to collect information and build staff capacity related to climate projections project.</p> <p>Completed Electoral Area Community Wildfire Resiliency Plans. Adopted new open burning bylaw to prevent human-caused wildfire. Community Wildfire Resiliency webinar series conducted for Electoral Areas. Community Evacuation Guides completed. <b>Media Release:</b> Electoral Area Emergency Programs Share Household Evacuation Guides to Help Residents Prepare (May 9, 2023).</p> <p>Electoral Area community wildfire exposure maps completed and will be shared with residents. Project is a collaboration between Islands Trust and Protective Services to prioritize wildfire mitigation efforts. Staff continue to socialize the community wildfire exposure and evacuation maps and other preparedness resources to enhance personal and community resiliency planning in the Electoral Areas. With the recent passing of the Emergency and Disaster Management Act (EDMA), CRD will be reviewing the legislation and planning program adjustments necessary to align with the new legislation. <b>Media Release:</b> CRD Electoral Area Wildfire Exposure Maps Show Risk (October 3, 2023).</p>  |



# Climate Action & Environment

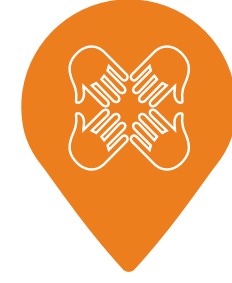
Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.



Making a difference...together

| Board Initiatives  | Resolutions   | Summary of Completed Actions  |
|--|---|---|
| <p><b>3d</b> Support energy efficient and low carbon buildings across the region</p> | <ul style="list-style-type: none"> <li>• <i>Environmental Services Committee, Sept. 27, 2023</i></li> <li>• <i>Board, October 11, 2023</i></li> </ul> | <p>Implemented and promoted Home Energy Navigator program to support retrofits in single family homes. 253 participants between November 8 2022 and February 28, 2023. Support municipalities in advancing new Energy Step Code and new Zero Carbon Step Code policy changes. Participated in Provincial Local Government Retrofit Peer network, Step Code Peer network, and the new Embodied Carbon Peer network and shared learnings with CRD Climate Action Inter-Municipal Working Group. Salt Spring Island’s rainwater harvesting rebate program was renewed for one year. Implemented and expanded existing rain barrel program for the Southern Gulf Islands. Corporate Green Building Policy and Carbon Price Policy adopted and implementation underway.</p> <p>Released 2022 Regional and Local Government Greenhouse Gas Inventory report. Developed and launched Neighbourhood Navigator pilot targeting fossil fuel heated neighbourhoods. Continued to support staff in several communities to consider Zero Carbon Step Code policy approaches.</p> <p>Supported implementation of public Climate Friendly Homes tour.</p> <p>Initiated industry consultation on energy and emission reporting for large buildings in the region, in conjunction with City of Victoria and the District of Saanich.</p> |





## First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.



| Board Initiatives  | Resolutions   | Summary of Completed Actions   |
|--|---|--|
| <p><b>4a</b> Develop mechanisms to hear more from First Nations’ governments as to how they would like the CRD to approach reconciliation</p>  | <ul style="list-style-type: none"> <li>• <b>Board, October 11, 2023</b></li> <li>• <b>Board, December 13, 2023</b></li> </ul> | <p>The Government-to-Government Relationship Building Initiative will, amongst other goals, invite First Nations to share their priority topics for a CRD Reconciliation Action Plan, and will provide an opportunity for Board Directors to hear directly from local Nations. Cultural perspectives training offered to CRD Board Directors and Alternate Directors. Hosted a gathering for CRD staff to learn from WSÁNEC cultural workers regarding archaeology and heritage conservation. Hosted Forum &amp; produced Summary Report that includes feedback from Nations regarding the structure of the event as well as priority topics for collaboration.</p> <p>Co-hosted with WSÁNEC Leadership Council a relationship building event for Southern Gulf Islands and Salt Spring Island Directors and Commissioners.</p> <p>Launched Board coaching program.</p>  |
| <p><b>4b</b> Collaborate with First Nations to build and strengthen new processes for respectful, reciprocal government-to-government decision-making and service delivery that uplift Indigenous self-determination</p> | <ul style="list-style-type: none"> <li>• <b>Board, December 13, 2023</b></li> </ul>   | <p>The upcoming government-to-government Relationship Building Initiative is an opportunity for the CRD and First Nations to strengthen our relationship and co-create mechanisms to support respectful, reciprocal, ongoing engagement at both the leadership and operational levels. Invites from Board Chair sent to First Nations to participate. New Regional Parks land acquisition notification process launched.</p> <p>Juan de Fuca Community Parks co-hosted an open-house with Pacheedaht First Nation to gather information and identify concerns related to the replacement of playground equipment in Port Renfrew. On September 13, 2023, CRD Board adopted policy direction to support land reversion to First Nations within the island rail corridor, in accordance with a process that is informed by a reconciliation-based approach. The CRD Board Chair wrote to the Island Corridor Foundation in September to inform its Board of this direction. Staff have participated in two inter-governmental island rail corridor planning sessions, facilitated by the province. Government-to-government leadership-level meetings held with T’Sou-ke, Songhees, Pacheedaht, and Pauquachin First Nations.</p> <p>Government-to-government relationship building initiative letters of engagement signed with Sc’ianew First Nation and the WSÁNEC Leadership Council. Implemented new staff-level quarterly meeting series with Pacheedaht First Nation.</p> <p>Implemented new Regional Parks land acquisition notification process and held meetings with First Nations prior to acquiring the Royal Oak Golf Course.</p> <p>Established a technical team with the T’Sou-ke Nation to discuss protected areas management and operations within T’Sou-ke’s traditional territories.</p> |



# First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.



Making a difference...together

| Board Initiatives  | Resolutions  | Summary of Completed Actions   |
|--|--|--|
| <p><b>4c</b> Invite, respect and incorporate Indigenous leadership and traditional knowledge to enhance initiatives and strategies that support other priorities in the plan</p> | <ul style="list-style-type: none"> <li>• <b>Regional Parks Committee, May 24, 2023</b></li> <li>• <b>Board, June 14, 2023</b></li> <li>• <b>Regional Parks Committee, June 28, 2023</b></li> <li>• <b>Board, July 12, 2023</b></li> <li>• <b>Board, December 13, 2023</b></li> </ul> | <p>Regional Parks engaging with First Nations for input into the Regional Parks Strategic Plan and the Regional Parks Land Acquisition Strategy, as well as ongoing collaboration on management plans. Feedback presented Regional Parks Committee in June for approval recommendation at the July Board meeting. Ongoing collaboration with First Nations on the conservation and protection of heritage sites, across all service delivery. Ongoing meetings with First Nations regarding Regional Parks Land Acquisition Strategy, land acquisitions, and management plans. Developed and shared with staff a Working with Indigenous Elders guidance document, to support respectful relationships where elders are interested to share their knowledge to inform CRD initiatives. First Nations Feedback on the Interim Regional Parks and Trails Strategic Plan 2022-2032 brought to Regional Parks Committee in June 2023 and approved at the July 2023 Board meeting. Partnered with Eddy Charlie and Kristin Spray of Orange Shirt Day Victoria to fly the Xe Xe Smun' Eem flag outside the CRD Fisgard Street office. Panorama Recreation is partnered with the Victoria Native Friendship Centre, The Art of Reconciliation and Indigenous artist Dahlila Charlie to host a community mosaic project inspired by Orange Shirt Day and National Day of Truth and Reconciliation.</p> <p>Invited First Nation participation on the Technical and Community Advisory Committee for Core Area Liquid Waste Management Planning. Invited First Nation participation on a Technical Working Group to recommend updates to the Saanich Peninsula Liquid Waste Management Plan. Invited input from First Nations regarding the transportation governance initiative. Ongoing engagement with First Nations regarding the conservation and protection of heritage sites. Environmental Protection and Integrated Water Services staff provided keynote presentation to Tsartlip community event about water and wastewater, as invited. Collaborating with T'Sou-ke and Sc'ianew regarding heritage conservation, ecological restoration and management planning for East Sooke Regional Park. Collaborating with the WSÁNEC Leadership Council on management planning for Mount Work Regional Park. Collaborated with Tsawout First Nation on mosquito management at Island View Beach Regional Park. Partnering with T'Sou-ke and the District of Sooke on the Sooke River Knotweed Control Project.</p> |
| <p><b>4d</b> Support shared prosperity by enhancing economic opportunities, in partnership with First Nations</p>  | <ul style="list-style-type: none"> <li>• <b>First Nations Relations Committee, Apr. 26, 2023</b></li> <li>• <b>Board, May 10, 2023</b></li> </ul>  | <p>Partnered with Greater Victoria Harbour Authority, City of Victoria, and the South Island Prosperity Partnership to develop an Indigenous Business Directory for the south island to support enhanced procurement from Indigenous businesses. <b>Media Release:</b> New Business Directory Supports Indigenous Entrepreneurs (June 7, 2023). Released CRD Indigenous Employment Project Reports: Summary Report, Full Findings Report, and Wise Practices Report for Indigenous Employment and Culturally Safe and Supportive Workplaces. Proposed a new HR position for 2024 service planning, to lead the development of an Indigenous Employment Strategy. Funded solid waste bin removal to support a community clean-up for the Pacheedaht First Nation (Q1 - Q2 2023). Provided draft updated water service agreements to T'Sou-ke Nation, Esquimalt Nation, Sc'ianew First Nation and Pauquachin First Nation. Met with Sc'ianew First Nation and Esquimalt Nation to discuss.</p> <p>Provided a draft updated wastewater service agreement to Pauquachin and Tseycum First Nations. Meeting scheduled and confirmed with Esquimalt and Songhees to discuss wastewater projects and capacity in December 2023. Met with a member of Tsartlip First Nation to discuss opportunities for the Water Supply Area to provide wood for carving. Spring Salmon Place Campground Operating Agreement between CRD and T'Sou-ke Nation. Ongoing meetings with Pacheedaht to discuss solid waste management partnership opportunities. Provide firewood to First Nations as available.</p>  |





## Governance

Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.



Making a difference...together

| Board Initiatives  | Resolutions  | Summary of Completed Actions   |
|--|--|--|
| <p><b>5a</b> Influence regional issues and advocate in a consistent, focused way that aligns with the Board strategic priorities</p>                               | <ul style="list-style-type: none"> <li>• <i>Board, April 12, 2023</i></li> <li>• <i>Board, Aug. 9, 2023</i></li> </ul>   | <p><b>Operationalized.</b> Corporate Advocacy Dashboard updated and included in CAO quarterly report. A complete list of all advocacy correspondence is available on the <a href="#">Board Advocacy webpage</a>. The CRD Board approved an updated <a href="#">CRD Advocacy Strategy</a> on August 9, 2023.</p> <p>Administrative Policy for Intergovernmental Relations information report provided to Board.</p>   |
| <p><b>5b</b> Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses</p>   | <ul style="list-style-type: none"> <li>• <i>Board, May 10, 2023</i></li> <li>• <i>Board, October 25, 2023</i></li> </ul> | <p>The 2023-2026 CRD Corporate Plan has been developed in alignment with this priority. Additional information has been included in the plan to support the Board’s understanding of how the three lenses impact future initiatives and activities. All staff report templates updated to include decision-making considerations for First Nations reconciliation, equity, diversity and inclusion, and climate action lenses. 2024 Service and Financial Planning Guidelines approved by Board. Committees and commissions will consider service plans (Community Need Summaries) for 2024 between September and October 2023. The CRD Board approved the 2024 service plans (Community Need Summaries) and provisional Financial Plans on October 25, 2024 following their deliberation. These documents form the foundation of the CRD budget. <b>Media Release:</b> CRD and CRHD look for public feedback on the 2024 provisional financial plans (October 30, 2023)</p> |
| <p><b>5c</b> Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies</p>                               | <ul style="list-style-type: none"> <li>• <i>Board, December 13, 2023</i></li> </ul>                                      | <p>The CRD has established a statement of Commitment to Equity, Diversity and Inclusion (EDI) to guide internal decisions and policies. Staff training and awareness courses ongoing through 2023. Staff have secured a training specialist for the Equity, Diversity and Inclusion initiative. Staff training for applying the EDI lens for staff reports will be prioritized. <b>Accessibility Advisory Committee</b> established and Terms of Reference approved. Staff have defined the scope of deliverables and learning outcomes for the EDI training seminar for CRD Board members. Consultants have been engaged to secure dates for the Equity, Diversity and Inclusion (EDI) training which will now be offered slightly earlier than anticipated. The Accessibility Advisory Committee’s inaugural meeting was held in October and orientation is underway.</p>  |
| <p><b>5d</b> Foster greater civic participation among diverse community members</p>  | <ul style="list-style-type: none"> <li>• <i>Board, December 13, 2023</i></li> </ul>                                      | <p>The 2023-2026 CRD Corporate Plan includes initiatives to review and enhance engagement practices, tools and frameworks in alignment with this priority. The CRD engagement platform <b>Get Involved</b> hosts initiatives and campaigns that have public participation components. Presentation at the December 2023 Governance committee on provincial engagement tool.</p> <p>Project charter for website redesign finalized. Procurement process and internal analysis underway for website redesign project. Scope refinement and contract negotiations underway for work to start early 2024 on the website redesign project.</p>  |
| <p><b>5e</b> Explore changes to growth management approaches and identify implementation actions appropriate for local, regional and provincial implementation</p> | <ul style="list-style-type: none"> <li>• <i>Planning and Protective Services Committee, June 21, 2023</i></li> </ul>     | <p>Hosted the Development and Planning Advisory Committee on January 16 and March 13, 2023. Initiated research and analysis to support CRD Regional Housing and local governments to take action on housing and development challenges. The Planning and Protective Services Committee approved a grant application to the Union of BC Municipalities (UBCM) Complete Communities Fund for a regional growth and mobility study. Recipient of a UBCM Complete Communities grant to undertake a regional growth and mobility study.</p> <p>The timing for a policy white paper has shifted with newly announced provincial legislation on housing, land use and transit-oriented development. Staff will prepare a Growth and Mobility study to document the cumulative housing, transportation and infrastructure impacts of growth to support informed land-use decision making.</p>  |

## August 2023

### Advocacy Strategy for the Capital Regional District

Responding to community needs, the Capital Regional District (CRD) Board of Directors identify priorities and set the strategic course for the CRD over a four-year period, including an annual check-in and review of Board Priorities. For the 2023-2026 mandate, the CRD Board agreed to focus on five strategic priorities. As regional leaders, members of the CRD Board have and continue to be active in their advocacy on several policy initiatives that flow from these priorities.

To be effective in gaining the support of senior orders of government, local government, and partners, the Priorities agreed to by the Board will remain the basis of the advocacy strategy, unless updated by the Board annually, or supplemented by resolutions of the Board to advocate on specific initiatives. A successful advocacy strategy should be targeted, focused, and requires message discipline and consistency. Those we are advocating to need to understand what our priorities are and that we are committed to advancing them. The Board Priorities are organized under five themes with defined initiatives and desired outcomes. Role clarity, clear communication and reporting is essential for both elected officials and staff to enhance effectiveness and portray the strength of common cause.

#### Board Priorities (2023 – 2026 Term) and associated outcome statements

##### Transportation

Residents have access to convenient, green, and affordable multi-modal transportation systems that enhance livability.

##### Housing

Residents have access to affordable housing that enhances livability.

##### Climate Action & Environment

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental, and economic impacts.

##### First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.

## **Governance**

Effective advocacy coordinated and collaborative governance, and leadership in organizational performance and service delivery.

A key initiative within the Governance priority is to “Influence regional issues and advocate in a consistent, focused way that aligns with the Board strategic priorities”.

Within the legislative framework which the Board and administration of the CRD, Capital Regional Hospital District (CRHD) and Capital Region Housing Corporation (CRHC) operate, the Board, its members and staff must work collaboratively to address multi-jurisdictional issues that impact the wellbeing of the region’s residents. Board governance includes region wide general government and legislated authority as well as mandated and agreed on participant based sub-regional and local service delivery responsibilities that require infrastructure, regulatory, legislative, financial, and operational support, to evolve and remain efficient and effective.

Residents and rate payers expect progressive action by the CRD to solve problems and advance regional, sub-regional, and local priorities within its mandate in partnership and collaboration with other authorities. As orders of government, the CRD and CRHD are delegated powers to operate by the Province of British Columbia and as corporate entities and publicly accountable authorities, can enter into agreements, partnerships with other public authorities, other corporate entities, and individuals. The CRHC is a wholly owned non-profit corporation of the CRD. Each entity may delegate or direct certain responsibilities including advocacy, however decisions of record, including the priorities for advocacy are established by resolution of each individual Board.

## **Advocacy Strategies**

For issues that require regional action outside the CRD’s mandate, the Board can leverage the collective voice of its members, partners, and staff to contribute its experience and resources to advance solutions and achieve greater outcomes. As a member of the Federation of Canadian Municipalities, Union of British Columbia Municipalities and Association of Vancouver Island Coastal Communities, and with member, director, or staff representation in a variety of other organizations, the CRD has an opportunity advance our priorities and initiatives or seek the support of these bodies as part of its advocacy strategy. Through its governance and service delivery mandate, the CRD also has the opportunity to directly advocate to the Provincial and Federal Government, government Ministries, appointed bodies and agencies and to partner with other entities. There may also be an opportunity this term to work more closely with First Nations on issues as outlined in the Board priority.

## **Board Advocacy**

Agreed on Board Priorities are the basis of the Board advocacy and the process for adding to those priorities is by Board resolutions with follow up actions typically directed through the Board Chair or the Executive Leadership Team. The Board Chair may ask for the support of other Directors to assist with efforts based on relationships, expertise, and experience or participant jurisdiction and geography. While the Board collectively has responsibility for the interests of the electoral areas, it has included or may delegate specific advocacy to the electoral area Directors for those areas. The Board may decide this term to pursue a focused more assertive strategy on a particular matter of importance at selected times during this term.

## **Inter-Regional Municipal and Electoral Area Advocacy**

Board Priorities are only as strong as the support for them in our communities and working with the municipalities and electoral areas to ensure they support Board initiatives is key. The Board Chair, working directly with Board members, and the CAO working directly with Municipal CAOs should engage with elected officials and senior CRD, municipal and electoral area staff to ensure that there is a clear understanding of Board priorities, while identifying and responding to any divergent priorities to ensure alignment within any advocacy initiatives. The Advocacy Strategy needs to align with the Board approved Intergovernmental Relations Policy.

## **Corporate Advocacy**

The CAO will lead corporate advocacy based on Board direction and the Corporate Plan. The CAO will lead the staff efforts on how best to drive initiatives forward with the right agreements and protocols with other organizations and has delegated authority from the Board to enter into agreements including memorandums of understandings with other agencies. The CAO will work closely with the Chair and play a major role in supporting the Chair and Board in advocacy efforts and will update the Board quarterly.

An advocacy strategy must be flexible, nimble and pivot on emerging issues or opportunities and the CAO will respond to and assign specific priorities and strategies for action. The Board Priorities Quarterly Dashboard progress report tracks resolutions of the Board, current initiatives, and planned actions related to advocacy as well as other priorities.

Advocacy can include formal letters, requests for meetings, presentations, partnering with agencies, campaigns, advisories, and announcements. Strong relationships with media who cover the CRD are essential to an effective advocacy strategy and engagement and outreach to editorial boards and media briefings, releases, and advisories as well as the CRD website and social media posts are effective tools.

## **Service Mandate and Operational Advocacy**

Under the direction of their General Manger, CRD staff participate in many conversations with regulators and policy makers on efficient and effective service delivery approaches, and with organizations that engage with senior orders of government on policy and implementation. The Executive Leadership Team will coordinate communications with senior orders of government on policy and implementation to ensure alignment with Board direction, service mandate, and consistency of messaging in any advocacy.

Over the past few years, local government associations and related organizations have increased their role in advocacy for the municipal sector. The CRD needs to stay active in these organizations and drive our issues into and through their process. At times, senior orders of government will only consider policy changes that have been approved by these voices for our sector.

## **Potential Advocates**

The following parties have been recognized as potential advocates and have been categorized based on each stakeholders' potential ability to influence the CRD's work (positively or negatively) or according to each stakeholder or groups interest in CRD and whether they are internal or external to the organization.

A Primary Level stakeholder or group interest has or may be identified as a result of a delegated authority, partnership agreement, contract or operating agreement, funding agreement, grant, or other formal relationship or understanding with the CRD.

A Secondary Level stakeholder or group interest has or may be identified as a result of receiving a service or benefit, in a contract, operating agreement, funding agreement or through a secondary or related affiliation with a primary group or stakeholder or having a mandate aligned with the CRD.

Internal stakeholders or groups include individuals or groups that have a duty or direct affiliation with the CRD or whose organizations participate directly or have a formal relationship with the CRD.

External stakeholders of groups include individuals or groups whose decision-making authority either directly impacts the CRD at a Primary Level or whose decision-making authority influences the CRD at a Secondary Level.

This categorization provides a focus for advocacy and communications activity by identify primary and secondary advocacy relationships and the preferred approach for advocacy.



## Advocacy Internal/External Stakeholders

| Advocacy                        | Internal  | External  |
|---------------------------------|---|---|
| <p><b>Primary Level</b></p>     | <p>Board Members and, Alternates</p> <p>Member municipal councils</p> <p>Delegated CRD Commission Members including First Nations Members</p> <p>Local Area Elected Officials</p> <p>Local Area CAOs</p> <p>Local Area Senior Staff</p> | <ul style="list-style-type: none"> <li>• Premier’s office</li> <li>• Province: Ministers, Ministers’ offices, and Deputy Ministers of select Government of BC ministries and Opposition Leaders</li> <li>• Vancouver Island Region MLAs</li> <li>• Federal Government: Vancouver Island Region MPs, Ministers, and staff of select ministries</li> <li>• First Nations</li> </ul> |
| <p><b>Secondary Level</b></p>   | <p>Agencies and organizations, including First Nations who have entered into formal agreement with the CRD.</p> <p>CRD representatives appointed to an affiliated governance body</p>   | <ul style="list-style-type: none"> <li>• First Nations</li> <li>• Federation of Canadian Municipalities</li> <li>• Union of BC Municipalities</li> <li>• Association of Vancouver Island Coastal Communities</li> </ul>   |
| <p><b>Operational Level</b></p> | <p>ELT and designated staff who participate in various external initiatives, committees, and groups as a representative of the organization.</p>  | <ul style="list-style-type: none"> <li>• Membership in various Professional Associations, Boards and Groups</li> <li>• Engagement work with Federal, Provincial, Institutional and Local Government staff.</li> <li>• Engagement with Crown and Non-profit bodies aligned and mandated to advance similar priorities.</li> </ul>  |

## Advocacy Approach

| <b>Advocate</b>   | <b>Objectives</b>   | <b>Methods</b>  |
|---|---|---|
| <p><b><u>Board</u></b><br/>Includes Board Members and Alternates</p>  | <p>Advance Board priorities and actions required by other orders of government to address regional issues.</p>  | <p>Board resolutions reported and conveyed to the media and appropriate party by way correspondence and follow up meetings as required.</p>   |
| <p><b><u>CRD Member Representatives</u></b><br/>Member municipalities and Local Area Elected Officials.<br/><br/>Designated CRD Commissions and Commissioners, including Frist Nations Members</p>  | <p>Coordinate actions based on shared interests and in support of shared goal to improve regional outcomes.</p>   | <p>Advance Board and Corporate priorities as identified by the CRD Board and included in the Corporate Plan and other approved CRD Strategies when aligned with municipal and commission interests.</p>             |
| <p><b><u>Intergovernmental Relations</u></b><br/>A framework for establishing and maintaining effective relationships with other orders of government,</p>  | <p>Convey one regional voice on issues.</p>   | <p>Ensure municipal partners are aware and involved as appropriate in advocacy efforts.</p>   |
| <p><b><u>Partnerships</u></b><br/>Agencies and organizations, including First Nations, who have entered into formal agreement with the CRD and/or a CRD representative is appointed to a governance body of that organization.</p>              | <p>Identify shared interests as a result of delegated authority, partnership agreement, contract or operating agreement, funding agreement, grant, or other formal relationship or understanding.</p> | <p>Advance Board and Corporate priorities as identified by the CRD Board and included in the corporate plan and other approved CRD Strategies when aligned with agencies and organization’s interest.</p>           |
| <p><b><u>Staff</u></b><br/>ELT and designated staff who participate in various external initiatives, committees, and groups as a representative of the organization when adhering with corporate policy and/or by professional affiliation.</p> | <p>Communicate formal CRD policy or position and share professional expertise.<br/>Act on behalf of the organization to advance initiatives in support of Board and Corporate Priorities.</p>         | <p>Advance Board and Corporate Priorities as identified by the CRD Board and included in the Corporate Plan and other approved CRD Strategies when aligned with external agencies and organization’s interests.</p> |



| Tracking # | Issue                                     | Objective   | Advocates |       |         |       | Comments   | Status/Update  |
|------------|---|---|-----------|-------|---------|-------|--|--|
|            |   |   | Board     | LG/EA | Partner | Staff |  |  |
| 21-01-02   | <b>Regional Transportation Priorities</b> | Confirm the CRD Board’s Regional Transportation Priorities.   | ✓         |       |         | ✓     | Letter to <a href="#">Minister Fleming</a><br>Met with Minister Fleming by teleconference October 4, 2021<br>Letter to <a href="#">Minister Fleming</a><br>Virtual Meeting with Minister Fleming March 31, 2022  | Initiated the planning required to scope regional transportation governance options with a background report to the Transportation Committee on March 15, 2023.  |
| 22-01-01   | <b>Vancouver Island Rail Corridor</b>     | Request the federal government to provide an update on their position regarding the protection of the Island Rail Corridor. | ✓         |       |         | ✓     | Letter to <a href="#">MP Randall Garrison</a><br>Letter to <a href="#">MP Laurel Collins</a><br>Letter to <a href="#">MP Alistair MacGregor</a><br>Letter to <a href="#">Minister Fleming</a><br>Letter to <a href="#">Minister Alghabra</a><br>Letter from <a href="#">Minister Fleming</a><br>Meeting with MP Alistair MacGregor August 17, 2022<br>Letter from <a href="#">Minister Alghabra</a><br>Letter to <a href="#">Minister Alghabra</a><br>Letter to <a href="#">Minister Miller</a><br>Letter from <a href="#">MP Alistair MacGregor</a><br>Letter from <a href="#">MP Gord Johns</a><br>Letter to <a href="#">Chair, Island Corridor Foundation</a><br>Letter to <a href="#">Deputy Director, South Coast Region MOTI</a> | March 31, 2023 Funding Agreement signed between the Province and the CRD to enable engagement in short and long-term planning for the Island Rail Corridor in collaboration with First Nations and local governments impacted and/or bisected by the Corridor. |



| Tracking # | Issue  | Objective   | Advocates |       |         |       | Comments   | Status/Update |
|------------|--|---|-----------|-------|---------|-------|--|---------------|
|            |  |   | Board     | LG/EA | Partner | Staff |  |               |
| 23-01-01   | <b>Active Transportation Infrastructure Investment</b> | Request the Provincial government to secure funding support for the Trails Widening and Lighting Project.   | ✓         |       |         | ✓     | Letter to <a href="#">Minister Fleming</a>   |               |
| 24-01-01   | <b>Intersection Safety Camera Program</b>              | Request the Provincial government to expand the Intersection Safety Camera Program.   | ✓         |       |         | ✓     | Letter to <a href="#">Minister Farnworth</a><br>Letter from <a href="#">Minister Farnworth</a> |               |
| 24-01-02   | <b>Amendment of the BC Motor Vehicle Act</b>           | Request the Provincial government to amend the BC Motor Vehicle Act to allow electric wheelchairs, mobility scooters, and micro mobility devices to operate in designated bike lanes and/or routes. | ✓         |       |         | ✓     | Letter to <a href="#">Minister Fleming</a>   |               |
| 24-01-03   | <b>Province-wide Trip Reduction Program</b>            | Request the Provincial government to create a province-wide Trip Reduction Program.   | ✓         |       |         | ✓     | Letter to <a href="#">Premier Eby</a>  |               |



| Tracking # | Issue   | Objective  | Advocates |       |         |       | Comments   | Status/Update |
|------------|---|--|-----------|-------|---------|-------|--|---------------|
|            |   |  | Board     | LG/EA | Partner | Staff |  |               |
| 23-06-01   | <b>Explore funding opportunities with the Province to further advance affordable housing in the Capital Regional District</b> | To enter a Memorandum of Understanding with the Province to partner on housing projects to increase the delivery of affordable housing in the Capital Regional District. | ✓         |       |         | ✓     | Chair, CRHC and CAO attended in person meeting with Minister Kahlon at UBCM on Sept. 19, 2023.<br>Letter to <a href="#">Minister Kahlon</a><br>Letter to <a href="#">MLAs</a><br>Letter to <a href="#">Premier Eby</a><br>*Note Premier Eby forwarded the letter to Minister Kahlon<br>Letter from <a href="#">Minister Kahlon</a> |               |
| 23-06-02   | <b>Secondary Suite Incentive Program</b>  | Request the Province to include Electoral Areas in the Secondary Suite Incentive Program.  | ✓         | ✓     |         | ✓     | Letter to <a href="#">Minister Kahlon</a>  |               |
| 23-06-03   | <b>Housing needs in Electoral Areas</b>   | Support for Mike Harcourt to advocate for rural housing solutions.   | ✓         | ✓     |         | ✓     | Letter to <a href="#">Mike Harcourt</a>  |               |
| 23-06-04   | <b>Drake Road Housing Project on Salt Spring Island (SSI)</b>   | Request the Province to expedite the completion of the Drake Road supportive housing project on SSI.   | ✓         | ✓     |         | ✓     | Letter to <a href="#">Minister Kahlon</a><br>Letter from <a href="#">Minister Kahlon</a>   |               |





| Tracking # | Issue  | Objective   | Advocates |       |         |       | Comments                                  | Status/Update |
|------------|--|---|-----------|-------|---------|-------|---|---------------|
|            |  |   | Board     | LG/EA | Partner | Staff |   |               |
| 24-06-01   | <b>Inclusion of alternate forms of housing within the BC Building Code</b> | Request the Province to review the inclusion of alternative forms of housing within the BC Building Code. | ✓         |       |         | ✓     | Letter to <a href="#">Minister Kahlon</a> |               |



| Tracking # | Issue   | Objective   | Advocates |       |         |       | Comments   | Status/Update   |
|------------|---|---|-----------|-------|---------|-------|--|---|
|            |   |   | Board     | LG/EA | Partner | Staff |  |   |
| 19-02-01   | <b>Climate Emergency</b>                                | Ask Federal government to strengthen national efforts to meet the Paris Agreement.<br>Ask Provincial government to fully implement CleanBC and provide data on utilities vehicles and community energy emission inventories to local governments. | ✓         | ✓     | ✓       | ✓     | Letter to <a href="#">Premier Horgan</a><br>Letter to <a href="#">Minister McKenna</a><br>Representation from all CRD local governments on Climate Action Task force and staff Working Group sharing information and collaborating on projects. Partner with NGO's, Academic Institutions and Utilities with staff support through shared research, policy development and program delivery. |   |
| 19-02-02   | <b>Climate Action Leadership</b>                        | Seek Strategic partnership  | ✓         |       |         |       | Letter to <a href="#">Minister Heyman</a><br>Response from <a href="#">Minister Heyman</a><br>Letter to <a href="#">Minister McKenna</a>   | Continue to seek partnership with senior governments.   |
| 20-02-02   | <b>Parkland Acquisition</b>                             | Ask provincial government to participate in further parkland acquisition in the Capital Region.   | ✓         |       |         | ✓     | Letter to <a href="#">Minister Heyman</a><br>Met with Minister Heyman by teleconference on February 17, 2021.  |   |
| 21-02-01   | <b>Climate Action Revenue Incentive Program (CARIP)</b> | Ask provincial government to re-establish CARIP funding or similar program.   | ✓         |       |         | ✓     | Letter to <a href="#">Premier John Horgan, Minister Osborne, Minister Heyman and Brian Frenkel (UBCM)</a> .<br>Letter from <a href="#">Minister Osborne</a>  | CARIP was replaced with the Local Government Climate Action Program (LGCAP) with approved funding through 2024. |



| Tracking # | Issue  | Objective   | Advocates |       |         |       | Comments   | Status/Update |
|------------|--|---|-----------|-------|---------|-------|--|---------------|
|            |  |   | Board     | LG/EA | Partner | Staff |  |               |
| 23-02-01   | <b>Update of Marine Invasive Species List</b>    | Ask provincial and federal government to list the red algae <i>Asparagopsis</i> on its invasive species list and review the aquaculture permitting requirements.            | ✓         |       |         | ✓     | Letter to <a href="#">Minister Ralston</a><br>Letter to <a href="#">Minister Murray</a><br>Letter from <a href="#">Minister Murray</a>   |               |
| 24-02-01   | <b>Long-Term Biosolids Management Plan</b>       | Request for a meeting with the Minister of Environment & Climate Change Strategy to seek an extension for the submission date of the Long-Term Biosolids Management Plan.   | ✓         |       |         | ✓     | Letter to <a href="#">Minister Heyman</a>  |               |
| 24-02-02   | <b>Boat related issues in the Capital Region</b> | Invite provincial and federal Ministers and their staff to participate in a regional workshop on collaborative action to resolve boat related issues in the capital region. | ✓         |       |         | ✓     | Letter to <a href="#">Minister Cullen</a><br>Letter to <a href="#">Minister Guilbeault</a><br>Letter to <a href="#">Minister Rodriguez</a><br>Letter to <a href="#">Minister Lebouthillier</a><br>Letter to <a href="#">Elizabeth May, MP</a><br>Letter to <a href="#">Adam Olsen, MLA</a> |               |



| Tracking # | Issue                               | Objective  | Advocates |       |         |       | Comments  | Status/Update |
|------------|-------------------------------------|--|-----------|-------|---------|-------|---|---------------|
|            |                                     |  | Board     | LG/EA | Partner | Staff |   |               |
| 19-03-01   | <b>First Nations Reconciliation</b> | Enhance Indigenous reconciliation at the community level.  | ✓         |       |         | ✓     | <p>Letter from Minister Robinson identifying the opportunity to meet with Snr. Provincial staff from the Ministry of Indigenous Relations and Reconciliation.</p> <p>Letter to <a href="#">Ministers Fraser and Robinson</a><br/>                     Letter from <a href="#">Minister Robinson</a><br/>                     Met with senior provincial staff on March 7, 2019 and agreed to follow up as required.<br/>                     Letters to <a href="#">MPs (Collins, Garrison, MacGregor and May)</a><br/>                     Letter to <a href="#">JOLEP (Tsartlip First Nation) Chief and Council</a><br/>                     Forum of All Councils took place on November 28, 2019.</p> | Ongoing       |
| 22-03-02   | <b>First Nations Reconciliation</b> | Secure Provincial capacity funding to support government to government relationship building with First Nations to support efforts towards reconciliation. | ✓         |       |         | ✓     | <p>Board Chair met with Minister Rankin to communicate the need for Provincial capacity funding on August 12, 2022.</p>   |               |



| Tracking # | Issue  | Objective   | Advocates |       |         |       | Comments   | Status/Update   |
|------------|--|---|-----------|-------|---------|-------|--|---|
|            |  |   | Board     | LG/EA | Partner | Staff |  |   |
| 22-04-01   | <b>Greater Victoria Harbour Authority (GVHA)</b>   | Advocate for funding for the GVHA Shore Power Project   | ✓         |       |         | ✓     | Letter to <a href="#">Minister LeBlanc</a> seeking federal support<br>Letter from <a href="#">Minister LeBlanc</a><br>Letter of Support to <a href="#">Transport Canada</a>              |   |
| 22-04-01   | <b>Speculation &amp; Vacancy Tax – SSI Electoral Area</b>  | Advocate that Speculation & Vacancy Tax be applied to the Salt Spring Island Electoral Area   | ✓         |       |         | ✓     | Letter to <a href="#">Minister Robinson</a><br>Letter from <a href="#">Minister Robinson</a><br>Letter to <a href="#">Minister Conroy</a><br>Letter from <a href="#">Minister Conroy</a> |   |
| 23-04-01   | <b>Recapitalization of the Island Coastal Economic Trust</b>                                     | Ask the provincial government to recapitalize the Island Coastal Economic Trust.  | ✓         |       |         | ✓     | Letter to <a href="#">Minister Bailey</a>  |   |
| 23-04-02   | <b>Increased high-speed broadband connectivity for the Jordan River and Shirley communities.</b> | Advocate for funding from the Connecting Communities BC Fund to support increased high-speed broadband connectivity for the Jordan River and Shirley communities. | ✓         |       |         | ✓     | Letter to <a href="#">Ministry of Citizens’ Services</a>   |   |
| 23-04-03   | <b>Intergovernmental relationship building with Minister of Municipal Affairs</b>                | Introductory meeting to discuss issues of mutual interest.  | ✓         |       | ✓       | ✓     | Board Chair and CAO met with Minister Kang on April 27, 2023.  | Ongoing dialogue regarding best practice as to how Electoral Areas could be supported in future granting opportunities. |





| Tracking # | Issue  | Objective   | Advocates |       |         |       | Comments   | Status/Update |
|------------|--|---|-----------|-------|---------|-------|--|---------------|
|            |  |   | Board     | LG/EA | Partner | Staff |  |               |
| 23-04-04   | <b>Capital Region<br/>Emergency Service<br/>Telecommunications<br/>(CREST)</b> | Advocate for the implementation of a call answer levy on cell phone devices and that the revenue be available to the CRD to fund the CREST service. | ✓         |       | ✓       | ✓     | Letter to <a href="#">Minister Farnworth</a>                           |               |
| 24-04-01   | <b>Emergency and Disaster<br/>Management Act</b>                               | Advocate for time, funding and supports from the province and for clarification in the legislation regarding responsibility for infrastructure.     | ✓         | ✓     |         | ✓     | Letter to <a href="#">Premier Eby, Minister Ma and Minister Heyman</a> |               |



| Tracking # | Issue   | Objective   | Advocates |       |         |       | Comments                                 | Status/Update |
|------------|---|---|-----------|-------|---------|-------|--|---------------|
|            |   |   | Board     | LG/EA | Partner | Staff |  |               |
| 23-07-01   | <b>Advocacy for the Salt Spring Island Electoral Area</b> | Support for Farmland Trust’s funding application.                                       |           | ✓     |         | ✓     | <a href="#">Letter of Support</a>        |               |
|            |   | Support for the Universal Broadband Fund application.                                   |           | ✓     |         | ✓     | Letter to <a href="#">CityWest</a>       |               |
|            |   | Support for Kings Lane affordable housing project.                                      |           | ✓     |         | ✓     | <a href="#">Letter of support</a>        |               |
|            |   | Support for SSI Chamber of Commerce as official provider of community visitor services. |           | ✓     |         | ✓     | Letter to <a href="#">Destination BC</a> |               |
|            |   | Support for Vision Zero application.  |           | ✓     |         | ✓     | <a href="#">Letter of support</a>        |               |
|            |   | Support for Salt Spring Elementary Parent Advisory Council application.                 |           | ✓     |         | ✓     | <a href="#">Letter of support</a>        |               |
|            |   | Support for Tourism Growth Program application.   |           | ✓     |         | ✓     | <a href="#">Letter of support</a>        |               |



| Tracking # | Issue  | Objective  | Advocates |       |         |       | Comments  | Status/Update |
|------------|--|--|-----------|-------|---------|-------|---|---------------|
|            |  |  | Board     | LG/EA | Partner | Staff |   |               |
| 23-07-02   | <b>Advocacy for the Southern Gulf Islands Electoral Area</b> | Support for New Horizons' grant application.   |           | ✓     |         | ✓     | Letter to <a href="#">Chair, Pender Island Health Care Society</a>              |               |
|            |  | Support for the Rural Islands Economic Partnership Society's (RIEP) application to fund the expansion of the RIEP's Rising Tide Business Services. |           | ✓     |         | ✓     | Letter to <a href="#">Ministry of Jobs, Economic Development and Innovation</a> |               |
|            |  | Support for New Horizons' grant application.   |           | ✓     |         | ✓     | Letter to <a href="#">Employment and Social Development Canada</a>              |               |
|            |  | Support for the Connected Coast Project.   |           | ✓     |         | ✓     | Letter to <a href="#">CityWest</a>  |               |
|            |  | Support for REDIP Economic Diversification application by the Islands Futures Society of Gabriola Island for Islands Alive Project.                |           | ✓     |         | ✓     | Letter to <a href="#">Ministry of Jobs, Economic Development and Innovation</a> |               |
|            |  | Support for application by the SGI Community Resource Centre and the Housing NOW Project.  |           | ✓     |         | ✓     | Letter to <a href="#">Ministry of Jobs, Economic Development and Innovation</a> |               |



| Tracking # | Issue | Objective   | Advocates |       |         |       | Comments  | Status/Update |
|------------|-------|---|-----------|-------|---------|-------|---|---------------|
|            |       |   | Board     | LG/EA | Partner | Staff |   |               |
|            |       | Support for the AquaLink Application by the SGI Tourism Partnership Funding.  |           | ✓     |         | ✓     | Letter to <a href="#">Rural Economic Diversification and Infrastructure Program</a> |               |
|            |       | Support for the Salish Grove Affordable Housing Project by Mayne Island Housing Society.                                  |           | ✓     |         | ✓     | <a href="#">Letter of support</a>   |               |
|            |       | Support for the Galiano Affordable Living Initiative (GALI) Project application to the BC Housing Community Housing Fund. |           | ✓     |         | ✓     | <a href="#">Letter of support</a>   |               |
|            |       | Support for the Pender HANDY-Dart Taxi Pilot Project by Moving Around Pender Alternate Transportation Society.            |           | ✓     |         | ✓     | <a href="#">Letter of support</a>   |               |
|            |       | Support for the Galiano Island Recycling Resources Society Grant application to the Plastics Action Fund.                 |           | ✓     |         | ✓     | <a href="#">Letter of support</a>   |               |



| Tracking # | Issue | Objective   | Advocates |       |         |       | Comments                          | Status/Update |
|------------|-------|---|-----------|-------|---------|-------|-----------------------------------|---------------|
|            |       |   | Board     | LG/EA | Partner | Staff |                                   |               |
|            |       | Support for the SGI Neighbourhood House Society application for a community gaming grant.   |           | ✓     |         | ✓     | <a href="#">Letter of support</a> |               |
|            |       | Support for Green Municipal Fund’s Study Grant Program.   |           | ✓     |         | ✓     | <a href="#">Letter of support</a> |               |
|            |       | Support for Building Communities Through Arts and Heritage Grant Program.   |           | ✓     |         | ✓     | <a href="#">Letter of support</a> |               |
|            |       | Support for Infrastructure Canada’s Rural Transit Solutions Fund application.   |           | ✓     |         | ✓     | <a href="#">Letter of support</a> |               |
|            |       | Support for redesignation of the SGI Tourism Partnership as the Destination Marketing Organization to receive Municipal and Regional District Tax revenues. |           | ✓     |         | ✓     | <a href="#">Letter of support</a> |               |



No Associated Board Priority



# Advocacy Dashboard

Quarter 1 – 2024



| Tracking # | Issue   | Objective   | Advocates |       |         |       | Comments  | Status/Update |
|------------|---|---|-----------|-------|---------|-------|---|---------------|
|            |   |   | Board     | LG/EA | Partner | Staff |   |               |
| 19-05-05   | <b>Deer Management</b>  | Encourage province to take responsibility for wildlife.   | ✓         | ✓     |         |       | Letter to <a href="#">Ministers Popham, Heyman and Donaldson</a><br>Several municipalities are now advocating as a group and individually for Provincial action and support.<br>Letter from <a href="#">Nancy Liesch, ED, Natural Resources</a>   | Ongoing       |
| 20-05-03   | <b>Request the province to develop a strategy and plan for ongoing coordination between BC Ferries, BC Transit and MoTI on integrated, low carbon, active transportation-oriented solutions for SSI and SGI</b> | Advocate for this approach mostly around integration of transportation planning.  | ✓         | ✓     |         |       | Letter to <a href="#">Minister Trevena</a><br>Letter from <a href="#">Minister Trevena</a>  | Ongoing       |
| 20-05-04   | <b>Write to UBCM and FCM asking them to advocate to the Federal Government to broaden the guidelines of Community Works Funds for capital and operating expenditures as a result</b>                            | Asking for relaxed guidelines in light of economic and financial impacts for up to one year subject to local government due diligence and as long as expenditures are in the public interest. | ✓         | ✓     |         |       | Letter to <a href="#">UBCM and FCM</a><br>Board Chair and CAO - call with FCM on May 21<br>Board Chair and CAO - call with UBCM on June 4<br>Letter from <a href="#">FCM</a><br>Letter from <a href="#">UBCM</a><br>UBCM indicated that they are generally aligned with the CRD position in their advocacy with FCM to the Federal Government. UBCM is in engaged in discussions with FCM and the Federal | Ongoing       |

No Associated Board Priority



| Tracking # | Issue                           | Objective | Advocates |       |         |       | Comments  | Status/Update |
|------------|---------------------------------|-----------|-----------|-------|---------|-------|---|---------------|
|            |                                 |           | Board     | LG/EA | Partner | Staff |   |               |
|            | <b>of the COVID-19 pandemic</b> |           |           |       |         |       | <p>Government to utilize the gas tax funding model for recovery funding and granting.</p> <p>There continue to be challenges with Regional District EAs with respect to the request for funding non-profits and ineligible projects and risks to RDs in proceeding to fund projects that might ultimately not received UBCM and Federal funding approval.</p> <p>EA continue to what to pursue funding approvals for non-profit services.</p> <p>UBCM administer under the Federal Provincial agreement approved in 2014 for 10 years and that would be difficult to change without renegotiating the whole agreement which would come with some risks.</p> <p>Acknowledged social services and emergency and public service buildings being asked to be included as eligible projects.</p> |               |

No Associated Board Priority



| Tracking # | Issue  | Objective  | Advocates |       |         |       | Comments   | Status/Update |
|------------|--|--|-----------|-------|---------|-------|--|---------------|
|            |  |  | Board     | LG/EA | Partner | Staff |  |               |
| 21-05-01   | <b>Opioid Overdose Crisis</b>  | Advocate the provincial and federal government to declare the overdose crisis a national public health emergency and develop comprehensive action plans. | ✓         |       | ✓       | ✓     | <a href="#">Resolution</a> to UBCM and AVICC.  | Ongoing       |
| 23-05-02   | <b>Mobile Youth Services Team</b>  | Ask the province to support the Pacific Centre Family Services Association’s Mobile Youth Services Team.   | ✓         |       |         |       | Letter to <a href="#">Minister Dean</a><br>*Note: Minister Dean forwarded the letter to Minister Farnworth<br>Letter from <a href="#">Minister Farnworth</a>   | Completed     |
| 23-05-03   | <b>Letters of congratulations to locally elected First Nations Leaders</b> | Relationship building, discuss issues of mutual interest and establish means of communication.   | ✓         |       | ✓       | ✓     | Letter to <a href="#">Pauquachin First Nation</a><br>Letter to <a href="#">SxÁUTW</a><br><br>Letter to <a href="#">x<sup>w</sup>sepsum</a><br>Letter to <a href="#">Sc’ianew</a><br>Letter to <a href="#">T’Sou-ke Nation</a><br>Letter to <a href="#">Pacheedaht Nation</a> |               |

**Capital Regional District**  
**Quarterly Operating Variance Report - Q4, 2023**  
**Service Budgets Greater than \$1,500,000**

| Service Number | Service Description                                | Operating Expenses            |            |             | Operating Revenue   |            |             | 2023 Surplus / (Deficit) |   |                                  |        |  |
|----------------|--|-------------------------------|------------|-------------|---|------------|-------------|--------------------------|---|----------------------------------|--------|--|
|                |  | Annual Budget \$ (Schedule A) | Actuals \$ | % of Budget | Annual Budget \$ (Schedule A)   | Actuals \$ | % of Budget | \$                       | % Budget  | Treatment of Surplus / (Deficit) |        |  |
| 1.010          | Legislative & General                              | 36,520,973                    | 33,363,598 | 91%         | Savings are primarily related to one-time savings from staff vacancies and hiring delays, as well as a partial deferral of costs on Electronic Records Management (EDRMS) and the Electronic Project Document Management System (EPDMS) initiatives to 2024.                                | 36,520,973 | 35,635,794  | 98%                      | Half of revenue is derived from allocations to other services; one-third is funded by requisition, with balance from reserves, grants and other revenue. Some minor savings due to reduction in reserve funds being required for project consultancy costs deferred to 2024, partially offset by increased grant revenue. | 2,272,196                        | 6.2%   | Transfer to Operating Reserve Fund \$1.6m; and carried forward to 2024 \$675k.   |
| 1.105          | Facility Management                                | 2,016,211                     | 1,823,830  | 90%         | Service is facilities management delivered to CRD HQ and satellite facilities. Service is under plan due to temporary staff vacancies.  | 2,016,211  | 1,906,916   | 95%                      | Revenues derived from delivery of service to other services, and under plan for the year due to temporary staff vacancies.  | 83,086                           | 4.1%   | Surplus transferred to Operating Reserve Fund.   |
| 1.106          | CRD Headquarters Building                          | 1,977,438                     | 1,981,286  | 100%        | Service experienced slightly higher operating costs as a result of a winter cold snap in Q1 and commissioning of 1st floor renovations. Service on plan for the fiscal year.  | 1,977,438  | 1,981,292   | 100%                     | Service provides office space to other CRD services and is on plan.   | 7                                | 0.0%   | Surplus transferred to Operating Reserve Fund.   |
| 1.112          | CRD Regional Grant in Aid                          | 1,532,621                     | 15,000     | 1%          | CRD raised the funds in 2013-2015 through tax requisition specifically for one-time funding request from Island Corridor Foundation (ICF). The timeline hasn't been established for the distribution of the funds.  | 1,532,621  | 1,584,336   | 103%                     | Revenue mostly consists of 2022 surplus carry forward; increase in revenue due to higher interest income.   | 1,569,336                        | 102.4% | Surplus carried forward to 2024 operating budget.  |
| 1.226          | Health Facilities - VIHA                           | 1,720,718                     | 1,013,017  | 59%         | Service provides leased building to VIHA, and is 100% recovery from tenant. Q1 level of service provided, including rebilling utilities and daily checks were reduced starting Q2, as VIHA assumed these costs directly.  | 1,720,718  | 1,079,336   | 63%                      | Service provides leased buildings to VIHA, and is 100% recovery from tenant. Any deficit will be recovered from VIHA.   | 66,319                           | 3.9%   | Surplus transferred to Capital Reserve Fund.   |
| 1.280          | Regional Parks                                     | 17,528,007                    | 17,083,000 | 97%         | Service experiences a seasonal nature to expenditures, primarily weighted to Q2 and Q3. Temporary staff vacancies on new service levels for 2023 are partially offset by one-time costs for studies, auxiliary staff backfills and deferred maintenance.                                    | 17,528,007 | 17,758,231  | 101%                     | Revenues are primarily from requisition and are on plan. Revenue generated from fees were higher than budget.   | 675,231                          | 3.9%   | Transfer to Equipment Replacement Fund \$250k; Capital Reserve Fund \$425k.  |
| 1.297          | Arts Grants & Development                          | 3,132,037                     | 3,094,590  | 99%         | Service is a grant funding service, which had limited grant distribution in Q1 and Q2. Grant funding to arts organisations was primarily distributed in Q3.   | 3,132,037  | 3,094,590   | 99%                      | Revenues are primarily from requisition and are on plan.  | -                                | 0.0%   | No Surplus   |
| 1.309          | Climate Action and Adaptation                      | 2,288,185                     | 1,931,201  | 84%         | Operating expenses under budget on the Regional Building Energy Retrofit Program, due to reduction in contract cost.  | 2,288,185  | 2,053,023   | 90%                      | Revenues are primarily from requisition. Grant revenue was lower than budget due to delay in final approval of the Investing in Canada Infrastructure Program grant.  | 121,822                          | 5.3%   | Surplus transferred to Operating Reserve Fund  |
| 1.310          | Land Banking & Housing                             | 3,048,387                     | 2,825,727  | 93%         | Expenses under budget primarily due to staff vacancies and consultancy work carried forward to 2024.  | 3,048,387  | 3,086,360   | 101%                     | Revenues are approximately 50% requisition and 50% federal grants. Slightly higher revenues as predicted due to higher recovery from Reaching Home Grant.   | 260,633                          | 8.5%   | Surplus carried forward to 2024 operating budget.  |
| 1.311          | Regional Housing Trust Fund                        | 3,676,394                     | 648,234    | 18%         | Expenses are driven by internal and external grants, with timing contingent on external factors such as project schedules and municipal approvals. Any surpluses are carried forward. One grant of \$615K was paid out in 2023, with remaining commitments to be paid out in 2027 and 2028. | 3,676,394  | 3,874,427   | 105%                     | Revenue is about 70% from surplus carry forward and 30% from requisition. Revenues were higher due to receipt of one-time donations and interest earned on carry-forward balance.   | 3,226,193                        | 87.8%  | Surplus carried forward to 2024 operating budget.  |
| 1.313          | Animal Care Services                               | 1,663,324                     | 1,866,696  | 112%        | Costs above budget due to higher auxiliary staff wages due to new service contracts and sick leave coverage of regular staff, higher vet services and legal costs. Additional costs for the purchase of protective vests for Bylaw officers as mandated by OH&S.                            | 1,663,324  | 1,806,251   | 109%                     | Service is funded approximately 26% from requisition, 56% from contract revenue, 15% from dog tag sales and 3% from other. Higher revenue due to higher than expected dog tag sales, increased volume of adoptions, and additional contract revenue due to new service contract with Royal Roads University.              | 60,445                           | -3.6%  | Reduce transfers to Equipment Replacement Fund (\$25k) and Operating Reserve Fund (\$25k); transfer from Operating Reserve Fund (\$10k). |
| 1.318          | Building Inspection                                | 2,026,725                     | 1,880,602  | 93%         | Operating expenses are lower, mainly due to salaries savings from temporary staff vacancies.  | 2,026,725  | 2,037,410   | 101%                     | Service is funded approximately 70% by permit fee revenue, with the balance funded by requisition and reserve. Permit fee revenues were in line with the budget with a small increase due to higher interest income.  | 156,808                          | 7.7%   | Transfer to Equipment Replacement Fund \$20k; Operating Reserve Fund \$137k.   |
| 1.324          | Regional Planning Services                         | 1,554,118                     | 1,395,360  | 90%         | Operating expenses are lower than budget due to savings in salaries from temporary staff vacancies and lower auxiliary wages, and reduced consultant and program costs due to shifting focus to transportation governance initiatives during the year.                                      | 1,554,118  | 1,567,353   | 101%                     | Funding sources consist of approximately 79% requisition, 12% operating reserve and 9% other. Increase in revenue due to higher interest income.  | 171,993                          | 11.1%  | Transfer to Equipment Replacement Fund \$11k; Operating Reserve Fund \$161k.   |
| 1.40X          | SEAPARC  | 4,571,131                     | 4,881,708  | 107%        | High program levels due to stronger user demand than planned. Resulted in higher overall operating expense for the year, largely in increased auxiliary wages, operating supplies and maintenance.  | 4,571,131  | 5,073,584   | 111%                     | Revenues are approximately 70% from requisition; 30% from fees. Higher than budgeted fees for the full year based on higher utilization, increased volume of membership fees and other recreation user fees.  | 191,876                          | 4.2%   | Transfer to Equipment Replacement Fund \$96k; Capital Reserve Fund \$96k.  |
| 1.44X          | Panorama Rec. Center                               | 10,136,965                    | 10,189,040 | 101%        | Service utilization returning to pre-pandemic level. Service is seasonal in nature, and full year expense in line with budget.  | 10,136,965 | 10,284,091  | 101%                     | Revenues are approximately 51% from requisition; 49% from fees. Higher than budgeted user generated revenues for the full year based on the higher utilization, particularly in rental revenues, child care grants and membership sales.  | 95,051                           | 0.9%   | Surplus transferred to Equipment Replacement Fund.   |
| 1.459          | Salt Spring Is- Pool, Parks, Land, Art & Rec. Prog | 2,154,490                     | 2,316,421  | 108%        | Higher service level due to higher user demand. As a result, operating expenses were over budget, largely in pool programs, staff salaries and Community Centre Recreation programs costs.  | 2,154,490  | 2,256,801   | 105%                     | Revenue was over budget due to increased day use and pool pass revenue, and higher than anticipated Community Centre gym and room booking revenue.  | 59,620                           | -2.8%  | Reduce transfers of to Capital Reserve (\$7.5k); Carried forward to 2024 Operating Budget (\$52.1k).                                     |

**Capital Regional District**  
**Quarterly Operating Variance Report - Q4, 2023**  
**Service Budgets Greater than \$1,500,000**

| Service Number       | Service Description                        | Operating Expenses            |                       |             | Operating Revenue   |                       |             | 2023 Surplus / (Deficit) |  |                                  |       |   |
|----------------------|--|-------------------------------|-----------------------|-------------|---|-----------------------|-------------|--------------------------|--|----------------------------------|-------|---|
|                      |  | Annual Budget \$ (Schedule A) | Year to Q4 Actuals \$ | % of Budget | Annual Budget \$ (Schedule A)   | Year to Q4 Actuals \$ | % of Budget | \$                       | % Budget   | Treatment of Surplus / (Deficit) |       |   |
| 1.521                | Environmental Resource Management          | 29,690,987                    | 30,507,369            | 103%        | Increased waste tonnages and biosolids disposal activities have increased landfilling costs in 2023. The service experienced higher equipment service costs related to landfilling of standard refuse and controlled wastes. Expenses partially offset by savings on curbside recycling and leachate operations.                      | 29,690,987            | 35,019,699  | 118%                     | Overall solid waste revenue for 2023 is higher than budget due to increased waste tonnages, and a significant increase in controlled waste being received due to operational deficiency of biosolid treatment. Higher than budgeted revenue also received from Recycle BC, due to more materials being received, and recycling revenue for scrap metal is also higher than budgeted. | 4,512,330                        | 15.2% | Transfer to Operating Reserve Fund \$2.4m; Capital Reserve Fund \$2.1m.       |
| 1.576                | Environmental Engineering Services         | 2,765,567                     | 2,658,176             | 96%         | Service provides engineering and project management services to multiple services across the CRD's recreation and environmental management services. Service is below budget due to a small saving in temporary staff vacancies and the postponement of the Project Management Office study.  | 2,765,567             | 2,719,252   | 98%                      | Revenues are driven by providing services to other CRD services which continue to operate as planned. Recovery revenue from CRD service are in line with annual budget, reserve transfers will be lower due to the postponed Project Management Office study.  | 61,076                           | 2.2%  | Surplus transferred to Equipment Replacement Fund.                            |
| 1.577                | IW - Environmental Operations              | 13,875,220                    | 12,715,824            | 92%         | Overhead service budget, continuing to deliver services as planned. Expenditures remained below budget largely due to temporary staff vacancies.  | 13,875,220            | 12,714,651  | 92%                      | 97% of revenue is driven by labour recovery, providing services to other CRD services. The remaining 3% of revenue is from reserve transfers to cover one-time costs. Recovery revenue from CRD services has fallen below the budget due to staff vacancies.   | 1,173                            | 0.0%  | Recovered from Operating Reserve Fund.  |
| 1.578                | Environmental Protection and Water Quality | 9,177,767                     | 8,480,457             | 92%         | Overhead service budget, continuing to provide service as planned. Savings from vacancies on new positions, combined with delayed backfilling of existing positions.  | 9,177,767             | 8,955,384   | 98%                      | Revenues are driven by providing services to other CRD services. Recovery revenue from CRD services slightly below annual budget due to staff vacancies on new positions, combined with delayed backfilling of existing positions.   | 474,927                          | 5.2%  | Transfer to Equipment Replacement Fund \$286k; Operating Reserve Fund \$188k. |
| 1.911                | 911 Systems                                | 2,495,079                     | 2,522,080             | 101%        | This service collects 911 levies from phone carriers and distributes a percentage to participating municipalities. Debt servicing and operating costs were on track with budget, with the exception of higher dispatch levies to E-Comm.  | 2,495,079             | 2,469,619   | 99%                      | Sources of revenue are fixed source requisitions, lease revenue, and variable 911 levies received from phone carriers. Reduction in revenues due to reduction in 911 levies.   | 52,461                           | -2.1% | Recovered from Operating Reserve Fund.  |
| 1.921                | Regional CREST                             | 1,790,531                     | 1,821,255             | 102%        | This is a contribution service that provides support to CREST based on service agreement. New agreement is in place which resulted in a larger contribution than budgeted.  | 1,790,531             | 1,799,270   | 100%                     | Operating revenues are primarily requisition and are on plan. Minor increase in revenue due to higher interest income.   | 21,985                           | -1.2% | Recovered from Operating Reserve Fund.  |
| 2.610                | Saanich Peninsula Water Supply             | 7,407,397                     | 7,681,289             | 104%        | Operational services and system maintenance are continuing as planned. Expenditures exceeded budget due to higher than budgeted bulk water purchases as a result of increased water demand.   | 7,407,397             | 8,094,096   | 109%                     | Revenues are driven by seasonal water sales. Demand exceeded 2023 budget by 0.4m cubic metres largely due to dry summer weather.   | 412,807                          | 5.6%  | Transfer to Capital Reserve Fund.   |
| 2.670                | Regional Water Supply                      | 39,915,804                    | 39,699,408            | 99%         | Operational services and system maintenance are continuing as planned. Expenditures exceeded budget primarily due increased agriculture subsidy payments resulting from increased water demand, and chemical costs due to inflationary cost increases and demand volume. Operational savings resulted from temporary staff vacancies. | 39,915,804            | 41,887,600  | 105%                     | Revenues are driven by seasonal water sales. Demand exceeded 2023 budget by 2.9m cubic metres largely due to dry summer weather.   | 2,188,192                        | 5.5%  | Transfer to Water Capital Fund.   |
| 2.680                | Juan de Fuca Water Distribution            | 23,970,506                    | 24,909,220            | 104%        | Operational services and system maintenance are continuing as planned. Expenditures exceeded budget due to higher than budgeted bulk water purchases as a result of increased water demand.   | 23,970,506            | 26,281,331  | 110%                     | Revenues are driven by seasonal water consumption. Demand exceeded 2023 budget by 1.2m cubic metres. largely due to dry summer weather. Additional revenue from connection cost recovery is driven by development activity.  | 1,372,111                        | 5.7%  | Transfer to Water Capital Fund.   |
| 3.717                | Core Area Wastewater Operations            | 33,765,016                    | 32,412,336            | 96%         | Operational services are largely on track as planned, with expenditures below the amended budget. Underspending occurred in repair maintenance, water, electricity, and purchasing maintenance, partially offset by higher than anticipated expenses in supplies and screen disposal.   | 33,765,016            | 32,412,336  | 96%                      | Requisition serves as the primary source of service revenue; while additional funding for one-time expenses, increased spending on waste sludge disposal, and delayed revenue from tipping fees was sourced from the Operating Reserve Fund. The total actual operating reserve transferred was less than the budgeted amount required for balancing the budget.                     | -                                | 0.0%  | No Surplus  |
| 3.718                | Saanich Peninsula Wastewater               | 4,747,515                     | 3,929,083             | 83%         | Service delivering on plan. Underspend on budget due to operational delays at the OMS receiving facility and savings from labor allocation expenses.  | 4,747,515             | 4,620,858   | 97%                      | Revenues are approximately 93% from requisition, 7% other. Overall revenue is on plan.   | 691,775                          | 14.6% | Transfer to Operating Reserve Fund \$346k; Equipment Replacement Fund \$346k. |
| 3.755                | Regional Source Control                    | 1,641,038                     | 1,648,943             | 100%        | Operational services are continuing as planned. Minor additional expense due to increased interest expense incurred, offset by deferral of consulting work postponed to 2024.   | 1,641,038             | 1,609,062   | 98%                      | Service revenue is primarily from requisition. Overall revenue is on plan, with reduced reserve transfer due to postponed consultant work.   | 39,881                           | -2.4% | Recover from Operating Reserve Fund \$39k.                                    |
| Total Services above |  | 266,790,151                   | 84%                   |             |   | 266,790,151           | 84%         |                          |  |                                  |       |   |
| Other CRD Services   |  | 51,623,331                    | 16%                   |             |   | 51,623,331            | 16%         |                          |  |                                  |       |   |
| Total CRD            |  | 318,413,482                   |                       |             |   | 318,413,482           |             |                          |  |                                  |       |   |



**Capital Regional District**  
**Quarterly Operating Variance Report - Q4, 2023**  
**Service Budgets Greater than \$1,500,000**

| Service Number                     | Service Description                | Operating Expenses            |             |      |  | Operating Revenue             |             |      |  | 2023 Surplus / (Deficit) |          |  |
|------------------------------------|------------------------------------|-------------------------------|-------------|------|--|-------------------------------|-------------|------|--|--------------------------|----------|--|
|                                    |                                    | Annual Budget \$ (Schedule A) | Year to Q4  |      | Explanation  | Annual Budget \$ (Schedule A) | Year to Q4  |      | Explanation  | \$                       | % Budget | Treatment of Surplus / (Deficit)   |
|                                    |                                    | Actuals \$                    | % of Budget |      |  | Actuals \$                    | % of Budget |      |  |                          |          |  |
| CRHD                               | Capital Regional Hospital District | 32,678,574                    | 32,020,324  | 98%  | Savings due to the deferral of feasibility studies to 2024, and lower debt servicing costs from re-prioritization of certain Island Health capital projects from 2023 to future years.             | 32,678,574                    | 32,838,208  | 100% | Higher interest earnings on operating capital and recovery of insurance costs for The Summit, partially offset by fewer reserve fund transfers required due to deferral of feasibility studies to 2024.  | 817,884                  | 2.5%     | Transfer to Summit Management Reserve \$180k; Debt Management Reserve \$209k; Admin & Feasibility Studies Reserve \$298; surplus carried forward \$131k. |
| Total CRHD                         |                                    | <u>32,678,574</u>             |             |      |  | <u>32,678,574</u>             |             |      |  |                          |          |  |
| CRHC                               | Administration                     | 3,586,855                     | 3,103,003   | 87%  | Expenditures were below budget largely due to temporary staff vacancies and hiring delays.   | 3,586,855                     | 4,130,552   | 115% | Revenues are directly tied to property management fees. Revenues were higher than budgeted fees due to the new CHF property at 2782 Spencer and higher than anticipated one-time interest earnings.  | 1,027,549                | 28.6%    | Transfer to operating reserve.   |
| CRHC                               | Development Services               | 801,498                       | 714,537     | 89%  | Savings due to temporary staff vacancies and hiring delays, and lower than budgeted consultancy costs.   | 838,851                       | 680,827     | 81%  | Revenues are 100% project management fees from multiple projects. Less revenues in 2023 as forecasted due to the delay of Michigan Square completion to Q2 2024, and the Campus View fees could not be collected until final project approval is achieved, now forecasted for Q2 2024. | 33,710                   | -4.0%    | Transfer from operating reserve.   |
| CRHC                               | CHF Operating                      | 1,347,674                     | 1,048,643   | 78%  | Expenditures are lower than budgeted primarily due to mortgage savings, lower than budgeted insurance and water expense at 2782 Spencer, and completion of Michigan building B delayed to Q2 2024. | 1,347,674                     | 1,007,609   | 75%  | Revenues are lower than budgeted due to new building (2782) still in rent-up phase and completion of Michigan Building B is delayed until Q2 2024. Revenues are approximately 50% tenant rents and 50% provincial grants.  | 41,034                   | -3.0%    | Transfer from operating reserve.   |
| CRHC                               | UOA buildings                      | 13,182,306                    | 13,451,355  | 102% | Expenditures higher than budgeted due to increased maintenance costs, offset by savings in caretaker salaries, insurance and utilities.  | 13,030,302                    | 13,544,058  | 104% | Revenues are approximately 85% from tenant rents and 15% from provincial grants. Revenues are higher than budget due to rent increases.  | 92,703                   | 0.7%     | Transfer to operating reserve.   |
| CRHC                               | ILBC building                      | 868,056                       | 894,927     | 103% | Higher expenses due to first aid contract, insurance, and maintenance costs.   | 729,881                       | 669,310     | 92%  | Revenues are approximately 50% from tenant rents and 50% from provincial subsidy tied to occupancy controlled by Island Health. Revenues lower than budgeted due to lower subsidy received partially offset by increased tenant rents.   | 225,617                  | -30.9%   | Transfer from operating reserve.   |
| CRHC                               | NOA buildings                      | 1,653,452                     | 1,663,193   | 101% | Higher expenses due to maintenance costs and garbage disposal, net of savings in caretaker salaries due to staff vacancy.  | 1,684,250                     | 1,730,095   | 103% | Revenues are 100% from tenant rents. Revenue slightly higher due to increased tenant rents.  | 66,902                   | 4.0%     | Transfer to operating reserve.   |
| CRHC                               | RHFP buildings                     | 9,183,431                     | 8,982,256   | 98%  | Lower expenses due to temporary staff vacancies, and delay of Michigan A completion to Q2 2024, partially offset by increased maintenance costs at current buildings.                              | 9,217,057                     | 9,086,088   | 99%  | Budgeted revenues are 98% from tenant rents and 2% transfer from capital project surplus. Realized lower tenant rents due to vacancies and deficiencies with accessible units at Prosser and delay of Michigan A completion to Q2 2024.  | 103,832                  | 1.1%     | Transfer to operating reserve.   |
| CRHC                               | IHI building                       | 760,553                       | 751,114     | 99%  | Overall minor savings in operating expenditures.   | 857,570                       | 840,878     | 98%  | Revenues are 100% from tenant rents. Realized a small decrease in rents due to vacancy.  | 89,764                   | 10.5%    | Transfer to operating reserve.   |
| Total CRHC                         |                                    | <u>31,383,825</u>             |             |      |  | <u>31,292,440</u>             |             |      |  |                          |          |  |
| Total Services (CRD + CRHD + CRHC) |                                    | <u>\$382,475,881</u>          |             |      |  | <u>\$382,384,496</u>          |             |      |  |                          |          |  |

\*Amended Budget as at September 13, 2023 (#Bylaw 4570)  
\*\*Amended Budget as at March 8, 2023 (CRHC Board Approved)

**Capital Regional District**  
**2023 - Quarter 4 - Capital Plan Report**  
**Projects Greater than \$500,000**

|          |  |
|----------|--|
|          | As planned or better than plan   |
|          | Changes to quarter forecast, no revision to annual plan  |
|          | Change in annual plan  |
| <b>R</b> | Changes to project plan (may result in 2023 Budget Amendment or included in 2024 Capital Plan) |

| Department                | Service Description                             | Capital Project Title                                |
|---------------------------|---|--|
| <b>CRD</b>                |   |  |
| Integrated Water Services | Core Area Wastewater                            | Core Area Wastewater Treatment Project               |
|                           | Core Area Wastewater                            | Bowker Sewer Rehabilitation                          |
|                           | Core Area Wastewater                            | SCADA and Radio Assessment                           |
|                           | Core Area Wastewater                            | Annual Provisional Emergency Repairs                 |
|                           | Core Area Wastewater                            | Marigold Electrical and Building Upgrades            |
|                           | Core Area Wastewater                            | Process & Mechanical Upgrades                        |
|                           | Core Area Wastewater                            | Safety & Security Upgrades                           |
|                           | Core Area Wastewater                            | Manhole Repairs and Replacement                      |
|                           | Regional Water Supply                           | Goldstream IWS Field Office                          |
|                           | Regional Water Supply                           | Replace Gatehouse at Goldstream Entrance             |
|                           | Regional Water Supply                           | Main No.3 Segment Replacement                        |
|                           | Regional Water Supply                           | Sooke Lake Dam - Instrumentation System Improvements |
|                           | Regional Water Supply                           | Replacement of UV System                             |
| Regional Water Supply     | Integrate Dam Performance and Hydromet to SCADA |  |

| Quarter 4 |             |            |                         |                           |  |
|-----------|-------------|------------|-------------------------|---------------------------|--|
| Q4 Budget | Q4 Forecast | Q4 Actuals | Variance (over) / under | Variance % (over) / under | Q4 Variance Explanation (if necessary)   |
| 761,500   | 681,000     | 489,800    | 191,200                 | 28%                       | In Q4, the majority of expenditures were for commitments to external stakeholders, in line with the project closeout plan. Unused contingency funding will be carried into 2024. Overall project is within scope and project budget updated on 2024 Capital Plan.  |
| 2,040,000 | 2,500,000   | 2,844,986  | (344,986)               | -14%                      | Q4 work includes catchup of the delayed work from earlier in the year. The construction work is mostly finished, and the issuance of the substantial completion certificate for the project is expected in Q1 2024. Overall project is within scope and budget.  |
| 1,400,000 | 100,000     | 44,438     | 55,562                  | 56%                       | Survey Mountain Tower design and installation in Q4 and continuing through 2024 as part of a multiple project system upgrade program. The project has experienced delays due to prioritization and the need for alignment between various departments, overall project is within scope and budget.   |
| 250,000   | 350,000     | 153,288    | 196,712                 | 56%                       | Screen repairs at Macaulay Point and disk filter repair in Q4. The nature of the project is to address emergency repairs arising from unforeseen events and circumstances and costs will fluctuate dependent on scope, magnitude, and urgency of the emergency repairs. Overall project is within scope and budget.  |
| 1,895,000 | 25,000      | 13,988     | 11,012                  | 44%                       | Project management work occurred in Q4. Project is delayed to consider cost escalation indicated in Q3 tender responses. Staff look to phase-in portions of this project while requesting additional funds in 2024. Re-tendering is forecasted to occur Q1 2024, overall project is within scope.  |
| 212,500   | 300,000     | 343,807    | (43,807)                | -15%                      | Provisional project to address process and mechanical upgrades to the Core Area and conveyance infrastructure arising from optimization of operational needs. Q4 activities included continuation of odour dispersion modeling, SCADA upgrades at Clover Pump Station, installation of monorail and upgrades to odour control system (hydrogen sulphide sensors) at MPWWTP. Overall project is within scope and budget.                        |
| 150,000   | 250,000     | 61,784     | 188,216                 | 75%                       | Provisional project to address safety and security upgrades to the Core Area and conveyance infrastructure. Q4 continued implementation, including upgrades, for Fall Protection at the tertiary building, the design of new secondary deck guardrails, and the design of 5 new access hatches. The detailed design was necessary for the construction projects which will be carried out in 2024. Overall project is within scope and budget. |
| 645,000   | 5,000       | 1,386      | 3,614                   | 72%                       | Preparation of RFP document for engineering consultant in Q4. This will be further progressed in 2024.   |
| 2,835,000 | 100,000     | 100,486    | (486)                   | 0%                        | Detailed design work in Q4, construction still expected to occur in 2024. Project scope is under review and budget updated on 2024 Capital Plan.   |
| 20,000    | 20,000      | 59,399     | (39,399)                | -197%                     | The project was substantially completed Q4 2023. Overall project is within scope and under budget.   |
| 498,000   | 50,000      | 8,777      | 41,223                  | 82%                       | Planning work in Q4, project is part of a multiple project Transmission main upgrade program. Forecasting will become more accurate in detailed design and construction phases. Design to continue into 2024 with construction anticipated for 2025. Overall project is within scope and budget.   |
| 650,000   | 50,000      | 158,788    | (108,788)               | -218%                     | External contract detailed design work progressed ahead of forecast in Q4. Construction start expected in late 2024 to align with lower water level. Overall project is within scope and budget.   |
| 7,960,000 | 50,000      | 103,649    | (53,649)                | -107%                     | External contract detailed design work progressed ahead of forecast for Q4. Construction continues to be forecast for Q4 2024/2025. Overall project is within scope and budget.  |
| 300,000   | 490,000     | -          | 490,000                 | 100%                      | Project remains on hold in Q4 with no project activity due to prioritization of internal resources. The bulk of work scheduled for 2023 is expected to occur in Q4 with completion deferred to 2024. Overall project is within scope and budget.   |

| Total 2023   |                     |                    |  |            |
|--|---------------------|--------------------|--|------------|
| Total 2023 amended Budget (as per approved budget) | Total 2023 Forecast | Total 2023 Actuals | Total 2023 Forecast Variance \$ (under) / over | % Forecast |
| 1,633,000  | 1,632,207           | 1,441,007          | (191,200)                                      | 13%        |
| 8,300,000  | 7,569,799           | 7,914,785          | 344,986  | -4%        |
| 1,550,000  | 196,686             | 141,124            | (55,562)                                       | 39%        |
| 1,000,000  | 490,661             | 293,949            | (196,712)                                      | 67%        |
| 2,000,000  | 121,996             | 110,984            | (11,012)                                       | 10%        |
| 850,000  | 405,707             | 449,514            | 43,807   | -10%       |
| 600,000  | 252,079             | 63,863             | (188,216)                                      | 295%       |
| 745,000  | 5,000               | 1,386              | (3,614)  | 261%       |
| 3,950,000  | 144,506             | 144,992            | 486  | 0%         |
| 1,280,000  | 1,080,082           | 1,119,481          | 39,399   | -4%        |
| 800,000  | 84,826              | 43,603             | (41,223)                                       | 95%        |
| 950,000  | 198,796             | 307,584            | 108,788  | -35%       |
| 8,300,000  | 644,409             | 698,058            | 53,649   | -8%        |
| 600,000  | 493,151             | 3,151              | (490,000)                                      | 15551%     |

| Status of Total Project Plan |          |          |  |
|------------------------------|----------|----------|--|
| Scope                        | Timing   | Budget   | Notes  |
|                              |          |          | S - on plan<br>T - on plan<br>B - 2023 Amended, on plan  |
|                              | <b>R</b> |          | S - on plan<br>T - completion expected Q1 2024<br>B - better than plan   |
|                              | <b>R</b> |          | S - on plan<br>T - completion deferred to 2024<br>B - on plan  |
|                              |          |          | S - on plan<br>T - on plan<br>B - better than plan   |
|                              | <b>R</b> | <b>R</b> | S - on plan<br>T - re-evaluation for 2024 plan<br>B - re-evaluation for 2024 plan  |
|                              |          |          | S - on plan<br>T - on plan<br>B - better than plan   |
| <b>R</b>                     | <b>R</b> | <b>R</b> | S - re-evaluation for 2024 plan<br>T - re-evaluation for 2024 plan<br>B - re-evaluation for 2024 plan                          |
| <b>R</b>                     | <b>R</b> | <b>R</b> | S - under review for potential revision<br>T - construction delayed to 2024<br>B - project budget updated on 2024 Capital Plan |
|                              |          |          | S - on plan<br>T - substantially completed Q4 2023<br>B - better than plan   |
|                              | <b>R</b> |          | S - on plan<br>T - construction expected in 2025<br>B - on plan  |
|                              | <b>R</b> |          | S - on plan<br>T - construction start deferred to 2024<br>B - on plan  |
|                              | <b>R</b> |          | S - on plan<br>T - construction start expected in Q4 2024<br>B - on plan   |
|                              | <b>R</b> |          | S - on plan<br>T - completion deferred to 2024<br>B - on plan  |

**Capital Regional District**  
**2023 - Quarter 4 - Capital Plan Report**  
**Projects Greater than \$500,000**

|   |  |
|---|--|
|   | As planned or better than plan   |
|   | Changes to quarter forecast, no revision to annual plan  |
|   | Change in annual plan  |
|   | Changes to project plan (may result in 2023 Budget Amendment or included in 2024 Capital Plan) |
| R |  |

| Department                | Service Description          | Capital Project Title   |
|---------------------------|------------------------------|---|
| Integrated Water Services | Regional Water Supply        | RWS Supply Main No. 4 Upgrade                                   |
|                           | Regional Water Supply        | Vehicle & Equipment Replacement (Funding from Replacement Fund) |
|                           | Regional Water Supply        | Main No. 4 - Mt Newton to Highway 17                            |
|                           | Regional Water Supply        | SCADA Masterplan and System Upgrades                            |
|                           | Regional Water Supply        | EV Charging Stations Electrical Infrastructure                  |
|                           | Regional Water Supply        | Post Disaster Emergency Water Supply                            |
|                           | Regional Water Supply        | Deep Northern Intake and Sooke Lake Pump Station                |
|                           | Regional Water Supply        | Bulk Supply Meter Replacement Program                           |
|                           | Regional Water Supply        | Sooke Lake Dam Spillway Hoist and Stop Log Replacement          |
|                           | JDF Water Distribution       | Comprehensive Pump Station Upgrades (10 year Program)           |
|                           | JDF Water Distribution (DCC) | McCallum Pump Station and Tank 4                                |
|                           | JDF Water Distribution       | Rocky Point Upgrades  |
|                           | JDF Water Distribution       | AC Pipe Replacement Program                                     |
|                           | JDF Water Distribution       | Goldstream AC Replacement                                       |
|                           | JDF Water Distribution       | Residential Service & Meter Replacement Program                 |
|                           | JDF Water Distribution       | Vehicle & Equipment Replacement (Funding from Replacement Fund) |

| Quarter 4 |             |            |                         |                           |  |
|-----------|-------------|------------|-------------------------|---------------------------|--|
| Q4 Budget | Q4 Forecast | Q4 Actuals | Variance (over) / under | Variance % (over) / under | Q4 Variance Explanation (if necessary)   |
| 3,190,000 | 50,000      | 10,310     | 39,690                  | 79%                       | Design process work in Q4 as part of a multiple project transmission main upgrade program. Forecasting will become more accurate in detailed design and construction phases. Construction anticipated to commence in 2025 for works associated with high pressuring Main No. 1 but not until 2026 or later for Main No. 4 segment replacement. Overall project is within scope and budget. |
| -         | 234,241     | 89,300     | 144,941                 | 62%                       | Delivery and vehicle road preparation of Chevy Silverado 3500 in Q4, and continued road prep of F150 Lightnings. Supply chain issues impact the delivery schedule of vehicles expected in 2023, final vehicle budgeted for 2023 expected to arrive Q1 2024. Overall project is within scope and budget.  |
| 2,715,000 | 50,000      | 2,437      | 47,563                  | 95%                       | Design process work in Q4 as part of a multiple project Transmission main upgrade program. Forecasting will become more accurate in detailed design and construction phases. Construction remains anticipated for award in late 2024, with construction continuing through 2025. Overall project is within scope and budget.   |
| 650,000   | 5,000       | 38,570     | (33,570)                | -67.1%                    | Survey Mountain Tower design and installation in Q4 and continuing through 2024 as part of a multiple project system upgrade program. The project has experienced delays due to prioritization and the need for alignment between various departments, overall project is within scope and budget.   |
| 545,000   | 545,000     | 203,077    | 341,923                 | 63%                       | Construction continued on Phase One 15 charging stations in Q4, with completion deferred to Q1 2024 due to delay of equipment delivery. Overall project is within scope and budget.  |
| 263,000   | 30,000      | 15,448     | 14,552                  | 49%                       | Storage containers purchased in Q4. Annual spend is within approved funding. Overall project is within scope and budget.   |
| 580,000   | -           | -          | -                       | 0%                        | No 2023 work forecasted; project has been deferred to 2025 due to project prioritization and internal resource availability. Overall project is within scope and budget.   |
| 490,000   | 2,500       | 8,652      | (6,152)                 | -246%                     | Ad hoc work completed when resources available. Project slated to be constructed by CRD staff but postponed due to competing priorities. Completion deferred to 2024, overall project is within scope and budget.  |
| 443,500   | 15,000      | 14,543     | 457                     | 3%                        | Planning work occurred in Q4. construction remains deferred to 2024. Overall project is within scope and budget.   |
| 2,025,000 | 75,000      | 70,564     | 4,436                   | 6%                        | Design work on Coppermine Pump Station and Ludlow Fire Pump closeout work continued in Q4. Completion of Coppermine is deferred to 2024. Overall project within scope and budget.  |
| -         | 200,000     | 486,472    | (286,472)               | -143%                     | Construction work continued in Q4, including increased contract work to address site piping, modified phasing, and excavation and backfill project requirements that exceeded initial project estimates. Overall project is within scope and budget and is expected to be completed by Q2 2024.  |
| -         | 50,000      | 13,820     | 36,180                  | 72%                       | Substantial completion achieved in Q2, project closeout work continued in Q4. Warranty work outstanding to be completed in 2024, overall project is within scope and budget.   |
| 2,065,000 | 70,000      | 158,616    | (88,616)                | -127%                     | Design work continued in Q4 including catchup work from prior quarters. Construction remains expected in 2024. Overall project is within scope and budget.   |
| -         | 1,844,237   | 975,473    | 868,764                 | 47%                       | Construction continued in Q4 with completion deferred to Q1 2024. Project substantially completed Jan 2024, with asphalt and vault chamber work waiting for dry weather. Overall project is within scope and budget.   |
| 325,000   | 209,320     | 284,409    | (75,089)                | -36%                      | Annual Provisional work contracted out to complete the work based on limited internal staff availability due to other commitments, accelerating some 2024 work into Q4 2023. Funding in CD.289 for related work covers overage. Overall project is expected to be within scope and budget.   |
| 180,000   | 180,000     | 79,814     | 100,186                 | 56%                       | Delivery of Ford Transit 350 Cargo Van, road preparation work in Q4. Supply chain issues continue to impact the delivery schedules of vehicles expected in 2023, final vehicle budgeted for 2023 is forecasted to arrive Q1 2024. Overall project is within scope and budget.  |

| Total 2023   |                     |                    |  |            |
|--|---------------------|--------------------|--|------------|
| Total 2023 amended Budget (as per approved budget) | Total 2023 Forecast | Total 2023 Actuals | Total 2023 Forecast Variance \$ (under) / over | % Forecast |
| 3,300,000  | 102,585             | 62,895             | (39,690)                                       | 63%        |
| 995,000  | 970,040             | 825,099            | (144,941)                                      | 18%        |
| 2,800,000  | 58,137              | 10,574             | (47,563)                                       | 450%       |
| 800,000  | 18,000              | 51,570             | 33,570   | -65%       |
| 680,000  | 645,055             | 303,132            | (341,923)                                      | 113%       |
| 623,000  | 618,821             | 604,269            | (14,552)                                       | 2%         |
| 600,000  | -                   | -                  | -  | -          |
| 600,000  | 43,281              | 49,433             | 6,152  | -12%       |
| 510,000  | 18,987              | 18,530             | (457)  | 2%         |
| 2,300,000  | 543,108             | 538,672            | (4,436)  | 1%         |
| 5,000,000  | 4,555,454           | 4,841,926          | 286,472  | -6%        |
| 1,710,000  | 1,707,120           | 1,670,940          | (36,180)                                       | 2%         |
| 3,900,000  | 158,302             | 246,918            | 88,616   | -36%       |
| 5,200,000  | 5,200,000           | 4,331,236          | (868,764)                                      | 20%        |
| 1,300,000  | 1,300,000           | 1,375,089          | 75,089   | -5%        |
| 1,080,000  | 983,728             | 883,542            | (100,186)                                      | 11%        |

| Status of Total Project Plan |        |        |  |
|------------------------------|--------|--------|--|
| Scope                        | Timing | Budget | Notes  |
|                              |        |        | S - on plan<br>T - construction expected in 2026<br>B - on plan  |
|                              |        |        | S - on plan<br>T - completion expected Q1 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - construction expected in 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - completion deferred to 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - completion deferred to Q1 2024<br>B - on plan   |
|                              |        |        | S - on plan<br>T - on plan<br>B - on plan  |
|                              |        |        | S - on plan<br>T - project start deferred to 2025<br>B - on plan   |
|                              |        |        | S - on plan<br>T - completion deferred to 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - construction deferred to 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - Coppermine Pump Station to complete in 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - completion delayed to Q1 2024<br>B - better than plan   |
|                              |        |        | S - on plan<br>T - warranty work to be completed in 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - construction deferred to 2024<br>B - on plan  |
|                              |        |        | S - on plan<br>T - completion deferred to Q1 2024<br>B - on plan   |
|                              |        |        | S - on plan<br>T - 2024 work completed in 2023<br>B - overage funded by funding room in related capital project work |
|                              |        |        | S - on plan<br>T - completion expected Q1 2024<br>B - on plan  |

**Capital Regional District**  
**2023 - Quarter 4 - Capital Plan Report**  
**Projects Greater than \$500,000**

|          |  |
|----------|--|
|          | As planned or better than plan   |
|          | Changes to quarter forecast, no revision to annual plan  |
|          | Change in annual plan  |
|          | Changes to project plan (may result in 2023 Budget Amendment or included in 2024 Capital Plan) |
| <b>R</b> |  |

| Department                       | Service Description                      | Capital Project Title   |
|----------------------------------|--|---|
| Integrated Water Services        | JDF Water Distribution                   | Sooke Henlyn Supply & Distribution Mains                      |
|                                  | JDF Water Distribution                   | SCADA Master Plan Update & Upgrades                           |
|                                  | Regional Water Supply & JDF Distribution | Voice Radio Upgrade   |
|                                  | Regional Water Supply & JDF Distribution | Portable Pump Station   |
|                                  | Seagirt Water System                     | Seagirt Watermain Extension                                   |
|                                  | Saanich Peninsula Treatment Plant        | Trunk Sewer Relining  |
|                                  | Saanich Peninsula Treatment Plant        | Odour Control Upgrade Construction                            |
|                                  | Saanich Peninsula Water Supply           | Hamsterly Pump Station Backup Power Generator                 |
|                                  | Saanich Peninsula Water Supply           | SPW System Upgrade and Expansion                              |
|                                  | Saanich Peninsula Water Supply           | Keating Cross Road Water Main                                 |
| Local Services                   | Maliview Sewer Utility (SSI)             | Wastewater Treatment Plant Upgrade                            |
|                                  | Willis Point Fire                        | Engine 2 Replacement  |
|                                  | Magic Lake Sewer Utility (SGI)           | Pump Station and Treatment Plant Upgrades & Sewer Replacement |
| Parks and Environmental Services | Regional Parks                           | Mayne Island Demonstration Trail                              |
|                                  | Regional Parks                           | Repair GGRT Bridges (5)                                       |
|                                  | Regional Parks                           | Purchase and Install Elk Lake Remediation Systems             |
|                                  | Regional Parks                           | Construct Selkirk Trestle - Phase 1 & 2                       |

| Quarter 4 |             |            |                         |                           |   |
|-----------|-------------|------------|-------------------------|---------------------------|---|
| Q4 Budget | Q4 Forecast | Q4 Actuals | Variance (over) / under | Variance % (over) / under | Q4 Variance Explanation (if necessary)  |
| -         | -           | -          | -                       | 0%                        | DCC funded project based on development predictions. Project to begin when associated housing development work has been completed. Project work expected to be delayed to 2024 as housing development work is not ready for project to start. Overall project is within scope and budget.   |
| 750,000   | 50,000      | 38,570     | 11,430                  | 23%                       | Survey Mountain Tower design and installation work in Q4 and continuing through 2024 as part of a multiple project system upgrade program. The project has experienced delays due to prioritization and the need for alignment between various departments, overall project is within scope and budget.   |
| 300,000   | 300,000     | 102,766    | 197,234                 | 66%                       | Upgrade construction work continued in Q4. Seasonal constraints have delayed some work, and logistical challenges with radio installations has resulted in fewer charges than expected. Completion is expected in 2024, overall project is within scope and budget.   |
| 122,500   | -           | 689        | (689)                   | -100%                     | Engineering work continued in Q4, replacement generator expected to arrive in 2024. Completion deferred to 2024, overall project is within scope and budget.  |
| 2,217,500 | 20,000      | 58,676     | (38,676)                | -193%                     | Design work occurred in Q4 in combination with the AC Replacement Program. Construction forecast to begin in 2024. Overall project is within scope and budget.  |
| 40,000    | 760,000     | 716,851    | 43,149                  | 6%                        | Construction costs continued in Q4. Construction was completed on schedule in 2024 with close out costs to continue into Q1 2024. Overall project is within scope and budget.   |
| 100,000   | -           | -          | -                       | 0%                        | No Q4 activity. Detailed design costs expected to begin Q1 2024, with the construction tender process expected mid-2024. Construction is anticipated to commence in late 2024. Overall project scope and budget will be refined and reviewed once detailed design is complete.  |
| 240,000   | -           | -          | -                       | 0%                        | Project remains on hold due to market cost escalation and the criticality is being reassessed amid the increased cost expectations. Overall project remains within scope.   |
| 425,000   | 25,000      | 5,342      | 19,658                  | 79%                       | Design process work in Q4 as part of a much larger program. Forecasting will become more accurate in detailed design and construction phases. Construction remains anticipated to start in late 2024 or early 2025, overall project is within scope and budget.   |
| 700,000   | 2,500       | 572        | 1,928                   | 77%                       | Q4 costs were for CRD Project Management support to MoTI project. Project work is delayed due to MoTI delay in tendering and awarding contract. CRD will have some minor support effort in 2023, but most of the costs will occur in 2024 as driven by MoTI's project and contractor. Overall project is within scope and budget.   |
| 110,000   | 20,000      | 41,593     | (21,593)                | -108%                     | Q4 variance is due to timing of detailed design that is to be completed in Q1 2024. Fabrication work will begin in Q1 2024, with overall completion deferred to 2025. Overall project is within scope and budget.   |
| -         | 15,000      | 7,418      | 7,582                   | 51%                       | Purchase completed in Q2; road preparation completed in Q4. Overall project is within scope and budget.   |
| 2,580,000 | 1,500,000   | 1,410,044  | 89,956                  | 6%                        | Q4 variance is due to minor timing differences of work performed by contractors. Project scope was reduced in Q2 due to tenders coming in over budget, completion deferred to early 2025, overall project budget is on plan.  |
| 1,235,340 | 1,234,755   | 402,463    | 832,292                 | 67%                       | Project construction continued in Q4. Project was amended in Q3 to reflect increased volume of material to be removed for development of the trail. Project progress is limited in late fall and winter months due to wet conditions and the negotiation of access to private lands certain sections of the trail. Project completion forecast for Q3 2024, overall project is within amended scope and budget. |
| 280,000   | 197,279     | 187,836    | 9,443                   | 5%                        | Bilston Bridges 1 and 2 bridge replacement substantially completed in Q3 ahead of forecast. Project continued in Q4 for minor items. Overall project is ahead of time and within scope and budget.  |
| 150,000   | 262,169     | 7,170      | 269,339                 | 103%                      | Project substantially complete, system commissioned in November 2023, overall project is within scope and amended budget. Final works to be completed in Q1 2024.   |
| 2,138,241 | -           | -          | -                       | 0%                        | No activity in 2023. Project will be combined into the 2024 Trestles Renewal, Trails Widening and Lighting Project. Activity will occur on this new project over 2024-2029.   |

| Total 2023   |                     |                    |  |            |
|--|---------------------|--------------------|--|------------|
| Total 2023 amended Budget (as per approved budget) | Total 2023 Forecast | Total 2023 Actuals | Total 2023 Forecast Variance \$ (under) / over | % Forecast |
| 1,000,000  | -                   | -                  | -  | -          |
| 900,000  | 101,787             | 90,357             | (11,430)                                       | 13%        |
| 1,300,000  | 1,243,810           | 1,046,576          | (197,234)                                      | 19%        |
| 530,000  | 305,649             | 306,338            | 689  | 0%         |
| 2,350,000  | 36,918              | 75,594             | 38,676   | -51%       |
| 1,000,000  | 899,784             | 856,635            | (43,149)                                       | 5%         |
| 1,000,000  | -                   | -                  | -  | -          |
| 1,100,000  | 5,626               | 5,626              | -  | 0%         |
| 1,700,000  | 51,991              | 32,333             | (19,658)                                       | 61%        |
| 900,000  | 11,091              | 9,163              | (1,928)  | 21%        |
| 2,010,000  | 67,980              | 89,573             | 21,593   | -24%       |
| 580,000  | 579,017             | 571,436            | (7,582)  | 1%         |
| 6,130,000  | 2,890,644           | 2,800,688          | (89,956)                                       | 3%         |
| 4,253,400  | 3,571,901           | 2,739,609          | (832,292)                                      | 30%        |
| 1,400,000  | 1,400,000           | 1,390,557          | (9,443)  | 1%         |
| 1,534,000  | 1,534,000           | 1,264,661          | (269,339)                                      | 21%        |
| 3,789,350  | -                   | -                  | -  | -          |

| Status of Total Project Plan |          |          |   |
|------------------------------|----------|----------|---|
| Scope                        | Timing   | Budget   | Notes   |
|                              | <b>R</b> |          | S - on plan<br>T - deferred to 2024<br>B - on plan  |
|                              | <b>R</b> |          | S - on plan<br>T - completion delayed to 2024<br>B - on plan  |
|                              | <b>R</b> |          | S - on plan<br>T - completion deferred to 2024<br>B - on plan   |
|                              | <b>R</b> |          | S - on plan<br>T - completion delayed to 2024<br>B - on plan  |
|                              | <b>R</b> |          | S - on plan<br>T - construction expected in 2024<br>B - on plan                                       |
|                              |          |          | S - on plan<br>T - completion delayed to Q4 2023<br>B - better than plan                              |
|                              | <b>R</b> |          | S - on plan<br>T - construction deferred to 2024<br>B - on plan                                       |
|                              | <b>R</b> | <b>R</b> | S - on plan<br>T - completion delayed to 2024<br>B - to be re-evaluated                               |
|                              | <b>R</b> |          | S - on plan<br>T - construction deferred to 2024<br>B - on plan                                       |
|                              | <b>R</b> |          | S - on plan<br>T - construction deferred to 2024<br>B - on plan                                       |
|                              | <b>R</b> |          | S - on plan<br>T - completion deferred to 2025<br>B - on plan   |
| <b>R</b>                     | <b>R</b> |          | S - Reduced scope<br>T - completion deferred to 2025<br>B - on plan                                   |
|                              | <b>R</b> |          | S - on plan<br>T - completion deferred to Q3 2024<br>B - 2023 Amended, on plan                        |
|                              |          |          | S - on plan<br>T - on plan<br>B - on plan   |
|                              |          |          | S - on plan<br>T - completion deferred to Q1 2024<br>B - 2023 Amended, on plan                        |
| <b>R</b>                     | <b>R</b> | <b>R</b> | S - re-evaluation for 2024 plan<br>T - re-evaluation for 2024 plan<br>B - re-evaluation for 2024 plan |

**Capital Regional District**  
**2023 - Quarter 4 - Capital Plan Report**  
**Projects Greater than \$500,000**

|          |  |
|----------|--|
|          | As planned or better than plan   |
|          | Changes to quarter forecast, no revision to annual plan  |
|          | Change in annual plan  |
|          | Changes to project plan (may result in 2023 Budget Amendment or included in 2024 Capital Plan) |
| <b>R</b> |  |

| Department                       | Service Description               | Capital Project Title                             |
|----------------------------------|-----------------------------------|---|
| Parks and Environmental Services | Regional Parks                    | Vehicle Replacement                               |
|                                  | Regional Parks                    | Purchase of 5 vehicles for new staff              |
|                                  | Regional Parks                    | Design & Construct GGRT 4km - Selkirk to McKenzie |
|                                  | Environmental Resource Management | Cell 4 Liner Installation                         |
|                                  | Environmental Resource Management | Aggregate Production for Internal Use             |
|                                  | Environmental Resource Management | Landfill Gas Utilization                          |
|                                  | Environmental Resource Management | Gas Flare, Candlestick & LFG Blowers              |
|                                  | Environmental Resource Management | Hartland Amenity Project                          |
|                                  | Environmental Resource Management | Contractor Workshop Relocation                    |
|                                  | Environmental Resource Management | Cell 5&6 Gravity Retaining Wall Construction      |
|                                  | Environmental Resource Management | NE & NW Aggregate Stockpile cover                 |
|                                  | Environmental Resource Management | Sedimentation Pond Relining                       |
|                                  | Environmental Protection          | Annual vehicle replacement                        |
| Facilities                       | CRD Headquarters                  | Interior Renovations                              |
| Finance and Technology           | Information Technology            | SAP Migration from ECC to S4                      |
| Facilities                       | Family Court Building             | Mechanical Upgrades                               |

| Quarter 4 |             |            |                         |                           |  |
|-----------|-------------|------------|-------------------------|---------------------------|--|
| Q4 Budget | Q4 Forecast | Q4 Actuals | Variance (over) / under | Variance % (over) / under | Q4 Variance Explanation (if necessary)   |
| -         | 551,725     | 306,456    | 245,269                 | 44%                       | Procurement process has begun, but long lead times for vehicle procurement have delayed the vehicle acquisitions. Four vehicles delivered in Q4. Overall project is within scope and budget.   |
| -         | 540,000     | 173,631    | 366,369                 | 68%                       | Procurement process has begun, but long lead times for vehicle procurement have delayed the vehicle acquisitions. 2 vehicles purchased in late Q4. Overall project is within scope and budget.   |
| 1,006,210 | -           | -          | -                       | 0%                        | No activity in 2023. Project will be combined into the 2024 Trestles Renewal, Trails Widening and Lighting Project. Activity will occur on this new project over 2024-2029.  |
| 2,700,000 | 3,667,483   | 709,689    | 2,957,794               | 81%                       | Cell 4 liner installation occurred in Q4. Majority of installation costs will occur in 2024, with completion deferred to 2024 due to delay in design and tendering. Overall project is within scope and budget.  |
| 763,149   | 645,122     | 80,364     | 564,758                 | 88%                       | Phase 2 Blasting, aggregate removal and crushing continued in Q4. Contractor progress was delayed, because of labour shortage. 2023 phase of multi-year project to be completed in 2024. Overall project is within scope and budget.   |
| 2,585,000 | 3,400,000   | 625,568    | 2,774,432               | 82%                       | Landfill Gas Utilization Electrical Design was conducted in 2023. Manufacturing of major equipment is in progress, with completion and installation deferred to 2024 due to the delay of contractor's work schedule. Multi-year project will end in Q4 2024. Overall project is within scope and budget. |
| 1,610,000 | 1,955,000   | 203,347    | 1,751,653               | 90%                       | Procurement of flares and blower package was conducted in 2023. Majority of construction work deferred to 2024 due to the delay of contractor's work schedule. Overall project is within scope and budget.   |
| 1,100,000 | 247,795     | 30,574     | 217,221                 | 88%                       | Project management and consulting work for the project occurred in Q4 on design and community engagement plan. Majority of construction costs will occur in 2024, with completion deferred to 2024. Overall project is within scope and budget.  |
| 550,000   | 699,105     | -          | 699,105                 | 100%                      | The planned construction of the contractor workshop relocation was not accomplished in 2023 due to delay in design and tendering and is being carried forward to 2024. Overall project is within scope and budget.   |
| 400,000   | -           | -          | -                       | 0%                        | Due to project logistics, the timeline for this project has changed. This project will not occur in 2023 and has been moved to 2024. Overall project is within scope and budget.   |
| 100,000   | -           | -          | -                       | 0%                        | Project work deferred to 2024. Covering the stockpile is not possible until filling / reclaiming from each pile is complete. Overall project is within scope and budget.   |
| 300,000   | -           | -          | -                       | 0%                        | Due to project logistics, the timeline for this project has changed. This project will not occur in 2023 and has been moved to 2025 per the 2024 capital plan. Overall project is within scope and budget.   |
| 395,000   | 133,770     | 135,981    | (2,211)                 | -2%                       | Environmental Protection Fleet Replacements occurred in Q4. Overall project is within scope and budget.  |
| 102,000   | 661,371     | 138,335    | 523,036                 | 79%                       | Reconfiguration work began in Q3 and will continue to Q2 2024. Overall project is progressing on plan and within scope and budget.   |
| 733,000   | 1,213,783   | 1,430,697  | 216,914                 | -18%                      | Project timeline accelerated in 2023 with the installation of network hardware. The project budget may change because of project costing currently underway as the project planning phase continues. Overall project is on time and within scope.  |
| 1,050,000 | -           | -          | -                       | 0%                        | Project is grant dependent and has not as yet received a grant. Overall project is within scope and budget.  |

| Total 2023   |                     |                    |  |            |
|--|---------------------|--------------------|--|------------|
| Total 2023 amended Budget (as per approved budget) | Total 2023 Forecast | Total 2023 Actuals | Total 2023 Forecast Variance \$ (under) / over | % Forecast |
| 615,000  | 615,000             | 369,732            | (245,269)                                      | 66%        |
| 540,000  | 540,000             | 173,631            | (366,369)                                      | 211%       |
| 1,006,210  | -                   | -                  | -  | -          |
| 7,200,000  | 3,761,272           | 803,478            | (2,957,794)                                    | 368%       |
| 6,763,149  | 6,762,372           | 6,197,614          | (564,758)                                      | 9%         |
| 9,600,000  | 6,674,339           | 3,899,907          | (2,774,432)                                    | 71%        |
| 2,610,000  | 2,609,882           | 858,229            | (1,751,653)                                    | 204%       |
| 2,000,000  | 259,453             | 42,232             | (217,221)                                      | 514%       |
| 1,250,000  | 732,678             | 33,573             | (699,105)                                      | 2082%      |
| 750,000  | -                   | -                  | -  | -          |
| 750,000  | -                   | -                  | -  | -          |
| 1,000,000  | -                   | -                  | -  | -          |
| 535,000  | 534,965             | 537,176            | 2,211  | 0%         |
| 1,602,000  | 1,300,278           | 777,242            | (523,036)                                      | 67%        |
| 1,466,000  | 1,487,583           | 1,704,497          | 216,914  | -13%       |
| 1,050,000  | -                   | -                  | -  | -          |

| Status of Total Project Plan |          |          |   |
|------------------------------|----------|----------|---|
| Scope                        | Timing   | Budget   | Notes   |
|                              |          |          | S - on plan<br>T - completion deferred to Q1 2024<br>B - on plan                                      |
|                              |          |          | S - on plan<br>T - completion deferred to Q2 2024<br>B - on plan                                      |
| <b>R</b>                     | <b>R</b> | <b>R</b> | S - re-evaluation for 2024 plan<br>T - re-evaluation for 2024 plan<br>B - re-evaluation for 2024 plan |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2024<br>B - on plan                                 |
|                              | <b>R</b> |          | S - on plan<br>T - project completion deferred to 2025<br>B - on plan                                 |
|                              |          |          | S - on plan<br>T - on plan<br>B - on plan   |
|                              | <b>R</b> |          | S - on plan<br>T - on plan finish Q2 2024<br>B - on plan  |
|                              |          |          | S - on plan<br>T - on plan<br>B - under review  |
|                              | <b>R</b> |          | S - on plan<br>T - deferred pending grant funding<br>B - on plan                                      |



**Capital Regional District**  
**2023 - Quarter 4 - Capital Plan Report**  
**Projects Greater than \$500,000**

|          |  |
|----------|--|
|          | As planned or better than plan   |
|          | Changes to quarter forecast, no revision to annual plan  |
|          | Change in annual plan  |
| <b>R</b> | Changes to project plan (may result in 2023 Budget Amendment or included in 2024 Capital Plan) |

| Department               | Service Description      | Capital Project Title                       |
|--------------------------|--------------------------|---|
| Land Banking and Housing | Land Banking and Housing | RHFP - Prosser Place                        |
| Royal Theatre            | Royal Theatre            | Repair Building Envelope                    |
| McPherson Theatre        | McPherson Theatre        | Repair East Elevation Wall                  |
|                          |                          | <b>Total Projects &gt;\$500k</b>            |
|                          |                          | <b>Total Projects &lt;\$500k; Potential</b> |
|                          |                          | <b>Total Projects</b>                       |

\*Amended Budget as at September 13, 2023 (#Bylaw 4570)

| Quarter 4         |                   |                   |                         |                           |   |
|-------------------|-------------------|-------------------|-------------------------|---------------------------|---|
| Q4 Budget         | Q4 Forecast       | Q4 Actuals        | Variance (over) / under | Variance % (over) / under | Q4 Variance Explanation (if necessary)  |
| -                 | -                 | 2,414             | (2,414)                 | -100%                     | Prosser purchase was executed in early Q2 as forecasted. Residual legal costs incurred in Q4 are related to modification of mortgage.   |
| 150,000           | -                 | 3,043             | (3,043)                 | -100%                     | Project has been scaled back to be a multiyear brick re-pointing program. Limited work on project in Q4, next period of work to occur in 2024. Overall project is within scope and budget.                |
| 2,176,000         | -                 | -                 | -                       | 0%                        | Project Management work performed in Q2. Balance of project is deferred to 2024 pending the analysis of the results of the brick repointing work carried out. Overall project is within scope and budget. |
| <b>60,197,440</b> | <b>26,633,155</b> | <b>13,641,830</b> | <b>12,991,325</b>       | <b>49%</b>                |   |

| Total 2023   |                     |                    |  |            |
|--|---------------------|--------------------|--|------------|
| Total 2023 amended Budget (as per approved budget) | Total 2023 Forecast | Total 2023 Actuals | Total 2023 Forecast Variance \$ (under) / over | % Forecast |
| 17,104,721   | 17,114,323          | 17,116,737         | 2,414  | 0%         |
| 750,000  | 3,580               | 6,623              | 3,043  | -46%       |
| 2,176,000  | 13,116              | 13,116             | -  | 0%         |
| <b>154,200,830</b>                                 | <b>85,351,561</b>   | <b>72,360,236</b>  | <b>(12,991,325)</b>                            | <b>18%</b> |
| <b>73,146,035</b>                                  |                     |                    |  |            |
| <b>227,346,865</b>                                 |                     |                    |  |            |

| Status of Total Project Plan |          |        |  |
|------------------------------|----------|--------|--|
| Scope                        | Timing   | Budget | Notes  |
|                              |          |        | S - on plan<br>T - completed in Q2 2023<br>B - on plan |
|                              | <b>R</b> |        | S - on plan<br>T - deferred to 2024<br>B - on plan     |
|                              | <b>R</b> |        | S - on plan<br>T - deferred to 2024<br>B - on plan     |

**Capital Regional District**  
**2023 - Quarter 4 - Capital Plan Report**  
**Projects Greater than \$500,000**

|   |  |
|---|--|
|   | As planned or better than plan   |
|   | Changes to quarter forecast, no revision to annual plan  |
|   | Change in annual plan  |
| R | Changes to project plan (may result in 2023 Budget Amendment or included in 2024 Capital Plan) |

| Department | Service Description | Capital Project Title |
|------------|---------------------|-----------------------|
|------------|---------------------|-----------------------|

| CRHD                           |                                    |  |
|--------------------------------|------------------------------------|--|
| Planning & Protective Services | Capital Regional Hospital District | Regional Housing First Program Contribution      |
|                                |                                    | <b>Total Projects &gt;\$500k</b>                 |
|                                |                                    | <b>Total Projects &lt;\$500k; Capital Grants</b> |
|                                |                                    | <b>Total Projects</b>                            |

| CRHC                           |                  |                                  |
|--------------------------------|------------------|----------------------------------|
| Planning & Protective Services | Regional Housing | Michigan Redevelopment Housing   |
|                                |                  | Caledonia Redevelopment Housing  |
|                                |                  | Prosser Prepaid Lease            |
|                                |                  | Carey Lane BER                   |
|                                |                  | Campus View Redevelopment        |
|                                |                  | Routine Capital                  |
|                                |                  | <b>Total Projects &gt;\$500k</b> |
|                                |                  | <b>Total Projects &lt;\$500K</b> |
|                                |                  | <b>Total Projects</b>            |

| Quarter 4 |                   |            |                         |                           |  |
|-----------|-------------------|------------|-------------------------|---------------------------|--|
| Q4 Budget | Q4 Forecast       | Q4 Actuals | Variance (over) / under | Variance % (over) / under | Q4 Variance Explanation (if necessary)             |
| -         | 10,000,000        |            | 10,000,000              | 100%                      | Contribution to RHFP forecast to occur in Q2 2024. |
| -         | <b>10,000,000</b> | -          | <b>10,000,000</b>       | <b>100%</b>               |  |

| Total 2023   |                     |                    |  |            |
|--|---------------------|--------------------|--|------------|
| Total 2023 amended Budget (as per approved budget) | Total 2023 Forecast | Total 2023 Actuals | Total 2023 Forecast Variance \$ (under) / over | % Forecast |
| 10,000,000   | 10,000,000          | -                  | (10,000,000)                                   | -          |
| <b>10,000,000</b>                                  | <b>10,000,000</b>   | -                  | <b>(10,000,000)</b>                            | -          |
| <b>14,064,628</b>                                  |                     |                    |  |            |
| <b>24,064,628</b>                                  |                     |                    |  |            |

| Status of Total Project Plan |        |        |       |
|------------------------------|--------|--------|-------|
| Scope                        | Timing | Budget | Notes |

|  |   |  |  |
|--|---|--|--|
|  | R |  | S - on plan<br>T - completion deferred to Q2 2024<br>B - on plan |
|--|---|--|--|

|                   |                   |                  |                  |            |  |
|-------------------|-------------------|------------------|------------------|------------|--|
| 4,415,286         | 4,415,286         | 2,680,001        | 1,735,285        | 39%        | Q4 variance due to materials shortage and timing of construction draws. Completion is expected for Q2 2024. Overall project is within scope and on plan with amended budget.   |
| 6,333,333         | 6,660,129         | 5,565,224        | 1,094,905        | 16%        | Q4 variance due to timing of construction draws, project completion is deferred to 2025. Overall project is within scope and budget.   |
| -                 | -                 | 195,000          | (195,000)        | -100%      | Project management and marketing fees in Q4 related to project close-out with BC Housing.  |
| 575,000           | 1,021,084         | 440,325          | 580,759          | 57%        | Prior quarter delays due to scope increase have pushed construction forward from 2023 to 2024. The Prime contractor mobilized to site in late November and began demolition of existing building envelope.   |
| 1,950,000         | 418,349           | 480              | 417,869          | 100%       | This project remains in the predevelopment phase. Staff are working with the District of Saanich to finalize the housing agreement, which is the final step for rezoning and development permit approval. A project budget update is included on 2024 Capital Plan. Overall project is within scope and remains forecast for completion in 2028. |
| 1,101,632         | 1,101,632         | 1,025,725        | 75,907           | 7%         | Routine upgrades of housing townhouses and apt buildings are affected by tenant moveouts, trades availability, CRHC staff vacancies and weather. Some work scheduled for 2023 will be completed in 2024, overall project within scope and budget.  |
| <b>14,375,251</b> | <b>13,616,480</b> | <b>9,906,755</b> | <b>3,709,725</b> | <b>27%</b> |  |

|                   |                   |                   |                    |           |
|-------------------|-------------------|-------------------|--------------------|-----------|
| 21,461,537        | 16,011,461        | 14,276,177        | (1,735,285)        | 12%       |
| 23,000,000        | 21,419,647        | 20,324,742        | (1,094,905)        | 5%        |
| 13,613,091        | 13,035,027        | 13,230,027        | 195,000            | -1%       |
| 1,200,000         | 1,044,767         | 464,008           | (580,759)          | 125%      |
| 2,500,000         | 445,001           | 27,131            | (417,869)          | 1540%     |
| 4,724,826         | 3,263,625         | 3,187,718         | (75,907)           | 2%        |
| <b>66,499,454</b> | <b>55,219,528</b> | <b>51,509,803</b> | <b>(3,709,725)</b> | <b>7%</b> |
| <b>3,794,684</b>  |                   |                   |                    |           |
| <b>70,294,138</b> |                   |                   |                    |           |

|  |   |   |  |
|--|---|---|--|
|  | R |   | S - on plan<br>T - completion deferred to Q2 2024<br>B - 2023 Amended, on plan   |
|  | R |   | S - on plan<br>T - project completion deferred to 2025<br>B - on plan  |
|  |   |   | S - on plan<br>T - completed in Q2 2023<br>B - better than plan  |
|  | R |   | S - 2023 Amended, on plan<br>T - completion deferred to Q4-2024<br>B - 2023 Amended, on plan   |
|  | R | R | S - on plan<br>T - 2023 work deferred to 2024, completion remains forecast for 2028<br>B - project budget updated on 2024 capital plan |
|  | R |   | S - on plan<br>T - 2023 uncompleted work will be executed in 2024<br>B - on plan   |



Making a difference...together

**APPENDIX H  
HUMAN RESOURCES TRENDS AND CORPORATE SAFETY  
OPEN CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, APRIL 10, 2024**

**1. Workforce Composition and Turnover**

The Chief Administrative Officer submits a Staff Establishment Chart (SEC) annually together with the Financial Plan for consideration of approval by the Board. For 2024 the SEC identifies 786.94 FTE's – 756.94 regular and 30 term positions (with terms ranging from one to five years, with the majority being two years or longer). The CRD also has 510 auxiliary staff, with most of these staff working Parks and Recreation where we see a number of seasonal opportunities. In addition, the CRD engages almost 1,500 registered volunteers to assist in the support of many of its services and programs including volunteer fire services and emergency response and support. 90.1% of the CRD's paid workforce is unionized. The average length of service and average workforce age of CRD staff is 9.1 years and 45.5 years respectively. Turnover rates remain at a healthy rate, and consistent with pre-pandemic norms, with retirements accounting for approximately 21.6% of all employee turnover.

Table 1:

| Corporate CRD Human Capital Performance Metric  | CRD Current (By Quarter 2023)  | CRD Current (Annual 2023) | Industry Average (Annual 2023) | CRD Annual (2022)        | Industry Average (2022)  |
|---|--|---------------------------|--------------------------------|--------------------------|--------------------------|
| Total Unionized Workforce (all staff)           | Q1: 89.8%<br>Q2: 90.2%<br>Q3: 90.4%<br>Q4: 90.1%   | 90.1%                     | 78.9%                          | 89.3%                    | 81.2%                    |
| Average Length of Service (regular staff)       | Q1: 9.2 years<br>Q2-4: 9.1 yrs   | 9.1 years                 | 10.8 years                     | 9.5 years                | 11.1 years               |
| Average Employee Age (regular staff)            | Q1: 45.4 yrs<br>Q2-4: 45.5 yrs   | 45.5 years                | 46.7 years                     | 45.7 years               | 46.7 years               |
| Turnover Rate / Retirement Rate (regular staff) | Q1: 1.4% (0.3% retire.)<br>Q2: 1.6% (0.5% retire.)<br>Q3: 2.9% (0.5% retire.)<br>Q4: 2.4% (0.5% retire.) | 8.3% (1.8% retirements)   | 8.4% (1.7% retirements)        | 11.7% (3.4% retirements) | 11.1% (2.9% retirements) |

**2. Job Opportunities**

At the end of 2023, a total of 352 job postings and 488 individual job opportunities have been posted, with over 5,368 applications received. Currently there are 36 regular positions and 43 auxiliary positions under active recruitment and listed on the CRD’s website, with many of the auxiliary opportunities aligned to upcoming seasonal hirings. To date for 2024, the CRD has received 1,122 job applications for posted positions. The CRD continues to review and modify recruitment strategies and approaches as needed to better attract and retain staff especially in the hard-to-fill market positions.

Significant workplace onboarding and orientation is undertaken for all new employees. In addition to the workplace orientations and required training programs, all new employees attend the regular twice per month onboarding sessions which are geared to inform and engage new staff early in their CRD careers. 208 staff have been put through the program through the end of 2023, and 1,053 employees since this program was implemented.

Table 2:

| Corporate CRD Human Capital Performance Metric | CRD Current (By Quarter 2023)                | CRD Current (Annual 2023) | Industry Average (Annual 2023) | CRD Annual (2022) | Industry Average (2022) |
|--|--|---------------------------|--------------------------------|-------------------|-------------------------|
| <b>Job Opportunities (all staff)</b>           | Q1: 205<br>Q2: 90<br>Q3: 113<br>Q4: 80       | 488                       | N/A                            | 565               | N/A                     |
| <b>Vacancy Rate (regular staff)</b>            | Q1: 2.6%<br>Q2: 2.4%<br>Q3: 2.1%<br>Q4: 2.2% | 2.3%                      | 2.9%                           | 3.3%              | 4.9%                    |

**3. Absenteeism and Occupational Health and Safety**

As an essential service, the CRD closely monitors the impact of absenteeism and takes appropriate measures to ensure essential operations are maintained. The CRD measures and monitors absenteeism by both its sick leave usage and safety ratings and has commenced a comprehensive disability management program aimed at early intervention and proactive and positive return to work programs. The CRD is continuing its proactive disability management efforts to ensure costs of absenteeism are appropriately managed, and employees are actively engaged early in return-to-work measures to aid in their recovery to work from illness, as well as its proactive healthy workplace program focused on providing employees personal tools to keep them healthy.

In 2023, sick leave absenteeism rates were trending consistently with previous pre-pandemic years and remain below industry average. Typically, sick leave absenteeism rates will be higher in Quarters 1 and 4 of a year given higher levels of cold-and-flus in the community. This trend was consistent for 2023.

Table 3:

| Corporate CRD Human Capital Performance Metric   | CRD Current (By Quarter 2023)                | CRD Current (Annual 2023) | Industry Average (Annual 2023) | CRD Annual (2022) | Industry Average (2022) |
|--|--|---------------------------|--------------------------------|-------------------|-------------------------|
| Absenteeism (Illness Leave) Rate (regular staff) | Q1: 5.1%<br>Q2: 3.8%<br>Q3: 1.3%<br>Q4: 4.2% | 3.6%                      | 4.3%                           | 5.1%              | 5.8%                    |

With our proactive focus on safety, absences related to workplace illness or injury remain far below those of industry. This has also resulted in the CRD being in a positive (merit) position with WorkSafeBC resulting in a lower-than-industry Employer Rating Assessment (ERA). The ERA is the premium WorkSafeBC charges employers based on their claims experience over the previous three-year period.

WorkSafeBC base rates for the industry continue to increase, and by more than 70% since 2018 (from 1.87% to 3.19%). Despite this base trend, the CRD’s Actual ERA (“Net Rate”) has been consistently below the rate for industry as a result of our proactive and diligent safety program. For 2024, the CRD’s Net Rate with WorkSafeBC, Inclusive of our industry leading Certificate of Recognition (CoR) certification, is 47% below the base rate for the industry for 2023, which corresponds to a 47% savings in WorkSafeBC premiums over the base industry assessment.

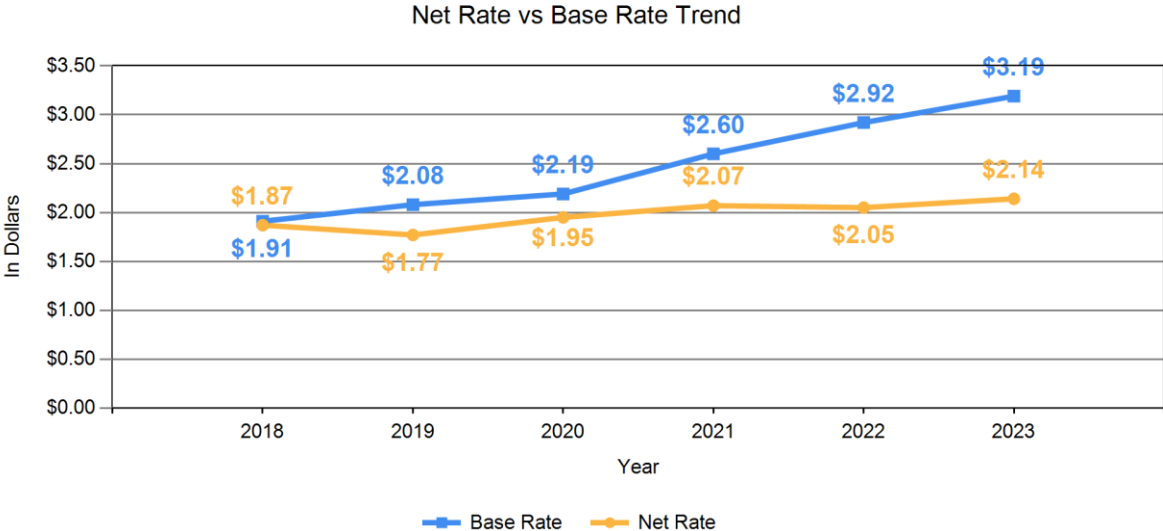
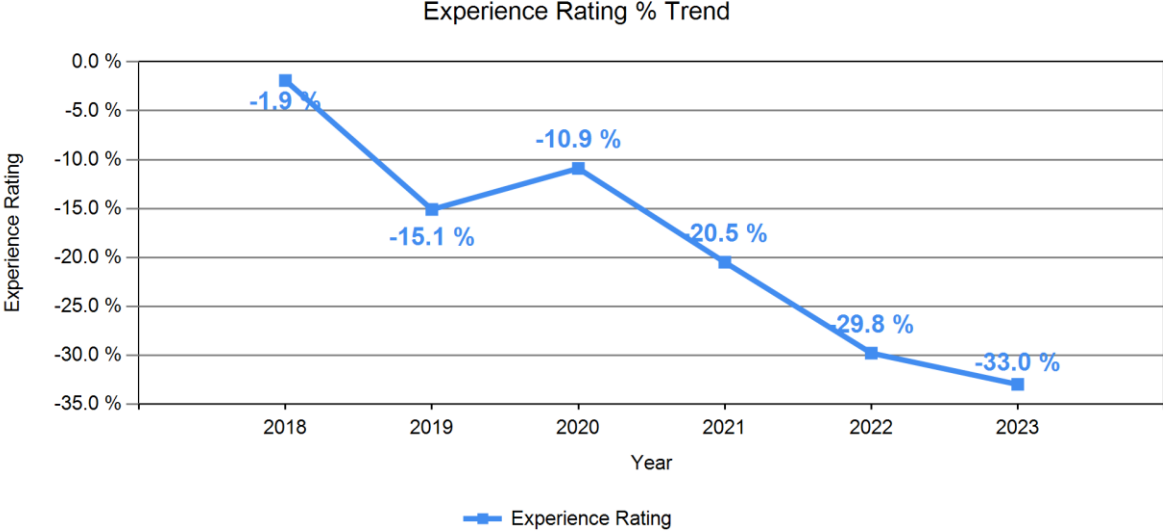
Table 4:

| Corporate CRD Human Capital Performance Metric | CRD Current (By Quarter 2023)   | CRD Current (Annual 2023)  | Industry Average (Annual 2023)   | CRD Annual (2022)           | Industry Average (2022) |
|--|---|--|----------------------------------|-----------------------------|-------------------------|
| WorkSafeBC Employer Rate (all staff)           | All 2023 = 2.14% less 10% <sup>1</sup><br><br>Q1 2024 = 2.41% less 10% <sup>1</sup> | 2023 = 2.14% less 10% <sup>1</sup><br><br>2024 = 2.41% less 10% <sup>1</sup> | 2023 = 3.19%<br><br>2024 = 3.83% | 2.05% less 10% <sup>1</sup> | 2.92%                   |

<sup>1</sup> an addition 10% reduction in assessed premiums is applied to the assessed rate, as a result of the CRD’s Certificate of Recognition program and designation.



Table 5:

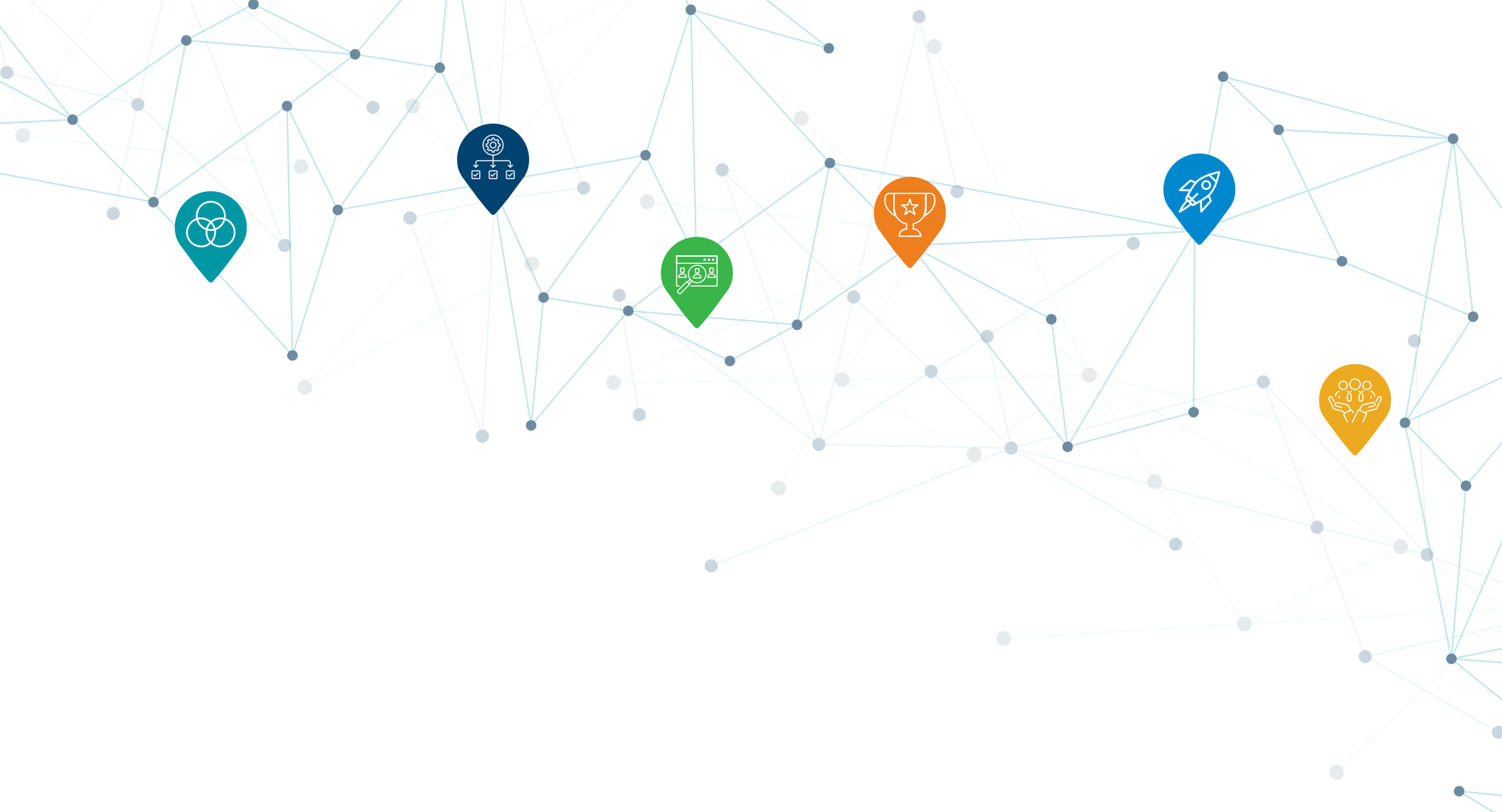


**4. Awards and Recognition**

In 2023, and for the fourth consecutive year, the CRD was recognized as one of the safest employers in Canada as the recipient of the 2023 Canada’s Safest Employers Award - Public Sector/Non-Profit Employer as an Excellence Awardee.

**CONCLUSION**

The CRD continuously monitors human resource organizational health, and proactively modifies and adapts human resource programs and systems where trends may show challenges arising. While there continues to be no significantly concerning organizational health trends based on metrics information, the CRD continues to monitor environmental factors affecting the workplace and workforce closely and adapt workplace practices and programs to continue to ensure essential services are maintained.



# People, Safety & Culture Strategic Plan

2024-2027



Making a difference...together



## Territorial Acknowledgement

The CRD conducts its business within the traditional territories of many First Nations, including but not limited to BOKÉCEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?aht (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, STÁUTW (Tsawout), T'Sou-ke, WJOLEŁP (Tsartlip), WSIKEM (Tseycum), and x<sup>w</sup>sepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.



## 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 government partners to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure, while continuing to provide core services to residents throughout the region.

**People, Safety & Culture Services** are delivered across the organization to nurture a culture where employees feel safe, valued and accepted, and where they have opportunities for growth and professional development. We support programs that are essential to the health and wellbeing of our employees, and we support managers and supervisors with a range of functions and services as they seek to attract, hire and retain talented individuals. People, Safety & Culture services are critical in ensuring organizational resilience by building a culture that is engaged, responsive, adaptive and aligned with corporate priorities and our service delivery mandate.

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# Executive Summary – a message from the Senior Manager



On behalf of our People, Safety & Culture (PS&C) team, previously the Human Resources and Corporate Safety team, I am pleased to present you with the 2024-2027 People, Safety & Culture Strategic Plan. The development of our strategic plan was a collaborative process involving staff and stakeholders, and is intended to help shape key organizational initiatives and requirements within PS&C over the next four years.

As an organization, the CRD is constantly facing exciting challenges and opportunities, and we must continually review and adjust to meet the needs of our partners and our citizens. With our strong foundation of hard working and dedicated staff who truly want to make a difference, the CRD continues to be recognized as a leader in local government and an organization of choice.

Over the next four years, while continuing to deliver key services that enhance our people and organizational culture everyday, key areas of focus will include:

- **Equity, Diversity, Inclusion & Accessibility.** We work to foster and promote an inclusive and equitable work environment for employees and the diverse community the CRD serves.
- **Organizational Capacity.** We work to enhance organizational capacity by implementing and improving programs, systems and business processes to create more organizational capacity or to free up existing capacity currently taken up by tasks and activities which could be delivered more efficiently.

- **Talent Excellence.** We work to support employees on their professional development journey by offering varied, engaging and quality opportunities to learn and improve their skills and knowledge.
- **Employee Experience & Recognition.** We work to enhance employees' experience while they are a part of the CRD community and to build a culture of trust, safety, connectivity and belonging.
- **Talent Acquisition.** We work to provide hiring managers with consistent guidance and advice related to talent recruitment and selection, with a drive towards employing and retaining a qualified and diverse workforce that delivers essential services to the capital region.
- **People, Safety & Culture Excellence.** We work and are committed to being collaborative advisors and capacity builders for all areas of the organization and we strive to continuously improve the way we work to deliver timely, effective and quality service to all customers; and to continuously improve organizational compliance and any related processes to ensure the organization meets all legal and statutory obligations.

We recognize our plan is not static and will be adapted from time to time, as needed, to continue to meet the needs of our people, our services, and the communities we serve. As a team, we are committed to serving our organization and its people with professionalism and excellence, and we are excited about our future and the journey we as staff are all on together.

We are very excited about our plan for the next four years and look forward to continuing to make our region the best place to live and work.

**Chris Neilson, MBA, CPHR**  
Senior Manager, People, Safety & Culture





# Context

# Strategy Alignment

The CRD exists to foster cooperation in the region and contribute to creating a livable, sustainable and resilient region for generations to come. We do this by embracing collaboration, innovation, and by being leaders in service delivery.

The Corporate Plan presents the work the CRD needs to deliver over the four year Board term, along with the regional, sub-regional and local services, to meet the region’s most important needs and advance the Board’s vision and priorities.

The People, Safety & Culture Strategic Plan nestles under and supports the Corporate Plan, is in alignment with other corporate strategies and plans, and has the following target outcome:

| Community Need         | People   |
|------------------------|--|
| <b>Desired outcome</b> | An organization staff are proud to be a part of                    |
| <b>Goal</b>            | 11a: Equity, diversity & inclusion<br>11b: Organizational capacity |

**People, Safety & Culture initiatives in the Corporate Plan**

- Develop and implement an organizational accessibility plan that is informed by residents and an Accessibility Advisory Committee.
- Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies.
- Create and implement an Indigenous Employment Strategy in partnership with local Indigenous communities and Indigenous serving organizations.
- Advance the Human Resource Strategic Plan to guide organizational capacity and continuity, workforce planning and retention, and corporate safety.
- Maintain and enhance corporate compliance and alignment with workplace safety legislation.
- Continue supporting the CRD Leadership Development Program.
- Evaluate the effectiveness and impacts of the workplace flexibility and Alternative Work Options implementation on the organization and staff.

# Mission

## PEOPLE, SAFETY & CULTURE

Through strategic partnerships and collaboration, our purpose is to build and nurture a culture where individuals feel accepted and supported by colleagues and where there is a commitment to a healthy and safe work environment.

We enable everyone to realize their potential by offering varied opportunities for continuous learning and growth, and we help build the organization's reputation as a place where work is fulfilling, connections are plentiful, and everyone's contributions are valued, inclusive and foster two-way dialogue.

A mission statement is a concise description of organizational purpose, intention and objectives.

The Communications mission statement is aligned with the [CRD Mission](#) and the [Board and Organizational Visions](#).



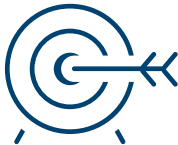
# Values

Our values capture what motivates us and our intentions. They are aligned to the CRD Cultural Traits which reflect what the broader organization values and the behaviours and mindsets all employees strive to demonstrate and apply throughout their work.



### LEAD THE WAY

We strive for the CRD to be viewed as an employer of choice in our region as a result of our exceptional employment practices.



### OWN THE OUTCOME

We are responsible for our actions and deliver our services fairly, professionally and transparently.



### EMBRACE CHANGE

We adjust to meet the ever-changing needs of an evolving society openly.



### WORK COLLABORATIVELY

As we support all areas of the organization, we are often positioned to identify and foster opportunities for collaboration across the CRD.



### DEVELOP EMPLOYEE EXCELLENCE

We provide our clients with the opportunities, skills, knowledge, and resources to best be able to accomplish their goals individually and collectively.



### SERVE THE CUSTOMER

As an organization, the CRD serves the people of this region. As a division, we are of service to the people who make up the CRD. We approach our service with respect, humility, compassion, and integrity.

# Guiding Principles

Our guiding principles act as our guardrails. They describe what is considered when we make decisions about our work or set organizational standards. This framework applies in all circumstances and sets the direction for our approach in the workplace.

The principles below appear in no particular order.

- Employee and organizational wellbeing guides decisions we make
- We strive to provide excellent customer service
- Ongoing learning, professional growth and recognition is central to employees' experience at the CRD
- We are committed to fair and respectful interactions and processes that meet the highest ethical, statutory and professional standards
- We lead by example and role model the behaviours and mindsets that we want to see in others (the cultural traits)
- We strive to communicate at the right time, in the right way and we encourage employees to share their thoughts openly, reflect on their input and adapt our strategies and tactics accordingly



# Audiences

The People, Safety & Culture Strategic Plan has been developed to provide transparency and accountability for the vision for strategic human resources and occupational health and safety at the CRD.

The plan may be of interest to:

- The CRD Board
- The Executive Leadership Team
- All CRD employees

The plan captures the goals and actions that will be led by the PS&C division over the next four years to enable colleagues across the CRD to reach their goals while keeping pace with organizational growth. It also offers insights to all staff about changes to come in the next four years, and how this might affect them and, where applicable, their employees and divisional capacity.

In many instances, the successful delivery of actions will also depend on CRD staff's capacity and ability to participate in the delivery of the proposed actions and, working collaboratively with PS&C, change associated processes, systems and ways of working.

# The Team

The People Safety & Culture division provides professional in-house services to all departments and divisions of the CRD.

The professionals in the division function as both generalists and specialists in the fields of human resources and corporate safety to:

- support strong relationships between employees and managers
- provide a one-stop professional shop with the information, tools, advice and support needed to align individual and organizational success
- ensure a healthy and safe workplace and workforce
- be proactive and responsive to the ongoing and changing needs of our vibrant organization



# Situational Analysis — Human Resources

The situational analysis provides a comprehensive assessment of the internal and external factors that influence the human resources landscape — a landscape which is constantly changing, evolving and being reshaped, and one for which we must continuously evaluate and adapt. By examining these factors, we can strategically align our efforts to effectively meet the needs of the region.

As an organization responsible to our local partners and citizens, there is a strong expectation that we continue to demonstrate responsible fiscal management, provide innovative service delivery and ongoing professionalism. As with governments in general, there is a continued expectation for openness and to provide high-quality value for the taxpayer dollar. Our commitment to these principles remains.

The CRD's success depends on talented and committed employees who have the knowledge, skills and resources to make a difference every day. With approximately 1,200 employees, 1,500 volunteers, two unions and one management association, ensuring the right people are in the right jobs with the right skills requires responsive and strategic human resources systems and support.

Through several hundred individual job opportunities every year, the CRD provides career growth opportunities for employees and brings in new talent as needed. Talent excellence (training and development) is a key component of the People, Safety & Culture Strategic Plan so we ensure employees have the skills and competencies to support CRD success now and in the future. We want employees to value their employment at the CRD and willingly contribute their time, energy, creativity and hard work. The outcome is a safe, inspiring, healthy and progressive workplace with rewarding work, strong leaders and a reputation for results.

# Services

At the CRD, our employees are the foundation of our success and we value each phase of our employee lifecycle. We accomplish this through the provision of a number of key services, including the following:

## **TALENT ACQUISITION SERVICES**

Responsible for a variety of activities to assist in attracting, selecting, promoting and retaining the best qualified employees who will enhance the potential of the organization to meet the current and future needs of our residents and other customers. On average, approximately 325-350 job competitions, and 525-575 job opportunities are run through PS&C annually.

## **LABOUR RELATIONS SERVICES**

Provide advice and information on Legislative and Collective Agreement matters to enable departments to meet their objectives in delivering high quality service at a reasonable cost with an understanding of all involved: Board, management, union, employees and the public at large. There are two unions at the CRD – Canadian Union of Public Employees (CUPE) and United Steelworkers (USW) – and one Managerial and Professional Association.

## **COMPENSATION SERVICES**

Develop, monitor and enhance defined compensation programs to ensure that employees are compensated and rewarded for their productivity and accomplishments in a fair, equitable and competitive manner while also balancing fiscal accountability and responsibility.

## **BENEFITS SERVICES**

Provide quality management and administration services to all employees for a range of employee benefit plans, meeting organizational and individual needs in a cost effective and efficient manner. Over 700 regular staff participate on CRD benefit plans, plus additional staff who access mandatory pension plan arrangements.

## **ABILITIES MANAGEMENT AND WELLNESS**

Provide abilities management and wellness programs including proactive tools and resources to keep employees engaged on the job and healthy and safe in the workplace, and to quickly return employees back to work when they may be unable to temporarily be at the workplace.

## **COACHING & EMPLOYEE PERFORMANCE MANAGEMENT**

Provide quality advice and professional consultative services to managers, supervisors and employees on the CRD Performance Management program. High internal succession, more difficult external recruitment and a younger overall workforce mean more leadership development, mentorship and coaching support is being provided for new and emerging leaders.

## **CORPORATE/ORGANIZATIONAL DEVELOPMENT SERVICES**

Work with departments to ensure optimum organization structures, systems and processes are in place that continues cohesive alignment of Departmental Service, Operating and Workforce Plans with the People, Safety & Culture Strategic Plan, and the Corporate Plan.

## **LEARNING AND DEVELOPMENT**

Develop, coordinate and deliver cost-effective training programs which enable employees to acquire and maintain the skills necessary to meet/exceed current and future organizational needs. On average, 50 key corporate-wide learning and development programs are offered annually.

### **HUMAN RESOURCES INFORMATION SYSTEMS, RECORDS AND POLICY**

Maintain all employee records for approximately 1,200 employees and contractors. Maintain PS&C management information system to facilitate the work of the department and the organization. Process approximately 2,000 Human Resources Information System (HRIS) transactions annually. Develop and continuously review policy to effect excellence in our people, processes, and regulatory requirements. As of December 2023, there are over 50 core policies being actively managed through PS&C.

### **EMPLOYEE ENGAGEMENT**

Develop, lead and embed Equity, Diversity, Inclusion and Accessibility into systems, policies, and procedures. Lead, support and collaborate with other areas of the organization to the success of employee centric corporate initiatives and events including Employee Experience Surveys.

More information about CRD policies, forms and other supporting documents can be found through the [HR Toolkit](#) on CRD Central.



# Trends

The CRD is constantly facing exciting challenges and opportunities, and we must continually review and adjust to meet the needs of our partners and our residents. With our strong foundation of hard working and dedicated staff who truly want to make a difference, the CRD continues to be recognized as leaders in our field and an organization of choice.

Changing workplace and society demographics have significant impact on the nature of PS&C programs and focus. We are seeing an increase in workplace retirements, more emphasis being placed on employee transitional and family needs, an acceleration of workplace and technological change, shifting economic growth and increased cost of living, very low unemployment and more job competition, and an increased reliance on employee goodwill. Therefore, proactive recruitment, retention, workforce and succession planning, recognition, and learning and development initiatives are paramount to ensure the continued success of the organization.

While staff turnover is at a healthy rate, there are currently pressures associated with staff retirements. The average worker age at the CRD suggests that we will continue to see significant numbers of retirements. With higher levels of

retirements come significant staffing pressures, most notably at the senior staff levels where accountabilities to continue to deliver high levels of service remains, regardless of resource turnover. In addition, periods of transition, change and doing more-with-less increases pressure to labour dynamics in the workplace.

The CRD, like many successful organizations, is continuously evaluating and refocusing how it does its business, including rationalizing resources, reorganizing work activities, and investing in employees to ensure viability and vibrancy for the future. With this comes the need to be more transparent and inclusive for the workplace not only to understand changes in direction, but to embrace and shape it for the future.

# Achievements

Over the last few years, the PS&C team:

- Led the CRD's recognition of Best in BC and Greenest Employers' Awards
- Continued to strengthen relationships with clients, with a focus on building trust
- Met the expected service levels despite significant resourcing challenges and upheaval during the COVID-19 pandemic
- Supported the successful negotiation of a new collective agreement in 2022, while avoiding collective action
- Delivered a new Employee Experience Survey in 2023 and is leading the way in supporting the organization with action planning and implementation of recommendations
- Supported, participated in and actively managed the roll out of the CRD's new Alternative Work Options program initiated in June 2023
- Celebrated and honoured the 2SLGBTQIA+ communities by participating in the 2023 Pride Parade
- Continued to welcome new employees to the CRD through the Welcome to the CRD training program
- Supported staff's ongoing learning by providing a robust training calendar which includes options for remote learning
- Successfully aligned our Board and Exempt staff remuneration plans through its regular review of the market
- Successfully negotiated our collective agreements with the USW and CUPE, and the transition agreement of the USW to CUPE



# Situational Analysis — Corporate Safety

The provincial *Workers Compensation Act* and Occupational Health and Safety (OH&S) Regulation hold employers responsible for protecting employee health and safety. Enforcement of the legislation is carried out by WorkSafeBC and, in some cases, Technical Safety BC. Many basic elements (e.g. rights and responsibilities of workers, responsibilities of employers, supervisors, etc.) are similar in all the jurisdictions across Canada. However, the details of the OH&S legislation and how the laws are enforced vary by jurisdiction. The CRD has a legal responsibility to comply with all legislative and regulatory requirements, as well as guidelines and supporting policies.

An OH&S program includes an action plan designed to maintain compliance with the legislation and prevent incidents and/or occupational diseases in the workplace, and the elements required by the health and safety legislation as a minimum. Such a program is technically a compliance management system.

A compliance management system is a framework that integrates essential structures, policies, processes, and procedures to achieve the desired compliance outcomes and act to prevent, detect and respond to non-compliance. Compliance management systems are multi-dimensional. For example, some aspects are designed to support desired behaviors or prevent undesirable behaviors, while other aspects monitor the organization's compliance performance and provide alerts for non-compliance instances.

The CRD OH&S Program Elements are based on the Plan, Do, Check, Act safety model and has 14 best practice elements. When designing its OH&S program, the CRD drew from best practice standards including the International Standard for Compliance Management Systems<sup>1</sup> and the WorkSafeBC/BC Municipal Safety Association OH&S Certificate of Recognition standard.

In addition to the OH&S Program Elements, PS&C has also implemented over 30 supplementary safety programs to identify, assess, eliminate, or control all unique hazards in the work environment. The CRD is also supported by an OH&S Policy, a statement of principles and general rules that guides action. Senior management is committed to ensuring that the policy is carried out with no exceptions.

<sup>1</sup> ISO 37301: 2021(E)

# Services

The CRD's safety record continues to be a strong part of the corporate culture and the organization remains in a merit position—meaning better than industry average—with WorkSafeBC. Changes in workforce demographics and in safety legislation mean that safety will continue to be a key focus in the years to come.

Safety services include:

## › OH&S PROGRAM AND COMPLIANCE MANAGEMENT

Developing and implementing supplementary safety programs; continuous improvement of the current OH&S Program; maintaining the Safety Management Centre information and systems; enforcing OH&S legislation; resolving OH&S concerns, disputes and issues; conducting and supporting workplace inspections; and monitoring CRD department safety programs.

## › ABILITIES AND MANAGEMENT

Lead the CRD's corporate safety initiatives and programming, including Return to Work and Stay at Work programs.

## › INCIDENT INVESTIGATIONS

Providing professional expertise, leadership, and support for workplace incident investigations, including conducting those which are serious in nature; ensuring the timely implementation of corrective and preventative actions with supervisors and managers.

## › TRAINING, EDUCATION AND RESEARCH

Promoting effective training, education, and research; collecting and analyzing health and safety statistics; providing health and safety education and training; and conducting research on special problems.

## › SUPPORTING A SAFETY CULTURE

Attending and providing expert support to health and safety committees and meetings as a professional resource; disseminating information to improve health and safety in the workplace; advising all workers on health and safety matters; and coordinating interdepartmental health and safety activities.

# Trends

Employees expect more than ever from their organizations, particularly from their organization’s health and safety programs. In recent years, we have seen a number of emerging trends that the CRD is working on staying current with.

## ➤ **WORKPLACE HEALTH & SAFETY LEGISLATION**

There are continuous changes in workplace legislation. WorkSafeBC releases frequent announcements on law and policy changes. The PS&C team stays current with these changes and communicates any applicable updates to those affected to ensure continued compliance.

## ➤ **PSYCHOLOGICAL SAFETY & MENTAL HEALTH**

While physical safety is still high on the list of priorities for organizations, psychological safety, mental health and wellness are the topics that have been most frequently raised and discussed in recent years. Mental health is slowly being destigmatized and more attention is being paid to how psychological safety affects employees in the workplace. Approaching a subject as sensitive as mental health in the workplace can feel intimidating, but it is necessary to create a positive and holistically safe work environment.

## ➤ **SAFETY BEYOND THE TRADITIONAL WORKPLACE**

Workplace safety is not limited to protecting employees in an on-site facility. The scope of employee safety is stretching to include remote work locations, such as working from home. The CRD has responded to these changes by introducing the Alternative Work Options program in June 2023. PS&C has responded to this change by ensuring that legislative requirements are still being met with respect to office ergonomics and working alone or in isolation.

## ➤ **SAFETY CULTURE**

Fostering a positive workplace safety culture has been a trend for several years. Workplace safety is about creating a top-down culture that prioritizes safety. A leadership team that is cohesively aligned with safety is critical to achieve a strong safety culture. Raising the standards for safety training is also critical in striving for a strong safety culture. Making certain training mandatory is key to ensuring sure that safety procedures are top of mind and employees have a robust understanding of their responsibilities.

Safe employees are the CRD’s best investment for long-term success. By implementing these safety trends into our existing safety program, we aim to see a boost in our employees’ trust and effectiveness—and the CRD’s overall growth. The impact of our work will be measured through the CRD Employee Experience Survey, among other ways .

More information about CRD OH&S policies, forms and other supporting documents can be found through the Corporate Safety Toolkit on CRD Central.



# Achievements

## ➤ DESIGN AND IMPLEMENTATION OF A 14 ELEMENT BEST PRACTICE OH&S PROGRAM

With over 30 Supplementary Safety Programs. Establishment of eleven Joint Health & Safety Committees and a Corporate Safety Coordination Committee.

## ➤ CERTIFICATE OF RECOGNITION (COR) IN OH&S ACHIEVED IN OCTOBER 2021

WorkSafeBC COR was achieved through our industries' certifying partner, BC Municipal Safety Association (BCMSA). This provides a 10% annual discount in our Assessment Rate.

## ➤ BCMSA – 2021 SAFETY IMPROVEMENT AWARD

This award is based on employer's experience rating. To be eligible the CRD had to have a reduction of 15 percentage points or more in the past four years with the current experience rating no greater than +20%. The CRD received a 20.5% discount from WorkSafeBC in 2021.

## ➤ BCMSA – 2022 ORGANIZATIONAL EXCELLENCE AWARD

To be eligible, an organization must meet one of the two following criteria:

- 1) the current experience rating is in a discount position with a consistent experience rating discount of 20% or more over a three-year period, or
- 2) a reduction of 20 percentage points in the past four years and has to be in a discount by the end of the most recent three-year period. The CRD received a 29.8% discount from WorkSafeBC in 2022 and a 33% discount in 2023.

## ➤ BCMSA – 2022 OCCUPATIONAL HEALTH AND SAFETY LEADERSHIP AWARD

Awarded to the CRD's Manager of Corporate Safety.

## ➤ CANADA'S SAFEST EMPLOYERS 2022

The CRD was a 2022 Excellence Awardee under category Canada's Safest Public Sector/Non-Profit Employer.

# Managing compliance with the CRD Occupational Health & Safety Program

PS&C works to continuously improve the compliance management system, including the processes needed and their interactions, in accordance with the requirements of this document. The CRD OH&S Program reflects the organization's values, objectives, strategy, and compliance risks, taking into account the context of the organization.

## COMPLIANCE FUNCTION

The PS&C compliance function is responsible for the operation of the compliance management system including the following:

- maintaining the system in compliance with ISO Standard 37301, the Workers' Compensation Act of BC, the BC OH&S Regulations, Guidelines and Policies
- facilitating the identification of compliance obligations
- documenting the compliance risk assessment
- aligning the compliance management system with the compliance objectives
- monitoring and measuring compliance performance
- analyzing and evaluating the performance of the compliance management system to identify any need for corrective action
- establishing a compliance reporting and documenting system
- ensuring the compliance management system is reviewed at planned interval
- establishing a system for raising concerns and ensuring that concerns are addressed

The compliance function exercises oversight that ensures:

- responsibilities to achieve identified compliance obligations are appropriately allocated throughout the organization
- compliance obligations are integrated into policies, processes and procedures
- all relevant personnel are trained as required
- compliance performance indicators are established

Aligned with best practice and ISO 37301 Compliance Management Systems, to ensure compliance is maintained the CRD ensures that PS&C is:

- provided access to:
  - senior decision-makers and the opportunity to contribute early in the decision-making process, including those who may be in the most authority to act as needed
  - all levels of the organization (departments and divisions)
  - all personnel, documentation, and data as needed
  - expert advice on relevant legislation, regulations, guidelines, policies, codes and organizational standards
- not purposely conflicted by organizational structure or elements
- has authority and is authorized to direct actions as necessary to ensure compliance
- not put in a conflict between ensuring compliance and personal desires of leaders or staff.

The compliance function shall provide personnel with access to resources on compliance policies, processes and procedures, and provide advice to the organization on compliance-related matters. The specific duties of the compliance function do not relieve other personnel of their responsibilities for compliance under the BC Workers' Compensation Act, OH&S Regulations, Guidelines and Policies.



# Strategic Priorities

The PS&C division have identified six strategic priorities. These capture the most important and pressing areas of focus over the next four years, and will address organizational and divisional challenges and opportunities.

For each priority, the division has identified the specific goals and actions it intends to take. Additional or alternative goals and actions may be identified in future years to remain aligned to emerging changes to the CRD's operating context and/or priorities.

- 1 Equity, Diversity, Inclusion & Accessibility
- 2 Organizational Capacity
- 3 Talent Acquisition
- 4 Employee Experience & Recognition
- 5 Talent Excellence
- 6 People, Safety & Culture Excellence



## Equity, Diversity, Inclusion & Accessibility

We work to foster and promote an inclusive and equitable work environment for employees and the diverse community the CRD serves. We promote a diverse, inclusive, and accessible workplace and, when necessary, we conduct fair and sound investigations so that employees and the community feel respected and valued.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Promote a workforce that reflects the diversity of the community the CRD serves
- b. Create a work environment that embraces and values diversity, inclusion and belonging
- c. Foster awareness and understanding of the CRD's commitment to equal employment opportunities and the prevention of harassment and discrimination in the workplace

### ACTIONS >>

- 1 Develop an overall EDI Strategy for the CRD to set an overarching vision and goals, and coordinate EDI efforts across divisions
- 2 Review internal policies and practices with an Equity, Diversity, Inclusion & Accessibility (EDIA) lens
- 3 Enhance existing training courses and develop and facilitate the delivery of additional learning opportunities for staff to create a common understanding of EDIA, including literacy and terminology, understanding of unconscious bias and other topics that support respectful workplaces, policy and inclusive practices
- 4 Work with the Equity, Diversity & Inclusion (EDI) working group and steering committee to identify ways to promote equity, diversity and inclusion, and increase cultural competency among all staff
- 5 Work with the Accessibility Advisory Committee to identify barriers of access to CRD services and programs for persons with disabilities in the community and recommend solutions for consideration by the CRD
- 6 Develop an employee demographic data collection program to monitor progress on promoting and supporting a diverse workforce



## Organizational Capacity

Organizational capacity is made up of the skills, abilities and expertise available within the organization. It is our collective ability to perform work and achieve goals. We work to enhance organizational capacity by implementing and improving programs, systems and business processes to create more organizational capacity or to free up existing capacity currently taken up by tasks and activities which could be delivered more efficiently (e.g. through automation, process improvements or better data).



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Expand and leverage technological, systems and processes capabilities and usage across a range of activities to support managers in making better talent and safety compliance decisions
- b. Facilitate a community of practice to encourage cross-divisional learning and sharing of best practices in relation to human resources and corporate safety
- c. Ensure the organizational structure enables sufficient and effective cross departmental/divisional service supports

### ACTIONS >>

- 1 Complete the implementation of SuccessFactors Recruitment and Onboarding modules, including delivering training for end users
- 2 Promote, support and leverage SuccessFactors to improve and enhance workflow efficiency and workforce analytics
- 3 Prepare for and implement the SuccessFactors Talent Suite module — Learning Management System, Performance & Goals, and Succession & Development
- 4 Sustain the momentum on the ongoing roll out of the Safety Management Centre and promote broad organizational use
- 5 Establish a community of practice for People, Safety & Culture to facilitate cross-divisional learning and sharing of best practices
- 6 Empower employees and managers to make good decisions and self-serve by expanding resources available on CRD Central
- 7 Support the organization in modernizing the collective agreements through bargaining, and the exempt staff terms and conditions alignment through the exempt staff compensation plan review, to enhance organizational capacity and resilience
- 8 Support organizational realignment that improves business function alignment, including the implementation of organizational structures that enables the CRD to realize capacity through more efficiency.





## Talent Acquisition

We work to provide hiring managers with consistent guidance and advice related to talent recruitment and selection, with a drive towards employing and retaining a qualified and diverse workforce that delivers essential services to the capital region.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. We strive to ensure the right talent is in the right place at the right time by creating robust organizational recruitment strategies that are reflective of the goal to promote a diverse workforce and a work environment that is culturally safe
- b. Strengthen strategic partnerships with educational institutions, professional associations, community organizations and Indigenous partners to attract diverse talent
- c. Provide staff with varied development opportunities and celebrate their work and their successes to make them want to continue their careers at the CRD (connected to Employee Experience & Recognition)

### ACTIONS >>

- 1 Continue ongoing work with Corporate Communications to expand branding, marketing and proactive recruitment efforts, and enhancing employee communications
- 2 Develop marketing and social media strategies with Corporate Communications to promote the CRD as an employer of choice
- 3 Develop the CRD's Employee Value Proposition
- 4 Utilize data analytics to measure success of advertising and outreach efforts
- 5 Enhance the career page of crd.bc.ca in collaboration with departments
- 6 Develop an implementation plan for the Indigenous Employment Strategy
- 7 Develop a comprehensive Talent Acquisition Strategy and collaborate with internal departments to develop additional, focused strategies to address unique recruitment challenges
- 8 Encourage staff to progress their careers and enhance their skills and abilities while at the CRD by promoting internal temporary opportunities
- 9 Identify opportunities to publicly showcase and celebrate staff achievements and successes with Corporate Communications
- 10 Expand proactive recruitment efforts and networking opportunities for staff through career fairs and other collaboration opportunities with strategic partners



## Employee Experience & Recognition

We work to enhance employees' experience while they are a part of the CRD community and to build a culture of trust, connectivity and belonging. We strive to achieve this:

- i. By promoting adaptable ways of working and maximizing wellness programs to ensure that employees feel part of a supportive, connected organization.
- ii. By supporting initiatives that recognize and reward employees for their contributions –including their commitment to workplace safety– to foster meaningful engagement and connection with the organization.
- iii. By advancing initiatives that safeguard the physical and psychological wellbeing of employees through meaningful engagement.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Contribute to a culture where there is a commitment to employees and their wellbeing, with a focus on compassion and kindness
- b. Lead the way in recognizing and celebrating employees for their contribution to the organization
- c. Promote employee engagement opportunities by supporting employee events and community sponsored events
- d. Reduce the number of musculoskeletal (MSI) injuries and uphold a culture of psychological health and safety in the workplace

### ACTIONS >>

- 1 Promote new ways of working, building on the Alternative Work Options program, implemented in June 2023
- 2 Evaluate the effectiveness and impacts of the workplace flexibility and Alternative Work Options implementation on the organization and staff (2023-2026 Corporate Plan, initiative 11b-6)
- 3 Deliver a biennial CRD Employee Experience Survey and work with Corporate Communications on identifying other ways to increase two-way staff engagement, such as pulse polls
- 4 Support action planning, implementation of the recommendations and outcomes review for the regular CRD Employee Experience Survey report (2023-2026 Corporate Plan, initiative 11b-1)
- 5 Establish and enforce "Health & Safety" as an essential organizational value and engage staff on what this change means



## Employee Experience & Recognition *continued*

### ACTIONS >>

- 6 Refresh on an annual basis the CRD Corporate Health and Safety Policy and Program which provides a framework for setting compliance objectives and includes a commitment to meet applicable legislation requirements and continual improvement of the compliance management system and Health and Safety Program
- 7 Continued review of the Abilities Management — Stay at Work/Return to Work Program and early intervention strategies consistent with best practice standards, including through essential training for managers and supervisors
- 8 Establish a peer recognition program that allows employees to recognize their colleagues
- 9 Explore enhancing the organizational employee recognition program to recognizes staff's contributions in service, safety and organizational achievements, among other things
- 10 Enhance, support and promote employee engagement initiatives within the CRD and across the region
- 11 Complete the roll out of the Don't Walk By Program across the CRD
- 12 Start an Ergonomics Sub-Committee to consult CRD workers on MSI prevention strategies and design and implement supplementary safety programs for ergonomics & MSI
- 13 Design and implement a supplementary safety program for corporate psychological health & safety
- 14 Work with Corporate Communications to enhance and bolster the organizational visions and cultural traits
- 15 Explore the potential of establishing an inter-local government wellness/recreation pass program to support and enhance wellness



## Talent Excellence

We work to support employees on their professional development journey by offering varied, engaging and quality opportunities to learn and improve their skills and knowledge. We administer a program of essential courses for staff, including New Employee Welcome, Leadership Development Program for managers (iLead), EDI and Cultural Perspectives in partnership with the First Nations Division.

We are committed to increasing the skills and expertise of all employees related to safety ensuring employees to have the necessary information, instruction and training to do their job safely.

This priority also supports the goals listed in Talent Acquisition.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Provide a diverse array of quality training and development designed to increase expertise, productivity and fulfilment
- b. Create, promote and foster a culture that values development, diversity and safe work practices for all employees
- c. Provide ongoing support and improvement to the organization's onboarding, employee engagement and succession efforts
- d. Support and enhance strategic training and development partnerships, including compulsory safety training

### ACTIONS >>

- 1 Promote and pursue partnerships to expand the resources/tools available to employees
- 2 Continue supporting the CRD Leadership Development Program and continue annual delivery of the management iLead program (2023-2026 Corporate Plan, initiative 11b-5)
- 3 Offer training through various technology options to respond to customer needs, increase efficiency, and make training opportunities more widely accessible to employees and partners
- 4 Enhance the alignment of training and development opportunities with certification requirements to support employees' paths to professional or trade certifications and improve the attractiveness of recruitment



## Talent Excellence *continued*

### ACTIONS >>

- 5 Identify role-specific training requirements and ensure staff receive the necessary training from time of hiring and at regular intervals to ensure they are competent persons and understand their responsibilities under the various applicable legislations, regulations and policies
- 6 Develop and implement a program of essential supervisor training, and enhance development opportunities for supervisors
- 7 Develop and implement a program of compulsory health and safety training for all employees, in alignment with the CRD OH&S Program, the Workers' Compensation Act, and Occupational Health and Safety Regulation
- 8 Implement essential Psychological Health & Safety training and certification for senior leaders, managers and employees
- 9 Conduct an audit of all compulsory training and courses to identify gaps
- 10 Review the effectiveness of all training offered on a regular basis to ensure content and format remain meaningful and relevant
- 11 Encourage employees to seek out mentorship opportunities through informal channels, where appropriate
- 12 Revitalize a CRD mentorship program to offer a formal framework
- 13 Enable employees to enter their learning and development updates in a centralized training database
- 14 Enhance current approaches to career development and succession planning, career pathing and upskilling programs (tied to strategic priority #2 Organizational Capacity)
- 15 Develop a "Future Leaders" program for supervisors and those interested in future management opportunities, similar to iLead, to support succession planning (tied to strategic priority #2 Organizational Capacity)
- 16 Implement an updated employee performance management program





## People, Safety & Culture Excellence

We are committed to being collaborative advisors and capacity builders for all areas of the organization and we strive to continuously improve the way we work to deliver timely, effective and quality service to all customers. We work to continuously improve organizational compliance and any related processes to ensure the organization meets all legal and statutory obligations. Our ambition, however, is to lead, guide and support the organization in reaching far beyond compliance towards excellence and leadership.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Provide organizational education to support compliance with policies, legislation, and collective agreements
- b. Streamline and enhance PS&C processes and systems to enhance organizational excellence
- c. Identify innovative ways to continuously improve ways of working
- d. Enhance and continuously improve the safety compliance management approach to align with the ISO Standard 37301 and comply with other regulatory requirements to ensure the CRD remains safe and healthy for employees
- e. Provide employees with sufficient training, education, and resources to support the OH&S Program and diligently carry out duties as per legislative requirements

### ACTIONS >>

- 1 Complete the required internal and external COR audits to maintain the CRD's COR certification
- 2 Identify, analyze, and evaluate internal compliance risks by completing risk assessments for each CRD department and their divisions
- 3 Assess compliance risks related to outsourced and third-party processes and design and implement a contractor compliance management process and template Contractor Project Safety Plan to streamline review time
- 4 Fully implement the Corporate Safety Management Centre and deliver ongoing training for all users
- 5 Evolve the current health and safety approaches, policies and procedures to meet the ISO Standard 37301
- 6 Review and realign PS&C staff and financial resources to optimize the division's operations, align to divisional and corporate KPI's, and meet our strategic objectives



## People, Safety & Culture Excellence *continued*

### ACTIONS >>

- 7 Work with corporate partners to establish a continuous collaborative improvement framework to facilitate the regular review of policies, guidance, tools and clients' and partners' expectations
- 8 Develop guidance for key reference documents (e.g., legislation, regulations, collective agreements) for PS&C team members to support the provision of high-quality advice and enhance consistency of application
- 9 Implement a safe process for employees at all levels to provide feedback directly to PS&C
- 10 Systematically implement digital capability on forms and processes to improve and streamline the user experience with PS&C forms, where appropriate
- 11 Identify and address areas of reporting duplication



# Monitoring & Reporting

Implementation of the plan and associated actions will be overseen by the Executive Leadership Team. The Chief Administrative Officer (CAO) will report progress to the CRD Board through the Quarterly CAO Report.

The impact of the plan itself will be measured through the CRD Employee Experience Survey through which staff are engaged every other year and through action-specific measures. The implementation of the plan will also impact employee recruitment and retention metrics which will be monitored closely.

## CRD EMPLOYEE EXPERIENCE SURVEY

The following questions will be tracked as indicators of impact of the actions highlighted in this plan, among other factors.

- My organization cares about the well-being of its employees (Q28)
- In my organization, employees are recognized when they do as good job (Q29)
- I have the tools, materials and equipment (other than technology) that I need to do my job in an efficient manner (Q30)
- My organization trains and develops its employees to guarantee a high level of efficiency on the job (Q32)
- My organization places great importance on the health and safety of its employees (Q34)
- In my organization, employees are treated fairly, despite their individual differences (Q44)
- I feel that my contribution is valued by my organization (Q45)
- My organization values all aspects of diversity including origin, race, age, gender and thought (Q47)
- If it easy for anybody to fit in and be accepted in my organization (Q48)
- In my organization, employees can freely express their opinion, even if it is different (Q49)
- If I became aware of an unethical practice in my organization, I would feel free to report it (Q52)
- I can openly discuss safety issues or work hazards with my immediate supervisor/manager (Q53)



APPENDIX A

Four-Year Action Plan



## Equity, Diversity, Inclusion & Accessibility Actions

| PRIORITIES & ACTIONS   | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Develop an overall EDI Strategy for the CRD to set an overarching vision and goals, and coordinate EDI efforts across divisions  | •                    | •    | •    |      |
| <b>ACTION 2</b> Review internal policies and practices with an Equity, Diversity, Inclusion & Accessibility (EDIA) lens  | •                    | •    |      |      |
| <b>ACTION 3</b> Enhance existing training courses and develop and facilitate the delivery of additional learning opportunities for staff to create a common understanding of EDIA, including literacy and terminology, understanding of unconscious bias and other topics that support respectful workplaces, policy and inclusive practices | •                    | •    | •    | •    |
| <b>ACTION 4</b> Work with the EDI working group and steering committee to identify ways to promote equity, diversity and inclusion, and increase cultural competency among all staff   | •                    | •    | •    | •    |
| <b>ACTION 5</b> Work with the Accessibility Advisory Committee to identify barriers of access to CRD services and programs for persons with disabilities in the community and recommend solutions for consideration by the CRD   |                      | •    |      |      |
| <b>ACTION 6</b> Develop an employee demographic data collection program to monitor progress on promoting and supporting a diverse workforce  |                      | •    | •    |      |





# Organizational Capacity

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Complete the implementation of SuccessFactors Recruitment and Onboarding modules, including delivering training for end users  | •                    |      |      |      |
| <b>ACTION 2</b> Promote, support and leverage SuccessFactors to improve and enhance workflow efficiency and workforce analytics  | •                    | •    | •    | •    |
| <b>ACTION 3</b> Prepare for and implement the SuccessFactors Talent Suite module – Learning Management System, Performance & Goals, and Succession & Development   |                      | •    | •    | •    |
| <b>ACTION 4</b> Sustain the momentum on the ongoing roll out of the Safety Management Centre and promote broad organizational use  | •                    | •    |      |      |
| <b>ACTION 5</b> Establish a community of practice for People, Safety & Culture to facilitate cross-divisional learning and sharing of best practices   |                      | •    | •    |      |
| <b>ACTION 6</b> Empower employees and managers to make good decisions and self-serve by expanding resources available on CRD Central   |                      | •    | •    |      |
| <b>ACTION 7</b> Support the organization in modernizing the collective agreements through bargaining, and the exempt staff terms and conditions alignment through the exempt staff compensation plan review, to enhance organizational capacity and resilience | •                    | •    |      |      |
| <b>ACTION 8</b> Support organizational realignment that improves business function alignment, including the implementation of organizational structures that enables the CRD to realize capacity through more efficiency.                                      | •                    | •    |      |      |





## Talent Acquisition

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Continue ongoing work with Corporate Communications to expand branding, marketing and proactive recruitment efforts, and enhancing employee communications                       | •                    | •    | •    | •    |
| <b>ACTION 2</b> Develop marketing and social media strategies with Corporate Communications to promote the CRD as an employer of choice  | •                    |      |      |      |
| <b>ACTION 3</b> Develop the CRD’s Employee Value Proposition   |                      | •    | •    |      |
| <b>ACTION 4</b> Utilize data analytics to measure success of advertising and outreach efforts  |                      | •    | •    | •    |
| <b>ACTION 5</b> Enhance the career page of crd.bc.ca in collaboration with departments   |                      | •    | •    | •    |
| <b>ACTION 6</b> Develop an implementation plan for the Indigenous Employment Strategy  | •                    | •    |      |      |
| <b>ACTION 7</b> Develop a comprehensive Talent Acquisition Strategy and collaborate with internal departments to develop additional, focused strategies to address unique recruitment challenges |                      | •    | •    |      |
| <b>ACTION 8</b> Encourage staff to progress their careers and enhance their skills and abilities while at the CRD by promoting internal temporary opportunities                                  |                      | •    |      |      |
| <b>ACTION 9</b> Identify opportunities to publicly showcase and celebrate staff achievements and successes with Corporate Communications   | •                    | •    | •    | •    |
| <b>ACTION 10</b> Expand proactive recruitment efforts and networking opportunities for staff through career fairs and other collaboration opportunities with strategic partners                  |                      | •    | •    |      |



## Employee Experience & Recognition

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Promote new ways of working, building on the Alternative Work Options program, implemented in June 2023  | •                    | •    | •    | •    |
| <b>ACTION 2</b> Evaluate the effectiveness and impacts of the workplace flexibility and Alternative Work Options implementation on the organization and staff (2023-2026 Corporate Plan, initiative 11b-6)   | •                    | •    | •    | •    |
| <b>ACTION 3</b> Support action planning, implementation of the recommendations and outcomes review for the regular CRD Employee Experience Survey report (2023-2026 Corporate Plan, initiative 11b-1)  | •                    | •    | •    | •    |
| <b>ACTION 4</b> Deliver a biennial CRD Employee Experience Survey and work with Corporate Communications on identifying other ways to increase two-way staff engagement, such as pulse polls   | •                    | •    | •    | •    |
| <b>ACTION 5</b> Establish and enforce “Health & Safety” as a essential organizational value and engage staff on what this change means.  | •                    |      |      |      |
| <b>ACTION 6</b> Refresh on an annual basis the CRD Corporate Health and Safety Policy and Program which provides a framework for setting compliance objectives and includes a commitment to meet applicable legislative requirements and continual improvement of the compliance management system and Health and Safety Program | •                    | •    | •    | •    |
| <b>ACTION 7</b> Continued review of the Abilities Management – Stay at Work/Return to Work Program and early intervention strategies consistent with best practice standards, including through essential training for managers and supervisors  | •                    | •    |      |      |



## Employee Experience & Recognition *continued*

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 8</b> Establish a peer recognition program that allows employees to recognize their colleagues   | •                    |      |      |      |
| <b>ACTION 9</b> Explore enhancing the organizational employee recognition program to recognizes staff’s contributions in service, safety and organizational achievements, among other things | •                    | •    |      |      |
| <b>ACTION 10</b> Enhance, support and promote employee engagement initiatives within the CRD and across the region   |                      |      |      | •    |
| <b>ACTION 11</b> Complete the roll out of the Don’t Walk By Program across the CRD   |                      | •    |      |      |
| <b>ACTION 12</b> Start an Ergonomics Sub-Committee to consult CRD workers on MSI prevention strategies and design and implement supplementary safety programs for ergonomic & MSI .          |                      | •    | •    |      |
| <b>ACTION 13</b> Design and implement a supplementary safety program for Corporate Psychological Health & Safety   | •                    | •    |      |      |
| <b>ACTION 14</b> Work with Corporate Communications to enhance and bolster the organizational visions and cultural traits  |                      | •    |      |      |
| <b>ACTION 15</b> Explore the potential of establishing an inter-local government wellness/recreation pass program  |                      |      | •    |      |





## Talent Excellence

| ACTIONS   | IMPLEMENTATION YEARS |      |      |      |
|---|----------------------|------|------|------|
|   | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Promote and pursue partnerships to expand the resources/tools available to employees  |                      |      | •    | •    |
| <b>ACTION 2</b> Continue supporting the CRD Leadership Development Program and continue annual delivery of our management iLead program (2023-2026 Corporate Plan, initiative 11b-5)  | •                    | •    | •    | •    |
| <b>ACTION 3</b> Offer training through various technology options to respond to customer needs, increase efficiency, and make training opportunities more widely accessible to employees and partners   |                      |      |      | •    |
| <b>ACTION 4</b> Enhance the alignment of training and development opportunities with certification requirements to support employees' paths to professional or trade certifications and improve the attractiveness of recruitment   |                      | •    | •    |      |
| <b>ACTION 5</b> Identify role-specific training requirements and ensure staff receive the necessary training from time of hiring and at regular intervals to ensure they are competent persons and understand their responsibilities under the various applicable legislations, regulations and policies. | •                    | •    | •    | •    |
| <b>ACTION 6</b> Develop and implement a program of essential supervisor training, and enhance development opportunities for supervisors.  |                      |      | •    | •    |
| <b>ACTION 7</b> Develop and implement a program of compulsory health and safety training for all employees, in alignment with the CRD OH&S Program, the Workers' Compensation Act, and Occupational Health and Safety Regulation  | •                    | •    |      |      |





## Talent Excellence *Continued*

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 8</b> Implement essential Psychological Health & Safety training and certification for senior leaders, managers and employees                                | •                    | •    |      |      |
| <b>ACTION 9</b> Conduct an audit of all compulsory training and courses to identify gaps   |                      | •    | •    |      |
| <b>ACTION 10</b> Review the effectiveness of all training offered on a regular basis to ensure content and format remain meaningful and relevant                       | •                    | •    | •    | •    |
| <b>ACTION 11</b> Encourage employees to seek out mentorship opportunities through informal channels, where appropriate   | •                    | •    | •    | •    |
| <b>ACTION 12</b> Revitalize a CRD mentorship program to offer a formal framework   |                      |      | •    | •    |
| <b>ACTION 13</b> Enable employees to enter their learning and development updates in a centralized training database   |                      |      |      | •    |
| <b>ACTION 14</b> Enhance current approaches to career development and succession planning, career pathing and upskilling programs                                      |                      |      | •    | •    |
| <b>ACTION 15</b> Develop a “Future Leaders” program for supervisors and those interested in future management opportunities at the CRD, to support succession planning |                      |      | •    | •    |
| <b>ACTION 16</b> Implement an updated employee performance management program  |                      |      | •    |      |



## People, Safety & Culture Excellence

| ACTIONS   | IMPLEMENTATION YEARS |      |      |      |
|---|----------------------|------|------|------|
|   | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Complete the required internal and external COR audits to maintain the CRD’s COR certification  | •                    | •    | •    | •    |
| <b>ACTION 2</b> Identify, analyze, and evaluate internal compliance risks by completing risk assessments for each CRD department and their divisions  |                      | •    |      |      |
| <b>ACTION 3</b> Assess compliance risks related to outsourced and third-party processes and design and implement a contractor compliance management process and template Contractor Project Safety Plan to streamline review time |                      |      | •    |      |
| <b>ACTION 4</b> Fully implement the Corporate Safety Management Centre and deliver ongoing training for all users   | •                    | •    | •    | •    |
| <b>ACTION 5</b> Evolve the current health and safety approaches, policies and procedures to meet the ISO Standard 37301   |                      | •    | •    |      |
| <b>ACTION 6</b> Review and realign PS&C staff and financial resources to optimize the division’s operations, align to divisional and corporate KPI’s, and to meet our strategic objectives  | •                    | •    | •    | •    |
| <b>ACTION 7</b> Work with corporate partners to establish a continuous collaborative improvement framework to facilitate the regular review of policies, guidance, tools and clients’ and partners’ expectations                  | •                    | •    | •    | •    |



## People, Safety & Culture Excellence *continued*

| ACTIONS   | IMPLEMENTATION YEARS |      |      |      |
|---|----------------------|------|------|------|
|   | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 8</b> Develop guidance for key reference documents (e.g., legislation, regulations, collective agreements) for PS&C team members to support the provision of high-quality advice and enhance consistency of application | •                    | •    |      |      |
| <b>ACTION 9</b> Implement a safe process for employees at all levels to provide feedback directly to PS&C   | •                    |      |      |      |
| <b>ACTION 10</b> Systematically implement digital capability on forms and processes to improve and streamline the user experience with PS&C forms, where appropriate  | •                    | •    | •    | •    |
| <b>ACTION 11</b> Identify and address areas of reporting duplication  | •                    | •    | •    | •    |





# Corporate Communications & Engagement Strategic Plan

2024-2027

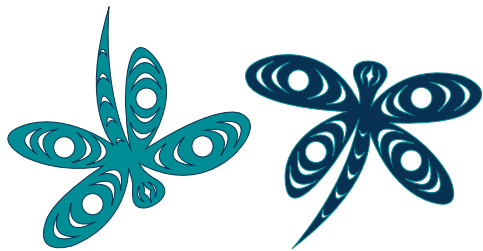


Making a difference...together



## Territorial Acknowledgement

The CRD conducts its business within the traditional territories of many First Nations, including but not limited to BOKÉĆEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?ah (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, STÁUTW (Tsawout), T'Sou-ke, WJOLEŁP (Tsartlip), WSIKEM (Tseycum), and x<sup>w</sup>sepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.



## 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 government partners to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure, while continuing to provide core services to residents throughout the region.

**Corporate Communication & Engagement Services** are delivered across the organization equipping us with the tools necessary to enable consistent, credible, relevant, and timely information sharing both internally and externally.



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# Executive Summary – a message from the Senior Manager



On behalf of the Communications team, I am pleased to present to you our comprehensive Strategic Communications and Engagement Plan. As the Senior Manager, I have had the privilege of working closely with our Communications team as well as other internal interested parties to build this plan, and I am confident that it will play a pivotal role in shaping the future of our organization.

In today's fast-paced world, the field of communications is constantly evolving. To remain at the forefront, we recognize the need to stay innovative, adapt to changing priorities, and leverage industry trends. This plan provides the context of how communications services are structured and strategically aligned, provides a situational analysis, outlines our guiding principles and identifies our strategic priorities and supporting actions to advance work during the next four years.

Our plan is built on a foundation of several key areas of focus:

- **Fostering meaningful connections with communities**  
We strive to build trust with residents by fostering civic engagement, strengthening relationships, and connecting communities through open communication and compelling storytelling where diverse voices are heard and valued.
- **Supporting a culture of organizational connection**  
Deeper connections between colleagues allow for greater collaboration, shared learnings and organizational awareness. When employees feel supported, valued and engaged, the organization benefits.

- **Providing quality information at the right time, in the right way**  
What we say, how we say it and when we say it **matters**. All our audiences deserve communications that are accurate, thoughtful and meaningful.
- **Placing equity, diversity, inclusion and accessibility at the heart of communications**  
Connecting with people with diverse lived experiences leads to more innovative ideas, better decisions, and stronger democracies. Meaningful two-way engagement strategies help address barriers to participation.
- **Adapting to changing digital landscapes**  
In response to trends, organizations are not relying on one way of communicating and instead use advertising, social media, website content and relationships with journalists and influencers to increase reach. With the majority of Canadians engaging with services online, we must continue to evolve our use of digital tools to match the increasing expectations of residents in the capital region.

The Strategic Communications and Engagement Plan will guide us through the complexities of industry trends, foster innovation, and equip us with the tools necessary to reach wider audiences, all while seamlessly adapting to the priorities of our organization.

Although this plan is ambitious, I firmly believe that it aligns with our organizational goals and will significantly contribute to our continued success.

**Andy Orr**

Senior Manager, Corporate Communications



# Context

Effective communication is crucial for the success of our organization and the region.

While the communications team, including the Corporate Communications & Engagement Division and program area-specific communications staff, plays a vital role in communication and engagement, the act of communicating is not restricted to a single department or team. Instead, it is a shared responsibility that involves everyone at the CRD. In today's interconnected world, open and transparent communication channels are crucial, recognizing that each staff member brings unique insight and connections to contribute to our collective efforts.

By embracing communication as a shared responsibility, we empower each individual within the organization. Encouraging a culture of open communication and collaboration across teams unlocks innovative ideas, diverse perspectives, and effective problem-solving. We encourage all employees to actively participate in communication initiatives, sharing updates, seeking feedback, engaging with interested parties, and enhancing outreach efforts.

Through the collective power of our organization, we aim to create a culture of communication excellence—building trust, transparency, and strong relationships. Together, we will foster an environment where information flows seamlessly, ideas are openly shared, and collaboration thrives for the betterment of our community and region.

# Strategy Alignment

The CRD exists to foster municipal and electoral area cooperation in the region and contribute to creating a livable, sustainable and resilient region for generations to come. We do this by embracing collaboration, innovation and by being leaders in service delivery.

The Corporate Plan presents the work the CRD needs to deliver over the four-year Board term, along with the regional, sub-regional and local services, to meet the region’s most important needs and advance the Board’s vision and priorities.

This Plan nestles under the Corporate Plan, and is in alignment with other corporate strategies and plans and has the following target outcomes:

|                        | Desired outcome   | Goal  |
|------------------------|---|---|
| <b>Open Government</b> | Coordinated and collaborative governance, and leadership in organizational performance and service delivery | Foster greater civic participation among diverse community members                                    |
| <b>Advocacy</b>        | Effective and coordinated advocacy  | Influence regional issues and advocate in a consistent, focused way that aligns with Board Priorities |

## Corporate Communications & Engagement initiatives in the Corporate Plan

- Enhance the public participation and engagement practices and framework to foster trust and understanding, informed by input from residents and equity, diversity and inclusion principles.
- Advance the Communications Strategic Plan to guide organizational communications practices and policies internally and externally.
- Modernize the **crd.bc.ca** website.
- Work collaboratively to address multi-jurisdictional issues that impact residents’ well-being, in alignment with the Board’s Strategic Priorities.

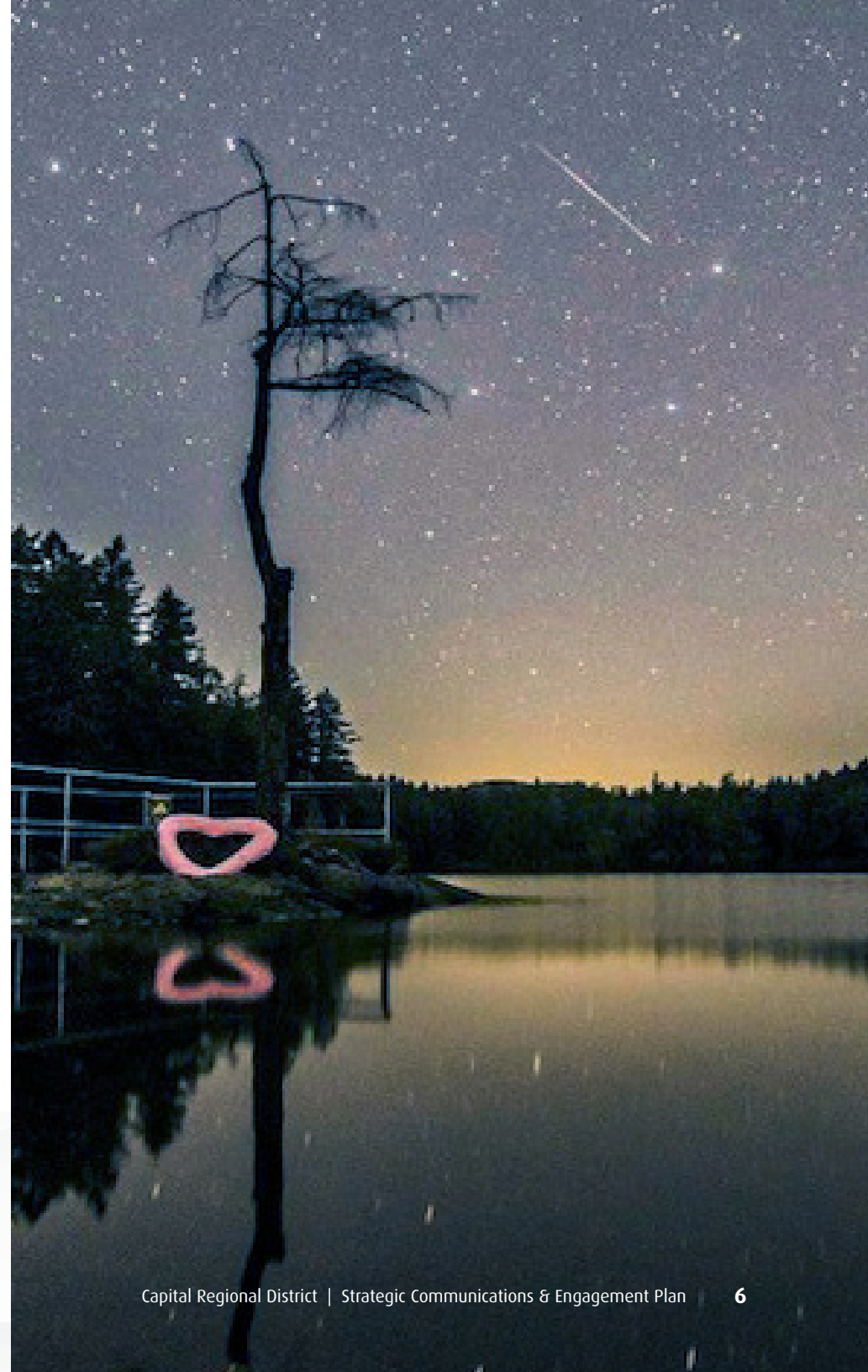
# Mission

## CORPORATE COMMUNICATIONS & ENGAGEMENT

Through strategic partnerships and collaboration, we create meaningful connections with residents, partners and colleagues by communicating at the right time, in the right way. We realize the CRD visions by ensuring residents, partners and colleagues can rely on us to provide information that is reliable and relevant. We deepen trust through every interaction by listening actively, being inclusive and fostering two-way dialogue.

A mission statement is a concise description of organizational purpose, intention and objectives.

The Communications mission statement is aligned with the CRD Mission and with the Board and Organizational Visions.





# Guiding Principles and Values

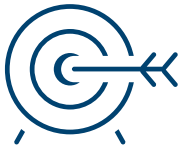
Our guiding principles act as our guardrails. They describe what is considered when we make decisions about our work or set organizational standards. They are aligned to the CRD Cultural Traits which reflect what the broader CRD community values and the behaviours and mindsets all employees strive to demonstrate and apply throughout their work.



### SERVE THE CUSTOMER

**We deliver resident-centered experiences**

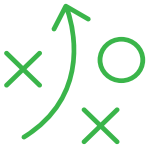
We understand who our audience is, our purpose for communicating with them and we listen to what they need. We value everyone, regardless of background, identity or beliefs.



### OWN THE OUTCOME

**We are data informed**

We measure outcomes instead of outputs and adjust our strategies based on what we learn.



### LEAD THE WAY

**We set the organizational standards for communications**

Corporate Communications & Engagement develops communications strategies, protocols and tactics for organizational success in a consistent and flexible approach.



### DEVELOP EMPLOYEE EXCELLENCE

**All staff have a role to play in representing the CRD through communication**

Corporate Communications & Engagement provides guidance, develops tools and templates, and builds capacity to enable everyone to reach their communication goals within established practices.



### WORK COLLABORATIVELY

**We build and nurture relationships**

We identify and work toward common goals and outcomes.



### EMBRACE CHANGE

**We anticipate communication needs and embrace change**

We scan the environment, identify emerging trends, and act proactively to find solutions.

# Audiences

The Strategic Communications & Engagement Strategic Plan intends to create an organizational vision for communications. The audiences for this plan are the Corporate Communications & Engagement divisional staff, communications specialists embedded in program areas, and any other employee who plays a role in communicating information about or on behalf of the CRD, up to and including the Executive Leadership Team.

## External Audiences

The CRD, as a regional services provider and federation of local governments, engages with a multitude of audiences externally across a wide spectrum of activities. The key external audiences are summarized below.

### Political

- Regional Boards (CRHD, CRHC, CRHD)
- Other local elected officials (councils, Islands Trust)
- CRD commissions and committees
- First Nations Governments
- Partners (Province/Federal government — grant providers)

### Non-political

- Regional residents
- Regional businesses
- Media
- Public Sector Workers
- Non-Profit and Resident Organizations

# The Team

The Communications team consists of the Corporate Communications & Engagement Division and program area-specific communications staff.

The Corporate Communications & Engagement Division supports the Board, Executive Leadership Team and the organization by providing strategic advice and support to ensure information is communicated appropriately through various channels. This is accomplished through the development and application of guidelines and tools that foster engagement and provide the public and employees with access to accurate, timely and consistent information.

Program area-specific communications staff are experts in the content and programs of their respective Divisions, and they report directly to their functional departments. They assist Divisions with issues management, strategic planning and product execution, offering a critical eye to assess products or narratives before they are distributed or presented publicly. Program area-specific communications staff plan for, develop and implement communications initiatives which reflect the program area's priorities and work plans. These staff liaise between their Divisions and the Corporate Communications & Engagement Division to provide program-specific content, ensuring corporate alignment and that all communications policies and procedures are adhered to within their service area. This is accomplished through the Corporate Communications & Engagement Division's oversight over CRD brand and messaging.

In late 2023 the executive leadership team announced the reorganization initiative "CRD Evolves", one outcome of this initiative changes the reporting structure of the communications team from a decentralized model to a more centralized approach with the program area-specific communications staff reporting to the Corporate Communications & Engagement Division which will build in additional integration and constituency between program areas.

## PROGRAM AREA COMMUNICATIONS

### Capital Region Housing Corporation

Communications Coordinator

### Environmental Services

Communications Supervisor  
Communications Coordinators  
Communications Liaison  
Communications Assistant  
Visual Communications Specialist  
Outreach Coordinator

### Integrated Water Services

Communications Coordinator

### Regional Parks

Communications Coordinator  
Communications Officer

### Planning & Protective Services

Communications Coordinator

### Panorama Recreation Centre

Recreation Program Coordinator

## COMMUNICATIONS EXTERNAL TO CENTRALIZED MODEL

### Arts & Culture

Community Outreach Coordinator

### SEAPARC Leisure Complex

Program Services Manager



# Situational Analysis

The situational analysis provides a comprehensive assessment of the internal and external factors that influence the communication landscape — a landscape which is constantly changing, evolving and being reshaped, and one for which we must continuously evaluate and adapt. By examining these factors, we can strategically align our efforts to effectively meet the needs of the region.

As an organization responsible to our residents and local partners, there is a strong expectation that we continue to demonstrate responsible fiscal management, innovation and professionalism. As with governments in general, there is a continued expectation for clear, transparent communication and open governance. Our commitment to these principles remains.

Our overarching goals of fostering greater civic participation among our diverse community members, influencing regional issues and advocating in a consistent, focused way that aligns with Board priorities are supported by our efforts to ensure the right message is delivered to the right audience in a timely and effective way.

Key principles of effective communication include developing strategies and policies that ensure messaging is delivered consistently in alignment with the CRD's policy objectives and the broader open government principles of transparency, integrity, accountability and inclusion. This work includes building internal capacity to continually learn, adapt and ensure the necessary skills are in place to lead the transformation required of communicators working in a rapidly changing context.

# Services

Together, the Communications team plays a vital role in supporting the organization by effectively managing and enhancing its communication efforts. With increased use of digital communications and engagement platforms, the communications team identifies, manages and supports emerging digital services. Resources and toolkits are available for all staff. The Communications team is also responsible for corporate document control so that all protocols, procedures and guidelines are followed to ensure consistency in brand handling and messaging.

**STRATEGIC COMMUNICATION PLANNING:** develops comprehensive communication strategies for both external and internal audiences aligned with CRD goals and objectives. Identifying target audiences, defining messaging frameworks and outlining communication channels and tactics to ensure consistent and impactful communication. It includes developing and applying communications guidelines and tools, as well as strategy, advice and alignment.

 **Supporting resources:** Communication planning templates and guidelines

**CONTENT DEVELOPMENT:** crafts clear, compelling, and consistent content that aligns with the CRD's mission, values and priorities utilizing high levels of planning, audience perception and behaviour research to fulfill the organization's mission. Highly technical information is distilled into plain language to make the critical information accessible and readable for everyone. Messaging is tailored to specific target audiences and effectively conveys key information, initiatives, and achievements of the CRD.

 **Supporting resources:** CRD Writing Style Guide

**BRAND AND IDENTITY:** develops and manages brand and visual guidelines. Ensures the consistent use of a strong visual brand in the projection of the CRD's image, standards and values. Graphic standards, a sign strategy and a brand identity are overseen to ensure that all CRD print, promotional and educational

materials maintain a consistent look, feel and tone. The goal is to have the public and other interested parties immediately recognize our work is that of the CRD.

 **Supporting resources:** Brand and Graphic Standards, Corporate Sign Strategy

**MEDIA RELATIONS:** establishes and maintains relationships with media outlets and journalists to facilitate accurate and timely coverage of the CRD's activities and initiatives. Proactively engaging with the media, responding to inquiries, and coordinating press releases and media interviews to ensure accurate representation of the CRD's work.

 **Supporting resources:** Media Relations Protocols and Policy

**INTERNAL COMMUNICATIONS:** ensures effective communication within the CRD by developing and implementing internal communication strategies that deliver messages and campaigns to people who need to see them. Facilitating the flow of information among different departments, disseminating organizational updates, and fostering a culture of transparency, collaboration, and employee engagement. Develop and implement an internal communications framework outlining the strategic approach to effectively communicate CRD information, and identify resources that encourage accessible, relevant, understandable, timely and engaging communications.

 **Supporting resources:** Internal Communications Framework



**CRISIS COMMUNICATION AND ISSUES MANAGEMENT:** is responsible for accurate, timely and consistent distribution of information to the public, media and staff. The CRD manages infrastructure and provides services that are essential to the health, livelihood and well-being of people within the region. Developing crisis communication plans, coordinating messaging, and providing guidance and support to CRD leadership and staff in effectively addressing and responding to emerging issues. A crisis communications response is appropriate for any situation that has the capacity to impact public safety or impair the organization's reputation and ultimately its ability to operate. Regular media routines and procedures are established and briefings are prepared for elected officials.

 **Supporting resources:** Emergency Communications Guidelines


**SOCIAL MEDIA:** manages the CRD's social media platforms, including Facebook, Twitter, LinkedIn and Instagram. Maintains an active and positive online presence by choosing the appropriate channels and audiences for different messages, developing engaging and informative content, monitoring online conversations, and responding to public inquiries or comments. Reviews and considers the advantages and disadvantages of stand-alone social media channels for some organizational functions. Social media platforms are monitored to identify opportunities and emerging issues, and to respond to public questions in a friendly, timely and credible manner.

 **Supporting resources:** Social media policy and guidelines,  
Social Media Plan Template

**WEBSITE:** establishes, maintains and updates the CRD website to allow members of the public to quickly find relevant, credible and up-to-date information. Training is provided to staff and updates are reviewed to ensure that consistent web standards, copyright and brand requirements and approved communication plans are upheld. Coordinate with Information Technology staff on ongoing improvements to the website and timelines for implementation.

 **Supporting resources:** Website Content Roles and Responsibilities,  
Corporate Communications Team

**MARKETING:** conceives, develops and implements paid media campaigns and materials to build awareness of CRD programs and initiatives or to address regulatory requirements to promote behaviour change and generate revenue. Generate media plans that identify the appropriate media and social media platforms and outlets to maximize the benefit of paid media opportunities.

 **Supporting resources:** Communication planning templates and guidelines,  
advertising planning sheets

**COMMUNITY ENGAGEMENT:** facilitates community engagement initiatives by developing communication materials, organizing public consultations, and coordinating outreach activities and events. Ensuring that the CRD actively seeks input from the community, listens to concerns, and communicates decisions effectively to foster meaningful engagement and community participation. Policies and related standards for survey creation and public participation initiatives are established and implemented to ensure a consistent and credible process is in place for engaging with the public on matters that impact them. Training and access to corporate engagement tools is provided and all materials are reviewed prior to the launch of a new initiative. Oversees "Get Involved", the corporate, web-based engagement tool.

 **Supporting resources:** Public Participation Policy and guidelines.

**EVALUATION AND MEASUREMENT:** tracks and evaluates the effectiveness of communication strategies and initiatives through various metrics, such as media coverage, website and social media analytics, and interested parties feedback. This data is used to assess the impact of communication efforts, identify areas for improvement, and make data-driven decisions to optimize future communication activities.

 **Supporting resources:** Analytic Reports

By fulfilling these responsibilities, the Communications team supports the CRD in effectively communicating with interested parties, building trust and credibility, enhancing the organization's reputation, and ensuring that its initiatives and accomplishments are effectively shared with the public.

# External Trends

To communicate effectively we need to understand the larger societal context we operate in as a regional government. These key external trends are shaping the way residents perceive and interact with government entities, emphasizing the need for strategic communication planning and adaptation.

## **SOCIETAL CHANGES**

### **Reduced Trust in Government and Disinformation**

One prominent trend is the reduced trust in government institutions. Residents may perceive information from government sources as untrustworthy, leading to a rise in disinformation and misinformation. According to the Edelman Trust Barometer in 2022, 58% of Canadians have an increasing concern that government leaders are purposely trying to mislead people by saying things they know are false or gross exaggerations (an increase of 12 points from 2021). In response, it is crucial for governments to demonstrate humanity, transparency, capability, and reliability. Building trust through open and honest communication becomes paramount, highlighting the need for well-crafted messages, reliable sources, and accessible information.

## **DIGITIZATION**

### **Constant State of Flux and Impact on Engagement**

More Canadians than ever are using the Internet to connect with governments, causing digital communication to be the fastest-growing area in the communications industry. The rapid pace of digitization brings about constant changes in communication channels, platforms, and tools. Government entities must stay nimble and adaptive, ensuring official forms of communication are up-to-date, timely, and responsive. Websites play a crucial role as an immediate information source, and residents now have higher expectations for real-time updates. Additionally, social media significantly impacts engagement with the public. Government organizations must actively engage and respond on social platforms to connect with residents effectively.

## **IMPORTANCE OF DATA**

### **Countering Misinformation and Fostering Transparency**

Data has gained immense importance in countering misinformation and disinformation. Obtaining data to understand resident awareness and sentiment towards the CRD is critical. By integrating data into the strategic communication planning process, the CRD can make informed decisions based on resident awareness and sentiment. This data-driven approach enables the government to identify areas where misinformation or misunderstandings may arise, allowing for targeted and effective communication efforts to dispel inaccuracies. In addition, emphasizing the use of reliable data and statistics in communication helps foster transparency and reinforces the credibility of government messages.

# Internal Trends

Organizational culture and processes significantly impact government organizational communications. These internal dynamics and trends pose unique challenges and opportunities for aligning communication efforts and achieving organizational goals.

## **PROGRAM LEVEL DECISION MAKING**

### **Aligning Corporate View and Organizational Goals**

One significant internal trend is the distribution of communication responsibilities across various staff members, both formally and informally. This decentralized approach can result in challenges in understanding the value and purpose of aligning communications to a corporate view, message, and tone. Some staff may feel that aligning with a corporate view detracts from their original intention, leading to potential inconsistencies in messaging. Additionally, there may be a lack of alignment between communication content and the broader organizational goals, which can hinder the effectiveness of communication efforts.

## **CRD EVOLVES**

### **Adjusting reporting structures and enhancing flexibility**

In late 2023 the executive leadership team decided to move from a decentralized communication service to a more centralized reporting structure within the communications team to increase consistency and integration. This new structure will allow all communications specialists to be equipped with a more comprehensive understanding of available tools, policies and guidelines and ensure adherence to organizational standards. It also provides a mechanism to flexibly redirect the pool of communication specialists towards more urgent or priority initiatives.

## **ISSUES MANAGEMENT**

### **Balancing Proactive and Reactive Work**

A prominent internal trend is the prevalence of issues management taking precedence in Corporate Communications. The specialist capacity internally is often consumed by addressing reactive issues and crisis situations, leaving limited room for proactive and strategic communication activities. This reactive focus can hinder the organization's ability to plan and execute long-term communication initiatives, resulting in missed opportunities for advancing broader organizational goals.

## **ENHANCED INTERNAL COMMUNICATIONS**

### **Open Communications and Streamlined Processes**

With a new organizational vision introduced in 2023 improved and enhanced internal communications is a corporate priority. Data collected in the employee experience survey confirms that employees would like improvements in how and when we communicate to all employees. This includes being clear about why we make corporate and organizational decisions and what they are.

By addressing the impact of organizational culture and processes on communication, the CRD can overcome challenges and capitalize on opportunities to achieve communication goals more effectively. A culture that values open communication and streamlined processes can lead to improved interested parties engagement, enhanced transparency, and successful achievement of organizational objectives.

# Achievements

Over the past few years, we have pursued innovative approaches to enhance our communication efforts. Our accomplishments have transformed our communication strategies and also reinforced our overarching goal of fostering transparent, efficient, and impactful communication.

- ✓ Agenda and Minutes subscription service
- ✓ Mobile navigation added to website
- ✓ Website alerts and public notices
- ✓ Corporate Writing Style Guide
- ✓ Internal Communications Framework
- ✓ CRD Central Launched
- ✓ Google and Facebook Ads Launched
- ✓ Board Highlights Launched
- ✓ Dashboard redesign
- ✓ First YouTube Live event
- ✓ Instagram Launched
- ✓ Corporate Sign Strategy
- ✓ Digital Engagement Platform Launch
- ✓ Graphic Standards Update
- ✓ Year over Year growth on Social Channels
- ✓ Templating progress reports

A background network diagram consisting of numerous grey circular nodes connected by thin, light blue lines, creating a complex web of connections across the top and right portions of the page.

# Strategic Priorities

Five strategic priorities have been identified by the Corporate Communications & Engagement Division. These capture the most significant and pressing areas of focus over the next four years and will address organizational and divisional challenges and opportunities.

For each priority, we have identified specific goals and actions we intend to take. Additional or alternative goals and actions may be identified in future years to remain aligned with emerging changes to the CRD's operating context and/or priorities. The priorities appear in no particular order.

- 1 Fostering meaningful connections with communities
- 2 Supporting a culture of organizational connection
- 3 Providing quality information at the right time, in the right way
- 4 Placing equity, diversity, inclusion and accessibility at the heart of communications
- 5 Adapting to changing digital landscapes





## Fostering meaningful connections with communities

We strive to build trust with residents by fostering civic engagement, strengthening relationships, and connecting communities through open communication and compelling storytelling where diverse voices are heard and valued.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Enhance public participation and engagement practices to build trust and understanding through honest and relevant communications.
- b. Tell compelling stories to connect residents and communities to the places they live, work and play.
- c. Support effective and coordinated CRD Board advocacy to create positive change for the region, in alignment with the CRD Advocacy Strategy.

### ACTIONS >>

- 1 Create “day-in-the-life” profiles to showcase and celebrate the diversity and complexity of work employees undertake at the CRD.
- 2 Identify parameters to review impact of marketing campaigns and digital channels on resident behaviour change.
- 3 Through the communications working group, explore options to raise the profile of CRD staff and how the work they do contributes to the region and to help residents feel connected to the region they live, work and play in.
- 4 Make content more relevant to CRD audiences by expanding news sections of the crd.bc.ca site to incorporate stories.
- 5 Contribute to organizational approach for advocacy to ensure consistency and alignment with Board Priorities.
- 6 Evaluate current organizational marketing and outreach approaches, identifying opportunities to link routine or program-specific communication with talent acquisition strategies.



## Supporting a culture of organizational connection

Deeper connections between colleagues allow for greater collaboration, shared learnings and organizational awareness. When employees feel supported, valued and engaged, the organization benefits.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Promote a culture where staff feel supported, connected and informed through authentic and transparent internal communication.
- b. Cultivate staff connection to their workplace and each other.
- c. Ensure everyone (staff, leadership and Board Directors) understands the role they play and the support they have in their communication efforts.

### ACTIONS >>

- 1 Explore ways to increase two-way staff engagement, such as pulse polls or other feedback mechanisms, to supplement the biennial CRD Employee Experience Survey and support departmental program activities.
- 2 Collect data about CRD Central usage (SharePoint Analytics) to measure and inform plans and strategies.
- 3 Support People, Safety & Culture to promote the successful rollout of SuccessFactors.
- 4 Increase the profile of our organizational visions and cultural traits to boost their awareness among employees in collaboration with People, Safety & Culture.
- 5 Collaborate with People, Safety & Culture to deliver staff connection and recognition programs.
- 6 Create a policy to mandate the adherence to corporate standards and processes for communications.
- 7 Support all staff in being 'brand ambassadors' by creating a Communications Overview package to orient new employees and guide existing employees to key documents, toolkits and expectations.
- 8 Establish a new collaborative, user-friendly quarterly communications work-planning and forecasting tool for all communicators, including embedded communications employees.
- 9 In late 2023, the Chief Administrative Officer changed the reporting relationships of embedded communication coordinators to a more direct line to Corporate Communications. This will increase communications capacity and alignment and allow for stronger support and oversight in developing department/division communication initiatives. This transition will unfold over 2024.



## Providing quality information at the right time, in the right way

What we say, how we say it and when we say it matters. All our audiences deserve communication that is accurate, thoughtful and meaningful.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Ensure internal and external communications are timely, clear and relevant, and content is easy to access.
- b. Promote the CRD brand as a trustworthy and reliable source of information.

### ACTIONS >>

- 1 Corporate Communications to identify ways to improve coordination and management of incoming media requests.
- 2 Formalize systems to promote early discussions with Corporate Communications to provide advice on how to deal with emerging issues so we can be proactive.
- 3 Strengthen relationship building and collaboration with communicators in other local governments to leverage information sharing.
- 4 Gain a better understanding of how the CRD brand is perceived by staff and the public, as well as gather valuable data by conducting surveys about what is known about the CRD and use this feedback to inform strategies and tactics.
- 5 Communicate which tools, templates and brand assets are available to staff and how to access them.
- 6 Participate in the creation of a corporate standard for policy review and renewal.
- 7 Roll out a Digital Asset Management System organization-wide so that staff can easily find and access corporately approved digital brand and photography assets.
- 8 Conduct a review of service levels for communication activities during non-traditional working hours (i.e., weekends).
- 9 Develop Response Guidelines and Standards for incoming queries for all channels (e.g., media, social media, email, etc.) to improve consistency across the organization.



## Placing equity, diversity, inclusion and accessibility at the heart of communications

Connecting with people with diverse lived experiences leads to more innovative ideas, better decisions, and stronger democracies. Meaningful two-way engagement strategies help address barriers to participation.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Ensure communications are written in plain language and avoid the use of jargon and acronyms.
- b. Make public information available in a way that is accessible to all people, including those with disabilities.
- c. Reflect the diverse communities the CRD serves in communication materials.

### ACTIONS >>

- 1 Update the Public Participation Framework to reflect principles of equity, diversity and inclusion and create a toolkit that supports best practice to address barriers.
- 2 Work with People, Safety & Culture to support the implementation of the Accessibility Plan, which will identify barriers of access to CRD services and programs including information and communication materials.
- 3 Refresh website to comply with internationally recognized Web Content Accessibility Guidelines.
- 4 Provide plain language and accessible content training to communicators and web authors.
- 5 Provide communications expertise and support to the Equity, Diversity and Inclusion steering committee in the development of corporate documents, communications and initiatives related to corporately recognized awareness days as well as assisting with other ways to promote diversity and inclusion.



## Adapting to changing digital landscapes

Organizations are responding to changing trends and no longer relying on one form of communication. They now increase reach using advertising, social media, web, and relationships with journalists and influencers. As most Canadians engage with services online, we must continually evolve our use of digital tools to meet the increasing expectations of residents.



### WE ACCOMPLISH THIS BY FOCUSING ON THE FOLLOWING GOALS:

- a. Help create an environment where digital transformation and capacity in the organization is championed and valued.
- b. Establish baselines of success for communications plans.
- c. Support staff that play a role in communication by developing and improving skills for using new and existing digital tools.
- d. Ensure voice and tone on digital channels is consistent, engaging and effective.
- e. Further develop strategic relationships between Corporate Communications and Information Technology and Geographic Information Systems (IT & GIS).

### ACTIONS >>

- 1 Modernize the crd.bc.ca website by updating design, navigation and content to meet current needs and plan for future use as a virtual front counter.
- 2 Measure reach and engagement of content across channels.
- 3 Leverage communication working group to share best practices and promote professional development and growth.
- 4 Participate in digital governance policy decisions with IT & GIS related to communication.
- 5 Corporate Communications and IT & GIS to implement an intake process so that staff can easily request communications support and track progress.
- 6 Co-develop programs with IT & GIS and People, Safety & Culture that are grounded in an understanding of workforce needs, are tailored to the different stages of digital literacy, encourage learning, and enable collaboration.
- 7 Review and consider the advantages and disadvantages of stand-alone social media channels for some organizational functions.





# Monitoring & Reporting

Implementation of the plan and associated actions will be overseen by the Executive Leadership Team. The Chief Administrative Officer (CAO) will report progress to the CRD Board through the Quarterly CAO Report.

The impact of the plan itself will be measured through the CRD Employee Experience Survey, through which staff are engaged every other year, and through action-specific measures.

## CRD EMPLOYEE EXPERIENCE SURVEY

The following questions will be tracked as indicators of impact of the actions highlighted in this plan, among other factors.

- In my organization, important matters are communicated to me in a timely and effective manner (Q39)
- My organization does a good job of explaining why important changes are made (Q40)
- I am satisfied with the information contained in my organization's intranet (Q41)



**APPENDIX**

# Four-Year Action Plan



## Fostering meaningful connections with communities

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Create “day-in-the-life” profiles to showcase and celebrate the diversity and complexity of work employees undertake at the CRD.   | •                    | •    | •    | •    |
| <b>ACTION 2</b> Identify parameters to review impact of marketing campaigns and digital channels on resident behaviour change.   |                      |      |      | •    |
| <b>ACTION 3</b> Through the communications working group, explore options to raise the profile of CRD staff and how the work they do contributes to the region and to help residents feel connected to the region they live, work and play in. |                      | •    | •    |      |
| <b>ACTION 4</b> Make content more relevant to CRD audiences by expanding news sections of the crd.bc.ca site to incorporate stories.   |                      | •    |      |      |
| <b>ACTION 5</b> Contribute to organizational approach for advocacy to ensure consistency and alignment with Board Priorities.  | •                    | •    | •    | •    |
| <b>ACTION 6</b> Evaluate current organizational marketing and outreach approaches, identifying opportunities to link routine or program-specific communication with talent acquisition strategies.   |                      | •    | •    |      |



## Supporting a culture of organizational connection

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Explore ways to increase two-way staff engagement, such as pulse polls or other feedback mechanisms, to supplement the biennial CRD Employee Experience Survey and support departmental program activities.  |                      | •    |      |      |
| <b>ACTION 2</b> Collect data about CRD Central usage (SharePoint Analytics) to measure and inform plans and strategies.  | •                    |      |      |      |
| <b>ACTION 3</b> Support People, Safety & Culture to promote the successful roll-out of SuccessFactors  | •                    | •    | •    | •    |
| <b>ACTION 4</b> Increase the profile of our organizational visions and cultural traits to boost their awareness among employees in collaboration with People, Safety & Culture.  |                      | •    |      |      |
| <b>ACTION 5</b> Collaborate with People, Safety & Culture to deliver staff connection and recognition programs.  | •                    | •    | •    | •    |
| <b>ACTION 6</b> Create a policy to mandate the adherence to corporate standards and processes for communications.  |                      | •    |      |      |
| <b>ACTION 7</b> Support all staff in being ‘brand ambassadors’ by creating a Communications Overview package to orient new employees and guide existing employees to key documents, toolkits and expectations.   |                      | •    |      |      |
| <b>ACTION 8</b> Establish a new collaborative, user-friendly quarterly communications work-planning and forecasting tool for all communicators, including embedded communications employees.   |                      | •    |      |      |
| <b>ACTION 9</b> In late 2023, the Chief Administrative Officer changed the reporting relationships of embedded communication coordinators to a more direct line to Corporate Communications. This will increase communications capacity and alignment and allow for stronger support and oversight in developing department/division communication initiatives. This transition will unfold over 2024. | •                    |      |      |      |



## Providing quality information at the right time, in the right way

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Corporate Communications to identify ways to improve coordination and management of incoming media requests.   |                      | •    |      |      |
| <b>ACTION 2</b> Formalize systems to promote early discussions with Corporate Communications to provide advice on how to deal with emerging issues so we can be proactive.   |                      | •    |      |      |
| <b>ACTION 3</b> Strengthen relationship building and collaboration with communicators in other local governments to leverage information sharing.  |                      | •    | •    | •    |
| <b>ACTION 4</b> Gain a better understanding of how the CRD brand is perceived by staff and the public, as well as gather valuable data by conducting surveys about what is known about the CRD and use this feedback to inform strategies and tactics. | •                    | •    |      |      |
| <b>ACTION 5</b> Communicate which tools, templates and brand assets are available to staff and how to access them.   |                      | •    |      |      |
| <b>ACTION 6</b> Participate in the creation of a corporate standard for policy review and renewal.   |                      | •    |      |      |
| <b>ACTION 7</b> Roll out a Digital Asset Management System organization-wide so that staff can easily find and access corporately approved digital brand and photography assets.   | •                    |      |      |      |
| <b>ACTION 8</b> Conduct a review of service levels for communication activities during non-traditional working hours (i.e., weekends).   |                      |      | •    |      |
| <b>ACTION 9</b> Develop Response Guidelines and Standards for incoming queries for all channels (e.g., media, social media, email, etc.) to improve consistency across the organization.   |                      | •    | •    | •    |





## Placing equity, diversity, inclusion and accessibility at the heart of communications

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Update the Public Participation Framework to reflect principles of equity, diversity and inclusion and create a toolkit that supports best practice to address barriers.   | •                    |      |      |      |
| <b>ACTION 2</b> Work with People, Safety & Culture to support the implementation of the Accessibility Plan, which will identify barriers of access to CRD services and programs including information and communication materials.   | •                    | •    | •    | •    |
| <b>ACTION 3</b> Refresh website to comply with internationally recognized Web Content Accessibility Guidelines.  |                      | •    | •    | •    |
| <b>ACTION 4</b> Provide plain language and accessible content training to communicators and web authors.   | •                    |      |      |      |
| <b>ACTION 5</b> Provide communications expertise and support to the Equity, Diversity and Inclusion steering committee in the development of corporate documents, communications and initiatives related to corporately recognized awareness days as well as assisting with other ways to promote diversity and inclusion. | •                    | •    | •    | •    |



## Adapting to changing digital landscapes

| ACTIONS  | IMPLEMENTATION YEARS |      |      |      |
|--|----------------------|------|------|------|
|  | 2024                 | 2025 | 2026 | 2027 |
| <b>ACTION 1</b> Modernize the crd.bc.ca website by updating design, navigation and content to meet current needs and plan for future use as a virtual front counter.   | •                    | •    |      |      |
| <b>ACTION 2</b> Measure reach and engagement of content across channels.   | •                    | •    |      |      |
| <b>ACTION 3</b> Leverage communication working group to share best practices and promote professional development and growth.  | •                    | •    | •    | •    |
| <b>ACTION 4</b> Participate in digital governance policy decisions with IT & GIS related to communication.   | •                    | •    | •    | •    |
| <b>ACTION 5</b> Corporate Communications and IT & GIS to implement an intake process so that staff can easily request communications support and track progress.   |                      | •    |      |      |
| <b>ACTION 6</b> Co-develop programs with IT & GIS, and People, Safety & Culture that are grounded in an understanding of workforce needs, are tailored to the different stages of digital literacy, encourage learning and enable collaboration. |                      | •    | •    | •    |
| <b>ACTION 7</b> Review and consider the advantages and disadvantages of stand-alone social media channels for some organizational functions.   |                      | •    |      |      |

## REPORT TO CAPITAL REGIONAL DISTRICT BOARD MEETING OF WEDNESDAY, APRIL 10, 2024

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**SUBJECT**     **Biosolids Monthly Update – April**

### **ISSUE SUMMARY**

To provide a monthly update to the Board on the status of the short-term options for biosolids management, as well as progress on the development of the Long-term Biosolids Management Plan and the advanced thermal pilot project.

### **BACKGROUND**

The Capital Regional District (CRD) has been responsible for the beneficial use of Class A biosolids produced at the Residuals Treatment Facility since the commissioning of the core area wastewater treatment project in 2020. Currently, the CRD is operating under the Short-term Biosolids Management Plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at Hartland Landfill has been the only alternative. In 2011, the CRD Board passed a resolution to ban the land application of biosolids from CRD facilities; however, in 2023, given the operational and logistical challenges with the short-term plan, the CRD Board amended its position to allow limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC. Staff continue to seek additional short-term beneficial use contingency options, in order to limit or avoid landfilling of biosolids when the other options are not available.

The CRD is also required to develop a Long-term Biosolids Beneficial Use Strategy by June 2024. Plan development will include input from the Technical and Community Advisory Committee, First Nations engagement and public consultation.

### **Short-term Biosolids Management Plan Implementation**

*Land Reclamation in Cassidy, BC:* The quarry resumed receiving mixed biosolids and sand in late March. A blend of biosolids and sand is currently being stored by the landowner under cover, pending regulatory approval for mixing and placement of biosolids growing medium, in accordance with the *Organic Matter Recycling Regulation* and approvals under the *Mines Act*.

*Cement Kiln in Richmond, BC:* The Lafarge facility continues to undertake repairs to the biosolids receiving silo but expects to receive some biosolids before a planned nine-day maintenance shutdown on April 24. The kiln continues to be the priority destination for CRD biosolids under the short-term plan.

*Landfilling at Hartland Landfill:* In March, the majority of biosolids produced were landfilled. Landfilling is not a beneficial use, as per provincial and federal expectations, and continues to consume valuable airspace at the landfill. With the resumption of sending biosolids to the quarry and cement kiln, it is anticipated that landfilling through April will be minimal.

*Second Quarry Site in the Regional District of Nanaimo:* As reported last month, the CRD has been approached by a site operator of a second gravel quarry within the Regional District of Nanaimo to receive CRD Class A biosolids for site reclamation. Discussions are ongoing.

### **Long-term Biosolids Management Planning**

*Public Engagement:* Public engagement on the Long-term Biosolids Management Plan closed March 6, 2024. The CRD hosted a virtual open house on February 20, 2024, which included presentations from CRD staff and the technical consultant, as well as a moderated question and answer period. Members of the public participated in a CRD survey on a voluntary basis and a separate representative survey was conducted by Ipsos. The “What We Heard” consultation report, summarizing the public engagement, will be included in the staff report outlining the draft long-term biosolids management plan, to give the CRD Board a full opportunity to consider all of the engagement feedback.

*First Nations Engagement:* Eighteen First Nations were invited to in-person and virtual open houses held in late March. Some First Nations have requested individual presentations and discussion on the topic, rather than participating in the joint open houses. These meetings are planned for April. A report on First Nations consultation will be included in the staff report outlining the draft Long-term Biosolids Management Plan.

*Long-Term Management Plan:* The draft Long-term Biosolids Management Plan will come forward to the Board at the May 8, 2024 meeting. The Plan, originally scheduled to come forward to the April meeting, has been delayed one month to allow time for fulsome First Nations consultation and a report on this engagement to be prepared. Once received by the Board in May, the Plan and both the public and First Nations engagement reports, will be referred to the Technical and Community Advisory Committee for final review and comment; the Plan will also be distributed to First Nations for comment and it will be posted for public comment on the CRD website. The Plan will subsequently be brought forward to the CRD Board for final approval at the June meeting.

On March 13, 2024, the CRD Board received correspondence regarding a lawsuit filed in Texas against Synagro. Synagro is a partner in Hartland Resource Management Group (HRMG), which is responsible for designing, building, financing, operating and maintaining the residuals treatment facility. CRD staff have met with Synagro executive to obtain more information about the allegations. Synagro confirmed that the biosolids applied to a property in Johnson County between December 2022 and January 2023 were a dried Class A product. The following statement was provided by Synagro to the CRD on April 3, 2024:

*Thank you for reaching out. Per your request regarding the recently filed Johnson County litigation, Synagro can provide the following statement regarding land application of City of Fort Worth biosolids in Johnson County:*

*Synagro denies these allegations, which are unproven and novel, and will contest this lawsuit. As a matter of fact, without any response from Synagro, the plaintiffs have already amended the complaint to drastically reduce the concentrations of PFAS alleged in the complaint when it was originally filed. The biosolids applied by a farmer working with Synagro met all ESEPA and Texas Commission on Environmental Quality (TCEQ) requirements. USEPA continues to support land application of biosolids as a valuable practice that recycles nutrients to farmland and has not suggested that any changes in biosolids management is required.*

*For further background, biosolids are a nutrient-rich end-product of the wastewater solids treatment process that have been treated to ensure safe use in agricultural land application. Biosolids provide multiple benefits to overall soil quality and health, including improved moisture absorption ability, recycling of micro and macro nutrients, carbon sequestering, reduced nutrient leaching, and lower use of industrially produced chemical fertilizers. USEPA and state environmental agencies, including TCEQ, have approved and regulated biosolids for decades and multiple risks assessments and scientific studies have found that biosolids recycling presents little to no risk to human health and the environment.*

*Provincial (Organic Matter Recycling Regulation) Technical Working Group Review:* In 2023, the provincial Ministry of Environment and Climate Change Strategy conducted a review of the Organic Matter Recycling Regulation, including an evaluation of emerging contaminants of concern in the context of land application. The report was anticipated in late 2023, but staff have been advised that the date has been delayed until May 2024. The Ministry has not altered its regulatory direction at this time. Options for undertaking an independent literature review will be presented at the April 17, 2024 Environmental Services Committee meeting.

*Letter to Minister requesting extension:* On March 19, the CRD Board Chair, as directed by the Board, sent a letter to the Minister of the Environment & Climate Change Strategy, requesting a meeting to discuss the extension of the submission deadline for the Long-Term Biosolids beneficial Use Strategy. The Minister had not responded to the request as of April 5.

### **Advanced Thermal Pilot Project Status**

The CRD has selected a technical advisor to support CRD staff in developing terms and technical requirements. The advisor has begun working on the technical specifications for the demonstration plant, and it is anticipated that the Request for Proposal for the demonstration plant will be issued in Q2, with a preferred proponent selected in Q3-Q4 2024.

### **CONCLUSION**

The Capital Regional District (CRD) continues to implement the Short-term Biosolids Management Plan while also developing the draft Long-term Biosolids Management Plan. The short-term program continues to experience operational challenges and there is inadequate contingency capacity to ensure the sustainable beneficial use of biosolids. Staff are currently exploring additional contingency options to support short-term operations.

### **RECOMMENDATION**

There is no recommendation. This report is for information only.

|               |   |
|---------------|---|
| Submitted by: | Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection           |
| Concurrence:  | Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                       |





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## REPORT TO CAPITAL REGIONAL DISTRICT BOARD MEETING OF WEDNESDAY, APRIL 10, 2024

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**SUBJECT**     **Establishment of Bilateral Agreements with Municipalities in the Capital Regional District to Facilitate Implementation of Next Generation 9-1-1**

### **ISSUE SUMMARY**

The Government of Canada has mandated the transition of analog emergency telecommunications across the country to the digital Next Generation 9-1-1 system by March 2025. In order to meet this deadline, the Capital Regional District (CRD) needs to establish bilateral agreements with municipalities in the region by May 31, 2024 to allow the Public Safety Answer Points (PSAP) centres to complete their necessary technical and operational preparations to be compliant in time for the transition.

### **BACKGROUND**

In 1988, the CRD was the first place in North America to implement Enhanced 9-1-1. The service established at the time provided for the regional district to administer 9-1-1 Call Answer under Bylaw No. 2468. This Bylaw created the function of financing, installation, operation and maintenance of a 9-1-1 emergency response telephone service. TELUS is the network provider for most of the existing legacy Basic 9-1-1 (B9-1-1) and Enhanced 9-1-1 (E9-1-1) service in British Columbia (BC). In February 2017, the CRD entered into a contract with E-Comm to deliver E9-1-1 services for the region.

The Government of Canada has mandated a move, through the Canadian Radio-Television and Telecommunications Commission (CRTC), from the existing analog telephone systems to digital (internet protocol-based) communication networks for 9-1-1 calls across the country. The new system, called Next Generation 9-1-1 or NG9-1-1, will improve emergency communications and response for the public and emergency responders. NG9-1-1 will improve the public's access to emergency response services by allowing 9-1-1 (PSAP) centres to exchange additional data and information with responders beyond voice communications, improve call processing times, enhance situational awareness, and increase responder safety. The current 9-1-1 system is scheduled to be decommissioned in March 2025.

In BC, TELUS is the Emergency Services IP Network (ESInet) provider, the network architecture upon which NG9-1-1 will operate. The CRD has an executed agreement with TELUS for access to these systems but with the introduction of NG9-1-1, TELUS requires regional districts to sign new agreements to meet certain requirements of NG9-1-1. These agreements, called Local Governing Authority (LGA) Agreements (Appendix A), set out the responsibilities of TELUS and the regional districts regarding NG9-1-1. E-Comm has stated that without these agreements in place by May 31, 2024, the PSAPs including E-Comm will be unable to undertake necessary preparatory actions to meet the March 2025 deadline (Appendix B).

These agreements require that the CRD, as the responsible regional district, guarantee that all the PSAPs that provide service to the region are compliant with the CRTC NG9-1-1 technical requirements. The challenge that is faced is that there are a number of PSAPs named in the TELUS agreement, such as Surrey Fire and Campbell River Fire Dispatch centres, that are contracted individually by the local authorities and with which the CRD, as the responsible LGA,

legally does not have any contractual agreements and therefore no oversight ability to ensure compliance. This issue has prevented many regional districts from being able to sign the current TELUS LGA agreements as presented. The CRD and the other unsigned regional districts have been working with TELUS since the Fall of 2022 to find solutions to this impasse to no avail.

It has been recommended that the responsible regional districts establish bilateral agreements with all local authorities that provide emergency services in their geographic areas that would empower the regional districts to sign definitive agreements with TELUS for NG9-1-1 while addressing the responsibilities and accountabilities related to the inter-dependencies. This would ensure that any future agreements that any municipality may enter into with other PSAP providers will meet compliance requirements with TELUS as required by the CRTC.

Currently, Metro Vancouver is working with TELUS to draft bilateral agreements for their municipal partners and these may serve as a template to assist a similar exercise in the CRD.

## **ALTERNATIVES**

### *Alternative 1*

That staff be directed to develop and enter into bilateral agreements with local authorities to allow the Capital Regional District to sign the Local Governing Authority Agreement with TELUS for Next Generation 9-1-1 implementation.

### *Alternative 2*

That this report be referred back to staff for additional information based on Capital Regional District Board direction.

## **IMPLICATIONS**

### *Alignment with Board & Corporate Priorities*

The proposed activity aligns with the following Board and Corporate priorities:

- 5a Influence regional issues and advocate in a consistent, focused way that aligns with the Board strategic priorities
- 9a Goal: Effective emergency management
- 16g Goal: Public safety & emergency response

### *Alignment with Existing Plans & Strategies*

This activity aligns with current plans to implement NG9-1-1 services to the CRD.

### *Financial Implications*

While the final additional costs related to the mandatory transition of local PSAPs to NG9-1-1 is not clearly defined at this point, all PSAPs have been aware of and planning for the transition for many years. The CRD has established contingency funds specifically dedicated to facilitating the transition and to ensure no additional financial impacts during the implementation process.

### *Intergovernmental Implications*

The establishment and signing of the bilateral agreements between the CRD and municipalities will ensure that local authorities maintain the ability to enter into agreements with PSAPs that they believe are in the best interest to serve the needs of their communities while allowing the CRD to sign the LGA Agreement with TELUS that would allow the implementation of NG9-1-1 in the region.

*Service Delivery Implications*

The implementation of NG9-1-1 services to the region will significantly enhance the ability for PSAPs to serve the emergency needs of the region while improving responder safety. If the signing of the LGA Agreement with TELUS is delayed past May 31, 2024 then it will likely mean that E-Comm and other PSAPs serving the region will be unable to meet the CRTC mandated March 2025 deadline for NG9-1-1 implementation.

*Social Implications*

The upgrading of the emergency call answer services in the region to meet NG9-1-1 is an expectation of the public and failure to meet mandated deadlines for implementation will likely lead to reputational damage.

**CONCLUSION**

It is necessary for the CRD to develop and enter into bilateral agreements with all local authorities that provide emergency services in the region to allow the CRD to sign the LGA Agreement with TELUS. This will ensure that the PSAPs serving the emergency call answer and dispatch needs of the region are able to undertake necessary preparations to the mandatory transition deadlines for NG9-1-1 implementation.

**RECOMMENDATION**

That staff be directed to develop and enter into bilateral agreements with local authorities to allow the Capital Regional District to sign the Local Governing Authority Agreement with TELUS for Next Generation 9-1-1 implementation.

|               |  |
|---------------|--|
| Submitted by: | Shawn Carby, CD, MAL, Senior Manager, Protective Services                    |
| Concurrence:  | Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                  |

**ATTACHMENTS**

- Appendix A: TELUS Local Governing Authority Agreement
- Appendix B: E-Comm Letter

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

This Agreement for the provision TELUS' Next Generation 9-1-1 Service (the "**Agreement**") is effective the [REDACTED] day of [REDACTED], 2022 [REDACTED] (the "**Effective Date**")

BETWEEN:

[REDACTED]  
(the "**Local Government Authority**" or "**LGA**")

AND:

TELUS Communications Inc.  
(**"TELUS"**)

WHEREAS the Local Government Authority wishes to provide its citizens with access to Next-generation 9-1-1 ("**NG9-1-1**") Emergency Services ("**NG9-1-1 service**") through calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1;

WHEREAS, the legacy 9-1-1 service is, as per Telecom Regulatory Policy CRTC 2017-182 ("**TRP 2017-182**"), called "Next Generation 9-1-1 – Modernizing 9-1-1 networks to meet the public safety needs of Canadians", is due to be decommissioned by order of the Canadian Radio-television Commission ("**CRTC**").

WHEREAS, the current legacy 9-1-1 LGA service agreement will remain in effect and supplement the NG9-1-1 until such time the legacy 9-1-1 network is decommissioned.

WHEREAS TELUS, as mandated by the CRTC, is the sole provider of NG9-1-1 services in the province in which the LGA is located and as such can route calls, sessions or events from the inhabitants of the LGA calling the 3-digit emergency telephone number 9-1-1 to the appropriate Public Safety Answering Point which provides the 9-1-1 caller with access to Emergency Services;

WHEREAS TELUS has developed an IP based next generation 9-1-1 service designed to replace the legacy provincial enhanced 9-1-1 service that will transit calls, sessions and events to the 3-digit emergency telephone number 9-1-1 in accordance with the terms and conditions laid out in TRP 2017-182 and Telecom Decision CRTC 2021-199 ("**Decision 2021-199**"); and

WHEREAS TELUS will recover costs associated with delivering the TELUS Next Generation 9-1-1 Service in the form of a fee levied against each End-User as prescribed in TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001) filed in accordance with the process laid out in TRP 2017-182 and any future modifications thereto.

**NOW THEREFORE** in consideration of the mutual agreements hereinafter contained and other good and valuable consideration, the parties hereto agree as follows:

### 1 DEFINITIONS

In this Agreement, in addition to those terms which are parenthetically defined, capitalized terms shall have the meanings ascribed to them in Schedule "A" (Definitions).

### 2 SCOPE OF AGREEMENT

2.1 **Agreement:** The LGA and TELUS (collectively, the "**Parties**") hereby agree to fulfil their respective obligations as per the terms and conditions set out in TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001) and those contained in this Agreement, in order to provide NG9-1-1 emergency calling services. The Parties agree that this Agreement is for their mutual advantage and is designed to provide continued access to Emergency Services to the

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

served inhabitants within the Serving Area.

- 2.2 **Cost Recoveries:** The Parties agree that TELUS will recover costs associated with delivering the TELUS Next Generation 9-1-1 Service via the TELUS NG9-1-1 Tariff filed by TELUS to be levied against entities that provide access to NG9-1-1 services in TELUS' ILEC operating territory.
- 2.3 **Service Description:** The NG9-1-1 Service provides a managed, private, dedicated IP network referred to as the Emergency Services Internet Protocol network ("**ESInet**"). The ESInet provides the transport and interconnectivity for all i3-PSAPs within the Serving Area as well as Originating Service Provider networks supporting 9-1-1 Calling over IP-based networks and devices. For i3-PSAPs, the ESInet is delivered to the PSAP operations premise using TELUS's IP VPN service to the PSAPs. The NG9-1-1 Service also provides a series of applications and service interfaces known as NG9-1-1 Core Services ("**NGCS**") and may include other third-party applications from trusted entities as may be requested by the LGA and agreed to by TELUS. TELUS provided NG9-1-1 Service features are described in the User-to-Network Interface ("**UNI**") document. The LGA agrees that TELUS is not responsible nor liable for damages arising from LGA's use of third-party applications in conjunction with the NG9-1-1 Service.

### 3 TELUS' OBLIGATIONS

In accordance with TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001), TELUS agrees to:

- 3.1 Provide TELUS Next Generation 9-1-1 Service to the LGA in order to provide End-Users, within the Serving Area, served by Originating Network Providers who have entered into agreements with TELUS with respect to access to TELUS Next Generation 9-1-1 Service, access to Emergency Services through calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1, as further described herein.
- 3.2 Provide TELUS' Next Generation 9-1-1 Network access, network termination/demarcation, and services to the PSAP, as agreed to by TELUS and the LGA, to be used to answer and transfer calls, sessions and events to the 3-digit emergency telephone number 9-1-1.
- 3.3 Provide Selective Routing and Transfer of emergency calls, sessions and events to the Primary PSAP and Secondary PSAPs according to instructions provided by the LGA, including those described in PSAP Contingency Plans.
- 3.4 Provide 9-1-1 caller information, as ordered by the CRTC, to the PSAP(s).
- 3.5 Maintain and update the 9-1-1 mapping and addressing database subject to receipt of the information required to be provided by the LGA pursuant to paragraphs 4.4.2 and 4.4.3.
- 3.6 Be responsible for any other requirements not specifically identified in this Agreement related to matters of the kind as imposed by the CRTC.
- 3.7 Where an Originating Network Provider has entered into agreements with TELUS with respect to access to TELUS Next Generation 9-1-1 Service, TELUS shall remain responsible for all aspects of the operation of the TELUS Next Generation 9-1-1 Service and shall not be relieved of any of its obligations under this Agreement.
- 3.8 Maintain a 24x7 9-1-1 Support Team to monitor the network and coordinate activities with stakeholders.
- 3.9 Maintain a fallback Third Party Operator Service that will accept NG9-1-1 calls, sessions and events and route them to the appropriate Primary PSAP in the event of network,



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- routing, or location issues.
- 3.10 Selectively route and enable the selective transfer of 9-1-1 Calls to the Primary-PSAP, Secondary-PSAPs and Dispatch Agency according to Policy Routing Rules crafted to the needs of the LGA, including those described in PSAP Contingency Plans.
  - 3.11 Maintain a PSAP Contingency Plan as prepared by each PSAP in the event of network or customer equipment outage or evacuation.
  - 3.12 Perform Quality Assurance and Quality Control (QA/QC) on the aggregated dataset and provide mapping and addressing discrepancy/errors reporting back to the Local Government Authorities or their designees.
  - 3.13 Provide ESInet IP connection with redundant and, dependent upon availability, diverse facilities to PSAP locations designated by the LGA and as listed in Schedule "D" (PSAP Designations & Locations).
  - 3.14 TELUS is responsible for delivering NG9-1-1 traffic to the TELUS NG9-1-1 demarcation point. TELUS will not be responsible for any issues, nor will it troubleshoot outages or failures proved to be occurring with the LGA network, which begin on the LGA side of the TELUS NG9-1-1 demarcation point.

### 4 OBLIGATIONS OF THE LGA

#### 4.1 As it applies to PSAPS, the LGA agrees to:

- 4.1.1. Designate Primary PSAPs, Secondary PSAPs, and Back-Up PSAPs to answer and dispatch 9-1-1 Calls in the Serving Area. In the event that the LGA contracts with a third party for the management and operation of the PSAP, the LGA will remain responsible for all aspects of the operation of the PSAP and will not be relieved of any of its obligations under this Agreement.
- 4.1.2. Ensure that all PSAPs are i3-compliant as per the conditions listed in section 6, requirements listed in Schedule C, and documents referenced in Schedule E of this document are connected to the NG9-1-1 network
- 4.1.3. Ensure that all PSAPs provide, operate, and manage the personnel and the equipment, including terminal equipment, required to receive and process all emergency calls, sessions and events directed to the PSAP, based on the technical requirements further detailed under Schedule C. LGA shall put in place a Business Continuity Plan applicable to the PSAPs and test it annually.
- 4.1.4. Provide TELUS with a minimum of ninety (90) days' written notice of an intended change of a PSAP in their serving area.<sup>1</sup>

#### 4.2 The LGA acknowledges and understands that in cases where Next Generation 9-1-1 calls, sessions and events are delivered to TELUS without complete location information, these calls, sessions and events may be routed to a default PSAP which may be a Provincial Default i3 PSAP, designated by the provincial government or an alternate default PSAP selected and managed by TELUS.

- As it applies to mapping addressing data (GIS or MSAG), where not otherwise defined

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<sup>1</sup> See Telecom Decision 2011-309 – CISC consensus reports – Emergency Services Working Group – ESRE0052 Section 4.2.2 – Change activity timelines.

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

by applicable provincial legislation and absent a provincial body that acts as a GIS data aggregator, the LGA shall create, maintain and update all boundaries, addressing and mapping information according to applicable standards (MSAG and GIS) and perform quality assurance and control on the data prior to submission. If a third party is to provide the GIS data on behalf of the LGA, such party shall be identified in Schedule “E”, and that 9-1-1 specific GIS data layers must be provided directly to TELUS in a secure manner without transiting through any shared open platform upon implementation of GIS functionality within the NG9-1-1 network. The LGA agrees to provide TELUS with a minimum of ninety (90) days’ written notice of a change in GIS data providers. The LGA shall take responsibility for changes to the 9-1-1 call routing resulting from submitted GIS data.

- 4.3 As it applies to Serving Area, the LGA shall coordinate the participation of all PSAPs in the Serving Area with respect to TELUS Next Generation 9-1-1 Service. This will include:
- 4.3.1. Determining, in conjunction with TELUS, the Serving Area and Emergency Service Zones served by the PSAPs;
  - 4.3.2. Providing and validating, as required by TELUS, all geographical data, including street names, addresses, or other data provided by the geographic information system (GIS) and associating those with Emergency Service Zones;
  - 4.3.3. Informing TELUS of all changes in the geographical data that may occur during the term of this Agreement and changes in that geographical data must be reported to TELUS as soon as possible after that data changes;
  - 4.3.4. Ensuring all PSAPs in the Serving Area have secure 9-1-1 data and systems which security includes physical security, network security, cybersecurity, and all other considerations within the PSAPs domains;
  - 4.3.5. Ensuring all PSAPs in the Serving Area have and maintain current contact information and make it available as per the NENA i3 standard;
  - 4.3.6. Ensuring the Primary PSAP accepts specific planned test calls from the public;
  - 4.3.7. Ensuring the Primary PSAP implements a call handling solution that includes a test call interface and automaton as described in NENA i3;
  - 4.3.8. Correcting all errors with submitted geographic data as reported by TELUS as soon as possible after the notification is sent to the LGA. LGA shall aim to do it in 72 hours to ensure that all carriers operating within the LGA territory have access to accurate validation information;
  - 4.3.9. Providing TELUS with 85 days written notice of an intended change in borders of the Serving Area.<sup>2</sup>
- 4.4 As the requirements related to the TELUS Next Generation 9-1-1 Service may evolve in time or need to be detailed, the LGA shall be responsible for any other requirements that are not specifically identified in the Agreement but added in documents referred under the Agreement (such as UNI) or otherwise communicated by TELUS to all LGAs and

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<sup>2</sup> Please see Telecom Decision 2011-309 – CISC consensus reports – Emergency Services Working Group – ESRE0052 Section 4.2.2 – Change activity timelines.

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

PSAPs.

- 4.5 The LGA shall not, nor shall it authorize, assist or permit any person other than TELUS to change, repair, reinstall or tamper with the TELUS' Next Generation 9-1-1 Network and equipment up to the demarcation point.
- 4.6 The LGA recognizes that TELUS Next Generation 9-1-1 Service allows for many new functionalities regarding types of data that can be transmitted over the Next Generation 9-1-1 network. It is expected that the Commission will mandate the implementation of such new functionalities. The availability of these functionalities may require the LGA to upgrade software and/ or hardware at the PSAP. To ensure NG9-1-1 services' upgrades and new features are available uniformly across TELUS' ILEC operating territory, the LGA will have to ensure the PSAPs selected to serve its inhabitants implement such upgrades on the implementation schedule set out by the CRTC.
- 4.7 The LGA shall support embargoes implemented to suspend changes to the database during major outages or planned upgrades.
- 4.8 The LGA shall implement guidelines and procedures with respect to the retention and destruction of personal information related to NG9-1-1 services prior to the provision of those services.<sup>3</sup>
- 4.9 The LGA shall ensure that all communications destined for carriage over the NG9-1-1 network will be secure, and it will take all steps necessary to protect the confidentiality of the information carried over these networks to the maximum extent feasible.
- 4.10 Upon implementation of GIS functionality within the NG9-1-1 network, the LGA must provide sensitive NG9-1-1-related GIS and addressing data directly to TELUS in a secure and encrypted manner without transiting through any shared open platform.<sup>4</sup>
- 4.11 The LGA shall continue to provide TELUS access to the Master Service Addressing Guide until such time as the legacy 9-1-1 network is decommissioned or is advised by TELUS that the Master Service Addressing Guide is no longer required.
- 4.12 Warrant and represent that it has the authority to:
  - 4.12.1. Enter into this Agreement;
  - 4.12.2. Determine that the LGA will utilize TELUS Next Generation 9-1-1 Service to provide End-Users within the Serving Area, served by TELUS or by Originating Network Providers who have entered into agreements with TELUS with respect to access to TELUS Next Generation 9-1-1 Service, access to Emergency Services through calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1; and
  - 4.12.3. Determine that all End-Users, within the Serving Area, served by TELUS or by Originating Network Providers who have entered into agreements with TELUS with respect to access to 9-1-1 Service, shall receive access to Emergency Services through calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1 through use by the LGA of 9-1-1 Service.

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<sup>3</sup> Pursuant to Telecom Regulatory Policy CRTC 2017-182, paragraph 233.

<sup>4</sup> Pursuant to Telecom Regulatory Policy CRTC 2020-150, paragraph 22.

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## 5 PROPERTY RIGHTS

5.1 Title to, ownership of, and all intellectual property rights in any facilities, equipment, software, systems, processes, and documentation used by TELUS to provide the TELUS Next Generation 9-1-1 Service and all enhancements on them shall be and remain with TELUS or its suppliers. Except as expressly set forth elsewhere in this Agreement, this Agreement does not grant the LGA any intellectual property or other rights or licenses in or to any service components listed above.

## 6 TRUSTED ENTITIES

6.1 Trusted entities are entities that have been qualified, certified and authorized by either TELUS and/or CRTC to connect to the TELUS Next Generation 9-1-1 Network.

## 7 CONFIDENTIAL INFORMATION

- Unless the LGA provides express consent or disclosure is pursuant to a legal power, all information kept by TELUS regarding the LGA, other than the LGA's name, address and listed telephone number, is confidential and may not be disclosed by TELUS to anyone other than: i) the LGA; ii) a person who, in the reasonable judgment of TELUS, is seeking the information as an agent of the LGA; iii) another telephone company, provided the information is required for the efficient and cost-effective provision of telephone service and disclosure is made on a confidential basis with the information to be used only for that purpose; iv) an agent retained by TELUS in the collection of the LGA's account, provided the information is required for and is to be used only for that purpose; v) public authority or agent of a public authority, for emergency public alerting purposes, if a public authority has determined that there is an imminent or unfolding danger that threatens the life, health or security of an individual and that the danger could be avoided or minimized by disclosure of information; vi) an Affiliate involved in supplying the LGA with the Services, provided the information is required for that purpose and disclosure is made on a confidential basis with the information to be used only for that purpose.

7.1 TELUS is responsible for complying with Canadian privacy legislation (including the Personal Information Protection and Electronic Documents Act (PIPEDA) and substantially similar Canadian provincial privacy legislation) as such is applicable to TELUS in the provision of the Services under this Agreement. TELUS' commitment to the protection of personal information is further detailed in the TELUS Business Customer Privacy Policy available at [www.telus.com/businessprivacy](http://www.telus.com/businessprivacy). TELUS' provision of the Services is subject to this policy. This policy may be updated by TELUS from time to time. The amended policy will be posted at the location above, and notice of the change will be provided by invoice notification, email, or otherwise. Unless otherwise indicated, the effective date of the amended policy will be the date of posting. The continued use of the Services by the Customer after such date will be deemed to constitute the acceptance of the amended policy. As TELUS does not have a direct contractual relationship with the PSAPs and the End-Users, TELUS relies on and the LGA shall ensure that the LGA (directly or through the PSAPs) has obtained all necessary consents from such End-Users, provided all necessary notices to End-Users, and otherwise have all necessary authority to permit the collection, use or disclosure of personal information by and between LGA and TELUS (if any).

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

- 7.2 Any information including any and all written documentation provided by TELUS to the LGA, its employees, servants, agents, assigns and/or contractors pertaining to the design, development, implementation, the operation and the maintenance of TELUS the Next Generation 9-1-1 Service is confidential, and will be provided only to such persons who have a need to know for the purposes of this Agreement. The LGA will not permit any of its employees, servants, agents, assignees and/or contractors to duplicate, reproduce, or otherwise copy any such confidential information for any purpose whatsoever, except as may be required by any such employees, servants, agents, assigns and/or contractors with a need to do so for the purposes of this Agreement.
- 7.3 Use all information or data that is provided by an End-User for the sole purpose of responding to 9-1-1 related communications, unless the End-User provides express consent for other use or disclosure, or disclosure is ordered pursuant to a legal power. For greater clarity, information or data related to a specific emergency occurrence shall be used only for the purpose of responding to that emergency, unless the End-User provides express consent for other use or disclosure, or disclosure is ordered pursuant to a legal power.<sup>5</sup> For greater clarity, such obligation also applies to the information or data that are provided on behalf of the End-User, for purposes associated with emergency services accessed through TELUS' NG9-1-1 network. For greater clarity, such obligation also applies when the information or data is stored or otherwise under the custody or control of the PSAP.
- 7.4 The LGA will retain the confidential End-User data, including any audio or video or text files provided and associated information in confidence and will treat the confidential information with the same degree of care that it employs for the protection of its own confidential information and, at a minimum, a reasonable degree of care, and will not use or copy such confidential information except as necessary to perform its obligations under this Agreement, and will not permit disclosure of such confidential information except to employees, servants, agents, assigns and/or contractors, including the PSAP (provided such employees, servants, agents, assigns and/or contractors are bound by similar confidentiality obligations as the one contained in this Agreement and provided such can be evidenced) where there is a need to know for purposes of this Agreement.
- 7.5 The LGA agrees that it will indemnify TELUS against any and all liabilities, losses, damages, costs, and expenses (including legal fees and disbursements on a solicitor and own client basis) resulting from the unauthorized disclosure or use of information identified in paragraphs 7.1 to 7.3 on the part of the LGA, its employees, servants, agents, assigns and/or contractors.
- 7.6 Furthermore, the LGA agrees to abide by all applicable federal and provincial legislation with respect to the protection of privacy and confidential information in effect from time to time.

### 8 QUALITY OF THE LGA'S SERVICE

- 8.1 The LGA agrees to implement and ensure the operation of its PSAP(s) in a manner that meets the quality standards generally accepted in Canada for such services.
- 8.2 The LGA acknowledges the importance under this Agreement that all PSAPs connected to the TELUS' Next Generation 9-1-1 Network meet at all times the requirements set out under this Agreement and promptly whenever those are changed by TELUS from time to time to assure the operation of TELUS' Next Generation 9-1-1 Network, in accordance with quality standards generally accepted in Canada and that the default of a PSAP to comply with such requirement can compromise the TELUS' Next Generation 9-1-1

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<sup>5</sup> Pursuant to Telecom Regulatory Policy CRTC 2017-182, paragraph 232.



# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

Network and affect all End-Users.

## 9 FORCE MAJEURE

- 9.1 Neither TELUS nor the LGA will be held responsible for any damages or delays as a result of war, invasion, insurrection, demonstrations, or as a result of decisions by civilian or military authorities, fire, floods, strikes, decisions of regulatory authorities, and, generally, as a result of any event that is beyond the LGA's or TELUS' reasonable control ("Force Majeure").
- 9.2 TELUS and the LGA agree that in the event of a Force Majeure, the Parties will cooperate and make all reasonable efforts to provide temporary replacement service until permanent service is completely restored.
- 9.3 The costs required to provide temporary replacement service will be borne according to the sharing of obligations between TELUS and the LGA, as indicated in Articles 3 and 4 of this Agreement.

## 10 IMPLEMENTATION SCHEDULE

- 10.1 TELUS and the LGA agree that the implementation of TELUS Next Generation 9-1-1 Service within the Serving Area, and based on the requirements set out in Schedule B, will be carried out pursuant to an implementation schedule to be mutually agreed to by the Parties in writing and which may be changed from time to time by agreement of the Parties.

## 11 LIMITATION OF LIABILITY

- 11.1 TELUS' liability for the performance of its obligations pursuant to this Agreement shall be the one set out in TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001). It is understood that TELUS' limited liability under this Agreement is a condition without which TELUS would not have entered into this Agreement, and therefore, TELUS' liability for the performance of its obligations pursuant to this Agreement shall not exceed any limitation of liability set out under TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001) even if such limitation of liability does not specifically apply or refer to the LGA.
- 11.2 The LGA and TELUS shall, during the Term, maintain sufficient insurance to cover their respective obligations under this Agreement and shall provide evidence of same to the other party or, if either the LGA or TELUS is self-insured, provide to the other party evidence that is satisfactory to that party that the LGA and/or TELUS, as the case may be, is and will be, at all relevant times, in a position to face successfully its monetary obligations stemming from liability under this Agreement.
- 11.3 This Article 11 will survive the present Agreement even if it is annulled, in part or in whole, or even if it is terminated for any other reason.

## 12 TERM

- 12.1 **Term:** This Agreement will be effective as of the Effective Date, and will be valid for a period of five (5) years, with an automatic renewal for a successive period of five (5) years, unless one party gives to the other at least six (6) months' written notice of termination before the end of the then current five (5) years term.

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

- 12.2 **Termination or Suspension of a Service:** Notwithstanding Article 13.1, TELUS may immediately suspend the entirety or a portion of the NG9-1-1 Service where TELUS has reasonable cause to believe that the LGA's traffic is compromised or otherwise poses a risk to the NG9-1-1 Service. For any reason other than the integrity of NG9-1-1 Service, the LGA may terminate the NG9-1-1 Service, or TELUS may terminate or suspend the NG9-1-1 Service, in accordance with the terms of the relevant Tariffs with six (6) months prior written notice.

### 13 REGULATORY APPROVAL

- 13.1 It is expressly understood that TELUS Next Generation 9-1-1 Service is provided pursuant to the terms and conditions of the TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001) as amended from time to time and as approved by the Commission, and this Agreement as amended from time to time and as approved by the Commission.
- 13.2 This Agreement (excluding the Schedules) will be subject to approval by the Commission, and is subject to changes imposed by directions or orders of the Commission. Any future amendments to this Agreement (excluding the Schedules) will also be subject to approval by the Commission.

### 14 WAIVER

- 14.1 The failure of either party to require the performance of any obligation hereunder, or the waiver of any obligation in a specific instance, will not be interpreted as a general waiver of any of the obligations hereunder, which will continue to remain in full force and effect.

### 15 RELATIONSHIP OF THE PARTIES

- 15.1 This Agreement will not create nor will it be interpreted as creating any association, partnership, any employment relationship, or any agency relationship between the Parties.

### 16 ENTIRE AGREEMENT

- 16.1 Except as otherwise stated herein, this Agreement, together with the terms of TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001) constitutes the entire agreement of the Parties and supersedes any previous agreement, whether written or verbal. Should any provision of this Agreement be declared null, void, or inoperative, the remainder of the Agreement will remain in full force and effect. In the event of a conflict between this Agreement and TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001), the terms of TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001) will prevail.

### 17 NOTICES

- 17.1 Except if expressly specified otherwise elsewhere in the Agreement, all notices necessary under this Agreement shall be given in writing. In the case of TELUS, the notice shall be sent by e-mail and in the case of the LGA, the notice can be either personally delivered, or sent by registered mail or facsimile, or by e-mail at the addresses indicated below, Notices, if personally delivered or sent by facsimile, will be deemed to have been received the same day, or if sent by registered mail, will be deemed to have been received four days (excluding Saturdays, Sundays and statutory holidays) after the date of mailing. Notices delivered by e-mail shall include the following, and shall only be effective if the recipient provides by e-mail a confirmation of delivery and the date of acceptance of the delivery: (i) sender's name, address, telephone number, and e-mail address; and (ii) date and time of the transmission.

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17.2 TELUS can change the telecommunication services provided to a PSAP by providing the LGA at least thirty (30) days prior written notice, without the necessity of the Parties signing a formal amendment to this Agreement. By continuing to use the TELUS' Next Generation 9-1-1 Network after TELUS has changed the telecommunication services provided to a PSAP, the change is deemed to have been accepted by the Parties.

**Local Government Authority**

TELUS Communications Inc.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TELUS  
Regulatory Affairs  
Attn: TELUS NG9-1-1 Leadership Team  
Regulatory.affairs@telus.com

Or to such other address as either party may indicate in writing to the other.

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed by their duly authorized representatives, such execution effective on the Effective Date.

**Local Government Authority**

TELUS Communications Inc.

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Printed: \_\_\_\_\_

Printed: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule A

### 1 DEFINITIONS

For the purposes of this Agreement, in addition to other terms defined elsewhere in the Agreement, the following terms have the meanings ascribed below:

1.1 “Automatic Number Identification” or “ANI”:

TELUS’ NG9-1-1 Network’s capability to automatically identify the calling telephone number and to provide a display of the number at the PSAP.

1.2 “Border Control Function” or “BCF”:

Provides a secure entry into the ESInet for emergency calls presented to the network. The BCF incorporates firewall, admission control, and may include anchoring of session and media as well as other security mechanisms to prevent deliberate or malicious attacks on PSAPs or other entities connected to the ESInet.

1.3 “Business Continuity Plan”:

A plan outlining how to continue operating during an unplanned service disruption; i.e.: technology or relocation.

1.4 “Commission”:

The Canadian Radio-television and Telecommunications Commission (“CRTC”) and its successors.

1.5 “Default Routing”:

Default Routing is a contingency routing scheme whereby 9-1-1 calls, sessions and events are directed to an alternative PSAP or PSAPs due to network issues or missing/invalid location information.

1.6 “Demarcation Point”:

The furthest physical point of NG9-1-1 interconnection for the PSAPs. The location of the PSAP is designated by the LGA; however, the PSAP shall determine where the termination equipment/demarcation points are to be located.

1.7 “Emergency Services”:

The first responders to situations that require immediate assistance, such as law enforcement, fire department, ambulance service, or other emergency medical assistance service.

1.8 “Emergency Services IP Network” or “ESInet”:

An ESInet is a managed, private, dedicated IP network used for Emergency Services communications. The ESInet provides the transport and interconnectivity for trusted entities designated by the CRTC such as NENA i3-compliant PSAPs within the Serving Area, as well as CRTC-registered ONPs supporting 9-1-1 calling over IP-capable networks. For PSAPs, the ESInet is delivered using the Company’s IP VPN service to the PSAPs’ operations premises authorized by the LGA. ONPs interconnect to the ESInet through designated physical Points of Interconnection (POIs).

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

### 1.9 “End-User”:

An end-user with NG9-1-1 Network Access within the boundaries of the LGA, as determined by the Company and the LGA.

### 1.10 “Emergency Service Zone” or “ESZ”:

A defined area within a Serving Area consisting of a specific combination of LGA, law enforcement, fire, emergency medical, and PSAP coverage areas.

### 1.11 “i3 PSAP”:

A PSAP that is capable of receiving IP-based signaling and media for delivery of emergency calls conformant to the i3 standard.

### 1.12 “Local Government Authority” or “LGA”:

An LGA is the relevant government authority, at the provincial, indigenous, territorial, regional and/or municipal level, that governs the PSAPs. For greater clarity, the PSAP is selected or designed by the LGA and is under the responsibility of the LGA.

### 1.13 “Master Service Addressing Guide” or “MSAG”:

The MSAG/SAG is a database of street names and house number ranges; it defines emergency service zones within a community and the emergency service numbers associated to them in order to enable proper routing of basic 9-1-1 and enhanced 9-1-1 calls.

### 1.14 “Network Access”:

A connection that allows calls, sessions, or other types of events intended to be delivered to the Company’s NG9-1-1 Network.

### 1.15 “Next Generation Core Services” or “NGCS”:

The base set of services needed to process an NG9-1-1 call, session or event on an ESInet. NGCS includes the Emergency Service Routing Proxy (ESRP), Emergency Call Routing Function (ECRF), Location Validation Function (LVF), Border Control Function (BCF), Bridge, Policy Store, Logging Services and typical IP services such as Domain Name System (DNS). The term NGCS includes the services but not the network on which they operate.

### 1.16 “NG9-1-1 Network Provider”:

The carrier that provides connectivity, services, and management for Next Generation 9-1-1 service to LGASs and their PSAPs.

### 1.17 “Offnet Agency”:

An agency outside of the NG9-1-1 network, such as a poison control centre or a hospital, which the LGA may designate to be able to receive PSTN calls transferred by a PSAP through the ESInet.

### 1.18 “Originating Network Provider”:

A CRTC-approved authorized telecommunications service provider, wireless service provider, or other service provider which delivers traffic to the Company’s NG9-1-1 Network for routing to a PSAP.



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### 1.19 “Policy Routing Rules” or “PRRs”:

Policy Routing Rules (PRRs) allow PSAP to enable multi-layered treatment policies for diversion within the NG9-1-1 Network, providing more options to a PSAP to divert 9-1-1 calls, sessions and events to another destination based upon multiple conditions defined in the PRRs.

### 1.20 “Public Safety Answering Point” or “PSAP”:

A primary PSAP is a PSAP to which 9-1-1 calls, sessions and events are routed directly as the first point of contact. In some cases, the primary PSAP then contacts the appropriate agency to dispatch emergency responders. However, in cases where local authorities determine that specialized expertise, such as emergency medical services, is required, 9-1-1 calls, sessions and events are then transferred from a primary PSAP to a secondary PSAP.

A secondary PSAP, also known as an Emergency Response Agency dispatch centre, is a PSAP to which NG9-1-1 calls, sessions and events are transferred from a primary PSAP. A secondary PSAP is directly interconnected to an NG9-1-1 Network, allowing for the receipt and display of NG9-1-1 information.

### 1.21 “PSAP Contingency Plan”:

It is a plan prepared by the PSAP, in collaboration with TELUS, to provide Default Routing to ensure 9-1-1 calls are answered. PSAP Contingency Plan is about alternative routing and configuration options related to the NG9-1-1 Network and is more specific than the overall PSAP Business Continuity Plan.

### 1.22 “Selective Routing and Transfer”:

A feature that automatically routes traffic destined for emergency services to the appropriate PSAP based on the location data provided during the setup of the 9-1-1 call, session or event (Automatic Identification information or Geodetic) and facilitates inter-agency transfer.

### 1.23 “Serving Area”:

The area within the LGA’s boundaries, as determined by TELUS and the LGA, from which calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1 will be directed to a particular primary PSAP which has a contract with the LGA .

### 1.24 “TELUS’ Next Generation 9-1-1 Network”:

A standards-based, all IP emergency communications infrastructure enabling highly reliable and secure voice and multimedia communications.

### 1.25 “Operator Service”:

Operator Service for NG9-1-1 is a last resort routing scheme whereby calls, sessions and events that cannot be routed by the NG9-1-1 network on the ESInet to the PSAP will be routed to an operator service contracted by the NG9-1-1 Service Provider as mandated in Telecom Decision 2019-66.

### 1.26 “User-to-Network Interface (UNI) Interconnection Design Specifications”:

User-to-Network Interface (UNI) Interconnection Design Specifications means the authoritative document which sets the technical specifications an i3-PSAP must comply with.

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

|   |
|---|
| <b>SCHEDULE B - v.1</b>   |
| <b>List of NG9-1-1 PSAPs, locations &amp; targeted migration</b>  |
| <b>Current Emergency Zones &amp; PSAP migration identification</b>  |
| <p><b>Schedule B is a current list of PSAPs that provide services to the LGA. Please review and confirm accuracy (initial) of all contracted PSAPs. Post transition changes or updates to Schedule B will be communicated to TELUS via current TELUS operations change process.</b></p> |
| <b>LGA initial _____</b>  |

| PSAP Serving Information     |                                     |                                 |                          |
|------------------------------|-------------------------------------|---------------------------------|--------------------------|
| PSAP Name (*1 & *2)          | PSAP Address                        | PSAP Address - Backup Site      | Targetted Migration Date |
| E-Comm 9-1-1 South Island    | 4219 Commerce Circle Saanich, BC    |                                 | TBD                      |
| Saanich Fire                 | 760 Vernon Ave Saanich, BC          | 311 Jordan Parkway, Red Deer AB | TBD                      |
| Surrey Fire                  | 8767 132nd Street Surrey, BC        | 14355 57th Avenue Surrey, BC    | Q3 2022                  |
| Campbell River Fire Dispatch | 675 13TH Avenue, Campbell River, BC |                                 | TBD                      |
| E-COMM South Island Police   | 4219 Commerce Circle Saanich, BC    |                                 | TBD                      |

| ESZ        | Community                 | Municipality                   | 9-1-1 Answer           | Fire                         | Police                     |
|------------|---------------------------|--------------------------------|------------------------|------------------------------|----------------------------|
| 4888       | Saanich                   | District of Saanich            | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4461       | Highlands                 | District of Highlands          | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4943       | Langford                  | District of Langford           | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4574       | Metchosin                 | District of Metchosin          | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4461       | North Saanich             | District of North Saanich      | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4947, 4913 | Sooke                     | District of Sooke              | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4298       | Galiano Island            | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4936       | Mayne Island              | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4943       | Pender Island             | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4947       | Saltspring Island         | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4888       | Saturna Island            | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4943       | Beecher Bay Reserve No. 2 | Beecher Bay First Nation       | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4888       | Esquimalt First Nation    | Esquimalt First Nation Reserve | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4913       | Gorden River Reserve      | Pacheedaht First Nation        | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4467       | Cole Bay Reserve          | Pauquachin First Nation        | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4521       | Galiano Island Reserve    | Penelakut First Nation         | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4922       | Beecher Bay Reserve No. 1 | Beecher Bay First Nation       | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4467       | New Songhees Reserve      | Songhees First Nation          | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4942       | East Saanich Reserve      | Tsawout First Nation           | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4469       | Union Bay Reserve         | Tseycum First Nation           | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4277       | Malahat                   | Capital RD                     | ECOMM 911 South Island | Campbell River Fire Dispatch | E-COMM South Island Police |
| 4574       | Sooke Reserve No. 1       | T'Sou-ke First Nation          | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4943       | Sidney                    | Town of Sidney                 | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4941       | View Royal                | Town of View Royal             | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4221       | Colwood                   | City of Colwood                | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 4221       | East Sooke                | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4922       | Willis Point              | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4535       | Haro Strait Island        | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 2120       | South Saanich Reserve     | Tsartlip First Nation          | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 2500       | Oak Bay                   | District of Oak Bay            | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 3000       | Victoria                  | City of Victoria               | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 3500       | Central Saanich           | District of Central Saanich    | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |
| 4000       | Esquimalt                 | District of Esquimalt          | ECOMM 911 South Island | Surrey Fire                  | E-COMM South Island Police |
| 5000       | Juan de Fuca              | Capital RD                     | ECOMM 911 South Island | Saanich Fire                 | E-COMM South Island Police |

**notes:**

- \*1 – LGA shall ensure all PSAP sites meet the NG9-1-1 requirements.
- \*2 – LGA shall ensure that if a PSAP changes during the Term, the replacement is aware of the LGA obligations re: PSAPs under this Agreement, and TELUS is notified of the change.
- \*3 – “Offnet” Agencies are not connected to the ESInet over an IP-UNI
- \*4 – This PSAP is only required if there is a PSAP designated as a safety net for a specific Province or Territory.

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## Schedule C

### Technical requirements\ESInet Access Criteria

Next Generation 9-1-1 is comprised of complex and interactive systems. In order to ensure proper network security, resiliency, diversity, and reliability, the LGA must ensure that all of their PSAPs meet the following technical criteria. A PSAP cannot interconnect to the NG9-1-1 network without meeting these requirements.

PSAPs utilizing networks to process and deliver NG9-1-1 calls outside of the ESInet do so at their own risk and assume all liabilities, including prolonged restoration times in the event of an outage.

LGA must ensure that the PSAP(s):

- 1 Deploy Dual Stack as the preferred method for simultaneous use of IPV4 & IPV6 address space OR to individually perform NAT-PT (Network Address Translation - Protocol Translation) for their Network Domain as defined in the NG9-1-1 network provider's UNI Interconnection Design Specifications, as a mandatory condition to interconnect to the NG9-1-1 network.
- 2 Support a set MTU (Maximum Transmission Unit) value of 1500 bytes for their network domain.
- 3 Utilize the Border Gateway Protocol (BGP) for dynamic routing between peering networks, using registered Autonomous System (AS) numbers, when available.
- 4 Assign a Local Registration Authority ("LRA"). The LRA will be responsible for determining and managing which users will be authorized to access the ESInet. An LRA can be assigned for a specific PSAPs or may be assigned for all PSAPs in an entire serving territory. The PSAP must notify TELUS at least 30 days prior to onboarding to the NG9-1-1 network of its selection and provide TELUS with 60 days' notice prior to any changes to its LRA structure. The LRA will have to enter into a distinct agreement with TELUS regarding the rights and obligations specific to the LRA and agree to TELUS Certificate Policy. For greater clarity, if access to the ESInet is needed for devices, the PSAP must assign an Authorized Organization Representative ("AOR"), which shall also enter into a distinct agreement with TELUS. For greater clarity, LRA and AOR doesn't need to be the PSAP itself.
- 5 Utilize the PCA service provided by the NG9-1-1 network provider, as defined in the UNI Interconnection Design Specifications, as a mandatory condition of interconnection with the NG9-1-1 network until a nation-wide PSAP Credentialing Agency is established.
- 6 Comply with the UNI and any other bulletins or technical documents communicated by TELUS to all LGAs and PSAPs from time to time. Employ a NENA i3 compliant BCF (Border Control Function), as defined in the NG9-1-1 network provider UNI Interconnection Design Specifications, as a mandatory condition of interconnection with the NG9-1-1 network. In addition, the BCF must be deployed in a manner that prevents single points of failure.
- 7 Employ the QoS requirements as defined in the NG9-1-1 network provider UNI Interconnection Design Specifications as a mandatory condition of interconnection with the NG9-1-1 network.
- 8 Implement the mandatory list of audio CODECs as provided by the NG9-1-1 network providers as part of the Onboarding Process, and as updated through the proposed change management process managed by CISC.
- 9 Use the two (2) redundant 9-1-1 IP-VPN circuits and routers provided by TELUS to deliver 9-1-1 calls, sessions and events, and associated data as per TELUS acceptable use policy available at [www.telus.com/aup](http://www.telus.com/aup). The PSAPs shall not modify, repair, reinstall, or tamper with the 9-1-1 IP-

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

VPN circuits and routers, or use them in a manner that interferes with any service components used to provide them, TELUS' networks, or with the use of TELUS services by other persons, or in a manner that avoids the payment of any charges, or use the 9-1-1 IP-VPN circuits in violation of any law or regulation. TELUS recommends that the PSAP use both 9-1-1 IP-VPN circuits to avoid service impacts in the event of an 9-1-1 IP-VPN circuit or terminating router failure.

- 10 Design and operation the PSAPs WAN/LAN, including resiliency, capacity, management, quality of service and security.
- 11 Support end-to-end encryption of traffic from and towards the ESInet as defined in the TELUS NG9-1-1 UNI Interconnection Design Specifications. PSAPs are strongly encouraged to utilize the TELUS NGCS-based DNS service to ensure the resiliency of DNS functions and seamless PCA functionality. If a PSAP opts to use its own DNS service, it will be the sole responsibility of that agency to design, maintain and administer this element.
- 12 Use the provided ESInet connections strictly for the delivery of NG9-1-1 calling and associated data and not to use any private VPN tunnels across the ESInet.
- 13 Create Policy Routing Rules for NG9-1-1 and communicate their Default Routing, if any, as part of their PSAP Contingency Plans to ensure that 9-1-1 calls are answered in the event of a PSAP outage.
- 14 Synchronize their network elements with those of the NGCS based on the Network Time Protocol resource provided by TELUS.
- 15 Apply on an ongoing basis, the required security updates (including any security patches) promptly, on the schedule communicated by TELUS.

The failure of a PSAP to comply with the technical requirement and access criteria may result in having such PSAP removed from the TELUS Next Generation 9-1-1 network. In the event where a PSAP does not meet the above technical requirements and access criteria to the ESInet, TELUS will inform the LGA before removing the PSAP from the TELUS Next Generation 9-1-1 network.

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## Schedule D

### MULTIPLE REGION PSAPs

This Schedule, or an alternative format agreed to by both the LGA and the Company, must be filled out by the LGAs with their respective PSAPs covering multiple regions and managed by a provincial or federal authority (e.g. Alberta Health Services, British Columbia Health Care Services, Royal Canadian Mounted Police.)

**Operating as a provincial or federal secondary PSAP, the following provisions within this agreement does not apply: 4.1.1; 4.3; 4.8.1; 4.8.2; 4.8.3; 4.8.9; 4.21;**

**The following provisions of this agreement (4.6; 4.8.4; 4.8.5; 4.9) that relate to “all PSAPs” for the purposes of this LGA, shall apply only to the single Multiple Regions PSAP.**

| Communication Centre Sites | Official Name | LGA (municipalities, counties, etc.) |
|----------------------------|---------------|--------------------------------------|
|                            |               |                                      |
|                            |               |                                      |
|                            |               |                                      |



# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule E

NG9-1-1 GIS REQUIREMENTS \* **Provided to TELUS upon introduction 2021-2024**

| Municipality, County or Other Government Entity name | GIS Data Provider or *Provincial/ Territorial Designated Data Aggregator name | Provincial /Territorial Legislation (Y/N) |
|--|---|---|
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |

In the absence of Provincial or Territorial legislation defining a Data Aggregator body, by default, the NG9-1-1 Network Provider will be the defined GIS and addressing Data Aggregator ([Telecom Decision CRTC 2020-150 | CRTC](#))

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**SCHEDULE F - v.1**

**LGA must verify with each PSAP and PSAP location listed in Schedule B has a 9-1-1 Contingency Plan and Policy Routing Rules documented and identified to TELUS. TELUS' requirement is to obtain documented contingencies and does not imply imposing mutual aid, backup sites, or any actual contingency options.**

| <b>PSAP Serving Information</b> |                                     |                                 |   |
|---------------------------------|-------------------------------------|---------------------------------|---|
| <b>PSAP Name (*1 &amp;*2)</b>   | <b>PSAP Addresses</b>               | <b>PSAP Address-Backup Site</b> | <b>Contingency Plan &amp; Policy Routing Rules LGA verified (initial)</b> |
| E-Comm 9-1-1 South Island       | 4219 Commerce Circle Saanich, BC    |                                 |   |
| Saanich Fire                    | 760 Vernon Ave Saanich, BC          | 311 Jordan Parkway, Red Deer AB |   |
| Surrey Fire                     | 8767 132nd Street Surrey, BC        | 14355 57th Avenue Surrey, BC    |   |
| Campbell River Fire Dispatch    | 675 13TH Avenue, Campbell River, BC |                                 |   |
| E-COMM South Island Police      | 4219 Commerce Circle Saanich, BC    |                                 |   |

**Notes:**

- \*1 – LGA shall ensure all PSAP sites meet the NG9-1-1 requirements.
- \*2 – LGA shall ensure that if a PSAP changes during the Term, the replacement is aware of the LGA obligations re: PSAPs under this Agreement, and TELUS is notified of the change.
- \*3 – “Offnet” Agencies are not connected to the ESInet over an IP-UNI
- \*4 – This PSAP is only required if there is a PSAP designated as a safety net for a specific Province or Territory.

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**SCHEDULE G - v.1**

**LGA must designate a Local Registration Authority ("LRA")  
\* reference Schedule C, #4.**

**Digital Subscriber Certificate Agreement and Application Form - submitted by LGA's Local Registration Authority designate upon TELUS onboarding**

**PSAP Serving Information**

| <b>PSAP Name (*1 &amp;*2)</b> | <b>PSAP Addresses</b>               | <b>PSAP Address-Backup Site</b> | <b>LGA designated Local Registration Authority ("LRA")</b> |
|-------------------------------|-------------------------------------|---------------------------------|--|
| E-Comm 9-1-1 South Island     | 4219 Commerce Circle Saanich, BC    |                                 |  |
| Saanich Fire                  | 760 Vernon Ave Saanich, BC          | 311 Jordan Parkway, Red Deer AB |  |
| Surrey Fire                   | 8767 132nd Street Surrey, BC        | 14355 57th Avenue Surrey, BC    |  |
| Campbell River Fire Dispatch  | 675 13TH Avenue, Campbell River, BC |                                 |  |
| E-COMM South Island Police    | 4219 Commerce Circle Saanich, BC    |                                 |  |

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- \*4 – This PSAP is only required if there is a PSAP designated as a safety net for a specific Province or Territory.

March 12, 2024

## **NG9-1-1 Update for Regional Districts Regarding Importance of Executing TELUS LGA Agreement**

Further to previous communications concerning Next Generation 9-1-1 (NG9-1-1), I am writing to provide a summary of the NG9-1-1 program and to highlight some related developing risks of which regional districts, as the level of government responsible for the primary public safety answer points in British Columbia, need to be aware. **Please review this correspondence as it requires attention and action from your regional district, specifically execution of a Local Government Agreement with TELUS.**

### **Executive Summary**

The Government of Canada has mandated a move from the existing analog telephone systems to digital (internet protocol-based) communication networks for 9-1-1 calls across the country. The current 9-1-1 system is scheduled to be decommissioned in March 2025. Here are some critical factors of which E-Comm's regional district partners need to be aware:

- the project is technologically challenging and resource intensive
- E-Comm needs to begin a structured migration not later than June 2024 if it is to:
  - meet the March 2025 deadline, and
  - avoid increased project costs beyond those already covered by grants from the Province of British Columbia
- a major barrier to timely migration is the fact that many regional districts have yet to execute LGAs with TELUS.

### **Why Next Generation 9-1-1?**

In order to update Canada's aging 9-1-1 infrastructure and provide advanced capabilities that today's 30+ year old telephone system simply can't deliver, the Canadian Radio-television and Telecommunications Commission (CRTC) has mandated a move from today's analog telephone systems to digital (internet protocol-based) communication networks for 9-1-1 calls across the country. Called Next Generation 9-1-1 or NG9-1-1, this system will improve emergency communications and response for the public and emergency responders. NG9-1-1 will improve the public's access to emergency response services by allowing 9-1-1 Public Safety Answer Points (PSAP) centres to exchange additional data and information with responders beyond voice communications, improve call processing times, enhance situational awareness, and increase responder safety.



## Background

Recognizing that transitioning to NG9-1-1 is a major project, technically complex, and expensive, E-Comm has worked successfully, with municipal and regional district partners, to lobby the provincial government to fund a significant portion of the associated costs. With stable funding assured, E-Comm has built the capacity required to effect this vital and mandatory transition between old and new technologies.

In British Columbia (and Alberta) TELUS is the Emergency Services IP Network (ESInet) provider, the network architecture upon which NG9-1-1 will operate. TELUS is also the network provider for most of the existing legacy Basic 9-1-1 (B9-1-1) and Enhanced 9-1-1 (E9-1-1) service in BC. Most regional districts will have an executed agreement with TELUS for access to these systems (likely from many years ago) but with the introduction of NG9-1-1, TELUS requires regional districts to sign new agreements to meet certain requirements of NG9-1-1. These agreements, called Local Governing Authority (LGA) Agreements, set out the responsibilities of TELUS and the regional districts regarding NG9-1-1.

**It is important to recognize that unless the CRTC delays implementation of NG9-1-1, and even more significantly, the decommissioning of the legacy 9-1-1 system, callers trying to place 9-1-1 calls within regional districts that have not (i) reached an LGA Agreement for access and (ii) updated their primary PSAP to be NG9-1-1 compliant, will not have 9-1-1 service.**

## Current State

E-Comm has made several applications to the CRTC, formally known as “Part 1 Applications” regarding various aspects of the NG 9-1-1 rollout. One of these addresses our concern that not all PSAPs in BC will be ready for NG9-1-1 by March 2025, and asking the CRTC to consider extending that deadline or leave the legacy 9-1-1 systems operational for longer so as not to impact access to 9-1-1. Not only have other organizations joined E-Comm in submitting that Part 1, but other organizations across Canada have also made applications of their own along similar lines. Unfortunately, it is impossible to know when the CRTC will reach a decision and what that decision will ultimately be. We must therefore act as though the March 2025 deadline is firm.

E-Comm is working steadily to meet that deadline and has the plans, budget, contracts and the required resources in place to do so. However, factors external to E-Comm are creating a risk that (i) the deadline will not be met and (ii) that the actual costs of implementation will exceed the approved, budgeted costs. One major source of risk is unanticipated delays in the execution of the LGA Agreements, and E-Comm is acutely aware that only 12 of 27 regional districts in BC





have so far done so. E-Comm will be unable to onboard the regional districts it serves until they have all executed an agreement with TELUS.

### Next Steps and Risks

E-Comm's planned NG9-1-1 onboarding schedule allows time for 9-1-1 call traffic to be migrated in a structured and incremental manner, allowing us to:

- more time to become more familiar with the operation of the new network,
- validate that call flows are working as designed,
- assess that call quality is what it should be,
- train staff on the new processes, and,
- identify and remedy any performance issues as quickly as possible.

We had planned to begin the migration this quarter, but delays in the execution of LGA Agreements have precluded this. Employing the last of the contingency in our schedule we are confident that, if the LGA Agreements are executed by May 31, 2024, we can complete the migration by the March 2025 deadline.

As previously noted, one of the risks of not migrating in time is the loss of 9-1-1 service. There are others. For example, the existing 9-1-1 network is aging (part of the rationale behind the move to NG9-1-1) and our own PBX for handling legacy 9-1-1 calls is past end of life. Furthermore, delay creates a risk of significant cost overruns into 2025.

E-Comm would be unable to execute as complex a project as NG9-1-1 implementation with only its standard staff and has therefore recruited an expanded temporary workforce with a broad range of technical, project management and other skills. We are also relying on enhanced support from vendors and other service providers to ensure we have the necessary capabilities to complete the migration successfully.

Delaying the start of this migration beyond June 2024 increases the risk that onboarding will not be completed by March 2025 and that the costs of migration exceed those forecast and therefore those covered by the provincial grant. As a not-for-profit organization, E-Comm will need to recover those costs, and at least a portion of that recovery would likely have to come from the regional districts. **For each month after June 2024 E-Comm is unable to commence the five-month onboarding plan, we estimate those costs at over \$1M per month that we would apportion among various NG9-1-1 stakeholders beginning in 2025.** Therefore, there are compelling financial as well as public safety reasons to complete the migration in accordance with the current plans which are predicated on all LGA agreements being signed not later than May 31, 2024.



## TELUS and Government of BC Contacts & Resource

As TELUS' 9-1-1 team has continued to partner with and collaborate with the regional districts which have provided feedback but have yet to sign TELUS' CRTC-mandated NG9-1-1 LGA Agreement, TELUS has made minor changes to the certain sections to address the specific circumstances that exist in British Columbia, notably around BC-specific regional district constructs as well as NG9-1-1 GIS obligations. To those regional districts that have yet to execute the NG9-1-1 LGA Agreement with TELUS, TELUS will share the revised document with you as soon as it is completed. If you have not already been in contact with TELUS about the LGA Agreement for your regional district, please contact Assunta Marozzi. Assunta is TELUS's primary point of contact for LGA Agreements and would be happy to take you through the process. She can be reached at [assunta.marozzi2@telus.com](mailto:assunta.marozzi2@telus.com).

Three Government of British Columbia ministries in particular are monitoring the NG9-1-1 rollout. These are Citizens' Services, Public Safety and Solicitor General and Water, Land and Resource Stewardship. If you would like further information about their respective roles in this initiative, please feel free to contact Mr. Ivan Rincon of the Connectivity Division of Citizen's Services at [ivan.rincon@gov.bc.ca](mailto:ivan.rincon@gov.bc.ca), Mr. Darrion Cambell of the Policing & Security Branch of Public Safety and Solicitor General at [darrion.campbell@gov.bc.ca](mailto:darrion.campbell@gov.bc.ca) or Nancy Liesch, GeoBC at Water Land and Resource Stewardship.

Finally, as I hope you are already aware, GeoBC has circulated correspondence announcing that a new NG9-1-1 related website is now public and seeking feedback from a broad range of stakeholders on how it may be improved. Please visit <https://ng911gisdata.gov.bc.ca> for more. GeoBC will also will be reaching out to discuss how the province can work together with local governments, First Nations and 9-1-1 agencies to communicate our support for this transition. to understand GIS data system concerns and to support the development of coordinated data management processes.




## Further Updates

I anticipate writing again soon with updates on other E-Comm and NG9-1-1 related topics and will of course also keep you abreast of developments relating specifically to the LGA Agreements.

In the interim, I'd welcome any questions you may have or hearing any concerns you may wish to raise.

Thank you,

  
Stephen Thatcher, *Vice President, Operations*

**E-Comm 9-1-1**  
Helping to Save Lives and Protect Property

cc: Union of BC Municipalities



## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

This Agreement for the provision of TELUS' Next Generation 9-1-1 Service (the "**Agreement**") is effective the [ ] day of [ ], 20[ ] (the "**Effective Date**")

BETWEEN:

**Metro Vancouver Regional District**  
(the "**Local Government Authority**" or "**LGA**")

AND:

**TELUS Communications Inc.**  
( "**TELUS**" or the "**Company**" )

(each a "**Party**", and together, the "**Parties**")

WHEREAS:

- A. The LGA is a regional district incorporated and operating pursuant to the *Local Government Act* (BC). The LGA is composed of member municipalities, one treaty First Nation, and Electoral Area A ("**LGA Members**");
- B. Within the Serving Area:
  - the Primary PSAP is the Emergency Communications Corporation established pursuant to the *Emergency Communications Corporations Act* (BC) ("**E-Comm**"), and administered by the province;
  - the LGA contracts with E-Comm to ensure the provision of initial 9-1-1 calling services within the LGA boundaries;
  - provincial, federal, and municipal authorities (including the LGA and the LGA Members) administer, govern, and regulate the Emergency Services and the PSAPs, when the LGA, more particularly, contractually administers the PSAPs, including E-Comm, as specified in this Agreement; and
  - the LGA Members administer GIS within their respective geographic areas, except that the LGA administers GIS within the Electoral Area A;
- C. The LGA wishes to provide its inhabitants with access to Next-generation 9-1-1 service ("**NG9-1-1 Service**") through calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1;
- D. The legacy 9-1-1 service is, as per Telecom Regulatory Policy CRTC 2017-182 titled "Next Generation 9-1-1 – Modernizing 9-1-1 networks to meet the public safety needs of Canadians" ("**TRP 2017-182**"), due to be decommissioned by order of the Canadian Radio-television Commission ("**CRTC**");
- E. The current legacy 9-1-1 services will remain in effect and supplement the NG9-1-1 Service until such time the legacy 9-1-1 network is decommissioned;
- F. As mandated by the CRTC under TRP 2017-182, TELUS is the sole provider of NG9-1-1 Service in British Columbia, and as such can route calls, sessions or events from the inhabitants of the LGA calling

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the 3-digit emergency telephone number 9-1-1 to the appropriate PSAP which provides the 9-1-1 caller with access to Emergency Services;

- G. The NG9-1-1 Service is IP based and is designed to replace the legacy provincial basic and enhanced 9-1-1 service, which will transit calls, sessions and events to the 3-digit emergency telephone number 9-1-1 in accordance with the terms and conditions laid out in applicable CRTC policies and decisions, including TRP 2017-182 and Telecom Decision CRTC 2021-199 (“**Decision 2021-199**”);
- H. TELUS NG9-1-1 Tariff (CRTC 21461 Item 1001)<sup>1</sup> (the “**Tariff**”) states that TELUS will recover costs associated with delivering the TELUS NG9-1-1 Service in the form of a fee levied against each End-User;
- I. In Telecom Order 2021-421, the CRTC approved a template NG9-1-1 Local Government Service Agreement for use by TELUS and local government authorities responsible for the provision of emergency services in Alberta and British Columbia. In Telecom Order 2022-119, the CRTC approved a modification to the original template filed by TELUS, and confirmed that the CRTC expects that finalized agreements between TELUS and local government authorities will be modified, as necessary, to account for individual local government authority context; and
- J. The Parties wish to enter into this Agreement for NG9-1-1 Service within the boundaries of the LGA, using a template agreement approved by the CRTC as modified to reflect the circumstances of the LGA,

**NOW THEREFORE** in consideration of the mutual agreements hereinafter contained and other good and valuable consideration, the Parties hereto agree as follows:

## 1 INTERPRETATION

- 1.1 In this Agreement, in addition to those terms which are parenthetically defined, capitalized terms will have the meanings ascribed to them in Schedule A (Definitions).
- 1.2 TELUS has or will enter into a contract with: (a) the British Columbia Health Care Services (“**Health Care Services**”) and (b) the Royal Canadian Mounted Police (“**RCMP**”), in connection with (among other things) their respective administration of public safety answering points within the Serving Area, including, with respect to RCMP, the municipally-run RCMP operational communications centres in the City of Langley, the City of Coquitlam, the City of Surrey, and the City of North Vancouver. The LGA has no contracts with the Health Care Services nor the RCMP in connection with this Agreement, or the administration of public safety answering points in the Serving Area supported by the Health Care Services and the RCMP. As such, the LGA has no obligation to coordinate with the Health Care Services and the RCMP in connection with this Agreement.

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<sup>1</sup> This Tariff was filed by TELUS with the CRTC in accordance with the process laid out in TRP 2017-182.



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## 2 SCOPE OF AGREEMENT

- 2.1 **Agreement:** Without limiting section 13.3, the Parties hereby agree to fulfil their respective obligations as per the terms and conditions set out in the Tariff and those contained in this Agreement, in order to provide and receive NG9-1-1 Service in the Serving Area. The Parties agree that this Agreement is for their mutual advantage and is designed to provide continued access to NG9-1-1 Service to the served inhabitants within the Serving Area.
- 2.2 **Cost Recoveries:** The Parties agree that TELUS will recover costs associated with delivering the NG9-1-1 Service via the Tariff filed by TELUS to be levied against entities that provide access to NG9-1-1 Service in TELUS' ILEC operating territory.
- 2.3 **Service Description:** The NG9-1-1 Service provides a managed, private, dedicated IP network referred to as the Emergency Services Internet Protocol network ("**ESInet**"). The ESInet provides the transport and interconnectivity for all i3-PSAPs within the Serving Area as well as Originating Network Provider networks supporting 9-1-1 calling over IP-based networks and devices. For i3-PSAPs, TELUS delivers the ESInet to the Primary PSAP and the Secondary PSAP operations premise using TELUS's IP VPN service to the PSAPs. The NG9-1-1 Service also provides a series of applications and service interfaces known as NG9-1-1 Core Services ("**NGCS**") and may include other third-party applications from Trusted Entities (as defined in section 6.1) as may be requested by the LGA, and agreed to by TELUS. NG9-1-1 Service features are described in the User-to-Network Interface ("**UNI**") document. The LGA agrees that TELUS is not responsible nor liable for damages arising from the LGA's or the PSAPs' use of third-party applications in conjunction with the TELUS NG9-1-1 Service, unless (a) the application is approved by TELUS, or (b) the application is permitted or required by an applicable law, a court order, or a governmental authority (including CRTC). TELUS agrees that the LGA and the PSAPs are not responsible nor liable for damages arising from TELUS' wrongful or grossly negligent operation and administration of the NG9-1-1 Service.

## 3 TELUS' OBLIGATIONS

- 3.1 Without limiting TELUS' obligations under the Tariff, or any policies, orders and decisions of the CRTC, in accordance with the Tariff, TELUS will:
- 3.1.1. Provide NG9-1-1 Service to the LGA in order to provide End-Users, within the Serving Area, served by Originating Network Providers who have entered into agreements with TELUS with respect to access to NG9-1-1 Service, access to Emergency Services through calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1, as further described herein;
  - 3.1.2. Provide TELUS' Next Generation 9-1-1 network (the "**TELUS NG9-1-1 Network**") access, network termination/demarcation, and services to the Primary PSAP and the Secondary PSAPs, in the manner agreed to by TELUS and the LGA from time to time, to be used to answer and transfer calls, sessions and events to the 3-digit emergency telephone number 9-1-1;
  - 3.1.3. Provide Selective Routing and Transfer of emergency calls, sessions and events to the Primary PSAP and Secondary PSAPs according to instructions provided by the LGA from time to time, including those described in PSAP Contingency Plans;
  - 3.1.4. Provide 9-1-1 caller information, as ordered by the CRTC, to the PSAP(s);

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- 3.1.5. Receive GIS Data, aggregate GIS Data into a dataset, and maintain the GIS Data dataset for the Serving Area;
- 3.1.6. Be responsible for any other requirements not specifically identified in this Agreement related to matters of the kind as imposed by the CRTC;
- 3.1.7. Where an Originating Network Provider has entered into agreements with TELUS with respect to access to NG 9-1-1 Service, TELUS will remain responsible for all aspects of the operation of the NG 9-1-1 Service and will not be relieved of any of its obligations under this Agreement;
- 3.1.8. Maintain a 24x7 9-1-1 Support Team to monitor the TELUSNG9-1-1 Network and coordinate activities with stakeholders;
- 3.1.9. Maintain a fallback Operator Service that will accept NG9-1-1 Calls, sessions and events and route them to the appropriate PSAP in the event of network, routing, or location issues;
- 3.1.10. Selectively route and enable the selective transfer of 9-1-1 Calls to the Primary PSAP, Secondary PSAPs and Dispatch Agency according to Policy Routing Rules crafted to the needs of the LGA, including those described in PSAP Contingency Plans;
- 3.1.11. Maintain a PSAP Contingency Plan as prepared by each PSAP in the event of network or customer equipment outage or evacuation. Schedule E sets out the Contingency Plans and Policy Routing Rules in place as of the Effective Date. The Parties may update Schedule E as necessary from time to time, by mutual written consent, without requiring an amendment to this Agreement;
- 3.1.12. Perform Quality Assurance and Quality Control (QA/QC) (as described in the Tariff) on the aggregated dataset and provide mapping and addressing discrepancy/errors reporting back to the LGA or its designees; and
- 3.1.13. Provide ESInet IP connection with redundant and, dependent upon availability, diverse facilities to the Primary PSAP and the Secondary PSAP locations listed in Schedule B.

TELUS is responsible for delivering NG9-1-1 traffic to the TELUS NG9-1-1 Demarcation Point(s). TELUS will not be responsible for any issues, nor will it troubleshoot outages or failures proved to be occurring with the PSAP network, which begin on the PSAP- side of the TELUS NG9-1-1 Demarcation Point. Neither the LGA nor the PSAPs will be responsible for any issues, nor will they troubleshoot outages or failures, proved to be occurring with the TELUS network on the TELUS side of the TELUS NG9-1-1 Demarcation Point.

### 4 OBLIGATIONS OF THE LGA

#### 4.1 The LGA:

- 4.1.1. Has designated the Primary PSAPs and the Secondary PSAPs, including back up locations for the PSAPs, to answer and dispatch 9-1-1 Calls in the Serving Area, as set out in Schedule B. In the event that the LGA contracts with a third party for the management and operation of a PSAP, the LGA will not be relieved of any of its obligations under this Agreement.

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- 4.1.2. Shall provide TELUS with a minimum of ninety (90) days' written notice of an intended change of a PSAP in the Serving Area.
- 4.1.3. Will require the PSAPs to:
  - (a) operate in the manner that is i3-compliant, based on the technical requirements listed in Schedule C;
  - (b) provide, operate, and manage the personnel and the equipment, including terminal equipment, required to receive and process all emergency calls, sessions and events directed to the PSAP, based on the technical requirements listed in Schedule C; and
  - (c) establish a PSAP's Business Continuity Plan and to test it annually.
- 4.2 The LGA acknowledges and understands that in cases where NG9-1-1 Calls are delivered to TELUS without complete location information, they may be routed to a default PSAP which may be a default i3 PSAP, designated by the provincial government of British Columbia, or an alternate default PSAP selected and managed by TELUS.
- 4.3 The Parties acknowledge and agree that, at the Effective Date of this Agreement, in the Serving Area, GIS or MSAG are not defined and established under the applicable provincial legislation, and there is no provincial body that acts as a GIS Data aggregator. In accordance with the CRTC Order 2020-150, the following will apply:
  - 4.3.1. The LGA will (in respect to Electoral Area A), or will direct each LGA Member (in respect to their respective geographic area) to:
    - (a) upon implementation of GIS functionality within the TELUS NG9-1-1 Network, provide GIS Data created or collected by the LGA or the LGA Member directly to TELUS in a secure manner without transiting through any shared open platform;
    - (b) create, maintain and update all boundaries, addressing and mapping data according to applicable standards generally accepted in Canada for such data (MSAG and GIS) and perform quality assurance and control on the data before data is provided to TELUS;
    - (c) provide and validate, when required by TELUS, all GIS Data, including street names, addresses, or other data provided by the GIS and associate those with Emergency Service Zones;
    - (d) inform TELUS of all changes in the GIS Data that may occur during the term of this Agreement. Changes in that data must be reported to TELUS as soon as possible after that data changes;
    - (e) correct all errors with submitted GIS Data as reported by TELUS as soon as possible after the notification is sent to the LGA or the LGA Member, as applicable. The LGA will, or will require the LGA Members to, endeavor to correct it within 72 hours, from being notified by TELUS, or advise TELUS promptly of the time reasonably required to correct, all with the view to ensure that all carriers operating within the LGA territory have access to accurate validation information;
    - (f) provide TELUS access to the Master Service Addressing Guide until

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such time as the legacy 9-1-1 network is decommissioned or is advised by TELUS that the Master Service Addressing Guide is no longer required; and

- (g) as soon as practicable, notify TELUS in writing if the LGA or the LGA Member intends to have a third party provide GIS Data on its behalf. To the extent known at of the Effective Date, third parties identified to provide GIS Data on behalf of the LGA or an LGA Member are identified in Schedule D.

The Parties may update Schedule D, from time to time, by mutual written consent, without requiring an amendment to this Agreement.

- 4.4 The LGA will take responsibility for changes to the 9-1-1 call routing resulting from GIS Data submitted by the LGA or the LGA Members, as applicable, pursuant to section 4.3.
- 4.5 The LGA will provide TELUS with a minimum of ninety (90) days' written notice of an intended change in the GIS Data providers.
- 4.6 The Parties acknowledge and understand that there are several First Nation reserves within the Serving Area (the "**First Nation Lands**"). TELUS will collaborate with the Province of British Columbia to engage directly with the respective First Nation governments to support the collection and aggregation of GIS Data on the First Nation Lands.
- 4.7 With respect to the Serving Area, the LGA will:
  - 4.7.1. Determine, in conjunction with TELUS, the Serving Area and Emergency Service Zones served by the PSAPs. For greater certainty, the Serving Area and the Emergency Service Zones have been determined as of the Effective Date, as set out in Schedule B. The Parties may update Schedule B, from time to time, by mutual written consent, without requiring an amendment to this Agreement;
  - 4.7.2. Ensure the PSAPs have secure 9-1-1 data and systems within the PSAPs domains, which security includes physical security, network security, cybersecurity, and all other considerations within the PSAPs domains, all in the manner generally accepted in Canada for such services;
  - 4.7.3. Ensure the PSAPs have and maintain current contact information and make it available as per the NENA i3 standard;
  - 4.7.4. Ensure the Primary PSAP accepts specific planned test calls from the public;
  - 4.7.5. Ensure the Primary PSAP implements a call handling solution that includes a test call interface and automaton as described in NENA i3; and
  - 4.7.6. Provide TELUS with 85 days written notice of an intended change in borders of the Serving Area.<sup>2</sup>
- 4.8 The LGA will ensure the PSAPs comply with the current UNI and NENA i3 standards and other technical and operational requirements set out in the documents referenced in this Agreement, or otherwise communicated by TELUS to all LGAs and PSAPs prior to the

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<sup>2</sup> Please see Telecom Decision 2011-309 – CISC consensus reports – Emergency Services Working Group – ESRE0053 Section 4.2.2 – Change activity timelines.

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Effective Date. The Parties acknowledge and understand that technical and operational requirements related to the NG9-1-1 Service may evolve from time to time, or need to be detailed. If, after the Effective Date:

4.8.1. CRTC orders TELUS to implement new technical, or operational requirements in connection with the NG9-1-1 Service; or

4.8.2. TELUS implements new technical, or operational requirements to address safety, security, or similar concerns,

then, if directed to do so in writing by TELUS, the LGA will require the PSAPs to comply with the new technical and operational requirements on the implementation schedule set out by the CRTC, or by TELUS, acting reasonably. Change of technical and operational requirements pursuant to this section 4.8 will not require an amendment to this Agreement.

4.9 The LGA will require PSAPs to not authorize, assist, or permit any person, other than TELUS, to change, repair, reinstall or tamper with the TELUS NG9-1-1 Network located on property owned or operated by the PSAP, up to the PSAP side of the Demarcation Point.

4.10 The LGA recognizes that the NG9-1-1 Service allows for many new functionalities regarding types of data that can be transmitted over the TELUS NG9-1-1 Network. It is expected that the CRTC will order TELUS to implement such new functionalities. The availability of these functionalities may require software and/or hardware upgrades by the PSAPs. If, after the Effective Date, CRTC orders TELUS to implement new functionalities, then, if directed to do so by TELUS in writing, the LGA will require the PSAPs to implement the necessary software and/or hardware upgrades on the implementation schedule set out by the CRTC. Implementation of new functionalities pursuant to this section 4.10 will not require an amendment to this Agreement.

4.11 The LGA acknowledges that, from time to time, due to unforeseen major outages or planned upgrades, TELUS network may be impacted and changes to addressing database may be suspended. The LGA will, and will require the PSAPs to, support, and work cooperatively with TELUS during such events.

4.12 The LGA will require the PSAPs to implement guidelines and procedures with respect to the retention and destruction of the End Users' personal information (the term "personal information" is defined in the same manner as in the BC *Freedom of Information and Protection of Privacy Act*) related to NG9-1-1 Service, prior to the provision of the NG9-1-1 Service, in accordance with the BC *Freedom of Information and Protection of Privacy Act*.

4.13 The LGA will require the PSAPs to:

4.13.1. Take all reasonable steps necessary to ensure that all communications destined for carriage over the TELUS NG9-1-1 Network will be secure, in the manner generally accepted in Canada for such services; and

4.13.2. Take all reasonable steps necessary to protect the confidentiality of the information carried over these networks, to the extent generally accepted in Canada for such services.

4.14 The LGA warrants and represents that it has the authority to:

4.14.1. Enter into this Agreement;

4.14.2. Through its agreements with PSAPs, utilize the NG 9-1-1 Service to provide End-Users within the Serving Area, served by TELUS or by Originating

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# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

Network Providers who have entered into agreements with TELUS with respect to access to the NG 9-1-1 Service; and

- 4.14.3. Through its agreements with PSAPs, determine that all End-Users, within the Serving Area, served by TELUS or by Originating Network Providers who have entered into agreements with TELUS with respect to access to the NG9-1-1 Service, will receive access to NG-9-1-1 Service through use by the LGA of the NG9-1-1 Service.

## 5 PROPERTY RIGHTS

- 5.1 Title to, ownership of, and all intellectual property rights in any facilities, equipment, software, systems, processes, and documentation used by TELUS to provide the NG 9-1-1 Service and all enhancements on them will be and remain with TELUS or its suppliers. Except as expressly set forth elsewhere in this Agreement, this Agreement does not grant the LGA any intellectual property or other rights or licenses in or to any service components listed above.

## 6 TRUSTED ENTITIES

- 6.1 Trusted entities are entities that have been qualified, certified and authorized by either TELUS, or CRTC, or both, to connect to the TELUS NG 9-1-1 Network ("**Trusted Entities**").

## 7 CONFIDENTIAL INFORMATION

- 7.1 Unless the LGA provides express written consent, or disclosure is pursuant to an applicable law, all information provided to TELUS by the LGA pursuant to this Agreement, other than the LGA's name, address and listed telephone number, is confidential and may not be disclosed by TELUS to anyone other than:

- 7.1.1. The LGA;
- 7.1.2. A person who, in the reasonable judgment of TELUS, is seeking the information as an authorized agent of the LGA;
- 7.1.3. Another telecommunications company, provided the information is required for the efficient and cost-effective provision of the NG9-1-1 Service in the Serving Area and disclosure is made on a confidential basis with the information to be used only for that purpose;
- 7.1.4. An agent retained by TELUS in the collection of payments (if any) lawfully due to TELUS by the LGA in connection with this Agreement, provided the information is required for and is to be used only for that purpose;
- 7.1.5. Governmental authority or agent of a governmental authority, for emergency public alerting purposes, if the governmental authority has determined that there is an imminent or unfolding danger that threatens the life, health or security of an individual and that the danger could be avoided or minimized by disclosure of information; and
- 7.1.6. A TELUS affiliate involved in supplying the LGA with the NG9-1-1 Service, provided the information is required for that purpose and disclosure is made on a confidential basis with the information to be used only for that purpose.

The LGA will require the LGA Members and the PSAPs to grant to TELUS a signed

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

consent in respect to their respective information in the manner that parallels the language of this section 7.1.

- 7.2 TELUS acknowledges that the LGA is subject to the BC *Freedom of Information and Protection of Privacy Act* (“**FOIPPA**”). LGA’s obligations in this Agreement are subject to FOIPPA.
- 7.3 TELUS will comply with Canadian privacy legislation (including the *Personal Information Protection and Electronic Documents Act* (PIPEDA), the *Personal Information Protection Act* (BC) and the FOIPPA as such legislation is applicable to TELUS in connection with the provision of the NG9-1-1 Services under this Agreement. Without limiting the foregoing statement, TELUS’ commitment to the protection of personal information is further detailed in the TELUS Business Customer Privacy Policy available at [www.telus.com/businessprivacy](http://www.telus.com/businessprivacy). TELUS’ provision of the NG9-1-1 Service is subject to this policy. This policy may be updated by TELUS from time to time, provided that all updates must be in compliance with all applicable laws. The amended policy will be posted at the location above, and notice of the change will be provided by TELUS to the LGA in writing in advance. Unless otherwise indicated, the effective date of the amended policy will be the date of posting. The continued use of the NG9-1-1 Service by the LGA after such date will be deemed to constitute the acceptance of the amended policy. The LGA’s use of the NG9-1-1 Service, or the deemed acceptance of the policy, as amended, will not be deemed to constitute a representation or warranty by the LGA that TELUS or the policy is in compliance with applicable laws. TELUS is solely responsible for ensuring that its policies and practices comply with all applicable laws.
- 7.4 Any information including any and all written documentation provided by TELUS to the LGA, its employees, servants, agents, assigns and/or contractors (including the PSAPs) pertaining to the design, development, implementation, the operation and the maintenance of the NG9-1-1 Service is confidential, and will be provided only to such persons who have a need to know for the purposes of NG9-1-1 Service. The LGA will not permit any of its employees, servants, agents, assignees and/or contractors (including the PSAPs) to duplicate, reproduce, or otherwise copy any such confidential information for any purpose whatsoever, except as may be required by any such employees, servants, agents, assigns and/or contractors with a need to do so for the purposes of NG9-1-1 Service. The LGA shall include the restrictions set forth in this section in its agreements with the PSAPs and the LGA Members.
- 7.5 The LGA will require the PSAPs to comply with the applicable laws, including FOIPPA, in connection with the collection, use, retention, disclosure, and destruction of personal information (as defined under FOIPPA) provided to the PSAPs by the End-Users in the context of the NG9-1-1 Service (“**Personal Information**”)
- 7.6 The LGA will require the PSAPs to use Personal Information for the sole purpose of responding to the 9-1-1 related communication, unless:
- 7.6.1. otherwise permitted or required under applicable laws;
  - 7.6.2. the End-User consents to other use or disclosure; or
  - 7.6.3. a court or another governmental authority having jurisdiction orders otherwise.
- 7.7 The LGA will, and will require the PSAPs to:
- 7.7.1. retain Personal Information in accordance with all applicable laws;
  - 7.7.2. not use Personal Information except as set out in section 7.6; and

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

7.7.3. not disclose Personal Information except as set out in section 7.6.

7.8 The LGA will indemnify TELUS against all reasonable claims and expenses (including reasonable legal costs) that TELUS incurs as a result of breach by the LGA of its obligations under this Article 7, except to the extent resulting from wrongful acts or gross negligence of TELUS, or breach by TELUS of its obligations under this Agreement. This section 7.8 will survive the expiration or the earlier termination of this Agreement even if it is annulled, in part or in whole, or even if it is terminated for any other reason.

7.9 The Parties will:

7.9.1. Abide by all applicable federal and provincial legislation with respect to the protection of privacy and confidential information in effect from time to time;

7.9.2. Promptly advise each other of any security incident that involves loss or unauthorized disclosure of confidential or personal information collected and retained pursuant to this Agreement, and cooperatively work to address any such incident;

7.9.3. Promptly assist each other to respond to any information requests which require response pursuant to applicable laws; and

7.9.4. Promptly assist each other in connection with a privacy impact assessment prepared by either Party in connection with the NG9-1-1 Service in the Serving Area

## 8 QUALITY OF THE LGA'S SERVICE

8.1 The LGA will require the PSAPs to acknowledge the importance under this Agreement that the PSAPs connected to the TELUS NG9-1-1 Network:

8.1.1. provide, operate, and manage the personnel and the equipment, including terminal equipment, required to receive and process all emergency calls, sessions and events directed to the PSAP, based on the technical requirements listed in Schedule C and the requirements described in TELUS General Tariff CRTC 21461 – item 1001 Next Generation 9-1-1 service; and

8.1.2. meet at all times the technical requirements set out under this Agreement. A default of a PSAP to comply with such technical requirement can compromise the TELUS NG9-1-1 Network and affect the End-Users.

## 9 FORCE MAJEURE

9.1 Neither TELUS nor the LGA will be held responsible for any damages or delays as a result of war, invasion, insurrection, demonstrations, or as a result of decisions by civilian or military authorities, fire, floods, strikes, decisions of regulatory authorities, and, generally, as a result of any event that is beyond the LGA's or TELUS' reasonable control ("**Force Majeure**").

9.2 In the event of a Force Majeure, the Parties will cooperate and make all reasonable efforts to provide temporary replacement service until permanent service is completely restored.

9.3 The costs required to provide temporary replacement service will be borne according to

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

the respective roles of TELUS and the LGA, as indicated in sections 3 and 4 of this Agreement.

### 10 IMPLEMENTATION

10.1 TELUS and the LGA agree that the implementation of the NG 9-1-1 Service within the Serving Area based on the details in Schedule B, will be coordinated with the PSAPs in accordance with mutual readiness for deployment of the NG9-1-1 Service and in compliance with CRTC deadlines. TELUS and the LGA agree that the implementation of the GIS Data delivery contemplated in this Agreement will be coordinated with the LGA Members in accordance with section 4.3, and with First Nation governments in accordance with section 4.6.

### 11 LIMITATION OF LIABILITY

11.1 The LGA acknowledges and agrees that TELUS' liability for the performance of its obligations pursuant to this Agreement are limited pursuant to CRTC 21461, Item 124 (as amended or replaced from time to time) ("**Terms of Service**"). It is understood that TELUS' limited liability under this Agreement is a condition without which TELUS would not have entered into this Agreement, and therefore, TELUS' liability for the performance of its obligations pursuant to this Agreement will not exceed any limitation of liability set out in the Terms of Service, even if such limitation of liability does not specifically apply or refer to the LGA.

11.2 The LGA and TELUS will, during the Term, maintain sufficient insurance to face their respective monetary obligations stemming from liability under this Agreement. The Parties may self-insure. Each Party will provide the other Party evidence of insurance, or self-insurance, as applicable, upon demand by the other Party.

11.3 Section 11.1 will survive the expiration or the earlier termination of this Agreement even if it is annulled, in part or in whole, or even if it is terminated for any other reason.

### 12 TERM, TERMINATION AND CHANGES

12.1 **Term:** his Agreement will be effective as of the Effective Date, and will be valid for a period of five years (the "**Initial Term**"), with one automatic renewal for a successive period of five years (the "**Extended Term**"). Either Party may terminate this Agreement by giving the other Party at least six months' written notice of termination before the end of the Initial Term, or the end of the Extended Term, as applicable.

12.2 **Termination or Suspension of a Service:** TELUS may immediately suspend the entirety or a portion of the NG9-1-1 Service (without terminating this Agreement) if TELUS has reasonable cause to believe that the LGA's NG9-1-1 traffic is compromised or otherwise poses a risk to the NG9-1-1 Service or the TELUS NG9-1-1 Network.

### 13 REGULATORY APPROVAL

13.1 It is expressly understood that NG 9-1-1 Service is provided pursuant to the terms and conditions of the Tariff as amended from time to time (with the approval of CRTC), and as approved by the CRTC, and this Agreement as amended from time to time.

13.2 Any material amendments to this Agreement (excluding the Schedules) will require the prior written approval by the CRTC.

13.3 Notwithstanding sections 13.1 and 13.2, the Parties acknowledge and agree that the CRTC does not have regulatory jurisdiction over the LGA, the LGA Members, or the PSAPs. This

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

Agreement, including its approval by the CRTC, does not change that. The LGA's agreement to the terms of the Tariff, and the incorporation of the Tariff by reference into this Agreement, is contractual.

## 14 WAIVER

14.1 The failure of either Party to require the performance of any obligation hereunder, or the waiver of any obligation in a specific instance, will not be interpreted as a general waiver of any of the obligations hereunder, which will continue to remain in full force and effect.

## 15 RELATIONSHIP OF THE PARTIES

15.1 This Agreement will not create nor will it be interpreted as creating any association, partnership, any employment relationship, or any agency relationship between the Parties.

## 16 ENTIRE AGREEMENT

16.1 Except as otherwise stated herein, this Agreement constitutes the entire agreement of the Parties and supersedes any previous agreement, whether written or verbal. Should any provision of this Agreement be declared null, void, or inoperative, the remainder of the Agreement will remain in full force and effect. In the event of a conflict between this Agreement and the Tariff, the terms of the Tariff will prevail.

## 17 NOTICES

17.1 Except if expressly specified otherwise elsewhere in the Agreement, all notices necessary under this Agreement will be given in writing. In the case of TELUS, the notice will be sent by e-mail and in the case of the LGA, the notice can be either personally delivered, or sent by registered mail, or by e-mail at the addresses indicated below. Notices, if personally delivered, will be deemed to have been received the same day, or if sent by registered mail, will be deemed to have been received four days (excluding Saturdays, Sundays and statutory holidays in the province of British Columbia) after the date of mailing. Notices delivered by e-mail will only be effective if:

- (a) the notices include the following information: (i) sender's name, address, telephone number, and e-mail address; and (ii) date and time of the transmission; and
- (b) the recipient provides by e-mail a confirmation of delivery and the date of acceptance of the delivery.

Notices will be to the following:

**Metro Vancouver Regional District**

**TELUS Communications Inc.**

\_\_\_\_\_

TELUS

\_\_\_\_\_

Regulatory Affairs

\_\_\_\_\_

Attn: TELUS NG9-1-1 Leadership Team



# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

Regulatory.affairs@telus.com

Or to such other address as either Party may indicate in writing to the other.

## 18 SCHEDULES

The following schedules are attached to and form part of this Agreement:

- **Schedule A – Definitions**
- **Schedule B – Emergency Service Zones & PSAP migration identification in the Serving Area**
- **Schedule C – Technical Requirements\ESInet Access Criteria**
- **Schedule D – GIS Aggregator**
- **Schedule E – Contingency Plan and Policy Routing Rules**
- **Schedule F – Designated LRA**

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed by their duly authorized representatives, such execution effective on the Effective Date.

Metro Vancouver Regional District

TELUS Communications Inc.

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Printed: Jerry W. Dobrovolny, P.Eng, MBA

Printed: \_Jeff Smith\_\_\_\_\_

Title: Chief Administrative Officer

Title: Managing Consultant–Regulatory Affairs\_\_

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule A Definitions

### 1 DEFINITIONS

For the purposes of this Agreement, in addition to other terms defined elsewhere in the Agreement, the following terms have the meanings ascribed below:

1.1 “Automatic Number Identification” or “ANI”:

TELUS’ NG9-1-1 Network’s capability to automatically identify the calling telephone number and to provide a display of the number at the PSAP.

1.2 “Border Control Function” or “BCF”:

Provides a secure entry into the ESInet for emergency calls presented to the network. The BCF incorporates firewall, admission control, and may include anchoring of session and media as well as other security mechanisms to prevent deliberate or malicious attacks on PSAPs or other entities connected to the ESInet.

1.3 “Business Continuity Plan”:

A plan outlining how to continue operating during an unplanned service disruption.

1.4 “CRTC”:

The Canadian Radio-television and Telecommunications Commission and its successors.

1.5 “Default Routing”:

Default Routing is a contingency routing scheme whereby 9-1-1 calls, sessions and events are directed to an alternative PSAP or PSAPs due to network issues or missing or invalid location information.

1.6 “Demarcation Point”:

The boundary that delineates the network responsibilities between TELUS, as the provider of the TELUS NG9-1-1 Network, and the PSAPs, in the location acceptable to TELUS and the PSAPs, acting reasonably.

1.7 “Electoral Area A” means the unincorporated area of the Metro Vancouver Regional District, including (for certainty) Bower Island, Passage Island, University Endowment Lands, and the University of British Columbia;

1.8 “Emergency Service Zone” or “ESZ”:

A defined area within a Serving Area consisting of a specific combination of LGA, law enforcement, fire, emergency medical, and PSAP coverage areas. As of the Effective Date, the ESZs are as set out in Schedule B and Appendix 1 to Schedule B.

1.9 “Emergency Services”:

The first responders to situations that require immediate assistance, such as law enforcement, fire department, ambulance service, or other emergency medical assistance service.

1.10 “Emergency Services IP Network” or “ESInet”:

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

An ESInet is a managed, private, dedicated IP network used for Emergency Services communications. The ESInet provides the transport and interconnectivity for trusted entities designated by the CRTC such as NENA i3-compliant PSAPs within the Serving Area, as well as CRTC-registered ONPs supporting 9-1-1 calling over IP-capable networks. For PSAPs, the ESInet is delivered using the Company's IP VPN service to the PSAPs' operations premises described in Schedule B, as amended from time to time. ONPs interconnect to the ESInet through designated physical Points of Interconnection (POIs).

1.11 "End-User":

Under the Tariff, "End User" means, an end-user with NG9-1-1 Network Access within the geographic boundaries of the LGA, as set out in the LGA's letters patent from time to time.

1.12 "GIS":

"GIS" means mapping and addressing geographic information system and "GIS Data" means mapping and addressing data in an i3 format used in real time within the NG9-1-1 call flow for location validation, call routing and mapping.

1.13 "i3 PSAP":

A PSAP that is capable of receiving IP-based signaling and media for delivery of emergency calls conformant to the i3 standard.

1.14 "Local Government Authority" or "LGA" means the Metro Vancouver Regional District.

1.15 "Master Service Addressing Guide" or "MSAG":

The MSAG/SAG is a database of street names and house number ranges; it defines emergency service zones within a community and the emergency service numbers associated to them in order to enable proper routing of basic 9-1-1 and enhanced 9-1-1 calls.

1.16 "Network Access":

A connection that allows calls, sessions, or other types of events intended to be delivered to the TELUS NG9-1-1 Network.

1.17 "Next Generation Core Services" or "NGCS":

The base set of services needed to process an NG9-1-1 Call on an ESInet. NGCS includes the Emergency Service Routing Proxy (ESRP), Emergency Call Routing Function (ECRF), Location Validation Function (LVF), Border Control Function (BCF), Bridge, Policy Store, Logging Services and typical IP services such as Domain Name System (DNS). The term NGCS includes the services but not the network on which they operate.

1.18 "NG9-1-1 Calls" means telephone calls, sessions and events (voice, text, video and related data and nonhuman-initiated automatic event alerts, such as alarms, telematics, or sensor data, which may also include real-time voice, text, or video communications) sent from the Serving Area to the 3-digit emergency telephone number 9-1-1 and directed to a public safety answering point.

1.19 "NG9-1-1 Network Provider":

The carrier that provides connectivity, services, and management for NG9-1-1 service to a

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

local government authority or a public safety answering point. In this Agreement, TELUS is the provider of the TELUS NG9-1-1 Network.

### 1.20 “Operator Service”:

Operator Service for NG9-1-1 is a last resort routing scheme whereby calls, sessions and events that cannot be routed by the NG9-1-1 network on the ESInet to a public safety answering point will be routed to a third party call centre contracted by the NG9-1-1 Network Provider as mandated in Telecom Policy 2019-66.

### 1.21 “Originating Network Provider”:

A CRTC-approved authorized telecommunications service provider, wireless service provider, or other service provider which delivers traffic to the TELUS NG9-1-1 Network for routing to a PSAP.

### 1.22 “Policy Routing Rules” or “PRRs”:

Policy Routing Rules (PRRs) allow a PSAP to enable multi-layered treatment policies for diversion within the TELUS NG9-1-1 Network, providing more options to the PSAP to divert 9-1-1 calls, sessions and events to another destination based upon multiple conditions defined in the PRRs.

### 1.23 “Public Safety Answering Point” or “PSAP”:

Under the Tariff, a primary public safety answering point is a point to which 9-1-1 calls, sessions and events are routed as the first point of contact with a 9-1-1 telecommunicator. When the primary public safety answering point does not dispatch emergency responders itself, the primary public safety answering point then contacts the appropriate agency for such dispatch. However, in cases where local authorities determine that specialized expertise, is required to handle the 9-1-1 call, sessions and events are then transferred to a secondary public safety answering point.

Given the roles described above, in this Agreement:

- (a) “**Dispatch Agency**” means an agency that dispatches emergency responders;
- (b) “**Primary PSAP**” means the Emergency Communications Corporation under the *Emergency Communications Corporations Act* (BC) (“**E-Comm**”);
- (c) “**Secondary PSAP**” means the following: (a) E-Comm; (b) Burnaby Fire Dispatch; and (c) Surrey Fire Regional Dispatch;
- (d) The term “**PSAP**” or “**Primary Public Safety Answering Point**” means the Primary PSAP and the Secondary PSAPs, defined in section 1.23(b) and section 1.23(c) of this Schedule A, and excludes British Columbia Emergency Health Care Services (operating pursuant to the *Emergency Health Services Act* (BC)), and the Royal Canadian Mounted Police (operating pursuant to the *Royal Canadian Mounted Police Act* (Canada)). For greater certainty, municipally-run RCMP operational communications centres in the City of Langley, the City of Coquitlam, City of Surrey, and the City of North Vancouver are not Secondary PSAPs or PSAPs for the purpose of this Agreement.

### 1.24 “PSAP Contingency Plan”:

It is a plan prepared by the PSAP, in collaboration with TELUS, to provide Default Routing to ensure 9-1-1 calls are answered. PSAP Contingency Plan is about alternative routing and

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

configuration options related to the NG9-1-1 Network and is more specific than the overall PSAP Business Continuity Plan.

### 1.25 “Selective Routing and Transfer”:

A feature that automatically routes traffic destined for emergency services to the appropriate PSAP based on the location data provided during the setup of the 9-1-1 call, session or event (Automatic Identification information or Geodetic) and facilitates inter-agency transfer.

### 1.26 “Serving Area”:

Under the Tariff, the area within the LGA’s boundaries, as determined by TELUS and the LGA, from which calls, sessions and events sent to the 3-digit emergency telephone number 9-1-1 will be directed to the Primary PSAP.

In this Agreement, the Serving Area means the entire area within the geographic boundaries of the LGA, as set out in the LGA’s letters patent from time to time.

### 1.27 “User-to-Network Interface (UNI) Interconnection Design Specifications”:

User-to-Network Interface (UNI) Interconnection Design Specifications means the authoritative document which sets the technical specifications an i3-PSAP must comply with.

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# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule B Emergency Service Zones and PSAP migration identification in the Serving Area

|  |
|--|
| <b><u>Current Emergency Zones &amp; PSAP migration identification</u></b>  |
| <b><u>Schedule B is a current list of PSAP's that provide services to the LGA. Please review and confirm accuracy (initial) of all contracted PSAPs. Post NG9-1-1 transition changes or updates to Schedule B will be communicated to TELUS via current TELUS operations change process.</u></b> |
| <b><u>LGA initial:</u></b>   |
|  |

| <b>PSAP Serving Information</b>          |  |  |                       |              |                |
|--|--|--|-----------------------|--------------|----------------|
| PSAP Name                                | PSAP Address   | PSAP Address – Backup Site               | Target Migration Date |              |                |
| E-Comm 9-1-1                             | 3301 E Pender Street<br>Vancouver, BC                      | 2955 Virtual Way<br>Vancouver, BC        |                       |              |                |
| Burnaby Fire                             | 4867 Sperling Ave<br>Burnaby, BC                           | 3151 Gilmore<br>Diversion Burnaby,<br>BC |                       |              |                |
| Surrey Fire                              | 8767 132nd Street<br>Surrey, BC                            | 14355 57th Avenue<br>Surrey, BC          |                       |              |                |
| E-Comm Fire Dispatch                     | 3301 E Pender Street<br>Vancouver, BC                      | 2955 Virtual Way<br>Vancouver, BC        |                       |              |                |
| E-Comm Police                            | 3301 E Pender Street<br>Vancouver, BC                      | 2955 Virtual Way<br>Vancouver, BC        |                       |              |                |
| <b>Metro Vancouver Regional District</b> |  |  |                       |              |                |
| ESZ                                      | Community  | Local Government                         | 9-1-1 Answer          | Fire         | Police         |
| 4221                                     | UEL/University of British Columbia                         | Metro Vancouver RD                       | ECOM M                | ECOM M Fire  | ECOMM Police   |
| 4261                                     | Vancouver  | Metro Vancouver RD                       | ECOM M                | ECOM M Fire  | ECOMM Police   |
| 4277                                     | Richmond   | Metro Vancouver RD                       | ECOM M                | ECOM M Fire  | ECOMM Police   |
| 4298                                     | Burnaby  | Metro Vancouver RD                       | ECOM M                | Burnaby Fire | ECOMM Police   |
| 4461                                     | Anmore/Belcarra/Boulder Island/Passage Island/Bowen Island | Metro Vancouver RD                       | ECOM M                | Surrey Fire  | Coquitlam RCMP |
| 4467                                     | Maple Ridge and Pitt Meadows [                             | Metro Vancouver RD                       | ECOM M                | Surrey Fire  | ECOMM Police   |
| 4469                                     | Port Moody   | Metro Vancouver RD                       | ECOM M                | ECOM M Fire  | ECOMM Police   |
| 4521                                     | New Westminster  | Metro Vancouver                          | ECOM M                | ECOM M Fire  | ECOMM Police   |

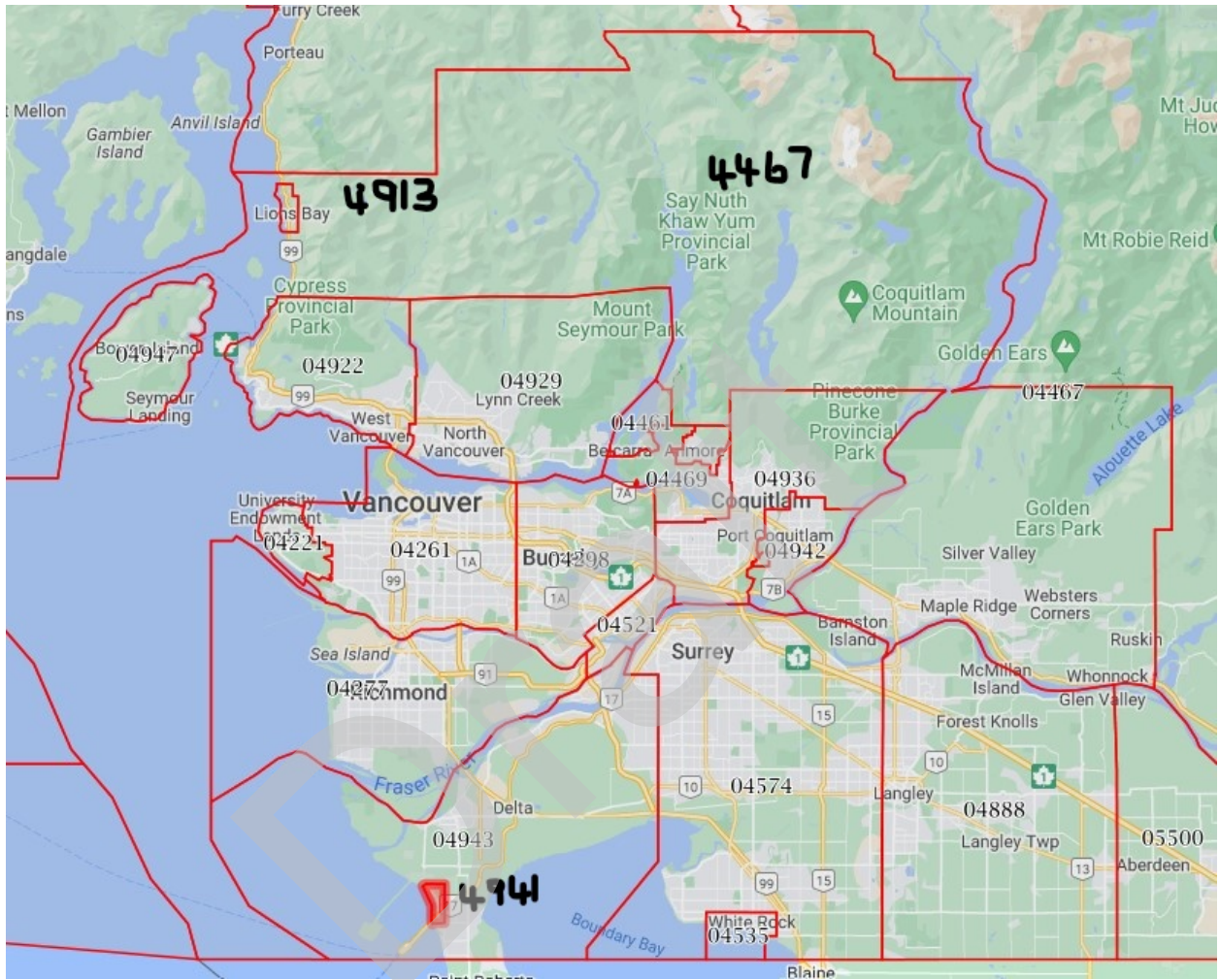
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|      |                                     |                    |        |             |                      |
|------|-------------------------------------|--------------------|--------|-------------|----------------------|
|      |                                     | RD                 |        |             |                      |
| 4535 | White Rock                          | Metro Vancouver RD | ECOM M | Surrey Fire | RCMP Surrey          |
| 4574 | Surrey                              | Metro Vancouver RD | ECOM M | Surrey Fire | RCMP Surrey          |
| 4888 | City of Langley/Township of Langley | Metro Vancouver RD | ECOM M | Surrey Fire | Langley RCMP         |
| 4913 | Lions Bay                           | Metro Vancouver RD | ECOM M | Surrey Fire | ECOMM Police         |
| 4922 | West Vancouver                      | Metro Vancouver RD | ECOM M | Surrey Fire | ECOMM Police         |
| 4929 | North Vancouver (City and District) | Metro Vancouver RD | ECOM M | Surrey Fire | North Vancouver RCMP |
| 4936 | Coquitlam                           | Metro Vancouver RD | ECOM M | ECOM M Fire | Coquitlam RCMP       |
| 4941 | Tsawwassen First Nation Lands       | Metro Vancouver RD | ECOM M | ECOM M Fire | RCMP Surrey          |
| 4942 | Port Coquitlam                      | Metro Vancouver RD | ECOM M | Surrey Fire | Coquitlam RCMP       |
| 4943 | Delta                               | Metro Vancouver RD | ECOM M | ECOM M Fire | ECOMM Police         |

Appendix 1 to Schedule B is attached at next page showing the geographic boundaries of the Emergency Service Zones as of the Effective Date.

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Appendix 1 to Schedule B – Emergency Service Zones



# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule C Technical Requirements/ESInet Access Criteria

Next Generation 9-1-1 is comprised of complex and interactive systems. In order to ensure proper network security, resiliency, diversity, and reliability, the LGA must ensure that all of the PSAPs meet the technical requirements detailed below. A PSAP cannot interconnect to the TELUS NG9-1-1 Network without meeting these requirements.

PSAPs utilizing networks to process and deliver NG9-1-1 calls outside of the ESInet do so at their own risk and assume all liabilities, including prolonged restoration times in the event of an outage.

LGA will direct the PSAP(s) to:

- 1 Deploy Dual Stack as the preferred method for simultaneous use of IPV4 & IPV6 address space OR to individually perform NAT-PT (Network Address Translation - Protocol Translation) for their Network Domain as defined in the NG9-1-1 network provider's UNI Interconnection Design Specifications, as a mandatory condition to interconnect to the NG9-1-1 network.
- 2 Support a set MTU (Maximum Transmission Unit) value of 1500 bytes for their network domain.
- 3 Utilize the Border Gateway Protocol (BGP) for dynamic routing between peering networks, using registered Autonomous System (AS) numbers, when available.
- 4 Assign a Local Registration Authority ("LRA") within Schedule F. The LRA will be responsible for determining and managing which users will be authorized to access the ESInet. An LRA can be assigned for a specific PSAPs or may be assigned for all PSAPs in an entire serving territory. The PSAP must notify TELUS at least 30 days prior to onboarding to the NG9-1-1 network of its selection and provide TELUS with 60 days' notice prior to any changes to its LRA structure. The LRA will have to enter into a distinct agreement with TELUS regarding the rights and obligations specific to the LRA and agree to TELUS Certificate Policy. For greater clarity, if access to the ESInet is needed for devices, the PSAP must assign an Authorized Organization Representative ("AOR"), which will also enter into a distinct agreement with TELUS. For greater clarity, LRA and AOR doesn't need to be the PSAP itself. The Parties may update Schedule F, from time to time, by mutual written consent, without requiring an amendment to this Agreement.
- 5 Utilize the PCA service provided by the NG9-1-1 network provider, as defined in the UNI Interconnection Design Specifications, as a mandatory condition of interconnection with the NG9-1-1 network until a nation-wide PSAP Credentialing Agency is established.
- 6 Comply with the UNI and any other bulletins or technical documents communicated by TELUS to all LGAs and PSAPs from time to time. Employ a NENA i3 compliant BCF (Border Control Function), as defined in the NG9-1-1 network provider UNI Interconnection Design Specifications, as a mandatory condition of interconnection with the NG9-1-1 network. In addition, the BCF must be deployed in a manner that prevents single points of failure.
- 7 Employ the QoS requirements as defined in the NG9-1-1 network provider UNI Interconnection Design Specifications as a mandatory condition of interconnection with the NG9-1-1 network.
- 8 Implement the mandatory list of audio CODECs as provided by the NG9-1-1 network providers as part of the Onboarding Process, and as updated through the proposed change management process managed by CISC.
- 9 Use the two (2) redundant 9-1-1 IP-VPN circuits and routers provided by TELUS to deliver 9-1-1

## NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

calls, sessions and events, and associated data as per TELUS acceptable use policy available at [www.telus.com/aup](http://www.telus.com/aup). The PSAPs will not modify, repair, reinstall, or tamper with the 9-1-1 IP-VPN circuits and routers, or use them in a manner that interferes with any service components used to provide them, TELUS' networks, or with the use of TELUS services by other persons, or in a manner that avoids the payment of any charges, or use the 9-1-1 IP-VPN circuits in violation of any law or regulation. TELUS recommends that the PSAP use both 9-1-1 IP-VPN circuits to avoid service impacts in the event of an 9-1-1 IP-VPN circuit or terminating router failure.

- 10 Design and operation the PSAPs WAN/LAN, including resiliency, capacity, management, quality of service and security.
- 11 Support end-to-end encryption of traffic from and towards the ESInet as defined in the TELUS NG9-1-1 UNI Interconnection Design Specifications. PSAPs are strongly encouraged to utilize the TELUS NGCS-based DNS service to ensure the resiliency of DNS functions and seamless PCA functionality. If a PSAP opts to use its own DNS service, it will be the sole responsibility of that agency to design, maintain and administer this element.
- 12 Use the provided ESInet connections strictly for the delivery of NG9-1-1 calling and associated data and not to use any private VPN tunnels across the ESInet.
- 13 Create Policy Routing Rules for NG9-1-1 and communicate their Default Routing, if any, as part of their PSAP Contingency Plans to ensure that 9-1-1 calls are answered in the event of a PSAP outage.
- 14 Synchronize their network elements with those of the NGCS based on the Network Time Protocol resource provided by TELUS.
- 15 Apply on an ongoing basis, the required security updates (including any security patches) promptly, on the schedule communicated by TELUS.

The failure of a PSAP to comply with the technical requirement and access criteria may result in having such PSAP removed from the TELUS NG9-1-1 Network. In the event where a PSAP does not meet the above technical requirements and access criteria to the ESInet, TELUS will inform the LGA before removing the PSAP from the TELUS NG9-1-1 Network.

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule D GIS Data Provider Details

| Municipality, County or Other Government Entity name | GIS Data Provider or Provincial/ Territorial Designated Data Aggregator name | Provincial /Territorial Legislation (Y/N) |
|--|--|---|
| Electoral Area A – University of British Columbia    | Data Provider: University of British Columbia                                |   |
| Electoral Area A – University Endowment Lands        | Data Provider:   |   |
| Electoral Area A – First Nation reserves             | Data Provider: see section 4.6   |   |
|  |  |   |

In the absence of Provincial or Territorial legislation defining a Data Aggregator body, by default, the NG9-1-1 Network Provider will be the defined GIS and addressing Data Aggregator ([Telecom Decision CRTC 2020-150 | CRTC](#))



# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule E Contingency Plans and Policy Routing Rules

LGA must verify with each PSAP and PSAP location listed in Schedule B has a 9-1-1 Contingency Plan and Policy Routing Rules documented and identified to TELUS. TELUS' requirement is to obtain documented contingencies and does not imply imposing mutual aid, backup sites, or any actual contingency options.

| <b>PSAP Serving Information</b> |                                    |                                    |   |
|---------------------------------|------------------------------------|------------------------------------|---|
| <b>PSAP Name (*1 &amp; *2)</b>  | <b>PSAP Address</b>                | <b>PSAP Address – Backup Site</b>  | <b>Contingency Plan &amp; Policy Routing Rules<br/>LGA verified (initial)</b> |
| E-Comm 9-1-1                    | 3301 E Pender Street Vancouver, BC | 2955 Virtual Way Vancouver, BC     |   |
| Burnaby Fire                    | 4867 Sperling Ave Burnaby, BC      | 3151 Gilmore Diversion Burnaby, BC |   |
| Surrey Fire                     | 8767 132nd Street Surrey, BC       | 14355 57th Avenue Surrey, BC       |   |
| E-Comm Fire Dispatch            | 3301 E Pender Street Vancouver, BC | 2955 Virtual Way Vancouver, BC     |   |
| E-Comm Police                   | 3301 E Pender Street Vancouver, BC | 2955 Virtual Way Vancouver, BC     |   |

# NEXT GENERATION 9-1-1 LOCAL GOVERNMENT SERVICE AGREEMENT

## Schedule F Designated LRA

**LGA must designate a Local Registration Authority (“LRA”) \* reference Schedule C, #4**

**Digital Subscriber Certificate Agreement and Application Form – submitted by LGA’s  
Local Registration Authority designate upon TELUS onboarding**

| <b>PSAP Serving Information</b> |                                    |                                    |  |
|---------------------------------|------------------------------------|------------------------------------|--|
| <b>PSAP Name</b>                | <b>PSAP Address</b>                | <b>PSAP Address – Backup Site</b>  | <b>LGA designated Local Registration Authority (“LRA”)</b> |
| E-Comm 9-1-1                    | 3301 E Pender Street Vancouver, BC | 2955 Virtual Way Vancouver, BC     |  |
| Burnaby Fire                    | 4867 Sperling Ave Burnaby, BC      | 3151 Gilmore Diversion Burnaby, BC |  |
| Surrey Fire                     | 8767 132nd Street Surrey, BC       | 14355 57th Avenue Surrey, BC       |  |
| E-Comm Fire Dispatch            | 3301 E Pender Street Vancouver, BC | 2955 Virtual Way Vancouver, BC     |  |
| E-Comm Police                   | 3301 E Pender Street Vancouver, BC | 2955 Virtual Way Vancouver, BC     |  |



**REPORT TO REGIONAL WATER SUPPLY COMMISSION  
MEETING OF WEDNESDAY, MARCH 20, 2024**

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**SUBJECT Bylaw No. 4604 – Capital Regional District Water Conservation  
Bylaw No. 1, 2016, Amendment Bylaw No. 4, 2024**

**ISSUE SUMMARY**

Amendments to Bylaw No. 4099 Capital Regional District Water Conservation Bylaw No.1, 2016 are required to support efforts to reduce peak and instantaneous water demand during summer morning periods.

**BACKGROUND**

Operations staff highlighted concerns regarding increasing stress on drinking water infrastructure caused by an instantaneous increase in peak demand during the summer overlap of indoor and outdoor morning water demands. On residential watering days, particularly at 4:00, 5:00 and 6:00 a.m., water demand can double with instantaneous increases that occur on the hour and are associated with the programmed timing of irrigation systems, and then the start of day for households.

High and instantaneous peak demands can impact the ability to supply the necessary water where and when it's needed, achieve complete disinfection, maintain adequate pressure in the system, as well as reduce hydraulic performance and increase water velocity and scouring, leading to turbidity excursions and potential water quality concerns. High instantaneous demands also have the potential to cause a decrease in pressure in the water conveyance system, which could lead to back-syphoning, cross connections or compromise the requirement to maintain adequate pressure for firefighting.

These issues are being exacerbated with climate change and increasing heat events. With regional climate projections forecasting hotter, drier summers, staff expect summer outdoor demand to increase beyond the expected trajectory from population increase alone.

Staff investigated peak demands during summer outdoor watering times and specific conditions that stress the water conveyance system and infrastructure. Staff also consulted other water utilities to determine if they were experiencing similar issues. As a result, staff recommend a coordinated approach to reducing the instantaneous and peak demands. A significant component are amendments to [Bylaw No. 4099](#), direct engagement with irrigation and landscape professionals, and an extensive public outreach campaign to engage the public in understanding the problem and participating in the solution.

Water Conservation Bylaw No. 4099 regulates the use of water in the region and defines specified times for lawn watering from May to September each year. Bylaw No. 4604 “Capital Regional District Water Conservation Bylaw No. 1, 2016, Amendment Bylaw No. 4, 2024” (Appendix A), amends the Water Conservation Bylaw by inserting a new overnight lawn watering schedule for timed irrigation systems only and changes the public authority watering day for public, institutional and community playing fields from Wednesday to any day other than Wednesday to eliminate overlap with residential lawn watering days where the largest peak demands are seen.

These amendments will be supported by an outreach campaign to inform the public about a

revised watering schedule for timed irrigation and to encourage irrigation system owners/operators to stagger the start times off the hour to reduce the instantaneous demand. Water conservation outreach staff will also utilize direct engagement with residents, irrigation and landscape professionals, municipalities, industrial, commercial and institutional users that have large, irrigated areas.

On February 27, 2024, the Water Advisory Committee was presented with this proposed amendment and its rationale. The committee supported the proposed Bylaw amendment.

## **ALTERNATIVES**

### *Alternative 1*

The Regional Water Supply Commission recommends to the Capital Regional District Board:

1. That Bylaw No. 4604, “Capital Regional District Water Conservation Bylaw No. 1, 2016, Amendment Bylaw No. 4, 2024”, be introduced and read a first, second and third time; and
2. That Bylaw No. 4604 be adopted.

### *Alternative 2*

That Bylaw No. 4604, “Capital Regional District Water Conservation Bylaw No. 1, 2016, Amendment Bylaw No. 4, 2024” be referred to staff for revision.

## **IMPLICATIONS**

### *Climate Action and Environmental*

Recently updated regional climate projections to 2050 forecast that there will be on average 32 summer days with temperatures above 25<sup>0</sup>C, that the length of heat waves will increase from 2.5 days to 4 days, and that summer droughts will be even longer. This, in turn, will increase the CRD’s summer water demand.

During recent extreme heat events, higher than normal drawdown of water from some balancing reservoirs in the water distribution system were observed. There are a limited number of balancing reservoirs, and this has the potential to impact the delivery of water when and where it’s needed and can cause a decrease in system pressure when demands are high.

Water quality may also be impacted by peak and instantaneous demands. Sudden high flows and pressure surges due to instantaneous and peak demands can cause deposited sediments in the pipes upstream of the Goldstream Treatment Plant to resuspend, leading to short duration turbidity events. Turbidity lowers the efficacy of ultraviolet and chlorine disinfection, which may compromise the ability to achieve complete disinfection of the drinking water prior to distribution to the community.

Adding an overnight watering window under the Bylaw and encouraging landowners and residents to switch timed irrigation systems for lawns to evening and overnight watering times will help to better manage peak morning flows and instantaneous demands, reduce the possibility of turbidity events and help alleviate impacts related to high demand due to heat events.

### *Service Delivery*

Sudden changes in flow can cause decreased pressure in the water conveyance system, requiring infrastructure valves to throttle quickly to accommodate the new flow. Multiple pulses of instantaneous increases to demand at specific times on designated lawn water days are placing

preventable strain on water infrastructure. Sustained overnight low flows also create operational challenges. Therefore, it is important to manage periods of both high and low flows. The Capital Regional District will work with local government staff to inform on the issue, seek collaborative actions and promote the new strategy across the regional service area.

Bylaw No. 4099 currently enables public authorities to water public, institutional and community playing fields on Wednesdays only, further intensifying the instantaneous peak demands due to programmed irrigation systems. The proposed changes in the bylaw will enable public authorities to water between the hours of 1:00 a.m. to 10 a.m. or 7:00 p.m. to 10:00 p.m. on any day except Wednesdays to again avoid overlap with residential lawn watering days where the largest peak demands are observed.

Amending the bylaw to add an overnight watering window, changing the public authority watering day from Wednesday to any day other than Wednesday, and encouraging landowners and residents to switch timed irrigation systems for lawns to evening and overnight watering times, should start to balance both peak morning flows and low overnight flows.

**CONCLUSION**

High and instantaneous demand for water in the summer during scheduled watering days is causing stress to the Capital Regional District’s drinking water supply infrastructure. Amending the bylaw to add an overnight watering window, changing the public authority watering day from Wednesday to any day other than Wednesday, engaging directly with irrigation and landscape professionals and encouraging landowners and residents to switch timed irrigation systems for lawns to evening and overnight watering times will help to reduce peak morning, instantaneous and low overnight flows.

**RECOMMENDATION**

The Regional Water Supply Commission recommends to the Capital Regional District Board:

1. That Bylaw No. 4604, “Capital Regional District Water Conservation Bylaw No. 1, 2016, Amendment Bylaw No. 4, 2024”, be introduced and read a first, second, and third time; and
2. That Bylaw No. 4604 be adopted.

|               |  |
|---------------|--|
| Submitted by: | Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection          |
| Concurrence:  | Larisa Hutcheson, P.Eng., Acting General Manager, Parks & Environmental Services |
| Concurrence:  | Alicia Fraser, P. Eng., General Manager, Integrated Water Services               |
| Concurrence:  | Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer    |
| Concurrence:  | Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer                      |

**ATTACHMENTS**

- Appendix A: Bylaw No. 4604 – A Bylaw to Amend Water Conservation Bylaw No. 4099
- Appendix A: Blacklined version of Bylaw No. 4099, Schedule A

CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4604

\*\*\*\*\*

A BYLAW TO AMEND WATER CONSERVATION BYLAW (BYLAW NO. 4099)

\*\*\*\*\*

WHEREAS:

- A. Under Bylaw No. 4099, "Capital Regional District Water Conservation Bylaw No. 1, 2016", the Regional Board has established a bylaw to regulate water use for a Water supply local service sourcing drinking water from the Sooke Lake and Goldstream Reservoirs;
- B. The Regional Board wishes to amend Bylaw No. 4099 to adjust the timing of certain watering restrictions;

**NOW THEREFORE**, the Board of the Capital Regional District in open meeting assembled hereby enacts as follows:

- 1. Bylaw No. 4099, "Capital Regional District Water Conservation Bylaw No. 1, 2016" is hereby amended as follows:
  - (a) by replacing section 1.(1)(a) in Schedule "A" in its entirety with:
 

no person shall, by any method, water a lawn growing on a property, including but not limited to a property that is used for residential, commercial, or institutional purposes, unless

    - (i) the property has an even-numbered address, the lawn watering is on Wednesdays or Saturdays, and the watering occurs between the hours of 12:01 a.m. to 4 a.m. by utilizing an irrigation system with a timer or automatic shut off that prevents continuous emission of Water, or between the hours of 4 a.m. to 10 a.m. or 7 p.m. to 10 p.m. by any method permitted by this bylaw;
    - (ii) the property has an odd-numbered address, the lawn watering is on Thursdays or Sundays, and the watering occurs between the hours of 12:01 a.m. to 4 a.m. by utilizing an irrigation system with a timer or automatic shut off that prevents continuous emission of Water, or between the hours of 4 a.m. to 10 a.m. or 7 p.m. to 10 p.m. by any method permitted by this bylaw; and
  - (b) by replacing section 1.(2)(b)(ii) in its entirety with:
    - (ii) in the case of all Public Authorities, water public, institutional or community playing fields on a Wednesday or on any other day at times other than during the hours of 1:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m; and



2. This bylaw may be cited for all purposes as "Capital Regional District Water Conservation Bylaw No. 1, 2016, Amendment Bylaw No. 4, 2024".

|                         |    |        |      |
|-------------------------|----|--------|------|
| READ A FIRST TIME THIS  | th | day of | 2024 |
| READ A SECOND TIME THIS | th | day of | 2024 |
| READ A THIRD TIME THIS  | th | day of | 2024 |
| ADOPTED THIS            | th | day of | 2024 |

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CHAIR

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CORPORATE OFFICER

**SCHEDULE "A"**  
**to Bylaw No. 4099**

(Bylaw 4261)

**OUTDOOR WATER USE RESTRICTION STAGES**

**APPLICATION**

This schedule does not apply to Nurseries, Farms, Turf Farms and Tree Farms.

**1. STAGE 1 Water Restrictions**

## (1) During Stage 1,

~~(a) no person shall, by any method, water a lawn growing on a property, including but not limited to a property that is used for residential, commercial, or institutional purposes, with~~

~~(i) an even-numbered address, other than on Wednesday and Saturday between the hours of 4:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m.; and~~

~~(ii) an odd-numbered address other than on Thursday and Sunday between the hours of 4:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m.; and~~

~~(a) no person shall, by any method, water a lawn growing on a property, including but not limited to a property that is used for residential, commercial, or institutional purposes, unless~~

~~(i) the property has an even-numbered address, the lawn watering is on Wednesdays or Saturdays, and the watering occurs between the hours of 12:01 a.m. to 4 a.m. by utilizing an irrigation system with a timer or automatic shut off that prevents continuous emission of Water, or between the hours of 4 a.m. to 10 a.m. or 7 p.m. to 10 p.m. by any method permitted by this bylaw;~~

~~(ii) the property has an odd-numbered address, the lawn watering is on Thursdays or Sundays, and the watering occurs between the hours of 12:01 a.m. to 4 a.m. by utilizing an irrigation system with a timer or automatic shut off that prevents continuous emission of Water, or between the hours of 4 a.m. to 10 a.m. or 7 p.m. to 10 p.m. by any method permitted by this bylaw; and~~

(b) no person shall

(i) water trees, shrubs, flowers and vegetables on any day with a Sprinkler other than during the prescribed hours for Stage 1 lawn watering or on any day at any time if watering is done other than by hand-held container, hand held hose equipped with an automatic shut-off nozzle, or by Micro-irrigation or Drip-irrigation systems.

(ii) water newly planted trees, shrubs, flowers and vegetables by any method referred to in Section 1(1)(b)(i) of this Schedule other than during installation and the following 24 hours;

(iii) outside the prescribed Stage 1 lawn Watering hours, water new sod or newly seeded lawns, other than on new sod installation and during the first 21 days after installation, or for newly seeded lawns, water until growth is established or for 49 days after installation, whichever is less;

- (iv) water public, institutional or community playing fields other than between the hours of 1:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m. on any day, unless failure to water will result in a permanent loss of plant material;
  - (v) wash a vehicle with Water other than by using a hand held container or a hand held hose equipped with an automatic shut-off nozzle or at car dealerships or commercial car washes; and
  - (vi) use Water to wash sidewalks, driveways, parking lots, exterior windows or exterior building surfaces, by means of other than a power washer or hand-held hose equipped with a shut-off valve or in a manner that results in Excess Water Use.
- (c) a person must not allow a Public Spray Park
- (i) to emit Water continuously;
  - (ii) to be operated other than by either:
    - 1) a motion sensor timer, or
    - 2) manually by the user provided the device that is activated manually by the user is equipped with a timer or automatic shut-off that prevents continuous emission of Water.
- (2) As exceptions to the Stage 1 restrictions,
- (a) Owners or Occupiers of property who, by reason of physical or mental incapacity, are unable to water their property within the restricted days and times, and whose property is not equipped with an automatic in-ground Irrigation System, with the written approval of the General Manager given under this bylaw, shall not water their lawn or turf on more than two days of the week for a maximum of 9 hours per day;
  - (b) no Public Authority shall:
    - (i) in the case of Municipalities only, water lawns and Boulevards other than on Mondays and Fridays during the hours of 1:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m.;
    - ~~(ii) in the case of all Public Authorities, water public, institutional or community playing fields on a Wednesday or on any other day at times other than during the hours of 1:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m.; and~~
    - ~~(ii) in the case of all Public Authorities, water public, institutional or community playing fields other than during the hours of 1:00 a.m. to 10:00 a.m. or 7:00 p.m. to 10:00 p.m. on any day other than Wednesday; and~~
    - (iii) in the case of all Public Authorities, water trees, shrubs, flowers and vegetable gardens other than at the times and in the manner prescribed under Sections 1(1)(b)(i) and (ii) of this Schedule.
  - (c) owners or operators of golf courses shall not water
    - (i) fairways on any day, other than during the Stage 1 lawn prescribed times;
    - (ii) trees, shrubs, flowers and vegetables grown on golf courses other than in accordance with Section 1(1)(b)(i), and (ii) of this Schedule; and

- (iii) golf greens and tees on any day unless failure to water will result in permanent loss of plant material.