

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, JANUARY 19, 2022**

SUBJECT **2020 Regional Greenhouse Gas Inventory**

ISSUE SUMMARY

To provide the results of the 2020 Capital Regional District (CRD) and regional local government community greenhouse gas (GHG) emissions inventory.

BACKGROUND

The CRD's 2018 Regional Growth Strategy (RGS) targets a reduction in community GHG emissions of 33% (from 2007 levels) by 2020, and 61% by 2038. In February 2019, the CRD Board declared a climate emergency and committed to regional carbon neutrality. At its March 13, 2019 meeting, the CRD Board directed staff to complete a regional GHG inventory and, in July 2020, staff delivered a 2018 regional GHG Global Protocol for Cities (GPC) BASIC + GHG emission inventory.

Utilizing the internationally recognized GPC framework, the CRD retained Stantec Consulting Ltd. to update the CRD regional GPC BASIC + GHG emission inventory for the 2020 calendar year (Appendix A).

The 2020 CRD inventory indicates the capital region emits approximately 1.8 million tonnes of CO₂e annually. This represents a 9.8% reduction from 2007 levels and a 5% reduction from 2018. This precipitous drop is largely the result of a reduction in transportation-related emissions associated with the early 2020 COVID-19 pandemic response. Emissions associated with buildings increased 8.1% in 2020 relative to 2018. The Municipalities and Electoral Areas inventories (Appendix B) show increases in natural gas emissions in residential buildings relative to 2007 for most municipalities, as measured by Fortis BC. That result is partially indicative of the 2020 trend, as well as the proliferation of gas appliances in the capital region over the past 10 years. An increase in emissions from buildings electricity use can also be observed, which is largely due to a change in the electricity emission factor used. Trends for propane, wood and fuel GHG emissions were estimated using linear regression methods, with the exception of the City of Victoria and District of Saanich where fuel oil consumption was estimated based on the number of known tanks, average heated floor areas and fuel volume intensity.

Together building and transportation-related emissions continue to be the largest sources of emissions (approximately 79% in 2020), and waste-related emissions were observed to be approximately 34% below 2007 levels. Per capita emissions (Appendix C) were observed to be approximately 24% below 2007, which speaks to the efforts by the CRD and regional local governments to reduce energy consumption and GHG emissions despite significant regional growth. However, as established in the new 2021 Climate Action Strategy, the region will not meet the 2038 target unless greater effort is taken.

This inventory represents the best available information and includes several notable updates, including the best available emission factor for electricity for each inventory year, Insurance

Corporation of BC vehicle counts, and the separation of sequestration and land use change values. Due to limitations in how to quantify GHG emissions from sequestration and land use change, these values have been excluded from the calculation of total emissions. Values for these items are disclosed for information only in the CRD and regional local government community GHG emissions inventory reports. Understanding the sequestration potential of the region’s natural assets will become increasingly important as emissions drop toward the RGS goal of a 61% reduction by 2038. Staff continue to pursue better data for estimating the sequestration rates of the region’s natural assets and land use changes occurring in the region. See Figure 1 for the emission trend since 2007 and the approximate trajectory of emissions reductions to 2038 established in the 2021 Climate Action Strategy.

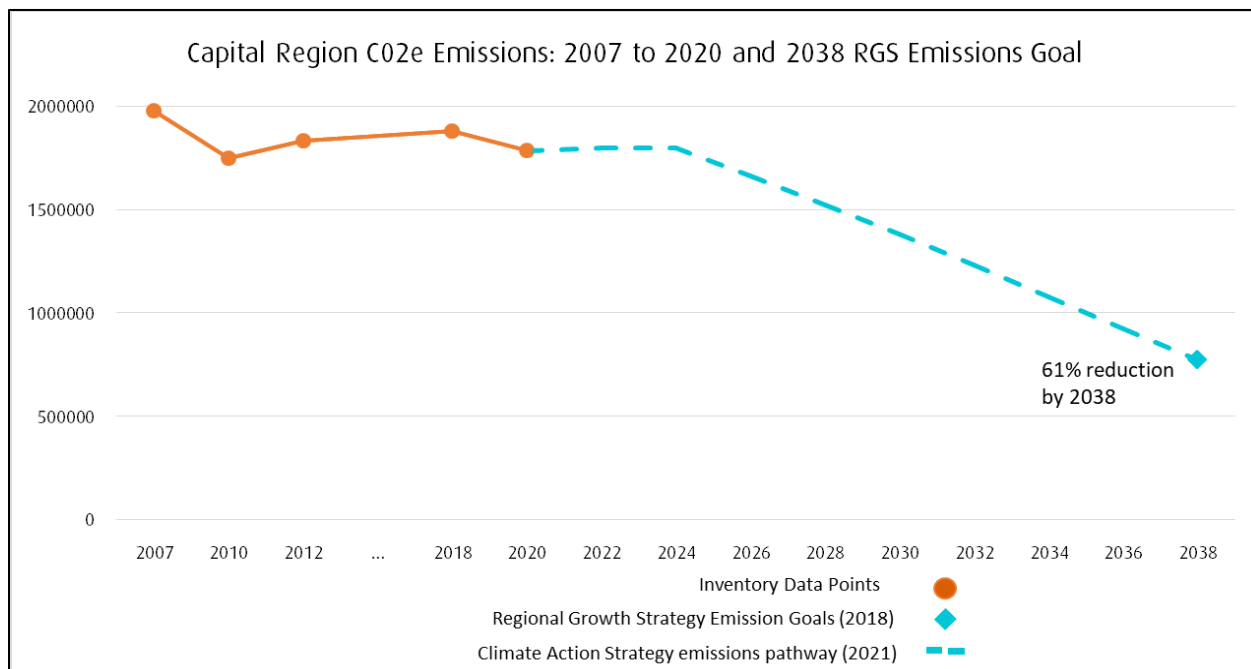


Figure 1: Capital Region Greenhouse Gas Global Protocol for Cities Basic + Emissions and 2038 Regional Growth Strategy Goal

CONCLUSION

The CRD completed a greenhouse gas emission inventory and report for the 2020 calendar year. Results indicate an approximate 9.8% decrease in regional emissions from 2007 to 2020, and a 5% reduction from 2018, largely associated with the early 2020 COVID-19 pandemic response. The analyses also indicated that on-road transportation and the built environment are the main sources of regional emissions, together accounting for approximately 79% of all emissions in 2020.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That the 2020 Regional Greenhouse Gas Inventory report be received for information.

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Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Capital Regional District 2020 GPC BASIC and Community Greenhouse Gas Emissions Inventory Report – Stantec Consulting Ltd. – October 2021

Appendix B: Capital Region District – Municipalities and Electoral Areas – 2007 Base Year and 2020 Reporting Year Energy & Greenhouse Gas Emissions Inventory – Stantec Consulting Ltd. – October 2021

Appendix C: Capital Region CO_{2e} Emissions Per Capita