2022 CLIMATE CHANGE ACCOUNTABILITY REPORT FOR SURREY SCHOOLS

Surrey Schools
LEADERSHIP IN LEARNING

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DECLARATION STATEMENT

This Climate Change Accountability Report for the period January 1st to December 31st, 2022 summarizes Surrey Schools' greenhouse gas (GHG) emissions profile, the offsets purchased to achieve carbon neutrality, and the actions we have taken to reduce climate change impacts from our operations.

Despite continual growth in the building portfolio area and student numbers, Surrey Schools has reduced its GHG emissions by 7%

EXECUTIVE SUMMARY

On behalf of Surrey Schools, we are pleased to submit our Climate Change Accountability Report for 2022. Surrey Schools continues to investigate and develop projects and programs that will improve the sustainability of the organization. The adopted policies and efforts made by Surrey Schools to reduce energy use and greenhouse gas emission reductions are resulting in positive benefits for both the organization and the environment.

Strategies to enhance sustainability include: collaborative work between key departments to optimize the operation of buildings and the vehicle fleet; data analysis; identification of specific projects that contribute to greenhouse gas emission targets; and, the monitoring of energy use and waste disposal volumes. As part of its annual facilities work, Surrey Schools completed several school upgrades that will contribute to reductions in energy use and greenhouse gas emissions.

As natural gas for heating buildings is the main source of greenhouse gases, a colder than average 2022 led to greater heating needs and an increase in the use of natural gas. The net result was an increase in 2022 emissions compared to 2021.

Despite significant growth in both the size of the building portfolio and the student population, for 2022 Surrey Schools maintained a reduction in greenhouse gas emissions with 7% below the 2010 baseline. With future efficiency and electrification projects, overall emissions are expected to decline as we pursue provincial reduction targets of 16% by 2025 and 40% by 2030.

Mark Pearmain
Superintendent of Schools

Jon Harding
Secretary-Treasurer

ABOUT SURREY SCHOOLS

The Surrey School District was formed in 1906 and is the largest of 60 school districts in the province of British Columbia. Surrey Schools is governed by an elected board of seven trustees representing the cities of Surrey and White Rock.

One of the fastest growing districts in the province, the Surrey School District is dedicated to the vision of leadership in learning.

There are 135 sites and 12,500 teachers and staff dedicated to supporting kindergarten to Grade 12 students in Surrey, White Rock, and Barnston Island.

Surrey Schools

2022 Quick Facts

- 75,400 K-12 students
- 12,500 staff and teachers
- $860 million operating budget
- 103 elementary schools
- 21 secondary schools
- 5 learning centres
- 3 adult education centres
- 3 administration buildings
- Over 350 portables
- School populations ranging from 80 to 1,900 students

GREENHOUSE GAS TARGETS

B.C.'s Climate Change Accountability Act (formerly the Greenhouse Gas Reduction Targets Act) specifies targets and the province has identified these overall greenhouse gas reduction targets for the province compared to a 2007 baseline:

- 16% reduction by 2025
- 40% reduction by 2030
- 60% reduction by 2040
- 80% reduction by 2050

The province's *CleanBC Roadmap* indicates more specific targets against a 2010 baseline for public service organizations, including schools, as follows:

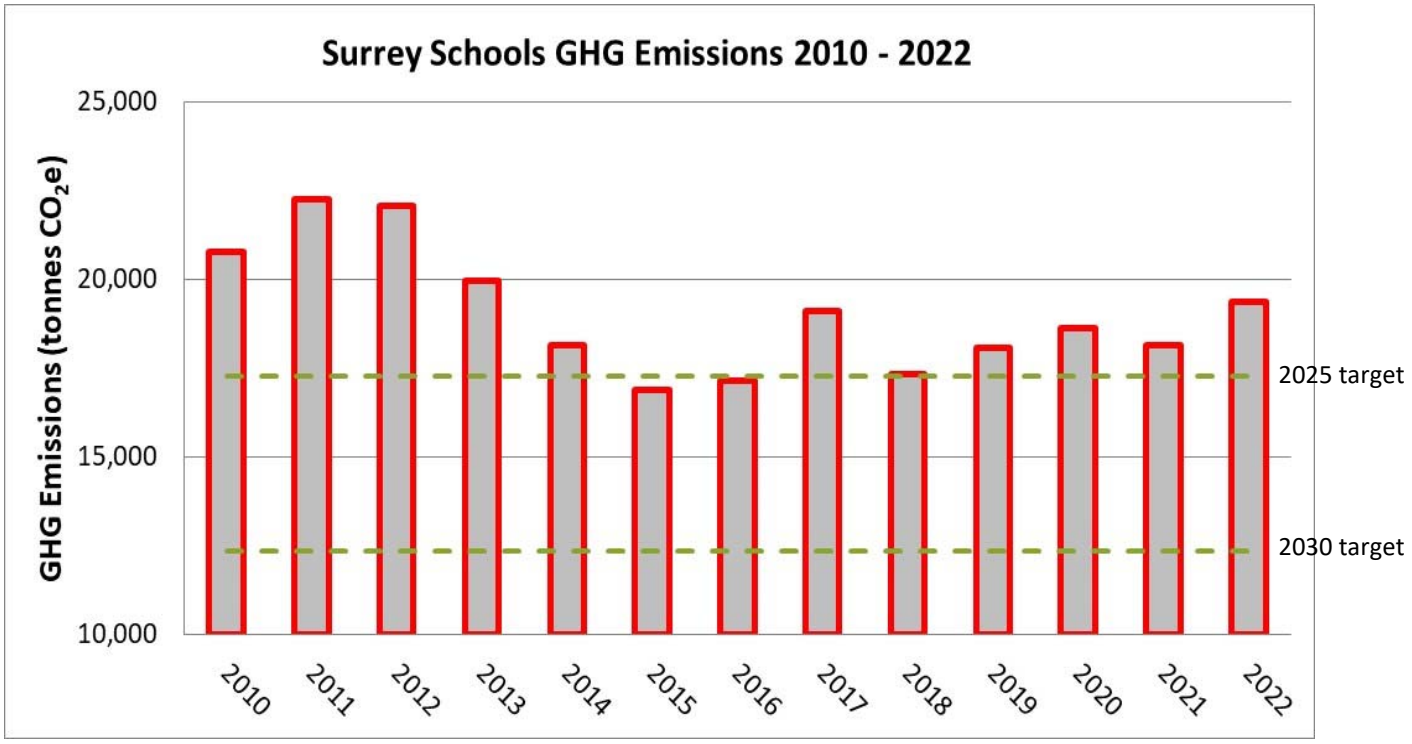
- 50% reduction in building emissions by 2030
- 40% reduction in fleet emissions by 2030

While overall provincial targets reference a 2007 baseline, specific targets for public service organizations for 2030 reference a 2010 baseline with the latter corresponding to when greenhouse gas reporting began in BC. For Surrey Schools the 2007 quantities for paper and fleet are estimated but the baseline emissions from 2007 and actual 2010 emission levels are similar.

GREENHOUSE GAS TRACKING

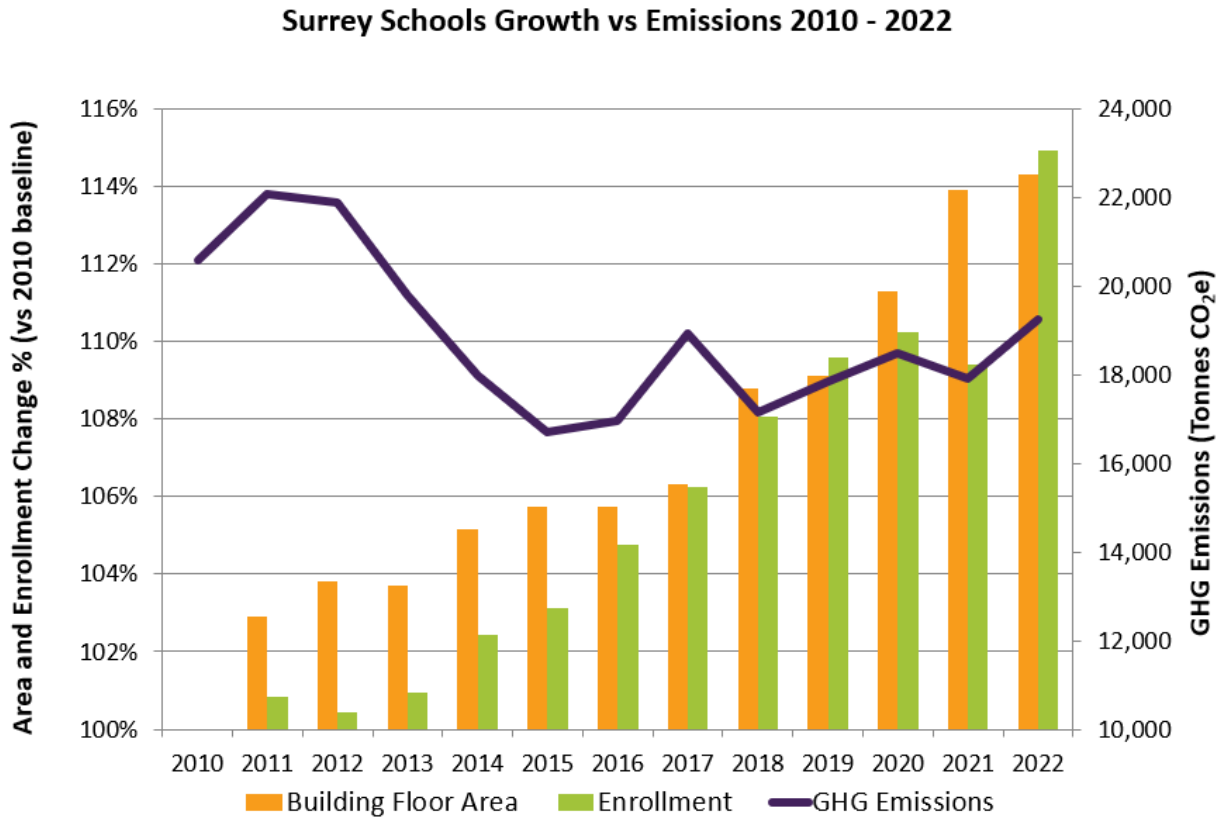
Reportable greenhouse gases are based on the annual measured consumption of energy in buildings, office paper, and fuel for fleet vehicles.

As of 2022, Surrey Schools' efforts to reduce emissions have resulted in a decrease of 7% from 2010. The 2022 emissions were higher than 2021 primarily due to an increase in building emissions.



DISTRICT GROWTH

Surrey Schools has been growing to provide services for an increasing student population. Since 2010, Surrey Schools' useable facility space from new schools, additions, and portables has increased by 14% and student enrollment has increased by 15%. Despite these demands, energy management efforts have reduced energy consumption and related greenhouse gas emissions compared to the 2010 baseline year.



ACHEIVING CARBON NEUTRALITY

Starting in 2010 provincial legislation has required that provincial entities, including school boards, be carbon neutral each year and also issue a public report detailing their emissions levels and progress in reducing greenhouse gas emissions.

In order to achieve annual carbon neutrality, it is necessary to purchase carbon offsets equivalent to quantity (in tonnes) of calculated, annual greenhouse gas (GHG) emissions. The money collected by the provincial government for carbon offsets is invested in certified, emissions-reducing projects.

At $25 per tonne, Surrey Schools' cost to offset 2022 emissions was $509,224

2022 REPORTED EMISSIONS & OFFSET SUMMARY

School District #36 (Surrey) GHG Emissions and Offset for **2022** (tCO_2e)	
GHG Emissions created in calendar year 2022:	
Total Emissions (tCO_2e) *	19,240
Total $BioCO_2$	159
Total Offsets (tCO_2e)	19,399
Adjustments to GHG Emissions Reported in Previous Years:	
Total Offsets (tCO_2e)	0
Grand Total Offsets for the 2022Reporting Year :	
Grand Total Offsets Required (tCO_2e)	19,399
Total Offset Investment	$509,223.75

- excludes emissions of 237 tCO_2e from fuel for buses but includes "estimated emissions" from rental of district-owned buildings.

Retirement of Offsets:
In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District #36 (Surrey) (**the Organization)** is responsible for arranging for the retirement of the offsets obligation reported above for the 2022 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to $25 per tonne of offsets retired on its behalf plus GST.

	May 31, 2022
Signature	Date
Jon Harding	Secretary -Treasurer
Name	Title

2022 GREENHOUSE GAS EMISSIONS SOURCES

Buildings

GHG emissions from buildings result from the energy consumed to provide heating, cooling, ventilation, and power to schools and other district facilities. Property owned by the district but rented out contribute to reported emissions and offset calculations but for internal tracking purposes are not included as the district has little control over them.

Fleet

Fleet emissions come from the use of fossil fuels in the vehicle fleet that primarily comprises maintenance vehicles and school buses. Fuel for school buses is excluded from offset calculations but included below for tracking purposes.

Office Paper

The emissions associated with consumption of office/printer paper.

Emissions Source	2022 GHG Emissions (tonnes of CO_2e)	% of 2022 Emissions	2022 Results Compared to 2021	2022 Results Compared to 2010 Baseline
Buildings	17,519*	89%	8.5% increase	4.7% decrease
Fleet	1,072**	6%	7.2% decrease	7.6% decrease
Paper	891	5%	4% increase	29% decrease

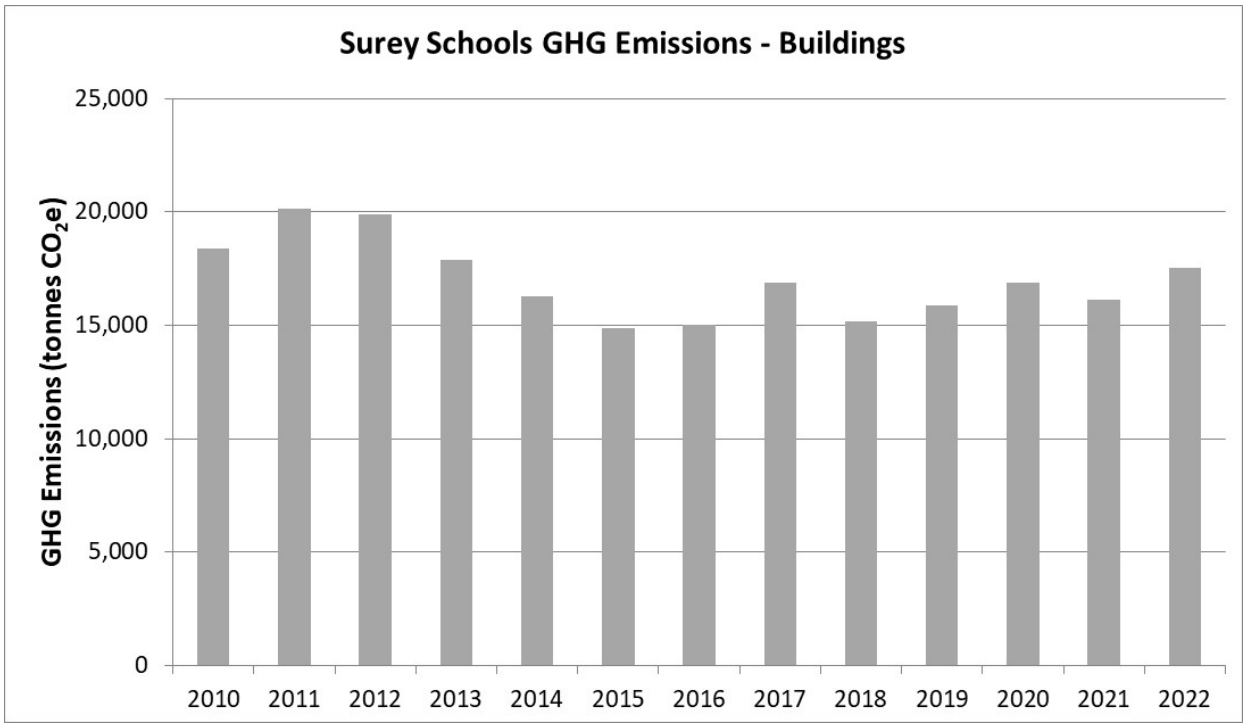
* excludes 63 t for buildings rented out on property held by the district e.g. houses.

** excludes biogenic emissions but includes 241 tonnes for school bus fuel emissions though neither are required to be included in offset purchase calculations.

2022 GHGS - BUILDINGS

BUILDINGS

Buildings account for the vast majority of the district's emissions as the natural gas used for heating is a potent greenhouse gas. 2022 building GHG emissions increased 8.5% from 2021 and decreased 4.7% from 2010.



ACTIONS

Several energy upgrade projects were completed including:

- Upgrade of a school's HVAC to hybrid heat pumps that use less natural gas
- Electrification of natural gas domestic hot water systems at three schools
- Boiler upgrades to more efficient models at four schools
- Secondary school building controls tune-up
- Studies at several sites to identify energy-saving opportunities

Green Construction

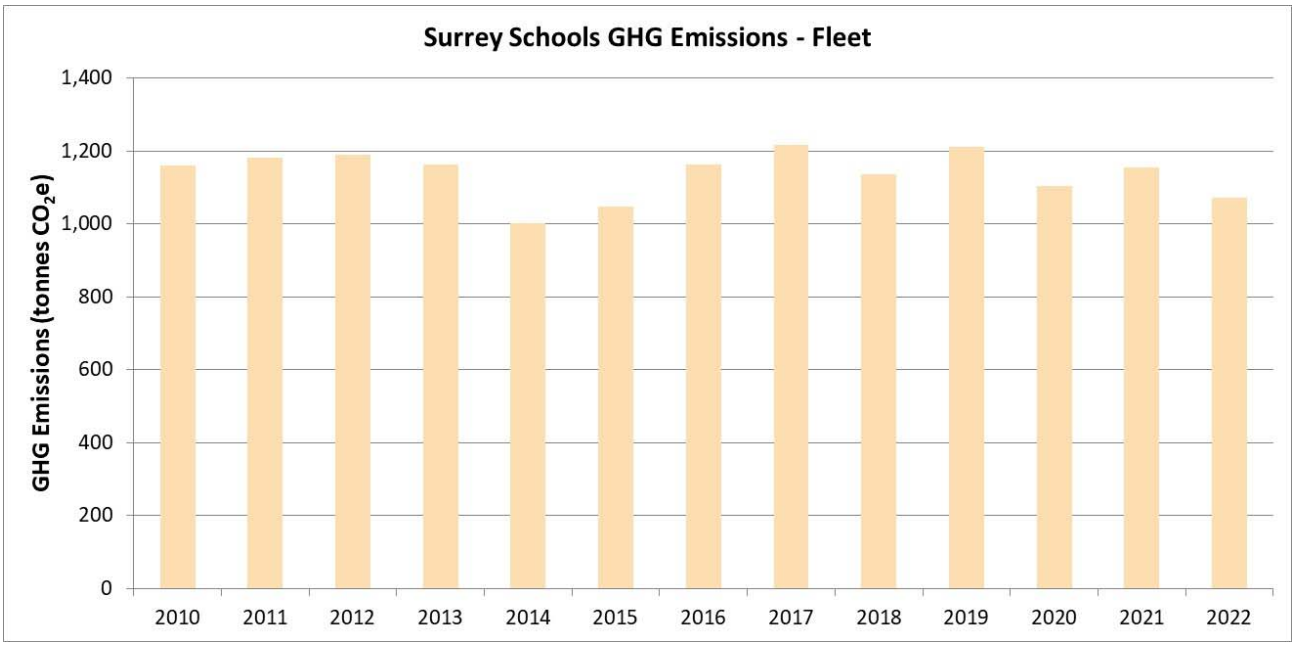
- Surrey Schools' new construction projects are built more sustainably and with higher energy efficiency that references the LEED V4 Gold standard
- Regent Road Elementary opened in 2022 and is an example of a low-carbon design that produces significantly lower GHGs that an average school

2022 GHGS - FLEET

FLEET

While the vehicle fleet has increased to serve the growing number of schools, fuel use has been countered to some degree by improvements in fuel economy. Annual fuel consumption can vary with the number of school projects, service requests, and snow removal demands. The graph below shows emissions from total fuel use, including school buses.

2022 Surrey Schools fleet emissions decreased 7.2% from 2021 and 7.6% from 2010 respectively. A contributing factor may have been reduced snow clearing requirements.



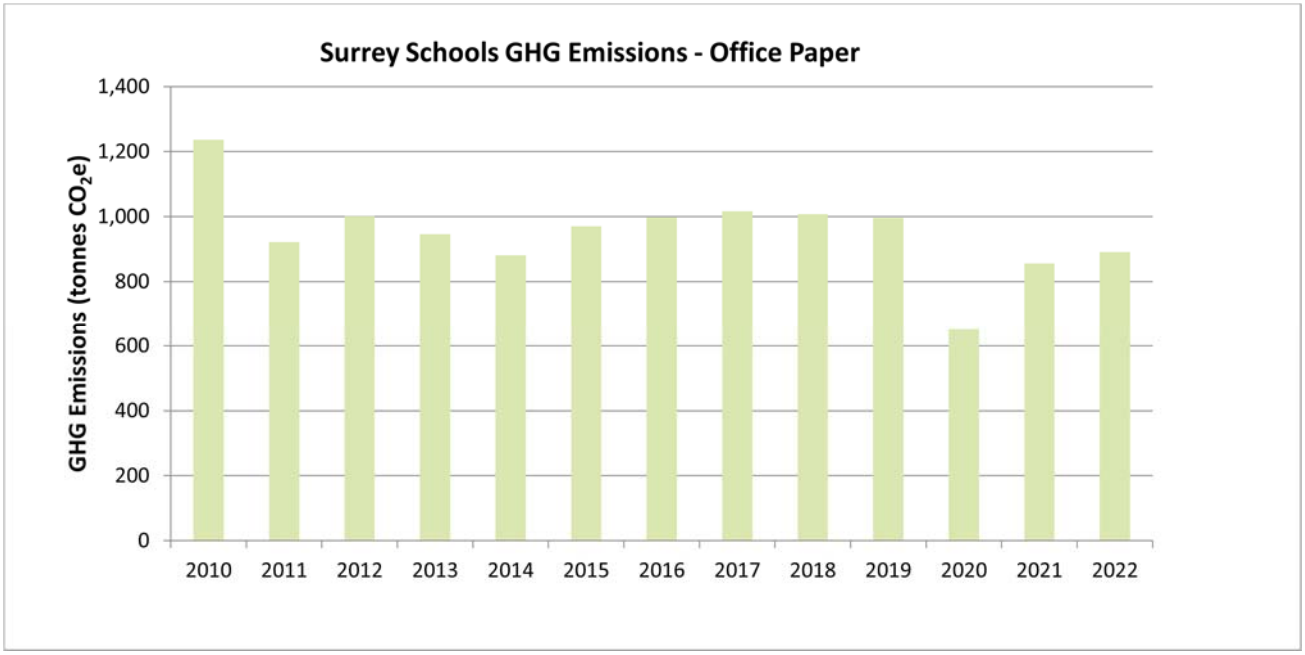
ACTIONS

- Purchased two electric school buses and installed chargers to support them
- Created delivery service quadrants to reduce driving long distances.

2022 GHGS - PAPER

PAPER

Though 2022 paper use was 4% higher than 2021, the recent trend of lower paper consumption may reflect the continued use of paperless teaching practices adopted during COVID-19 pandemic. 2022 was 28% lower than the 2010 baseline.



ACTIONS

- The district continued to use paper with 30% recycled content to lower GHG emissions

ONGOING EFFORTS TO REDUCE EMISSIONS

Surrey Schools' GHG and energy reduction initiatives will continue to be focused on energy efficiency and conservation within our schools and administrative facilities as these are the greatest source of greenhouse gas emissions. Surrey Schools is actively pursuing both low-carbon and more efficient technologies in new construction and retrofit projects; these will be key to achieving GHG targets.

In any large organization planning is essential in reaching targets and goals. Surrey Schools will continue to track the energy performance of the building portfolio and update the district's strategic energy management plan.

Upcoming energy efficiency projects slated for 2023 include:

- LED Lighting retrofits
- Low-carbon electrification projects for HVAC and domestic hot water
- Upgrades to more efficient boiler plants
- Building controls recommissioning
- Energy efficiency studies

Beyond 2022, Surrey Schools will continue to evaluate pathways to achieve the province's public sector emissions reduction targets and further incorporate sustainability into our operations.