2023 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, 2023 summarizes Surrey Schools' greenhouse gas (GHG) emissions profile, the offsets purchased to achieve carbon neutrality, and the actions taken to mitigate climate change impacts from our operations.

By June 30, 2024 Surrey Schools' final Climate Change Accountability Report will be posted to the website www.surreyschools.ca

EXECUTIVE SUMMARY

On behalf of Surrey Schools, we are pleased to submit our Climate Change Accountability Report for 2023. Surrey Schools is committed to reducing greenhouse gas emissions to protect the environment for the future of our students; in 2023, the Board of Education declared a climate emergency.

The majority of reportable greenhouse gas emissions arise from the heating of buildings with natural gas while fleet fuel consumption and paper used for printing contribute a minority of the emissions. After two cold winters, 2023 saw a warmer than average winter that resulted in a significant reduction in emissions. The decrease allowed the District to almost meet the province's 2025, interim greenhouse gas target of a 16% reduction compared to a 2010 baseline. The next provincial target is a 40% reduction by 2030.

With a significant increase in the population driving a need for more schools, it is challenging to manage energy demands and reduce greenhouse gas emissions but despite growth in both enrollment and building area, Surrey Schools has maintained an absolute reduction in emissions below the 2010 baseline.

A large building portfolio requires a strategic approach to asset and energy management and this informs the District's plans and projects to manage utility costs, increase energy efficiency, and reduce emissions. These efforts include engagement across key departments, ongoing monitoring of energy consumption, targeted energy studies across the building portfolio, and long-term project planning.

A number of lighting, HVAC equipment, and building envelope upgrades were completed in 2023. The annual completion of these types of projects will continue to improve learning conditions and accrue environmental benefits.

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.

There are 135 sites and 6,700 teachers dedicated to educating kindergarten to Grade 12 students in Surrey, White Rock, and Barnston Island. In order to service the growing population, the District has responded with new schools, additions, and portables.

Surrey Schools

2023 Quick Facts

- 80,200 students
- 12,500 staff and teachers
- Building area of 761,000 m2
- 103 elementary schools
- 21 secondary schools
- 5 learning centres
- 3 adult education centres
- 3 administration buildings
- Over 380 portables
- School populations ranging from 73 to 1,882 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:

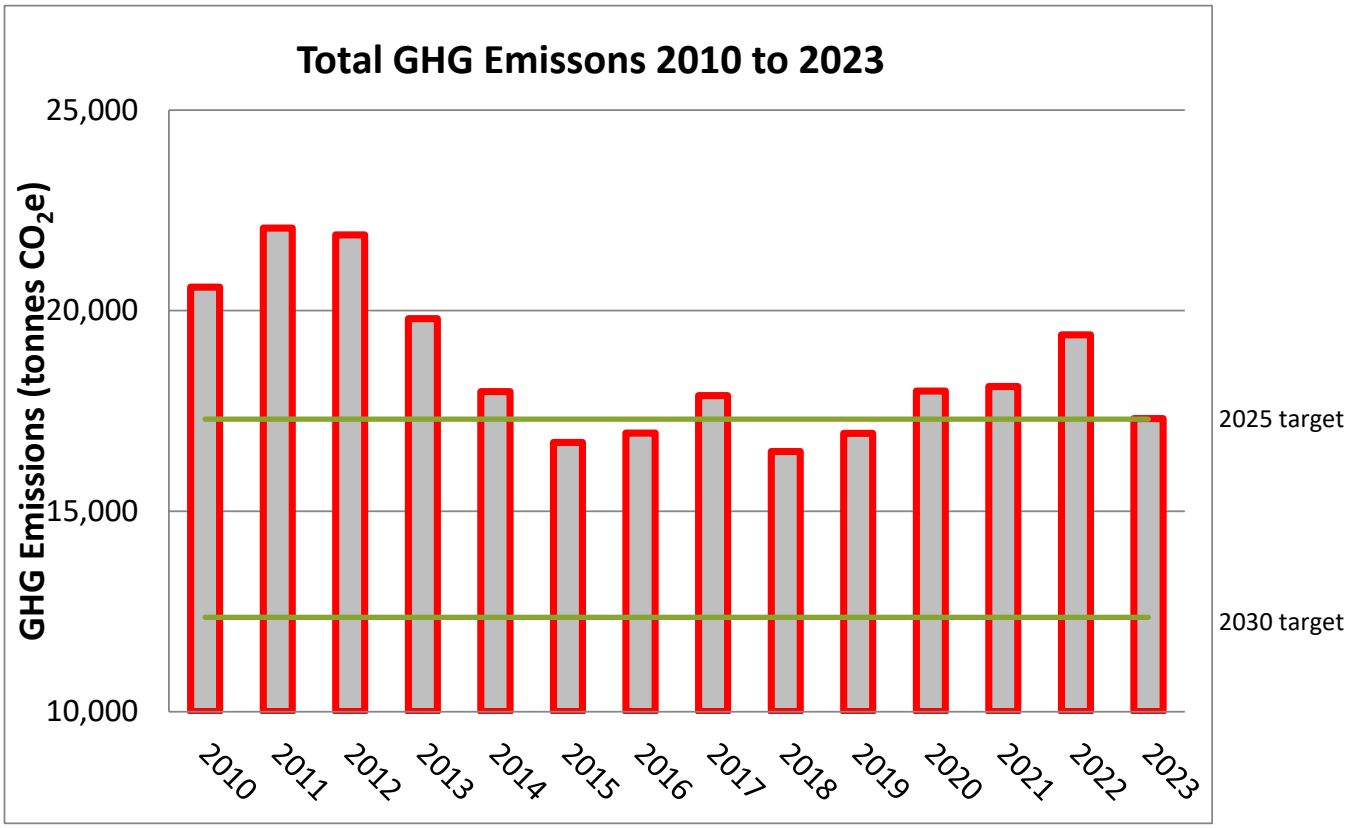
- 50% reduction in building emissions by 2030
- 40% reduction in fleet emissions by 2030

While overall provincial targets reference a 2007 baseline, specific targets for public service organizations 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 for 2007 and 2010 are actually similar. As a public service organization, we reference actual 2010 emissions baseline for target tracking.

GREENHOUSE GAS TRACKING

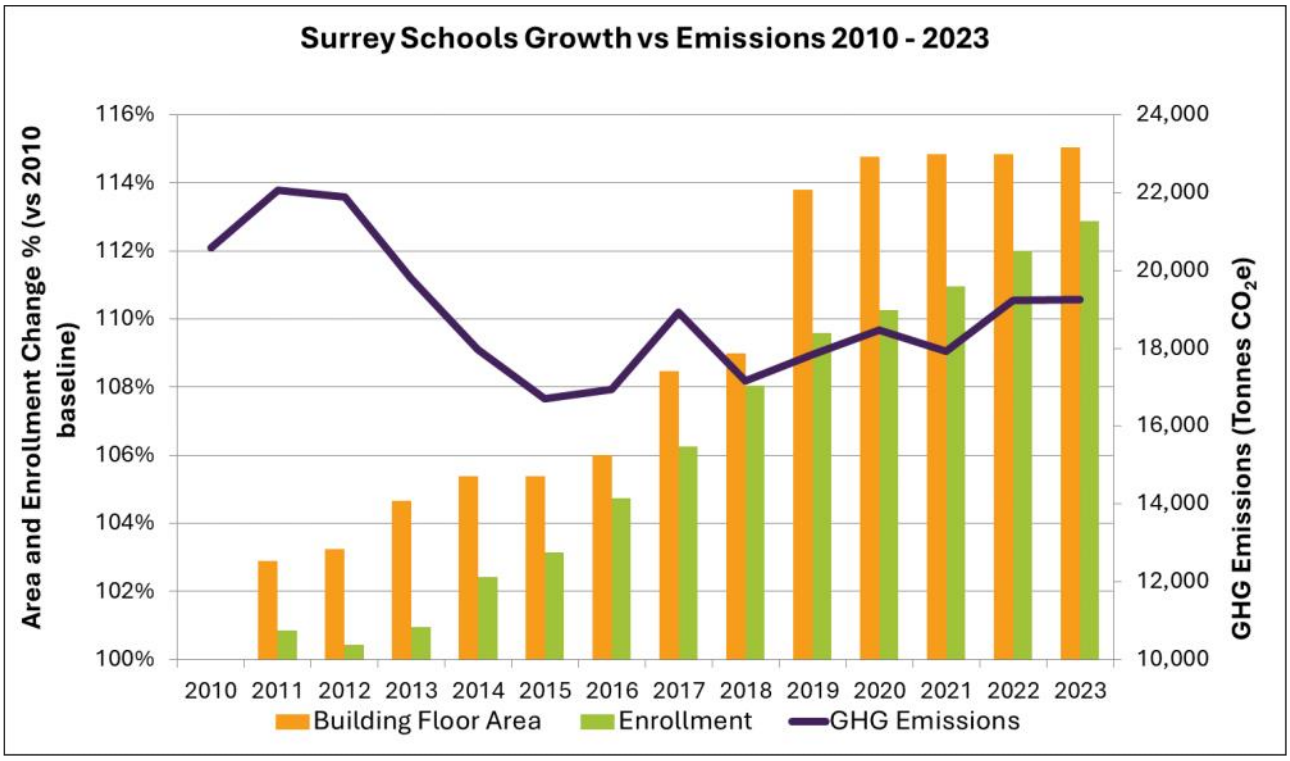
Reportable greenhouse gases are based on the annual measured consumption of energy in buildings, office paper, and fuel for fleet vehicles.

Ongoing efforts have helped lower emissions compared to the baseline but a warmer than average winter in 2023 saw significant decreases of almost 16% and 11% from the 2010 baseline and 2022 respectively.



DISTRICT GROWTH

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



ACHIEVING CARBON NEUTRALITY

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

In order to achieve annual carbon neutrality, it is necessary to purchase carbon offsets equivalent to the annual quantity of reported 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 the 2023 emissions is $454,282

2023 REPORTED EMISSIONS & OFFSET SUMMARY

School District #36 (Surrey) GHG Emissions and Offset for **2023** (tCO_2e)	
GHG Emissions created in calendar year 2023:	
Total $BioCO_2$ *	35
Total Emissions (tCO_2e) **	17,493
Total Offsets (tCO_2e) ***	17,160
Adjustments to GHG Emissions Reported in Previous Years:	
Total Offsets (tCO_2e)	0
Grand Total Offsets for the 2023 Reporting Year :	
Grand Total Offsets Required (tCO_2e)	17,160
Total Offset Investment (includes GST)	$454,282.50

* the portion of diesel fuel that is biodiesel but not included in totals
** for tracking purposes, this includes 187 t of emissions from diesel fuel for school buses though it is exempt from offset requirements
*** this amount is tracked against GHG targets

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 2023 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,

Signature	May 31, 2024
	Date
Jon Harding	Secretary -Treasurer
Name	Title

2023 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. There are a small number of rental properties over which the District has little control but they contribute little to the total emissions.

Office Paper

The emissions associated with consumption of office/printer paper.

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.

Emissions Source	2023 GHG Emissions (tonnes of CO_2e)	% of 2023 Emissions	2023 Results Compared to 2022	2023 Results Compared to 2010 Baseline
Buildings	15,524	88.7%	12.2% decrease	15.3% decrease
Paper	971	5.6%	9.0% increase	21.4% decrease
White and Bus Fleet	998	5.7%	6.8% decrease	14.0% decrease

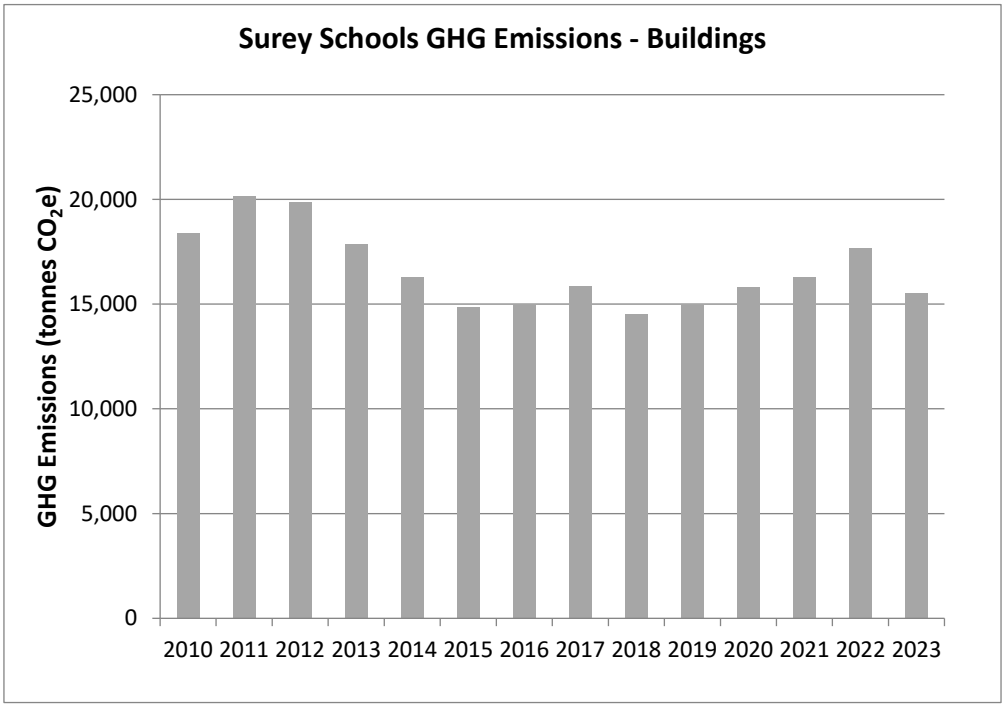
*excludes 35 t of biogenic emissions

** the 187 t of emissions from bus fuel is excluded from the offset purchase

2023 GHGS - BUILDINGS

BUILDINGS

Buildings account for the majority of the district's emissions as the natural gas used for heating is a potent greenhouse gas. Mostly owing to a warmer winter, 2023 building GHG emissions decreased 12.2% from 2022 and were 15.3% lower than 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 one school
- Boiler upgrades to more efficient models at three schools
- Secondary school building controls tune-up
- Studies at several sites to identify energy-saving opportunities

Green Construction

- Since 2010 new construction projects have referenced the LEED V4 Gold standard and have typically included a better building envelope and lower-carbon heating equipment

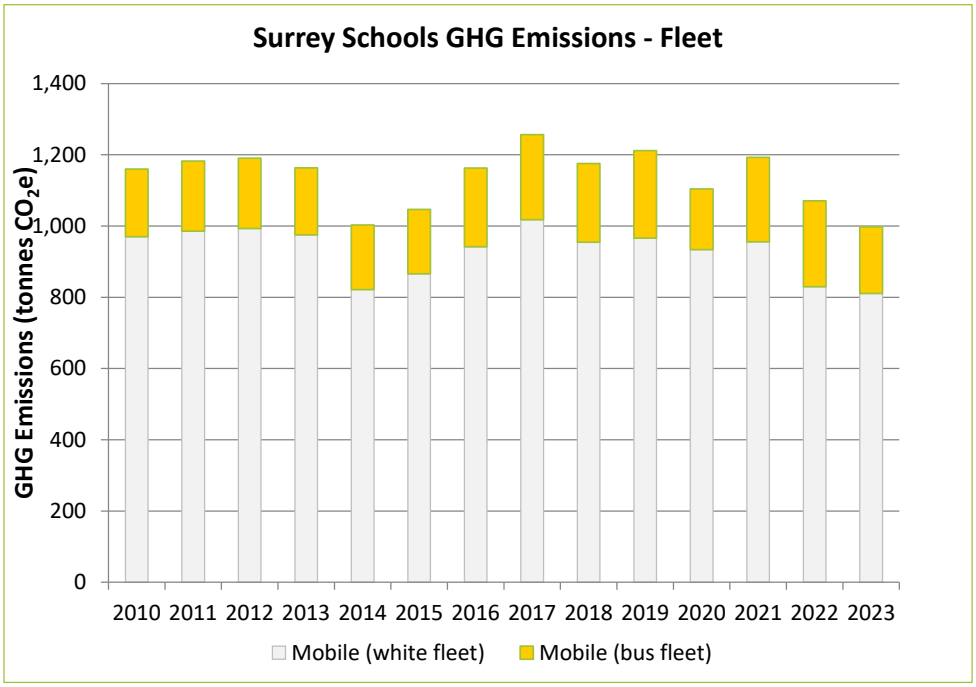
2023 GHGS - VEHICLE FLEET

FLEET

The size of the vehicle fleet has been increasing to serve the growing number of students and schools.

The standard/white fleet ranges from cars to dump trucks that use gasoline or diesel. Annual fleet fuel consumption can vary with the number of school projects, service requests, and snow removal demands. Fuel use is countered to some degree by improved fuel economy and electrification in replacement vehicles.

The graph below shows the separate emissions from the white fleet and school buses. Compared to the 2010 baseline and 2022, combined fleet emissions dropped 14.3% and 6.8% respectively. A warmer winter required less snow clearing.



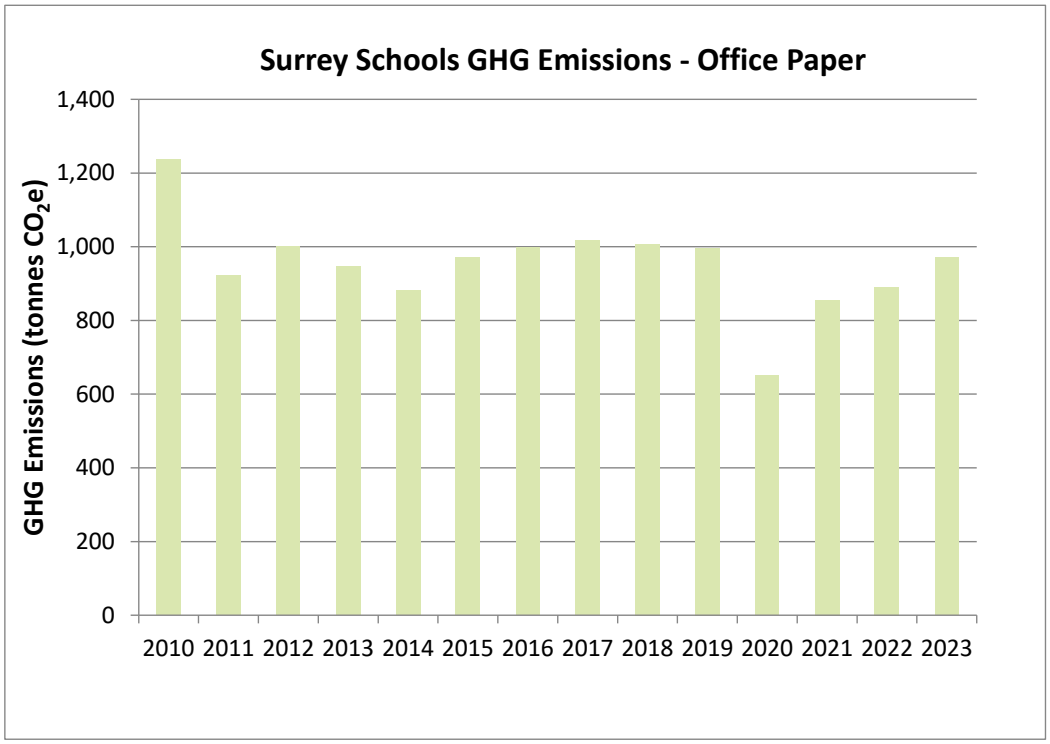
2023 ACTIONS

- Purchased an electric delivery van
- More efficient route planning for delivery vehicles

2023 GHGS - PAPER USE

PAPER

2023 paper use was 9.0% higher than 2022 with the increase due to a growing number of students and possibly a decline in the paperless teaching practices adopted during the COVID-19 pandemic. 2023 consumption was 21.4% lower than the 2010 baseline but close to the 10-year average.



2023 ACTIONS

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

ONGOING EFFORTS TO REDUCE EMISSIONS

Surrey Schools' GHG initiatives will continue to be focused on energy conservation and HVAC electrification in 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 projects as it is essential to limit emissions from growth as existing buildings are slowly retrofitted.

In any large organization planning is essential in reaching targets and goals and Surrey Schools will continue to track consumption and maintain a strategic plans to tackle climate change.

Upcoming energy efficiency and electrification projects planned for 2024 include:

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

Beyond 2023, Surrey Schools will continue to evaluate technologies and operational approaches that will reduce energy use and make progress on the emission reduction targets.