2020 CLIMATE CHANGE ACCOUNTABILITY REPORT

Surrey Schools
LEADERSHIP IN LEARNING

TABLE OF CONTENTS

DECLARATION STATEMENT

This Climate Change Accountability Report summarizes Surrey Schools' GHG emissions and the actions taken to reduce them for the period January 1st, 2020 to December 31st, 2020.

By June 30, 2021 Surrey Schools' final Climate Change Accountability Report will be posted to the website www.surreyschools.ca

Despite continual growth, Surrey Schools has reduced its GHG emissions by 15%

EXECUTIVE SUMMARY

On behalf of Surrey Schools, we are pleased to submit our Climate Change Accountability Report for 2020. Surrey Schools continues to investigate and develop projects and programs that will improve the sustainability of the organization. Surrey Schools has adopted an environmental sustainability policy and made commitments to energy and greenhouse gas emission reductions that will see many 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 greenhouse gas emission targets; the monitoring of energy use, the consumption of material goods, and waste disposal volumes; and engagement of staff and students. As part of its typical facilities work, Surrey Schools completed several school upgrades that will contribute to reductions in energy use and greenhouse gas emissions

As with many organizations, COVID-19 caused changes in the regular delivery of services. There was an increase in building-related emissions but decreases in both fleet- and paper-related emissions. The net result was a slight increase compared to 2019. .

Despite significant growth in both the number of schools and the student population, in 2020 Surrey Schools showed a 14% reduction in greenhouse gas emissions against the 2010 baseline year. With future projects that number is expected to further improve decrease as we pursue a target of 40% reduction by 2030.

Dr. Jordan Tinney
Superintendent of Schools/CEO

Patti Dundas
Assistant 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.

135 buildings and 12,000 teachers and staff are dedicated to supporting kindergarten to Grade 12 students in Surrey, White Rock, and Barnston Island.

Surrey Schools Quick Facts

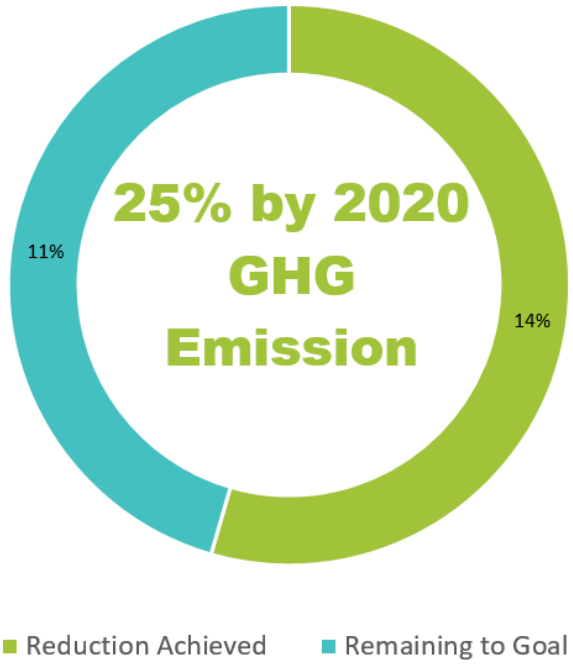
- 74,000 K-12 Students
- 12,000 Staff of Which 6,500 are Teachers
- $840 Million Operating Budget
- 103 Elementary Schools
- 20 Secondary Schools
- 5 Learning Centres
- 4 Adult Education Centres
- 3 Administration Buildings
- School populations ranging from 80 to 1,900 students

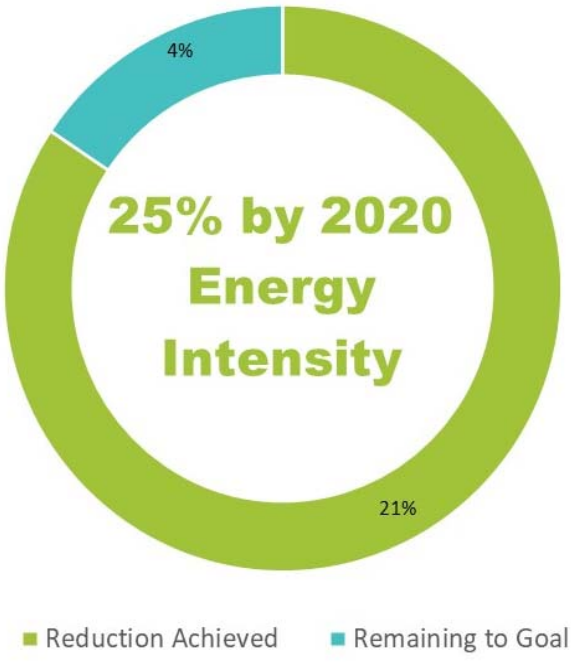
GREENHOUSE GAS TARGETS

B.C.'s Climate Change Accountability Act (CCAA, formerly: Greenhouse Gas Reduction Targets Act, GGRTA) updated legislated targets for reducing greenhouse gas emissions:

- By 2030 GHG emissions are to be reduced by at least 40% below 2007 levels;
- By 2040 GHG emissions are to be reduced by at least 60% below 2007 levels;
- By 2050, GHG emissions will be reduced by at least 80% below 2007 levels.

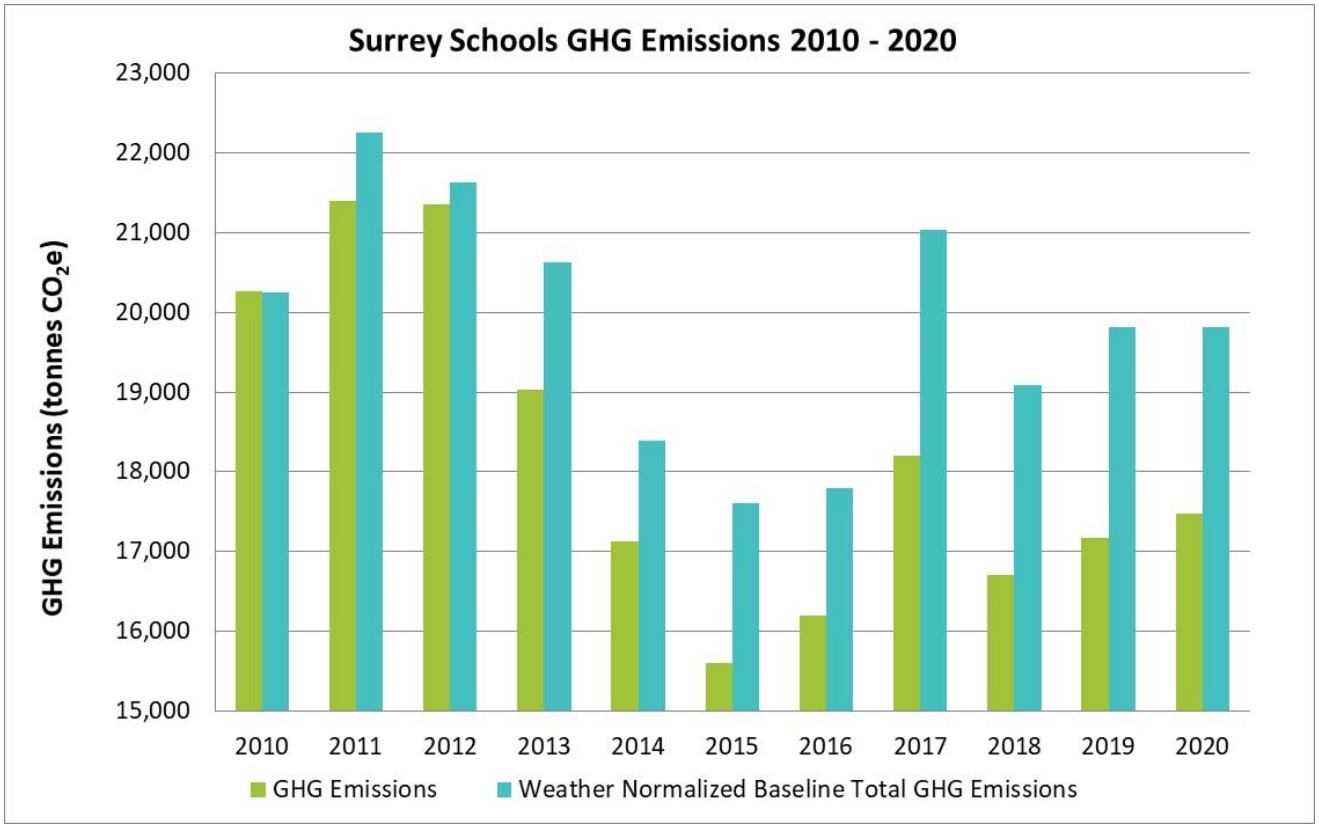
In 2015 Surrey Schools established internal five-year reduction targets of 25% by 2020 for both greenhouse gas emissions and energy intensity with the latter being weather normalized. The targets reference a 2010 baseline and steady progress has been made in reducing emissions and energy use. New ten-year GHG targets are being developed through 2030 to maintain a focus on reducing emissions and saving energy.





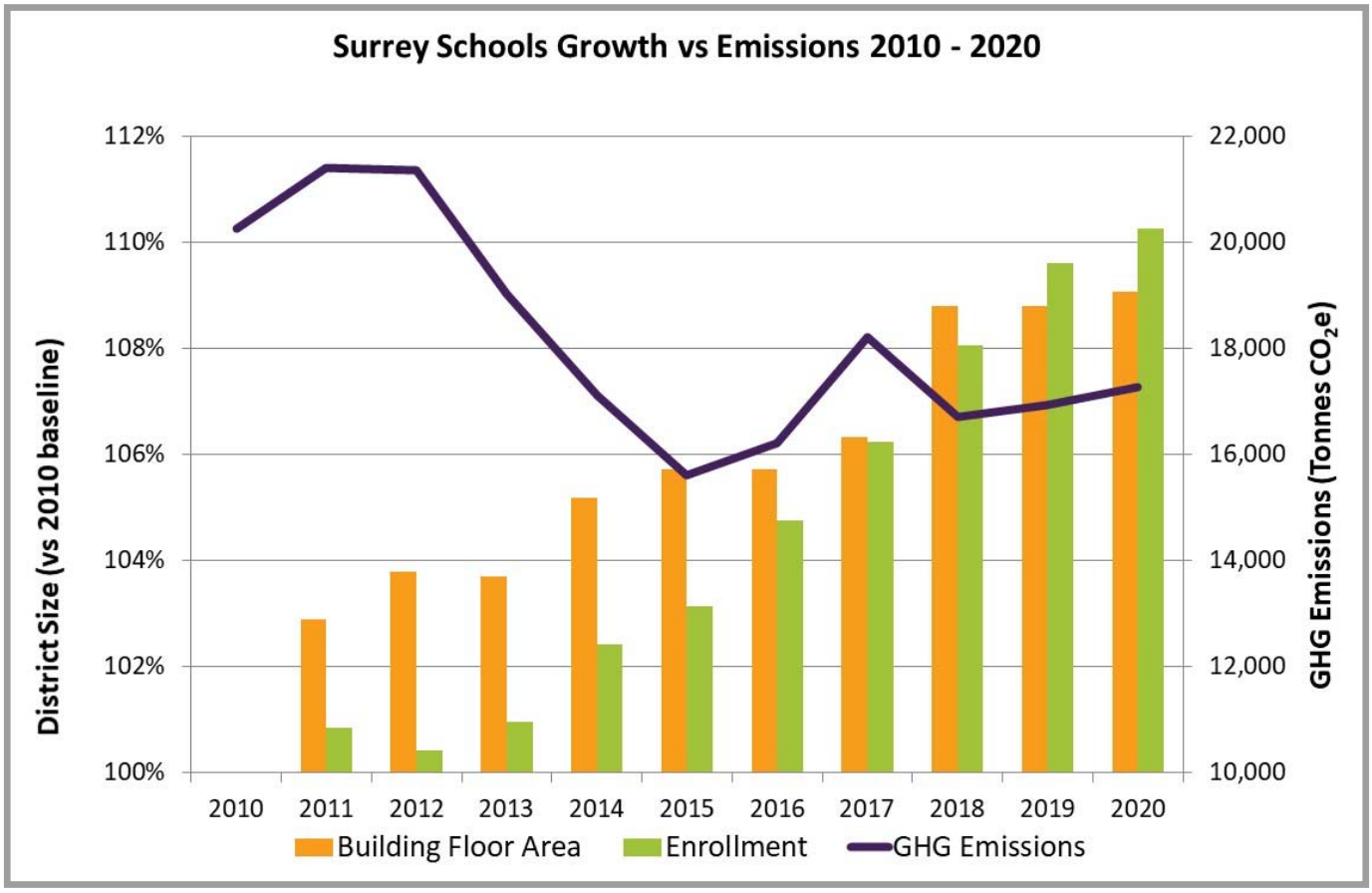
GREENHOUSE GAS TRACKING

Reportable greenhouse gases are based on the annual measured consumption of energy in buildings, office paper, and fuel for fleet vehicles. 2010 is the baseline year against which changes are tracked. As of 2020, Surrey Schools' efforts to reduce emissions have resulted in an absolute decrease of 14% and a weather adjusted decrease of 12% compared to 2010. Though there were some COVID-19-related requirements to increase building ventilation, 2020's overall emissions did not change significantly from 2019 owing to reductions in paper and fleet fuel consumption.



GREENHOUSE GAS EMISSIONS

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 9% and student enrollment has increased by 10%. Despite these demands, energy management efforts have reduced energy consumption and related greenhouse gas emissions compared to the 2010 baseline year.



ACHEIVING CARBON NEUTRALITY

The act also requires the provincial government, including provincial ministries and agencies, schools, colleges, universities, health authorities and Crown corporations, to be carbon neutral each year starting in 2010 and to make public a report every year detailing actions taken towards reducing greenhouse gas emissions.

Surrey Schools continues to implement projects that reduce GHG emissions but in order to achieve annual carbon neutrality, it is necessary to purchase carbon offsets to balance out its annual GHG emissions. The amount of carbon offsets purchased are equivalent to the calculated, annual number of tonnes of GHG emissions that were emitted. The money collected by the provincial government for carbon offsets is invested in quantified, emissions-reducing projects selected by the provincial government.

Owing to the impacts of COVID-19 on the 2019 reporting year, the province allowed organizations to submit their 2018 GHG emission numbers in a 2019 interim report with the understanding that updated values would be submitted and adjustments made to the carbon offsets to be paid in 2020. For Surrey Schools, the outstanding payment for the 2019 offsets portion are included with the 2020 offset amount in the total shown below.

At a cost of $25/tonne, Surrey Schools' total offset investment for 2020 is $472,421 plus tax.

2020 REPORTED EMISSIONS & OFFSET SUMMARY

School District #36 (Surrey) GHG Emissions and Offset for **2020** (tCO_2e)	
GHG Emissions created in calendar year 2020:	
Total Emissions (tCO_2e)	17,611
Total $BioCO_2$	37
Total Offsets (tCO_2e)	17,404
Adjustments to GHG Emissions Reported in Previous Years:	
Total Offsets (tCO_2e) *	593
Grand Total Offsets for the 2020 Reporting Year :	
Grand Total Offsets Required (tCO_2e)	17,997
Total Offset Investment	$472,421.25

*** Due to impacts of COVID-19, organizations were directed to use their 2018 GHG emissions as interim values for their 2019 Report with expectation that adjustments would be applied in the 2020 reporting year.**

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 2020 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.

P. Dundas

May 31, 2021

Signature | Date

Patti Dundas | Assistant Secretary -Treasurer

Name | Title

2020 GREENHOUSE GAS EMISSIONS SOURCES

Surrey Schools' GHG emissions are compiled from three sources:

Buildings
GHG emissions from buildings result from the energy consumed to provide heating, cooling, ventilation, and power to schools and other district facilities.

Fleet
Fleet emissions come from the use of fossil fuels in the vehicle fleet that primarily comprises maintenance vehicles and school buses.

Office Paper
The emissions associated with consumption of office paper.

Emissions Source	2020 GHG Emissions (tonnes of CO_2e)	% of 2020 Emissions	2020 Results Compared to 2019	2020 Results Compared to 2010 Baseline
Buildings	15,678	91%	4.5% increase	12.0% decrease
Fleet	1,141*	5%	5.9% decrease	4.7% decrease
Paper	651	4%	34.7% decrease	47.3% decrease

* 207 tonnes of these emissions are from school bus fuel and also biogenic emissions and under the current framework are exempted from the total used to calculate payment of carbon offsets.

2020 GHG ACTIONS - BUILDINGS

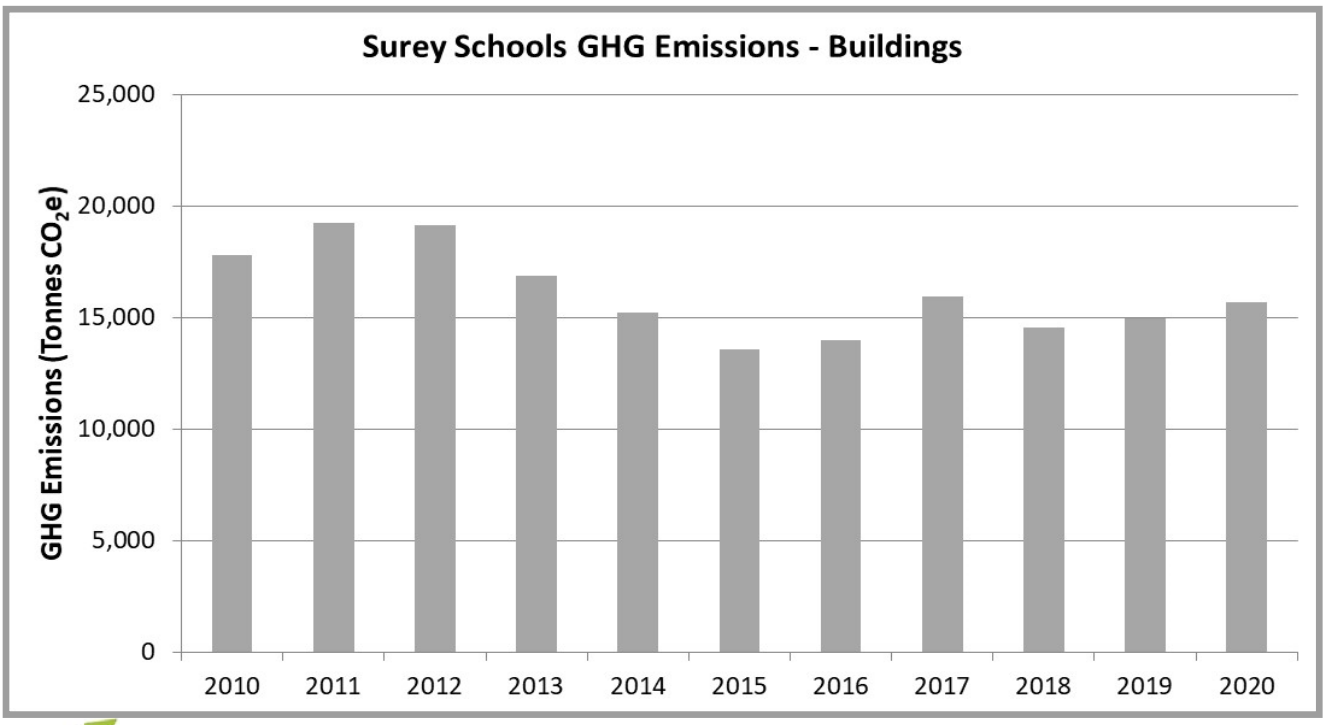
BUILDINGS

With a large portfolio of buildings, a strategic energy management approach is essential in tackling energy use and greenhouse gas emissions. It is supported through integrated planning and project coordination among key departments and a focus on sustainable building design and retrofits, efficient building operations, and engaging staff and students.

2020 building GHG emissions increased from 2019 owing to increased energy related to additional air heating and ventilation rates to help mitigate the spread of COVID-19.

Several energy conservation projects and campaigns were completed including:

- Elementary school HVAC upgrade to gas-electric hybrid systems
- Boiler upgrades to more efficient models at two schools
- LED lighting upgrades at several schools
- Building controls tune-up at one school



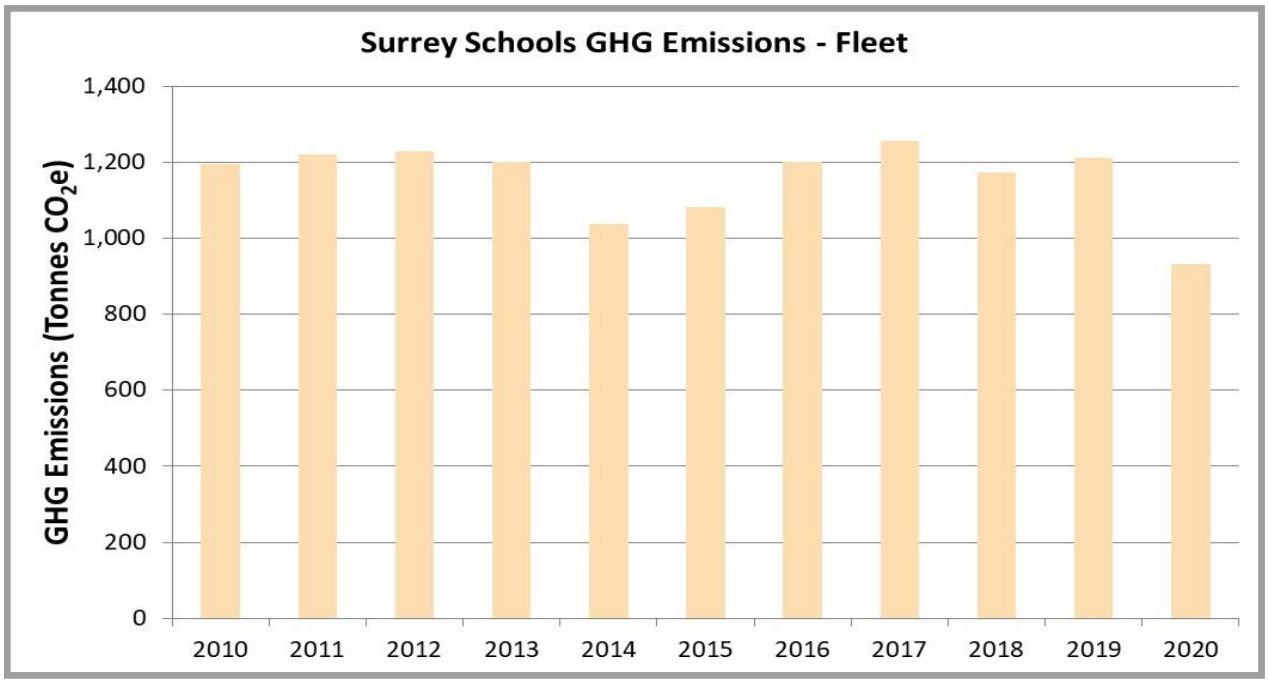
2020 GHG ACTIONS - FLEET

FLEET

There has been growth in the size of the of the vehicle fleet but that has been offset to some degree by improvements in fuel economy. Annual fuel consumption can vary depending on vehicle fuel efficiency, the number of school projects and service requests, and snow removal demands.

The 2020 Surrey Schools' fleet emissions portion saw a drop from 2019 to just 5% of total GHG emissions. This was the result of reduced service requirements and less busing related to COVID-19 as well as less snow removal. Fuel used in school buses is excluded from carbon offset purchase requirements.

Actions taken in 2020 to reduce fleet emissions included the replacement of six older vehicles with more fuel efficient models and the completion of a feasibility study for electrical vehicle charging stations at the main board office.

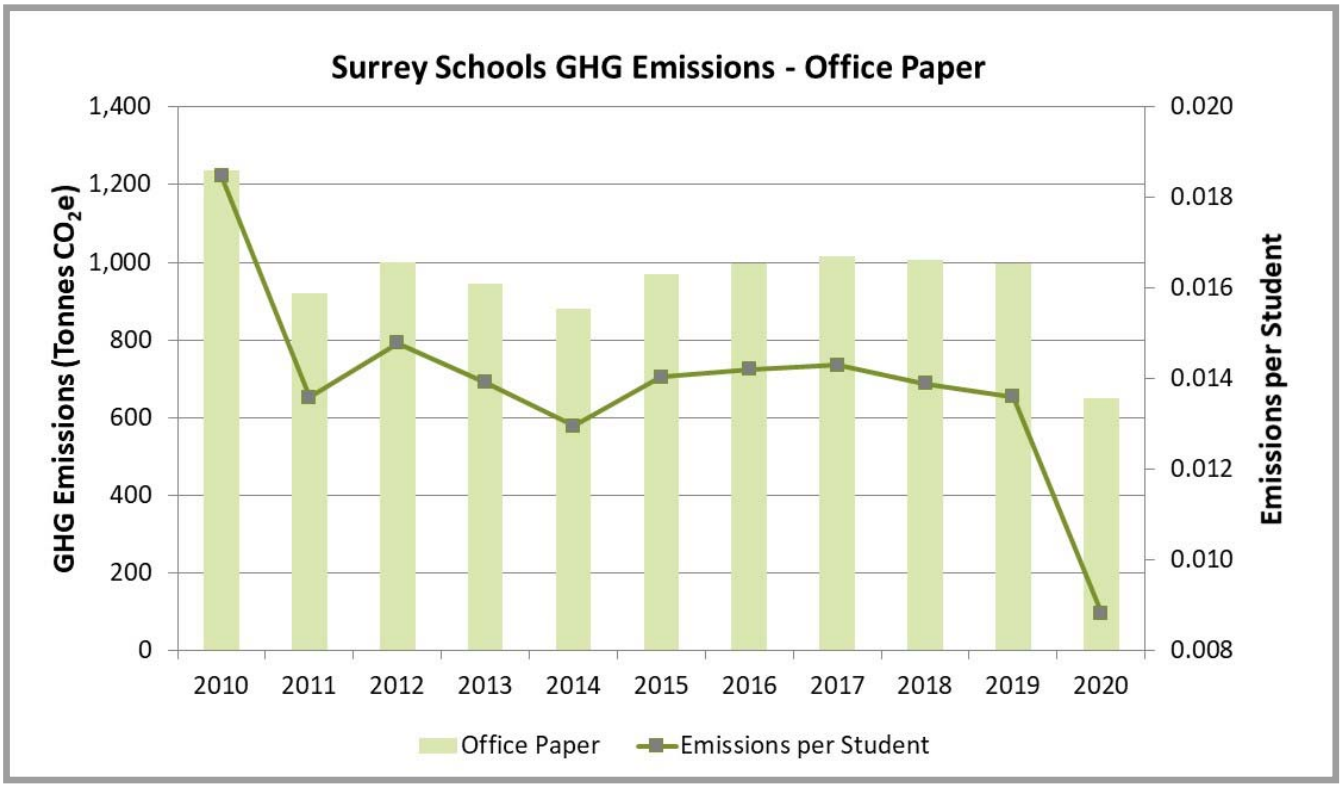


2020 GHG ACTIONS - PAPER

PAPER

Emission from paper are primarily related to printing. With reduced occupancy and related reduction in printer use owing to COVID-19, the 2020 paper emissions from office paper were much lower than 2019 or any other year since 2010.

Surrey Schools' purchasing standard for office paper specifies a minimum of 30% recycled content for office paper. A gradual move to centralized printers and print management software is also contributing to reduced paper use.



CONSERVATION CULTURE

Surrey Schools is working to create a culture of conservation by engaging staff and students in the district's energy and emissions reduction initiatives. In 2020 staff and students at many schools across the district participated in environmental stewardship initiatives and campaigns. School-based green teams and environmental clubs also have a big impact through their own unique, school-based environmental stewardship actions. Moreover, teachers in Surrey are taking a leadership role in making environmental and outdoor education a priority through networks such as Surrey Environmental Educators of District #36 (SEED36) and the East Kensington Outdoor Learning (EKOLogy) program. Surrey Schools also received a national *Canada's Greenest Employers* award.

Students and staff at Surrey Schools are creating a culture that makes conservation an everyday activity and proving that with small efforts they can reduce energy and paper consumption and increase waste diversion rates. Though COVID-19 made it more challenging, a number of activities were conducted.

- Vacation Shut Down Campaign
- Last Out Lights Off Campaign
- Custodial Energy Challenge
- Surrey Youth Sustainability Network: two outreach events with the City of Surrey

GREEN BUILDINGS

Surrey Schools' new construction projects are built to a higher level of sustainability and energy efficiency than required, often exceeding the current building code.

With new schools being constructed to higher levels of energy efficiency, they operate at less than half the energy intensity and much lower emissions than the district average. Douglas elementary was one such school completed in 2020.

Constructing energy efficient buildings with fewer emissions requires integrated design and energy modelling early in the planning process.

The three schools listed below are scheduled to completed in 2021 and will also incorporate energy efficient design as a result of input from BC Hydro and FortisBC-funded programs that focus on new buildings. Numerous additions are being built to expand school capacities and these are constructed to the current building code standard which is becoming progressively more energy efficient.

School	Occupancy
Grandview Heights Secondary	Sep/2021
Maddaugh Road Elementary	Mar/2021
Edgewood Drive Elementary	Jan/2021

ONGOING EFFORTS TO REDUCE EMISSIONS

The largest proportion of Surrey Schools' GHG reduction initiatives will continue to be focused on energy efficiency and conservation within our schools and administrative facilities, the largest source of GHG emissions in the district. Surrey Schools is actively pursuing both low carbon and more efficient technologies in new construction and retrofit projects and these will be key strategies in the coming years.

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

Surrey Schools is continuing to implement the district's comprehensive energy management program and there are number of energy efficiency projects slated for 2021 including:

- LED Lighting retrofits at four schools
- Chiller upgrade at North Surrey will allow for lower-carbon heating
- Upgrades to heating systems (boiler plants) at two elementary schools
- Replacing natural gas-fired rooftop units with low-carbon heat pumps at one elementary school
- Building controls recommissioning
- Installation of electric vehicle charging stations at the school board office

Beyond 2020, Surrey Schools will continue to evaluate pathways to achieve the province's public sector emissions reduction targets, set internal GHG targets, and further incorporate sustainability into our operations.