

DECLARATION STATEMENT:

The DSCAP itself has nine Pillars that guide how the Richmond School District links our core mandate of education with sustainability and climate action. The genesis of these pillars was from the active leadership in environmental stewardship dating back to 2011, and have a

How the pillars interact is shown in the following:

How will we get there? Here is a graph showing how our Strategic Energy Management Plan (SEMP) will be contributing in to the implementation of DSCAP and reduction of GHG emissions.

In 2021, as part of our Energy Conservation pillar under our DSCAP, the District achieved significant savings in electricity and natural gas, and subsequently reduced GHG emissions. More details in the following sections.

A. Stationary Sources Buildings

In 2021, we maintained the focus of our greenhouse gas (GHG) reduction initiatives on reduc(f)9.9 2 6 (s)4 (in)-

GHG emissions from buildings result from the fossil fuels consumed to provide heating to schools and other district facilities. These emissions account for the vast majority of the District's overall emissions at 93.3% in 2021.

Our carbon neutral objectives and GHG reduction endeavours are inextricably linked to our environmental stewardship initiatives. Of the nine DSCAP pillars, Energy Conservation presents the greatest opportunity for both GHG reductions and financial savings given that the largest proportion of the District's GHG emissions is from energy use in buildings. Thus, the largest proportion of our GHG reduction initiatives focus on energy conservation within our schools and administrative facilities. In 2021:

- x Implemented 4 boiler replacement projects to high efficiency condensing boilers at Sea Island, DeBeck, Diefenbaker and McNeely Elementary

x

B. Mobile Sources Fleet

The use of fossil fuels used to power the District's fleet vehicles, including maintenance vehicles and school busses, results directly in emissions. The fleet accounted for 4.1% of the District's overall emissions in 2021.

In order to reduce the fleet emissions, there is a two-pronged approach:

- x Behavioural – providing training and planning resources to all employees that drive District vehicles on route planning and economic driving techniques. It is believed that this can achieve up to 27% of the required 40% reduction in GHG emissions.

- x Technical – as existing vehicles reach a point where maintenance costs become greater than the cost of replacement, they will be retired in favour of electric vehicles where feasible, or with a more fuel efficient version of the same.

In 2021, through the Association of School Transportation Services of BC, and through the provincial Bus Acquisition Program, that Richmond School District was purchasing two Type C electric buses from Western Canada Bus, to replace two diesel Type D buses. Delivery is expected in the summer of 2022.

Considering the significant lack of commercial-duty vehicles with electric variants, Richmond School District is working with [Blue Dot Motorworks](#) on installing retrofit plug-in hybrid systems on our "white fleet". Currently in alpha development, the intent is that these plug-in hybrid systems would provide up to 6

D. COVID19 Impacts on Energy and GHG Performance

During the pandemic, the Richmond School District has focused on ASHRAE recommendations for ventilation as a means to mitigate transmission of respiratory viruses our schools. The District is taking concrete steps to ensure that our students and staff come to school and work each day in a clean, healthy and safe work environment. Over \$2.1 million has been spent or committed to HVAC system improvements in Richmond schools in 2021.

The Richmond School District is fully compliant with all school ventilation requirements. The District works closely with, and takes direction from, public health officials to ensure that heating, ventilation, and air conditioning (HVAC) systems are designed, operated and maintained per Provincial standards and specifications:

- x Mechanical ventilation systems are in excellent working order through scheduled filter changes and equipment maintenance.
- x Extended operating hours for ventilation systems – initiating ventilation systems well before school starts each day to flush the air in all rooms prior to occupancy.
- x Increased fresh air exchange in accordance with Provincial guidelines.

Because of these enhanced ventilation efforts, energy consumption has increased relative to previous historic levels, and GHG emissions has also been increased as a result.

	Projected data (school year)			Actual data (school year)		
	Percentage	Consumption	Cost	Percentage	Consumption	Cost
Natural gas	23%	25,384 GJ	\$219,042	15%	15,520 GJ	\$336,533
Electricity	18%	2,589,431 kWh	\$283,855	5%	735,625 kWh	\$47,423
			\$502,897			\$383,956
GHG (building only)	26%			15%		

While the cost of

E. Plans to continue reducing Greenhouse Gas Emissions

In 2022, we are continuing with the District's comprehensive energy conservation program and have a number of energy efficiency projects slated for 2022/23 including:

- x Implementation of Continuous Optimization programs at 10 sites: Boyd, McNair, Palmer, Richmond, Steveston-London (5 secondary schools), Byng, Kidd, McNeely, Talmey (4 elementary schools), and the Facilities Services Centre (FSC)
- x LED lighting upgrade at 4 sites: McMath Secondary, Ferris, Mitchell and Steves Elementary
- x

RETIREMENT OF OFFSETS:

In accordance with the requirements of the **Climate Change Accountability and Carbon Neutral Government Regulation**, School District 38 (Richmond) (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2021 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy (**the Ministry**) ensuring that these offsets are retired on the Organization's behalf, the

PART 2. Public Sector Leadership

2A. CLIMATE RISK MANAGEMENT

In March 2019, Richmond City Council declared a climate emergency in response to the urgent call set out by the United Nations' Intergovernmental Panel on Climate Change (IPCC), joining more than 600 cities across the world that have made similar declarations. The City has set the target of reducing GHG

emissions will not only help us mitigate our climate impact but will also result in cost savings for the District.

We also aim to provide educational opportunities to staff, educators, and students on climate change and how to take action on climate change, incorporating these important concepts into the curriculum and into staff training opportunities.

In 2021, the District had the Climate Change Risk Assessment conducted for the Board Office, Talmey Elementary, and McNair Secondary. Using the localized climate change projections through 2050, each facility was evaluated for actions to improve resiliency, service continuity, and embedding climate change into the Long Range Facilities Plan and District policies and regulations. Building on this model, we plan to conduct Climate Change Risk Assessment at 8 additional buildings in 2022.

2B. OTHER SUSTAINABILITY INITIATIVES

The Richmond School District continues to create and support the necessary structures for an integrated, system-

Inspired by the Environmental Stewardship Policy and guided by the DSCAP, multiple sustainability initiatives leading by teachers and students have been implemented at schools:

School-based Green and Eco teams through the annual Eco-Wise grants funding by the Energy and Sustainability team, schools would undertake ownership of various sustainability initiatives. A number of activities are undertaken by school-based Green and Eco teams, including:

Waste Audits pre-pandemic, students would be part of the waste audit process, but we have partnered with Recycling Alternative to conduct waste audits at our school, with reports being sent back to Green and Eco teams, Administrators, and team sponsor teachers. We have conducted audits at 5 elementary schools and 2 secondary schools as of late 2021, and plan to conduct more audits each quarter.

In-Class Waste Diversion program we are still working out the details, 10.1 Its

We ran 6 thermal comfort educational workshops at 6 schools from November 2021 to February 2022, coinciding with District Professional Development Days and staff meetings to raise thermal comfort awareness of building occupants and how their behavior change in thermal comfort may reduce unnecessary building set point temperature adjustments. We provided 5 facts about how our schools are heated or cooled, tips to improve thermal comfort, and frequently asked questions. The audiences of these workshops highly appreciated the information, and they committed to reviewing and changing their behaviours toward sustainability.

After 5 months of the campaign, a noticeable amount of natural gas savings were recodered as below:

Executive Signoff:

Signature

Date

Cindy Wang

SecretaryTreasurer

Name (please print)

Title

[Please email your signed, completed report to Carbon.Neutral@gov.bc.ca by no later than May 31, 2022.]

Appendix A: GHG Emissions of

Appendix B: GHG Emissions

Appendix B: Stationary Energy Use by Month, 2021



