



## 2021 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT

**Organization:** West Vancouver Schools (School District 45)

### PART 1. Legislative Reporting Requirements

**Declaration statement:** This PSO Climate Change Accountability Report for the period January 1, 2021 to December 31, 2021 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2021 to reduce our GHG emissions, and our plans to continue reducing emissions in 2022 and beyond.

By June 30, 2022, West Vancouver Schools' final 2021 Climate Change Accountability Report will be posted to our website at <https://westvancouver.schools.ca/carbon-neutral-reports>.

### Emission Reductions: Actions & Plans

#### A. Stationary Sources (e.g. buildings, power generation)

West Vancouver Schools' Long Range Facility Plan includes the renewal of its facility systems – particularly building envelopes and HVAC components that have significant impacts on the school district's energy consumption.

The following are projects that were completed in 2021:

- Under the Carbon Neutral Capital Program (CNCP), West Vancouver Schools had three atmospherically-vented boilers at the Gleneagles Ch'axáy Elementary, which were estimated at only 65-70% efficiency, replaced with new higher-efficiency condensing boilers. These replacements are projected to reduce fuel consumption by 271 gigajoules (GJ) annually.
- As part of its School Enhancement Program (SEP) initiatives, the school district completed the final phase of the HVAC renewal for Ridgeview Elementary. Original system components such as boilers, air handling units, and unit ventilators were replaced with higher efficiency models.

- Another SEP project was the West Bay Elementary building envelope renewal. Although it was approved for funding by the Capital Branch of the Ministry of Education, the undertaking was stalled by supply-chain and other technical issues beyond the school district's control. However, it is worthwhile to note that engineering drawings were completed and ready to be tendered.
- Failed gas furnaces at the West Vancouver Secondary's south campus (ILC) were replaced with six heat pumps. Powered by hydroelectricity, this conversion from fossil fuels reduces its environmental footprint.
- Digital Control Direct (DDC) systems in three schools, Gleneagles Ch'axáy Elementary, West Bay Elementary, and West Vancouver Secondary (Kay Meek), were upgraded and allow better management of the schools' energy consumption.
- Other minor retrofitting plans include the completion of the air leakage containment project for the remaining facilities. This is submitted as another CNCP initiative.

#### **B. Mobile Sources (e.g. fleet vehicles, off-road/portable equipment)**

Vehicles of the school district's Facilities department require heavy cargo load capacities that were not readily available in the market until recent months. Last year, West Vancouver Schools retired two aging vehicles – 2001 and 2006 models. Although not zero-emission vehicles, the replacements promise to yield improved fuel consumptions.

The school district is also looking to start building its electric vehicle (EV) charging infrastructure. Alongside an electric voltage conversion project with BC Hydro this year, provisions for ten EV chargers at Sentinel Secondary are being planned to future-proof the site. The chargers will not yet be installed but at least, the capacity to do so will be available.

As stated in previous years' reports, the school district will continue to reduce frequencies of supplies and inter-office mail deliveries.

#### **C. Paper Consumption**

The school district continues to use the print management software, PaperCut™, to minimize waste. It will include exploring paper consumption reduction initiatives in its sustainability action plan.

**2021 GHG Emissions and Offsets Summary Table:**

<b>West Vancouver Schools 2021 GHG Emissions and Offsets Summary</b>	
<b>GHG Emissions created in Calendar Year 2021</b>	
Total Emissions (tCO <sub>2</sub> e)	1919
Total BioCO <sub>2</sub>	2.20
Total Offsets (tCO <sub>2</sub> e)	1917
<b>Adjustments to Offset Required GHG Emissions Reported in Prior Years</b>	
Total Offsets Adjustment (tCO <sub>2</sub> e)	0
<b>Grand Total Offsets for the 2021 Reporting Year</b>	
Grand Total Offsets (tCO <sub>2</sub> e) to be Retired for 2021 Reporting Year	1917
Offset Investment (\$25 per tCO <sub>2</sub> e)	\$47,925

**Retirement of Offsets:**

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, West Vancouver Schools (**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 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.

## **PART 2. Public Sector Leadership**

### **2A. Climate Risk Management**

Climate change has certainly been visible to West Vancouver Schools especially in 2021. A sizable number of the district's emergency response work dealt with flooding from abnormal rainfall. Beyond the capacity of its internal staff, many of the work had to be dispatched to drainage contractors. Of course, this meant extra expenses unseen in previous years and therefore had to be considered in the operating budget.

Another consideration this has brought about is the preservation of permeable surfaces within the school grounds. Where there have been interest in developing hardscape to increase year-round play surfaces, there is now the need to keep grass and gravel fields instead.

### **2B. Other Sustainability Initiatives**

For 2022, West Vancouver Schools is developing a bolder sustainability action plan that looks at building control optimization, renewable energy sources, standard design specifications for its building materials.

Working with its Information Technology (IT) team and building automation contractor, the school district is exploring the following optimization opportunities – all of which are intended to reduce energy consumption by the HVAC systems:

- Static pressure resets
- Air exchange frequencies
- Existing Wi-Fi as occupancy sensors

The school district also is working with solar energy company, Stardust Solar, to prepare a feasibility study of installing solar panels in its facilities. Of all the facilities, only two have been identified as not feasible and three studies have already been completed for consideration. It is also looking at the possibility of installing a small biomass furnace at the Facilities yard to use wood waste from its shop to fuel its heating needs. A biomass furnace will also divert waste from the landfill.

Standardizing design specifications allows the procurement of green products. For example, regular carpet is now being replaced with carpet tiles with 68% total recycled content and that is recognized with a 100% Air Quality Green Label Plus. The school district is also now using homogenous vinyl to replace hard flooring. This material can be dry-buffed to avoid heavy cleaning practices and reduce indoor volatile organic compounds (VOCs) for improved occupancy health.

Design specifications extend to the school grounds as well. Last year, the district implemented “no-mow meadows” and the preservation of existing trees and native vegetation to reduce the use of power tools and other landscaping equipment to maintain them.

**2C. Success Stories**

2021, just like the year preceding it, is an anomaly. COVID-19 had the school district encouraging increased fresh air ventilation through open doors and windows and higher air filtration and highly impacted energy consumption in the schools. While there were a number of significant projects that West Vancouver Schools hoped to consider as success stories, the data to support them is not there.

However, we remain optimistic about our commitment to developing and acting upon climate change initiatives. More than ever, the awareness of the issues are emerging front and center and West Vancouver Schools is sure to have many success stories to come.

**Executive Sign-off:**



*May 31, 2022*

---

Signature

Date

Julia Leiterman

Secretary-Treasurer & CFO

---

Name (please print)

Title