

WEST VANCOUVER SCHOOLS 2023 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT

Title: 2023 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, 2023 to December 31, 2023 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2023 to minimize our GHG emissions, and our plans to continue reducing emissions in 2024 and beyond.

Emission Reductions: Actions & Plans

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

West Vancouver Schools' 2023 capital projects included HVAC system installations that have significant impacts on the school district's energy consumption.

- **Boiler Renewal.** Under the Carbon Neutral Capital Program (CNCP), West Vancouver Schools replaced an atmospherically vented boiler at Chartwell Elementary, which was estimated at only 65-70% efficiency, with new higher-efficiency condensing boilers. This replacement is projected to reduce GHG emissions significantly in the years ahead. With limited funding available to a school district of its size, West Vancouver Schools aims to keep this business model of replacing systems that have come to the end of their useful service life with efficient components.
- **HVAC System Installations.** West Vancouver Schools continues to investigate and plan for future HVAC ventilation system installations. This includes working with school district mechanical engineers to design systems that include boilers, air handling units and unit ventilators that are highly efficient models.
- **Direct Digital Controls.** West Vancouver Schools continues to enhance integration of Direct Digital Controls (DDC) into all mechanical, electrical and building systems. This includes installing DDC systems as a part of all new mechanical installations. Also, the school district aims to include lighting controls and building access controls into the DDC system as much as possible to ensure energy consumption is reduced by lights working on schedules and doors being closed automatically when not in use.

- **HVAC Device Audits.** In November 2022, a mechanical consultant was commissioned to conduct an audit of all the HVAC devices in the district’s facilities. The assessment included items such as dampers, sensors, and other controls, to verify if these devices performed as intended. Whenever maintenance work is completed in the school district, HVAC service contractors always refer to the device audits to inquire if changes could be implemented to increase efficiencies.
- **HVAC System Studies.** In consultation with contracted mechanical engineers, the school district is exploring the feasibility of gas absorption heat pumps for heating. The prospect of using this technology as an alternative heating method for our facilities is exciting as they are much more efficient (over 100%) than common boilers, including condensing boilers. These gas absorption heat pumps are an interesting prospect for the school district as many of our school sites do not have enough electrical capacity to install electric heat pumps. Fortis BC is offering considerable rebates for feasibility studies; West Vancouver Schools will look to pilot this initiative as funding becomes available.

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

Clean Fleet Plan

West Vancouver Schools does not maintain a large fleet of vehicles and does not have a formal Clean Fleet Plan. As stated in last year’s report, vehicles of the school district’s Facilities department require heavy cargo load capacities that were not readily available in the market. Although there are no current plans to replace fleet vehicles due to fiscal constraints, consideration for electric vehicles remains. Potentially, the Facilities department may replace an existing gas-powered van issued to the district locksmith. The smaller payload would be suitable for an electric vehicle.

The BC Hydro voltage conversion project affecting Sentinel Secondary commenced in 2023 and has been completed in early 2024. The school district worked with its electrical consultant to include in their design of the school’s infrastructure, the capacity to install ten (10) EV chargers for future-proofing. This capacity now exists in the school electrical system, the school district will investigate installing EV chargers in the near future.

Last, the school district continues to reduce frequencies of supplies and inter-office mail deliveries by consolidating shipments and proper scheduling.

C. Paper Consumption

The school district continues to use the print management software, PaperCut™, to minimize waste. PaperCut™ was able to be installed on many devices in 2023 that previously could not

handle the software. The school district will continue to explore paper consumption reduction initiatives in its sustainability action plan.

2022 GHG Emissions and Offsets Summary Table

West Vancouver Schools 2022 GHG Emissions and Offsets Summary	
GHG emissions for the period January 1 - December 31, 2022	
Total BioCO ₂	3.78
Total Emissions (tCO ₂ e)	1,580
Total Offsets (tCO ₂ e)	1,580
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO ₂ e)	0
Grand Total Offsets for the 2022 Reporting Year	
Grand Total Offsets to be Retired for 2022 Reporting Year (tCO ₂ e)	1,580
Offset Investment at \$25 per tCO ₂ e (\$)	39,500

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 2023 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 Climate Leadership

2A. Climate Risk Management

Since 2021, increased precipitation has been the most impactful manifestation of climate change for West Vancouver Schools. This continued in 2022 as school district maintenance staff responded to numerous flooding issues. The financial impact came not only from overtime pay but also from fees of contractors, who were more capable of handling the job of rebuilding the storm drain systems.

The matter emphasizes the need to preserve permeable surfaces within the school grounds. The school district will continue to discourage further hardscape installations as year-round play surfaces and prioritize the need to keep grass and gravel fields.

- **No-Mow Meadows.** Shifting from having clear-cut boundaries, the school district's grounds crew will leave the grasses to grow naturally – only trimming the edges closest to the hardscape. The taller grasses slow down storm water run-offs, help reduce erosion, are more resilient to drought, and provide an environmental benefit by carbon sequestration.
- **Drainage Improvements.** West Vancouver Schools continues to install drainpipes and catch basins to help channel storm water more rapidly to the municipal system. This has been a significant expense but serves as a smart investment to prevent school disruption and water damage.

West Vancouver has started to experience extremes in weather which has included increased precipitation in winter (noted above) and increased drought conditions in summer. West Vancouver Schools has plans to plant drought resistant plants and trees across the district to continue to grow our forested areas on school grounds. Using drought resistant species will allow the trees to thrive in both winter and summer and contribute to overall sustainability practices in the District of West Vancouver.

2B. Other Sustainability Initiatives

The initiatives considered previous years continue to be in place for 2023. These included building control optimization, renewable energy sources, and standard design specifications for its building materials. In 2024, West Vancouver Schools will look to increase its design standardization such as no-finish floor tiles, fixed-length millwork to reduce waste material, and brighter colors of wall paint to improve reflectivity.

2C. Success Stories

While most of the funding and grants that West Vancouver Schools receives annually are allocated towards maintenance and system renewals, the business model it has formulated appears to optimize the impact towards adapting to climate change. Simply stated, it is the model of specifying building system components that are more efficient and anticipating future demands on the system. For example, the boiler renewal at Chartwell Elementary was not a complex installation. Yet, the schematic design allowed for incorporating air source heat pumps or gas absorption heat pumps in the future that

will help reduce energy consumption as well. West Vancouver Schools looks at its smaller projects as steps towards the bigger picture of sustainability.

Executive Sign-off:



May 31, 2024

Sig	Date
Julia Leiterman	Secretary-Treasurer/CFO

Name (please print)	Title
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