



## Chilliwack School District 33 - Partners in Learning!

Located in the Fraser Valley of British Columbia, we are a learning community of over 14,000 students, served by 1,800 teachers and support staff. There are 20 elementary schools, 8 middle/secondary schools and 3 alternate sites.



Pictures Top to bottom:

(New K-8 Stitó:s Lá:lém totí:lt Elementary/ Middle School rendering, G.W. Graham Secondary)

# 2020 PSO Climate Change Accountability Report



## CONTENTS

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<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>OVERVIEW: .....</b>	<b>4</b>
<b>ACTIONS TAKEN TO REDUCE GREENHOUSE GAS EMISSIONS IN 2020 .....</b>	<b>4</b>
<b>MECHANICAL UPGRADES .....</b>	<b>4</b>
<b>ELECTRICAL UPGRADES .....</b>	<b>6</b>
<b>BUILDING ENVELOPE UPGRADES .....</b>	<b>7</b>
<b>TRANSPORTATION .....</b>	<b>7</b>
<b>TECHNOLOGY UPGRADES.....</b>	<b>8</b>
<b>OTHER UPGRADES .....</b>	<b>8</b>
<b>CONTINUE REDUCING GREENHOUSE GAS EMISSIONS 2020-2021 .....</b>	<b>9</b>
<b>EMISSIONS AND OFFSET SUMMARY TABLE .....</b>	<b>10</b>

## EXECUTIVE SUMMARY

*Due to the continued pressures of student population growth and the recent COVID 19 Pandemic, the 2020-21 school year has been a challenging one. Increased ventilation requirements, school shutdowns and a magnitude of capital projects have kept District planners busy.*

Nonetheless, the Chilliwack School District has continued its green initiatives, and with partnerships with B.C. Hydro, Fortis, and the Ministry, we have been able to implement several projects to help further reduce our carbon footprint. Two projects that we are particularly proud of involved the replacement of two end of serviceable life boilers at *F.G. Leary* and *Robertson Elementary*. Through Ministry funding, School District Facilities staff were able to upgrade both end-of-life boiler plants with high efficiency replacements. The new state of the art condensing boilers will provide years of reliable service with improved staff and student comfort. The heating plants also utilize our D.D.C. software that not only optimize building efficiency but will help to reduce the District's overall carbon emissions.

Other upgrades worth highlighting includes exterior LED lighting retrofits to Sardis Secondary and Sardis Elementary, and a gym lighting upgrade to Watson Elementary.

Our staff, students, parents, and community partners continue to develop a culture of sustainable thinkers by practicing conservation activities in our buildings daily, turning off the lights, and recycling and composting at each site. This also supports our City's mandate. "Green Teams" of students throughout the District continue to share their enthusiasm and knowledge with other students and staff on a variety of green projects including our most recent district-wide recycling and composting program. We are also encouraged by our District's initiative to print less paper and shift towards electronic document storage in an effort to reduce paper consumption.

While the Chilliwack School District is continually working on reducing its carbon footprint, it still generates GHG emissions. Through careful planning and strategizing, we hope to further reduce our GHG emissions and meet our reduction goals for future generations.

**Declaration statement:** This Climate Change Accountability Report for the period January 1, 2020 to December 31, 2020 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2020 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2021 and beyond.

## OVERVIEW:

# ACTIONS TAKEN TO REDUCE GREENHOUSE GAS EMISSIONS IN 2020

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## MECHANICAL UPGRADES

### Boiler Upgrades

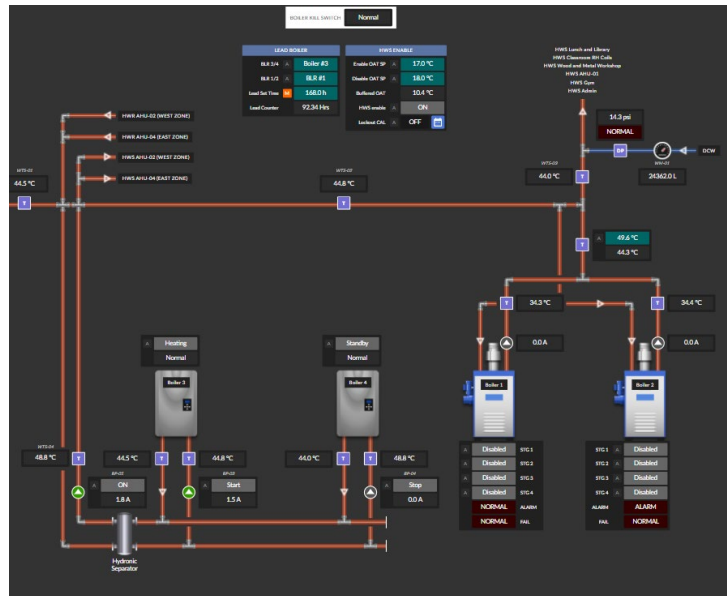
- Robertson Elementary – Replacement of old natural gas boiler heating plant with high efficiency boiler upgrade
- F.G. Leary - Replacement of old natural gas boiler heating plant with high efficiency boiler upgrade



(Picture: Top - Robertson Elementary Boiler Upgrade,  
Below - F.G. Leary Boiler Upgrade)

## HVAC Control Upgrades

- Continual upgrades to the DDC Building Management and HVAC system to optimize building performance and efficiency.



## Natural Gas water heater Upgrade:



- F.G. Leary existing primary water heating system replaced with energy efficient natural gas on demand hot water heater.

## ELECTRICAL UPGRADES

### LED Lighting Upgrades



- Exterior LED lighting upgrades at Sardis Secondary, Sardis Elementary and Cheam Elementary parking lot.
- Dark campus exterior lighting practice along with astronomic time clocks and DDC scheduling to capitalize on energy savings.
- Gym lighting upgrade at Watson Elementary.

(Picture: Sardis Secondary Lighting Upgrade)



(Picture: Watson LED Lighting Upgrade)

## BUILDING ENVELOPE UPGRADES



- New window upgrade Central Elementary.
- Ministry funded building envelope upgrades to incorporate high efficiency window replacements
- All new future builds incorporating LEED Standard envelope requirements.

(Picture: Central Elementary – High efficiency window upgrades)

## TRANSPORTATION

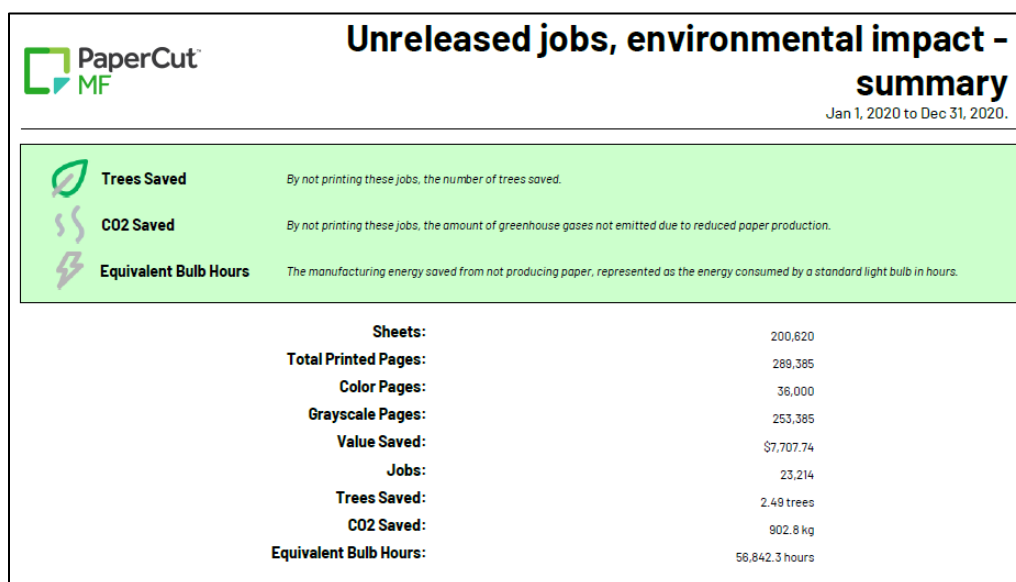


- Encourage carpooling to all district events.
- Smaller more fuel-efficient vehicles utilized in I.T. Department's fleet.
- 10-year Capital Plan for fleet vehicle replacement based on vehicle age, fuel consumption, and maintenance costs.

(Picture: Bus drop-off at GWG)

## TECHNOLOGY UPGRADES

- Power management settings have been utilized in all computers, copiers, and printers.
- Continual updating of the district's computer inventory.
- Laserfiche software used for electronic document storage to digitize student files.
- Reduced paper consumption with the use of PaperCut software and low use presets like standard double-sided printing and print release functions.



## OTHER UPGRADES

- Water conservation with water bottle filling stations.
- Continued implementation of recycling and organic management system, "Bin Be Gone".
- Replacement old floor scrubbers with new scrubbers using ionized water instead of chemicals.



(Picture: Water filling and drinking fountain Sardis Secondary School)

# CONTINUE REDUCING GREENHOUSE GAS EMISSIONS 2020-2021

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- New 900 occupancy K to 8 Stitó:s Lá:lém totí:lt Elementary/Middle designed to meet current LEED Gold standards.
- All upcoming expansions to include latest in energy saving technologies.
- Recently purchased University of the Fraser Valley site to receive latest mechanical and electrical system upgrades.
- Continue with lighting and distribution upgrades throughout the district.
- Fine-tune and review of current control systems and scheduling to better optimize building performance.
- Continual upgrades to our Building Management Software (BMS) and Direct Digital Controls (DDC).
- HVAC mechanical systems and boiler plants upgraded to reduce GHG emissions.
- Further Energy Studies will be performed for future energy related projects in mechanical and lighting.
- In-depth assessment of current inventory of buildings and assets to establish project list and a timetable using consumption data along with operational costs.
- Building envelope upgrades to aging building infrastructure to improve insulation in regard to heat loss and cooling.
- Create green, sustainability, energy conservation or climate action teams with the support of senior school district staff.
- Continue to encourage carpooling.
- Encourage staff to consider virtual attendance/presentations at events where possible.
- Continue to provide education to staff, student and Green Team initiatives about the conservation of water, energy and raw materials.
- Investigate opportunities in increased recycled paper content as a district standard.


## EMISSIONS AND OFFSET SUMMARY TABLE

Chilliwack School District 2020 GHG Emissions and Offsets	
<b>GHG Emissions created in Calendar Year 2020</b>	
Total Emissions (tCO <sub>2</sub> e)	<b>3,941</b>
Total BioCO <sub>2</sub>	<b>31.49</b>
Total Offsets (tCO <sub>2</sub> e)	<b>3,305</b>
<b>Adjustments to Offset Required GHG Emissions Reported in Prior Years</b>	
Total Offsets Adjustment (tCO <sub>2</sub> e)	<b>305</b>
<b>Grand Total Offsets for the 2020 Reporting Year</b>	
Grand Total Offsets (tCO <sub>2</sub> e) to be Retired for 2020 Reporting Year	<b>3,610</b>
Offset Investment (\$25 per tCO <sub>2</sub> e)	<b>\$ 90,250</b>

**Retirement of Offsets:**

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, the Chilliwack School District **(the Organization)** is responsible for arranging for the retirement of the offset’s obligation reported above for the 2020 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.

**Executive sign-off:**

	May 28, 2021
Signature	Date
Rohan Arul-pragasam	Superintendent
Name (please print)	Title