

VENTILATION SYSTEM OVERVIEW

This template has been developed to support school districts in sharing information on ventilation systems at the school level. This includes information on how systems meet requirements for regular inspection and maintenance, and additional mitigations that have been put in place to promote student and staff safety throughout the pandemic.

School District:	72 - Campbell River
School Name:	Penfield Elementary
REQUIREMENT: Regular inspection and maintenance of HVAC systems	Yes/No: Yes
	Date of last inspection: 2021-12-16
	Date of next inspection: 2022-03-15
	Date and type of most recent maintenance: December 2021 - change filters and visual inspection of all air handlers
RECOMMENDATION: Increase supply of outside air	Yes/No: No
	<p>Detail: During school days, air supply units activate at 04:00 with exception of Mondays (03:30) and the modular classrooms (06:00). During school days, air supply units deactivate at 22:00 with exception of modular classrooms M-1 (18:00) and M-2 (17:30).</p> <p>Increasing outside air supply can also be increased by disabling occupancy sensors. These changes will increase wear & tear on equipment and increase utility costs.</p>
RECOMMENDATION: Upgrade filtration, including installing MERV-13 filters, where possible	Yes/No: No
	<p>Detail (Including filter grade): Direction received to replace MERV-10 filters with MERV-13 as existing stock is used. 100% complete. Frequency of filter changes increased from twice per year (MERV-10) to three times per year (MERV-13). Ongoing monitoring of air flow in place.</p> <p>Mitigation measures available as per Ministry of Education and Public Health Guidelines. Generally, due to increased filter pressure drop, increasing filter efficiency can reduce air flow, impact occupant's thermal comfort, increase carbon dioxide [CO₂] levels, etc. The professional opinion of an HVAC engineer is strongly recommended before attempting to upgrade any air filters. More efficient filters cause a higher pressure drop and will have an impact on Indoor Environmental Quality [IEQ] that may be beyond the capacity of building air handling units to compensate.</p>

RECOMMENDATION: Use other air cleaning or treatment technologies	Yes/No: No
	Detail: Engineering study required to quantify effectiveness of other technologies that might be feasible for ventilation system Portable HEPA filtration units have been provided.
RECOMMENDATION: Manage energy use and air distribution through building automation control systems	Yes/No: Yes
	Detail: Periodic re-commissioning of building automation control systems is best practice and mandatory when hardware/software become obsolete.
Other Relevant Information:	Duct cleaning done on a 4 year cycle. Next scheduled date is 2023. According to Provincial COVID-19 Communicable Disease Guidelines for K-12 Settings, updated August 23,2021: At the time, there is no evidence that a building's ventilation systems, in good operating condition, would contribute to the spread of the virus. Good indoor air ventilation alone cannot protect people from exposure to COVID-19, however, it may reduce risk when used in addition to other preventive measures.
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