



September 2018

Dear Parents and Guardians,

This past winter West Vancouver Schools worked in partnership with Vancouver Coastal Health, to screen for radon in all of our schools. This school screening initiative was undertaken to confirm that radon concentrations are low in district schools. Radon is a naturally occurring, colourless and odourless gas that is produced by the decay of uranium found in rock, soil or water. Radon gas enters buildings through cracks in the foundation, walls or floors and gaps around cables or pipes. Indoors, radon can accumulate to concentrations much higher than the outdoor air. While there was no evidence that radon might be a problem in our schools, we have proactively tested to ensure we continue to have healthy environments for our staff and students.

Screening is now complete, and test results for most classrooms are below the Canadian guideline of 200 Bq/m³ and the World Health Organization suggested action level of 100 Bq/m³. The radon screening results can be found below. Because a child's classroom exposure represents a small portion of their overall exposure, and the radon concentrations found are not high enough to warrant urgent action, the continued use of these classrooms while further testing is being planned is not a health concern.

We are pleased to advise that with the exception of 2 of our gyms at Cedardale and Cypress Park all classrooms in all of our schools are below the Canadian guideline for radon levels. For these two schools, additional testing is required to assess variations in radon concentrations over the day and weekends, to determine if concentrations are above guideline levels during the daytime when the building is in use. The school district will be engaging certified professionals to conduct this additional testing and the results will be shared with parents as soon as they are available.

Vancouver Coastal Health continues to encourage all community members to test their homes for radon this winter. The risk of health impacts due to radon exposure is greatest from exposures in buildings where people spend the majority of their time and following exposure over many years. Over a calendar year, children spend approximately 15% of their time in their school, and 60-75% of their time in their home. Vancouver Coastal Health and the West Vancouver School District are taking action in the school environment, and we encourage you to test your own home where you and your family spend more time.

Please refer to the fact sheet attached for more information on this screening initiative and how you can test your home for radon. If you have questions or concerns contact Charlene Wood, Senior Environmental Health Officer at Vancouver Coastal Health at 604-983-6797 or Wade Hickey, West Vancouver Schools Director of Facilities at 604-981-1079.

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Table 1. Radon school screening results for West Vancouver schools.

| School | # of test devices (excluding blanks and duplicates) | # (%) of results below 100Bq/m ³ | # (%) of results above or equal to 100Bq/m ³ but below 200Bq/m ³ | # (%) of results above or equal to 200Bq/m ³ but below 600Bq/m ³ | # (%) of results above or equal to 600Bq/m ³ |
|-----------------------------------|---|---|--|--|---|
| Bowen Island Community School | 19 | 19 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Caulfield Elementary School | 8 | 8 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Cedardale Elementary | 13 | 11 (85%) | 2 (15%) | 0 (0%) | 0 (0%) |
| Chartwell Elementary | 15 | 15 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Cypress Park Primary School | 7 | 5 (71%) | 1 (14%) | 1 (14%) | 0 (0%) |
| Eagle Harbour Primary | 7 | 7 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Gleneagles Elementary School | 12 | 12 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Hollyburn Elementary School | 12 | 12 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Irwin Park Elementary | 13 | 13 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Lions Bay Community School | 5 | 5 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Pauline Johnson Elementary School | 12 | 12 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Ridgeview Elementary School | 14 | 14 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Rockridge Secondary | 14 | 14 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Sentinel Secondary School | 29 | 29 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| West Bay Elementary | 17 | 17 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| West Vancouver Secondary School | 59 | 59 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Westcot Elementary | 8 | 8 (100%) | 0 (0%) | 0 (0%) | 0 (0%) |

Radon Screening in Schools Fact Sheet

What is radon?

Radon is a naturally occurring, colourless and odourless radioactive gas that is produced by the decay of uranium found in rock, soil or water. Radon gas enters buildings through cracks in the foundation, walls or floors and gaps around cables or pipes. Indoors, radon can accumulate to concentrations much higher than the outdoor air. Long-term exposures to radon have been linked to an increased risk of lung cancer. Radon can be found in any building including homes, workplaces and schools. Given that we spend the majority of our time at home and the health effects of radon are from long term exposures, Health Canada recommends that everyone test their home for radon. Testing is easy and effective mitigation measures exist.

What schools are being tested and why?

Radon concentrations across Vancouver Coastal Health have typically been low in comparison to the rest of the province. This school screening initiative is being undertaken to confirm this in schools and to encourage people to confirm levels are low in their own homes.

Public schools in North Vancouver, West Vancouver, Sea-to-Sky, Sunshine Coast, Powell River and Central Coast were tested for radon. In a previous survey of radon concentrations in homes conducted by Health Canada, the homes within the Vancouver Coastal Health boundaries had low concentrations in comparison to the rest of the province. However, slightly more homes in the Coastal regions of Vancouver Coastal Health had concentrations above the Canadian guideline (about 3%). This percentage is still much lower than many other areas of BC or Canada; for comparison 8% of British Columbia homes tested above the Canadian guideline and 29% of homes in the Kootenay-Boundary area tested above this guideline.

Table 1. Data from the Cross-Canada Survey of Radon Concentrations in Homes for Vancouver Coastal Health, 2009-2011. Canadian guideline: 200Bq/m³. World Health Organization recommended guideline: 100Bq/m³. (Data provided by Health Canada)

| Health Service Delivery Area | Number of participants | % Below 100 Bq/m ³ | % Between 100 and 200 Bq/m ³ | % Above 200 Bq/m ³ |
|------------------------------|------------------------|-------------------------------|---|-------------------------------|
| Vancouver | 104 | 99% | 0% | 1% |
| Richmond | 63 | 100% | 0% | 0% |
| North Shore/Coast Garibaldi | 96 | 92% | 5% | 3% |

What are the radon guidelines?

Canadian guideline for remedial action is 200Bq/m³.

As our knowledge of the health effects from radon increases, so does our understanding of the risk of exposure to lower concentrations. Ideally, we want radon levels to be as low as practical. Some jurisdictions, including the World Health Organization, recommend taking action if concentrations are above 100Bq/m³.

What happens if the radon levels are high?

Buildings with radon concentrations above the guideline levels will undergo necessary further testing to determine when and where levels are elevated. If mitigation is required, there are a number of extremely effective approaches to mitigating buildings with elevated radon concentrations. Mitigation for radon often involves installing a venting system that will direct the radon gas from underneath the building to the outside air where it is quickly diluted to low levels and is no longer a health concern. Other mitigation efforts may include modifications to the heating, ventilation and air-conditioning system, such as increasing ventilation or modifying the times that the system is on.

When should action be taken?



A world of opportunity

Because we are concerned about long-term radon exposures, the goal is to remediate the building within a year or two of receiving the test results. Health Canada recommends taking remedial action within two years if concentrations are between 200Bq/m³ and 600Bq/m³ and within one year if concentrations are above 600Bq/m³. If concentrations are between 100Bq/m³ and 200Bq/m³ remedial action can be taken within two years of receiving the test results. If radon concentrations are found to be elevated in district schools, priority would first be given to schools with higher concentrations.

How do I test my own home for radon?

Vancouver Coastal Health recommends performing a long-term radon test for at least 91 days in the lowest level of your home that is occupied for more than four hours a day. Testing should be conducted in the winter months when windows in the home are closed.

Test kits can be purchased from a number of online suppliers for \$30-50. When purchasing a detector, ensure that it is for a long-term test and that the cost of the lab analysis is included in the price. A limited number of low-cost radon detection kits are available from a Citizen Science project underway at Simon Fraser University www.sfu.ca/radon. Test kits are also available from the BC Lung Association online at www.radonaware.ca or by calling 1-800-665-LUNG (5864).

Resources

- Health Canada: www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/radon-reduction-guide-canadians-health-canada-2013.html
- BC Lung Association: www.radonaware.ca/
- Take Action on Radon Public Resources: www.takeactiononradon.ca/public-resources
- SFU lead Citizen Science Project: www.sfu.ca/radon
- Canadian National Radon Proficiency Program: <http://c-nrpp.ca/>
- Cross-Canada Survey of Radon Concentrations in Homes: www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/radiation/radon/survey-sondage-eng.pdf