

# RADON PREVALENCE IN HAMILTON

Board of Health

November 16, 2020

- Purpose and Background.
- What is Radon?
- Why is Radon a public health concern?
- Hamilton's Household Radon Survey, 2019-2020
  - Methods
  - Finding
- Next Steps.

# Purpose and Background

- From 2009-2011, Health Canada conducted a household radon survey to estimate the frequency of and geographic areas with elevated radon levels in Canadian homes.
- 5 of the 100 Hamilton homes included were found to have radon levels above Health Canada's guideline of 200 Bq/m<sup>3</sup>.
- In 2019-2020, a household radon survey was conducted in Hamilton to obtain an updated and more precise estimate.

- Radon is a colourless, odourless gas
- Produced by decay of natural uranium in the ground
- Quickly diluted outdoors, but can accumulate to harmful levels indoors
- Radioactive particles can be inhaled and damage cells that can become cancerous
- 2<sup>nd</sup> leading cause (after tobacco) of lung cancer—so main cause among non-smokers

- Radon estimated to be the cause of 16% of lung cancer deaths in Canada
- While there is no safe level of radon, Health Canada's current guideline for "increased risk" is  $> 200 \text{ Bq/m}^3$ 
  - remedial action to reduce the levels of radon is recommended to be completed within 2 years
  - and within 1 year for those with levels  $> 600 \text{ Bq/m}^3$

**...and radon levels can only be determined by testing!**

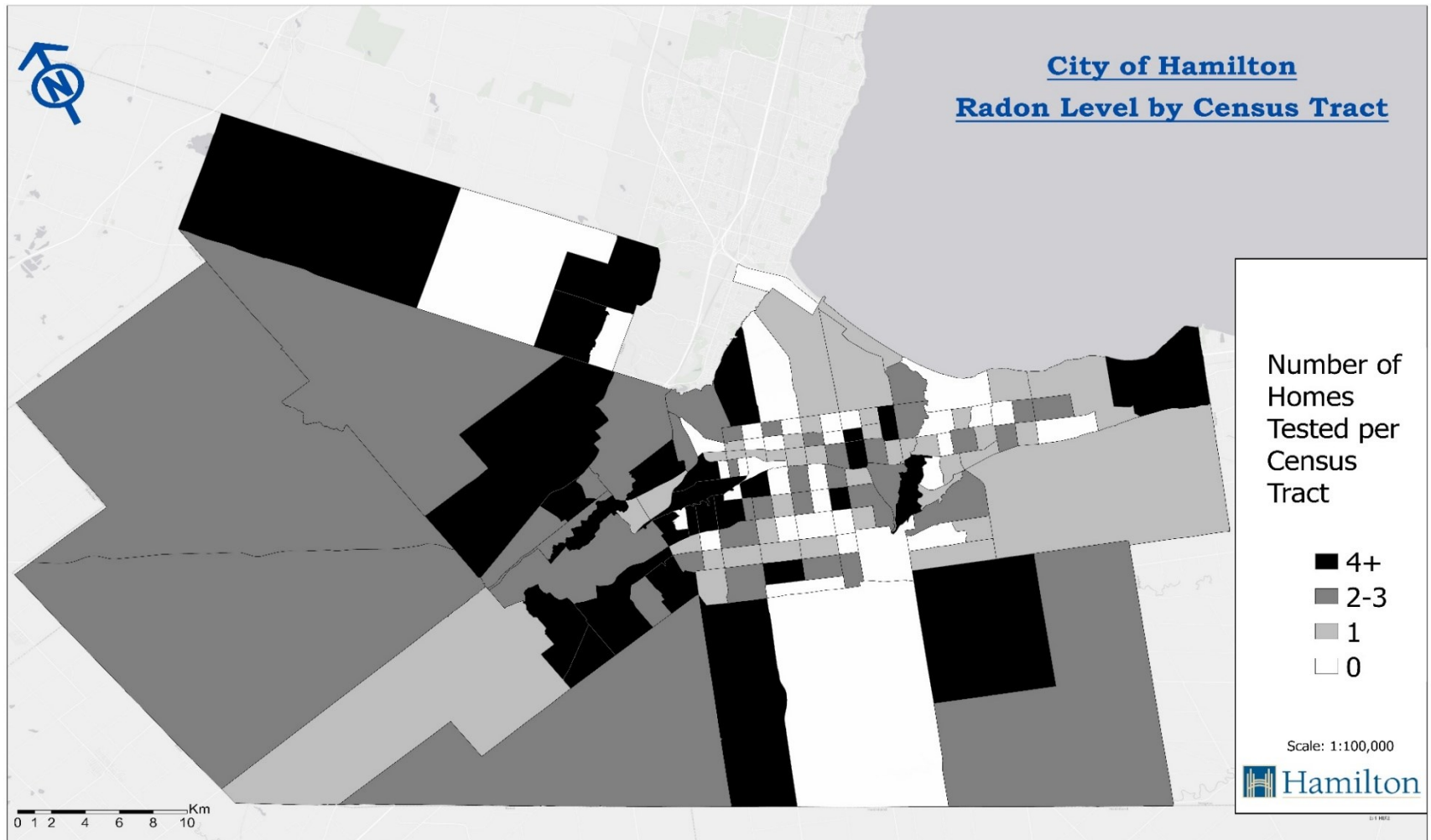
- In Fall 2019, Hamilton Public Health Services initiated its annual Radon Awareness Promotional Campaign to:
  - 1) Increase public education and awareness about radon; and,
  - 2) Encourage radon testing of homes.
- The campaign also informed and recruited participants for the 2019-2020 Household Radon Survey.



## Survey Eligibility:

- 18+ years who communicate in English;
- owner of primary residence in Hamilton;
- residence has ground floor or basement;
- no tenants living in the residence;
- no business in the residence with non-family members spending 4+ hours;
- no plans to sell/renovate home in next 6 months;
- residence not already tested for radon;
- limited to one radon detector per household;
- committed to placing detector in lowest lived-in room;  
and,
- committed to keep it in place for the required 91 days.

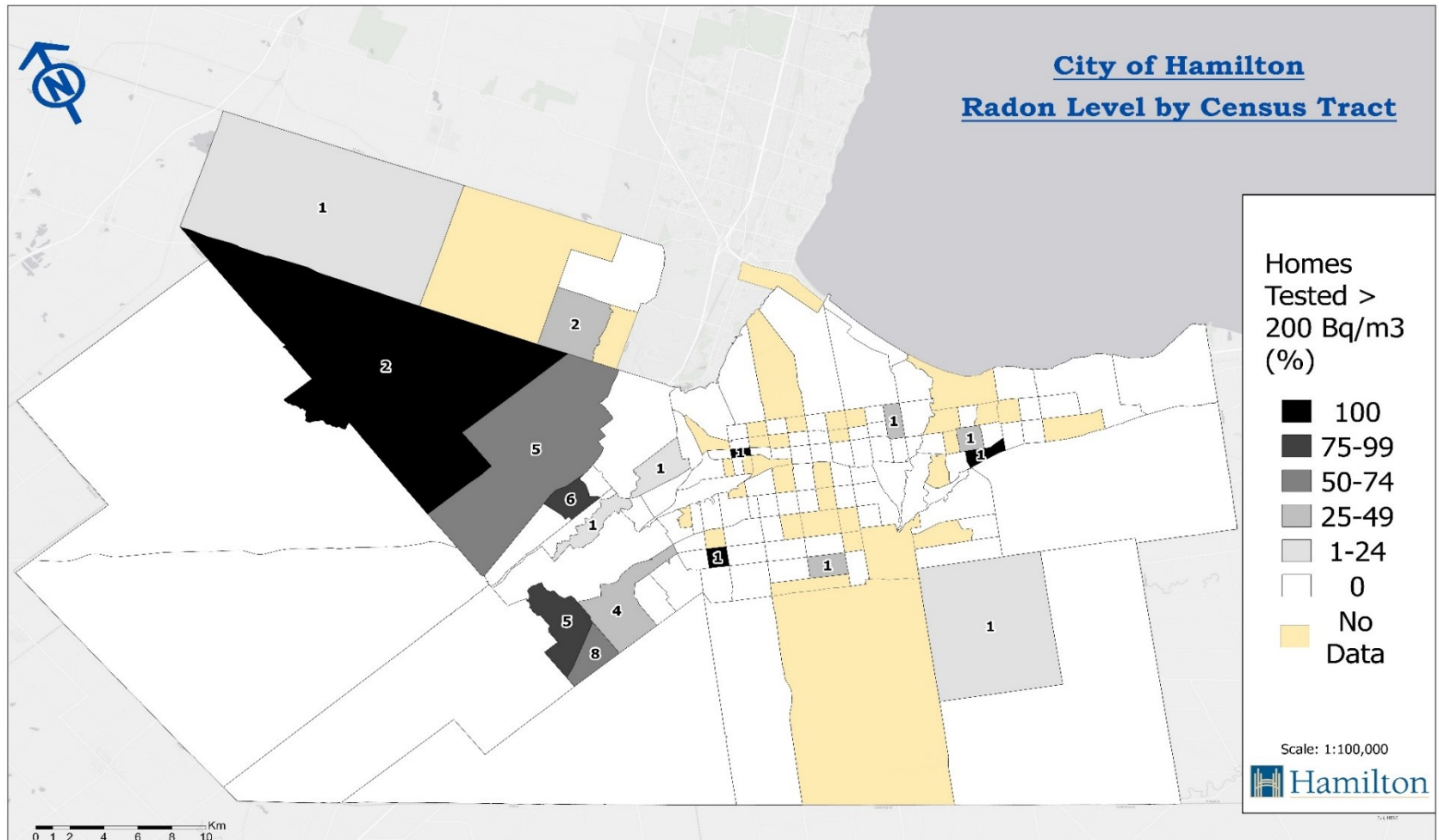
# 294 participating homes, mapped by census tract





***42 (14.3%) of the 294 participating homes were found to have radon levels greater than Health Canada's guideline of 200 Bq/m<sup>3</sup>.***

# Percent of homes with radon > 200 Bq/M3 by CT

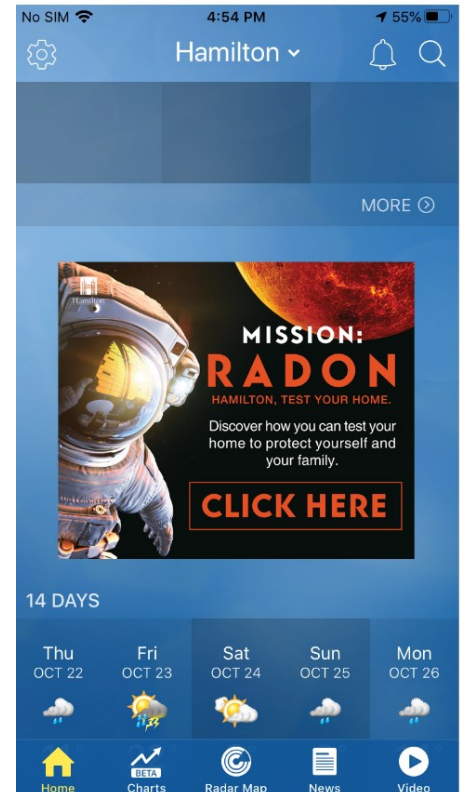
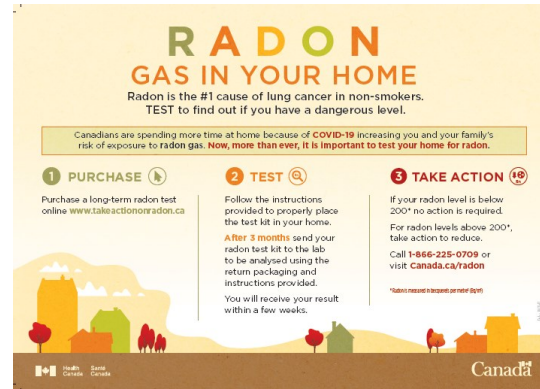


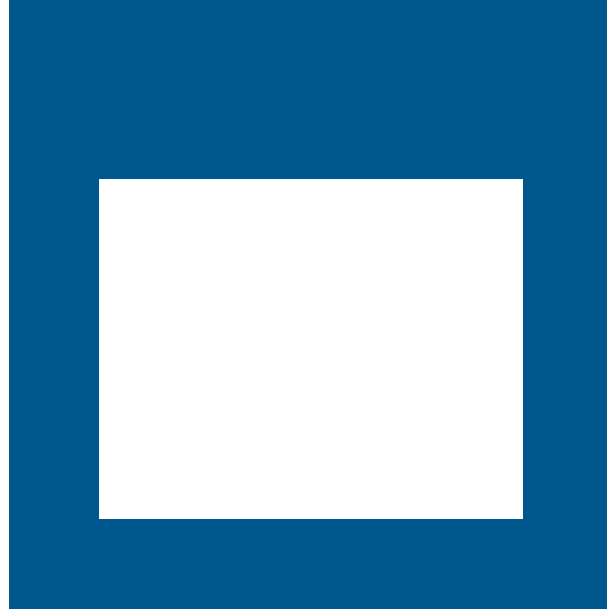
# Interpretation

- The results of the survey are consistent with any area of Hamilton having at least 18% of homes with radon levels greater than 200 Bq/m<sup>3</sup>.
- The findings indicate the need for radon intervention, such as outreach and education efforts, and to encourage testing of homes and remediation, where necessary.

# Next Steps

- In Hamilton, interventions will include the continuation of annual Radon Awareness efforts, and increased promotion to Hamilton homeowners to test for radon in their home if they have not already done so.
- Radon Promotion in 2020/2021 includes:
  - Transit shelters
  - Weather Network
  - Newspaper
  - Social media
  - Post Card
- Hamilton's Chief Building Officer.





THANK YOU