Radon Action Plan

2024 – 2027

Created: January 2025

1. INTRODUCTION

Dauphin, Manitoba is a city of 8,368 residents located on Treaty 2 Territory, 300 kilometres (km) northwest of Winnipeg, along the Vermillion River. It is the largest city in and the regional centre for the Parkland Region. It is a distribution and transportation centre due to the surrounding agricultural belt. Dauphin is also a tourism hub where visitors enjoy great natural assets, adventure opportunities, and cultural events and festivities. Besides agriculture and tourism, industries in Dauphin include manufacturing, healthcare, education, and retail.

The City of Dauphin has established itself as an early leader and innovator in sustainability (Manitoba Sustainable Community for 2017), active transportation, and tourism, with an award-winning new place brand identifying Dauphin as a primary Manitoba destination for "adventure from here on out". The Manitoba Office of Drinking Water heralded the City of Dauphin for its leadership in addressing the "lead in drinking water" crisis in 2018, setting an example for other municipalities to follow. The City finalized its Community Energy and Emissions Plan (CEEP) in 2020 with the goal of reducing energy consumption and greenhouse gas emissions. The CEEP laid out a bold vision for the City "to become Manitoba's most sustainable City by becoming the first Manitoban City to reach Carbon Neutrality and Net Zero Energy Status for Municipal operations." The City has recently created a progressive and proactive new Animal Services program that will blaze the trail for other communities to follow suit in tackling the overpopulation of stray domestic animals, alleviating the strain on over-stretched rescue volunteers, and encouraging responsible pet ownership. The City is an active and respected member of the Association of Manitoba Municipalities and is known for its highly competent complement of staff who are always seeking out best practices to provide the most effective and efficient municipal governance possible.

2. BACKGROUND

Radon is the second leading cause of lung cancer, and radon exposure is linked to approximately 16% of lung cancer deaths in Canada. Radon levels in Manitoba are higher than the Canadian average, and radon levels in Dauphin are among the highest seen in Manitoba.

In 2023, the City acknowledged the significance of radon via its second annual Council Proclamation – https://dauphin.ca/Home/DownloadDocument?docId=954b52af-3b54-46ac-9c63-db7d331ffb0e – and participated in the 100 Test Kit Challenge offered by Take Action on Radon. Of the 139 homes that participated, 92% were above Health Canada's Guideline for Radon in Indoor Air. Full report posted at: https://takeactiononradon.ca/wp-content/uploads/2024/06/Dauphin-Community-Report-June-2024.pdf. However, the limited options for local radon mitigation services highlights the need to further develop a Radon Action Plan for sustained reduction in residents' exposure to radon. Dauphin currently has no certified radon mitigation professionals in our area, and this presents a significant barrier to improving exposure among our residents. We are disappointed that the Province of Manitoba has been relatively silent on this issue, and we have seen no initiatives, guidance, or education from Public Health on this serious health crisis. We must take action at the municipal level to alter this grim health trajectory for our residents, yet we require funding in order to be able to implement a comprehensive program that will be truly impactful. In September 2024, Health Canada's Radon Outreach Contribution Program awarded the City of Dauphin a multi-year grant of $15,000 per year over a period of three years (2024 – 2027) to put a radon action plan into motion.

Demographics

Dauphin has a total of 3,780 households (2021 Census) with an average household size of 2.2. The majority (72%) of households in Dauphin are two persons or fewer. The majority (73%) of residents live in single-detached private residences. According to the 2021 Census, 62% of households own their home, while 38% rent their home. Dauphin has an older housing stock that is mostly single-detached homes, with 72% of homes being constructed before 1980. Approximately 85 new dwelling units were constructed between the 2016 and 2021 Census years. With significant development of south-end infrastructure and commercial growth, there is the potential for housing growth in Dauphin over the next decade. Currently, there is little evidence that new home construction is testing and mitigating to reduce radon levels, and this needs to change. The Manitoba Building Code mandates the installation of a radon sub pipe through the foundation of the house, but this is merely a rough-in and is not a mitigation system. New home owners need to be educated about the need to follow through with testing and installation of an active mitigation system if warranted.

According to the 2021 Census, the median household income in Dauphin is $60,800, which would qualify the majority of Dauphin residents for the Canadian Lung Association's Lungs Matter radon grant https://www.lung.ca/lung-health/radon/lungs-matter-radon-mitigation-support . Securing local trained and certified mitigation professionals could help to lower costs for our residents; currently, we only have access to certified mitigators in Roblin and Onanole (both an hour from Dauphin, which incurs travel costs and time delays.)

- 29% of households in Dauphin earn under $39,999 before taxes.
- 28% of households in Dauphin earn between $40,000 and $79,999 before taxes.
- 35% of households earn over $80,000 before taxes.
- 58% of Dauphin's population actively participates in the work force (Manitoba: 64%), which means that a significant number of Dauphin's residents spend their days at home, potentially breathing in poor-quality air. Further, 7.3% of Dauphin's labour force work from home. Risk is generally highest for this group compared to sectors that work outside or in buildings with high air exchanges that reduce radon levels.

Dauphin has an aging population when compared to Manitoba's overall population. Approximately 24% of Dauphin's population is 65 years and over (compared to Manitoba at 17%). Online shopping for radon test kits is less accessible to this group, and yet there is no local supply of the standard 91-day alpha track test kits for purchase. The proposed Radon Action Plan would empower this demographic to take charge of their health risks by providing access to information, guidance, accredited test kits, and direction for proceeding with mitigation if required.

With a recent increase in immigration to Dauphin, we know that 72 different countries are now represented in our diversifying community. The proposed Radon Action Plan would include partnership with Regional Connections to provide new residents with critical information regarding radon in their welcome packages to enable them to make informed decisions about their health and the risks in their homes and workplaces.

Languages

Our language demographics in Dauphin are primarily related to our Ukrainian, First Nations, and Metis populations. There is no notable francophone demographic, and demand for French services is virtually non-existent. More than half of Manitoba's francophone population (36,740 people as of 2021) lives in the City of Winnipeg. As of 2021, less than 5% of the population in the

Dauphin Census division could conduct a conversation in French. Bilingual Health Canada radon materials will be available to serve the francophone population, but activities will be designed to address the needs of the anglophone population while at the same time working with Regional Connections to ensure information is accessible to our diverse immigrant families. For activities that are delivered outside of Dauphin, such as the Association of Manitoba Municipalities resolutions, support will be provided by the collaborating partners as required.

Gender Lens

The Project Team will review the Plan's radon initiatives and communications through a lens that identifies gender as a factor requiring unique accommodation and targeted campaigns. We know that women are the primary participants in our social media engagement and that women hold significant decision-making power regarding changes related to homes, families, and health. Our surveys will include gender as a demographic identifier.

3. GOALS AND OBJECTIVES

The goal of the project is to complete a sustainable Radon Action Plan ("The Plan") for the City of Dauphin and to demonstrate leadership in radon action to local businesses and other municipalities in Manitoba and, indeed, in Canada.

Objectives:

- To educate the citizens of Dauphin about lung cancer risk factors attributable to radon exposure.
- To encourage Dauphin citizens to take action and test their homes for radon.
- To empower Dauphin citizens to take action to reduce radon levels in their homes.
- To increase the number of certified radon mitigation contractors in Dauphin. We currently have none.
- To become the credible voice on radon policy solutions in Manitoba.
- To advocate to municipal and provincial governments on policy/legislative changes that can be implemented to protect Manitoba citizens from the health impact of radon exposure, and help reduce the financial barrier of taking action.
- To, ultimately, effect meaningful change in health risk and outcomes for the citizens we care about by making a measurable impact on reducing radon levels in the homes, businesses, institutions, and workplaces in our community.

4. ACTION PLAN

Key Activities:

- Take the lead by testing City-owned facilities and workplaces, sharing results publicly, and mitigating where warranted.
- Develop a Radon Action Month (November) campaign including, but not limited to: website notices, social media campaign, pamphlet distribution, advertising, City Proclamation, media interviews, and public presentations.
- Increase access to test kits at hardware stores, City Hall, public library.
- Offer 100 free test kits each November (during Radon Action Month) with collection of data for tracking purposes.

- Offer free test kits to the owners of all new dwelling units constructed in the last five years.
- Issue free test kits with educational materials for new dwellings.
- Build a Radon Action Plan that will demonstrate a sustainable business for local certified radon professionals (currently there are none).
- Organize and present at annual public, in-person radon information sessions to draw the public's interest and curiosity and to educate residents regarding the risks associated with radon exposure and their options for taking action to protect their families.
- Present the City's Radon Action Plan at health and/or municipal-related conferences and workshops.
- Draft, solicit support for, and table radon-related resolutions at the Association of Manitoba Municipalities (AMM) annual conventions to lobby the Province of Manitoba to create a radon task force to regulate action on radon in the Building Code, *Tenancies Act, Workplace Safety & Health Act*, and *Community Child Care Standards Act* and bring radon to the forefront of Public Health and Cancer Care advocacy and initiatives in Manitoba.
- Facilitate knowledge transfer and exchange to advance radon-related regulations and health policy goals.
- Share the City of Dauphin Radon Action Plan with local, regional, and provincial organizations (e.g. Manitoba Municipal Administrators' membership, Manitoba Health, Planning Districts, contractors).
- Complete surveys to determine improved awareness, knowledge, skills, and competencies of targeted stakeholders and priority populations.
- Review and assess the feasibility of Health Canada's Radon Action Guide for Municipalities as it relates to existing bylaws and potential policy development.

Timeline

Activities	Timeline	Outputs
Test City-owned properties and share results publicly	December 2024 - May 2025	Will show leadership by establishing the need to protect our City staff in their workplace. Elevated results will be considered when budgeting for facility mitigation.
Establish a Radon Action Month (November) campaign including but not limited to: website notices, pamphlet distribution, advertising, City Proclamation, media interviews, and public presentations.	Occurring in November, annually	Will serve as a key initiative in raising awareness, getting people talking about radon. Will show municipal leadership in acknowledging (rather than hiding from) radon as a health crisis that must be addressed.
Organize and present at public, in-person	Occurring in November, annually	Will draw the public's interest and curiosity and educate residents regarding the risks associated with radon exposure and their

radon information sessions		options for taking action to protect their families.
Increase access to test kits at hardware stores, City Hall, public library.	October 2024 - ongoing	Will have real impact on the number of homes tested and potentially mitigated.
Offer 100 free test kits each November with collection of data for tracking purposes.	November - March, annually	Will have real impact on the number of homes tested and potentially mitigated. Data will enable the tracking of locations and hot spot areas for radon in Dauphin.
Offer free test kits to the owners of all new dwelling units constructed in the last five years.	January - May 2025	Will impact awareness of the need for every new home-owner to consider radon safety when preparing for occupancy.
Issue free test kits with educational materials along occupation permits for new dwellings.	November 2024 - ongoing	Will impact awareness of the need for every new home-owner to consider radon safety when preparing for occupancy.
Build a Radon Action Plan that will demonstrate a sustainable business for local certified Radon professionals	November 2024 - ongoing	Will increase the number of certified radon mitigation professionals in Dauphin, thereby increasing the affordability and number of mitigations and reducing exposure.
Draft, solicit support for, and table radon-related resolutions at the Association of Manitoba Municipalities (AMM) annual conventions to lobby the Province of Manitoba to create a radon task force to regulate action on radon in the Building Code, *Tenancies Act*, *Workplace Safety & Health Act*, and *Community Child Care Standards Act* and bring radon to	June 2025 (resolution(s) to be presented to the AMM Parkland June District Meeting, to be forwarded to the AMM Convention in November 2025 for approval.)	Will potentially impact policy and legislation at the provincial level, which could refine regulations affecting home-owners, tenants, workers, and children and entrenching their right to breathe clean, safe air.

the forefront of Public Health and Cancer Care advocacy and initiatives in Manitoba.		
Facilitate knowledge transfer and exchange to advance radon-related regulations and health policy goals.	November 2024 - ongoing	Will potentially impact policy and regulatory development at the provincial and municipal level that will result in long-term improvement in health risk related to radon exposure.
Share the City of Dauphin Radon Action Plan with local, regional, and provincial organizations (e.g. Manitoba Municipal Administrators' membership, Manitoba Health, Planning Districts, contractors)	2025 - ongoing	Will show leadership in radon action and will encourage other municipalities to follow suit.
Complete surveys to determine improved awareness, knowledge, skills and competencies of targeted stakeholders and priority populations.	2025 - ongoing	Will provide data to determine efficacy and outcomes related to radon awareness, action, and reduced exposure.
Review and assess the feasibility of Health Canada's Radon Action Guide for Municipalities as it relates to existing bylaws and potential policy development.	2024 - 2027	Will provide input from a local perspective to gauge the applicability and relevance of the Guide for municipalities in Manitoba.

The Radon Action Plan will continue to be applied, and updated, beyond 2027. Engagement of local contractors is the most significant barrier to successfully providing Dauphin citizens with cost effective radon mitigation services. This Plan will seek to educate local contractors about the business potential and burgeoning market for radon mitigation services.

5. PROJECT TEAM

The Deputy City Manager oversees several municipal departments, including Bylaw Enforcement, Animal Services, and Protective Services. They will oversee this project and commit to fulfilling its mandate over the three-year duration of this program and beyond.

The Building & Development Department oversees all City activities related to the Manitoba Building Code, development permits, and city zoning and planning. They have connections with local contractors and will be an effective resource in evaluating the efficacy of the Building Code as it relates to radon exposure and proposing amendments related to the Code and other building and workplace legislation.

The Safety Manager is also the City's Municipal Emergency Coordinator, Fire Inspector, and back-up Building Inspector. They will provide support and resources in the implementation of the Plan stemming from their wealth of experience in these areas.

The Economic Development/Marketing & Promotions team are equipped with the creativity, software applications, and communications resources to assist our team in creating the advertising, promotion, and education materials and social media messaging that will contribute to our efforts to bring radon to the attention of our residents.

The ICT/Building Management Department will serve as a resource for the Plan's IT needs and for expertise related to the City's facilities and any mitigation that may be required as a result of radon testing.

6. STAKEHOLDERS

Sustained radon action requires participation and commitment from public and private partners. Each activity and radon initiative outlined in our work plan is a collaborative effort with many partners that will improve awareness, knowledge, skills, and competencies of a greater and wider spread audience. The ultimate goal of this coalition is to protect Dauphin residents from radon through education, awareness, and advocacy initiatives. Dauphin has some of the highest levels of radon in the country, and all residents have a comparatively greater risk of developing radon-induced lung cancer.

Engaging with municipal associations will extend the impact across Manitoba by demonstrating leadership in areas of education, awareness, and policy.

A City of Dauphin Radon Action Plan provides the framework for communicating the risk of radon exposure to residents, businesses, and partners alike. By demonstrating leadership and commitment at the municipal level, it is expected that collaboration opportunities will encourage more to take action.

Names of collaborating organizations	Contribution(s)
Local Contractors	Education will be provided to local contractors regarding the need for radon testing and active mitigation systems in new builds. Will solicit contractors to engage in the training required for mitigation certification.

Association of Manitoba Municipalities (AMM)	Will provide provincial and federal advocacy via municipal resolutions regarding the need for policy changes related to radon in Manitoba.
Manitoba Municipal Administrators (MMA)	The Deputy City Manager (project lead) is a former (recent) Executive Council Member for the MMA and can tap into MMA membership from across Manitoba to generate engagement and advocacy province-wide.
Manitoba Health	Will be engaged to take on greater efforts to address radon as a public health crisis in our area and throughout Manitoba.
Health Canada	Will be engaged as a funder and resource for bilingual promotional/educational materials related to radon and to serve on Information Session panels.
Canadian Association of Radon Scientists and Technologists (CARST)	Will be engaged as a resource for further research and development as the Plan evolves to reflect changes in radon data and scholarship.
Canadian-National Radon Proficiency Program (C-NRPP)	Will be engaged to provide resources for standardized radon testing and mitigation.
Take Action on Radon (100 Test Kit Challenge)	Provided support for Dauphin's 100 Radon Test Kit Challenge in November 2023 and will be engaged to provide support for Dauphin's test giveaways each November.

Target Audiences:

1. **Citizens of Dauphin**: Social media campaigns, policy changes, and media coverage will promote action.
2. **Local contractors**: Sharing radon testing data and policy plans to demonstrate need for services (testing and mitigation).
3. **Other Manitoba municipalities**: Collaboration on resolutions to provincial organizations will demonstrate possibilities for improving policy and health outcomes.
4. **Manitoba Health**: Testing campaigns, annual survey results, and experiences from citizens (story-telling) will demonstrate need for additional support from Manitoba Health.

7. PROJECTED OUTCOMES

Immediate outcome: A consequence directly attributable to the project's activities/outputs. There will be an increase as compared to prior years in the number of Dauphin residents who know about radon and the related lung health risk. Dauphin residents will be aware of proven radon reduction methods.

Intermediate outcome: A consequence that is expected to logically occur once one or more immediate outcomes have been achieved. There will be an increase as compared to prior years in the numbers of Dauphin residents that have tested their homes for radon. Dauphin residents will be taking action to reduce radon levels in their homes.

Long-term outcome: The highest-level consequence that can be reasonably attributed to (i.e. not directly caused by) the project as it is the consequence of one or more intermediate outcomes having been achieved. Dauphin residents will have a decreased risk of lung cancer attributable to radon exposure. Policy change will be made provincially to better protect Manitobans from radon-related lung cancer.

Performance Measurement Indicators

1. Work with Take Action on Radon to complete follow-up surveys with 100 Test Kit Challenge participants from 2023-24 to determine:
    a. Number of mitigations completed
    b. Type of mitigation completed
    c. Certified (C-NRPP) mitigations completed
    d. Costs of mitigations completed

2. Track testing and mitigation data following annual 100 Free Radon Test Kit Giveaway to determine:
    a. Number of mitigations completed
    b. Type of mitigation completed
    c. Certified (C-NRPP) mitigations completed
    d. Costs of mitigations completed

2. Increase local radon professional services
    a. Number of local contractors who take certified radon training
    b. Number of local contractors who continue to offer radon services each year

3. Number of resolutions written, presented, and passed

4. Number of engagements with regional and provincial partners

5. Local bylaws amended or written to address radon

6. Number of Radon Action Guide for Municipalities actions reviewed, evaluated for feasibility

7. Manitoba Health activities