Around the world, countries with active radon programs utilize radon risk maps in their planning and communications. Natural hazards like radon gas have a strong geospatial component, and play a decisive role in communicating risk information.

In 2010, Radon Environmental engaged a team of geoscientists to produce a geology-based *Radon Potential Map of Canada*, the first of its kind in the country. The *Radon Atlas of Canada* followed, illustrating how the map was generated and the consequences of radon in our environment. Since publishing the map and atlas in 2011, the company has produced the first integrated *Canada-USA Radon Potential Map*, provincial maps for public health authorities, and regional and municipal maps for direct use in community planning applications.

Geological units form the basic framework of the Canadian map. Geology is the single greatest contributing factor in determining the amount of uranium (and therefore radon) present in any given location.

1. Geologic map of North America database. 2. Sample of Canadian subset. 3. Any number of individual map polygons. 4. Assignment of geological radon potential value. GIS processing was used to evaluate rock units within the geology dataset with respect to other sources, such as uranium geochemistry and radiometric geophysical response. 5. Aeroradiometric survey maps. 6. Uranium geochemical surveys. 7. GIS processing and evaluation. 8. Radon classified polygons.

Approximately 80% of the most densely populated areas of Canada fall within areas of elevated radon potential. The National Capital Region, including the City of Ottawa, is one of those population centres that fall within an area of radon concern. Radon gas is among the highest environmental causes of lung cancer and has the highest mortality rate of all environmental exposures. Understanding radon, where it comes from, and establishing enough data to make an assessment of the risk are the necessary steps in designing solutions to manage that risk.

These maps are constructed using relevant published data sources, independent field work including analytical data acquisition, structural mapping, bedrock sampling, overburden and soil sampling, hydrology-aquifer geochemistry, seismic activity, airborne geological data and available direct indoor radon measurements. All of this information is used to create a queryable illustrated database that can communicate radon risk information for all end users.

No matter where you are on the map, you need to test for radon in your home and workplace. Testing is easy, inexpensive and, should you find a problem, there are simple solutions.
RADON POTENTIAL MAP LICENSE AGREEMENT

IMPORTANT: all maps are licensed only on the condition that you agree with Radon Environmental Management Corporation (Radon Environmental) to the terms and conditions set forth below in this Radon Potential Map License Agreement. PLEASE CAREFULLY READ THE TERMS OF THIS AGREEMENT.

1. INTERPRETATION: As used in this Agreement, the following terms shall have the following meanings:
   (a) “Map” shall mean the Radon Potential Map of the specified region stated (i.e. Canada, North America, Ontario, National Capital Region, etc.) provided to you by Radon Environmental pursuant to this Agreement.
   (b) “Permitted Use” shall mean the following in respect of the following: use on a single website; editorial use in print or electronic media; or personal, non-commercial use.

2. LICENSE TO USE: Subject to the terms and conditions of this Agreement, Radon Environmental grants you a royalty-free, world-wide, non-exclusive, non-transferable license to use the Map only for the Permitted Use. If, in the opinion of Radon Environmental, you attempt to act in breach of this Agreement, Radon Environmental shall have the right to immediately terminate the license contemplated in this section.

3. RESTRICTIONS: Except to the extent explicitly permitted by the Permitted Use, you may not do any of the following:
   (a) add to, alter, modify, abridge or manipulate the Map;
   (b) combine or compile the Map or any part thereof with any other works or images;
   (c) distribute or publish the Map in connection with any commercial purpose or in any manner, including by placing or allowing the Map to be placed on the internet, a website, an electronic bulletin board or ftp server, for any purpose other than the Permitted Use;
   (d) use the names of Radon Environmental or any of its related entities in your advertising, publicity, or otherwise use the Map in a way that implies an affiliation with or endorsement by Radon Environmental of any product or service;
   (e) duplicate or make copies of the Map except to the extent reasonably necessary for your personal (non-commercial) use or to create a single backup copy of the Map;
   (f) sell, resell, sublicense, assign, distribute, give away, lend, rent, lease, otherwise transfer any part of your interest in the Map or any copies thereof or provide others with any portion of the Map except in connection with the Permitted Use.

You acknowledge and agree that it would be difficult to measure damages to Radon Environmental from any breach by you of this section or any use of the Map other than as expressly permitted by this Agreement, and that damages would therefore be an inadequate remedy for such a breach. Accordingly, you agree that in the case of any breach contemplated in this section, Radon Environmental shall be entitled to, notwithstanding subsection 9(a), and in addition to all other remedies it may have, seek an injunction or other appropriate order in any court of competent jurisdiction to restrain any such breach by you or any non-permitted use of the Map without showing or proving any actual damage sustained.

4. OWNERSHIP: You acknowledge and agree that the Map and any and all copyright, knowledge, know-how or other intellectual property, whether or not patentable or copyrightable, contained within or relating to the Map, is and will remain the sole and absolute property of Radon Environmental and that Radon Environmental owns any and all right, title and interest in and to the Map. Radon Environmental has an interest in protecting the Map and such Map is protected by United States, Canadian and other applicable copyright laws. No right, title or interest in or to any trademark, service mark, logo, or trade name of Radon Environmental or its related entities are granted to you under this Agreement.

5. WARRANTY AND DISCLAIMER: Radon Environmental warrants that to the best of its knowledge it has the right to grant you the license contemplated in this Agreement. Except as set out in the previous sentence, the Map is provided to you by Radon Environmental “as is”, and you acknowledge and agree that Radon Environmental makes no representations and extends no warranties of any kind, either express or implied. Without limiting the foregoing there are no express or implied warranties of merchantability, fitness for a particular purpose, durability, or correspondence with a particular description. You further acknowledge and agree that: (i) Radon Environmental is providing the Map as an illustration of the predictive potential of the geological formations found in the areas depicted in the Map only; (ii) the Map should not be relied upon in forming any determination regarding the actual level of radon gas present in any area; (iii) your use of and reliance upon the information represented in the Map is at your own risk; and (iv) Radon Environmental makes no representation about the accuracy of the information depicted in the Map.

6. LIMITATION OF LIABILITY: Radon Environmental will not be liable to you or any other person or entity for any liability, loss or damages caused or alleged to have been caused, either directly or indirectly, by your use or reliance upon the information depicted in the Map. Without limiting the foregoing, in no event will Radon Environmental be liable for any lost revenue, profit, business interruption, or for special, indirect, consequential, incidental or punitive damages, however caused and regardless of the theory of liability, arising out of or related to the use of or inability to use the maps, even if Radon Environmental has been advised of the possibility of such damages. You acknowledge and agree that the exclusions and limitations of liability set out in this agreement are fair and reasonable in the commercial circumstances, and such limitations have been, in part, an inducement to Radon Environmental entering into this agreement.

7. INDEMNITY: You will indemnify, defend and hold harmless Radon Environmental, its directors, employees and agents from and against any and all liability, loss, damage, action, claim or expense (including attorney’s fees and costs at trial and appellate levels) in connection with any third party claim, suit, action, demand or judgment arising out of, connected with, resulting from, or sustained as a result of your use of the Map in breach of this agreement.

8. TERM: This Agreement is effective until terminated. You may terminate this Agreement at any time by ceasing to use the Map and destroying or deleting any copies of the same (electronic or otherwise). This Agreement will terminate immediately, on notice from Radon Environmental if you fail to comply with any provision of this Agreement. On any termination of this Agreement Sections 3 (Restrictions), 4 (Ownership), 5 (Warranty and Disclaimer), 6 (Limitation of Liability) and 7 (Indemnity) of this Agreement shall survive and continue in full force and effect.

9. GENERAL PROVISIONS:
   (a) This Agreement will be governed and interpreted according to the laws of British Columbia, Canada. You agree that by accepting the terms of this Agreement and using the Map you have attorned to the exclusive jurisdiction of the Courts of competent authority in the Province of British Columbia.
   (b) This Agreement is the entire agreement between you and Radon Environmental relating to the subject matter contemplated herein.
   (c) No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of Radon Environmental.
   (d) The provisions of this Agreement are severable in that if any provision in the Agreement is determined to be invalid or unenforceable under any controlling body of law, that will not affect the validity or enforceability of the remaining provisions of the Agreement.

Agreement
Your use of the Map indicates you have read and agree to be bound by the terms of the agreement, and is expressly conditioned on your acceptance without modification of these Terms and Conditions.