

Healthy Environments and Climate Change Guideline, 2018

Population and Public Health Division,
Ministry of Health and Long-Term Care

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Preamble

The Ontario Public Health Standards: Requirements for Programs, Services, and Accountability (Standards) are published by the Minister of Health and Long-Term Care under the authority of section 7 of the *Health Protection and Promotion Act* (HPPA) to specify the mandatory health programs and services provided by boards of health.^{1,2} The Standards identify the minimum expectations for public health programs and services. Boards of health are accountable for implementing the Standards including the protocols and guidelines that are referenced in the Standards. Guidelines are program and topic-specific documents which provide direction on how boards of health shall approach specific requirement(s) identified within the Standards.

Purpose

The Healthy Environments and Climate Change Guideline is intended to assist boards of health to develop approaches for promoting healthy built and natural environments to enhance population health and mitigate environmental health risks. The guideline presents existing and new population-based activities to address the health impacts of environmental health issues, which includes climate change and environmental exposures of public health significance.

The guideline supports the development of strategies that raise public awareness and reduce environmental health risks, allowing for evidence-informed program delivery to address the needs of priority populations within local communities.

The objective of this guideline is to identify approaches for boards of health that must be used or considered to achieve the following:

- Enhance public health capacity to address risk factors in the environment, including the impacts of climate change, using population-based activities. (e.g. Vulnerability Assessments).
- Identify and enable mitigation of risk factors related to environmental exposures that can contribute to the burden of illness.
- Facilitate upstream, preventative strategies for advancing healthy built and natural environment initiatives using standard provincial approaches.
- Align existing public health initiatives across boards of health to ensure optimum delivery from both the Healthy Environments and Chronic Disease Prevention Standards.

The following approaches are required for use by boards of health, as outlined in this guideline:

- Engaging Municipalities in Healthy Environment Strategies
- Climate Change Adaptation
- Environmental Exposures

Reference to the Standards

Population Health Assessment

Requirement 2: The board of health shall interpret and use surveillance data to communicate information on risks to relevant audiences in accordance with the *Healthy Environments and Climate Change Guideline, 2018* (or as current); the *Infectious Diseases Protocol, 2018* (or as current); and the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Healthy Environments

Requirement 1: The board of health shall:

- a) Conduct surveillance of environmental factors in the community;
- b) Conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations; and
- c) Use information obtained to inform healthy environments programs and services in accordance with the *Health Hazard Response Protocol, 2018* (or as current); the *Healthy Environments and Climate Change Guideline, 2018* (or as current); the *Infectious Diseases Protocol, 2018* (or as current); and the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Requirement 3: The board of health shall assess health impacts related to climate change in accordance with the *Healthy Environments and Climate Change Guideline, 2018* (or as current).

Requirement 4: The board of health shall engage in community and multi-sectoral collaboration with municipal and other relevant partners to promote healthy built and natural environments in accordance with the *Healthy Environments and Climate Change Guideline, 2018* (or as current).

Requirement 5: The board of health shall collaborate with community partners to develop effective strategies to reduce exposure to health hazards and promote healthy built and natural environments in accordance with the *Health Hazard Response Protocol, 2018* (or as current) and the *Healthy Environments and Climate Change Guideline, 2018* (or as current).

Requirement 7: The board of health shall, as part of its strategy to reduce exposure to health hazards and promote healthy natural and built environments, effectively communicate with the public by:

- a) Adapting and/or supplementing national/provincial health communications strategies where local assessment has identified a need;
- b) Developing and implementing regional/local communications strategies where local assessment has identified a need; and
- c) Addressing the following topics based on an assessment of local needs:
 - i) Built and natural environments;
 - ii) Climate change;

- iii) Exposure to hazardous environmental contaminants and biological agents;
- iv) Exposure to radiation, including UV light and radon;
- v) Extreme weather;
- vi) Indoor air pollutants;
- vii) Outdoor air pollutants; and
- viii) Other emerging environmental exposures

in accordance with the *Healthy Environments and Climate Change Guideline, 2018* (or as current).

Required Approaches

Engaging Municipalities in Healthy Environment Strategies

- 1) Boards of health shall develop and maintain working relationships with local municipalities to integrate population health approaches through the actions outlined below.
 - a) Boards of health shall participate in local processes for developing, updating or reviewing municipal bylaws and standards as authorized by municipalities under the *Ontario Municipal Act* to support changes which are intended to improve health outcomes and address the impacts of the social determinants of health.³ Policy and bylaws that may be considered for review include, but are not limited to:
 - i) Property standards;
 - ii) Housing conditions;
 - iii) Temperature control in rental housing;
 - iv) Pest and vermin control;
 - v) Restrictions on open fires in residential areas; and
 - vi) Restrictions on wood burning stoves.
 - b) Boards of health shall collaborate with municipalities under the *Ontario Planning Act* to address local impacts of climate change and reduce exposure to environmental health hazards in the community.⁴ Collaboration activities may include reviewing and providing comments to local planning authorities on regional and local official plans not less than every 5 years as part of the local planning cycle. Aspects to consider for review include, but are not limited to:
 - i) Land use compatibility (e.g., air quality impacts, PM_{2.5}, protection of ground water);
 - ii) Climate change impacts (e.g., integrating green space and shade policy options to adapt to rising extreme heat events, and flood protection); and
 - iii) Other local or emerging environmental health concerns.

Climate Change Adaptation

- 1) Boards of health shall consider the use of the *Ontario Climate Change and Health Toolkit, 2016* or other equivalent tool when assessing the health vulnerability status of their communities.⁵ Assessments should address rising temperatures, vector-borne illness, food and waterborne illness, forest fires, and air pollution.
- 2) Boards of health shall monitor the impacts of climate change within their jurisdiction to inform local vulnerability plans using indicators such as:
 - a) Number of heat and cold alerts for the summer and winter seasons respectively;
 - b) Number of Smog Air Health Advisories (SAHA) per year;
 - c) Number of extreme weather events requiring public health emergency interventions per year;
 - d) Surveillance data for vector-borne illness rates (e.g. West Nile Virus, Lyme disease);
 - e) Syndromic surveillance data (e.g. hospital admissions coinciding with extreme heat, extreme cold, poor air quality events etc.); and
 - f) Number of climate change adaptation measures implemented.
- 3) Boards of health shall engage in actions to mitigate heat health impacts using tools such as the *Harmonized Heat Warning and Information System for Ontario, 2016* (or as current).⁶

Environmental Exposures

- 1) Boards of health shall consider planning and implementing public awareness initiatives to address environmental exposures of:
 - a) Solar Ultra Violet Radiation;
 - b) Radon; and
 - c) Other region-specific environmental exposure(s).
- 2) Boards of health shall use best available evidence and resources, which could include the complementary resources referenced in this document, to develop and implement mitigation strategies for radon exposures.
- 3) Boards of health shall use tools and evidence-based approaches to address the public health impact(s) resulting from poor air quality and enable the public to take precautions through the promotion of tools such as the *Air Quality Health Index (AQHI)*.

Glossary

Adaptation: The process societies go through in order to prepare for and cope with an uncertain future. Adapting to climate change entails taking measures to reduce the negative effects of climate change – or to take advantage of the positive effects.

Intervention: An activity or set of activities aimed at modifying a process, course of action or sequence of events in order to change one or several of their characteristics, such as performance or expected outcome. A public health intervention would be a programme or policy designed to reduce the burden of illness and prevent or reduce risk exposures.³

Priority Population: Priority populations are identified by surveillance, epidemiological, or other research studies. They are those populations that are at risk and for which public health interventions may be reasonably considered to have a substantial impact at the population level.

Syndromic Surveillance: Syndromic surveillance monitors in real time or as close to it as possible, information from electronic data collected for other purposes – such as emergency department visits – to detect emerging patterns of disease outbreaks sooner than with traditional public health methods.⁷

Vulnerability: It is the propensity or predisposition to be adversely affected. Vulnerability can arise because of individual susceptibility, geographic location, socioeconomic factors, and a wide range of other factors that determine an individual or community's susceptibility to harm and ability to cope with an event. For example, certain individuals can be vulnerable to extreme heat events because of where they live (parts of cities may warm more than others), characteristics of their dwelling (such as whether there is cross ventilation) that influence inside temperature, socioeconomic status, age, fitness, and a range of other factors that determine their susceptibility to high ambient temperatures.²

Complementary Resources

1. **Ontario Climate Change and Health Toolkit**
 - **Ontario Climate Change and Health Vulnerability and Adaptation Assessment Guidelines: Technical Document**
http://www.health.gov.on.ca/en/common/ministry/publications/reports/climate_change_toolkit/climate_change_toolkit.aspx
 - **Ontario Climate Change and Health Vulnerability and Adaptation Assessment Guidelines: Workbook**
 - http://www.health.gov.on.ca/en/common/ministry/publications/reports/climate_change_toolkit/climate_change_toolkit.aspx
 - **Ontario Climate Change and Health Modelling Study: Report**
http://www.health.gov.on.ca/en/common/ministry/publications/reports/climate_change_toolkit.aspx
2. **Harmonized Heat Warning Information System**
 - http://www.health.gov.on.ca/en/common/ministry/publications/reports/heat_warning_information_system/heat_warning_information_system.aspx
3. **Air Quality Health Index (AQHI)**
 - <http://www.ec.gc.ca/cas-aqhi/default.asp?lang=En&n=CB0ADB16-1>
4. **Radon Mitigation Resources, Examples & Tools**
 - **Government of Canada Radon Guideline**
<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/radiation/radon/government-canada-radon-guideline.html>
 - **Health Canada: National & International Resource Bank**
<http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/resource-ressources-eng.php#a3>
 - **The Lung Association: Radon Awareness**
<https://www.on.lung.ca/take-action>
5. **Policies addressing UV Radiation**
 - **Shade Policy and Guidelines for the City of Toronto: Implementation, Dissemination, and Next Steps**
 - **York Region Public Health: Shade- A Planning Guide**
<http://www.york.ca/wps/portal/yorkhome/health/yr/cancer/sunsafety/sunsafetyresources/sunsafetyresources>
6. **Healthy Community Design: Policy Statements for Official Plans**
<http://www.simcoemuskokokahealth.org/JFY/OurCommunity/healthyplaces/Healthydesign.aspx>

7. **Public Health and Land Use Planning Guide**
<http://www.opho.on.ca/What-We-Do/Resources.aspx>
8. **Public Health and Environmental Assessments**
<http://www.opho.on.ca/What-We-Do/Resources.aspx>

References

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3. *Municipal Act*, SO 2001, c 25. Available from: <https://www.ontario.ca/laws/statute/01m25>
4. *Planning Act*, RSO 1990, c P.13. Available from: <https://www.ontario.ca/laws/statute/90p13>
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