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The Regional Municipality of Durham Information Report

From: Commissioner & Medical Officer of Health
Report: #2024-INFO-58
Date: September 27, 2024

Subject:

Climate Change and Health Vulnerability Assessments; Extreme Heat Report

Recommendation:

Receive for information

Report:

1. Purpose

1.1 To provide an update on Durham Region Health Department's (DRHD's) Climate Change and Health Vulnerability Assessments (CCHVAs).

2. Background

2.1 DRHD is mandated to conduct health vulnerability assessments under the [Ontario Public Health Standards: Requirements for Programs, Services and Accountability](#) (OPHS).

2.2 The [Healthy Environments and Climate Change Guideline](#) of the OPHS requires DRHD to assess health impacts related to climate change.

2.3 DRHD is completing the following seven reports in a special CCHVA series called Understanding the Local Health Impacts of Climate Change:

- a. A [background primer on climate change and health](#) in Durham Region, which was released on August 12, 2024, followed by six CCHVAs on:
- Extreme heat
 - Solar UV radiation
 - Vector-borne disease
 - Food and water impacts
 - Extreme weather

- Air quality

2.4 The report series aims to:

- a. Improve understanding of the links between climate change and health.
- b. Assess the risks of local climate hazards and associated health impacts.
- c. Prioritize health equity and priority populations.
- d. Establish a baseline for future analysis.

2.5 The extreme heat CCHVA entitled [Climate Change and Health in Durham Region: Assessing the Impact of Extreme Heat](#) was released on September 23, 2024.

2.6 Reviews and feedback on the report were provided by the Mississaugas of Scugog Island First Nation and Regional Sustainability staff of the Office of the CAO.

2.7 The report, along with an executive summary are available at www.durham.ca/ClimateAndHealth.

3. Report Highlights

3.1 The report explores current and future health impacts of extreme heat in Durham Region.

3.2 It establishes an equity-focused framework for assessing and addressing factors of heat vulnerability based on extreme heat exposure, sensitivity, and adaptive capacity.

3.3 It provides a knowledge base to support diverse strategies to prepare and protect residents, particularly those worst affected and least protected from extreme heat.

3.4 Key findings of the report:

- a. Durham Region should be prepared for increasing frequency and intensity of extreme heat events due to climate change.
 - Extreme heat events in Durham Region are expected to more than double in the coming decades.
- b. Health impacts may be severe but are also preventable:
 - Extreme heat events are the deadliest weather-related events in Canada and are associated with severe illness, pregnancy complications, hospitalization and death.
 - Extreme heat can overwhelm and disrupt health systems.
 - Durham Region data demonstrate increased health burden and emergency room visits associated with temperatures above 30° C.

- It is possible to prevent local heat-related illness and death by reducing heat exposure, prioritizing those most sensitive to negative health impacts and supporting local capacity for taking protective measures.
- c. Not everyone is affected equally and there is strong evidence of a social gradient of heat-related health impacts. There is a need to prioritize residents who are worst affected and least protected, including:
- Durham Region's large and rapidly growing older adult population.
 - People living in Durham's seven priority neighbourhoods due to the convergence of multiple risk factors within these settings.
 - People living in urban heat islands and hot buildings who may be exposed to even higher than forecasted temperatures.
 - People living in places at greater risk of high indoor temperatures.
- d. As residents experience the strain of increasing extreme heat, so will the natural environment.
- Deforestation and land-use change have contributed to extreme heat vulnerability in the Region.
 - Heat tolerant, nature-based solutions can cool neighborhoods and increase heat resilience.
- e. Increasing heat resilience requires addressing key knowledge gaps such as:
- Data and information about residents without cooling systems and their heat coping barriers and needs.
 - Methods for identifying and reaching isolated individuals during heat waves.
 - Data on the distribution, accessibility, and use of cooling centres.
 - Identification of community spaces with high need for shade/green space.
- f. Local strengths to protect Durham Region residents from extreme heat include:
- Existing forests, wetlands, and grasslands crucial to heat mitigation.
 - DRHD's Heat Warning and Information System.
 - The Region-wide Durham Greener Homes Program.
 - The Region's energy efficiency and resilience strategy for the Durham Regional Local Housing Corporation multi-unit seniors building portfolio that includes in-home cooling.
 - Tree planting such as Regional collaboration with local municipalities to promote and subsidize the LEAF (Local Enhancement and Appreciation of Forests) backyard tree planting program.
 - Strong shade policies in some municipalities.

4. Relationship to Strategic Plan

4.1 This report aligns with the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Goal 1: Environmental Sustainability

- 1.4: Demonstrate leadership in sustainability and addressing climate change.

b. Goal 2: Community Vitality

- 2.2: Enhance community safety and well-being.
- 2.3: Influence the social determinants of health to improve outcomes for vulnerable populations.
- 2.5: Build a healthy, inclusive, age-friendly community where everyone feels a sense of belonging.

5. Next Steps

5.1 The extreme heat report will be disseminated and promoted to municipal and community partners. The communication plan includes a news release and social media messages to build public awareness of extreme heat as one of the six climate hazards of concern for communities as well as the link between extreme heat and health.

5.2 The remaining reports of the CCHVA series will be completed, published and promoted in sequence.

5.3 The next report entitled, Climate Change and Health in Durham Region: Assessing the Impact of Solar Ultraviolet Radiation, is expected in the winter of 2024.

5.4 The report development process will continue to integrate the review and feedback of the Mississaugas of Scugog Island First Nation and Regional Sustainability staff.

6. Conclusion

6.1 The CCHVA report series is intended to help decision-makers better understand the health risks that Durham Region residents will face in the coming years.

6.2 It will help guide equity-focused adaptation plans to protect residents, especially those who are most affected and least protected.

6.3 The CCHVA report series will help support municipalities, community organizations and residents respond to the growing impacts of climate change.

Respectfully submitted,

Original signed by

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