

# City of Toronto Cold Weather Plan

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 **TORONTO** Public Health



# Cold Weather Plan

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## **Goal of the Cold Weather Plan**

The Goal of the Cold Weather Plan is to prevent harmful health impacts of cold weather on residents of Toronto.

The Cold Weather Plan provides a framework for implementing and co-ordinating cold weather preparedness and response activities which focus on reducing the negative health impacts of cold weather conditions. The Plan's main objectives are to

- alert those most vulnerable that cold weather conditions are either expected or currently exist;
- enable those most vulnerable to take appropriate precautions;
- trigger response actions by agencies who are in a position to provide services or alter operations in such a way as to protect vulnerable people from cold weather. The Plan includes a particular focus on preventing direct impacts of cold exposure on people experiencing homelessness.

## **Background**

Each year, winter weather brings cold temperatures and cold and wet conditions to Toronto. Cold weather can adversely affect the health and wellbeing of many of Toronto's residents.

It is well-known that people experiencing homelessness are particularly vulnerable to direct health impacts of cold weather. Such impacts include hypothermia, frostbite, frostnip, and trench foot. Hypothermia occurs when the body's core temperature drops below 37 °C and can progress to a life-threatening condition when shivering stops, the person loses consciousness, or cardiac arrest occurs. Untreated severe frostbite can lead to permanent nerve damage, blisters, and even to infection and loss of limbs. Trench foot results from prolonged exposure to a damp or wet environment and can lead to numbness, leg cramps, swelling, tingling pain, blisters or ulcers, bleeding under the skin, and even gangrene.

People experiencing homelessness are at high risk for cold weather injuries because they are likely to spend long periods of time outside, resulting in increased exposure. Many chronic problems faced by people experiencing homelessness, including inadequate clothing, malnutrition, and underlying infection increase the risk of developing and dying from hypothermia or suffering from frostbite. Some factors that contribute to the risk of homelessness, such as alcohol use, psychiatric disorders, and use of certain medications can also increase the risk of cold weather injuries.

However, emerging research suggests that the health impacts of cold weather are not limited to direct impacts of cold on homeless populations. Studies in countries around the world including many northern countries find that the risk of premature death or hospitalization increases in the general population as temperatures get colder. Periods of especially cold weather that are unusual relative to normal conditions are also linked with higher rates of premature death and hospitalization. The research consistently shows that these effects occur several days and up to

several weeks after exposure to cold weather. The temperature-related impacts persist even when the contribution of wintertime influenza to mortality and illness is considered.

Most of these outcomes arise from heart problems, especially heart attacks. Researchers believe that it may occur because the body protects core temperature from cold weather by restricting blood flow to extremities, which increases overall blood pressure. The effect is not thought to be related to snow shovelling. There is also some evidence that cold increases the risk of respiratory conditions including asthma and chronic obstructive pulmonary disease, as well as risk of stroke.

The elderly and those with pre-existing health conditions, especially heart conditions, may be at particular risk from exposure to the cold. A World Health Organization report estimated that those over 75 years of age may have a winter excess mortality of about 30%. Some evidence suggests that socioeconomic factors such as deprivation also increase the risk of hospitalization or death due to cold.

A 2005 analysis for Toronto concluded that cold contributes to an average of 105 premature deaths each year in the city. Separate analyses also suggest that for Toronto's elderly population, the risk of cold-related death could be up to six times the risk that exists for the general population. These findings may underestimate the impact of cold weather as they did not account for more recent evidence that the effects of cold weather on mortality and morbidity can occur days and even weeks after exposure.

Additional details about the health impacts of exposure to cold weather are available in a technical report called *Health Impacts of Cold Weather* at [www.toronto.ca/health/reports](http://www.toronto.ca/health/reports).

## Authority

Extreme Cold Weather Alerts were first implemented in Toronto during the winter of 1996/97, and arose from a June 1996 report of the Homeless Emergency Action Task Force to respond to the increased number of homeless people who needed services. The strategy was developed in consultation with social service agencies, volunteers, homeless people and government representatives.

Since 2004, Toronto's Shelter, Support and Housing Administration Division has been issuing Extreme Cold Weather Alerts and co-ordinating the response to protect people experiencing homelessness from the adverse impacts of exposure to cold weather.

In July 2014 Toronto City Council approved the transfer of responsibility for co-ordinating Toronto's cold weather alerts from Shelter, Support and Housing Administration to the Medical Officer of Health in time for the 2014-2015 cold weather season. Council's decision further activated a June 2014 Board of Health request that *should Council approve [this transfer of responsibility,] ... the Medical Officer of Health develop a comprehensive Cold Weather Plan in collaboration with the General Manager of Shelter, Support and Housing Administration and other City officials as appropriate to reduce health risks for City of Toronto populations* (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.HL32.3>).

This transfer of responsibility aligns well with the requirements under the Ontario Public Health Standards that Boards of Health are required to increase awareness of the risks associated with extreme weather, and also assist community partners to develop healthy policies related to reducing exposure to extreme weather.

## **Components of the Plan**

The Cold Weather Plan is expected to be a living document, maintained and updated by Toronto Public Health (TPH). While the key components described below reflect the current understanding and expectations regarding the Plan, this document will be updated to reflect developments and enhancements to the Plan over time. In particular, TPH expects to develop a network of Cold Weather Plan partners, learn from experiences of both TPH and our partners, develop new health promotion resources, and monitor rapidly emerging research related to health impacts of cold weather.

The Cold Weather Plan is a public document and is available from [www.toronto.ca/health](http://www.toronto.ca/health).

## **Extreme Cold Weather Alerts**

Extreme Cold Weather Alerts will be declared by the Medical Officer of Health when conditions are expected to be associated with an elevated risk of health impacts from cold weather. The intent of calling an alert is to:

- Warn people who are vulnerable to cold weather and their service providers and caregivers that such conditions are expected or already exist in the City;
- Urge vulnerable people to take measures to protect their health;
- Trigger response activities by City and community partners to protect vulnerable people within the city (e.g., enhance services).

The Cold Weather Plan will be in effect each year between November 15 and April 15.

During this time period, the Medical Officer of Health will issue Extreme Cold Weather Alerts when Environment Canada forecasts that overnight temperatures will reach -15 °C or colder in the City of Toronto.

Extreme Cold Weather Alerts may also be issued at warmer temperatures when Environment Canada's weather forecast includes one or more factors that increase the impact of cold weather on health, such as:

- Wind chill;
- Precipitation;
- Low daytime temperatures;
- Days/nights of cold weather in a row;
- Sudden cold weather.

At all times, the Medical Officer of Health will apply the guidelines with some discretion after consideration of current and expected weather conditions. This discretion is intended to enable response services to be maintained when conditions warm up briefly between cold spells or prevent them from being needlessly mobilized when temperatures dip for brief periods during otherwise moderate weather conditions.

Shelter, Support and Housing Administration additionally retains the ability to extend additional services to their clients at any time that they perceive weather conditions to create a risk for the populations that they specifically serve, regardless of whether an Extreme Cold Weather Alert is declared.

## **Notification of Cold Weather Plan Partners and Stakeholders**

TPH is responsible for the notification, activation, and termination of Extreme Cold Weather Alerts. Once the Medical Officer of Health issues an alert, immediate notification of the public and those participating in cold weather response is critical to ensure that individuals and organizations can respond to protect themselves and their clients in a timely manner.

Public notification of Extreme Cold Weather Alerts occurs through media releases issued to news outlets 7 days a week, news releases issued to the City's Strategic Communications Division, live updates to TPH and City of Toronto web pages, and through social media.

Organizations that carry out cold weather response activities in response to Extreme Cold Weather Alerts may receive direct notification from TPH by email or voicemail. TPH notifies three separate groups when an Extreme Cold Weather Alert is declared:

- Key response partners who are contacted directly by telephone. This group includes Shelter, Support and Housing Administration, the Office of Emergency Management, Toronto Paramedic Services, and TPH Strategic Support.
- Cold Weather Plan partners who provide direct services or response actions as detailed in the Cold Weather Plan. Notification of this group is by voicemail and email. This includes specific TPH directorates or programs and select City divisions.
- Community partners, agencies, and individuals, including those that service vulnerable populations, and various City staff. Notification of this group occurs by email. TPH is currently assembling a list of organizations and individuals who wish to be notified of Extreme Cold Weather Alerts. If you or your organization wish to be added to TPH's Extreme Cold Weather Alert notification list, please contact Toronto Health Connections at 416-338-7600.

All notification lists are regularly updated and each participating member is responsible for notifying TPH of any changes to contact names, email addresses, and telephone numbers, and to make sure that their own internal fan-out lists are maintained and current.

## **Health Promotion**

A key role for Toronto Public Health is to provide information about the health impacts of extreme cold weather and about what people can do to protect themselves and others from these impacts. The advice may include steps to be taken on extremely cold days as well as advance planning and preparation that helps to reduce health risks from cold weather. This information is available from [www.toronto.ca/health](http://www.toronto.ca/health) and includes:

- People who are most at risk from extreme cold weather;
- The types of health impacts that may arise from exposure to cold weather, both among homeless populations and in the general population;
- Ideas on how to stay warm and dry to prevent health impacts of cold weather;
- Advice about how to help others;
- Web links to helpful sites that provide information about how to be prepared for winter, including regular maintenance at home as well as emergency planning for the possibility of a power outage;
- Advice for groups and organizations who provide services or care for vulnerable groups;
- Contact information for Toronto's Shelter, Support, and Housing Administration, who deliver a suite of cold weather-related services for people experiencing homelessness;
- Direction to contact 311 if there is a need to report people at risk.

## **Cold Weather Committee**

A Cold Weather Committee will be assembled and co-ordinated by Toronto Public Health, with an initial face-to-face meeting expected in 2015. The role of the committee will be to develop, monitor, and improve Toronto's Cold Weather Plan. Members of the committee are expected to consist mainly of key partners who provide direct services under the Cold Weather Plan. The committee will likely meet twice a year: ahead of the cold weather season, to confirm the co-ordination and implementation of the Cold Weather Plan, and after the cold weather season in order to review the effectiveness of response efforts under the Cold Weather Plan.

Committee members will also be responsible for ensuring that all those involved in the response are familiar with the Plan. In addition, all plan members are encouraged to provide information to their own staff about how to avoid cold-related health impacts while on the job.

As the functions of the Hot Weather Response Committee and the Cold Weather Plan Committee are similar, TPH will explore whether efficiencies can be attained by co-ordinating the meeting times for the two groups.

## **Plan Partners and Roles**

### **Toronto Public Health**

In addition to issuing and terminating Extreme Cold Weather Alerts, TPH is responsible for the overall administration and coordination of the Cold Weather Plan.

This involves:

- Monitoring weather conditions and forecasts. TPH staff will monitor weather conditions daily and consult with the Medical Officer of Health as necessary when current or forecast weather conditions indicate that an Extreme Cold Weather Alert should be called;
- Developing and chairing a Cold Weather Committee. This committee is described above, in this document;
- Developing and co-ordinating distribution of cold weather educational resources. TPH will develop and maintain resources that provide information about health impacts of cold weather, vulnerable populations, and how to prevent adverse impacts from cold weather. This information will be available online and will be communicated through the media, including social media;
- Developing and communicating information targeted to vulnerable adults and seniors about how to stay safe in cold weather, and how to prepare for wintertime emergencies. TPH provides the following services:
  - Developing and communicating information targeted to vulnerable adults/seniors about how to stay safe in cold weather, and how to prepare for wintertime emergencies
  - Delivering community presentations to groups of vulnerable adults and seniors/community agencies
  - Disseminating cold weather and emergency preparedness tip sheet card to vulnerable adults group
- Conducting media interviews as necessary. TPH issues media releases and provides the City's Strategic Communications with electronic copies of these releases. TPH also arranges media interviews for key spokespersons and will make the logistical arrangements for new conferences, as needed;

### **Shelter, Support & Housing Administration**

As part of a Cold Weather Plan, the Shelter, Support & Housing Administration division has leadership over Extreme Cold Weather Alert response activities intended to prevent cold-related injury among people experiencing homelessness.

Shelter, Support, and Housing Administration co-ordinates a suite of services that support people experiencing homelessness living outside and provides assistance during winter months and extreme cold weather conditions. These services build on existing year-round homeless support services and include:

- Respite services such as drop-in centres that provide temporary escape from the cold;
- Additional street outreach services to connect with and monitor individuals who are homeless and continue to camp outside ;
- Financial support to the Out of the Cold program (OOTC), which offers both a meal program and an overnight bedded program. OOTC is delivered by volunteers in a network of interdenominational, faith-based organizations that are coordinated by a community agency through a purchase of service agreement with Shelter, Support and Housing Administration. Currently, there are 16 OOTC sites dispersed throughout the city. These sites typically operate one night per week between November and April.

- Supporting three existing drop-ins run by community agencies to expand to 24 hr/overnight services when Extreme Cold Weather Alerts are called. There will be one in the east side of downtown, one in the west side and one focused on youth.

### **Municipal Licensing and Standards**

For rental units where landlords pay for heating costs, Toronto has a bylaw (Municipal Code Chapter 497 Article 1) that requires landlords to provide heating up to at least 21 °C between September 15 and June 1 of each year. MLS is responsible for investigating complaints from tenants of no heat or low-heat. In the event of an Extreme Cold Weather Alert, front line officers are prepared to respond to an increase in such calls.

### **Toronto Paramedic Services**

Toronto paramedic Services has agreed to report critical incidents (death or transfer of an individual to hospital believed to be cold-related where the environmental conditions observed by the paramedic indicate possible excessive cold exposure) to TPH.

Toronto Paramedic Services also maintains the ability to activate a Division Operations Centre (DOC) and in the event of a severe and prolonged cold event would have the Toronto Paramedic Services DOC fully operational within a couple of hours to help coordinate the City's Cold Weather Response.

### **Toronto Office of Emergency Management**

The Office of Emergency Management maintains the Emergency Operations Centre in a state of operational readiness. During a severe or prolonged cold weather event, the Medical Officer of Health may request that the Emergency Operations Centre be activated. Additional details about the potential role of the EOC in a cold weather emergency are described under the "Extreme Cold Weather Emergencies" section of this Plan.

### **Toronto Parks, Forestry and Recreation**

During Extreme Cold Weather Alerts, community centres are available as places for people to warm up during regular business hours. As well, "Parks Ambassadors" connect with potentially vulnerable individuals in City parks and public green spaces and may notify Streets to Homes staff, who provide and coordinate mobile street outreach services.

### **Toronto Police Service**

The Toronto Police Service, when notified of an Extreme Cold Weather Alert, ensures that its members pay special attention to areas where vulnerable citizens at risk of cold-related illness are found and encourages them to go to a safe place.

### **311 Toronto**

311 Toronto offers a 24/7 telephone service to provide information about City Services and programs, including cold weather response.

### **Toronto Health Connection**

Toronto Health Connection (THC) offers the opportunity to speak to a health professional for free, confidential information and advice, including how to prevent cold weather-related health impacts. THC can be reached at 416-338-7600. People who are deaf, deafened or hard of hearing can call 416-392-0658 for TTY.

## **Community Care Access Centres**

Toronto Central Community Care Access Centre (CCAC) delivers home and community health care and connects people to other services in our community. The CCACs integrate consideration of indoor temperatures into regular in-home assessments conducted for vulnerable clients. Should a home environment be identified as too cold, follow-up will occur with the client's family to address concerns. The CCAC further encourages Cold Weather Plan partners who encounter individuals in the community and may require additional support (e.g., through outreach programs, or at a warming shelter, etc.) to refer that person to CCAC for a home risk assessment and case management and/or referral to other community services that may better meet their needs.

## **Collaboration and Partner Engagement**

Maintaining a robust Cold Weather Plan will depend on co-ordination and collaboration with organizations and individuals who play a role in education, planning, and response related to cold weather. Over the coming years, Toronto Public Health will seek to develop a network of partners who are able to collaborate and contribute to cold weather response in the City. A new process to engage organizations who may have a role in cold weather response (including conducting health promotion) will be vital to determine those that are best positioned to deliver cold weather responses, the types of response actions that are feasible and effective, and identify where efficiencies and improvements can be made in delivering identified responses. Once these issues have been explored, TPH will update the Cold Weather Plan with information about new partnerships and response actions.

To carry out this engagement, TPH plans to build on established partnerships related to climate change and extreme weather, and engage City agencies, boards, commissions, and divisions. As well, TPH will reach out to potential new partners that are identified as having an interest in health impacts of cold weather and vulnerable populations in Toronto.

In advance of implementing the Cold Weather Plan for winter 2014-2015, TPH advised key partners (including all members of the hot weather response committee and all City agencies, boards, and divisions) about the new role of Medical Officer of Health in declaring Extreme Cold Weather Alerts in Toronto, and developing a Cold Weather Plan.

## **Related Plans, Protocols, and Programs**

### **Extreme Cold Weather Emergencies**

It is possible that extreme cold weather conditions could be sufficiently severe and/or prolonged that their effects would require action beyond what is outlined by this Cold Weather Plan. For example, extreme cold in combination with power or water shortages, or of extended duration and magnitude could strain the capacity of the health and social services sectors to respond. In such an event, the MOH will request the Toronto Office of Emergency Management (OEM) to activate the City of Toronto's Emergency Operations Centre (EOC). The EOC may be activated with or without the declaration of an emergency. The EOC provides an established and

recognized point of authority to coordinate response resources, personnel and incident information. The Toronto Office of Emergency Management will be able to complement the ongoing cold weather response through activities such as: arranging for services and equipment from local agencies or third party providers ( i.e., private contractors, industry, volunteers, service clubs); ensuring that timely and consistent messages are provided to all staff and media; requesting assistance from and / or liaising with neighbouring municipalities and other levels of government if required, etc.

At some point, a decision may be made to declare a cold weather-related emergency. The Mayor under the provisions of the City of Toronto Municipal Code, Chapter 59 and provincial legislation, Emergency Management and Civil Protection Act has the legal authority to declare an emergency and to take necessary protective measures. Chapter 59 also establishes the Toronto Emergency Management Program Committee (TEMPC) comprised of a number of key executives, including the MOH who has the lead role in providing advice and direction on health-related matters. Other members of TEMPC include the Mayor, the Deputy Mayor, City Manager, the three Deputy City Managers and other senior officials.

However, there is no pre-determined set of criteria that automatically triggers a cold weather emergency. The decision to escalate the municipal response from an Extreme Cold Weather Alert will be taken in consultation with the MOH and other impacted City Divisions, coordinated by the Toronto Office of Emergency Management.

If the decision is made to declare an emergency, the City of Toronto Emergency Plan will be implemented.

More details about the City's Emergency Plan are available from [http://www1.toronto.ca/City%20Of%20Toronto/Office%20of%20Emergency%20Management/Files/pdf/E/emergency\\_plan.pdf](http://www1.toronto.ca/City%20Of%20Toronto/Office%20of%20Emergency%20Management/Files/pdf/E/emergency_plan.pdf).

### **Winter Preparedness and Power Outages**

Toronto Fire Services offers information about how to prepare for winter and the possibility of winter storms in combination with power outages. For more information, please visit: <http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=aa41a069d81f1410VgnVCM10000071d60f89RCRD&vgnextchannel=ddd3840456e1410VgnVCM10000071d60f89RCRD>

### **Occupational Health and Safety**

The City is committed to providing and maintaining safe and healthy working conditions for all employees. Staff safety during cold weather and in particular during Extreme Cold Weather Alerts is a priority. City employees (both management and staff) have access to further information on how to avoid harmful impacts of cold weather, which is posted on the City's web site by Human Resources Occupational Health and Safety. The City's Cold Stress Policy and Guidelines are available from <http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=e93ce03bb8d1e310VgnVCM10000071d60f89RCRD> .

## **Climate Change and Severe Weather**

Toronto is expected to experience more severe and unpredictable weather in the coming years as a result of our changing climate. Additional information about the health impacts of climate change are available [www.toronto.ca/health](http://www.toronto.ca/health). Information about the City's plans and progress on reducing greenhouse gas emissions and on preparing for a changed climate can be found at <http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=a201fbfa98491410VgnVCM10000071d60f89RCRD>.

## **Future Work**

This initial version of the Cold Weather Plan should be considered developmental. Transferring the responsibility to call Extreme Cold Weather Alerts to the Medical Officer of Health offers an opportunity to build on past cold weather response activities and develop a Cold Weather Plan that addresses the range of health impacts associated with extreme cold weather. Moving into the future, TPH will conduct additional consultation, promote relevant partnerships, and review and update the Plan to reflect longer-term goals that include:

- Improving co-ordination of response across city divisions and with external agencies;
- Developing additional partnerships and response actions that may be appropriate;
- Providing a forum for discussing how to best communicate health risks for cold weather;
- Providing a mechanism for regular review of the thresholds for calling alerts as more information becomes available.

In the long-term the Cold Weather Committee will provide a mechanism for regular review, evaluation, and improvement of the City's cold weather response.