City of Toronto
Hot Weather Response Plan
2015
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SECTION 1 INTRODUCTION

1.1 General

The City of Toronto Hot Weather Response (HWR) Plan is a protocol for hot weather response and is comprised of both proactive and reactive components. The reactive components are activated when a Heat Alert or Extreme Heat Alert is declared by Toronto’s Medical Officer of Health (MOH).

Since 2000, the Hot Weather Response Committee, chaired by Toronto Public Health (TPH), has developed, monitored and improved Toronto’s HWR plan. Committee members consist mainly of key partners who provide direct services under the HWR plan. Each year, the HWR committee has a pre-season meeting to confirm the coordination and implementation of the HWR plan and a post-season briefing to review the effectiveness of the response during Heat/Extreme Heat Alerts.

The HWR plan is a living document and is reviewed and up-dated on an annual basis. An electronic version of the plan is provided to HWR committee members, in addition to being posted on the TPH website. It is the responsibility of each committee member to ensure all those involved in the response are familiar with the current plan.

1.2 Purpose

The purpose of the HWR plan is to provide a framework for the implementation and coordination of hot weather response activities which focus on reducing the negative health impacts of extreme heat. The plan’s main objective is to alert those most at risk of heat-related illness that hot weather conditions are either imminent or currently exist, and to take appropriate precautions. Socially isolated seniors are at highest risk of heat-related illness and death. Other at-risk groups include people with chronic and pre-existing illnesses including mental illness, children, and people who are marginally housed or homeless.

In the event of a severe and prolonged heat event, the HWR plan also identifies actions that may be taken to escalate the response under the provisions of the City’s Emergency Plan.

1.3 Background

Toronto has had a heat warning system since 1999. The first heat warning system used a threshold of a one-day forecast of humidex over 40 degrees Celsius. However, humidex levels change rapidly and are very difficult to predict. To address this, during the period of 2000 to 2001, TPH collaborated with the Toronto Atmospheric Fund and the University of Delaware to develop a Heat Health Alert System expressly for Toronto, based on a complex synoptic system. A synoptic system involves historical analysis of regional air masses that are associated with elevated mortality, while taking into account regional differences in population vulnerability to heat.

The synoptic method provided an evidence-based tool with acceptable predictive value in forecasting periods of heat-related mortality. Heat Alerts were forecast when weather conditions suggested that the likelihood of a high level of mortality was between 25 and 50 percent greater than what would be expected on a typical day. Extreme Heat Alerts were forecast when weather conditions suggest that the
likelihood of a high level of mortality is at least 50 percent greater than what would be expected on a typical day.

In May 2015, Toronto Public Health agreed to participate in a Provincial Harmonized Heat Alert and Response System (HARS). Heat Alerts will be called when Environment Canada issues a Level 2 warning. A level 2 warning is indicative of two consecutive days with daytime high temperatures \( \geq 31^\circ C \), together with overnight low temperatures \( \geq 20^\circ C \), or humidex values \( \geq 40 \). Extreme Heat Alerts will be called when Environment Canada's Level 2 warning extends beyond 2 days, that being when there are greater than 32 days of the above conditions.

Factors considered before the Medical Officer of Health declares a Heat Alert or Extreme Heat Alert include the relationship between mortality, air temperature or humidex along with other key areas such as air pollution. The number of consecutive days that these conditions will likely occur is also considered.

TPH and Environment Canada estimate that heat contributes to an average of 120 premature deaths per year in the City, and that the likelihood of mortality increases on each day of a heat episode. As Toronto experiences hotter days and longer heat episodes, the impact of heat on health is expected to increase.

1.4 Authority

The current authority for implementing the HWR Plan is provided through the noted City of Toronto Council directive. It states that “the Hot Weather Response Plan piloted in 2001 be implemented on an annual basis and the appropriate City officials be authorized and directed to take the necessary steps to give effect thereto” (Clause No.1 Report No.3 of the Board of Health adopted by Council on April 16, 17 and 18, 2002 in accordance with the provisions of Chapter 27 of the City of Toronto Municipal Code).

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. Severe and prolonged hot weather may continue and be declared as a heat emergency. The heat event may initially be forecasted as a Heat Alert or Extreme Heat Alert however, the intensity and magnitude may be such that other measures in addition to those identified in the HWR plan would become necessary.

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.

1.5 Members of the Hot Weather Response Plan

The HWR plan is coordinated by TPH and includes both City and community partners. HWR members that provide direct services under the plan are listed below. Section 3 of the HWR plan (Roles and Responsibilities) outlines all the pre-agreed activities each member.
1.6 Service Contracts

TPH on behalf of the City of Toronto has established a service contract with the Canadian Red Cross to provide specific services during Heat/Extreme Heat Alerts.

SECTION 2 OPERATIONS

2.1 Notification, Activation and Termination of the Hot Weather Response Plan

TPH is responsible for the notification, activation and termination of the HWR plan. Following the MOH declaration or termination of an Alert, immediate notification of the public and all those participating in the response is critical. All Notification lists are continuously updated and each participating member is responsible for notifying TPH of any changes to contact names and telephone numbers and to make sure that their own internal fan-out lists are maintained and current.

There are three distinct groups that TPH notifies when an Alert is declared. They include the following:
- Key Response Notification Group
- Core Heat Alert Notification Group
- Community Partners Notification Group

Key Response Notification Group
The Key Response Notification Group consists of key partners who have major responsibilities under the HWR plan and are immediately notified by telephone once an Alert has been declared and terminated by the MOH.

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<thead>
<tr>
<th>Key Response Notification Group</th>
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<tr>
<td>Canadian Red Cross</td>
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<td>Emergency Medical Services</td>
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<td>Toronto Office of Emergency Management</td>
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<td>Toronto Public Health Strategic Support</td>
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Core Heat Alert Notification Group
The Core Heat Alert Notification Group consists of HWR Committee members who provide direct services under the HWR plan, TPH directorates/programs and specific city divisions.

Community Partner Notification Group
A broader list consisting of over 900 community agencies and individuals servicing vulnerable populations and City staff also receive Alert notifications via fax and/or e-mail. This broader group is reviewed and maintained by TPH on a regular basis.

2.2 Severe and Prolonged Heat Event and / or Hot Weather Emergency

Neither a prolonged heat event nor a heat emergency is automatically triggered by a pre-determined set of weather related or other criteria. When an Extreme Heat Alert is severe and/or prolonged that its effects extend outside healthcare services and social services, such as power or water shortages, and/or strains the capacity of the health and social services sectors, the MOH will request the Toronto Office of
Emergency Management to activate the City of Toronto’s Emergency Operations Centre (EOC). The EOC complements the response and provides an established and recognized point of authority to coordinate response resources, personnel and incident information. The decision to escalate the municipal response from an Extreme Heat Alert will be taken in consultation with the MOH and other impacted City Divisions, coordinated by the Toronto Office of Emergency Management. A prolonged heat event would primarily be a public health issue although this would need to be confirmed at the time of the event. If the decision is made to escalate the municipal response (i.e. an emergency is declared), the City of Toronto Emergency Plan will be implemented and municipal and agency efforts will be directed by the Toronto Emergency Management Program Committee (TEMPC) Control Group. The TEMPC Control Group has the authority and responsibility to initiate, co-ordinate, direct and otherwise bring about the implementation of Toronto’s Emergency Plan, expend funds required to obtain and distribute emergency materials, equipment and supplies and obtain volunteer support from public agencies. See the City of Toronto Emergency Plan for further details including emergency notification levels (See City website: [http://insideto.toronto.ca/oem/pdf/emergency_levels_table.pdf](http://insideto.toronto.ca/oem/pdf/emergency_levels_table.pdf)).

### 2.3 Communications

Timely and effective communication of information to the public and between participating agencies is critical during a Heat/Extreme Heat Alert. TPH Communications issues media releases to outlets seven days a week when an Alert is called or terminated. News releases are also e-mailed to Strategic Communications. In addition, TPH Heat Alert website is updated to reflect current Alert status. (See TPH Heat Alert website: [http://www.toronto.ca/health/heatalerts/index.htm](http://www.toronto.ca/health/heatalerts/index.htm)).

Key spokespersons from Toronto Public Health, Toronto EMS, Toronto Shelter Support and Housing Administration and the Canadian Red Cross have been selected to respond to media requests during Heat/Extreme Heat Alerts.

### 2.4 Occupational Health and Safety

The City is committed to providing and maintaining safe and healthy working conditions for all employees. Staff safety during hot weather and in particular during Heat/Extreme Heat Alerts is a priority. City employees (both management and staff) have access to further information on how to avoid heat-related illness, which is posted on the City’s internal web site by Human Resources Occupational Health and Safety. Other participating agencies and members are encouraged to provide additional information to their staff.

## SECTION 3 ROLES AND RESPONSIBILITIES

### 3.1 Toronto Public Health

**Medical Officer of Health**

The MOH or designate declares and terminates Heat Alert or Extreme Heat Alert, conducts media interviews as appropriate and may request the activation of the City’s Emergency Operations Centre in the event of a severe and prolonged heat emergency.
Healthy Environments
Healthy Environments is responsible for the overall administration and coordination of the HWR plan. Healthy Environments responsibilities include the following:

- Monitor, evaluate and maintain the Heat Health Alert System
- Notify and consult with the MOH on forecasted Heat/Extreme Heat Alerts
- Maintain notification lists and initiate notification process
- Update the heat alert website
- Conduct media interviews, as appropriate
- Chair the HWR Committee and provide overall leadership and direction regarding hot weather response
- Oversee the contract with the Canadian Red Cross
- Develop and coordinate distribution of HWR educational resources
- Procure and provide TTC tokens to Shelter, Support and Housing Administration for distribution, as appropriate
- Conduct site visits during an extended extreme heat event to confirm the implementation of the Hot Weather Protection Plan and to evaluate its effectiveness; and, provide Landlord packages as required.
- Investigate reports of critical incidents (possible heat related illness or death) reported to Toronto Public Health from Toronto Emergency Medical Services or the Office of the Chief Coroner, Toronto Region

Healthy Families/Healthy Communities Services
Healthy Communities (HC) provides public education on hot weather and health through seminars, presentations and displays during hot weather season. Groups targeted include seniors, home support agencies, meals on wheels and congregate dining programs and property managers of Toronto Community Housing.

Healthy Families (HF) provides public education at parenting groups and Canadian Prenatal Nutrition Programs and starting in 2012, TPH breastfeeding clinics. Both HF and HC contact known clients who may be at high risk of severe health impacts due to hot weather during Heat and Extreme Heat Alerts.

Strategic Support
Timely and effective communication to the public and partner agencies is critical when an Alert is declared. TPH Strategic Support issues media releases and provides Strategic Communications with an electronic copy of the release. They also arrange media interviews for key spokespersons and will make the necessary logistical arrangements for news conferences, as needed.

Communicable Disease Control
The Communicable Disease Liaison Unit distributes hot weather resource packages to hospitals in Toronto, discusses content that will be displayed in emergency room and their distribution to patients seen for heat-related illness.
3.2 City Agencies, Boards, Commissions, Corporations and Divisions

Toronto Shelter, Support & Housing Administration
Shelter, Support and Housing Administration (SS&HA) issues a request that all hostels make adjustments to permit clients to occupy air-conditioned space in common areas. SS&HA provide street outreach to the homeless through the Streets to Home Team and ensure ongoing coordination of street outreach services to people who are homeless, provided by community agencies through SS&HA’s various funding streams.

Toronto Emergency Medical Services
Emergency Medical Services Community Medicine Program works with TPH to utilize various forms of media in delivering messages on the potential health risk of hot weather conditions. Toronto Emergency Medical Services (EMS) maintains the ability to act as key spokespersons for media request, either through the Community Paramedicine Program or the After Hours On-Call Media Group.

As well, EMS has agreed to report critical incidents (death or transfer of an individual to hospital believed to be heat-related where the environmental conditions observed by the paramedic indicate possible excessive heat exposure) to TPH for investigation.

Toronto EMS maintains the ability to activate the H-DOC and in the event of a severe prolonged heat event would have the EMS H-DOC fully operational within a couple of hours to help coordinated City’s Hot Weather Response.

Toronto Community Housing Corporation
Toronto Community Housing Corporation circulates education materials and communicates with tenants to ensure they are informed about precautions to take during hot weather, including 24-hour access to air conditioned common rooms where they exist, during Heat/Extreme Heat Alerts.

Toronto Parks, Forestry and Recreation
Parks, Forestry and Recreation encourage people to go to city pools to cool off or stay in the shade in parks, and allow people to remain in public parks during Alerts. “Parks Ambassadors” visit City parks to provide information with telephone numbers and locations of services where people who are homeless can go to cool down. A number of swimming pools extend their hours during Extreme Heat Alerts. During alerts, community centre's post notices about the Heat/Extreme Heat Alert and are available as places for people to cool off during regular business hours selected locations operate as Cooling Centres.

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

Long-Term Care Homes and Services
Long-Term Care Homes and Services provide relief short-term stay beds for use by frail isolated seniors during an Extreme Heat Alert, as required.
Toronto Public Library
Libraries display key health messages about hot weather and heat-related illness throughout the summer. During alerts, libraries post notices about the Heat/Extreme Heat Alert and are available as places for people to cool off during regular business hours. During visits to schools to talk to children and teachers about summer library programs, library staff includes summer safety and hot weather messages in their information sessions.

Toronto Office of Emergency Management
The Office of Emergency Management (OEM) maintains the Emergency Operations Centre (EOC) in a state of operational readiness. During a severe or prolonged heat event, the Medical Officer of Health may request that the EOC be activated. The EOC may be activated with or without a Declaration of an Emergency. However, it will be activated once an emergency declaration has been made. In addition, OEM manages the City Cooling Centres opened during Extreme Heat Alerts.

Toronto Animal Services
Animal services develops and disseminates hot weather safety messages for pet owners and attends to sick or injured stray dogs or cats if confined or immobile, and critically sick, injured or distressed wildlife if confined or immobile and attended by someone.

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

3.3 Community Partners

Canadian Red Cross Society
The Canadian Red Cross society provides training on recognition of heat-related illness and first aid for staff and volunteers of community agencies who serve vulnerable clients, co-ordinates the delivery of bottled water to partnering community agencies that dispense water to where vulnerable people are likely to gather, conducts street and park outreach to homeless people and provides them with water and transportation to a cool place, if needed.

Office of the Chief Coroner, Toronto Region
The Office of the Chief Coroner contacts TPH to report deaths where heat may be a contributing factor (possible heat-related deaths) identified during routine investigations within one business day. The coroner’s office also confirms prior to the upcoming hot weather season to existing protocols and key contact information regarding notifications of possible heat-related deaths.

Community Care Access Centres
Community Care Access Centres identify vulnerable clients and develop response plans for them on Heat/Extreme Heat Alert days and share timely information and Alert notices with their respective contracted service provider organizations.
**Ontario Community Support Association**
Members of the Ontario Community Support Association, an organization of home support agencies serving frail and isolated seniors, distributes to their clients information and education on heat-related illness. They also participate in training on recognizing the symptoms and providing first aid for heat-related illness, and contact vulnerable clients on Heat/Extreme Heat Alert days.

**Community Health Centres**
Receive Heat/Extreme Heat Alert notifications. Individual centres may post alert notifications and contact high risk clients, provide “Beat the Heat” education and display hot weather resource materials.

**Change Toronto**
The City of Toronto opens Cooling Centres during Extreme Heat Alerts. Cooling Centres are designated air-conditioned locations designed to allow people and their pets to escape the heat, rest, have a drink, have a light snack and get information on how to “Beat the Heat”. The Cooling Centres are opened, staffed and operated under the direction of the City of Toronto’s Office of Emergency Management. Change Toronto operates the cooling centres.

**Environment Canada**
Environment Canada provides TPH with weather forecasts, Heat Warnings and consultation services as needed.
SECTION 4 ATTACHMENTS

Attachment 1 - Key Terms/Abbreviations

Key Terms

**Level 2 Warning** issued by Environment Canada when there are 2 or more consecutive days with daytime high temperatures \( \geq 31^\circ C \), together with overnight low temperatures \( \geq 20^\circ C \), or hHumidex values \( \geq 40 \).

**Heat Alerts** are issued by TPH, when there are two consecutive days with daytime high temperatures \( \geq 31^\circ C \), together with overnight low temperatures \( \geq 20^\circ C \), or hHumidex values \( \geq 40 \).

**Extreme Heat Alerts** are issued by TPH when there are greater than 23 consecutive days with daytime high temperatures \( \geq 31^\circ C \), together with overnight low temperatures \( \geq 20^\circ C \), or hHumidex values \( \geq 40 \).

**Severe and Prolonged Heat Event / Heat Emergency**
Although no specific conditions trigger this event, the magnitude or the discussions amongst City staff may be sufficient to refer to the event as such.

**Abbreviations**

- EOC  Toronto Emergency Operations Centre
- H-DOC Health Division Operations Centre (EMS)
- HWRP Hot Weather Response Plan
- HC Healthy Communities
- HF Healthy Families
- MOH Medical Officer of Health
- OEM Toronto Office of Emergency Management
- SS&HA Shelter, Support and Housing Administration
- TEMPC Toronto Emergency Management Program Committee
- TPH Toronto Public Health
Background
Since 2000 Toronto Public Health has coordinated the response to heat events through a Hot Weather Response Plan. The Hot Weather Response Committee which is chaired by Toronto Public Health includes member organizations that may have specific roles and responsibilities outlined within the plan. The purpose of the Hot Weather Response Committee is to provide updates on services, identify issues and make recommendations regarding improvements to the plan.

Mandate
The Hot Weather Response Committee ensures that the Hot Weather Response Plan is reviewed and updated on an annual basis. The HWR Committee will:
- Review, evaluate and make recommendations to changes to the Hot Weather Response Plan.
- Facilitate hot weather response communication, coordination and collaboration across divisions and member agencies.
- Identify new or emerging extreme heat event issues.

Accountability
The Hot Weather Response Committee is accountable to the Board of Health, through the Medical Officer of Health.

Membership
The committee includes representation from:
- Toronto Public Health
- Canadian Red Cross
- Toronto Community Care Access Centre
- Toronto Emergency Medical Services
- Toronto Community Housing Corporation
- Toronto Parks, Forestry and Recreation
- Toronto Animal Services (Municipal Licensing & Standards)
- Toronto Public Library
- Toronto Office of Emergency Management
- Toronto Police Service
- Toronto Shelter, Support and Housing Administration
- Street Health
- Parkdale Community Health Centre

Meeting Times
The committee will meet in the spring prior to May 15th the start of the hot weather season and in the fall following September 30th the end of the hot weather season.
Attachment 3 – Additional Resources

TPH and other agencies have developed a number of useful resources for City and community partners to use during heat events/extreme heat events/heat emergencies. These include

· Interactive online heat vulnerability maps
· Heat-health brochures providing advice about preventing heat-related illness
· Toolkits for communicating about the risk of extreme heat
· Guidelines for health care workers
· A heat registry manual

These and other resources are available at:
http://www.toronto.ca/health/heatalerts/beatheat_community_partners.htm