



**County of Essex**

# **Extreme Temperature Management Plan**

**Annex A**

**Revised: 2025**

**Emergency Management Division**

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# Extreme Temperature Management Plan

## 1.0 Purpose

The County of Essex Extreme Temperature Management Plan (ETMP) outlines how the county coordinates emergency response activities during extreme temperature events. It outlines departmental roles and responsibilities during an integrated municipal response and establishes a collaborative approach to managing the consequences of either extreme heat or cold.

## 2.0 Scope

The plan focuses on readiness and response activities of the government at the upper-tier level. Although the focus of this document is a county response, municipal, provincial, and federal government responsibilities pertaining to extreme temperature response activities are briefly discussed.

This document is a hazard-specific annex of the County of Essex Emergency Management Plan (EMP) and aligns with the Ontario Emergency Response Management System. Please refer to the County of Essex EMP for a detailed outline of the operational structure and responsibilities for all hazard responses.

Enhanced readiness and response activities require the participation of all stakeholders in the ETMP. This plan is a living document that represents an agreement between various departments of the County of Essex and replaces all previous versions.

## 3.0 Background

Extreme temperature events such as heat or cold waves can affect communities across the County of Essex and the City of Windsor, most commonly throughout the summer, but there can be extreme weather events throughout the winter too. Local municipal authorities, through partnerships with public health agencies and provincial emergency management, would lead the response to these types of events.

Environment and Climate Change Canada (ECCC) issues extreme temperature warnings for Southwestern Ontario, including Essex and Chatham-Kent Counties, when:

- An extended heat warning is issued when three or more consecutive days are forecasted to have a daytime high temperature greater than or equal to 31°C and a nighttime temperature greater than or equal to 21°C, or a humidex greater than 42°C

To support effective local planning, the Public Health Agency of Canada (PHAC) recommends implementing a Heat Alert and Response System (HARS), which consists of:

**County Mobilization:**

- Identifying a lead agency and response partners

**Alert Protocols:**

- Defining thresholds for activating the plan

**Community Response Actions**

- Mobilizing support for vulnerable populations

**Communication strategy**

- Delivering public awareness and coordinated messaging

**Evaluation process**

- Assessing response effectiveness and making improvements

**4.0 County of Essex Roles & Responsibilities**

**4.1 Community Emergency Measures Coordinator (CEMC)**

- Coordinate and share extreme temperature event information with internal and external stakeholders
- Support the Windsor-Essex County Health Unit (WECHU) in updating the ETRP as needed
- Collaborate with the Communications and Organizational Development to distribute public messaging
- Share official alerts from ECCC and WECHU
- Liaise with Essex Windsor Emergency Medical Services (EWEMS) management regarding responder health and safety

**4.2 Communications Department**

- Support the development and distribution of messaging during extreme temperature events
- Ensure timely updates and public access to ECCC and WECHU resources

### 4.3 Environmental and Climate Change Coordinators

- Assist with the coalition and disseminating of temperature-related review
- Explore and promote adaptation strategies to improve long-term community resilience to extreme weather events

### 4.4 Essex County Library


- Share public health messaging related to extreme temperatures through the library branches when possible
- Consider extending hours and offering branch spaces as temporary cooling centres




### 4.5 Individual Responsibilities

- Stay informed through ECCC and WECHU
- Check in on vulnerable populations (elderly, infants, those with medical conditions)
- Follow heat safety practices: stay hydrated, wear light clothing and hats, limit outdoor activities, and seek air-conditioned environments when needed.

## 5.0 WECHU Heat Warnings

The WECHU and the Medical Officer of Health (MOH), through its WECHU webpage and social media, issue heat warnings to inform the public of extreme temperature conditions that may pose health risks. These warnings are based on ECCC forecasts and follow the criteria outlined below:

Heat Warning Level	Warning Icon	Heat Warning Criteria
Heat Warning		A heat warning is issued when two consecutive days are forecasted to have a daytime high temperature greater than or equal to 31°C and a nighttime temperature greater than or equal to 21°C or a humidex greater than 42°C

<p><b>Extended Heat Warning</b></p>		<p>An extended heat warning is issued when three or more than three consecutive days are forecasted to have a daytime high temperature greater than or equal to 31°C and a nighttime temperature greater than or equal to 21°C or a humidex greater than 42°C</p>
<p><b>Heat Emergency</b></p>		<p>Heat Emergencies are declared during extenuating circumstances (i.e., large scale power outage or drinking water emergency) during a heat event.</p>
<p><b>Special Weather Statement</b></p>		<p>While heat warning criteria is not expected to be reached, this is the first very warm and humid weather of the season.</p>

**5.1 Heat Related Illness**

While vulnerable populations like seniors, infants, people with chronic illnesses, and individuals taking certain medications are at higher risk, anyone can experience heat related illness during prolonged hot and humid conditions. Common heat illnesses include heat exhaustion, heat stroke and dehydration.

Prevention involves staying hydrated, avoiding strenuous outdoor activity, wearing light clothing, seeking air-conditioned environments and checking on vulnerable populations.

**6.0 Stay Cool: Beat the Heat**

**Heat-related illnesses are preventable.** Follow these tips to help prevent heat-related illnesses and stay cool during the summer months.

**Places to stay cool in the City of Windsor and Essex County:** For a list of community centres, public libraries, pools, and splash pads to stay cool, call 2-1-1 (alternate 519-258-0247) to confirm if these facilities are open.

The WECHU's Heat Alert & Response Plan is listed partially below and remains a good guidance document and reference tool.

## **WECHU Extreme Temperature Response Plan (ETRP)**

### **7.0 Introduction**

Climate projections by ECCC indicate that the region of southwestern Ontario can expect extreme heat events of increasing intensity, duration, and frequency. This plan is intended to define what constitutes a heat event for the City of Windsor and County of Essex that would warrant a response by public authorities. It describes a three-tier alert structure for such events and the appropriate communications and other response protocols. It also outlines how to involve non-government organizations and community groups to improve the resiliency of specific vulnerable populations and the public at large to heat health impacts.

This document is part of a project supported by the WECHU to develop an extreme temperature plan for the City of Windsor and County of Essex. This version of the ETRP is dated 2023.

### **8.0 Objectives**

The goal of the WECHU's ETRP is to improve the resiliency among residents of the Windsor-Essex region to extreme heat. In order to achieve this goal, the overarching objectives of this plan are to:

- Provide direction to decision makers on acting during an extreme heat event based on the outline alert protocol.
- Educate the public about the heat health risks, notification, and appropriate protective measures.
- Identify ways and means of reaching vulnerable populations concerning appropriate protective measures.
- Engage non-government organizations and community groups to support the communication and outreach strategy of the ETRP.

### **9.0 Roles and Responsibilities**

The following core organizations were all active participants on the Heat Alert and Response System Advisory Committee (HARSAC)

## 9.1 Windsor-Essex County Health Unit (Lead)

**Contact:** Medical Officer of Health

### **Roles and Responsibilities:**

- Monitor ECCC Humidex forecast, May through September
- Contact Environment Canada regarding special weather statements and forecasts
- Determine the appropriate heat notification level
- Notify media and community partners of change in level
- Conduct debriefings after extreme heat events
- Undertake annual evaluations of the ETRP in the fall
- Add web cross link button to the WECHU's website
- Execute education campaign and training

## 9.2 Canadian Red Cross

**Contact:** Disaster Management Coordinator

### **Roles and Responsibilities:**

- Maintain network of (respite) community partner organizations
- Conduct annual workshop to train the leadership of the community partner organizations
- Provide volunteers, including member of the First Aid Service (FAS) team to provide support

## 10.0 City of Windsor and County Municipalities

### 10.1 Corporate Communications

**Contact:** Municipal Marketing & Communications Officer

### **Roles and Responsibilities:**

- Assist with the dissemination of information regarding extreme heat events
- Provide web cross link to the WECHU webpage and social media between May and September

### 10.2 Environmental Master Plan Office

**Contact:** Municipal Environmental Coordinator

### **Roles and Responsibilities:**

- Assist with the dissemination of information regarding extreme heat events
- Continue to coordinate efforts with Health Canada on heat health and other associated health issues (i.e. air quality)
- Continue to support the ETRP
- Explore adaptation strategies to build a more heat resilient community

### **10.3 Fire and Rescue Services**

**Contact:** Fire Chief or Community Emergency Measures Coordinator (CEMC)

**Roles and Responsibilities:**

- Assist with the dissemination of information regarding extreme heat events
- Prepare first responders with heat-health messaging
- Provide web cross link to the WECHU webpage and social media

### **10.4 Parks & Facility Operations and Recreation**

**Contact:** Municipal Parks Marketing & Communications Officer

**Roles and Responsibilities:**

- Assist with the dissemination of information regarding extreme heat event
- Provide annual list of public facilities with air conditioning (and generators) with normal hours of operation that the general public can access if required
- Monitor the use of pools and explore options to extend hours during extreme heat events

### **10.5 Police Services**

**Contact:** Municipal Police Chief

**Roles and Responsibilities:**

- Assist with the dissemination of information regarding extreme heat event
- Prepare first responders with heat-health messaging

### **10.6 211/311 Call Centre**

**Contact:** Manager of 211/311 Call Centre

### **Roles and Responsibilities:**

- Assist with the dissemination of information regarding extreme heat event

### **10.7 County of Essex**

**Contact:** Emergency Measures Coordinator

### **Roles and Responsibilities:**

- Support preparedness among County municipalities and local organizations through ongoing exchange of information about heat-health and emergency response best practices
- Prepare first responders with heat-health messaging
- Provide link to the WECHU webpage and social media between May and September
- Develop and organize extreme table-top simulations for local emergency response agencies, taking place as needed

### **10.8 Essex-Windsor EMS**

**Contact:** Deputy Chief, Planning & Physical Resources

### **Roles and Responsibilities:**

- Prepare first responders with heat-health messaging
- Provide emergency medical response to the public during extreme heat events
- Report to the Medical Officer of Health the prevalence of heat-related illnesses

The sustainability and success of the ETRP will be in part due to the large number of organizations that have committed to the development and implementation of this plan.

## **11.0 Heat Alert Triggers - Monitoring**

Starting in May of each year, the WECHU will begin monitoring the ECCC forecast for extreme heat events. ECCC monitors both temperature and humidity. The combination of temperature and humidity reflects the perceived temperature and is reported as the Humidex reading. ECCC defines an extremely high humidex reading as over 40. In such conditions, all unnecessary activity should be curtailed.



## Heat Warning

A heat warning is intended to signal an impending heat event of particular concern for vulnerable populations, such as the elderly and children, as well as anyone who is physically active or outdoors for a prolonged period of time. It is also meant to signal to various agencies that they should be in a state of readiness for a possible escalation in the severity of weather conditions.

At this stage, EWEMS, hospitals, and selected health professionals are expected to begin regular reporting to the Medical Officer of Health on specific data for heat-related illness.



### Who Activates/Deactivates:

The MOH of the WECHU is responsible for activating a heat advisory Level 1.

### When:

A Heat Advisory Level 1 is called when one of the following conditions are met:

Two consecutive days are forecasted to have a daytime high temperature greater than or equal to 31°C and a nighttime temperature greater than or equal to 21°C or a humidex greater than 42.

### What Happens:

- A media release along with an email blast will be sent to all community partners and any member of the public that has signed up to be notified.
- EWEMS and area hospitals will be reminded that they are expected to report back to the WECHU regarding possible heat-related illnesses for the duration of the heat advisory.
- Information from EWEMS, hospitals, and other community partners as

needed will be considered by the MOH in determining if and when to activate the Level 2 (Heat Warning) protocol.

- The MOH will notify EWEMS, hospitals, and other community partners as needed, once reporting is no longer required, based on return to normal weather conditions satisfactory to the MOH.

## **Extended Heat Warning**

An extended heat warning is designed to signal impending health risks to the public-at-large due to a prolonged extreme heat wave. Specific actions are advised for vulnerable populations, such as visits and phone calls by community organizations. EWEMS and area hospitals should anticipate increased admissions and prepare to cope. A number of other agencies, such as the Canadian Red Cross, the Salvation Army and local fire and rescue services, are expected to be in a state of readiness for possible impacts affecting the public-at-large.



### **Who Activates/Deactivates:**

The MOH of the WECHU (backup: Director of Health Protection, WECHU) is responsible for activating a heat warning Level 2.

### **When:**

A Heat Warning Level 2 is called when one of the following conditions is met:

- Three or more than three consecutive days are forecasted to have a daytime high temperature greater than or equal to 31°C and a nighttime temperature greater than or equal to 21°C or a humidex greater than 42.

### **What Happens:**

- A media release along with an email blast will be sent to all community partners and any members of the public that have signed up to be notified.
- The MOH will request the Canadian Red Cross to contact community partners to confirm their continued cooperation and make any revisions to the public directory of Community Partners, as necessary.
- The MOH will advise the Canadian Red Cross of the potential for a

change in the alert level from extended heat warning to heat emergency, thereby allowing the Red Cross an opportunity to prepare for deployment of mobile cooling stations in the event of a heat emergency (Level 3).

- The CEMC will consult with ENWIN Utilities and other area utilities to briefly review their disaster planning for a potential widespread power outage.

## Heat Emergency

A heat emergency is the highest stage in the ETRP and denotes a state of emergency. This would occur when a heat wave is so severe and/or prolonged that its effects extend outside health and social care, such as power or water shortages, and/or where the capacity of health and social care systems to respond is threatened.



### Who Activates/Deactivates:

The local MOH is responsible for declaring a heat emergency level 3, which may prompt a declaration of emergency by the Municipal Council (Mayor or alternate), in consultation with members of the Community Control Group (CCG), which includes the Chief Administrative Officer (CAO), CEMC, etc.

### When:

A heat emergency will be called by the MOH. A decision would be reached based on circumstances prevailing at the time.

### What Happens:

Activation/deactivation of the emergency notification system, pursuant to the respective municipal EMP. Steps include formal declaration/termination of an emergency, media release, notification to organizations, and activation/deactivation of the EOC. The full EMP should be available on the respective municipal websites.

## 12.0 Preparing for Heat

### Community Partner Preparedness

Early each spring, community partners should be contacted to review the following:

1. Verify primary and secondary contacts
2. Determine if each partner is still able to provide support to the program
3. Determine if they need additional resources (i.e., posters, flyers, etc.)
4. Determine their capacity and availability of support staff in the event of a prolonged heat wave.

## **Places to Cool Down**

A list of places to cool down is provided in Section 6.0. This list should be reviewed in the spring to verify hours of normal operation.

## **Stay Cool Windsor-Essex**

The WECHU website is updated routinely prior to and during the heat season. Communications tools developed as support to the community partners should be provided on the website in formats that allow easy downloading and printing. The places to stay cool should also be updated to ensure that the information remains accurate. The number of visits to the website should be monitored and used to evaluate the success of the awareness campaign.

## **211 Call Centre**

211 should be provided with all updated information as it pertains to the ETRP and awareness campaign.

211 will also be asked to track the number of calls received for heat-related questions. This information will assist in the evaluation of the awareness campaign.

## **Education and Awareness**

The education campaign will be led by the WECHU and the City of Windsor's Environmental Coordinator. Community partnerships will be crucial for the success of this campaign. Such partnerships will be necessary to ensure that the messages are getting out across the community.

In addition to the education and awareness done by the WECHU and the City of Windsor, the County of Essex also plays an active role in providing public education and awareness. The county does email blasts to staff and partners to get the message surrounding extreme weather out, reinforcing protective actions and personal preparedness. Information also gets shared through digital displays around county facilities, which can provide messages of

seasonal hazards. Another tool used is social media accounts to extend the reach to the broader public. Aside from these digital messages, the county also engages in public awareness and education events. These events often promote preparedness for extreme temperatures through brochures, handouts, and checklists, while also interacting with the public and answering questions.

The beginning of the heat season represents a timely opportunity to build public awareness of heat wave notification protocol (internally and with the general public), associated health risks, and protective measures. The heat season is defined roughly as the period from May to September. In addition to the WECHU website and 211, a marketing campaign will be executed. The marketing campaign may vary year-to-year depending on the funding and the success of certain tactics implemented. Posters, banners, brochures, advertisements, and fridge magnets are all examples of tactics that may be implemented.

## **13.0 Heat Illness**

**Extreme heat events can lead to one or more of the following health effects, presented in descending order of severity:**

### **Heat Stroke:**

- The most serious type of heat illness that is a result of body heat overload. Signs of heat stroke may include a core body temperature greater than 40°C/104°F, complete or partial loss of consciousness, and/or reduced mental ability.

### **Heat Exhaustion**

- Caused by excessive loss of water and salt. Symptoms may include heavy sweating, weakness, dizziness, nausea, headache, diarrhea, and muscle cramps.

### **Heat Fainting**

- Caused by the loss of body fluids through sweating and by lowered blood pressure due to pooling of blood in the legs. Symptoms include temporary dizziness resulting from insufficient flow of blood to the brain while a person is standing.

### **Heat Edema**

- Heat-induced swelling is frequently noticeable in the ankles, feet, and hands and is most often seen in people who are not regularly exposed to heat.

### **Heat Rash**

- Is a result of inflammation of clogged sweat glands and is accompanied by tiny red spots on the skin, which may give a prickling sensation.

### **Heat Cramps**

- Caused by a salt imbalance resulting from a failure to replace salt lost through excessive sweating. Symptoms are sharp muscle pains.

## **14.0 Extreme Cold Temperature Events**

WECHU Criteria:

### **Cold Warning:**

- A Cold Warning is issued when the temperature reaches - **15°C (5°F)** **without wind chill** for one day.

### **Extreme Cold Warning:**

- An Extreme Cold Warning will be issued when temperatures reach - **27°C (-16.6°F)** **with and/or without** the wind chill for one day.

### **Cold Emergency:**

- A cold emergency is declared during extenuating circumstances (i.e., large scale power outage or drinking water emergency) during a cold event.

Cold weather can be harmful to health. While the health risks related to cold are higher for certain groups (such as people who work outdoors, people with pre-existing heart conditions or respiratory illnesses, elderly, infants, young children, and those who are experiencing homelessness), everyone is potentially at risk. Fortunately, most cold related injuries can be prevented or treated if you are aware of the risks, signs, and symptoms. This information can help you to plan ahead and act to protect yourself and your family. Examples of cold-related injuries are windburn, frostnip, frostbite, and hypothermia.

## **Roles and Responsibilities**

### **WECHU:**

- WECHU will monitor ECCC forecasts for extreme cold events from October through to April annually.
- Every morning during the cold season, the MOH (or designate) will review the 24-hour forecast and decide whether to issue, maintain, or terminate a warning, using discretion based on conditions.
- The WECHU Medical Officer of Health will issue a Cold Warning and Extreme Cold Warning when the criteria are met and forecasted for cold events in the Windsor-Essex County Region.
- The MOH will also consider factors that could potentially increase the impact of extreme cold temperature events, such as expected duration of event, wind chill, vulnerable populations (elderly, children), precipitation levels (snow, freezing rain, ice), as well as power and drinking water outages.
- WECHU will issue media releases and update wechu.org and social media channels. County communications will amplify this messaging through facility monitors, social media, and departmental alerts.
- Community partners and municipalities will advise WECHU if warming stations are opened or if additional protective measures are implemented.

### **The Corporation of the County of Essex:**

- Monitor both ECCC Extreme Cold and Extreme Cold Warnings along with WECHU Cold and Extreme Cold Warnings.
- Consider factors that could potentially increase the impact of extreme cold temperature events, such as expected duration of event, wind chill, outside workers and responders, staff who are travelling long distances, precipitation levels (snow, freezing rain, ice) as well as power and drinking water outages.
- Facility managers and HVAC staff monitoring heating and backup power capabilities along with fuel supplies.
- Communications and Organizational Development passing along cold and extreme cold warnings to all departments, staff, and visitors using facility monitors, social media, and alerting systems as needed.
- CEMC to consult with local utility companies to review planning for potential outages.

### **Individuals:**

- Monitor ECCC for forecasted cold or extreme cold warnings.

- Wear appropriate layered winter clothing, and cover the head, neck, and hands.
- Remove any wet clothing if safe to do so, and replace it with a new dry layer.
- Eat and drink warm high-energy food and beverages.
- Be aware of signs and symptoms of frostbite and hypothermia.
- Move activities indoors when temperatures are extremely cold.
- Check on and monitor the elderly, very young, and medically vulnerable persons throughout the day and evening.

## **15.0 Conclusion**

The County of Essex ETMP provides a coordinated and adaptable framework to protect residents, visitors, staff, and critical services during periods of extreme heat or cold. By laying out roles and responsibilities, integrating forecasting, and prioritizing outreach to vulnerable populations, the plan ensures a proactive and organized response to temperature related emergencies. Collaborating between the County, its departments, local municipalities, public health agencies, and community partners is key to successfully being prepared for, able to respond to, and recover from an extreme temperature emergency. This will be a living document, it will be reviewed regularly to add new best practices, lessons learned, and evolving climate data, keeping the County prepared to reduce risks, and build community resilience for extreme temperature events.