CITY OF YARRA

HEAT PLAN

A complementary plan of Yarra City Council

PUBLIC VERSION

Version 2.7

Last Amended 5-12-2023.

Contents

Version Control

Major changes to this section must be endorsed by the Municipal Emergency Management Planning Committee (MEMPC) and presented to Council for consideration and adoption.

The record below is to be completed by the person making the amendment(s). As amendments occur, the decimal version number will be updated (e.g. from Version 2.1 to Version 2.2). Major changes will require the whole version number to change (e.g. from Version 2.6 to version 3).

Date	Version	Page #	Description	Amended by
20-12-2016	V2.4	9, 19	Control agency updated, ADS actions updated	Lucy Saaroni
13-02-2017	V2.5	4,9, 12, 16, 27	Updates made to control agency info, DHHS, communications tool kit, alerts	James Boyce
13-04-2017	V2.5	8	Contacts list updated	Lucy Saaroni
01-05-2018	V2.5	All	Minor administrative changes made in document. Updates made to redundant weblinks. Heatwave Coordination Group contacts updated	Glen Moore
07-05-2018	V2.5	12, 14 and 28	References to extreme heat alongside some references to heatwave; added drawing blinds to closing windows under cooling houses; updated a reference and link to the SERP Extreme Heat Sub-Plan; and added the DHHS *Responding to people sleeping rough in extreme weather policy* under the DHHS policies and fact sheets section.	James Boyce
08-05-2018			Section endorsed by MEMPC	MEMPC
10-05-2018	V2.5	7,8	Yarra's heat health threshold added. The term 'mini evaluation' removed. Urban Forestry Strategy added as an action towards heat reduction	Ellie Mandritis
18-05-2018	V2.5	9	Heatwave Coordination group contacts updated	Sophie Barison
30-08-2018	V2.5	9	Heatwave Coordination group contacts updated	Sophie Barison
08-01-2019	V2.5	5 & 9	Policy context information and Heatwave Coordination group contacts updated	Sophie Barison
11-04-2019	V2.5	9	Heatwave Coordination group contacts updated	Sophie Barison
11-07-2019	V2.5	9	Heatwave Coordination group contacts updated	Sophie Barison
17-12-2019	V2.5	All	Format corrections, Heatwave Coordination group contacts updated, outdated information deleted.	Sophie Barison
13-12-22	V2.6	4, 5, 7,8,10, 11-12, 15, 16, 20,22-23,26-28	Updated acronyms, Changed from Sub-Plan to complementary plan as pursuant to Emergency Management Reform, updated legislation, Inserted section on heatwaves in a warming climate, Updated HCG contacts, Updated Heat Vulnerability Profile, aligned key messaging from recent heatwave communications added, New State Government Health resources appended, Service/function titles updated, and tasks reviewed and updated based on HCG input.	Shaun Young
02-08-23	V2.6		Contacts updated	Shaun Young

5/12/23	V2.7	all	Updating acronyms. Update of organizational business units. Contacts updated. Based on Heatwave Coordination Group input: Service areas updated responsibilities and actions in the heat action plan. Sections reworded to bring in line with current policy and practice.	Shaun Young

Acronyms

Acronym	Full Title
BCM	Business Continuity Management
BOM	Bureau of Meteorology
CALD	Culturally and Linguistically Diverse
CEO	Chief Executive Officer
CERA	Community Emergency Risk Assessment
COY	City of Yarra
DH	Department of Health
DFFH	Department of Families Fairness and Housing
MEML	Emergency Management Planning Lead
HACC	Home and Community Care
HCG	Heatwave Coordination Group
LGA	Local Government Area
CEOC	Council Emergency Operation Centre
MEMP	Municipal Emergency Management Plan
MERC	Municipal Emergency Response Coordinator
MEMO	Municipal Emergency Management Officer
FRV	Fire Rescue Victoria
MRM	Municipal Recovery Manager
SES	State Emergency Service
VICPOL	Victoria Police

Introduction

Sometimes called the "silent killer", heatwaves cause more deaths than any other type of natural disaster in Australia. In addition to causing illness and fatality, heatwaves can also have a harmful effect on our infrastructure, our economy, our agriculture, our social cohesion, and our biodiversity. And as the climate continues to warm, heatwaves are becoming hotter, longer, and more frequent.

Given that extreme heatwaves will almost certainly occur in the municipality and given the major consequences associated with this type of hazard, the Municipal Emergency Management Planning Committee has identified extreme heatwaves as a **high risk.**

As a result of this risk rating, Yarra City Council determined the need for a specific plan to address issues relating to prolonged or intense periods of heat in the municipality.

This document provides a framework and guidance for Council and other stakeholders in the municipality to appropriately plan for and effectively respond to emergency heatwave conditions.

Policy Context

This document is a Complementary Plan of the City of Yarra Municipal Emergency Management Plan (MEMP). All background information on the municipality and detailed information on supplementary emergency management arrangements can be found in the MEMP. The Heatwave Complementary Plan aligns with and should be read in the context of the following Council policies and plans:

- City of Yarra Council Plan
- City of Yarra Council Business Continuity Plan
- Working in Excessive Weather Policy
- Aged & Disability Services Extreme Heat & Heatwave Policy and Procedures 2009
- Yarra Climate Emergency Plan (2019-2024)

The Heat Plan aligns with the following State government Plans and documents:

- State Extreme Heat Sub - plan 2022

Within a legislative context, this plan complies and aligns with the following legislation:

- Emergency Management Act 1986/2013, 2018
- Local Government Act 2020
- Public Health and Wellbeing Act 2008
- Climate Change Act 2010
- Planning and Environment Act 1987

Definition of a heatwave and heatwave emergency

In Victoria, a heatwave is generally understood as a period of unusual and uncomfortably hot weather that could impact on human health, community infrastructure and services.

The Bureau of Meteorology defines a heatwave as 'three days or more of high maximum and minimum temperatures that are unusual for that location'. This definition is used to determine when an emergency response is required under the State Emergency Management Plan (SEMP)

The State Heat Health Alert System and the associated Heat Health Thresholds are used to establish when an unusual temperature has been reached for a specific location, which is likely to impact on the health of the community. The point at which a community is impacted is known as the 'Heat Health Threshold'. A more detailed explanation of the Heat Health Threshold and how it is calculated is available at Appendix 1.

Heat Plan Aims and Objectives

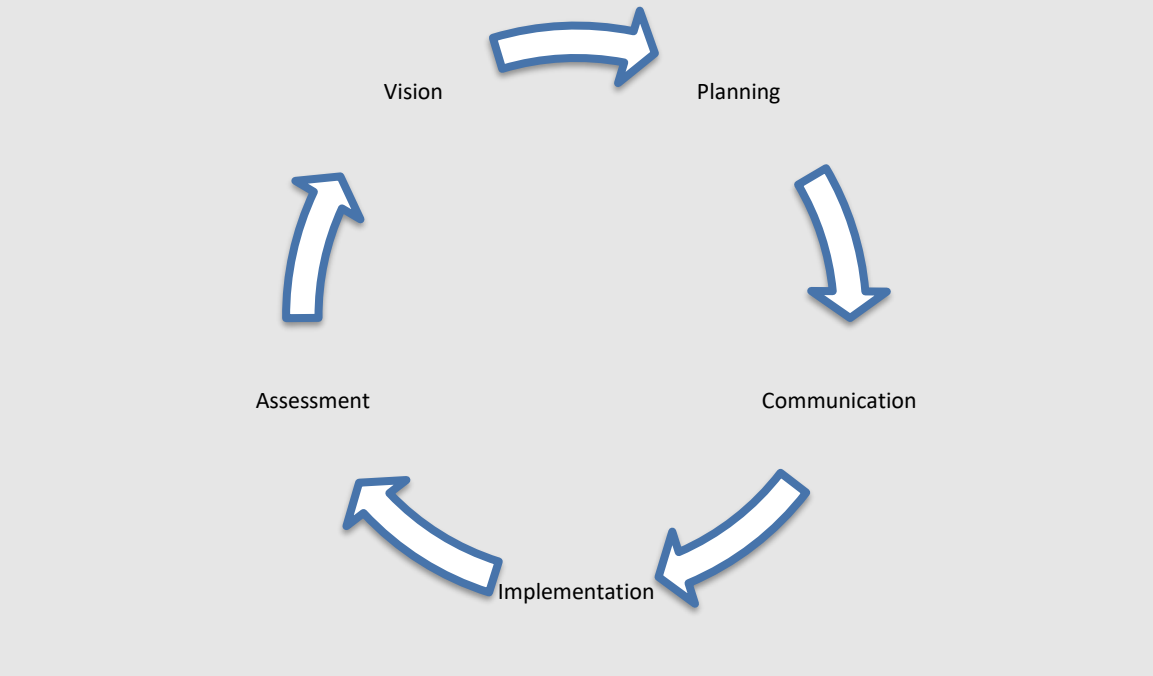
The aim of the Heat Complementary Plan is to ensure that Yarra City Council acts appropriately prior to, during and after a heatwave, to minimise the consequences of heatwaves in the City of Yarra.

The objectives of this plan are to:

- Inform Yarra community members of the risks associated with heatwaves.
- Outline actions that the Yarra City Council will take to mitigate the impact of heatwaves.
- Outline actions that others can take to diminish the impact of heatwaves.
- Complement and support other local, regional and state emergency management plans.

Heatwave Planning Framework

The Heat Plan is a Complementary plan of the Municipal Emergency Management Plan (MEMP). As such, all structures and processes in the MEMP do not strictly apply to this Plan, but the MEMPC will be consulted where appropriate. The heatwave planning framework is cyclic and seeks to establish a process that encourages continuous improvement. This framework is illustrated below:



Heatwave Planning Framework illustrated (above) and explained (below)

Planning Stage	Description
Vision	Develop and agree on the aims, objectives and ways to enhance the plan
Planning	Collate evidence, expert advice and end user feedback to write the plan
Communication	Discuss the plan with relevant stakeholders and ensure a mutual understanding of stakeholder roles and responsibilities listed in the plan
Implementation	Exercise or activate the plan by undertaking actions listed as required
Assessment	Evaluate how the plan was implemented; review the plan for relevancy and effectiveness in relation to the aims and objectives

Review and Evaluation of the Heat Plan

The Heatwave Coordination Group (see below) will review the Heat Plan every three years during the self-assurance review cycle, unless an emergency heatwave event occurs, in which case the plan will be reviewed following the event.

An evaluation of the plan and processes will occur prior to each summer to ensure current processes and systems are appropriate and to remind stakeholders of the plan, their roles and responsibilities, as well as the processes and systems in place.

The DHHS Heatwave Planning Guide and the Plan Review Tool will be used in both the pre-Summer evaluation and full plan review process.

Any major changes to the document will be forwarded to the MEMPC for its consideration and awareness.

Heat Planning in a changing climate

In Melbourne, between 1981 and 2010, we experienced an average of eight days per year when the temperature exceeded 35°C. By the 2050s this is expected to rise to between 13 and 21 days on average and the risk of extreme heatwaves will increase. By 2030 it's projected that there will be a severe heatwave approximately once a year, an extreme heatwave (like the one associated with Black Saturday) once every thirteen years and a very extreme heatwave once every 25 years (currently once every 110 years). As heatwaves become hotter, longer and more frequent, this will have to be factored into our heat planning and will have significant implications for business continuity, occupational health and safety, and demand for and delivery of critical community services.

Heatwave Coordination Group

The Heatwave Coordination Group (HCG) is responsible for ensuring the maintenance and development of the Complementary Plan.

The HCG is also responsible for prompting the activation of the plan and ensuring that Council responds to a heatwave in a coordinated manner. To do this, members of the HCG work together under the leadership of the Municipal Recovery Manager to enable the availability of adequate resources to meet the demands placed upon the services and functions of Council, especially in regards to maintaining business continuity and complying with emergency management legislation and guidelines. The activation of City of Yarra Municipal Emergency Management arrangements are set out here Emergency Management | Yarra City Council.

Heatwave stakeholders in Yarra: roles and responsibilities

In the City of Yarra, a range of stakeholders have important roles and responsibilities regarding heatwave planning, preparedness, response and recovery. These stakeholders are clarified below.

Yarra City Council

To manage the risks and consequences associated with heatwaves, Council commits to:

- Nominating two contacts to receive heat alerts from the department.
- Monitoring the Bureau of Meteorology website for impending heatwaves.
- Activating Council's Heatwave Action Plan as necessary.
- Activating appropriate Council policies and procedures when necessary.
- Evaluating the actions taken during heatwaves at the end of each summer season.

- Maintaining and improving the heatwave plan continuously.

To assist in ensuring Council can and will undertake these functions, Council has developed a specific Heatwave Action Plan, which details specific actions to be undertaken by Council staff prior to, during and after a heatwave event.

Emergency Management Commissioner

In a heatwave emergency or during other episodes of extreme heat as deemed necessary by the control agency, the Emergency Management Commissioner will be the incident controller with Emergency Management Victoria as the control response agency. As heatwaves may impact infrastructure, such as electricity generation and distribution or transport failure, as well as human health impacts, Emergency Management Victoria will play a key role in ensuring appropriate operational responses are conducted by responsible agencies such as health, infrastructure and transport. The Commissioner will appoint a person to the role of "State Controller – Heat" when conditions reach extreme triggers, to lead the response to the impacts and consequences of heat. The "State Controller – Heat" appointee will work within the State Control Centre.

Department of Health & Department of Families, Fairness and Housing

The Department of Health (DH) will issue heat health alerts to agencies and individuals who have subscribed to the Chief Health Officer subscription service.

DH also posts heat health alerts online: www.health.vic.gov.au/chiefhealthofficer/. The Department may need to collect data from Yarra City Council during a heat wave, such as details on specific actions undertaken by the Council.

The Department of Family Fairness and Housing's (DFFH)) high-rise apartment buildings are equipped with electrical generators to operate core functions and elevators to ensure that tenants will be able to safely exit premises in the event of a power outage. DFFH has also identified and prepared community rooms within a number of housing complexes that can be maintained as cool places available to tenants during periods of extreme heat.

In a heatwave emergency, the Department of Health will deliver the following emergency management functions at the regional level:

- regional health coordination

In a heatwave emergency, the Department of Families Fairness and housing will deliver the following emergency management functions at the regional level:

- recovery coordination

Ambulance Victoria

At the regional level Ambulance Victoria delivers the emergency management function of regional health command.

Not-For-Profit, Community and Commercial Organisations

Council encourages all not-for-profit community groups, community and commercial service providers delivering services to vulnerable people to develop their own heat management plans.

There are many not-for-profit organisations and community service providers within the City of Yarra that need to ensure that they monitor vulnerable clients during a heatwave and take necessary action in the event that clients suffer heat related illness. These service providers should also ensure that their clients receive appropriate and timely information and advice in the event of a heatwave.

Examples of some not-for-profit, community and commercial organisations with a role to play in mitigating the effects of a heatwave in Yarra are:

- Hospitals, ambulances, medical centres, pharmacies
- Community service groups (e.g. Brotherhood of St Lawrence, St Mary's House of Welcome)
- Cinemas, shops, market organisers, local business associations
- Neighbourhood Houses, community groups (e.g. Seniors, Youth, Cultural, Religious, RSL)
- Local Childcare Centres, Kindergartens, playgroups
- Red Cross, disability services providers
- Libraries, tourism centres, museums, galleries
- Local sporting associations, leisure, health and sports centres

Actions that can be taken by these groups are outlined in the table below:

Pre-summer (preparation)	During summer (prevention)	In a heatwave (response)
Revisit actions from the previous summer and identify improvements	Distribute DH heatwave information	Contact those listed on the Vulnerable People Register or community register
Liaise with other stakeholders to ensure consistency and interoperability of heatwave messaging and activity	Promote heat health messages through internal and external communications channels (e.g. newsletters, meetings)	Develop support plans for heatwave conditions for vulnerable clients
Review heat health protocols for the workplace and staff	Maintain regular contact with vulnerable clients or persons	Prioritise tasks (especially physically demanding tasks)
Update any community or agency registers	Identify and organise cool areas	Assess risk for clients and staff
Prepare or revise key heat health messages	Subscribe to the Heat Health Alert message system	Reschedule staff work times and service delivery times
Develop business continuity plans to cope with heatwaves	Provide staff with access to extra water and breaks	Provide additional fluids and cool places to rest
Educate staff of key heatwave risks and messages	Reschedule staff work or business hours	Modify programs
Assist vulnerable persons in developing heat health and personal emergency plans	Provide staff with personal protective clothing and equipment	Transport clients during cooler parts of the day if possible
Audit client homes (if appropriate)	Modify programs and services	Alter outdoor activities and outdoor play times for children

Residents and Visitors in the City of Yarra

Everyone in Yarra has a role in preparing for and coping with extreme heat and heatwaves. For a complete set of current Yarra communications materials see here.

Prior to periods of heat, residents are advised to prepare in the following ways:

- Plan ahead
- Keep up to date with weather forecasts.
- Cancel non-essential outings and plan essential activities for the coolest part of the day.
- Stock up on food, water, and medicines so you don't have to go out in the heat.
- Visit your doctor to check if changes are needed to your medicines during extreme heat.

- Store medicines safely at the recommended temperature.
- Check that your fan or air-conditioner works well. Have your air-conditioner serviced if necessary.
- Prepare for power failures – ensure you have a torch, battery-operated radio, fully charged mobile phone or battery back-up, food items that don't require refrigeration, medications, plenty of drinking water and other essential items.
- Look at the things you can do to make your home cooler such as installing window coverings, shade cloths or external blinds on the sides of the house facing the sun.

During a period of intense heat in Yarra City, residents and visitors are advised to take the following steps:

Cool your home down	Stay out of the heat	Keep cool and hydrated	Assist Others	Get Help
• Close windows and draw blinds during the day; open windows at night when the temperature is cooler • Turn off lights and electrical equipment if they are non-essential • Sleep in the coolest room of the home	• Keep out of the sun during the hottest part of the day • Avoid intense physical exercise • Wear light, loose fitting clothes • Find an air conditioned site to spend the day (e.g. library, pool) • Avoid outdoor travel and activities • If you have to go outside stay in the shade, wear a hat	• Drink plenty of water • Avoid caffeine and alcohol as they dehydrate • Take a cool shower • Spray water on your skin and clothes • Keep a damp cloth on the back of your neck • Eat cold meals and avoid cooking	• Never leave children or pets in cars • Contact sick or elderly family neighbours to check they are ok • Recognise the signs of heat related illnesses in others and get help	• For 24-hour health advice contact NURSE-ON-CALL: 1300 60 60 24. • For life-threatening emergencies Call: 000.

Yarra Community Profile

A detailed profile of the Yarra Community is available in Section 2 of the Municipal Emergency Management Plan. The plan can be found at Emergency Management | Yarra City Council

Yarra Heatwave Vulnerability Profile

Technically speaking, everyone is at risk of harm during a heatwave if appropriate precautions are not taken. Heatwaves can cause death and seriously affect thousands of people. As well as the health impacts of a heatwave, there can also be a social and cultural impact (which may mean more or less social contact depending on the person and their situation), an economic impact, a natural and a built environment impact.

Most people have the knowledge, ability and capacity to look after themselves in the heat and will respond appropriately to public health messages. However, many people are at higher risk of heat-related impacts and also have lower capacity to respond to heat for a variety of reasons including

institutional barriers such as inadequate housing. An understanding of who is the most vulnerable to heatwaves allows targeted action to assist those most at risk. The following table outlines the most vulnerable groups in the municipality and how heatwaves may affect them:

Vulnerable People	Reason for vulnerability in a heatwave
Older people (over 65)	Ability to perceive and adapt to temperature variation declines with age as does perception of hydration resulting in particular vulnerability to heat stress and illness. High likelihood to have at least one, if not multiple other vulnerabilities.
People who are overweight or obese	Greater mass to surface ratio makes it harder for the body to cool down.
Women who are pregnant and breastfeeding	Greater body mass to cool, higher than normal hydration needs and hormonal variation can affect perception of heat and hydration.
Babies, Infants, Children	Ability to perceive and adapt to temperature variation is still developing. Children may not be able to undertake adaptive measures on their own.
People who have a chronically ill and people with a disability	Ability to perceive and respond (consciously and unconsciously) to environment may be impaired. Increased sensitivity to heat and reliance on cooling. Particularly medical conditions that affect the cardiovascular, respiratory, renal and endocrine systems or thermoregulation capacity.
Limited or poor mobility	Less able to adapt to physical environment to make it cooler or to seek cool respite.
People taking certain medications	Some medications may interfere with temperature regulation.
People using drugs and alcohol	Less able to perceive heat and heat-related risk, less aware of surroundings (e.g. may fall asleep in a hot, exposed place); more likely to be dehydrated.
CALD groups	Multiple and complex barriers in accessing health services and community messages.
People who are homeless and are housing insecure	Difficulty in accessing relief from the heat (cool places) and health services.
Outdoor workers and outdoor event goers	Difficulty in accessing relief from the heat (cool places), inaccessibility of water.
Anyone else who cannot find relief from the heat for at least 2 hours per day	2 hours relief provides the body with critical recuperation time[1]. Factors such as poverty and/or social isolation can impair the ability for a person to find relief from the heat for at least 2 hours per day.

An expanded list of groups susceptible to heat related illness is available from appendix A of the State Emergency Response Plan Extreme Heat Sub- SERP StateExtremeHeatSub plan.pdf (emv.vic.gov.au).

A large number of Yarra residents belong to one or more of the groups listed above, including many who live in social housing, and have limited control over their living environment.

An extreme heatwave has the potential to severely affect everyone, especially if there is a parallel hazard affecting the municipality (such as a power outage). A list of vulnerable facilities and the most

[1] *Heat Health Plans,* WHO Europe, 2006

vulnerable people in Yarra City is maintained by DFFH Council and associated service providers. In a heatwave emergency the Victoria Police may ask to access these lists for evacuation planning and emergency relief planning purposes.

Risks associated with heatwaves in Yarra

Heatwaves in the City of Yarra can cause significant harm to the City's individuals, groups and communities. The types of harm caused by heatwaves include:

- Illness, injury or fatality
- Displacement of population from housing estates
- Decreased economic activity
- Disruption to public transport and electricity supply (including blackouts and brownouts)
- Increased Council staff absenteeism
- Increased anti-social behaviour
- Increased probability of fires
- Increased severity in the consequences of concomitant emergency events
- Stress to parks and gardens
- Stress and injury to domestic animals and wildlife
- Increased demand on medical and social facilities.

Impact on physical health

When the surrounding temperature is higher than skin temperature the only effective heat-loss mechanism is sweating. Therefore, any factor that reduces the effectiveness of sweating can cause the body to overheat. The following table outlines the three types of heat-related illnesses:

Heat-related illnesses

Heat cramps	Usually muscle pains or spasms, commonly occurring in the abdomen, arms or legs and may be a symptom of heat exhaustion. Heat cramps may occur after strenuous activity in a hot environment, when the body gets depleted of salt and water.
Heat exhaustion	A serious condition that can develop into heat stroke. Someone experiencing heat exhaustion may appear pale and sweating. They may have a rapid heart rate, muscle cramps, weakness, dizziness, headache, nausea, vomiting or fainting.
Heat stroke	A life-threatening emergency. It occurs when the body temperature rises above 40.5°C. The symptoms may be the same as for heat exhaustion, but the skin may be dry with no sweating, and the person's mental condition worsens. They may stagger, appear confused, have a fit or collapse and become unconscious.

Heatwaves can also aggravate existing medical conditions.

Impact on social behaviour

In a heatwave, people can become exhausted, agitated, and more strained. Heat can also have a negative impact on mental health and wellbeing. There may also be increased demand on emergency services, hospitals and other critical services.

Higher rates of drug and alcohol misuse, incidents of crime, family dissolution, self-harm and suicide may be more likely to follow more extreme weather events. Evidence is beginning to emerge that drought and heatwaves lead to higher rates of self-harm and suicide, as much as 8 per cent higher[2].

Impact on Yarra's built environment, infrastructure and utilities

Heatwaves place stress on many types of infrastructure including roads, train and tram tracks, and overhead power lines. This includes overhead power lines sagging[3], power failures or blackouts impacting the operation of electrified trains, trams and traffic signals.

The risk of extreme heat days is compounded in urban areas due to an effect known as the Urban Heat Island (UHI) effect. Built-up areas experience higher temperatures than surrounding areas due to expanses of exposed concrete, asphalt, and steel which retain heat and release it over longer time periods than vegetation. This can cause average urban daytime air temperatures to be up to 5.6°C higher than the surrounding areas in summer[4].

Heatwaves place pressure on the provision of essential services such as electricity. This can result from either heat impacts on infrastructure or increased demand. During emergency events power companies make an assessment of the damage and prioritise repairs to ensure those most in need, such as hospitals, are returned to power first.

Increased use of air-conditioners increases demand for power during heatwaves and can potentially outstrip supply resulting in power blackouts. This risk has significant flow on implications during a heatwave, particularly for those managing their heat stress with air-conditioning. Mass stranding of public transport passengers may also occur if outages are sufficient to disrupt transport services.

The Department of Climate Change and Energy Efficiency has prepared a document[5] which outlines the risks to public transport infrastructure and projects that will improve reliability during very hot days.

Impact on Yarra's economy

Extreme heat can restrict the productivity of workers, particularly those working outdoors or in heat-exposed jobs. As heatwaves become more extreme and occur more frequently, decreased labour productivity will become more costly and will likely force changes in the workplace, such as a transition to working night shifts[6].

Agricultural losses, outages of infrastructure and utilities as a result of heatwaves can constrain economic productivity and growth of the economy, as business may suspend, or products become unavailable for consumption. Individuals may also find themselves in economic hardship if they are dependent on costly methods of cooling (e.g. air conditioning).

Impact on Yarra's natural landscape

The main remnants of the natural landscape character of Yarra City are located along the waterway corridors. Due to the long period of Yarra's settlement and extent of urbanisation and change, these

[2] Taken from The Climate Institute (2013) *The human impact of heatwaves and extreme weather*
[3] Energy Safe Victoria (2014) http://www.esv.vic.gov.au/About-ESV/Campaigns/Look-up-and-live
[4] Akbari, Menon & Rosenfeld 2009 *Global Cooling: increasing world-wide albedos to offset CO2 Climate Change*
[5] AECOM (2012) Adaptation of Melbourne's Metropolitan Rail Network in Response to Climate Change
[6] Climate Council Report (2014): *http://www.climatecouncil.org.au/heatwaves-report*

remnants are relatively small and therefore significant. A heatwave in Yarra City could significantly reduce the health and amount of vegetation along these waterway corridors.

Impact on Yarra's wildlife and pets

Wildlife and pets, like people, are susceptible to heat-related stress and illness. Animal owners should consider ways to prepare and protect their animals during a heatwave.

Actions that can minimise risks associated with harm to pets, animals and wildlife in a heatwave:

- Bring pets inside
- Ensure there is shade for animals which must remain outsides
- Don't leave animals in cars on hot days
- Ensure pets have water
- Provide a bowl of water in your garden for birds and wildlife to drink from
- Refrigerate pet food
- Remember older and long haired animals can be more susceptible to the effects of heat
- If pets show signs of lethargy, excessive panting or breathing problems, put pets in a cool (but not icy cold) bath, if they do not improve take them to the vet.

Impact on Council Business Continuity

A heatwave will impact on Council operations and service provision levels in a number of ways. A detailed overview of impacts of a heatwave on the organisation is provided at Appendix 2.

The main impacts on Council operations are:

- Increased staff absenteeism
- Staff fatigue and heat stress
- Power outages leading to suspension or cessation of works and service delivery
- High demand on air-conditioned facilities
- High demand on social services
- Impaired ability to undertake outdoor work
- Cancelled public transport services
- Increase in anti-social behaviour
- Increased demand on Customer Experience including for after hours support.

Council's Business Continuity Plan addresses the management of these potential impacts, identifying critical services and the arrangements to maintain them. The Plan identifies that a collaborative and coordinated effort between Council's business continuity and emergency management coordination groups is needed in the event of MEMP activation due to an emergency.

In a heatwave emergency, there are specific everyday Council services and functions that may become or need to continue to be delivered as essential, because of they are essential (e.g. delivered meals) or their ability to assist the community to cope with the impacts of heat.

Appendix 2: Quick Council Guide to Business Continuity in Heatwaves outlines business functions and services that need to be prioritised in a heatwave by Council business units. This is a quick reference for Council units to use in the event of a heatwave. It should be applied alongside actions listed in the Council Heatwave Action Plan.

Heatwave Communications

The key purpose of Heatwave Communications is to generate preparedness and improve community resilience to heatwave conditions.

The Department of Health (DH) has the lead responsibility for preparing messages and general information about management in a heatwave. Fact sheets are provided on the Department's website and the Better Health website. A media toolkit has been prepared for use by local government and is available from Survive the heat - partner kit - Better Health Channel This toolkit comprises a range of electronic documents that can be used to ensure media releases are localised.

The Emergency Management Commissioner may engage the support of Emergency Management Joint Public Information Committee (EMJPIC) to ensure the state-level messages from all agencies with a role or responsibility in managing the impact and consequences of an extreme heat event are prioritised and included in the key messages to the public. This may also include the integration of messaging across all emergencies, such as fires, storm, etc. If EMJPIC-Heat is convened without the State control function being activated the agency leading the predominate consequence will be responsible for coordinating key messages and agencies/departments will publish these through their normal channels based on the joined-up approach established by EMJPIC-Heat.

Advice relating to heatwaves and extreme heat are prepared by the Chief Health Officer from DH and disseminated by DH, the Bureau of Meteorology, Ambulance Victoria, service providers, health professionals and local media. Relevant Community Groups are encouraged to subscribe to the DH heat alert emails.

The heat health messages currently being promoted by DH are and can be seen here:

- **Plan ahead**
- **Stay somewhere cool**
- **Drink plenty of water**
- **Never leave anyone in a car**
- **Check in on others**

Council acts as a supporting agency to assist in the localised dissemination of advice and warnings.

For Council, communicating heatwave risk and safety information occurs throughout the year and is a task undertaken by business areas across the organisation. The Heatwave Action Plan identifies and assigns communications tasks to specific business units.

Relief and recovery arrangements after a heatwave emergency

Any relief and recovery assistance required following a heatwave emergency will be managed using the relief and recovery arrangements documented in the City of Yarra Municipal Emergency Management Plan (MEMP) located Emergency Management | Yarra City Council.

References and Appendices

Emergency Management Victoria (2021) SERP StateExtremeHeatSub plan.pdf (emv.vic.gov.au)
CSIRO (2022) State of the Climate Report
AECOM (2012) Adaptation of Melbourne's Metropolitan Rail Network in Response to Climate Change

Akbari, Menon & Rosenfeld (2009) Global Cooling: increasing world-wide albedos to offset CO2
Climate Council Report (2022) The Great Deluge: Australia's State of Unnatural Disasters.
Department of Health (2012) Heatwave Planning Guide
Department of Health (2012) Heatwave plan review tool
Energy Safe Victoria (2014) Look Up and Live
The Climate Institute (2013) The human impact of heatwaves and extreme weather
WHO Europe (2008) Heat Health Action Plans: Guidance

Appendix 1: Heat Health Thresholds and Alerts explained

DH has identified heat health temperature thresholds for Victoria, above which heat-related illness and mortality increases substantially. These thresholds differ across the nine weather forecast districts in Victoria; in the City of Yarra, the heat health temperature threshold is 30ºC. What this means for Yarra residents and visitors is that if the daily minimum and maximum temperatures forecast[7] for the city average above 30ºC degrees, DH will issue a heat health alert for the district.

Calculating the average temperature

The average temperature is calculated from the forecast **daily maximum** and the forecast overnight temperature, which is the **daily minimum for the following day**.

An example of this calculation is demonstrated below:

Melbourne

Tuesday

Min: 20ºC

Max: 38ºC

Wednesday

Min 25ºC

Max: 31ºC

Average calculation for Tuesday

(38+25) /2 = 31.5ºC

The threshold for Melbourne = Average of 30ºC

The temperature forecast indicates that the threshold will be exceeded.

This calculation will be repeat for each of the seven days including in the daily foreca

[7] Forecast by the Bureau Meteorology