



Yarriambiack

SHIRE COUNCIL

2020-2021

HEATWAVE PLAN



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Executive summary

Heatwaves have been experienced in the past and are forecast to increase in frequency and intensity in the future. Evidence shows that heatwaves cause death and can aggravate existing health conditions. Those most at risk are vulnerable population groups including the elderly, babies and children and those with pre-existing medical conditions.

Adverse health effects of hot weather and heatwaves are largely preventable and this *Heatwave Plan* aims to form partnerships with other levels of government and local agencies to increase the resilience of the community and to ensure that solid plans are in place to respond to heatwaves in the future.

The aim of this plan is to:

- Assist in reducing illness and death caused by heatwave events in the community; and
- Provide support and recovery assistance throughout the duration of a heatwave.

The objectives of the plan include:

- Preparedness:
 - Have arrangements in place to reduce the impact of a heatwave on the community;
 - Increase the understanding of heatwave planning and management across Council and key stakeholders;
 - Develop partnerships and collaborative arrangements to better respond to heatwaves;
 - Increase understanding of heatwaves in communities so as to increase their capacity to respond during a heatwave event; and
 - Develop long term and sustainable behavioural change to minimise the impacts of heatwaves on health and wellbeing.
- Response:
 - Ensure that health information and support is readily available to the community, vulnerable population groups and their carers during a heatwave; and
 - Provide a coordinated emergency response to heat events so as to increase effectiveness.
- Communication:
 - Develop media and communication messages, in line with whole of government messages, to inform the community and staff of impending heatwaves and any changes to normal municipal service delivery.
- Community support and recovery:
 - Maintain a community response to community members who continue to be at risk as a heatwave abates.

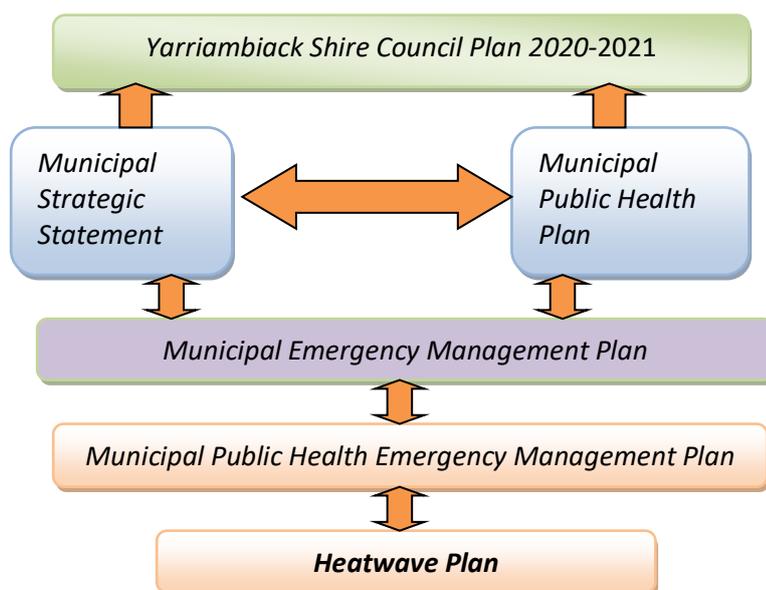
Policy context

The *Heatwave Plan* has been written to:

- Be consistent with legislation, departmental guidelines and other Council planning frameworks relevant to heatwaves. These include:
 - *State Heat Plan 2015*;
 - *Public Health and Wellbeing Act 2008*;
 - *Emergency Management Act 2013*;
 - *Emergency Management Act 1986*;
 - *Climate Change Act 2010*;
 - *Planning and Environment Act 1987*; and
 - *Local Government Act 1989*.
- Outline health and community actions and response arrangements to heatwave alert;
- Identify vulnerable persons within the Yarriambiack community;
- Propose a clear communication strategy to initiate alert, response and recovery phases of the plan;
- Describe key stakeholder roles and recommend stakeholder actions; and
- Promote a community awareness and education component.

The *Yarriambiack Shire Council Heatwave Plan* is an important part of a suite of Council publications that provide consistent community-wide messages around how to stay healthy. This plan informs existing frameworks by outlining a coordinated, municipal wide approach to better understanding the health impacts of heatwaves. The plan is a sub-plan of the Shire's *Municipal Public Health Emergency Management Plan*, itself a sub-plan of the *Yarriambiack Municipal Emergency Management Plan*.

Figure 1: Planning responsibilities of local government



What is a heatwave?

There is no single nationally or internationally accepted definition of a heatwave. Factors such as humidity, demographics, urban and rural design, and acclimatisation mean that similar temperatures might vary in impact in different environments or on different communities. Heatwaves are typically described as a minimum temperature over a prescribed duration that is likely to impact on the health of the community.

Heatwaves and the Yarriambiack Shire

The Yarriambiack Shire covers a 7,158 square kilometre area in the Wimmera Mallee district of Victoria. The Shire had an estimated population according to ABS data 2018 6,658 people a number which continues to slowly decrease. The Yarriambiack Shire is also facing an ageing population with 25.9% over 65 years of age, compared to the state figures of 14.3%. The region is the heartland of grain production and handling. One quarter of Victoria's total production of wheat and barley is produced locally.

People in the Yarriambiack Shire are generally accustomed to living in hot weather and are known to be resilient in hot conditions. For this reason, many of us can become complacent about extreme heat events and don't believe we could be susceptible to heat-related health impacts.

The events of the January 2009 heatwave in Victoria resulted in an estimated 374 excess deaths compared with the average rate in the same week over the previous five years, and serves as a reminder that the impact of heatwaves on human health is real and life threatening¹. Our region experienced heat of unprecedented intensity and duration with maximum temperatures 12 to 15°C above normal for much of the area. The temperature was above 43°C for three consecutive days from 28 to 30 January reaching a peak of 45.1°C on 30 January 2009.

Research tells us that climate change is expected to increase the frequency and intensity of such heatwaves in our area. During the last decade, average daily maximum temperatures in our region have been recorded as 0.6°C warmer than the 30 year (1961 to 1990) average². The future climate of our area is expected to be hotter and drier than it is today. By 2030, average annual temperatures will be around 0.8°C warmer and the number of hot days (days over 30°C) will continue to increase. Extreme weather events are predicted to become more frequent and severe in the years to come.

Yarriambiack Shire's landscape and climate make it vulnerable to drought, bushfire and heatwave conditions. Drought has been a constant feature of the climate conditions in recent years. Extended dry hot periods have seen natural waterways reduced and communities and industry adapt to the conditions. High temperatures in the Wimmera Mallee typically correspond to low humidity values because the prevailing winds originate from the dry inland parts of the country.

Very hot days are usually associated with hazardous fire weather conditions in the region. The fire threat is increased when thunderstorms develop causing lightning that provides the ignition for storms. This is particularly the case when thunderstorms cause little or no rain, as is sometimes the case in our municipality.

1. Victorian Office of the Chief Health Officer (2009). Office of the Chief Health Officer Report

2. Victorian Government of Sustainability and Environment (2008). Climate Change in Wimmera/Mallee

Heat health alert

The Department of Health and Human Services (DHHS) as developed a state-wide Heat Health Alert System to notify councils, hospitals, and health and community service providers of forecast heatwave conditions which are likely to affect human health. Research tells us that when our area, north of the netting fence in the Mallee District, reaches a heat health temperature threshold of 34°C or above, heat-related illness and mortality increases substantially. When the threshold reaches 32°C or above, south of the netting fence in the Wimmera District, a similar alert will be given. Our Shire is the only municipality in Victoria with two different heat health thresholds.

These thresholds are calculated by the Bureau of Meteorology (BoM). They determine the daily average temperature: the average of the forecast daily maximum temperature and the forecast overnight temperature (which is the daily minimum for the following day).

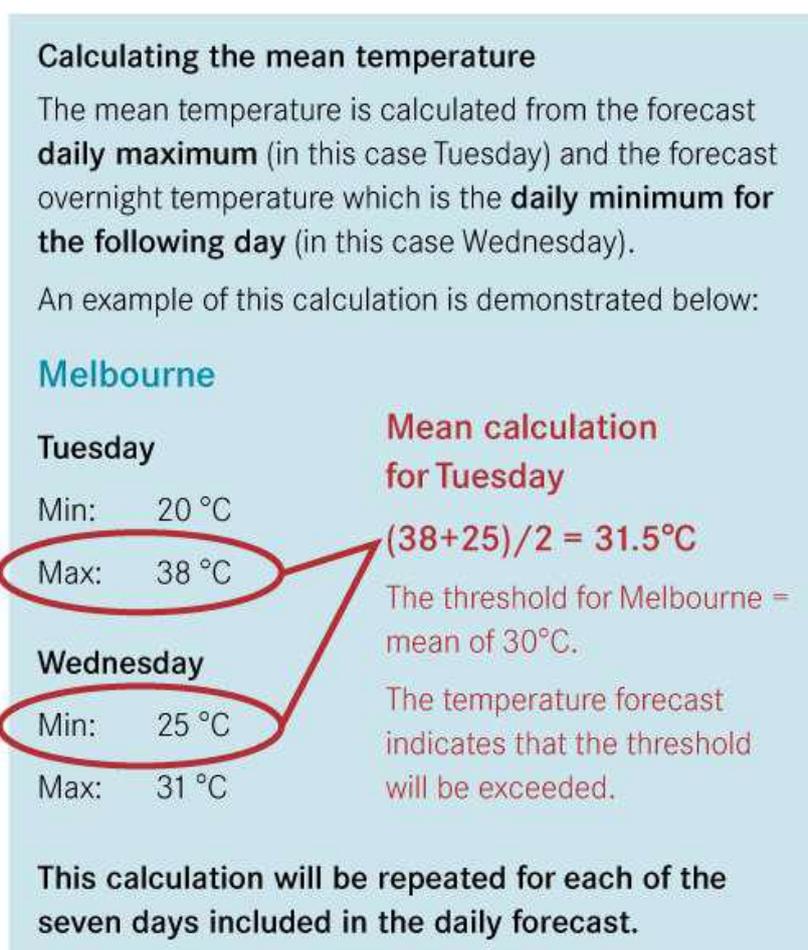
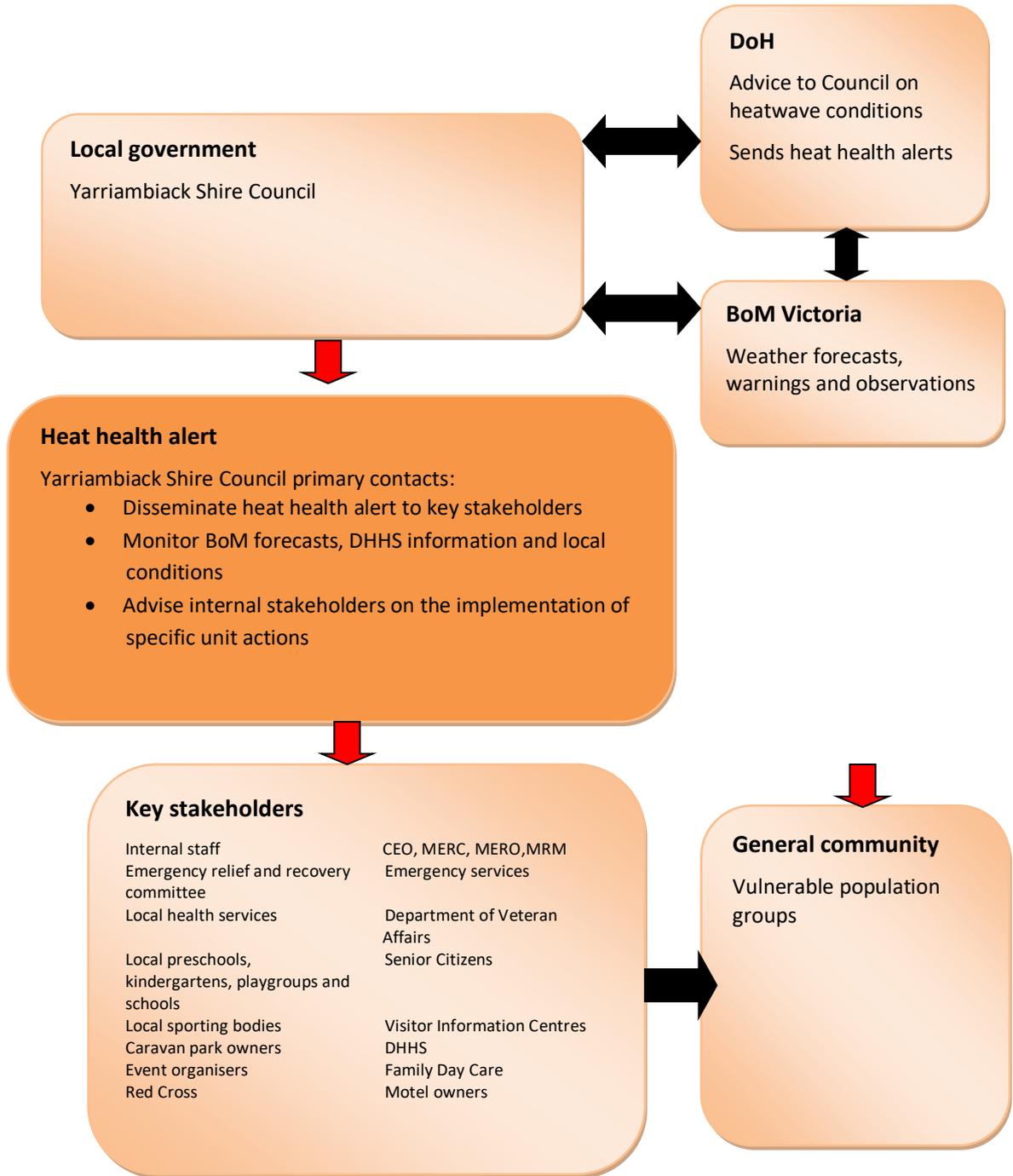


Figure 2: Calculating Heat Health Alert thresholds

When forecast average temperatures are predicted to reach or exceed the heat health temperature thresholds for the two areas within the Yarriambiack Shire, the department will issue a heat health alert to designated contacts (see Appendix 1), including our Council primary contacts.

Efficient response to heat health alerts is dependent upon the Yarriambiack Shire informing all key stakeholders of their responsibilities to enact their own heatwave actions via email, fax or telephone. An activation plan will be followed to ensure this process is carried out smoothly and effectively (see Figure 3).

Figure 3: Heat Health Alert Activation Plan



Heatwaves and health

As temperatures rise, so does the risk of contracting a heat related illness, a medical condition that results from the body's inability to cope with heat and cool itself. If left untreated, a heat illness can lead to serious complications, even death. In fact, heat kills more people than tornadoes, hurricanes, lightning and flash floods – combined.

Heat-related illness can range from mild conditions, such as a rash or cramps, to very serious conditions, such as heat stroke, which can be fatal. Heatwaves can also exacerbate existing medical conditions including heart and kidney disease. Heat-related illness can make people feel uncomfortable, not so much because they feel hot, but rather because they sense how difficult it has become to lose body heat at the rate necessary to keep their inner body temperature close to 37°C. The body responds to this stress progressively through three phases.

1. Heat cramps - muscular pains and spasms caused by heavy exertion. Although heat cramps are the least severe Phase they are an early signal that the body is having trouble with the heat.
2. Heat exhaustion - typically occurs when people exercise heavily or works in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing a decrease of flow to the vital organs. This results in mild shock with symptoms of cold, clammy and pale skin, together with fainting and vomiting. If not treated the victim may suffer heat stroke.
3. Heat stroke - is life threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature may exceed 40.6°C potentially causing brain damage and death if the body is not cooled quickly.

High temperatures can also be linked to increased hospital admissions relating to heat stress, dehydration, or as a result of heat exacerbating existing conditions; increased rates of certain crimes particularly those related to aggressive behaviour such as homicide; increased number of work-related accidents and reduced work productivity; and decreased sporting performance.

To help prevent the onset of a heat related illness, people in the Yarriambiack Shire are advised to follow the **four key health messages** promoted by DHHS Keep cool

- Drink plenty of water
- Stay out of the sun
- Look after yourself and others.

General care for heat emergencies includes cooling the body, giving fluids and minimising shock. Prevention is the best way to manage heat related illness.



People most at risk to heatwaves

Heatwaves can affect anybody, including the young and healthy; however, there are certain population groups that are more at risk than others. These include the elderly, infants and young children, people with a disability, people with a pre-existing medical condition and people who are socially and economically disadvantaged. Other groups at risk to heat include people who are overweight, people who over exert during work or exercise and people confined to bed and unable to care for themselves.

While the *Yarriambiack Shire Council Heatwave Plan* plans for a whole-of-community response, it particularly focuses upon the following groups:

- The elderly: People over 65 years of age

Most studies have found that heat-related mortality is highest in those over 65 years of age. In Victoria's January 2009 heatwave, reportable deaths for those 65 years and older more than doubled³. Yarriambiack Shire's population, like most parts of Australia, is ageing. This ageing trend is projected to continue, but at a higher rate as the baby boomers enter old age. Activities which improve the care of the elderly will improve their ability to cope with heatwaves. This includes regular monitoring, ensuring proper clothing, a cool environment, appropriate diet and adequate intake of fluids.

- Infants: Children aged 0 to 4 years

Young children are also sensitive to the effects of high temperatures because they produce more metabolic heat than adults and rely on others to regulate their environments and provide adequate liquids. Their core temperature can rise quickly causing dehydration. Our Maternal and Child Health nurses will provide education to families on how to care for young children in hot weather.

- Tourists and residents of caravan parks

Tourists can be more prone to the effects of heatwaves, particularly if they are visiting from cooler regions and are not acclimatised to the hot dry heat that rural Victoria can experience during the summer months. Nevertheless, it is assumed that most tourists in their own vans visiting the area over the summer period would have air-conditioning and be prepared for hot weather.

Caravan park residents (temporary or permanent) are more vulnerable to the effects of heatwave events, particularly vans without air conditioning when daytime and night time temperatures remain high, or there is a power outage. Education around heatwaves will target tourist destinations within the Yarriambiack Shire, particularly focused on caravan parks and community events. Caravan park owners and community event organisers will be encouraged to designate and promote areas where patrons can find relief from the heat on hot weather days. These designated areas should be air conditioned and provided with a potable water supply. A fridge where water can be cooled to a drinkable temperature should also be provided.

- People working in hot environments

Many occupations require people to work in hot conditions irrespective of the weather. Air temperature, radiant temperature, air velocity, humidity, clothing and activity are recognised as factors that interact to determine heat stress.

3. Victorian Office of the Chief Health Officer 2009. Office of the Chief Health Officer Report

Anyone having to work outside in hot weather without appropriate protection, particularly if it involves heavy physical activity, is at increased risk of suffering health effects from heat. Protective clothing, particularly for workers in the emergency services, may become a dangerous hazard. Employers and employees have Occupational Health and Safety obligations to follow to ensure that the health and wellbeing of staff is a priority.

- People participating in physical activity

Exercising in the heat creates competitive demands on the cardiovascular system, which is required to increase the blood supply to exercising muscles. In extreme heat and high humidity, evaporation is slowed and the body must work harder to maintain a normal temperature. Most heat disorders occur because a person has been over-exposed to heat and/or has over-exercised.

Council will encourage sporting clubs to consider introducing policies for heatwave days based on Sports Medicine Australian guidelines. A full copy of the Sports Medicine Australia guidelines is available from the website www.sma.org.au.

- People with chronic diseases

Virtually all chronic diseases present a risk of death/illness due to heat and since the elderly are more likely to have a chronic medical condition, this is another reason why they are at increased risk. Those at the greatest risk are people with psychiatric disorders, depression, and diabetes, pulmonary, cardiovascular and cerebrovascular conditions.

Partners

Council is working alongside Key Partners from within the targeted sector groups in the Yarriambiack community to act as key partners in the future evaluation of the *Heatwave Plan*. We will partner with government, private sector, service provider and community group organisations that represent our vulnerable communities.

These partners include:

- Municipal Emergency Management Committee
- Local health services
- Local preschools, kindergartens, playgroups and schools
- Local sporting bodies
- Caravan park owners
- Event organisers
- Red Cross
- Emergency services
- Department of Veteran Affairs
- Senior Citizens
- Visitor Information Centres
- DHHS
- Family Day Care
- Motel owners

Each of the key partners has an important role to play in the event of a declared heatwave. Recommendations around what stakeholders can do in times of extreme heat are summarised in the following action plan.

Comprehensive contact details for emergency management agencies and individuals in the Yarriambiack Shire Council Shire are contained in the *Yarriambiack Municipal Emergency Management Plan*.

What we are going to do

To be better prepared for heatwave conditions this summer, Yarriambiack Shire Council is going to:

- Include heatwave preparation, response and recovery into existing municipal plans;
- Make use of existing community registers;
- Use our community services and organisations to support vulnerable populations;
- Engage in a communication and media campaign using heatwave messages consistent with DHHS materials; and
- Respond to state activated heat alert system in a planned and considered way.

Our action plan

Our action plan is not just about responding to a pending heatwave; instead, it provides guidance all-year-round as we prepare our community in advance for very hot summers. Our actions then can be divided into four phases.

- Phase 1: Pre summer preparation
- Phase 2: During summer prevention
- Phase 3: Heatwave response
- Phase 4: Heatwave recovery

Each phase is characterised by a set of key actions (see Figure 4).

Figure 4: Summary of heatwave plan actions

Phase 1 Pre summer preparation April 1 to November 30	<ul style="list-style-type: none"> • Revisit vulnerable groups and update community register • Engage key stakeholders • Identify cool areas • Revisit communication resources and materials
Phase 2 During summer prevention December 1 to March 31	<ul style="list-style-type: none"> • Disseminate heat health information • Organise cool areas for possible use • Monitor BoM thresholds • Audits on vulnerable groups • Advise key stakeholders of roles and responsibilities
Phase 3 Heatwave response Trigger: Department of Health (DHHS) eat health alert	<ul style="list-style-type: none"> • Alert key stakeholders of Heat Health Alert • Enact internal Council heatwave actions • Media alert of key messages and cool area locations • Monitor local conditions
Phase 4 Heatwave recovery	<ul style="list-style-type: none"> • Review heatwave actions • Modify <i>Yarriambiack Shire Council Heatwave Plan</i> according to recommendations

What we will do in Phase 1

Phase 1 includes a range of actions to build capacity within Yarriambiack communities leading up to the summer months. It identifies and engages all key stakeholders. This phase is implemented between April 1 and November 30 each year.

Phase 1 actions	Responsibility	Time frame
Revisit vulnerable groups and update community registers <ul style="list-style-type: none"> Update client base contact information 	General Manager Community Development, Aged and Disability admin officer, MCH staff	April - November
Engage key stakeholders <ul style="list-style-type: none"> Distribute <i>Staying Healthy in the Heat</i> information to stakeholders Advise on Phase 1 actions (see below) 	EHO	April - November
Identify cool areas <ul style="list-style-type: none"> Compile lists of cool areas 	General Manager Community Development, Emergency relief and recovery committee	April - November
Revisit communication resources and materials <ul style="list-style-type: none"> Seek updated resources to support heatwave messages Plan for summer media campaign 	EHO	April - November

What key stakeholders can do in Phase 1

In Phase 1, key stakeholders will be advised by Council to consider:

- Revisiting their actions from the previous summer and evaluate their levels of effectiveness;
- Meeting with other stakeholders to revise and amend key heatwave messages and actions;
- Updating their community registers;
- Collecting general heatwave information from Council;
- Educating any staff of key heatwave messages; and
- Auditing client homes (if appropriate).

What we will do in Phase 2

Phase 2 includes a range of actions to further build resilience amongst Yarriambiack Shire residents during the summer months. It directly involves the actions of most key stakeholders. This phase is implemented between December 1 and March 31 each year.

Phase 2 actions	Responsibility	Time frame
Disseminate heat health information <ul style="list-style-type: none">• General media release• Place information brochures in Council Offices and spaces	EHO	December
Organise cool areas for possible use	General Manager Community Development	December
Monitor heat health thresholds for the Shire	EHO	Summer
Audits on vulnerable groups <ul style="list-style-type: none">• Assist clients to plan what they would do in a heatwave	Aged and Disability Admin officer, MCH staff	Summer
Advise key stakeholders of roles and responsibilities <ul style="list-style-type: none">• Advice on Phase 2 actions (see below)	EHO	December

What key stakeholders can do in Phase 2

In Phase 2, key stakeholders will be advised by Council to consider:

- Distributing heatwave information to clients;
- Identifying cool areas;
- Keeping in regular contact with vulnerable clients;
- Modifying client programs; and
- Providing staff with access to extra water and cool clothing.

What we will do in Phase 3

Phase 3 is triggered when imminent heatwave temperatures are predicted by BoM for the Yarriambiack Shire. Council will know to move to this phase when it is notified by DHHS the EHO and Manager Community Services and Development will receive an email Heat Health Alert when forecasted temperatures are expected to exceed threshold levels. It will then be up to Council to continue to monitor forecast temperatures and notify the relevant stakeholders to activate specific actions in Phase 3 of this *Heatwave Plan*.

Phase 3 actions	Responsibility	Time frame
Alert key stakeholders of Heat Health Alert <ul style="list-style-type: none"> Send generic DHH Message to all listed stakeholders 	EHO	Activation of Heat Health Alert
Enact internal Council heatwave actions <ul style="list-style-type: none"> Send generic DHHS message to managers Enact client phone trees in HACCPAC 	EHO, Aged and Disability admin officer	Activation of Heat Health Alert
Media alert of key heat health messages and cool area locations/messages	EHO	Activation of Heat Health Alert
Notify the CEO, MERC and MERO	General Manager Community Development	Activation of Heat Health Alert
Monitor local conditions <ul style="list-style-type: none"> Reassess any outdoor run events Alter staff scheduling Revisit pool opening and closing times 	General Manager Community Development , EHO, MERO	During heatwave

Aspects of the *Municipal Emergency Management Plan* would be activated by Yarriambiack Shire Council in response to declared emergencies resulting from heatwave conditions. In this case, the MERO or MRM could assume command.

What key stakeholders can do in Phase 3

Prompt action by stakeholders during Phase 3 will ensure the impacts of heat on the elderly, very young, tourists and Council staff is kept to a minimum. Key stakeholders will be advised by Council to consider:

- Enacting their phone trees;
- Prioritising tasks especially for those involving physical exertion;
- Assessing risk for clients and staff;
- Rescheduling staff work times and hours;
- Providing additional fluids and cool places to rest for clients and staff;
- Modifying client programs;
- Transporting clients in cooler parts of the day; and
- Altering children’s outdoor activities and play times.

What we will do in Phase 4

Phase 4 ensures our *Heatwave Plan* remains relevant and meets the changing needs of our community. Council will review heatwave actions in this phase after each heatwave event or at the end of summer and use any amendments to inform an updated *Heatwave Plan* every four years. This will be carried out in conjunction with the *Municipal Emergency Management Plan* review cycle. The review process will take into account changes at state, regional and local levels. All relevant stakeholders will actively participate in the evaluation. The following questions will be addressed.

- Were the actions in Phase 3 appropriate and timely?
- What worked?
- What didn't work?
- Was information communicated effectively to stakeholders?
- Was information communicated effectively to the general community?
- What could we do differently next summer?

Phase 4 actions	Responsibility	Time frame
Review current <i>Heatwave Plan</i> <ul style="list-style-type: none">• Engage internal stakeholders in planned review• Follow up on clients as to how they went during last summer	General Manager Community Development	April – Annually
Modify <i>Yarriambiack Shire Council Heatwave Plan</i> according to recommendations	EHO	Post summer

What key stakeholders can do in Phase 4

In Phase 4, key stakeholders will be advised by Council to consider:

- Participating in Council's evaluation of the *Yarriambiack Shire Council Heatwave Plan*;
- Reviewing their own actions during prolonged periods of hot weather; and
- Making recommendations to modify their own plans.

Appendix 1: Heat health alert distribution list .

Local government authorities: Designated contacts (minimum 2 per council)

Minister's office:

- Minister for Health
- Minister for Housing
- Minister for Disability, Ageing and Carers
- Minister for Education
- Minister for Mental Health

DHHS– Head office

- DH Secretary
- Executive Directors
- Directors
- Executive Officers

DHHS – Regional

- REOC
- Regional Director
 - EM Coordinator/Manager
 - Corporate Service Managers
- Director – Health & Aged Care
 - Public Health Manager
 - Regional Environmental Health Officer (REHO)

DHHS – Head office

- DHS Secretary
- Executive Directors
- Directors
- Executive Officers

DHHS – Program areas

- WICA
 - Aged Care
 - Health Protection and Chief Health Officer
 - Prevention and Population Health
 - Integrated Care
- Strategy, Policy & Finance
 - Business Planning & Communications – Media Unit
 - Health Regulation and Reform – Private Hospitals Unit
- Mental Health, Drugs & Regions
 - Operations
- Hospital & Health Services
 - Performance, Acute Programs & Rural Health
 - Quality, Safety & Patient Experience (VHEC)

SECONDARY DISTRIBUTION

- Metropolitan health services
- Rural health services
- Private hospitals
- Stakeholders
 - Adult Retrieval Victoria
 - Field Emergency Medicine Officers
 - Nurse-On-Call
 - Ambulance EOC
 - ARC Blood Service
- Aged care sector
 - PSRACS
 - DVA
 - DOHA

DHHS – Program areas

- Disability Services
- Service Delivery and Performance
 - Emergency Management Branch
- Housing & Community Building

Emergency services

- Country Fire Authority
- Metropolitan Fire Brigade
- State Emergency Services
- Victoria Police

Commonwealth departments

- Department of Health and Ageing (DoHA)

State government departments/programs

- Department of Premier and Cabinet
- Department of Education and Training
- Department of Justice and Safety
 - Emergency Management Victoria
- Department of Environment and Land, Water, Planning
- Department of Transport
- Department of Jobs, Precincts and Regions
- Department of Health and Human Services

Government agencies

- Ambulance Victoria
- Bureau of Meteorology
- Centrelink
- Coroners Court

Statewide or major metropolitan service providers

- Baptcare
- Brotherhood of St Laurence, Integrated Community Care
- Life Saving Victoria
- Melbourne Medical Deputising Service
- Multiple Sclerosis Australia (Victoria)
- NURSE-ON-CALL provider (Medibank Private)
- Personal Alert Victoria
- Royal District Nursing Service (RDNS)
- Red Cross (regional and EOC)

Peak or advocacy bodies

- Aged and Community Care Australia
- Aged Care Standards and Accreditation Agency
- Alzheimer's Australia Vic (AAV)
- Aquatics and Recreation Victoria
- Australian Psychological Society
- Carer's Victoria Inc.
- Disability Emergency Management Advocacy
- Ethnic Communities Council of Victoria (ECCV)
- General Practice Victoria
- KidSafe Victoria
- Municipal Association of Victoria
- Pharmacy Guild of Australia
- Pharmaceutical Society of Australia
- Seniors Information Victoria (COTA)
- Victorian Eyecare Service