

Heat Wave Response Plan



Central Goldfields
Shire Council



Prepared for the Shire of Central Goldfields
by
Jim Smith, James C Smith & Associates and
Simon Berton, Infocus Management Group

Front cover photo sourced from http://www.visitmaryborough.com.au/station_11.JPG

Document & Version Control

Name	Emergency Management Heatwave Response Sub-Plan		
Status	Draft		
Version number	Final as at November 2010		
Dates document revised			
Authors:	JS		
Approved by:			

Revision history

Revision no.	Issue date	Pages amended	Amended by:	Approved by:

Distribution record

Issued to:	Issue date:	Organisational position or role

Contents

Introduction	4
Background	5
Aims and objectives of the Heat Wave Response Sub-Plan	6
Roles and Responsibilities in Heat Wave Management	7
Planning Framework for the Heat Wave Response Plan	7
Central Goldfields Shire Demographic Profile	10
Health and Wellbeing Profile	13
Weather statistics (Maryborough)	16
Management plan	18
Appendices	22
References	31

Introduction

One of the critical roles Council undertakes on behalf of its community is to plan for emergencies. This Heatwave Response Sub-Plan has been developed as part of Council's suite of emergency plans on the basis that it is expected that with climate change we will be experiencing more frequent and intense heatwaves. Our municipal population is quite diverse and has a number of groups that will be particularly susceptible to heatwave conditions. The impact of heatwaves on our community could be quite substantial, subsequently the need for this Sub-Plan which outlines the operations of the organisation during these events.

The Heatwave Response Sub-Plan is a sub plan of the Municipal Emergency Management Plan (MEMP) and will work in conjunction with the MEMP. The Sub-Plan is subject to the approval of the Municipal Emergency Management Committee and it will be reviewed annually with the Municipal Emergency Management Plan.

Mark Johnston
Chief Executive Officer

1.0 Background

Climate change is expected to increase the frequency and intensity of heatwaves in Victoria. Heatwaves cause illness and death, particularly in vulnerable population groups. In January 2009 when Victoria experienced a prolonged statewide heatwave with temperatures among the highest ever recorded there were 374 additional deaths during the heatwave period. Because weather factors are complex and inter-related there is no single internationally accepted definition of a heatwave.

In Victoria, heatwave plans are normally activated when temperatures are forecast that are likely to impact on the health of the community - these activation levels are also called 'thresholds'. The Victorian Department of Health has established a heatwave threshold for all of Victoria. For Central Goldfields Shire (being part of the Bendigo Statistical District) a heat alert will be issued by the Department of Health when the mean of the expected minimum overnight temperature and expected maximum day temperature is equal to, or greater than, 32°C.

In heatwave conditions mortality rates in people might increase by 19–21% for those aged 65 years or older.

The development of this Sub-Plan was undertaken with the assistance of a number of internal and external stakeholders:

- Cr Barry Rinaldi
- Paul Hugget, Victoria Police
- Wendy Lambert, Victoria Police
- Glenn Stickland, Australian Red Cross
- Bettina Gordon, Maryborough District Health Service
- Helen McAulay, Maryborough District Health Service
- Max Murphy, Department of Health
- Sandra Wright, Community Services Officer, Central Goldfields Shire
- Margaret Murphy, Maternal & Child Health, Central Goldfields Shire
- Trudie McHugh, Home Care Services Manager, Central Goldfields Shire
- John Kelly, Municipal Recovery Manager, Central Goldfields Shire
- Ron Potter, Municipal Emergency Resource Officer, Central Goldfields Shire
- Tatiana Collier, Special Projects Officer & Media, Central Goldfields Shire

2.0 The Aims and Objectives of the Heat Wave Response Sub-Plan

Heatwaves are known to increase the incidence of illness and death, particularly among vulnerable population groups which include people with the following characteristics:

- the elderly;
- children under five years old;
- pregnant or nursing mothers;
- people with a pre-existing medical condition, such as diabetes, heart disease, kidney disease or mental illness;
- those living alone with little social contact;
- people taking certain medications, such as those for Multiple Sclerosis; &
- people with a disability.

Also considered to be vulnerable are people in the following circumstances:

- people without air-conditioning or who refuse to use it;
- homeless people;
- low income earners;
- those with limited access to transport;
- people who are outdoors for any reason, especially doing strenuous activity like working or playing sports;
- residents in the upper floors of multi-storey buildings; and
- some people from culturally and linguistically diverse backgrounds who cannot access health services, or information.

The aim of the sub-plan is to prepare for, and respond to, the occurrence of a heatwaves in the Central Goldfields Shire municipality and, by doing so, reduce the impact on the community and particularly those deemed to be more vulnerable to heatwave events.

The public health planning objectives of the Sub-plan are to:

1. identify vulnerable population groups;
2. develop effective strategies to minimise risks to vulnerable groups in times of heatwaves; and
3. maintain planning activities integrated with local emergency management plans.

3.0 Roles and Responsibilities in Heat Wave Management

3.1 Department of Health

Our Environment Our Future Sustainability Action Statement 2006 sets out a whole-of-Victorian-Government policy, identifying heatwave planning in local government as a priority. The Department of Health has developed the *Victorian Heatwave Strategy* to:

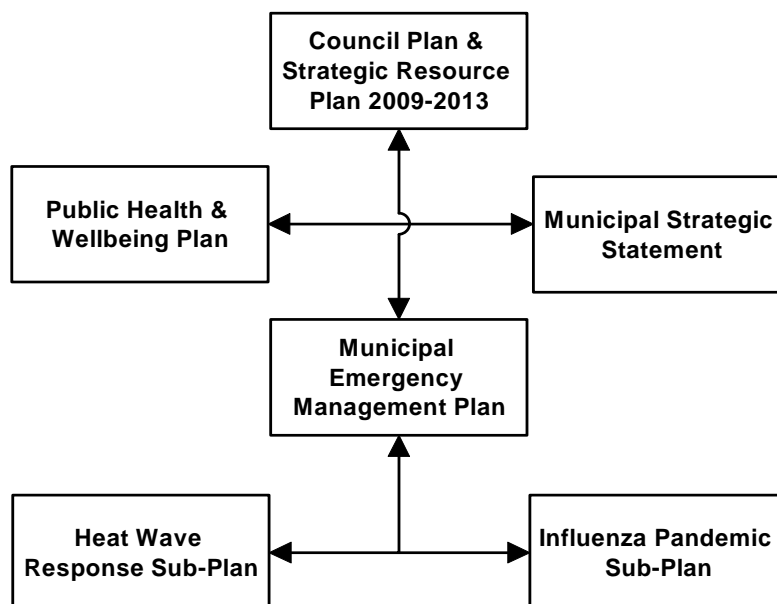
- raise awareness about the impact of heatwaves on morbidity and mortality;
- commission research to better understand heatwaves; and
- assist local councils in developing and implementing heatwave plans.

As part of its role, the Department has established a heat alert system to inform local councils and departmental staff of impending heatwaves and provided funding for the development of pilot plans, funding for councils to develop their heatwave response plans and developed a planning guide.

3.2 Central Goldfields Planning Framework for the Heatwave Response Plan

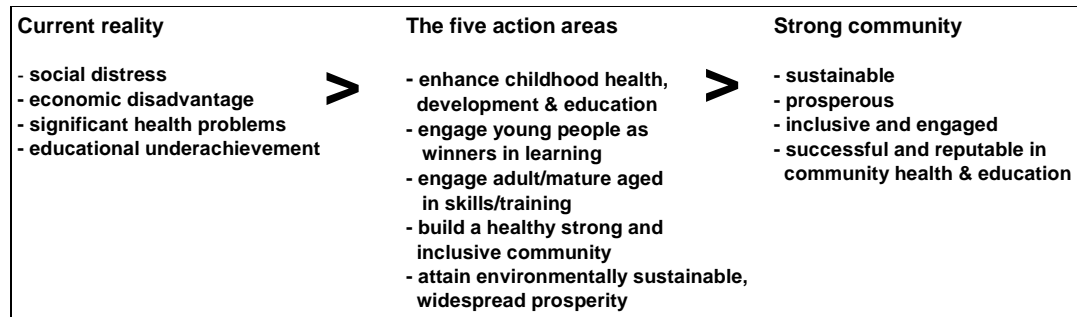
The planning framework for the development of the Heatwave Response Sub-Plan exists within the broader planning for public health and emergency management in the municipality.

Figure 1 Central Goldfields Planning Framework



The focus of the current Council Plan and Strategic Resource Plan 2009-2013 is summarised in the following figure:

Figure 2 Focus of the Council Plan



The building of a healthy, strong and inclusive community is one of the five action areas for Council and provides a focus for the goals of all public health planning efforts including the Heatwave Response Plan. Council has developed also its Public Health & Wellbeing Plan 2009-2012 which has examined the health status of the Shire's population and developed goals and strategies to improve the community's health which is consistent with the Council Plan. One strategy contained in the Public Health & Wellbeing Plan is the development of a Heatwave Response Plan for the Shire.

The Municipal Emergency Management Plan (MEMP) 2008 has the aim of detailing the agreed arrangements for the prevention of, the response to, and the recovery from, emergencies that could occur in the Central Goldfields Shire as identified in Part 4 of the Emergency Management Act, 1986. The broad objectives of this Plan are to: -

- a) Implement measures to prevent or reduce the causes or effects of emergencies.
- b) Manage arrangements for the utilisation and implementation of municipal resources in response to emergencies.
- c) Manage support that may be provided to or from adjoining municipalities.
- d) Assist the affected community to recover following an emergency.
- e) Complement other local, regional and state planning arrangements.

The following table from the MEMP shows that heatwaves are a medium risk rating with the potential to affect all four risk elements – people, economy, environment and infrastructure.

Table 1 Risk ratings under the Municipal Emergency Management Plan

Risks	Risk Rating	Elements at Risk			
		People	Economy	Environment	Infra-structure
Floods	S	✓	✓	✓	✓
Blue green algae	S	✓	✓	✓	✓
Wildfire	H	✓	✓	✓	✓
Structural fire	S	✓	✓	✓	✓
Workplace accidents	H	✓	✓	✓	✓
Boating/water accidents	S	✓	X	✓	✓
Rail accidents	H	✓	✓	✓	✓
Aircraft accidents	S	✓	✓	✓	✓
Land subsidence	S	✓	✓	✓	✓
Earthquake	M	✓	✓	✓	✓
Water contamination	H	✓	✓	✓	✓
Storms	H	✓	✓	✓	✓
Human diseases	H	✓	✓	X	X
Animal diseases	H	✓	✓	✓	✓
Plant diseases	H	✓	✓	✓	✓
Terrorism	S	✓	✓	✓	✓
Food poisoning	S	✓	✓	X	X
Loss of utilities	H	✓	✓	✓	✓
Hazardous materials incidents	M	✓	✓	✓	✓
Civil disturbance	M	✓	✓	✓	✓
Dam burst	M	✓	✓	✓	✓
Structural collapse	H	✓	✓	✓	✓
Space debris	S	✓	✓	✓	✓
Pest plague	H	✓	✓	✓	✓
Lost persons	S	✓	✓	X	X
Drought	H	✓	✓	✓	✓
Heatwave	M	✓	✓	✓	✓

(Central Goldfields 2008)

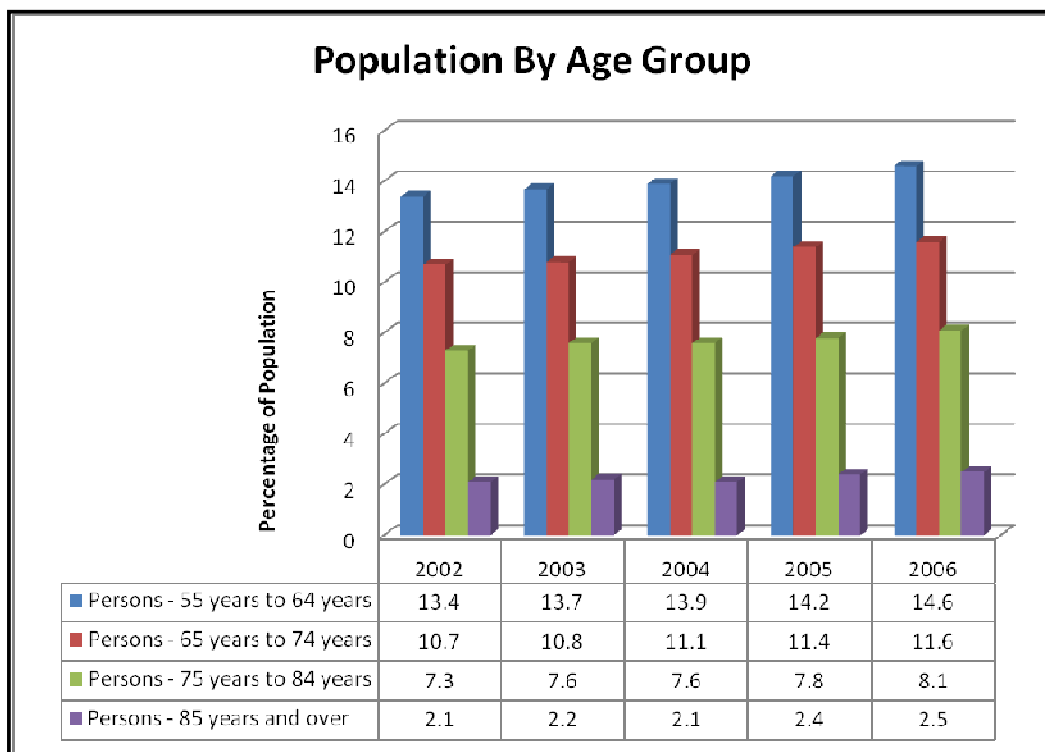
4.0 Community Demographic Profile

In 2006, Central Goldfields covered 1,534 square kilometers and has a total population of 12,325 (excluding overseas visitors) with 6,086 males and 6,239 females. The postcode with the largest population was 3465 (Maryborough). Other towns in the Shire include Bealiba, Carisbrook, Dunolly, Majorca, Talbot, and Timor.

4.1 Age profile

Of the total population 5.3% (648) were aged 0-4 years, 13.1% (1,614) aged 5-14 years, 9.9% (1,222) 15-24 years, 34.2% (4,216) 25-54 years, 14.7% (1,812) aged 55-64 years and 22.8% (2,813) aged 65 years and over, making the median age of persons 46 years. The Shire's birthrate was 125 babies per annum.

Graph 1 Population by age group in Central Goldfields



The above graph depicts the population growth trends in the "baby boomer" and older aged groups, all age categories have seen an increase in percentage of population each year over the five year data period, with the largest increase evident in the 55-64 year aged group.

4.2 Health and related services

The Shire has five kindergartens, three in Maryborough, one in Talbot and one in Dunolly. Maryborough District Health Services operates within the Shire and it consists of the Maryborough Campus, Dunolly Campus and Community Services.

The Maryborough Campus includes the Maryborough Nursing Home (45 beds) District Nursing and Palliative Care and Tuaggra House. The Dunolly Campus provides acute and aged care services consisting of 4 Acute Beds, 18 High & Low Aged Care beds, 1 Low Care respite bed, Outpatients (A&E), Day Centre for Planned Activity Groups two days a week, consulting rooms for Maternal Child & Health, Podiatry Services, and RITCH program services. Dunolly Campus also provides accident & emergency and outpatients on a 24hour, 7 days a week basis. Also within the shire is Havliah Hostel consisting of 51 Low Care beds and located within Maryborough.

Delivered Meals

The Meals on Wheels service prepares and delivers 18,659 meals within the Shire with Maryborough community receiving 15,902 meals and the Dunolly area community 2,757 meals. All delivered meals are provided by the Maryborough Health Service kitchens in Maryborough and Dunolly.

Seniors meals

Group meals are provided on a monthly basis at Senior Citizens Clubs within the Shire – Carisbrook Senior Citizens, Maryborough 899 meals and Dunolly Senior Citizens, Dunolly 424 meals

Maternal and Child Health Service are provided free to all residents with new babies and young children. Centres are located at Carisbrook, corner Napier & Tuaggra Streets and Primrose and Spring Streets, Maryborough, Dunolly and Talbot.

4.3 Household profile

Central Goldfields Shire Council consists of 5,136 household dwellings, 42% of which have internet access. These dwellings consist of:

- 4661 - Separate houses
- 115 - Semi-detached, row or terrace houses
- 256 - Flat, unit or apartments
- Other Dwellings:
 - 55 - Caravan, Cabin or Houseboat
 - 12 - Improvised Home, Tent, Sleepers out
 - 37 - House or Flat attached to a shop, office

Of the 5,136 dwellings within the Shire:

- 1,575 are occupied by a couple family with no children;
- 1,175 are occupied by a couple family with children; and
- 1,621 dwellings are occupied by a lone person.

93.3% of persons usually resident in the Shire were Australia citizens of which 87% were born in Australia, 7.8% were born overseas and 0.1% were overseas visitors. English was the only language spoken at home by 95.45% of residents. In the 2006 census, 50.2 % of persons aged 15 years and over were married, 26.2% had never married, 14.4% had separated or divorced and 9.3% were widowed.

There are 586 lone parents within the Shire with 492 of these being lone female parents.

5.0 Health and wellbeing profile

Central Goldfields Shire Council is currently rated as the most disadvantaged municipality in Victoria in terms of income, educational attainment, employment, housing and motor vehicle access according to the Socio-economic Indexes for Areas (SEIFA) report. The following provides the Shire's health and wellbeing profile:

- high overall disadvantage
- an older population profile
- a high level of blended families
- potential for a drop in housing affordability in the area which is at present is much better than the Victorian average
- a high level of youth disengagement from education and employment - the worst in Victoria
- high unemployment including high youth unemployment
- a significantly above average hospital admission rate for a wide range of conditions and age groups
- the Shire was one of only eight rural LGAs with a significantly above average admission rate for alcohol/drug use and induced mental disorders
- a significantly below average female life expectancy
- a substantial increase in the incidence of diabetes although the ranking compared to other Victorian LGAs is in the bottom half of localities
- an above average level of persons with a disability and an above average level of persons providing unpaid aid to a person with a disability
- poor performance on various maternal and child health indicators, including a very high level of teenage births , a large increase in the number of low birth-weight babies, a low level of infants who were fully breastfed at three months, and a growing number of family violence incidents
- well below average household incomes and the highest rate of benefit recipients for each of the main benefit types
- an above average rate of crimes against the person and drug-related crimes

5.1 Burden of disease

Life expectancy for females in the Shire is significantly below average at 81.3 years compared with the Loddon-Mallee Region and Victorian averages of 83.5 and 84.3 years respectively. Life expectancy for males is marginally below average at 78 years compared with the Loddon Mallee Region 78.7 and Victoria 79.6 years.

- Young people aged 15-24 and the total population had an above average overall hospital admission rate
- In 2001, Central Goldfields had a well above average burden of disease for mental disorders amongst males with a DALY (Disability Adjusted Life Year) rate of 23.6 per 1,000, compared to a Victorian average of 19.6 per 1,000. This included an above average burden of disease due to alcohol abuse/dependence, heroin abuse and dependence, depression and bipolar disorder. It also had an above average burden of disease due to intentional injuries, including suicide.
- Central Goldfields also has an above average burden of disease for mental disorders amongst females with a DALY rate of 22.3 per 1,000 compared to a Victorian average of 19.7 per 1,000. This included an above average burden of disease due to depression, bipolar disorder and borderline personality disorder. It also had an above average burden of disease due to intentional injuries, including suicide

The following is a ranking of the ten most prevalent cases in Central Goldfields in 2001:

1. Oral health (6965 cases)
2. Dental caries (5012)
3. Hearing loss (2042)
4. Diabetes Mellitus (959)
5. Asthma (941)
6. Alcohol abuse/ dependence (567)
7. Depression (422)
8. Osteoarthritis (336)
9. Generalised anxiety disorder (298)
10. Social phobia (240)

5.2 Chronic Conditions

In 2001, Central Goldfields had 249 registered cases of diabetes, affecting 1.9% of its population and ranking it 50 out of 79 LGAs (number one is the highest incidence). By 2006, the level had risen by 85% to 460 cases- 3.5% of the population. Its ranking had worsened to 42. The Shire had an above average level of persons with a disability (7%) and an above average level of persons providing unpaid aid to a person with a disability, at 11% compared to 9% for Victoria. It had an above average level of persons undertaking voluntary work.

5.3 Socio-economic status

Within the CVHA catchment area, Central Goldfields had a relatively high level of disadvantage, with a score of 948 in 2001: preliminary Index of Disadvantage data for 2006 also shows a high level of disadvantage across collection districts with the Shire rated the most disadvantaged local government area in Victoria, ahead of the neighbouring Shires of Loddon and Pyrenees. Central Goldfields had the highest rate of benefit recipients for each of the main benefit types and in 2006, the median family income was \$703 per week, well below the Victorian average of \$1,170.

(Central Goldfields Public Health & Wellbeing Plan 2009-2013)

5.4 Summary

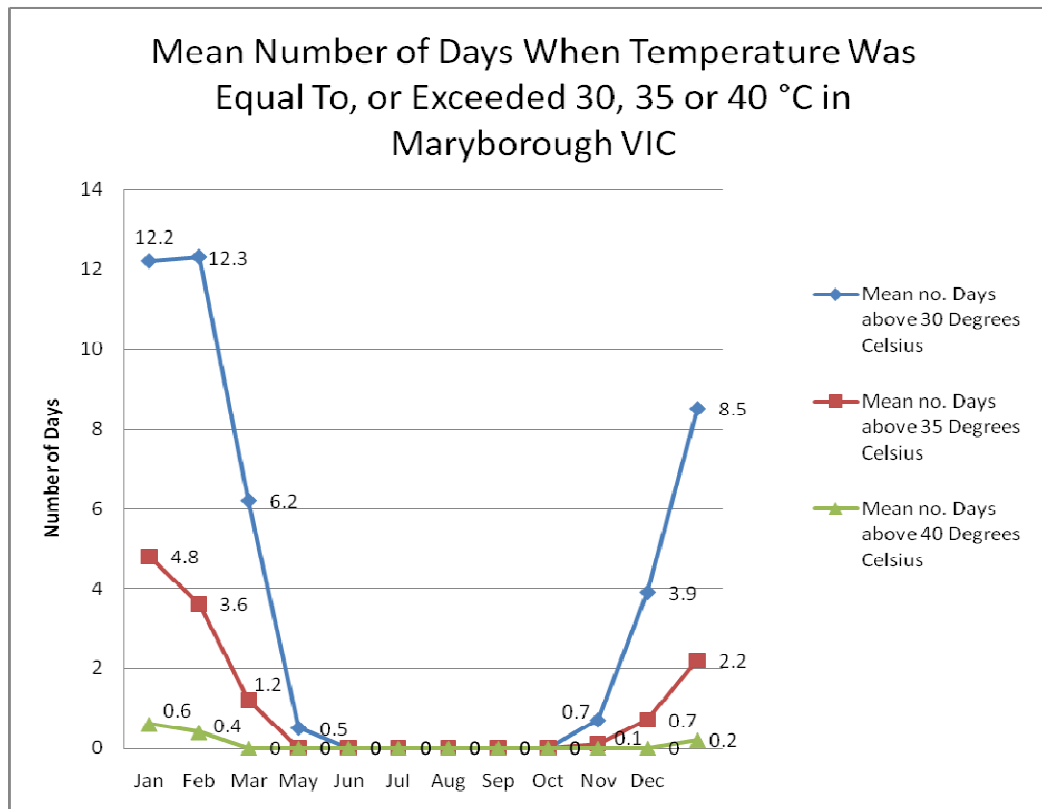
In summary, there appears to be four demographic features for Central Goldfields Shire that are of particular relevance to heatwave response planning. The first is that the community has a high overall level of disadvantage with well below average household incomes. The second is that the community has an older population profile with 22.8%, or 2813 people aged 65 years or older. The third is that there are 1621 dwellings occupied by a lone person (586 lone parents) and the fourth is there is an above average level of persons with a disability and an above average level of persons providing unpaid aid to a person with a disability.

6.0 Weather statistics (Maryborough)

The following provides a profile of Maryborough as an example of meteorological conditions experienced in the Central Goldfields Shire:

Parameter	Result
Mean maximum temperature	• 20.4°C
Highest annual temperature	• 45.4 °C (7 th Feb 2009)
Mean number days above 30 °C	• 44.3 days annually
Mean number days above 35 °C	• 12.6 days annually
Days above 35 °C in each month	<ul style="list-style-type: none"> • Oct 0.1 • Nov 0.7 • Dec 2.2 • Jan 4.8 • Feb 3.6 • March 1.2
Mean number days above 40 °C	• 1.2 days annually
Days above 40 °C in each month	<ul style="list-style-type: none"> • Dec 0.2 • Jan 0.6 • Feb 0.4

Graph 2 Mean number of days when temperature exceeded 30°, 35° and 40° C



(Source: Commonwealth of Australia 2009, Bureau of Meteorology)

7.0 Management plan

The following tables outline the operational strategies and associated major tasks that will be developed and implemented in preparation for, and response to, heatwaves by Council. As a matter of policy, movement of large numbers of people during heatwaves will be avoided and the focus will be on responding to people in place. A breakdown of infrastructure may require evacuation and this will be determined by the Emergency Management Committee at the time in accordance with the Municipal Emergency Management Plan.

The operational strategies of the Management Plan focus on developing and providing information to assist community members to cope with heatwaves, developing mechanisms and processes that increase the level of monitoring of vulnerable individuals including coordination between local service providers on monitoring of at risk individuals, and ensuring that Council's services continue to be provided and service providers' health is not put at risk in heatwaves.

A heat alert will be issued by the Department of Health approximately four days prior to heatwave days which, in the Shire's case, will be when the mean of the expected minimum overnight temperature and expected maximum day temperature is equal to, or greater than, 32°C. The initiation of the Shire's Heatwave Response Plan will occur in two stages:

Stage 1 Response

Criteria

There is one day when the mean of the expected minimum overnight temperature and expected maximum day temperature is equal to, or greater than, 32°C (e.g. a 37°C day and 27°C night)

Stage 2 Response

Criteria

There is more than one day when the mean of the expected minimum overnight temperature and expected maximum day temperature is equal to, or greater than, 32°C.

Management plan

Stage	Operational strategies	Major tasks	Responsible officer(s)	Timeframe
Preparedness	1. Develop a Heatwave Response Sub-Plan as part of the Municipal Emergency Management Plan	<ul style="list-style-type: none"> Engage adviser and develop draft Sub-Plan Consult stakeholders on draft development 	Senior EHO Senior EHO	Completed
	2. Review and revise plan annually as part of the Emergency Management Plan	<ul style="list-style-type: none"> Undertake Sub-Plan exercise annually (March) Review and revise Sub-Plan after exercise completed 	MERO Senior EHO	Annually(Mar) Annually(Mar)
	3. Develop, collect and maintain resource information	<ul style="list-style-type: none"> Develop draft media releases & community fact sheets for coping with heatwaves (based on existing DOH material) 	MEMPC Sub committee	13/12/10 & thereafter Annually (Sept)
		<ul style="list-style-type: none"> Purchase Red Cross Fact Sheet & Plan Packages and disseminate to community service providers 	MRM	Completed
		<ul style="list-style-type: none"> Obtain, refer and promote Sports Medicine Australia guidelines to sporting clubs 	MEMPC Sub Committee	13/12/10 & thereafter Annually (Sept)
	4. Participate in Community Registers initiative	<ul style="list-style-type: none"> Investigate and participate in the development of a Community Register(s) for the Shire 	MRM/Home Care Services	01/07/2011
		<ul style="list-style-type: none"> Research opportunities for recurrent funding to ensure continuance of a community register. 	MRM	01/07/2011
	5. Develop a contact protocol between service providers	<ul style="list-style-type: none"> Identify vulnerable individuals from current service users and develop an inter-agency contact protocol 	MRM/Home Care Services	Completed
	6. Ensure implementation of occupational health & safety protocols	<ul style="list-style-type: none"> Disseminate protocols to staff & include in staff/volunteer induction process 	MERO/MRM/HR	Completed

Stage	Operational strategies	Major tasks	Responsible officer(s)	Timeframe
	7. Develop a heat alert communication strategy	<ul style="list-style-type: none"> • Identify target individuals/groups (residents, visitors, events etc) and appropriate communication modes for each group • Draft strategy and consult with key stakeholders • Finalise strategy 	MEMPC Sub Committee	13/12/10
	8. Develop heatwave protocols for Council conducted children's services e.g. Goldfields Childrens' Centre and Family Day Care services	<ul style="list-style-type: none"> • Provide Children's Services Director and Staff with information, including a Heatwave planning questionnaire to assist them in preparing a Heatwave Action Plan. • Establish and maintain a contact listing of children's centre's and kindergartens for expedient dissemination of heat wave alerts. 	<p>Children's Services/MEMPC Sub Committee</p> <p>EHO</p>	<p>13/12/2010</p> <p>Completed</p>
Response	1. <i>Stage 1</i> (Information, communication and advice)	<ul style="list-style-type: none"> • Sub-plan triggered by MERO & MRM on advice from Department of Health (DOH) • Communication of sub-plan initiation to Council key staff and key community organizations • Heatwave information resources prepared and deployed • Communication strategy implemented. • Advisory disseminated to planned sporting and community events 	MERO/MRM	

Draft Heatwave Response Sub-Plan (Final)

Stage	Operational strategies	Major tasks	Responsible officer(s)	Timeframe
		<ul style="list-style-type: none"> • Council service coordinators and all service providers advised and reminded of OH& S policy • Council's children service providers advised to implement heatwave protocol 		
	<p>2. <i>Stage 2</i> (Information, communication, advice, service modification, monitoring of individuals)</p>	<ul style="list-style-type: none"> • Sub-plan triggered by MERO & MRM on advice from Department of Health (DOH) • Communication of sub-plan initiation to Council key staff and key community organizations • Heatwave information resources prepared and deployed • Communication strategy implemented. • Advisory disseminated to planned sporting and community events • Council service coordinators and providers advised and reminded of OH& S policy and service priorities and times reviewed and modified • Council's children service providers advised to implement heatwave protocols • Inter-agency contact protocols for at risk individuals/groups are activated. 	MERO/MRM	
Recovery	Undertake an internal debriefing of key staff and an external debriefing with organisations	<ul style="list-style-type: none"> • A debriefing session is undertaken to review preparedness and response stages • A report is prepared for the EMC 	MRM/MERO	

APPENDICES

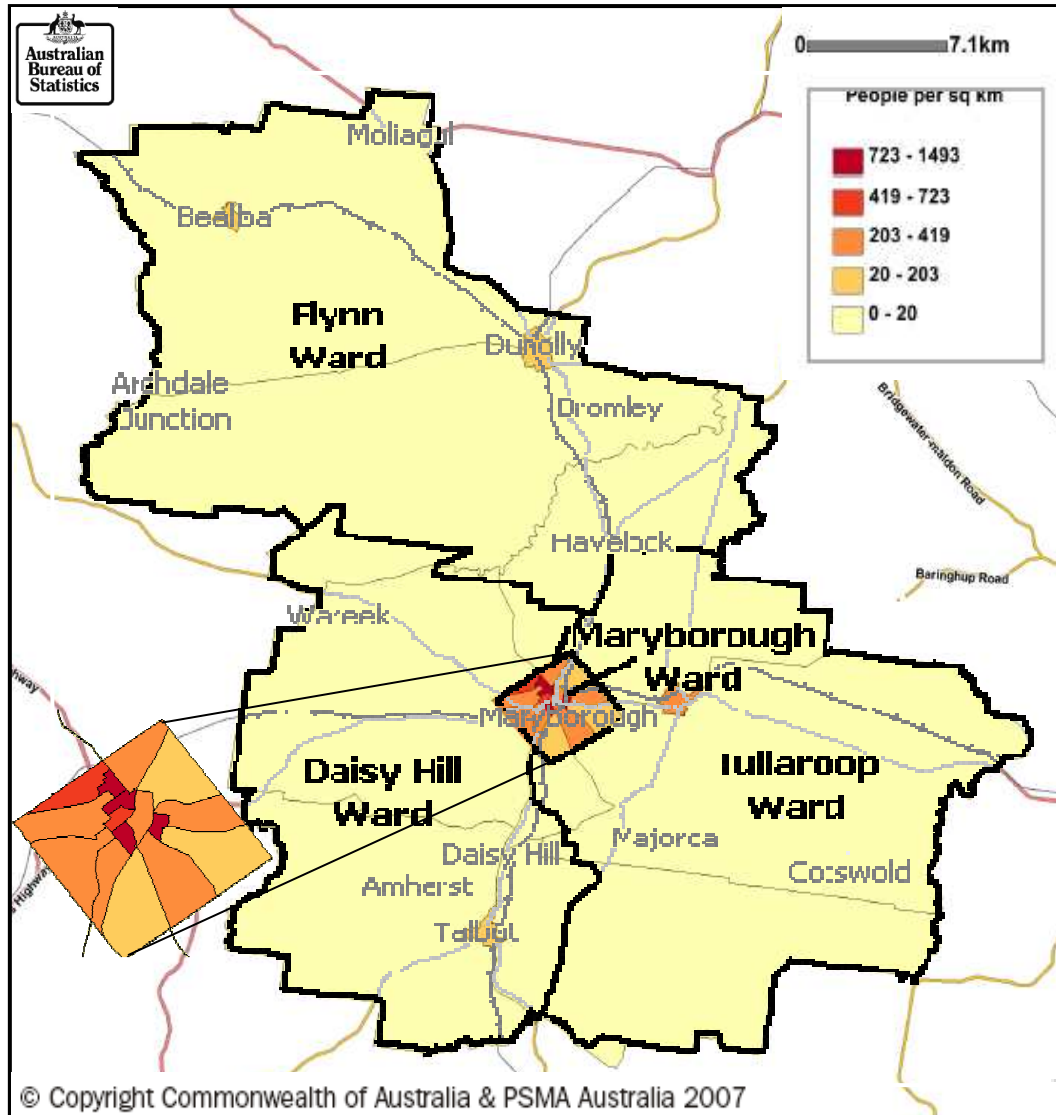
Appendix 1 Population density

Population Density

Number of people per square kilometre

Based on Place of Usual Residence, 2006

Central Goldfields (S) (Local Government Area) by Census Collection District



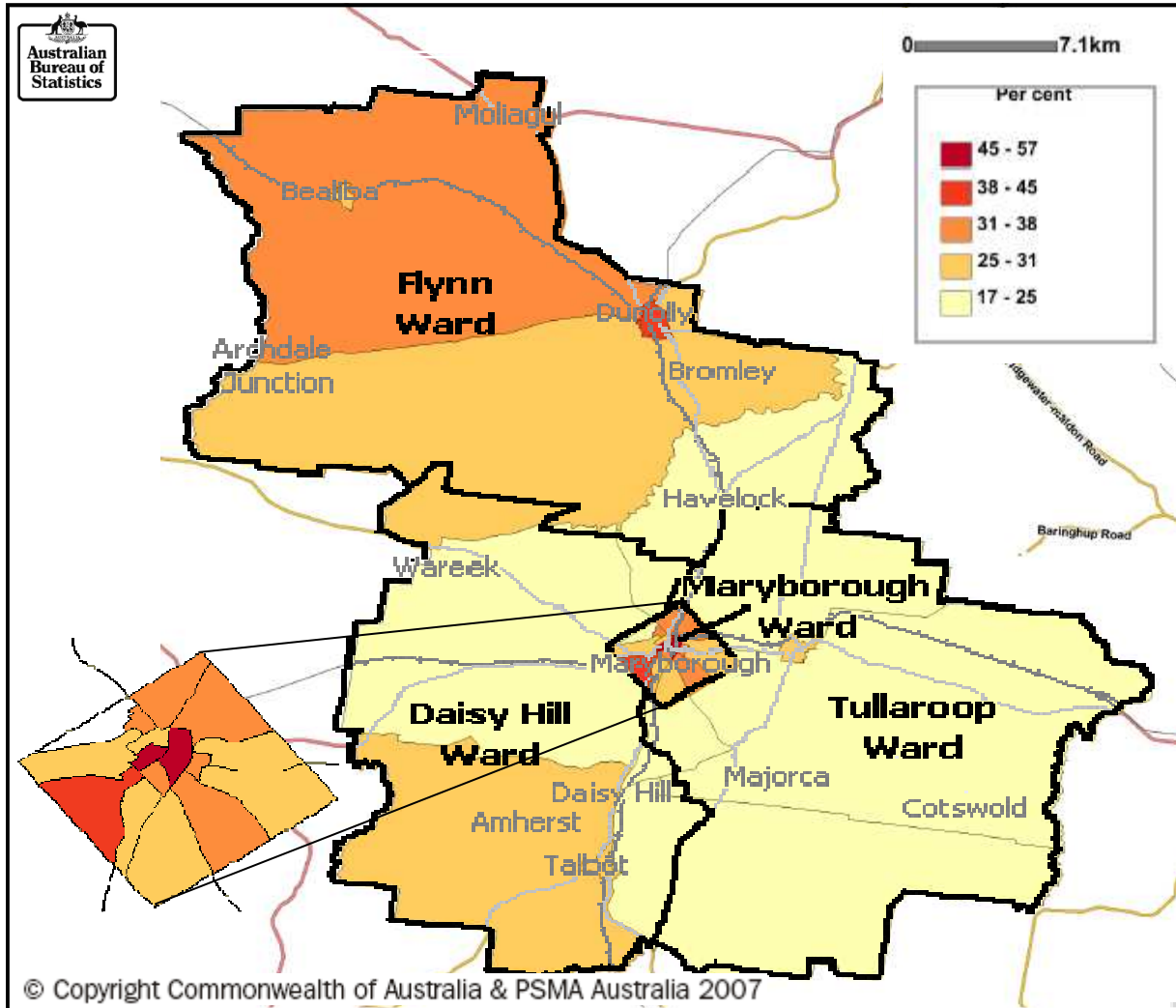
Appendix 2 Lone person households

Lone Person Households

As a percentage of all households

Based on Place of Usual Residence, 2006

Central Goldfields (S) (Local Government Area) by Census Collection District



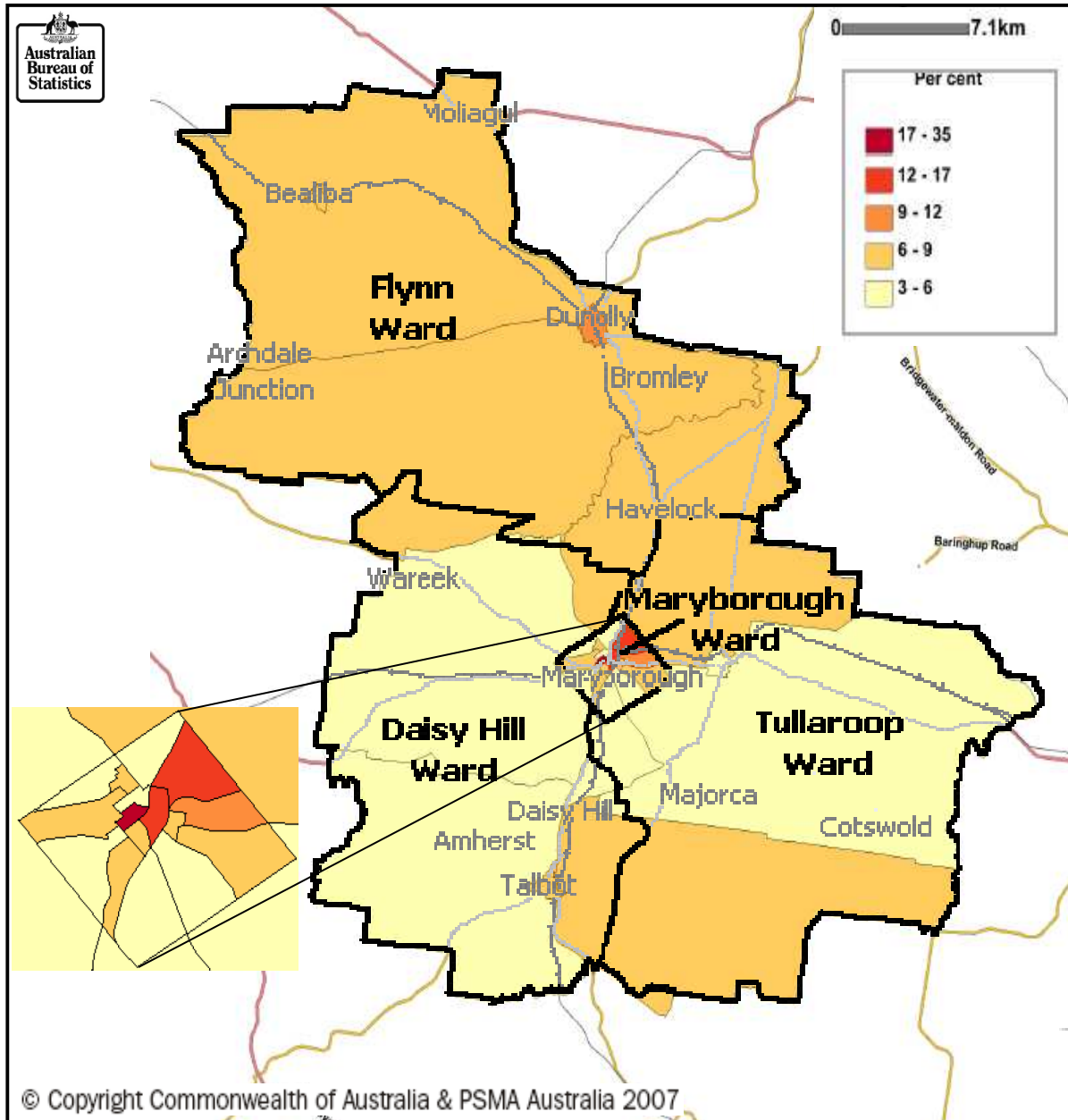
Appendix 3 People who need assistance

People who need Assistance

As a percentage of the total population

Based on Place of Usual Residence, 2006

Central Goldfields (S) (Local Government Area) by Census Collection District



Appendix 4 **Central Goldfields Shire Occupational Health & Safety Policy – Inclement Weather**

5.16 INCLEMENT WEATHER

Objective

This policy provides guidelines to identify, assess and control work conditions that may effect the health and safety of Shire employees exposed to inclement weather conditions. Central Goldfields Shire recognises any agreement that has been established with employees and unions where employees are required to work in extreme temperatures (hot and cold)

Policy/Procedures

The Shire shall, where planning work include as part of the Risk assessment, the working environment, taking into account hazards associated with working outdoors such as critical attention to realistic work/schedules/targets, and personal protective measures and by examining;

- Engineering controls, that is, physical barriers
- Administrative controls, that is procedures and time of activities and training, Work Rest/Regime
- Personal Protective Equipment-appropriate clothing and equipment.

In agreed emergency situations such as Call Outs, public health and safety, the safety of Shire Employees and equipment, etc., work shall continue though inclement weather prevails. An emergency work roster shall be arranged locally whereby available labour is rostered on with additional labour available if necessary.

This policy does not preclude any individual employee from ceasing work when distressed by thermal environment.

Works Superintendent and or the health and safety staff as appropriate shall be informed of cessation of work.

This policy covers all Council employees working in the Works, Parks / Gardens, HACC Handyperson and Dams Units otherwise known as outdoor workers.

Planning & Monitoring Works to Limit Thermal Environment Stress

Detailed planning of work procedures shall include appropriate controls to minimise employees' potential to develop thermal stress, including consultation with employees, unions or relevant parties. Such planning shall consider local and extra-ordinary circumstances with the potential to induce thermal stress, when assessing work environments.

Work Group Leaders shall during periods of high heat/humidity, monitor the work practices and condition of each employee in their group to reduce thermal stress risk.

Employees shall be given time to acclimatise to conditions. (All people are different and the time frame for acclimatisation will vary from individual to individual, particularly new or un-acclimatised employees moving into an area of potential health hazard due to high temperature/humidity working environment)

Works Manager/Superintendents should seek help from Health and Safety resources/professionals where uncertainty applies e.g. Employees returning to work in a

hot environment after an absence exceeding two weeks or employees indicating a history of health problems when exposed to heat.

Supervisors, Project Managers should consider the following when planning or undertaking work where thermal stress may apply;

- Rotating duties and rest breaks as appropriate
- Ensure workloads remain compatible with physical capabilities
- Re-scheduling work to cool times of the day or re-scheduling work to another day
- Frequent rotation of employees carrying out heavy physical tasks e.g. Asphaltting Works
- Provision of shade, preferable with a means of air circulation
- Individual employees physical capabilities
- Provision of frequent rest breaks
- Provision and storage of cool fluids
- Ensure adequate cool drinking water is made available to all employees working in hot/humid conditions, and that employees are encouraged to maintain hydration through frequent drinks (continued fluid top ups are recommended throughout the day before thirst occurs).
- Ensure sunscreens with minimum protection Factor (SPF) of 30+, is available to employees
- Discourage the use of fluids with high sugar contents and the use of salt tablets because of osmotic fluid transfer with the circulation to the stomach.
- Employees should be briefed on the symptoms of heat stress (headache, vagueness, fatigue and nausea.)
- Where employees complain of or are identified as being victim of heat stress then medical assistance should be sought following first aid guidelines or from trained professionals where required.

Responsibilities

Employees are responsible to optimise personal safety measures to prevent heat stress by:

- Wearing protective clothing (approved Shire Work wear) safe to the job requirements, to promote air circulation around the body
- Wearing minimal, loose fitting clothing under protective clothing
- Wearing clothing to cover as much skin as possible to limit sun exposure
- Wearing helmets designed to cool the wearer
- Wearing a broad brimmed hat where possible
- At least two (2) hourly applications of sunscreens with a minimum protection Factor (SPF) of 30+
- During hot/humid conditions drink plenty of fluid (water) prior to the commencement of work and maintain hydration through frequent drinks.
- If possible park vehicle in the shade with windows partly down.

The Business Unit carrying out work which may expose employees to adverse thermal environment is responsible for ensuring that the provision of these instructions are carried out.

1. This Policy is intended to cover the work of all outdoor workers.

‘Inclement weather’ shall mean the existence of abnormal climatic conditions (that is rain, hail, cold, wind, dust storm, high temperature or the like or any combination thereof) by virtue of which it is neither reasonable, nor safe for outdoor workers to be exposed to or continue working whilst such conditions prevail.

2. Decisions about whether it is safe to work shall be taken at the local level through consultation and agreement between the employee in charge and Health and Safety

- Representative (or employee/union representative). In making such a decisions consideration shall be given to the factors referred to in (2) and the resultant presence of chemical vapors or fumes, and the need to use protective clothing and equipment under these conditions.
3. On any day where work is hindered by inclement conditions the Team Leader shall confer with Health and Safety Representative (or employee representative) when requested and it is reasonable to do so and if consultation between the Team Leader and the Health and Safety Representative (or employee/union representative) does not occur, outdoor workers shall be entitled to cease work until one of the above representatives has been contacted.
 4. Where prevailing conditions require, normal work shall be modified as agreed between the Team Leader and the Health and Safety Representative (or employee/union representative).
 5. When work has ceased due to inclement conditions, outdoor workers shall have access to shelter from the prevailing inclemency.
 6. Outdoor workers may be transferred from one location where it is unreasonable to work due to inclement conditions to work at another location which is not so affected subject to the following:
 - (i) No outdoor workers shall be transferred unless there is useful work available for them to perform.
 - (ii) Transfers take place in accordance with a mutually agreed procedure and having regard to:
 - the distance to be travelled;
 - the climate conditions under which travel takes place; and
 - the normal work time remaining.
 8. When work has ceased because of inclement weather, outdoor workers shall not be required to resume work unless it is safe to do so.
 9. Pursuit to this inclement weather agreement, The Shire shall, in consultation with the VTHC, issue specific instructions to regional offices regarding outdoor workers working in heat, that is, in the absence of other inclement factors referred to in (2) and (3). These instructions shall take normal local weather patterns and practices into account.
 10. In agreed emergency situations such as Call Out's, public health and safety, safety of employees and equipment etc. work shall continue even though inclement weather prevails. An emergency work roster shall be worked out locally whereby available labour is rostered on an equal basis. In the case of bushfires, standard practice will prevail.
 11. No clauses in this policy will in any way affect award rights.

This Inclement Weather Policy is also subject to the following Interpretation

- The outdoor staff acknowledged that employees should not leave the workplace without being authorised by management.
- Both parties see the need for a consistent approach to be adopted when the temperature has reached the level at which employees shall be entitled to cease work.
- Under the terms of the Inclement weather Policy; employees may be transferred from a location which is effected by heat, to another location which is not effected, provided that there is useful activity available for the employees to perform at the new location. The transfers should also have regard to the distance to b travelled, the climate conditions of the conditions of the travel and the normal work time remaining.

The Council considers that if a stressful and unhealthy work environment exists, with no alternative work situations or locations available, work supervisors should authorise the employees to leave the workplace.

It is agreed that if it is consistent with the Inclement Weather Policy (Clause 7 above), then authorisation to leave the workplace should be given.

Supervisors and Team Leaders on individual work sites should exercise some discretion, taking into consideration the time that the prescribed temperature level is reached and the normal work time remaining.

There is agreement that in emergency situations, such as Call Outs, public health and safety, and safety of employees and equipment, work shall continue, even through inclement weather prevails.

Heath Effects

Heat caused injuries and illness come about through an excessive rise in core (deep body) temperatures or by the overloading and exhaustion of the body's protective or balancing mechanisms. The following are some illnesses associated with heat stress:

- Heat exhaustion is caused by insufficient water intake to balance losses through sweating. Symptoms include clammy moist skin, weakness and extreme fatigue, nausea, headache and weak pulse. Without treatment, collapse is inevitable.
- Heat cramps are caused by loss of body salts. They are characterised by painful muscle spasms.
- Heat stroke can occur when the body's core temperature reaches 41 degrees Celsius. If not promptly treated, it can lead to death. Symptoms include hot, dry skin, rapidly rising body temperature, collapse, convulsions and loss of consciousness.

Even before physical injury from heat is a possibility, the performance of the unprotected worker will decline. This is associated with increased risk of accidents.

The Physical condition of the employee is a very important consideration. Un-acclimatized individuals and people who have heart conditions, high blood pressure or certain other medical conditions may show adverse reaction in conditions that would not normally be of concern.

First Aid

Where possible, first aid should be given by trained a person. However, in many cases, this may not be immediately possible. Following are guidelines to emergency treatment:

- Heat Exhaustion- Treatment is rest in a cool place and drinking slightly salted water.
- Heat Cramps- Same treatment as for heat exhaustion.
- Heat Stroke- The victim should be cooled as quickly as possible.

Hygiene Standards – Rest Breaks

The purpose of rest breaks is to lower work energy output to offset heat stress and should be considered as defining the ratio of work to rest (eg 30 minutes rest in each hour means 50% work and 50% rest in any given period). The procedure of allowing rest break time to be accumulated over a day/shift and used to shorten the overall work period, rather than allowing periodic breaks, shall be prohibited.

Employees remain in their general work location when taking rest breaks unless authorised by supervision to do otherwise. Where it is unreasonable to work due to hot conditions, and it is not possible to control this heat, transfers to another location may take place in accordance with a mutually agreed procedure and having regard to;

- The distance to be travelled;
- The availability of work activity upon transfer;
- Normal work time remaining; and
- (For outdoor work) the climate under which travel take place

Work – Rest Regime for Indoor Work in Hot Conditions

Duration of Paid Rest Breaks in each hour when the on site temperature reaches or exceeds;

15 minutes	30 degrees Celsius
30 minutes	32 degrees Celsius
45 minutes	34 degrees Celsius
60 minutes	36 degrees Celsius

Work – Rest Regime Outdoor Work in Hot Conditions

Rest breaks should be taken in shaded, cooled or air-conditioned rest areas where available.

In all locations, temperatures issued by locally nominated radio station will be used.

Duration of rest Breaks in each hour when the on site temperature reaches and/or exceeds;

15 minutes	30 degrees C
30 minutes	32 degrees C
45 minutes	34 degrees C
60 minutes	36 degrees C

Note: If the temperature reaches the 60 minutes/hour rest regime, this means that work should stop until temperature falls below the 60 minutes/hour rest regime, where upon work should recommence in accordance with the rest breaks given in the tables above.

Working in the Heat for Gloves & Barrier and Bare Hand

Where Gloves & Barrier or Bare Hand work is to be carried out in the heat of the day the following precautions will be adhered to;

When the temperature reaches 32 degrees Celsius Outdoor Staff will work for no more than 30 minutes at a time rotating to reduce fatigue.

When the temperature reaches 36 degrees all work will cease.

The intent of the above temperatures does not preclude any employee from ceasing work earlier than indicated above if they are distressed by the extreme heat.

References

- Occupational Health and Safety Act 1985
- AS 1067 1990 Sunglasses Safety Requirements
- Various Sun Smart Publications – Anti Cancer Council
- Working Outdoors – Worksafe Victoria

Related Policy and Procedures

- Occupational Health and Safety Policy
- Outdoor Staff Uniform Policy
- Grievance / Disciplinary Policy
- Issue Resolution Policy
- Sun Protection for Employees

References

Australian Government Bureau of Meteorology
<http://www.bom.gov.au> (Current as at 1st October 2009)

Australian Government Department of Health & Ageing, Aged Care Australia (2009)
<http://www.agedcareaustralia.gov.au> (current as at 1st October 2009)

Central Goldfields Shire Council (2008)
Municipal Emergency Management Plan, Maryborough.

Central Goldfields Public Health & Wellbeing Plan 2009-2013, Maryborough

Central Goldfields Shire Council (2009)
Council Plan and Strategic Resource Plan, Maryborough

Community Indicators Victoria (2009)
<http://www.communityindicators.net.au/> (current as at 1st October 2009)

Victorian Government Health Information (2009)
<http://health.webcentral.com.au/bodw/> (current as at 1st October 2009)