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Outdoor Work

1. Purpose

The purpose of this procedure is to provide guidelines for the prevention of heat stress and the minimization of exposure to solar Ultra Violet (UV) radiation for employees working outdoors.

2. Scope

This procedure applies to all employees working outdoors and to all outdoor workplaces of the Council.

3. References

1. Occupational Health and Safety Act 2004
2. Council's Inclement Weather Policy

4. Responsibilities

Managers

Managers shall ensure that this procedure is implemented in all of the Council's outdoor workplaces.

Supervisors/Health and Safety Representatives (HSRs)

Supervisors and HSRs shall conduct **Risk Assessments** to identify potential heat stress locations and tasks and identify appropriate preventative actions.

Employees

Employees shall report UV exposure and heat stress hazards to their Manager/Supervisor or HSR. And shall be responsible to ensure they take sufficient cool drinking water when working outdoors

5. Definitions

Outdoor Work

Outdoor work is where employees are required to work continuously in unshaded conditions for:

- two (2) hours or more in the period 9:00 am to 3:30 pm (10:00 am to 4:00 pm Eastern Standard Daylight Time (ESDT); or
- one (1) hour or more in the period 10:00 am to 2:00 pm (11:00 am to 3:00 pm ESDT).

6. Method

6.1. Risk Assessment

The **Risk Assessment** shall assess the risk from heat stress and UV radiation for all outdoor work locations. The **Risk Assessment** should consider relevant factors including:

- Temperature,

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- Duration, period and time of exposure,
- Humidity,
- Direct sunlight or availability of and access to shade,
- Radiant heat, and
- Air flow.

6.2. Control of Risks

Risk control measures should be implemented that eliminate or reduce the risks associated with identified hazards. The hierarchy of controls shall be followed to determine suitable risk controls (refer to Section 3.06, *Hazard Identification*).

Risk controls should consider the Guidelines as outlined below.

6.3. Heat Stress Guidelines

The following Guidelines should apply to all employees working outdoors to minimise or prevent heat stress:

- Ensure adequate supply of cool palatable drinking water is available at all times at the workplace.
- Encourage employees to drink at least half a litre of water or other suitable liquid prior to commencing work on any hot day.

(Note: Unsuitable liquids include alcohol and carbonated soft drinks with high sugar content).

- The equivalent of half a litre of liquid should be consumed every hour worked throughout the day to maintain hydration.
- Modified work duties may be considered for employees whose physical capabilities and known state of health may place them at risk from certain duties in hot working conditions eg those who are markedly overweight, recovering from illness, have heart or respiratory conditions, high blood pressure, diabetes etc. (It should be noted that in the short term even cold and 'flu can adversely affect a person's ability to cope with heat.)
- Any signs of heat illness eg heat rash, heat cramps, heat exhaustion, fainting and heat stroke, should be immediately treated by a trained first aid officer in accordance with Section 3.08, First Aid Procedure.
- Where possible, reschedule heavy work to cooler days or cooler parts of the day eg early morning.
- Avoid prolonged and continuous periods in the direct sun.
- Consider means of reducing heat loads such as the provision of a canopy or awning to shade the work area.

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6.4. UV Radiation Guidelines

Employees undertaking outdoor work should be provided with appropriate Personal Protective Equipment (PPE), clothing and sun screens as detailed below:

- A suitable broad brimmed hat with a rim of at least 8 cm wide or a bucket hat with a brim of 6-7 cm and constructed from material that transmits less than 10% of UV radiation.
- In the winter period – 1 May to 1 September when the UV rays are at their lowest the wearing of Council Logo beanies and baseball caps is acceptable.
- A suitable attachment to protect the neck of the wearer where hard hats must be worn. This attachment must also transmit less than 10% of UV radiation.
- Loose, long sleeved shirts (where practicable) and long trousers.
- Sun screen lotions are to be available on location and provided to outdoor employees, especially from September to March (inclusive).
- Sun screens will exceed a sun protection factor (SPF) of 30+, be available in formulations suitable for large areas of skin application and for use on the nose, ears, lips and face, and will have a low allergy formulation.
- Training should be provided to outdoor employees detailing the potential hazards of UV radiation exposure, the use of PPE, protective clothing and sun screens, and methods of avoiding work in direct sun during the high risk hours of the day particular in the summer period. (Refer to Section 3.05, *Health and Safety Training*).

NOTE: Some employees may require protection at levels above those stated in this procedure due to fair skin pigmentation, a history of skin cancer or using photo-sensitising medication, and such protection must be available at all times.

7. Related Documents

1. Section 3.05, *Health and Safety Training*.
2. Section 3.06, *Hazard Identification*.
3. Section 3.08, *First Aid*.
4. Section 4.13, *Needlestick and Body Fluids Safety*
5. Council's Inclement Weather Policy Document
6. Section 4.15, Dealing with threats to Staff
7. Section 4.16, Alcohol and/or Drugs
8. Section 4.17, No Bullying Policy
9. Section 4.18, Staff working alone or in remote areas

8. Attachments

1. Council's Inclement Weather Policy

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GREATER SHEPPARTON OUTDOOR STAFF INCLEMENT WEATHER POLICY

INTRODUCTION

Greater Shepparton City Council has acknowledged its duty to provide and maintain so far as is practical, a working environment that is safe, and without risks to health within its Occupational Health and Safety Policy (COGSafe).

As such Greater Shepparton City Council recognizes that working in extreme climatic conditions and outdoors presents particular Health and Safety issues which must be addressed.

In recognition of the Health and Safety issues wherever practical and possible, Council shall purchase mobile plant equipment that is fitted with closed cabin. Where possible, mobile plant equipment will be fitted with heating and air conditioning.

GENERAL REQUIREMENTS

Greater Shepparton City Council will endeavour to work in such a way to minimize the hazards posed by working in seasonal heat and extreme cold conditions to its staff by ensuring:

- That all staff are aware that they have a responsibility under this policy and the Occupational Health and Safety Act to take reasonable care in regards to themselves, their colleagues, and the community and not to act contrary to this or another Council policy and procedure.
- That all staff units are aware of their responsibilities under the Fire Protection Regulations 1992 on days of Total Fire Bans.
- If at any time a dispute arises regarding appropriate breaks the relevant Occupational Health and Safety Representative may be contacted by either the relevant staff member or supervisor.
- This procedure will be reviewed annually.

Measuring Temperature in the Working Environment

It is recommended that temperature in the workplace be monitored throughout the day. Temperature should be measured as close to the worksite as is possible.

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Weather Forecasts and Reports

Where local temperature measurement is not practicable, for example, when the employee travels between worksites, regular weather announcements from the nearest radio stations can provide a guide to the local conditions. In any case, weather forecasts should be used to plan working arrangements when inclement conditions are expected.

Furthermore, if local temperature cannot be readily obtained by workers and supervisors, then a normal dry bulb thermometer is recommended as an adequate measure of temperature.

REGUALTIONS FOR HOT CONDITONS

Working in Hot Environments

The thermal comfort of employees who work outdoors or in non-air conditioned buildings can be affected by air temperature, radiant heat from the surroundings (e.g. bitumen roads, concrete paving) the sun, relative humidity, air movement and the metabolic heat generated by the worker performing the work.

While air temperature is not the sole measurement needed, it does provide a useful and readily available guide. Other variables that must be taken into account are air movement, humidity, radiant heat and location.

Those work areas where periods of prolonged high temperatures are expected, and in which staff are required to work, are referred to as potential heat stress areas. These areas may include:

- Premises with no temperature control.
- Motor vehicle with no temperature control.
- Where employees spend more than 80% of the day outdoors.

STRATEGY FOR DEALING WITH HOT WORKING ENVIRONMENTS

Managers and supervisors shall identify areas with the potential for heat stress and should:

- Advise staff of the potential for and signs and symptoms of heat stress.
- Advise staff of the need for the type of suitable clothing.
- Optimise ventilation, air movement and/or shade where and as appropriate.
- Provide protective clothing (e.g. hats, sunscreen) for those who have to work outdoors.
- Advise staff of the need for adequate fluid intake and make water supplies available.
- Modify the rate at which work is performed.
- Reschedule certain work to other days or limit it to cooler periods of day/s in question.
- Modify the hours of work (e.g. early start) by agreement between the parties.
- Rotate employees on heavier work where possible and consider the impact on employees who have not been acclimatised to the work performed or heat.

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- Allow short regular breaks
- Where the official Shepparton temperature rises beyond 34 degrees Celsius, and appropriate work/rest regime should be implemented by supervisors.
- Where the official Shepparton temperature reaches 40 degrees Celsius, consideration should be given to ceasing all outdoor work and alternative work found.
- In determining appropriate work/rest arrangements Supervisors shall have regard to the cumulative effect of consecutive days of above average temperature.
- Supervisors are required to report any special arrangements with regard to rescheduling work to their respective managers.
- Disagreement must be reported to and adjudicated by the next highest level of management immediately.
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HEALTH EFFECTS OF EXPOSURE TO EXTREME COLD

Exposure to cold environment conditions can result in a number of disorders:

1. Increased Incidence of Arthritis, Rheumatism and Bronchitis:

Muscle/tissue Damage

These conditions are commonly associated with the cold. When working in clothing that is also damp with rain, the body heat is lost even faster. Muscles and soft tissue are susceptible to damage when used in cold conditions.

2. Decrease in Dexterity and Sensitivity

As hands and feet become cold, stiff and painful, a worker cannot perform manual tasks with as much dexterity or skill. Shivering also makes it difficult to perform work skillfully or accurately.

3. Increase in Accident Rates

Factors list in 2 above promote an increased rate of incidents and accidents.

4. Hypothermia

Hypothermia is one of the most serious hazards of exposure to cold working conditions. This is the progressive lowering of the body's core temperature from 37 degrees Celsius, where unconsciousness followed by death usually occurs.

Most cases of hypothermia occur in air temperature below 10 degrees Celsius, although the body can lose significant heat in air temperatures as high as 18 degrees Celsius or water temperatures as high as 22 degrees Celsius. Body heat is lost much faster when wet, either as a result of inclement weather or perspiration.

During activity, the body increases its metabolic heat production. This heat production drops by as much as one-half when the body becomes inactive. Uncontrollable shivering followed by hypothermia is likely to result. The body's physiological response, designed to minimize heat loss becomes ineffective when the body's core temperature drops below 30 degree Celsius.

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5. Frostbite

Another frequently encountered and potentially dangerous disorder is frostbite. Frostbite normally occurs during exposure to temperatures well below freezing and is the result of actual freezing of the tissues in the affected area of the body, whether it be the face following exposure to a cold wind or an extremity, such as hand or foot, following prolonged exposure to cold environmental conditions. Damage resulting from freezing can range from mild, superficial tissue damage to massive tissue damage and gangrene. During treatment, the frostbitten tissue should be gently warmed (by placing affected part near source of warmth) and not exposed to further cold.

6. Trench Foot and Immersion Foot

Immersion foot is a condition that results after prolonged exposure of the foot to moisture. It generally occurs at air temperatures above freezing point. The injury is primarily due to spasms of the blood vessels, which stop blood circulating to the foot. In contrast to frostbite, the skin and blood vessels are not damaged. The damage occurs to muscles and nerves. Gangrene may develop. Trench foot is similar to immersion foot, but results from prolonged exposure to moisture at or near freezing point.

7. Reproductive Disorders

The brain of an early developing foetus is vulnerable to severe disturbances as a result of its mother suffering hypothermia.

MONITORING OF COLD STRESS

Air movement and temperature are the major environmental factors to be monitored in respect of cold working conditions.

The combined effect of wind and low temperature can produce a condition known as “wind-chill”, in which cooling or freezing of exposed flesh increased rapidly as wind velocity increased.

REGUALTIONS FOR COLD CONDITIONS

Working in Cold Conditions

Driver/Operators of mobile plant equipment not fitted with a closed cabin who are required to travel on “cold weather days” beyond the area where such equipment is located, shall either have the equipment transported to the other location or be provided with alternative duties.

STRATEGY FOR DEALING WITH COLD WORKING ENVIRONMENTS

Managers and Supervisors shall identify areas with the potential for extreme cold and should address the following:

- Effective, controllable heating of lunch rooms and workshop areas.
- Outside work in cold weather to be monitored by Supervisors.
- If the environment cannot be effectively controlled, an appropriate work/rest regime should be implemented by Supervisors when the official Shepparton temperature falls below 10 degrees Celsius.

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- An air temperature of 1 degree Celsius should be regarded as the minimum acceptable for normal work, and when temperature reaches this point alternative work should be found.
- Heated rest-rooms or shelters should be provided so that workers may obtain temporary relief from the cold.
- Proper education and close monitoring of new employees until they are accustomed to work conditions, requirements for appropriate clothing, etc.
- Protection of the extremities through the use of appropriate protective clothing, including gloves, insulated boots and face masks.
- To maintain manual dexterity, special provisions often must be made to keep the hands warm, such as the use of hot air jets, radiant heaters, and appropriate types of gloves and mittens. Frequently, conductive heat loss from the hands to the surface of metal handles and control bars can be reduced by insulative coverings or by making them out of less conductive materials such as wood.