



Heat Illness Prevention Plan

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Heat Illness Prevention Plan

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INTRODUCTION

The City of Palm Springs has developed this Heat Illness Prevention Plan to control the risk of occurrences of heat illness and to comply with the California Code of Regulations, Title 8, Chapter 4, Section 3395. The plan is designed to educate employees and their supervisors on the symptoms of heat illness, causes of these symptoms, ways to prevent heat illness, and what to do if they or a fellow employee experience symptoms of heat illness.

RESPONSIBILITY

It is the policy of the City of Palm Springs that all employees and supervisors of those employees who perform job functions in areas where the environmental risk factors for heat illness are present shall comply with the procedures set forth in this plan. The Heat Illness Prevention Plan applies to any and all outdoor places of employment, at the times when environmental risk factors for heat illness are present. All employees of the City of Palm Springs fall under this regulation. The ultimate responsibility for establishing and maintaining the policies of the Heat Illness Prevention Plan specific to City facilities and operations rests with the City Attorney.

- **Supervisors**

Supervisors are responsible for enforcement of this Plan among the employees under their direction by carrying out the various duties outlined herein, setting acceptable safety policies and procedures for each employee to follow and ensuring that employees receive the required Heat Illness Prevention training. Supervisors must also ensure that appropriate job specific safety training is received.

- **Employees**

Immediate responsibility for workplace heat illness prevention and safety rests with each individual employee. Employees are responsible for following the established work procedures and safety guidelines in their area, as well as those identified in this Plan. Employees are also responsible for using the personal protective equipment issued to protect them from identified hazards, ensuring that they have adequate amounts of drinking water, access to shade, and for reporting any unsafe conditions to their supervisors.

DEFINITIONS

The California Occupational Safety and Health Standards Board propose definitions of key terminology, as they relate to the standard, as follows:

- **Acclimatization** - the temporary, gradual adaptation of the body to work in the heat when a person is exposed to it. Usual acclimatization time while working in the heat for at least two hours per day ranges from four to fourteen days.
- **Environmental risk factors for heat illness** - the working conditions that create the possibility for a heat illness to occur. Risk factors include air temperature, air movement, relative humidity, workload, work severity, work duration, radiant heat, conductive heat, and personal protective equipment (PPE) worn by an employee.
- **Heat Illness** - a serious medical illness, which results from the body's inability to cope with a heat load. Heat illnesses include heat cramps, heat exhaustion, heat stroke and heat syncope (fainting).
- **High-Heat Procedure** – is required for five industries when temperatures reach 95 degrees or above. These procedures include observing and being in constant contact with employees, closely supervising new employees and reminding all workers to drink water. The industries specified under this modification are: 1) Agriculture, 2) Construction, 3) Landscaping, 4) Oil

and Gas extraction, 5) Transportation or Delivery of agricultural products, construction material or other heavy materials.

- **Personal risk factors for heat illness** - includes factors such as an employee's age, level of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, overall health, and use of prescription medications which may alter the body's ability to retain water or otherwise effect its physiological response to heat. The City shall not request any of the above personal information from an employee.
- **Preventative Recovery Period** - a period of time for an employee to recover from a heat illness or signs of a heat illness. The amount of time for a recovery period shall be no shorter than five minutes and shall be taken in a shaded area and shall not be ordered back to work until any signs or symptoms of heat illness have abated.
- **Shade** - the blockage of direct sunlight. Sufficient blockage is when an object does not cast a shadow in the area of the blockage. Shade is not acceptable if heat in the shaded area prevents the body from cooling. Shade shall be open to the air or otherwise provided with ventilation and/or climate controlled. Access to shade shall be made available at all times.
- **Shade Requirements** – must be adequate to accommodate the number of the employees on the shift at any time when temperatures exceed 80 degrees, and located as close as practicable to the areas where employees are working. When temperatures are below 80 degrees, employers shall provide timely access to shade upon an employee's request.

PROCEDURES

- **Provisions of Water**
 - At the beginning of each shift, all employees who work outside when environmental risk factors for heat illness are present shall have sufficient quantities and immediate access to suitably cool, fresh, pure drinking water.
 - The importance of frequently drinking water shall be conveyed and encouraged as described in the training section and available in the quantity of at least 1 quart per employee per hour.
- **Access to Shade**
 - When temperature does not exceed 80 degrees F, provide shade or timely access to shade upon request.
 - Access to shade shall be made available at all times to any employee experiencing heat illness, symptoms of heat illness, or believing a preventative recovery period is needed in a manner that does not deter or discourage access or use.
 - The preventative recovery period shall be at least five (5) minutes in the shade or until symptoms have abated whichever is greater.
 - An employee taking a rest period shall be monitored and asked if he or she is experiencing symptoms of heat illness.
 - If an employee exhibits symptoms or makes a report of heat illness during a cool down period then appropriate first aid or emergency response shall be rendered.
 - Water shall be made available in the shade/preventative recovery period area.
 - Where temperatures equal or exceed 80 degrees F or during a heat wave, adequate shade must be provided to accommodate the number of employees on recovery, rest, or meal periods.

- **Identifying, Evaluating and Controlling Environmental Risk Factors for Heat Illness**

- To identify if environmental risk factors are present, the City shall obtain temperature and humidity measurements for the work areas, either by direct measurements or by weather forecasts.
- To evaluate if an environmental risk factor is present, the City shall obtain the Heat Index, calculated by the National Weather Service, to rate the risk of heat illness depending on air temperature and humidity. The City shall assume there is a significant risk of heat illness when the Heat Index for an employee working in the sun is 80 or above, and 90 or above when employees are working in the shade.
- To control and reduce the exposure to environmental risk factors, the City shall provide shade for work areas and schedule outdoor and/or vigorous work in the cooler hours of the day.

- **Identifying, Evaluating and Controlling Personal Risk Factors for Heat Illness**

The City shall train employees on the factors that can affect their vulnerability to heat illness. The City shall convey the importance of acclimatization, and shall take steps to aid employees in becoming acclimatized.

- Employees exhibiting signs or symptoms of heat illness, or who observe a co-worker with signs or symptoms, shall report these symptoms to their supervisor immediately.
- It shall be the responsibility of each supervisor to respond to all reports and/or observations of heat illness symptoms and signs.
- When a sick employee is unable to communicate, it shall be the responsibility of the supervisor (or designee) to contact emergency services when required, and to provide accurate and precise directions to the employee's location.
- The City shall account for the whereabouts of all employees at appropriate intervals during and at the end of the work shift. This procedure shall be followed whenever the outdoor work environment creates a heat hazard that could result in the collapse of an employee due to heat illness.
- Communication between the Supervisor and their crew is of the utmost importance.

High Heat Procedures

The following provisions go into effect when temperatures reach 95 degrees or above.

- Supervisors shall implement the following on High Heat days.
 - Effective employee observation/monitoring shall be achieved by implementing one of the following, supervised/designee observation of crews of 20 or less, mandatory buddy system, regular communication by cellular phone or radio or other effective means of observation.
 - One or more employees in each work area shall be designated to call for emergency medical services if an employee exhibits elevated Heat Illness symptoms.
 - Employees shall be reminded throughout the shift to drink plenty of water.
 - A pre-shift meeting prior to the commencement of work shall be conducted to review high heat procedures and encourage employees to drink plenty of water.
 - Pre-shift meetings before the commencement of work to review high heat procedures, the need to drink plenty of water and be informed of their right to take a cool-down rest period when necessary.

Emergency Response Procedures

- Effective communication by voice, observation or electronic means is maintained so that employees at a work site can contact a supervisor or emergency medical services when necessary.
- If a supervisor observes or an employee reports any signs or symptoms of heat illness with any employee the supervisor shall take immediate action commensurate with the severity of the illness.
- If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions) the employer must implement emergency response procedures.
- An employee exhibiting signs or symptoms of heat illness shall be monitored and shall not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with procedures.
- If deemed necessary the supervisor or buddy shall contact emergency medical services and transport the employee to a location where they can be reached by an emergency medical provider.
- In the event of emergency clear and precise directions shall be given to the emergency responders.

Acclimatization

- All employees shall be closely observed by a supervisor or designee during a heat wave. For purposes of this section only, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.
- An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee’s employment.

Training

Training shall be administered to all employees and their supervisors who fall under the scope of this plan in the Aviation, Building & Safety, Parks & Recreation, Public Works, Police and Fire Departments. The City shall ensure the effectiveness of the training by conducting regular follow-up and “tailgate” meetings.

- Supervisory and non-supervisory employees shall be trained on:
 - Environmental and personal risk factors for heat illness.
 - City procedures for identifying, evaluating and controlling the exposure to environmental and personal risk factors for heat illness.
 - Importance of frequent consumption of small amounts of water under extreme conditions
 - The employer’s responsibility to provide, water, shade, cool-down rests, and access to first aid, as well as the employee’s right to exercise their rights under this standard without retaliation.
 - Acclimatization and its importance.
 - The different types of heat illness, the common signs and symptoms of heat illness, and appropriate first aid and/or emergency responses to the different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life threatening illness.

- Procedure of immediately reporting the signs and symptoms of heat illness in themselves or in a co-worker and its importance.
- Procedures to respond to symptoms of heat illness, which shall include how emergency medical services will be provided, if needed.
- Procedures for contacting emergency medical services and transporting employees to a readily accessible location for emergency medical services to reach them.
- Procedures on and how to provide clear and precise directions to emergency medical services.
- Supervisors shall be trained on:
 - All information included in Training subsection above.
 - Procedures a supervisor shall follow when implementing this Heat Illness Prevention Plan.
 - The procedures a supervisor shall follow when an employee exhibits symptoms of a possible heat illness, which includes emergency response procedures.

HEAT ILLNESS INDEX AND SIGNS/SYMPTOMS/TREATMENT QUICK REFERENCE ON THE FOLLOWING PAGE.

APPENDIX A

HEAT INDEX CHART

NOAA's National Weather Service

Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	126	130					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution	Extreme Caution	Danger	Extreme Danger
- Fatigue possible.	- Sunstroke, muscle cramps, and/or heat exhaustion possible.	- Sunstroke, cramps, and/or heat exhaustion is likely.	- Heat stroke or sunstroke highly likely.

Heat Illness Signs/Symptoms/Treatment <http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>

Heat Cramps: Strong, involuntary muscle spasms usually in calves, thighs, shoulders or back

Treatment: Rest in cool place, drink water/electrolytes

Heat Syncope: Faint or light headed feeling/actual fainting spell

Treatment: Rest in cool/shaded place, drink water/electrolytes

Heat Exhaustion: Dehydration, fatigue, dizziness/nausea, pale moist skin, temperature elevation

Treatment: Rest in cool/shaded place, drink water/electrolytes/non-caffeinated fluids

Heat Stroke: Mental confusion, fainting, seizures, hot/dry/red skin (sweating has stopped)

Treatment: Call 911 immediately, soak clothing with cool water, move victim to cool/shaded area