



HEAT ILLNESS PREVENTION PROGRAM

INTRODUCTION

On August 22, 2005, the Office of Administrative Law approved the California Occupational Safety and Health Standards Board's adoption of the California Code of Regulations Proposed State Standard, Title 8, Chapter 4, Section 3395. The Office of Administrative Law formally adopted the revised, permanent regulation on July 27, 2006, making the regulation effective immediately. These new regulations were meant to significantly reduce the severity and frequency of occupational heat-related illness in all outdoor places of employment.

Since then, Cal/OSHA implemented updated safety standards for employees working in outdoor heat. The revisions to the Heat Illness Prevention Standard, approved by the Occupational Safety and Health Standards Board on August 19, 2010, became effective November 4, 2010. The revised standards provide clarification of the shade requirement, including temperature triggers, and address high-heat requirements. On February 19, 2015, in a 5 to 1 vote, the Department of Occupational Safety and Health (Cal/OSHA) Standards Board approved changes to the existing Heat Illness Standard. The Standards Board recommended the effective date as May 1, 2015, for implementation.

SCOPE

This Heat Illness Prevention Plan and emergency regulations apply to any and all outdoor places of employment, at the times when environmental risk factors for heat illness are present.

PURPOSE

The _____ School District 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 Proposed State Standard, 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. Employees that fall under this regulation could include, but are not limited to, maintenance, grounds workers, transportation workers, custodians, security personnel, physical education teachers, and playground supervisors.

POLICY

It is the policy of _____ School District 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.

STATUTORY AUTHORITY

California Code of Regulations Proposed State Standard, Title 8, Chapter 4, Section 3395

DEFINITIONS

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

Acclimatization means 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. Acclimation procedures include close observation of all employees during a heat wave – defined as at least 80 degrees. New employees must be closely observed for their first two weeks on the job.

Emergency response procedures include effective communication, response to signs and symptoms of heat illness, and procedures for contacting emergency responders to help stricken employees.

Environmental risk factors for heat illness mean 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 means 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 procedures are 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 high heat procedures shall ensure "effective" observation and monitoring, including a mandatory buddy system and regular communication with employees working by themselves. During high heat, employees must be provided with a minimum 10-minute cool-down period every two hours. 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 affect the body's physiological response to heat. (The District shall not request any of the above personal information from an employee).

Preventative recovery period means 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.

Employees taking a preventative cool-down rest must be monitored for symptoms of heat illness, encouraged to remain in the shade, and not ordered back to work until symptoms are gone. Employees with symptoms must be provided appropriate first aid or emergency response.

Shade means 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 all employees on recovery or rest periods, and those onsite taking meal periods when temperatures reach 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.

RESPONSIBILITY

The ultimate responsibility for establishing and maintaining the policies of the Heat Illness Prevention Plan specific to District facilities and operations rests with _____.

General policies, which govern the activities and responsibilities of the Heat Illness Prevention Plan, are established under _____ (his or her) final authority.

It is the responsibility of _____ to develop procedures which ensure effective compliance with the Heat Illness Prevention Plan.

It is the responsibility of _____ to identify all employees required to work outdoors where the environmental risk factors for heat illness are present.

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, and that safety responsibilities are clearly outlined in the job descriptions, which govern the employees under their direction.

Supervising others also carries the responsibility for knowing how to safely accomplish the tasks assigned to each employee, for providing appropriate preventative controls (water, shade, PPE, etc.), and for evaluating employee compliance.

Supervision of new employees or new employees to the job site must take into account the importance of acclimatization. These employees must be closely monitored for the first 14 days. Acclimatization procedures include close observation of all employees during a heat wave – defined as at least 80 degrees.

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.

PROCEDURES

Procedures for Provision of Water

Employees shall have access to potable drinking water meeting the requirements of Sections 1524, 3363, and 3457, as applicable, including but not limited to the requirements that it be fresh, pure, suitably cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working. Where drinking water is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift.

- 1) 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 at least one (1) quart of potable drinking water per hour for the entire shift (at least two (2) gallons of potable water per person per eight-hour shift).
- 2) Smaller quantities may be provided if the District has an effective procedure for replenishment that meets the above quantity and time requirements.
- 3) Water must be fresh, pure, suitably cool and located as close as practicable to where employees are working, with exceptions made only when infeasibility can be demonstrated by the employer.
- 4) The importance of frequent drinking water shall be conveyed and encouraged as described in the training section.

Procedures for Access to Shade

- 1) Shade shall be present when the temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. Shade structures must be erected if there are no other sources of shade readily available.
- 2) Even when the temperature does not exceed 80 degrees F, shade or timely access to shade must be provided upon request. When shade from a nearby site is not readily available or accessible, shade structures will be opened and placed as close as practical to the employees. Note: The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.
- 3) 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. Employees with symptoms must be provided appropriate first aid or emergency response.
- 4) The preventative recovery period shall be at least five (5) minutes. Employees taking a preventative cool down rest must be monitored for symptoms of heat illness, encouraged to remain in the shade, and not ordered back to work until symptoms are gone.
- 5) Water shall be made available in the shade/preventative recovery period area.
- 6) When temperatures equal or exceed 80 degrees F or during a heat wave, adequate shade must be provided to accommodate all employees on recovery or rest periods, and those onsite taking meal periods.

Procedures for Monitoring the Weather

- 1) To identify if environmental risk factors are present, the District shall obtain temperature and humidity measurements for the work areas, either by direct measurements or by weather forecasts that are adjusted to match worksite conditions.

- 2) To evaluate if an environmental risk factor is present, the District 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 District 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. If workers are wearing more than "light" clothing, the risk of heat illness shall be considered significant at a lower Heat Index.
- 3) To control and reduce the exposure to environmental risk factors, the District shall utilize the following control measures (mark all that apply):
- Provide shade for work areas
 - Schedule outdoor and/or vigorous work in the cooler hours of the day
 - Schedule more breaks during the day
 - Provide misters or other cooling devices
- Other _____

Identifying, Evaluating and Controlling Personal Risk Factors for Heat Illness

The District shall train employees on the factors that can affect their vulnerability to heat illness. These factors include an employee's age, level of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, overall health, and use of prescription medications that may alter the body's ability to retain water or otherwise affect its physiological response to heat. The District shall convey the importance of acclimatization, and shall take steps to aid employees in becoming acclimatized. An employer shall not request any of the above personal information from an employee.

Reporting Symptoms or Signs of Heat Illness to the District

Employees exhibiting signs or symptoms of heat illness, or who observe a co-worker with signs or symptoms, shall report these symptoms to _____ immediately.

Responding to Symptoms of Possible Heat Illness

It shall be the responsibility of _____ to respond to all reports and/or observations of heat illness symptoms and signs.

Contacting Emergency Medical Services

When a sick employee is unable to communicate, it shall be the responsibility of _____ to contact emergency services when required, and to provide accurate and precise directions to the employee's location. This individual shall be immediately available to perform this function.

Communication

The District shall account for the whereabouts of all employees at appropriate intervals during and at the end of the work shift by _____. 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.

Training

Training shall be administered to all employees and their supervisors who fall under the scope of this plan. The District shall ensure the effectiveness of the training by one of the following methods:

- Tailgate meetings before a shift begins
- Test employees/supervisors after training
- Conduct the training on a regular basis

Training-Continued

- 1) Supervisory and non-supervisory employees shall be trained on:
 - i. Environmental and personal risk factors for heat illness
 - ii. District procedures for identifying, evaluating and controlling the exposure to environmental and personal risk factors for heat illness
 - iii. Importance of frequent consumption of small amounts of water under extreme conditions
 - iv. Acclimatization and its importance
 - v. Types of heat illness and their symptoms, signs, and differences
 - vi. Procedure for immediately reporting the signs and symptoms of heat illness in themselves or in a co-worker to their employer, and its importance
 - vii. Procedures for the District to respond to symptoms of heat illness, which shall include how emergency medical services will be provided, if needed
 - viii. Procedures for contacting emergency medical services and transporting employees to a readily accessible location for emergency medical services to reach them
 - ix. Procedures on and how to provide clear and precise directions to emergency medical services

- 2) Supervisors shall be trained on:
 - i. All information included in subsection (3)(a) above
 - ii. Procedures a supervisor shall follow when implementing this Heat Illness Prevention Plan
 - iii. The procedures a supervisor shall follow when an employee exhibits symptoms of a possible heat illness, which includes emergency response procedures

RESOURCES (included but are not limited to):

Heat Illness Prevention Enforcement Q&A <http://www.dir.ca.gov/dosh/heatillnessQA.html>
Cal/OSHA's Heat Illness Prev eTool <http://www.dir.ca.gov/dosh/etools/08-006/index.htm>
Cal/OSHA's Heat Illness Prev Website <http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>

APPENDIX I

HEAT STRESS FACT SHEET

High temperatures and humidity stress the body's ability to cool itself, and heat illness becomes a special concern during hot weather. There are three major forms of heat illnesses: **heat cramps**, **heat exhaustion**, and **heat stroke**, with heat stroke being a life threatening condition.

Heat Cramps: Heat cramps are muscle spasms which usually affect the arms, legs, or stomach. Frequently they don't occur until sometime later after work, at night, or when relaxing. Heat cramps are caused by heavy sweating, especially when water is replaced by drinking, but not salt or potassium. Although heat cramps can be quite painful, they usually don't result in permanent damage. To prevent them, drink electrolyte solutions such as Gatorade during the day and try eating more fruits like bananas.

Heat Exhaustion: Heat exhaustion is more serious than heat cramps. It occurs when the body's internal air conditioning system is overworked, but hasn't completely shut down. In heat exhaustion, the surface blood vessels and capillaries, which originally enlarged to cool the blood, collapse from loss of body fluids and necessary minerals. This happens when you don't drink enough fluids to replace what you're sweating away.

The symptoms of heat exhaustion include: headache, heavy sweating, intense thirst, dizziness, fatigue, loss of coordination, nausea, impaired judgment, loss of appetite, hyperventilation, tingling in hands or feet, anxiety, cool moist skin, weak and rapid pulse (120-200), and low to normal blood pressure.

Somebody suffering these symptoms should be moved to a cool location such as a shaded area or air-conditioned building. Have them lie down with their feet slightly elevated. Loosen their clothing, apply cool, wet cloths or fan them. Have them drink water or electrolyte drinks. Try to cool them down, and have them checked by medical personnel. Victims of heat exhaustion should avoid strenuous activity for at least a day, and they should continue to drink water to replace lost body fluids.

Heat Stroke: Heat stroke is a life threatening illness with a high death rate. It occurs when the body has depleted its supply of water and salt, and the victim's body temperature rises to deadly levels. A heat stroke victim may first suffer heat cramps and/or the heat exhaustion before progressing into the heat stroke stage, but this is not always the case. It should be noted that, on the job, heat stroke is sometimes mistaken for heart attack. It is therefore very important to be able to recognize the signs and symptoms of heat stroke - and to check for them anytime an employee collapses while working in a hot environment.