



LITTLE LAKE CITY
SCHOOL DISTRICT

Heat Illness Prevention Program

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1 Introduction

1.1 Background

California employers with outdoor places of employment must comply with the Heat Illness Prevention Standard - Title 8 California Code of Regulations (T8 CCR) Section 3395. T8 CCR Section 3395 is not intended to supersede or replace the application of T8 CCR 3203 that mandates employers to develop, implement, and maintain an Injury and Illness Prevention Program (IIPP) but rather expand safety measures required to prevent injury due to heat exposure.

1.2 Purpose

This Heat Illness Prevention Program (HIPP) is intended to prevent heat related illness from occurring through education and proper work practices. This program also teaches employees how to recognize the signs and symptoms of heat illness, and how to respond should heat related illness occur. Heat related illness is a serious medical condition that results when the body is unable to cool itself sufficiently through sweating. Both personal and environmental factors can contribute to the likelihood of developing heat related illness which include heat stress, heat exhaustion and ultimately, heat stroke. Heat stroke can be fatal, especially if medical treatment is delayed.

This HIPP is written to comply with California Code of Regulations, Title 8, section 3395, Heat Illness Prevention and applies to all employees who work outdoors, including:

- Grounds staff
- Maintenance staff
- Custodial staff
- Warehouse and Delivery staff
- Campus supervisors and yard duty staff
- Physical education staff

1.3 Definitions

Acclimatization: means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

Heat Illness: means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

Heat: 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.

Environmental Risk Factors for Heat Illness: means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant

heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

Personal Risk Factors for Heat Illness: means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

Shade: means blockage of direct sunlight. Shade is considered sufficient when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or artificial means as long as it does not expose employees to unsafe or unhealthy conditions, or deter or discourage access or use.

Temperature: means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer to measure the outdoor temperature in an area where there is no shade. While the temperature measurement must be taken in an area with full sunlight, the bulb or sensor of the thermometer should be shielded while taking the measurement, e.g., with the hand or some other object, from direct contact by sunlight.

2 Management Commitment and Responsibilities

2.1 Management Commitment and Support

The District accepts the responsibility to establish an effective HIPP and to provide safeguards required to ensure safe work conditions for all of its employees. Furthermore, the District will act in the best interest of all employees and respond to unsafe conditions.

All District employees are expected to comply with the District adopted HIPP. Employees must work safely and maintain a safe work environment at all times.

2.2 Program Administrator

The Superintendent or his Designee is the HIPP Administrator. He/she is responsible for the overall implementation and maintenance of the District's HIPP. The Superintendent may assign all or some of the District's HIPP tasks to other District personnel. Nevertheless, the Superintendent remains ultimately responsible for the implementation and maintenance of the District's HIPP.

2.3 Administrators, Managers, Supervisors and Principals

Supervisors of employees who perform outdoor work are responsible for:

- 2.3.1 Providing the necessary resources to ensure the health and safety of their employees;
- 2.3.2 Encourage employees to drink water frequently;

- 2.3.3 Ensure that adequate water and shade are available at the job site when the environmental risk factors for heat illness are present;
- 2.3.4 Ensure employee compliance with health and safety policies and procedures;
- 2.3.5 Ensure workplace hazards are identified and controlled;
- 2.3.6 Ensure employees understand and comply with the requirements of this program;
- 2.3.7 Develop and implement procedures to comply with the requirement of this program as needed;
- 2.3.8 Ensure employees have completed documented Heat Illness Prevention training;
- 2.3.9 Be aware of risk factors that contribute to heat illness;
- 2.3.10 Reduce the risk of heat illness by taking special precautions when necessary;
- 2.3.11 Being alert for the signs and symptoms of heat illness in employees;
- 2.3.12 Allowing employees acclimate to working in hot conditions;
- 2.3.13 Make sure employees working in hot conditions are accounted for at the end of the work shift.

2.4 Employees

As a condition of employment, employees must exercise due care in the course of their work to prevent heat related injuries to themselves and to their fellow workers and actively contribute to the success of the overall safety program. At minimum, employees must:

- 2.4.1 Understand and complying with the District health and safety policies and procedures;
- 2.4.2 Notify their supervisor if they do not fully understand District and/or departmental safety policies and procedures and/or the hazards associated with their job;
- 2.4.3 Notify their supervisor about any hazardous conditions observed on the worksite;
- 2.4.4 Inform their supervisors of any factors that may increase their risk of heat related illness;
- 2.4.5 Report the signs or symptoms of heat illness in themselves, or others, to their supervisor immediately.
- 2.4.6 Attend all safety training session.

3 Heat Illness & the Types of Heat Stress

There are several types of heat-related illness. The following sections will explain the symptoms, causes and first aid procedures for each type of heat-related illness. All signs or symptoms of heat illness should be reported to a supervisor immediately. If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in an 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), emergency response procedures shall be implemented. 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.

3.1 Heat Stroke

Heat stroke is the most serious heat-related disorder. It occurs when the body becomes unable to control its temperature; the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

3.1.1 Heat Stroke Symptoms:

- Hot, dry skin or profuse sweating
- Reddening of skin
- Altered behavior, person becomes confused, agitated, irritable, etc.
- Rapid and shallow breathing
- Increased heart rate
- Chills
- Throbbing headache
- High body temperature (104 degrees or higher)
- Confusion/dizziness
- Nausea and Vomiting
- Slurred speech

3.1.2 Heat Stroke First Aid:

- Contact emergency medical services and notify supervisor;
- Move the individual to a cool, shaded or air conditioned area;
- Cool the individual using methods such as;
 - Loosening or removing clothing;
 - Soaking their clothes with water;
 - Spraying, sponging, or showering them with water;
 - Fanning their body.

3.2 Heat Exhaustion

Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating. Workers most prone to heat exhaustion are those that are elderly, have high blood pressure, and those working in a hot environment.

3.2.1 Heat Exhaustion Symptoms:

- Heavy sweating
- Extreme weakness or fatigue
- Dizziness, confusion

- Nausea
- Clammy, moist skin
- Pale or flushed complexion
- Muscle cramps
- Slightly elevated body temperature
- Fast and shallow breathing

3.2.2 Heat Exhaustion First Aid:

- Move individual to a cool, shaded or air conditioned area and allow them to rest;
- Encourage individual to drink water or other cool, nonalcoholic and non-caffeinated beverages;
- Lie the person down and elevate the legs;
- Cool the individual using methods such as:
 - Loosening or removing clothing;
 - Soaking their clothes with water;
 - Spraying, sponging, or showering them with water;
 - Fanning their body.
- Be prepared to call 911 if no improvement

3.3 Heat Syncope

Heat syncope is a fainting (syncope) episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

3.3.1 Heat Syncope Symptoms:

- Light-headedness
- Dizziness
- Fainting

3.3.2 Heat Syncope First Aid:

- Contact emergency medical services and notify supervisor;
- Have individual sit or lie down in a cool, shaded or air conditioned area and allow them to rest;
- Encourage individual to drink water or other cool, nonalcoholic and non-caffeinated beverages

3.4 Heat Cramps

Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low salt levels in muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.

3.4.1 Heat Cram Symptoms

- Muscle pain or spasms usually in the abdomen, arms, or legs.

3.4.2 Heat Cramp First Aid

- Stop all activity, and sit in a cool place;
- Drink clear juice or a sports beverage;
- Do not return to strenuous work for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke;
- Seek medical attention if any of the following apply:
 - The worker has heart problems;
 - The worker is on a low-sodium diet;
 - The cramps do not subside within one hour

3.5 Heat Rash

Heat rash occurs when sweat ducts become clogged and the sweat can't get to the surface of the skin. Instead, it becomes trapped beneath the skin's surface causing a mild inflammation or rash.

3.5.1 Heat Rash Symptoms:

- Heat rash looks like a red cluster of pimples or small blisters;
- It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

3.5.2 Heat Rash First Aid:

- Work in a cooler, less humid environment when possible;
- Keep the affected area dry;
- Dusting powder may be used to increase comfort.

4 **Personal and Environmental Risk Factors**

There are a number of factors that can increase the likelihood of an individual experiencing heat related illness. Often heat illness is a result of a combination of environmental and personal risk factors.

4.1 Environmental Risk Factors

Environmental risk factors are working conditions that increase the likelihood of a person experiencing heat related illness. They include:

- Warm temperatures
- High humidity
- Direct exposure to the sun or other heat sources
- Limited air movement

4.2 Personal Risk Factors

Personal factors affect how well an individual responds to heat. They include:

- Age, weight, and physical condition
- Degree of acclimatization

- Consumption of water, alcohol, drugs and caffeine
- Use of medications that affect tolerance to heat

4.3 Job Related Risk Factors

An individual's job duties may increase the likelihood of experiencing heat related illness, such as:

- Physical exertion and duration
- Protective clothing and protective equipment worn by employees

5 Heat Illness Prevention Procedures

The following elements of the LLCSD program for heat illness prevention provide specific information for departments and supervisors complying with the program:

5.1 Monitor Weather Conditions

Department and site supervisors are responsible for monitoring weather conditions and scheduling work appropriately. All employees shall be closely observed by a supervisor or designee during a heat wave. Make sure to monitor the weather at the specific location(s) where work activities are occurring. Prior to each workday, have a designated person check the weather forecast in the areas of work activities. The weather can be monitored by using local radio and television stations, websites, and electronic or other devices. The National Weather Service forecasts the temperature in various locations in California. Weather forecasts and information are broadcast on NOAA Weather radio and can be accessed at <http://www.weather.gov/view/states.php?state=ca&map=on>. Weather information can also be accessed at: www.weather.com.

The United States Department of Labor, Occupational Safety and Health Administration (OSHA) provides a Heat Safety Tool that is available for smart phones. The OSHA Heat Safety Tool allows supervisors and workers to calculate the heat index for their worksite, and, based on the heat index, displays a risk level to outdoor workers. Then, supervisors and workers can get reminders about the protective measures that should be taken at that risk level to protect workers from heat-related illness. Supervisors will monitor predicted weather temperatures in advance to know when the temperature is likely to exceed 80 degrees.

5.2 Provisions of Water

Supervisors shall ensure employees have access to potable drinking water at all times. Drinking water shall 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.

Custodians and other employees at workers at school sites are encouraged to drink from drinking fountains or water provided in offices. Grounds and Maintenance vehicles will be

equipped with insulated containers to keep water cool and disposable cups for drinking. Employees are encouraged to report to supervisor/designated person low levels or dirty water.

The frequent drinking of water shall be encouraged. The supervisor will provide frequent reminders to employees to drink frequently, and more water breaks will be provided. Water is a key preventive measure to minimize the risk of heat related illnesses. Drinking water is available at no cost to the employees.

Outlets for non-potable water, such as water for landscaping irrigation purposes, are posted in a manner understandable to all employees to indicate that the water is unsafe and is not to be used for drinking.

Drinking water and water dispensers shall meet the following requirements:

- All sources of drinking water shall be maintained in a clean and sanitary condition.
- Potable drinking water dispensers used to provide water to more than one person shall be equipped with a spigot or faucet.
- Any container used to store or dispense drinking water shall be clearly marked as to the nature of its contents and shall not be used for any other purpose.
- Dipping or pouring drinking water from containers, such as barrels, pails or tanks, is prohibited regardless of whether or not the containers are fitted with covers.
- The use of shared cups, glasses or other vessels for drinking purposes is prohibited.
- Non-potable water shall not be used for drinking.
- Outlets for non-potable water shall be posted in a manner understandable to all employees that the water is unsafe for drinking.

5.3 Shade Access and Rest Periods

Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade for a period of no less than five minutes at a time when they feel the need to do so to protect themselves from overheating. An individual employee who takes a preventative cool-down rest (A) shall be monitored and asked if he or she is experiencing symptoms of heat illness; (B) shall be encouraged to remain in the shade; and (C) shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.

5.3.1 Shade

Supervisors shall ensure shade is available to their employees when the temperature exceeds 80°F, and upon employee request when temperatures are below 80°F. When the outdoor temperature in the work area exceeds 80°F, 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. The amount of shade present shall be at least enough to accommodate the number of employees on recovery or rest periods, so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shade shall be located as close as practicable to the areas where employees are working.

Subject to the same specifications, the amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain onsite.

Shade means blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use. Shade is available at all district sites. Employees are encouraged to take breaks in areas of shade and open to the air.

5.3.1.1 Areas of shade include:

- Sides of buildings under roof eaves;
- Inside buildings;
- Permanent lunch shade structures;
- Fully-leaved trees (worker makes no shadow)
- Vehicles with air conditioning operating.

Employees are allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade is permitted at all times.

5.3.1.2 An individual employee who takes a preventative cool-down rest:

- Will be monitored and asked if he or she is experiencing symptoms of heat illness;
- Will be encouraged to remain in the shade; and
- Will not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.

If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the supervisor will provide appropriate first aid or emergency response according to the Emergency Response section below.

5.4 Acclimatization

Acclimatization is a process by which the body adjusts to increased heat exposure. Employees are more likely to develop heat related illness if they not allowed or encouraged to take it easy when a heat wave strikes, or when they start a new job that exposes them to heat.

Supervisors are required to acclimatize employees and allow time to adapt when temperatures rise suddenly and employee risk for heat illness increase. Acclimatization may also be required for new employees, employees working at temperatures to which they haven't been exposed for several weeks or longer, or employees assigned to new jobs in hot environments.

Generally, about four to fourteen days of daily heat exposure is needed for acclimatization. Heat acclimatization requires a minimum daily heat exposure of about two hours of work. Gradually increase the length of work each day until an appropriate schedule adapted to the required activity level for the work environment is achieved. This will allow the employee to acclimate to conditions of heat while reducing the risk of heat illness.

It should be noted that new employees are among those most at risk of suffering the consequences of inadequate acclimatization. Supervisors with new employees should be extra-vigilant during the acclimatization period, and respond immediately to signs and symptoms of possible heat illness.

5.5 Emergency Procedures

If an employee has any symptoms of heat illness, first-aid procedures should be initiated without delay. Common early signs and symptoms of heat illness include headache, muscle cramps, and unusual fatigue. However, progression to more serious illness can be rapid, and can include loss of consciousness, seizures, mental confusion, unusual behavior, nausea or vomiting, hot dry skin, or unusually profuse sweating.

Any employee exhibiting any of the above-mentioned symptoms requires immediate attention. Even the initial symptoms may indicate serious heat exposure. If medical personnel are not immediately available onsite and serious heat illness is suspected, emergency medical personnel should be immediately contacted and on-site first aid undertaken. No employee with symptoms of possible serious heat illness should be left unattended or sent home without medical assessment and authorization.

If any employee exhibits signs or symptoms of heat stroke emergency medical services must be contacted. Supervisors must be able to provide clear and precise directions to the worksite and should carry cell phones or other means of communication to ensure that emergency services can be called.

5.6 High Heat Procedures

High heat procedures are additional preventative measures that the District will take when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures will include the following to the extent practicable:

- 5.6.1 Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site or area can contact a supervisor when necessary. An electronic device, such as a cell phone or radio may be used for the purpose only if reception in the area is reliable.
- 5.6.2 Observing employees for alertness and signs or symptoms of heat illness. The employer shall ensure effective employee observation/monitoring by implementing one or more of the following:
 - Mandatory buddy system
 - Regular communication with supervisor such as by radio or cellular phone
 - Other effective means of observation

- 5.6.3 Designating one or more employees on each worksite as authorized to call for emergency medical services and allowing other employees to call for emergency services when no designated employee is available.
- 5.6.4 Reminding employees throughout the work shift to drink plenty of water.
- 5.6.5 Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water and remind employees of their right to take a cool-down rest when necessary.

5.7 Training

The District shall provide training for all potentially impacted employees, and their supervisors, working where environmental risk factors for heat illness are present. Training information shall include, but not be limited to:

- 5.7.1 Environmental and personal risk factors for heat illness.
- 5.7.2 Procedures for identifying, evaluating, and controlling exposure to environmental risk factors for heat illness.
- 5.7.3 The importance of frequent consumption of hydrating fluids, up to 1 quart (4 cups of water) per hour, when environmental risk factors for heat illness are present; particularly when employee is excessively sweating during the exposure.
- 5.7.4 The importance of acclimatization.
- 5.7.5 Different types of heat illness and the common signs and symptoms of heat illness.
- 5.7.6 The importance of immediately reporting symptoms or signs of heat illness, in themselves or in co-workers, to their supervisor.
- 5.7.7 Understanding the procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by emergency medical service.
- 5.7.8 Procedures for ensuring that, in the event of an emergency, clear and precise direction to the work site can and will be provided to emergency responders.

Supervisors shall receive training on the following topics prior to being assigned to supervise outdoor employees:

- 5.7.9 The training information required of the employees, detailed above
- 5.7.10 Procedures supervisors are to follow to implement the provisions of this program
- 5.7.11 Procedures the supervisor shall follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures

Retraining will be required under any of the following conditions:

- 5.7.12 Changes in the workplace render previous training obsolete.
- 5.7.13 Inadequacies in an employee's knowledge of heat illness prevention indicate that the employee has not received the required training.

6 Safety Program Compliance

6.1 Disciplinary System

Failure to comply with the guidelines of the District's HIPP will result in disciplinary actions.

6.1.1 Classified employees – Article 14 of the “California School Employees Association Agreement.”

6.1.2 Certificated employees - Administrative Regulation Section 4118.

7 References and Resources

Cal/OSHA Heat Illness Prevention Standard - California Code of Regulations, Title 8, Section 3395, California Department of Industrial Relations (<http://www.dir.ca.gov/title8/3395.html>)

Cal/OSHA Heat-Related Illness Prevention and Information

(<http://www.dir.ca.gov/dosh/heatillnessinfo.html>)

Heat Illness Prevention enforcement Q&A

<http://www.dir.ca.gov/DOSH/heatIllnessQA.html>

Protect Yourself from Heat Illness

http://www.dir.ca.gov/dosh/dosh_publications/HeatIllnessEmployeeEngSpan.pdf

NOAA Heat Wave Resources

(<http://www.nws.noaa.gov/om/heat/index.shtml>)

NOAA Heat Index Chart

(http://www.nws.noaa.gov/om/heat/heat_index.shtml)

NOAA Weather Information and Forecasting

(<http://www.noaa.gov/wx.html>)

8 Program Maintenance

The Heat Illness Prevention Program Administrator will periodically review this plan. This person shall verify effective implementation of each element of the Program, make any changes needed and communicate program status and changes made to management and to affected employees.