

HEAT ILLNESS PREVENTION PROGRAM (HIPP)

Approved by the Safety Committee on 9-21-17

FALLING VICTIM TO HEAT

Know the **“signs and symptoms”** of the various types of heat-related illnesses

- Excessive thirst
- Sleepiness or fatigue
- Dry mouth
- Muscle weakness or cramps
- Headache
- Dizziness or lightheadedness
- Sweating profusely
- No sweat: hot red skin



CALIFORNIA EMPLOYERS ARE REQUIRED TO TAKE THESE “FOUR STEPS TO PREVENT HEAT ILLNESS”

- 1) **Training** – train all employees and supervisors about heat illness prevention
- 2) **Water** – Provide enough fresh water so that each employee can drink at least 1 quart per hour and encourage them to do so.
- 3) **Shade** – Provide access to shade for at least 5 minutes of rest when an employee believes he or she needs a preventative recovery period. They should not wait until they feel sick to do so.
- 4) **Planning** – Develop and implement written procedures for complying with the Cal/OSHA Heat Illness Prevention Standard.

Drink water often

Rest in the shade

Report heat symptoms early

Know what to do in an emergency

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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. On December 15, 2005, the OSHA Standards Board extended the emergency regulations, which are now set to expire on April 20, 2006, unless permanently adopted. The regulations are 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 19th, 2010, became effective November 4th, 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 Lodi Unified 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, and transportation workers, custodians, security personnel, physical education teachers, and playground supervisors.

POLICY

It is the policy of Lodi Unified 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 proposed definitions of key

terminology, as they relate to the standard, as follows:

- Acclimatization is a process by which the body adjusts to increased heat exposure. All employees shall be closely observed by a supervisor or designee during a heat wave. “Heat Wave” means any day in which the predicted temperature for the day will be at least 80 degrees and at least ten degrees higher than the average high daily temperature in the preceding five (5) 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 fourteen (14) days of the employee’s employment.
- Emergency response procedures ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor or emergency medical services when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area, employer will ensure a means of summoning emergency medical services. Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided. If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in 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 the employer’s procedures. Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider. Ensuring that, in the event of an emergency, clear and precise directions (map) to the work site can and will be provided as needed to emergency responders.
- Environmental risk factors for heat illness means 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 when temperatures reach 95 degrees or above. These procedures include 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: (a) supervisor or designee observation of 20 or fewer employees, or (b) mandatory buddy system or (c) regular communication with sole employee such as by radio or cellular phone or (d) other effective means of observation. 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. Reminding employees throughout the work shift to drink plenty of water. 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.

- 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 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 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 Requirements **Shade shall be present when the temperature exceeds 80 degrees.** When the outdoor temperatures exceeds 80 degrees, 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 recover 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 on site.

Employees shall be 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 shall be permitted at all times.

An individual employee who takes a preventative cool-down rest (a) shall be monitored and shall be asked if he or she is experiencing symptoms of heat illness; (b) shall be encouraged to remain in the shade; (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. If an employee exhibit's signs or report symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the employer shall provide appropriate first aid or emergency response.

RESPONSIBILITY

The Director of Maintenance and Operations has the overall responsibility for maintaining the policies of the Heat Illness Prevention Plan including developing procedures, which ensure effective compliance with the Heat Illness Prevention Plan. The Risk Management Workers'

Compensation Analyst, will provide support and oversight of this program.

It is the responsibility of **the immediate supervisor** 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.

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

1. Provisions of Water

- a. 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).
- b. Smaller quantities may be provided if the District has an effective procedure for replenishment that meets the above quantity and time requirements.
- c. 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.
- d. The importance of frequently drinking water shall be conveyed and encouraged as described in the training section.

2. Access to Shade

- a. When temperature does exceed 80 degrees F, provide shade or timely access to shade upon request.
- b. 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.
- c. 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.

- d. Water shall be made available in the shade/preventative recovery period area. 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.

3. Identifying, Evaluating and Controlling Environmental Risk Factors for Heat Illness

- a. 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.
- b. 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.
- c. 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: _____

4. Identifying, Evaluating and Controlling Personal Risk Factors for Heat Illness

- a. 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.

5. Reporting Symptoms or Signs of Heat Illness to the District

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

6. Responding to Symptoms of Possible Heat Illness

- a. It shall be the responsibility of the immediate supervisor to respond to all reports and/or observations of heat illness symptoms and signs, and report to Risk Management Workers’ Compensation Claims Analyst.

7. Contacting Emergency Medical Services

- a. When a sick employee is unable to communicate, it shall be the responsibility of **the**

immediate supervisor to contact emergency services when required, and to provide accurate and precise directions to the employee's location.

- b. This individual shall be immediately available to perform this function. **The immediate supervisor will report all incidents requiring emergency medical services to Risk Management.**

8. Communication

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

9. Training

Training shall be administered annually 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
- Supervisory and Non-Supervisory employees before they begin work that should reasonably be anticipated to result in exposure to the risk of heat.

- a. 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 of 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.
- b. Supervisors shall be trained on:
 - i. Procedures a supervisor shall follow when implementing this Heat Illness Prevention Plan
 - ii. The procedures a supervisor shall follow when an employee exhibits symptoms of a possible heat illness, which includes emergency response procedures

DOCUMENTATION

Documentation of all aspects of this Heat Illness Prevention Plan shall be managed in accordance with the District's Injury and Illness Prevention Plan.

Heat Index (Apparent Temperature) Chart

The Heat Index (HI) is the temperature the body feels when heat and humidity are combined. The chart below shows the HI that corresponds to the actual air temperature and relative humidity. (NOTE: This chart is based upon shady, light wind conditions. Exposure to direct sunlight can increase the HI by up to 15°F.) (Due to the nature of the heat index calculation, the values in the tables below have an error of +/- 1.3F.)

Heat Index	General Effect of Heat Index on People in Higher Risk Groups
80 to 89° - Caution	Fatigue possible with prolonged exposure and/or physical activity.
90 to 104° - Extreme Caution	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity.
105 to 129° - Danger	Sunstroke, heat cramps or heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity.
130° or higher - Extreme Danger	Heat/sunstroke highly likely with continued exposure.

		Relative Humidity (in percent)																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Air Temp (in F)	140	125																					
	135	120	128																				
	130	117	122	131																			
	125	111	116	123	131	141																	
	120	107	111	116	123	130	139	148															
	115	103	107	111	115	120	127	135	143	151													
	110	99	102	105	108	112	117	123	130	137	143	150											
	105	95	97	100	102	105	109	113	118	123	129	135	142	149									
	100	91	93	95	97	99	101	104	107	110	115	120	126	132	138	144							
	95	87	88	90	91	93	94	96	98	101	104	107	110	114	119	124	130	136					
	90	83	84	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113	117	122			
	85	78	79	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97	99	102	105	108	
80	73	74	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86	87	88	89	91		
75	69	69	70	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80		
70	64	64	65	65	66	66	67	67	68	68	69	69	70	70	70	70	71	71	71	71	72		

		Dew Point (in F)																									
		60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Air Temp (in F)	104	110	110	110	110	110	110	111	112	113	114	115	116	117	118	119	121	122	124	125	127	128	130	132	133	136	137
	102	108	108	108	108	108	108	109	110	110	111	112	113	114	116	117	118	119	121	122	124	126	127	129	131	133	136
	100	106	106	106	106	106	106	107	108	109	110	111	112	113	114	115	117	118	119	121	123	124	126	128	129	132	
	98	103	103	103	103	103	104	105	105	106	107	108	109	110	111	113	114	115	117	118	120	121	123	125	127	129	
	96	101	101	101	101	101	101	102	103	104	105	106	107	108	109	110	111	112	114	115	117	118	120	122	124	127	
	94	98	98	98	98	98	98	99	100	100	101	102	103	104	105	106	107	108	109	111	112	114	115	117	119	122	
	92	96	96	96	96	96	96	97	97	98	99	99	100	101	102	103	104	105	106	108	109	110	112	114	116	119	
	90	94	94	94	94	94	94	94	95	95	96	97	98	98	99	100	101	102	103	105	106	107	109	110	113	116	
	88	88	88	88	89	89	90	90	90	91	92	93	94	95	96	97	98	99	100	101	103	104	106	108	110	112	
	86	86	86	87	87	87	88	88	89	89	90	91	91	92	93	94	95	96	97	98	100	101	102	104	106	108	
	84	84	84	85	85	85	86	86	87	87	88	88	89	90	90	91	92	93	94	95	96	97	98	100	101	103	
	82	82	83	83	83	83	84	84	85	85	86	86	87	87	88	88	89	89	90	91	92	93	94	95	-	-	
80	80	81	81	81	82	82	82	82	83	83	83	83	84	84	85	85	85	86	86	87	87	-	-	-	-		

