

ADMINISTRATIVE ORDER NUMBER 2-31

SUBJECT: Heat Illness Prevention Plan

Responsible Department: Personnel Services

Date Issued: October 14, 2015

Date Revised: June 19, 2025

Approved: *Signature on File*

Purpose

It is the policy of the City of Fresno (City) to provide a safe, healthy, and secure workplace for all employees. The purpose of the Heat Illness Prevention Plan (HIPP) is to reduce the risk of heat related illness through education, training, and proper work practices.

Heat related illness is a serious condition that results when the body is unable to cool itself sufficiently through sweating. Both personal and environmental factors can contribute to heat related illnesses, which include heat stress, heat exhaustion, and ultimately, heat stroke. Heat stroke can cause serious injury or death, especially if medical treatment is delayed.

This HIPP has been created to comply with Cal/OSHA's Heat Illness Prevention Standards as set out in California Code of Regulations Title 8, Sections 3395 and 3396.

Scope

This HIPP applies to all Departments with any worksites, indoor or outdoor, where it could be reasonably anticipated that environmental or personal risk factors for heat illness are present. The Cal/OSHA's Heat Illness Prevention Standards, set out in California Code of Regulations Title 8, Sections 3395 and 3396, require all employers with outdoor and/or indoor worksites to take precautions, which have been outlined in this document, to prevent heat illness. The primary focus of the HIPP is to prevent heat related illness from occurring through education and proper work practices; however, the plan also identifies the signs and symptoms of heat illness, as well as the appropriate responses should heat related illness occur.

This does not apply to places of employment where employees are teleworking from a location of the employees' choice, which is not under the control of the City.

Responsibilities

A. Personnel Services Department

The Personnel Services Department (PSD) Director, or other designee, is the administrator of this Policy and has overall authority and responsibility for implementing the provisions of this plan.

PSD may collaborate with Departments to assist in training and distribution of the HIPP to employees.

B. Departments

All department directors, managers, supervisors, and other designated persons are responsible to implement and maintain this HIPP in their department, train their employees, maintain such training records, and answer employee questions about this plan. Departments shall communicate with PSD if they are unsure how to implement the HIPP in their workplace.

C. Employees

All City employees are responsible for using safe work practices, following all directives, policies and procedures, and assisting in maintaining a safe work environment. This includes but is not limited to:

- a. Compliance with the provisions of the HIPP as described in this document and with the training provided.
- b. Taking steps to mitigate any personal risk factors that may exist prior to working in a hot environment.
- c. Immediately reporting unsafe conditions to their supervisor.
- d. Reporting heat-related illness signs and symptoms in themselves or others immediately to their supervisor.

Definitions

Acclimatization – 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 (4) to fourteen (14) days of regular work for at least two (2) hours per day in the heat.

Administrative control – a method to limit exposure to a hazard by adjustment of work procedures, practices, or schedules.

Clothing that restricts heat removal – full-body clothing covering the arms, legs, and torso that is any of the following:

1. Waterproof; or

2. Designed to protect the wearer from a chemical, biological, physical, radiological, or fire hazard; or
3. Designed to protect the wearer or the work process from contamination.

This does not include clothing demonstrated by the employer to be all of the following:

1. Constructed only of knit or woven fibers, or otherwise an air and water vapor permeable material; and
2. Worn in lieu of the employee's street clothing; and
3. Worn without a full-body thermal, vapor, or moisture barrier.

Cool-down area – an indoor or outdoor area that is blocked from direct sunlight and shielded from other high radiant sources to the extent feasible and is either open to the air or provided with ventilation or cooling. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of the blocked sunlight. A cool-down area does not include a location where:

1. Environmental risk factors defeat the purpose of allowing the body to cool; or
2. Employees are exposed to unsafe or unhealthy conditions; or
3. Employees are deterred or discouraged from accessing or using the cool-down area.

Engineering control – a method of control or a device that removed or reduces hazardous conditions or creates a barrier between the employee and the hazard. Examples of engineering controls that may be effective at minimizing the risk of heat illness in a particular work area include, but are not limited to: isolation of employees from sources of heat, air conditioning, cooling fans, cooling mist fans, and natural ventilation where the outdoor temperature or heat index is lower than the indoor temperature or heat index.

Environmental Risk Factors for Heat Illness – 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.

Globe temperature – the temperature measured by a globe thermometer, which consists of a thermometer sensor in the center of a six-inch diameter hollow copper sphere painted on the outside with a matte black finish, or equivalent. The globe thermometer may not be shielded from direct exposure to radiant heat while the globe temperature is being measured.

Heat Illness – 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 Index – a measure of heat stress developed by the National Weather Service (NWS) for outdoor environments that takes into account the dry bulb temperature and the relative humidity. For purposes of indoor procedures, heat index refers to conditions in indoor work areas. Radiant heat is not included in the heat index. (Indoor)

Heat Wave – any day in which the predicted high outdoor temperature for the day will be at least 80 degrees Fahrenheit and at least 10 degrees Fahrenheit greater than the average high daily outdoor temperature for the preceding five days.

High radiant heat area – a work area where the globe temperature is at least five (5) degrees Fahrenheit greater than the temperature.

High radiant heat source – any object, surface, or other source of radiant heat that, if not shielded, would raise the globe temperature of the cool-down area five (5) degrees Fahrenheit or greater than the dry bulb temperature of the cool-down area.

Indoor – refers to a space that is under a ceiling or overhead covering that restricts airflow and is enclosed along its entire perimeter by walls, doors, windows, dividers, or other physical barriers that restrict airflow, whether open or closed. All work areas that are not indoor are considered outdoor and shall follow guidance for outdoor work locations.

Outdoor – See *Indoor* definition.

Preventative cool-down rest – is a rest taken in a cool-down area to prevent overheating.

Personal Risk Factors for Heat Illness – 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.

Radiant heat – heat transmitted by electromagnetic waves and not transmitted by conduction or convection. Sources of radiant heat include the sun, hot objects, hot liquids, hot surfaces, and fire.

Relative humidity – the amount of moisture in the air relative to the amount that would be present if the air were saturated.

Shade – 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.

Shielding – a physical barrier between radiant heat sources and employees that reduces the transmission of radiant heat.

Temperature (*indoor*) – the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer freely exposed to the air without considering humidity or radiant heat, to measure the temperature in the immediate area where employees are located.

Temperature (*outdoor*)– 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.

A. Provisions for Water

Departments shall ensure that 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. The shift may begin with smaller quantities of water if there are effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. The frequent drinking of water shall be encouraged.

All potable water containers shall be kept in a sanitary condition. Departments may choose to have employees clean their portable drink containers. Water from non-approved or non-tested water sources (e.g., untested wells) is not acceptable. If hoses or connections are used, they must be approved for potable drinking water systems, as shown on the manufacturer's label.

B. Indoor Work Location Procedures

Heat illness prevention procedures shall be in effect in indoor places of employment where the indoor temperature equals or exceeds 82 degrees Fahrenheit when employees are present. Additional procedures are required once the temperature equals or exceeds 87 degrees Fahrenheit.

These provisions do not apply to incidental heat exposures where an employee is exposed to temperatures at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60- minute period. This exception does not apply to the following:

- Vehicles without effective and functioning air conditioning.
- Shipping or intermodal containers during loading, unloading, or related work.

These provisions do not apply to emergency operations directly involved in the protection of life or property.

These provisions do not apply to local detention facilities as defined by Section 6031.4 of the Penal Code that are operated by a local government.

1. Cool-Down Areas

- a. There shall be at least one cool-down area at all times while employees are present. Cool-down areas shall be as close as practicable to the work area.
- b. The temperature in an indoor cool-down area will be maintained at less than 82 degrees Fahrenheit by use of administrative or engineering controls as set out in Section B(3)(b-d) of this policy unless it is infeasible to do so.
- c. The cool-down area(s) shall be at least large enough to accommodate the number of employees on recovery, rest periods, or meal periods so that they can sit in a normal posture in the cool-down area without having to be in physical contact with each other. This may include but is not limited to a breakroom, conference room, office, or outside space.
- d. Employees will be informed of the location of the cool-down area(s) and will be encouraged and allowed to take cool-down breaks in the designated area(s) whenever they feel they need a break. An employee who takes a preventative cool-down rest break:
 - i. Shall be monitored and asked if they are experiencing symptoms of heat illness;
 - ii. Shall be encouraged to remain in the cool down area; and
 - iii. Shall not be ordered back to work until signs and symptoms of heat illness have abated, but in no event less than five (5) minutes in addition to the time needed to access the cool down area.

- e. If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest, departments shall provide appropriate first aid or emergency response according to Section D of this policy.

2. Temperature Assessment

- a. Departments are subject to this section when their indoor work area(s) is subject to one or more of the following conditions:
 - i. The temperature equals or exceeds 87 degrees Fahrenheit when employees are present; or
 - ii. The heat index equals or exceeds 87 degrees Fahrenheit when employees are present; or
 - iii. Employees wear clothing that restricts heat removal and the temperature equals or exceeds 82 degrees Fahrenheit; or
 - iv. Employees work in a high radiant heat area and the temperature equals or exceeds 82 degrees Fahrenheit.
- b. A thermostat, thermometer, weather station, wet-bulb thermometer, or hygrometer for measuring humidity may be used throughout the workplace to monitor temperature or heat index. Monitoring instruments will be maintained according to manufacturer's recommendations and the instruments used to measure the heat index shall be based on the heat index chart in Appendix A of Section 3396. The locations for the temperature measurements may be placed throughout the indoor work locations.
- c. Departments shall determine how each indoor work location temperature or heat index is going to be tracked. This may include but is not limited to:
 - i. A software program which alerts designated persons when the internal temperature reaches a pre-determined number.
 - ii. The temperature or heat index will be measured and recorded by a software program or an employee(s) designated by their department.
 - iii. Records of the temperature or heat index measurements, whichever value is greater, will be retained for one (1) year or until the next measurements are taken, whichever is later, and made available in the department to employees or designated representatives upon request. The records will include the date, time, and specific location of all measurements.

- iv. Initial temperature or heat index measurements shall be taken where employees work and at times during the work shift when employee exposures are expected to be the greatest and when it is suspected to equal or exceed 82 degrees Fahrenheit.
- v. Measurements will be taken again when they are reasonably expected to be 10 degrees Fahrenheit or more above the previous measurements where employees work and at times during the work shift when employee exposures are expected to be the greatest.

3. Control Measures

- a. Control measures shall be implemented when either of the following occurs:
 - i. Indoor temperature or heat index is 87 degrees Fahrenheit or higher.
 - ii. Indoor temperature is 82 degrees Fahrenheit or higher and employees are either:
 - 1. Wearing clothing that restricts heat removal, or
 - 2. Working in an area with high radiant heat
- b. Feasible engineering controls shall be implemented first to reduce the temperature and heat index to below 87°F (or below 82°F for employees working in clothing that restricts heat removal or working in high radiant heat areas). Administrative controls will be implemented if feasible engineering controls are not enough to comply with the standard. If both feasible engineering and administrative controls are not enough to decrease the temperature and minimize the risk of heat illness, then personal heat-protective equipment may be provided.
- c. The most common engineering control used throughout the City is air conditioning and cooling fans. Additional engineering controls may be implemented to lower the indoor temperature, heat index, or both to the lowest possible level. The following controls may help make the work environment cooler or create a barrier between the employee and the heat:
 - i. Increased natural ventilation, such as open windows and doors when the outdoor temperature or heat index is lower than the indoor temperature and heat index

- ii. Local exhaust ventilation at points of high heat production or moisture (such as exhaust hoods in laundry rooms)
 - iii. Reflective shields to block radiant heat
 - iv. Insulating/isolating heat sources from employees, or isolating employees from heat sources
 - v. Elimination of steam leaks
 - vi. Cooled seats or benches
 - vii. Evaporative coolers
 - viii. Dehumidifiers
- d. The following administrative controls may be implemented once all feasible engineering controls have been implemented, and the indoor temperature is still above the action level. These controls are modified work practices that can reduce heat exposure by adjusting work procedures, practices, or schedules. Departments may:
- i. Move employees to cooler workspaces where engineering controls are effective.
 - ii. Modify work schedules and activities to times of the day when the temperature is cooler, especially during heat waves. For newly hired employees and unacclimatized existing employees, gradually increase shift length over the first one to two weeks.
 - iii. Require mandatory rest breaks in a cooler environment, such as a shady location or an air-conditioned building. The duration of rest breaks should increase as heat stress rises.
 - iv. Rotate job functions among employees to help minimize exertion and heat exposure. If employees must be in proximity to heat sources, mark those sources clearly, so they are aware of such hazards.
 - v. Require employees to work in pairs or groups during extreme heat so they can monitor each other for signs of heat illness.

Personal heat-protective equipment may be provided if feasible engineering controls do not decrease the temperature enough and administrative controls do

not minimize the risk of heat illness. This personal heat-protective equipment may consist of special cooling devices that the employee wears on their body that can protect them in hot environments.

4. Acclimatization

Where no effective engineering controls are in use to control the effect of outdoor heat on indoor temperature, all employees shall be closely observed by a supervisor or designee during a heat wave.

An employee who has been newly assigned to any of the following shall be closely observed by a supervisor or designee for the first fourteen (14) days of employment:

- a. In a work area where the temperature or heat index, whichever is greater, equals or exceeds 87 degrees Fahrenheit;
- b. In a work area where the temperature equals 82 degrees Fahrenheit for employees who wear clothing that restricts heat removal; or
- c. In a high radiant heat area where the temperature equals or exceeds 82 degrees Fahrenheit.

C. Outdoor Work Location Procedure

1. Monitoring the Weather

Departments shall have a written procedure describing how they will monitor outdoor temperature and communicate that to their employees working outdoors.

2. Access to Shade

- a. Shade shall be present when the temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, one or more areas with shade shall be available at all times while employees are present that are either open to the air or provided with ventilation or cooling.
 - i. The amount of shade present shall be at least enough to accommodate the number of employees on recover or rest periods, so they can sit in a normal posture fully in the shade without having to be in physical contact with each other.
 - ii. The shade shall be located as close as practicable to the areas

where employees are working.

- b. Shade shall be available when the temperature does not exceed 80 degrees Fahrenheit and provided per the provisions above upon an employee's request.
- c. 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 is permitted at all times.

An individual who takes a preventative cool-down rest shall:

- i. Be monitored and asked if he or she is experiencing symptoms of heat illness;
 - ii. Be encouraged to remain in the shade; and
 - iii. Not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than five (5) minutes in addition to the time needed to access shade.
- d. 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, appropriate first aid or Emergency Response Procedures shall be provided.
 - e. If it is infeasible or unsafe to have a shade structure, or otherwise to have shade present on a continuous basis, alternative procedures for providing access to shade may be utilized, if alternative procedures provide equivalent protection. Contact Risk Management if alternative procedures for providing access to shade is required.

3. Acclimatization

All employees shall be closely observed by a supervisor or designee during a heat wave.

An employee who has been newly assigned to a high-heat area shall be closely observed by a supervisor/designee for the first 14 days of the employee's employment.

4. High-Heat Procedures

Additional high-heat procedures are required when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practical:

- a. Ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary.
 - i. 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.
- b. Observe employees for alertness and signs or symptoms of heat illness. Ensure effective employee observation/monitoring by implementing one or more of the following:
 - i. Supervisor/designee observation of 20 or fewer employees;
 - ii. Mandatory buddy system;
 - iii. Regular communication with sole employee such as by radio or cellular phone; or
 - iv. Other effective means of observation.
- c. Designate one or more employees on each worksite as authorized to call for emergency medical services, and allow other employees to call for emergency services when no designated employee is available.
- d. Remind employees throughout the work shift to drink plenty of water.
- e. 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

D. Emergency Response Procedures, Identifying Heat Illness, and First Aid

1. Emergency Response Procedures

- a. 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, a means of summoning emergency medical services must be identified.

- b. Respond to signs and symptoms of possible heat illness including, but not limited to, first aid measures and the emergency medical services that will be provided if necessary.
 - i. If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in any employee, the supervisor shall take immediate action to commensurate with the severity of the illness.
 - ii. 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.
 - iii. 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.
- c. Contact emergency medical services, and if necessary, transport employees to a place where they can be treated by an emergency medical provider.
 - i. Ensure that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

2. Identifying Heat Illness and First Aid

Heat Illness is a medical condition that can result from the body’s inability to cope with a particular heat load. The National Institute of Occupational Safety and Health (NIOSH) identifies types of heat illness, symptoms, and first aid measures as follows:

Illness	Symptoms	First Aid*
Heat Stroke	<ul style="list-style-type: none"> • Hot dry, skin or profuse sweating • Altered mental status • Seizures • High body temperature • Confusion • Slurred speech 	<ul style="list-style-type: none"> • Call 911 • Move employee to a cool, shaded, or air-conditioned area • Cool the employee: <ul style="list-style-type: none"> ○ Spray, sponge, or shower with cold water ○ Place cold wet clothes on skin ○ Place ice on head, neck, armpits, and groin ○ Fan body with cool air

<p>Heat Exhaustion</p>	<ul style="list-style-type: none"> • Headache • Nausea • Dizziness • Weakness • Irritability • Thirst • Heavy sweating • Elevated body temperature • Decreased urine output 	<ul style="list-style-type: none"> • <u>Seek medical care or call 911</u> • Remove employee from heat • Give liquids to drink, encourage frequent sips of cool water • Remove unnecessary clothing • Cool with cold compresses • Have employee wash their head, face, and neck with cold water
<p>Rhabdomyolysis (Rhabdo)</p>	<ul style="list-style-type: none"> • Muscle cramps/pain • Abnormally dark urine • Weakness • Exercise intolerance • Asymptomatic 	<ul style="list-style-type: none"> • Stop activity • Drink more liquids (water preferred) • Seek immediate care • Ask to be checked for rhabdo
<p>Heat Syncope</p>	<ul style="list-style-type: none"> • Light-headedness • Dizziness • Fainting 	<ul style="list-style-type: none"> • Sit or lie down in a cool place when they begin to feel symptoms • Slowly drink water, clear juice, or a sports beverage
<p>Heat Cramps</p>	<ul style="list-style-type: none"> • Muscle cramps • Pain or spasms in the abdomen, arms, or legs 	<ul style="list-style-type: none"> • Drink water and have a snack or a drink that replaces carbohydrates and electrolytes every 15-20 minutes. • Avoid salt tablets • Seek medical attention if any of the following apply: <ul style="list-style-type: none"> ○ Employee has heart problems ○ Employee is on a low-sodium diet ○ Cramps do not subside within one hour
<p>Heat Rash</p>	<ul style="list-style-type: none"> • Red cluster of pimple-like bumps or small blisters • More likely to occur on neck and upper chest, in groin, under breasts, and in elbow creases 	<ul style="list-style-type: none"> • Keep affected area dry • Apply powder to increase comfort • Don't use ointments and cream

Figure 1 - Types of Heat Illness, Symptoms, and First Aid

***Information should be used as a guide only and is not intended to take the place of treatment from a medical professional.**

Recognizing Heat Illness Risk Factors

1. Environmental Risk Factors

Environmental risk factors for heat illness include 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, and protective clothing and personal protective equipment worn by employees.

2. Personal Risk Factors

Personal risk factors for heat illness include age, degree of acclimatization, general health, water consumption, and use of medications, caffeine, or alcohol, which can affect the body's water retention or other physical response to heat.

3. Work Conditions

Supervisors shall evaluate work conditions before sending employees to perform work in hot conditions. Typically, outdoor temperatures above 80 degrees Fahrenheit, especially with heavy physical work activities, would represent conditions where there is a risk of heat illness. Other factors, such as high humidity or work activities that restrict the body's ability to cool itself, such as protective clothing, could result in a risk of heat illness at lower temperatures.

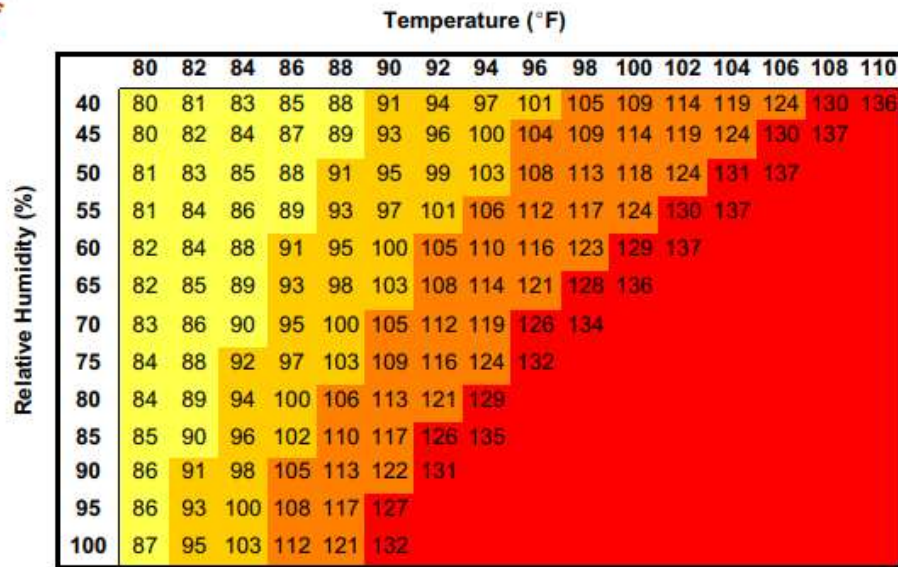
4. Heat Index

[The U.S. National Oceanographic and Atmospheric Administration's \(NOAA\) National Weather Service](#) developed a heat index system that combines both air temperature and relative humidity into a single value that indicates the apparent temperature in degrees Fahrenheit, or how hot the weather will feel when relative humidity is factored in with the actual air temperature. The higher the heat index, the hotter the weather will feel, and the greater the risk that employees will experience heat-related illness as the heat index rises.

The Heat Index Chart below will identify the Heat Index temperature. As an example, if the air temperature is 96 degrees Fahrenheit and the relative humidity is 65%, the heat index (how hot it feels) is 121 degrees Fahrenheit.



National Weather Service Heat Index Chart



Likelihood of Heat Disorders with Prolonged Exposure and/or Strenuous Activity
 ■ Caution ■ Extreme Caution ■ Danger ■ Extreme Danger

Figure 2 - National Weather Service Heat Index Chart

Important Consideration: NOAA devised the heat index values for shaded conditions and light winds. Full sunshine can increase heat index values up to 15 degrees Fahrenheit. Strenuous work and the use of heavy or specialized protective clothing also have an additive effect. As a result, the risk at a specific heat index could be higher than that listed in the table above if the work is in direct sunlight without a light breeze, or if work involves strenuous tasks or the use of heavy or specialized protective clothing. Extra measures, including implementing precautions at the next risk level, are necessary under these circumstances.

The heat index can be used to determine the risk of heat-related illness for employees, what actions are needed to protect them, and when those actions are triggered. Depending on the heat index value, the risk for heat-related illness can range from lower to very extreme. As the heat index value goes up, more preventative measures are needed to protect employees.

E. Training

Departments shall provide documented Heat Illness Prevention Training meeting the requirements below to all employees, and supervisors of employees, who perform outdoor or indoor work where heat-related illness could reasonably be anticipated to

occur. Training records shall be maintained in the respective department for a minimum of three (3) years.

1. Employee Training

All employees, supervisory and non-supervisory, shall receive training on the following prior to commencement of work that should reasonably be anticipated to result in exposure to the risk of heat illness:

- a. The environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.
- b. Procedures for complying with the requirements of Cal/OSHA's Heat Illness Prevention Standard, California Code of Regulations Title 8, Section 3395 and 3396.
- c. The importance of frequent consumption of water.
- d. The concept, importance, and methods of acclimatization.
- e. Types of heat illness, common signs and symptoms of heat illness, and appropriate first aid and emergency responses to different types of heat illness.
- f. Importance of immediately reporting signs and symptoms of possible heat illness in themselves or co-workers.
- g. Procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided.
- h. Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider.
- i. Procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided to emergency responders, including designating a person to be available to ensure that emergency procedures are invoked when appropriate.
- j. Employees who have a potential exposure in both indoor and outdoor work locations may receive one training covering both.

2. Supervisor Training

Prior to supervising employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness, effective training on the following topics shall be provided to the supervisor:

- a. The training received by all employees as indicated in Section E.1. above.
- b. Procedures the supervisor is to follow to implement the applicable provisions of this policy.
- c. The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.
- d. Where the work area is affected by outdoor temperatures, how to monitor weather reports and how to respond to hot weather advisories.

F. Additional Resources

Additional information about Heat Illness can be found at the following resources:

[Cal/OSHA's Heat Illness Prevention Standard, California Code of Regulations Title 8, Section 3395](#)

[Cal/OSHA's Heat Illness Prevention Standard, California Code of Regulations Title 8, Section 3396](#)

[Cal/OSHA Heat Illness Prevention Guidance and Resources \(Indoor and Outdoor\)](#)

[OSHA's Campaign to Prevent Heat Illness in Outdoor Workers](#)

[Department of Industrial Relations – Heat Illness Prevention](#)

[The National Institute of Occupational Safety and Health \(NIOSH\)](#)

[The U.S. National Oceanographic and Atmospheric Administration's \(NOAA\) National Weather Service](#)