

# **Placer County Office of Education**

## **Heat Illness Prevention Plan**



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### Program Administrator

County Office Name	Placer County Office of Education
County Office Address:	1400 West Stanford Ranch, Rocklin, CA 95765
School Phone Number:	530-889-8020
Lead Administrator Name and phone number:	Mark Williams – 530-889-5916
Heat Illness Prevention Coordinator Name and phone number:	Mark Williams – 530-889-5916

### Heat Illness Prevention Element

Heat illness results when the body's internal temperature system is overworked. These procedures are designed to assist the County Office in reducing the risk of heat related illnesses and to ensure that emergency assistance is provided without delay. This plan addresses outdoor and indoor heat illness prevention.

Outdoor heat illness applies to all outdoor work areas where temperature is at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days. Additional measures are taken when temperature equals or exceeds 95 degrees Fahrenheit.

Indoor heat illness applies to all indoor work areas where the temperature or the heat index equals or exceeds 87 degrees Fahrenheit when employees are present; OR when employees wear clothing that restricts heat removal or employees work in a high radiant heat area and the temperature equals or exceeds 82 degrees Fahrenheit.

The elements reflected within this Heat Illness Prevention Plan are those contained in Title 8 of the California Code of Regulations, Section 3395 (T8 CCR 3395) for outdoor workplaces and Section 3396 (T8 CCR 3396) for indoor workplaces and consist of the following:

- Procedures for the Provision of Water
- Procedures for Access to Shade and/or Cool-Down Areas
- Procedures for Monitoring the Weather
- Procedures for Handling a Heat Wave
- High heat Procedures
- Procedures for Recording and Documenting Indoor Heat
- Procedures for Acclimatization
- Procedures for Emergency Response
- Procedures for Handling a Sick Employee
- Procedures for Employee and Supervisor Training

## Procedures for the Provision of Water

Water is a key preventive measure to minimize the risk of heat related illnesses.

According to regulations 3395 (c) and 3396 (c), 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 cold and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working and in indoor cool-down areas when responding to indoor heat prevention conditions. Where the supply of water is not plumbed or otherwise continuously supplied, water 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. Smaller quantities of water are allowed if effective procedures for replenishment during the shift are established to allow employees to drink one quart or more per hour. Frequent drinking of water shall be encouraged.

To ensure access to enough and to encourage frequent drinking of potable water, the following steps will be taken:

- All employees, whether working individually or in smaller crews, will have access to drinking water.
- Supervisors will provide repeated reminders to employees to drink frequently, and more water breaks will be provided.
- Where water fountains are not easily accessible, the County Office will provide water bottles, paper cones or bags of disposable cups and the necessary cup dispensers will be made available to employees and will be kept clean until used.
- As part of the Effective Replenishment Procedures, the water level of all containers will be checked periodically, supervisor/designated person will monitor water containers periodically, and employees are encouraged to report to supervisor/designated person low levels or dirty water.
- All water containers will be kept in a sanitary condition. 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.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

## Procedures for Access to Shade and Cool-Down Areas

Access to rest, shade, cool down areas or other cooling measures are important preventive steps to minimize the risk of heat related illnesses.

Shade shall be present when the outside temperature equals or exceeds 80 degrees Fahrenheit in the outdoor work area.

Indoor cool-down areas are to be always provided while employees are present. Temperature in the indoor cool-down area will be maintained at less than 82 degrees Fahrenheit.

Shade structures and cool-down areas will be located as close as practicable to areas where employees are working. Employees will be informed of the location of the shade and cool-down areas.

Shade structures and cool-down areas will be large enough to accommodate the number of employees on recovery or rest periods or meal periods, so that they can sit in a normal posture without having to be in physical contact with each other.

Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to shade or cool-down area that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade or cool-down area shall be always permitted.

An individual employee who takes a preventative cool-down rest shall be monitored and asked if he or she is experiencing symptoms of heat illness; shall be encouraged to remain in the shade/cool-down area; and shall not be ordered back to work until any signs or symptoms of heat illness have abated. If the employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest, the employer shall provide appropriate first aid or emergency response.

To always ensure access to shade and/or cool-down areas and a preventative recovery period at, the following steps will be taken:

- During days of anticipated heat, jobs requiring outside exposure will be conducted early in the day. When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Indoor jobs where air conditioning is available will be conducted in the late morning or afternoon when the temperatures are higher.
- Employees will be reminded regularly to take rest breaks in shaded and cool-down areas.
- Supervisors can provide umbrellas, canopies, or other portable devices for near the work activity if other shade and/or cool-down areas are not available upon request.
- Drinking water will be available in shaded areas.

Note: The interior of a vehicle may not be used to provide shade and/or cool-down areas unless the vehicle is air-conditioned, and the air conditioner is on.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

## Procedures for Monitoring the Weather for Outdoor Places of Employment

Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed and will be compared against the National Weather Service Heat Index to evaluate the risk level for heat illness. Determination will be made about whether employees will be exposed to a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses. It is important to note that the temperature at which these warnings occur must be lowered as much as 15 degrees if the employees are working in direct sunlight. Additional steps, such as those listed below, will be taken to address these hazards.

Prior to each workday, the supervisor will monitor the weather (using <http://www.nws.noaa.gov/> or a simple thermometer, available at most hardware stores) at the worksite for those days scheduled to be above the heat index..

A thermometer will be used at the job site to monitor for a sudden increase in temperature and to ensure that once the temperature exceeds 80 degrees Fahrenheit, shade structures will be opened and made available to the employees. In addition, when the temperature equals or exceeds 95 degrees Fahrenheit, additional preventive measures, such as high-heat procedures, will be implemented.

Stay alert to weather – make sure to monitor the weather and the specific locations where work activities are occurring. Continue to stay updated throughout the work shift on the changing air temperatures and other environmental factors. Use current weather information to make the appropriate adjustments in work activities throughout the workday.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

## Temperature Assessment and Control Measures for Indoor Places of Employment

*This section applies when one or more of the following indoor work area conditions exist:*

*Where the temperature or the heat index equals or exceeds 87 degrees Fahrenheit when employees are present; OR when employees wear clothing that restricts heat removal or employees work in a high radiant heat area and the temperature equals or exceeds 82 degrees Fahrenheit.*

The designated supervisor or method will measure the temperature and heat index and record whichever is greater. The supervisor will also identify and evaluate all other environmental risk factors for heat illness.

Accurate records of either the temperature or heat index measurements, whichever is greater will be established and maintained. Records shall include date, time and specific location of all measurements. Temperature and heat index measurements shall be taken as follows:

- Initial measurements shall be taken when it is reasonable to suspect that temperatures/heat index will exceed 82 degrees Fahrenheit where employees work and when during the work shift the exposures are expected to be the greatest;

- Measurements shall be taken again when they are reasonably expected to be 10 degrees 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.

Records shall be retained for 12 months or until the next measurements are taken, whichever is later. Records are available to employees, designated representatives, representatives of the Division and upon request.

Instruments used to measure the temperature or heat index shall be used and maintained according to the manufacturers' recommendations. Instruments used to measure the heat index shall utilize the National Weather Service (NWS) heat index equation or tables.

Staff are encouraged to notify their supervisor if the heat index rises to a level of caution at which point the supervisor will work with MOT and designated staff to correct the problem.

The County Office shall have effective procedures to obtain the active involvement of employees and their union representatives in determining the proper communication protocol to report any changes in temperature that would warrant immediate corrective action

The County Office shall use control measures to minimize the risk of heat illness. The selection of control measures shall be based on the environmental risk factors for heat illness present in the work area.

- Engineering controls are methods of control or a device that removes or reduces hazardous conditions or creates a barrier between the employee and the hazard. Engineering controls shall be used to reduce and maintain both the temperature and heat index as defined for application of this section, except to the extent that the County Office demonstrates such controls are infeasible.
  - Increase natural ventilation, such as open windows and doors when the outdoor temperature or heat index is lower than the indoor temperature and heat index.
  - Use of cooling fans or air conditioning
- Administrative controls are methods to limit exposure to a hazard by adjustment of work procedures, practices, or schedules. Where feasible engineering controls are not sufficient to reduce and maintain the temperature and heat index as defined for application of this section, administrative controls shall be used to minimize the risk of heat illness, except to the extent that the County Office demonstrates such controls are infeasible.
  - Modify work schedules & activities to times of the day when the temperature is cooler.
  - Rotate job functions among employees to help minimize exertion and heat exposure. If employees must be in proximity to heat sources, mark the area clearly, so they are aware of the hazards.
- Personal heat-protective equipment is equipment worn to protect the user against heat illness. Where feasible administrative controls are not sufficient to reduce and maintain the temperature and heat index as defined for application of this section, personal heat-protective equipment shall be used to minimize the risk of heat illness, except to the extent that the County Office demonstrates such controls are infeasible.
  - Water and/or air-cooled garments, cooling vests, jackets, and neck wraps. The cooling source can be reusable ice packs or cooled air connected to an external source.
  - Supplied air personal cooling systems and access to water

## Procedures for Handling a Heat Wave

For purposes of this section only, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.

- Pre-shift meetings will be conducted to review high-heat procedures. Topics may include staying hydrated, taking cool-down rests, identifying the employees who will call for emergency medical services when needed, and discussing how employees will be observed.
- Co-workers will use a “buddy system” (when available) to watch each other closely for discomfort or symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.
- Changing work assignments – supervisors may need to put into place one or more of the following additional measures:
  - Reduce the severity of work by scheduling slower paced less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

## High-Heat Procedures

High Heat Procedures are additional preventive measures that this County Office will use when the temperature equals or exceeds 95 degrees Fahrenheit.

- Frequent communication will be maintained with employees working by themselves or in smaller groups (via phone or two-way radio), to be on the lookout for possible symptoms of heat illness. The employee(s) and supervisor(s) will be in contact regularly and as frequently as possible throughout the day since an employee in distress may not be able to summon help on their own.
- Effective communication and direct observation for alertness and signs and symptoms of heat illness will be conducted frequently. When the supervisor is not available, a designated alternate responsible person must be assigned to look for signs and symptoms of heat illness. If a supervisor, designated observer, or any employee reports any signs or symptoms of heat illness in any employee, the supervisor or designated person will take immediate action commensurate with the severity of the illness (see Emergency Response Procedures).
- Extra vigilance – real time communication and the “buddy system” account for the whereabouts of employees at more frequent intervals throughout the work shift and at the end of the work shift.
- Employees are authorized to call for emergency services if needed.



- Employees will be reminded constantly throughout the work shift to drink plenty of water and take preventative cool-down rest breaks when needed.
- Additional water consumption – encourage employees to drink small quantities of water more frequently and have effective replenishment measures in place for the provision of extra drinking water to ensure that supplies are reliable.
- Additional cooling measures – employees may use alternative cooling measures in addition to shade (i.e. air-conditioned rooms, misters, spraying themselves with water)
- Additional and/or longer rest breaks – employees may be allowed to take more frequent and longer breaks.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

### Procedures for Acclimatization

Acclimatization is the temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave or heat spike strikes, or when starting a new job that exposes the employee to heat to which the employee's body hasn't yet adjusted.

Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress. Employers are responsible for the working conditions of their employees, and they must implement additional protective measures when conditions result in sudden exposure to heat their employees are not accustomed to.

This includes employees who have been newly assigned to any indoor areas where the temperature or the heat index equals or exceeds 87 degrees Fahrenheit when employees are present; OR when employees wear clothing that restricts heat removal, or employees work in a high radiant heat area and the temperature equals or exceeds 82 degrees Fahrenheit.

*To ensure that employees can acclimatize to the conditions, the following steps will be taken:*

Employees are encouraged to take it easy when a heat wave strikes or when starting a job that newly exposes them to heat.

- The supervisor or the designee will be extra vigilant with new employees and stay alert to the presence of heat-related symptoms.
- During a heat wave, all employees will be observed closely (or maintain frequent communication via phone or radio) for possible symptoms of heat illness.
- Employees and supervisors will be trained in the importance of acclimatization, how it is developed, and how the County Office procedures address it.
- Supervisors will strive to find alternative tasks that lessen the intensity of employee's work during the heat wave and during the 2-week break-in period of new employees.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

### Procedures for Emergency Response

Emergency medical services will be provided as quickly as possible if an employee suffers from heat illness.

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 with signs or symptoms of heat illness will not be left alone or sent home without being offered first aid or provided with medical services.

If employees cannot reach emergency medical services directly (i.e. cell phone coverage is inadequate), the employer shall designate a person who can immediately contact emergency services on behalf of the employees. Employees must be able to contact this person quickly (i.e. by radio) to request emergency services be summoned. If necessary, employee will be transported to a place where they can be reached by an emergency responder.

*To ensure that emergency medical services are provided without delay, the following steps will be taken:*

- Supervisors and co-workers are encouraged never to discount any signs or symptoms they are observing or experiencing and will immediately report them.
- Supervisors will carry cell phones, radios, or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- In the event of an emergency, supervisor or lead will call 911 and give clear and precise directions to the work site.
- Employees may contact emergency services directly and are not required to contact a supervisor first.
- When an employee shows symptom(s) of possible heat illness, emergency medical services will be called, and steps will immediately be taken to keep the stricken employee cool and comfortable to prevent the progression to more serious illness. Under no circumstances will the affected employee be left unattended.
- During a heat wave, heat spike, or hot temperatures, employees will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

### Procedures for Handling a Sick Employee

When an employee displays possible signs or symptoms of heat illness, a trained first aid employee or supervisor will evaluate the sick employee and determine whether resting in the shade and/or cool-down areas and drinking cool water will suffice or if emergency service providers will need to be called. A sick employee will not be left alone in the shade and/or cool-down areas as they could take a turn for the worse!

*To ensure that a sick employee is addressed without delay, the following steps will be taken:*

- When an employee displays possible signs or symptoms of heat illness and no trained first aid employee or supervisor is available at the site, emergency service providers will be called.
- Emergency service providers will be called immediately if an employee displays signs or symptoms of severe heat illness (e.g., decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, incoherent speech, convulsions, red and hot face), does not look okay, or does not get better after drinking cool water and resting in the shade and/or cool-down areas.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

### Procedures for Employee and Supervisor Training

To be effective, training must be understood by employees. Therefore, it must be given in a language and vocabulary the employees understand. Training records will be maintained and will include the date of the training, who performed the training, who attended the training, and the subject(s) covered.

The following topics shall be provided to each supervisory and non-supervisory employee before the employee begins 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. The employer's procedures for complying with the requirements of this standard including, but not limited to, the employer's responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights under this standard without retaliation.

- c. The importance of frequent consumption of small quantities of water when the work environment is hot, and employees are likely to be sweating more than usual in the performance of their duties.
- d. The concept, importance, and methods of acclimatization pursuant to the employer's procedures.
- e. The different types of heat illness, the common signs and symptoms of heat illness, and appropriate first aid and/or emergency responses to the different types of heat illness, and in addition that heat illness may progress quickly from mild symptoms and signs to serious and life-threatening illness.
- f. The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- g. The employer's procedures for responding to signs or symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- h. The employer's 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. The employer's procedures for ensuring that, in the event of emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders. These procedures shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate.

Supervisor training: Prior to supervising employees performing work that should reasonable 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. All topics listed for all staff above (A-I)
- b. County Office written procedures and the steps supervisors will follow when employees exhibit symptoms consistent with heat illness.
- c. Supervisors will be trained in appropriate first aid and/or emergency response to different types of heat illness and made aware that heat illness may progress quickly from mild signs and symptoms to a serious, life-threatening illness.
- d. Supervisors will be instructed on how weather information will be used to modify work schedules, increase the number of water and rest breaks, or cease work early if necessary.
- e. Supervisors will be instructed in the appropriate method for assessment and documentation of indoor heat temperatures and heat index.
- f. When the temperature is expected to exceed 80 degrees Fahrenheit, communication methods will be used to review the weather report, reinforce heat illness prevention with all employees, provide reminders to drink water frequently, inform them that shade will be available, and remind them to be on the lookout for signs and symptoms of heat illness.
- g. The procedures the supervisor is to follow to implement the applicable provisions in this section.

*To ensure appropriate training, the following steps will be taken:*

- a. All employees and supervisors will be trained prior to working outside and/or indoors. Training will include all aspects of implementing an effective Heat Illness Prevention Plan, including providing sufficient water, providing access to shade and/or cool-down areas, high-heat procedures, emergency response procedures, and acclimatization procedures contained in the

County Office written plan. Employees and supervisors will also be trained on the environmental and personal risk factors of heat illness and the importance of immediately reporting signs and symptoms of heat illness.

- b. In addition to initial training, employees will be retrained annually.
- c. New employees will be assigned a “buddy,” or experienced co-worker, to ensure that they understand the training and follow County Office procedures.
- d. Employee training will be conducted as the weather begins to warm and on a weekly/daily basis during the hottest days and heat waves.
- e. Records of the training will be kept with the Injury and Illness Prevention Program documentation.

The County Office will implement the following to ensure that this task is accomplished:

1.	Employees will be reminded of heat prevention strategies
2.	MOT Staff are trained in Heat Illness Prevention and Awareness on an annual basis

To report any concerns regarding our County Office heat illness plan contact Mark Williams, Director of Human Resources at [mwilliams@placercoe.org](mailto:mwilliams@placercoe.org) or at 530-889-5916

## Appendix

Definitions from Cal – OSHA standards

**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 to fourteen days of regular work for at least two hours per day in the heat.

**Administrative control** - a method to limit exposure to a hazard by adjustment of work procedures, practices, or schedules. Examples include, but are not limited to: acclimatizing employees, rotating employees, scheduling work earlier or later in the day, using work/rest schedules, reducing work intensity or speed, reducing work hours, changing required work clothing, and using relief workers.

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

- a. Waterproof; or
- b. Designed to protect the wearer from a chemical, biological, physical, radiological, or fire hazard; or
- c. Designed to protect the wearer or the work process from contamination.

EXCEPTION to subsection (b)(3): “Clothing that restricts heat removal” 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 STANDARDS PRESENTATION
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 heat sources to the extent feasible and is either open to the air or provided with ventilation or cooling. A cool-down area does not include a location where:

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

**Engineering control** - a method of control or a device that removes or reduces hazardous conditions or creates a barrier between the employee and the hazard. Examples include, but are not limited to: isolation of hot processes, isolation of employees from sources of heat, air conditioning, cooling fans, cooling mist fans, evaporative coolers (also called swamp coolers), natural ventilation where the outdoor temperature or heat index is lower than the indoor temperature or heat index, local exhaust ventilation, shielding from a radiant heat source, and insulation of hot surfaces.

**Environmental risk factors for heat illness** - working conditions that create the possibility that heat illness could occur, including air temperature, air movement, relative humidity, radiant heat from the sun and other sources; conductive heat sources such as the ground, workload severity and duration, protective clothing, and personal protective equipment worn by employees.

**Globe Temperature** - 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 considers the dry bulb temperature and relative humidity. For the purposes of this section, heat index refers to conditions in indoor work areas. Radiant heat is not included in the heat index. The required NWS heat index chart (2019) is in Appendix A of section 3396.

**Heat wave** - any day in which the predicted high outdoor temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit greater than the average high daily outdoor temperature for the preceding five days, for the purpose of this section only.

**High radiant heat area** - a work area where the globe temperature is at least five degrees Fahrenheit greater than the temperature, as defined in subsection (b)(20).

**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 degrees Fahrenheit or greater than the dry bulb temperature of the cool-down area.

**Indoor** - all space between a floor and a ceiling that is bounded by walls, 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 covered by section 3395.

EXCEPTION: Indoor does not refer to a shaded area that meets the requirements of subsection 3395(d) and is used exclusively as a source of shade for employees covered by section 3395.

**Personal heat-protective equipment** - equipment worn to protect the user against heat illness. Some examples are: water-cooled garments, air-cooled garments, cooling vests, wetted over-garments, heat-reflective clothing, and supplied-air personal cooling systems.

**Personal risk factors for heat illness** - individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of medications that affect the body's water retention or other physiological responses to heat.

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

**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** - comparative darkness and coolness caused by shelter from direct sunlight. Shade is not adequate when excess heat is still present. A car sitting in the sun does not provide acceptable shade to a person inside, unless the car is running with air conditioning allowing the body to cool. 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** - 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.

**Union representative** - a recognized or certified collective bargaining agent representing the employees.