

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

2520 Venture Oaks, Suite 350
Sacramento, CA 95833
(916) 274-5721
FAX (916) 274-5743
www.dir.ca.gov/oshsb

**NOTICE OF FURTHER MODIFICATIONS TO PROPOSED AMENDMENTS TO****TITLE 8, California Code of Regulations, Section 3395
Of the General Industry Safety Orders****Heat Illness Prevention**

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named standard in which further modifications are being considered as a result of public comments and/or Board staff consideration.

On September 25, 2014, the Standards Board held a Public Hearing to consider revisions of Title 8, Section 3395. The Standards Board received written and oral comments on the proposed revisions. As a result of these comments and Board consideration, the proposal was modified, and comments on the modifications were solicited during a public comment period that commenced on November 19, 2014, and concluded on December 8, 2014. As a result of those comments and Board consideration, the proposal is being further modified as follows.

Subsection (d). Access to Shade

In the first line of paragraphs (1) and (2), the words "required to" are being changed to "shall". This is a grammatical change only with no intended change in meaning.

Also in paragraph (1), the shade requirement for meal periods is being modified so that it will apply only to the number of employees on a meal break who remain onsite.

Subsection (e). High Heat Procedures

In paragraph (6), language has been added to clarify the timing considerations for required preventative cool down rest periods.

Subsection (f). Emergency Response Procedures

Paragraph (2)(c) has been modified to specify that 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.

Subsection (h). Training

A clarifying non-substantive change has been made to the wording of paragraph (1)(D) concerning training on acclimatization.

Subsection (i). Heat Illness Prevention Plan

The wording of paragraph (4) had been revised so that it refers to acclimatization "methods and procedures".

A copy of the full text of the standard, with these further modifications clearly indicated, is attached for your information.

Any written comments on these modifications must be received by 5:00 p.m. on January 5, 2015, at the Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833 or submitted by fax to (916) 274-5743 or e-mailed to oshsb@dir.ca.gov. This proposal will be scheduled for adoption at a future business meeting of the Standards Board.

The Standards Board's rulemaking files on the proposed action are open to public inspection Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board's office.

The Standards Board will have rulemaking documents available for inspection throughout the rulemaking process on its web site. Copies of the text of the regulations in an underline/strikeout format and the Notice of Proposed Modifications can be accessed through the Standards Board's website at <http://www.dir.ca.gov/oshsb>.

Inquiries concerning the proposed changes may be directed to the Executive Officer, Marley Hart, at (916) 274-5721.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date: December 19, 2014

Marley Hart, Executive Officer

ATTACHMENT 1

PROPOSED FURTHER MODIFICATIONS TO REGULATORY TEXT

Modifications are reflected as follows:

- Original proposal: Proposed new language being added to existing regulation is underlined. Language to be deleted is ~~lined out~~.
- First 15-day notice: Additions to original proposal are double-underlined, and deletions from that proposal are ~~double-lined out~~.
- Second 15-day notice: Revisions are to subsections (d)(1) and (2), (e)(6), (f)(2)(c), (h)(1)(D), and (i)(4). All language being added or deleted is in ***bold italics***, with text being added **underlined** and text being deleted **~~double-lined out~~**.

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Subchapter 7. General Industry Safety Orders
Article 10. Personal Safety Devices and Safeguards

Amend Section 3395 to read:

Section 3395. Heat Illness Prevention in Outdoor Places of Employment.

(a) Scope and Application.

(1) This standard applies to all outdoor places of employment.

EXCEPTION: If an industry is not listed in subsection (a)(2), employers in that industry are not required to comply with subsection (e), High-heat procedures.

(2) List of industries subject to all provisions of this standard, including subsection (e):

(A) Agriculture

(B) Construction

(C) Landscaping

(D) Oil and gas extraction

(E) Transportation or delivery of agricultural products, construction materials or other heavy materials (e.g. furniture, lumber, freight, cargo, cabinets, industrial or commercial materials), except for employment that consists of operating an air-conditioned vehicle and does not include loading or unloading.

(3) This section applies to the control of risk of occurrence of heat illness. This is not intended to exclude the application of other sections of Title 8, including, but not necessarily limited to, sections 1512, 1524, 3203, 3363, 3400, 3439, 3457, 6251, 6512, 6969, 6975, 8420 and 8602(e).

NOTE No. 1: The measures required here may be integrated into the employer's written Injury and Illness Program required by section 3203, or maintained in a separate document.

NOTE No. 2: This standard is enforceable by the Division of Occupational Safety

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and Health pursuant to Labor Code sections 6308 and 6317 and any other statutes conferring enforcement powers upon the Division. It is a violation of Labor Code sections 6310, 6311, and 6312 to discharge or discriminate in any other manner against employees for exercising their rights under this or any other provision offering occupational safety and health protection to employees.

(b) Definitions.

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

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

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

“Landscaping” means providing landscape care and maintenance services and/or installing trees, shrubs, plants, lawns, or gardens, or providing these services in conjunction with the design of landscape plans and/or the construction (i.e., installation) of walkways, retaining walls, decks, fences, ponds, and similar structures, except for employment by an employer who operates a fixed establishment where the work is to be performed and where drinking water is plumbed.

“Oil and gas extraction” means operating and/or developing oil and gas field properties, exploring for crude petroleum or natural gas, mining or extracting of oil or gas or recovering liquid hydrocarbons from oil or gas field gases.

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

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

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

- (c) Provision of water. Employees shall have access to potable drinking water meeting the requirements of Sections 1524, 3363, and 3457, as applicable, including but not limited to the requirements that it be fresh, pure, suitably cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working. Where drinking water is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Employers may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. ~~The water provided shall be fresh, pure and suitably cool, and shall be provided to employees free of charge.~~ The frequent drinking of water, as described in subsection ~~(f)~~(h)(1)(C), shall be encouraged.

~~The water shall be located as close as practicable to the areas where employees are working and shall not in any event be farther than 400 foot walking distance from any employee at any time other than when the employee is using a restroom or travelling between the restroom and an area where employees are working unless the employer can demonstrate that conditions prohibit locating the drinking water within the proscribed distance.~~

- (d) Access to shade.

(1) Shade ~~required to~~ shall be present when the temperature exceeds 8580

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degrees Fahrenheit. When the outdoor temperature in the work area exceeds 8580 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. The amount of shade present shall be at least enough to accommodate 25% of the number of employees on the shift at any time ~~meal, recovery or rest periods~~, so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The ~~shaded area~~ shade shall be located as close as practicable to the areas where employees are working ~~but no farther than 700 foot walking distance from the area where any employee is working unless the employer can demonstrate that terrain or other conditions prohibit locating the shaded area within the prescribed distance.~~ **Subject to the same specifications, the amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain onsite.**

- (2) Shade ~~required to~~ **shall** be available when the temperature does not exceed 8580 degrees Fahrenheit. When the outdoor temperature in the work area does not exceed 8580 degrees Fahrenheit employers shall either provide shade as per subsection (d)(1) or provide timely access to shade upon an employee's request.
- (3) Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade ~~for a period of no less than five minutes at a time when they feel the need to do so to protect themselves from overheating.~~ 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 asked if he or she is experiencing symptoms of heat illness; (B) shall be encouraged to remain in the shade; and (C) shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.
- (4) If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the employer shall monitor the employee during the cool down rest or recovery period to determine if signs or symptoms are abating or worsening. If signs or symptoms worsen or do not resolve, the employer shall provide appropriate first aid and/or emergency medical services response according to subsection (f) of this section.

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Exceptions to subsections (d)(1) and (d)(2):

- (1) Where the employer can demonstrate that it is infeasible or unsafe to have a shade structure, or otherwise to have shade present on a continuous basis, the employer may utilize alternative procedures for providing access to shade if the alternative procedures provide equivalent protection.
 - (2) Except for employers in the agricultural industry, cooling measures other than shade (e.g., use of misting machines) may be provided in lieu of shade if the employer can demonstrate that these measures are at least as effective as shade in allowing employees to cool.
- (e) High-heat procedures. The employer shall implement high-heat procedures when the temperature equals or exceeds ~~95~~85-95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:
- (1) Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor 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.
 - (2) Observing employees for alertness and signs or symptoms of heat illness. The employer shall ensure effective employee observation/monitoring by implementing one or more of the following:
 - (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.
 - (3) Designating ~~an~~ 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.
 - (4) Reminding employees throughout the work shift to drink plenty of water.

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~~(4) Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for 4 or more hours per day.~~

(5) Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

(6) For employees employed in agriculture, the following shall also apply:

~~For every two hours an employee works continuously outdoors during~~ When temperatures reach 95 degrees or above, the employer shall ensure that the employee takes a minimum ten minute net recovery preventative cool down rest period every two hours. The recovery preventative cool down rest-period required by this paragraph shall be taken, insofar as practicable, near the end of each second hour of work in which temperatures are 95 degrees or greater. This recovery period may be provided concurrently with any other meal or rest period required by Industrial Welfare Commission Order No. 14 if the timing of the recovery preventative cool down rest period coincides with a required meal or rest period **thus resulting in no additional preventative cool down-rest period required in an eight hour work day. If the workday will extend beyond eight hours, then an additional preventative cool down-rest period will be required at the conclusion of the eighth hour of work; and if the work day extends beyond ten hours, then another preventative cool down-rest period will be required at the conclusion of the tenth hour and so on.** For purposes of this section, preventative cool down rest period has the same meaning as "recovery period" is defined in Labor Code Section 226.7(a).

(f) Emergency Response Procedures. The Employer shall implement effective emergency response procedures including:

(1) Ensuring 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, the employer will ensure a

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- means of summoning emergency medical services.
- (2) 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.
- (A) 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.
- (B) 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.
- (C) 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.
- (3) Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider.
- (4) Ensuring 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.
- (g) Acclimatization.
- (1) All employees shall be closely observed by a supervisor or designee during 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.
- (2) An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.
- ~~(f)~~ (h) Training.

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- (1) Employee training. Effective training in 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, up to 4 cups per hour, 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, ~~and the~~ pursuant to the employer's procedures under subsection ~~(e)(3)(i)(4)~~.
 - (E) The different types of heat illness, ~~and~~ 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.

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- (l) The employer's procedures for ensuring 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. These procedures shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate.
- (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 information required to be provided by section ~~(f)~~(h)(1) above.
- (B) The procedures the supervisor is to follow to implement the applicable provisions in this section.
- (C) The procedures the supervisor is to follow when an employee exhibits signs or reports symptoms consistent with possible heat illness, including emergency response procedures.
- (D) How to monitor weather reports and how to respond to hot weather advisories.
- ~~(g)~~(i)(3) Written procedures Heat Illness Prevention Plan. The employer's shall establish, implement, and maintain, an effective procedures for complying with each requirement of this standard required by subsections (f)(1)(B), (G), (H), and ~~(I)~~ heat illness prevention plan. The plan shall be in writing in both English and the language understood by the majority of the employees and shall be made available at the worksite to employees and to representatives of the Division upon request. The ~~h~~Heat ~~i~~llness ~~p~~revention ~~p~~lan may be included as part of the employer's Illness and Injury Prevention Program required by section 3203, and shall, at a minimum, contain:
- (1) Procedures for the provision of water and access to shade.
- (2) The high heat procedures referred to in subsection (e).
- ~~(3) Procedures for the close supervision of all employees during periods when it is predicted that the high temperature for the day will be 80 degrees Fahrenheit or more and ten degrees Fahrenheit or more above the average~~

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~~high daily temperature in the preceding five days, and for an employee newly assigned to high heat areas by a supervisor or designee, for the first 14 days of the employee's employment by the employer.~~

~~(4)(3) Emergency Response Procedures: in accordance with subsection (f).~~

~~(A) Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor 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.~~

~~(B) 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.~~

~~(C) Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider.~~

~~(D) Ensuring 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. These procedures shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate.~~

~~(4) Acclimatization **methods and** procedures in accordance with subsection (g).~~

~~(h) 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 not be sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the employer's procedures.~~

