

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Attachment No. 2

INITIAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: Chapter 4, Subchapter 7, Group 2, Article 10, New Section 3395
of the General Industry Safety Orders

Heat Illness Prevention**SUMMARY**

This rulemaking action was initiated at the request of the Division of Occupational Safety and Health (Division). The request proposes a permanent Title 8 Section 3395 substantially similar to the emergency standard it is to supersede, which took effect August 22, 2005. Adoption of the emergency standard was prompted by a significant increase in the number of possible heat-related incidents reported to the Division starting approximately July 12, 2005. The majority of these incidents were subsequently found by Division investigations to be substantially heat-related according to medical opinion.

Currently, a number of existing Title 8 standards address related requirements with respect to key factors in control of heat-related illness, including the development of an injury and illness prevention program, provision of drinking water, and emergency first aid and medical response preparedness. These standards, which apply to various industry sectors, include sections 1230, 1512, 1524, 3203, 3363, 3400, 3439, 3457, 6251, 6512, 6969, 6975, 8420 and 8602. The proposed standard includes a reference to the existing requirements of these standards along with specific control and training measures to reduce the risk of heat-related illness.

There is no existing federal OSHA standard that specifically and comprehensively addresses prevention of heat illness. However, Federal OSHA does have requirements similar to those in the Title 8 standards identified above addressing drinking water, first aid, and other workplace factors that have applicability to prevention of heat illness.

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

The purpose and factual basis of the standard proposed to be adopted as a permanent rule are outlined below:

New Section 3395. Heat Illness Prevention

The section proposed to be adopted as a permanent rule is to be placed in Article 10, Personal Safety Devices and Safeguards, immediately preceding the related Section 3400, Medical Services and First Aid.

New Section 3395(a). Scope and Application

This proposed subsection would provide that the requirements of the standard apply to all outdoor places of employment. The proposed subsection is necessary to delineate the circumstances under which employers must take the specific steps detailed in the standard to prevent heat illness, as well as provide notice to employers of other specific Title 8 standards relevant to prevention of heat illness with which they need to comply as applicable. The specific purpose of the proposed subsection is to limit the requirements of the proposed standard to employers with employees having significant exposure to outdoor work, with the intended effect of protecting employees performing such work from the increased risk of heat illness that can result from working without the environmental protections indoor working environments can provide.

The proposed language includes a clarifying note that is without direct regulatory effect and does not add any additional regulatory requirements. The note states that employers may, if they choose, integrate the requirements of the proposed standard into their Injury and Illness Prevention Program that is required by Section 3203. A second clarifying note, also not adding requirements, reiterates the Division's authority to enforce the proposed standard and references sections of the Labor Code that prohibit discriminating against employees for exercising their rights provided by this and other occupational safety and health standards.

The proposed subsection provides a list of other sections of Title 8, some of which are industry-specific and all of which may have application to the prevention of heat illness under certain circumstances, to make it clear to the regulated public that employers must continue to comply with these standards to the extent they apply after this proposed standard takes effect.

The scope of the emergency standard further limited application of its provisions to "those times when the environmental risk factors for heat illness as defined in (b), are present." This limitation is not included in the proposed permanent rule because of the variability of environmental risk factors and the resulting difficulty of predicting with confidence when environmental risk factors for heat illness may be present.

New Section 3395(b). Definitions

The proposed language includes definitions for six terms used in the standard. The proposed definitions are necessary to clarify for employers what is meant when the defined terms are used in the standard.

(1) A definition is proposed for the term "acclimatization". The proposed definition will clarify the topic to be addressed in the employee training requirement of proposed subsection (e).

(2) A definition is proposed for the term “heat illness.” The definition gives examples of some of the forms of heat illness that are intended to be prevented by the proposed standard. The list is not all-inclusive and there are other conditions that can result from excessive exposure to work in heat. The definition indicates the types of illnesses intended to be prevented by the proposed standard.

(3) A definition is proposed for “environmental risk factors for heat illness.” The definition describes major environmental and working conditions that need to be addressed in order to reduce the risk of occurrence of heat illness. The list is comprehensive but not all-inclusive, and there are other factors of an environmental nature that can affect the risk of occurrence of heat illness. The definition identifies an important set of issues in the prevention of heat illness that employees and supervisors must be aware of through training required by subsection (e).

(4) A definition is proposed for “personal risk factors for heat illness.” The definition describes major health-related factors that vary from individual to individual and have a significant impact on an employee’s risk of developing heat illness. The list is comprehensive but not all-inclusive, and there are other factors related to an individual employee’s habits or physical condition that can affect the risk of occurrence of heat illness. The definition identifies an important set of issues in the prevention of heat illness that employees and supervisors must be aware of through training required by subsection (e).

(5) A definition is proposed for “preventative recovery period.” The definition describes the reason for providing access to shade in subsection (d) in order to effectively reduce the risk of occurrence of heat illness. The definition helps to clarify the intent behind the requirement to provide access to shade at outdoor places of employment.

(6) A definition is proposed for “shade.” It is proposed to define shade as blockage of direct sunlight. The definition is written to allow employers to choose any effective method available to comply, including the use of canopies, umbrellas, and other temporary structures or devices. The proposed definition further provides one example of how the adequacy of sunlight blockage can be determined, i.e., by determining whether objects cast a shadow in the area of blocked sunlight. While this is not the only acceptable method, and the adequacy of shade will depend to an extent on what is reasonable under the circumstances, it is still a simple, useful, and certain method employers can use to evaluate compliance. Finally, the definition makes it clear that the means for providing shade must be consistent with the purpose of shade, which is to provide cooling. The example of a car sitting in the sun without air conditioning is given as a non-compliant source of shade.

New Section 3395(c). Provision of Water

Proposed subsection (c) details requirements for the provision of drinking water as a means of controlling the risk of heat illness. The purpose of this proposed subsection is to reference existing drinking water requirements and to ensure that employees are provided with water quantities sufficient to maximize the effectiveness of drinking water as a measure to prevent heat illness. The proposed language requires a sufficient quantity for a full shift to be provided at the beginning of the shift, or periodically throughout the day in conjunction with effective procedures for replenishment. This subsection is necessary to give employers who provide water

to their employees by means of portable containers appropriate notice of the specific minimum quantity of water they are required to provide.

New Section 3395(d). Access to Shade

Proposed subsection (d) details a requirement for employees performing outdoor work to have access to a shaded area for a period of no less than five minutes when a preventative recovery period is needed from the heat. The purpose of the proposed requirement is to ensure that employees needing a preventative recovery period have a suitable place to cool down.

This subsection is necessary to reduce the risk of heat illness arising from overexposure to heat.

New Section 3395(e). Training

Proposed subsection (e) details the topics which employees and supervisors are to be trained on with respect to prevention of, and response to, heat illness, its early signs and symptoms, and risk factors for its occurrence. The purpose of this proposed subsection is to clarify and make specific the training required to be provided to employees and supervisors with respect to prevention of, and response to, heat illness.

One change has been made to the language of the emergency standard, which is to require employers to train employees on the employer's procedures for complying with this standard instead of training employees on the employer's procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness.

This subsection is necessary to ensure that employees are informed of various aspects of prevention and recognition of, and response to, heat illness, its early signs and symptoms, and risk factors for its occurrence. It is also necessary to ensure that employers have considered and developed procedures for complying with the requirements of the standard generally and specifically with respect to responding to the occurrence of symptoms of heat illness.

DOCUMENTS RELIED UPON

1. OSHA Fact Sheet on Working Outdoors (2003) US Department of Labor Occupational Safety and Health Administration.
2. OSHA Heat Stress Card, Publication 3154 (2002) US Department of Labor Occupational Safety and Health Administration.
3. EPA Guide to Heat Stress in Agriculture, EPA publication 750 (1993) US Environmental Protection Agency.
4. NIOSH Criteria for a recommended standard: Occupational exposure to hot environments. NIOSH Pub 86-113 (1986) US Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, Part VI. Control of Heat Stress.
5. ACGIH Criteria document for a heat stress and strain threshold limit value. (2001) American Conference of Governmental Industrial Hygienists.
6. California Division of Workers Compensation Table of heat related illness claims from 2000 to 2004.

7. Special Order for the California Department of Forestry and Fire Protection #00-2803 as amended by the Division of Occupational Safety and Health on August 8, 2001.
8. Memorandum dated February 17, 2006, to Len Welsh from Janice Proudhomme, DO, MPH, and Amalia Neidhart, MPH, CIH.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESS

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

COST ESTIMATES OF PROPOSED ACTION

Costs or Savings to State Agencies

The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting state agencies. The cost associated with providing suitable protection from heat illness, as required by the proposal, is expected to be offset by improved productivity, improvement of employee health, and saving lives.

There is no additional cost of providing water since water is already required by existing Title 8 standards. Specifying a requirement to provide at least one quart per hour is consistent with national consensus recommendations and industry practice and is not anticipated to be an additional cost.

The cost of providing shade is considered insignificant. Existing standards require personal protection when necessary to protect employees from harmful exposures. The additional cost of providing shade is estimated to be minimal for those few outdoor places of employment that do not already have shade where employees could potentially need a recovery period. Typical state agencies with a significant number of employees working outdoors include: Department of Forestry and Fire Protection (CDF), Department of Transportation, California Highway Patrol, Department of Corrections and Rehabilitation, Environmental Protection Agency, and Resources Agency. Employees of the other state agencies who work outdoors typically have access to shade. So very few, if any, would need to purchase canopies or other forms of additional shade. Temporary shade structures can be purchased for approximately \$100, and can be erected in minutes. However, for those few locations that need additional shade, this additional cost would be more than offset by the increased productivity, improvement of employee health and saving

lives associated with the benefits of shade and other cooling measures. Therefore, any additional cost associated with providing shade to employees, as required by the proposal, is estimated to be insignificant to none.

The proposed employee training requirements are performance based and do not mandate a specific amount of training time. Training is already required by Section 3203, Injury and Illness Prevention Program, and therefore should not be considered an added cost of this proposed standard.

Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

Impact on Businesses

The Board has made a determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. See the discussion of cost or savings to state agencies above.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under "Determination of Mandate."

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies. See the discussion of cost or savings to state agencies above.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed standard does not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed standard will not require local agencies or school districts to incur additional costs in

complying with the proposal. Furthermore, this standard does not constitute a “new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.”

The California Supreme Court has established that a “program” within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

This proposed standard does not require local agencies to carry out the governmental function of providing services to the public. Rather, the standard requires local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, this proposed standard does not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

This proposed standard does not impose unique requirements on local governments. All state, local and private employers who perform agricultural operations will be required to comply with the prescribed standard.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed standard may affect small businesses. However, no economic impact is anticipated.

ASSESSMENT

The adoption of the proposed standard will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.