

**OCCUPATIONAL SAFETY
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**INITIAL STATEMENT OF REASONS**

PROPOSED AMENDMENTS TO
Title 8, California Code of Regulations, Section 3395
of the General Industry Safety Orders

Heat Illness Prevention

SUMMARY

The Occupational Safety and Health Standards Board (Board) proposes to adopt amendments to Title 8, California Code of Regulations, Section 3395 of the General Industry Safety Orders. These proposed amendments are authorized by Labor Code Section 142.3.

The proposed amendments are needed to clarify, make more specific, and strengthen the requirements of Section 3395 in order to prevent heat illness and to ensure that emergency medical services are provided without delay.

Currently, Section 3395 requires that drinking water and access to shade be provided to employees. Section 3395 specifies that shade be erected at temperatures above 85 degrees Fahrenheit ($^{\circ}$ F); that it accommodate 25% of the employees; and that employees be allowed and encouraged to take a cool-down rest in the shade for at least five minutes. Section 3395 also requires additional precautionary measures when the outdoor temperature is at or above 95 $^{\circ}$ F and that employees be observed for alertness and signs or symptoms of heat illness. In addition, Section 3395 requires that employers have emergency procedures for responding to symptoms of possible heat illness and that employees and supervisors be trained regarding those procedures.

The proposed amendments would revise the requirements of Section 3395 by: (1) specifying that drinking water must be provided at no cost and be fresh, pure, suitably cool and located within 400 feet unless prohibited by site conditions; (2) requiring that shade be present when the temperature exceeds 80 $^{\circ}$ F, be sufficient to accommodate all employees on break, and be located within 700 feet of employees unless that is not feasible; (3) requiring that an employee taking a cool-down rest be encouraged to remain in the shade until symptoms have abated and be monitored by the employer during this recovery period; (4) lowering the threshold temperature for initiating high heat procedures from 95 $^{\circ}$ F to 85 $^{\circ}$ F; (5) specifying that high heat procedures include the means for observing employees for signs and symptoms of heat illness, designation of an employee at the worksite who is authorized to call for emergency medical services, and a pre-shift meeting to cover high heat precautions; (6) requiring a net ten minute recovery period (which may be concurrent with other required breaks) for every two hours that an employee in agriculture works continuously in temperatures equal to or exceeding 95 $^{\circ}$ F; (7) specifying that workers receive additional training on the right to exercise their rights under the heat illness standard without fear of retaliation,

procedures for acclimatization, and appropriate first aid and emergency response to heat illness; (8) adding new elements to the required written heat illness prevention procedures, which would now be called a heat illness prevention plan; and (9) requiring that supervisors take immediate action if an employee exhibits symptoms of heat illness, and prohibiting an employer from sending home an employee who was exhibiting signs or symptoms of heat illness without first offering onsite first aid or providing emergency medical services.

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

The overall intent of the proposed amendments is to improve worker safety in all outdoor places of employment and reduce the incidence of heat illness. The Division of Occupational Safety and Health (Division)'s enforcement experience and review of heat illnesses and fatalities has demonstrated that in many cases serious injury might have been avoided if employees were better hydrated, had a better opportunity to break the heat illness cycle through cool-down breaks, had been acclimatized, or had received more timely emergency aid.

The proposed amendments and this rulemaking:

- Are based on the following authority and reference: Labor Code Section 142.3, which requires California to adopt occupational safety and health regulations that are equivalent to or more protective of worker health and safety than federal occupational safety and health regulations, and designates the Board as “the only agency in the state authorized to adopt occupational safety and health standards.” (Labor Code Section 142.3(a)(1).)
- Differ from existing federal regulations in that the federal Occupational Safety and Health laws and regulations do not include a specific and comprehensive standard to address the prevention of heat illness.
- Are not inconsistent or incompatible with existing state regulations. After conducting an evaluation for any regulations related to heat illness prevention in the work place, the Board has determined that these are the only regulations concerning this topic, and therefore, the proposed regulations are not inconsistent or incompatible with existing state regulations.
- Will enhance employee safety by clarifying and making more specific the current requirements for providing water and shade to workers, minimizing disincentives for drinking water and taking rest periods, requiring additional observation and training during high heat periods, and improving procedures for accessing first aid and emergency medical services.

The specific necessity and purpose of the proposed amendments are outlined below:

Section 3395 Heat Illness Prevention in Outdoor Places of Employment.

Subsection 3395(b) Definitions.

Existing subsection 3395(b) includes a definition of the term “Shade” that provides clarification and guidance on what is adequate or unacceptable. These proposals would add to this definition a specification that shade be provided in a way “that does not discourage access.” This amendment is needed to clarify and strengthen existing requirements so that employers will not, either inadvertently or intentionally, provide shade in a location that discourages use, such as adjacent to portable toilets or across a highway from the work area.

Subsection 3395(c) Provision of water.

Section 3395(c) details requirements for providing drinking water to employees exposed to heat while working outdoors. These proposals would add language requiring that the water be fresh, pure, suitably cool, and provided at no cost to the employee. This added language incorporates the general mandate of Labor Code Section 2441 (requiring the employer to provide fresh and pure drinking water, without charge to employees) into the specific heat illness prevention requirements, together with Title 8, California Code of Regulations, section 3457(c)(1)(B)’s mandate (applicable to agricultural employers) that the water be “suitably cool.” It is necessary to include these specifications as a means to encourage employees to drink water frequently, which is one of the most effective measures for reducing heat illness. This also will collect disparate drinking water requirements in one place and clarify for employers that they apply specifically to water provided for heat illness prevention and are not standards that can be met separately simply by having some suitable water available somewhere.

These proposals would add a further specification to section 3395(c) that the water be as close as practicable to where work is being performed and, with limited exceptions, not greater than 400 feet from any employee. This distance is based on balancing of the need to place water as close as possible to workers to enable frequent drinking throughout the day without unduly disrupting the flow of work, and the feasibility of requiring multiple or even individual repositories of water that must be carried and replenished during the day. For a quarter mile long row of crops, placing the water in the middle and at either end would meet this need for any employee working on that row. In the few circumstances in which this limit is impracticable, other measures for access may be provided. Based on experience acquired through trainings, inspections, and consultations with individual employers, the Division believes that it is both necessary and appropriate to set forth more specific requirements that will apply in general to all employers, and that 400 feet is an appropriate outside limit.

Section 3395(d) Access to shade.

Section 3395(d) sets forth requirements for providing shade, including the amount of shade that must be available and the outdoor temperature at which it must be provided. These proposals would make several modifications to clarify and strengthen these requirements. Subsections (d)(1) and (2) would be modified to require that shade be available at all temperatures and erected at 80° F or higher (lowered from the current trigger temperature of 85° F). In subsection (d)(1) these proposals would also change the requirement for the amount of shade required from an amount sufficient to accommodate 25% of the total number of employees to an amount sufficient to accommodate all employees on break for a meal, rest, or recovery period. In addition, they would specify that the shade must be no more than 700 feet walking distance from any employee unless site conditions prohibit.

These proposed amendments do not change existing requirements in terms of the general requirement to have shade available, but for employers who erect portable structures or use other mechanical means to provide shade, this change may increase the number of occasions on which those measures must be deployed; and the distance limit could increase the number of portable structures required for a highly dispersed workforce. The change in the amount of shade required could require more or fewer structures depending on whether all employees take breaks at the same time or breaks are staggered. The lower temperature threshold is based on heat illness studies and the Division's experience in individual cases showing that heat illness risks increase appreciably in temperatures above 80°. The necessity and purpose of the other modifications is to clarify what constitutes adequate shade so that actions taken to comply with the regulatory standard will meet the underlying purpose of providing shade that is actually and readily available. The 700 foot maximum is based on the average length of rows of crops found on large commercial farms, allowing shade to be placed and accessed at either end, as well as the size and configurations of other places of employment such as multiple story construction sites. The distance limitation avoids the disincentives in terms of effort and lost productivity and the increased health risks that come into play when it takes longer to access shade. Based on experience acquired through trainings, inspections, and consultations with individual employers, the Division believes that it is both necessary and appropriate to set forth these more specific requirements and limitations that will apply in general to all employers, and that 700 feet is an appropriate outside limit for shade accessibility.

These proposals would also amend subsection 3395(d)(3) to specify that employers should encourage employees taking a cool-down rest to remain in the shade at least five minutes and not be ordered back to work until signs or symptoms of heat illness have abated. This amendment rephrases and makes more specific the existing requirement in order to clarify the employer's responsibility to have the employee rest for at least five minutes, exclusive of the time needed to access the shade, and for as long as needed to prevent the onset of heat illness or for signs or symptoms of mild heat illness to abate. The purpose and need for this amendment is to add clarity and specificity to the existing requirements, so that the effectiveness of a recovery break as a preventive or ameliorative measure will not be defeated by ordering or encouraging an employee to return to work prematurely.

In addition, these proposals would add a new paragraph (4) to subsection 3395(d), to require active monitoring of an employee who exhibits signs or symptoms of heat illness, and for appropriate first aid or emergency medical services to be provided if the signs or symptoms do not abate. The purpose and necessity for this addition is to set clear requirements for employers so that employees are monitored for the presence of symptoms of heat illness rather than left unattended (as has occurred in past incidents, including fatalities, investigated by the Division), and that if symptoms are exhibited, emergency services will be provided without delay.

A clarifying amendment is also being added to the exceptions to subsection (d), specifying that these exceptions only apply to subsections (d)(1) and (2) (setting forth the specific requirements for providing shade) and not to the recovery, monitoring and response requirements in (d)(3) and (d)(4), which are intended to apply in all circumstances.

Section 3395(e) High-heat procedures.

These proposals would amend subsection 3395(e) to lower the trigger temperature for taking additional high heat precautions to reduce the risk of heat illness from 95° F to 85° F. The lower temperature is based on heat illness studies and the Division's experience in individual cases showing that heat illness becomes a significant risk and the need for precautionary measures becomes more critical when temperatures reach 85°, especially when there is an upward spike in temperatures (10° or more) for the first time in the spring or summer season or after an extended period of lower temperatures.

These proposals would expand upon subsection (e)(2)'s existing requirement to observe employees for alertness and signs or symptoms of heat illness by specifying four alternative means for ensuring effective employee observation and monitoring. The purpose and necessity for this amendment is to explain and clarify what kind of observation is required so that an employer will be able to recognize and respond quickly to heat-related illness signs and symptoms.

These proposals also add a new subsection (e)(3) (with existing subsection (e)(3) renumbered (e)(4)) to require employers to designate an employee at each worksite who is authorized to call for emergency medical services. The purpose and necessity for this amendment are to establish a clear requirement that someone will be responsible to obtain emergency services when needed and without delay in order to secure the best outcome for the employee.

These proposals would delete existing subsection (e)(4) and incorporate its requirements instead within the provisions governing the employer's written procedures or "heat illness prevention plan" in subsection (g), discussed below.

These proposals would also add two additional paragraphs (5) and (6) to the high heat procedures in subsection 3395(e). Subsection (e)(5) would require a pre-shift meeting to review high heat procedures, encourage employees to drink plenty of water and remind them of their right to take a cool-down rest when necessary. The purpose of these meetings is not to provide the comprehensive heat training required by subsection (f), but rather to alert employees to the presence of high heat conditions and the need to take preventive measures to avoid or address potential heat illness.

New subsection (e)(6) would add a special rule for agricultural employees required to work continuously outdoors in temperatures of 95° F or above. This subsection would require employers to ensure that the employee take a net 10 minute recovery period toward the end of every two hours of work in temperatures of 95° or higher. The word "ensure" is used to require the employer to be proactive in halting work. The term "net recovery period" means that the recovery period does not include time needed to access a rest area or any time during which the employee performs work activities. This new provisions specifies that the recovery period may be combined with other legally-required meal or rest periods, which in an 8 hour work shift would normally include paid mid-morning and mid-afternoon breaks and a mid-day meal period. This provision does impose an obligation to provide an additional paid break, over and above what is required by Wage Order No. 14 (8 Calif. Code Reg. § 11140), if an employee is required to work more than four continuous hours in temperatures of 95° or higher. This provision is limited to and focused on agriculture because of the incentives in that industry for more and longer workdays: specifically, the seasonal nature of the work, the prevalence of piece-rate compensation, and the fact that Wage Order No. 14 only requires the payment of overtime after 10 hours

of work in a day or 60 hours of work in a week rather than the usual 8 and 40. Given these factors, which operate as disincentives to stopping or limiting work, it is necessary to require that employers ensure that work stops, rather than simply making breaks available to workers who may be disinclined to stop working, and to have recovery periods every two hours as a precaution against the increased risks associated with working under these conditions. Based on representations made by employer representatives in pre-notice discussions regarding these proposals, the Division does not believe it is customary for agricultural employers to require extended hours of work during periods of very high heat on the hottest days of the year. However, the requirement for additional compensable breaks beyond what Wage Order No. 14 requires in a 10 hour day is needed as a preventative and precautionary measure for employers and employees who do work longer hours under these conditions.

Section 3395(f) Training.

Subsection 3395(f) sets forth requirements for employee and supervisor training on heat illness prevention procedures. These proposals would make revisions to four of the nine elements of employee training under subsection (f)(1). The requirements in paragraph (f)(1)(B) covering the employer's procedures for complying with the heat illness regulation would be revised to include specific references 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 rights under the heat illness regulation without retaliation. This amendment is needed to provide clear and more specific guidelines on the required elements of training on the employer's prevention procedures, so the procedures and requirements are better understood and appropriate precautions against heat illness more likely to be taken.

These proposals would add clarifying language to subsection (f)(1)(D), so that it includes training on the employer's procedures for acclimatization. This amendment is necessary to provide clear and more specific requirements for training on acclimatization, and is offered in conjunction with the restated requirements on acclimatization procedures in proposed new subsection (g)(3), discussed below.

These proposals would expand the requirement in subsection 3395(f)(1)(E) to train on types, signs, and symptoms of heat illness, to also include training on appropriate first aid and emergency response and heat illness progression. This amendment is needed to clarify and strengthen this element of training to help ensure that employees are aware and respond immediately and appropriately when signs or symptoms of heat illness appear.

These proposals would modify subsection (f)(1)(G) by adding the words "signs or" before the word "symptoms." The expanded phrase "signs or symptoms" recognizes the necessity for both employees and supervisors to be aware of and report indicators of heat illness. "Signs" of heat illness refers to the observable condition of the employee (*e.g.* excessive sweating, confusion, fainting), while "symptoms" refers to the employees' evaluation of their own condition.

In subsection (f)(2), covering supervisor training, paragraph (2)(C) would be modified by adding the words "signs or reports" before the word "symptoms", so that the complete phrase would read "when an employee exhibits signs or reports symptoms". The purpose of the expanded phrase is to ensure that supervisors are trained to take into account, both the observable condition of an employee (*i.e.* the "signs" which may include things like excessive sweating, confusion, or fainting), and what the employee reports about his or her own condition (*i.e.* "symptoms").

Section 3395(g) Written Procedures.

Subsection (f)(3) of the existing regulation requires an employer to have written procedures for complying with specified requirements enumerated in the subsection on training. These proposals would move this requirement into a separate subsection (g) and would separately enumerate the specific elements that need to be covered in the procedures, which are to be denominated a “heat illness prevention plan.” These proposals would require the written plan to be in English as well as the language understood by a majority of the employees, and available at the worksite. At a minimum the plan would need to cover the employer’s procedures on provision of water and access to shade; specific high heat procedures; the supervision of all employees in high heat conditions and acclimatization of new employees (with specific measures for heat waves and the acclimatization period); and emergency response procedures addressing issues of communication, responding to signs and symptoms of heat illness, and obtaining emergency medical service, including helping direct emergency responders to the site and having someone designated to ensure that emergency procedures are followed. The necessity and purpose of revising the subsection in this manner are to provide clarity and specificity on what needs to be covered in a heat illness prevention plan in order for that plan to be effective, and also to ensure the accessibility of that plan to workers, including a workforce in which a majority of the employees speak a language other than English. These requirements in turn will enhance effectiveness of the plan as a tool to combat heat illness.

Section 3395(h).

Finally, these proposals would also add a new subsection 3395(h), detailing observation and response requirements in the event signs or symptoms of heat illness are observed or reported. In furtherance of an employer’s general duties to provide a safe and healthy workplace and respond diligently and appropriately to incidences of job injury or illness, this proposed subsection provides specific guidance on some of the signs and symptoms of heat illness, and on what to do and what not to do in the event that signs or symptoms of heat illness are observed or reported.

DOCUMENTS RELIED UPON

ACGIH Criteria document for a heat stress and strain threshold limit value. (2009) American Conference of Governmental Industrial Hygienists. 7th Edition.

Anderson, G B and Bell, M L. (2011) Heat Waves in the United States: Mortality Risk during Heat Waves and Effect Modification by Heat Wave Characteristics in 43 U.S. Communities. NIH Environmental Health Perspectives 119:210–218.

Armstrong, Lawrence E.; Casa, Douglas J.; Millard-Stafford, Mindy; Moran, Daniel S.; Pyne, Scott W.; Roberts, William O., “Exertional Heat Illness during Training and Competition.” *Medicine & Science in Sports & Exercise*. 39(3):556-572, March 2007.

United States Department of Commerce, National Oceanic and Atmospheric Administration, Heat Index Chart, printed from internet, June 3, 2014.

US Army, Heat Stress Control and Heat Casualty Management, Technical Bulletin. Washington, D.C. March 7, 2003.

Armed Forces Health Surveillance Center [2011]. Surveillance Snapshot: reportable medical events of 19 heat injury in relation to heat index, June-September 2011. MSMR 18(10): 19.

Washington State Department of Labor and Industries, Concise Explanatory Statement for Rulemaking on Outdoor Heat Exposure, January 2008.

Meeting Summary of the Heat Illness Prevention Meeting on July 8, 2013, with a list of Attendees and Interested Parties.

Meeting Summary of the Heat Illness Prevention Meeting on February 3, 2014, with a list of Attendees and Interested Parties.

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

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

In proposing these standards to the Board, the Division considered numerous alternative methods for mitigating the hazards of exposure to heat. Using a buddy system to monitor employees working in high heat conditions was suggested as an alternative to other employee monitoring options and was incorporated into the proposals. The Division considered but rejected other clearly more expensive and sometimes impractical alternatives, including proposed requirements to equip all employees with individual portable sources of water or to require a specific ratio of supervisors to workers in high heat conditions. No other reasonable alternatives were identified by the Board or otherwise brought to its attention that 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

No costs or savings to state agencies will result as a consequence of the proposed action.

Impact on Housing Costs

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

Economic Impact Analysis

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.

The Board is proposing to amend its heat illness regulation at Title 8, California Code of Regulations, Section 3395, to clarify and strengthen standards to prevent against heat illness. Specific impacts of portions of the proposal are examined separately as follows with limited to no overall cost anticipated.

WATER

Under existing standards, employers must have sufficient water available on site (one quart per hour per employee), and it must be readily accessible to employees, meaning “as close as practicable” in accordance with current section 3395’s requirement that such measures be “effective.”

This proposal adds two new specifications: (1) that the water be fresh, pure, suitably cool, and free of charge to the employees, and (2) that in most circumstances it be within 400 feet walking distance from workers.

Impacts:

- These provisions do not change the quantity and quality of water that must be available, but they do make the requirements for accessibility to that water more specific. The costs associated with meeting these more specific requirements are dependent on current operational set-ups and the type of work being performed. The more dispersed a labor force is or the more the labor force moves about during the day, the greater the cost of meeting this accessibility standard. The most efficient way to meet this requirement for a dispersed or mobile workforce is through the use of “igloos” or other portable coolers, at a cost of approximately \$55 per unit (serving 5 employees for 4 hours of heat exposure). An employer that currently is not meeting the 400 foot limit could be required to incur one-time costs for the purchase of additional units, with the number required dependent upon the size and extent of dispersion of the labor force. Because a dispersed or mobile work force requires the regular transport of workers and materials to and from the place where work is being performed, there should be little or no extra cost for transporting portable water containers to and from those locations.

SHADE

Under existing section 3395, shade must be available at all times and sufficient to cover 25% of the workers on-site, must be erected at 85 degrees, and must be placed as close as practicable to working employees. Under existing section 3395, employees also must be allowed and encouraged to take cool-down rest breaks of no less than five minutes whenever necessary to protect themselves from overheating.

This proposal (1) specifies that shade be sufficient to cover all employees on break; (2) reduces the trigger for shade requirements from 85 to 80 degrees; (3) further specifies that shade be no further than 700 feet from workers; (4) adds language to clarify the obligation not to order an employee back to work until symptoms abate and not less than five minutes after shade is accessed; (5) specifies that if an employee exhibits symptoms of heat illness, the employer shall monitor the employee during recovery, and in the event symptoms continue, take appropriate first aid or emergency medical measures; and (6) adds to the definition of appropriate shade that it “does not discourage access.”

Impacts:

- In a review of commonly available weather data for several locations in the state over the last several years, Division staff estimate the reduction in the trigger temperature from 85 to 80 degrees will increase the number of days requiring additional shade precautions by an average of 30 – 45 days per year. This particular change does not add to the existing cost of having shade available under existing standards except insofar as an employer may incur some cost in erecting portable shade structures on additional days to comply with the new standard. The Division believes these additional costs are negligible.
- With regard to the extent of coverage provided, the revised standard may increase, decrease, or result in no additional costs to employers depending on how their existing breaks are structured. If an employer requires all employees to take the same fixed break period, then there may be a fourfold increase in the need for shade if the employer currently only meets the 25% standard. Conversely, an employer using rotating break periods could have as little as 1/8 (12.5%) of its workforce on break at one time, even assuming the need for increased breaks under the accompanying high heat proposal, and thus the necessary amount of shade would be less than under the current standard.
- The costs associated with setting up shaded areas are dependent on the type of work being performed. If the labor force changes location during the day, and the shade requirements are being met through the erection of portable structures, then the costs for obtaining those structures (at an estimated cost of \$100 per unit) and transporting them may decrease or increase depending on whether the employer needs to provide less or more shade under the coverage percentage standard. The proposed 700 foot requirement clarifies and makes more specific the current “as close as practicable” standard, and thus the Division does not regard it as imposing additional cost impacts.
- The additional language concerning employees taking recovery breaks clarifies and elaborates upon the existing standard to help induce greater compliance. It imposes no additional economic impacts on employers in compliance with existing requirements.
- The additional language concerning employees who exhibit symptoms of heat illness clarifies and elaborates upon prudent measures needed to monitor and alleviate heat illness in order to avoid liability for the costs of serious injury or death. It imposes no

additional economic impacts on employers confronted with employees exhibiting symptoms of heat illness.

- The language added to the definition of appropriate shade also clarifies and elaborates upon existing requirements to help induce greater compliance with those requirements and discourage practices that tend to defeat the purpose of providing shade. It imposes no additional economic impacts on employers in compliance with existing requirements.

HIGH HEAT PROVISIONS

Under existing standards, employers are required to implement high heat procedures requiring greater observation of employees when temperatures reach 95 degrees.

This proposal would (1) change the high heat trigger temperature to 85 degrees; (2) set more specific standards for observing employees during high heat conditions; (3) require a pre-shift meeting to cover high heat precautions; and (4) mandate a ten minute recovery period for every two hours an agricultural employee is employed in temperatures of 95 degrees or higher (with the recovery period permitted to coincide with other breaks mandated by Wage Order No. 14).

Impacts:

- In a review of commonly available weather data for several locations in the state over the last several years, Division staff estimate that the reduction in the trigger temperature will add as much as two to three months per year on average in which extra high heat precautions are required. This standard does not alter existing required practices other than the frequency in which they must be employed, and it may in fact impose no new impacts.
- This proposal also clarifies and elaborates upon current requirements for observing employees in high heat conditions. Currently, effective observation is already required so no additional costs for employers are anticipated with employers allowed to choose the means by which employee observation shall be achieved and find the method best suited and most cost effective for their operation. Any potential new costs are anticipated to be less than the potential exposure to liability for serious injury or death of employees who succumb to heat illness and cannot be helped because no one sees them.
- The pre-shift meeting requirement may impose an additional cost on some employers insofar as it requires more frequent or slightly longer pre-shift meetings when high heat conditions are present. Employees must be compensated for time spent in a required meeting, and this may reduce time engaged in productive work slightly. However, these meetings and other preventive measures should decrease potential liability for costs of injury or death due to heat illness.
- The proposed specific recovery period requirements for agricultural employees working in temperatures of 95 degrees or more are consistent with and may be followed in a manner that complies with existing Wage Order requirements for providing breaks during

the first 8 hours of work. This proposal reduces flexibility in scheduling breaks in order to avoid over-exposure to high heat and also mandates an additional break at the 8 hour mark for employees working a 10 hour day (as permitted without incurring overtime liability under Wage Order No. 14, 8 Calif. Code of Reg. § 11140). The Division believes that during periods of extended high heat it is customary for agricultural employers in this state to begin work during early morning hours when temperatures are lowest, to stop work before peak temperatures are reached later in the day, and not to require their employees to continue working for extended hours when temperatures remain at 95 degrees or above. However, this standard sets a precautionary requirement for those who might do so and a way to reduce exposure to the potential costs of injury or death due to heat illness. Assuming a crew of 100 workers with an effective pay rate of \$15 per hour, the cost of such a break would be \$250 (100 x \$15 x 1/6). Assuming up to 15 such days or occurrences in a calendar year, when an employer would incur the cost of an additional break that would not otherwise be compensable under Wage Order No. 14, the additional annual cost to that employer would be \$3750.

TRAINING and WRITTEN PROCEDURES

Current standards require employers to provide training and have written procedures covering high heat illness.

This proposal includes language that clarifies requirements for training and written procedures, including requirements that the heat illness prevention plan be available in a language understood by a majority of the employees and that it covers specified elements, including acclimatization of new employees and emergency response procedures.

Impacts:

- Some employers may incur one-time expenses to modify training and heat illness prevention plans in order to comply with more specific requirements, including having the plan translated into a language understood by the majority of workers. The Division believes that in most cases these additional costs will be negligible unless a consultant is hired to redraft or translate a plan.

RESPONSE TO ILLNESS

All employers have a general duty to maintain a safe and healthy working environment and to respond expeditiously and appropriately upon notice of a workplace injury or illness.

This proposal would add specific language to the heat illness regulation covering the appropriate response when an employee reports or exhibits signs of heat illness or injury.

Impacts:

- This proposal does not impose any costs beyond what is required under the general standard and may save costs and reduce exposure to the potential liability for injury or

death due to heat illness by providing more specific guidance on how to respond to reports or signs of heat illness.

Creation or Elimination of Jobs in the State of California

The proposed amendments 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. These proposals are intended to provide worker safety at places of employment in California.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impacts that a representative individual would necessarily incur in reasonable compliance with the proposed amendments. Because the potential cost impacts identified above are all associated with taking additional measures for an employee workforce, they would not be incurred by a sole proprietor who has no employees. The Board also believes that only a small fraction of affected employers will incur additional costs to comply with the more specific requirements set forth in the proposed amendments, and therefore that a representative or typical business will not incur costs.

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. The public sector and especially public safety already tend to follow the best practices for heat illness prevention; and the Board does not anticipate that they will incur additional costs to comply with the more specific proposed standards.

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Board has determined that the proposed amendments do not impose a local mandate and that there are no costs to any local government or school district which must be reimbursed in accordance with Government Code Sections 175000 through 17630.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses. However, the potential economic impacts identified above are likely to be incurred, if at all, by larger businesses with larger workforces, and primarily in the agriculture sector. Section 3395 currently requires employers to provide water, shade, high heat procedures, and training, and the principal purpose of these proposals is to clarify, strengthen, and make those requirements more specific.

CREATION OR ELIMINATION OF JOBS OR BUSINESSES

The proposed regulations will not have any effect on the creation or elimination of California jobs or the creation or elimination of California businesses or affect the expansion of existing California businesses because the proposed changes will clarify and strengthen these standards to prevent against heat illness.

BENEFITS OF THE REGULATION

The proposed amendments will reduce the risk of serious injury and death due to heat illness in the affected industries. Better hydration and access to shade as well as an additional mandated recovery period (for agricultural workers working extended hours in very high heat) should also improve worker productivity.