



LEGISLATIVE IMPACT ANALYSIS

**Senate Bill 1299 (Cortese):  
Evaluating the Proposed  
Rebuttable Presumption for  
Heat-Related Injuries for  
Agricultural Workers in the  
California Workers' Compensation System**

**California Workers' Compensation Institute**

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## EXECUTIVE SUMMARY

Senate Bill (SB) 1299 is a measure currently pending before the California Assembly that would create a rebuttable presumption of compensability if:

- 1) an outdoor agricultural worker suffers a heat-related injury, illness, or death;
- 2) the agricultural worker is covered by Cal/OSHA's outdoor heat illness prevention standard;<sup>1</sup> and
- 3) a Workers' Compensation Appeals Board (WCAB) judge determines that the agricultural worker's employer violated the Cal/OSHA outdoor heat illness prevention standard.

This report examines the population of agricultural workers covered by the legislation, measures the percentage of workers' compensation claims filed by agricultural workers that involve heat-related injuries, and compares the percentage of heat-related claims in the agriculture sector to the percentage in non-agricultural workers covered by the high-heat procedures in the Cal/OSHA outdoor heat illness prevention standard. Finally, the analysis considers the impact of the legislation on the California workers' compensation system.

### Key Findings:

- 1) Despite global warming and climate change, there are very few agricultural heat-related illness claims. From 2019 to 2023, there were 659 workers' compensation claims filed by agricultural workers that were due to heat-related illness. Less than 1 percent (0.65%) of workers' compensation claims from agricultural workers involve heat-related injuries and illnesses, which is comparable to other industries covered by the Cal/OSHA high-heat procedures<sup>2</sup>, such as landscaping (0.65%), construction (0.67%) and mining, oil and gas extraction (0.56%).
- 2) The small percentage of claims involving heat-related injuries and illness is likely associated with the success of Cal/OSHA's existing outdoor heat illness prevention standard, which was enacted in 2005.
- 3) While several studies found that increases in temperature led to increases in injuries overall, a recent UCLA study that focused on California exclusively found that this phenomenon largely ceased with the implementation of the Cal/OSHA outdoor heat illness prevention standard in 2005.
- 4) Outdoor agricultural workers have a workers' compensation claim denial rate of 11.0% – lower than the 12.4% to 13.3% denial rates for other outdoor occupations covered by the Cal/OSHA outdoor heat illness prevention standard, and lower than the 14.7% denial rate for all claims.
- 5) The presumption created by SB 1299 would shift the initial determination of whether a Cal/OSHA heat injury illness standard violation occurred from the Occupational Safety and Health Appeals Board (OSHAB) to the WCAB. Given the lack of subject matter expertise on the part of WCAB judges, as well as the challenge of determining violations without citations from Cal/OSHA, the administrative burden and frictional costs of SB 1299 will be significant.

<sup>1</sup> California Code of Regulations, Title 8, Section 3395. Heat Illness Prevention in Outdoor Places of Employment.

<sup>2</sup> The list of industries covered by the high-heat procedures is in subdivision (a) of the Cal/OSHA outdoor heat illness prevention standard. The high-heat procedures are in subdivision (e).



## BACKGROUND

SB 1299 was introduced in 2024 to address workers' compensation claims for outdoor agricultural workers. Specifically, SB 1299 would create a rebuttable presumption of compensability, if:

- a) an outdoor agricultural worker suffers a heat-related illness, injury, or death;
- b) the agricultural worker is covered by the Cal/OSHA outdoor heat illness prevention standard<sup>3</sup>; and
- c) the agricultural worker's employer violated the Cal/OSHA outdoor heat illness prevention standard.

### *What is a Rebuttable Presumption?*

For more than 100 years, the California workers' compensation system has operated as a "grand bargain" that provides injured workers with workers' compensation benefits, including medical care and temporary and permanent disability indemnity benefits. Employers in turn are protected against tort lawsuits for work-related injuries.

As the Legislature recognized that certain occupations had comparatively higher levels of risk for injury or occupation-related medical conditions, they debated modifications to the workers' compensation system through the inclusion of presumptions for those occupations and those medical conditions.

With traditional, or non-presumptive injuries, the claims administrator has the duty to investigate whether the reported claim is work related. If the investigation shows the injury is not work related, the claims administrator can deny the claim. The employee has the burden of proving that an industrial injury occurred.

A rebuttable presumption shifts the burden of proof to the employer in workers' compensation claims. Once the employee shows that they meet the requirements for a specific presumption, the employer must prove the injury or condition was not caused by work.

### *Presumptions and Public Policy*

The Legislature has historically been hesitant to create new workers' compensation presumptions. Outside of a handful of limited exceptions, all current workers' compensation presumptions apply exclusively to law enforcement and firefighters and only for a specific set of injuries or conditions such as hernias, cancer, and heart disease. Generally, when discussing the public policy reasons why a rebuttable presumption should be extended to peace officers and firefighters, the Legislature has focused on a few key points:

- 1) Lack of hazard abatement – uniquely, peace officers and firefighters are required to run towards occupational hazards, including fires, accidents, and violent confrontations. While personal protective equipment may be used to fully or partially abate certain hazards, it cannot abate all occupational hazards.
- 2) High incidence of injury – as one would expect if hazard abatement is limited, the rate of injury for peace officers and firefighters is higher than for similarly situated workers.

<sup>3</sup> For a full description of the Cal/OSHA outdoor heat illness prevention standard, see <https://www.dir.ca.gov/title8/3395.html>.



- 3) High rate of claim denials – as a presumption impacts the industrial liability for a claim, a presumption is unnecessary if the types of claims subject to the presumption are commonly accepted.

Since SB 1299 would establish a private sector, industry-specific presumption triggered by a violation of the Cal/OSHA outdoor heat illness prevention standard, this legislation would mark a significant departure from industrial presumptions in current law, both in the population covered and the operation of the presumption.

## OBJECTIVE

This report seeks to answer five questions:

- 1) How many heat-related claims were filed by agricultural workers from 2019 through 2023?
- 2) Is the abatement of heat illness feasible for agricultural workers?
- 3) Is the percentage of workers' compensation claims involving heat-related injuries higher for outdoor agricultural workers than for other workers covered by the high-heat procedures in the Cal/OSHA outdoor heat illness prevention standard?
- 4) Do agricultural workers have a higher rate of injury claim denials compared to workers in other industries subject to the high-heat procedures in the Cal/OSHA outdoor heat illness prevention standard?
- 5) How would the trigger of the SB 1299 presumption (a violation of the Cal/OSHA outdoor heat illness prevention standard) impact the operation of the presumption and enforcement of the standard?

## RESULTS

To answer these five questions, the authors compiled claims data from the Division of Workers' Compensation's Workers' Compensation Information System (WCIS)<sup>4</sup> for the injury years of 2019 through 2023. This created an initial data set of more than 3.2 million claims.

### *1. How many heat-related claims were filed by agricultural workers from 2019 through 2023?*

Starting with the data set of more than 3.2 million claims, the authors utilized the Workers' Compensation Insurance Rating Bureau of California (WCIRB) "Search for a Classification Code" tool<sup>5</sup> to isolate worker classifications related to the Farms industry group. This process resulted in a list of 100,777 agricultural claims.

<sup>4</sup> WCIS is a state mandated database of all occupational injuries and is considered a complete resource of all workers' compensation system injuries.

<sup>5</sup> <https://www.wcirb.com/products-and-services/classification-search>



Next, the claims were classified by their nature of injury codes to identify those involving heat prostration, angina pectoris, myocardial infarction, and vascular loss, provided that the injury occurred between May and October. This yielded 659 claims – or 0.65% of the 100,777 agricultural claims – that involved heat-related injuries or illnesses during the 5-year study period (Exhibit 1).

Exhibit 1. Heat-Related Injuries for Agriculture Class Codes (2019 – 2023)

Job Classification	Total Claims	Heat-Related Injuries	Share of Total Claims
0005 - Nurseries–Propagation/Cultivation	10,665	57	0.53%
0016 - Orchards–Citrus/Deciduous Fruits	12,999	69	0.53%
0035 - Florists–Cultivating/Gardening	4,444	15	0.34%
0040 - Vineyards	16,495	143	0.87%
0041 - Potato Crops	524	4	0.76%
0044 - Cotton Farms	174	1	0.57%
0045 - Orchards–Nut Crops	6,262	34	0.54%
0079 - Strawberry Crops	9,688	124	1.28%
0171 - Field Crops	4,455	48	1.08%
0172 - Truck Farms	17,626	121	0.69%
0034 - Poultry Raising/Egg Production	4,034	11	0.27%
0036 - Dairy Farms	9,735	18	0.18%
0038 - Stock Farms	1,162	5	0.43%
0050 - Farm Machinery Operation	2,514	9	0.36%
<b>Total:</b>	<b>100,777</b>	<b>659</b>	<b>0.65%</b>

2. *Is the abatement of heat illness feasible for agricultural workers?*

Heat illnesses and injuries related to high heat are an occupational hazard for all workers, including agricultural workers. Workers who are exposed to high heat conditions can develop heat-related injuries such as heat stroke and heat exhaustion, and the exposure can also make other workplace injuries more common.<sup>6</sup> A recent study from the Workers Compensation Research Institute (WCRI) looked at data from 24 states (not including California) and found that the injury rate increases with the temperature for all workers and that the injury rate is 8% higher on days that are above 100 degrees when compared to days that are 65-70 degrees.<sup>7</sup>

In California, the Cal/OSHA outdoor heat illness prevention standard serves as one of the primary methods of abating heat illness. The standard requires, among other things, access to shade and water, active monitoring for employees who need to acclimatize to heat, training for both employees and supervisors, and the creation of a heat illness plan. High heat procedures must be initiated if the temperature exceeds 95°F, and if the temperature crosses 95°F, agricultural workers must take a

<sup>6</sup> Jacklitsch, et al. “Occupational Exposure to Heat and Hot Environments”, DHHS (NIOSH) Publication No. 2016-106, February 2016. <https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf>

<sup>7</sup> Negrusa, et al. “Impact of Excessive Heat on the Frequency of Work-Related Injuries”, Workers Compensation Research Institute (WCRI), WC-24-18. May 2024, Page 25.



mandatory 10-minute cool down break every two hours.<sup>8</sup> The standard also requires employers to inform their workers that they may exercise their rights under the outdoor heat illness prevention standard without fear of retaliation and to advise them of procedures for acclimatization and appropriate first aid and emergency response to heat illness.

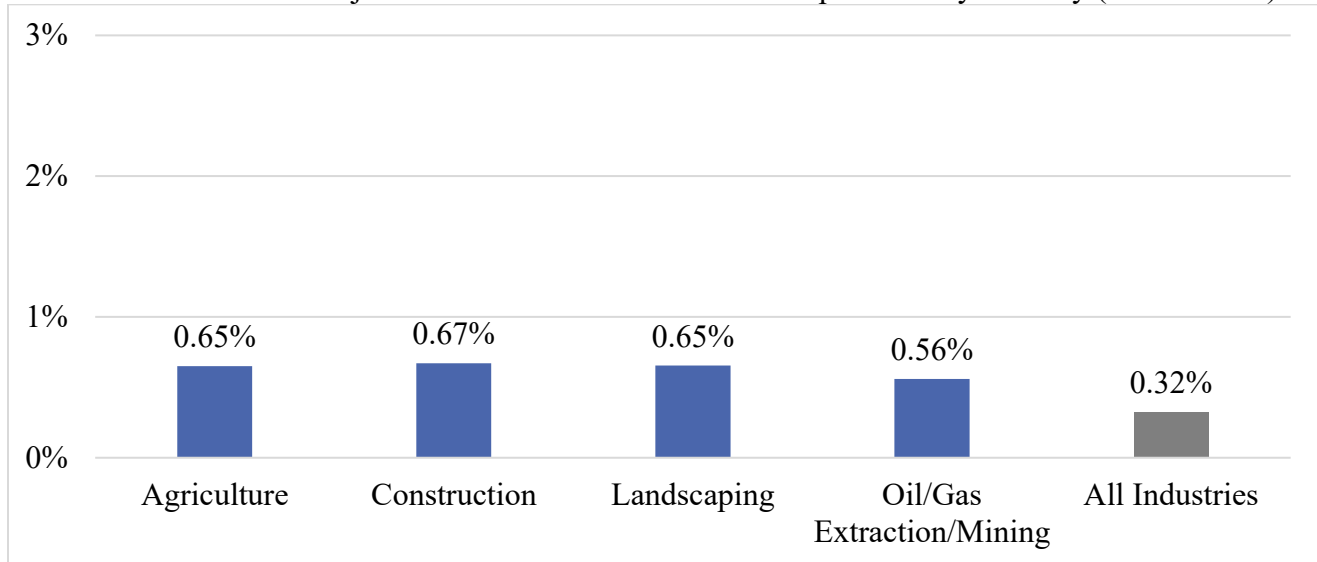
*Does the Cal/OSHA outdoor heat illness standard succeed in reducing heat illness injuries?*

As the heat illness standard began in 2005, and the study period begins in 2019, this question can be partially answered by the available data within this study. However, a recent study from UCLA found that while workplace injuries in California increased as the temperature increased, in the 13 years following the adoption of the Cal/OSHA outdoor heat illness prevention standard (2006 – 2018), temperatures of 90+ degrees were associated with a third fewer heat-related injuries than they had been in the five years prior to the standard (2001 – 2005).<sup>9</sup>

Noting the small number of agricultural heat illness injuries from 2019 to 2023 (as discussed above), as well as the UCLA study that found a statistically significant reduction in injuries with the introduction of the Cal/OSHA outdoor heat illness prevention standard, the data supports the conclusion that hazard abatement is both possible and common in the agriculture industry.

*3. Is the percentage of workers’ compensation claims involving heat-related injuries higher for outdoor agricultural workers than for other workers covered by the high heat procedures<sup>10</sup> in the Cal/OSHA outdoor heat illness prevention standard?<sup>11</sup>*

Exhibit 2. Heat-Related Injuries as a Percent of Workers’ Comp Claims by Industry (2019 – 2023)



<sup>8</sup> Cal/OSHA outdoor heat illness prevention standard, 8 CCR 3395. See <https://www.dir.ca.gov/title8/3395.html>.

<sup>9</sup> Park, et al. “Temperature, Workplace Safety, and Labor Market Inequality,” UCLA Luskin School of Public Policy, page 26-27. <https://ucla.app.box.com/s/14m6pj1algt7rwb8ihq4lyqjhm2ueejj>

<sup>10</sup> Under the Cal/OSHA outdoor heat illness prevention standard, the agricultural, construction, landscaping, and oil and gas extraction industries must also follow a special set of procedures when the temperature is 95 degrees or higher.

<sup>11</sup> See Appendix A for the inventory of employee classification codes identified by the authors as subject to the Cal/OSHA outdoor heat illness prevention standard.



As shown in Exhibits 1 and 2, between 2019 and 2023, agricultural workers subject to the Cal/OSHA outdoor heat illness prevention standard filed 659 heat-related claims, which represented 0.65% of all work-related injuries and illnesses claimed by agricultural workers. This percentage is significantly lower than other, more common agriculture injuries, such as strains (26.4%), contusions (16.1%), and lacerations (9.7%).<sup>12</sup>

Similarly, heat illness injuries account for only a small share of the injuries claimed by workers in the non-agricultural industries under the high-heat procedures in the Cal/OSHA standard. Among all the outdoor occupations subject to the Cal/OSHA heat standard, less than one percent of workers' compensation claims involve heat-related injuries: Construction (0.67%), Landscaping (0.65%), and Oil/Gas Extraction (0.56%), while heat-related injuries accounted for only 0.32% of claims from all of California's indoor and outdoor industries. Additionally, the percentage of heat-related work injury claims from the public administration sector, which is not covered by the full Cal/OSHA outdoor heat illness prevention standard, and includes peace officers and firefighters, is also similar (0.59%). These findings are consistent with the recent research from UCLA, discussed above.

These findings are also consistent with Cal/OSHA data on heat illness inspections and injuries. From 2008 to 2023, Cal/OSHA investigated 1,526 potential cases of heat illness in all industries and in both the indoor and outdoor setting. Of those, 870 were confirmed to be cases of heat illness. Similarly, from 2009 to 2023, Cal/OSHA received 3,836 heat complaints in all industries,<sup>13</sup> but many of those complaints were in the indoor setting, outside of the legislative intent of SB 1299. For example, in 2023, more than half of all complaints (160 complaints out of 299 complaints total) were for the *indoor* setting. Based on their investigations, Cal/OSHA states that for the 18 million employees in California, heat-related illnesses and injuries for all indoor and outdoor industries total approximately 1,000 injuries per year.<sup>14</sup>

*4. Do agricultural workers have a higher rate of injury claim denials compared to workers in other industries subject to the high-heat procedures in the Cal/OSHA outdoor heat illness prevention standard?*

Due to the small number of heat-related injuries across the selected class codes, the authors compared the overall denial rates for all injuries across the occupations covered by the high-heat procedures in the Cal/OSHA outdoor heat illness prevention standard.

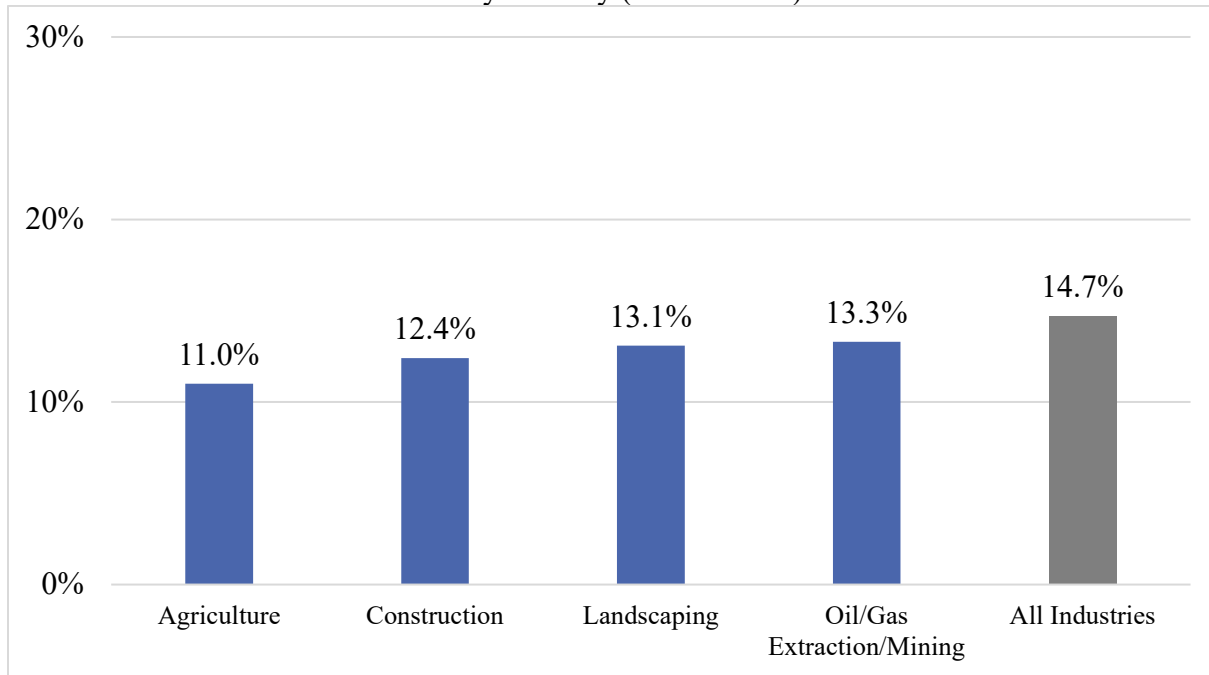
Exhibit 3 compares the overall denial rates for occupations that fall under the Cal/OSHA outdoor heat illness prevention standard. Here, the overall denial rate for submitted agricultural claims (11.0%) is lower than the denial rates for other industries subject to Cal/OSHA outdoor heat illness prevention standard, as well as the overall denial rate for all California workers' compensation claims.

<sup>12</sup> Derived by the authors from the WCIS dataset.

<sup>13</sup> Email communication from Cal/OSHA to CWCI, June 2024.

<sup>14</sup> Cal/OSHA public remarks, 10:20 timestamp. <https://videobookcase.org/cal-osha/2024-04-24/>

Exhibit 3. Denial Rates for Claims by Industry (2019 – 2023)



5. *How would the trigger of the SB 1299 presumption (a violation of the Cal/OSHA outdoor heat illness prevention standard) impact the operation of the presumption and enforcement of the standard?*

As discussed above, heat-related illness claims comprise a small share of agricultural workers’ occupational injury claims. This is comparable to non-agricultural workers covered by the high-heat procedures. Historical data indicated a decline in these injuries following the adoption of Cal/OSHA’s outdoor heat illness prevention law. This suggests that the presumption for agricultural industry workers in SB 1299 is distinct from existing presumptions. As SB 1299 applies to agricultural employers who have violated the Cal/OSHA heat illness prevention standard, some might argue that a workers’ compensation presumption is necessary to encourage compliance with the law.

However, this raises several concerns:

First, workers’ compensation presumptions have never been used in a punitive manner. The historic legislative focus has been on ensuring that injured workers who face an elevated risk of a hazard have their claims accepted without unnecessary litigation. As employers face higher workers’ compensation insurance costs due to higher injury rates, there are existing processes to incentivize them to reduce injuries. Again, this would be a departure from existing presumptions.

Second, the creation of a workers’ compensation presumption that is triggered by a violation of a Cal/OSHA standard could create conflicting determinations between the OSHAB and the WCAB. Specifically, under SB 1299, the WCAB would need to address the threshold issue of whether the employer violated the outdoor heat illness prevention standard. This determination may be made while another proceeding is occurring before OSHAB, but the bill does not address what would happen if the WCAB found there was a violation, triggering the presumption, but OSHAB found there was no violation.





Finally, as SB 1299 does not require a heat illness citation from Cal/OSHA to trigger the presumption, the bill places the WCAB as the trier of fact on whether a violation of the Cal/OSHA outdoor heat illness prevention standard occurred. By placing the WCAB in the position of interpreting Cal/OSHA standards, SB 1299 requires the WCAB to depart from its area of expertise. Just as it would run counter to existing law for the OSHAB to determine permanent disability or apportionment, it would run counter to existing law to ask the WCAB to weigh in on a violation of Cal/OSHA standards.

## CONCLUSION

In 2005, California became the first state to respond to the occupational hazard of outdoor heat by developing a heat illness prevention standard. California then strengthened this standard in 2015.<sup>15</sup> As of May 2024, only 4 other states have enacted variations on Cal/OSHA's heat-injury prevention standards for outdoor occupations.<sup>16</sup> Examination of the data reveals that this standard has been a historic worker safety innovation for farmworkers and other outdoor workers who are exposed to high heat conditions.

From 2019 through 2023, 659 agricultural workers filed workers' compensation claims due to heat-related illnesses. This represented 0.65% of all agricultural worker claims – a percentage that is comparable to that of other workers who are subject to the high heat procedures. At the same time, agricultural workers' work injury claims were denied at a lower rate than claims from workers in other occupations that were also subject to the Cal/OSHA outdoor heat illness prevention standard. It appears that the Cal/OSHA standard for heat-injury abatement for outdoor occupations has mitigated the growing impact of climate change. Additionally, research from UCLA suggests that policies targeting the risk of high heat exposure can be used to abate the hazard of heat illness.<sup>17</sup>

Taken together, and noting the potential jurisdictional questions raised by requiring the WCAB to determine if a violation of a Cal/OSHA outdoor heat illness prevention standard occurred, it is likely that SB 1299 would create more challenges than it would solve, entail significant administrative friction costs, and is unlikely to have an appreciable impact on the safety of agricultural workers.

<sup>15</sup> See Appendix B.

<sup>16</sup> <https://www.nrdc.org/resources/occupational-heat-safety-standards-united-states>

<sup>17</sup> Park, et al. "Temperature, Workplace Safety, and Labor Market Inequality", UCLA Luskin School of Public Policy, page 26-27. <https://ucla.app.box.com/s/14m6pj1algt7rwb8ihq4lyqjhm2ueejj>



## APPENDIX A

Construction, Landscaping, and Mining/Oil/Gas Extraction Class Codes Selected as Subject to the Cal/OSHA Outdoor Heat Illness Prevention Standard

### **Outdoor Construction**

5506 - Street/Road Construction–paving  
5507 - Street/Road Construction–grading  
5552 - Roofing–low wage  
5553 - Roofing–high wage  
5632 - Steel Framing–light gauge–low wage  
5633 - Steel Framing–light gauge–high wage  
6003 - Pile Driving  
6011 - Dam Construction  
6204 - Drilling  
6206 - Oil/Gas Wells–cementing  
6213 - Oil/Gas Wells–specialty tool  
6216 - Oil/Gas Lease Work  
6218 - Excavation–low wage  
6220 - Excavation–high wage  
6233 - Oil/Gas Pipeline Construction  
6235 - Oil/Gas Wells–drilling/redrilling  
6237 - Oil/Gas Wells–wireline service  
6251 - Tunneling  
6258 - Foundation Preparation Work  
6307 - Sewer Construction–low wage  
6308 - Sewer Construction–high wage  
6315 - Water Mains Construction–low wage  
6316 - Water Mains Construction–high wage  
6325 - Conduit Construction/Underground Wiring  
6361 - Canal Construction  
6364 - Irrigation Pipe Installation  
6400 - Fence Construction  
6834 - Boat Building/Repairing

### **Outdoor Landscaping**

0042 - Landscape Gardening  
0096 - Nut Hulling/Shelling/Processing  
0106 - Tree Pruning/Repairing/Trimming  
0251 - Irrigation/Drainage/Reclamation Works



### **Outdoor Mining/Oil Gas Extraction**

- 1122 - Mining–surface
- 1123 - Mining–underground
- 1124 - Mining–underground–surface employees
- 1320 - Oil/Gas Lease Operators
- 1322 - Oil/Gas Well Servicing
- 1330 - Blasting
- 1452 - Mining–ore milling
- 1463 - Asphalt Works
- 1624 - Quarries
- 1710 - Stone Crushing

## **APPENDIX B**

### 2015 Amendments to the Cal/OSHA Outdoor Heat Illness Prevention Standard

In 2015, the Occupational Safety and Health Standards Board amended the outdoor heat illness prevention standard to add the following requirements:

- “Potable water” available to workers must be provided no cost and be fresh, pure, suitably cool and located as close as practicable;
- Shade available when the temperature exceeds 80°F must accommodate all employees on break who remain onsite. The shade must be located as close as practicable to the areas where employees are working;
- Employees taking a cool-down break must be encouraged to remain in the shade until symptoms abate and the employer must monitor them during the recovery period;
- High-heat procedures must include a means of observing employees for heat illness symptoms; a designated onsite employee to call for emergency medical services; and a pre-shift meeting to review high-heat precautions;
- A net 10-minute preventive cool-down rest period (which may be concurrent with other required breaks) for every 2 hours that an agricultural employee works continuously in temperatures of 95°F or above;
- Additional training to inform workers that they may exercise their rights under the outdoor heat illness prevention standard without fear of retaliation, procedures for acclimatization, and appropriate first aid and emergency response to heat illness;
- The required written heat illness prevention procedures was renamed the “heat illness prevention plan” and new elements were added; and
- Supervisors must act immediately if a worker shows symptoms of heat illness and such workers shall be monitored and not left alone or sent home without first offering onsite first aid or providing emergency medical services.



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### California Workers' Compensation Institute

The California Workers' Compensation Institute (CWCI), incorporated in 1964, is a private, nonprofit membership organization of insurers and self-insured employers. CWCI conducts and communicates research and analyses to improve California's workers' compensation system. CWCI members include insurers that collectively write 76 percent of California's workers' compensation direct written premium, as well as many of the largest public and private self-insured employers in the state. Additional information about CWCI research and activities is available on the Institute's website, [www.cwci.org](http://www.cwci.org).

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