

**ATTORNEYS GENERAL OF NEW YORK, ARIZONA, COLORADO,  
CONNECTICUT, ILLINOIS, MAINE, MARYLAND, MASSACHUSETTS,  
NEW JERSEY, PENNSYLVANIA, AND THE DISTRICT OF COLUMBIA**

February 9, 2024

*Via Email*

**Julie Su**

Acting Secretary of Labor  
United States Department of Labor  
200 Constitution Avenue NW  
Washington, DC 20210

**Douglas L. Parker**

Assistant Secretary of Labor for Occupational Safety and Health  
United States Department of Labor  
200 Constitution Avenue NW  
Washington, DC 20210

**Re: Petition for an Emergency Temporary Standard for  
Occupational Heat Exposure for Farmworkers and  
Construction Workers**

Dear Acting Secretary Su and Assistant Secretary Parker:

The Attorneys General of New York, Arizona, Colorado, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey, Pennsylvania, and the District of Columbia petition the Occupational Safety and Health Administration (OSHA) to issue an emergency temporary standard for occupational heat exposure for farmworkers and construction workers, at minimum, beginning May 1, 2024. Under Section 6(c) of the Occupational Safety and Health Act, 29 U.S.C. § 655(c), OSHA is required to promulgate an emergency temporary standard if it finds (1) workers are exposed to a grave danger in the workplace, and (2) an emergency standard is necessary to protect workers from such danger. As this petition explains, both factors are undeniably met.

First, extreme heat poses a grave danger to the health and safety of millions of farmworkers and construction workers in our States and across the nation. In the summer of 2023, farmworkers and construction workers labored in unprecedented extreme heat, which climate scientists have attributed to the combined effects of escalating climate change and El Niño, a natural phenomenon that spurs higher temperatures across many areas of the United States. Based on these two factors, climate scientists predict that summer 2024 will be even hotter, exposing

farmworkers and construction workers to dangerous levels of heat and humidity that can cause a range of heat-related illnesses, and even death. In fact, each year, extreme heat results in approximately 40 workplace deaths,<sup>1</sup> a number that is likely significantly undercounted.

Although nearly all outdoor and many indoor workers are susceptible to occupational heat illness, farmworkers and construction workers are disproportionately vulnerable to heat stress due to, among other things, their work environments, the physical nature of their work, and prevailing socioeconomic factors, such as language barriers, limited access to healthcare, and wage structures that disincentivize breaks. Indeed, occupational heat exposure is an issue of environmental and racial justice, as people of color and low-wage workers are disproportionately burdened by heat stress in the workplace.

Second, an emergency temporary standard for occupational heat exposure is necessary to protect farmworkers and construction workers from the grave danger of extreme heat in summer 2024. As OSHA acknowledges, enforcement of heat hazards under the General Duty Clause of the Occupational Safety and Health Act presents legal challenges because, without a defined heat standard, OSHA must prove on a case-by-case basis that a heat hazard existed in the workplace when the injury or fatality occurred, and employers have no specific guidance on what constitutes a heat hazard under the Act. Because an emergency temporary standard has the same legal force as a permanent standard, it would not only give OSHA stronger enforcement power, but it would also provide employers with specific requirements and guidelines to protect workers from extreme heat.

In addition, while states are not preempted from implementing their own heat standards in the absence of a federal standard, OSHA cannot disregard its affirmative obligations under Section 6(c) of the Occupational Safety and Health Act and rely on states to take individual action. Recent political developments strongly suggest that the most heat-vulnerable states will not implement heat standards on their own, and at least two states have acted to preempt local ordinances aimed at protecting workers. Moreover, many other cities and states that have endeavored to promulgate heat standards have faced prolonged and contentious rulemakings, along with coordinated pushback from lobbyists and business interests, resulting in significantly weakened proposals. By issuing an emergency temporary standard, however, OSHA could immediately resolve these inconsistencies across the states and provide a defined and uniform rule to protect farmworkers and construction workers from extreme heat.

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<sup>1</sup> See *Census of Fatal Occupational Injuries News Release*, U.S. Bureau of Lab. Statistics (Dec. 19, 2023), [https://www.bls.gov/news.release/archives/cfoi\\_12192023.htm](https://www.bls.gov/news.release/archives/cfoi_12192023.htm).

Finally, as you are aware, the States previously petitioned OSHA for an emergency temporary standard for occupational heat exposure for all outdoor and indoor workers for summer 2023. OSHA denied that petition,<sup>2</sup> and the results were dire. For instance, on June 16, 2023, a 46-year-old construction worker died from hyperthermia at an outdoor construction site in East Texas, when the region was experiencing daily high temperatures around 100°F.<sup>3</sup> Just days later, a 35-year-old utility lineman from West Virginia died of heat-related causes while restoring powerlines in Harrison County, Texas.<sup>4</sup> In July, a 26-year-old farmworker and father of two died of heat stroke after collapsing in a field near Yuma, Arizona, as temperatures soared above 110°F.<sup>5</sup> On July 6, 2023, a 29-year-old Guatemalan immigrant died while picking fruit on a farm in Homestead, Florida<sup>6</sup> during an unprecedented heatwave.<sup>7</sup>

These are just four of the many workers who died from extreme heat during the summer of 2023, and it is likely that OSHA could have prevented at least some of these deaths, along with countless other heat-related illnesses, by requiring employers to implement the proven and common-sense protective measures requested in this petition. While we contend that all outdoor and many indoor workers face a grave danger from occupational heat exposure during the summer months, and we support federal legislation that would require OSHA to implement an interim final rule for heat exposure within one year,<sup>8</sup> OSHA must, at minimum, promulgate an emergency temporary standard for farmworkers and construction

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<sup>2</sup> See Ltr. from Douglas L. Parker, Assistant Sec’y for Occupational Safety & Health, to Hon. Letitia James, Att’y Gen. of N.Y. et al. (Apr. 17, 2023) [hereinafter OSHA April 2023 Letter].

<sup>3</sup> Adam Zuvanich, *Houston Man Working Outside Died from Overheating, According to Medical Examiner*, Houston Pub. Media (June 30, 2023), <https://www.houstonpublicmedia.org/articles/news/weather/2023/06/30/455869/houston-man-dies-working-outside-overheating/>.

<sup>4</sup> Jordan Gartner & KLTW Staff, *Utility Lineman Dies While Helping Restore Power to Texas Residents Following Storms*, WSAZ: Huntington, W. Va. (June 20, 2023), <https://www.wsaz.com/2023/06/21/utility-lineman-dies-while-helping-restore-power-texas-residents-following-storms/>.

<sup>5</sup> Daniel Gonzalez, *Yuma Farmworker and Father of 2 Dies Amid Record Heat Wave*, Ariz. Republic (July 24, 2023), <https://www.azcentral.com/story/news/local/arizona/2023/07/24/yuma-farmworker-dies-arizona-heat-wave/70457694007/>.

<sup>6</sup> Arianna Otero, *Calls for Action After Immigrant Farmworker, 29, Dies in Miami-Dade Heat*, WLRN: Miami (July 20, 2023), <https://www.wlrn.org/south-florida/2023-07-20/efrain-lopez-garcia-heat-stress-death-farmworker>.

<sup>7</sup> Alex Harris & Ashley Miznazi, *July 4th Broke World Heat Record. So Far, It’s Miami’s Hottest Year and a Sign of the Future*, Miami Herald (Oct. 3, 2023), <https://www.miamiherald.com/news/local/environment/climate-change/article277020973.html>.

<sup>8</sup> See Asunción Valdivia Heat Illness, Injury, and Fatality Prevention Act of 2023 (S. 2501/H.R. 4897).

workers for summer 2024 because they are gravely and disproportionately vulnerable to extreme heat in the workplace.

Accordingly, we urge OSHA to issue an emergency temporary standard for occupational heat exposure that applies when the heat index reaches 80°F—a temperature associated with increased rates of serious heat-related illnesses—and requires employers to take the necessary and readily implementable steps to prevent harm to their workers, such as providing water, rest breaks, and access to cool or shaded areas.<sup>9</sup> We urge OSHA to promulgate this standard by May 1, 2024, so it is in place this summer.

### **Legal Framework**

Under Section 6(c) of the Occupational Safety and Health Act, OSHA has an affirmative obligation to issue an emergency temporary standard if (1) “employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards,” and (2) “such emergency standard is necessary to protect employees from such danger,” 29 U.S.C. § 655(c)(1). Because the Act does not contemplate other factors for OSHA to consider in issuing an emergency temporary standard, if OSHA finds that the two statutory factors in Section 6(c) are satisfied, it cannot decline to issue an emergency standard based on other considerations, such as litigation risk or delays in rulemakings.<sup>10</sup>

A “grave danger” under Section 6(c) of the Occupational Safety and Health Act represents a risk greater than a “significant risk,” the threshold showing for OSHA to promulgate a permanent standard under Section 6(b) of the Act, 29 U.S.C. § 655(b).<sup>11</sup> As with any determination of risk, OSHA must support its findings with “substantial evidence in the record considered as a whole,”<sup>12</sup> though OSHA need not support its determination of risk with “scientific certainty.”<sup>13</sup> Once promulgated, an

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<sup>9</sup> The Arizona Attorney General’s Office supports a heat index threshold of at least 90 degrees for the emergency temporary standard and urges OSHA to approach extreme heat rulemakings with an appreciation for the importance of local environmental and climactic influences on heat risks.

<sup>10</sup> See, e.g., *Massachusetts v. EPA*, 549 U.S. 497, 535 (2007) (holding that EPA’s petition denial was arbitrary and capricious because EPA “offered no reasoned explanation for its refusal to decide whether greenhouse gases cause or contribute to climate change” and remanding to EPA to “ground its reasons for action or inaction in the statute”).

<sup>11</sup> See *Int’l Union, United Auto., Aerospace & Agric. Implement Workers of Am., UAW v. Donovan*, 590 F. Supp. 747, 755–56 (D.D.C. 1984), *adopted*, 756 F.2d 162 (D.C. Cir. 1985); *Indus. Union Dep’t, AFL-CIO v. Am. Petroleum Inst.*, 448 U.S. 607, 640 n.45 (1980) (noting the distinction between the risk findings for permanent standards and emergency temporary standards).

<sup>12</sup> 29 U.S.C. § 655(f).

<sup>13</sup> *Asbestos Info. Ass’n/N. Am. v. OSHA*, 727 F.2d 415, 425 (5th Cir. 1984) (accepting OSHA’s determination that 80 lives at risk over six months was a grave danger). The Act is silent on OSHA’s

emergency temporary standard remains in effect until it is superseded by a permanent standard, a process contemplated by the Occupational Safety and Health Act to occur within six months.<sup>14</sup>

As this petition will demonstrate, extreme heat poses a disproportionately grave danger to farmworkers and construction workers, especially during the summer months, and an emergency temporary standard is necessary to protect these workers from such danger. OSHA therefore has an affirmative obligation to issue an emergency temporary standard for occupational heat exposure under Section 6(c) of the Occupational Safety and Health Act, and we urge OSHA to do so by May 1, 2024.

### **Argument**

#### **I. Extreme Heat Is a Grave Danger to the Health and Safety of Farmworkers and Construction Workers.**

With each passing summer, there is new and stronger evidence that extreme heat is a grave danger to the health and safety of millions of workers in the United States. As climate change yields higher temperatures and more frequent and intense heat waves, these dangers will only increase, putting workers at even greater risk of heat-related illness and death. To mitigate these risks, OSHA should issue a finding of a grave danger and promulgate an emergency temporary standard for extreme heat for summer 2024 to protect the nation's most heat-vulnerable workers: farmworkers and construction workers.

##### **A. Summer 2023 Was Plagued by Unrelenting Extreme Heat, and Climate Scientists Predict that Summer 2024 Will Be Even Hotter.**

Summer 2023, the hottest summer ever recorded in the Northern Hemisphere, brought soaring temperatures and unrelenting extreme heat to the

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authority to extend or renew an emergency temporary standard past the six-month deadline if a grave danger remains and the permanent rule is not yet finalized. Case law suggests, however, that OSHA may have the authority to adapt to the exigencies of a situation by extending or renewing an emergency temporary standard, so long as it is “in the best interest of employees, whom the Act is designed to protect.” *Fla. Peach Growers Ass’n, Inc. v. U.S. Dep’t of Lab.*, 489 F.2d. 120, 127 (5th Cir. 1974).

<sup>14</sup> 29 U.S.C. § 655(c). OSHA’s rulemaking process generally consists of seven stages and can take more than ten years to complete, making this six-month turnaround difficult for the Agency to meet. *See The OSHA Rulemaking Process*, Occupational Safety & Health Admin., [https://www.osha.gov/sites/default/files/OSHA\\_FlowChart.pdf](https://www.osha.gov/sites/default/files/OSHA_FlowChart.pdf) (last updated Oct. 15, 2012).

United States.<sup>15</sup> Phoenix experienced the hottest month ever observed in a U.S. city, sweltering through a record 31 consecutive days at or above 110°F, and ultimately recording a total of 55 days above 110°F from June through September.<sup>16</sup> As overnight lows in Phoenix averaged around 90°F, there was little respite from the oppressive heat; indeed, on July 19th, the city recorded its warmest overnight low on record, 97°F.<sup>17</sup>

But Phoenix was hardly the only U.S. city to endure unprecedented extreme heat. El Paso, Texas saw 44 consecutive days above 100°F from mid-June into July, nearly doubling a previous record.<sup>18</sup> Miami sweltered through its hottest year on record,<sup>19</sup> and ocean temperatures off the coast of Florida soared to 101 degrees.<sup>20</sup> In the northeast, New York City's summer was "anomalous," as the City recorded a three-day stretch of temperatures above 90°F late in the season in September.<sup>21</sup> As President Biden remarked in summer 2023, "[Do] we really want to pretend these things are normal?"<sup>22</sup>

While summer 2023 continued the long-term warming trend associated with climate change, "exceptionally high sea surface temperatures, fueled in part by the return of El Niño," also contributed to summer 2023's record warmth.<sup>23</sup> El Niño is a recurring natural climate phenomenon characterized by elevated surface temperatures in the Pacific Ocean that is linked to warmer than average conditions in many regions across the globe. However, climate scientists have expressed

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<sup>15</sup> Press Release, NASA, NASA Announces Summer 2023 Hottest on Record (Sept. 14, 2023), <https://www.nasa.gov/news-release/nasa-announces-summer-2023-hottest-on-record>; see also *Summer 2023 Was Hottest on Record, Scientists Say*, Reuters (Sept. 7, 2023), <https://www.reuters.com/business/environment/august-was-hottest-ever-recorded-third-straight-month-set-record-2023-09-06/> (citing the European Union Climate Change Service).

<sup>16</sup> Zach Levitt & Elena Shao, *Where This Summer Was Relentlessly Hot*, N.Y. Times (Oct. 8, 2023), <https://www.nytimes.com/interactive/2023/10/09/world/hottest-summer-global-map.html>; Matthew Cappucci, *Phoenix Just Posted the Hottest Month Ever Observed in a U.S. City*, Wash. Post (Aug. 1, 2023), <https://www.washingtonpost.com/weather/2023/08/01/phoenix-record-hot-month-climate/>.

<sup>17</sup> Cappucci, *supra* note 16.

<sup>18</sup> Levitt & Shao, *supra* note 16.

<sup>19</sup> Harris & Miznazi, *supra* note 7.

<sup>20</sup> Hiroko Tabuchi, *101°F in the Ocean off Florida: Was It a World Record?*, N.Y. Times (July 26, 2023), <https://www.nytimes.com/2023/07/26/climate/florida-100-degree-water.html>.

<sup>21</sup> Brian K. Sullivan, *New York Will Get Longest Stretch of 90-Degree Temperatures of the Summer*, Bloomberg (Sept. 5, 2023), <https://www.bloomberg.com/news/articles/2023-09-05/new-york-broils-under-longest-heat-stretch-of-summer>.

<sup>22</sup> Remarks by President Biden on Actions to Protect Communities from Extreme Heat (July 27, 2023), <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/07/27/remarks-by-president-biden-on-actions-to-protect-communities-from-extreme-heat/>.

<sup>23</sup> NASA Announces Summer 2023 Hottest on Record, *supra* note 15; see also Remarks by President Biden, *supra* note 22 (noting that El Niño exacerbates the effects of climate change).

concern over summer 2023's unrelenting heat, because at that time, El Niño was just emerging and “not having a huge impact yet” on temperature extremes.<sup>24</sup>

Experts predict that summer 2024 will be even hotter because of both the escalating climate crisis and the enduring effects of El Niño, which is expected to peak in late 2023 and early 2024.<sup>25</sup> Because the effects of El Niño are usually most pronounced in the few months after it peaks, the Northern Hemisphere will likely experience more record-breaking extreme heat in summer 2024.<sup>26</sup> But while El Niño will soon abate, catastrophic climate change is here to stay.<sup>27</sup> As climate scientists have long warned, until we stop emitting greenhouse gases into the atmosphere, “temperatures will keep on rising.”<sup>28</sup>

In addition to record-breaking heat, summer 2023 also brought high humidity across many regions of the United States, further compounding the dangers of extreme heat.<sup>29</sup> Across the southeast, extreme temperatures coupled with high humidity “made the air feel swampy and suffocating.”<sup>30</sup> In Gulfport, Mississippi, the average high heat index in August was 112°F, with a high of 120°F on August 10th.<sup>31</sup> Compared to the ambient temperature, the heat index is a better indicator of the potential for heat stress because it measures the combined effects of heat and relative humidity, and reflects what the temperature “feels like.”<sup>32</sup>

Likewise, as temperatures rise, areas of the contiguous United States have faced more days with dangerously high wet-bulb globe temperatures (WBGTs) compared to locations at similar latitudes across the globe.<sup>33</sup> Measured with a specialized thermometer, the WBGT accounts for temperature, humidity, radiation,

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<sup>24</sup> Levitt & Shao, *supra* note 16.

<sup>25</sup> Ella Nilsen, *2024 Will Probably Be Hotter Than This Year Because of El Niño*, *NASA Scientists Say*, CNN (July 20, 2023), <https://www.cnn.com/2023/07/20/us/2024-hotter-than-2023-el-nino-nasa-climate/index.html>.

<sup>26</sup> *Id.*; Erika Spanger-Siegfried, *Summer 2023 Is a Wrap: It Showed Us the Inequities of Keeping Cool in Killer Heat*, Union of Concerned Scis. (Sept. 21, 2023), <https://blog.ucsusa.org/erika-spanger-siegfried/summer-2023-is-a-wrap-it-showed-us-the-inequities-of-keeping-cool-in-killer-heat/>.

<sup>27</sup> Nilsen, *supra* note 25.

<sup>28</sup> *Id.*

<sup>29</sup> Kristina Dahl et al., *Increased Frequency of and Population Exposure to Extreme Heat Index Days in the United States During the 21st Century*, 1 *Env't Rsch. Comms.* 75,002 (2019).

<sup>30</sup> Levitt & Shao, *supra* note 16.

<sup>31</sup> *2023 Summer Heat & Climatology*, Nat'l Weather Serv., <https://www.weather.gov/lix/2023summerheat> (last updated Aug. 31, 2023).

<sup>32</sup> See *Heat Forecast Tools*, Nat'l Weather Serv., <https://www.weather.gov/safety/heat-index> (last visited Feb. 6, 2024).

<sup>33</sup> Dawei Li, Jiacan Yuan & Robert E. Kopp, *Escalating Global Exposure to Compound Heat-Humidity Extremes with Warming*, 15 *Env't Rsch. Letters* 64,003 (2020).



and windspeed and has been adopted as the basis for health guidelines for military training and outdoor sports.<sup>34</sup>

Based on a 2010 study,<sup>35</sup> scientists have long considered a WBGT of 35°C (or 95°F at 100% humidity) to be the upper limit to safe environmental temperatures because at that point, environmental conditions would theoretically be too hot for bi-directional methods of thermoregulation and too humid for evaporative cooling, or sweating.<sup>36</sup> However, recent research suggests that the actual limit is much lower. Researchers at Penn State University studied the effects of heat and humidity on young healthy men and women and found that the upper limit is closer to a WBGT of 31°C, which is approximately 31°C (88°F) at 100% humidity, or 38°C (100°F) at 60% humidity.<sup>37</sup> These findings indicate that extreme heat and humidity can become life-threatening far more quickly than previously thought.

As the effects of climate change intensify, extreme heat events will grow in frequency, duration, and severity, resulting in increases in illness and death from occupational heat exposure, along with the secondary effects of extreme heat, such as air pollution and wildfires.<sup>38</sup> As explained below, extreme heat poses a grave danger to millions of outdoor and indoor workers across the United States, and most significantly, farmworkers and construction workers.

## **B. Occupational Exposure to Extreme Heat Causes a Range of Serious Illnesses, and Even Death.**

While the human body can withstand high temperatures, “unprecedented extreme heat driven by climate change is challenging our ability to adapt.”<sup>39</sup> Such

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<sup>34</sup> *Id.*

<sup>35</sup> Steven C. Sherwood & Matthew Huber, *An Adaptability Limit to Climate Change due to Heat Stress*, 107 Proc. Nat’l Acad. of Scis. 9552 (2010).

<sup>36</sup> W. Larry Kenney et al., *How Hot Is Too Hot for the Human Body? Our Lab Found Heat + Humidity Gets Dangerous Faster than Most People Realize*, The Conversation (July 6, 2022), <https://theconversation.com/how-hot-is-too-hot-for-the-human-body-our-lab-found-heat-humidity-gets-dangerous-faster-than-many-people-realize-185593>.

<sup>37</sup> Daniel J. Vecellio et al., *Evaluating the 35°C Wet-Bulb Temperature Adaptability Threshold for Young Healthy Subjects (PSU HEAT Project)*, 132 J. Applied Physiology 340–45 (2022).

<sup>38</sup> See, e.g., Liza Gross & Peter Aldhous, *Dying in the Fields as Temperatures Soar*, Inside Climate News (Dec. 31, 2023), <https://insideclimatenews.org/news/31122023/california-farmworkers-dying-in-the-heat/> (recognizing the high number of heat-related farmworker deaths in areas of California with chronically bad air); Natalia Reyes Becerra, *Impacts of the Climate Crisis on Farmworkers*, Am. Lung Assoc. (Oct. 13, 2023), <https://www.lung.org/blog/climate-change-impacts-farmworkers> (noting the compounding effects of extreme heat and wildfire smoke, especially as climate change pushes harvest season into wildfire season).

<sup>39</sup> Dana Smith, *What Extreme Heat Does to Your Body*, N.Y. Times (Aug. 9, 2023), <https://www.nytimes.com/interactive/2023/08/10/well/live/heat-body-dehydration-health.html>.



extreme heat is especially pernicious for workers due to the combined effects of environmental temperature and metabolic stress.<sup>40</sup> Physical labor increases the body's metabolic heat load, which is compounded by environmental heat sources, such as the ambient temperature, direct sunlight, or radiant heat from machinery.

Exposure to extreme heat can cause a range of heat-related illnesses, and because they are often characterized by non-specific symptoms, such as headache, nausea, dizziness, and weakness, they can be difficult to identify and diagnose.<sup>41</sup> The most grave form of heat-related illness is heat stroke, a medical emergency that progresses quickly; the internal body temperature can rise to 106°F or higher within 10 to 15 minutes of onset.<sup>42</sup> Heat stroke is accompanied by serious, life-threatening symptoms, including confusion, hallucinations, coma, and seizures.<sup>43</sup> Survivors of heat stroke remain at high risk for organ failure or death within a year.<sup>44</sup> Rhabdomyolysis, which is the rapid death of muscle tissue, emerges after prolonged physical labor or exertion in the heat.<sup>45</sup> When muscle tissue breaks down and ruptures, electrolytes and proteins are released into the bloodstream and can cause irregular heart rhythms, seizures, and kidney damage.<sup>46</sup>

Even comparatively milder heat-related illnesses can rapidly progress and worsen underlying health conditions.<sup>47</sup> Heat exhaustion, which often results from a lack of hydration and shade, is characterized by a core temperature of less than 104°F and occurs when the body loses critical amounts of water and salt, particularly through excessive sweating.<sup>48</sup> Heat syncope, or fainting, is most likely to occur when unacclimatized workers are first exposed to heat stress.<sup>49</sup> Heat

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<sup>40</sup> See *Heat Stress—Heat Related Illness*, Nat'l Inst. for Occupational Safety & Health, <https://www.cdc.gov/niosh/topics/heatstress/heatrelillness.html> (last updated May 13, 2022); *Climate Change Indicators: Heat-Related Illnesses*, U.S. Env't Prot. Agency, <https://www.epa.gov/climate-indicators/heat-related-illnesses> (last updated July 21, 2023).

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> Brenda Jacklitsch et al., Nat'l Inst. for Occupational Safety & Health, DHHS Pub. No. 2016-106, *Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments* 52 (2016), <https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf>.

<sup>46</sup> *Id.*

<sup>47</sup> See *Heat Stress—Heat Related Illness*, Nat'l Inst. for Occupational Safety & Health, *supra* note 40; *Climate Change Indicators: Heat-Related Illnesses*, U.S. Env't Prot. Agency, *supra* note 40.

<sup>48</sup> *Id.*

<sup>49</sup> *Heat Stress—Heat Related Illness*, Nat'l Inst. for Occupational Safety & Health, *supra* note 40; Dep't of the Navy, NAVMED P-5010-3, *Manual of Naval Preventive Medicine: Prevention of Heat and Cold Stress Injuries (Ashore, Afloat, and Ground Forces)* at 3-8 (2009), <https://www.med.navy.mil/Portals/62/Documents/BUMED/Directives/All%20Pubs/5010-3.pdf?ver=yohnSL5ixr0E8pzXCJLhCw%3D%3D>.

cramps, which are also common for unacclimatized workers, are painful cramps that primarily occur in individuals performing vigorous physical work or exercise in heat stress conditions.<sup>50</sup> While potentially serious, these illnesses are readily treatable by removing the individual from heat and providing hydration, ideally with electrolytes.<sup>51</sup> Finally, sunburn and heat rash are skin irritations caused by heat exposure and are often antecedents to more serious conditions.<sup>52</sup>

In addition to these acute illnesses, repeated exposure to extreme heat poses significant long-term health risks, especially for outdoor workers. In recent decades, a global epidemic of chronic kidney disease of nontraditional origin (CKDnt) has been identified among farmworkers and other workers who labor outdoors in hot environments.<sup>53</sup> CKDnt is a kidney disease in patients who do not have the usual risk factors for the disease, such as diabetes, hypertension, cardiovascular disease, or old age.<sup>54</sup> Researchers estimate that CKDnt has caused up to 20,000 premature deaths in Central America, affecting primarily young male agricultural workers who experience chronic occupational heat stress.<sup>55</sup>

Acute kidney injuries resulting from heat strain and dehydration have also been documented in agricultural workers in the United States, including in California<sup>56</sup> and Florida, where researchers have identified a “strikingly high prevalence” of dehydration and kidney injuries.<sup>57</sup> There are also “hot spots” of

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<sup>50</sup> *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> *Heat Stress—Heat Related Illness*, Nat’l Inst. for Occupational Safety & Health, *supra* note 40.

<sup>53</sup> Env’t Def. Fund & La Isla Network, *Farmworkers and Heat Stress in the United States 20 (2023)*, [https://www.edf.org/sites/default/files/2023-07/EDF040\\_Heat%20Stress\\_V5.pdf](https://www.edf.org/sites/default/files/2023-07/EDF040_Heat%20Stress_V5.pdf).

<sup>54</sup> Farmworker Justice & Migrant Clinicians Network, *Heat-Related Illness Clinician’s Guide 2 (2021)*, [https://www.farmworkerjustice.org/wp-content/uploads/2021/06/2021\\_Heat-Stress\\_Clinicians-Guide\\_Aug-2021.pdf](https://www.farmworkerjustice.org/wp-content/uploads/2021/06/2021_Heat-Stress_Clinicians-Guide_Aug-2021.pdf).

<sup>55</sup> Catharine Wesseling et al., *Chronic Kidney Disease of Non-Traditional Origin in Mesoamerica: A Disease Primarily Driven by Occupational Heat Stress*, 44 *Pan Am. J. Pub. Health* (2020); see also Oriana Ramírez-Rubio et al., *Urine Biomarkers of Kidney Injury Among Adolescents in Nicaragua, a Region Affected by an Epidemic of Chronic Kidney Disease of Unknown Aetiology*, 31 *Nephrology Dialysis Transplantation* 424 (2016); Env’t Def. Fund & La Isla Network, *supra* note 53, at 21.

<sup>56</sup> Sally Moyce et al., *Heat Strain, Volume Depletion and Kidney Function in California Agricultural Workers*, 74 *J. Occupational & Env’t Med.* 402 (2017).

<sup>57</sup> Jacqueline Mix et al., *Hydration Status, Kidney Function, and Kidney Injury in Florida Agricultural Workers*, 60 *J. Occupational & Env’t Med.* 253 (2018). During the summers of 2015 and 2016, researchers collected blood and urine samples from 192 Florida agricultural workers over 555 workdays and found that approximately 53% of the workers were dehydrated pre-shift and 81% post-shift. On at least one workday, 33% of workers had an acute kidney injury, and the odds of an acute kidney injury increased 47% for each 5°F increase in the heat index.

chronic kidney disease in some of the hottest agricultural regions of the country, including the San Joaquin Valley in California and the Rio Grande Valley in Texas.<sup>58</sup> However, there is limited data on the prevalence of CKDnt among U.S. farmworkers because undocumented workers, who make up around half of the agricultural workforce, are unlikely to be registered in the U.S. Renal Data System, which collects data on kidney diseases.<sup>59</sup>

Because exposure to extreme heat can cause a range of acute and chronic heat-related illnesses and even death, occupational heat exposure is a grave danger to the health and safety of farmworkers and construction workers. This danger demands mitigation through an emergency temporary standard.

### **C. Farmworkers and Construction Workers Are Disproportionately Vulnerable to the Grave Danger of Extreme Heat in the Workplace.**

While tens of millions of outdoor and indoor workers are at risk of injury, illness, and death from exposure to extreme heat, farmworkers and construction workers face a disproportionately grave danger from extreme heat in the workplace. Among U.S. workers, farmworkers and construction workers suffer the highest heat-related fatality rates,<sup>60</sup> and they are disproportionately located in some of the hottest states in the nation, including Arizona, California, Florida, and Texas.<sup>61</sup>

#### **1. Farmworkers Are 35 Times More Likely to Die of Heat Exposure Than the General Population.**

Despite being among the nation's most essential workers, U.S. farmworkers are at an exceptionally high risk of heat-related illness and death in the workplace.<sup>62</sup> By some estimates, farmworkers are 35 times more likely to die of heat

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<sup>58</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 21.

<sup>59</sup> *Id.*

<sup>60</sup> Anna Phillips, *As Temperatures Rise, Industries Fight Heat Safeguards for Workers*, Wash. Post (Aug. 9, 2022), <https://www.washingtonpost.com/climate-environment/2022/08/09/climate-change-heat-workers/>.

<sup>61</sup> Juley Fulcher, Pub. Citizen, *Hot Take: The Demand for Immediate Worker Protections Increases as Dangerous Temperatures Rise 3* (2023).

<sup>62</sup> *See generally* Env't Def. Fund & La Isla Network, *supra* note 53; Kristoffer Tigue, *Extreme Heat Pushes More Farmworkers to Harvest at Night, Creating New Risks*, Inside Climate News (Oct. 31, 2023), <https://insideclimatenews.org/news/31102023/todays-climate-extreme-heat-farmworkers-harvest-at-night-climate-change/>; Diane M. Gubernot et al., *The Epidemiology of Occupational Heat Exposure in the United States: A Review of the Literature and Assessment of Research Needs in a Changing Climate*, 58 Int'l J. Biometeorology 1779, 1780 (2014); Diane M. Gubernot et al.,

exposure than the general population,<sup>63</sup> and 20 times more likely to die of heat-related causes than the rest of the U.S. civilian workforce.<sup>64</sup>

Farmworkers are particularly prone to heat illness due to the very nature of their work.<sup>65</sup> Farmworkers often labor outside in the direct sun during the hottest months of the year, and they tend to wear long-sleeved clothing and layers to protect against pesticides, insects, and the sun.<sup>66</sup> Workers in protective gear can begin to experience heat illness at temperatures 12°F to 27°F below temperatures at which workers in lighter clothing begin to experience such effects.<sup>67</sup>

But farmworkers also face unique socioeconomic vulnerabilities that make them much more susceptible to heat stress than the average U.S. worker.<sup>68</sup> Farmworkers are among the lowest paid workers in the nation, averaging \$14.62 per hour for non-supervisory roles, and they often lack benefits afforded to other workers, such as an hourly wage, overtime pay, paid sick leave, and health insurance.<sup>69</sup> Indeed, fewer than half of farmworkers have health insurance, which is a significant financial impediment to receiving medical treatment.<sup>70</sup> Likewise, without sick leave benefits, farmworkers are less inclined to take time away from work when they are feeling sick.<sup>71</sup>

In addition, the prevailing payment structure for farmworkers incentivizes dangerous practices that increase the risk of heat stress. Farmworkers are generally paid at a piece rate rather than by the hour, meaning that they are paid based on the volume or units of crops they pick.<sup>72</sup> Because of this payment structure, farmworkers may feel pressure to work faster, overexert themselves, or

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*Characterizing Occupational Heat-Related Mortality in the United States, 2000–2010: An Analysis Using the Census of Fatal Occupational Injuries Database*, 58 Am. J. Indus. Med. 203 (2015).

<sup>63</sup> Fulcher, *supra* note 61, at 3.

<sup>64</sup> See Union of Concerned Scis., *Farmworkers at Risk* 4 (2019), <https://www.ucsusa.org/sites/default/files/2019-12/farmworkers-at-risk-report-2019-web.pdf> (citing *Heat-Related Deaths Among Crop Workers—United States, 1992–2006*, Ctrs. for Disease Control & Prevention, <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5724a1.htm> (last updated June 19, 2008)).

<sup>65</sup> See Union of Concerned Scis., *Farmworkers at Risk*, *supra* note 64, at 4–5.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

<sup>68</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 10.

<sup>69</sup> *Id.* at 10–11.

<sup>70</sup> *Id.* at 11.

<sup>71</sup> *Id.*

<sup>72</sup> Spanger-Siegfried, *supra* note 26.

ignore symptoms of heat stress.<sup>73</sup> The piece rate system also disincentivizes farmworkers from taking time to rest, cool off in the shade, or get water.<sup>74</sup>

Moreover, many farmworkers live in substandard housing, often without internal cooling mechanisms.<sup>75</sup> While some employers are required to provide housing for temporary migrant farmworkers,<sup>76</sup> such housing tends to be crowded and lack fans or air-conditioning, preventing much-needed overnight recovery time from the heat.<sup>77</sup> As a result, farmworkers often start their workday already dehydrated or experiencing symptoms of heat stress.<sup>78</sup>

Still more socioeconomic factors make farmworkers uniquely vulnerable to occupational heat stress. Approximately 64% of farmworkers in the United States are immigrants,<sup>79</sup> around half of whom have no legal work authorization,<sup>80</sup> though some growers and contractors estimate that the share is closer to 75%.<sup>81</sup> Because of their immigration status, farmworkers may experience a high sense of risk aversion,<sup>82</sup> precluding them from demanding safer working conditions or navigating available medical, social, or legal services.<sup>83</sup> Likewise, farmworkers are not covered

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<sup>73</sup> Michael Sainato, *Big Business Lobbies Against Heat Protections for Workers as US Boils*, The Guardian (July 31, 2023), <https://www.theguardian.com/environment/2023/jul/31/heat-protections-workers-big-business-lobbies>.

<sup>74</sup> *Id.*; see also Vicki Hertzberg et al., *Novel Analytic Methods Needed for Real-Time Continuous Core Body Temperature Data*, 39 West J. Nurs. Rsch. 95 (2017) (concluding that four out of five farm workers studied had body temperatures higher than the healthy limit of 100.4°F at least once during a three-day monitoring period, and that about 85% of workers claimed to experience heat-related symptoms, such as dizziness, nausea, headaches, confusion, or fainting, because much of their work occurs in hot environments and workers are under pressure to meet certain production quotas, requiring rapid work and limited breaks).

<sup>75</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 13.

<sup>76</sup> See *H-2A Seasonal Worker Program Has Expanded Over Time*, Econ. Rsch. Serv., U.S. Dep't of Agric., <https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail?chartId=104874> (last updated Oct. 3, 2022).

<sup>77</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 13; Union of Concerned Scis., *Farmworkers at Risk*, *supra* note 64, at 5; see also 29 C.F.R. §§ 654.404 & 1910.142 (federal housing standards that do not require cooling mechanisms).

<sup>78</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 13; Union of Concerned Scis., *Farmworkers at Risk*, *supra* note 64, at 5; Fulcher, *supra* note 61.

<sup>79</sup> *Farm Labor*, Econ. Rsch. Serv., U.S. Dep't of Agric., <https://www.ers.usda.gov/topics/farm-economy/farm-labor/> (last updated Aug. 7, 2023).

<sup>80</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 12.

<sup>81</sup> Miriam Jordan, *Farmworkers, Mostly Undocumented, Become 'Essential' During Pandemic*, N.Y. Times (Apr. 10, 2020), <https://www.nytimes.com/2020/04/02/us/coronavirus-undocumented-immigrant-farmworkers-agriculture.html>.

<sup>82</sup> Env't Def. Fund & La Isla Network, *supra* note 53, at 12.

<sup>83</sup> See Jordan, *supra* note 81; Raquel Rosenbloom, *A Profile of Undocumented Agricultural Workers in the United States*, Ctr. for Migration Studies (Aug. 30, 2022),

by the National Labor Relations Act, and most states do not protect farmworkers' right to collectively organize or form unions.<sup>84</sup> Further, compared to workers in other industries, farmworkers are much more likely to be native Spanish-speakers or foreign-born, which can limit the accessibility of written training materials or guidance, and create language or cultural barriers with supervisors.<sup>85</sup>

These unique socioeconomic vulnerabilities, coupled with the dangerous nature of their work, put farmworkers at a grave danger of injury, illness, and death from extreme heat in the workplace. This danger warrants promulgation of an emergency temporary standard for heat exposure.

## **2. Construction Workers Account for 36% of Heat-Related Workplace Deaths Each Year.**

As President Biden noted in July 2023, construction workers “risk their lives working all day in blazing heat.”<sup>86</sup> Indeed, millions of construction workers labor in extreme heat each summer,<sup>87</sup> and while construction workers comprise only 6% of the national workforce, they account for 36% of heat-related deaths.<sup>88</sup>

The number of heat-related deaths among construction workers has steadily increased over time, and that trend is expected to continue.<sup>89</sup> By the middle of the 21st century, most parts of Florida and Texas—the states with the largest populations of construction workers—will experience an additional month's worth of days where the heat and humidity combine to feel hotter than 90°F.<sup>90</sup> At the same time, the number of workers employed in the construction sector is rising. In January 2024, the U.S. construction sector employed approximately 8.1 million

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<https://cmsny.org/agricultural-workers-rosenbloom-083022/>; Julia Shipley et al., *Heat Is Killing Workers in the U.S.—And There Are No Federal Rules to Protect Them*, NPR (Aug. 17, 2021), <https://www.npr.org/2021/08/17/1026154042/hundreds-of-workers-have-died-from-heat-in-the-last-decade-and-its-getting-worse>; Ingfei Chen, *How Heat Kills Farmworkers*, Mother Jones (Sept. 20, 2017), <https://www.motherjones.com/food/2017/09/farmworkers-hot-days-deadly-mendota-california/>.

<sup>84</sup> Johns Hopkins Ctr. for a Livable Future, *Essential and in Crisis: A Review of the Public Health Threats Facing Farmworkers in the US* 13 (2021).

<sup>85</sup> See Vt. L. School, Ctr. for Agric. & Food Systems, *Essentially Unprotected* 6, 32, 42 (2021).

<sup>86</sup> Remarks by President Biden, *supra* note 22.

<sup>87</sup> Pub. Citizen, *Extreme Heat and Unprotected Workers* 10 (2018), [https://www.citizen.org/wp-content/uploads/extreme\\_heat\\_and\\_unprotected\\_workers.pdf](https://www.citizen.org/wp-content/uploads/extreme_heat_and_unprotected_workers.pdf).

<sup>88</sup> Xiuwen Sue Dong et al., *Heat-Related Deaths Among Construction Workers in the United States*, 62 Am. J. Indus. Med. 1047–57 (2019).

<sup>89</sup> Pub. Citizen, *Extreme Heat and Unprotected Workers*, *supra* note 87, at 10.

<sup>90</sup> See Union of Concerned Scis., *Too Hot to Work* (2021), [https://www.ucsusa.org/sites/default/files/2021-09/Too-Hot-to-Work\\_9-7.pdf](https://www.ucsusa.org/sites/default/files/2021-09/Too-Hot-to-Work_9-7.pdf).



workers, and that number has risen each year from a decline in 2020 during the height of the COVID-19 pandemic.<sup>91</sup>

Several factors contribute to high rates of heat-related illness and death for construction workers. Construction work, by its nature, is physically intensive, and physical stress raises body temperature, making workers more susceptible to heat illness.<sup>92</sup> Similarly, construction workers often wear personal protective equipment, such as hard hats, gloves, and long-sleeved clothing, which can reduce the body's ability to cool itself off.<sup>93</sup> Construction workers also tend to work outdoors directly exposed to heat and sunlight, or in poorly ventilated, closed spaces, where they may be exposed to heat-producing equipment.<sup>94</sup>

Working in hot environments also increases the risk of other types of workplace injuries, such as falls and mishandling of dangerous machinery.<sup>95</sup> These injuries are likely the result of heat's ability to impair decision-making and cognitive function.<sup>96</sup> Thus, in addition to causing heat stress, extreme heat can result in traumatic accidents for construction workers.<sup>97</sup>

Finally, because they often work in urban settings, construction workers may be more susceptible to the urban heat island effect, a phenomenon where urbanized areas experience higher temperatures than surrounding areas, primarily due to the built environment's retention of heat.<sup>98</sup> In particular, cement, pavement, dark

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<sup>91</sup> *Construction: NAICS 23*, U.S. Bureau of Lab. Statistics, [https://www.bls.gov/iag/tgs/iag23.htm#workplace\\_trends](https://www.bls.gov/iag/tgs/iag23.htm#workplace_trends) (last updated Feb. 6, 2024).

<sup>92</sup> Katie Pyzyk, *As OSHA Works on New Heat-Related Standard, Contractors Deal with Excessively Hot Weather*, Construction Dive (July 18, 2022), <https://www.constructiondive.com/news/osha-develop-federal-heat-exposure-standard-construction-health-risk/627505/> (citing Dong et al., *supra* note 88).

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> See Anna M. Phillips, *Study: Hotter Temps Increased Workplace Injuries in California; Incidents Undercounted*, L.A. Times (July 16, 2021), <https://www.latimes.com/environment/story/2021-07-16/study-finds-hotter-temperatures-increased-workplace-injuries-in-california>.

<sup>96</sup> *Id.*; R. Jisung Park et al., IZA Inst. of Lab. Econ., *Temperature, Workplace Safety, and Labor Market Inequality* 19 (2021), <https://ftp.iza.org/dp14560.pdf>; Samantha Maldonado & Suhail Bhat, *Extreme Heat Increases Workplace Injuries, But New York Lacks Safety Standards*, The City (Aug. 31, 2023), <https://www.thecity.nyc/2023/08/31/extreme-heat-workplace-injury-safety-standards/>.

<sup>97</sup> Phillips, *supra* note 60.

<sup>98</sup> See *Climate Change and the Health of Workers*, U.S. Env't Prot. Agency, <https://www.epa.gov/climateimpacts/climate-change-and-health-workers> (last updated Dec. 27, 2023); *Heat Island Effect*, U.S. Env't Prot. Agency, <https://www.epa.gov/heatislands> (last updated Jan. 29, 2024).

rooftops, and other non-vegetated surfaces in cities absorb and store heat, which is then released gradually at night.<sup>99</sup> Daytime temperatures in urban areas are on average 1°F to 6°F higher than in rural areas, while nighttime temperatures can be as much as 22°F higher.<sup>100</sup> While virtually all cities across the United States experience the urban heat island effect, it is most pronounced in humid regions (primarily in the eastern United States) and in cities with larger and denser populations.<sup>101</sup>

Construction workers are already at a grave danger of injury, illness, and death from extreme heat in the workplace, and this danger will only worsen in summer 2024. An emergency temporary standard is therefore necessary to protect construction workers from extreme heat this coming summer.

#### **D. Occupational Heat Exposure Is an Issue of Environmental and Racial Justice, Especially for Farmworkers and Construction Workers.**

As OSHA has recognized, certain workers are at an increased risk of occupational heat illness not only because of the nature of their work, “but also because of factors like the color of their skin, their ethnicity, or the fact that English is not their first language.”<sup>102</sup> Indeed, it is well-documented that heat stress disproportionately burdens workers of color and low-wage workers, largely because they are overrepresented in occupations most vulnerable to heat, including labor-intensive outdoor occupations like agriculture and construction.<sup>103</sup>

Race is closely linked to the risk of heat-related death in the workplace. Workers who identify as Hispanic or Latino have accounted for one-third of all heat-related fatalities since 2010, even though they represent only 18% of the national workforce.<sup>104</sup> This disparity is partially attributable to the fact that around 75% of

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<sup>99</sup> *Understanding the Urban Heat Island Index*, Cal. Env’t Prot. Agency, <https://calepa.ca.gov/climate/urban-heat-island-index-for-california/understanding-the-urban-heat-island-index/> (last visited Feb. 6, 2024).

<sup>100</sup> *Id.*

<sup>101</sup> Kenneth Hibbard et al., U.S. Global Change Rsch. Program, Climate Science Special Report: Fourth National Climate Assessment, Changes in Land Cover and Terrestrial Biogeochemistry (2017), <https://science2017.globalchange.gov/chapter/10/>.

<sup>102</sup> Sainato, *supra* note 73.

<sup>103</sup> See, e.g., Pub. Citizen, Boiling Point (2022), <https://www.citizen.org/article/boiling-point/>; Union of Concerned Scis., Too Hot to Work, *supra* note 90, at 3; Ariel Wittenberg, *OSHA Targets Heat Threats Heightened by Climate Change*, E&E News: Greenwire (Oct. 26, 2021), <https://www.eenews.net/articles/osha-targets-heat-threats-heightened-by-climate-change/>.

<sup>104</sup> See Wittenberg, *supra* note 103.

farmworkers<sup>105</sup> and 40% of construction workers nationwide identify as Hispanic or Latino.<sup>106</sup> In the construction sector, Black workers are 51% more likely to die of heat-related causes than the average construction worker.<sup>107</sup>

Similarly, immigrants and seasonal workers suffer from a higher rate of occupational heat illness, in part, because the nation's food system relies heavily on their labor.<sup>108</sup> Over half of farmworkers across the country are either undocumented or migrant workers,<sup>109</sup> and approximately three-quarters were born outside the United States, mainly in Mexico.<sup>110</sup> Likewise, in the construction sector, heat-related deaths for Mexican-born construction workers are 90% higher than the average for all construction workers.<sup>111</sup>

Workers who are paid low wages are also disproportionately vulnerable to extreme heat in the workplace, as they tend to work in more physically grueling and dangerous jobs.<sup>112</sup> According to farmworker advocacy groups, low-wage workers often tolerate dangerous conditions because they do not have a lot of financial options.<sup>113</sup> Indeed, “[a]s long as they’re getting paid something, they’re probably not going to complain about the excessive heat.”<sup>114</sup> Moreover, low-wage workers are more likely to live in areas affected by the urban heat island effect or have trouble paying high energy bills associated with air-conditioning, limiting their ability to cool down at home.<sup>115</sup>

Because workers of color and low-wage workers are disproportionately exposed to dangerous levels of heat in the workplace, occupational heat exposure is an issue of environmental and racial justice, especially for farmworkers and

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<sup>105</sup> JBS Int'l & U.S. Dep't of Lab., Findings from the National Agricultural Workers Survey (NAWS) 2019–2020, Research Report No. 16 (2022), <https://www.dol.gov/sites/dolgov/files/ETA/naws/pdfs/NAWS%20Research%20Report%2016.pdf>.

<sup>106</sup> *Labor Force Statistics from the Current Population Survey*, U.S. Bureau of Lab. Statistics, <https://www.bls.gov/cps/cpsaat11.htm> (last updated Jan. 26, 2024).

<sup>107</sup> Fulcher, *supra* note 61, at 6.

<sup>108</sup> Union of Concerned Scis., *Farmworkers at Risk*, *supra* note 64, at 2.

<sup>109</sup> Daniel Costa, Philip Martin & Zachariah Rutledge, *Econ. Pol'y Inst.*, *Federal Labor Standards Enforcement in Agriculture* (2020).

<sup>110</sup> Union of Concerned Scis., *Farmworkers at Risk*, *supra* note 64, at 2; JBS Int'l & U.S. Dep't of Lab., *supra* note 105.

<sup>111</sup> Fulcher, *supra* note 61, at 6.

<sup>112</sup> See Phillips, *supra* note 60.

<sup>113</sup> Aryn Baker, *Extreme Heat Is Endangering America's Workers—and Its Economy*, *Time* (Aug. 3, 2023), <https://time.com/6299091/extreme-heat-us-workers-economy/>.

<sup>114</sup> *Id.*

<sup>115</sup> *Heat Islands and Equity*, U.S. Env't Prot. Agency, <https://www.epa.gov/heatislands/heat-islands-and-equity> (last updated Dec. 3, 2023).

construction workers. To abate the grave danger of extreme heat—and to mitigate these inequities—OSHA should promulgate an emergency temporary standard for occupational heat exposure for summer 2024.

**E. The Number of Workplace Injuries, Illnesses, and Deaths from Heat Exposure Is Unacceptable and Likely Significantly Undercounted.**

While the number of reported occupational injuries, illnesses, and deaths attributable to heat exposure is already unacceptably high, that number is likely significantly undercounted.<sup>116</sup> Officially, the Bureau of Labor Statistics cites heat as a contributing cause of death for at least 43 workplace fatalities in 2022 and 2021, and 56 in 2020.<sup>117</sup> Recent research suggests, however, that heat causes up to 2,000 worker deaths per year in the United States.<sup>118</sup> Indeed, OSHA is “confident that [the Bureau of Labor Statistics’ number] is an undercount. Probably a significant undercount.”<sup>119</sup>

This undercount results from, among other things, the failure to recognize the role of heat in exacerbating underlying medical conditions and increasing workplace injuries; existing reporting requirements that do not require reporting if the injury or illness does not result in medical treatment or days away from work; and disincentives for employees and employers alike, including fear of lost wages, retaliation, and reputational harm.<sup>120</sup> These disincentives are particularly acute for undocumented, migrant, or low-wage workers, who are often at the greatest risk of heat-related illness.<sup>121</sup>

Recent analysis of more than 11 million workers’ compensation injury reports in California from 2001 through 2018 found that high temperatures likely caused approximately 20,000 additional injuries and illnesses per year in that state

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<sup>116</sup> Baker, *supra* note 113; *see also* 86 Fed. Reg. 59,309, 59,310 (Oct. 27, 2021) (OSHA recognizing that injuries, illnesses, and deaths from occupational heat exposure are significantly undercounted).

<sup>117</sup> *See Fatal Occupational Injuries by Event or Exposure, 2022*, U.S. Bureau of Lab. Stat., <https://www.bls.gov/charts/census-of-fatal-occupational-injuries/fatal-occupational-injuries-by-event-drilldown.htm> (last visited Feb. 6, 2024); *43 Work-Related Deaths Due to Environmental Heat Exposure in 2019*, TED: The Econ. Daily (Sept. 1, 2021), <https://www.bls.gov/opub/ted/2021/43-work-related-deaths-due-to-environmental-heat-exposure-in-2019.htm>.

<sup>118</sup> Rosemary K. Sokas & Emily Senay, *Preventing Heat-Related Illnesses Among Outdoor Workers—Opportunities for Clinicians and Policymakers*, 389 *New Eng. J. Med.* 1253 (2023).

<sup>119</sup> Baker, *supra* note 113.

<sup>120</sup> *See* 86 Fed. Reg. at 59,310–11; Sokas & Senay, *supra* note 118; Baker, *supra* note 113.

<sup>121</sup> 86 Fed. Reg. at 59,311.

alone.<sup>122</sup> That number is approximately 300 times the official number of annual injuries and illnesses attributed to heat by the California Division of Occupational Safety and Health.<sup>123</sup> Researchers attribute this discrepancy to heat's impacts on cognition and concentration, which, when experienced in hazardous work environments like construction sites, can markedly increase workplace accidents.<sup>124</sup>

Based on the foregoing, it is undeniable that extreme heat poses a grave danger to the health and safety of farmworkers and construction workers in our States and across the nation. As explained below, an emergency temporary standard is necessary to protect workers from this danger during the hottest months of the year.

## **II. An Emergency Temporary Standard Is Necessary to Protect Farmworkers and Construction Workers from the Grave Danger of Extreme Heat.**

OSHA recently affirmed that the Agency “will continue to use all the tools in [its] toolbox to ensure all workers have the health and safety protections they need and deserve in every workplace,” such as developing a permanent standard for occupational heat exposure.<sup>125</sup> While there is no doubt that a permanent heat standard will eventually save lives,<sup>126</sup> OSHA's rulemaking is expected to take several years, and a new administration could significantly delay or even derail a final rule. An emergency temporary standard, however, is a powerful tool that OSHA could implement immediately to protect farmworkers and construction workers from the grave danger of extreme heat. An emergency temporary standard is therefore necessary for two primary reasons.

First, as summer 2023 made clear, OSHA's current outreach and enforcement efforts, while significant, are still insufficient to protect workers from the grave danger of extreme heat in the workplace. Likewise, OSHA's enforcement of heat hazards under the General Duty Clause of the Occupational Safety and Health Act presents challenges for OSHA and employers alike, largely because of the lack of a discernible standard. An emergency temporary standard, however, is a legally binding rule that will give OSHA stronger enforcement power and provide clear safety requirements for employers.

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<sup>122</sup> R. Jisung Park, Nora Pankratz & A. Patrick Behrer, *Temperature, Workplace Safety, and Labor Market Inequality* (Ctr. for Equitable Growth, Working Paper, July 14, 2021).

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> Sainato, *supra* note 73.

<sup>126</sup> David Michaels, an epidemiologist at George Washington University who led OSHA during the Obama administration, predicts that when OSHA issues a permanent heat standard it will “be a game changer” and “it will save lives.” *Id.*

Second, OSHA cannot rely on individual states to promulgate standards to protect workers from extreme heat. While states are not preempted from developing their own heat standards, and states like California, Oregon, and Washington have already done so, many other states, including some of the most heat vulnerable states, are unlikely to implement heat standards on their own. At least two states—Texas and Florida, which experience some of the hottest temperatures in the United States—are seeking to preempt local governments’ ability to pass worker protection standards. In addition, while there have been some efforts to implement occupational heat standards at the state and local levels, those efforts have largely been blocked or weakened following opposition from lobbying interests. An emergency temporary standard would immediately address the inconsistencies across the states by providing a uniform enforceable standard. An emergency temporary standard is therefore necessary to protect farmworkers and construction workers from extreme heat in summer 2024.

**A. OSHA’s Current Enforcement of Heat Hazards Is Insufficient to Protect Workers from the Grave Danger of Extreme Heat.**

In its April 17, 2023 letter to the States, OSHA “recognize[d] the need to act now” to protect workers from extreme heat.<sup>127</sup> To that end, OSHA has implemented a National Emphasis Program for “heat-related inspections on high-risk worksites”<sup>128</sup> and, in July 2023, OSHA issued a Heat Hazard Alert “to remind employers of their obligation to protect workers against heat illness or injury.”<sup>129</sup> While proactive outreach and inspections under OSHA’s National Emphasis Program and its Heat Hazard Alert can mitigate dangers in some workplaces, they are hardly a replacement for a comprehensive and preventive rule that is legally binding on employers.

While OSHA can, on a case-by-case basis, cite employers for workplace safety violations under the General Duty Clause of the Occupational Safety and Health Act,<sup>130</sup> heat hazards have been historically difficult to enforce under this provision. This difficulty stems from the fact that OSHA cannot require abatement of a workplace hazard under the General Duty Clause unless it can prove in an enforcement proceeding that specific workplace conditions were hazardous, which is

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<sup>127</sup> OSHA April 2023 Letter, *supra* note 2, at 2.

<sup>128</sup> *Id.*

<sup>129</sup> See Press Release, U.S. Dep’t of Lab., Department of Labor Announces Hazard Alert, Steps Up Enforcement as Extreme Heat Endangers Workers Across the Nation (July 27, 2023), <https://www.osha.gov/news/newsreleases/national/07272023>.

<sup>130</sup> The General Duty Clause requires employers to “furnish to each of [their] employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to [their] employees.” 29 U.S.C. § 654.



difficult to do without a defined standard.<sup>131</sup> Because of this burden of proof, heat hazard enforcement actions under the General Duty Clause “are very legally vulnerable.”<sup>132</sup>

OSHA’s rulemaking for a permanent standard is expected to take several years, and it is unclear if OSHA will even publish a proposed rule by the end of 2024, leaving farmworkers and construction workers disproportionately vulnerable to occupational heat stress in the interim. An emergency temporary standard, which carries the same legal weight as a permanent standard, would substantially bolster OSHA’s enforcement efforts and serve as a legal reference point in enforcement proceedings going forward. Thus, an emergency temporary standard is necessary to protect farmworkers and construction workers from the grave danger of extreme heat this coming summer.

## **B. OSHA Cannot Rely on Individual States to Adopt Standards to Protect Farmworkers and Construction Workers from Extreme Heat.**

As OSHA noted in its April 17, 2023, letter to the States, any state could promulgate an occupational heat standard in the absence of a federal standard.<sup>133</sup> While some states and local jurisdictions have acted on their own, it is improbable that all the states, especially the most heat vulnerable states, will take such action. Indeed, many state legislatures have indicated their intention to weaken or rescind workplace safety standards. Thus, OSHA cannot relinquish its affirmative duty under Section 6(c) of the Occupational Safety and Health Act and rely on individual states to implement standards to protect farmworkers and construction workers from extreme heat.

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<sup>131</sup> 86 Fed. Reg. at 59,314–15.

<sup>132</sup> Whizy Kim & Kenny Torrella, *This Summer Is Giving Us a Glimpse at the Dangerous Future of Work*, Vox (Aug. 25, 2023), <https://www.vox.com/23844420/extreme-heat-work-labor-osha-climate-change>; see also *Sec’y of Lab. v. A.H. Sturgill Roofing, Inc.*, No. 13-0224, at 7 n.8, <https://www.oshrc.gov/assets/1/18/A.H. Sturgill Roofing Inc 13-0224 Decision> (OSHRC Feb. 28, 2019) (noting “the difficulty in addressing this issue in the absence of an OSHA standard,” even when a fatality occurs); *Sec’y of Lab. v. U.S. Postal Serv., Nat’l Ass’n. of Letter Carriers (NALC) & Nat’l Rural Letter Carriers’ Ass’n (NRLCA)*, OSHRC Dkt. Nos. 16-1713; 16-1813; 16-1872; 17-0023 & 17-0279, <https://www.oshrc.gov/assets/1/6/16-1713 Decision and Order> (OSHRC July 29, 2020) (finding that OSHA had not met its burden of establishing a workplace hazard, even though there was evidence that the heat index was as high as 109°F, and workers were medically diagnosed with heat illnesses).

<sup>133</sup> See OSHA April 2023 Letter, *supra* note 2, at 3 (citing 29 U.S.C. § 667(a)).

Five states—California, Oregon, Washington, Minnesota, and Colorado<sup>134</sup>—have promulgated some form of protective heat standards for workers. In addition, many states are in the process of developing workplace heat standards or have introduced legislation to establish such standards.<sup>135</sup> However, public records reveal that many other attempts by state and local governments to implement occupational heat standards “have been blocked or weakened following opposition from industry groups representing agriculture, construction and other business interests.”<sup>136</sup>

The Florida legislature has made more attempts to pass heat protection bills than any other state legislature, but nearly all the bills have failed without a single committee hearing.<sup>137</sup> In July 2023, with no action at the state level, the Miami-Dade County Commission introduced legislation that would have required agriculture and construction employers with five or more employees to give workers 10-minute breaks in the shade every two hours on days when the heat index reached 90°F, and provide training to workers to recognize the signs of heat illness.<sup>138</sup> Workers lauded the bill as “historic,” but after public opposition from industry groups, the bill was first weakened, and later deferred for reconsideration in 2024.<sup>139</sup> In January 2024, however, the Florida State Senate Commerce and Tourism Committee approved a bill that would ban local governments from requiring employers to provide heat protections for outdoor workers, which, if passed, would preempt Miami-Dade County from implementing local protections.<sup>140</sup>

Texas, the state with the most heat-related worker deaths per year, has passed legislation that would preempt local governments from implementing heat

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<sup>134</sup> See Cal. Code Regs. tit. 8, § 3395 (outdoor workers); Or. Admin. R. 437-002-0156 (indoor and outdoor workers); Wash. Admin. Code §§ 296-62-095 to 296-62-09560 (outdoor workers); Minn. R. 5205.0110 (indoor workers); 7 Colo. Code Regs. § 1103-15-3 (farmworkers).

<sup>135</sup> See, e.g., Proposed Rule, MD Draft Heat Stress Standard (2024), <https://www.dllr.state.md.us/labor/dliheatstressillnessprevstandarddraft.pdf>; N.Y. S.B. S1604D, 2023–2024 Leg. Sess., <https://www.nysenate.gov/legislation/bills/2023/S1604/amendment/D>.

<sup>136</sup> Phillips, *supra* note 60.

<sup>137</sup> Jana Cholakovska & Nate Rosenfield, *Workers Are Dying from Extreme Heat. Why Aren't There Laws to Protect Them?*, Grist (Oct. 19, 2023), <https://grist.org/accountability/outdoor-worker-extreme-heat-protections-labor-law-osh/>. According to one lawmaker, the failure of heat protection bills in Florida is due, at least in part, to industry groups opposing the measures. *Id.*

<sup>138</sup> Joe Gorchow, *Miami-Dade Shelves Heat Protections for Outdoor Workers*, CBS News Miami (Nov. 7, 2023), <https://www.cbsnews.com/miami/news/miami-dade-shelves-protections-for-outdoor-workers/>.

<sup>139</sup> *Id.*

<sup>140</sup> Fla. CS/SB-1492 (2024); see also Rachel Tucker, *Florida Bill Banning Heat Protection Laws for Outdoor Workers Moves Forward* (Jan. 23, 2024), <https://www.wfla.com/news/politics/florida-bill-banning-heat-protection-laws-for-outdoor-workers-moves-forward/>.

protections.<sup>141</sup> In June 2023, Texas enacted the Texas Regulatory Consistency Act (dubbed the “Death Star” bill by opponents) that would authorize the state to preempt any local ordinances that go beyond the requirements of state law, including worker protection standards.<sup>142</sup> Effective September 1, 2023, the bill would immediately repeal, among other things, ordinances in Dallas and Austin requiring water breaks for construction workers, and preempt San Antonio’s efforts to enact a similar ordinance.<sup>143</sup> In response, Houston, San Antonio, and El Paso sued the state of Texas, alleging that the law conflicts with a section of the state constitution that permits cities to enact their own laws.<sup>144</sup> A state district judge ruled that the law is unconstitutional, but the case is pending appeal.<sup>145</sup>

These examples show that it is implausible that all states will act to protect their most vulnerable workers from occupational heat exposure. Thus, it is necessary for OSHA to promulgate an emergency temporary standard for summer 2024 to ensure that farmworkers and construction workers are protected from the danger of extreme heat.

### **III. OSHA Should Issue an Emergency Temporary Standard that Sets a Heat Exposure Threshold and Requires Employers to Implement Preventive Measures to Protect Workers from the Grave Danger of Extreme Heat.**

Without an emergency temporary standard, farmworkers and construction workers will continue to be exposed to extreme occupational heat that can result in severe injury and illness, and even death. Climate scientists predict that summer 2024 will be even hotter than 2023, and this extreme heat will disproportionately affect vulnerable workers, such as low-wage workers and workers of color. We therefore urge OSHA to promulgate by May 1, 2024, an emergency temporary standard that applies when the heat index reaches 80°F and requires employers to provide, at minimum, access to water; access to shaded or cool areas; rest breaks; acclimatization; temperature and workload monitoring; heat alert plans; employee

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<sup>141</sup> Cholakovska & Rosenfield, *supra* note 137.

<sup>142</sup> Tex. H.B. 2127 (2023); Joshua Fechter, *Judge Declares New Texas Law that Would Erode Cities’ Power to Enact Local Rules Unconstitutional*, Tex. Trib. (Aug. 30, 2023), <https://www.texastribune.org/2023/08/30/texas-death-star-bill-unconstitutional/>.

<sup>143</sup> *Id.*

<sup>144</sup> Fechter, *supra* note 142; *City of Houston et al. v. State of Tex.*, No. D-I-GN-23-003474 (Travis Cty. Dist. Ct. 2023).

<sup>145</sup> Andrew Schneider, “*Death Star Law*” Takes Effect on Schedule, Following the State’s Appeal of a Lower Court Ruling, Tex. Pub. Radio (Sept. 3, 2023), <https://www.tpr.org/government-politics/2023-09-05/death-star-law-takes-effect-on-schedule-following-the-states-appeal-of-a-lower-court-ruling>.

and supervisor training; recordkeeping; and heightened protections for vulnerable workers.

**A. OSHA’s Emergency Temporary Standard Should Take Effect When the Heat Index Reaches 80°F.**

OSHA should promulgate an emergency temporary standard that takes effect when the heat index reaches 80°F, a temperature cited by the National Weather Service as indicating a likelihood of heat disorders with prolonged exposure or strenuous activity.<sup>146</sup> In its April 2022 National Emphasis Program directive, OSHA explained that a heat index of 80°F is a threshold where “serious occupational heat-related illnesses and injuries become more frequent,” especially when individuals are performing strenuous work in radiant heat.<sup>147</sup> Thus, OSHA inspectors have prioritized heat-related interventions and inspections on days when the heat index exceeds 80°F.<sup>148</sup> To facilitate monitoring, OSHA and the National Institute for Occupational Safety and Health, a subdivision of the Centers for Disease Control and Prevention, have already developed a Heat Safety Tool App that measures the heat index and, based on that reading, provides recommendations on how to minimize the risk of heat-related illness.<sup>149</sup>

Oregon’s heat standard, which covers both outdoor and indoor workers, uses this threshold. Specifically, when the heat index meets or exceeds 80°F, Oregon requires employers to provide workers with cool or cold drinking water and access to a shaded area equipped with mechanical cooling or open to the outside air.<sup>150</sup> Further, when the heat index reaches 90°F, Oregon employers are required to implement high heat practices, including rest breaks that meet minimum durations and intervals.<sup>151</sup>

Similarly, Washington’s standard applies to all outdoor workers when the ambient temperature reaches 80°F, and to workers wearing nonbreathable clothes

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<sup>146</sup> *National Weather Service Heat Index Chart*, Nat’l Weather Serv., <https://www.weather.gov/media/unr/heatindex.pdf> (last visited Feb. 6, 2024); Occupational Safety & Health Admin., National Emphasis Program—Outdoor and Indoor Heat-Related Hazards, CPL 03-00-024 (Apr. 8, 2022), [https://www.osha.gov/sites/default/files/enforcement/directives/CPL\\_03-00-024.pdf](https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024.pdf).

<sup>147</sup> Occupational Safety & Health Admin., National Emphasis Program, *supra* note 146.

<sup>148</sup> *Id.*

<sup>149</sup> See *OSHA-NIOSH Heat Safety Tool App*, Nat’l Inst. for Occupational Safety & Health, <https://www.cdc.gov/niosh/topics/heatstress/heatapp.html> (last updated Aug. 2, 2022). Based on our conversations with labor advocates, the Heat Safety Tool App is effective and easy to use in the workplace.

<sup>150</sup> Or. Admin. R. 437-002-0156.

<sup>151</sup> *Id.*

or personal protective equipment at 52°F.<sup>152</sup> California’s standard requires preventive interventions, such as the mandatory setup of shade, when the ambient temperature reaches 80°F.<sup>153</sup> Though neither is based on the heat index, the Washington and California standards show that 80°F is a critical temperature where intervention is necessary to prevent heat-related illness in the workplace.

Thus, OSHA’s emergency temporary standard should apply when the heat index reaches 80°F, and when that threshold is met, require employers to implement protective measures, such as providing adequate water and access to shaded or cool areas.

## **B. OSHA Should Require Employers to Implement Protective Measures to Minimize the Risk of Occupational Heat-Related Illness for Farmworkers and Construction Workers.**

To significantly reduce the risk of occupational heat-related illness, OSHA should require employers to provide or implement the following protective measures, at minimum, when the heat index reaches or exceeds 80°F. These simple measures—especially the provision of water, rest, and shade—are both effective and easily implementable for employers.

### **1. Water**

OSHA should require employers to provide adequate amounts of cool potable water in or near the work area and at no cost to the workers when the heat index reaches 80°F. California, Washington, and Oregon’s standards all require employers to provide suitably cool potable water so that all employees can drink at least one quart of water per hour.<sup>154</sup> Oregon’s standard further defines cool water as between 66°F and 77°F and cold water as between 35°F and 65°F.<sup>155</sup> OSHA should also require employers to encourage the frequent consumption of water when the work environment is hot and employees are likely to be sweating, even if they do not experience strong thirst.<sup>156</sup>

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<sup>152</sup> Wash. Admin. Code § 296-62-09530, tbl.1.

<sup>153</sup> Cal. Code Regs. tit. 8, § 3395.

<sup>154</sup> *Id.* § 3395(c); Or. Admin. R. 437-002-0156; Wash. Admin. Code § 296-62-09540(1).

<sup>155</sup> Or. Admin. R. 437-002-0156(2)(b).

<sup>156</sup> *See* Cal. Code Regs. tit. 8, § 3395(h)(c); *see also* Minn. Dep’t of Lab. & Indus., MNOSHA Heat Stress Guide 7 (2009), [https://mn.gov/admin/assets/heat\\_stress\\_guide\\_tcm36-207189.pdf](https://mn.gov/admin/assets/heat_stress_guide_tcm36-207189.pdf) (recommending that workers hydrate in small amounts frequently, even if they do not experience strong thirst); N.Y. S.B. S1164A, 2021–2022 Leg. Sess., Purpose of Bill and Justification, <https://www.nysenate.gov/legislation/bills/2021/s1164/amendment/a> (recommending the same in proposed legislation for delivery workers).

## 2. Access to Shaded or Cool Areas

OSHA should require employers to provide access to shaded or cool areas as close as practicable to the work area when the heat index reaches 80°F. The California, Oregon, and Washington standards require that the shaded area be either open to the outside air or equipped with mechanical ventilation or cooling.<sup>157</sup> OSHA should also require that the shaded area be adequately cool. Under the California, Oregon, and Washington standards, “[s]hade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool.”<sup>158</sup> Further, the shaded area should be large enough to accommodate the number of employees on recovery or rest periods without having to be in physical contact with one another.<sup>159</sup>

## 3. Rest Breaks

Relatedly, OSHA should direct employers to provide and monitor mandatory rest breaks for workers when temperature thresholds are met and encourage workers to take breaks, as needed.<sup>160</sup> For instance, under Oregon’s standard, employers must adopt one of three suggested work/rest cycles, where the frequency and duration of the rest period increases as the temperature rises.<sup>161</sup> Under each work/rest cycle, at the very least, a ten-minute rest break is required every two hours when the heat index is 90°F or greater.<sup>162</sup> Under the California standard, an employer must allow and encourage employees to take preventive cool-down rest periods of at least five minutes in the shade as needed, regardless of the temperature.<sup>163</sup> The California standard also prohibits an employer from ordering an employee back to work “until any signs or symptoms of heat illness have abated.”<sup>164</sup>

Further, OSHA should require that all rest breaks be mandatory and paid so that workers do not skip breaks out of fear of lost wages. In addition, rest breaks

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<sup>157</sup> See Cal. Code Regs. tit. 8, § 3395(b); Or. Admin. R. 437-002-0156(2)(e); Wash. Admin. Code § 296-62-09535(1).

<sup>158</sup> See Cal. Code Regs. tit. 8, § 3395(b); Or. Admin. R. 437-002-0156(2)(e); Wash. Admin. Code § 296-62-09520(8).

<sup>159</sup> See Cal. Code Regs. tit. 8, § 3395(b); Or. Admin. R. 437-002-0156(2)(e); Wash. Admin. Code § 296-62-09535.

<sup>160</sup> See Cal. Code Regs. tit. 8, § 3395(d)(3) (“Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating.”)

<sup>161</sup> Or. Admin. R. 437-002-0156(5)(e)(A)–(C).

<sup>162</sup> *Id.*

<sup>163</sup> Cal. Code Regs. tit. 8, § 3395(d)(3).

<sup>164</sup> *Id.* § 3395(d)(3)–(4).



should be longer and more frequent if workers are wearing clothing that restricts heat removal, such as coveralls or hazmat suits, or if workers are confronted with increased risks, such as unhealthy air quality or wildfire smoke.<sup>165</sup>

#### **4. Acclimatization**

To minimize the risk of heat-related illness, OSHA should require employers to implement heat acclimatization programs for new workers, workers newly exposed to hot environments, workers returning after an absence, and workers who may travel or be transferred to hotter regions for work. California, Oregon, and Washington’s standards define acclimatization as the “temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it.”<sup>166</sup> The standards further recognize that, for individuals with no underlying medical conditions, acclimatization peaks within seven to fourteen days of regular work for at least two hours per day in the heat.<sup>167</sup> Oregon’s standard also acknowledges that “there is no ‘one-size-fits-all’ acclimatization plan,” and acclimatization may vary based on an individual’s fitness level and personal risk factors.<sup>168</sup>

To ensure that individual workers are properly acclimatized, OSHA should require that a supervisor or designee closely observe workers for signs and symptoms of heat-related illness for their first fourteen days of employment in hot weather conditions. OSHA should also consider requiring employers to implement a gradual workload phase-in for new employees, with 20% of the usual duration of work in a hot environment on the first day, and for each subsequent day, an increase of no more than 20%. This acclimatization phase-in period is recommended by the National Institute for Occupational Safety and Health and referenced in Oregon and Washington’s standards.<sup>169</sup>

#### **5. Temperature and Workload Monitoring**

OSHA should require employers to monitor the heat index, which is available in OSHA’s Heat Safety Tool App and weather applications through the National Weather Service, to determine when relevant temperature thresholds are met in the work area. Employers should also monitor cooling conditions in shaded areas

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<sup>165</sup> See 7 Colo. Rules & Regs. § 1103-15-3.4.1(B) (defining “increased risk conditions” as including unhealthy air quality).

<sup>166</sup> Cal. Code Regs. tit. 8, § 3395(b); Or. Admin. R. 437-002-0156(2)(a); Wash. Admin. Code § 296-62-09520(1).

<sup>167</sup> *Id.*

<sup>168</sup> Or. Admin. R. 437-002-0156(7).

<sup>169</sup> Jacklitsch et al., *supra* note 45, at 34; see also Or. Admin. R. 437-002-0156(2)(a); Wash. Admin. Code § 296-62-09545.

and rest areas to ensure that workers are afforded adequate relief from the heat during breaks.

OSHA's emergency temporary standard should also include a provision for workload monitoring, especially when the heat index reaches 90°F, at which point rest breaks should become more frequent. Under Oregon's standard, employers are advised to consider the intensity of the work being performed when implementing work/rest cycles during high heat conditions.<sup>170</sup> Workload monitoring should also account for any personal protective equipment that an employee is wearing, which can significantly impede the body's ability to cool down.

## **6. High-Heat Practices**

Similarly, OSHA should require employers to implement high-heat practices when certain temperature thresholds are met. High-heat practices should require heightened monitoring of workers for signs and symptoms of heat illness, the postponement of non-urgent work, and longer rest breaks.<sup>171</sup>

For example, California's high-heat practices have additional requirements for days when the temperature is above 95°F. Specifically, employers must ensure effective communication between employees and supervisors; observe and monitor employees for symptoms of heat-related illness; designate a person authorized to call for emergency medical services (and allow others to call when the designee is not available); provide regular reminders to drink water; and conduct pre-shift meetings.<sup>172</sup> In Washington, the threshold for high-heat practices is an ambient temperature of 90°F,<sup>173</sup> whereas in Oregon, the threshold is a heat index of 90°F.<sup>174</sup>

## **7. Employee and Supervisor Training**

To ensure the efficacy of the emergency temporary standard, OSHA should require employers to provide heat-illness prevention training to all employees and supervisors in a language, format, and vocabulary they can easily understand.<sup>175</sup> The training should include a discussion of the employer's procedures for complying with the requirements of the emergency temporary standard; environmental risk factors; personal risk factors that may affect an individual's tolerance to heat, such as obesity and chronic illnesses; the role of exertion, clothing, and personal

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<sup>170</sup> Or. Admin. R. 437-002-0156(5)(e).

<sup>171</sup> Jacklitsch et al., *supra* note 45, at 10.

<sup>172</sup> Cal. Code Regs. tit. 8, § 3395(e).

<sup>173</sup> Wash. Admin. Code § 296-62-09547.

<sup>174</sup> Or. Admin. R. 437-002-0156(5).

<sup>175</sup> See Cal. Code Regs. tit. 8, § 3395(i); Or. Admin. R. 437-002-0156(5); Wash. Admin. Code § 296-62-09560.

protective equipment in increasing heat loads; the importance of water, rest, shade, and acclimatization; the signs and symptoms of heat-related illness; appropriate first aid responses; and the importance of immediately reporting signs or symptoms of possible heat illness to a supervisor for medical treatment.<sup>176</sup> Supervisors should receive additional training on how to implement the requirements of the emergency temporary standard; monitor weather reports; and respond when an employee exhibits signs or symptoms of heat illness.<sup>177</sup>

## **8. Recordkeeping**

As part of an emergency temporary standard, OSHA should require employers to keep and submit detailed records of all heat-related illnesses and injuries, regardless of severity, as they occur. OSHA should also require employers to review the records regularly to identify weaknesses in heat stress protocols and implement changes to better protect workers.

### **C. OSHA Should Require Employers to Institute Measures to Protect Vulnerable Workers.**

Finally, OSHA should require employers to take targeted steps to protect their most vulnerable workers. For instance, because heat stress can occur even when the heat index is far below 80°F,<sup>178</sup> OSHA should require that employee training programs cover various personal risk factors and vulnerabilities that may make workers more susceptible to heat-related illnesses at lower temperatures.

OSHA should also mandate that employers adopt a whistleblower protection policy and explain it to workers.<sup>179</sup> The policy should prohibit any person from discriminating or retaliating against an employee for reporting a heat-related concern or seeking assistance with respect to a heat-related hazard. A whistleblower protection policy will better protect vulnerable workers, such as low-

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<sup>176</sup> See Cal. Code Regs. tit. 8, § 3395(h); Or. Admin. R. 437-002-0156(9); Wash. Admin. Code § 296-62-09560.

<sup>177</sup> See *id.*

<sup>178</sup> See Occupational Safety & Health Admin., National Emphasis Program, *supra* note 146, at 5.

<sup>179</sup> California's outdoor heat standard contains a provision reminding workers of their rights. See Cal. Code Regs. tit. 8, § 3395(a) n.2 ("This standard is enforceable by the Division of Occupational Safety 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.").

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wage, migrant, or undocumented workers, who may be disincentivized from reporting dangerous heat conditions in the workplace.

### Conclusion

Extreme heat is already a grave danger to the health and safety of farmworkers and construction workers across the country, and that danger is expected to worsen in summer 2024. Because an emergency temporary standard for occupational heat exposure is necessary to protect these workers from heat-related injury, illness, and death during the hottest months of the year, the undersigned Attorneys General urge OSHA to promulgate an emergency temporary standard to protect farmworkers and construction workers, at minimum, incorporating the recommendations set forth above, by May 1, 2024.

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