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BURNING POINT: Why States Can't Wait for Federal Heat Protections

Audrey Nott

Daisy Martinez Jimenez

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Introduction

As climate change continues to drive extreme temperatures across the United States, heat and safety in the workplace has become a critical public health and labor issue. Although the Occupational Safety and Health Administration (OSHA) agency regulates workplace safety at the federal level, there is currently no national standard addressing extreme heat or providing protections for workers exposed to high temperatures. In response to this regulatory gap, seven states have taken a proactive approach to protecting their workers by enacting their own workplace heat safety regulations through their state level OSHA agencies. Due to the critical nature of work hazards, it is essential that states continue to lead in the absence of federal action by developing and implementing their own heat safety regulations to protect their workers and industries.

Problem Definition

As climate change drives extreme temperatures across the United States, heat and safety in the workplace has become a critical public health and labor issue. Extreme heat claimed 177 lives last year and at least 211 workers between 2017 and 2022, making it leading cause of death among weather-related fatalities (Economic Policy Institute).

In August of 2025, the World Health Organization (WHO) and World Meteorological Organization (WMO) released a joint report sounding the alarm on the growing threat extreme heat to workers across the world, urging governments to implement occupational heat action plans for worker wellbeing and economic resilience (World Health Organization, 2025).

Workers vulnerable to extreme heat include outdoor laborers in agriculture, construction, and delivery services, due to the extended exposure to heat hazards. Indoor workers can also face dangerous temperatures, especially in industries like manufacturing, mining, boiler room management, or otherwise engaged in strenuous physical activity. These workers face an increased risk of heat-related illnesses and occupational injuries (CDC, 2024).

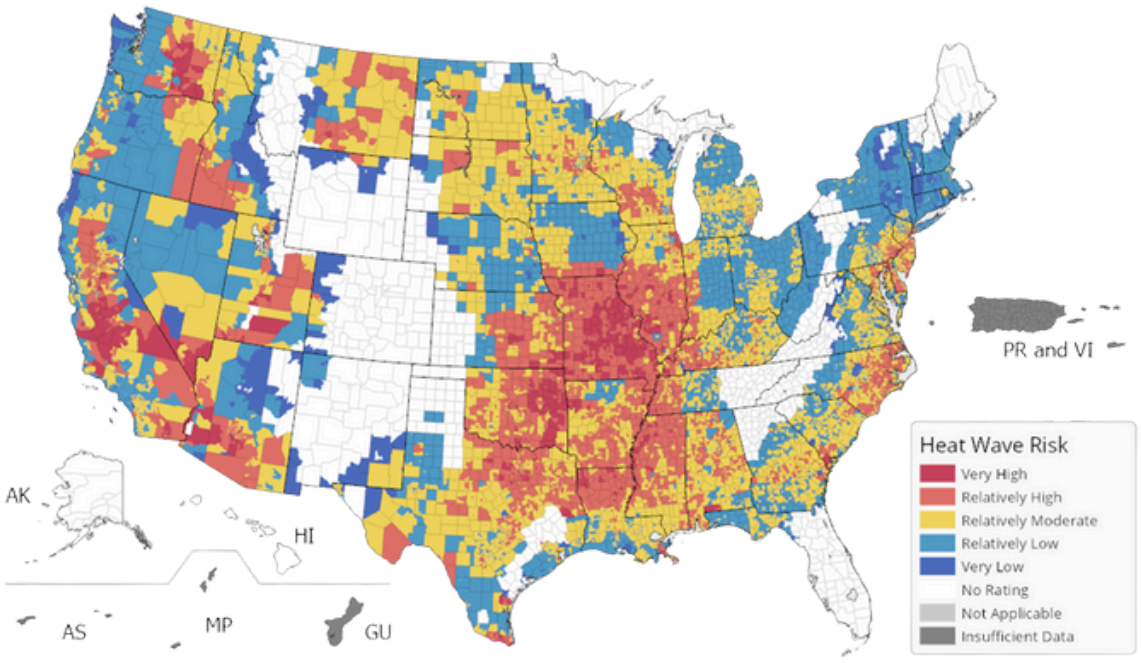
Workers across the United States are at risk for heat-related fatalities and injuries. Temperatures are increasing and without immediate interventions, there will be grave humanitarian and welfare consequences.

Role for Government

In the United States, workplace safety is regulated by the Occupational Safety and Health Administration (OSHA) and state level OSHA agencies. Safety regulations in the workplace provide protection from toxic chemicals, excessive noise levels, mechanical dangers, and unsanitary conditions (Clemans-Cope et al., 2024). Notably, there does not exist a federal standard on extreme heat as an occupational hazard.

In 2024, the Occupational Safety and Health Administration (OSHA) formally proposed a new heat standard titled Heat Injury and Illness Prevent in Outdoor and Indoor Work Settings, which would apply to all employers and industries under OSHA's jurisdiction. The proposed rule would require employers to evaluate heat hazards in their workplace and create a plan to protect employees from dangerous heat exposure (National Archives, 2024). Unfortunately, the proposed standard has progressed beyond the public comment period, and it remains unclear whether the Trump administration will adopt a final version of proposed OSHA heat standard (Economic Policy Institute, 2025). As action at the federal level stalls, states must take the initiative to enact stronger heat standards and worker protections to prioritize the health and safety of all workers.

Heat standards will vary from state to state because of differences in extreme temperatures and heat wave risks. States will have unique evaluations of heat risks and temperature thresholds for when heat protection plans must be followed. For example, states in the Southwest, like California and Arizona, have a higher and more frequent heat wave risk compared to states in the Northeast, like New York and Vermont. This shows the importance of state specific heat protections that account for local weather conditions.



Heat Wave National Risk Index | Federal Emergency Management Agency (FEMA)

Stakeholders

At the forefront of worker protections and security in the workplace regarding heat hazards are workers, including in outdoor and indoor industries. Workers in outdoor industries such as in agriculture, construction, mining, and sanitation, face high risk of exposure to extreme heat due to the nature of their labor and the hot environment they work in (NIOSH, 2016). Indoor workers in industries like baking, boiler room workers, and factory workers are also vulnerable to extreme temperatures (NIOSH, 2016).

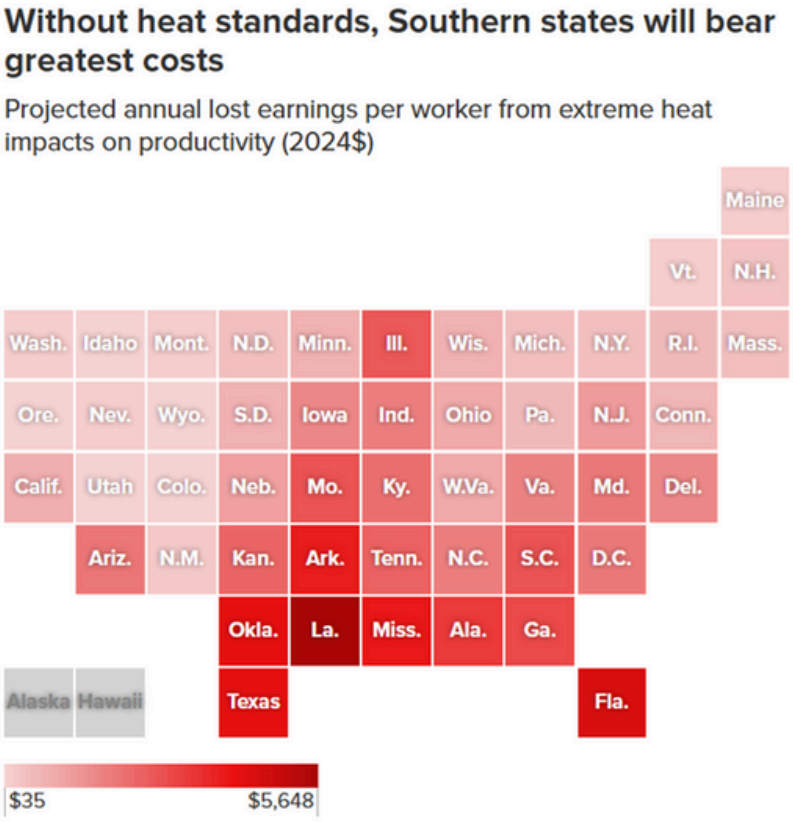
As a result of exposure to extreme heat, workers may experience heat related illnesses like heat stroke, heat exhaustion, heat syncope, heat cramps, rashes, and physical injuries from sweaty palms, heat interference with protective gear, and decreased brain function, and can ultimately result in death (NIOSH, 2016). The Bureau of Labor Statistics reports that from 1992 to 2022, 986 workers died as a result of exposure to extreme heat. This is an underestimate of the true impact of heat on workers as many heat related injuries and deaths are not categorized due to the complex health impacts of health stress and underreporting, particularly in industries with higher proportions of undocumented workers (NIOSH, 2016). Unions as organizations advocating on behalf of workers and laborers also have an interest in the creation of a federal heat standard and protections from heat as a workplace hazard. Unions such as the American Federation of State, County and Municipal Employees (AFSCME) are advocating for basic protections such as water, shade, and rest, to protect its members from heat related injury and death (AFSCME, 2025).

Employers must also be considered as they are responsible for implementing workplace protection regulations and liable to OSHA inspections. As enforcers of workplace laws and regulations, OSHA conducts inspections of workplaces and employer practices to ensure compliance; furthermore, it acts proactively to prevent workplace injuries and fatalities and may impose severe financial penalties on employers for violations, ranging from $16,550 to $165,514 for repeated offenses. (Cornell Law School, 2021; OSHA, 2025). This creates a financial interest for employers to ensure compliance with workplace health and safety regulations. Furthermore, extreme heat creates disruptions in work time and may result in economic loss from reductions in worker productivity.

Current Policy Landscape

Heat regulations have faced opposition from industry interests and businesses who argue that protections would be too costly to implement. This is backed by little evidence, and OSHA claims that savings to employers would outweigh any implementation costs by $1.4 billion a year.

States cannot afford to wait for the federal government to pass protective heat standards. Heat causes lower productivity for workers, which hurts our economy. “Short-term heat-induced lost labor productivity costs the U.S. approximately $100 billion annually and these costs will only increase as climate change worsens.” These may double to nearly $200 billion by 2030 and reach $500 billion by 2050 (Economic Policy Institute, 2025). Texas and Florida are the states that account for almost half of all severe heat-related injuries in the construction industry in 2015-2023, yet they have failed to pass statewide heat standards and have even banned cities and counties from passing local heat standards. This is just one example of why federal and state regulations for the safety and protection of workers nationwide are in dire need.



Impact on Productivity | Economic Policy Institute | 2025

On a humanitarian level, workers have protections from toxic chemicals, excessive noise levels mechanical dangers, and unsanitary conditions, and shouldn't risk their health and wellbeing because federal standards have failed to keep up with increasing temperatures and hazards in the workplace. Workers in extreme heat perform essential tasks that keep our society running, including agricultural workers, sanitation workers, and delivery drivers working at the convenience of consumers. Given their significant contributions to the functionality of society, the health and wellbeing of workers should be prioritized through the enactment of federal heat standard and protection regulations.

In the meantime, states are taking matters into their own hands. Seven states have already implemented heat standards: California, Colorado, Maryland, Minnesota, Nevada, Oregon, and Washington. States have enacted their own workplace extreme heat regulations through their respective OSHA agencies.

California, for example, has remained committed to offering and enforcing heat protections for workers in the state. The state first developed its heat standard in response to a heat wave in 2005 and has since revised its standard in 2015 and 2024 to expand its regulatory scope (Dean, 2025). The California Heat Illness Prevention Standards cover all outdoor workplaces and include indoor workplaces where the indoor temperature is greater than 82 degrees (Cal/OSHA, 2024). The standards require employers to monitor weather forecasts for extreme heat, which determines when heat protection must be followed. California uses a standard of 80 degrees for outdoor workplaces and 82 degrees for indoor industries. Regardless of whether workers are indoors or outdoors, employers must provide cool down areas in areas away from the heat hazard or in the shade, mandatory rest periods and water breaks, and have in place a heat illness prevention plan in which employers are trained to monitor for heat related illnesses, provide access to emergency services (CAL/OSHA, 2024). Indoor workplaces must mitigate temperatures which engineering controls must be pursued to keep workers safe (CAL/OSHA, 2024). California also emphasizes multilingual outreach to remind all workers, regardless of language, of their protections and rights.

Colorado governs heat in the workplace with Rule 3: Heat Illness and Injury Prevention; particularly by focusing on the agricultural sector. Requirements of Rule 3 kick in when outdoor work temperatures reach 80 degrees Fahrenheit. Similarly to California, Employees must provide potable drinking water and an opportunity to take water breaks. Shade must be accessible to the work site or ventilated if work is indoors (CAL/OSHA, 2024). Rule 3 requires notification to employees of their right to heat protection, breaks, and preventative cool down strategies. Additionally, should a worker fall ill to heat stress, the employer must have a person of contact for work site emergencies and provide prompt relief of duty when symptoms occur (CDLE, 2022).

Policy Recommendations

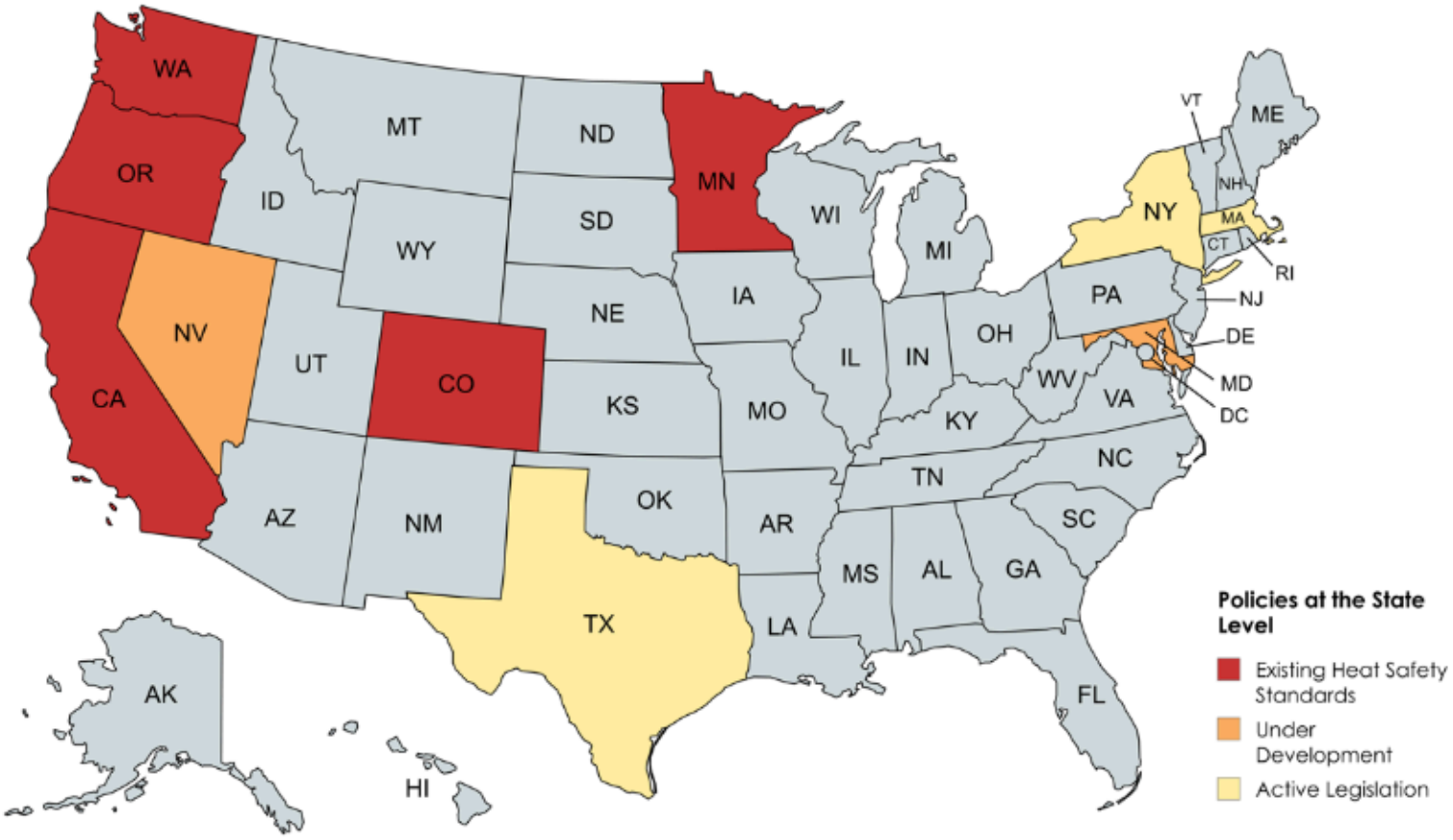
Stricter Enforcement of the OSHA Act: The General Duty Clause

Until a federal heat standard is adopted, OSHA needs to strengthen the enforcement of the General Duty Clause from the OSHA Act of 1970. It states that all employers should provide a work environment that is “free from recognized hazards that are causing or are likely to cause death or serious physical harm” (OSHA, 2019). The General Duty Clause is used only when a standard has not been developed for a particular hazard; in this case, a lack of federal standard of heat in the workplace constitutes immediate use of this clause. If OSHA uses the General Duty Clause to cite violations of heat hazards, then employers are more likely to take action to prevent the likelihood of heat disturbances.

There exists precedent for citing employers for excessively hot work environments using the General Duty Clause as it creates exposure to potential serious physical harm (OSHA, 2001). It is important to note that using the General Duty Clause is only a temporary solution and it is a reactive policy recommendation. With only the general duty clause, workers who believe they are working in unsafe heat conditions must file a confidential complaint with OSHA; though a workplace inspection by the agency would not be guaranteed. This is where state responsibility comes into play.

State Development of Heat Standards and Illness Prevention Plans

States should not wait for the federal government to finalize OSHA's proposed heat standards and enforcement regulations. OSHA agencies at the state level must take proactive action to develop and adopt comprehensive heat protection frameworks. States like California, Oregon, Washington, and Colorado have already created their own workplace heat safety frameworks that demonstrate a commitment to the wellbeing of workers, protecting economic productivity, and enforceable heat standards.



States with Heat Safety Standards in the U.S.

Because climate, temperature risks, and labor market characteristics vary across regions, states must tailor their heat standards to the specific needs of their labor force and vulnerable populations (Clemans-Cope et al., 2024). State specific standards could allow for more effective and responsive protections that adequately meet the needs of workers and industries than a generalized standard would.

First, states must evaluate their average temperatures to establish clear thresholds that trigger mandatory heat protections. In Washington, for example, the Outdoor Heat Exposure Rule must be followed when temperatures are 90°F or hotter, requiring workers to take additional paid, cool down rest periods of at least 10 minutes every 2 hours (Washington State Department of Labor & Industries, n.d.). Longer and more frequent breaks are indicated when temperatures continue to rise to 100°F. Traditional weather forecasts may be sufficient to monitor extreme temperatures, however, states may want to experiment with effective monitoring technologies that send out site-specific heat alerts to employers and employees.

Heat standards must include actions to prevent heat stress and related injuries. The Center for Disease Control (CDC) recommends heat stress to be mitigated through administrative interventions such as limiting exposure time to heat hazards through adequate rest schedules, secure access to fresh water, cool down areas away from heat sources, as well as work force training in recognizing dangers and illness from heat (NIOSH, 2016). The ideal tool would be engineering controls to regulate workplace temperatures, which of course is not feasible for outdoor laborers but can be pursued for indoor workplaces. As such, state heat standards must guarantee heat protections for outdoor and indoor workers.

These temperature thresholds need to mandate precautions like water, rest, and shade. State protections need to cover all indoor and outdoor workers, guarantee a phased acclimatization period, set clear temperature thresholds that trigger additional protections and ensure that workers are compensated for cooling breaks.

State heat standards and regulations must also have requirements around rest and cool down areas. The proposed OSHA standard provides two thresholds for mandating rest breaks which states can implement (Clemans-Cope et al., 2024). At 80 degrees Fahrenheit, employers should provide break areas and clean drinking water close enough to the worksite yet away from the heat hazard. At 90 degrees, employers should require workers to take 15-minute rest breaks every two hours. Colorado's heat standard for agricultural workplaces also mandates the notification of workers right to heat protection and preventative cool down breaks. This is low stakes action that states can undertake to keep workers informed and decrease the risk of heat related illness or injury. Additionally, states should consider the environment of the cool down areas. Colorado requires cool down and rest areas to be big enough to accommodate workers and at the minimum provide shade, and ventilation when possible (CDLE, 2022).

Many states also consider the vulnerability of new workers in high heat industries and mandate an acclimation period. National Institute for Occupational Safety and Health (NIOSH) states that new workers in industries with extreme heat hazards are more likely to succumb to heat illness and injuries. As such, states like California follow a 14-day acclimation period for new workers to gain tolerance to heat in the work environment.

Following the examples of California and Colorado, employers must be trained in recognizing heat related illnesses and their symptoms, as well as the increased risk of work-related injuries during extreme heat exposure. The employer must also have an emergency plan that will be enacted should a worker fall ill. The regulations to be outlined in this policy recommendation must be complied with when temperatures indoor or outdoor reach 80 degrees Fahrenheit or higher. New workers in industries with exposure to extreme heat are especially vulnerable to heat stress and thus should be acclimated to the work environment over a 14-day period.

Signs of Heat Illness

- **Abnormal Thinking or Behavior**
- **Slurred Speech**
- **Headache or Nausea**
- **Weakness or Dizziness**
- **Heavy Sweating or Hot, Dry Skin**
- **Elevated Body Temperature**

Education: The Foundation of Heat Security

OSHA emphasizes education as a key prevention tool. In 2011, OSHA launched "Water. Rest. Shade." as part of their Heat Illness Prevention campaign. This campaign has reached millions of people by partnering with employers and local governments to train workers on heat illness prevention with bilingual educational materials. It is essential that work supervisors and workers receive training on the risks of heat stress, the symptoms to look out for, and the methods for prevention (Kjellstrom et al., 2017). Education is essential for reducing heat related injuries because it increases awareness and promotes the consistent use of protective measures such as hydration and rest breaks. Businesses and employers should partner with their local government (i.e. Emergency Management Office or Safety and Health Departments) to host workshops aimed at educating and training their workers on the dangerous risks of heat. These awareness campaigns will provide industry-specific information for sectors such as construction, agriculture, or manufacturing. Employers can use this time to demonstrate cooling equipment and strategies, encourage signing up for local heat alert systems, and share timely safety tips. Consistent yearly training will create a culture of safety where both workers and employers are trained to prevent and respond to heat-related incidents.

Conclusion

Rising temperatures triggered by climate change are posing a high threat to worker security, public safety, and economic stability. There is no federal heat standard and the future of the proposed federal heat standard under the Trump administration remains unknown, with the potential for delay, modification, or withdrawal. This legislative failure exposes millions to preventable risks. Until it can be finalized, the General Duty Clause should be enforced more thoroughly by OSHA to hold employers responsible for protecting their workers from heat hazards. States must also take the lead in implementing more effective heat protection policies to protect workers and prevent further economic loss. States need to act now to limit future harm to their workers, businesses, and state economies. Furthermore, local government departmental partnerships with local businesses on safety practices and awareness is essential. A more robust heat protection foundation can be created with stronger OSHA enforcement, proactive state regulations, and training in the workplace. Prioritizing heat worker safety in a warming climate is essential for national and human security.

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