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El Sol No Perdona: The Impact of Extreme Heat on the Latino Workforce

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Executive Summary

Extreme heat is a growing concern for workers, especially in physically demanding and outdoor jobs. As heat waves increase in frequency and severity, numerous workers are at risk of heat-related illnesses and fatalities. In certain industries, such as agriculture and construction, workers face higher exposure to hazardous heat conditions. Disadvantaged populations, including Black and Latino workers, undocumented immigrants, pregnant people, incarcerated individuals, and individuals with chronic health conditions or disabilities, are disproportionately affected.

There is no federal Occupational Safety and Health Administration (OSHA) standard to protect workers from extreme heat. Only six states have any heat-standard regulations, leaving millions of workers unprotected. Some states have adopted state-specific heat safety standards, but implementation and enforcement remain inconsistent. Strengthening federal and state regulations, coupled with enhanced enforcement and oversight, is crucial to ensuring safer working conditions as heat risks continue to rise.

Background

The frequency of heat waves has

increased steadily, rising from an average of two heat waves annually in the 1960s to six annually in recent decades.[1] These extreme heat events are expected to increase in frequency and intensity in the future due to climate change. [2] In 2023, extreme heat was the leading cause of weather-related deaths in the United States.[3]

Workers across various industries face significant risks from hazardous heat exposure, with those in physically demanding or outdoor occupations at the greatest risk of serious injuries and illnesses.[4] Studies have shown that agriculture and construction workers in the U.S. are 35 and 13 times more likely to die from a heat-related illness than employees in other sectors. [5][6]

According to the U.S. Bureau of Labor Statistics, there was an annual average of 40 environmental heat exposure employment-related deaths between 2011 and 2022.[7] Between 2017 and 2022, OSHA reported and investigated 1,054 cases of heat-related injuries, illnesses, and fatalities.[8] This includes 211 fatalities and 625 hospitalizations.[9]

According to OSHA, these numbers are likely vast underestimates.[10] The full extent of heat-related injuries is generally underreported because heat is not always recognized as a

contributing factor, and the criteria for defining a heat-related death or illness may vary by state and medical professionals.[11] Furthermore, employers and employees are disincentivized from reporting injuries and illnesses. Employers may opt not to report injuries and illnesses out of concern of increasing workers' compensation costs and harming its reputation.[12] Employees may hesitate to report these issues due to a fear of retaliation.[13] This is especially true for undocumented, migrant, low-wage, and other vulnerable workers in high-risk sectors like agriculture and construction.

Problem Analysis

When analyzing the impacts of extreme heat, it's also important to understand the effects on disadvantaged populations.

People of Color

Black and Latino individuals, along with undocumented immigrants, are disproportionately affected due to their overrepresentation in jobs that are highly exposed to extreme heat conditions. For example, in Florida, a state without any heat protection laws, Latino and undocumented immigrant workers make up disproportionate shares of outdoor workers. Latino workers make up 40% of the outdoor workforce compared with 30% of the total workforce, and undocumented immigrants make up nearly twice the share of

outdoor workers compared to their share of the workforce (22% vs. 12%).[14] On a national scale, more than 40% of outdoor workers identified as either Black or Hispanic/Latino despite only comprising about 32% of the general population. [15]

Pregnant People

Pregnant workers are more likely to become dehydrated and experience heat stroke or heat exhaustion sooner than non-pregnant workers because it is harder for the body to cool down during pregnancy.[16] Studies have also shown that increased heat loads during early pregnancy can increase the fetus' risk of birth defects or abnormalities.[17] Nearly one in three employed pregnant Black women and Latinas hold low-wage jobs.[18] As a result, pregnant Black and Latina workers are likely to stand, walk, or run continuously during work, making them more likely to need accommodations during pregnancy to continue working safely. [19]

Incarcerated Individuals

U.S. prisoners are vulnerable to extreme heat due to a lack of air conditioning and clean water, aging infrastructure, and unethical carceral punishment practices. In 2018, nearly a million incarcerated individuals were housed in facilities that saw an annual increase in the number of days per year where the Wet Bulb Globe Temperature - a measure of the heat stress in direct sunlight - exceeded 82.4°F.[20] There is no federal mandate for prisons to have air conditioning or regulate their indoor air temperature. Roughly 20% of federal prisons do not have universal air conditioning.[21]

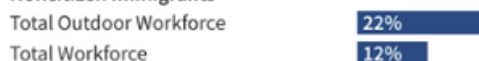
OSHA has no authority to regulate state carceral facilities, where 58% of incarcerated individuals are housed.[22] While some states have implemented protection

Four in Ten Outdoor Workers in Florida Are Hispanic and One in Five is a Noncitizen Immigrant

Share of Nonelderly Workers Who Are Hispanic



Share of Nonelderly Workers Who Are Noncitizen Immigrants



Note: Includes nonelderly adults ages 19 to 64. A potential limitation of estimates for outdoor workers is that some workers in outdoor occupations may not be outdoors all the time and the estimates may not include workers in generally indoor occupations who may have to spend some time outside. For a full list of occupations included in the outdoor workforce estimates, please refer to Appendix Table 1.

Source: KFF analysis of 2022 American Community Survey 1-year Public Use Microdata Sample (PUMS)

KFF

measures for incarcerated workers, 22 states have no limits on tolerable heat for jails and prisons, putting inmates and staff at risk. [23]

Mass incarceration in the United States has a disproportionate impact on people of color, particularly Black individuals, as well as low-income populations. According to the U.S. Bureau of Justice Statistics, in 2022, 32% of persons sentenced to state or federal prison were Black and 23% were Latino. A recent study found that the most heat-exposed prisons have larger proportions of Hispanic and nonwhite populations than the least heat-exposed prisons.[24]

Disabled Workers

Heat waves affect individuals with mental health disorders or chronic illnesses.[25] Individuals with chronic conditions like heart disease and diabetes are more sensitive to heat.[26] Heart disease impairs blood circulation to the skin, while diabetes reduces blood flow and sweat production - both essential for cooling the body.[27] According to the U.S. Department of Labor, nearly 1.1 million and 874 thousand Hispanic and Black adults with disabilities are currently working or want to work, respectively.

Federal Regulations on Extreme Heat

OSHA is the lead federal agency that regulates worker safety and health. Currently, there is no Federal standard specific to heat stress hazards in the workplace. [28] However, OSHA has been able to hold employers accountable by enforcing section 5(a)(1), known as the General Duty Clause, of the Occupational Safety and Health Act. The General Duty Clause states that employers have a general duty to provide “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 employees.[29] According to available OSHA enforcement data, Federal OSHA has issued at least 263 heat-related citations under the General Duty Clause between 2000 and 2023.[30] Additionally, OSHA’s Region 9 office has established a Regional Emphasis Program, using General Duty Clause authority, designed to address substantial heat-related illness occurrences in the region. [31] Through this program, regional enforcement officers can conduct inspections on days forecasted to be above 80°F to ensure safe working conditions.[32] Even so, the Commission has struggled to determine what constitutes a recognized heat hazard under the General Duty Clause, underscoring the need for a concrete standard.

OSHA recently released a draft of a proposed rule on preventing heat injury and illness: “Heat Injury and Illness Prevention in Outdoor and

Indoor Work Settings.” If finalized, this proposed rule would establish the first federal regulation on heat stress in the workplace - securing access to water, rest breaks, safety training, and emergency plans for workers. OSHA is expected to finalize the rule at the end of January 2025. However, Congress, emboldened by the Trump administration, is likely to pass a joint resolution disapproving of the rule using the Congressional Review Act (CRA), effectively removing its legal power.

State Regulations on Extreme Heat

Under section 18 of the OSH Act, states can establish their own occupational and safety plans and preempt standards established and enforced by OSHA.[33] To be approved, state plans must be “at least as effective” as OSHA’s existing standards and enforcement.[34] Only six states have established workplace heat safety standards (CA, CO, MN, MD, OR, and WA). [35]

California

In 2005, California became the first state to codify outdoor heat illness prevention standards. Cal/OSHA mandates that all employers with outdoor work sites provide training

on heat illness risks and protections. Employers must also ensure shade or cooling systems are available for at least five minutes when temperatures reach 80°F or higher. Additionally, employers in the agriculture, construction, landscaping, oil and gas extraction, and delivery industries must provide 10-minute rest breaks every 2 hours when temperatures reach 95°F.[36] California only recently codified heat illness prevention standards for indoor places of employment where temperatures exceed 82°F. [37] In 2023, Cal/OSHA reported 80% fewer heat-related fatalities than in 2005.[38]

Maryland

In 2024, Maryland became the first state on the East Coast to establish a heat standard, following a 2020 mandate. Maryland will require indoor and outdoor workplaces where employees are exposed to a heat index of 80°F or higher to consistently monitor the heat index and develop a heat illness prevention plan.[39] The Maryland Occupational Safety and Health (MOSH) heat standards require employers to provide for acclimatization for up to 14 days when starting or after 7 or more consecutive days of absence,

provide shaded areas to exposed employees as close to their work area as practicable, provide 32 oz. of drinking water per hour, implement an emergency response plan, and train employees and supervisors on identifying and preventing heat-related illnesses. [40]

Policy Recommendations

- **Congress should support the Asunción Valdivia Heat Illness and Fatality Prevention Act**
 - The Asunción Valdivia Heat Illness and Prevention Act mandates that the U.S. Secretary of Labor develop and implement a mandatory heat health protective standard for workers within 42 months, to be enforced by OSHA. This standard requires employers to provide adequate hydration, shade, rest breaks, and acclimatization periods for workers.
- **Congress should address climate change by investing in climate action**
 - Policies and investments aimed at promoting clean electricity, enhancing energy efficiency, supporting zero-emission vehicles, expanding mass transit, electrifying

Table III-1—Initial Heat Triggers and Provisions in State Heat Standards

	Threshold	Provision of water	Shade or cool-down means	Rest breaks if needed	Emergency response	Acclimatization	Training	Heat illness prevention plan	Observation/supervision
General									
California: Outdoor	80 °F (Ambient) ¹	•	•	•	•	•	•	•	
Washington: Outdoor	80 °F (Ambient), All other clothing; 52 °F, Non-breathable clothes	•	•	•	•	•	•	• (accident prevention)	
Colorado: Agriculture	80 °F (Ambient)	•	•	•	•	•	•		•
California (proposal): Indoor	82 °F (Ambient)	•	•	•	•	•	•	•	
Maryland (proposal): Indoor & Outdoor	80 °F (Heat Index)	•	•		•	•	•	•	
Minnesota: ² Indoor	86 °F (WBGT), Light work; 80 °F, Moderate work; 77 °F, Heavy work						•		
Oregon: Indoor & Outdoor	80 °F (Heat Index)	•	•		•	•	•	•	

¹ Some provisions, including water, emergency response, training, and heat illness prevention plan, apply to covered employers regardless of the temperature threshold.

² Minnesota uses a 2-hour time-weighted average permissible exposure limit rather than a trigger.

Source: Federal Register. (2024). Heat injury and illness prevention in outdoor and indoor work settings.

buildings and industrial processes, and preserving healthy soils and forests can create jobs and stimulate economic recovery.[41] These initiatives will lower emissions and, hopefully, reduce the frequency and intensity of extreme heat events in the future.

- **Improve OSHA's Enforcement Measures and Data Reporting**

- While Federal OSHA and state plans are in place, implementation and enforcement have proven challenging. A 2022 California farmworker health study found that nearly half of the workers interviewed said their employer had no heat-illness prevention plan, and one in six did not receive the state-mandated 10-minute rest breaks. With only 1,875 inspectors to inspect the 11.5 million workplaces under their jurisdiction, OSHA is vastly understaffed and under-resourced. With increased staff funding, OSHA could provide better oversight and protection to workers.

- OSHA and the BLS should also improve the collection and reporting of demographic, cause, nature, and other descriptive data related to on-the-job illness, injuries, and fatalities. This includes details on the circumstances of the incidents, specific occupations, and demographic characteristics of the affected workers.

- **OSHA's Finalized Heat Rule Should Include Protections for Federal Prisoners & Gig Workers**

- All federal prisoners are required to work to some extent. However, OSHA guidelines indicate that federal inmates cannot be

classified as employees under the OSH Act except when inmates engage in work similar to that performed outside of prisons, such as farming, firefighting, industrial work, or machine operations. [42]

- It should also include provisions for seasonal or temporary workers, guarantee legal protections for migrant workers, and economically support workers with heat-related injuries. The proposed rule would not apply to platform gig or contract workers - leaving about 5 million workers unprotected.[43] [44] By including incarcerated workers and gig workers who perform jobs vulnerable to heat exposure in its regulations, inspections, and enforcement, OSHA can help alleviate the disproportionate impact of heat exposure on these socially vulnerable workers.

Conclusion

Despite being a beachy 86 degrees outside, seventeen-year-old Maria Jimenez's core body temperature was 108 when she reached the hospital. Maria was working in a vineyard in rural California without access to shade or water when she collapsed from heat exhaustion. While in a coma, her heart stopped six times, and she passed away two days later. It was then that her family learned that she was pregnant.

Maria's tragic story highlights the reality of extreme heat on vulnerable workers. The absence of federal heat safety standards and inconsistent state-level regulations exposes millions of workers to dangerous conditions. Solutions must include the establishment of a federal heat standard, improved enforcement mechanisms, and targeted measures to protect

vulnerable groups such as outdoor workers, pregnant people, incarcerated individuals, and those with disabilities. By addressing these gaps and investing in climate action, policymakers can reduce the risks of extreme heat, create safer workplaces, and promote equity in the face of a warming world.

Endnotes

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