



OFFICE OF THE ILLINOIS STATE TREASURER
MICHAEL W. FRERICHS

January 14, 2024

Occupational Safety and Health Administration
200 Constitution Avenue, NW
Room Number N3626
Washington, D.C. 20210

Re: Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings – Docket No. OSHA-2021-0009

The Office of the Illinois State Treasurer (“ISTO”) respectfully submits this letter to the U.S. Department of Labor Occupational Safety and Health Administration in support of the proposed rulemaking on Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings (OSHA-2021-0009).

For context, researchers estimate that in the United States between 2020 and 2100, the number of days with wet bulb globe temperature (WBGT) above 77°F will rise substantially from 22 days to 80 days per year, and the number of days above 91°F will increase from near zero to almost seven.¹ In Illinois specifically, the USDA expects the number of days with temperatures above 95°F to increase between 28-65 days per year by the end of the century.² In the U.S., researchers have estimated that the cost of heat stress due to decreased productivity of workers could average approximately \$100 billion annually. They further estimate that the labor productivity losses could reach ~0.5% of projected U.S. GDP by 2030 and ~1.0% by 2050.³ Given the projections for meaningful increases in temperatures over the next century and their impact on the U.S. economy, the proposed rulemaking is timely.

ISTO supports this rulemaking because it believes a federal heat injury and illness prevention standard will help limit financial risks of rising temperatures and occupational heat stress, such

¹ Federal Reserve Bank of San Francisco, “Impact of U.S. Labor Productivity Losses from Extreme Heat,” May 2024. Available at <https://www.frbsf.org/wp-content/uploads/el2024-14.pdf>

² USDA Climate Hubs, “Climate Change Impacts on Illinois Agriculture,” October 2022. Available at https://www.climatehubs.usda.gov/sites/default/files/2022_ClimateChangeImpactsOnIllinoisAgriculture_0.pdf

³ Atlantic Council, “Extreme Heat: The Economic and Social Consequences for the United States,” August 2021. Available at <https://www.atlanticcouncil.org/wp-content/uploads/2021/08/Extreme-Heat-Report-2021.pdf>

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as productivity losses and increased occupational injuries and illnesses, to companies in our investment portfolio.

Worker exposure to heat stress is found to increase heat-related occupational injuries and illnesses, healthcare costs, sick leave, and injury compensation claims, as well as decrease labor output.⁴ A 2018 meta study found that 30% of workers (11 total studies with 8,076 workers total surveyed) during or after a shift who worked under heat stress reported productivity losses.⁵ Working under heat stress also influences the likelihood of traumatic injuries, which could further reduce the productivity of workers and/or require companies to hire new workers. Outdoor construction workers for example face a 0.5% increase in the odds of traumatic injuries per 1°C increase in the maximum daily humidex.⁶

The potential financial benefits of the proposed rulemaking's provision to establish a heat safety plan are documented in academic research. Implementing a heat safety plan has been shown to limit the need to re-hire staff, the need to pay overtime hours and the costs associated with worker compensation claims after a worker experiences a heat-related illness.⁷ Researchers also found that implementing heat-related illness prevention programs, such as worker and supervisor training on heat stress, medical monitoring, first aid plans, and acclimation programs, halved median worker compensation costs incurred per heat-related illness.⁸ This research suggests that there could be financial benefits to the implementation of a heat illness and emergency response plan as well as training to employees and supervisors, that are included in the proposed rulemaking.

As an institutional investor who is broadly invested in the U.S. market, the impact of increased temperatures will be felt across many of our investments. We believe the implementation of heat-safety measures will help impacted companies protect their employees and improve the productivity of their workforces, which in turn can benefit company performance and investor returns. Additionally, as a constitutional officer of the state of Illinois, I believe the rule would help protect Illinois companies and workers from the projected impacts of rising temperatures,

⁴ Margaret C. Morrissey, Gabrielle J Brewer, Warren Jon Williams, Tyler Quinn, and Douglas J. Casa, "Impact of Heat Stress on Worker Productivity and Economic Cost," American Journal of Industrial Medicine: Volume 64 Issue 12, September 2021. Available at <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23297>.

⁵ Andreas D. Flouris, et al., "Workers' health and productivity under occupational heat strain: a systematic review and meta-analysis," The Lancet Planetary Health, Volume 2, Issue 12, e521 - e531, available at [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(18\)30237-7/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(18)30237-7/fulltext).

⁶ MM Calkins et al., "A case-crossover study of heat exposure and injury risk among outdoor construction workers in Washington State," Scand J Work Environ Health 2019;45(6):588-599. Available at https://www.sjweh.fi/show_abstract.php?abstract_id=3814.

⁷ Margaret C. Morrissey, Gabrielle J Brewer, Warren Jon Williams, Tyler Quinn, and Douglas J. Casa, "Impact of Heat Stress on Worker Productivity and Economic Cost," American Journal of Industrial Medicine: Volume 64 Issue 12, September 2021. Available at <https://onlinelibrary.wiley.com/doi/10.1002/ajim.23297>.

⁸ Ronda McCarthy et al. "Outcomes of a Heat Stress Awareness Program on Heat-Related Injuries in Municipal Outdoor Workers," Journal of Occupational and Environmental Medicine 61(9):p 724-728, September 2019. Available at https://journals.lww.com/joem/abstract/2019/09000/outcomes_of_a_heat_stress_awareness_program_on.4.aspx.

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including those in the agricultural sector, which accounts for roughly 6% of the state's workforce, or 482,000 jobs.⁹

The Office of the Illinois State Treasurer appreciates the Occupational Safety and Health Administration's consideration of these comments and would be pleased to discuss them in greater detail. If you have any questions or need additional information, please contact Karen Kerschke, Deputy Director of Corporate Governance and Sustainable Investment at kkerschke@illinoistreasurer.gov.

Sincerely,



Michael W. Frerichs
Illinois State Treasurer

⁹ "What We Grow and Raise: The Illinois Supply Chain." Available at <https://www.ilfb.org/resources/learn-about-il-agriculture/what-we-grow-and-raise-the-illinois-supply-chain/>.

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