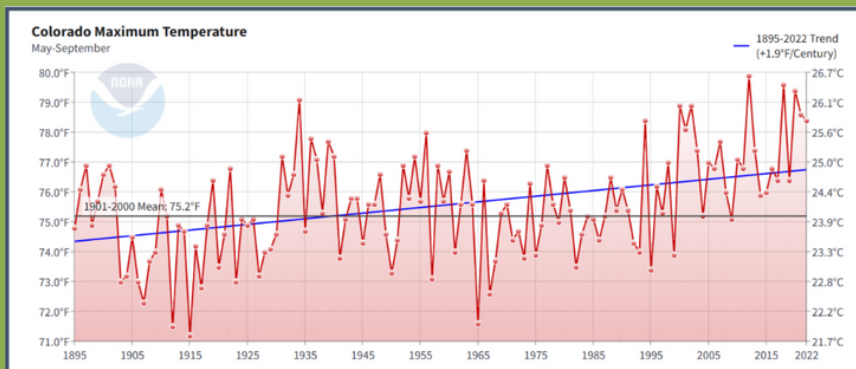


Extreme Heat & Health in Colorado

Victoria Bloom, Derrek Wilson, & AJ Carrillo

Project Overview

Extreme heat is the world's deadliest climate hazard. It exacerbates pre-existing health conditions and disproportionately impacts already vulnerable populations, including historically marginalized groups. Current mitigation techniques, namely air conditioning, emit greenhouse gases and add strain to the electrical grid, increasing the risk of deadly black- and brown-outs during heat waves. Furthermore, heat overlaps with other climate hazards such as wildfire and drought, and damages key infrastructure such as roads and transmissions lines, leading to ongoing negative economic consequences. Colorado is getting hotter due to human-caused climate change, which also makes extreme heat events more likely to occur.



NOAA: CO's maximum summer temperatures have steadily increased.

To address the risks associated with this complex climate hazard, the Colorado Department of Public Health and Environment and the Colorado Resilience Office (in the Department of Local Affairs) asked the MENV capstone team to create a framework of recommendations for the state to address extreme heat. The focus of this framework is to protect the health of vulnerable populations.

The Governor's Office of Climate Preparedness and Disaster Recovery also asked for prioritized policy recommendations for the 2024 legislative session, which the team presented at the State Capitol.

Research Methods

The team consulted a number of sources to better understand climate projections for Colorado, the impacts of extreme heat both on the environment and human health, the populations within the State that are disproportionately impacted by heat, evidence-based heat mitigation strategies, and key policy and budget solutions available in Colorado and leveraged in other states. Research strategies included:



Review of academic literature on the impacts of extreme heat and mitigation & adaptation strategies.



Attendance of relevant extreme heat webinars, workshops, and meetings.



Current state plans and policies in Colorado and other states leading on extreme heat adaptation and mitigation.



Review of NGO reports on the impacts of extreme heat on Colorado communities.

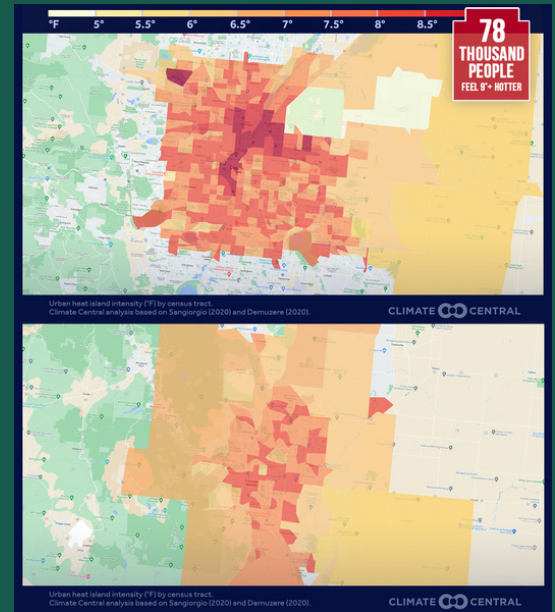


Stakeholder engagement via interviews of state and local agencies and presentations to public health groups.

Outcomes & Key Insights

The key outcome of this project is to create a path forward for the State of Colorado to effectively prepare for extreme heat events, with an emphasis on protecting vulnerable populations. The framework recognizes that:

- Heat exacerbates pre-existing conditions, inequity in the built environment, and other climate hazards.
- Urban and rural communities have unique vulnerabilities.
- Cross-sector collaboration is essential for implementing context-specific, equity-based, and scalable solutions.
- Community empowerment and adaptive capacity is necessary for long term feasibility.
- Flexible funding opportunities allow communities to adapt extreme heat planning to their needs.
- People and communities are likely to underestimate their vulnerability to heat.



Climate Central: Urban heat island maps of Denver (top) and Colorado Springs (bottom).

Literature Review

A compilation of current academic research, government policies, and state plans to understand the risks and impacts of heat, as well as effective adaptation and mitigation strategies.

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Deliverables

2

Policy Recommendations

A memo of the top ten policy leverage points for the Colorado Governor's Office and relevant state agencies to consider for the 2024 legislative session.

Framework of Recommendations

A culmination of research and stakeholder engagement, this document provides prioritized recommendations for the state to use to address heat and health in Colorado, focusing on vulnerable populations.

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