

Addressing Heat Vulnerability: Denver Department of Public Health and Environment

Denver Department of Public Health and Environment (DDPHE) plays an integral role in climate change activities in Denver city government. Equity and place are strong themes in Denver's climate action and adaptation plans and its community health needs assessment. DDPHE's *Health in All Policies* program developed a Neighborhood Equity Index based on socioeconomic factors, access to care, built environment, and mortality and morbidity data. In 2014, the City and County of Denver released its first climate adaptation plan identifying increased temperature and urban heat island effects, extreme weather events, and reduced snow pack as priority vulnerabilities. The plan proposed activities to reduce vulnerability and assigned responsibility to specific city departments.

In January 2016, DDPHE began the *Denver Neighborhood Climate and Health Vulnerability Project* (DNCHV), aiming to DDPHE build on its Health in All Policies approach to explicitly incorporate climate change into its work on the upstream determinants of health and engage with diverse partners to integrate climate, health, and equity across divisions and agencies. The goal of the project was to conduct geographically refined climate and health vulnerability assessments and connect them with established city neighborhood-level planning activities such as *Strong Neighborhoods* and *Denver Moves*.

Moving the conversation from climate science to climate and health

DDPHE contracted to develop a heat vulnerability tool in which thirteen variables were combined into a heat vulnerability index using factor analysis. The analysis is displayed on a story map that shows census tract vulnerability to extreme heat in the context of the interconnected socioeconomic, health and environmental conditions that can increase heat vulnerability. The program then engaged with other local agencies and community based organizations (CBOs) to disseminate the tool widely for use in planning and policy development.

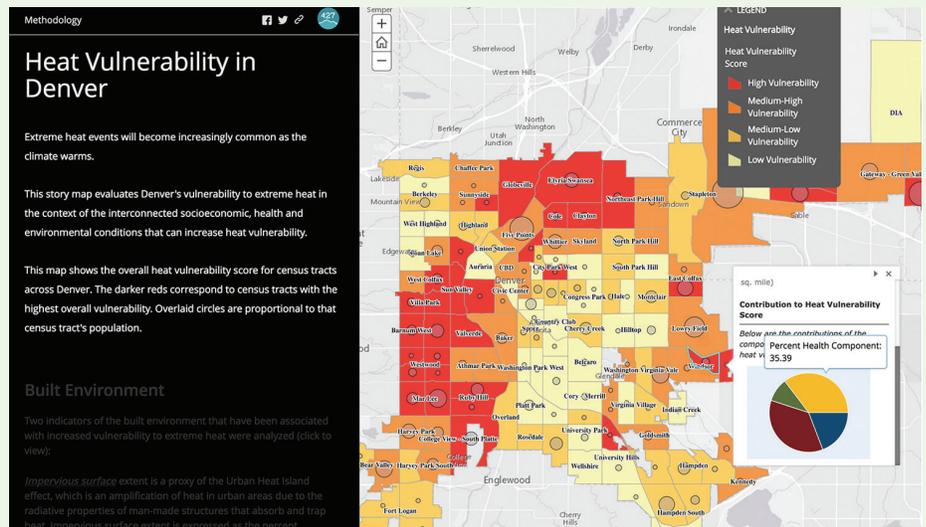
In partnership with the Trust for Public Lands (TPL), DDPHE hosted a community forum to discuss how to build a resilient Denver in the face of climate change. The Forum brought together a diverse group of health agencies, CBOs, and academic partners to enable partnerships to assess current health vulnerabilities to climate change and coordinate and prioritize interventions in the most impacted areas. DDPHE then co-hosted a series of climate, health, and equity walks, collaborating with the local Walk2Connect program. The walks provided an opportunity for Denver residents to join health department staff and local experts for fun physical activity on walks that showcased *Denver and Its Water*, *Denver's Urban Forest*, the *Green Roofs Initiative*, and *Gardening in Denver's New Weather*.

In summer 2018, DDPHE examined ways to create relevant messaging that connects climate change to injury prevention and other community concerns. DDPHE partnered with the National Highway Transportation Safety Administration to integrate climate change messaging into heat illness prevention public service announcements (PSA), which will be posted in 40 buses during the month of July. DDPHE also created PSAs for outdoor workers in collaboration with the Parks and Recreation Department and for pet owners in collaboration with Animal Protection division.



Future Work and Lessons Learned

Building on the success of the extreme heat vulnerability map to inform city plans, such as the [Denveright Plans](#), the [Ultra-Urban Green Infrastructure Guidelines](#), and the [Neighborhood Plans](#), DDPHE will continue to disseminate the vulnerability map to partner agencies and organizations to prepare for extreme heat in Denver. Despite the challenges of limited staff capacity, DDPHE continues to work on systems and policy level changes to improve climate resilience and equity throughout Denver. Additionally, DDPHE plans to continue to identify existing messaging campaigns and seasonal health alerts to integrate simple climate change messaging.



Learn More

Department of Public Health and Environment - [Heat Vulnerability](#)

Key Action Steps:

- Build on existing *Health in All Policies* initiatives to integrate climate change and health and expand collaboration with new agency partners.
- Conduct a climate and health vulnerability assessment. Make accessible story maps based on the assessment to share with CBOs, policy makers, and other local agencies.
- Collaborate with local CBOs and other local organizations to host community meetings to share the CHEVA and discuss and prioritize community-driven climate resilience and adaptation strategies.
- Establish other avenues to continue community engagement around climate change, built environment, health, and equity (e.g., Walk2Connect).
- Continue meeting with other LHD program and jurisdictional agencies climate champions to support the *Health in All Policies* approach to climate change.
- Integrate climate change messaging into seasonal health messaging and established PSA