

# SMART SURFACES HOT SHEET



SUMMER 2024



# summer 2024

**Extreme heat and climate-related flooding pose significant threats to public health. Heat is the leading weather-related cause of death in the U.S.. In Columbia, South Carolina, the South Carolina Public Health Association (SCPHA) and Smart Surfaces Initiative have worked diligently in combating this issue through focus groups, local advocacy, community outreach, and education.**

Photo Credit: Patricia Jerman. 15 July 2024. Beat the Heat Event. Columbia, SC.  
Photo Credit: Beata Dewitt. June 2024. SE EJ Summit. Atlanta, GA.



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A photograph of a busy street market. In the foreground, a man in a green cap and blue shirt stands with his back to the camera. To his left, a yellow sign on a stand reads "Store of Hope OPEN". The street is paved with asphalt and has a brick-paved area on the left. Many people are walking in the background, and there are trees and buildings in the distance. The sky is blue with some clouds.

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# What Are Smart Surfaces?

Infrastructure strategies that cost-effectively manage urban heat and stormwater while maximizing health, climate, and equity co-benefits

Cool Roofs



Green Roofs



Porous + Permeable Pavements



Solar Photovoltaics



Cool Pavements



Trees and Rain Gardens



Low- and Zero-Carbon Concrete



Combined Surfaces



Source: [Smart Surfaces Coalition & Carnegie Mellon University](#)

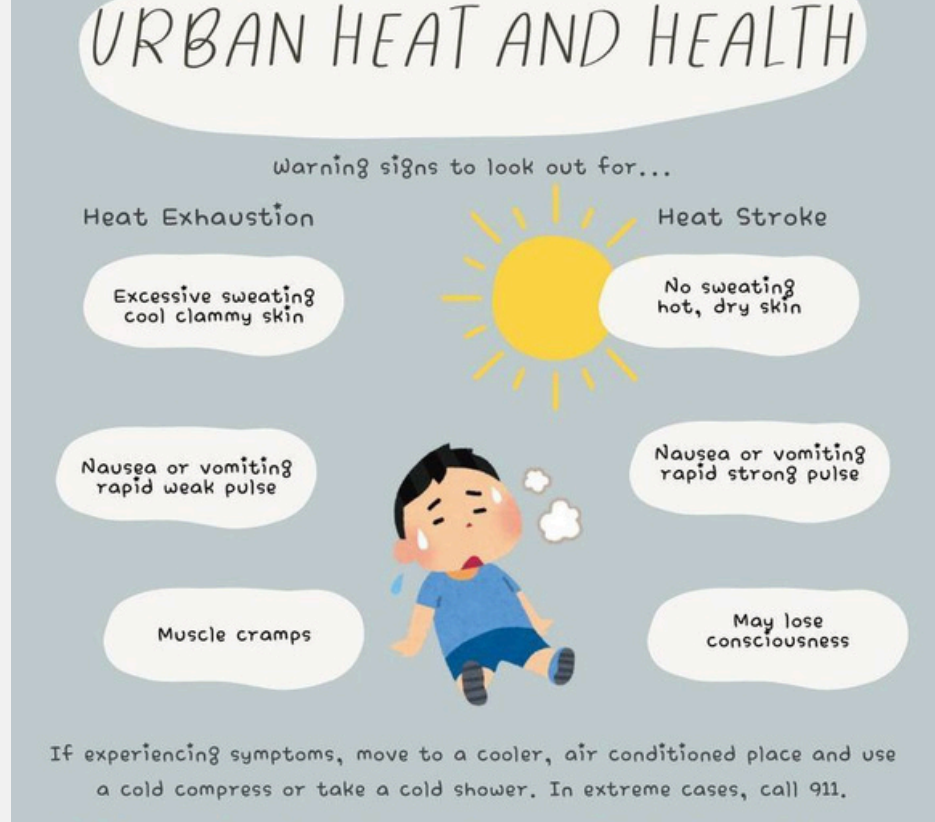
e.g., Green Roof + Solar PV



To combat higher surface temperatures, some cities have planned initiatives to plant more trees and increase shade in city centers. However, additional efforts are needed. In low-income areas, many individuals struggle to pay high costs for air conditioning and transport to cooling centers.

The American Public Health Association (APHA) is collaborating with the Smart Surfaces Coalition, National League of Cities, Metropolitan AME Church, and others to accelerate the implementation of smart surfaces in major cities. APHA invited its affiliates, including SCPHA, to join efforts in promoting the adoption of smart surfaces, offering grant opportunities to accelerate their implementation, and address the health impacts of climate change.

# PAGE 2



## Why Should I Care About the Heat?

Citizen science efforts performed in 2022 found Downtown Columbia as much as 18 degrees Fahrenheit hotter than the suburban areas of Richland County.

As the city continues to grow, green and porous surfaces have been replaced with dark and impervious ones, leading to higher surface temperatures. These higher temperatures exacerbate health and climate impacts.

The US Department of Energy (DOE) states, "The national average energy burden for low-income households is 8.6%, three times higher than for non-low-income households." Per the US DOE's Low-Income Energy Affordability Data (LEAD) Tool, Richland County's energy burden for low and moderate-income residents is as high as 20%.

As climate change worsens, South Carolina will face higher temperatures, higher power bills, more extreme flooding, and an increase in heat-related illnesses.



Photo Credit: Beata Dewitt. 9 April 2024 Focus Group. Columbia, SC.

# What Does the Community Think?

- Disseminate resources to the public in a way that is visible, accessible, and incorporated into daily lifestyle habits.
- Remember it is vital that future energy initiatives are cost-conscious.
- Advertise smart surfaces, especially tree planting, rain gardens, and porous pavements, to the public as inexpensive ways to reduce energy burden and decrease urban heat.
- Need more conversation about smart surfaces, cooling centers, and energy burden from the public sector, private sector, and lawmakers.
- Are open to advocating for more trees, porous pavements, and green roofs if they are cost-conscious and accessible.
- Help! The websites to apply for assistance with energy costs are not publicized, contacts are not easily accessible, and wording is complex.
- Post on social media or place information about resources on flyers in public spaces.

## Public Input is Vital!





Photo Credit: Keisha Long. 23 April 2024 Focus Group. Columbia, SC.

# What Does the Community Think?

- The City of Columbia needs cooling centers that are dedicated to resiliency, hydration, and proven cooling strategies.
- Efforts must focus on the people especially at risk for extreme heat complications—specifically children, elderly individuals, pets, and those who spend many hours outdoors (i.e., athletes, firefighters, and construction workers).
- The City of Columbia holds the authority to implement local governance over smart surface initiatives.
- Community health workers hold great knowledge on the health effects of urban heat.
- Churches and local media play a key role in educating the masses across the city and state.
- Homeowner Association Boards are a vital tool for disseminating information to neighborhoods, publicizing neighborhood projects, and implementing neighborhood-specific regulations.
- Prominent influencers are needed throughout the city and state to speak on the issue, share their stories, and promote smart surfaces.

## Public Input is Vital!

# What Can We Do?



**Educate!**



**Advocate!**



**Promote!**



**Provide!**

**Educate!** Learn all you can about extreme heat and smart surfaces then share your knowledge. Some useful resources include:

- [www.scpha.com/smart-surfaces](http://www.scpha.com/smart-surfaces)
- [smartsurfacescoalition.org](http://smartsurfacescoalition.org)
- [www.apha.org/topics-and-issues/climate-health-and-equity](http://www.apha.org/topics-and-issues/climate-health-and-equity)

**Advocate!** Talk about smart surfaces and energy burden with the public sector, private sector, and lawmakers, keeping populations particularly vulnerable to the impacts of extreme heat top of mind.

**Promote!** Follow us on the internet and share info with your friends:

- [www.facebook.com/thescpha](http://www.facebook.com/thescpha)
- Instagram @thescpha
- [linkedin.com/company/scpublichealthassociation](https://www.linkedin.com/company/scpublichealthassociation)
- [www.youtube.com/@thescpha](http://www.youtube.com/@thescpha)



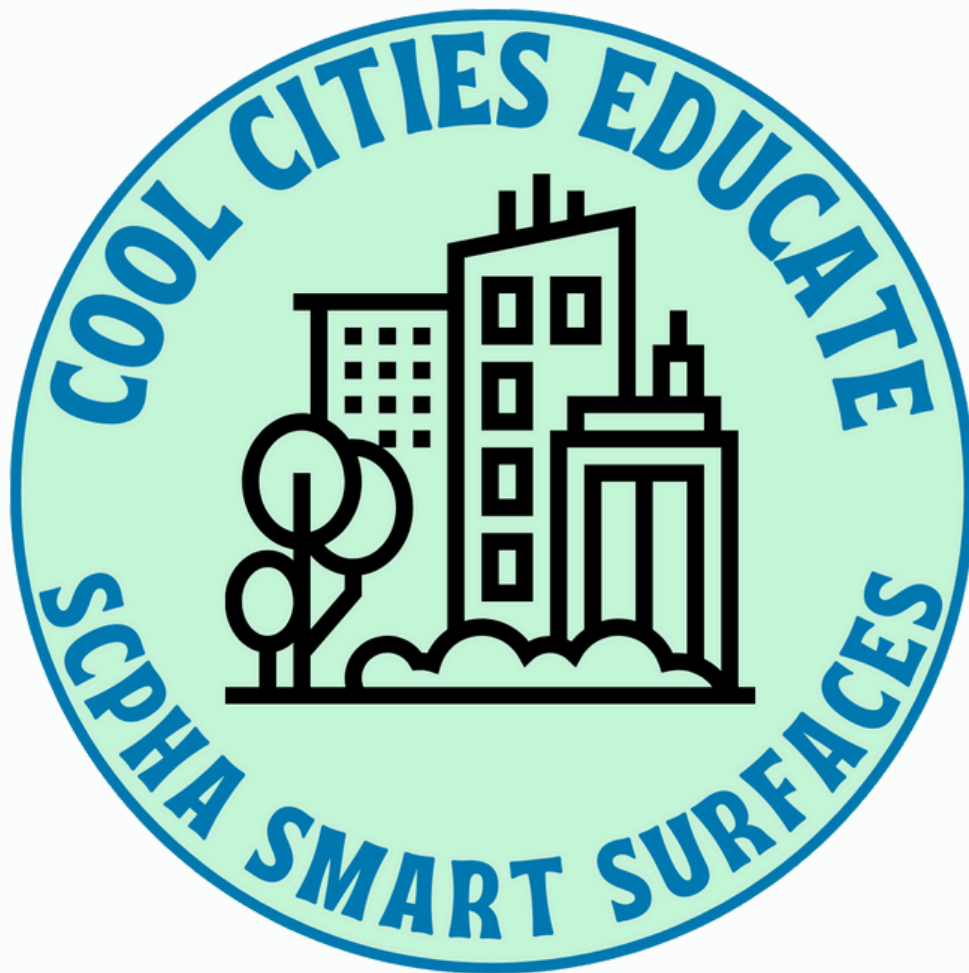
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#### About

Founded in 1921, South Carolina Public Health Association (SCPHA) is a statewide non-profit organization aimed at advancing the profession by serving Public Health Professionals who endeavor to improve population health.

#### Vision

To be the premier Public Health Organization for high quality professional development, advocacy, and networking opportunities.

#### Mission

- Enhance member benefits through the promotion of educational, mentoring, and networking opportunities;
- Provide a forum to convene our partners; and
- Advocate for healthy people and healthy communities.

