SMART SURFACES COALITION

The Smart Surfaces Coalition is made up of more than 40 leading national and international organizations with a shared commitment to creating **cooler**, **healthier**, and **more resilient** cities by cost-effectively working to reduce the impacts of extreme urban heat and flooding.

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

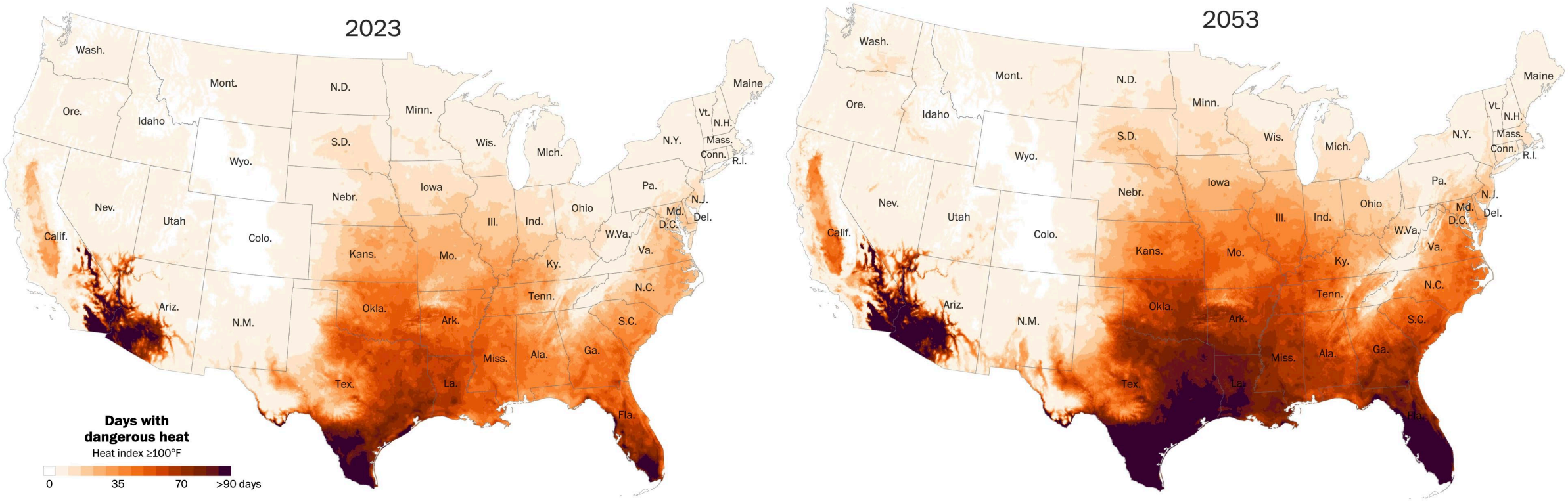
Low- and Zero-Carbon Concrete

Combined Surfaces

Source: Smart Surfaces Coalition & Carnegie Mellon University

SMART SURFACES COALITION

By mid-century, nearly two-thirds of Americans will experience perilous heat waves, with some regions in the South expected to endure **more than 70 consecutive days over 100 degrees.**[1]



[1]Washington Post, 2023

Source: Washington Post

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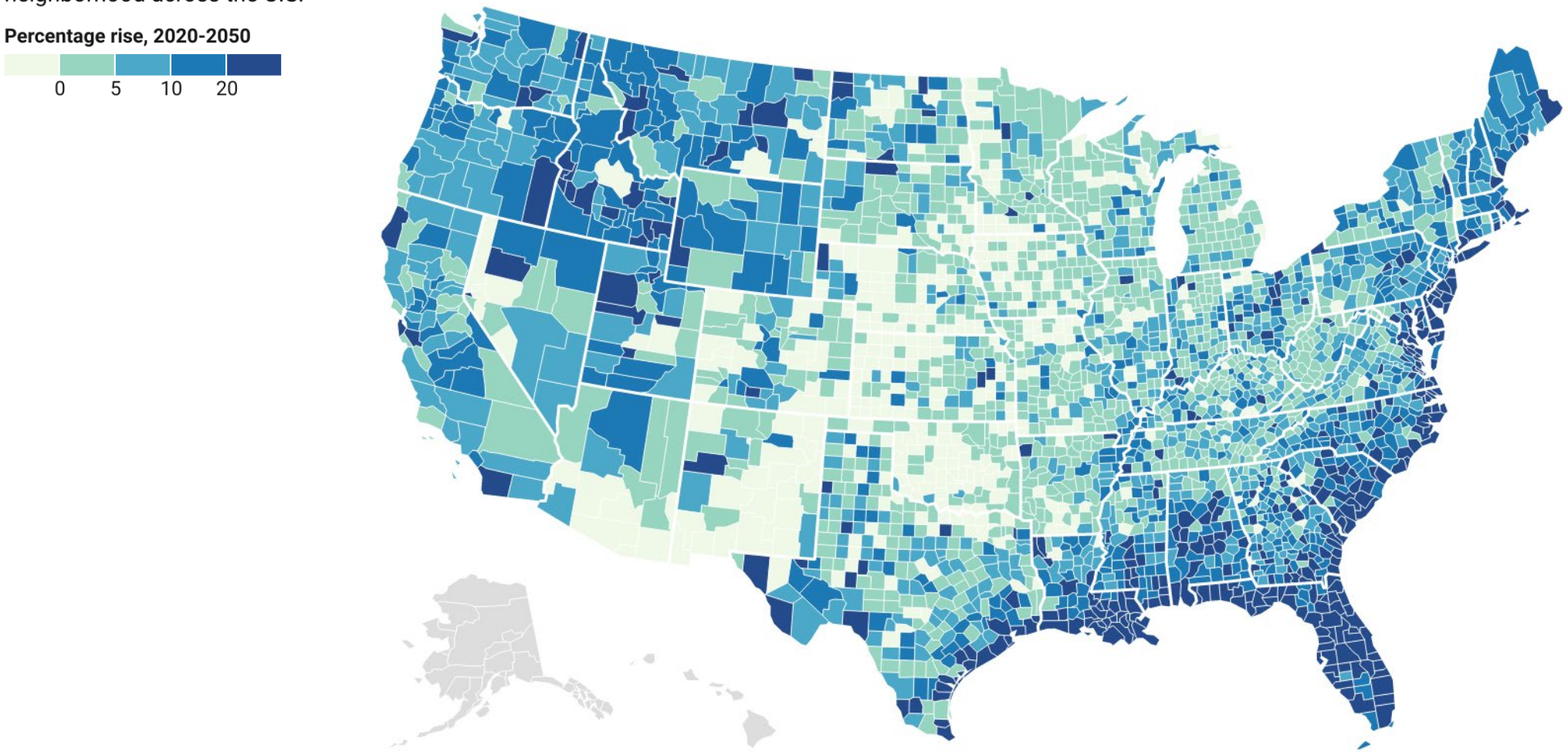
Where flood risk is projected to rise fastest in the US

A new analysis projects changes in flood risk between 2020 and 2050 by zooming in on every neighborhood across the U.S.



Flood damage measured in 2020 U.S. dollars.

Map: The Conversation/CC-BY-ND • Source: Wing, et al. 2022 • Created with Datawrapper

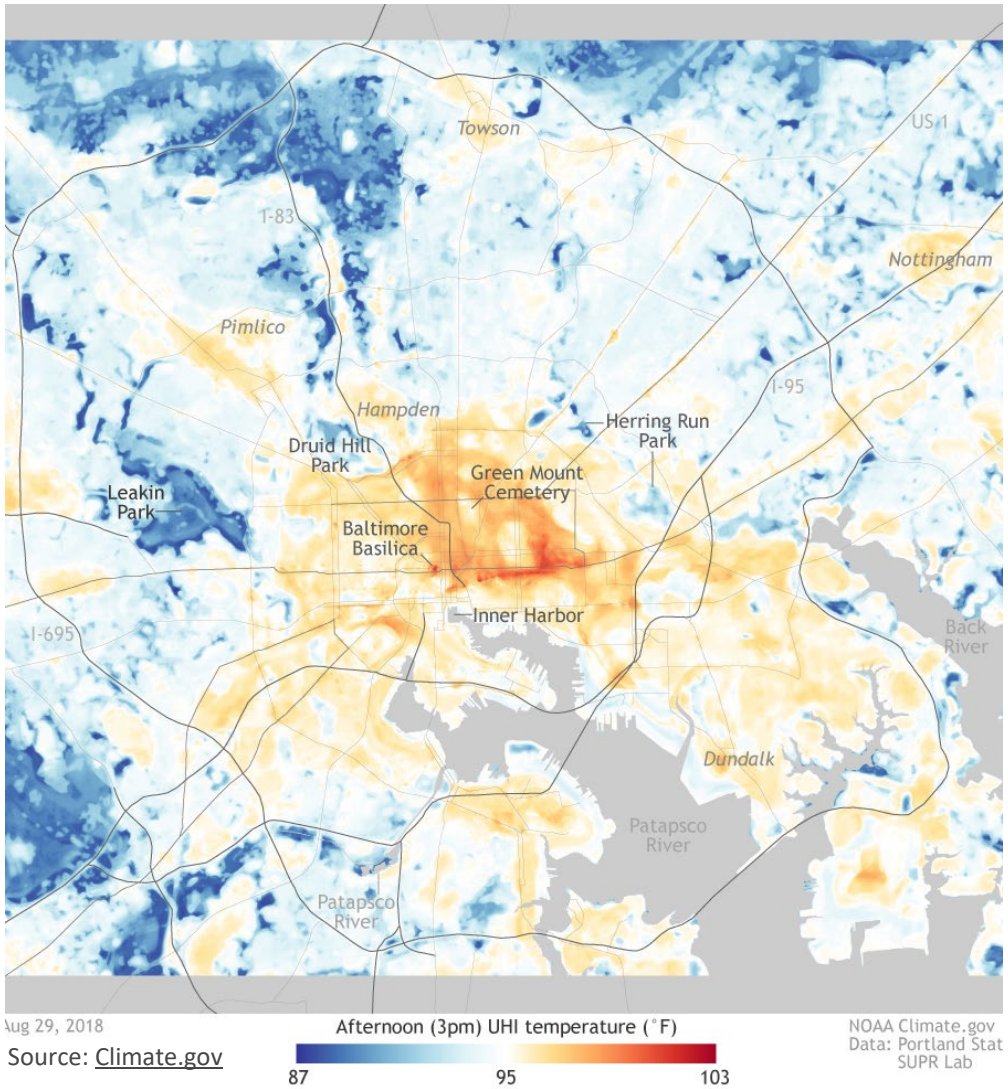
Urban Heat Islands

On average, urban heat islands are **5 to 7 degrees Fahrenheit hotter** during the day and can increase temperatures by as much as **22 degrees** at night.[1]

Some neighborhoods in cities, often in low-income areas, can be as much as **15-20 degrees F hotter**.

[1]American Forests, 2021

Heat Map of Baltimore, MD



Source: Climate.gov

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City-wide Deployment of Smart Surfaces Can:

- Reduce peak summer temperatures by 5°F or more
- Provide up to $10 in benefits and cost savings for every $1 spent
- Cut energy bills by reducing summertime energy demands for indoor cooling
- Lower city GHG emissions 10-12%
- Deliver large reductions in flooding and resulting mold
- Improve public health and air quality

with the greatest impact in lower income communities and communities of color

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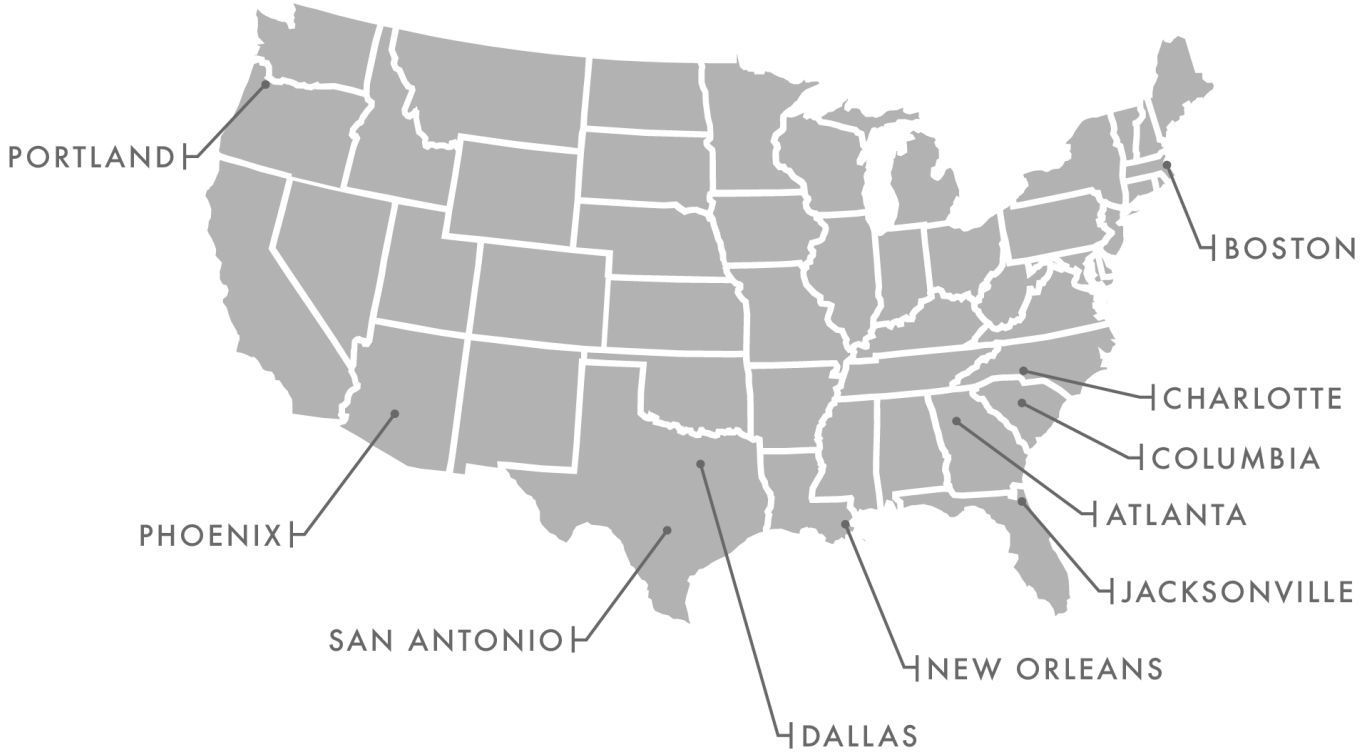
Cities for Smart Surfaces

SSC is partnering with 10 cities across the US to facilitate the adoption of Smart Surfaces at the metropolitan level and working with communities in those regions to support community-led, local Smart Surface implementation projects.



SMART SURFACES COALITION

Cities for Smart Surfaces Project Partners

Project Coordinator

SMART SURFACES COALITION

Data Visualization and Cost-Benefit Analysis

WORLD RESOURCES INSTITUTE

TRUST FOR PUBLIC LAND

Altostratus Inc.

open Technologies

City and Community Engagement

METROPOLITAN African Methodist Episcopal CHURCH

NLC NATIONAL LEAGUE OF CITIES CITIES STRONG TOGETHER

APHA

WE ACT FOR ENVIRONMENTAL JUSTICE

TRUST FOR PUBLIC LAND

THE OIKOS INSTITUTE FOR SOCIAL IMPACT

CITY FOREST CREDITS

Federal Funding

COLUMBIA LAW SCHOOL

SABIN CENTER FOR CLIMATE CHANGE LAW

ACEEE

NASEO National Association of State Energy Officials

CITY FOREST CREDITS

Policy + Legal

COLUMBIA LAW SCHOOL

SABIN CENTER FOR CLIMATE CHANGE LAW

American Lung Association.

NASEO National Association of State Energy Officials

NLC NATIONAL LEAGUE OF CITIES CITIES STRONG TOGETHER

METROPOLITAN African Methodist Episcopal CHURCH

APHA

Health Research and Communications

APHA

American Lung Association.

UPSTATE MEDICAL UNIVERSITY

HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH | C-CHANGE CENTER FOR CLIMATE, HEALTH, AND THE GLOBAL ENVIRONMENT

Before Smart Surfaces…

Source: Smart Surfaces Coalition

SMART SURFACES COALITION

After Smart Surfaces…

Source: Smart Surfaces Coalition

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