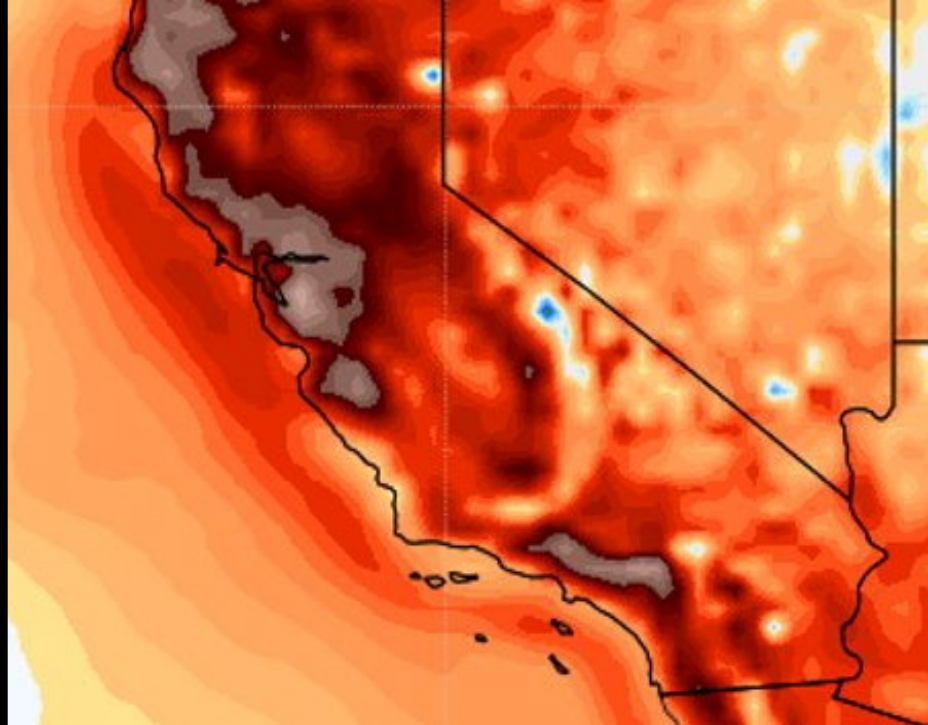




San Francisco Heat and Air Quality Resilience Project

All Hands Meeting 15 | 12/04/2025

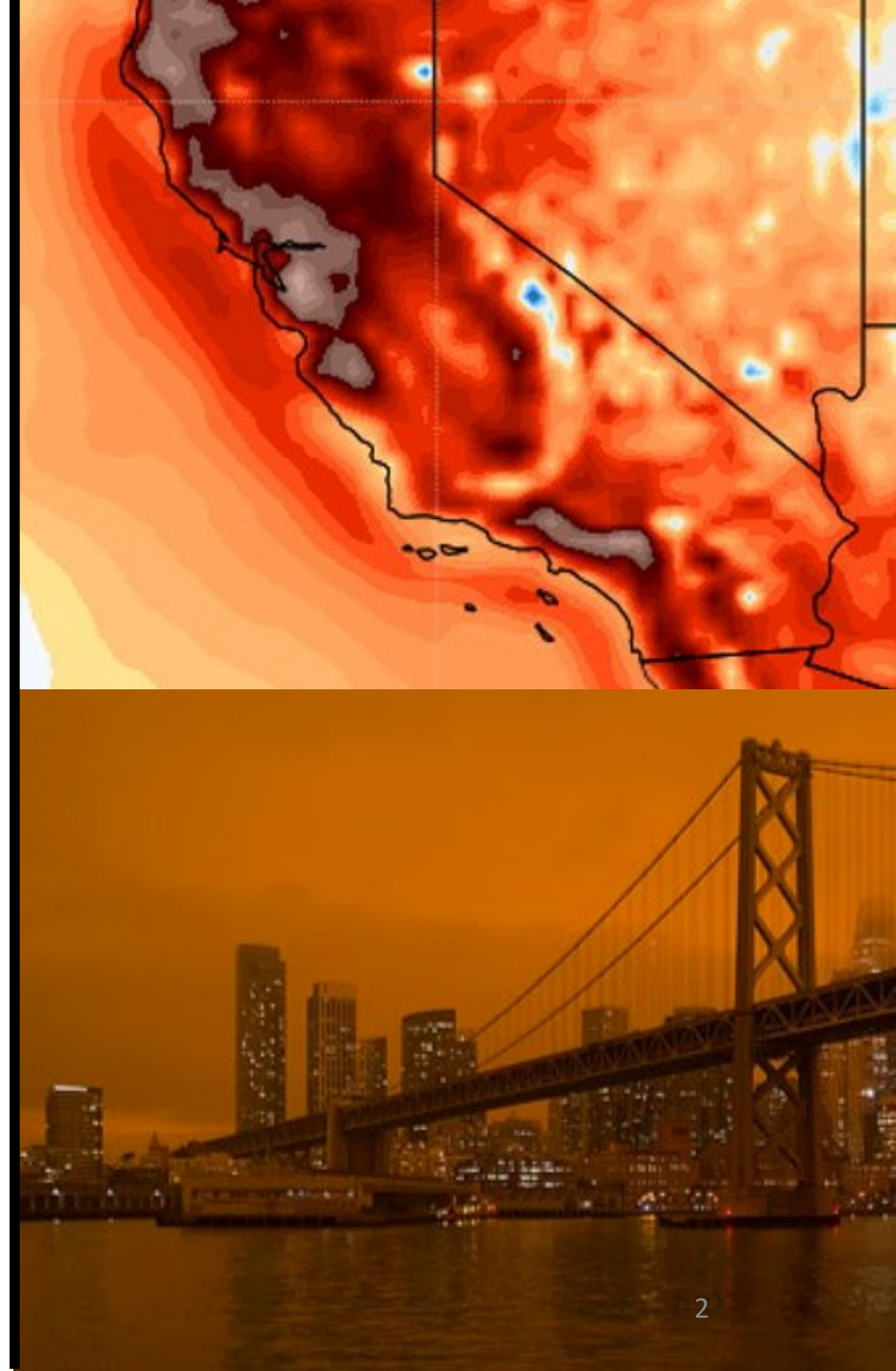
Matt Wolff, SFDPH, Matt.Wolff@sfdph.org
Alex Morrison, ORCP, Alex.Morrison@sfgov.org





Agenda

HAQR All-Hands Meeting #15 Date: 12/04/2025 Time: 2pm - 3pm	
Introductions	5 Minutes
Updates and Announcements <ul style="list-style-type: none">• Program Updates• Grant Opportunities	15 Minutes
HAQR All-Hands Presentations: Ali Frazzini, Policy Director at Los Angeles Office of Sustainability, “Building Traction for Heat Resilience Action”	30 Minutes
HAQR Evaluation Results	10 minutes
Heat and Air Quality Resources <ul style="list-style-type: none">• Data• Research	5 Minutes





Updates and Announcements

Program Updates

Resilience Hubs Framework

Project Description

Resilience Hubs are institutions that offer physical space for community members access resilience-building social services daily while providing response and recovery services in disaster situations. There are public facilities in San Francisco that provide cooling/clean air, but these facilities are often underutilized due to multiple factors. Developing Resilience Hubs will improve the effectiveness of existing city sites and better connect the CBOs that operate or support similar facilities to available city resources. This can include connecting facilities to resources for providing cooling/clean air and/or training/technical assistance.

Work to date

- Literature/National best practice review
- Created of resilience hub definition and tier framework
- Participating in Emerald Cities Collaborative workgroup and new BayCan working group

Project Status

- Moving from more planning actions towards implementation actions
 - Developing geographically focused, funding first approach for roll-out
 - Identifying potential funding streams such as grants (like SGC CRC) or philanthropic sources.

Definition and Tiers

A Resilience Hub is a physical institution that offers space for community members to gather, organize, and access resilience-based social services daily while providing response and recovery services in a disaster situation.

Tier 1	Tier 2	Tier 3
<u>City Owned Resilience Hub</u>	<u>Public Resilience Hub</u>	<u>Community Resilience Hub</u>
These are city owned and operated community-facing facilities open during extreme weather events. These may include libraries and other city facilities.	These are community operated sites that are open to the public, with support from the city, during extreme weather events. These sites are not expected to operate for extended hours in an emergency or own their buildings.	These are sites run by Community-Based Organizations that are focused on maintaining continuity of operations to provide services or limited shelter to their constituencies

Ex. Public Library Sites

Ex. Public CBO Site

Ex. Limited CBO Site



Smart Surface Policy Scope Development (GI)

Project Description

This effort leverages the relationships and success of SFO to quantify the impact of smart surfaces on their campus by working to bring that level of analysis city wide, with additional support to coordinate with implementing departments (SFPUC, Public Works, SF USD, Etc.).

Primary scope deliverables include: 1). Fill Gaps in Existing Analysis, 2). Conduct Benefit-Cost Analysis, 3). Develop Project Typologies, 4). Tool Development, 5). Policy Review, 6). Program Development, 7). Develop Funding Strategy , 8). Pursuing Grants – Min/Max Cost: \$300,625/\$394,175

Project Stakeholders

PRIMARY	SECONDARY
Public Works	ORCP/DPH
SFPUC	DataSF
SF USD	Smart Surfaces Coalition (SCC)

Project Status

- Identifying funding for scope implementation (Grants/Philanthropic)



Grant Opportunities

Extreme Heat and Community Resilience Program

California Governors Office of Land Use and Innovation

<https://lci.ca.gov/climate/icarp/grants/extreme-heat-round-2-resources.html>

Youtube Recording of Information Session: <https://www.youtube.com/watch?v=RGYDnvRIkC0>

Description: Round 2 of EHCRP will award \$22.5 million in funding to transformative infrastructure planning projects that that bring lasting, positive change to communities. The program aims to support efforts that combine community services and physical improvements to protect the health of Californians who are most vulnerable to extreme heat. This second round of funding comes from the Greenhouse Gas Reduction Fund (GGRF) and California’s Climate Bond (Proposition 4).

Timeline: NOFO will be released Early 2026

Applicant Preparation Guide:

https://lci.ca.gov/climate/icarp/grants/docs/20251113-ICARP_EHCRP_Applicant_Preparation_Guide.pdf

	Award Amounts	Budget Requirement for Infrastructure	Budget Requirement for Partnerships and Belonging
Early Transformative Infrastructure	\$600,000 - \$1,000,000	Minimum 25% towards an infrastructure demonstration project	Minimum 15% to partnerships; Minimum 5% to belonging
Advanced Transformative Infrastructure	\$2.5 M - \$4.0 M	70% - 85% towards infrastructure	Minimum 10% to partnerships; Minimum 5% to belonging

Community Resilience Centers Program

California Strategic Growth Council

<https://sgc.ca.gov/grant-programs/crc/>

Description: The CRC Program funds planning and implementation grants that advance the development of neighborhood resilience centers that provide shelter and resources during climate emergencies. It also supports year-round community services and programming. \$55m available from Safe Drinking Water, Wildlife Prevention, Drought Preparedness and Climate Bond.

Timeline: Applications Open Spring 2026, Awards Announced Spring 2027

Round 2 Program *Draft* Guidelines:

https://sgc.ca.gov/wp-content/uploads/CRC-Draft-Round2-Guidelines_REMEDIATED_20250918-1.pdf

Planning Grants P

An estimated \$5 million will be available for **CRC Planning Grants**, each ranging from \$100,000 to \$500,000. Planning Grants will fund communities in the initial stages of CRC project development, providing support for plan development, community engagement, coordination, and other activities.

Implementation Grants I

An estimated \$50 million will be available for **CRC Implementation Grants**, each ranging from \$1 million to \$10 million. Implementation Grants will fund new construction and upgrades of facilities to serve as Community Resilience Centers, as well as services and programs that build overall community resilience.

Call for Proposals: Health and Extreme Weather Research

University of Colorado Boulder

<https://hazards.colorado.edu/research/health-and-extreme-weather-research-call>

Background: With support from the National Institutes of Health and the National Science Foundation, the Natural Hazards Center is issuing a call for **quick response research** on the direct and indirect health impacts of extreme weather in the United States. This call is designed to address gaps in knowledge by supporting the ethical collection of perishable, health-relevant data and the rapid sharing of results through the publication of Health and Extreme Weather Reports and Research Briefs. Findings will inform efforts to save lives, prevent adverse health outcomes, and improve the quality of life of those affected by extreme weather.

Eligibility: (1) For research on direct/indirect health impacts of an extreme weather event within the last 6 months, (2) Lead applicant must be from an academic institution, but co-leads and collaborators can be from public or community, (3) Awards are \$10,000 - \$50,000.



HAQR All-Hands Presentations



Building Traction for Heat Resilience Action

LA County Chief Sustainability Office

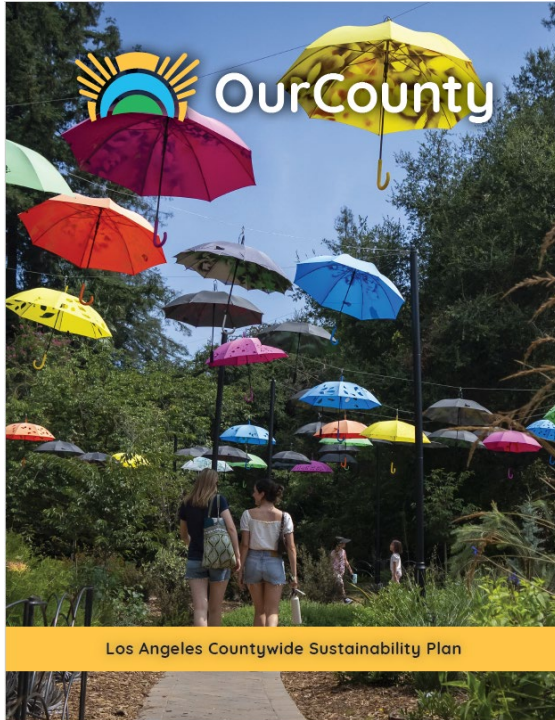


LA County Chief Sustainability Office



The Chief Sustainability Office provides comprehensive and coordinated policy support and guidance for the Board of Supervisors, County departments, the unincorporated areas, and the region.

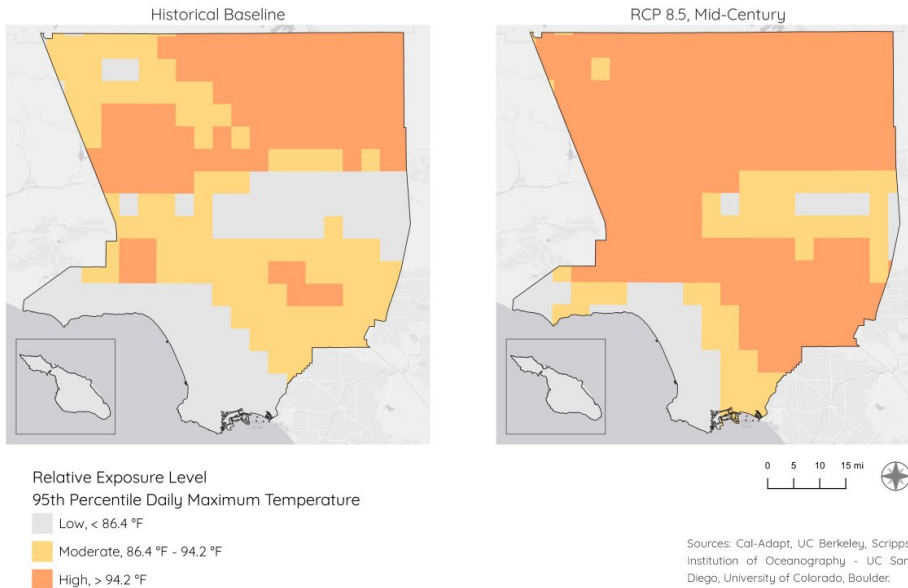
OurCounty Sustainability Plan



- Water
- Energy
- Climate
- Air Quality
- Land Use and Transportation
- Open Space, Recreation and Habitat/Biodiversity
- Resource Recovery and Waste Management
- Public Health and Well -Being
- Economy and Workforce Development
- Housing

Equity &
Resilience
woven
throughout

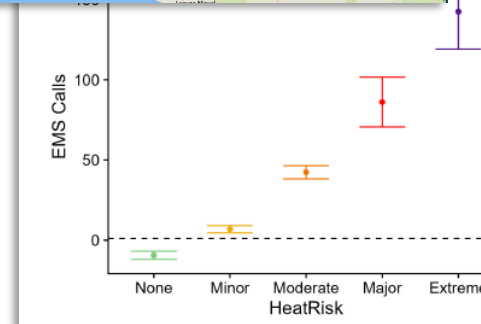
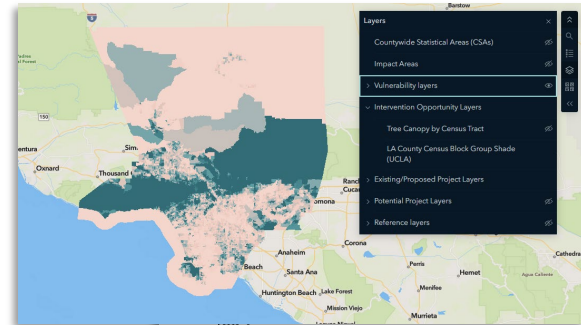
Climate Vulnerability Assessment (2021)



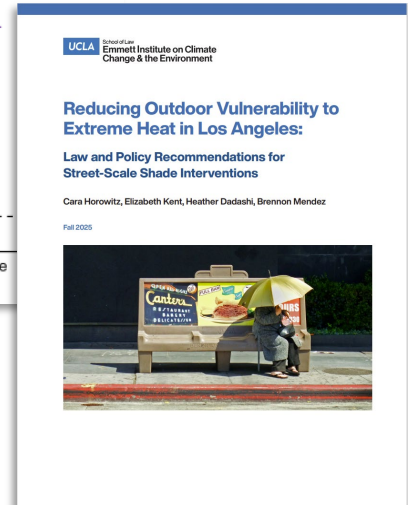
- Rising average temperatures and more frequent and severe extreme heat
- Impacts on health and well-being, air quality, natural resources, and infrastructure
- Susceptibility influenced by a range of social, economic, and environmental factors

Continuing Research

- Statistical analysis of heat impact on County operations and costs (RAND)
- Survey data (USC, LA County)
- Policy analysis of regulations related to shade (UCLA)
- Geospatial analyses of satellite data on shade (UCLA) and rooftop albedo (LA County)



Impact of HeatRisk on Los Angeles
2023



July 2023 Board Motion and Report

- Assessed heat resilience opportunities & gaps
- Proposed a County Heat Action Plan (CHAP) framework that includes preventive and responsive actions to address risks across multiple domains

LA County Heat Action Plan Framework

Guiding Principles:

Procedural Equity, Distributional Equity, Structural Equity, Transgenerational Equity

Goal 1:



Cool Outdoor Spaces

Goal 2:



**Create Heat-Resilient
Indoor Spaces**

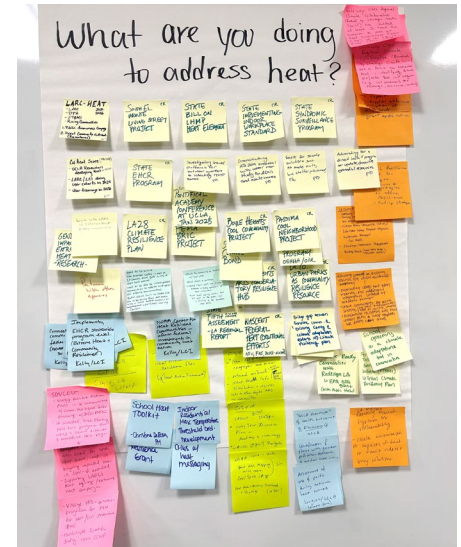
Goal 3:



**Expand Heat Safety
Comms & Programs**

Engagement Formats

- Cross-Sector Steering Committee
- Open-Invite Partner Workshops
- 3 Cross-Sector Workgroups
- OurCounty Cities Summit & City Meetings
- Unincorporated Community Engagement
- 1:1 Meetings with Experts & Implementation Partners
- Public Comment Period in September



Steering Committee

- Antelope Valley Partners for Health
- Climate Resolve
- Gateway Cities Council of Governments
- LA City Climate Emergency Mobilization Office
- LA County Department of Public Health, Office of Environmental Justice and Climate Health
- LA County Public Works, Sustainability Office
- LA Metro
- LEAP-LA Coalition, represented by Physicians for Social Responsibility Los Angeles and Pacoima Beautiful
- Los Angeles Regional Collaborative for Climate Action and Sustainability
- ReDesignLA, represented by the Council for Watershed Health
- San Gabriel Valley Council of Governments
- South Bay Cities Council of Governments
- Southern California Association of Governments
- UCLA Institute of the Environment and Sustainability
- UCLA Luskin Center for Innovation

Partner Workshops



Extreme Heat Tabletop

- Three-part scenario exercise simulating cascading impacts from an extreme heat event
- Participants identified areas for improvement across communication, mobilization of resources, outreach and preparedness
- Participants include local and regional government agencies, community organizations, services providers, and academic groups



Resident Engagement

- Gathered input on resident priorities and local vision for heat resilience
- Engagement locations in & around heat-vulnerable areas of unincorporated LA County:
 - Pomona: Wellness Center Food Distribution
 - Watts Willowbrook: MLK Hospital Farmers Market
 - Del Amo: Metro Station & Swap Meet
 - Topanga: Community Center Farmer's Market
 - Whittier: Pumpkin Splash
 - Pearblossom: Duck Race



Cool Outdoor Spaces

- Improve shade equity in the public right of way
- Alleviate chronic heat burden in highly paved urban areas
- Integrate cooling features into outdoor recreational and gathering spaces
- Ensure that County assets can thrive long-term in the face of rising temperatures



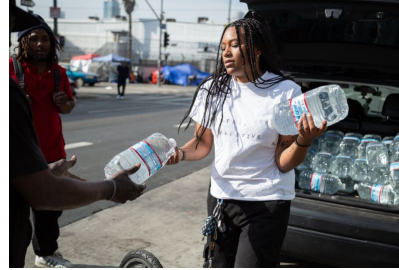
Create Heat-Resilient Indoor Spaces

- Protect renters and other heat-vulnerable residents from excessive heat in the home and congregate facilities
- Maximize passive cooling strategies and energy-efficient operations
- Promote electricity affordability, clean energy access, and energy resilience



Expand Heat Safety Communications and Programs

- Improve access to, and utilization of, cool spots during extreme heat
- Build community capacity to support resident and worker heat safety
- Increase public awareness of heat risk and personal strategies for staying cool and safe
- Improve the capacity of the health system to mitigate, prepare for, and respond to heat risk



Timeline

2024

2025

2026 &
beyond

Partner
Engagement



Community-level
Engagement



Draft Plan



Public Comment



Finalize Plan



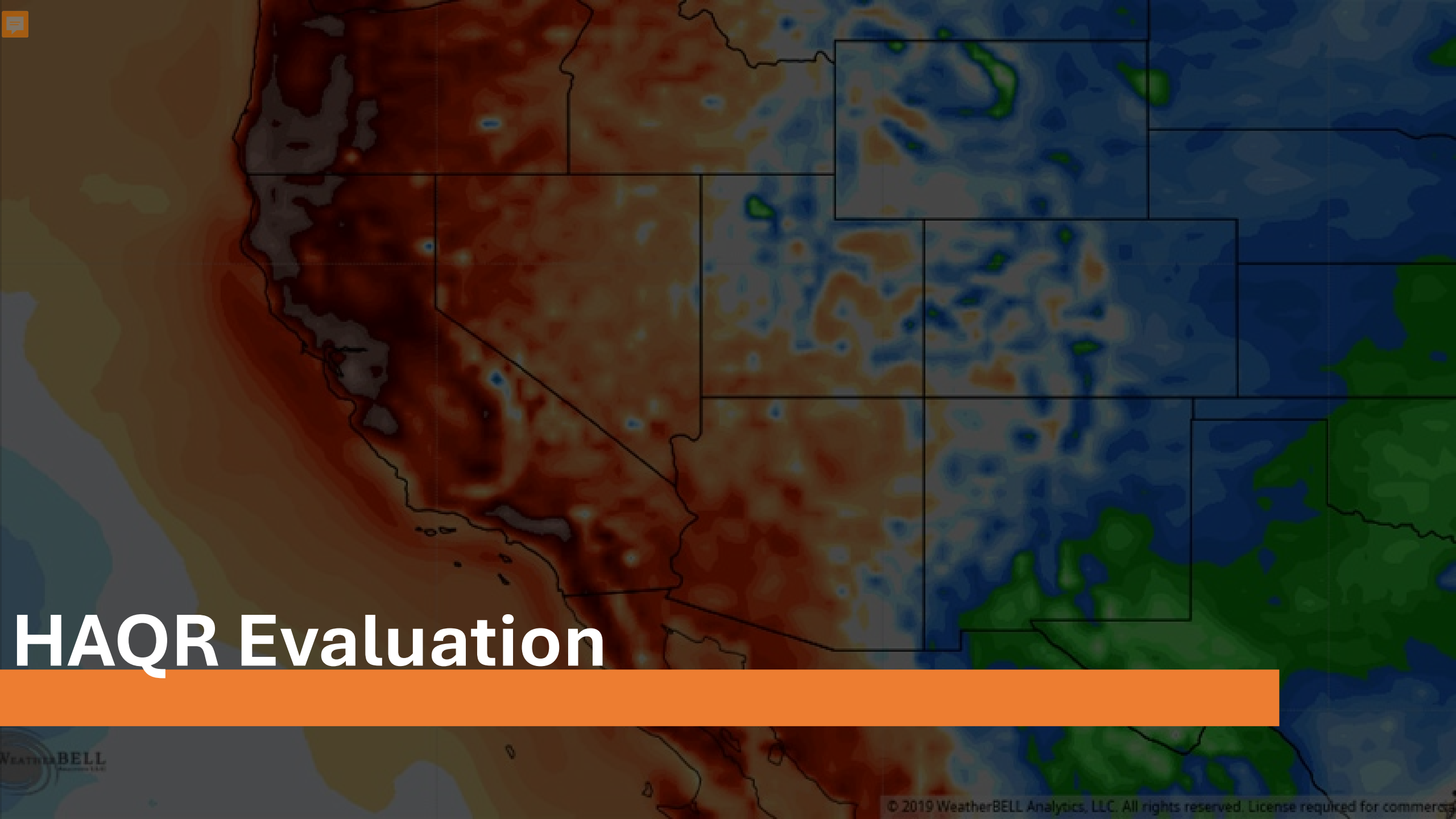
Publish, Implement



Thank You

Ali Frazzini, Policy Director
afrazzini@cso.lacounty.gov
cso.lacounty.gov





HAQR Evaluation

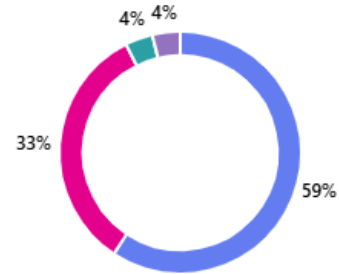
HAQR Evaluation

Evaluation Results

4. Organization Type

[More details](#)

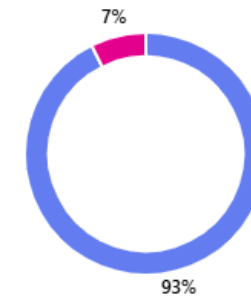
Public Sector (e.g. Jurisdiction)	16
Community Sector (e.g. CBO)	9
Academic Sector (e.g. Institution)	1
Private Sector (e.g. Small Business)	1



6. Have you attended HAQR Quarterly meetings in the past?

[More details](#)

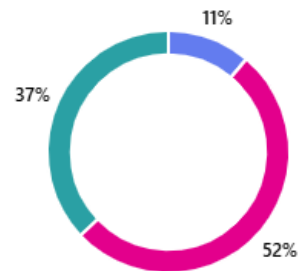
Yes	25
No	2



5. How long have you participated in HAQR?

[More details](#)

Less than 1 year	3
1-2 years	14
More than 3 years	10



7. Do you plan to attend future HAQR meetings?

[More details](#)

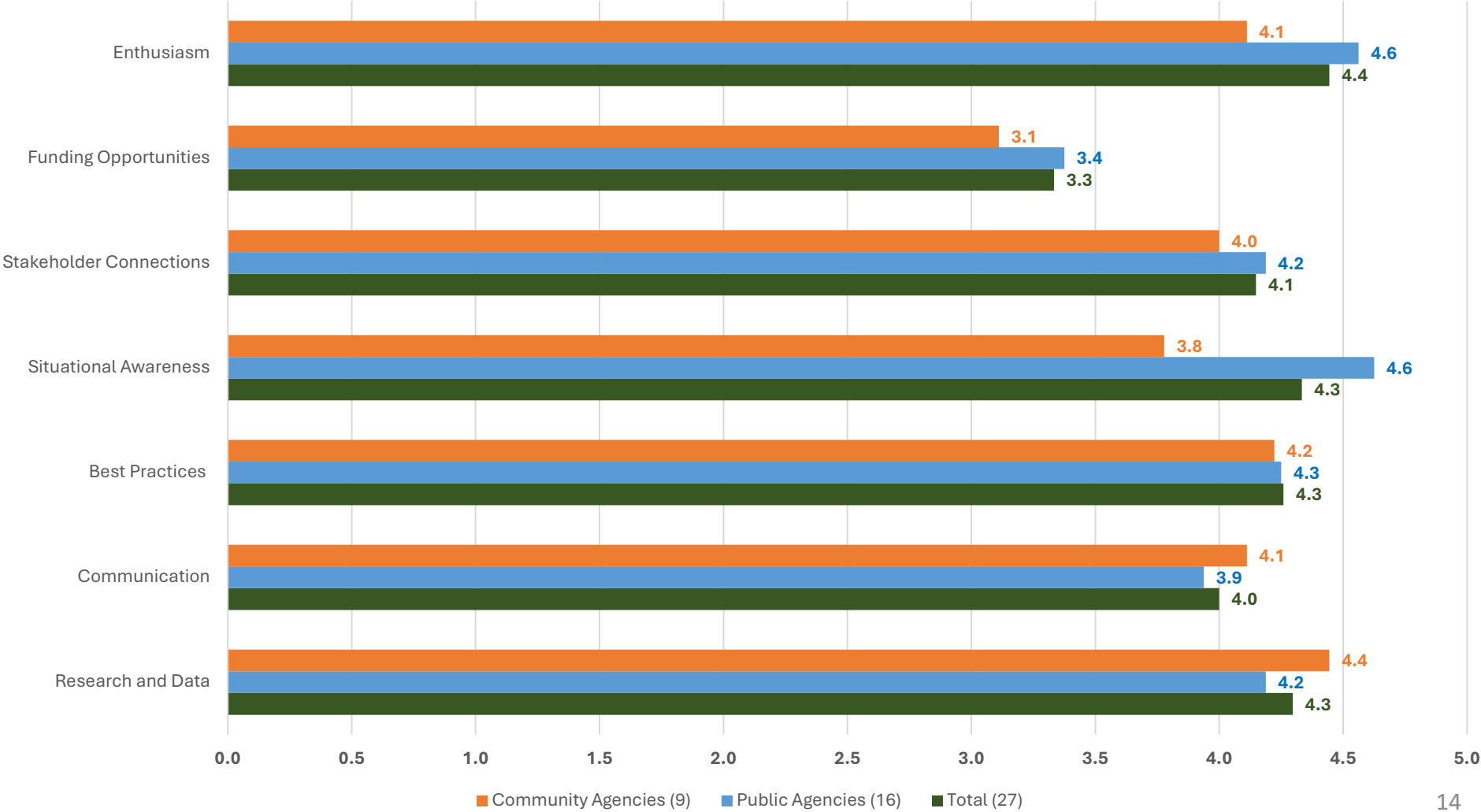
Yes	25
No	0
Undecided	2



HAQR Evaluation

Evaluation Results

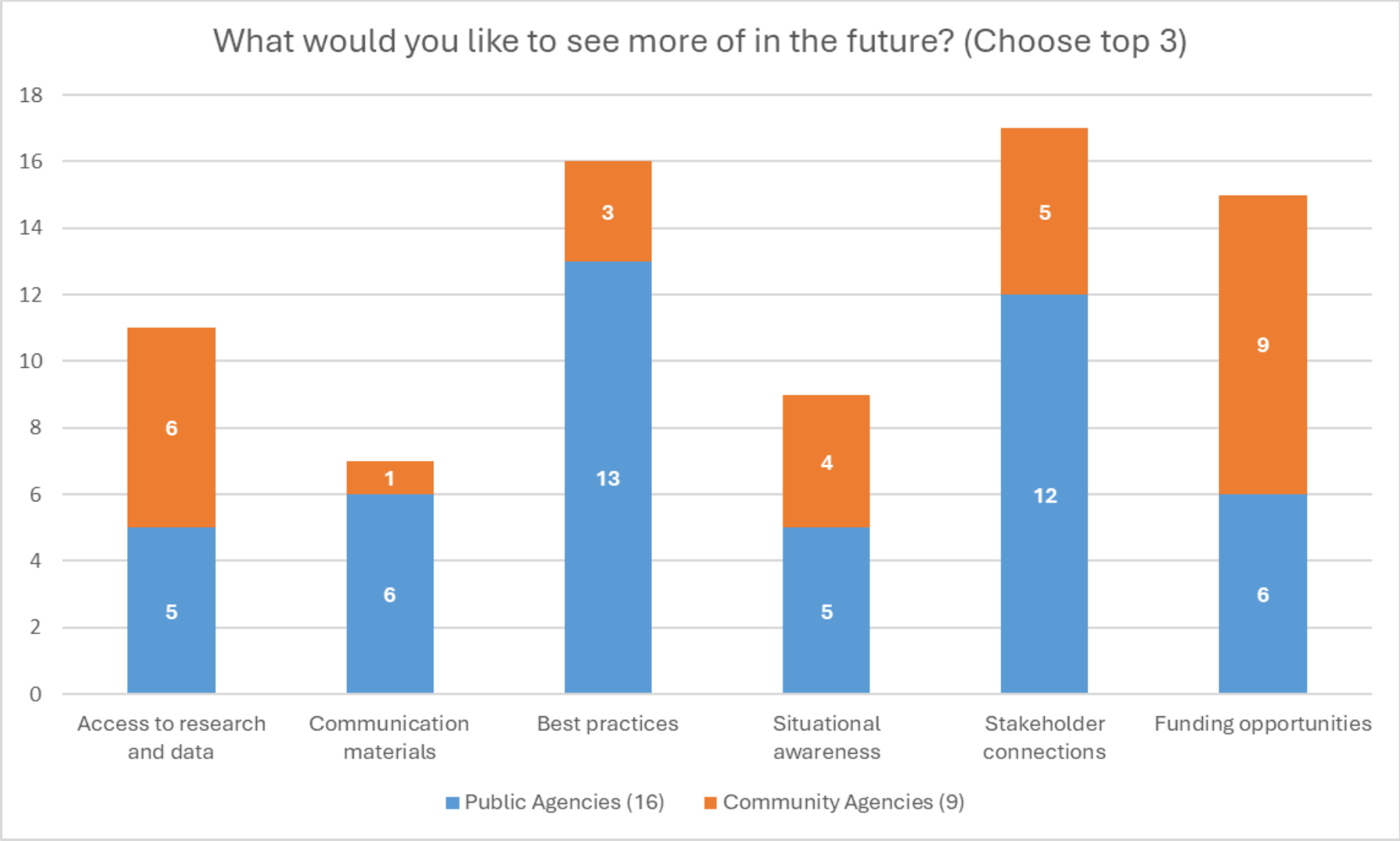
Please Rate (1 - 5) how your involvement in HAQR has improved your access to the following:





HAQR Evaluation

Evaluation Results





HAQR Evaluation

Comments

Question	General Themes
What specific topics would you like to see covered in future HAQR meetings?	<ul style="list-style-type: none">• Examples from other cities and communities and how they are responding to these issues.• Example strategies and best practices
What additional tools, data, or resources would better support your work?	<ul style="list-style-type: none">• Interagency coordination support (especially around communications)• HAQR specific funding opportunities.
Who else should HAQR engage that is currently missing?	<ul style="list-style-type: none">• More CBOs• Possibly bring in more state and federal agencies in this space.

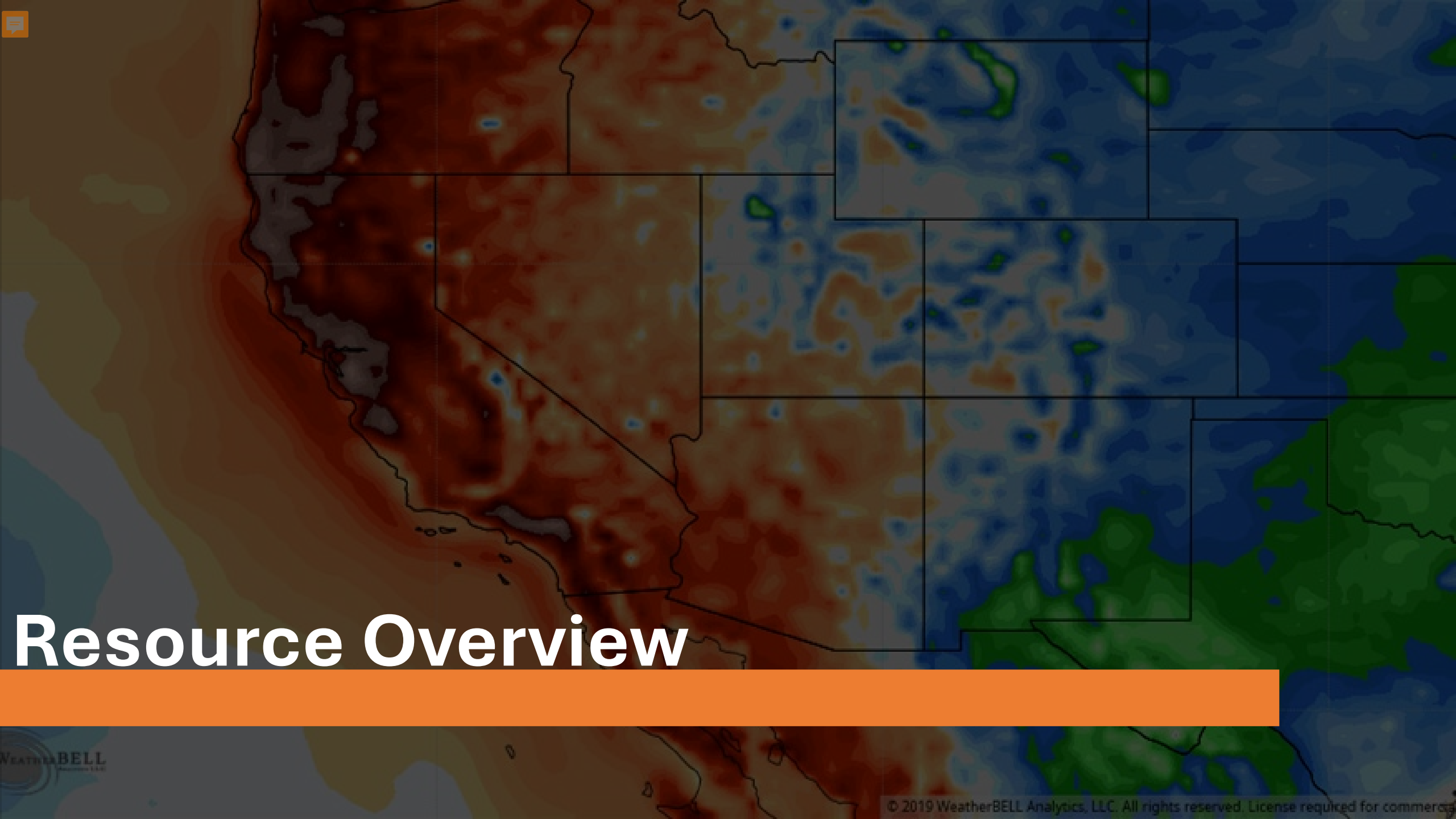
Key Takeaways

- **People Find Value in HAQR All-Hands Meetings**
 - Consistent Participation from City Agencies, Community Organizations
 - Over 4 (out of 5) for Enthusiasm, Stakeholder Connections, Best Practices, Access Research and Data, Communication (3.9)
- **More Work Needed to Support Implementation Projects**
 - Lower scores for funding opportunities
 - More technical support needed to move projects towards implementation
- **Opportunities to Increase Access to Resources**
 - Data, Communications, Stakeholders



Suggestions

Theme From Evaluation	Brainstorm Recommendation
More Access to Funding Opportunities	<ul style="list-style-type: none">• More liberal use of the HAQR email list to connect CBOs with funding opportunities• Include funding opportunities
More Support for Implementation Projects	<ul style="list-style-type: none">• Develop a list of shovel-ready HAQR projects
Increased Access to Research and Data	<ul style="list-style-type: none">• Include research/data resources as part of all-hands meetings• Invite researchers to present on their research/data sources• Inventory research questions / data needs
Expand Stakeholder Network	<ul style="list-style-type: none">• Increase opportunities for community participation (co-chair meetings, review agendas)• Explore in-person meetings• Expand invite list (more CBOs, state/regional stakeholders, philanthropy)



Resource Overview

Resource Overview

Cool rooms for indoor heat resilience: Evaluating affordable cooling strategies in heat-stressed California homes

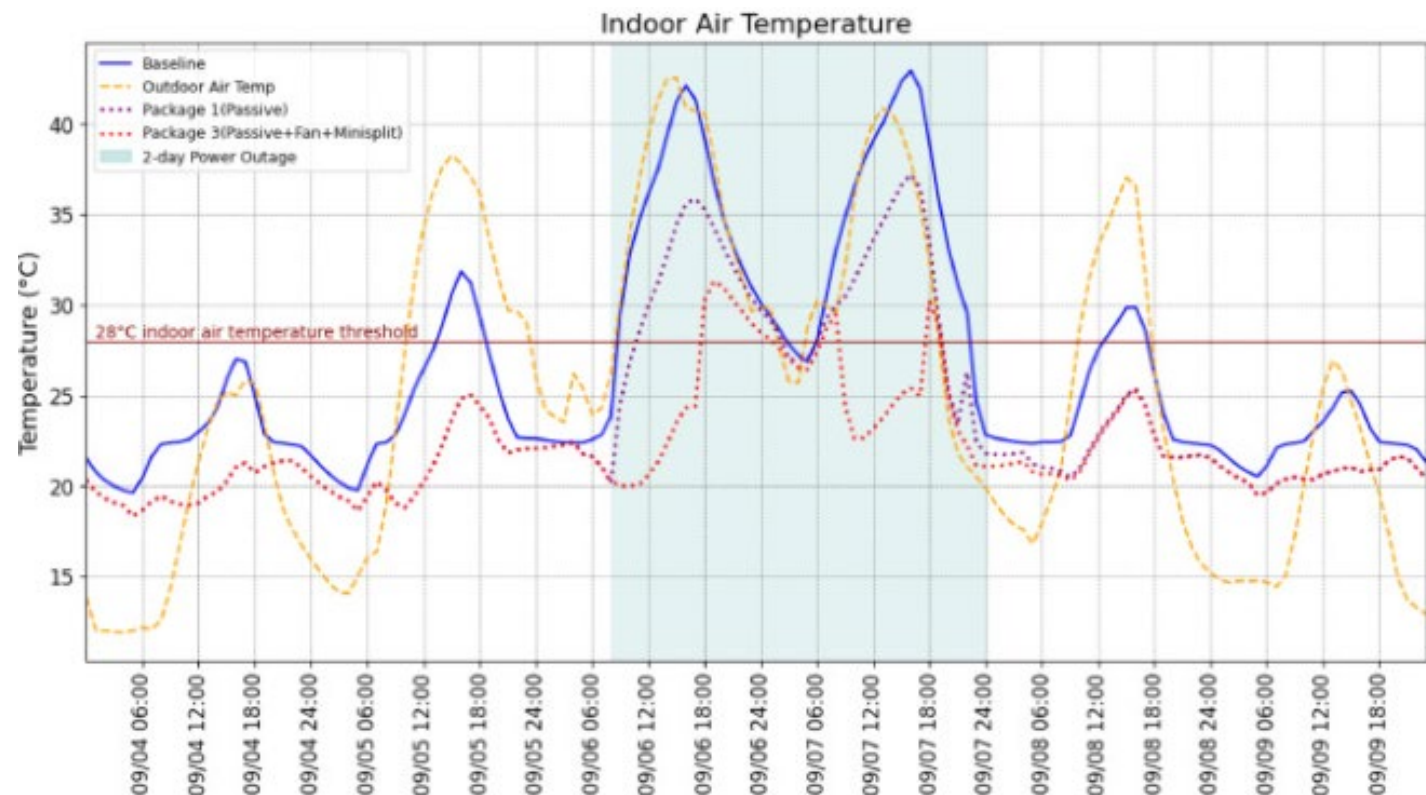
Jeetika Malik, Max Wei, Tianzhen Hong

LINK: <https://www.sciencedirect.com/science/article/pii/S0360132325013472?via%3Dihub>

Description: This study (1) assesses the efficacy of “cool rooms”—a designated space within a home equipped with passive and low-power active cooling measures to maintain safe indoor temperatures during extreme heat events and power disruptions and (2) evaluates the efficacy of various retrofit packages in maintaining thermal safety within the cool room under recent extreme heat conditions.

Tested: (1) Passive measures (i.e. Cool Room, Cool Wall, Interior Blinds, Window Film, Natural Ventilation, Insulation), (2) Overhead fans, (3) Mini-Splits

Results: Targeted “cool room” approach reduced indoor heat exposure during extreme heat events and multi-day power outages without significant increase in energy use and infrastructure requirements.





Resource Overview

Heat stress symptoms and cooling center efficacy among older adults experiencing homelessness in Phoenix, Arizona.

Raul Freire, Nadia Neimanas, Floris C Wardenaar, Melissa Guardaro, Jennifer K Vanos

LINK: <https://iopscience.iop.org/article/10.1088/2752-5309/ae050f#erhae050fs5>

Description: This study evaluated older adults experiencing homelessness ($n = 44$, ≥ 55 years) who used a respite center for cooling, examining overall physiological status (*urine specific gravity, body temperature, skin temperature, heart rate*) when entering the cooling center and during use, as well as health status, vulnerability, and adaptive capacity in relation to activity patterns and sociodemographics.

Background: In 2024, Maricopa County had 608 confirmed heat-related deaths (down from 645 in 2023) [11]. Of those, nearly 60% ($n = 359$) were 50 years or older, 78% ($n = 477$) were male; people experiencing homelessness accounted for ~49% of deaths ($n = 299$), 57% ($n = 349$) involved substance use, and 77% ($n = 467$) of deaths occurred outdoors. Further, at least 25% of heat-related deaths had a medical history of mental illness, while cardiopulmonary diseases (e.g. heart failure, asthma, pulmonary hypertension) contributed to 46% of deaths [11].

Results: While body temperature and HR dropped significantly during time in cooling, there were no significant differences in baseline body temperature, skin temperature, HR, blood pressure, or hydration levels between indoor and outdoor sleeping locations. Body temperature declined by 1.4 °C (baseline average of 38.4 °C [CI: 37.9°C–38.7 °C] to 37.0 °C [CI: 36.9°C–37.0 °C] during the 2 h study period (reaching safe levels after 70 min).

Potential Policy Application: (1) Cooling center duration guidance (minimum 70 minutes / suggested 120 minutes) for older adults. (2) Need for extended services beyond cooling and hydration (physical and mental health services, storage, legal services, etc), (3) Locate cooling centers near shelters and areas of high vulnerability/high emergency calls for heat.

Resource Overview

Costs of Climate Change: Financial and Economic Impacts on California and U.S. Households

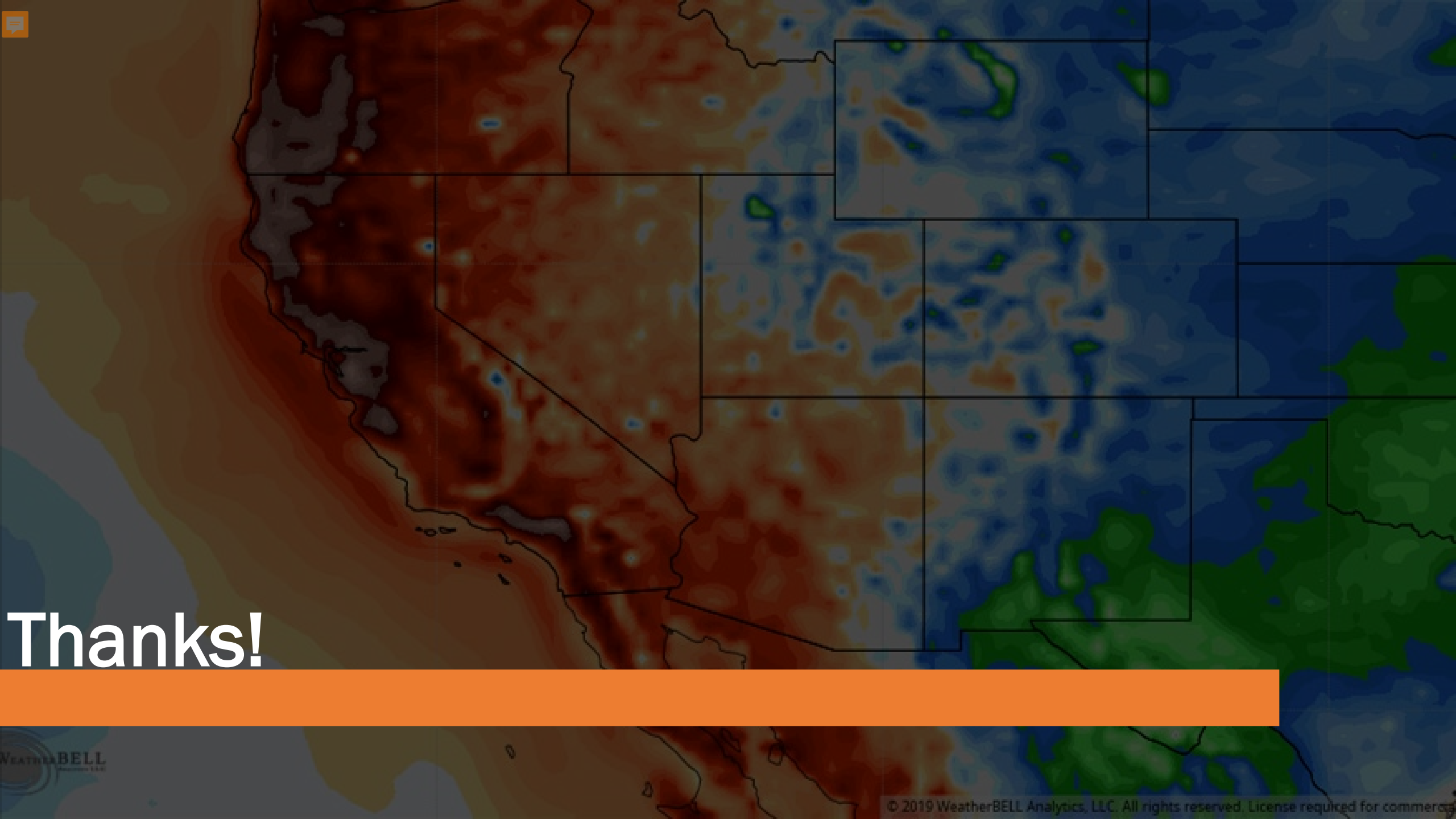
Center for Law, Energy and the Environment (CLEE) Kasia Kosmala-Dahlbeck, Louise Bedworth, Colin Johnson, Sarah Ali, Ken Alex

[LINK: https://www.law.berkeley.edu/wp-content/uploads/2025/09/Costs-of-Climate-Change-Report_CLEE_Sep2025.pdf](https://www.law.berkeley.edu/wp-content/uploads/2025/09/Costs-of-Climate-Change-Report_CLEE_Sep2025.pdf)



Description: California has unique vulnerabilities to climate because of its Mediterranean climate, the economic importance of climate-vulnerable industries including agriculture, tourism, and recreation, and the seasonal nature of its precipitation patterns that affect water supply. California is already experiencing severe impacts due to climate change – all of which are expected to increase in severity over the century.⁵ Below are highlights of the costs of climate change to California households, businesses, workers, and the public sector. This literature review provides an initial review of available literature on the costs of climate change and provides a starting point for future research and analysis

Highlights: (1) Moore Foundation calculated the average annual costs of wildfires in California between 2017 and 2021 to be over \$117.4 billion, (2) Wildfire related costs include wildfire vegetation management, increasing share of interest rates, (3) Canadian wildfires were linked to an additional \$6 billion in credit card spending in New York, (4) Heat softens asphalt road surfaces costing \$3.8 - \$35 million in repairs/delays per heat event, (5) Each additional day of temperatures over 95F increase electricity costs 1.6%, (6) Wildfire smoke in the San Francisco Bay Area alone resulted in an estimated \$7.8 billion of health care costs in 2018, (7) Climate-driven extreme events are projected to increase food prices between 0.92% - 3.23% per year globally through 2035.



Thanks!