2025 SOUTHERN ARIZONA HEAT SUMMIT REPORT

CITY OF TUCSON

Regina Romero

MAYOR REGINA ROMERO

TUCSON Resilient Together

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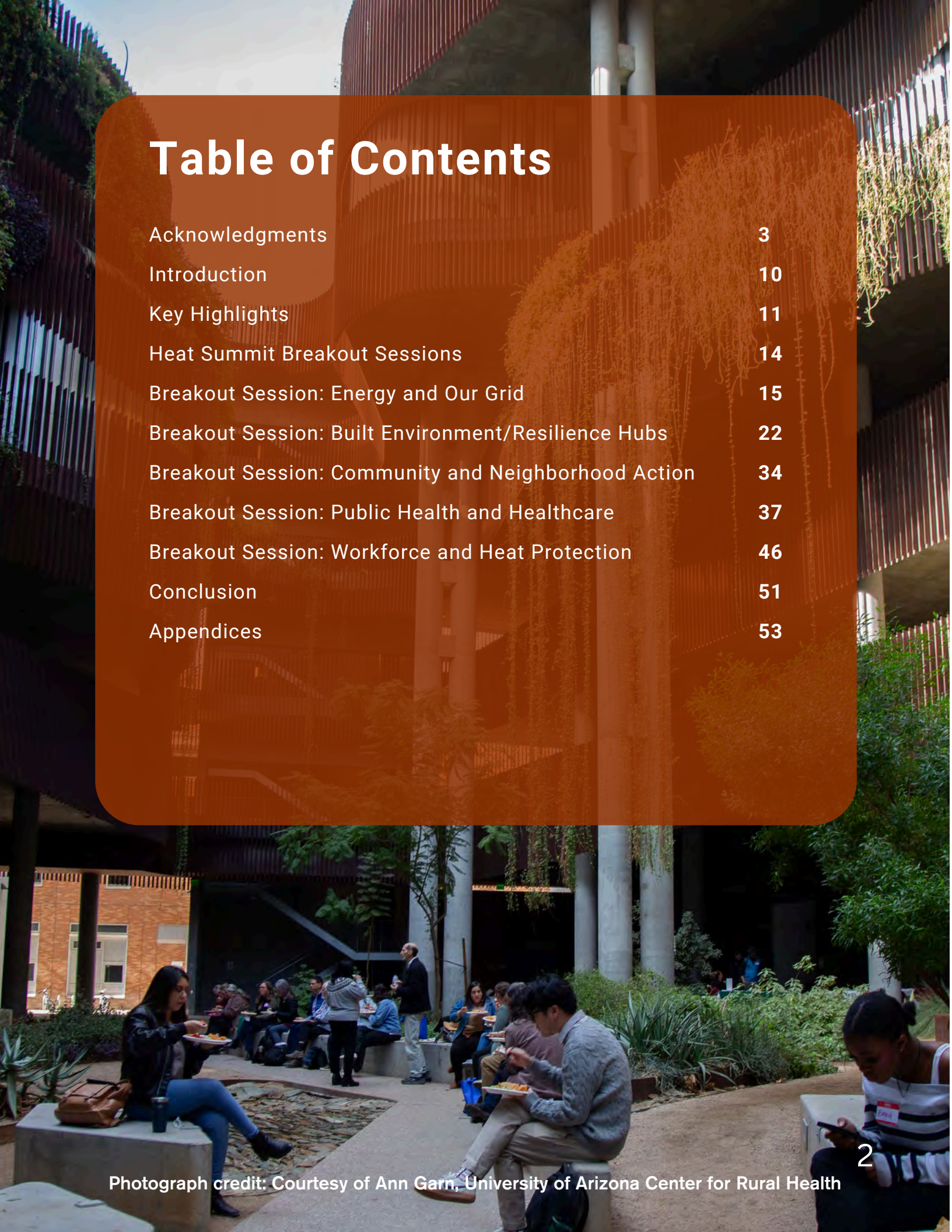

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Acknowledgments

The success of the 2025 Southern Arizona Heat Summit was made possible by the dedication and collaboration of many individuals and organizations. We extend our deepest appreciation to:

- **The Planning Committee and Heat Advisory Committee** for their leadership in organizing this event.
- Community Partners & Breakout Session Designers for shaping meaningful discussions.
- **Panelists and Speakers** for sharing expertise and strategies on heat resilience.
- **Sponsors and Supporters** for providing meals and language access.
- **Diverse Participants** from government, nonprofits, healthcare, labor, emergency response, and local communities for contributing valuable insights.

This summit was a collective effort, and we are grateful for the time, knowledge, and passion that each participant contributed. Your work is instrumental in building a more resilient and prepared Southern Arizona.

Acknowledgments

Sponsors

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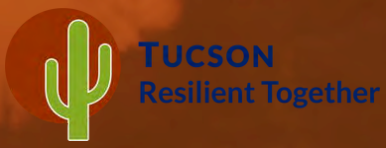
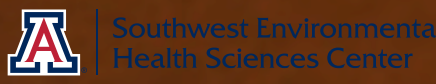
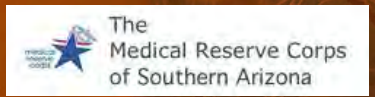


Resource Fair





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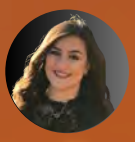

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Tucson Electric Power
Tohono O'odham Nation
United States Green Building Council
Universidad Pablo de Olavide, de Sevilla
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- Arizona Project WET
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- SWEHSC-CEC
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Introduction

The 2025 Southern Arizona Heat Summit was organized by the City of Tucson in collaboration with the University of Arizona and Pima County to address the increasing risks posed by extreme heat. As rising temperatures, prolonged heat waves, and growing energy demands continue to impact communities, heat resilience has become a critical public health and infrastructure priority for the region.

The summit convened nearly 170 participants, including representatives from local governments, nonprofit organizations, research institutions, community groups, and frontline workers. Discussions focused on key objectives:

- **Advancing collaborative solutions** that prioritize vulnerable populations, including low-income residents, outdoor workers, and unhoused individuals.
- **Strengthening emergency response coordination** across public health, energy, workforce safety, and urban planning sectors.
- **Developing strategies for resilience hubs, cooling centers, and community-driven heat mitigation efforts.**

Through interactive breakout sessions, participants engaged in scenario-based planning, policy discussions, and knowledge-sharing on critical topics such as energy resilience, workforce protections, public health strategies, urban planning, and community-led preparedness. Following the summit, a report-back session was held to share key takeaways, and Mayor and Council provided feedback on the discussions and proposed strategies.This report synthesizes key findings and recommendations to guide ongoing and future efforts in strengthening Southern Arizona's heat resilience.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

KEY HIGHLIGHTS

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Highlights

The summit discussions revealed several overarching themes and recommendations aimed at improving regional heat resilience. Key takeaways include:

1. Community-Based Resilience

- Strengthening social cohesion through neighborhood networks, block connectors, and mutual aid efforts enhances community preparedness and reduce heat-related risks.
- Identifying existing community spaces, such as libraries, schools, and community centers, as resilience hubs increases accessible cooling and emergency relief networks.
- Expanding transportation access improves community members' ability to reach cooling centers and other heat relief resources.

2. Public Health & Emergency Response

- Strengthening the availability, accessibility, and awareness of cooling centers better serves at-risk populations, particularly in rural and underserved areas.
- Expanding public health messaging on heat-related illnesses, medication interactions, and hydration awareness enhances overall community resilience.
- Utilizing multilingual messaging, visual communication tools, and digital resources, such as QR codes, improves public engagement and information accessibility.
- Encouraging buddy systems within workplaces and neighborhoods can help ensure at-risk individuals receive timely support.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Highlights

3. Workforce Heat Protection

- Enhancing OSHA and ADOSH standards could improve workplace heat safety and compliance for workers exposed to high temperatures.
- Expanding heat safety training programs to include supervisors and management can enhance compliance.
- Workforce safety programs may benefit from integrating individualized risk assessments, including considerations for age, pre-existing conditions, and acclimatization needs.
- Developing heat safety reporting tools may facilitate anonymous reporting of unsafe worksite conditions and improve data collection for compliance enforcement.

4. Energy & Infrastructure Resilience

- Expanding microgrids, solar integration, and distributed power sources strengthen grid reliability during extreme heat events and power outages.
- Retrofitting homes, shelters, and community spaces with energy-efficient cooling solutions could contribute to long-term resilience.
- Expanding weatherization programs and urban tree-planting initiatives can reduce urban heat island effects.

5. Policy & Governance Solutions

- Strengthening regional coordination among local governments, utilities, and emergency services enhances the alignment of heat resilience strategies.
- Community-driven advocacy could support policy initiatives that address Arizona's unique climate challenges, including stronger heat protection ordinances for workers.
- Increasing investments in sustainable housing, urban cooling infrastructure, and expanding public transportation can contribute to long-term heat resilience efforts.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

BREAKOUT SESSIONS

Energy & Our Grid

Built Environment / Resilience Hubs

Community & Neighborhood Action

Public Health & Healthcare

Workforce & Heat Protection

Energy and Our Grid

The **Energy and Our Grid** breakout session explored ways to enhance preparedness for energy disruptions, such as extended power outages and regional energy constraints during extreme heat. The goal was to identify actionable solutions to improve energy reliability and resilience.

The session was divided into two parts. The morning session featured presentations from **Tucson Electric Power (TEP)** on current energy resilience efforts, including strategies to enhance grid reliability, outage and wildfire preparedness, and customer support. Participants had the opportunity to ask questions throughout the presentation.

Why energy resilience is important to you?

"To have a thriving Tucson, we need energy"

"I want to remain safe and reduce emissions" "I live at the end of a power line"

"We are the first generation to feel the real impacts of climate change and the last generation to be able to do something about"

"For my children and family" "To keep the state running, I'm fearful of outages"

"We need energy for education and we need that education to power change"

"It is key to decarbonization and improving human condition"

"The most impactful climate solutions are based in electricity

"The most impactful climate solutions are based in electricity"

The afternoon session shifted to a **scenario-based planning discussion**, where participants worked through problem-solving and preparedness strategies. They selected one of two scenarios and collaboratively answered a series of guided questions before engaging in a group discussion.

SCENARIO 1: EXTENDED STORM-RELATED OUTAGES

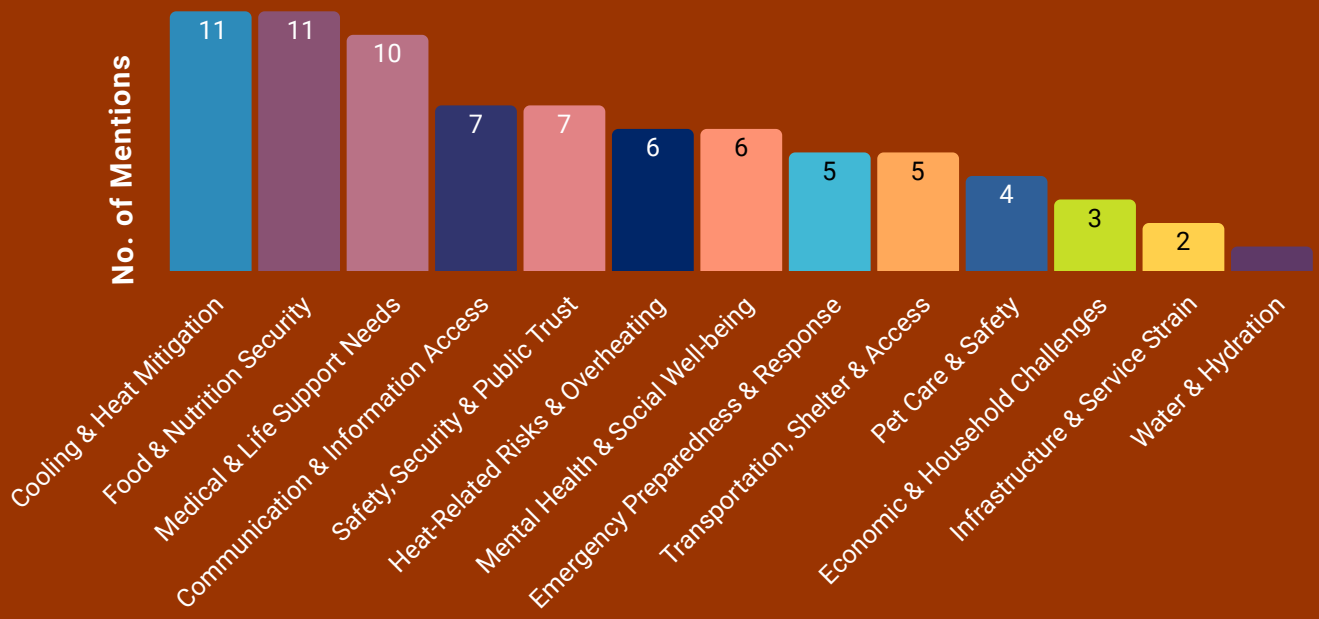
A punishing late-afternoon monsoon storm severely damages TEP's local energy grid, causing multiple outages across the city. Although service is restored to most customers that evening, residents in three neighborhoods – including yours – will be without service for 72 hours in hot summer weather until TEP can complete repairs. One or more of these areas includes many seniors and low-income residents who don't have backup energy resources and aren't sure where to turn for help.

SCENARIO 2: REGIONAL ENERGY CONSTRAINTS DURING EXTREME HEAT

Several critical energy resources fail during an intense regional heat wave, leaving TEP without enough energy to satisfy peak energy needs. TEP prioritizes power for critical service providers but uses what are called "rolling blackouts" that leave different areas of town without power for an hour at a time during the hottest hours of the day. This continues for three days until those critical energy resources can be restored.

Participants selected **Scenario 1** and responded to six key questions using Mentimeter. Their summarized responses are provided below, while **Appendix A** contains a comprehensive list of responses categorized accordingly.

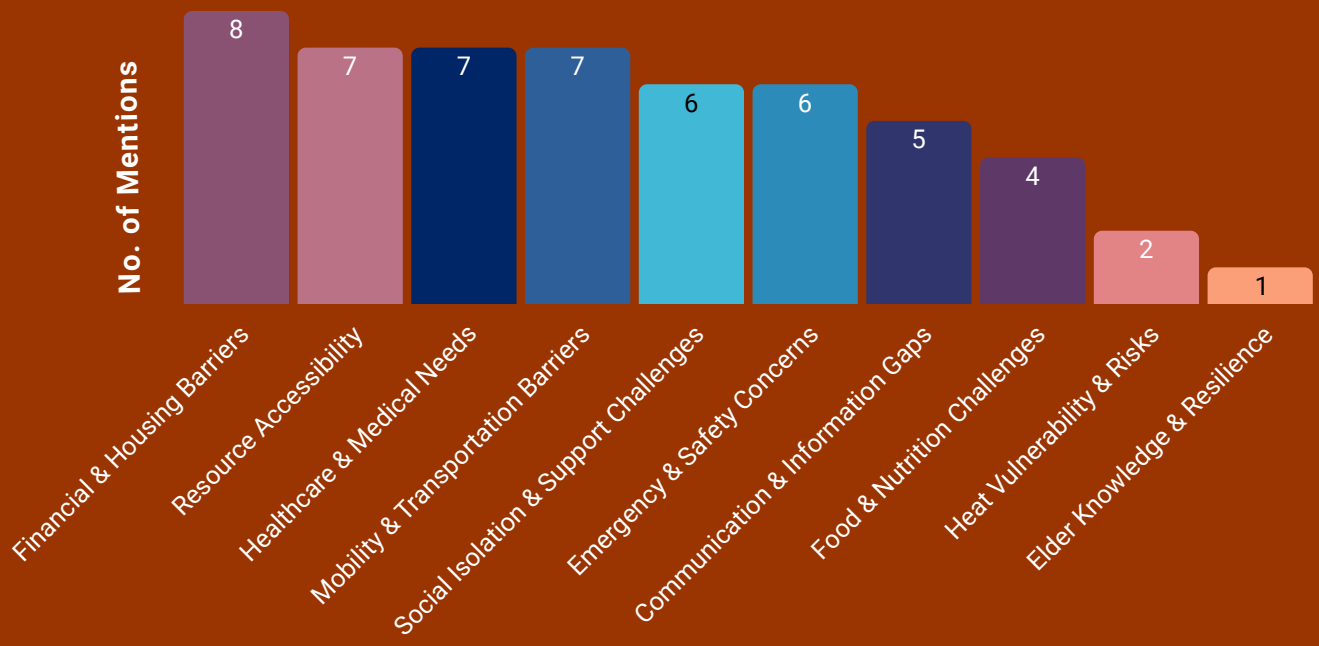
1. What are the biggest challenges residents face during a 72-hour power outage in extreme heat?



Participants identified cooling & heat mitigation, food & nutrition security, and medical & life support needs as the most significant challenges during a 72-hour power outage in extreme heat.

- **Cooling & Heat Mitigation:** Without power, access to air conditioning and cooling systems is severely limited, increasing the risk of heat-related illnesses and heat stroke. Residents struggle to stay cool, especially those without backup cooling options.
- **Food & Nutrition Security:** Power loss leads to food spoilage and loss of refrigerated goods, making it difficult for households to maintain safe and sufficient food supplies. Low-income residents are particularly affected.
- **Medical & Life Support Needs:** Many rely on electrically powered medical devices, such as oxygen tanks and life-support systems. A prolonged outage can be life-threatening for those dependent on powered healthcare equipment, medication refrigeration, or other essential medical resources.

2. How does a prolonged outage impact seniors and low-income households differently?

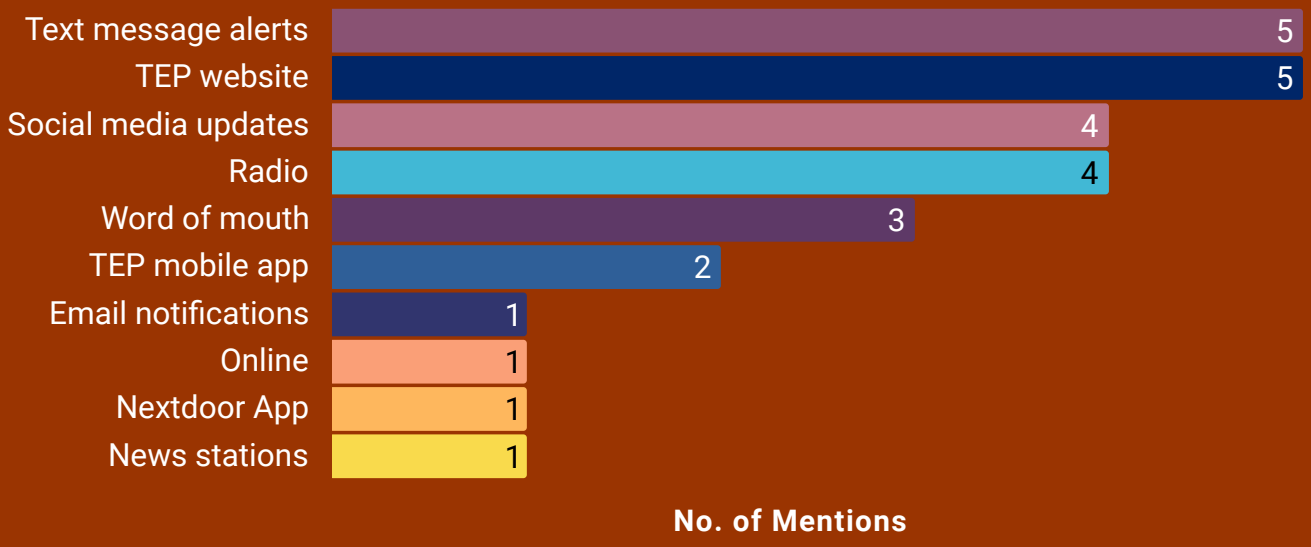


Participants indicated that prolonged power outages create significant hardships for seniors and low-income households, with the most pressing challenges being financial & housing barriers, resource accessibility, healthcare & medical needs, and mobility & transportation barriers.

- **Financial & Housing Barriers:** Many seniors and low-income residents cannot afford relocation or temporary cooling, forcing them to endure extreme heat in less energy-efficient homes with limited shaded areas. Additionally, those in food deserts face food insecurity, and limited financial resources make recovering from an outage more difficult.

- **Resource Accessibility:** Participants noted that many in these communities lack independent access to essential resources, including transportation, emergency aid, and replacement supplies. Limited social networks and digital literacy further prevent them from accessing critical support.
- **Healthcare & Medical Needs:** Medical devices fail without power, impacting oxygen tanks, mobility aids, and refrigerated medications. Limited access to healthcare facilities and alternative care locations increases medical risks for vulnerable populations.
- **Mobility & Transportation Barriers:** Many seniors lack access to personal vehicles, making it difficult to evacuate, reach cooling centers, or obtain essential supplies. Those with limited mobility face additional challenges, particularly if electric wheelchairs or transportation services are disrupted.

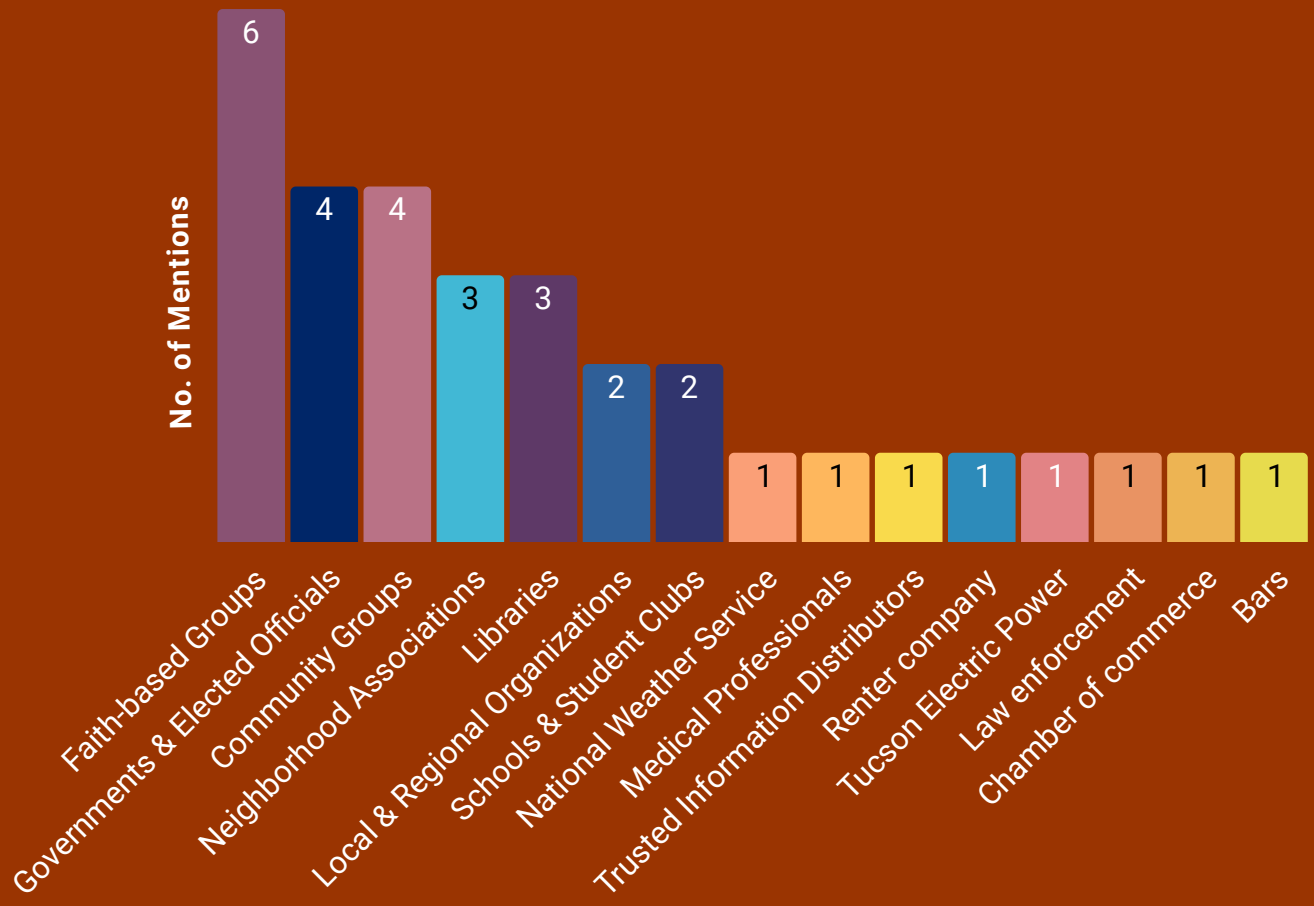
3. Where do people typically get emergency information during an outage?



Participants identified several key sources where people typically obtain emergency information during a power outage. The top sources mentioned were text message alerts, the TEP website, social media updates, radio, and word of mouth.

- **Text Message Alerts & TEP Website:** Participants indicated that official text alerts and the TEP website are the most commonly relied-upon sources for real-time updates during outages. These platforms provide critical information quickly and directly to affected residents.
- **Social Media Updates:** Social media platforms were mentioned as important channels for receiving real-time emergency information from utilities, news stations, and local authorities.
- **Radio:** Traditional radio broadcasts remain a vital source, especially for those without internet access or when mobile networks are disrupted.
- **Word of Mouth:** In some cases, residents rely on neighbors, family, or community members for updates, particularly in areas with limited digital access.

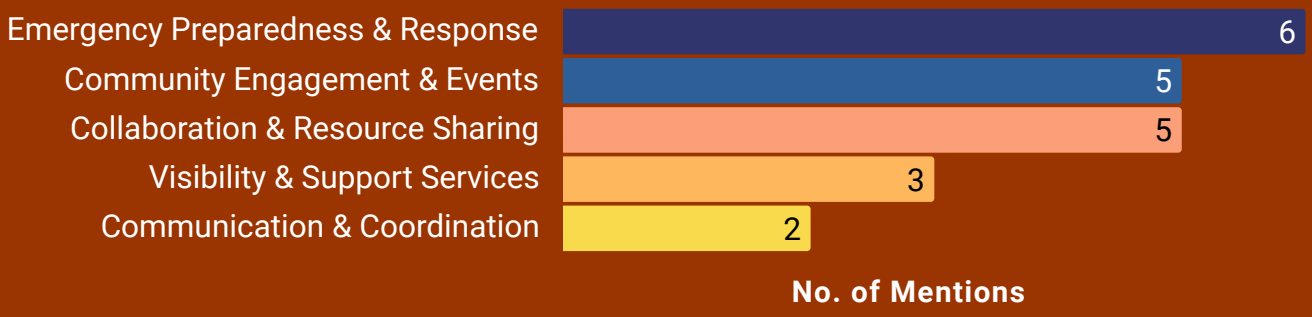
4. What partnerships (e.g., government, utilities, nonprofits) could improve emergency preparedness and response?



Participants identified faith-based groups, governments & elected officials, community groups, neighborhood associations, and libraries as the most valuable partnerships to strengthen emergency preparedness and response efforts.

- **Faith-Based Groups:** Churches and religious organizations play a vital role in community outreach and emergency assistance, serving as trusted information sources and providing shelter, food, and resources during crises.
- **Governments & Elected Officials:** Local government agencies and elected leaders—including Pima County, the City of Tucson, and the Community Safety Health and Wellness Program (CSHW)—can provide policy support, funding, and coordination for emergency response initiatives.
- **Community Groups:** Promotoras de Educacion y Outreach (PEO) and Community Food Bank connect directly with vulnerable populations, ensuring resource distribution and outreach.
- **Neighborhood Associations:** Local neighborhood groups can facilitate community-wide preparedness plans, communication networks, and resource-sharing.
- **Libraries:** As trusted community hubs, libraries can serve as information centers and emergency communication sites during power outages and disasters.

5. How can local organizations and neighbors support each other in these situations?



Participants identified emergency preparedness & response, collaboration & resource sharing, and community engagement & events as the most effective ways for local organizations and neighbors to support each other during a crisis.

- **Emergency Preparedness & Response:** Participants emphasized the need for household emergency plans, encouraging neighbors to create emergency contact lists, check in on each other, and conduct preparedness drills. Practicing Emergency Operations Center (EOC) drills and sharing response procedures can improve community readiness.
- **Collaboration & Resource Sharing:** Working together ensures efforts are not duplicated, and resources are efficiently distributed. Participants suggested sharing supplies, offering communal gathering spaces, and matching impacted families with those who have power or additional resources.
- **Community Engagement & Events:** Strengthening social connections through movie nights, bake exchanges, neighborhood block parties, and friendly competitions helps build trust and resilience, making it easier to mobilize support during emergencies.

6. What long-term investments (e.g., microgrids, emergency plans) should be prioritized to reduce vulnerability to extended outages?

Participants identified energy & infrastructure, emergency preparedness & response, community engagement & communication, and local resilience & urban planning as the most critical long-term investments to strengthen community resilience against extended outages.

- **Energy & Infrastructure:** Expanding microgrids, distributed energy systems, and battery backups can improve grid reliability and reduce power disruptions. Investments in alternative power sources, solar farms, and rooftop solar enhance community self-sufficiency.
- **Emergency Preparedness & Response:** Establishing backup plans, emergency communication strategies, resource sheds, and charging stations ensures communities can sustain essential services during outages.
- **Community Engagement & Communication:** Strengthening public outreach through email lists, information campaigns, and trust-building efforts fosters community preparedness and real-time emergency coordination.
- **Local Resilience & Urban Planning:** Investing in resilience hubs, improved housing, and sustainable urban planning ensures better disaster response infrastructure while reducing overall community vulnerability.

Group Discussion and Takeaways

Participants in the discussion identified key areas for improving emergency preparedness and response to prolonged power outages, particularly in extreme heat conditions. Their recommendations focus on decentralized response strategies, enhanced public awareness, and stronger local engagement. These strategies aim to ensure that resources are efficiently distributed and accessible to the most vulnerable populations. Main takeaways and recommendations include:

- **Rethink the Resilience Hub Model** - Participants recommended shifting from a single-site resilience hub model to a decentralized coordination approach. Instead of concentrating all services in one location, hubs should function as command centers that organize and distribute resources across multiple service areas. This model ensures aid is more accessible and responsive to diverse community needs.
- **Improve Public Awareness of Emergency Response -** Participants emphasized the importance of public education on emergency response procedures. Clear communication on expected response timelines, available resources, and safety measures can help prevent misinformation, reduce fear, and mitigate potential security concerns during outages.
- **Leverage CERT for Standardized Emergency Response -**To strengthen community preparedness, participants recommended expanding and integrating Community Emergency Response Teams (CERT). These trained teams can provide immediate support in emergencies, assist with response coordination, and improve communication between residents and local authorities.
- **Increase Distributed Power Generation** - Participants suggested encouraging home solar integration and virtual power banks to enhance grid resilience. Allowing decentralized energy generation can help maintain power availability in localized areas, reducing the overall impact of extended outages.

Built Environment / Resilience Hubs

The **Built Environment breakout session** focused on identifying community-driven solutions for developing resilience hubs in Tucson. The session aimed to build a shared understanding of resilience hubs, explore community needs, and prioritize locations and services that will enhance Tucson's resilience to climate hazards such as extreme heat.

The session was divided into two parts, and both were facilitated by **The City of Tucson** and **The University of Arizona's Heat Resilience Initiative**. The morning session featured an introduction to resilience hubs, highlighting their role in providing essential services during everyday operations, disruptions, and recovery. Facilitators presented foundational elements of resilience hubs, shared examples of successful models, and explained the City of Tucson's vision for these community spaces. Participants engaged in a brainstorming exercise to reflect on their experiences with community spaces that have served similar purposes.

The afternoon session shifted to hands-on activities designed to gather community input on **key aspects of resilience hub planning**. Participants used interactive polling to prioritize essential services and facility features before analyzing heat vulnerability maps to identify potential locations for future resilience hubs. Small group discussions allowed participants to share insights and collaboratively shape recommendations for the City's next steps.

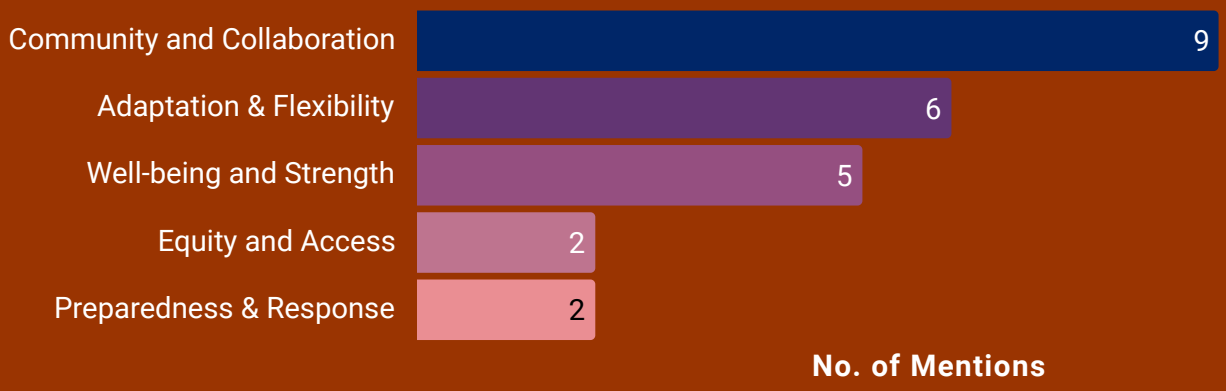
Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Icebreaker

In the **first interactive exercise,** participants shared what resilience means to them and their communities. Their responses were diverse, offering a rich range of perspectives on how individuals and communities perceive and practice resilience. A summary of their insights is summarized below.

Key words identified in the icebreaker

The responses illustrate a holistic view of resilience, emphasizing the **ability to adapt to changing circumstances, collaborate as a community, and maintain strength in the face of challenges.** Resilience spans physical, social, and environmental dimensions, with many participants highlighting the **importance of community-centered solutions, collective action, and networks of support in times of need**. Adaptation and preparedness were recurring themes, with respondents mentioning the need to plan for the unexpected and withstand difficult conditions. Equally vital is ensuring equity and **access to resources**, reflecting the community's focus on inclusive resilience-building efforts. These insights provide a valuable foundation for shaping future initiatives and actions aimed at enhancing resilience in the built environment.



Personal Experiences and Existing Spaces as Resilience Hubs

In the **second activity,** participants were asked to reflect on spaces they or others have used, managed, or supported that resemble resilience hubs based on the presentation. Responses were written individually and then shared with the group for discussion. The conversation focused on identifying existing spaces that could serve as resilience hubs, potential improvements, and challenges in implementing them.

Several existing facilities were mentioned, including the Joel D. Valdez Public Library, the Udall Community Center on the eastside, which has two buildings (a senior center and an exercise track), and the Tucson Mall, which participants noted could serve as an example of adaptive reuse. In the Tohono O'odham Nation, four main hubs or recreation centers were highlighted as critical community spaces, with large-capacity buildings such as gyms and government facilities equipped with electricity and water that can be transformed into resilience hubs.

Participants emphasized the importance of having backup systems for water and power to ensure uninterrupted services during emergencies. This includes solutions like solar power with battery storage, backup generators, and water storage systems to maintain essential services in resilience hubs when primary utilities fail. Also proposed health checks for at-risk community members through collaborations with nurses and the Department of Health. They discussed micro shelters and transitional housing for the unhoused population, focusing on incorporating communal services, showers, and bathrooms into the design.

Public and private solutions were also considered, such as transforming schools, abandoned houses into temporary cooling spaces. Specific examples included St. Vincent de Paul in Phoenix and programs in Madagascar where research centers have been repurposed into national parks. Questions were raised about the distinction between resilience hubs and cooling centers, debating whether the focus should be solely on heat relief or a broader set of services.

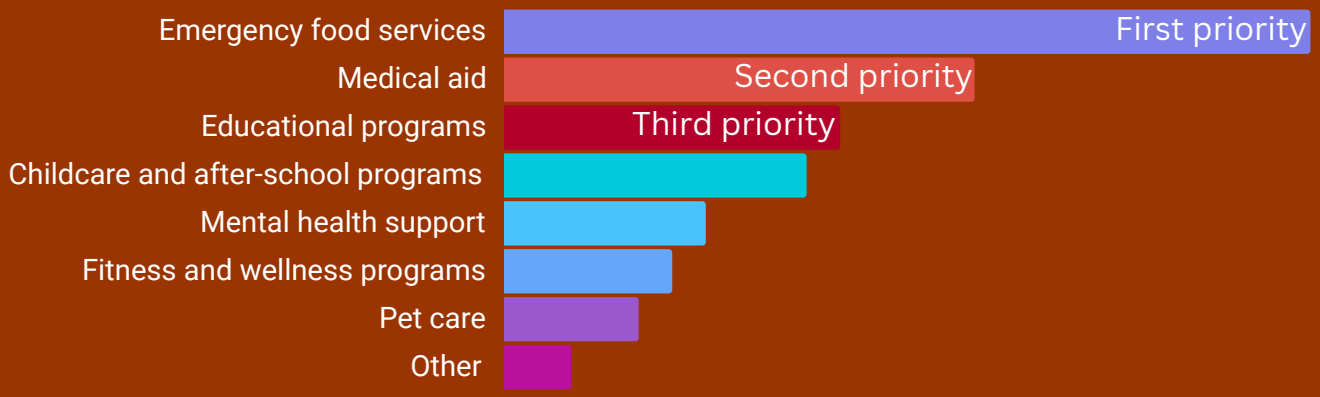
Participants agreed that a comprehensive strategy for tree planting, retrofitting buildings for water harvesting, and protecting communities from rezoning would help strengthen resilience efforts. They emphasized the need for strong leadership, diverse community engagement, and a collaborative approach to designing and implementing resilience hubs that meet the evolving needs of Tucson's communities.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Design an effective resilience Hub

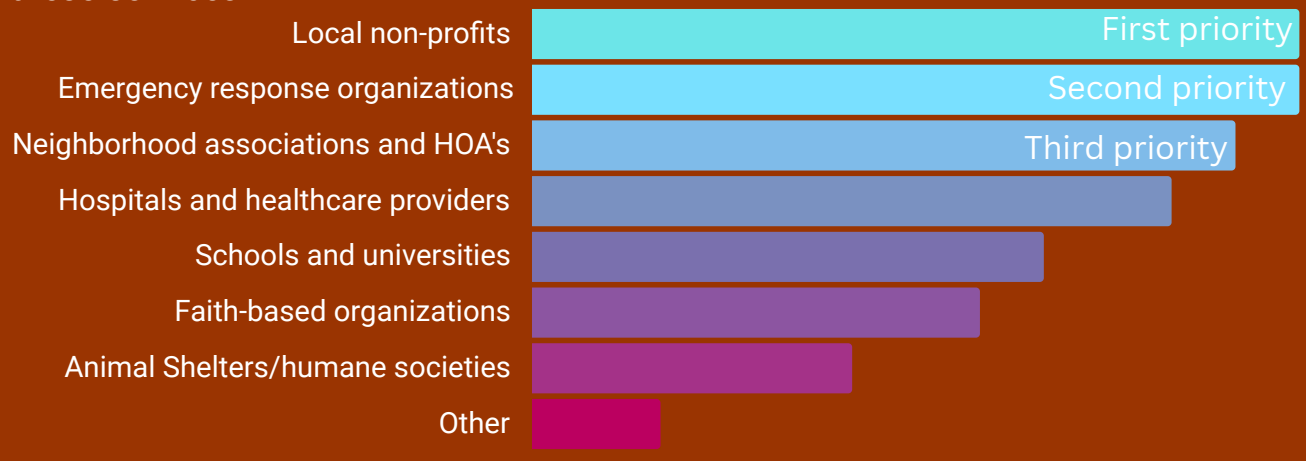
The third activity, marked the beginning of the afternoon session, we asked participants to rank the options we provided and to share additional suggestions to help identify priorities for services, programs, and partnerships that would make resilience hubs more effective and impactful.

Question 1: What types of programs or services should the City prioritize in resilience hubs?



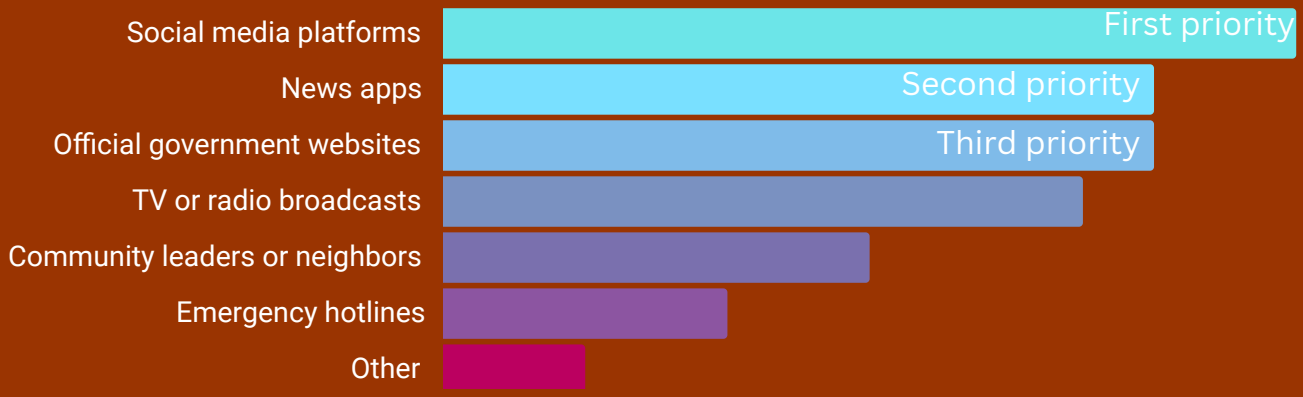
Participants highlight essential community needs, including cooling and heating centers, job training, transportation assistance, and community-building events. **Priorities focus on fundamental needs—food, health, and safety—while also recognizing mental well-being, education, and social connections.** These insights can guide the development of comprehensive resilience hubs that address both immediate and long-term needs.

Question 2: What groups or organizations should the City partner with to provide these services?



Responses show a **strong preference for collaborating with organizations that have deep community ties and can provide essential services**. Suggested partners include **public libraries, community centers, and local businesses, expanding resilience efforts.** Participants recognize the need for broad networks, emphasizing partnerships with emergency services, non-profits, and community organizations to create inclusive, comprehensive resilience hubs.

Question 3: What is your primary source of information during a disaster?

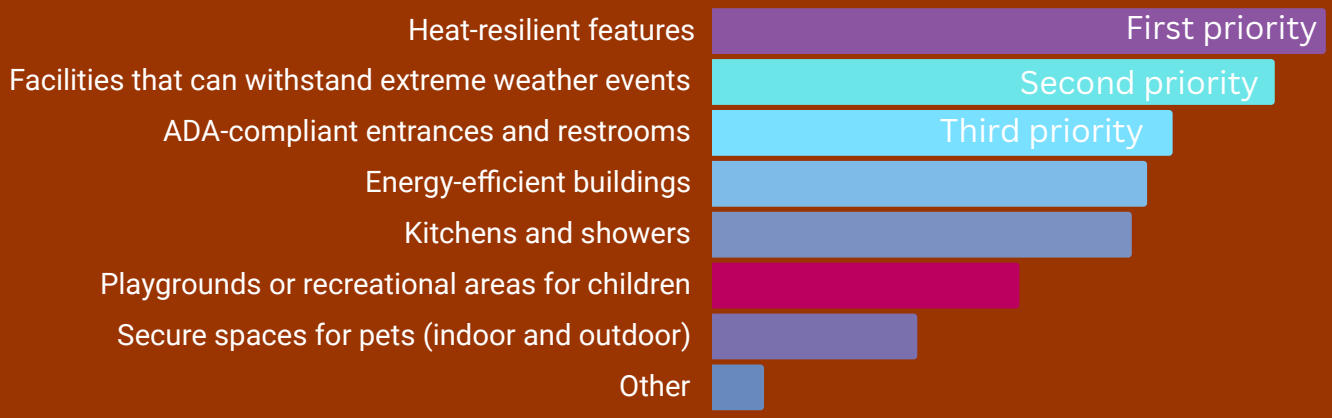


The responses emphasize the **growing role of digital communication while highlighting the importance of community-driven information sharing.** Ensuring that social media and news apps are complemented by reliable traditional media and local networks will create a more resilient information ecosystem during disasters. The "Other" category provided additional insights, identifying **public libraries as reliable sources when digital services are unavailable, community organizations for targeted information, and weather apps for localized alerts and tracking.**

Question 4: What strategies would help the City build trust and ensure clear communication with diverse communities?

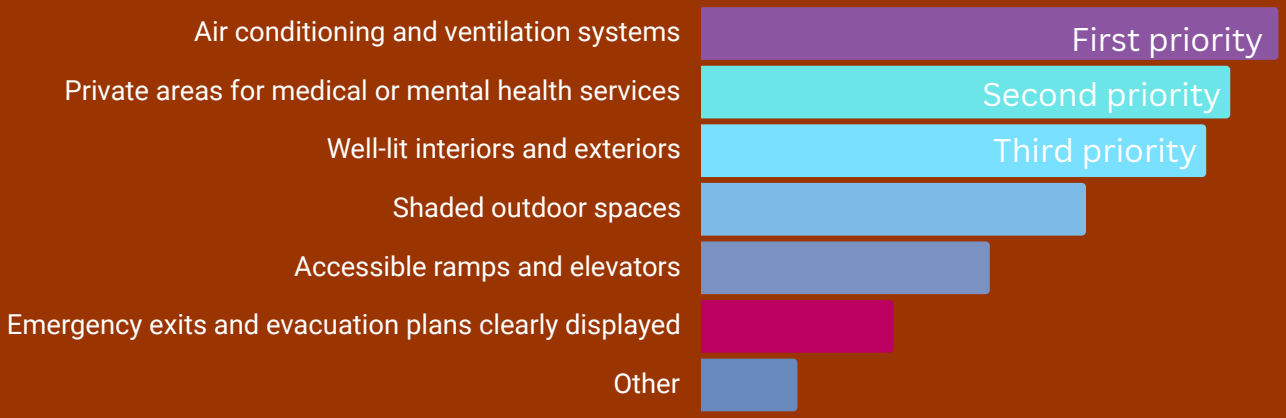
The responses highlight the need for a multi-faceted approach that **includes trusted local partners, language accessibility, and consistent community engagement** to ensure the City's message reaches everyone. Tailoring communication strategies to different populations builds trust, with participants emphasizing the importance of addressing all segments of the population, **including underrepresented groups, expanding language options beyond common languages, and creating safe spaces and trusted communication channels** to reach communities with limited trust in traditional messaging.

Question 5: What features should resilience hub facilities have to better serve the community?



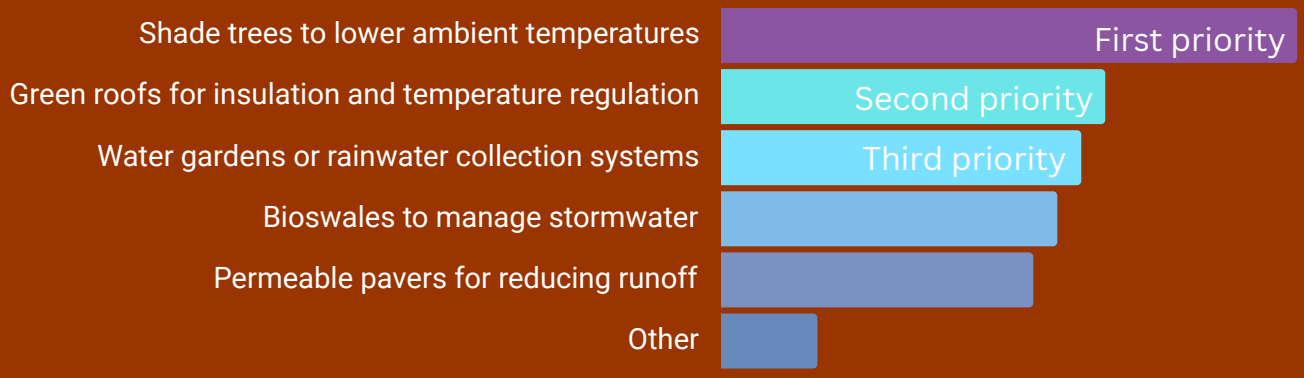
The responses emphasize a **holistic approach to resilience hub design, considering not just immediate functional needs but also long-term sustainability, accessibility, and psychological well-being**. Incorporating features like **long-term energy backups, transportation access, solar canopies, resource-efficient buildings, and universal design will enhance resilience and sustainability.** Participants also highlighted the importance of integrating trees and natural elements to support mental well-being, ensuring resilience hubs serve as valuable community assets both during emergencies and in daily life.

Question 6: What elements of the hub's design would make you feel safer and more comfortable?



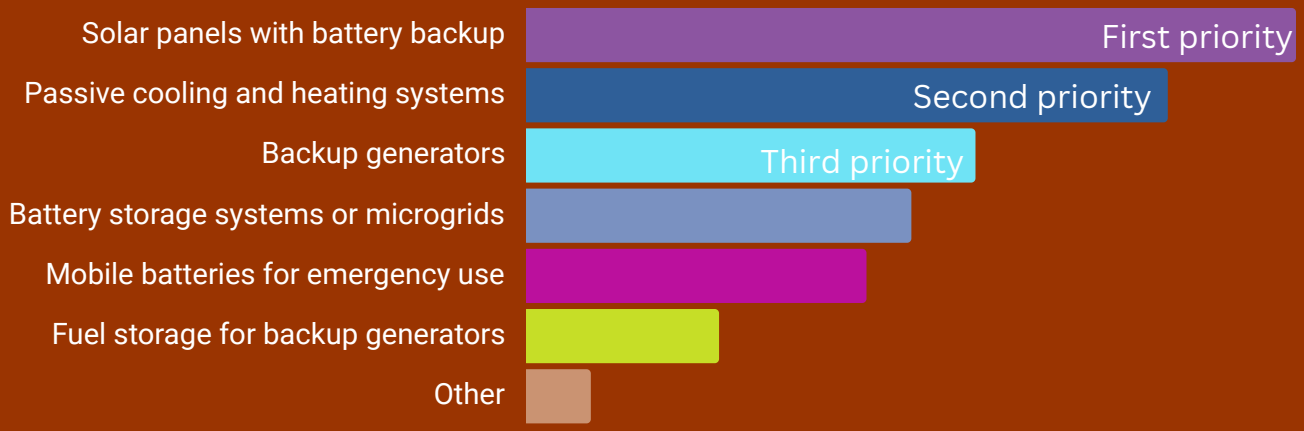
The responses highlight the community's emphasis on safety, inclusivity, and comfort to encourage participation and a sense of belonging. Participants stressed the importance of thoughtful design and cultural sensitivity, noting that law enforcement presence may deter some individuals and that spaces should reflect neighborhood culture and values. These considerations underscore the need for resilience hubs that balance functionality with community identity, creating safe, welcoming environments that foster trust and engagement.

Question 7: What green infrastructure features would you prioritize?



The responses highlight a **well-rounded approach to green infrastructure, blending climate adaptation with sustainability practices**. Incorporating shade trees, water management systems, and solar integration will enhance resilience hubs while benefiting both the community and the ecosystem. Participants also **suggested solar energy integration for power and shade, agrivoltaic systems to combine solar and agriculture, stormwater-managed trees maintained through pruning programs, and staff training to ensure long-term green infrastructure success.**

Question 8: What energy-related features should resilience hubs have to ensure uninterrupted services during disruptions?

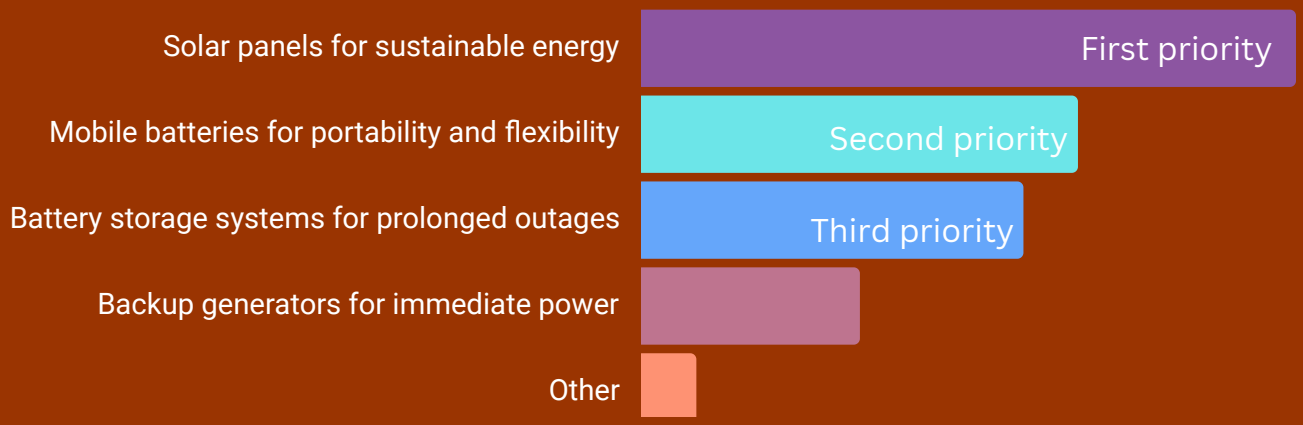


The responses emphasize a **combination of renewable energy, battery storage, and cooling solutions** to maintain operations and comfort during emergencies.
Reflecting a strong desire for a combination of **renewable energy solutions and traditional backup systems to ensure energy security**. Incorporating multiple layers of energy support will help resilience hubs **remain functional and comfortable** during prolonged emergencies.

Question 9: How important is it for resilience hubs to include renewable energy systems?

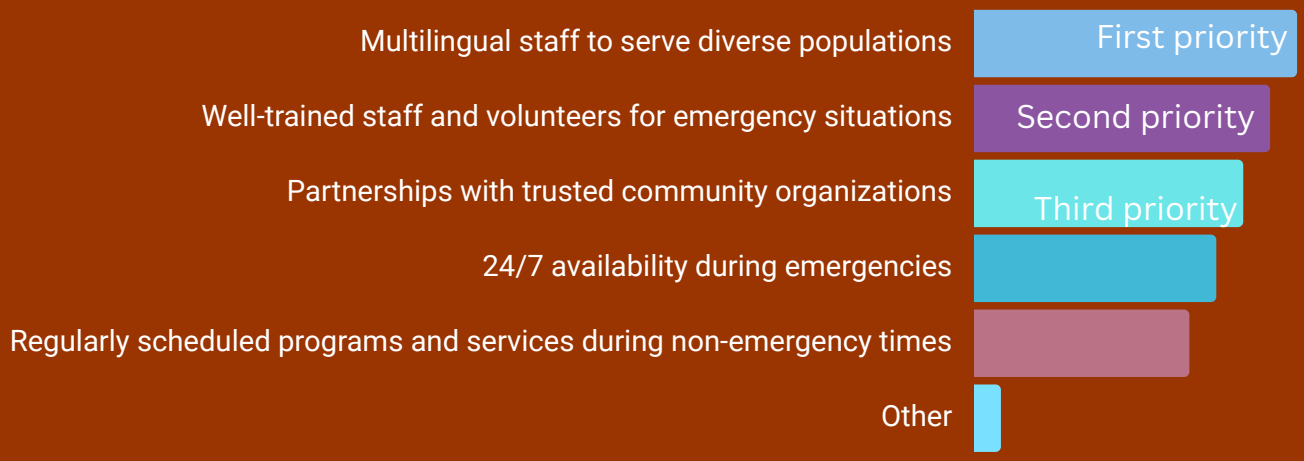
The responses underscore the **community's recognition of renewable energy as a core feature of resilience hubs, with 99% of participants emphasizing its importance**. This strong support suggests that future planning should **prioritize solar panels, battery backups, and other renewable solutions** to meet energy needs sustainably.

Question 10: What would you consider the most critical power feature in a resilience hub during an emergency?



Responses reveal a **strong community preference for renewable energy systems, with solar panels and battery storage leading the way**. Expanding renewable solutions such as wind power and other technologies, along with enhanced battery storage, will further strengthen resilience hubs during emergencies. Participants emphasized the need to explore wind energy as a complementary source and integrate a broader range of renewables with storage solutions for greater reliability.

Question 11: What operational practices would help resilience hubs run smoothly and inclusively?

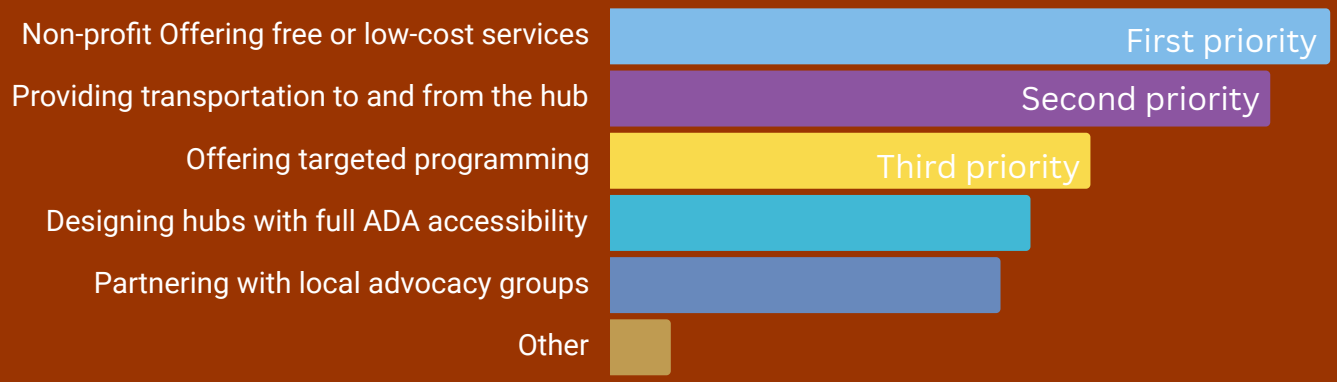


The responses emphasize a comprehensive approach to operations, blending **strong organizational partnerships with trained, multilingual staff to meet the diverse needs of the community**. Providing continuous services and maintaining regular programming will help resilience hubs remain trusted and effective resources year-round.

Question 12: What groups should be involved in managing and staffing resilience hubs?

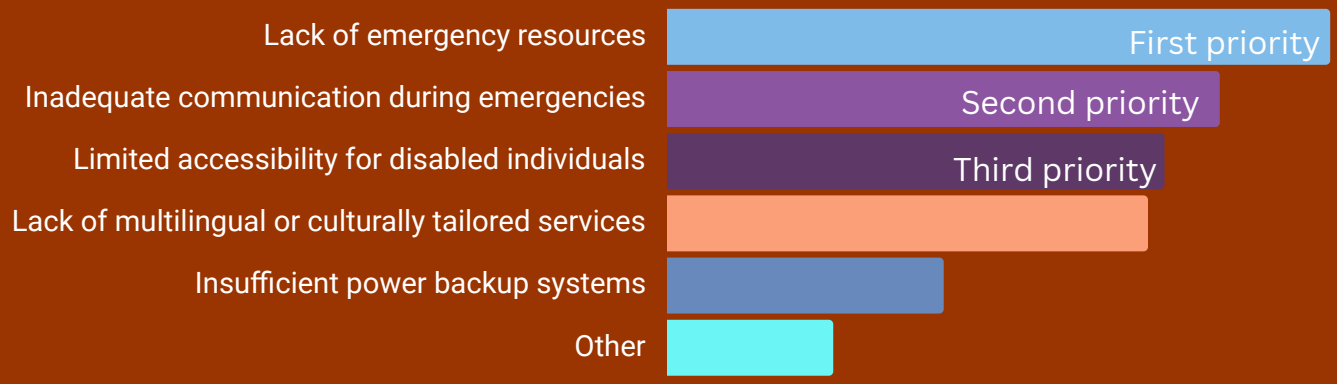
Participants indicate a preference for a diverse and collaborative approach that leverages the expertise and community connection of multiple stakeholders. The responses highlight a desire for an **inclusive management structure that combines expertise from government, healthcare, non-profits, and the community itself**. Building this collaborative framework will enhance the capacity of resilience hubs to serve as comprehensive community resources during both emergencies and regular operations.

Question 13: How can resilience hubs better engage with and serve vulnerable populations (e.g., elderly, disabled, low-income communities)?



The responses highlight a desire for resilience hubs **to serve as multi-functional community spaces beyond emergency services, fostering trust, participation, and long-term engagement.** Participants suggested additional features to enhance accessibility and inclusivity, including free meeting rooms for community gatherings, dedicated nursing spaces, transportation options for individuals with limited mobility, and areas for facilitated conversations and voting to encourage civic participation and decision-making.

Question 14: What operational gaps do you see in current community spaces that could be addressed in resilience hubs?



The responses emphasize that **resilience hubs should prioritize emergency preparedness, accessibility, and culturally relevant services while addressing staffing, funding, and resource coordination challenges**. Participants highlighted the **need for adequate staffing and funding,** as well as better integration with city and county services to strengthen operational capacity and ensure hubs effectively meet community needs.

Question 15: What would make you most likely to use or support a resilience hub in your community?

Participant responses highlight the importance of trust, accessibility, and community-driven design in making resilience hubs successful. Prioritizing these factors will enhance engagement and ensure hubs serve as vital community resources. Participants also emphasized the need for well-organized logistics coordination and expanded opportunities for community involvement to strengthen connections and support long-term success.

Mapping Activity Summary: Identifying Ideal Locations for Resilience Hubs

Participants engaged in a mapping activity to identify ideal locations for resilience hubs based on existing resources, community needs, and potential gaps. The activity focused on marking locations with green stickers for existing places that need to be included on the map and yellow stickers for other ideal hub locations.

The mapping activity revealed 5 key areas of focus for identifying ideal resilience hub locations. These areas highlight community needs, potential solutions, and the types of spaces that could serve as resilience hubs. Below is a summary of these key considerations:

1. MOBILE HOME COMMUNITIES: A HIGH-PRIORITY NEED

Mobile home communities experience frequent power outages during the summer, putting residents at higher risk during extreme heat. Participants identified these areas as high-priority for resilience hubs.

While it may not always be possible to build a hub within the community itself, nearby schools, parks, and walkable locations could serve as essential cooling stations and gathering spaces for residents.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

2. SCHOOLS AND LIBRARIES: UNLOCKING POTENTIAL

Schools and libraries are well-positioned to act as community hubs. Participants highlighted abandoned schools as opportunities for new community spaces.

- Public libraries are already trusted gathering places, making them ideal candidates for additional cooling and resource hubs.
- Abandoned schools could be repurposed into multi-use resilience hubs that offer cooling, emergency services, and community programming.
- The Tucson School for the Deaf and Blind was also suggested as a potential cooling station to serve its surrounding community.

3. PARKS AND GREEN SPACES: UNDERUSED BUT VALUABLE

Parks were identified as underutilized in some areas, but they have great potential. Participants emphasized the importance of maintaining and investing in these spaces to make them more welcoming.

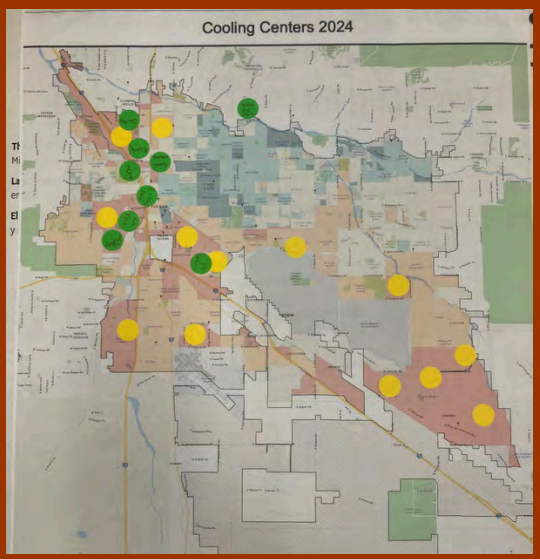
- Parks can double as cooling stations and gathering places if they're equipped with shaded areas and basic amenities.
- Trees were especially highlighted for their value in providing natural cooling, particularly in mobile home communities.

4. COMMUNITY-CENTERED LOCATIONS: WHERE PEOPLE ALREADY GATHER

Rather than creating new infrastructure, participants suggested focusing on existing community spaces where people already gather. Think parks, shopping centers, or youth organizations like Boys & Girls Clubs.
Las Milpitas de Cottonwood was mentioned as a model for integrating multiple community services into a single location that serves diverse needs.

5. CONNECTIVITY MATTERS: MAKE IT EASY TO REACH

Accessibility was a top concern. Resilience hubs will be most successful if they are easy to reach by public transit or located along major transportation corridors.
Participants recommended integrating hub locations with public transit systems like Tucson Norte-Sur, Rapid Bus, and SunLink, ensuring that underserved communities can easily access these critical resources.



Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Community & Neighborhood Action

The **Community and Neighborhood Action** breakout session, led by the **American Red Cross**, **Building a Resilient Neighborhood (BaRN)**, and the **Physicians for Social Responsibility (PSR)**, focused on mobilizing community-driven efforts to prepare for extreme heat and climate-related emergencies. The goal was to identify effective strategies to enhance neighborhood connections, improve resource access, and foster resilience at the local level.

The session was divided into two parts. The morning session began with an overview of the increasing frequency of extreme climate events and the urgent need for preparedness. The American Red Cross emphasized the critical role of **social cohesion** in disaster resilience, highlighting examples from past disasters like Hurricane Katrina and the 1995 Japan Earthquake.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Key topics included:

- **Defining Resilience:** Exploring the five determinants of resilience—physical health, economic stability, risk communication, organizational integration, and community cohesion.
- **Preparedness Activity:** Participants engaged in a discussion about the importance of knowing and supporting neighbors as the first line of defense during emergencies.

The afternoon session, led by PSR and BaRN, focused on practical strategies for resilience at the neighborhood level. Participants explored the Block Connector Model, which empowers local leaders to coordinate emergency response and preparedness efforts. Discussions covered:

- **Household Preparedness Checklists:** Assessing individual and family readiness.
- **Developing Neighborhood Emergency Plans:** Establishing systems for communication and resource sharing.
- **Coordinating Local Resources:** Strengthening community-based networks to improve response effectiveness.

Group Discussion and Takeaways

Participants emphasized that effective community resilience requires both strong local engagement and strategic, proactive planning to address vulnerabilities and improve emergency preparedness. The following key takeaways and recommendations highlight the most critical insights from the session:

- **Social Cohesion as a Survival Tool:** Strong neighborhood connections significantly enhance resilience. Many participants noted a lack of neighborhood cohesion, with most ranking their communities as moderately to weakly connected. Factors increasing vulnerability include living alone, aging community structures, and lack of mobility or transportation access. Encouraging casual neighborhood interactions and shared public spaces can strengthen long-term engagement and response during emergencies.
- **Community-Led Preparedness:** Local leaders and organizations play a vital role in preparedness. Participants recommended door-knocking campaigns to build resource lists, ensuring neighbors know who can provide cooling spaces, transportation, or other assistance during emergencies. The Block Connector Model, which assigns neighborhood leaders to facilitate emergency response, was highlighted as an effective way to improve communication and coordination. Additionally, fare-free public transit was recognized as essential for increasing access to cooling centers and community resources.
- **Decentralized Resilience Strategies:** Neighborhood design and physical infrastructure influence preparedness and social cohesion. Major roads, rental turnover, and seasonal residents often disrupt community bonds, affecting emergency response. Participants highlighted how neighborhood structures—such as apartment buildings, seasonal housing, and AirBnBs—impact cohesion and resilience. Solutions include localized emergency plans tailored to each neighborhood's unique layout and creating free, safe gathering spaces for cooling and social interaction.
- **Utilizing Available Resources:** Programs such as the American Red Cross Ready Rating, PSR's Building Resilient Communities, and BaRN's initiatives provide structured support for resilience planning. Participants emphasized the importance of community-driven approaches that address both immediate safety concerns (such as access to cooling centers) and long-term resilience strategies (such as energy-efficient home upgrades and distributed cooling networks). Additionally, anticipating resource demands—such as gas generators, emergency responders, and mental health services—is critical for effective emergency planning.
- **Proactive Engagement & Education:** Preparedness is an ongoing process, not a one-time effort. Attendees stressed the importance of educating communities on heat-related illness prevention and encouraging neighbors to ask for help when needed. Participants also shared concerns about public spaces being underutilized due to safety perceptions and recent examples of tree removal reducing available shade for cooling. Increasing public awareness about heat risks, community resources, and neighborhood-level solutions is essential for long-term resilience.

Public Health & Healthcare

The **Public Health and Healthcare Breakout Session**, led by the **Southwest Center on Resilience for Climate Change and Health (SCORCH)** and the **Pima County Health Department**, focused on examining the impact of extreme heat on the communities served, identifying effective communication strategies, building partnerships and solutions to enhance resilience. The session began with presentations from the **Medical Reserve Corps of Southern Arizona (MRCSA)** and **Civic Roundtable** to present partnerships and solutions to address health related needs of vulnerable populations and enhance heat relief coordination respectively.

Discussions emphasized the importance of improving communication strategies, strengthening local partnerships, and expanding public health infrastructure to address the increasing risks associated with rising temperatures. Participants represented climate and environmental experts and governmental and non-governmental organizations serving vulnerable populations including individuals experiencing homelessness, older adults, people who live in rural and tribal communities, refugee and migrant populations, and individuals with disabilities.

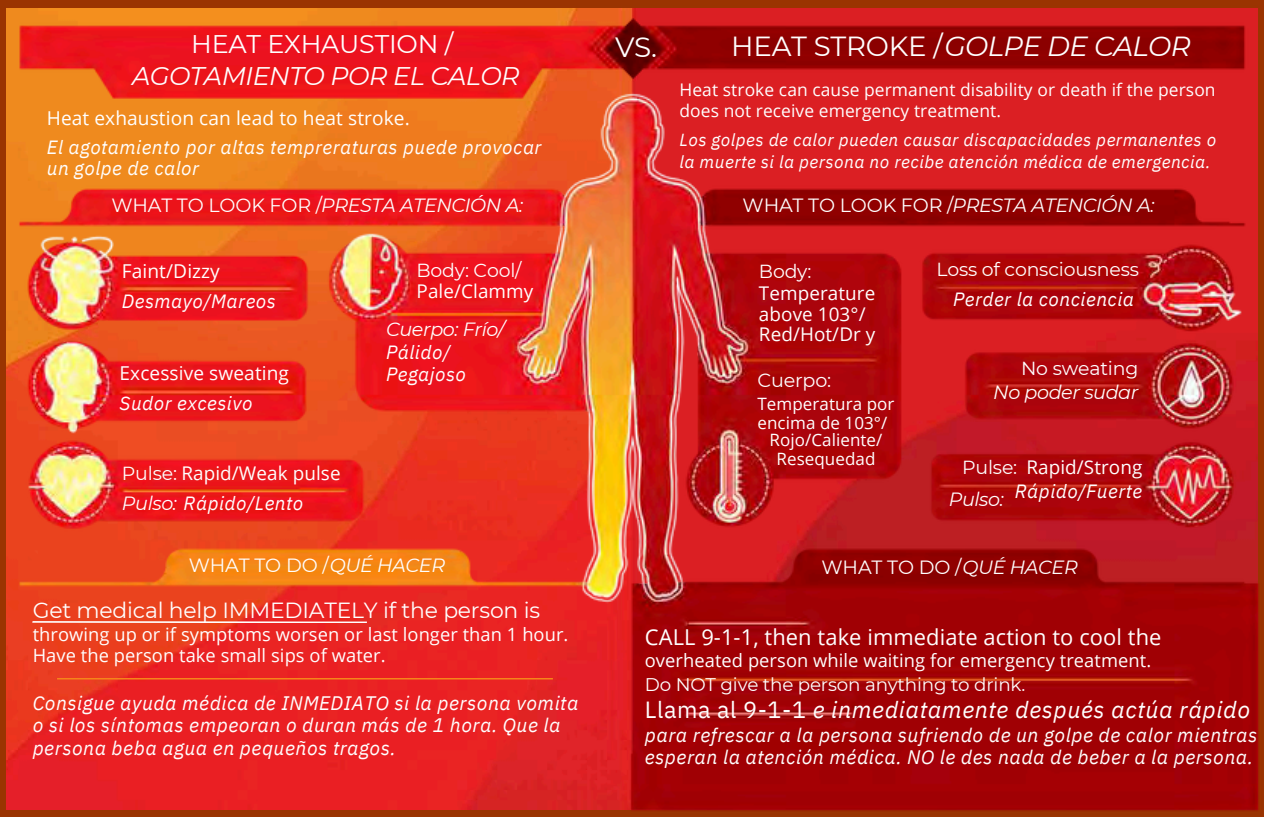
Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

The session was divided into two parts: Assessing select heat risk illness communication and understanding community impacts and building heat preparedness.

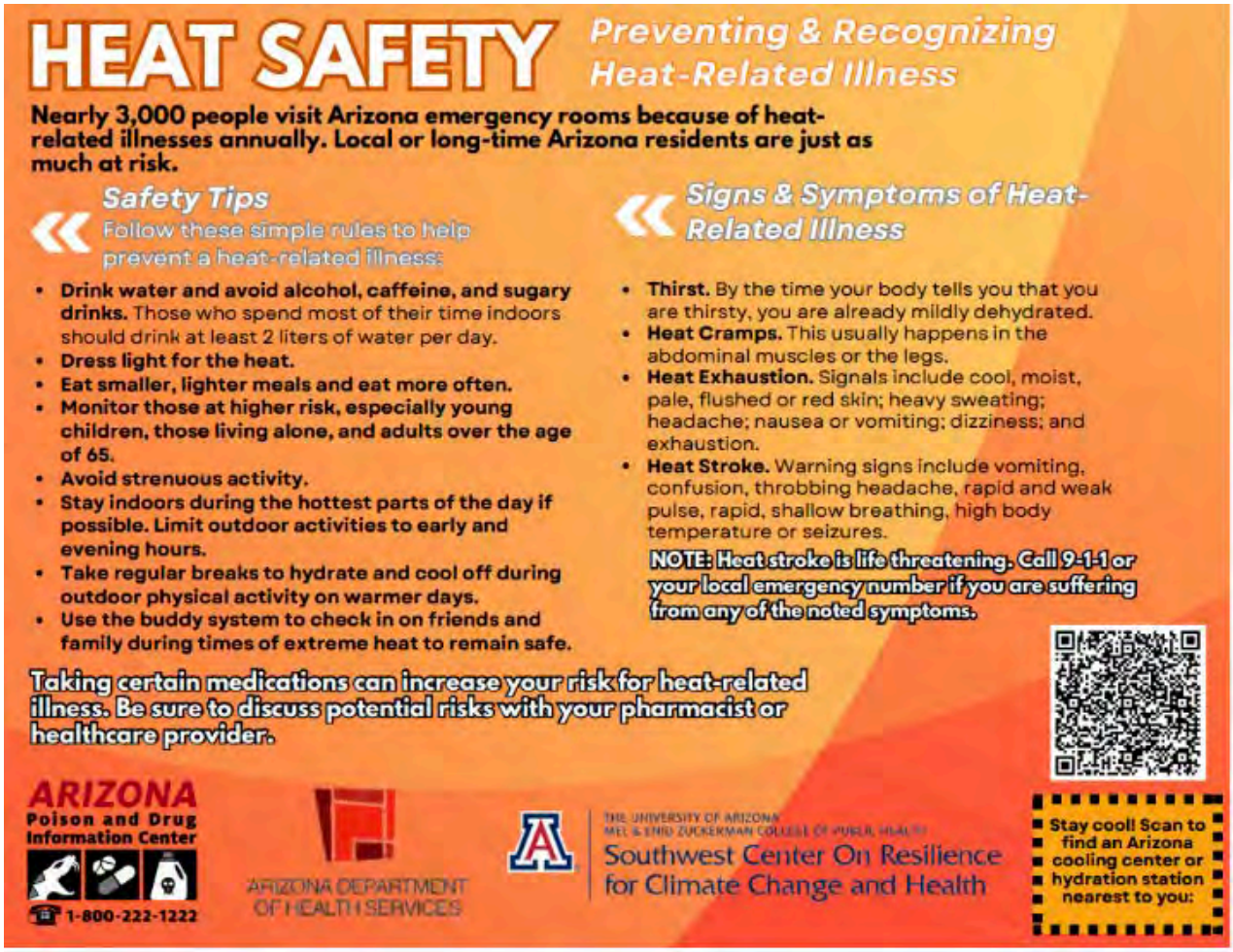
The **morning discussion** centered on refining communication materials (e.g., heat postcard, cooling center maps) for the 2025 heat season, with participants providing feedback on strategies to improve materials and outreach to effectively reach broader and more vulnerable populations.

All groups emphasized the critical need for improving heat risk communication, accessibility, and emergency preparedness to protect vulnerable and at-risk communities. Participants highlighted and suggested the importance of clear, actionable, and multilingual materials that effectively convey heat safety information.

Discussion feedback for the cooling center map underscored the importance of usability, accessibility, and strategic dissemination in high-risk areas, while the heat postcard flyer discussions stressed the need for simplified, widely distributed, and visually engaging materials that include emergency contacts and clear hydration guidance.



The heat and medications group underscored standardizing health messaging, ensuring clarity in medication-related risks during extreme heat, and improving digital and print accessibility. Finally, the heat risk communications table identified mobile home park residents, elderly individuals, refugees, and low-income communities as particularly at risk and advocated for multi-sector and interdisciplinary collaboration, increased heat relief infrastructure, and stronger policy enforcement.



A salient theme across all discussions was the need for community centered and inclusive communication strategies, use of QR codes to expand access to information, visual aids, and community partnerships to ensure at-risk populations receive and understand life-saving information.

The **afternoon session** was interactive, engaging participants in scenario-based planning to assess community readiness and available heat response resources. Working in small groups, participants discussed key elements of emergency preparedness, evaluated existing services, and identified gaps in resources needed to protect at-risk populations.

Scenario Discussion: Preparing for an Impending Heat Wave

Participants considered the **SCENARIO:**

If a heat wave were to occur next week, what information and resources would your community need, and how far in advance should they be provided?

Participants in this activity identified important elements that would assist in their community's preparation for a heat wave. They identified advanced emergency warnings and notifications and ongoing communication as an essential element to preparing for a heat wave. These notifications include sharing information about available resources. They further discussed that information should be shared by varied communication streams to ensure that messages reach across communities.

> ***"We need multi-modal messaging—social media for youth, door-to-door outreach for those without internet, and freeway signs for travelers."***

Participants also shared that advance notice could inform better coordination among supporting organizations and volunteers. Participants identified community support as playing an essential role in responding to heat effort and shared that strengthened partnerships between community response organizations and local agencies would help better serve the community.

> ***"Regular check-ins and quarterly meetings help maintain readiness."***
>
> ***"Collaboration between local agencies, nonprofits, and businesses is essential for an effective response."***
>
> ***"Libraries and community spaces play a crucial role in providing heat relief—let's strengthen these networks."***

Referencing the above Scenario, participants responded to five key questions. A summary of their responses is provided below, with a comprehensive, categorized list available in **Appendix C**.

1. What services are currently available to protect your communities during the heat season?

Participants identified emergency response teams, cooling centers, public infrastructure, and outreach initiatives as critical resources protecting communities during extreme heat events. However, gaps in infrastructure, accessibility, and awareness remain, particularly in rural and tribal areas.

- **Emergency Response & Public Safety:** First responders, fire departments, and medical personnel provide life-saving interventions, including rapid cooling measures and heat-related illness (HRI) training to improve emergency response. Frequent check-ins on at-risk individuals help prevent heat-related fatalities.
- **Cooling Centers & Public Spaces:** Cooling centers, libraries, malls, hospitals, and recreation spaces offer heat relief and safe shelter during extreme temperatures. These facilities must be widely accessible and well-publicized to maximize impact.
- **Community & Infrastructure Support:** Education programs, portable misting fans, public hydration stations, and weather alerts provide proactive support during extreme heat events. The Red Cross's community education and canvassing efforts were highlighted as effective tools for increasing awareness and preparedness.
- **Messaging & Outreach:** Targeted outreach strategies, including door-to-door engagement, community meetings, and social media campaigns, help inform vulnerable populations, such as seniors and the unhoused, about available services.
- **Challenges Identified:** Participants noted that some communities lack sufficient cooling facilities, and many existing resources are underutilized due to limited accessibility and awareness. Rural and tribal communities require greater infrastructure investment to expand heat relief services.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

2. What additional services are needed to protect this community?

Participants identified critical gaps in services and resources needed to enhance heat resilience and emergency preparedness. These recommendations focus on targeted community support, infrastructure improvements, and expanded outreach efforts to protect vulnerable populations.

- **Targeted Community Support for Rural and Vulnerable Communities:** Participants emphasized the need for specialized services for individuals with disabilities, mobile home park residents, and rural communities. Expanding cooling outreach efforts, transportation access, and home improvement programs can strengthen resilience in underserved areas.
- **Strengthening Community Efforts for Heat Relief:** To improve community-wide response, participants recommended evaluating the cost-effectiveness of home air conditioning versus cooling centers, deploying refrigerated trucks for emergency cooling, and enhancing security at cooling centers to ensure safety. Increasing public awareness and on-site medical navigators were also suggested to improve emergency response and accessibility.
- **Communication & Awareness:** Participants highlighted the importance of engaging the public in heat preparedness through extreme heat drills, sirens, and targeted awareness campaigns. Investment in urban infrastructure, such as shade structures and cooling installations, is needed to combat urban heat island effects.
- **Infrastructure, Shelter & Housing:** Expanding shelter capacity, staffing resources, and emergency medical services was identified as a critical need, with additional low-barrier shelter beds required to meet growing demand. Employment programs for relief work and coordinated shelter staffing were also suggested to improve service delivery.
- **Urban Planning & Sustainability:** Participants recommended expanding tree coverage, using reclaimed water systems, and increasing access to free public transportation as long-term solutions for heat resilience. Home weatherization, energy-efficient building designs, and workforce training on sustainable housing were also identified as priorities.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

3. Who are the local, trusted community partners that your community already looks to for support (e.g., social services, healthcare) during a time of need (e.g., emergency)?

Participants identified key local organizations and government agencies that communities rely on for emergency support and heat relief services. These trusted partners play a critical role in providing resources, shelter, and response efforts during extreme heat events.

Community-Based Organizations & Support Services

- **Pima Council on Aging:** A primary resource for senior citizens, offering support services during extreme weather conditions.
- **Local Nonprofits:** Organizations such as community centers, libraries and places of worship are gathering spaces that communities are already relying on for services and resources and provide critical relief for vulnerable populations.
- **Libraries:** Serve as established cooling centers, offering both heat relief and access to information on available services.

Government & Emergency Response Agencies

- **Fire Departments & Law Enforcement:** Participants highlighted their role in coordinating emergency response efforts and assisting at-risk individuals during extreme heat conditions.
- **Pima County Health Department: I**dentified as a more trusted entity than the City of Tucson, the department plays a key role in public health coordination, emergency preparedness, and heat mitigation strategies.

4. What are barriers for your community in seeking heat relief?

Participants identified several key challenges and barriers that communities face in accessing heat relief services, particularly among rural, tribal, and vulnerable populations. These barriers include limited awareness, accessibility issues, and structural deficiencies within existing heat relief infrastructure.

Lack of Awareness & Communication Gaps

- Inconsistent or unclear communication about timing and availability of heat relief services creates confusion.
- Many community members are unaware of cooling center locations, hours, or eligibility requirements.

Accessibility Challenges

- Limited transportation options prevent individuals, particularly in rural and tribal communities, from reaching cooling centers.
- Restricted operating hours of cooling centers result in underutilization, leaving individuals without relief options during peak heat periods.

Structural & Staffing Limitations

- Many cooling centers in our community are underfunded, and understaffed, and personnel often lack specialized training to support populations with complex needs.
- Insufficient funding and infrastructure investment contribute to service gaps in high-risk communities.
- ·There is a need to assess and align the availability of cooling services with the needs of different vulnerable populations to determine the need for respite centers and 'third spaces' where community members can obtain needed heat relief.

Social Stigma & Hesitation to Seek Relief

- Individuals from low-income backgrounds or those experiencing substance use disorders may avoid seeking relief due to stigma or perceived judgment at public cooling spaces.
- Lack of inclusive, low-barrier access points discourages some individuals from utilizing available resources.

5. How does your organization support the community during the heat season?

Participants highlighted ongoing initiatives and strategies implemented by community organizations to enhance heat relief efforts, increase public awareness, and improve emergency response. These efforts focus on communication, direct outreach, training programs, and emergency mitigation measures.

Public Awareness & Communication Campaigns

- Organizations engage in public messaging and outreach efforts to ensure that heat relief resources are widely known and accessible.
- Community partners collaborate within the heat relief network to disseminate critical information through campaigns, alerts, and resource distribution.

Direct Outreach & Resource Distribution

- Community workers conduct door-to-door outreach and mobile distribution of supplies to assist at-risk populations.
- Organizations prioritize reaching vulnerable groups, including seniors, unhoused individuals, and those without reliable access to cooling resources.

Training & Capacity Building

- Organizations such as the Red Cross and Medical Reserve Corps of Southern Arizona offer training programs to equip community members with heat emergency response skills.
- These programs help volunteers and local leaders support individuals in need during extreme heat events.

Emergency Mitigation & Response

- Community-led initiatives focus on emergency preparedness, response planning, and operational coordination.
- Participants highlighted the use of shelters and "cooltainers" (portable cooling units) as effective heat mitigation strategies.

Group Discussion and Takeaways

Participants emphasized the need for expanded infrastructure, improved emergency coordination, and targeted community support to enhance heat relief efforts. Key recommendations include:

Strengthen Targeted Community Support for Vulnerable Populations

- Expand services to support individuals with intellectual and developmental disabilities.
- Expand services and outreach to mobile home parks and areas where unhoused community members live and congregate to address accessibility gaps.
- Improve transportation options in rural communities, such as providing buses to cooling centers to ensure equitable access to relief services.
- Support home improvement programs like "Christmas in April" to enhance household resilience for at-risk individuals.

Expand & Improve Cooling Centers & Heat Relief Infrastructure

- Evaluate the cost-effectiveness of increasing in-home air conditioning access versus expanding cooling centers.
- Deploy refrigerated trucks as mobile cooling units to serve hard-to-reach areas.
- Strengthen security at cooling centers to prevent unsafe conditions and improve public trust in these facilities.
- Increase staffing at shelters and cooling centers to ensure consistent, high-quality service.

Improve Public Awareness & Multi-Channel Communication

- Implement extreme heat drills, public awareness campaigns, and engaging sirens to improve emergency preparedness.
- Expand targeted outreach through door-to-door engagement, community meetings, and social media campaigns to ensure vulnerable populations receive timely information.
- Address public perception challenges by reducing stigma around seeking heat relief services.

Address Barriers to Heat Relief Access

- Increase free or subsidized public transportation to help at-risk individuals reach cooling centers.
- Expand shelter availability, including adding at least 7,000 additional low-barrier beds to meet rising demand.
- Improve staffing levels and training for emergency response workers and shelter staff to enhance service delivery.

Develop Long-Term Climate Resilience Strategies

- Invest in urban planning initiatives such as expanding tree coverage, using reclaimed water systems, and increasing shade infrastructure to combat the urban heat island effect.
- Fund weatherization and home retrofitting programs to help low-income households reduce heat exposure.
- Provide training on sustainable buildings and energy-efficient housing to support long-term resilience.

Workforce & Heat Protection

The **Workforce & Heat Protection Breakout Session** focused on strategies to protect workers from extreme heat exposure through comprehensive planning, training, and enforcement mechanisms. Discussions highlighted best practices, challenges, and innovative solutions aimed at improving workplace safety and heat illness prevention.

The session was divided into two parts. The **morning session**, led by representatives from labor unions—including IATSE 336, AFL-CIO, IAFF Local 3832, and Ironwood Local 75—covered essential heat plan training, core components of a heat plan, and workers' rights. The discussion emphasized the importance of developing and implementing effective heat safety plans, training the workforce, and ensuring access to respite and safe worksites.

Core elements of heat safety were discussed, including access to shade, cool water, and personal protective equipment. Strategies for effective heat safety planning included the development of comprehensive safety plans tailored to specific work environments. Acclimatization protocols were identified as a critical component to ensure workers gradually adapt to high temperatures. Participants emphasized the importance of clear procedures for identifying and responding to heat-related illnesses, as well as structured accident and injury response protocols. These processes must be readily accessible to workers to ensure proper implementation and swift emergency response.

Photograph credit: Victor Mercado, Office of Tucson Mayor

The session highlighted the significance of buddy system work models, supervisor and staff training, and the need for a clear, safe mechanism for workers to report non-compliance with heat safety regulations. Practical, implementable examples from Fire Departments, Emergency Response and Iron Workers provided valuable insights for participants.

Participants were surveyed on current and planned capacity-building efforts for heat planning within their organizations. Key findings include:

- The majority of participants reported having a heat safety plan, while those without one indicated plans to implement one within the year.
- Many participating organizations have implemented heat safety training programs, though some have a heat plan in place without a formalized training program.
- A gap was identified in supervisor training for administering heat safety protocols. However, most participants noted that their organizations plan to enhance training at all workforce levels.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health & Victor Mercado, Office of Tucson Mayor

Participants shared **key best practices in heat safety**, emphasizing hydration, shade access, acclimatization strategies, and tailored training programs to protect workers from heat-related risks.

> ***"Teaching workers daily to recognize signs, symptoms of heat illness and reminders to drink water and take breaks in shade"***
>
> ***"Specialized plan for each department (because of how dynamic and different the tasks of each job are)"***
>
> ***"Developing training materials in collaboration with OSHA"***
>
> ***"Sharing acclimatization guidelines, heat stress and dehydration awareness training, and increasing number of people on a team during summer calls"***

Participants identified **key challenges to implementing heat standards**, including awareness gaps, resistance to safety protocols, employer compliance issues, and the balance between productivity and worker health.

> ***"Ensuring folks understand and recognize the symptoms and addressing them right away and not knowing if they are staying hydrated"***
>
> ***"The attitude that 'we got this' if workers have been here a long time – employers don't respect the recommendations so we need an ordinance that covers everyone and has enforcement"***
>
> ***"Making people believe heat is real and it can kill you"***

The **afternoon session** focused on standardizing training and safety plans while improving data collection on workforce heat-related accidents and injuries. Participants engaged in open discussions on heat risks, workplace incidents, and strategies to strengthen heat planning capacity within their organizations. Participants identified **primary heat-related risks** in the workplace, including limited access to shade, inadequate break schedules, and insufficient water availability.

Participants discussed the **need for improved data collection on heat-related injuries, illnesses, and fatalities among workers exposed to extreme temperatures**. While regional data on heat risks has expanded in recent years, critical gaps remain.

Mortality data is tracked by the Pima County Office of the Medical Examiner (OME) and the Pima County Health Department (PCHD), which monitor Emergency Medical Service (EMS) data, including City of Tucson 911 calls and hospital records. However, these datasets primarily focus on medical incidents and diagnostic information, often lacking the capability to classify cases as worksite-related. Enhancing data collection methods to accurately identify workplace heat exposure as a contributing factor was recognized as essential for strengthening heat safety measures.

Beyond gaps in medical response data, collaboration with agencies that investigate heat-related workplace complaints and violations was recognized as a priority. Enhancing these partnerships will improve collective knowledge and support the development of comprehensive heat safety strategies that effectively address the needs of vulnerable, heat-exposed workers.

The standardization and enforcement of heat safety protocols were identified as critical priorities. While comprehensive plans and extensive training are essential for workforce safety, enforcement remains inconsistent. Challenges range from limited access to violation reports to gaps in state-level departmental investigations and outcomes.

Participants also highlighted the increased risk for workers with prolonged outdoor heat exposure, noting that heat-related illnesses and injuries can manifest well after the workday ends. Addressing these delayed health effects was recognized as an area requiring further attention.

Currently, no centralized tool exists for reporting heat-related workplace infractions outside of direct complaints to the Arizona Department of Occupational Safety and Health (ADOSH). Enforcement relies on incident data and reporting mechanisms, emphasizing the need for a safe, anonymous process that allows workers to report violations without fear of retaliation.

Participants proposed additional innovative solutions, including the implementation of a dedicated call line, such as 211 (used in Maricopa County for heat-related information) or 311, to streamline reporting and data collection on non-compliant worksites. Establishing such a resource would provide workers with an accessible, anonymous reporting option while also improving data collection on heat safety violations.

Group Discussion and Takeaways

Participants provided key recommendations for improving workplace heat safety through enhanced planning, training, data collection, and reporting mechanisms. Discussions emphasized the importance of a proactive and comprehensive approach to mitigating heat-related risks and ensuring long-term workforce protection.

- **Strengthening Capacity for Heat Safety Plans:** Aligning workplace heat safety planning with federal, state, and health best practices for comprehensive protection for workers.
- **Expanding Workforce and Leadership Training:** Extending training programs beyond workers to include supervisors and management to foster a culture of shared responsibility for heat safety and contribute to overall productivity.
- **Enhancing Data Collection on Heat-Related Incidents:** Improving tracking systems for heat-related accidents, injuries, and fatalities, particularly for cases occurring after work exposure, could provide valuable insights for safety planning.
- **Integrating Post-Workday Check-Ins:** Incorporating post-shift or post-mission check-ins—similar to fire operations—may assist in monitoring workers for delayed heat-related symptoms.
- **Developing Heat Safety Reporting Tools:** Exploring the creation of a multilingual call line or mobile application for reporting unsafe worksite conditions could facilitate data collection, compliance, and knowledge-sharing efforts.
- **Improving Reporting and Enforcement Mechanisms:** Strengthening collaboration with state-level partners may support better tracking, investigation, and enforcement of workplace heat safety violations.
- **Evaluating and Enhancing Heat Protection Ordinances:** Regular assessment of the existing Heat Protection Ordinance over the next year may help identify areas for improvement and ensure the continued effectiveness of workplace heat safety measures.

Source: OSHA

CONCLUSION

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Conclusion

The 2025 Southern Arizona Heat Summit highlighted the significant progress made in strengthening heat resilience across the region. Efforts such as cooling centers, public awareness campaigns, workforce protections, and emergency coordination have already laid a strong foundation for protecting communities from extreme heat. However, as climate change continues to intensify heat risks, there is still much work to be done to ensure equitable access to cooling resources, stronger workplace protections, and long-term infrastructure solutions.

This summit brought together government agencies, nonprofit organizations, researchers, and community leaders to collaborate on strategies that will build on existing initiatives while addressing critical gaps. Through interactive breakout sessions, participants engaged in discussions on energy resilience, urban planning, workforce heat protections, public health strategies, and community-driven preparedness. This report synthesizes the key findings and recommendations to guide ongoing and future efforts in making Southern Arizona more resilient to extreme heat.

Next Steps

- **Strengthen Resilience Hubs:** Build on existing community spaces (e.g., cooling centers, libraries, schools) to enhance their role as cooling and resilience hubs.
- **Evaluate Heat Protection Policies:** Review and assess the existing heat protection ordinance to identify potential improvements and strengthen worker protections.
- **Increase Public Awareness:** Continue developing accessible, multilingual messaging on heat risks and available resources.
- **Advance Sustainable Cooling:** Explore tree planting and energy-efficient cooling strategies in high-risk areas.
- **Enhance Emergency Coordination:** Strengthen multi-agency collaboration, early warning systems, and mobile cooling solutions.

By building on these efforts and fostering continued collaboration, Southern Arizona is well-positioned to create a more heat-resilient future for all.

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

APPENDICES

Photograph credit: Courtesy of Ann Garn, University of Arizona Center for Rural Health

Appendix A - Energy and Our Grid Breakout Session Detailed Responses

1. What are the biggest challenges residents face during a 72-hour power outage in extreme heat?

Category	Description
Cooling & Heat Mitigation	Access to cooling, Cooling, Keeping cool, Staying cool
Food & Nutrition Security	Loss of food, Food, Food spoilage, Refrigerated food, Loss of perishable food, Fridge
Medical & Life Support Needs	Health, Life support systems, health machine, Powering medical devices, Medical devices, Powering oxygen tanks, Medical device concerns, Medical equipment
Communication & Information Access	No phone service, Getting info without internet, Communications, Information access, Information, Disconnect, Access to weather info
Safety, Security & Public Trust	Safety, Trust, Nefarious activity, Safety and health risk
Heat-Related Risks & Overheating	Overheating, Heat related illness, HRI, Heat, Heat illnesses, Heat stroke, Temperature,
Mental Health & Social Well-being	Confusion, Rest, Isolation, Mounting anxiety, Special needs, Shut-ins
Emergency Preparedness & Response	Where to turn, What resources available, Mobilizing volunteers
Transportation, Shelter & Access	Transportation to shelter, Shelter, Transportation, Poles down blocking access
Pet Care & Safety	Dealing with pets, Pet safety, Pet health
Economic & Household Challenges	Poverty and home maintenance, Lack of experience
Infrastructure & Service Strain	Strain on 911 services, Charging capabilities
Water & Hydration	Water

2. How does a prolonged outage impact seniors and low-income households differently?

Category	Description
Financial & Housing Barriers	Inability to afford hotel, Options to maintain stability, Living in a food desert, Wealthy run out of five-star hotel rooms, Limited funds to mitigate suffering, Less energy-efficient homes, Lack of shaded places outside, Limited resources to handle crisis and long-term impact.
Resource Accessibility	Seniors and low-income households may not have independent resources to access resources, LMI dealing with lack of resources, Limited resources, No one else at home, Potentially limited social networks, Less experience with online resources/info, Limited resources to replace lost items.
Healthcare & Medical Needs	Medical devices and transportation impacted quicker and stronger, Seniors depend on electricity for medical devices, Medicine risks, Managing medications, More medication-related risk, Alternative locations for medical conditions, Electric wheelchair charging.
Mobility & Transportation Barriers	Mobility to relocate not available, No access to personal vehicle, Transportation options, Seniors are more likely to have limited mobility - harder to get out of the house, Electric wheelchair charging, If have a car - can't buy gas to keep it running for long during the outage, Mobility issues.
Social Isolation & Support Challenges	Seniors and low-income households may lose connections with support systems, No emergency contact, Seniors dealing with solitude, Ways to deal with situation and stress, Less able to handle stress and situation, Higher vulnerability in isolated situations.
Emergency & Safety Concerns	911 services too overwhelmed to respond in time to those most at risk, Safety, Dark spaces make it harder to see in the home or outdoors, Fewer assistance options , Accessing medicine, Might have more experience with outages and disasters.
Communication & Information Gaps	Language barriers, Communication to loved ones, Communication challenges, Information access for low-income renters may be worse, Limited access to emergency information.
Food & Nutrition Challenges	Loss of food, Refrigeration challenges, Lack of resources to replace spoiled food, Limited funds to recover lost food supply.
Heat Vulnerability & Risks	Higher urban heat island impacts because fewer trees and vegetation, Increased heat-related illness risk, Less energy-efficient homes
Elder Knowledge & Resilience	Elderly may be more likely to know Morse code (which is often used in a major disaster).

4. What partnerships (e.g., government, utilities, nonprofits) could improve emergency preparedness and response?

Category	Description
Faith-based Groups	Places of worship. Churches. Any group people are in Religious organizations. Church.
Governments & Elected Officials	Pima county. City of Tucson. Community Safety Health and Wellness Program (CSWH). Political representatives
Community Groups	Promotoras. Promotores. Community Food bank. Promotoras de Educacion y Outreach (PEO).
Neighborhood Associations	Neighborhood associations
Libraries	Libraries
Local & Regional Organizations	Local groups. Regional orgs.
Schools & Student Clubs	Schools. Schools Student Clubs
National Weather Service	National weather service
Medical Professionals	Medical professionals
Trusted Information Distributors	Orgs mailers. Emergency response website
Renter company	Renter company
Tucson Electric Power	Tucson Electric Power
Law enforcement	Law enforcement
Chamber of commerce	Chamber of commerce
Bars	Bars

5. How can local organizations and neighbors support each other in these situations?

Category	Description
Community Engagement & Events	Movie nights downtown, Bake exchange, Neighborhood block parties, Facilitate friendly competition between neighbors, Pancake breakfasts
Emergency Preparedness & Response	Have your own household emergency plan, Help your neighbor and family create their own emergency plans, Create emergency call lists to check on people, Checking in, Practice EOC drills, Share procedures
Collaboration & Resource Sharing	Don't duplicate efforts work together not against one another, Share our resources, Neighbors asking what others need and sharing where possible, Offer up a shared space to gather and be in community, Match impacted families with those who have power and offer to help
Visibility & Support Services	Be visible in the community (putting a face to the organization), Provide mobile first response services to combat issues caused by an outage, Perhaps create jobs to fill the need
Communication & Coordination	Open and consistent communication. Exchange contact info.

6. What long-term investments (e.g., microgrids, emergency plans) should be prioritized to reduce vulnerability to extended outages?

Category	Description
Energy & Infrastructure	Neighborhood Microgrids, Microgrids, Black start plans, Neighborhood microgrids, Distributed grids, Battery backup systems, Alternative power source, Micro solar farms, Submetered utility transition to direct utility, Rooftop solar
Emergency Preparedness & Response	Back up plans, Emergency plans, Emergency comms plan, Have people in reserve, Resource sheds, Charging stations, Emergency funds
Cooling & Climate Resilience	Cooling centers, Cooling centers, Public shade, Free drinks
Community Engagement & Communication	Email listservs, Outreach staff, Public information, Constant Communication, Gaining trust
Local Resilience & Urban Planning	Local resilience hubs, Local resilience hubs, Housing improvement, Reduced sprawl, One stop site for resources

Appendix B - Built Environment/Resilience Hubs Breakout Session Detailed Responses

1. What does resilience mean to you?

Category	Description
Community and Collaboration	“The ability for community members and organizations to come together in a time of need”, “resilience to me is community centered”, “create solutions that benefit the community”, “supporting others to adapt and maintain strength”, “security for all segments of a given community’s population”, “collective problem-solving”, “coming together in a time of need”, “working together”, “community-centered solutions”.
Adaptation and Flexibility	“Being to adapt”, “having a plan for the unexpected”, “ability to withstand challenging conditions”, “sustainability”, “adaptability”, “better prepared for an emergency”
Well-being and Strength	“The ability to bounce back”, “backbone, strength to get back up”, “surviving extremes”, “maintaining or returning to a functioning standard”, “continuously surviving and improving”
Equity and Access	“Ensure equity and access to facility for comfort and happiness”, “access to resources”
Preparedness and Response	“Having a plan for the unexpected”, “emergency response”

Appendix C - Public Health and Healthcare Breakout Session Detailed Responses

Question 1: What services are currently available to protect your communities during the heat season?

Category	Service/Resource	Relevant Quote
Emergency Response & Public Safety	First responders & fire departments	Timely intervention by first responders can prevent heat-related fatalities. Rapid cooling measures, like body bag ice transport, can be life-saving for severe heat stroke.
	Trainings on heat-related illness (HRI)	Proper training ensures emergency personnel recognize and treat heat-related illness efficiently.
	Public safety 'frequent flyers' for monitoring at-risk individuals	Frequent check-ins on at-risk individuals can make all the difference in extreme heat events.
Cooling Centers & Public Spaces	Cooling and relief centers available for heat relief	Cooling centers should be widely accessible and well-publicized before a heatwave strikes. Libraries are more than just book hubs; they are essential cooling spaces for many communities. Indoor malls serve as heat havens with backup energy sources, making them ideal for relief.
	Hospitals (EMD in Oro Valley) offer cooling & emergency preparedness	Hospitals should be prepared to handle heat emergencies while also providing cooling spaces.
	Recreation centers, high schools, churches (Oro Valley) provide relief	Community spaces like recreation centers and churches play a vital role in heat preparedness.
Community & Infrastructure Support	Red Cross community education and canvassing	Education is the first step, when people understand the risks, they can take action.
	Portable misting fans on Tohono O'odham Nation	Portable misting fans are simple yet effective ways to provide quick relief in high-heat areas.
	Water fountains throughout cities for hydration	Public water access is critical hydration is the best defense against heat exhaustion.
	Extreme weather phone alerts	Timely weather alerts allow people to prepare and seek shelter before temperatures peak.
Messaging & Outreach	Targeted outreach (door-to-door, community engagement, Social media campaigns)	"Door-to-door outreach ensures vulnerable populations, including seniors and the unhoused, get the support they need." "Social media is a powerful tool for real-time alerts and community engagement during heatwaves."
Challenges Identified	Some areas lack sufficient facilities to meet demand	"Simply having facilities isn't enough. they must be well-equipped and accessible to truly protect people." "Cooling centers won't help if they don't exist. tribal nations need better infrastructure investment."

Question 2- What additional services are needed to protect this community?

Category	Needed Service/Resource	Relevant Quote
Targeted Community Support for Rural and Vulnerable Communities	Disability services	People with disabilities face unique challenges in extreme heat targeted services are essential.
	Outreach to mobile home parks	Mobile home communities often lack proper cooling outreach and solutions must be prioritized.
	Christmas in April (home improvement for neighborhood members)	Community-driven home improvement programs can strengthen resilience in vulnerable neighborhoods.
	Buses to drive around rural communities	Rural communities need reliable transportation options to access cooling centers.
Strengthening Community efforts for heat relief	Evaluating cost-benefit of A/C for homes vs. cooling centers	We need to evaluate whether home A/C installations or expanding cooling centers is the most cost-effective solution.
	Refrigerated trucks for cooling support	Refrigerated trucks could provide emergency cooling in areas with limited infrastructure.
	Expanding cooling center security to deter drug sales	Ensuring cooling centers remain safe is crucial security measures should deter unwanted activities.
	On-site navigators for heat-related illness triage.	Having an on-site expert for heat-related illness triage can prevent severe medical emergencies.
	Additional communication for those unaware of cooling spaces	Many people don't know where to go during a heatwave better outreach is needed.
	Public perception shift to encourage use of cooling centers	Public perception matters cooling centers must be seen as viable and accessible options.
Communication & Awareness	Extreme heat drills or engaging sirens (sizzling sound idea)	Can we make extreme heat awareness more engaging? Sirens or drills could help.
	More infrastructure: fixing hardscapes, built environment solutions	More shade, better urban planning, and cooling infrastructure are needed to combat urban heat islands.
	Funding to implement cooling and relief solutions	Without proper funding, solutions remain ideas rather than actions.
Infrastructure & Shelter and Housing	More shelter beds and ambulances (EMS overwhelmed)	EMS resources are overwhelmed, more shelter beds and ambulances are urgently needed.
	Adequate staffing and resource allocation for shelters	Shelter staffing shortages lead to unsafe conditions proper resourcing is non-negotiable.
	Coordinated staffing and employment for relief work	Providing employment for relief work ensures better staffing and community participation.
	Expansion of low-barrier shelters (need additional 7,000 beds)	We need over 7,000 more low-barrier shelter beds to meet the growing demand.

Question 2: What additional services are needed to protect this community? (Continued)

Category	Needed Service/Resource	Relevant Quote
Urban Planning & Sustainability	Increasing tree coverage and using reclaimed water systems	Green infrastructure, such as trees and reclaimed water systems, is key to long-term cooling.
	Funding for sleeping quarters for heat relief	Additional sleeping quarters will provide relief for unhoused populations.
	Free public transportation for heat relief	Free transportation access can help at-risk individuals reach safe cooling spaces.
	Weatherization & home improvements	Home weatherization and retrofits can significantly reduce heat exposure risks.
	Training on sustainable buildings for long-term resilience	Training in sustainable buildings can promote long-term community resilience.

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