



PIMA COUNTY
HEALTH DEPARTMENT

2024 Heat Season in Pima County

Office of Climate & Environmental Health Justice

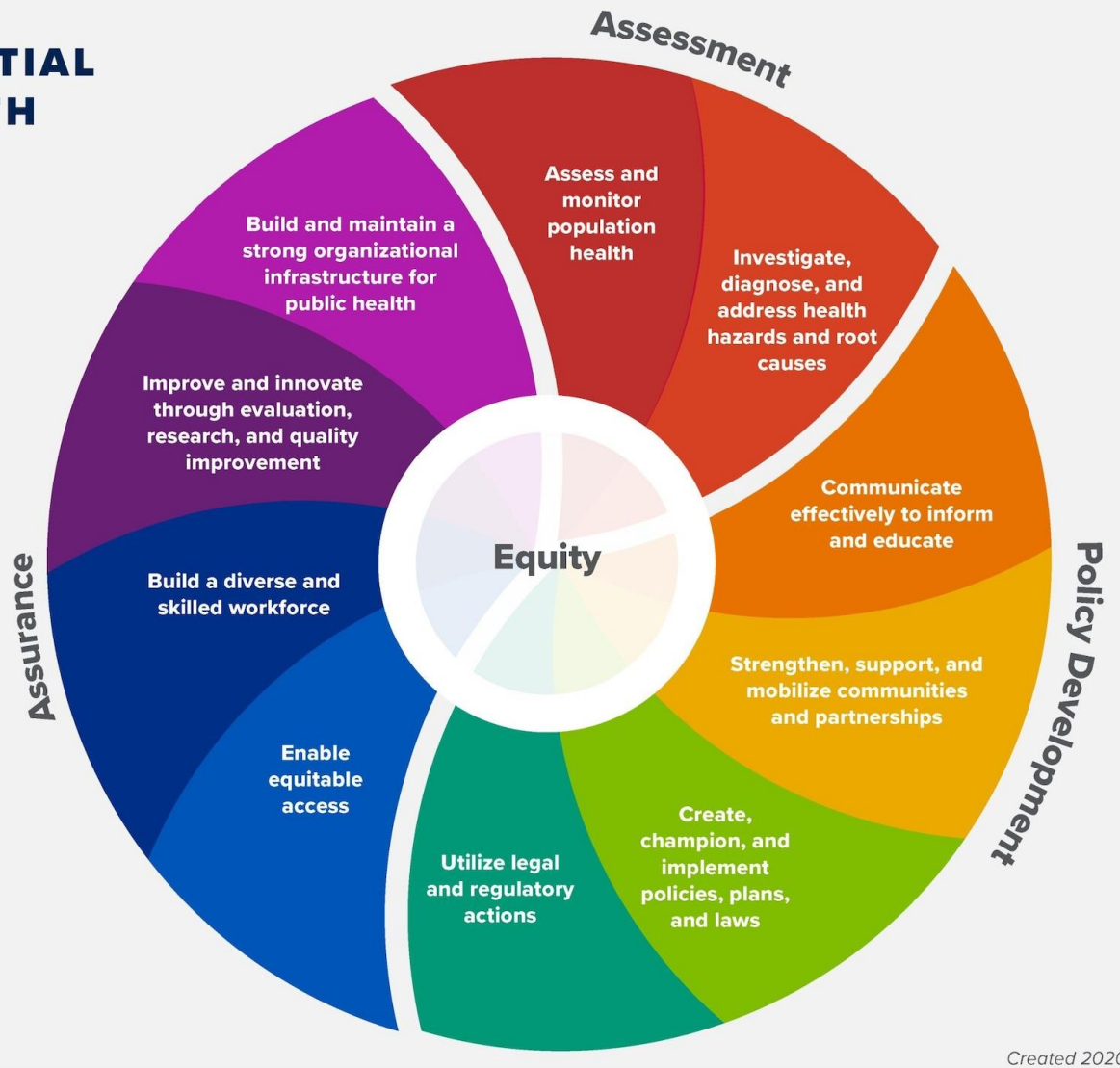
Julie Robinson, PhD

What is the Role of Public Health?

THE 10 ESSENTIAL PUBLIC HEALTH SERVICES

To protect and promote the health of all people in all communities

The 10 Essential Public Health Services provide a framework for public health to protect and promote the health of all people in all communities. To achieve optimal health for all, the Essential Public Health Services actively promote policies, systems, and services that enable good health and seek to remove obstacles and systemic and structural barriers, such as poverty, racism, gender discrimination, and other forms of oppression, that have resulted in health inequities. Everyone should have a fair and just opportunity to achieve good health and well-being.



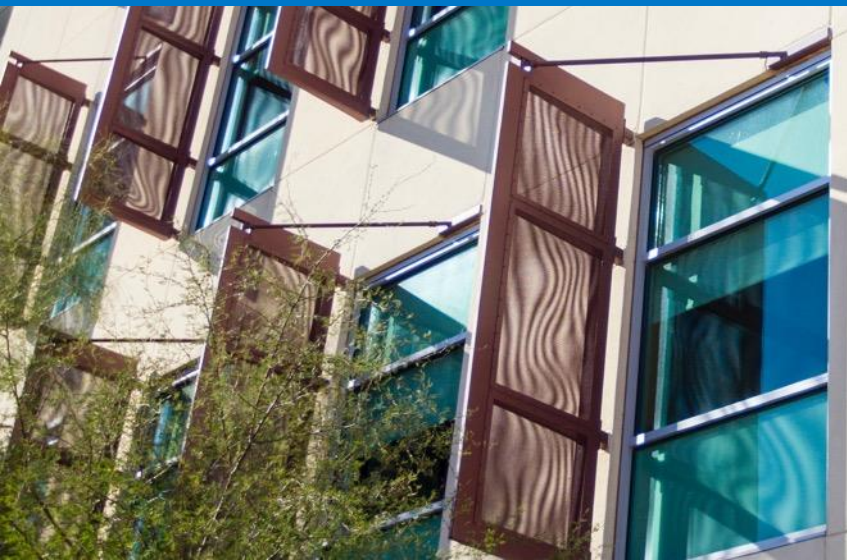
“Public health is the science of protecting and improving the health of people and their communities. This work is achieved by promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing and responding to infectious diseases.” Centers for Disease Control & Prevention

Emergency Mitigation & Preparedness (EMAP)

Public Health Emergency Preparedness

Role for Local health departments: prepare for, respond to, and recover from public health emergencies by leading a wide range of projects that span both policy and practice.

- Building and Sustaining Resilient Communities
- Enhancing the Use of Medical Countermeasures and Non-Pharmaceutical Interventions
- Ensuring Situational Awareness to Support Decision-Making
- Enhancing Public Health, Healthcare, and Emergency Management Systems
- Building All-Hazards Preparedness Planning



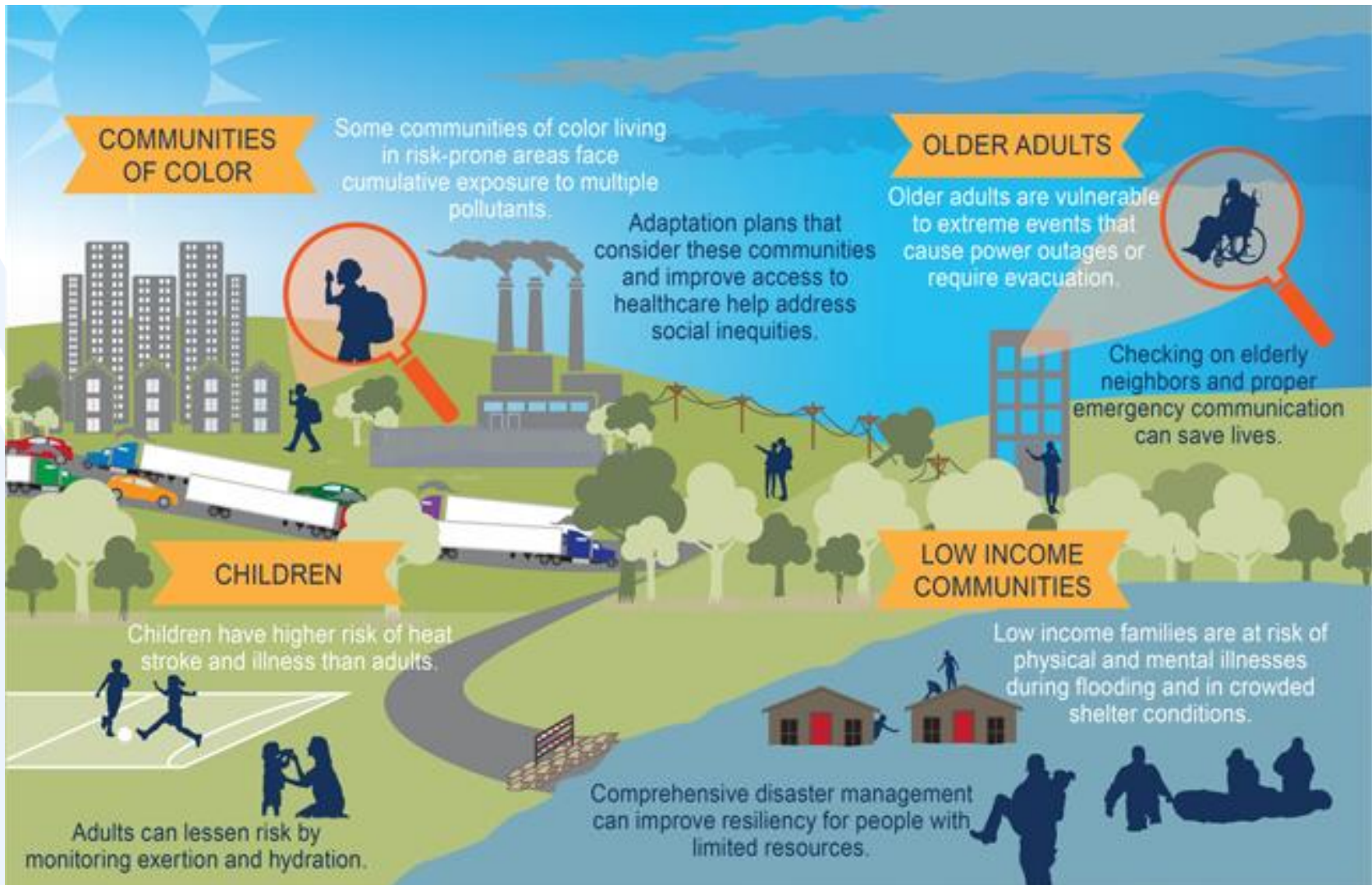
Office of Climate & Environmental Health Justice

Why?

“Climate change poses current and increasing threats to human health. As the climate continues to warm, the risks to human health will grow, exacerbating existing health threats and creating new public health challenges. HHS is committed to taking actions across the whole department to protect the health and wellbeing of all people, especially those most vulnerable.”

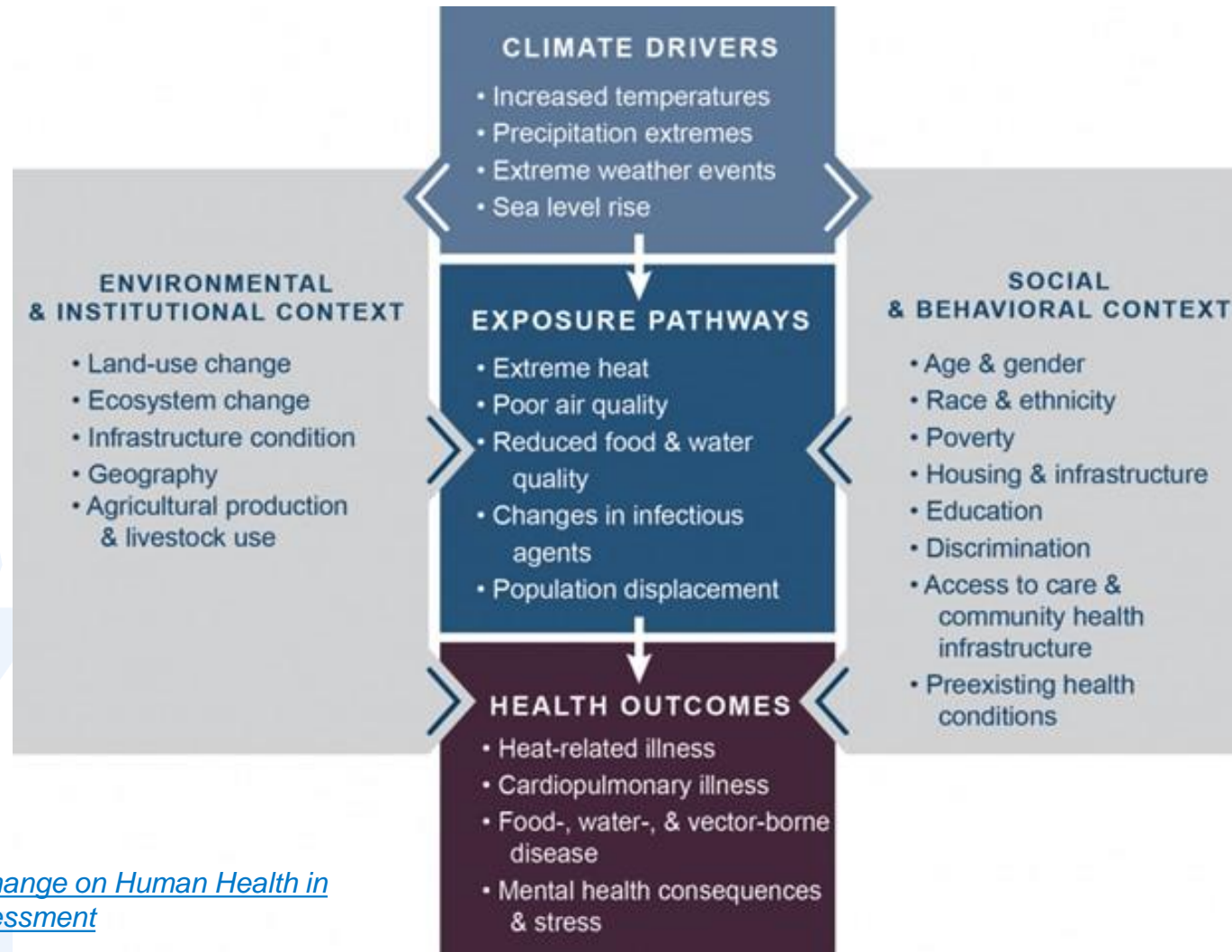
U.S. Department of Health and Human Services

Office of Climate & Environmental Health Justice



Source: [The Fourth National Climate Assessment](#)

Office of Climate & Environmental Health Justice



Source: [*The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*](#)

Office of Climate & Environmental Health Justice

Scope of Work

1. **Understanding and mitigating the effects of climate change on public health.**
2. **Enhancing planning, preparedness, and public health responses to climate change related or amplified disasters.**



Office of Climate & Environmental Health Justice

Address Big 8 Climate Impacts on Health

1. Extreme Heat (single focus for 2024)
2. Impacts on Tribal and Indigenous Peoples' Health
3. Worsening Air Quality
4. Vector-borne Disease Transmission
5. Food-borne Illness and Food Insecurity
6. Drought and Water Safety
7. Impacts to Mental and Spiritual Health
8. Disruption to Healthcare Access and Delivery

Source: Fifth National Climate Assessment (2023)



Recap Heat Season 2023

- Record breaking heat
- 990 Heat Deaths in AZ, 126 in Pima County
 - US annual average is 1220
- Governor Hobbs declared Heat Emergency
- Governor Hobbs appointed Dr. Livar as AZ's first Chief Heat Officer at ADHS
- Revealed need for more proactive approach locally

2024 State Level Directives

ARIZONA'S
**EXTREME
HEAT
PREPAREDNESS
PLAN**
MARCH 1, 2024



Immediate Priorities

Prioritizing Extreme Heat Mitigation and Emergency Response in the Executive Budget federal ARPA dollars to provide heat relief services:

- **Shelter Access and Support** (home energy cost assistance, cooling centers and mobile cooling units + coordination, expand emergency shelter responses to severe weather)
- **Grid Reliability**
- **Cooling Innovations**
- **Improve Health Outcomes**
- **Improve Disaster Response**
- Hiring of nation's first **Chief Heat Officer**



2024 ADHS Recommendations

Heat Response Activation Tiers, Thresholds, and Activities

ADHS Recommendations and Findings for the Arizona Extreme Heat Preparedness Plan

Heat Resilience: Shaping Arizona's Future

March 1, 2024



ARIZONA DEPARTMENT OF HEALTH SERVICES

Tier 0: Pre- & Post- Heat Season

October 1- April 30

Activities include:

- AZ Heat Planning Summit, Annual State Heat Workshop
- Heat Awareness Week and other educational campaigns and awareness
- Update heat resources, e.g. toolkits

Tier 1: Heat Season

May 1- September 30

Pre-posturing and providing life-saving assistance throughout the Arizona summer. NWS Heat Risk 1 - 4.

Examples include:

- Opening heat relief centers (cooling centers, hydration stations, and respite centers)
- Heat Alerts
- Partner meetings
- Cooling center workgroups
- 211 assistance
- Social media campaigns
- Heat relief centers map
- Coordinate resources, e.g. Narcan, cooling towels, water
- Heat Illness Dashboard
- Free or reduced bus passes and/or rideshare vouchers (rural areas)

Tier 1A: Cautionary Period

The NWS has issued an Excessive Heat Warning.

HeatRisk Values When the HeatRisk Value is:	Risk of Heat Effects ...the risk of heat effects are:	Level of Heat Concern ...as symbolized by this color:
0	Little to None	Green
1	Minor	Yellow
2	Moderate	Orange
3	Major	Red
4	Extreme	Magenta

Generally, a Heat Watch is issued by the NWS when there is potential to reach a value of 3 or 4 in the next 2-7 days. **A Heat Warning is issued by the NWS when the heat risk value will reach 3 or 4 within the next 12-24 hours.** NWS Extreme Heat Warnings in the Southwest account for regional and temporal differences and incorporate health outcome data (deaths) as displayed in the [heat risk map](#).

Activities include:

ADHS to provide real-time communications of cautionary periods to partners. Partners to plan to ramp up heat interventions, e.g. extended cooling center hours.

Tier 1B: Exceptional Heat Events

Exceptional Heat Events are defined when the **National Weather Services (NWS) has issued Excessive Heat Warnings for 2 days in a location**

AND

Health heat outcomes exceed the extreme threshold as defined below on a heat warning day or on one of the following 3 days.

- HRI Emergency Department visits are considered extreme when they are in the top 10% when compared to the previous 3 years
- OR
- The number of Heat-Related EMS dispatches are considered extreme when they are in the top 10% when compared to the previous 3 years

The **response returns to Tier 1A: Cautionary Period** when no new Excessive Heat Advisory, Watch, or Warning is issued for the next 3 days **AND** HRI ED visits and EMS dispatches have returned to below the top 10% when compared to the previous 3 years.

Activities include: Enhanced public health response, e.g. extended cooling center hours, media release, HANS.

Tier 1C: Multiple Emergencies Occurring Simultaneously

Examples: Power Outages, Transportation Interruptions, Outbreaks, Healthcare System Overload, Extreme Weather (Monsoon, Floods, Air Quality, and Smoke).

Activities include:

- Enhanced communication, coordination, prioritization of resources, response, and public messaging
- Multiple agencies involved, including DEMA

Tier 1D: Recovery

After heat emergency is rescinded

Evaluate Recovery Support Functions (RSF) needs outlined in the State Emergency Response and Recovery Plan (SERRP) which includes: infrastructure systems, economic recovery, natural and cultural resources, health and social services, community assistance, and housing.

Activities include:

- Coordinate with the community to address latent impacts post event.
- Multiple agencies involved, DEMA leads

History of Pima's Heat Response

- Non-profits and City of Tucson have opened heat relief sites for several years
- Pima County's role was minimal
- Different agencies were functioning independently
- 2023- Pima County joined the effort with 2 cooling centers
 - 13 total sites
- PCHD provided water bottles and sunscreen
- Began data collection with a survey
 - 127 survey responses received

Planning for 2024

- Following federal/state, Pima County gave responsibility for heat response to the Health Department
 - Office of Climate and Environmental Health Justice established Jan 2024
- 2024 Heat Season used Emergency Response framework for hybrid response.
- Focused on five key areas:
 1. Operations and Logistics
 2. Community Capacity Building
 3. Communications
 4. Policy & Planning
 5. Evaluation

Partners in PCHD 2024 Response

- ADHS – Chief Heat Resilience Officer & Team
- PCHD – Director, EMAP, PHEP, CFO, Epi, Informatics, Vaccine Equity, COPE, Tribal Liaison
- Pima County – Board of Supervisors, County Administration, Libraries, OEM, CWD, NRPR, Communications, PACC
- Partners – City of Tucson, TON, PYT, MRCSA, ARC, NWS
- UA – BRACE Team (H. Brown, L. Keith, E. Austoff, A. Sarko); SCORCH (M. Arora, A. Cunanan)
- CBO's – Primavera Foundation, St. Francis Shelter, Amistades

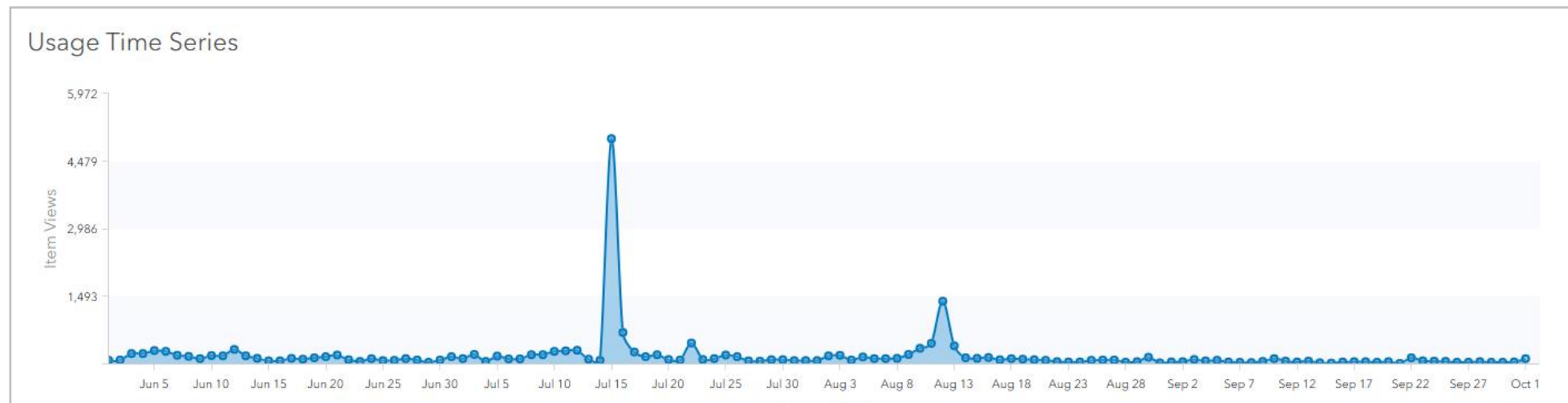
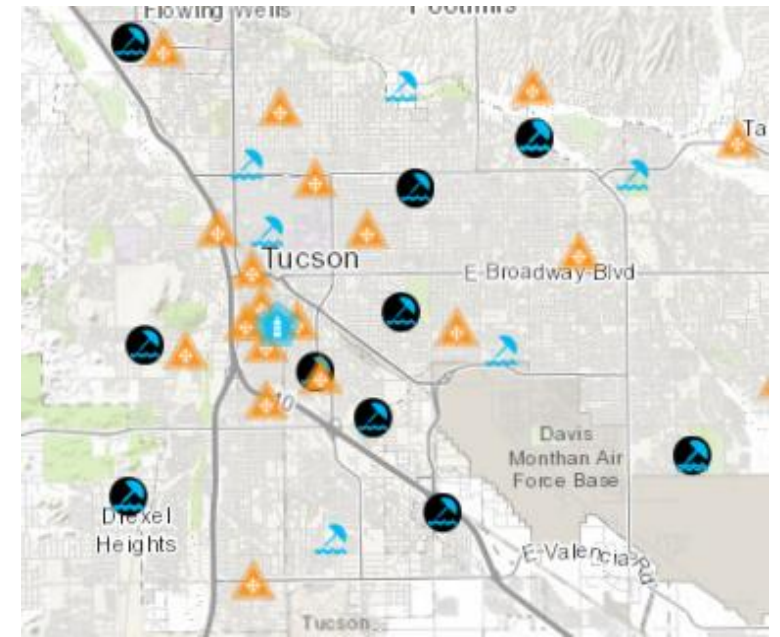
Logistics and Operations

- Goal: Bring partners together to create heat relief network
- Pima County increased number of heat relief sites
 - 23 libraries
 - 2 CWD locations
 - COOLtainer in Ajo, AZ
 - Mission Annex
- City of Tucson also increased number of sites with 2 new COOLtainers
- 2 additional COOLtainers on TON
- 43 total heat relief sites opened!
 - 1 shared map of cooling center sites

Cooling Center Map

June 1, 2024- September 30, 2024

- 21,237 total views
- 176 average views per day
- Highest views in a single day: 4,978 (July 15, 2024)
- 2nd highest views in a single day: 1,384 (August 12, 2024)

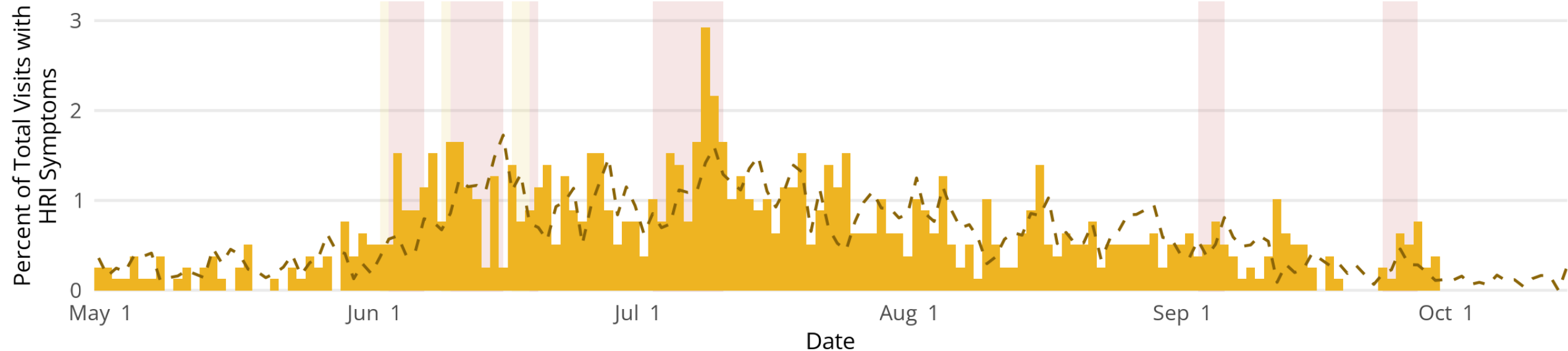


Logistics and Operations

- Over 14,926 visits to heat relief sites
- Distributed Materials:
 - 10,200 Sunscreen packets
 - 6,080 Refillable Water Bottles
 - 40 A-frame signs
 - 4,750 cooling center maps *and* 4250 "Heat Man" postcards (bilingual) distributed to shelters, buses, libraries, heat relief kits
- Weekly Heat Briefings June 1- Sept 30
 - Dr. Livar reported for AZDHS
 - Epi surveillance (HRI/HRD)
 - NWS forecast
 - Utility providers
 - Operations reports from cooling centers

Between May 1 and September 30, there were **787 hospital visits** with heat-related illness symptoms in Pima County.

Graph 1: Hospital Visits with Heat-Related Illness (HRI) Symptoms and Heat Alerts in Pima County, 2024



Percent of Total Visits with HRI Symptoms

2024

5-Year Average

NWS Alert

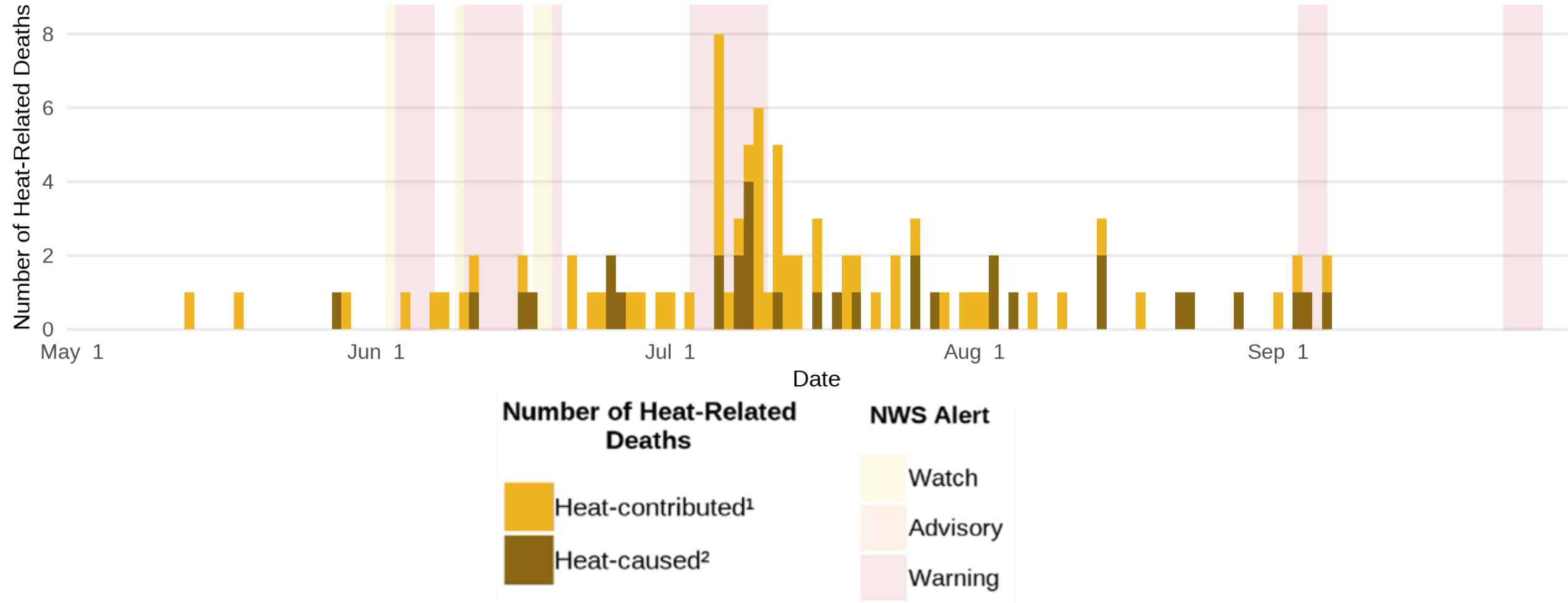
Watch

Advisory

Warning

Between May 1 and September 30, there were **95 certified heat-related deaths³** in Pima County.

Graph 6: Heat-Related Deaths and Heat Alerts in Pima County, 2024



¹ Heat-contributed includes deaths where environmental heat exposure was a contributing factor in the death.
² Heat-caused includes deaths where environmental heat exposure is the primary cause of death.
³ Data represents all deaths that occurred within Pima County, excluding deaths of undocumented border crossers (UBC). For information on UBCs, please see the PCOME heat-related deaths [dashboard](#). Deaths within a 3-week period of the end date may fluctuate due to certification.

Community Capacity Building

- PCHD, City of Tucson, UA, and community organizations came together to create the Joint Heat Action Team (JHAT)
- JHAT and other working groups formed to collaborate and align on policy, communications, and operations.
 - Led pre-season planning efforts in April/May
- Partnerships with ARC and MRCSA for volunteer deployment
- Purchased heat safety equipment for health department emergency responses

Communications

- Communications working group worked cross-jurisdictionally to align around heat messaging
- Expanded Beat The Heat website and resources
 - Extreme Heat messaging amplifying NWS alerts
 - Created [Beat The Heat](#) asset portal for partner organizations to access comms materials
- Expanded Beat the Heat campaign including:
 - Print ads
 - Radio ads
 - Bus Wraps
 - Printed flyers/postcards
 - Social media posts & videos



Policy and Planning

- On May 7th, 2024, the Pima County BOS and Tucson City Council approved a resolution to declare the second week of May ‘**Heat Awareness Week**’
- In July 2024, PCHD released its **3-year Public Health Heat Plan**
 - Engage in **collaborative planning**
 - Reduce the impact of extreme heat through **targeted interventions**
 - Foster **community resilience** to extreme heat events
- **Heat Worker Safety Ordinances for Contractors** approved by both City of Tucson and Pima County (*July and September, respectively*) – the County being the first County to enact such a policy
- The County also created its own **Administrative Procedure on Heat Safety** for its workforce
- PCHD drafting an Extreme Heat Emergency Response Plan

All Policy initiatives incorporated extensive community and workforce feedback, and provided public comment periods to ensure alignment with federal and state best practices, and successful implementation of such policies

Evaluation

- Oct 2, 2024, Hotwash: Break out groups, survey responses
- 949 extreme heat survey responses
- 154 heat relief site visitor survey responses
- 21 informational interviews with heat relief site staff
- Data analysis will be done late 2024
 - Comms analytics
 - Survey responses (4 groups – cooling center admin, staff, visitors, and general population)
 - Interview responses
 - Heat related death and illness data
 - 911 heat-related call data

Key Takeaways

- Heat is an equity issue
- The “whole” community is interested in participating in additional planning for next year.
- Everyone (50+ people) participating in the hotwash "owned" heat as an operational, planning and/or policy consideration, we consider this a big success in building community capacity.
- Our evaluation results will allow us to data driven decisions for our heat response efforts in 2025.
- Cooling Centers are a short-term response- long-term issues persist (ex. grid security, housing solutions, utility affordability).



PIMA COUNTY

HEALTH DEPARTMENT

Thank you!

Julie.Robinson@pima.gov

PCHD Office of Climate and Environmental Health Justice

“As the effects of climate change become more widespread and significant, communities least able to respond are bearing the largest burden. In the U.S., communities disadvantaged by a legacy of racial segregation and environmental injustice struggle with disparate health outcomes, are vulnerable to the effects of climate change...and lack sufficient resources to recover from and rebuild for resilience against future events.”

Source: National Academies of Sciences, Engineering, and Medicine. 2022. Communities, Climate Change, and Health Equity: Proceedings of a Workshop in Brief. Washington, DC: The National Academies Press.