



# Arizona's Chief Heat Officer and Efforts

## Maricopa Family Support Alliance

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Eugene Livar

Chief Heat Officer

Public Health Resiliency, Environment, and Policy

August 16, 2024

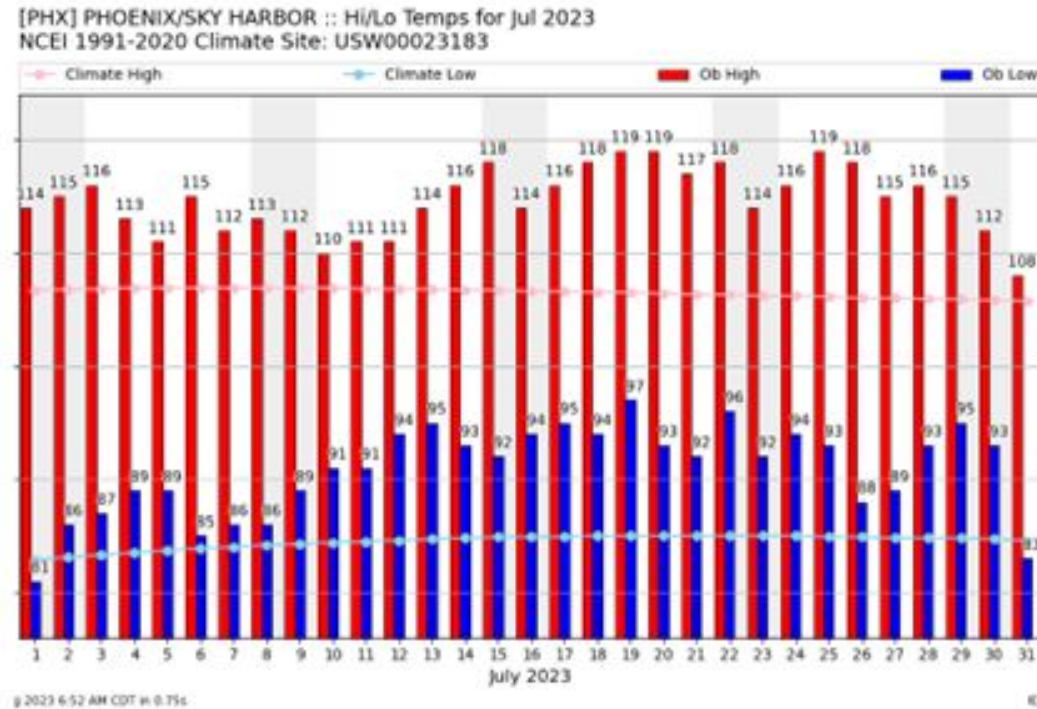
July 2023	Average	Depart	Rank
Apache	75.6°	4.6°	Warmest
Cochise	83.8°	5.7°	Warmest
Coconino	78.5°	5.3°	Warmest
Gila	84.1°	6.0°	Warmest
Graham	85.1°	6.0°	Warmest
Greenlee	80.5°	6.3°	Warmest
La Paz	97.3°	5.9°	Warmest
Maricopa	96.0°	6.6°	Warmest
Mohave	88.1°	5.3°	Warmest
Navajo	77.9°	4.8°	2 <sup>nd</sup> warmest
Pima	91.0°	5.9°	Warmest
Pinal	93.7°	6.3°	Warmest
Santa Cruz	82.3°	5.7°	Warmest
Yavapai	84.1°	6.0°	Warmest
Yuma	96.7°	6.1°	Warmest

Record coldest	Top 10 coldest	Top 40 coldest	Normal	Top 40 warmest	Top 10 warmest	Record warmest
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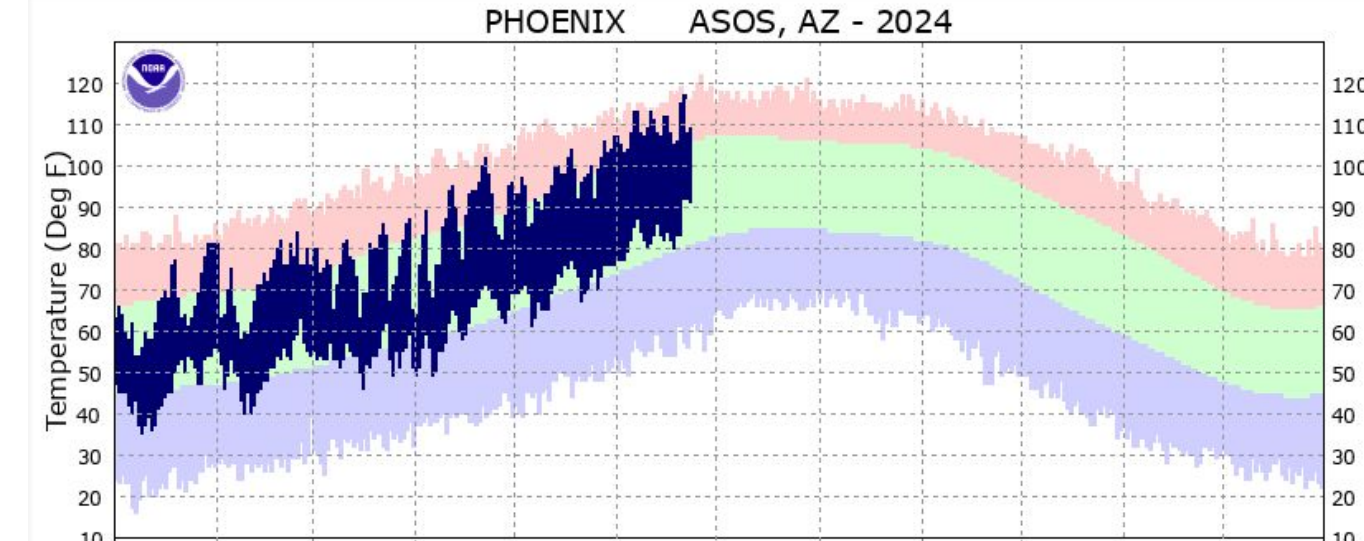
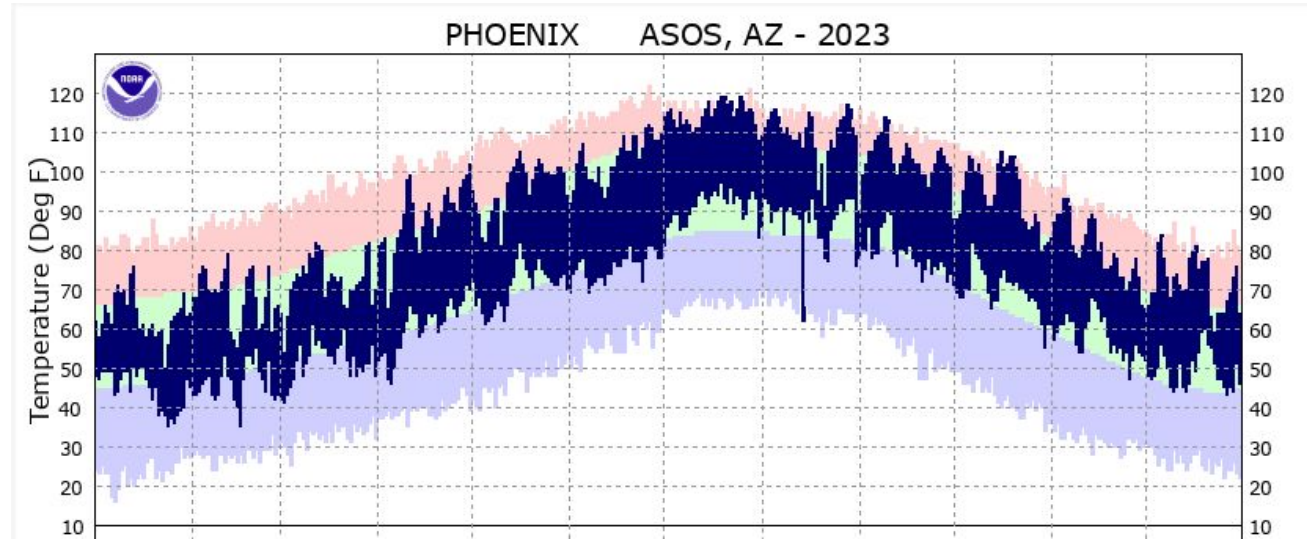
*Preliminary data from NOAA/NCEI*

July 2023 was the hottest month for most AZ counties ever recorded (since 1895)



Phoenix is now ranked as the US city with the hottest monthly temperature (102.7°F).

# Temperatures This Year



## Monthly Highest Max Temperature for PHOENIX AIRPORT, AZ

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2024	81	84	87	102	107	117	118	116	M	M	M	M	118
2023	76	79	82	102	105	112	119	117	114	105	93	84	119
2022	74	82	96	99	106	114	115	111	110	99	81	74	115
2021	79	82	89	98	102	118	112	115	111	98	91	85	118
2020	76	82	86	104	112	112	118	117	115	107	99	80	118

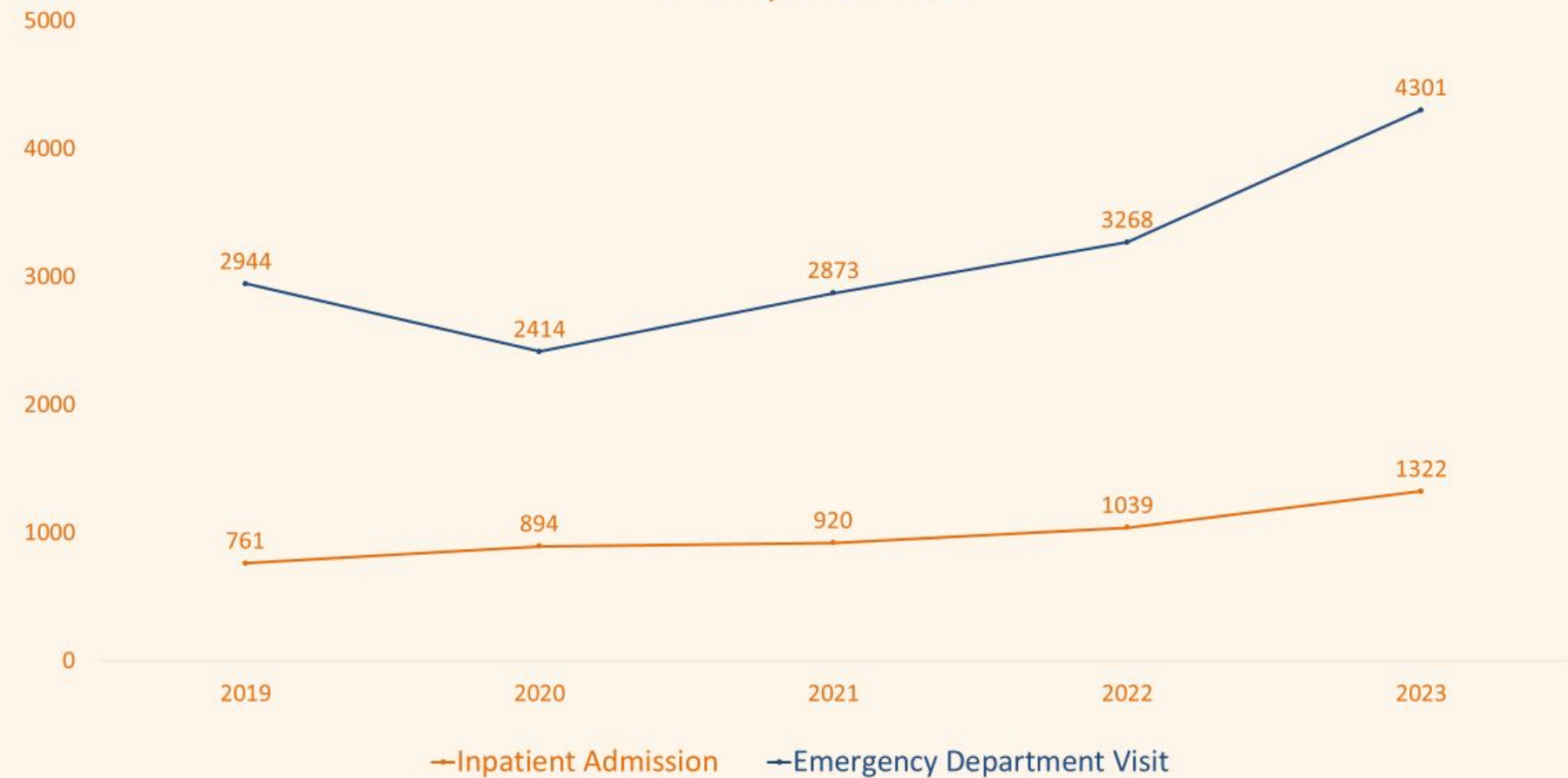
## Monthly Highest Min Temperature for PHOENIX AIRPORT, AZ

Click column heading to sort ascending, click again to sort descending.

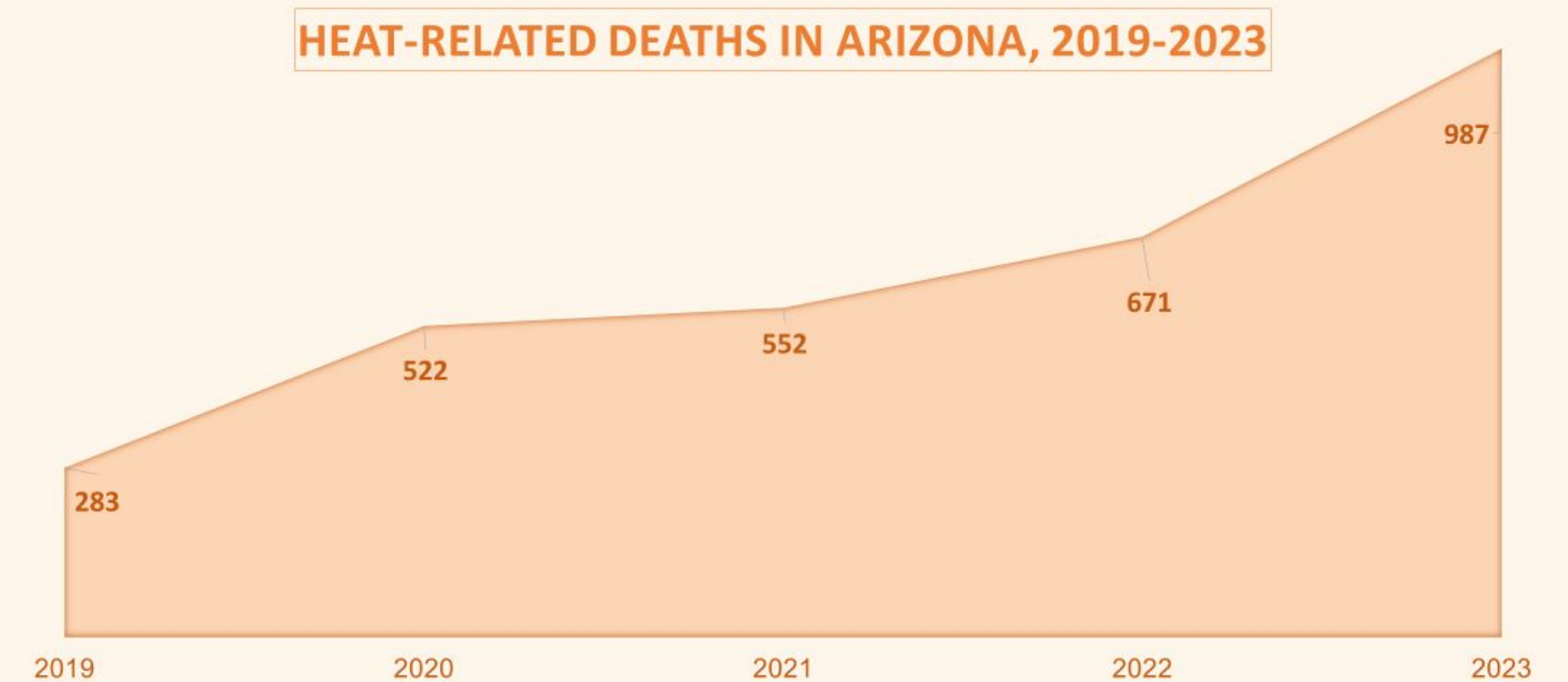
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2024	56	63	62	71	77	95	94	93	M	M	M	M	95
2023	50	55	61	71	82	81	97	93	90	82	68	60	97
2022	53	52	65	69	79	90	95	89	89	78	61	57	95
2021	61	64	66	71	76	92	93	91	87	74	64	57	93
2020	55	62	61	75	84	87	94	93	89	76	72	53	94

# Heat Related Deaths, ED visits, and hospitalizations are on the rise in Arizona since 2019

HEAT-RELATED ILLNESS (HRI) ED VISITS AND HOSPITALIZATIONS IN ARIZONA BY YEAR, 2019-2023



HEAT-RELATED DEATHS IN 2023 1.5 TIMES HIGHER THAN 2022



# 987 preliminary heat-related deaths



77% are  
Male



36% middle-aged  
45-64 years old



57% white and 24%  
Hispanic



47% of the residents lived in  
Arizona for 20 years and  
more



52% of heat deaths  
were associated with  
substance use

**2023 PRELIMINARY HEAT-RELATED MORTALITY SUMMARY**

# Plan Development Process

EO  
2023-16



August

IRF  
Workshop 1



October

Heat Health  
Summit



ADHS  
October

IRF  
Workshop 2

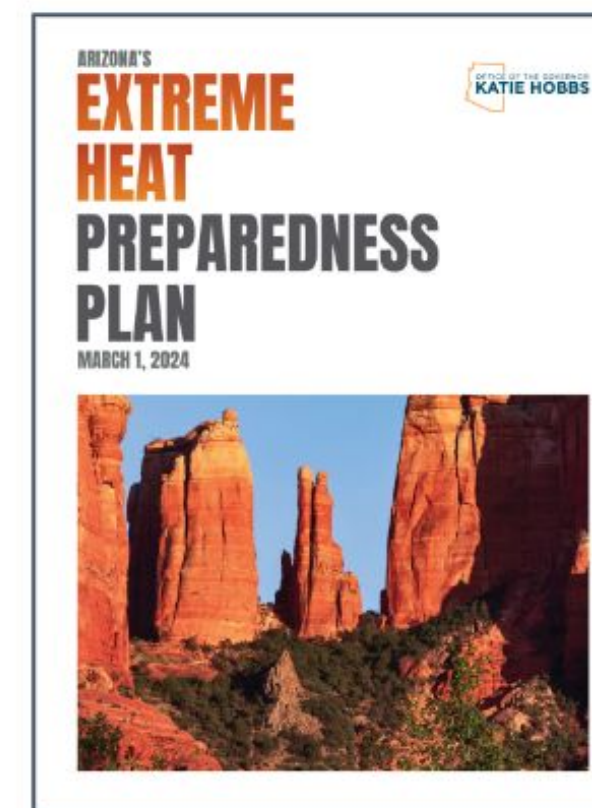


December

Plan Drafting



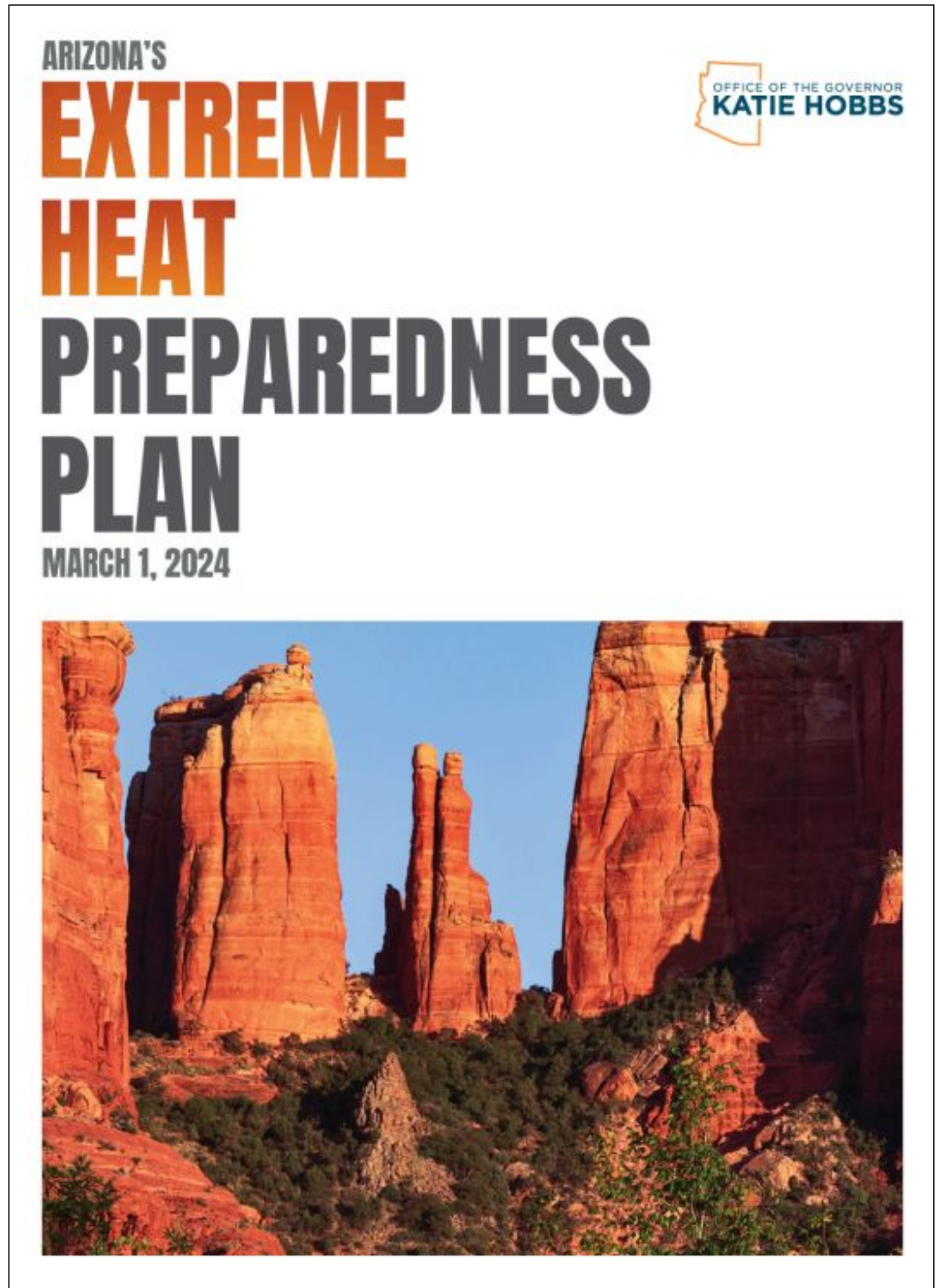
Jan/Feb



March 1, 2024

# Plan Elements

- I. **Cross-agency preparedness for heat season 2024**
  
- II. **Long-term policy and operational recommendations**



# Heat Season 2024 Preparedness

**Shelter**

**Energy**

+

**Health**

**Disaster Response**



# Longer-Term Recommendations

1

Safe,  
Affordable  
Housing

2

Adapting and  
Updating  
Emergency  
Response

3

Cooling  
Center  
Network and  
Supports

4

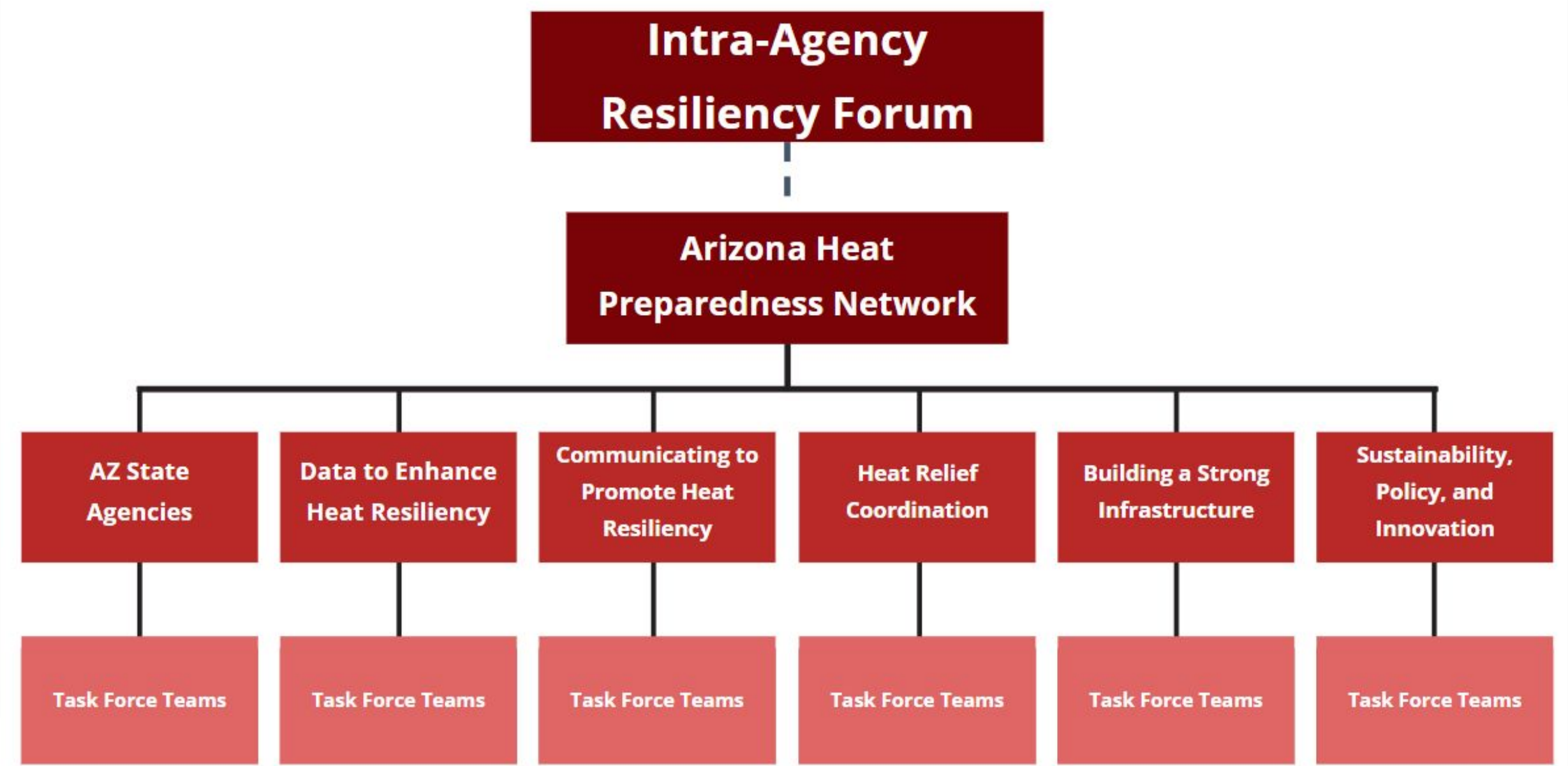
Data Sets,  
Knowledge,  
and  
Workforce  
Development

# Implementation

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- Current efforts
- Identify gaps & Implementation needs
- Health equity

# State Heat Work Groups



# We have 100 Participants

**Counties &  
Municipalities**

**Tribal Partners**

+

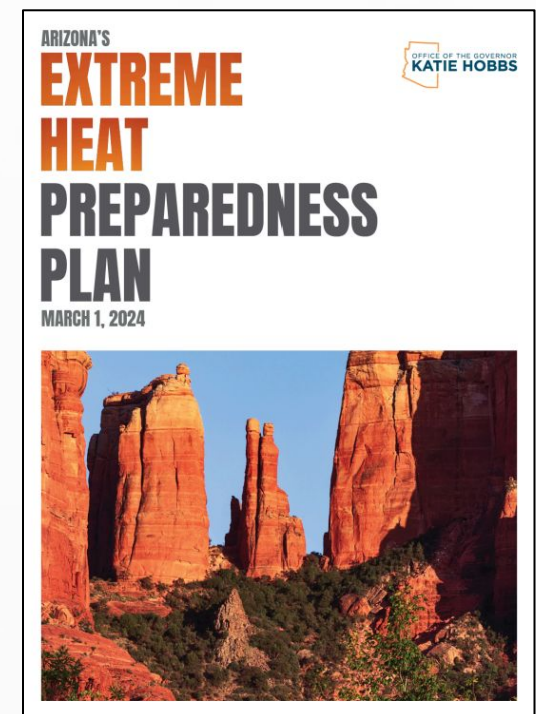
**Nonprofits,  
Community, &  
Faith Based  
Organizations**

**Local Businesses,  
Hospitals & Health  
Centers**

# What's New In 2024?

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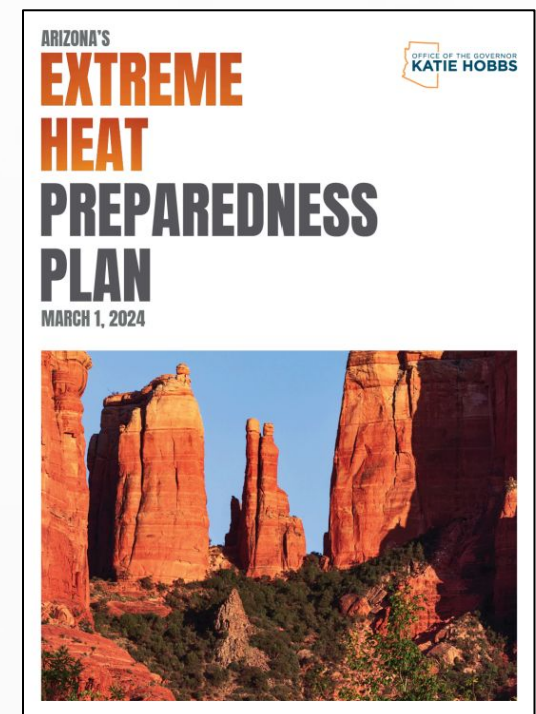
- Chief Heat Officer position
- Enhanced coordination among statewide efforts
- Identified threshold for enhanced heat response activities and developed an internal dashboard
- Alternating weekly video and blog updates
- State Extreme Heat Preparedness webpage



# What's New In 2024?

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- Construction and distribution of 18 retrofitted shipping containers that can be set up quickly as mobile cooling units
- State of AZ employees can opt to staff cooling centers and receive regular duty pay
- \$210 million investment in affordable housing and fighting homelessness
- The Executive Budget identified funding for hazard mitigation and emergency response
- HB 2146: mobile home park owners may not prohibit ACs or other cooling accessories on mobile homes
- Governor's Office of Resiliency identified \$13 million in grant funding to make necessary grid improvements in rural areas



# COOLtainers In Action

## New for 2024

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Capital Mall

City of Tucson



Gila County

# What's New In 2024?

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- Tribal Partnerships and Focus
  - Holistic view of the state
  - Regular tribal heat partner meetings
  - Tribal-specific heat summit breakouts and events
  - Outreach and inclusion for state-specific heat workgroups
  - Joint messaging and press events
  - COOLtainer criteria and distribution
    - 2 Tohono O'odham Nation
    - 2 Navajo Nation



# What's New

## In 2024?

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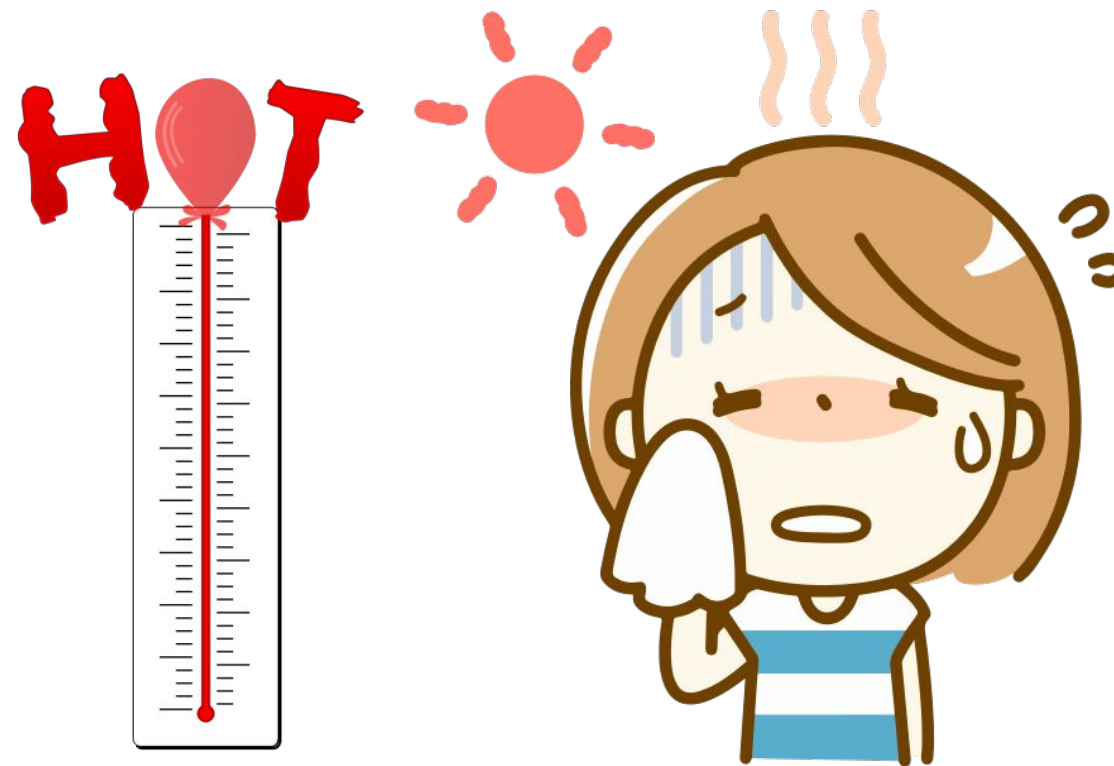
- Arizona Department of Economic Security (ADES)
  - Added state level heat objectives and heat resources to its 211 contract
- Arizona Department of Housing (ADOH)
  - Funded 4 new awards to expand existing emergency shelter response to severe weather
  - Expanded the allowability of heat relief funding
- Arizona Department of Corrections, Rehabilitation, and Reentry (ADCRR)
  - Implementing the excessive heat safety and relief strategy
  - Starting a capital improvement plan to convert all housing units from evaporative cooling to energy-efficient HVAC systems
- Department of Emergency and Military Affairs (DEMA)
  - Updated the State Emergency Response and Recovery Plan (SERRP)
  - Evaluating how to better measure the impacts of extreme heat events utilizing the national best practice framework of community lifelines

# What is a Heat Related Illness?

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High Temperatures = Potential for Heat-Related Illness

**Heat-related illness occurs when the body becomes too hot and is no longer able to regulate its own temperature**



# Key Populations & Settings


## Everyone is at risk of Heat-Related Illnesses

### Persons who (are)

- Older adults (people > 65)
- Infants, young children, and adolescents
- Living with a cognitive/mental, emotional, or physical disability
- Experiencing homelessness
- Homebound
- Overexert during work or exercise
- Larger bodies
- Physically ill or on certain medications (e.g., for depression, insomnia, or poor circulation)
- Cannot regulate or adjust their body temperature well
- Work outdoors (e.g., farm, electric line, & construction workers)
- Living with a substance use disorder
- Living in rural communities

# Look, See, & Act


Heat Exhaustion	Heat Stroke
<p><b>ACT FAST</b></p> <ul style="list-style-type: none"><li>• Move to a cooler area</li><li>• Loosen clothing</li><li>• Sip cool water</li><li>• <b>Seek medical help if symptoms don't improve</b></li></ul> <p><i>Heat exhaustion can lead to heat stroke.</i></p>	<p><b>ACT FAST</b></p> <p><b>CALL 911</b></p> <ul style="list-style-type: none"><li>• Move person to a cooler area</li><li>• Loosen clothing and remove extra layers</li><li>• Cool with water or ice</li></ul> <p><i>Heat stroke can cause death or permanent disability if emergency treatment is not given.</i></p>

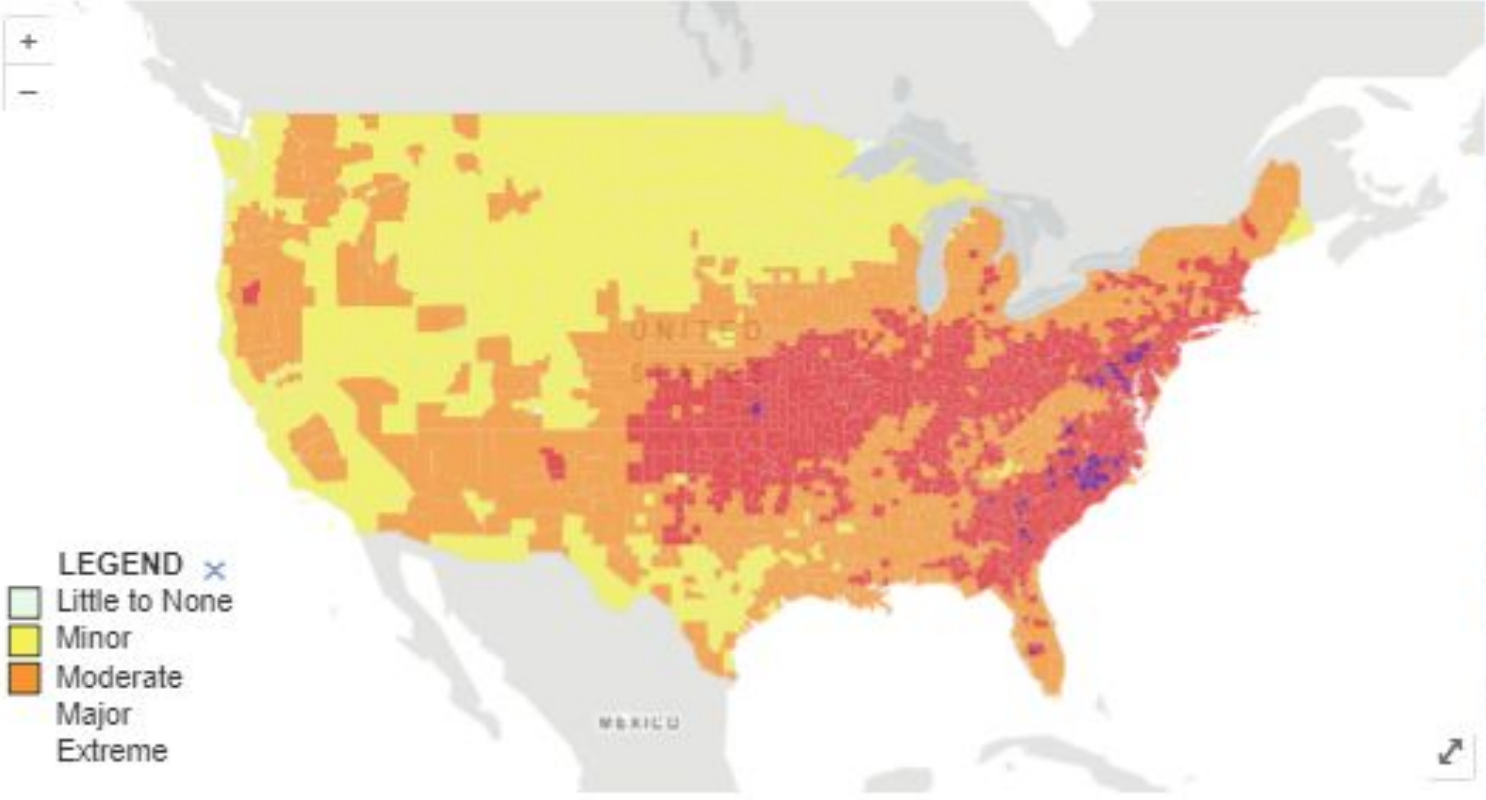



Stay Cool, Stay Hydrated, Stay Informed!









# Resources

**Get Your Local HeatRisk**  



**LEGEND** 


-  Little to None
-  Minor
-  Moderate
-  Major
-  Extreme

**Daily HeatRisk**  
Monday, July 15 

**HeatRisk Map**  
This map shows HeatRisk across the United States for Monday, July 15, 2024. Select a date from the dropdown menu to view daily HeatRisk across the United States for the week ahead.

You can view more local HeatRisk data on the Environmental Public Health Tracking Program's [Data Explorer](#).

HeatRisk is an experimental product and is not supported 24/7. Changes may occur without advance notice.

Source: [NOAA/NWS](#) 

**Health Info**  
Heat and health guidelines, recommendations, and resources

**Healthcare Professionals**

**Heat and Your Health**

# Resources

### Get Your Local HeatRisk

#### Today's HeatRisk

Maricopa County, AZ

**Moderate**

Sunday, July 14, 2024  
Source: [NOAA/NWS](#)

Today's HeatRisk is **Moderate**.

Today is an okay day to be outside for most people.

People who are outside for a long time or who are [sensitive to heat](#) could have health impacts.

#### Actions you can take to protect your health

Even a few hours in a cool location can lower your risk for health problems from heat. Stay hydrated, stay cool.

**If you are outside**, especially for a long time, you can:

- Stay in the shade as much as possible.
- Take breaks when you can.
- Do outdoor activities during the coolest parts of the day or evening, if possible.

**When you are indoors**, you can:

- Use air conditioning or [find a location](#) that has one.
- Use a fan to cool your body off, only when indoor temperatures are less than 90°F.

Check on your family, friends, and neighbors, especially if they have chronic medical problems or live alone. Check on pets.

Work with your doctor to see if you need to take additional health actions.

Check the [air quality](#) in your area before heading out.










[Heat and Your Health](#)

#### HeatRisk Forecast

Maricopa County, AZ

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
July 15	July 16	July 17	July 18	July 19	July 20
Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

# Resources

			
<p><b>AZ Cooling Centers</b></p> <p>Stay cool! Find cooling centers, hydration stations and collection/donation sites in Maricopa, Pima and Yuma counties.</p>	<p><b>Heat-Related Illness Dashboard</b></p> <p>Click here to see (near real time) trends in emergency department visits for heat-related illnesses across different demographics such as county, age, gender, race, and ethnicity in Arizona.</p>		
			
<p><b>Heat-Related Illness</b></p> <p>Arizona is one of the hottest places on earth from May to September, learn tips to stay safe.</p>	<p><b>Excessive Heat Warnings</b></p> <p>Stay informed! Sign up to receive excessive heat warnings by email.</p>	<p><b>Older Adult Toolkit</b></p> <p>The older adult population is more vulnerable to the effects of excessive heat.</p>	<p><b>Outdoor Worker Toolkit</b></p> <p>Resources for outdoor workers &amp; employers to prevent, recognize and treat heat illness.</p>
			
<p><b>School Toolkit</b></p> <p>Info for students, school staff, athletic coaches and parents regarding heat-related illness and prevention.</p>	<p><b>Extreme Heat Related Maps</b></p> <p>These maps visually represent the populations that may be most vulnerable to extreme heat events.</p>	<p><b>Annual Extreme Heat Planning Workshop</b></p> <p>Annual meeting with stakeholders across sectors to address the effects of extreme heat in Arizona.</p>	<p><b>Data, Statistics &amp; News</b></p> <p>Each year in Arizona, heat related illnesses cause over 250 deaths and nearly 3,000 emergency room visits.</p>

# New Resource

## Heat and Medications Information Sheet for Health Care Providers

### What is the concern?

Extreme heat temperatures may adversely impact patients on specific medications.

This document is intended to alert healthcare providers to the impact that ambient heat may have on patients taking certain medications and to provide recommendations.

### What do I need to be aware of?



Heat-related illness can affect everyone - no matter how long someone has lived in Arizona, their age, gender, gender identity, or health issues.



Heat-related illness is a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.



An individual's risk for heat-related illness is influenced by many factors including individual health, housing type, living conditions, and pre-existing conditions (to name a few).

Health care providers are recommended to consult the Heat and Medications websites provided by the [Centers for Disease Control and Prevent \(CDC\)](#), the [Arizona Department of Health Service \(ADHS\)](#) and the [Pima County Health Department \(PCHD\)](#) for more information.



### Some factors that might increase a patient's risk of developing a heat-related illness include:

- High levels of humidity
- Obesity
- Fever
- Dehydration
- Heart disease
- Mental illness
- Poor circulation
- Sunburn
- Alcohol use
- Certain prescription and non-prescription medications and polypharmacy

**Source:** CDC Extreme Heat and Your Health page

### The following populations may be at an even higher risk for heat-related illness:

- Children
- Individuals 65+ years old
- Outdoor workers
- Pregnant people
- Individuals with disabilities
- Athletes
- Individuals without air conditioning
- Individuals who are living alone
- Residents of mobile homes
- Individuals with chronic health conditions
- Individuals with substance use disorder/opioid use disorder

Taking certain medications increases the risk of adverse health outcomes for patients.

When individuals are on these types of medications extra education and precautions are necessary. Some medications will interfere with thermoregulation or fluid balance while other medications can increase skin sensitivity to sun exposure.

Included is a consolidated list of medications that increase risks from extreme heat exposure. These include certain cardiovascular medications, anti-seizure medications, antibiotics, and other classes of medications.



# Heat Season

## Take Home Message

- Stay safe/healthy: Learn how to recognize the signs of heat-related illness and ways to prevent it.
- Stay cool: Visit our extreme heat website to discover ways to stay cool.
- Stay informed: Sign up for ADHS excessive heat warnings.
- Stay hydrated: Learn more about ways to stay hydrated.
- Be SunWise: To prevent sun damage and skin cancer.
- Stay Connected: Check on your family, friends, and neighbors.



**ARIZONA HEAT**  
PREPAREDNESS NETWORK

# Resources

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- [Arizona's Extreme Heat Preparedness Plan](#)
- [ADHS Recommendations and Findings for the Arizona Extreme Heat Preparedness Plan](#)
- [ADHS Extreme Heat Preparedness Webpage](#)
- [ADHS Heat Safety Webpage](#)
- [ADHS Heat-Related Illness and Heat Tier Dashboard](#)
- [ADHS Sign Up for Heat Alerts](#)
- [CDC Heat Risk Tool](#)
- [CDC Heat & Health Tracker](#)



# THANK YOU

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Public Health Resiliency, Environment, and Policy

[www.azhealth.gov/heat](http://www.azhealth.gov/heat)



ARIZONA DEPARTMENT  
OF HEALTH SERVICES