

Arizona Heat Season 2020 Recap Webinar

December 3, 2020

2:00 PM – 3:30 PM



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans



ASU
Arizona State
University

Thank you for attending!

- Preferred audio through computer microphone/speaker
- Alternate audio available through phone
- This webinar is being recorded. Slide materials will be available after the webinar to registered participants.

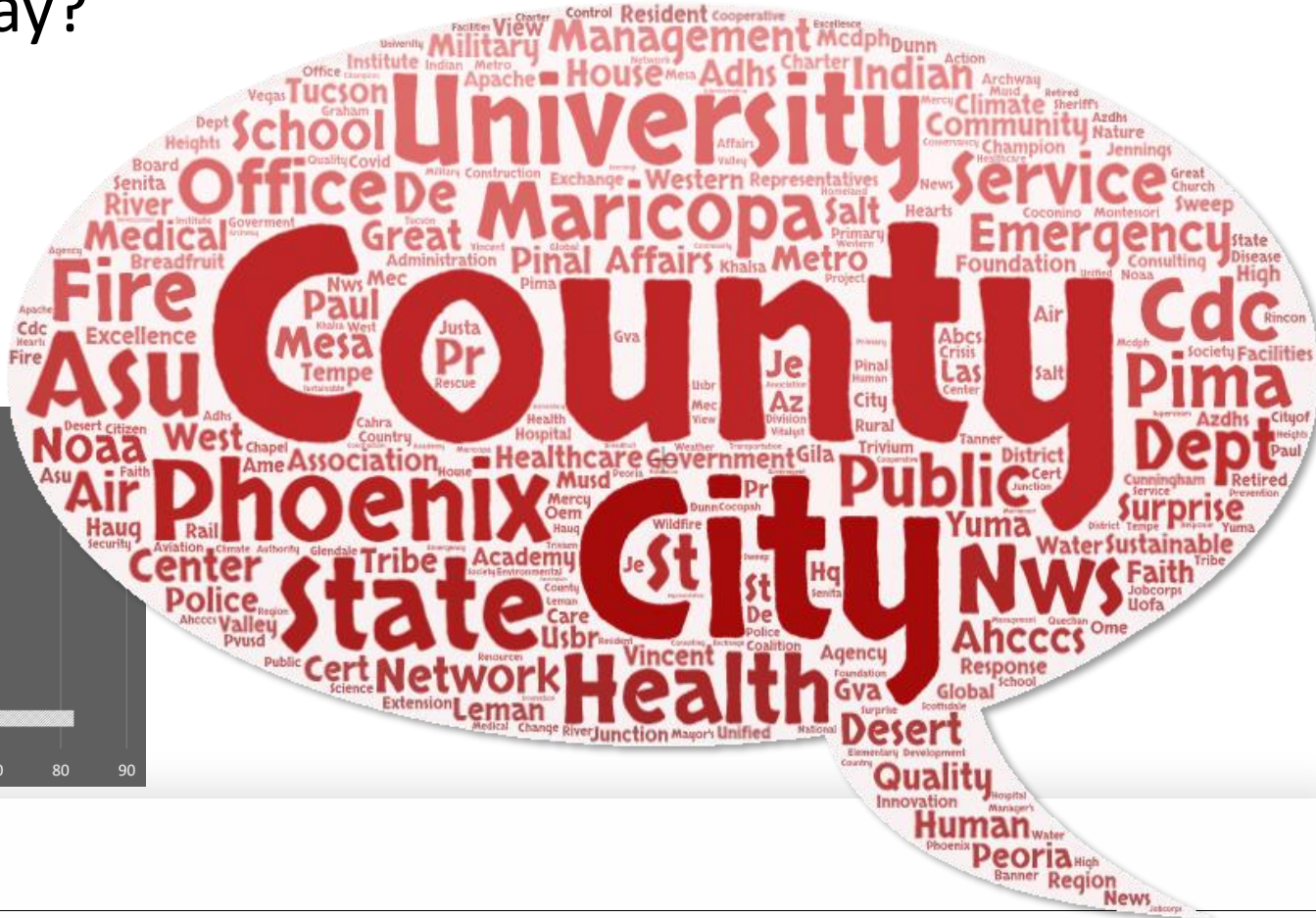


Webinar Housekeeping

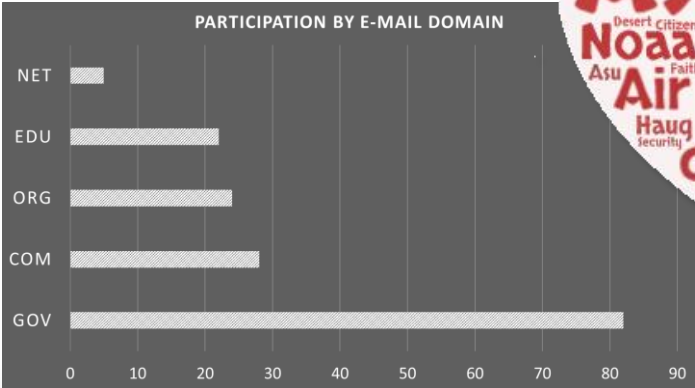
- Attendees are muted upon entry
- Please remember to mute your phone and video when not speaking
- Use the webinar chat to ask questions
- Meeting facilitators will compile questions for the presenters during each question and answer session



Who is here today?



PARTICIPATION BY E-MAIL DOMAIN



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Who is here today?

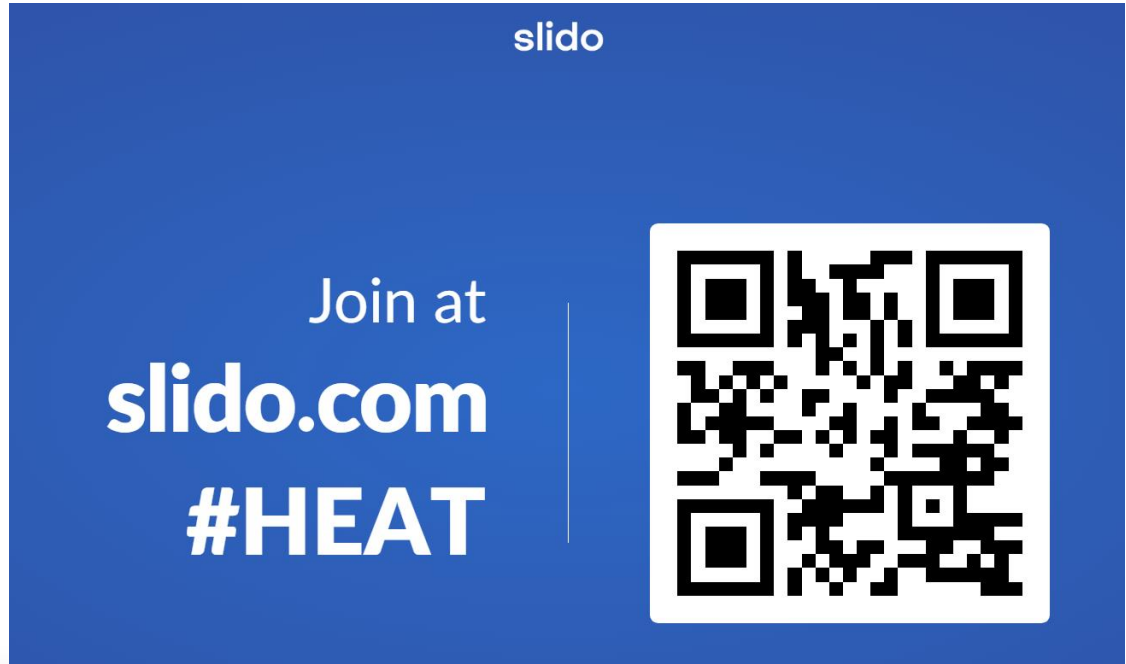


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Slido!

- We will be interacting with attendees using Slido
- Join as a participant by using your web browser or phone to visit the website:
slido.com
- Enter the event code # HEAT
- We will share live poll results throughout the webinar
- Joining is optional

A blue rectangular banner for a Slido event. In the top right corner, the word "slido" is written in white lowercase letters. In the center, the text "Join at" is in white, followed by "slido.com" in a larger white font, and "#HEAT" in a very large white font below it. On the right side of the banner, there is a large white square containing a black QR code.

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Agenda

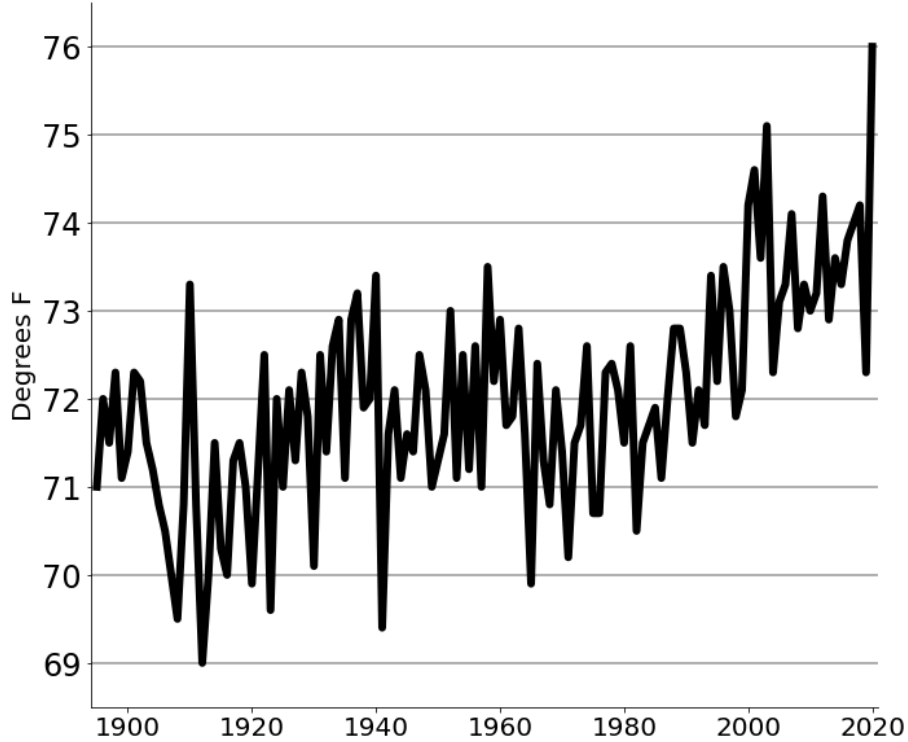
- **2:00 - 2:15 PM Introductions and welcomes**
 - David Hondula, PhD (Arizona State University), Associate Professor
 - Jennifer Botsford, MSPH (ADHS), Environmental Health Chief
- **2:15 - 2:25 PM Summer 2020 NWS Weather**
 - Paul Iñiguez, MA (National Weather Service, Phoenix), Science and Operations Officer
- **2:25 - 2:35 PM Q&A**
- **2:35 - 2:50 PM Summer 2020 Health impacts recap**
 - Laura Fox, MPH (Arizona Department of Health Services/Maricopa County Department of Public Health), Senior Epidemiologist
 - Matthew Roach, MPH (Arizona Department of Health Services), Epidemiology Program Manager
- **2:50 - 3:00 PM Q&A**
- **3:00 - 3:15 PM Summer 2020 Solutions recap**
 - Melissa Guardaro, PhD (Arizona State University), Assistant Research Professor, Healthy Urban Environments Initiative, Knowledge Exchange for Resilience, Urban Resilience to Extremes Sustainability Research Network
 - Anne Reichman (Arizona State University), Director, Sustainable Cities Network & Project Cities Program
- **3:15 - 3:25 PM Q&A**
- **3:25 - 3:30 PM Closing Remarks and Next Steps**



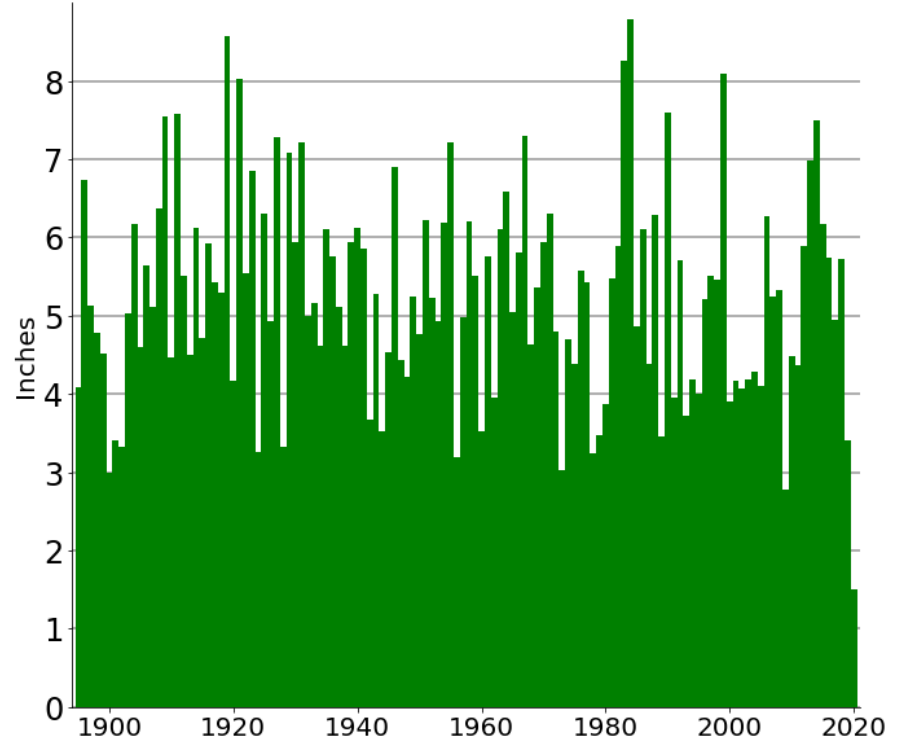
2020 Arizona Heat Season Recap

Paul Iñiguez
NOAA/NWS Phoenix, AZ

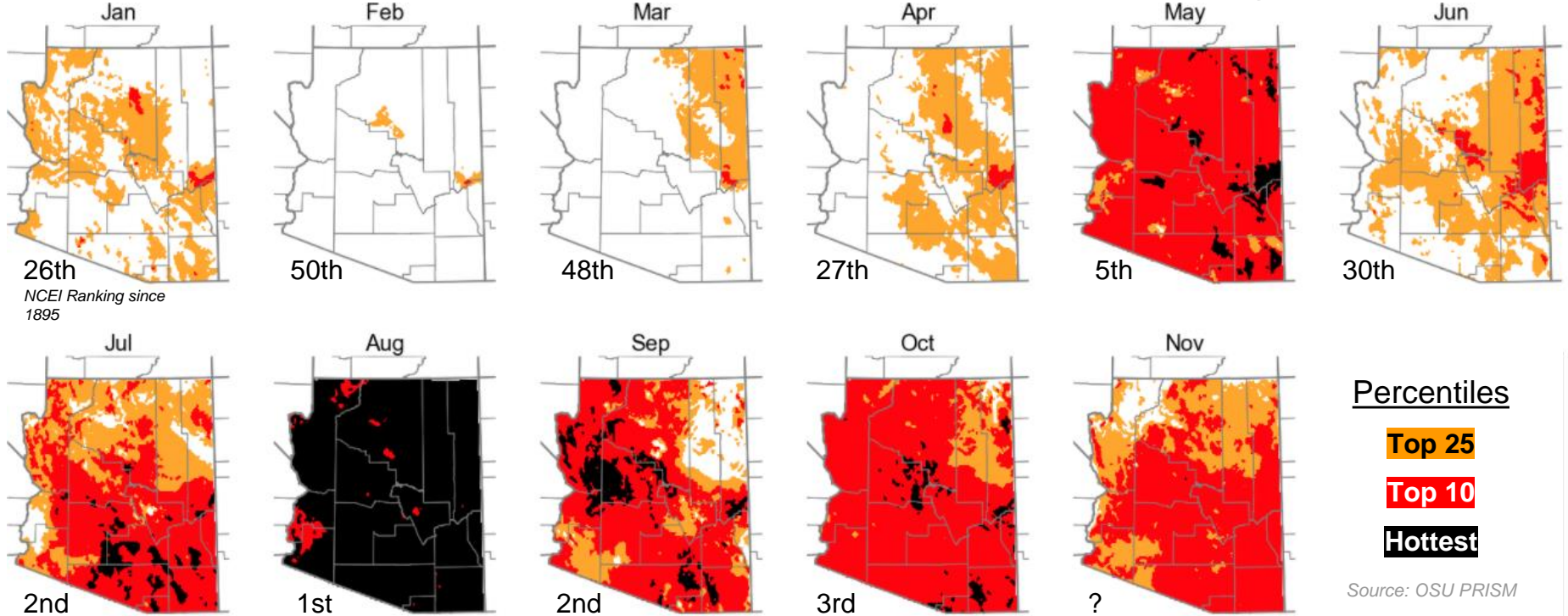
May-Oct Average Temperature - Arizona



May-Oct Average Rainfall - Arizona



Arizona 2020 Heat Season by Month



2020 Daily Temperature Records

Phantom Ranch
Highs 26 / Lows 5

Kingman
Highs 22 / Lows 7

Yuma
Highs 8 / Lows 9



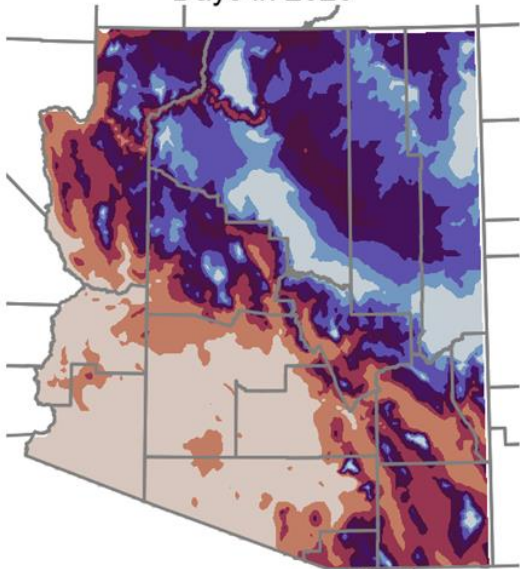
Canyon de Chelly
Highs 8 / Lows 10

Flagstaff
Highs 19 / Lows 7

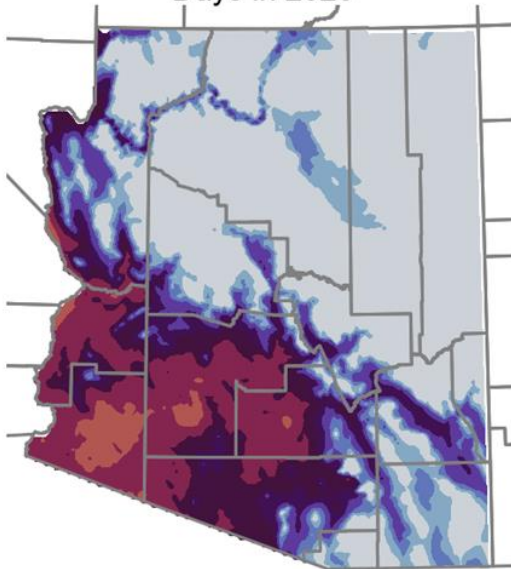
Phoenix
Highs 33 / Lows 26

Tucson
Highs 33 / Lows 26

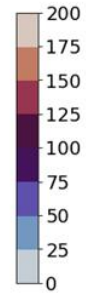
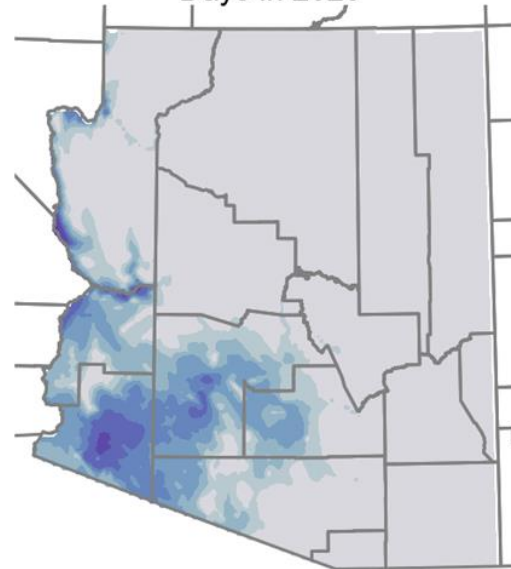
Number of 90+ °F
Days in 2020



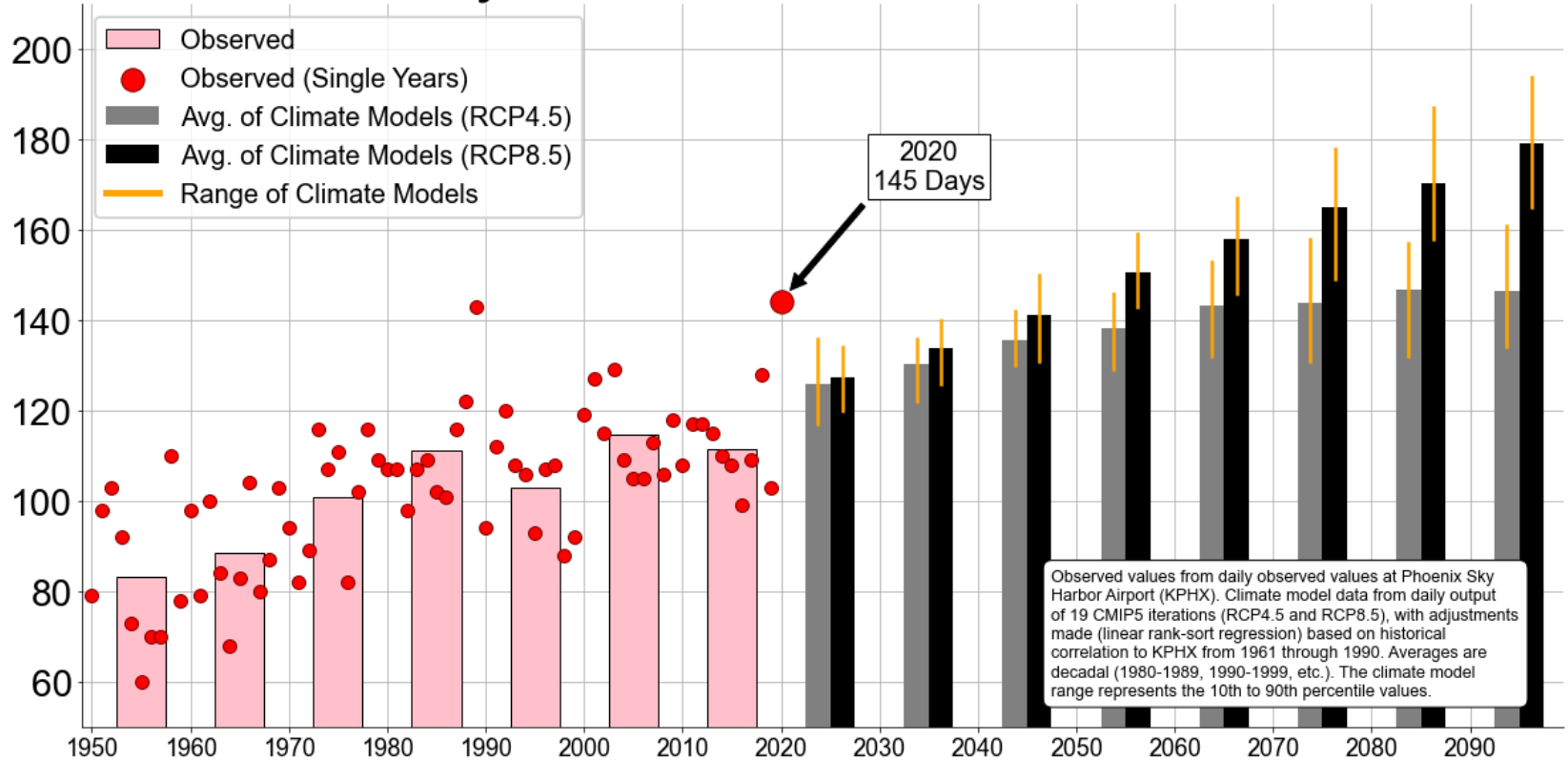
Number of 100+ °F
Days in 2020



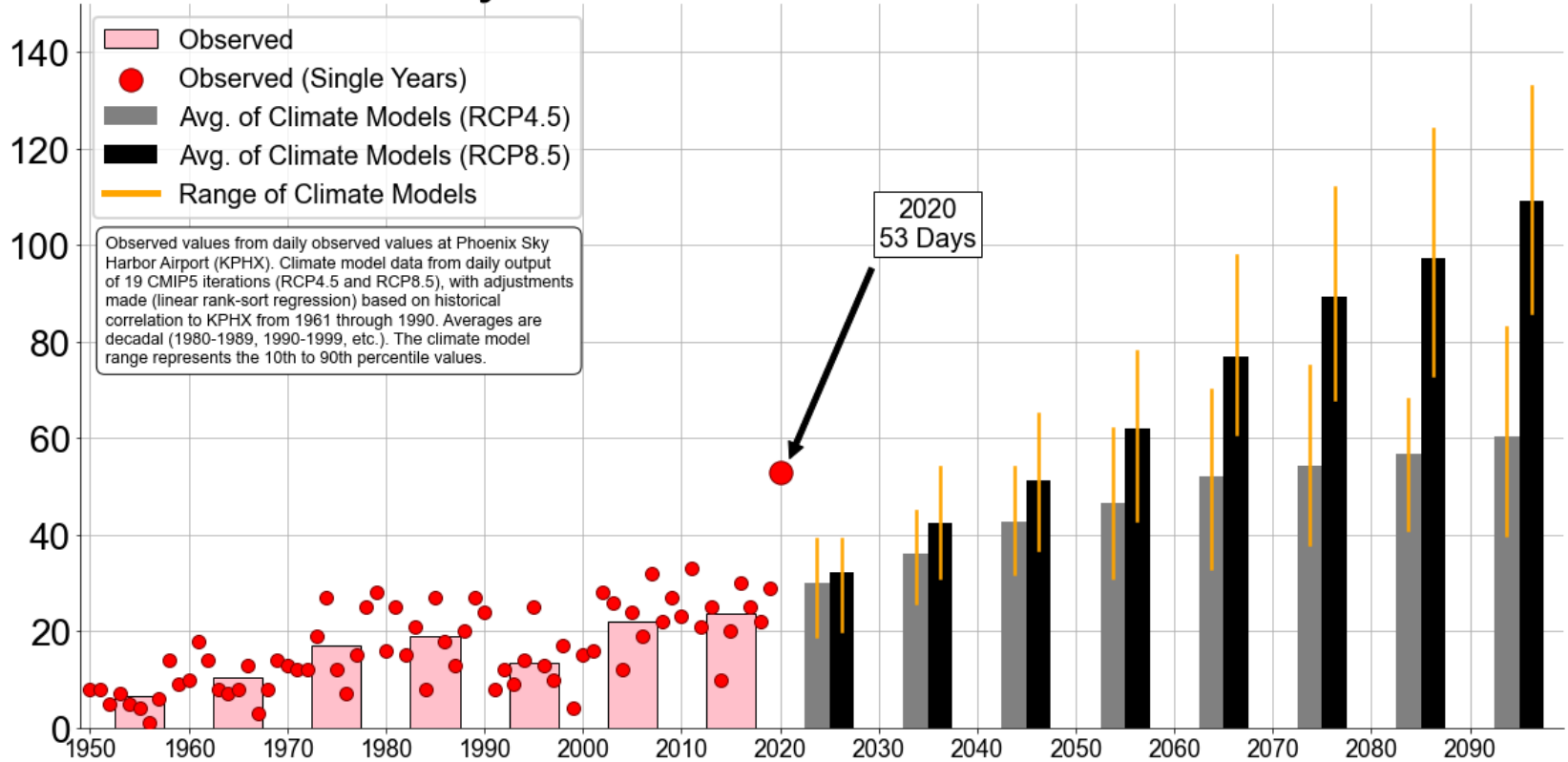
Number of 110+ °F
Days in 2020



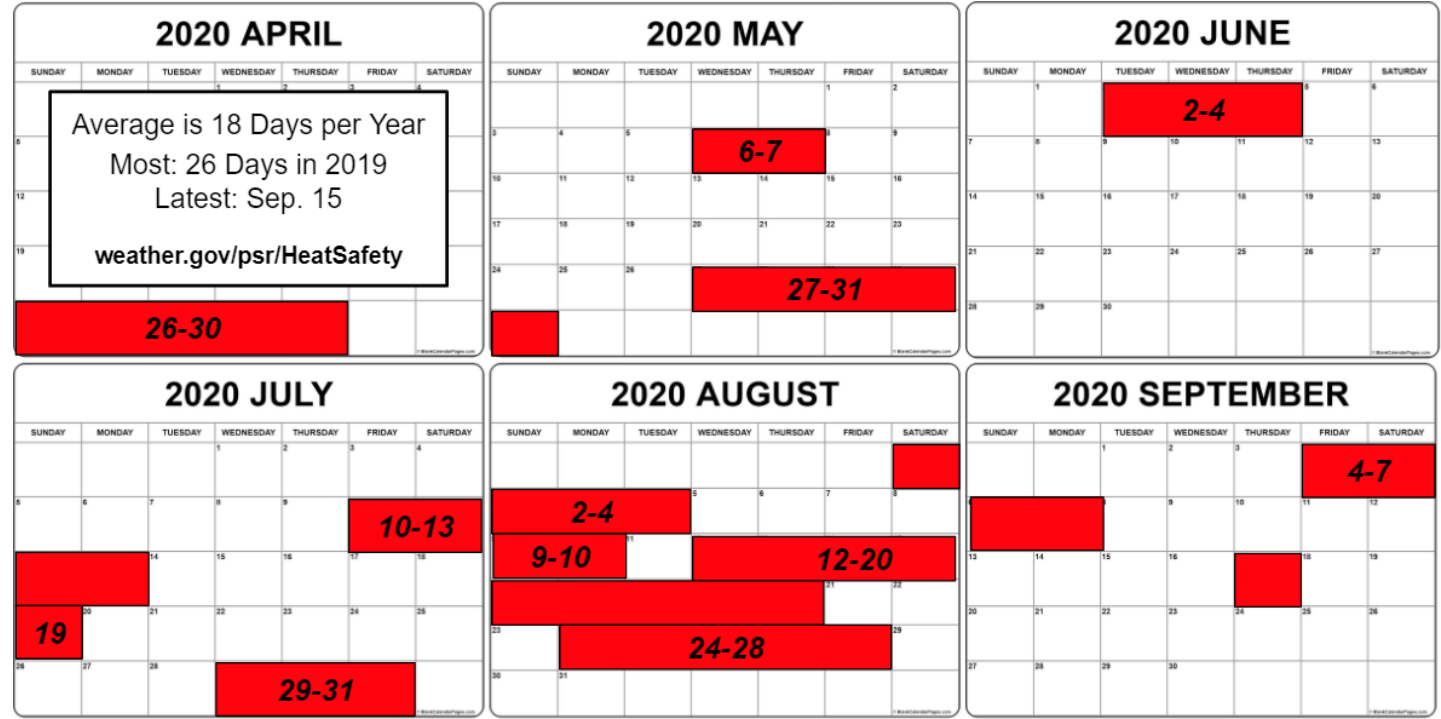
Number of Days 100+ °F in Phoenix, AZ



Number of Days 110+ °F in Phoenix, AZ



Phoenix Area Heat Warnings

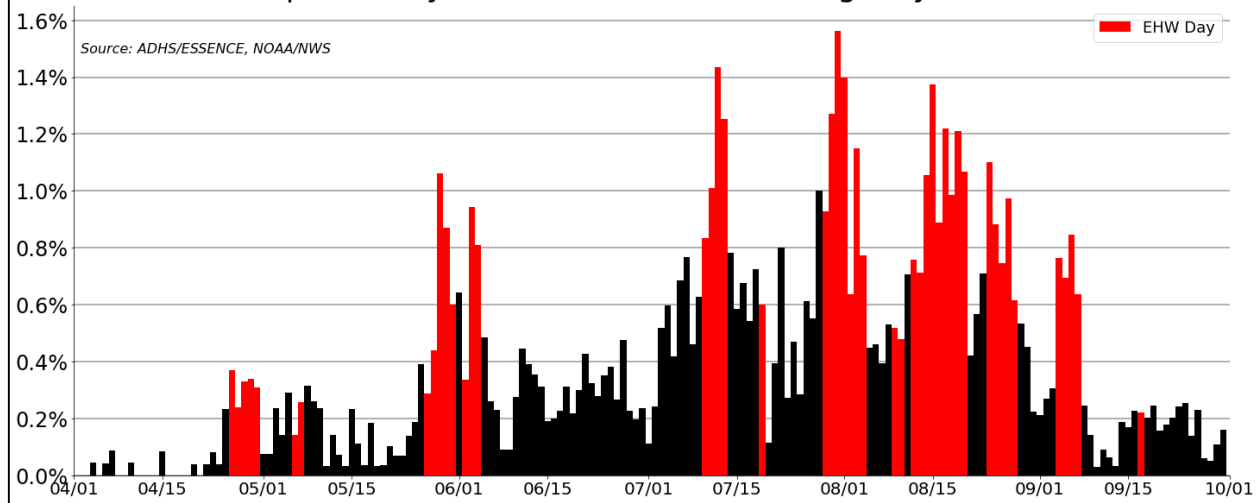


48 Days
of Heat Warning Days in 2020

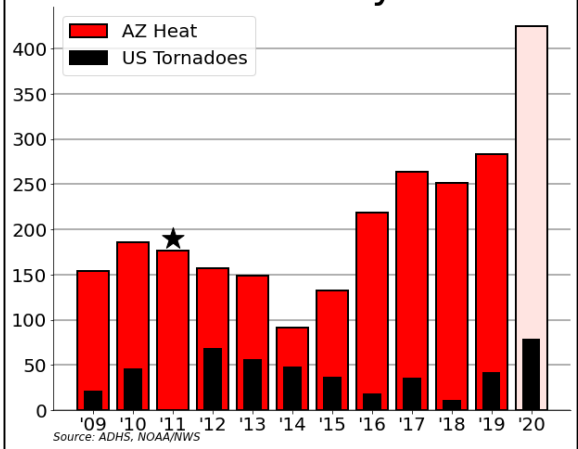
4 Days
Heat Warning Average Lead Time

Heat Impacts

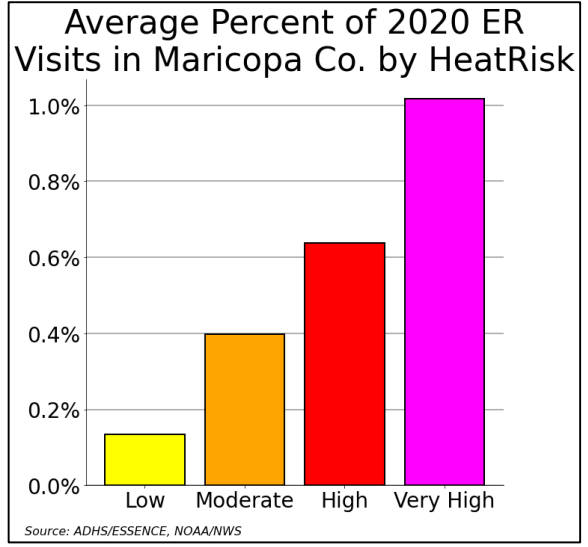
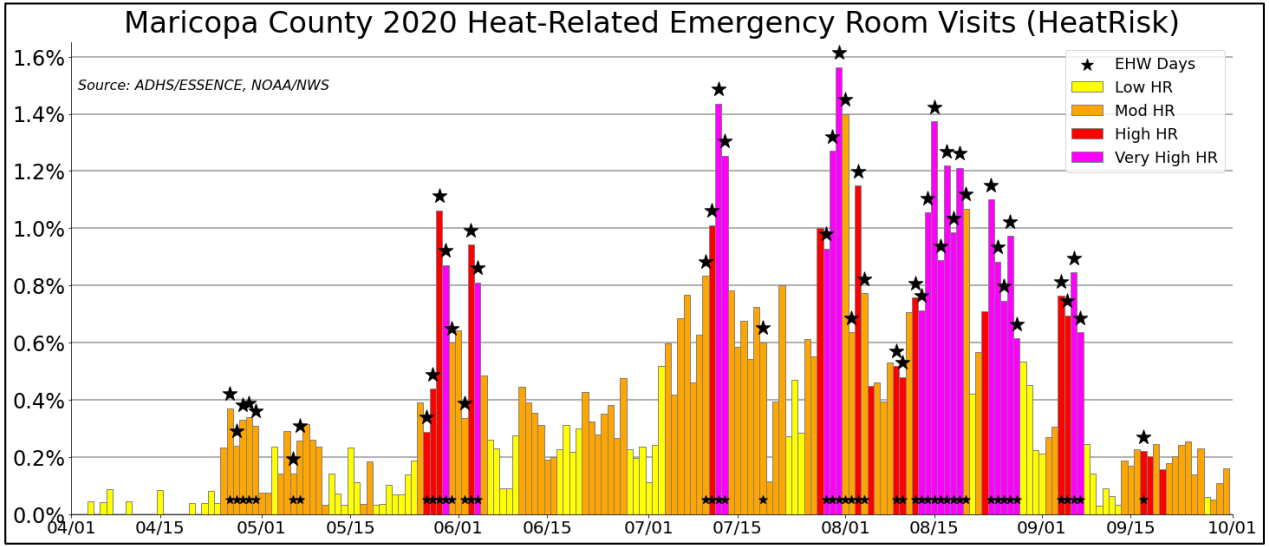
Maricopa County 2020 Heat-Related Emergency Room Visits



Heat-Related Deaths in Arizona by Year



Heat Impacts



NWS HeatRisk

www.wrh.noaa.gov
/wrh/heatrisk/

National Weather Service
National Oceanic and Atmospheric Administration

Bookmark Download **NWS** Graphics CaRDS Survey

EXPERIMENTAL NWS POTENTIAL HEAT RISKS Click map for potential heat risks and official NWS forecast for a location.

Valid: **Wed Sep 6**

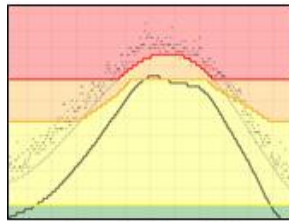
Click map for potential heat risks and NWS forecast for a location.

HeatRisk [More Information](#)

Heat affects everyone differently. In order to better address heat risk and allow you to prepare for upcoming heat events, the NWS has developed the experimental HeatRisk forecast. The NWS HeatRisk forecast provides a quick view of heat risk potential over the upcoming seven days. The heat risk is portrayed in a numeric (0-4) and color (green/yellow/orange/red/magenta) scale which is similar in approach to the Air Quality Index (AQI) or the UV Index. In a similar way, it provides one value each day that indicates the approximate level of heat risk concern for any location, along with identifying the groups who are most at risk. This product is supplementary to the official NWS heat watch/warning/advisory program and is meant to provide continuously available heat risk guidance for those decision makers and heat sensitive populations who need to take actions at levels that may be below current NWS heat product levels.

Category	Level	Meaning
Green	0	No Elevated Risk
Yellow	1	Low Risk for those extremely sensitive to heat, especially those without effective cooling and/or adequate hydration
Orange	2	Moderate Risk for those who are sensitive to heat, especially those without effective cooling and/or adequate hydration
Red	3	High Risk for much of the population, especially those who are heat sensitive and those without effective cooling and/or adequate hydration
Magenta	4	Very High Risk for entire population due to long duration heat with little to no relief overnight

NWS HeatRisk

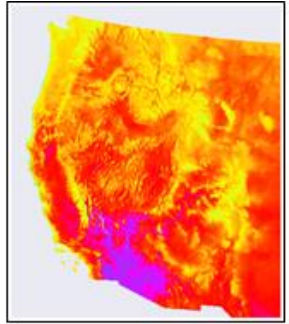


Determine Thresholds

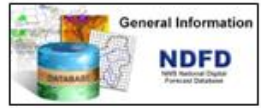


4000+ Stations

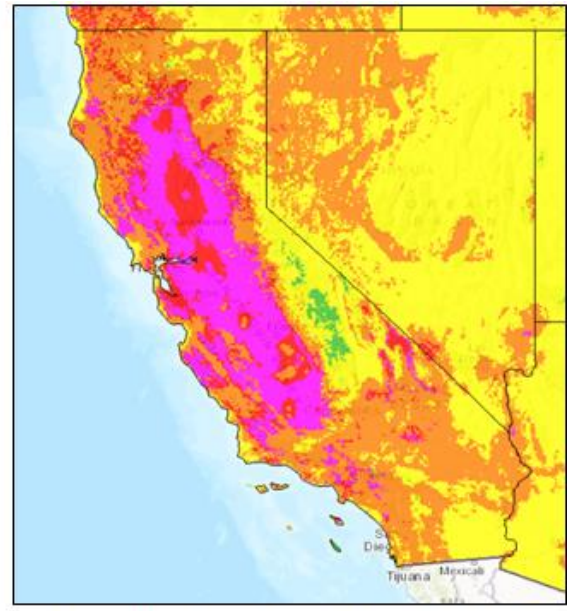
<https://www.wrh.noaa.gov/wrh/hil/historical/>



OSU PRISM Normals

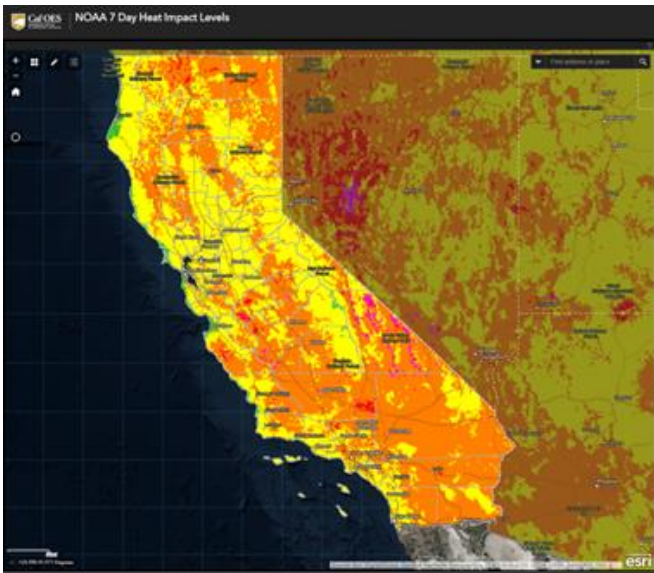


Daily MaxT and MinT Heat Impact Levels



Algorithm Combines MaxT & MinT Values into Final HeatRisk Product

NWS HeatRisk



Heat Alert

Excessive Heat Warning Issued for 13 Counties

National Weather Service has issued an Excessive Heat Warning for:

- Gila, La Paz, Maricopa, Pinal, Yuma Counties from 10 a.m. on June 17 to 8 p.m. on June 22.
- Graham, Greenlee, Pima Counties from 11 a.m. on June 17 to 7 p.m. on June 22.
- Coconino and Yavapai Counties from 10 a.m. on June 17 to 8 p.m. on June 21.
- Mohave County from 11 a.m. on June 17 to 11 p.m. on June 22.
- Santa Cruz County from 11 a.m. on June 18 to 7 p.m. on June 22.
- Cochise County from 11 a.m. on June 19 to 7 p.m. on June 22.

Daytime highs are expected to be in the 110 to 120 degrees Fahrenheit range. Residents are advised to stay cool, stay hydrated, and stay informed.

Precautions to prevent heat exhaustion or heat stroke:

- Stay in air-conditioned buildings.
- Limit outdoor activity during the hottest part of the day (mid-day).
- Check on at-risk friends, family, and neighbors at least twice a day.
- Drink water before, during, and after working or exercising outside.

[Click here to learn more about today's heat risk map.](#)

VALLEY HEAT RISK

A circular gauge showing heat risk levels from 0 to 4. The gauge is divided into five segments: 0 (None), 1 (Very Sensitive At Risk), 2 (Moderate), 3 (High), and 4 (Very High). A needle points to level 3, labeled 'HIGH' and 'HOTTEST PEOPLE AT RISK'. Level 4 is labeled 'VERY HIGH' and 'EVERYONE AT RISK'.

4WARN HEAT RISK SUNDAY/MONDAY

A vertical scale showing heat risk levels from 0 to 4. The scale is labeled '4 - VERY HIGH', '3 - HIGH', '2 - MODERATE', '1 - LOW', and '0 - NO RISK'. A white arrow points to level 3, labeled 'AT RISK, SENSITIVE TO'.

NWS Phoenix Media Interaction

Extensive Media/Social Media Engagement

- ~150 Media Interviews
- @NWSPhoenix:
13M Impressions (Heat)

NWS Phoenix @NWSPhoenix · Aug 31

It's official. August was the hottest month ever recorded in Phoenix with an average of 99.1° F, beating out the previous record set just last month of 98.9° F. Before this summer, the highest monthly average was 98.3° F. #azwx

Hottest Month On Record

99.1° F

*Preliminary, based on the average temperature [(high+low)/2].
Previous record 98.9° F in July 2020. Records since 1896.*

August 2020 – Phoenix, AZ

32 357 491

Why Was Summer 2020 Phoenix's Hottest on Record?

Weather

The weather pattern this summer often featured stronger-than-usual high pressure over or to the south of Phoenix. This stopped very humid air from moving north as is typical with the monsoon circulation. Less moisture meant less clouds/showers to cool the region.

Urban Heat Island

As Phoenix has grown in size over the years, the built environment has altered the local climate. Buildings retain more heat from the day and release it slowly at night. The result is slightly warmer afternoons and drastically warmer nights.

Climate Change

The Earth's climate is changing due to increasing amounts of anthropogenic greenhouse gases in the atmosphere. For the Southwest US, one way the change has come is several decades of steadily warming temperatures.



@NWSPhoenix

55%

Above Normal

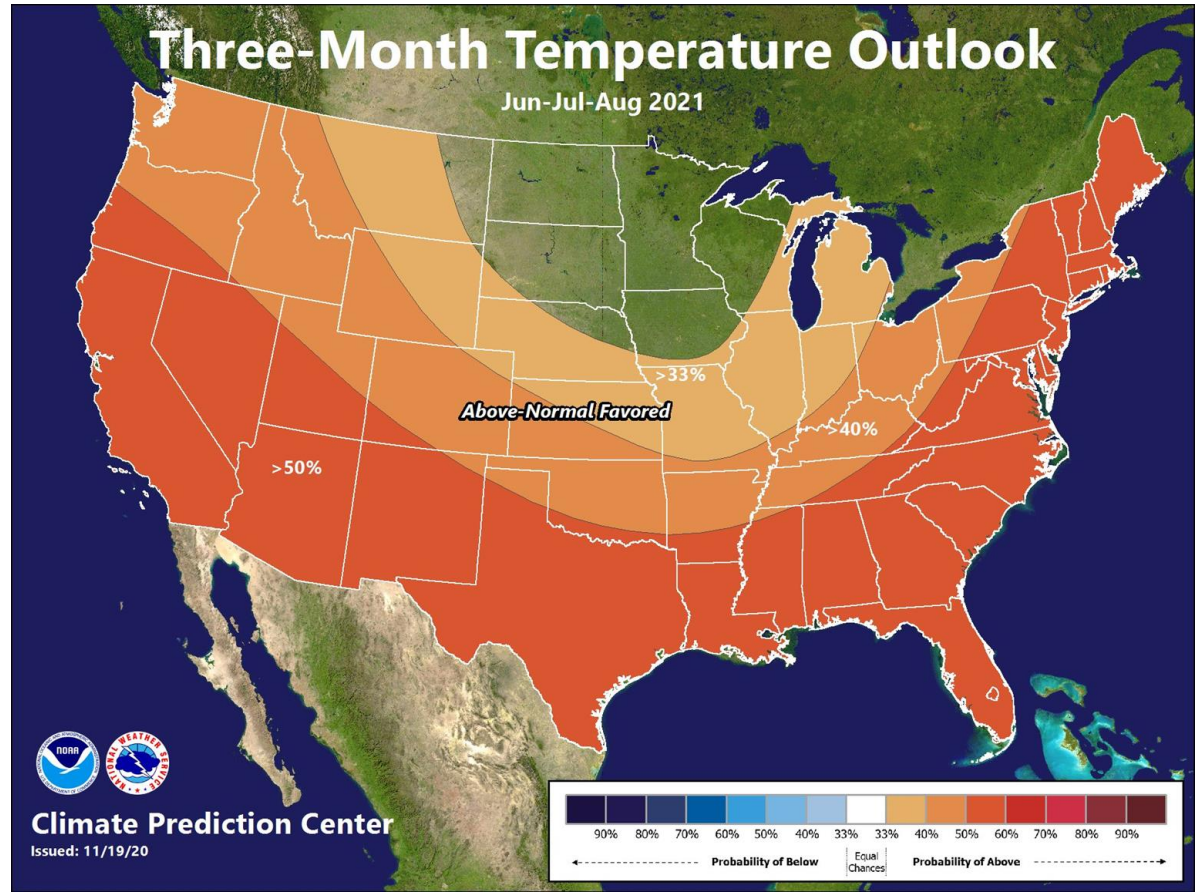
33%

Near Normal

11%

Below Normal

**Phoenix's last below normal
summer was 1968!**



Weather.Gov
/Phoenix

Paul.Iniguez
@noaa.gov

In Summary...

- This was Arizona's hottest & driest summer on record.
- Record level of impacts.
- Summer 2021 will be hot and will have significant impacts.
- NOAA/NWS Phoenix is always available to partner with you to help enhance your response to all levels of heat.

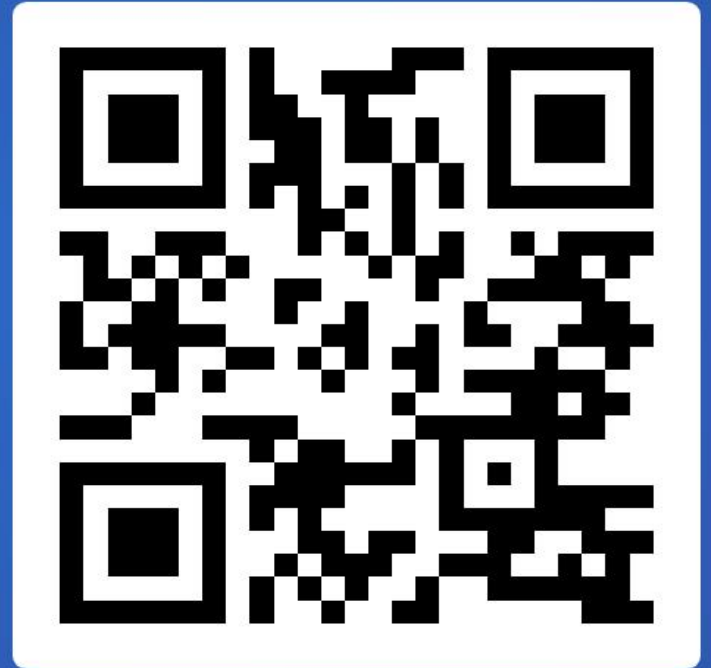
slido

Question and Answer Session for National Weather Service

Join at

slido.com

#HEAT



Heat-Related Illness Impacts

Laura Fox, MPH, Senior Epidemiologist
Matthew Roach, MPH, Epidemiology Program Manager

Heat-Related Illness and Mortality Data Sources

- Hospital Discharge Data
- Syndromic Surveillance
- Death Records



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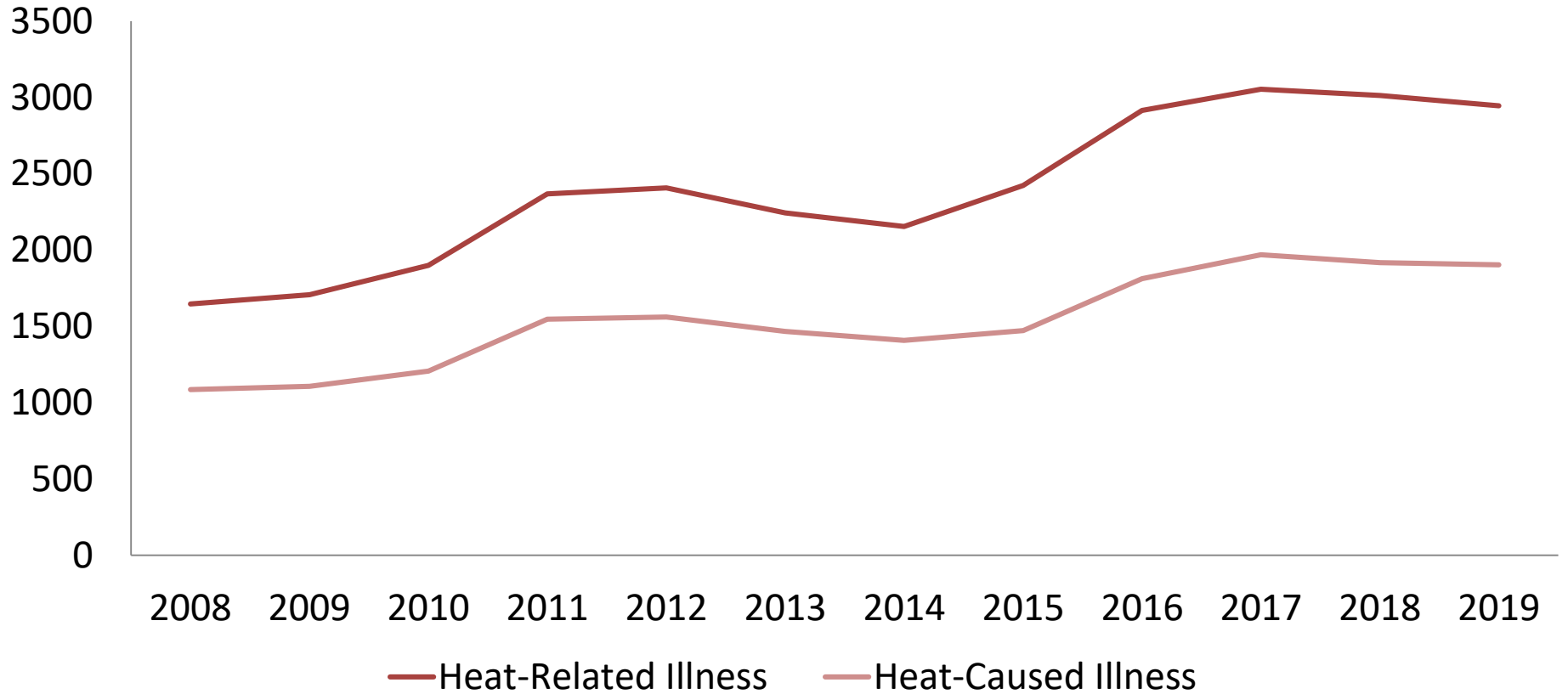
Health and Wellness for all Arizonans

Heat-Related Illness ED Visits Summary, 2015-2019

- Average **2870 visits** per year
- **28%** were Middle-Aged Adults 45-64 years
- **67%** were Male
- **61%** White non-Hispanic and **26%** Hispanic
- **89%** were AZ Residents
- **92%** of cases occurred from May-September
- Preceding activity: **recreational or occupational**
- Place of injury: **private residence, street/highway, & industrial site**



Heat-Related and Heat-Caused Illness Emergency Department Visits, 2008-2019



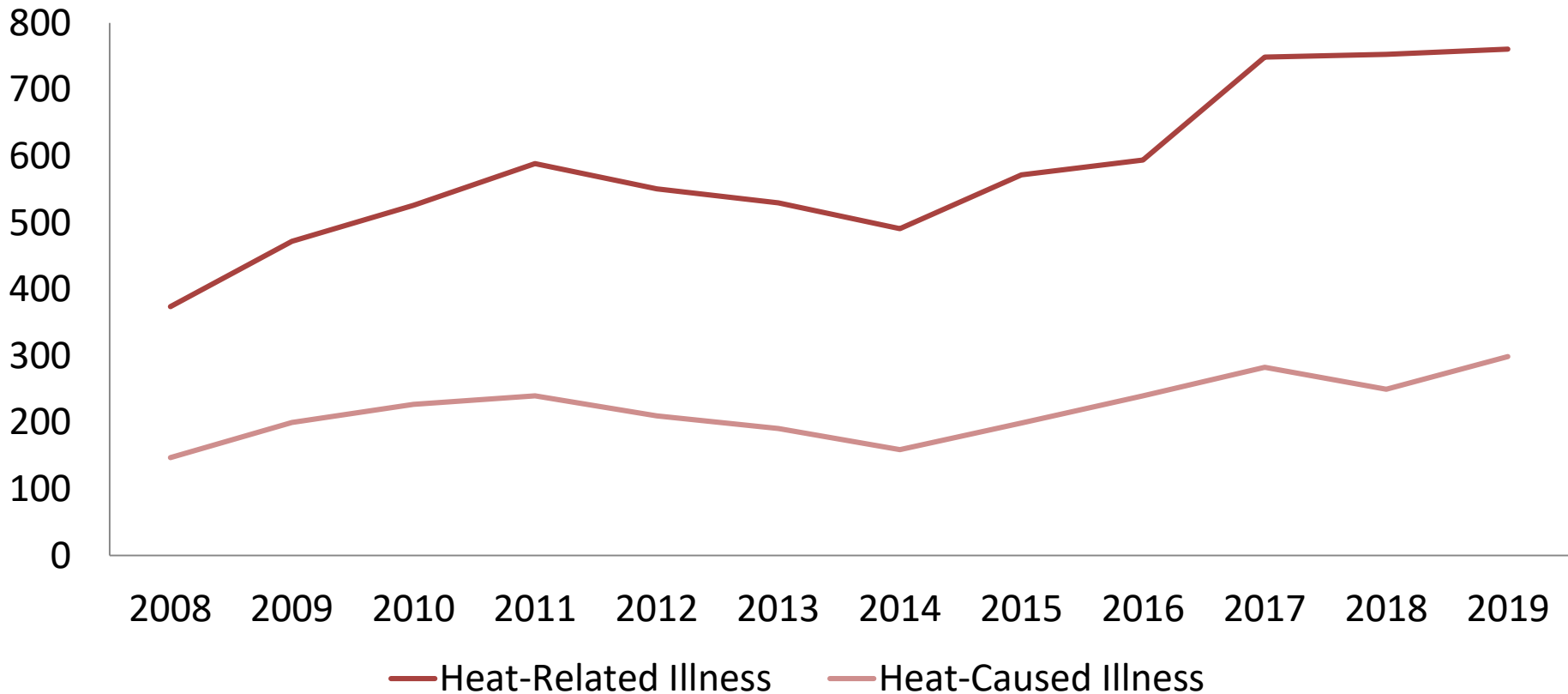
Heat-Related Illness Hospitalizations

Summary, 2015-2019

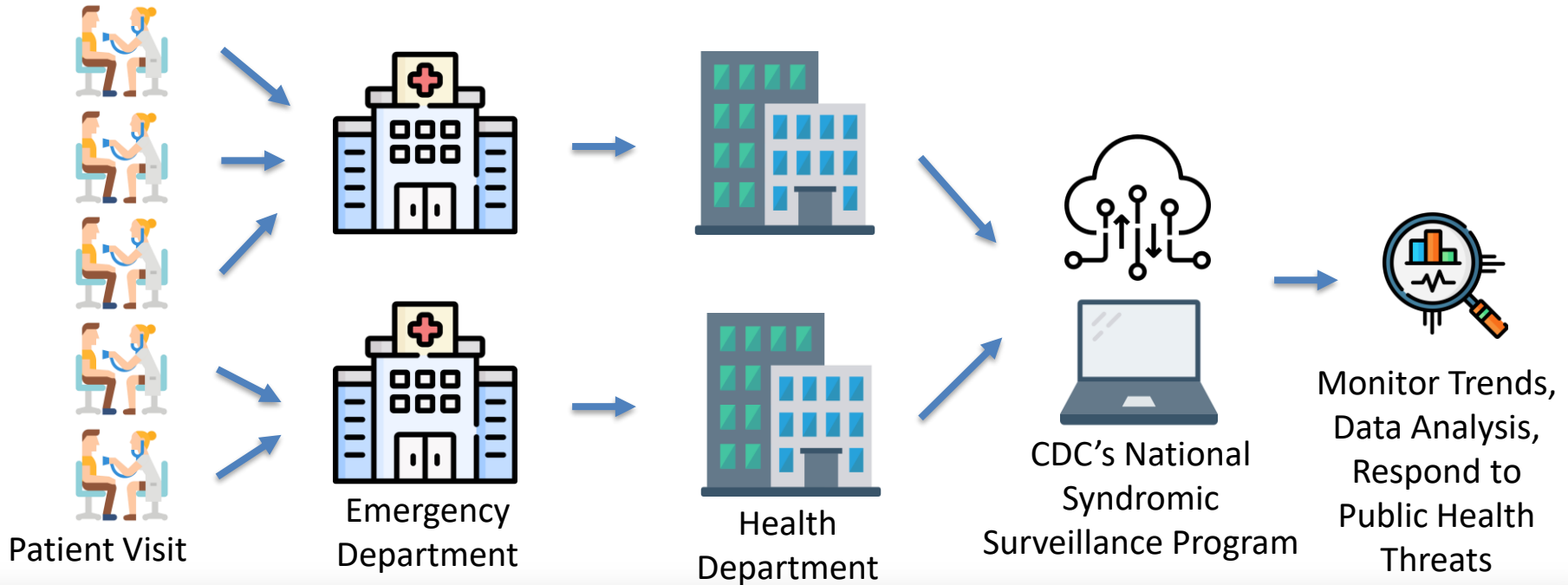
- Average **685 visits** per year
- **38%** were Middle-Aged Adults 45-64 years
- **77%** were Male
- **88%** were AZ Residents
- **95%** of cases occurred from May-September
- **3 Days** Median Length of Stay
- Preceding activity: **recreational** or **occupational**
- Place of injury: **private residence** or **street/highway**



Heat-Related and Heat-Caused Illness Hospitalizations, 2008-2019



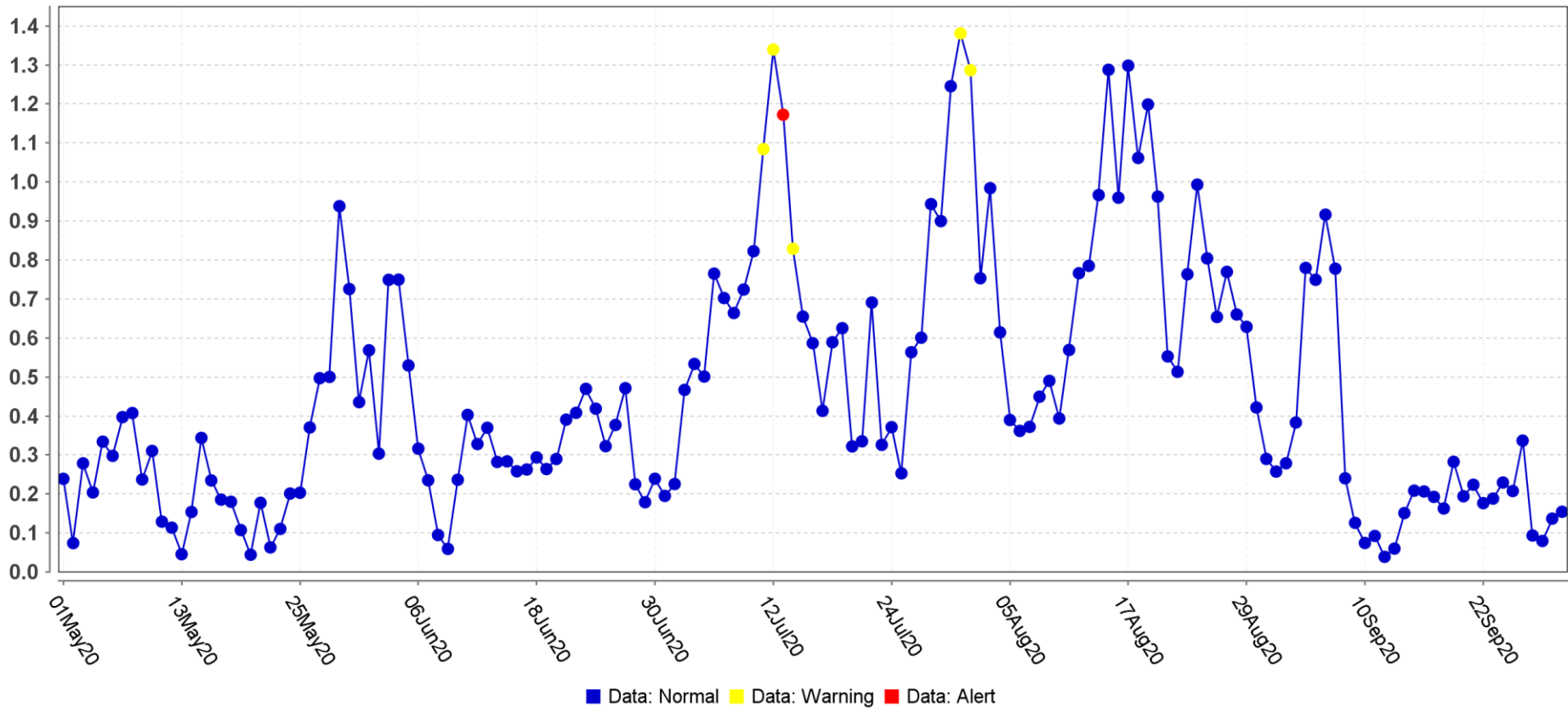
What is syndromic surveillance?



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Daily Percentage of Heat-Related Illness ED Visits in Arizona Facilities, May-September 2020



Heat-Related Illness Syndromic Surveillance Summary, May-September 2020

- **3,700+** ED visits
- **73%** Male
- **44%** Young Adults aged 18-44 yrs & **33%** Middle-Aged Adults aged 45-64 yrs
- **56%** White non-Hispanic & **23%** Hispanic and
- **94%** occurred in Maricopa, Mohave, Pima, Pinal, and Yuma counties



Heat-Related Deaths Summary, 2015-2019

- Average **229 deaths per year**, and **exceeded 250 deaths the last 3 years**
- **75%** were Male
- **72%** were Adults 45+ years
- **77%** were Arizona residents
- Most deaths occurred in Southern Arizona Counties
- **96%** of cases occurred from May-September

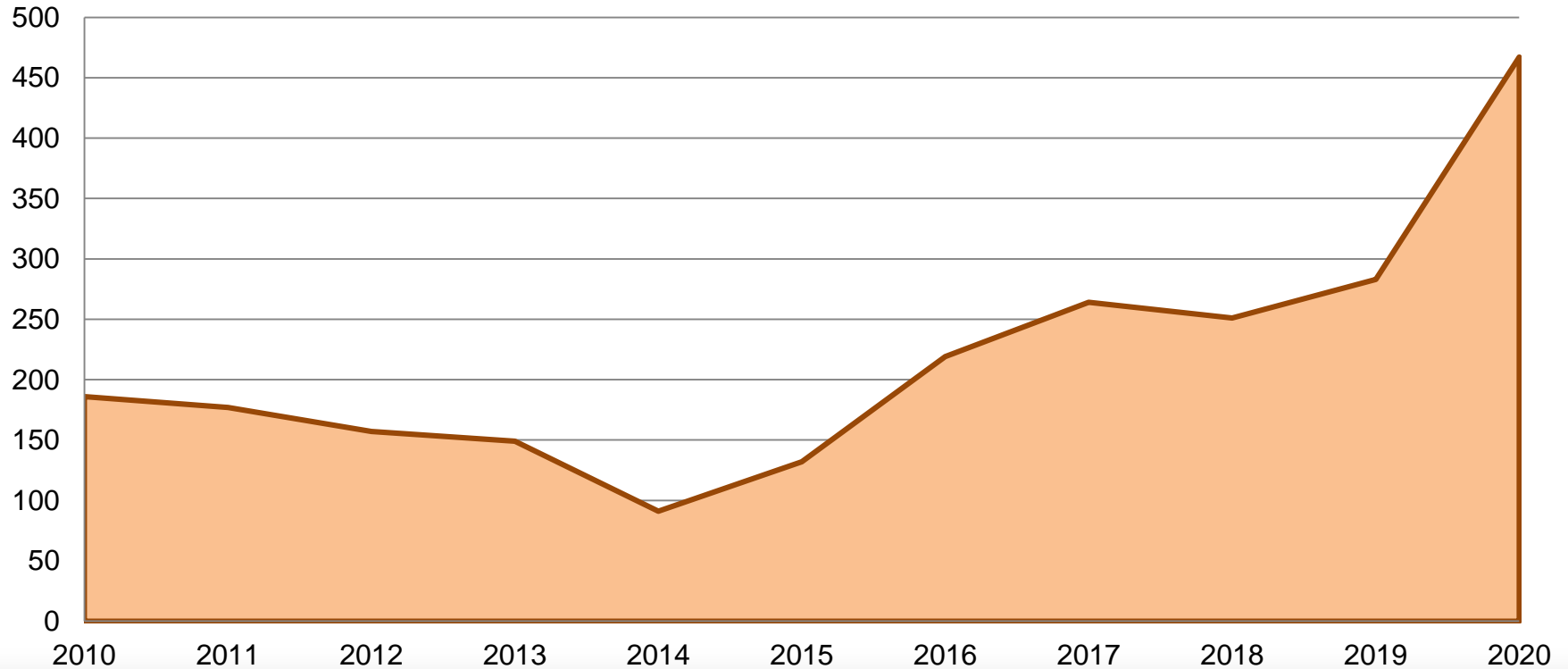


Preliminary Heat-Related Deaths Summary, 2020*

- **467 heat-related deaths reported* - record**
- **77% Male**
- **72% AZ Residents**
- **69% Adults aged 45+ years**
- Majority of deaths occurred in Maricopa, Pima, Mohave, Yuma, and Pinal counties



Heat-Related Deaths in Arizona, 2010-2020*

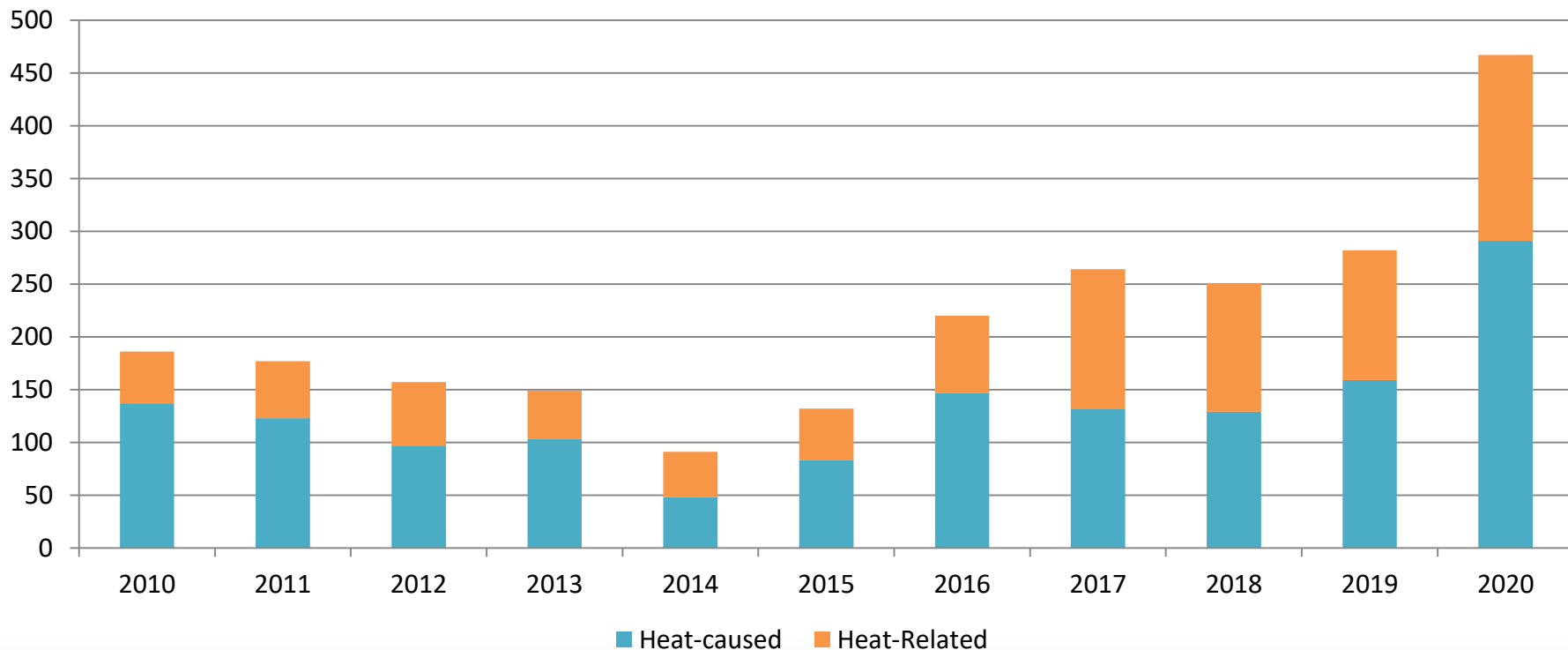


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*Data presented for 2020 is preliminary.

Heat-Caused and Heat-Related Deaths in Arizona by Year, 2010-2020*

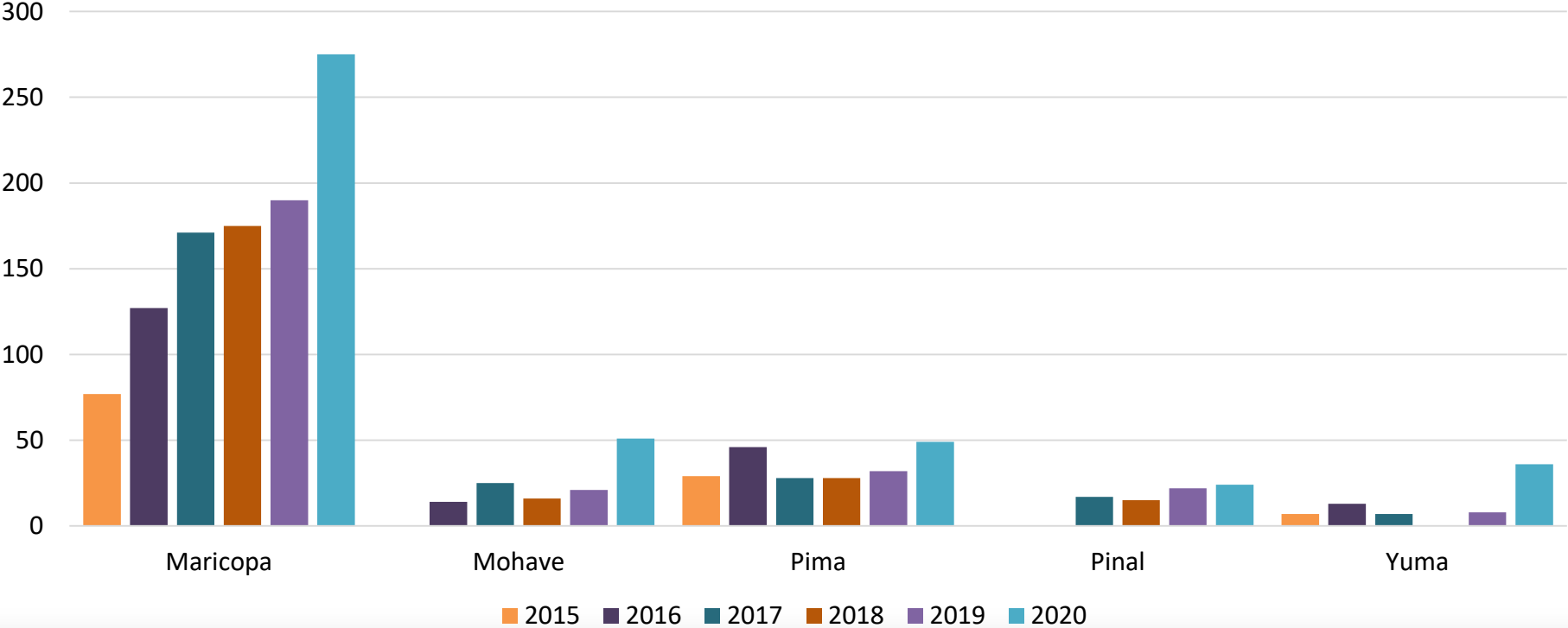


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*Data presented for 2020 is preliminary.

Heat-Related Deaths by County, 2015-2020*

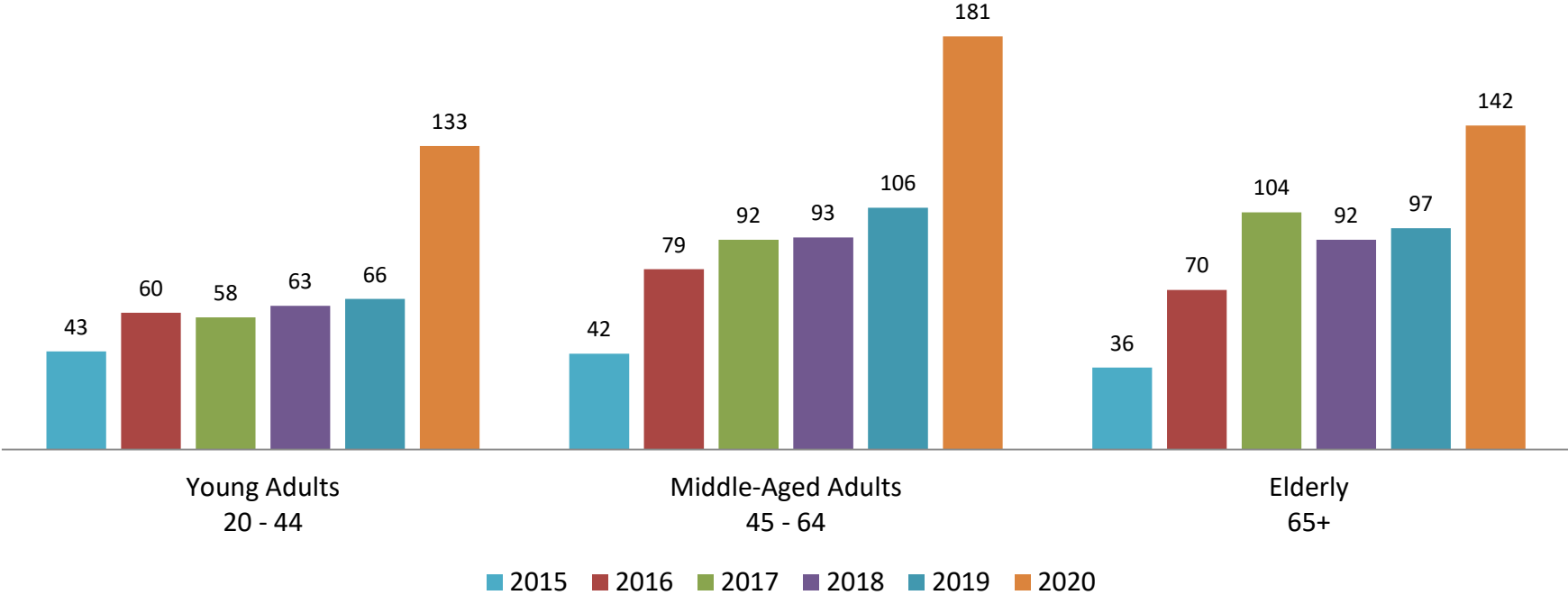


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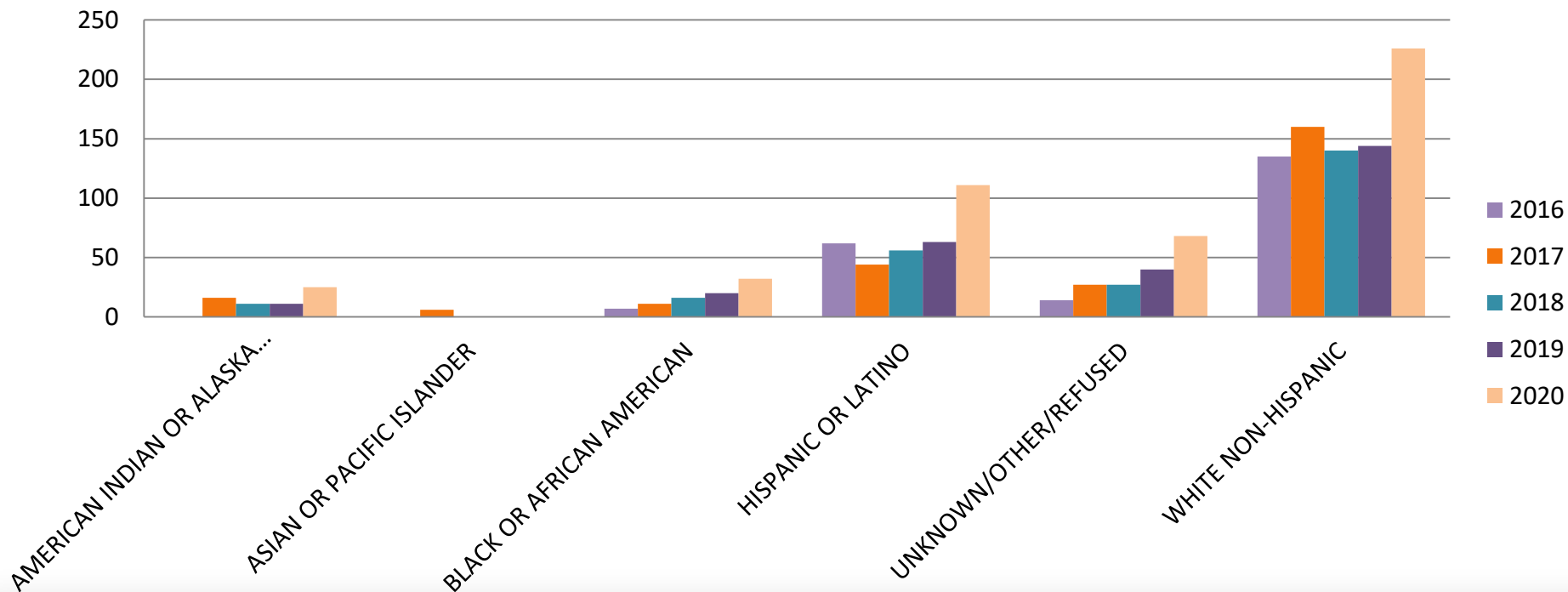
*Data presented for 2020 is preliminary.

Heat-Related Deaths in Arizona by Age Group, 2015-2020*



*Data presented for 2020 is preliminary.

Heat-Related Deaths in Arizona by Race and Ethnicity, 2016-2020*

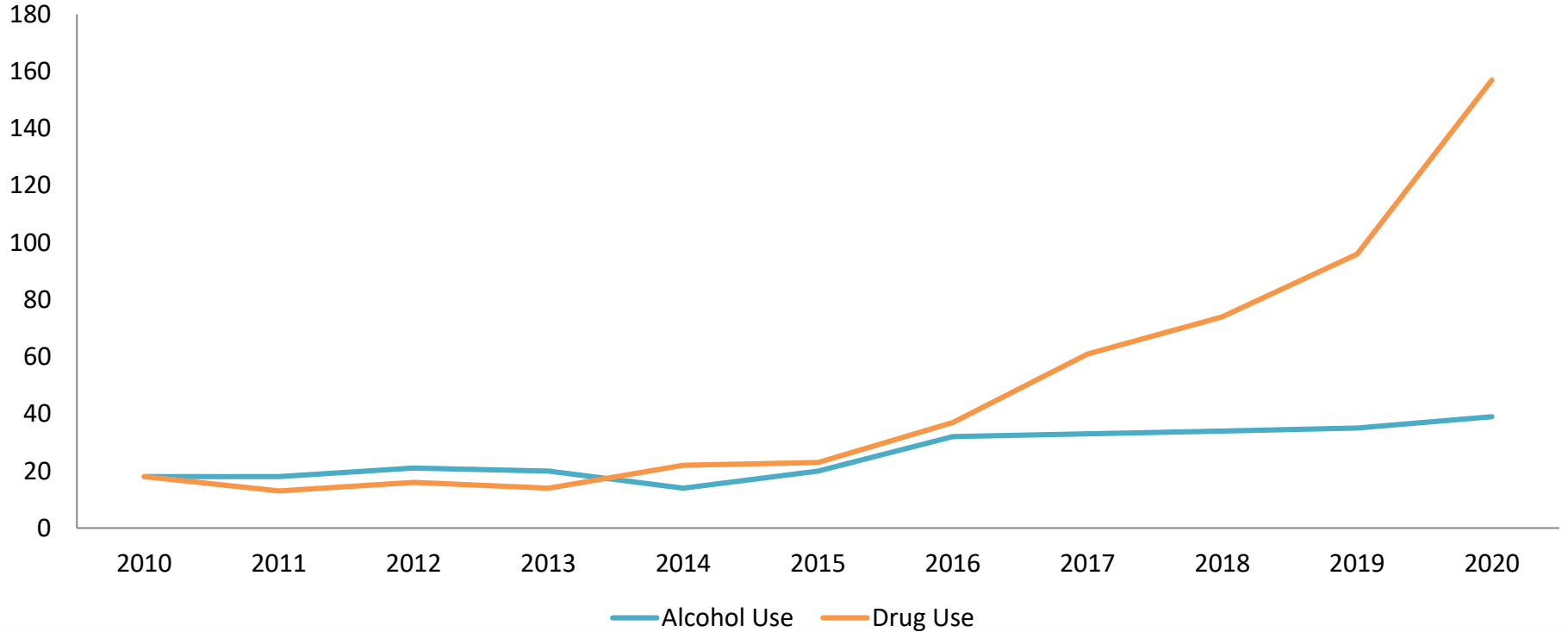


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*Data presented for 2020 is preliminary.

Substance Use Among Heat-Related Deaths by Year, 2010-2020*

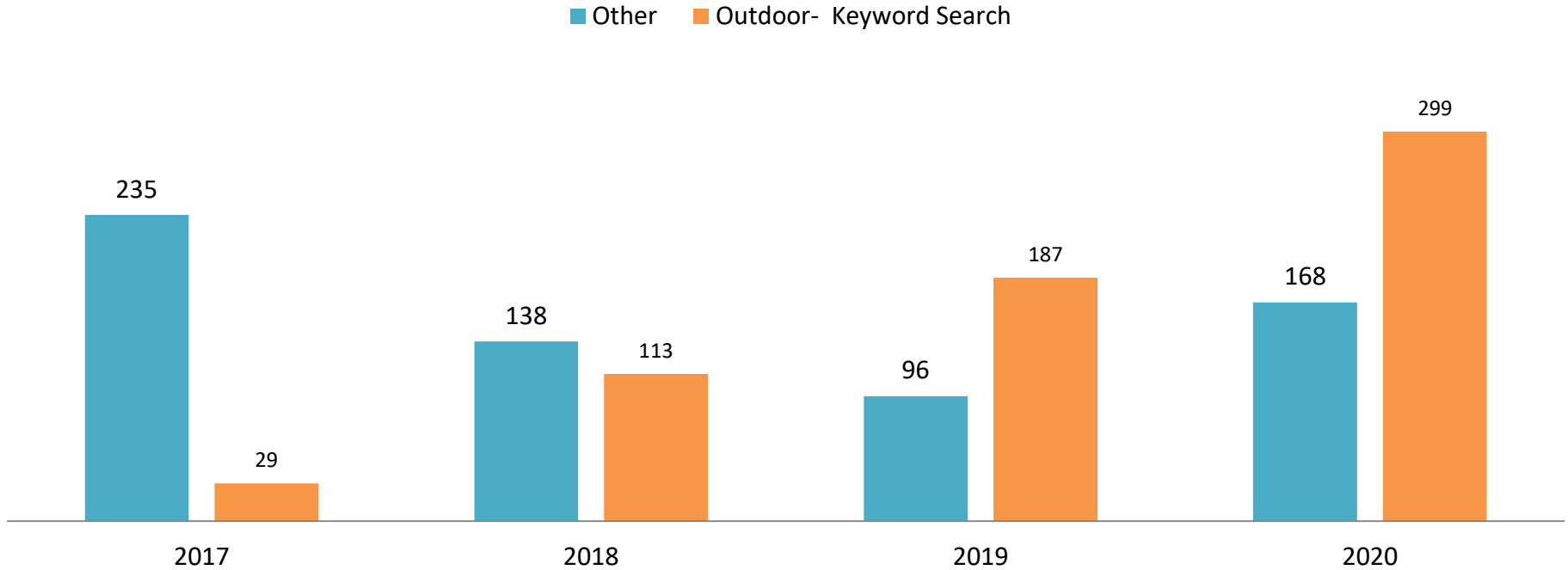


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*Data presented for 2020 is preliminary.

Preliminary Heat-Related Deaths in Arizona by Key Word Search, 2017-2020*



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*Data presented for 2020 is preliminary.

What is a cooling center?



Evaluating Cooling Centers in Yuma, Arizona

Water Sites and Cooling Centers in Yuma County

Central Yuma Area

- First United Methodist Church**
298 W. 3rd St. Yuma, AZ 85364
Open: June 1st – August 31st
Hours: Monday-Friday 9:00am-11:30am
- HOPE, Inc**
201 S. 1st Ave. Yuma, AZ 85364
Open: Year-Round
Hours: Monday – Thursday 8:00am – 5:00pm
Friday 8:00am – 4:00pm
Closed weekends and holidays
- National Community Health Partners**
285 W. 24th St. Yuma, AZ 85364
Open: May 1st – September 30th
Hours: Monday-Friday 8:00am – 5:00pm
- St. Paul's Episcopal Church**
1550 S. 14th Ave. Yuma, AZ 85364
Open: May 1st – September 15th
Hours: Monday – Thursday 9:00am – 3:00pm
Church office closed Friday-Sunday and holidays
- WACOG**
1236 S. Redondo Center Dr. Yuma, AZ 85364
Open: May 1st – September 15th
Hours: 9:00am – 5:00pm
- Crossroads Mission**
944 S. Arizona Ave. Yuma, AZ 85364
Open: Year-Round
Hours: 24 hours a day/7 days a week
- Crossroads Mission Thrift Store**
550 W. 8th St. Yuma, AZ 85364
Open: Year-Round
Hours: Monday – Saturday 8:00am – 4:00pm
Closed Sundays and holidays
- Starbucks Coffee**
2383 W. 24th St. Yuma, AZ 85364
Open: May 1st – September 30th
Hours: Monday – Thursday 4:30am – 10:30pm
Friday – Sunday 4:30am – 11:00pm
- Walmart**
8151 E. 32nd St. Yuma, AZ 85364
Open: May 1st – September 30th
Hours: Monday-Sunday 7:00am – 10:00pm

Yuma Cooling Center Location Feedback Results

Thank you for volunteering to become either a location for collecting donated water, hydration station, heat refuge or emergency hydration station. Please fill out the form below as completely as possible. Again, thank you.

* Required

Organization Name *

Your answer

Address *

Your answer

City *

Your answer

Type of Activity (Hydration Station, Drop-off Location or Both): *

- Hydration Station (Place to give out water)
- Drop-off Location (Only)
- Heat Refuge (Place to cool down and get water)
- Emergency Hydration Station (Opened during a Heat Warning issued by the National Weather Service)

Map labels include: HOPE, Inc, Crossroads Mission Thrift Store, Crossroads Mission, WACOG, St. Paul's Episcopal Church, National Community Health Partners, Starbucks Coffee, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, M.

Question

Are cooling centers helpful for protecting vulnerable populations from the heat?

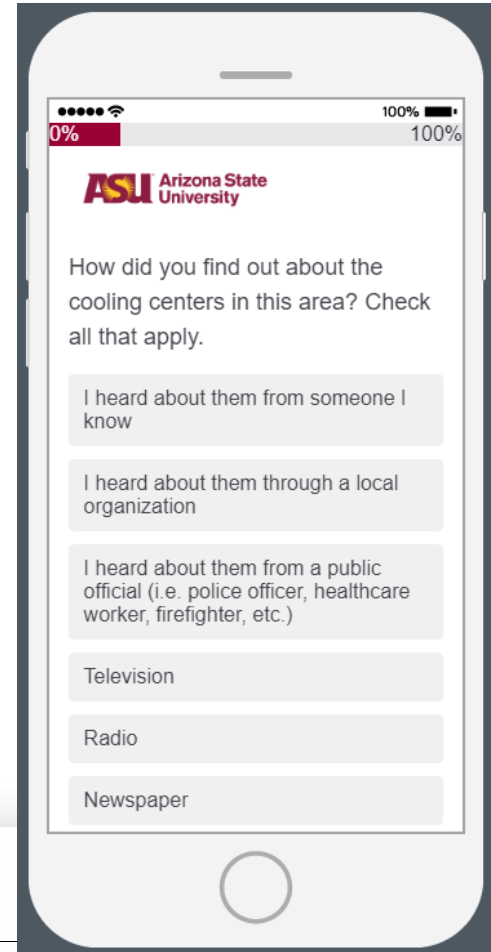
Methods

3 evaluation tools

- Intercept (Homeless) survey, cooling center manager interview, and older adult survey



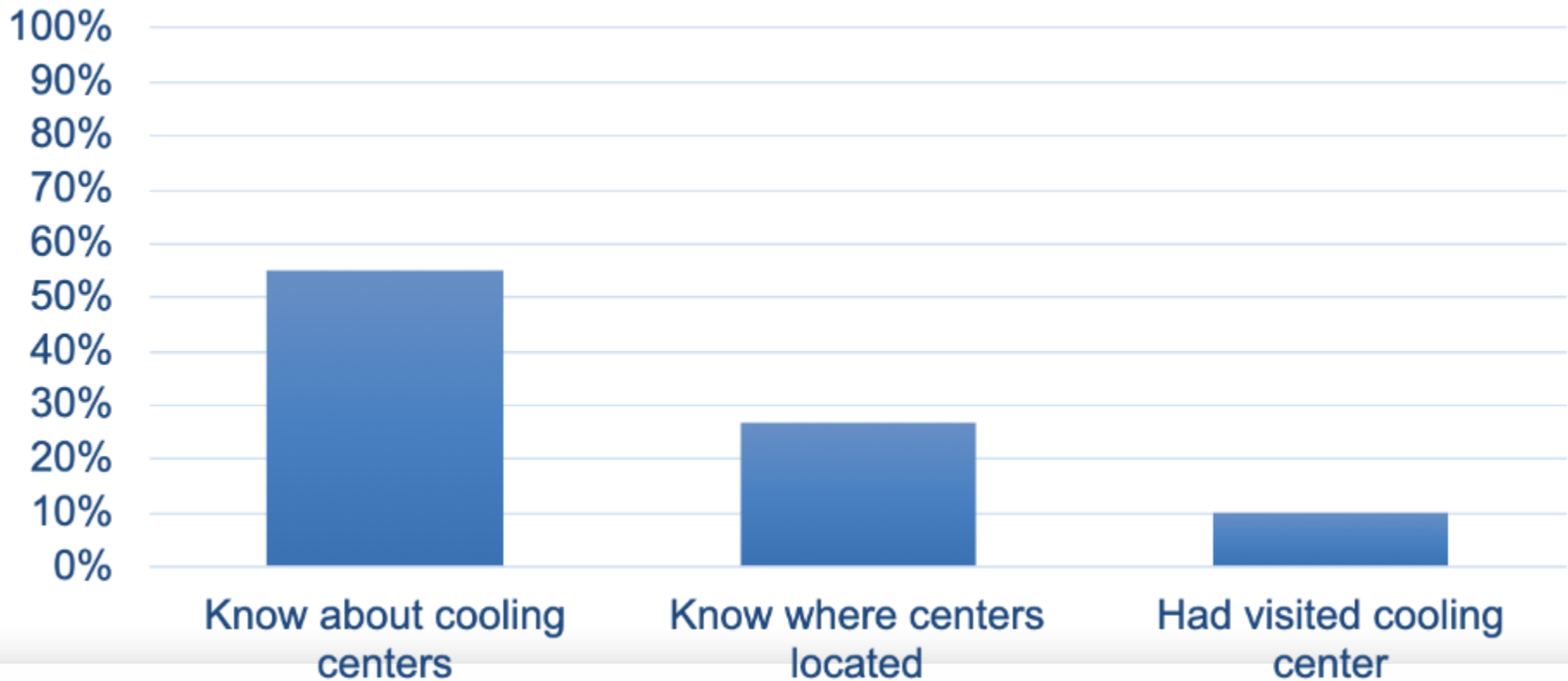
Surveying Strategies (In-Person & Online)



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Cooling Center Awareness Indicators

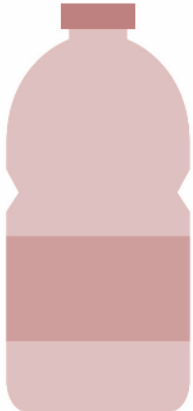


Facility Manager Interview Results (n=5)

Successes



Challenges



Evaluating Cooling Centers in Yuma, Arizona



Living in the heat

Yuma, AZ



38% walk to cooling centers

43% bike to cooling centers



12 out of 30 people found out about cooling centers through someone they knew



71% of cooling center users' don't have regular homes

Not having a regular home increases the risk of adverse health effects related to heat

40% know where cooling centers are located, but knowing where cooling centers are located was lower among Hispanics



58% of cooling center user's reported adverse heat effects

41% feel their health is in danger on hot days



In June of 2015, Yuma County Health District, ASU, and the Arizona Department of Health Services surveyed 76 homeless individuals in the Yuma area. 80% of individuals surveyed are males. This survey was aimed at understanding their experience with heat. The information portrayed above is result from these surveys.

Maricopa County Cooling Center Evaluation

HEAT RELIEF REGIONAL NETWORK



English Español

This map depicts water hydration stations, collection sites, and heat refuge locations in Maricopa County for May-September, 2019.



Click [HERE](#) for weather forecast

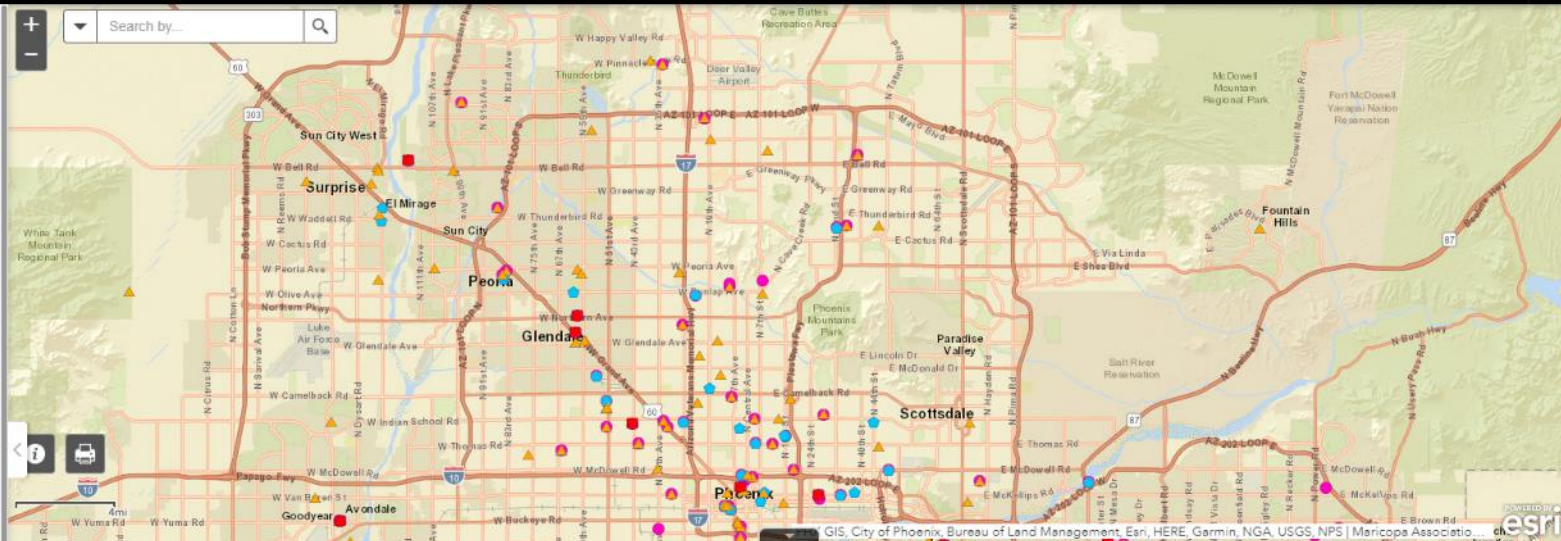
Hydration Stations: Places where individuals can go to receive bottled water and other collected donated items.

Heat Refuges: Cooled indoor locations that provide refuge from the heat during the day. Drinking fountains or bottled water is available.

Emergency Heat Relief Stations: Locations offering hydration and heat refuge. Open on days with excessive heat warnings as issued by the National Weather Service. Pets are welcome, but MUST be leashed. Operated by the [Salvation Army](#).

Collection Sites: Water bottles can be donated here for use at hydration and refuge locations. Some sites also accept other donations, such as cash; light colored, long-sleeved tee-shirts; socks; underwear; hats; lip balm; sun block; and pre-packaged snacks.

Public Transportation: Valley Metro local bus routes,



Emergency Heat Relief Station	Heat Refuge Location	Hydration Station	Collection/Donation Site					
Options Filter by map extent Address Zoom to Clear selection Refresh								
Organization	Address	Regular Hours	Primary Contact	Primary Phone	Primary Email	Secondary Contact	Secondary Phone	Secondary Email
The Salvation Army - Phoenix Maryvale Corps	4318 W. Clarendon Ave. Phoenix 85031	11am-5pm (open during excessive heat warning)	Joseph Cisneros	602-233-9272	joseph.cisneros@usw.salvation	Nicole Kanne	202-270-7520	nicole.kanne@usw.salvation

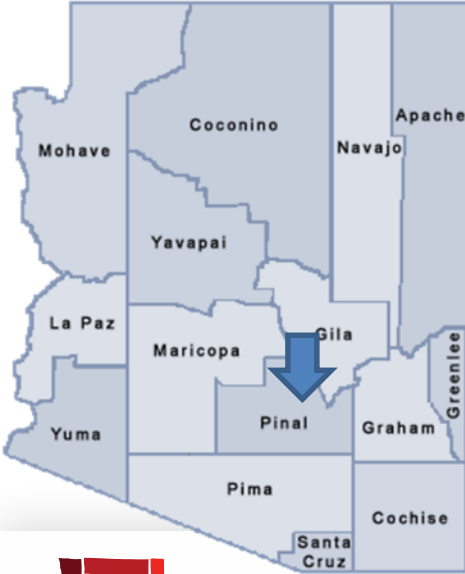


ARIZONA DEPARTMENT OF HEALTH SERVICES

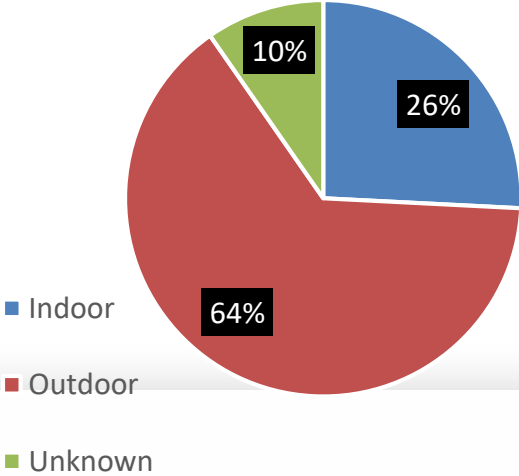
Health and Wellness for all Arizonans

Pinal County – Enhanced Surveillance of Heat-Related Illness Using Syndromic Surveillance

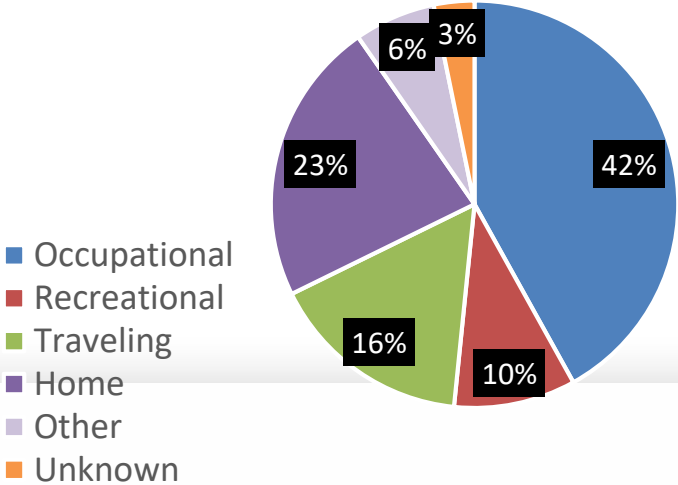
- Using Syndromic Surveillance to Identify Risk Factors and Take Action



Heat Exposure Setting




Activity HRI Risk Factor



AZ School Heat Policy Recommendations and Threshold Development

- Matching school-age children emergency department visits to daily temperature to identify thresholds for highest attributable risk.
- Increased risk was found below heat warning temperatures.

ARIZONA DEPARTMENT
OF HEALTH SERVICES



Managing Extreme
Heat
Recommendations
for Schools

A guidance document from the Arizona Department of Health Services | October 2020

Contents

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AZ School Heat Policy - Thresholds by Climate Zone

Climate Zone		Percent of Heat-Attributable Emergency Department Visits by Daily Maximum Temperature Ranges (°F) (8 AM to 8 PM)							
		(76 to 80)	(81 to 85)	(86 to 90)	(91 to 95)	(96 to 100)	(101 to 105)	(106 to 110)	(>=111)
Basin and Range	Pre-heat Season	1%	4%	8%	15%	21%	27%	18%	5%
Transition Zone		11%	16%	29%	26%	9%	1%	0%	0%
Colorado Plateau		21%	30%	19%	5%	0%	0%	0%	0%



AZ School Heat Policy - Tiered Response (Draft)

Time to Take Action/Season	Action to Take
<p>Early on in anticipation of policy implementation</p> <p>Pre-heat season, spring</p>	<p>Environmental modification:</p> <ul style="list-style-type: none"> ● Plant trees ● Install artificial shading ● Install water fountains and water misters <p>*Consider checking functionality of the water fountains, misters and artificial shading periodically and do upgrades, maintenance (e.g. misters cleaned, landscaping), or replacements as needed. These activities can occur anytime during the cooler season. Create a "water wise" environment and do not run the misters when children are not around to avoid wastage of water.</p>
<p>Lowest positive attributable risk by climate zone</p> <ul style="list-style-type: none"> ● Basin and Range – 81-85 °F ● Colorado Plateau – 76-80 °F ● Transition Zone– 76-80 °F <p>Pre-heat season, spring</p>	<p>Education of supervisory staff, health professional staff, parents and students on heat-related illness prevention, recognition, and treatment. Sign up for Heat Alerts or be aware of how to receive them.</p>
<p>One category below highest positive attributable risk for climate zone</p>	<p><u>Administrative control</u> – Acclimation period, scheduled rest/hydration, recess before lunch, move activities during the cooler part of day.</p> <p><u>Student actions</u> – use of sunscreen, lightweight clothing and frequent hydration.</p>
<p>Highest attributable risk for climate zone</p>	<p>Physical separation – Avoid outdoor play using indoor cooled space for all physical activity.</p>

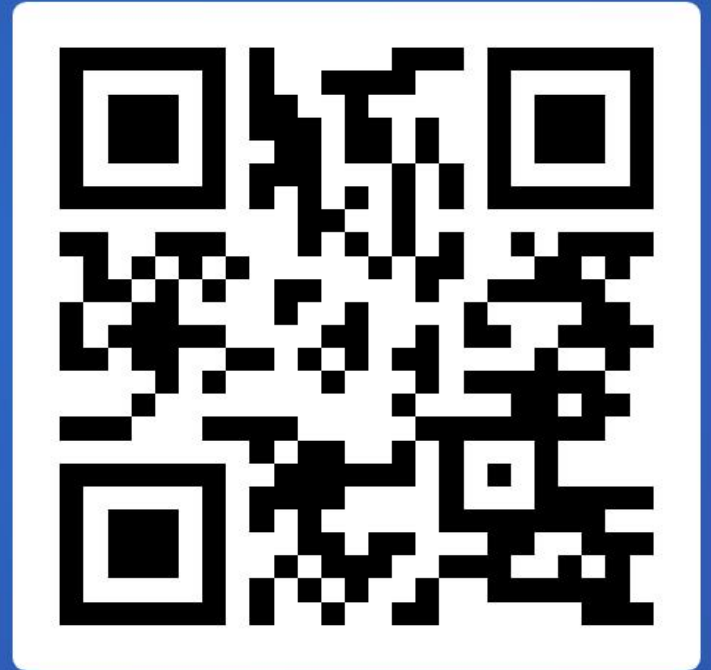
slido

Question and Answer Session for the Arizona Department of Health Services

Join at

slido.com

#HEAT



Solutions and Interventions

**Melissa Guardaro and Anne
Reichman (Arizona State University)**



AZ Heat Preparedness & Resilience Workgroup

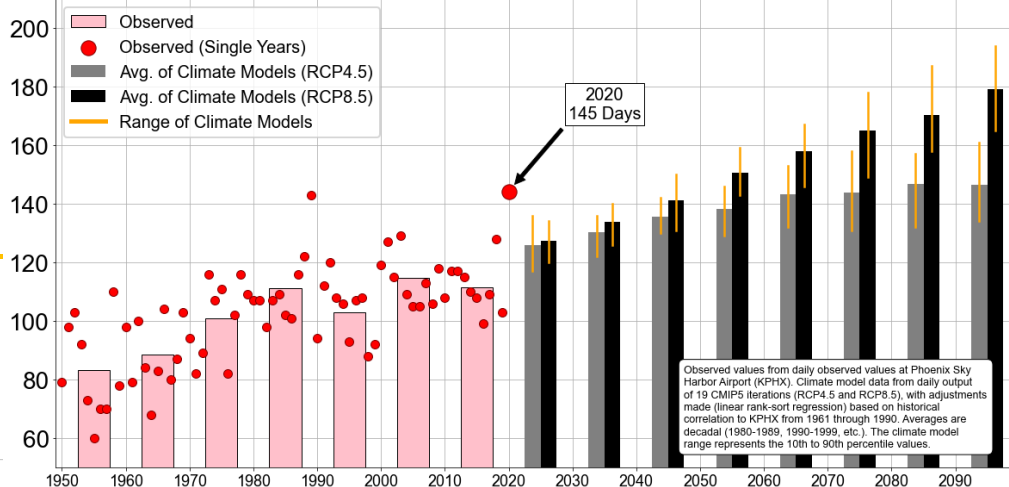
Melissa Guardaro &
Anne Reichman

AZ Heat Season Recap
Webinar

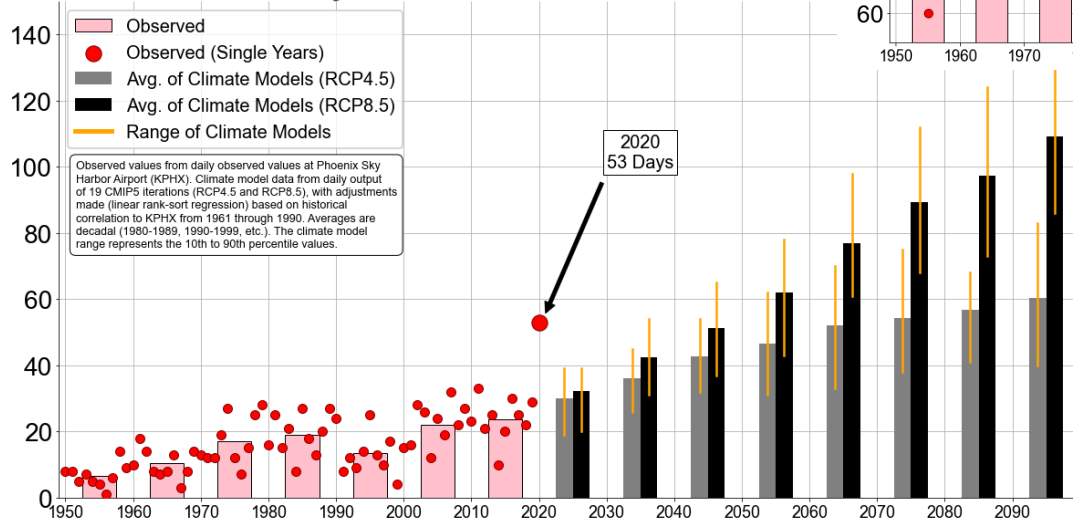
December 3, 2020

A Sign of Future Heat Trends?

Number of Days 100+ °F in Phoenix, AZ



Number of Days 110+ °F in Phoenix, AZ



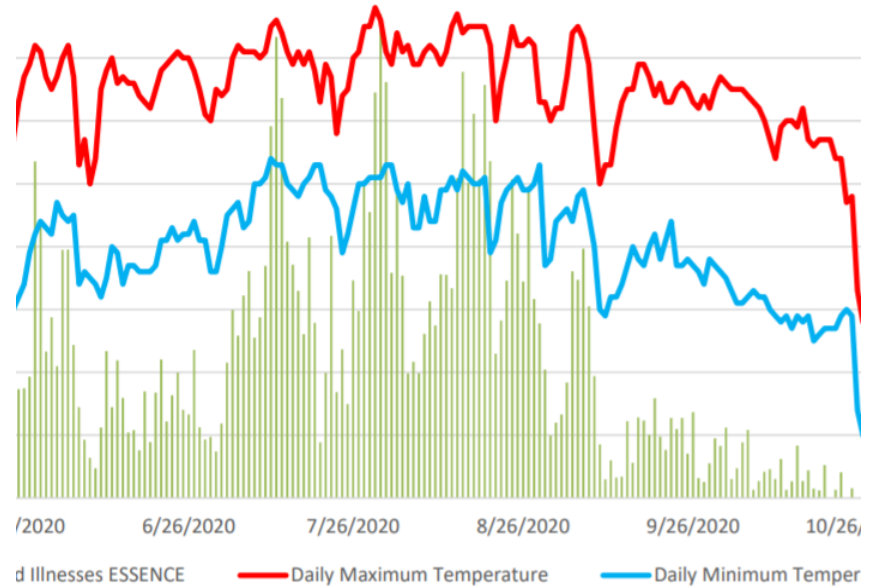
Heat Public Health Crisis

Heat Deaths in Maricopa County as of 10/31/2020

- 207 confirmed, 134 pending
- 82% outdoors
- Hospitalizations

WEEK 44 (10/25-10/31)

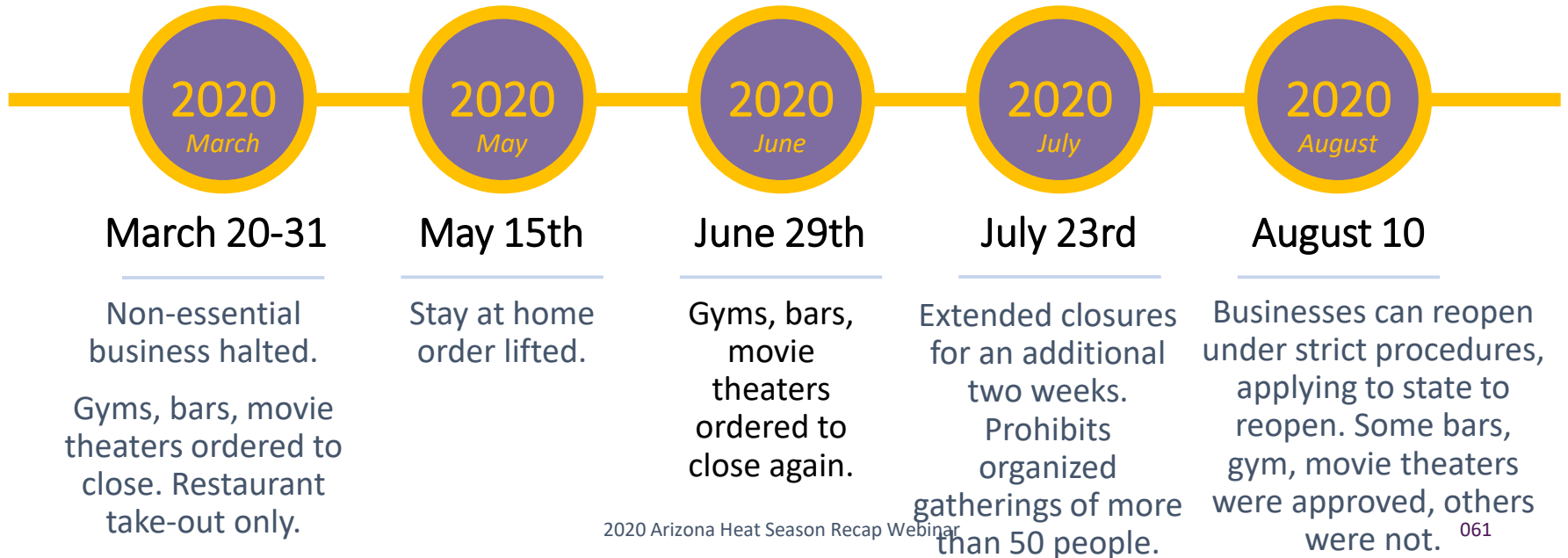
Number of hospital visits due to heat-related illness (HRI)



<https://www.maricopa.gov/1858/Heat-Surveillance>

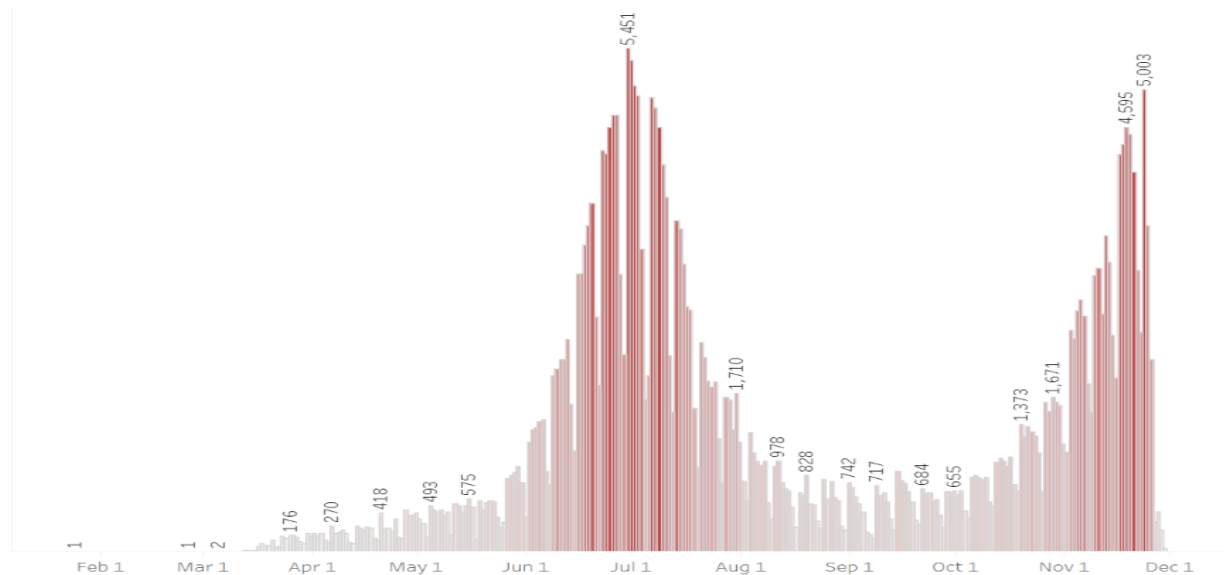
Arizona COVID Closures

Governor's Executive Orders



An Unusual Summer....

- COVID pandemic cases by day in Arizona,
 - AZ Department of Health Services Data Dashboard



*Illnesses in the last 4-7 days may not be reported yet



AZ Heat Preparedness & Resilience Workgroup

- Purpose:
 - Ensure cities and counties have the weather data they need
 - Share approaches to heat relief and share communications strategies and resources
 - Connect cities and counties to regional and state resources and information
 - Participants:
 - State, County, Cities
 - Health Departments
 - Academia
 - Non-profits/faith groups
-

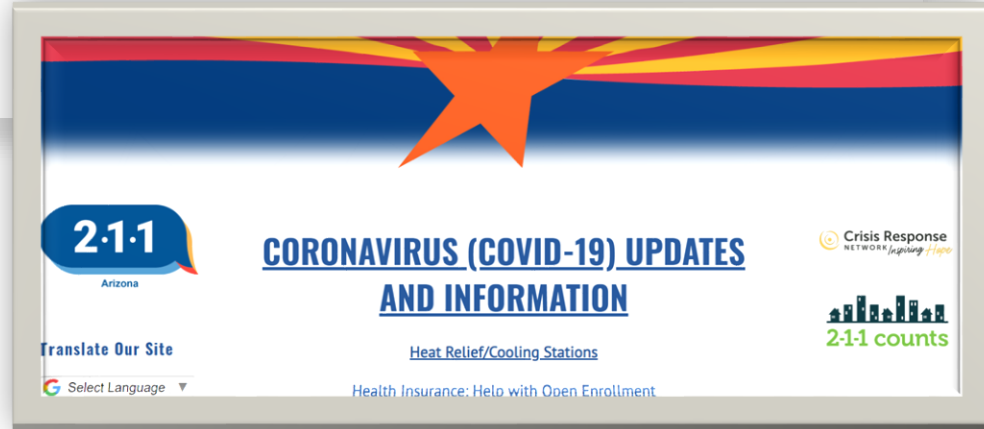


AZ Heat Preparedness & Resilience Workgroup

- Sharing Best Practices
 - CDC Guidelines for Cooling Centers
 - Opening/Closing Dates for Heat Relief
 - Funding Sources
 - Preparing for the Future
 - All County Hazard Mitigation Plan
-

AZ Heat Preparedness & Resilience Workgroup

- New Alliances
 - AZ Interfaith Network
 - 211 Button
 - Utility Companies –
 - Disconnection moratorium, power outages





AZ Heat Preparedness & Resilience Workgroup

- **Economic Costs of Urban Heat**
 - **Maricopa County 2018**
 - 2100 Emergency Room visits x average \$6,500/visit = \$13,650,000
 - 600 Inpatient admissions x average \$71,000/visit = \$42,600,000
 - **Total for Maricopa County 2018 = \$56,250,000**
 - **State of Arizona 2008-2018**
 - Emergency Room visits \$136,000,000
 - Inpatient admissions \$308,000,000
 - **Total including loss of life - \$17.8 Billion**
-



Rick Davis
@rdavisfox10

@CityofPhoenixAZ setting up Heat Relief Center for Homeless Population today because of Extreme Heat
@PhxSalArmy #fox10phoenix



9:01 AM · May 29, 2020 · Twitter for iPhone



Creative Cooling Centers

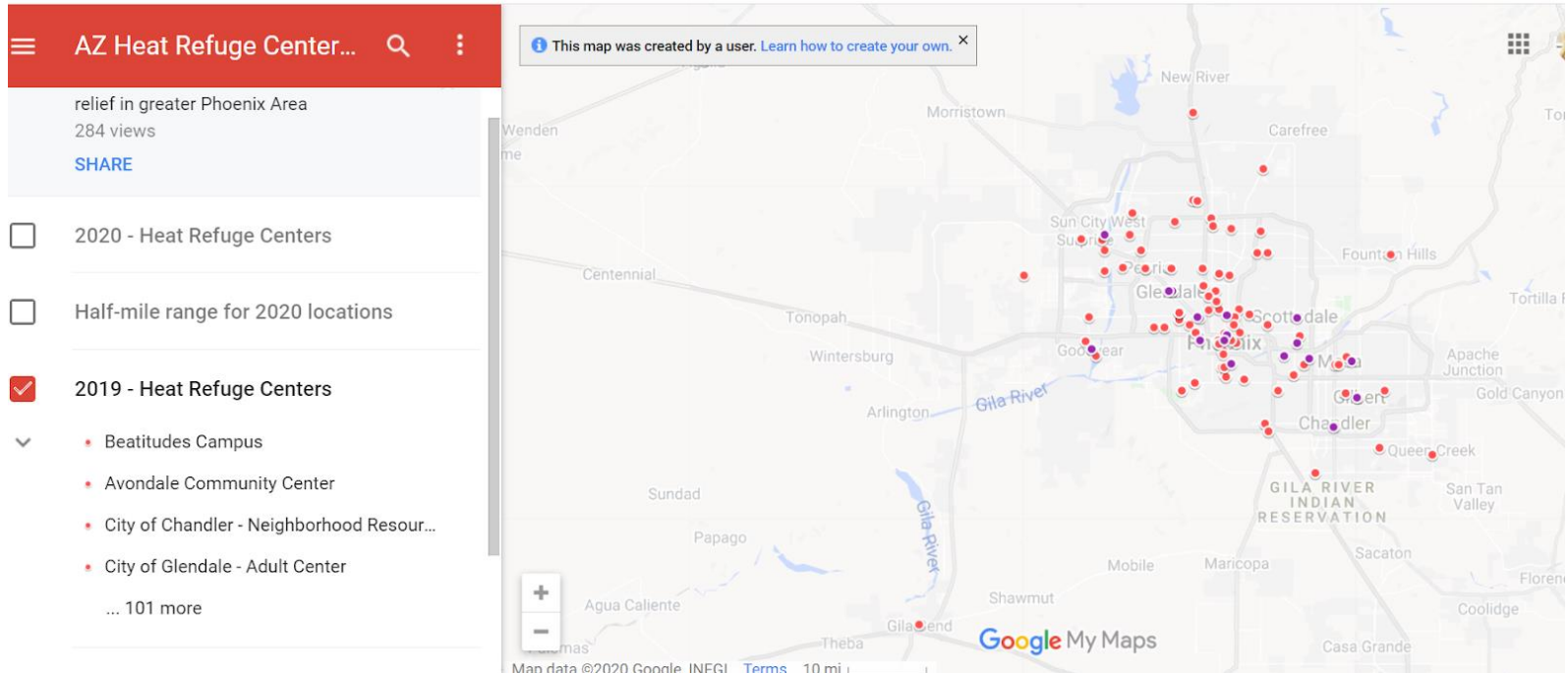
- Managing cooling centers under COVID restrictions
 - Avondale
 - (Glendale – hydration)
 - Phoenix Convention Center/CARES Act funding for hotel rooms for unhoused
 - Tempe Senior Center – converting unused municipal spaces

Lessons Learned This Summer

- Be prepared early!
 - Heat Relief Regional Network

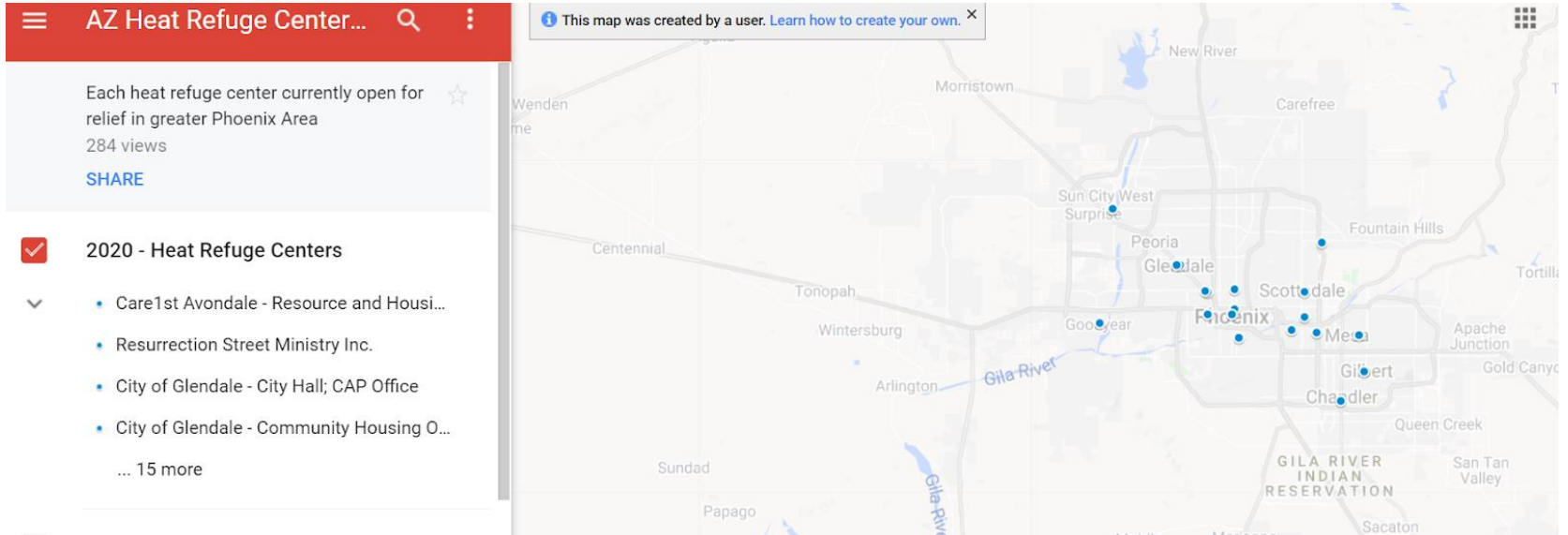


MAG's Heat Relief Network



MAG's Heat Relief Network

82% Less Indoor, Air-Conditioned Cooling Centers from 2019



The screenshot shows a Google Maps interface with a red header bar containing the text "AZ Heat Refuge Center..." and search icons. Below the header, a light blue box contains the text "Each heat refuge center currently open for relief in greater Phoenix Area" and "284 views", with a "SHARE" button below it. A list of heat refuge centers is displayed, with a red checkmark icon next to the title "2020 - Heat Refuge Centers". The list includes:

- Care1st Avondale - Resource and Housi...
- Resurrection Street Ministry Inc.
- City of Glendale - City Hall; CAP Office
- City of Glendale - Community Housing O...
- ... 15 more

The map on the right shows the Phoenix area with several blue dots representing heat refuge centers. The Gila River is visible, and the Gila River Indian Reservation is labeled. A notification at the top of the map says "This map was created by a user. Learn how to create your own." with a close button.

Optimized locations for Cooling Centers

Cooling centers optimization, Maricopa county, 2020

Cooling centers optimization

Optimized cooling stations (regardless existing)



0.5 mile buffer zone



Existing cooling stations

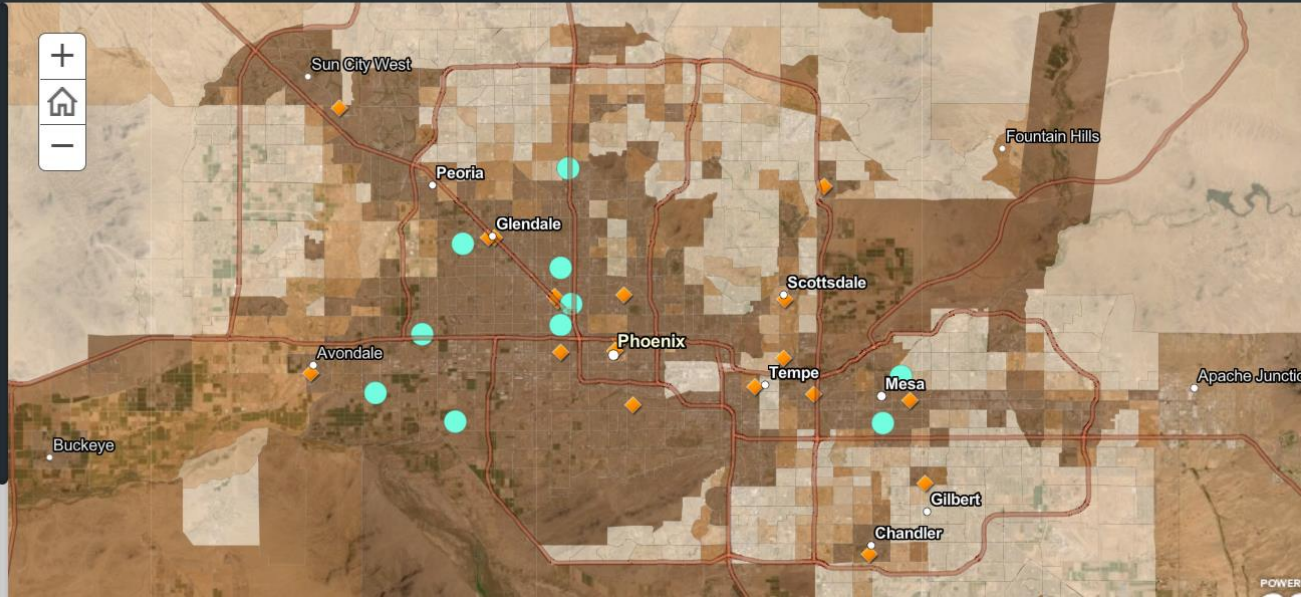


Social Vulnerability Index (SOVI)



SUMM

> 90





Lessons Learned This Summer

- Be prepared early!
 - Communication



Current Intervention Activities

- Tracking Program monitors heat-related illness and death
- Publishing Heat Advisories
- Annual State Heat Meeting
- Work with partners to establish cooling centers and public health messaging
- Emergency Response Plans

The New York Times

Heat Deaths Jump in Southwest United States, Puzzling Officials



A morning walk at the South Mountain Preserve in Phoenix last month. Afternoon highs in Phoenix last

Emergency Preparedness Plans



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Extreme Heat Incident Annex

Arizona Department of Health Services
Office of Environmental Health; in collaboration with
Bureau of Public Health Emergency Preparedness

June 2018

Response Activation Levels, Thresholds, and Activities

Tier 0: Preparedness & Recovery

- Risk assessment/Situation monitoring
- Community partnership building
- Community engagement to foster public health, medical, and mental/behavioral health networks
- Coordination and promotion of training and guidance for community engagement in preparedness and recovery efforts

Tier 1: Heat Advisory, Watch, or Warning Issued

- Information Sharing & Safety Education
- Increase Surveillance Systems (Hospital and community based)
- Coordination with community partners for well checks and needs assessments throughout existing networks
- Public messaging and outreach
- Incident Coordination and Management

Tier 2: Heat Watch, Advisory, or Warning with high $\geq 108^{\circ}$ and low $\geq 87^{\circ}$

- Identification and assessment of impacted area(s) to include identification of AIN and vulnerable populations
- Provide messaging to health care providers for discharge considerations.

Tier 3: Three or more consecutive days at Tier 2 criteria (Heat wave criteria)

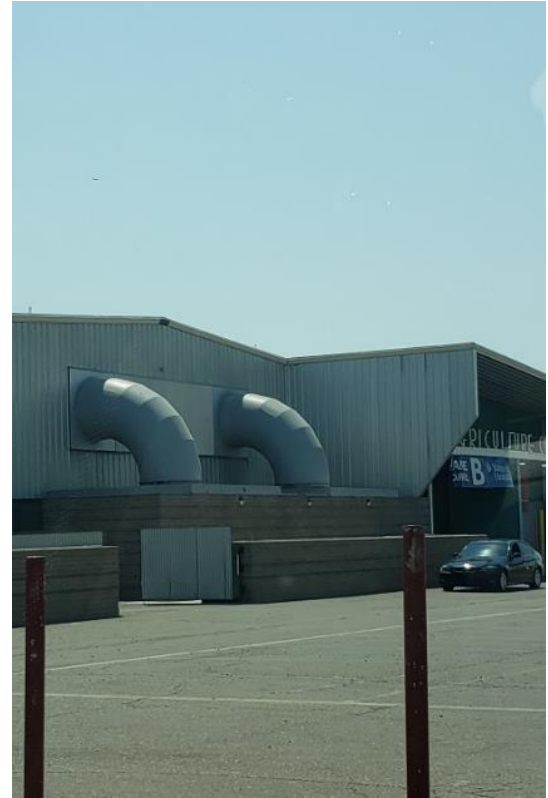
- *Potential for activation (physical or virtual) of the Health Emergency Operations Center, at discretion of the designated official as depicted by the ADHS All-Hazards Emergency Response Plan.*

Note: HEOC activation may occur at any time as requested by ADHS leadership in accordance to the All-Hazards Emergency Response Plan and HEOC Standard Operating Procedure (SOP). Messaging should follow processes set out in the Crisis and Emergency Risk Communication (CERC) Plan, in conjunction with the Public Information Officer.

Tier 4: Unplanned major power outage occurring Monsoon Season, posing an impact to public health and/or well-being

- Identification and assessment of impacted area(s) to include identification of AIN and vulnerable populations
- Essential Elements of Information collection from licensed facilities in impacted and surrounding areas
- Coordination with utility companies for situation awareness, incident coordination, and joint messaging
- Public messaging re: environmental health and safety, medication safety, respite/refuge locations and resources
(may have to explore alternative means for message delivery)

Distributing Heat Safety Materials to Outdoor & Drive Up Testing Sites



COVID-19 & Heat Combined Safety Messaging



Arizona Department of Health Services

July 11 · 🌐

The temperature inside cars in direct sunlight can quickly increase to dangerous levels causing heat stroke. If you encounter a line at a COVID-19 outdoor testing site, continue to use air conditioning when possible and bring extra water during periods of excessive heat to help plan for any unexpected issues. Also, never leave anyone in a parked vehicle, especially small children and older adults. <https://1.azdhs.gov/2CrLI88>



👍👎👏 73

84 Comments 12 Shares



Arizona Department of Health Services

July 11 · 🌐

Thank you to all the healthcare and essential workers assisting in COVID-19 testing efforts across Arizona. With ongoing Heat Warnings throughout the state, it is important for those working outdoors in PPE to stay cool. Take breaks in air conditioning when possible, stay hydrated by drinking 24-32 ounces of water every hour while working outside: <https://1.azdhs.gov/3gL4EbQw>



👍👎👏 122

43 Comments 15 Shares



Heat Warning Alert Banner

The National Weather Service has extended the Excessive Heat Warning for 9 Counties: Coconino, Gila, La Paz, Maricopa, Pinal, Yavapai, and Yuma (8/17- 8/20 8 PM); Pima (8/16 - 8/19 8 PM); Mohave (8/17 - 8/20 10 PM). Daytime highs up to 118°F are expected. Learn more about how to stay safe in extreme heat and stay informed about future heat alerts.



ARIZONA DEPARTMENT OF HEALTH SERVICES

Health and Wellness for All Arizonans

HOME

AUDIENCES

TOPICS

DIVISIONS

A-Z INDEX

ENHANCED BY Google



Maricopa Heat Page

Phoenix Heat Page

Pima County Heat Page

Extreme Heat Stay safe when our state heats up



Extreme Weather & Public Health

[ADHS Home](#) / [Public Health Preparedness](#) / [Epidemiology & Disease Control](#) / [Environmental Health](#) / [Extreme Weather](#) / [Extreme Weather & Public Health - Heat Safety](#)

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[Outdoor Worker Toolkit](#)

[School Toolkit](#)

[Extreme Heat-Related Maps](#)

[National Weather Service](#)

[Data, Statistics & News](#)

Signup for email updates



Heat Safety - Home



The 2020 State Heat Planning Workshop scheduled for April 13, 2020 has been postponed based on the COVID-19 response and public health recommendations. The planning team will keep registered attendees informed on future meeting details as they become available. Please email extremeweather@azdhs.gov regarding any questions about the event.

Stay hydrated and safe in the Arizona heat! Heat is the number one weather-related cause of death in Arizona and across the country. Check out our latest [heat illness and death surveillance data](#).



Heat-Related Illness

Arizona is one of the hottest places on earth from May to September; learn tips to stay safe.



Heat Alerts

Stay informed! Sign up to receive heat alerts via email.



Older Adult Toolkit

The older adult population is more vulnerable to the effects of excessive heat.



Outdoor Worker Toolkit

Resources for outdoor workers & employers to prevent, recognize and treat heat illness.



School Toolkit

Info for students, school staff, athletic coaches and parents regarding heat-related illness and prevention.



Extreme Heat Related Maps

These maps visually represent the populations that may be most vulnerable to extreme heat events.



National Weather Service

National info about health dangers of heat and what to do in an excessive heat event.



Data, Statistics & News

Each year in Arizona, heat related illnesses cause over 250 deaths and nearly 3,000 emergency room visits.

Heat Alerts

4,226 Subscribers

14,272 Subscribers

Heat Alerts for Schools



Health and Wellness for All Arizonans



Excessive Heat Warning for Maricopa County

National Weather Service has issued an Excessive Heat Warning for:

Maricopa County on 9/7/19 from 10 AM to 8 PM

Daytime highs are expected to be in the **103 to 110** degrees Fahrenheit range. Residents are advised to stay cool, stay hydrated, and stay informed.

In areas with an excessive heat warning, it is recommended for schools to keep students indoors for physical activity and recess.

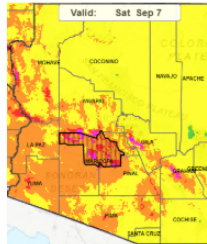
If students are going outdoors for recess, it is recommended that schools provide water (eight gulps every 15 minutes) and provide shade. Encourage students to wear hats, sunscreen, light colored clothing, and provide frequent breaks.

If students show signs and symptoms of heat illness or want to go inside, it is advised to get them to a cool environment immediately, such as inside an air-conditioned school building.

Additionally, it is very important that students be hydrated before, during and after being outside for physical activity and/or recess.

Check your local news for extreme heat warnings. Remember to also check the [UV Index](#).

Click [here](#) to learn more about today's heat risk map.



For additional information, please visit our [Heat Safety Site](#) which details ways to stay cool, stay hydrated, and stay informed.

sign up
for heat
alerts

azhealth.gov/heat



ARIZONA DEPARTMENT
OF HEALTH SERVICES



Heat Alert



Health and Wellness for All Arizonans



Excessive Heat Warning for Maricopa County

National Weather Service has issued an Excessive Heat Warning for:

Maricopa County on 9/7/19 from 10 AM to 8 PM

Daytime highs are expected to be in the **103-110** degrees Fahrenheit range. Residents are advised to stay cool, stay hydrated, and stay informed.

Precautions to prevent heat exhaustion or heat stroke:

Stay in air-conditioned buildings.

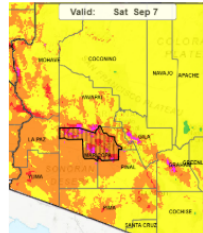
Limit outdoor activity during the hottest part of the day (mid-day).

Check on at-risk friends, family, and neighbors at least twice a day.

Drink water before, during, and after working or exercising outside.

Check the [UV Index](#).

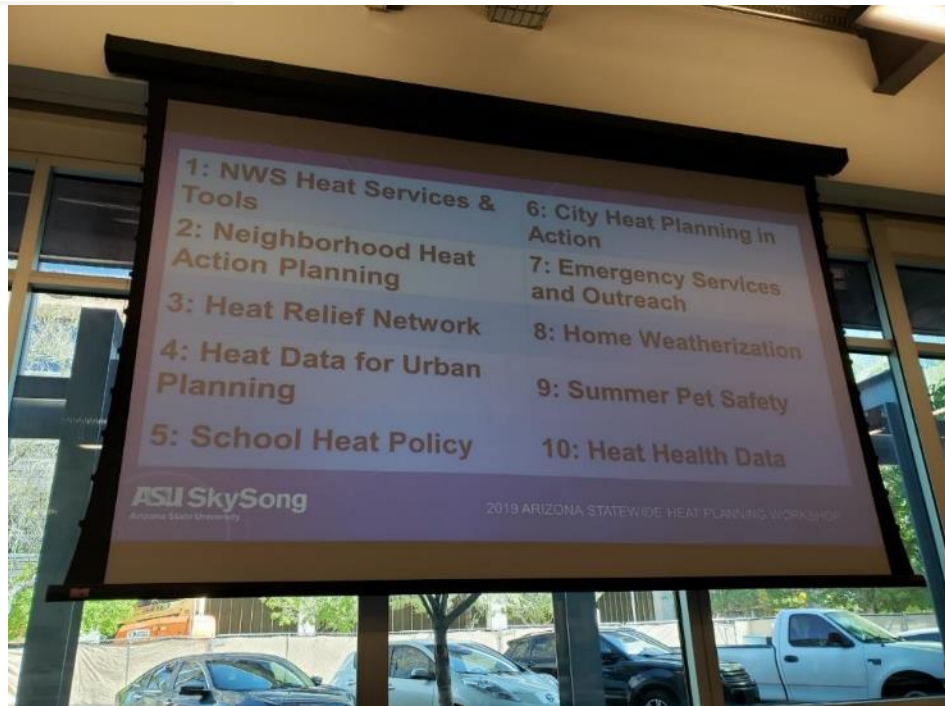
Click [here](#) to learn more about today's heat risk map.



For additional information, please visit our [Heat Safety Site](#) which details ways to stay cool, stay hydrated, and stay informed.

Annual State Heat Planning Workshop

(2019) 108 Attendees




Arizona Heat Awareness Week with NWS

Arizona Heat Awareness Week

May 25th - May 29th, 2020

(español)


The National Weather Service, in partnership with local, county, and state officials, has developed this page and a social media campaign as a resource for everyone to learn more about heat prevention, safety and awareness in Arizona.

 WeatherNation

Arizona Heat Awareness Week

This week—May 25 through May 29, 2020—is Arizona Heat Awareness Week. The Arizona Department of Health Services and the three ...
May 27, 2020



 AZFamily

Arizona Heat Awareness Week is underway

Officials are looking to curb heat-related deaths with the "Arizona Heat Awareness Week" campaign. (Source: 3TV/CBS 5). The National ...
May 26, 2020



Arizona Semana de la Conciencia del Calor

25 de Mayo a 29 de Mayo del 2020

(english)

El Servicio Nacional de Meteorología, en colaboración con funcionarios locales, del condado y del estado, ha desarrollado esta página y una campaña en las redes sociales como un recurso para que todos puedan obtener más información sobre la prevención, seguridad y conocimiento del calor en Arizona.



Lessons Learned This Summer

- **Increase and Optimize Locations for Cooling Centers**
 - Need for point in time data of cooling center usage
 - Energize networks for additional cooling center locations
 - Use data to determine optimal location for cooling centers
 - Provide levels of cooling center opportunities (evenings/heat warning periods)
 - Assist with supplying cooling centers to ease burden of operations
 - Cooling Center Response Network Platform
 - Utility assistance program for cooling center providers
-

slido

Question and Answer Session for Arizona State University

Join at

slido.com

#HEAT



Closing Remarks & Next Steps



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans

Thank you for attending!

- Recordings and slide materials will be sent to registered participants soon
- For additional questions please contact: extremeweather@azdhs.gov

