

EXTREME HEAT IN PHOENIX

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2024 EXTREME HEAT IN PHOENIX

100°+ DAYS



143

2ND MOST ON RECORD

RECORD:
145 DAYS
SET IN 2020

105°+ DAYS



122

MOST ON RECORD

OLD RECORD:
102 DAYS
SET IN 2020

110°+ DAYS



70

MOST ON RECORD

OLD RECORD:
55 DAYS
SET IN 2023

115°+ DAYS



12

3RD MOST ON RECORD

RECORD:
22 DAYS
SET IN 2023



OF CONSECUTIVE DAYS AT 110°+

NEW RECORD



31

JUNE 30 - JULY 30
2024

OLD RECORD



18

SET IN JUNE 1974



NUMBER OF 115°+ DAYS IN PHOENIX

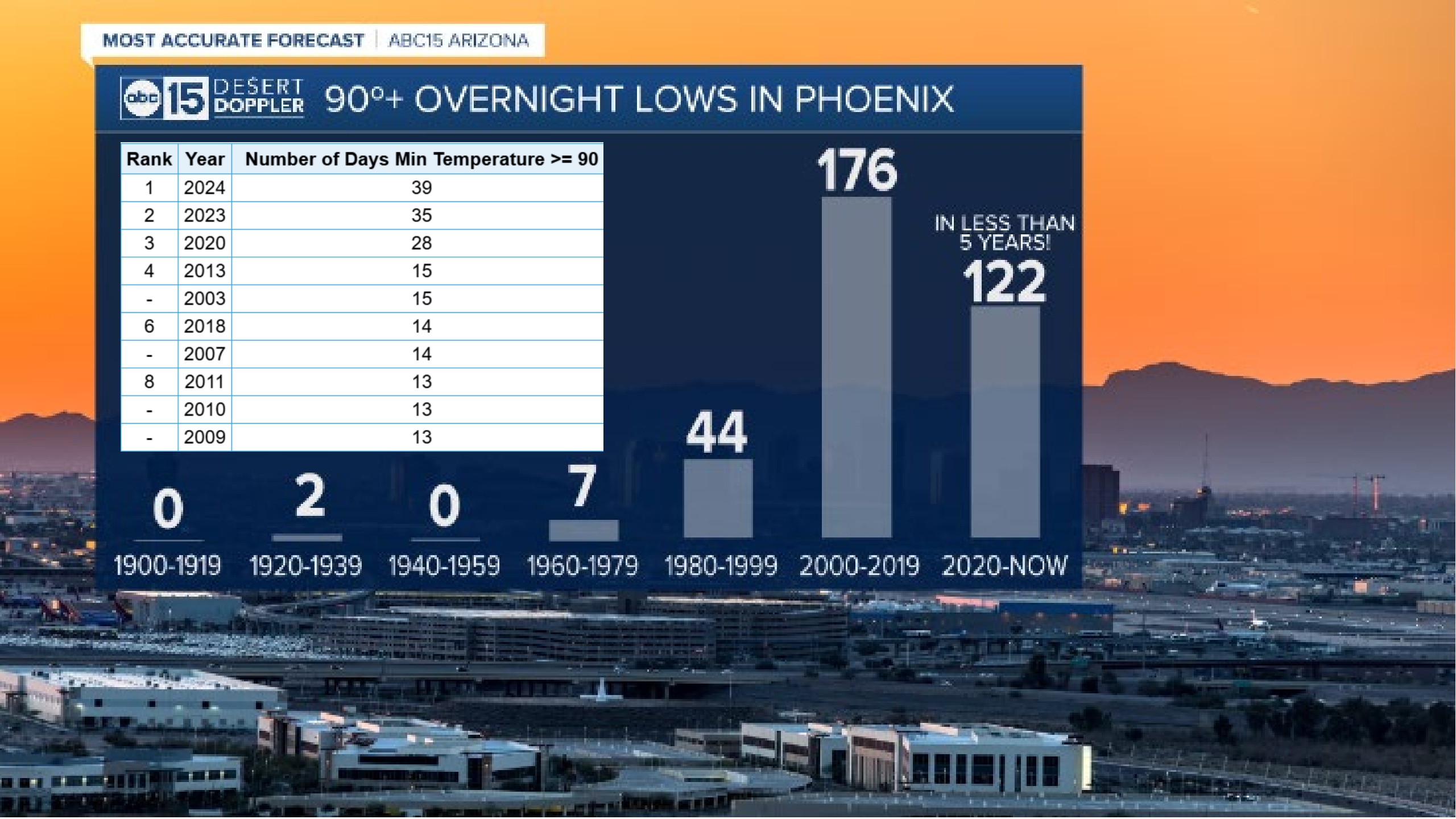
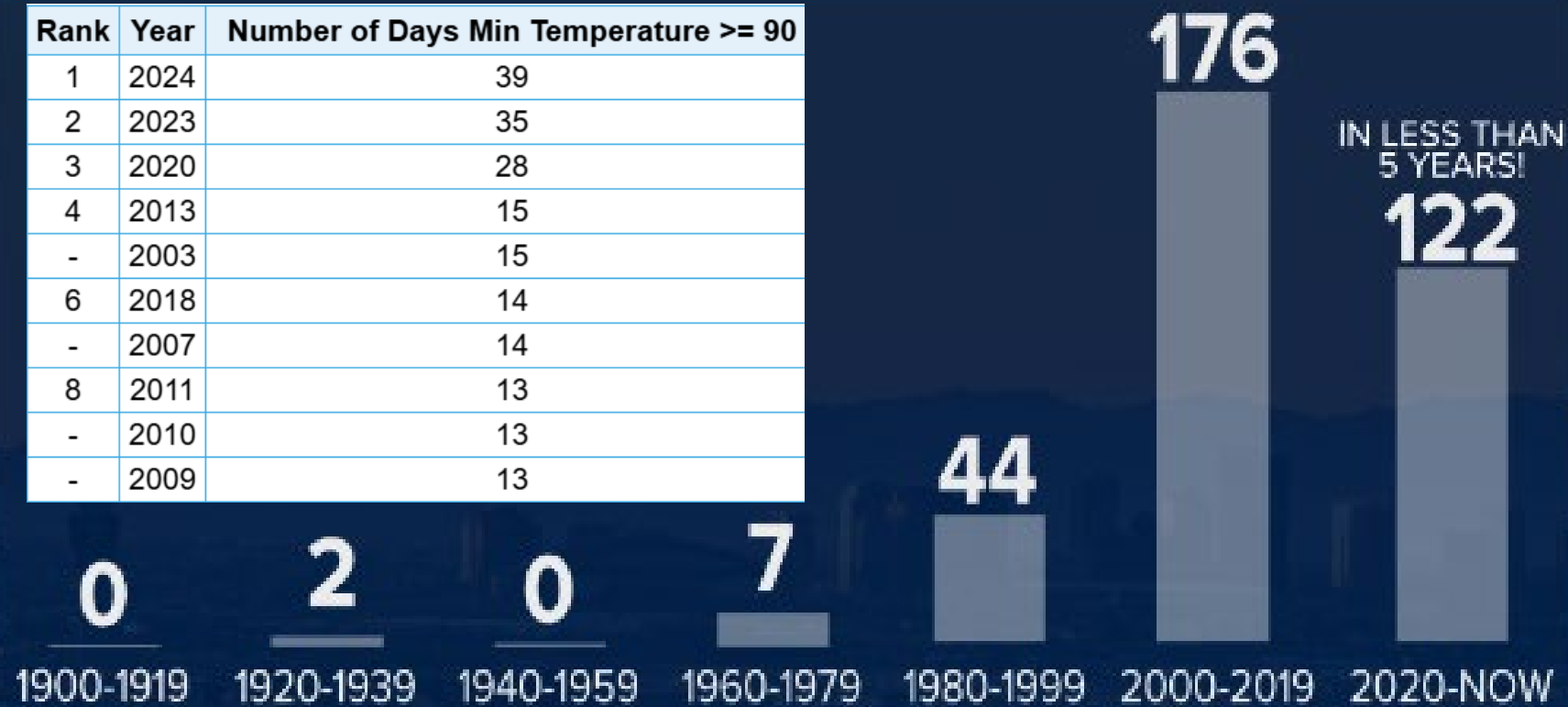
IN LESS THAN
5 YEARS!





90°+ OVERNIGHT LOWS IN PHOENIX

Rank	Year	Number of Days Min Temperature >= 90
1	2024	39
2	2023	35
3	2020	28
4	2013	15
-	2003	15
6	2018	14
-	2007	14
8	2011	13
-	2010	13
-	2009	13



MOST ACCURATE FORECAST | ABC15 ARIZONA



DESERT
DOPPLER

URBAN HEAT ISLAND EFFECT

PHOENIX
METRO AREA

BUILDINGS AND CONCRETE TRAP
HEAT DURING THE DAY

DOES NOT COOL DOWN AS MUCH
OVERNIGHT

MOST ACCURATE FORECAST | ABC15 ARIZONA



DESERT
DOPPLER

URBAN HEAT ISLAND EFFECT

PHOENIX
METRO AREA

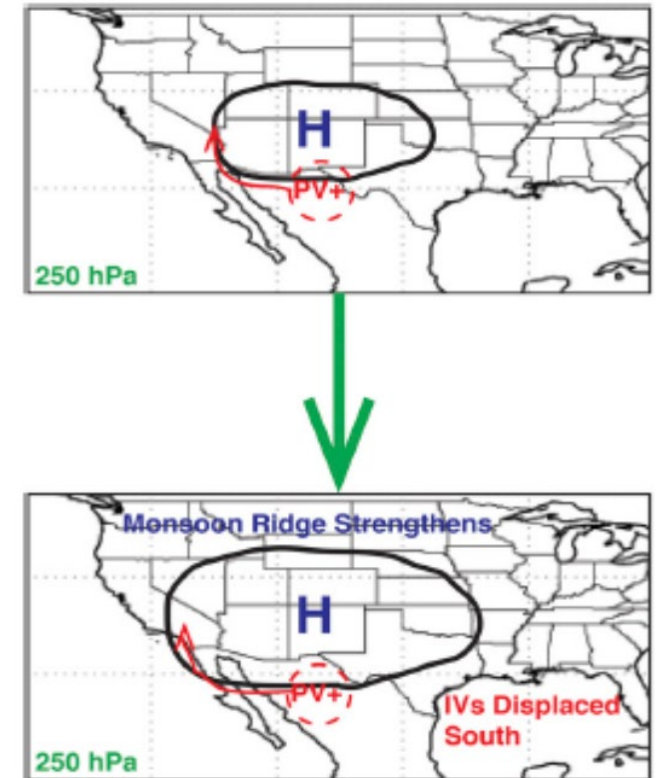
OUTLYING, MORE RURAL AREAS
5-10° COOLER AT NIGHT



Why is Phoenix getting hotter?

Combination of human-induced climate change and our expanding urban heat island

Monsoon rain brings heat relief, but that is becoming less frequent



Lahmers et al. (2016)

Big “heat dome” blocks moisture and suppresses convection

- Hot and dry go hand-in-hand
- Failure of our monsoon leads to much hotter temperatures
- We are seeing that more often in a warming world
- 2023 and 2024 were among the hottest and driest monsoons on record

MOST ACCURATE FORECAST | ABC15 ARIZONA

abc 15 DESERT DOPPLER "NON-SOONS"

YEAR	RAINFALL
2023	0.15"
1924	0.35"
1914	0.51"
1993	0.61"
1932	0.61"
2019	0.66"
2024	0.74"
2007	0.74"

DRIEST ON RECORD AT SKY HARBOR

MOST ACCURATE FORECAST | ABC15 ARIZONA

abc 15 DESERT DOPPLER HOTTEST MONSOONS

YEAR	AVG TEMPERATURE
2024	98.3°
2023	96.9°
2020	96.0°
2011	95.0°
2015	94.5°
2007	94.5°
2009	94.1°
2010	94.0°

HOTTEST ON RECORD AT SKY HARBOR

RECORD SUMMER HEAT STRETCHES INTO FALL
Phoenix breaks old “Dust Bowl” record for the most
record-setting days in a row, by a full week!

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DESERT
DOPPLER

RECORD HOT START TO FALL

RECORD



21 STRAIGHT DAYS
OF RECORD HEAT

PHOENIX, AZ
SEP 24 - OCT 14, 2024

OLD RECORD



14 STRAIGHT DAYS
OF RECORD HEAT

BURLINGTON, IA
JULY 4 - JULY 17, 1936

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DESERT
DOPPLER

OCTOBER HEAT IN PHOENIX

HOTTEST OCTOBER DAY ON RECORD
113° ON 10/1/2024 & 10/6/2024

PREVIOUS HOTTEST OCTOBER DAY
107° ON 10/1/2020 & 10/2/1980

LATEST 110°+ ON RECORD

OCTOBER 7, 2024

MOST ACCURATE FORECAST | ABC15 ARIZONA

abc15 DESERT DOPPLER SEPTEMBER 2024 HIGHS IN PHOENIX							NORMAL = +/- 2° AVG	
SUN	MON	TUE	WED	THU	FRI	SAT		
1 108	2 108	3 108	4 111	5 RECORD 116	6 111	7 110		
8 RECORD 110	9 110	10 110	11 109	12 109	13 107	14 104		
15 106	16 102	17 93	18 97	19 98	20 97	21 90		
22 99	23 105	24 RECORD 108	25 RECORD 113	26 RECORD 110	27 RECORD 113	28 RECORD 117		
29 RECORD 113	30 RECORD 107							
				BELOW 3	NORMAL 5	ABOVE 22		

MIND-NUMBING HEAT

- **Hottest September day ever**
 - 117 on September 28th broke the record for that day by 9 degrees!
- **Hottest October day ever**
 - 113 on October 6th broke the record for that day by 8 degrees!
 - Previous hottest October day was 107 degrees in 2020 and 1980
 - Phoenix topped 107 8 times in October 2024

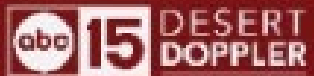
MOST ACCURATE FORECAST | ABC15 ARIZONA

abc15 DESERT DOPPLER

OCTOBER 2024 HIGHS IN PHOENIX

NORMAL = +/- 2° AVG

SUN	MON	TUE	WED	THU	FRI	SAT
		1 RECORD 113	2 RECORD 108	3 RECORD 109	4 RECORD 108	5 RECORD 111
6 RECORD 113	7 RECORD 110	8 RECORD 108	9 RECORD 106	10 RECORD 107	11 RECORD 104	12 RECORD 104
13 RECORD 103	14 RECORD 103	15 99	16 99	17 90	18 79	19 74
20 82	21 90	22 95	23 98	24 96	25 RECORD 97	26 RECORD 100
27 96	28 95	29	30	31		
				BELOW 3	NORMAL 1	ABOVE 24



HOTTEST ASU KICKOFFS

107°

OCT 5, 2024 & SEP 5, 2023

106°

AUG 31, 2002

104°

SEP 9, 2023 AND 4 OTHER TIMES

103°

SEP 1, 2022 AND SEP 6, 2008

102°

AUG 31, 2023

IMPACTS TO FALL SPORTS

- These are for kickoffs mostly happening around 7 p.m.



IMPACTS TO SCHOOL RECESS AND SPORTS

- Many school districts in the Phoenix metro area start classes in late July or August, during the hottest time of the year
- Districts may have a “Heat Contingency Plan” for recess and after-school sports, but they are not necessarily in sync.
- Different districts have different standards. Some private and charter schools may have no written plans to address heat at all. Same with club sports leagues
- The Heat Contingency Plans that I found were based off of criteria we don’t even use here in Phoenix like the heat index or Heat Advisories.
- The National Weather Service does not issue Heat Advisories in Phoenix. Only Excessive Heat Warnings, which are being renamed this year to Extreme Heat Warnings.

The Phoenix Police Department (PPD) has faced scrutiny regarding incidents involving the use of force and potential heat-related injuries during detentions, particularly when people are held on hot pavement. There have been lawsuits and accusations of excessive force and the department's handling of heat-related injuries. Additionally, the [Phoenix City Council](#) has enacted measures to address heat safety for outdoor workers and those working under city contracts. [🔗](#)

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COVER STORY

How heat affects the mind

Policy and infrastructure changes are urgently needed to protect our mental health from the impact of high temperatures

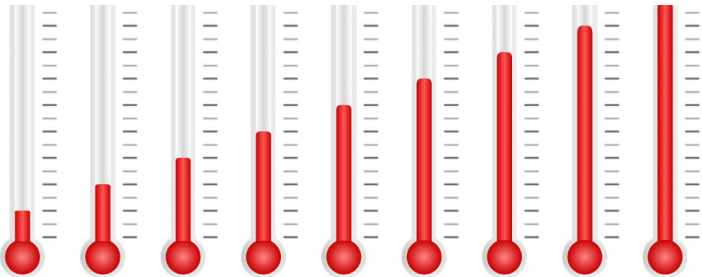
By [Stephanie Pappas](#)

Date created: June 1, 2024

16 min read

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Print version: page 42



Excessive heat and its impact on mental health

Homa Shalchi

713-798-4710

Houston, TX - Jul 24, 2023

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In the Heat of Anger: The Impact of Increasing Temperatures on Veteran and Military Mental Health

[Cynthia Geppert](#) ^{1,✉}

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PMCID: PMC9648583 PMID: [36425348](#)

Feeling the heat of anger right now, I close my eyes and look into the future. Three hundred years from now, where will you, where will I be?

☰

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Hot under the collar? Heat can make you angry and even aggressive, research finds

By Jen Christensen, CNN

🕒 6 minute read · Published 7:11 AM EDT, Tue September 5, 2023

📱

✂

✉

🔗

IMPACTS TO MENTAL HEALTH

Extreme heat can lead to increased anger, rage, sadness and depression

IMPACTS TO THE ECONOMY AND PERSONAL FINANCES



PEOPLE DON'T GO OUT AS
MUCH DURING THE
SUMMER. IT'S JUST TOO HOT!
RESTAURANTS ARE NOT AS
BUSY, FUN OUTDOOR
PLACES LIKE TOP GOLF,
ETC...ARE NOT AS BUSY.



UTILITY BILLS GO UP!
AC IS RUNNING 24-7
AVERAGE-SIZE HOUSE BILL
IN THE SUMMER IS BETWEEN
\$300-500 A MONTH
MANY CAN'T AFFORD IT

Heat deaths are rising! Even indoors.

Family pursuing justice for 82-year-old who died after A/C turned off in triple-digit temperatures

The family of Kate Korman says her death was preventable, while a Corporation Commissioner has publicly blamed the family for her death

Reported on ABC15 on May 1, 2025
APS shutoff power due to missed payments

Total Confirmed

466

Heat Caused

281

Heat Contributed

185

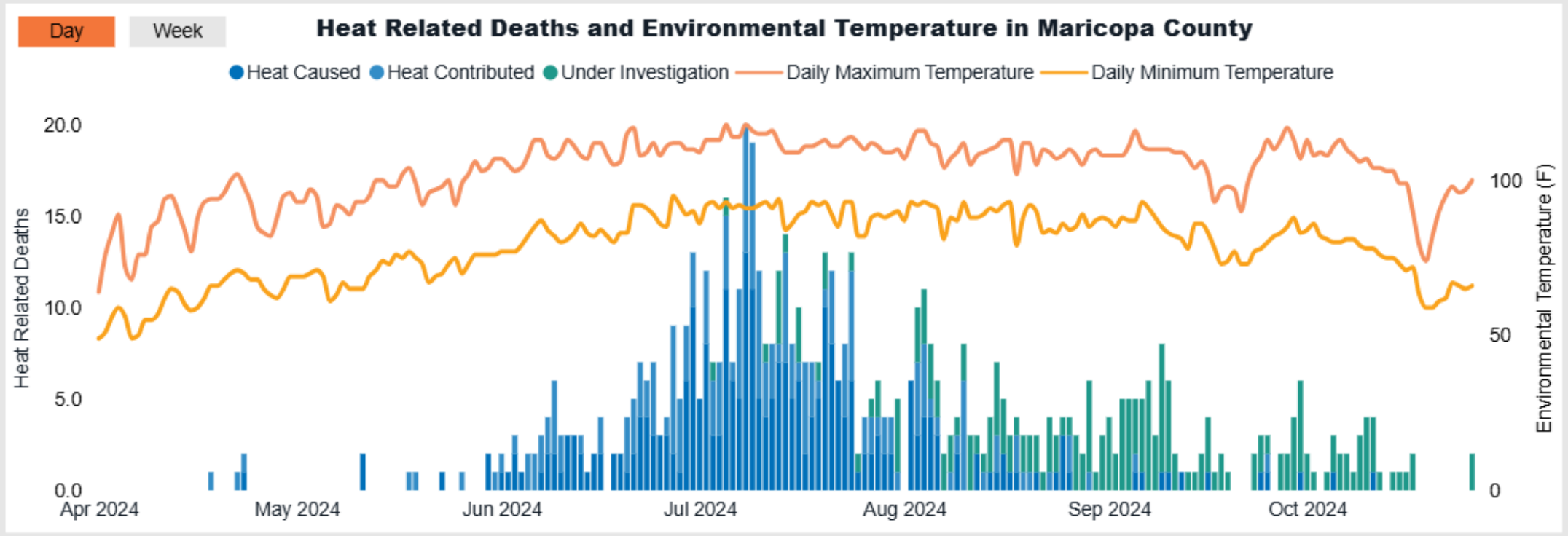
Under Investigation

191

2023 Heat Related Deaths as of Week Range: (10/20 - 10/26)

Total Confirmed: 569

Under Investigation: 92



Maricopa County Heat Related Deaths by Age Group

Maricopa County Heat Related Deaths by Sex

Maricopa County Heat Related Deaths by Race and Ethnicity

Alcohol Use

12%

Drug Use

57%

Unhoused

47%

HEAT DEATH NUMBERS ARE GROSSLY UNDERESTIMATED

We need a standardized way of reporting heat deaths across the country.

Heat response measures need to be taken in every city, county and town.

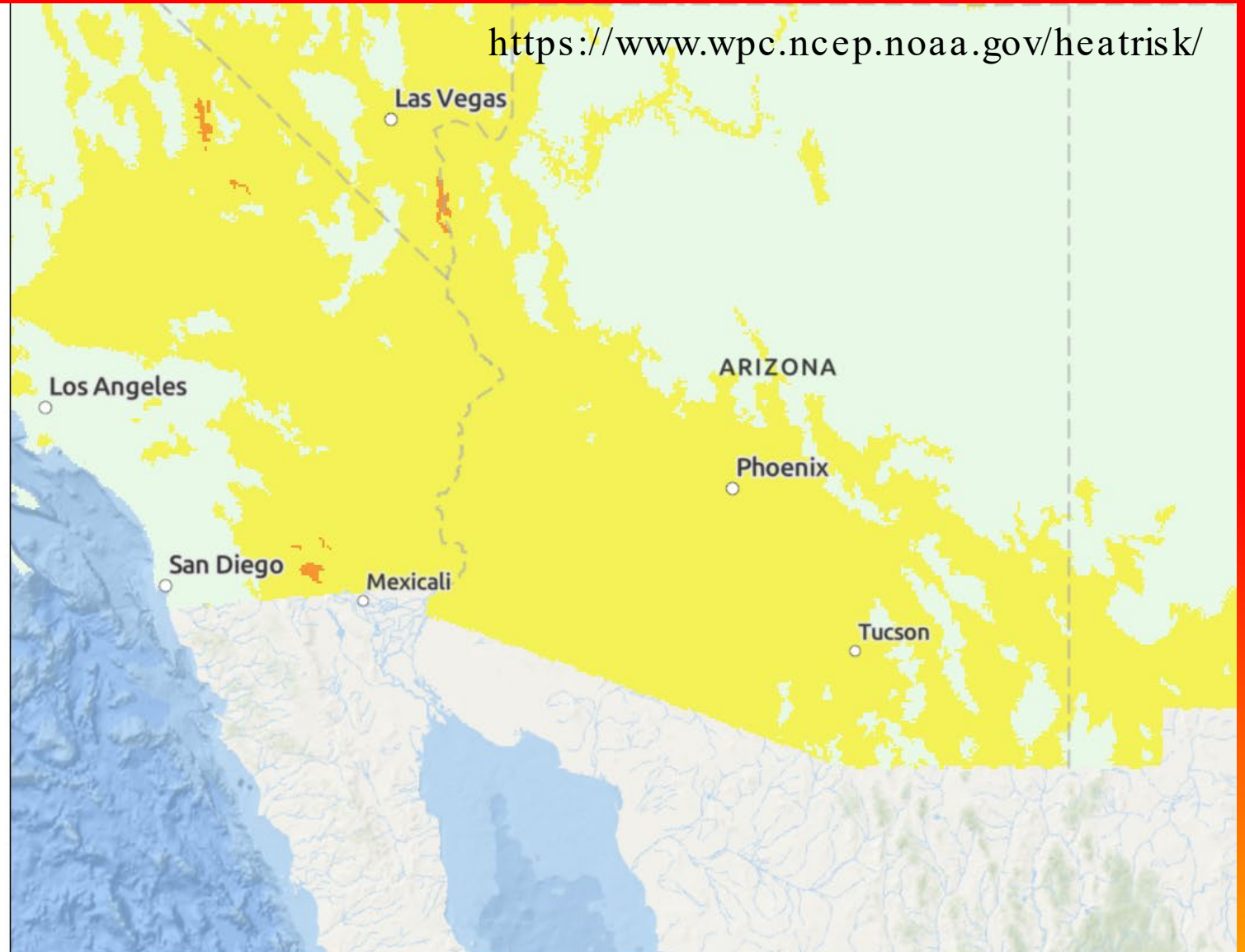
Much of Arizona is rural and without access to “Heat Relief Centers” like we have in Phoenix.

We need to decouple heat response measures from Excessive Heat Warnings.

In long heat stretches, NWS may drop these warnings for a day or two when the temperature drops below 110, but 108 or 109 is still life-threatening heat.

FOCUS ON “HEAT RISK” TO HEALTH AND SAFETY

Category	Risk of Heat-Related Impacts
Green 0	Little to no risk from expected heat.
Yellow 1	Minor - This level of heat affects primarily those individuals extremely sensitive to heat, especially when outdoors without effective cooling and/or adequate hydration.
Orange 2	Moderate - This level of heat affects most individuals sensitive to heat, especially those without effective cooling and/or adequate hydration. Impacts possible in some health systems and in heat-sensitive industries.
Red 3	Major - This level of heat affects anyone without effective cooling and/or adequate hydration. Impacts likely in some health systems, heat-sensitive industries and infrastructure.
Magenta 4	Extreme - This level of rare and/or long-duration extreme heat with little to no overnight relief affects anyone without effective cooling and/or adequate hydration.



But this should be extended beyond 7 days to help with planning to get resources into rural communities

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