

## CITY OF PHOENIX WEEKLY HEAT RESPONSE UPDATE

MONDAY, AUGUST 1, 2022

REVIEWING MONDAY, JULY 25–SUNDAY, JULY 31

### Summary

A week of below-average temperatures has provided some needed respite from the heat, as summer 2022 continues to trend about 1°F hotter than last year and about 3°F hotter than the climatological normal. The impacts of the mid-to-late July stretch of hot weather are becoming clearer in health and dispatch data, which showed near- to above-record case volume. Heat-related calls to the Phoenix Fire Department are now outpacing last year's call volume by more than 15% and the Maricopa County Department of Public Health added 9 more confirmed heat-associated deaths to the 2022 total, with five dozen more cases under investigation.

Temperatures are forecast to be slightly higher this week than last, but conditions will remain favorable for storm and precipitation activity that will limit warming. No excessive heat warning days are likely to occur in the next two weeks, based on current forecast guidance.

### I. RECENT AND YEAR-TO-DATE WEATHER CONDITIONS

A major shift in the regional weather pattern quickly transitioned the Phoenix area to a week of below-average temperatures, offering some respite from what had been one of the hottest stretches of the year. Over the past week daily high temperatures only exceeded 100°F twice, and overnight lows in the 70s were recorded four times. This summer (April 1 to present) is now approximately 0.9°F hotter than the same period in 2021 and 2.7°F higher than the climatological normal.

| Red=highest high<br>Blue=lowest high<br>low breaks ties | Daily High °F | Normal High °F | vs. Normal °F | Daily Low °F | Normal Low °F | vs. Normal °F |
|---|---------------|----------------|---------------|--------------|---------------|---------------|
| Mon 7-25  | 100           | 106.2          | -6.2          | 80           | 85            | -5            |
| Tues 7-26   | 102           | 106.1          | -4.1          | 83           | 84.9          | -1.9          |
| Weds 7-27   | 99            | 106            | -7            | 77           | 84.9          | -7.9          |
| Thurs 7-28  | 98            | 106            | -8            | 83           | 84.8          | -1.8          |
| Fri 7-29  | 92            | 105.9          | -13.9         | 79           | 84.8          | -5.8          |
| Sat 7-30  | 100           | 105.9          | -5.9          | 78           | 84.8          | -6.8          |
| Sun 7-31  | 104           | 105.8          | -1.8          | 79           | 84.7          | -5.7          |

## HOT DAYS AND NIGHTS TRACKER

|             | Year to Date (2022) | Year to Date (2020) | Normal Year to Date |
|-------------|---------------------|---------------------|---------------------|
| 100°F days  | 68                  | 77                  | 63.1                |
| 110°F days  | 20                  | 28                  | 14.2                |
| 85°F nights | 27                  | 28                  | 19.9                |

Notes: Year to Date statistics for 2020 are included as a point of comparison to the hottest summer in the recorded history of Phoenix by most climatological measures. Normal is defined based on the 1991–2020 time period.

## HEAT WARNING TRACKER

No Excessive Heat Warnings were issued last week. Excessive Heat Warnings have been in effect for 10 days thus far in 2022.

## 2. NATIONAL WEATHER SERVICE FORECAST

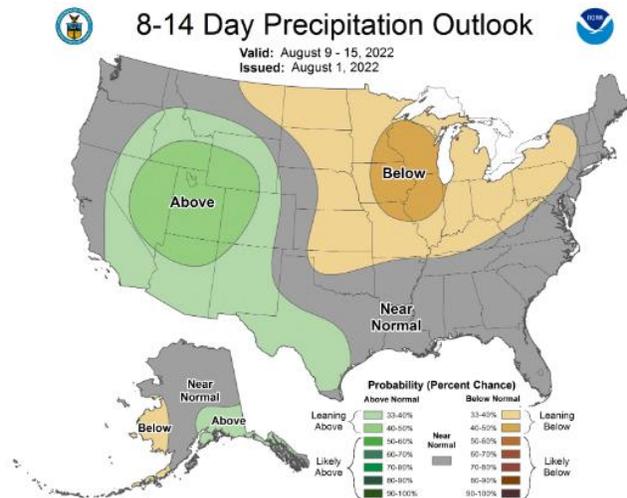
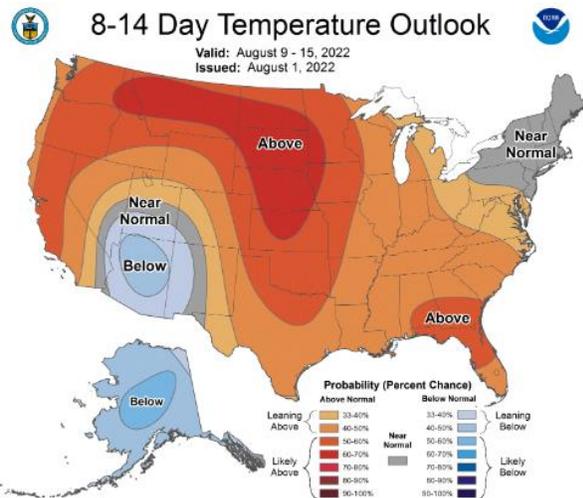
Temperatures are forecast to be at or below seasonal averages for the upcoming week. A moderate warmup for midweek is expected to yield to slightly cooler conditions and increasing storm probabilities for the weekend. The forecast includes Low and Moderate HeatRisk, per the National Weather Service.

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|-----|-----|-----|-----|-----|-----|-----|
| 104 | 106 | 106 | 105 | 103 | 103 | 103 |
| 87  | 86  | 86  | 85  | 84  | 85  | 84  |

|          |  |                                  |                      |                   |
|----------|--|----------------------------------|----------------------|-------------------|
| No risk. | Risk to those extremely sensitive to heat. | Risk to those sensitive to heat. | Risk to most people. | Risk to everyone. |
| None     | Low  | Moderate                         | High                 | Very High         |

The early forecast for the following week shows a continuation of favorable chances for below average temperatures corresponding to an expectation of above-average precipitation activity. The normal daily high for the second week of August is 105°F.



### 3. HEAT-HEALTH DATA

#### HEAT-RELATED MORTALITY AND MORBIDITY

The Maricopa County Department of Public Health is reporting 38 confirmed heat-associated deaths for 2022, an increase of 9 cases from the previous reporting period. As of their July 23 report, there are 256 additional cases under investigation, an addition of 63 cases from the prior week. MCDPH heat-health reports are available online:

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

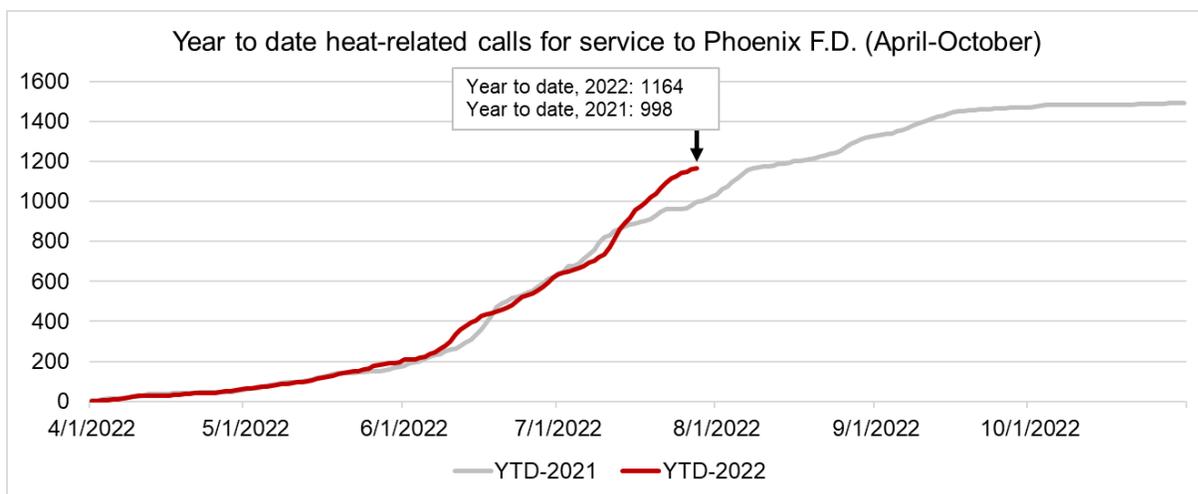
#### HEAT-RELATED CALLS FOR SERVICE TO PHOENIX FIRE DEPARTMENT

The Phoenix Fire Department responded to 41 calls for service identified by the dispatcher to be related to heat between July 25 and July 28\*. Advanced life support systems were deployed for 11 of the 41 calls. In 2021, the same 4-day period had 35 calls for service related to heat, with slightly lower temperatures (average high temperature of about 97°F in 2021 vs about 98°F in 2022).

The highest daily number of calls between July 25 and July 28 occurred on Monday, July 25 (high of 102°F), with 18 heat-related calls, which was less than the daily maximum number of calls the previous week (27 calls). June 19 had the most heat-related calls last year with 43, with a high temperature of 116°F. (Note: heat dispatch call data typically do not reflect mountain rescues related to overheating and/or dehydration).

**\*NOTE:** The reporting period for fire department calls in this week's report only includes the four days from July 25 – July 28, based on data availability.

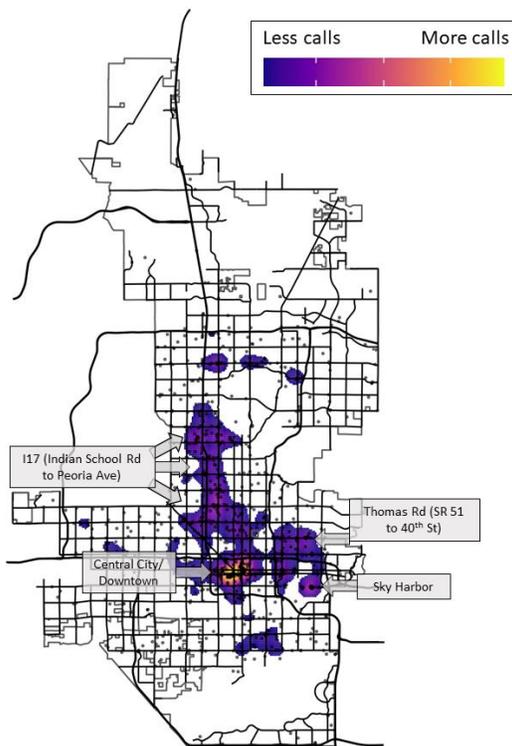
Year to date, heat-related calls for service to the Phoenix Fire Department are now running approximately 17% **higher** than 2021.



Spatially, since June 1, 2022 to date (through July 28), heat-related calls for service have continued to concentrate in a few areas: the Central City/Downtown area, Sky Harbor airport, and along the I-17 from Indian School Rd to Peoria Ave. Additionally, some more minor areas of concentration have occurred along Thomas Rd from State Route 51 to 40<sup>th</sup> St, around 24<sup>th</sup> St from Thomas Rd to Jefferson St, and near Central Ave between Camelback Rd and Thomas Rd. Over the past four days, the areas of concentration are less obvious given the limited data availability and the comparably lower number of calls last week, but a few areas experienced multiple calls, including Bethany Home Rd and 19<sup>th</sup> Ave, Van Buren St and 24<sup>th</sup> St, and Baseline Rd and 32<sup>nd</sup> St.

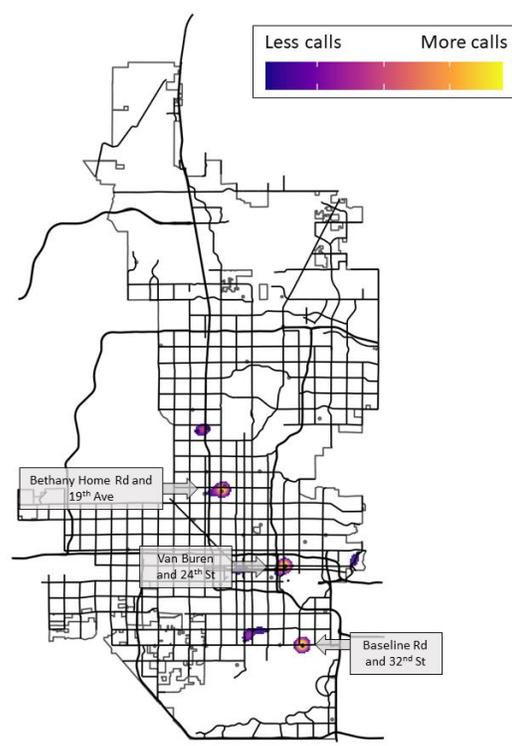
### June 1 – July 28

Map of Phoenix Fire Department calls for service related to heat June 1 – July 28, 2022  
 \*Note: Point locations are approximated based on partial addresses or cross streets.



### Last week (July 25 – July 28)

Map of Phoenix Fire Department calls for service related to heat July 25 – July 28, 2022  
 \*Note: Point locations are approximated based on partial addresses or cross streets.



## 4. COMMUNITY SEARCH DATA

### PHOENIX 3-1-1

There were 6 inquiries made through Phoenix 3-1-1 for July 25–July 29 that were related to summer heat, an increase of 4 calls from the week prior. Call topics spanned urban forestry, pools, media engagement, and air conditioning assistance.

## ARIZONA 2-1-1

There were 317 requests for electrical utility assistance fielded by Arizona 2-1-1 over the previous week in Maricopa County, which was approximately 10% more than the week prior.

## GOOGLE SEARCH

Google staff members are preparing a prototype customized dashboard for monitoring heat-health impacts and search queries related to heat for the City of Phoenix that will be tested and evaluated this summer. Publicly available Google Trends data for Arizona showed a weekly decline in searches related to heat warnings, air conditioning, heat exhaustion, cooling centers, swimming pools, and heat stroke.

## 5. STATUS OF HEAT RESPONSE PROGRAMS AND SERVICES

Program status indicated by color in status column. Updates are provided in the right-hand column as relevant to program planning and implementation.

|  |                                       |
|--|---------------------------------------|
|  | Fully operational (24 programs)       |
|  | Partially operational (2 programs)    |
|  | Planning and preparation (5 programs) |
|  | No action to date (0 programs)        |
|  | No information available (0 programs) |

| City of Phoenix Heat Response Programs and Services – Summer 2022                      |                   |             |        |  |
|--|-------------------|-------------|--------|--|
| Initiative   | Target population | Lead depts. | Status | Updates  |
| <b>FOCUS AREA 1. Situational awareness at City Hall and real-time response</b>         |                   |             |        |  |
| 1.1 First responder services   | ALL               | FIRE, PD    |        | Normal operations.   |
| 1.2 Reciprocal relationship with 3-1-1 and 2-1-1                                       | ALL               | OHRM, 311   |        | More search terms and customized analysis will be added in future reports. Staff are following up on selected 311 calls.                     |
| 1.3 Real-time monitoring of weather and health data with AZ Heat Resilience Work Group | ALL               | OHRM        |        | Normal operations. The work group meets biweekly on Thursday afternoons during the summer with participation from multiple city departments. |
| 1.4 Enhancing heat response resources for first responders                             | ALL               | OHRM, PD    |        | Planning continues with OHRM and PD staff. Customized cooling center maps are being prepared for fire stations in highly impacted areas.     |
| 1.5 Pilot program with Google search data for public health                            | ALL               | OHRM        |        | Pilot dashboard in development. Additional planning conversations were held during the last week of June.                                    |
| 1.6 Weekly status reports  | CITY DEPTS        | OHRM        |        | Thirteenth report distributed August 1.  |
| <b>FOCUS AREA 2. Public engagement, communications, and outreach</b>                   |                   |             |        |  |
| 2.1 Multi-platform Heat Safety Messaging   | ALL               | COMMS, OHRM |        | Summer safety messaging has transitioned to full operational mode and includes new content produced by the Communications team this year.    |

|  |                               |                           |  |  |
|--|-------------------------------|---------------------------|--|--|
| 2.2 We're Cool Volunteer Program   | UNSHELTERED , HIKERS          | VOL, OHRM, FIRE           |  | 52 outreach shifts have been completed, with 44 focusing on street outreach and 8 at City trailheads. More than 2000 contacts have been made through this program. Supplies distributed include water, hats, sunscreen, cooling center maps, heat safety cards, cooling towels, misters, and umbrellas. Community volunteer onboarding and engagement continues to increase. |
| 2.3 Cool Callers Volunteer Program                                       | LIVING ALONE, LIMITED COOLING | VOL, OHRM                 |  | Multiple referrals to other City and regional services have been made through the first four weeks of phone calls. Enrollment of additional participants and volunteers continues with a round of volunteer training scheduled for the upcoming week.  |
| 2.4 Let's Talk Heat Booklet  | ALL                           | A&C                       |  | Booklets are available for distribution, and a digital version is available on the City website (link available below).  |
| 2.5 Investments in Cooling Center Signage                                | ALL                           | OHRM, VOL                 |  | New signs for cooling centers are being distributed to City facilities and community partners through multiple channels, including the Cooling Center Response Network platform.   |
| 2.6 Heat Relief Resource Distribution                                    | ALL                           | OHRM, VOL                 |  | Order fulfillment continues, with evaporative coolers and ice makers arriving in the coming weeks. 50 organizations have been allocated supplies with more than 37,500 individual items committed.   |
| <b>FOCUS AREA 3. Publicly accessible cool space and drinking water</b>   |                               |                           |  |  |
| 3.1 Supporting the regional Heat Relief Network                          | ALL                           | OHRM, LIBRARY, PARKS, HSD |  | 56 City facilities are participating as cooling centers or hydration stations. Staff from multiple departments are supporting Heat Relief Network participation, including managing water distribution. Staff are filling requests from community organizations for printed maps showing locations of nearby cooling centers and hydration stations.                         |
| 3.2 Reusable water bottle pilot program                                  | ALL                           | OHRM, PUBLIC WORKS        |  | Staff are continuing to distribute bottles from an initial inventory of 5,000 reusable aluminum water bottles through the We're Cool Program. A qualifying bid for a larger order has been secured through an RFQ.   |
| 3.3 Shade and shelter enhancements at and near the Human Services Campus | UNSHELTERED                   | HSD                       |  | Staff implemented a new cooling tent at 9 <sup>th</sup> Avenue and Jackson on June 11 that will operate through the summer, and continue to explore opportunities to improve cooling and water access in this area. An upgrade to the cooling system at the new tent was made in late July.  |
| 3.4 New shelter at 28 <sup>th</sup> St. and Washington St.               | UNSHELTERED                   | HSD                       |  | The shelter is fully operating with high demand and use.   |
| 3.5 Provision of portable water tanks                                    | ALL                           | WATER, OHRM               |  | Staff are refining product specs with the manufacturer.  |
| <b>FOCUS AREA 4. Supporting cool and safe home environments</b>          |                               |                           |  |  |
| 4.1 Cooling ordinance and landlord tenant program                        | RENTERS                       | NSD, HSD                  |  | Normal operations.   |
| 4.2 Housing repair programs and weatherization                           | LIMITED HOME COOLING          | NSD                       |  | Normal operations. Staff continue to develop neighborhood prioritization criteria for expansion of home weatherization with ARPA funding and are exploring collaborative opportunities with NOAA.  |
| 4.3 Emergency utility assistance   | LOW INCOME                    | HSD                       |  | Normal operations.   |
| 4.4 Suspension of water shutoffs   | LOW INCOME                    | WATER                     |  | Normal operations.   |
| 4.5 Navigating utility disconnection rules                               | LOW INCOME                    | OHRM, COMMS               |  | Web content has been disseminated through City platforms and channels. OHRM and 311 staff reviewed   |

|   |                                   |                        |  |   |
|---|-----------------------------------|------------------------|--|---|
|   |                                   |                        |  | existing rules at the start of summer to ensure accurate communication to residents.  |
| <b>FOCUS AREA 5. Supporting cool and safe mobility and recreation</b> |                                   |                        |  |   |
| 5.1 Take a Hike, Do it Right  | HIKERS                            | PARKS                  |  | Normal operations. Piestewa Peak and Camelback summit trailheads have closed during Excessive Heat Warnings, as planned.  |
| 5.2 Adding shade structures at transit stops                          | TRANSIT USERS                     | TRANSIT                |  | Normal operations.  |
| 5.3 Valley Metro real-time transit tracking                           | TRANSIT USERS                     | TRANSIT                |  | Normal operations.  |
| 5.4 ARPA-funded transit passes  | NON-PROFIT ORGS AND THEIR CLIENTS | TRANSIT                |  | Normal operations.  |
| 5.5 City pools  | ALL                               | PARKS                  |  | Pools have transitioned to weekend-only operation for the month of August, as scheduled.  |
| 5.6 SunBlock Umbrella Distribution                                    | ALL                               | A&C                    |  | Sun umbrellas featuring 14 designs from local artists have been delivered to Council offices and are beginning to be distributed at public events.                                    |
| <b>FOCUS AREA 6. Supporting cool and safe workplaces and schools</b>  |                                   |                        |  |   |
| 6.1 City employee heat safety efforts                                 | CITY EMPLOYEES                    | HR SAFETY              |  | Normal operations.  |
| 6.2 Promoting ADHS School Heat Safety Toolkit                         | SCHOOLS                           | OHRM, COMMS            |  | Messaging content is being prepared to share for the start of the 2022-2023 school year later this summer.  |
| 6.3 Reducing and reporting workplace heat safety concerns             | EMPLOYERS, EMPLOYEES              | OHRM, COMMS, HR SAFETY |  | Messaging content is being prepared to share throughout the summer, staff are planning cross-departmental meeting to discuss engagement with state agencies including ADHS and ADOSH. |

Department key: OHRM – Office of Heat Response and Mitigation; PD – Police; COMMS – Communications; VOL – Volunteer Programs; A&C – Arts and Culture; HSD – Human Services Department; NSD – Neighborhood Services Department.

## 6. HEAT RESPONSE PROGRAM HIGHLIGHT

Public cooling centers and hydration stations are critical community resources for public health during the Phoenix summers. This year, the City of Phoenix has 56 facilities participating in the regional Heat Relief Network as cooling centers or hydration stations, including libraries, community centers, and senior centers. The role of cooling centers in protecting public health was recently examined in reporting by the Arizona Republic, linked below. The Republic article was written in response to an academic commentary in the scientific journal *Epidemiology*.

<https://www.azcentral.com/story/news/local/arizona-environment/2022/07/20/how-effective-cooling-centers-preventing-heat-related-deaths/10087174002/>

## 7. REGIONAL AND NATIONAL HIGHLIGHT

Last week, the federal government launched Heat.gov, a new public-facing resource from the National Integrated Heat Health Information System. In a press release, the National Oceanic and Atmospheric Administration noted that the website is designed “to provide the public and decision-makers with clear, timely and science-based information to understand and reduce the health risks of extreme heat. Heat.gov will provide a one-stop hub on heat and health for the nation and is a priority of President Biden’s National Climate Task Force and its Interagency Working Group on Extreme Heat.”



## 8. HEAT SAFETY – DID YOU KNOW?

The back-to-school season and resumption of sports activities for many young people in the community brings an increased risk for *exertional heat stroke*. Compared to classic heat stroke, exertional heat stroke occurs because of an increase in core body temperature attributable to strenuous activity and environmental conditions, rather than environmental conditions alone. Cases of exertional heat stroke are most commonly observed in young, healthy adults. Rapid cooling of the body is the best treatment option. Classic and exertional heat stroke are both life-threatening medical emergencies that require an immediate call to 9-1-1.

## KEY WEBSITES

[City of Phoenix Office of Heat Response and Mitigation](#)

[City of Phoenix Let’s Talk Heat Booklet](#)

[City of Phoenix Heat Relief Supply Request Form for Community Organizations](#)

[National Weather Service Phoenix Forecast Office Heat Page](#)

[Maricopa Association of Governments Heat Relief Network](#)

[Maricopa County Department of Public Health Heat-Health Surveillance Program](#)

[Arizona Department of Health Services Climate and Health Program](#)

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