Operating Cooling Centers in Arizona Under COVID-19 and Record Heat Conditions:

Lessons Learned from Summer 2020

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Arizona State University

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Tempe ARIZONA

City of Phoenix

Avondale
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EXECUTIVE SUMMARY

Cooling centers are important community resources for protecting the public from adverse health effects of extreme heat. In the summer of 2020, the combination of the Covid-19 pandemic and record-setting heat across much of the Southwestern United States posed significant challenges for cooling center operations. This report describes the circumstances surrounding cooling center operations in 2020 in Arizona, presents examples of successful cooling center practices during the pandemic, and provides more general lessons learned about operating heat interventions during a time of compounding and intersecting hazards.

Safety protocols and government orders forced the closure of many of the facilities that typically serve as cooling centers across much of the state. In Maricopa County, the number of facilities participating as cooling centers dropped from 106 in 2019 to only 19 in 2020, an 82% reduction. Impacts were widely felt in large and small cities statewide; in many smaller cities, there were zero available cooling centers in 2020. Multiple municipalities were able to open and operate cooling centers with modified operations to protect public health during the pandemic. Examples from Avondale, Tempe, and Phoenix illustrate a range of approaches to serve vulnerable populations.

The broader lessons learned from the 2020 experience of heat relief practitioners in Arizona are threefold. First, preparedness calendars need to be shifted to earlier in the spring season to account for increasingly early-arriving heat in the state. Second, decision support tools like optimization maps can be leveraged to help guide and prioritize cooling center recruitment efforts and other heat relief services. Finally, additional mechanisms are needed to share resources and alleviate cost burdens throughout the heat relief network in Arizona. A new virtual platform for resource exchange is presented as one strategy to enhance network operations in 2021 and beyond. Finally, this report includes CDC recommendations for operating cooling centers during the pandemic and sample operational guidelines from one municipality.

TABLE OF CONTENTS

INTRODUCTION 5

Impacts from Record Heat and Covid-19 5

Public health 5

Household costs 6

Thermal injustice 6

Cooling centers 7

Municipal examples - Operating cooling centers under Covid-19 8

Avondale Community Center 9

Tempe Senior Center 9

Phoenix Convention Center 10

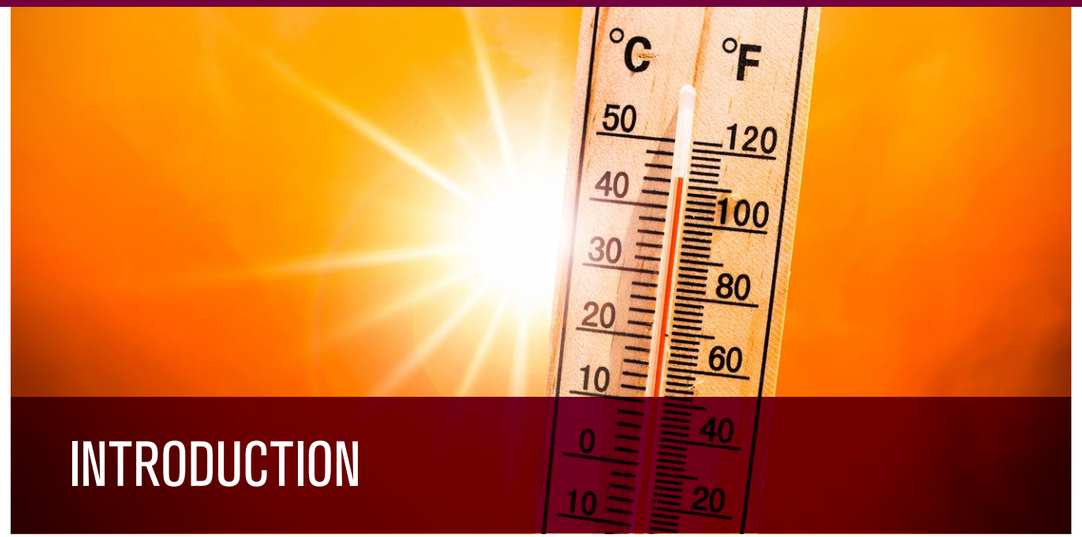
LESSONS LEARNED 12

Early preparation necessary 12

Optimization analysis can help prioritize recruitment into evolving networks 13

Supply assistance at cooling centers 13

CONCLUSIONS 14



INTRODUCTION

Arizona endured a long summer in 2020 with myriad challenges. The extreme heat arrived early and lingered into the fall. Heat illnesses and death statistics broke records. The coronavirus pandemic restrictions complicated heat relief efforts. As part of the Arizona Heat Preparedness and Resilience Workgroup, a stakeholder collaboration with municipalities, health departments, academia and non-profits, cooling center provisioning was examined, best practices shared, and efforts to improve thermal comfort opportunities for the most heat-vulnerable were attempted within COVID-appropriate guidelines.

Historical record heat in 2020 (Phoenix, AZ)

110°F	**53 DAYS** (average 21)
100°F	**145 DAYS** (average 111)
90°F	**191 DAYS** (average 173)

The Drought and Heatwave of Summer-Fall 2020 in the Western United States was recognized by the National Oceanic and Atmospheric Administration (NOAA) as a billion dollar weather and climate disaster (NOAA, 2020). Record breaking heat dwarfed records from previous years. There were 145 days in Phoenix, Arizona in 2020 over 100° F and 53 days over 110° F, both of which are historical records. The National Weather Service, Phoenix Office, had Heat Warnings in effect on 48 days in summer 2020, compared to an average of 18 in prior years.

Heat Warning Days (Phoenix, AZ)

Average **18** 2020 **43**

Impacts from Excessive Heat

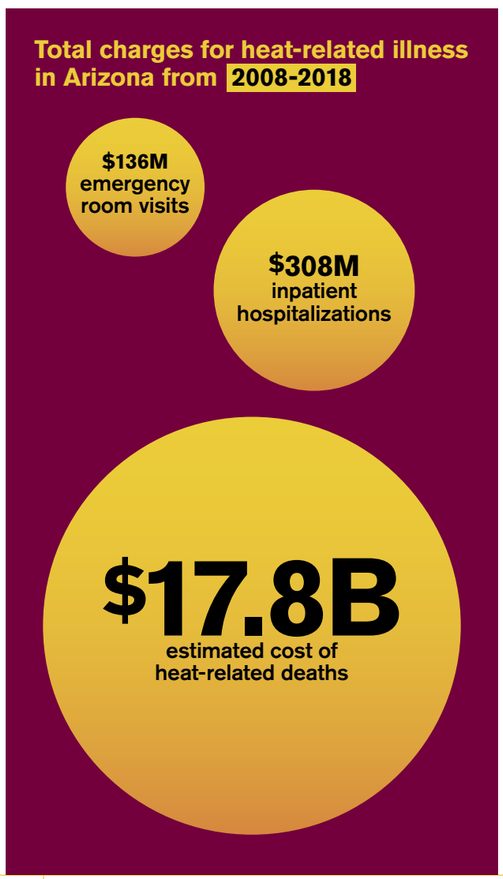
PUBLIC HEALTH

2020 broke historical records regarding the magnitude of heat-related illness and deaths in Arizona. Preliminary statewide syndromic surveillance data found more than 3,700 Emergency Department visits for heat-related illness occurred from May-September 2020. As a point of comparison, between 2015-2019, an average of 2,870 visits per year occurred. 2020 was similar in terms of stratifications of risk factors presented above when compared to 2015-2019 data.

From 2015-2019, heat-related deaths had averaged 230 per year, but the average had increased to more than 250 in the last 3 years. Preliminary tabulation of heat-related deaths for

2020 identified more than 510 heat-related deaths, which is a record. Risks of heat-related death by sex, age, and location were similar compared to deaths in 2015-2019.

Heat-related illness is preventable, even for the most vulnerable populations including older adults, infants and children, people with chronic conditions, people in poverty, athletes, and outdoor workers. According to an analysis by the Arizona Department of Health Services (ADHS), total charges for heat-related illness in Arizona from 2008-2018 have cost $136 million from emergency room visits and $308 million from inpatient hospitalizations. Additionally, heat-related deaths were estimated to cost $17.8 billion from 2008-2018 based on the value of statistical life. These figures equate to annual averages of about $40 million for heat-related hospital-related visits and $1.6 billion for heat-related deaths (ADHS).

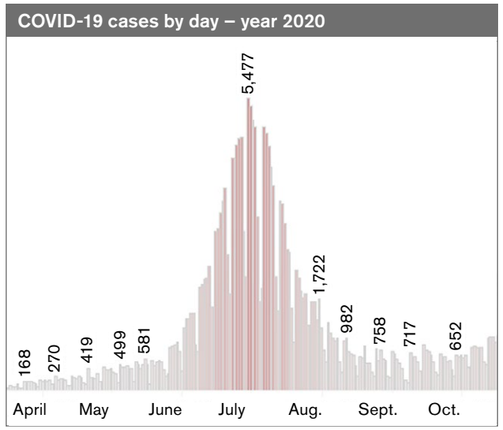


Increased household costs

The Arizona heat can also create challenges in terms of air conditioning use. Air conditioning is the number one protective measure for preventing heat-related illness. This intervention is limited by a person's ability to afford the cost of running air-conditioning, maintenance of a unit, and purchase of a unit. Survey data collected by the Maricopa County Department of Public Health, ADHS, and Arizona State University has repeatedly identified cost as a barrier to using air-conditioning. The most heat-vulnerable residents also spend a greater proportion of their income on energy costs. Low income households nationally spend more than three times that of more affluent households on utilities, 7.2% vs 2.3%, according to the American Council for an Energy Efficient Economy. This translates to many households facing difficult choices, whether to pay for air conditioning, rent, or other essentials. These decisions can be particularly challenging for certain populations, such as older adults with chronic medical conditions who may have to choose between use of air conditioning and prescription medication costs.

The COVID pandemic exacerbates thermal injustice

The Covid-19 pandemic reached its first major peak in Arizona during the summer months, compounding risks posed by extreme heat. Many residents found themselves at home--and thus needing to cool their homes--for many more hours than in previous years. A statewide moratorium on utility disconnections and evictions largely eliminated the risk of sudden loss of cooling resources and shelter across the state. However, these provisions neither eliminated nor reduced the bill burden associated with cooling costs; they simply delayed potential consequences of nonpayment. As such, the typically high energy bills that many Arizona residents face in the summer months, which can already be catastrophic, were pushed even higher for residents who were no longer able or willing to reduce energy consumption during daytime and "peak" hours due to stay at home orders from the Governor's office.



ADHS COVID-19 Data Dashboard During Arizona Heat Season, Updated 2/18/21

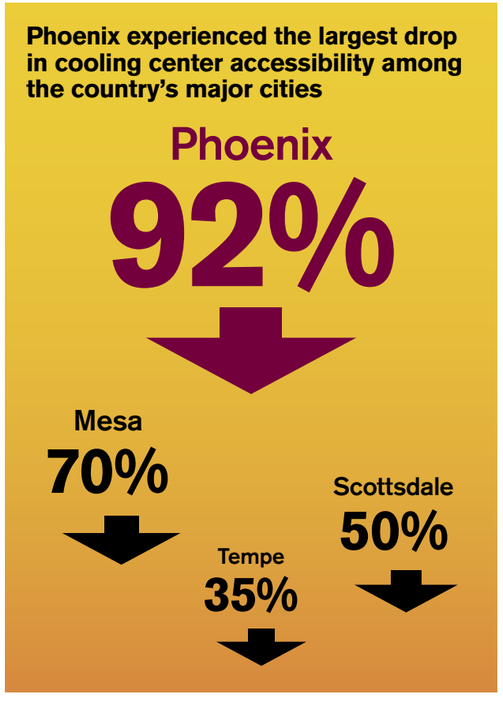
Cooling Center impacts

Local community cooling resources vary by coordination and capability. Areas such as Maricopa, Pinal, and Yuma Counties have developed partnership networks that provide information and resources for addressing heat-related illness, such as cooling centers (generally defined as an indoor air conditioned location freely available for public use) and water donation sites. Other counties may have minimal cooling center availability. The varying levels of resources, even during non-Covid years, can adversely affect Arizonans' ability to cope with the heat.

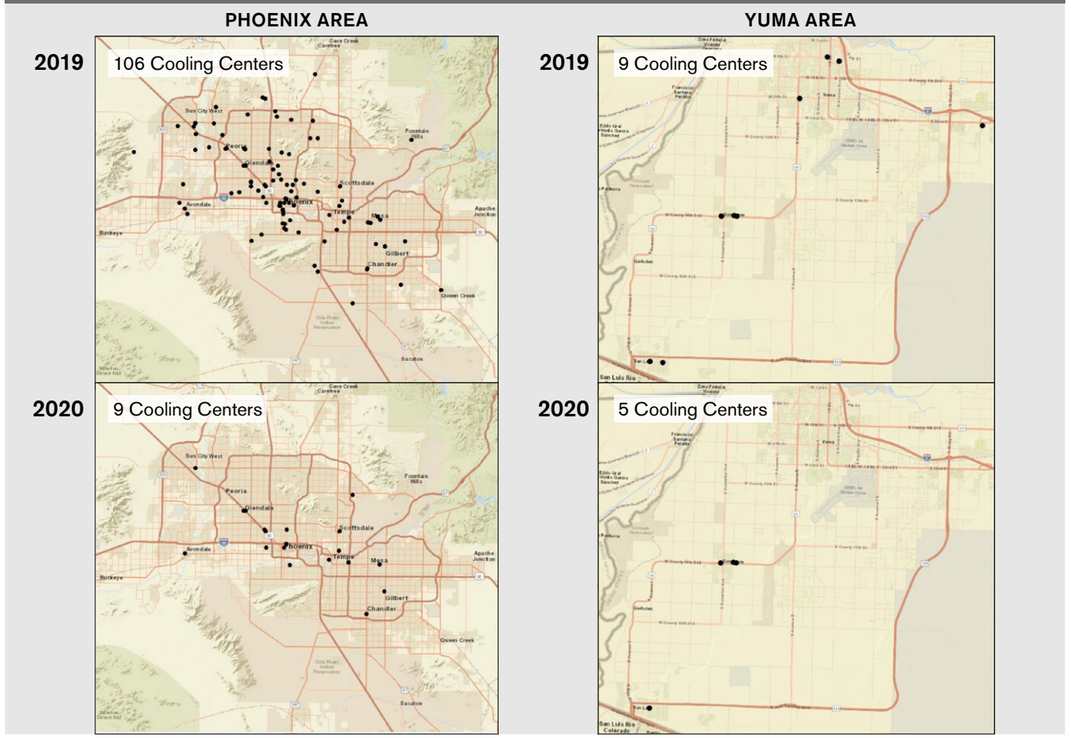
In summer 2020, the extreme heat arrived early in the year. The first Heat Warning in Phoenix for 2020 was issued from April 26-30. Generally, cooling center operations are mobilized in May - September. This early onset heat limited the readiness for jurisdictions to have cooling centers open. Additionally, many jurisdictions were still developing COVID-19 safety protocols regarding operating a cooling center, water site, or donation site. The U.S. Centers for Disease Control and Prevention released COVID-19 and Cooling Center guidance in April 2020 which helped to expedite these processes.

The number of cooling centers available to the public was severely reduced in 2020 as a consequence of building closures, a lack of volunteers, and other restrictions associated with the pandemic. In 2019, there were 106 cooling centers available in Maricopa County. Only 19 such centers were open in 2020, an 82% reduction. Similarly, there was an 83% reduction in the number of people who live within a half-mile of a cooling center. Due to limited resources, analysis of other Arizona counties was not completed in 2020, but could be a possibility in 2021.

The significant reduction in cooling center network accessibility in 2020 was experienced unevenly by different cities in Maricopa County. Phoenix experienced the largest drop among the county's major cities, with more than a 92% reduction in accessibility. Other cities experienced more modest decreases, including a 70% reduction in Mesa and a 50% reduction in Scottsdale. Residents of Tempe had the highest access to cooling centers in 2020, with more than 2% living within a half-mile of a heat refuge center, the highest number (by a considerable margin) of any municipality in the county. Tempe experienced only a 35% reduction in cooling center access from 2019 to 2020.



Heat Relief Network Cooling Centers in Maricopa and Yuma County*



As listed on Maricopa Association of Government Heat Relief Network and Yuma County Public Health Services District maps.

Maricopa County's smaller municipalities were hit particularly hard by Covid-related closures with respect to cooling center access. In a typical summer, many of these jurisdictions are home to only one or two cooling centers. In summer 2020, many of them were not able to open a single cooling center, leaving their residents needing to look to other towns and cities to find such a facility.

The extended summer of 2020 along with the impacts of the COVID-19 pandemic complicated efforts to provide cooling opportunities for residents. Informal cooling spots, such as movie theaters, malls, and libraries, were closed to the public, and official cooling center options were severely limited during the summer months. There were, however, a handful of unique solutions implemented that alleviated suffering and, possibly, saved lives.

Municipal examples

Of the cooling centers that remained open, extra precautions were taken to protect the health of cooling center providers and their clients. In Arizona, cooling centers providers used the CDC guidance on reducing the risk of COVID-19 while operating a cooling center when formulating safe cooling center opening and operating plans.

As part of a heat relief network strategy, cooling centers, those that provide indoor air conditioned environments, were complemented by hydration stations that collect and/or give away bottled water and pop-up emergency heat relief tents that are open during the National Weather Service Heat Warnings only. While there are a range of options for providing heat relief, this report focuses on those centers that provide indoor, air conditioned environments under COVID-10 conditions. Other innovative options, such as providing a hydration station in a cemetery and pop-up tents that provide respite exist but were beyond the scope of this report.

City of Avondale Community Center

The City of Avondale did not close their community center during the pandemic and remained open for regular services while also serving as a cooling center. COVID protocols such as mask wearing and social distancing were initiated and the design of the space allocated to providing respite was changed (see image below). Chairs were spaced six feet apart and floors were marked to ensure compliance with the CDC guidelines. Table and counter plexiglass shields provided additional barriers. Chairs and tables used by patrons were disinfected after every visit. Signage outside the facility requested that those experiencing symptoms of COVID-19 or exposed to family members that have COVID-19 to not enter the facility.

Photo used with permission from the City of Avondale.

As with many providers of heat relief, using a space within a community center allows for patrons to get out of the heat, cool down, and drink some water. This usually is located in an entry area and during non-COVID times, is concurrent with community programming. So while only seven people came to the Resource Center specifically for a cool refuge, the center served near 3,400 patrons from May to September of 2020 and distributed more than 1,300 bottles of water.

City of Tempe Converts Unused Municipal Space

Many municipal buildings were closed during the COVID-19 pandemic that usually serve as long standing cooling centers, such as the public library and community centers. Seeing a need for Tempe residents who needed to cool off but had no place to go, the City of Tempe opened a Senior Center to serve as a cooling center staffed with Parks and Recreation personnel from closed facilities.

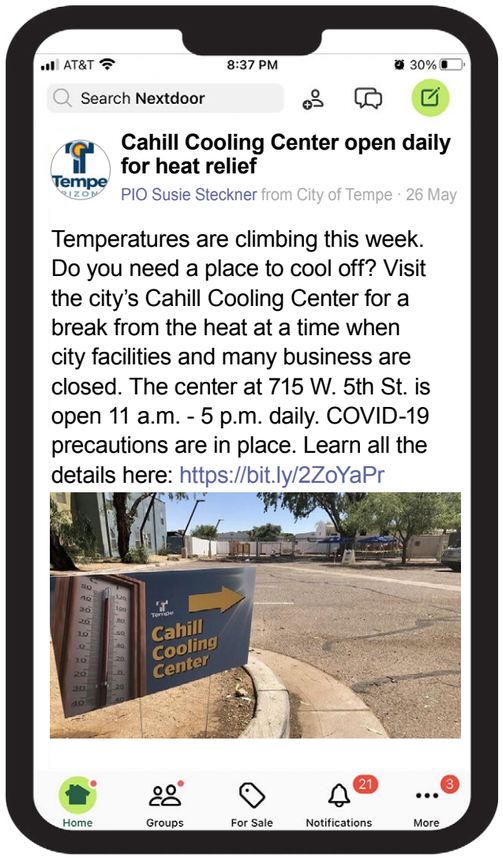
As a first step, a protocol was collaboratively developed (see Appendix C) by the City of Tempe Human Services, Community Services and Office of Sustainability departments. This protocol incorporated guidelines from the CDC for Covid-19 safety and described detailed precautions for both employees and patrons. The City of Tempe Parks & Recreation Code of Conduct served as the guidelines for patron behavior. Masks were used by all employees and patrons. Upon entering the facility, employees and patrons answered screening questions and had their temperature checked. Signs were constructed outside of the facility to help identify the repurposed senior center as a cooling center. Precautionary signage was placed at the entrance and inside the cooling location. A shaded canopy was built outside the facility to provide shading for those waiting to enter.

Photo used with permission from the City of Tempe.

Upon entering the building, employees asked screening questions, took the patron's temperature and assigned a table number, noting the check-in time on a sign in sheet. Tables were placed

more than six feet apart and patrons identifying as families were seated together at one table. Charging stations were provided for cell phones and water was distributed. Patrons also had the benefit of Care 7 resources (social services), providing assessments for additional services including basic need items such as hygiene products and bus passes, as well as connection to mental health services, if needed. A detailed plan for restroom use, and cleaning and sanitation of the facility before, during, and after hours was established to limit the spread of COVID.

This converted cooling center was used 604 times during four weeks of operation. It was closed and the cooling center moved to another more central location, the Pyle Adult Recreation Center, for the duration of the summer as other public buildings opened up and was used 1,864 times. The same promotion of safety and health protocols were carried forward to the Pyle Adult Recreation Center. It is important to note that everyone who arrived at the Tempe temporary cooling center was allowed into the center or was provided services to meet their needs.



Sample NextDoor posting from the City of Tempe advertising cooling center availability during the Covid-19 pandemic.

Phoenix Convention Center transformed into a specialized cooling center

People experiencing homelessness were particularly vulnerable when the pandemic forced closures of many institutions that provide heat relief. The closure of libraries, community centers, and public buildings greatly limited options for visiting indoor, air conditioned space to cool off during the day. The City of Phoenix tackled this issue by opening the Phoenix Convention Center as a cooling center for patrons registered at the Human Services Campus, the largest homeless shelter in the state of Arizona. The Phoenix Convention Center Heat Respite Program was open from May 31 through September 30, 2021 operating seven days a week from 9:00 a.m. until 7:00 p.m. and served a total of 27,189 patrons, with more than 200 patrons attending daily.

Photos used with permission from the City of Phoenix.

The patrons first needed to register and obtain an identification card from the Human Services campus. Bus transportation was provided between the two locations during operating hours. Once inside the center, lunch and dinner was provided by St. Vicente de Paul: a total of 46,410 hot meals and 63,648 bottles of water were distributed. The City of Phoenix Homeless Services Division caseworkers and Parks and Recreation employees staffed the convention center and provided guidance on resources and services. Two police officers, along with security guards, ensured patron safety. Services were provided to patrons, including computer access to conduct housing and employment searches as libraries were shuttered. The six computer stations, provided by the City of Phoenix IT and Library Departments, were used by 1,253 patrons between August 31 and September 30, 2021.

The safety, health and well-being of the patrons were addressed through the provision of health services for non-emergency medical issues through the Parsons Family Health Center at Circle the City. Nurses and doctors from Circle the City administered 38 free flu shots. CAN Community Health also provided free health screenings and medical tests including STD, blood pressure, and glucose tests. The City of Phoenix Caseworkers IIs provided daily referral services and connected 115 patrons with employment and housing information, clothing, and local shelter referrals. The city was assisted by community partners. Community Bridges Inc. navigators engaged with twenty individuals, enrolling them in on-going services. Southwest Behavioral Health offered mental health and justice system services, engaging 42 patrons. The United Methodist Outreach Ministries (UMOM) navigators offered services twice weekly for youth under the age of 25 and engaged with 17 youth.

Photos used with permission from the City of Phoenix.

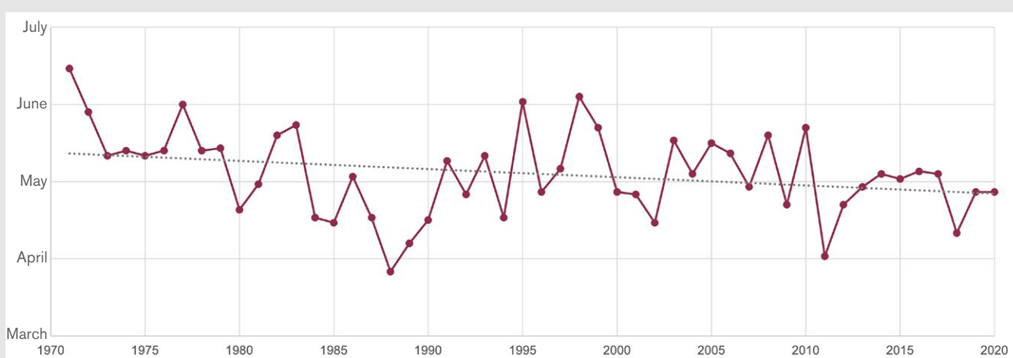
LESSONS LEARNED

Early Preparation Necessary

High temperatures arrived sooner than expected and challenged established cooling center/ heat relief network planning schedules. As a result, there was a need for thermal comfort provisioning, but locations were not yet ready. Average temperatures differ by region, but human thresholds for coping with extreme heat in Maricopa County showed minimum risk at 79 degrees, increased risk at 91 degrees, and excess risk at 105 degrees for heat-related mortality (Pettiti et al, 2016). Cooling center planning should commence at least sixty days before the earliest calendar date on which a stakeholder-identified threshold temperature has been observed.

Facilities should be prepared to open thirty days later, and be fully operational when temperatures typically first hit the threshold, or if temperatures exceed the threshold earlier (whichever comes first). These calendar dates and thresholds should be re-evaluated regularly, particularly in the context of a changing climate. In Phoenix, for example, the first 100 degree day of the year has been shifting earlier by one calendar day per every four years. Local National Weather Service forecast offices and the Arizona State Climate Office are useful resources for accessing historical weather records to help establish operation and decision calendars.

Day of Year with First Maximum Temperature of 100°F in Phoenix



Logistics for opening and operating cooling centers can be time consuming and it is important to coordinate with other official and ad hoc cooling center providers so that services are not redundant in some locations and missing in needed communities. To this point, municipalities cannot be expected to be the sole provider of heat relief services and other institutions (such as universities and faith communities) and service oriented non-profits can close the existing gaps in providing cooling opportunities for the most vulnerable.

Communications about what a cooling center is, where they are located, and the hours they are open should also be publicized beginning sixty days before the heat season. A public awareness campaign that includes hydration and cooling center access maps, signage for cooling center and hydration stations, and heat-health safety tips should be heavily promoted and launched before and during the extreme heat season. Street signage linking public transit nodes to the cooling center is important especially since research has shown that residents are unaware of heat relief network locations publicized through the traditional public communication channels such as television and print media.

Optimization analysis can help prioritize recruitment into evolving networks

The severe reductions in cooling center capacity in 2020 revealed a lack of decision support tools that could help network coordinators prioritize locations for adding new facilities to the network. The sudden and drastic change in the network structure erased years of institutional knowledge accumulation and efforts to grow the network to meet community needs. As facilities' ability to participate in the network evolved over the course of the summer, network coordinators and partners were forced to contemplate where the most important gaps were in the locations of cooling centers. It became apparent that, beyond institutional knowledge, there were no tools available to help decision-makers identify the locations most in need of additional cooling centers. While the subject of optimizing cooling center locations has been discussed in the academic literature for several years (e.g., Fraser et al. 2018), the experience in 2020 brought a new sense of urgency to the topic.

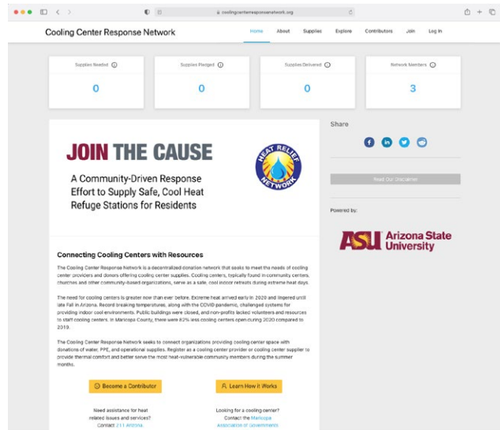
Partners are now working to develop optimization models that can help cooling center network coordinators direct recruitment efforts to locations where the opening of a cooling center might have a disproportionately positive impact compared to other potential locations. Network partners are collaboratively identifying criteria for candidate sites that could be included in a cooling center network, as well as variables and data sources that can be used to measure the level of cooling center need, or demand, throughout the communities. One major challenge in operationalizing an effective optimization model for cooling centers include incomplete historical information about cooling center usage, especially concerning the spatial "catchment" area from which people may come to use a cooling center, their mode of transportation to get there. Collecting additional data from and about cooling center visitors in upcoming summers will be critical to improving optimization models. Other major challenges include the lack of reliable and consistent information about the locations of all vulnerable populations who might benefit from using cooling centers, especially those experiencing homelessness, as well as different interpretations of vulnerability and target populations that different cooling centers strive to serve. More sophisticated optimization models should take into account the time-varying nature of cooling center access, as not all facilities are open for the same hours of the day or days of the week, and some are only activated during Excessive Heat Warning days as determined by the National Weather Service.

Supply Assistance at Cooling Centers

Providing building space along with staff or volunteers to run the cooling center is only part of the solution in developing more cooling centers. One barrier to operating cooling centers are the costs of cooling supplies, operational materials and the additional electricity costs to cool the building, especially if the building is being opened up solely for the purpose of providing a

cooling center. Currently, large non-profits, like the Salvation Army and United Way, have been coordinating donations of water and other supplies to established cooling centers.

To help to alleviate this burden, a decentralized donation network platform is being pilot tested in summer 2021 that matches the needs of cooling center providers with donors offering cooling center supplies. Cooling center providers register, go through a verification process, and post their needs on the dashboard. Donors, whether individuals or organizations, also go through the registration and verification process before committing to supplying donations to those centers in need.



Screenshot of new cooling center response network platform to be launched in summer 2021.

https://coolingcenterresponsenetwork.org

CONCLUSIONS

Preparation for extreme heat events is challenging in itself. However, as the summer of 2020 made evident, being prepared for the effects of cascading events is of paramount importance. The COVID-19 pandemic may not be the last major event that challenges heat preparedness. Other catastrophic events such as power outages, fires, and incidents of mass violence may impact the ability to provide cooling opportunities. Early planning and adequate resource allocation for both emergency situations and long-term mitigation strategies will help to provide more thermal comfort for the most vulnerable residents and help prepare for other unknown deleterious conditions that arise alongside increasing urban heat events.

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APPENDICES

APPENDIX A:
Steps for implementing cooling systems from "CDC Use of Cooling Centers to Prevent Heat Illness"

Suggested steps and considerations for implementing a cooling center

1. Scoping
   a. Are cooling centers a feasible, appropriate, and cost-effective strategy for your jurisdiction?
   b. Do cooling centers already exist in your jurisdiction? Who runs them?
2. Existing landscape and identification of partners
   a. What is the role of the health department in cooling center implementation?
   b. Do existing groups provide cooling centers?
   c. Are there other government agencies and non-profit partners that should be involved?
   d. What other key stakeholders should be involved?
   e. Is there available budget and staff?
3. Assessment of vulnerable populations and geographic scale
   a. Which populations should cooling centers target?
   b. Are there particularly vulnerable neighborhoods?
   c. Is there an existing Heat Vulnerability Index? If not can one be created?
   d. Which stakeholders can help identify populations of concern?
4. Planning
   a. Check agency policies, local laws, and ordinances
   b. Identify relevant materials and utilize existing guidance
   c. Identify staff and responsibilities
   d. Finalize locations
   e. Identify transportation options
   f. Determine thresholds for triggering cooling centers
   g. Create timeframe and budget
5. Implementation
   a. Implement plan when a heatwave occurs
   b. Communicate and provide information
6. Evaluation and publication
   a. If resources are available, the intervention should be monitored and evaluated
   b. Publication in the grey literature or peer-reviewed literature will aid other health departments

APPENDIX B:
Excerpts from CDC COVID-19 and Cooling Centers Guidance Document

Centers for Disease Control and Prevention

Coronavirus Disease 2019 (COVID-19)

COVID-19 and Cooling Centers

Interim guidance to reduce the risk of introducing and transmitting SARS COV-2 (the agent responsible for causing COVID-19 disease) in cooling centers.

Who this guidance is for: Federal, state, local, and tribal jurisdictions in the United States considering opening or operating cooling centers during the COVID-19 pandemic.

Purpose: This document provides interim guidance to reduce the risk of introducing and transmitting SARS COV-2 (the agent responsible for causing COVID-19 disease) in cooling centers. It should be used in conjunction with existing cooling center operation and management plans, procedures, guidance, resources, and systems.

This interim guidance is based on what is currently known about the transmission and severity of coronavirus disease 2019 (COVID-19).

Overview

Extreme heat is a major public health concern in the United States. Exposure to extreme heat can cause a variety of health problems, including heat stroke and death. Cooling centers (a cool site or air-conditioned facility designed to provide relief and protection during extreme heat) are used by many communities to protect health during heat events. However, the use of cooling centers can result in congregating of groups of at-risk people, such as older adults or those with respiratory diseases, and potentially provide a route for the transmission of the SARS COV-2 virus and subsequent development of COVID-19 disease among both visitors and staff.

Considerations and Potential Intervention Strategies

Utility Assistance

Consider implementing or expanding programs that provide utility assistance, such as the low-income home energy assistance program (LIHEAP) or similar methods that provide financial assistance for home air conditioner use. A temporary ban on utility shut-offs during heat waves would allow people to continue using home air conditioning. This strategy could lower the number of people utilizing cooling centers.

Staff and Volunteers

Plan for staff and volunteer absences. Develop flexible attendance and sick-leave policies. Staff (and volunteers) may need to stay home when they are sick, caring for a sick household member, or caring for their children during school dismissals. Identify critical job functions and positions, and plan for alternative coverage by cross-training cooling center staff.

Screening and Alternative Sites for Symptomatic and Asymptomatic Individuals

If resources are available, consider implementing verbal screening or temperature checks before admitting visitors to the cooling center. If possible, provide alternative cooling sites for those showing symptoms of COVID-19 (i.e., fever, cough, shortness of breath). This may be separate rooms within cooling centers or a space that can be used to accommodate visitors with symptoms and separate them from others. Designate an alternate site, or a separate room and bathroom (if available) for visitors with mild illness who remain at the cooling center. Be prepared to contact emergency officials (call 911) in the case of severe illness requiring medical assistance.

Physical Distancing

Maintain social (physical) distancing within cooling centers, ideally at least six feet between individuals. Consider separation of furniture and creating spaces for individual family units (families who live together do not need to maintain physical distancing in a cooling center). In larger cooling center facilities, it may be possible to provide adequate space for social distancing among visitors. Smaller cooling centers can limit the number of visitors, in accordance with local guidelines that limit the size of gatherings. This could lower capacity, so consider setting up a greater number of smaller cooling centers. If a lack of potential cooling center sites arises, emergency alternatives such as using parked air-conditioned buses can be utilized. Communities may also partner with closed businesses, such as movie theaters, as alternative cooling sites.

Air Filtration

It may not be possible to locate cooling centers in buildings with high ventilation capacity similar to healthcare facilities. If possible cooling centers should be equipped with air exchange systems, and be located in buildings with tall ceilings. Utilize the highest efficiency filters that are compatible with the cooling center's existing HVAC system, and adopt "clean-to-dirty" directional airflows. If resources allow, ceiling fans with upward airflow rotation combined with upper-air ultraviolet germicidal irradiation (UVGI) disinfection systems can be utilized. When conditions allow (low humidity), shaded outdoor spaces with cross-draft airflow augmented by evaporative coolers may provide a safer alternative.

Cleaning

Follow the Centers for Disease Control and Prevention (CDC) cleaning and disinfection guidelines for community facilities, and cleaning facilities if someone is sick. Because even individuals with no symptoms can still transmit the virus, and the virus can survive for several days on non-porous surfaces, it is important to continue routine cleaning and disinfection (every day if possible) with a focus on high touch surfaces, including those in common areas and bathrooms.

Communication

Enhance communication about COVID-19 onsite. Use health messages and materials developed by credible public health sources, such as your local and state public health departments or CDC. Read more about everyday preventive actions. Share or post COVID-19 posters and CDC Fact Sheets and keep your visitors informed about public health recommendations to prevent disease spread. Messaging may include:

- Posting signs at entrances and in strategic places providing instruction on hand hygiene, respiratory hygiene, cough etiquette, and cloth face coverings.
- Providing educational materials about COVID-19 for non-English speakers, as needed.
- Encouraging ill staff and volunteers to stay home (or be sent home if they develop symptoms while at the facility), to prevent transmitting the infection to others.

Identify and address potential language, cultural, and disability barriers associated with communicating COVID-19 information to workers, volunteers, and those visiting cooling centers. Learn more about reaching people of diverse languages and cultures.

Prevention Supplies

If available, provide COVID-19 prevention supplies onsite at cooling centers. Have supplies on hand for staff, volunteers, and visitors, such as soap, alcohol-based hand sanitizers that contain at least 60% alcohol, tissues, and trash baskets. Visitors and staff should wear a cloth face covering, or if supplies are available, be given a clean disposable facemask, even if they are not showing any symptoms. Cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance. Place posters that encourage hand hygiene to help stop the spread at the entrance to the facility, at sinks in restrooms, and in other areas where they are likely to be seen. If water bottles are distributed at the cooling center, ensure visitors to not share bottles or glasses.

APPENDIX C:
City of Tempe Temporary Cooling Center Protocol: Cahill Senior Center

Employee Health

- ☐ All employees shall always wear a protective mask and gloves.
- ☐ Employees conducting screenings shall wear a cloth or surgical mask, gloves, and eye protection.
- ☐ Employees shall wash their hands prior to putting on protective equipment. If removing protective equipment, employees shall use extreme precaution not to contaminate their equipment.
- ☐ In the event an employee removes their gloves, they shall obtain a new pair.
- ☐ Prior to all shifts, employees shall complete a health screening and have their temperature checked.
  - ☐ If the employee answers "yes" to any of the questions or has a temperature greater than or equal to 100.4 F, and the symptoms are not related to known allergies or asthma, the employee shall be sent home.
  - ☐ If the employee becomes sick during the day, they should be sent home immediately.
  - ☐ All employees shall follow City of Tempe Personnel Rules, Rule 4, Section 404: Safety
- ☐ Employee Screening Questions
  - ☐ Since the last day you worked, have you developed any of the following:
    - ☐ Do you have a fever 100.4 F or greater?
    - ☐ Do you have a new cough?
    - ☐ Do you have new shortness of breath?
    - ☐ Do you have a sore throat?
    - ☐ Do you have any flu-like symptoms (fever, chills, muscle aches, cough, congestion, runny nose, headaches or fatigue)?

Patron Health

- ☐ Patron entering the cooling center shall be screened and have their temperature checked
  - ☐ If a patron answers "yes" to any of the questions or has a temperature greater than or equal to 100.4 F, the patron will not be admitted to the cooling center
    - ☐ If the reason the patron is not admitted is due to a temperature at or above 100.4 F, they will be provided a shaded seat outside of the facility and may be rescreened in 10 minutes.
    - ☐ If the patron is not admitted for any other reason, they will be provided a shaded seat and a bottle of water outside of the facility, if available.
      - ☐ Care 7 will be notified and provide additional assistance when available
- ☐ Patron Screening Questions
  - ☐ Are you under quarantine restrictions?
  - ☐ Are you currently ill?
  - ☐ In the past 24 hours have you experienced any of the following symptoms that are not related to preexisting conditions (asked independently for each of the below listed symptoms)
    - ☐ Fever greater than 100.4 F
    - ☐ New Cough
    - ☐ New Shortness of breath or difficulty breathing
    - ☐ Chills
    - ☐ Repeated shaking from chills
    - ☐ Muscle Pain
    - ☐ Headache
    - ☐ Sore Throat
    - ☐ New loss of smell or taste
- ☐ Unaccompanied minors may not enter the cooling center and shall not be screened. In the event of an unaccompanied minor needing heat relief, Care 7 will respond and provide additional assistance when available.

Operations

- ☐ **Signage**
  - ☐ Exterior signage
    - ☐ One (1) double sided sandwich board 36" x 24" placed at the street entrance to 715 W. 5th Street.
    - ☐ Two (2) yard sale signs will be placed along the east parking lot directing patrons to the entrance of the cooling center
    - ☐ One (1) 24"x18" sign with general information about the cooling center will be placed at the entrance prior to the screening staging area (see below).
  - ☐ Interior signage
    - ☐ One (1) interior sign with precautions and instructions will be placed at entrance to the multipurpose room serving as the cooling location.
    - ☐ Two (2) additional signs with duplicate information will be placed in the multipurpose room and in front of the restrooms.
    - ☐ Each table will have a laminated sign identifying the table number and an additional laminated sign with precautionary reminders.
- ☐ **Setup**
  - ☐ The entrance to the cooling center will be at the Southeast corner of the facility.
  - ☐ A shade canopy will be setup to provide exterior shading prior to entrance.
  - ☐ The initial screening questions will occur inside the first entrance door and their temperature will be taken and marked pass or fail based on 100.4 F or greater or responding yes to any of the screening questions
  - ☐ A second employee will assign a table number and sign-in the patron noting check in time.

- ☐ The 3'x6' tables will be designated for families: 4 tables can accommodate up to 6 familial units each
- ☐ The 3'x3' tables will be designated for individuals and/or couples: 6 tables can accommodate up to 2 patrons per table
- ☐ Total capacity range: 10 min to 36 max

- ☐ Electrical receptacles will be available at four (4) of the tables
- ☐ Coolers with water will be located along the North wall in the cooling center. Employees will distribute the water.
- ☐ Lobby furniture and computers will be covered with plastic to prevent contamination of fabric covered furniture.
- ☐ Employees will rotate assignments every 30 minutes to prevent fatigue and heat stress.

☐ **Registration/Table Assignment**

- ☐ After screening and temperature reading, staff will sign-in patrons and record time of entrance into the cooling center.
- ☐ Employees will assign a table based on the number of individuals/family.
- ☐ Employees will ask patrons if device charging is necessary.
  - ☐ Device charging will be available upon request and availability
  - ☐ Devices may only be charged at the participants' assigned table.
  - ☐ If a table with an electrical receptacle is available, it shall be assigned.
  - ☐ If an electrical receptacle is not available, employees will assign an alternative table.
    - ☐ When a table with an electrical receptacle is made available, employees will have the table and chairs sanitized, and then move the individual(s) that requested device charging capability.
    - ☐ Patron shall be responsible for removing all devices prior to departure.
  - ☐ Patrons identifying as family members may be assigned the same table with a maximum 6 per family table and 2 per small table, distancing between tables will be a minimum of 6 feet.

☐ **Record Retention**

- ☐ All documentation related to the cooling center including but not limited to screening questionnaire, sign-in and sign-out sheets shall be retained onsite in the custodial closet adjacent to the multipurpose room for the duration of the cooling center operations.
- ☐ Records will be collected, dated, and filed at the end of each cooling center operations date.
- ☐ At the conclusion of the cooling center operation, records will be retained in accordance with state and local records retention laws.

☐ **Restroom Use**

- ☐ Patron Use
  - ☐ An employee will be assigned as a restroom monitor.
  - ☐ Two (2) single stall restrooms will be available.
  - ☐ Only one (1) adult may enter the restroom at a time (people with disabilities requesting assistance from a family member will be accommodated).
  - ☐ Children may be accompanied in the restroom by one parent or guardian.
  - ☐ No line shall form for use of restroom.
    - ☐ If both restrooms are in use, additional patrons shall notify the restroom monitor who shall note the patrons name and table number.
    - ☐ The restroom monitor will let the patron know when the restroom is available.
  - ☐ The patron shall return to their table.
  - ☐ Patron shall limit restroom use to five (5) minutes per use.
- ☐ Employee Use
  - ☐ Employees shall use the employee staff break room on the second floor of the Westside Multigenerational Center.
  - ☐ Employees shall remove gloves and wash hands with soap and water before and after using the staff break room restroom.
  - ☐ Employees will properly remove their gloves and dispose of them in the staff break room trash, wash their hands at the break room sink and then proceed to use the restroom.
  - ☐ Employees shall wash their hands in the restroom prior to departing. Employees must obtain a new pair of gloves prior to returning to service.

☐ **Additional Resources**

- ☐ Care 7
  - ☐ Provide assessments for additional resources when available.
  - ☐ Provide immediate stabilization and de-escalation services for patrons.
  - ☐ Provide connection to mental health services if needed and when necessary and appropriate
  - ☐ Provide basic needs items (hygiene products, bus passes, etc.).
  - ☐ If an unaccompanied minor visits the cooling center, Care 7 will provide assistance.
  - ☐ Care 7 will provide bottled water in large ice chests daily.
- ☐ Employees will provide patron(s) with a water bottle at their table. Patrons shall not retrieve a water bottle from the ice chests.

☐ **Patron Departure**

- ☐ Patron shall depart the cooling center no later than 5 p.m.
- ☐ Patron shall take all personal belongings with them.
  - ☐ Any belongings left behind will be retained for 48 hours at which time will be sent to the Tempe Police Department.
- ☐ Patron will exit the Southeast single exterior door and will continue through the East metal exit doors to the parking lot.

- ☐ Patron shall depart the property upon departure from the cooling center.
- ☐ Employees will note departure time.

Cleaning & Sanitization Procedure

- ☐ **Entry**
  - ☐ Patron shall use the handwashing station prior to receiving screening.
  - ☐ Patrons will be provided a surgical mask and required to wear during time at Cooling Center.
  - ☐ Infrared thermometer should not touch patron, but in the event of contamination, employees shall sanitize the thermometer and let dry prior to next use, using an alternate thermometer for the next patron
- ☐ **Departure of Patron**
  - ☐ Custodial employees will sanitize the table, chairs, laminated signage, and the immediate area surrounding the assigned table.
  - ☐ A minimum of 10 minutes of "dry" time will be required prior to reassignment of table.
- ☐ **Restrooms**
  - ☐ Custodial employees will sanitize each restroom after every use.
  - ☐ Restrooms shall remain unoccupied for a minimum of 10 minutes after sanitization and prior to next use.
  - ☐ Sanitization will include all restroom fixtures and the interior and exterior door handles.
  - ☐ Staff break room restroom will be sanitized at the end of each operating day.
- ☐ **Water Fountain**
  - ☐ Custodial employees will sanitize each water fountain immediately after each use and shall not be used for a minimum of 10 minutes after sanitization and prior to next use.
  - ☐ Patrons may use water fountains after they are sanitized and dry.
- ☐ **Daily Closing**
  - ☐ Custodial employees will sanitize all tables, chairs, restrooms, and water fountains to prepare for next day operations.
  - ☐ The cooling center will have a deep cleaning provided by a contract vendor three (3) times per week during operations, which will occur prior to opening on those dates.

Emergency Procedures

- ☐ **Fire Alarm**
  - ☐ Patrons shall leave their belongings and promptly exit the cooling center through the Southeast exit door.
  - ☐ If determined it is safe to reenter the facility, each patron shall use the hand washing station prior to returning to their assigned table.
  - ☐ A minimum of six (6) foot distancing shall be used when exiting, using the hand washing station, and when reentering the building.
- ☐ **Power Outage**
  - ☐ Patron shall gather their personal belongings and promptly exit the cooling center.
  - ☐ An employee will record departure times.
  - ☐ If power is restored prior to 5 p.m., patron shall complete the entry process including screening.
  - ☐ Custodial employees will sanitize all tables, chairs, and surrounding areas prior to reassignment.

Reporting Procedures

- ☐ At the conclusion of each operating date, information will be reported to Tempe Fire & Medical Rescue, consisting of a number of daily patrons, and burn rate of personal protective equipment and sanitizing supplies.

Cooling Center Closure

- ☐ The City may close the facility at any time in its sole discretion.
- ☐ When the Cahill Senior Center returns to normal operations or it is determined by the City's Emergency Operations Command that the City's inventory of Personal Protective Equipment cannot support the cooling center operations, the cooling center will be closed or operation protocols will need to be addressed prior to resuming operations.
- ☐ When the cooling center is closed, the facility will return to a heat refuge location with access to the lobby area of the facility for heat relief.
- ☐ Employees will return the multipurpose room to standard setup for regular operational use.
- ☐ All remaining PPE will be returned to Tempe Fire Medical Rescue.
- ☐ All records will be retained in accordance with state and local records retention laws.

APPENDIX D:
City of Tempe Parks and Recreation Code of Conduct Applicable at Tempe Cooling Centers

City of Tempe
Parks & Recreation Code of Conduct

Tempe Parks & Recreation services and facilities are available to the community for everyone to enjoy. To ensure they remain true to their intent; the City has developed a Code of Conduct based on city ordinances and state statutes for everyone to follow.

Multigenerational & Recreation Centers & Programs:

1. Centers are open daily according to their posted hours; exceptions may be made for city observed holidays, staff training, special events, etc.
2. No individual should do anything that endangers the health and safety of themselves or others
3. Staff are not responsible for personal belongings or items left unattended in or on Tempe property.
4. No damaging or improper use of city property including facilities, toilets, lighting, water fountains, furniture, etc. A.R.S. 13-1602
5. Use restrooms only for their intended purpose. Unsanitary activities, including bathing, washing clothes, brushing teeth, grooming and shaving, are prohibited per Tempe City Code 23-40.
6. Proper attire must always be worn including shirts, shorts/pants and shoes. Offensive clothing with vulgar or inappropriate language or graphics is prohibited.
7. No threatening, intimidating, harassing or disorderly behavior which includes threatening to harm or cause damage, fighting, unreasonable noise and abusive or offensive language likely to provoke physical retaliation
8. Be respectful; inappropriate, threatening, intimidating, harassing or disorderly behavior, activity or contact which includes threatening to harm or cause damage, fighting, unreasonable noise and abusive or offensive language of any type is prohibited. A.R.S. 13-3301, A.R.S. 13-1402, A.R.S. 36-601.01, R9-2-202(B)
9. Using or being under the influence of drugs, alcohol or tobacco is prohibited. A.R.S. 13-1301
10. Carrying or concealing any weapons, devices or objects that may be used as a weapon is prohibited.
11. Store all firearms in the provided gun lockers in the entryway of the facility, when provided. A.R.S. 13-3102. Firearms are not permitted inside the facility, except for the time it takes to acquire a key for a storage locker.
12. Food and drink may be restricted to designated areas or approved City programs and reservations within the facility. Outside food of any kind is not allowed, unless otherwise approved.
13. Loitering or sleeping is prohibited
14. All rented equipment must be returned
15. Entering the facility with any type of animal, vehicle or insect, is prohibited, except as required by persons with disabilities.

Further details and information can be found in Tempe City Code – Chapter 23: Parks and Recreation as well as Arizona Revised Statutes – Title 13: Criminal Code.

Staff reserve the right to add, delete or adapt a rule in the best interest of safety, program administration and facility management. This includes establishing additional guidelines for special use areas within the Center such as pools, gymnasiums, fitness rooms, etc.

Violations of the above code of conduct and any other illegal behavior may result in receiving a verbal warning, suspension, citation, fines, arrest and/or being issued a trespass order.

Arizona Heat Resilience Work Group

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ARIZONA DEPARTMENT OF HEALTH SERVICES