SACRAMENTO COUNTY

OFFICE OF EMERGENCY SERVICES

EXTREME HEAT EMERGENCY HAZARD ANNEX

FINAL

May 10, 2022

HANDLING INSTRUCTIONS

1. The title of this document is the *Sacramento Operational Area (OA) Extreme Heat Hazard Annex*
2. The information gathered herein is to be used for training and reference purposes within the Sacramento OA. Reproduction of this document, in whole or in part, without prior approval from the Sacramento County Office of Emergency Services is prohibited.
3. The Extreme Heat Hazard Annex is available at www.sacoes.org. Alternative formats (e.g. Large Print) can be made upon request with the point of contact below.
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RECORD OF CHANGES

(Note: File each revision transmittal letter behind this record page.)

REVISION NUMBER	ENTERED BY	DATE	REVISION NUMBER	ENTERED BY	DATE
1			21		
2			22		
3			23		
4			24		
5			25		
6			26		
7			27		
8			28		
9			29		
10			30		

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EXECUTIVE SUMMARY

The Extreme Heat Emergencies Hazard Annex is a support annex to the Sacramento County Emergency Operations Plan (EOP).

The annex describes the Operational Area (OA) coordination during extreme weather events and guides Sacramento County government, special districts, local government, community-based organizations, and faith-based organizations in preparation for, and response to emergency incidents involving extreme heat weather.

This annex recognizes the need for the OA to communicate and coordinate with local agencies through the Sacramento County Office of Emergency Services (SacOES) and to support local agencies' actions consistent with the Standardized Emergency Management System (SEMS).

The plan recognizes three (3) phases of activation.

I. Seasonal Readiness
II. Heat Watch
III. Heat Warning

The Extreme Heat Hazard Annex outlines criteria and response triggers for each specific type of event. It further identifies event-specific department and agency roles and responsibilities, in addition to those outlined in the Basic EOP.

Departments and agencies identified in this document shall review the plan to familiarize themselves with their roles and responsibilities. Local agencies are advised to develop their plans and prepare agreements for support in response to any emergency.

PURPOSE

The purpose of this guidance is to identify actions that may need to be taken during Phases I through III to address the needs of populations in an extreme heat emergency. The guidance also provides direction for local governments, non-governmental organizations, and other agencies in the preparation of their extreme heat emergency response plans and other related activities. This guidance is for immediate use and is designed to provide agencies within the Operational Area with specific roles and responsibilities related to the implementation of an extreme heat response. The SacOES, in coordination with Sacramento County departments and affected cities, will direct implementation of this guidance.

Response operations will be based on the Standardized Emergency Management System /National Incident Management System/ (SEMS/NIMS), consistent with those described in the Sacramento Emergency Operations Plan (EOP).

> ***NOTE: This guidance in no way shall restrict activities of Sacramento County, the cities or special districts and volunteer organizations, to establish cooling centers or extreme heat emergency related actions. This Annex should not be used as a point of triage or entry point to additional or expanded social services. The intent of this Annex is for emergencies and disasters only.***

SCOPE

The scope of this document identifies Sacramento County agency actions and how county resources in extreme heat events will be made available in support of local government preparedness and response efforts in accordance with SEMS.

ASSUMPTIONS

Weather emergencies are mild in the Sacramento County compared to other parts of the country. However, the County has experienced periods of extreme temperatures that were hazardous to health, crops, and animals. The following assumptions were used in the development of this annex.

- Sacramento County is not generally considered the most threatened area for extreme heat emergency conditions.
- The County has the primary responsibility to meet the needs of citizens living in unincorporated areas during emergencies.
- Incorporated cities have the primary responsibility to meet the needs of citizens living within their boundaries during emergencies.
- New information on climate science may be applied to understand the effects of heat over time, and the body's ability to adapt.
- Emergencies involving heat are often slower to develop, taking several days of continuous heat before a significant impact can be seen.
- Extreme temperatures have increased effects on vulnerable populations or those with lower thresholds, including:
    - The elderly and the very young
    - Medically fragile
    - Those experiencing homelessness
    - Those without access to reliable cooling center or shelter.
- Based on worse case planning the following could occur depending upon the size and scope of the event:
    - The Sacramento Emergency Operations Center (EOC) could be activated if the event were significant enough to trigger response actions.
    - The OA will communicate and coordinate actions with local, regional, and State Governments, as needed.
    - Numerous densely populated communities may be impacted.
    - Power outages may occur and communication systems may be damaged.
    - Large-scale movement of at-risk populations may be necessary, causing otherwise non-impacted jurisdictions to become "host" to displaced populations.
- The State may initiate specified actions independently, but will communicate and coordinate those actions with local government.
- Reimbursement of expenditures from the State during a proclaimed emergency is not guaranteed; all agencies involved must carefully track costs associated with any emergency response.
- Local cities, special districts, and Sacramento County agencies may have programs to address extreme temperatures. This plan does not restrict their operations, providing they are consistent with SEMS and NIMS.

HAZARD ANALYSIS

According to the Western Regional Climate Center, in Sacramento County, monthly average maximum temperatures in the warmest months (May through October) range from the upper-70s to the low-90s. The highest recorded daily extreme was 114°F on July 17, 1925. In a typical year, maximum temperatures exceed 90°F on 65.4 days.

Month	Record High	Date	Month	Record High	Date
January	74°	1/31/1976	July	114°	7/17/1925
February	80°	2/18/1899	August	111°	8/13/1933
March	90°	3/31/1966	September	109°	9/1/1950
April	98°	4/26/2004	October	102°	10/2/1952
May	107°	5/28/1984	November	86°	11/1/1966
June	112°	6/30/1934	December	72°	12/15/1958

Source: Western Regional Climate Center

Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly take the lives of vulnerable populations. Heat waves do not generally cause damage or elicit the immediate response of floods, fires, earthquakes, or other more "typical" disaster scenarios. While heat waves are obviously less dramatic, they are potentially deadlier. According to the 2018 California State Hazard Mitigation Plan, the worst single heat wave event in California occurred in Southern California in 1955, when an eight-day heat wave resulted in 946 deaths.

The National Weather Service Sacramento has implemented an Experimental Heat Risk map showing vulnerabilities to heat based on climatological science. This product from the NWS Sacramento is utilized in decisions about actions and responses to heat that poses a risk to a person's life or health.

Within the Sacramento Valley region, climate change modeling forecasts an increase in the frequency, intensity, and duration of extreme heat events and heatwaves, which are likely to increase the risk of mortality and morbidity due to heat-related illness and exacerbation of existing chronic health conditions.

Additionally, the higher temperatures throughout California will cause an earlier melting of the snowpack resulting in high water, stress on the levee system and reserviors in and around the County,and less drinking water available to citizens in non-rainfall months of the year.

Although the probability of drought is expected to increase throughout the 21st century due to the impacts of climate change, the possibility of increased intense rainfall with historical runoff is also projected. With the current high flood risk throughout the County, this could have widespread impacts throughout the county and the entire region, including local and regional floods and levee or dam failures.

Increased development contributes to the urban heat island (UHI) impacts. Areas that have an abundance of asphalt and building materials such as steel and brick absorb and hold in heat, whereas rural areas reflect some of the heat.

Extreme Temperatures and Humans

Extreme temperatures can severely affect humans. When the body is hot for long periods, it loses its ability to perspire, which is how the body handles high temperatures. Heat exhaustion is a common reaction to severe heat and can include symptoms such as excessive perspiration, dizziness, headache, and fainting. It can usually be treated with rest, a cool environment, and hydration. When a person stops perspiring, they can move from heat exhaustion to heatstroke very quickly. Heatstroke is more severe and requires immediate medical attention. It is often accompanied by dry skin, body temperature above 103 degrees Fahrenheit, confusion, and sometimes unconsciousness. Untreated heatstroke may lead to death. Prolonged exposure to heat can disproportionately affect certain populations. It is essential to include specific planning for groups including:

- Individuals with Access and Functional Needs (AFN) ;
- Chronic conditions or injuries;
- Limited English proficiency, or non-English speaking;
- Older adults;
- Young children;
- Pregnant;
- Living in institutional settings;
- Low income, homeless, or transportation disadvantages;
- From diverse cultures;
- Medically fragile;
- People that work outdoors, especially new workers, temporary workers, or
- those returning to work after a week or more off;
- People exercising or doing strenuous activities outdoors during the
- hottest point of the day; or
- Those not acclimated to the level of heat expected, especially those that are new to a much warmer or cooler climate.

Extreme Heat Vulnerabilities in Humans

Heat Cramps

Heat Cramps are not immediately dangerous but is a signal of significant stress on the body from heat. It occurs when the salts in the body fluids become out of balance as a result of sweating in an effort to maintain cooler temperatures during hot weather and inadequate fluid and salt replacement.

- Symptoms – Severe painful cramping of the muscles in the arms, legs or abdomen often accompanied by swelling of the legs and feet
- First Aid – Move to a cooler spot and drink electrolyte replacement fluids (juices, non-carbonated sports drinks without caffeine)
- Without intervention – It can lead to heat exhaustion and/or heat stroke

Heat Exhaustion

Heat Exhaustion is more serious and generally includes an elevated core body temperature up to 104°F. It occurs when the body becomes dehydrated with a consequential imbalance of electrolytes (salts). This causes progressive compromise of the circulatory system.

- Symptoms -- Headache, nausea, dizziness, cool and clammy skin, pale face, cramps, weakness, profuse perspiration

- First Aid -- Move to a cooler spot, drink water with a small amount of salt added (one teaspoon per quart) or rehydration solution or sports drinks without caffeine
- Without Intervention -- It can lead to collapse and heat stroke within minutes or hours

Heat Stroke
Heat Stroke is the most serious illness and is a severe and life-threatening failure of the body's ability to cool. It occurs when natural cooling mechanisms are overwhelmed, including perspiration and circulatory reflexes. Brain and nerve functions begin to fail and the body temperature rises out of control.

- Symptoms – Severe mental status changes, seizures, loss of consciousness, kidney failure, abnormal cardiac rhythm, confusion, rapid pulse, hot and dry skin, shortness of breath, facial flushing with no perspiration, core body temperature over 104°F
- First Aid – Immediately call 9-1-1 for emergency medical assistance. Cool person immediately, move to shade or indoors, wrap in a cool, wet sheet
- Without Intervention -- it can lead to permanent neurological impairment, coma, and death

Children Vulnerabilities
Did you know there is no safe amount of time to leave any child in a car alone? Every 10 days in the U.S. a child dies when left alone in the car. Avoid heatstroke-related injury and death by never leaving your child alone in a car, not even for a minute. If you see a child alone in a car, call 911. Emergency personnel want you to call. One call could save a life.
The temperature in a car rises rapidly in the first 30 minutes, even on a cool day. Additionally, leaving the car windows open or cracking them open does not allow enough air into the vehicle.

Facts:
Car with window rolled down slightly + windows collecting light, trapping heat inside = pressure cooker effect.

<u>Outside air = 85 degrees Fahrenheit</u>

- After 10 minutes: inside car = 102 degrees Fahrenheit
- After 30 minutes: inside car = 120 degrees Fahrenheit

<u>Outside air = 72 degrees Fahrenheit + humidity</u>

- After 30 minutes: inside car = 104 degrees Fahrenheit
- After 60 minutes: inside car = 112 degrees Fahrenheit

Prevention:

- Never leave children in a car alone
- Call 9-1-1 immediately if you see a child alone in a car or in distress
- It takes only a body temp of 104 degrees Fahrenheit for heat stroke to occur. 107 degrees is usually fatal
- A child's body warms up 3-5 times faster than an adult's body
- Be alert for any sign of heat stress:
- Agitation

- Disorientation
- Dizziness
- Nausea
- Rapid breathing
- Seizure
- Unconsciousness
- Vomiting

Treatment:

- Bring your child to a cooler place indoors, an air-conditioned car, or shady area
- Remove your child's excess clothing
- Encourage your child to drink cool fluids containing salt and sugar, such as sports drinks
- Put a cool, wet cloth or cool water on your child's skin
- Call your doctor for advice

Extreme Temperatures and Animals

Extreme heat can be hazardous to animals as well. Dogs and cats naturally conserve heat and are less efficient at cooling than humans. They are in danger of heatstroke at 110 degrees Fahrenheit. Sweat glands on pets are located on the nose and footpads, which are inadequate for cooling on hot days. Panting and drinking water can help with cooling, but if the air temperature is overheated, brain and organ damage can occur in 15 minutes. Risk factors to heat stress include body size, age (young and old), breed (short-nosed breeds, such as bulldogs), obesity, and existing metabolic, cardiovascular, or respiratory disease.

Livestock and poultry are also vulnerable during extreme temperature events. During heat events, livestock and poultry should be provided adequate and accessible cooled drinking water, shade, and fans where (or when) feasible. In addition, planning for rolling power outages can mitigate problems. Dairy farmers have used a variety of temporary cow-cooling methods. Hoses can be hooked up to water trucks and used to soak the cattle. Strings of cows can be cooled in sprinkler pens if they are in constant use for milking. Industrial fans can be rented to augment these water-cooling methods.

In addition, monitoring local rendering facility operations can provide early indicators as well. During a heat incident in July 2006, the County lost livestock, mainly poultry and cows. The State's rendering system (six facilities Statewide) was overwhelmed, and animals were not disposed of promptly, leading to some animals being buried on site. The California Integrated Waste Management Board required an emergency waiver to dispose of the carcasses throughout the state. The Local proclamation of emergency was utilized in advance, with animal mortality being one of the triggers.

Extreme Heat Vulnerabilities in Animals

Pets

Dogs and cats are designed to conserve heat and are less efficient at cooling than humans. They are in danger of heat stroke at 110 degrees Fahrenheit. Sweat glands on pets are located on the nose and footpads, which are inadequate for cooling on hot days. Panting and drinking water help cooling, but if the air temperature is overheated, brain and organ damage can occur in 15 minutes. Risk factors to heat

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Outside air = 72 degrees Fahrenheit + humidity

- After 30 minutes: inside car = 104 degrees Fahrenheit
- After 60 minutes: inside car = 112 degrees Fahrenheit

Prevention:

- Never leave pets in a car on warm days
- Call animal control or law enforcement immediately if an animal is in distress in a car
- Be alert for any sign of heat stress: heavy panting, glazed eyes, a rapid pulse, unsteadiness, a staggering gait, vomiting, deep red or purple tongue
- Never leave pets tied up without shade, air circulation, and fresh water
- Offer a cool place to rest when temperatures are uncomfortable
- If you are going to take advantage of a local cooling center and feel the need to bring your pet, always call ahead to find out if they are able accept pets and what preparations are necessary (i.e., leash for dog, cage for cats, etc.)

Treatment:

- Overheated pets must be cooled immediately
- Move pet to shade
- Apply cool water all over body
- Apply ice packs to neck and chest area
- Allow licking ice and small amount of water (large amount will cause vomiting)
- Take to veterinarian immediately for evaluation

Livestock and Poultry
Producers should assure that all livestock and poultry are provided adequate and accessible drinking water, shade, and fans and water-cooling, where feasible.

Many producers have back-up generators for their facilities, which should be inspected to ensure operational condition in the event of rolling or rotating blackouts or power failures. Emergency power should also be available for fans and well pumps. Misters, soakers, and fans should be checked to ensure they are operational. Shade structures (especially shade cloths) should be in good repair.

During an extreme heat emergency, dairy producers have used a variety of temporary cow-cooling methods. Fire hoses can be hooked up to water trucks and used to soak the cattle. Strings of cows can

be cooled in sprinkler pens, if they are not in constant use for milking. Temporary soaking lines can be devised using flexible landscaping PVC hose and high volume emitters positioned over the cattle. Industrial fans have been rented to augment these water cooling methods. Temporary shade structures have been erected. In general, working cattle should be avoided except in the early morning.
If producers are experiencing difficulties or delays in having dead animals picked up by rendering companies, they should immediately contact the Ag Commissioner, OES, or Environmental Health Department and make them aware of the situation. Local officials are in a position to assist with alternate methods of disposal, including evaluating the need for a Proclamation of a Local Emergency.

Mosquitos and Related Health Threats
Elevated heat causes mosquitoes to develop faster and allows infectious agents, such as viruses, to incubate faster. Faster development times means there is less time to control mosquitoes before going egg to adult and may lead to dramatically increased mosquito populations if standing water is present.

Summer temperatures are a primary variable that is used in scientific models used to predict and track mosquito-borne disease transmission. Each year in Sacramento County, there are temperatures that would support possible epidemic level transmission of West Nile virus. The longer this extreme heat lasts, the more likely epidemic levels of transmission will be observed in local communities.

NATIONAL WEATHER SERVICE ALERTS AND WARNINGS

NWS issues watches, warnings, and advisories to warn of extreme weather-related issues that are forecast to influence an area within the following 36 hours. If NWS forecasters predict an extreme heat event beyond 36 hours, then the NWS will issue messaging in the form of Special Weather Statement, partner emails, and social media that is based on how far in advance of the event they are making a prediction.

Heatrisk

The NWS has developed the experimental *HeatRisk* forecast to provide a quick view of the risk potential for the following seven days using color and numeric values.1 This risk is assessed by comparing the official NWS temperature forecast to local thresholds, which change through the year based on climatology. This location-specific approach considers:

- Significantly above average temperatures; Time of year (e.g., early season vs. typical summer heat);
- Duration of unusual heat expected;
- If temperatures pose an elevated risk for heat complications;
- If overnight lows and humidity allow temporary relief or enhancement of the heatwave,
- The approximate role of humid air using well-known physical relationships of temperature to humidity.

All of these factors are used to create daily dynamic heat thresholds and then are matched to their appropriate *HeatRisk*. Information from both the overnight lows and daily highs are combined to create the final output - the experimental 24-hour *HeatRisk*.

> **Heat Advisory**: A Heat Advisory will be tied to an event where the *HeatRisk* output is on the Orange/Red threshold (Orange will not always trigger an advisory).

Extreme Heat Watch / Warnings: An Extreme Heat Watch / warning will be tied to the *HeatRisk* Red/Magenta output.

NWS HEAT EXPERIMENTAL HEAT RISK

The National Weather Service (NWS) experimental HeatRisk forecast provides a color and numeric value that places forecast heat for a specific location into an appropriate level of heat concern, along with identifying groups potentially most at risk at that level. The HeatRisk is accompanied by recommendations for heat protection and is a useful tool for planning for upcoming heat and its associated potential risk. Based on the high resolution NWS national gridded forecast database, a daily HeatRisk value is calculated for each location from the current date through seven days in the future. At this time, the experimental HeatRisk forecast is being used to influence the issuance of, and to add value, to the NWS's official heat watches, advisories, and warnings across much of the western United States in an experimental capacity. This product is another NWS tool that can be used to protect lives and property from the potential risk of extreme heat, being especially useful for those who are more easily affected by heat or those who provide support to those communities of heat vulnerable individuals. The experimental HeatRisk product ensures that communities have the right information at the right time to be better prepared for upcoming heat events. This approach considers:

- How significantly above normal temperatures are at your location;
- Time of year (i.e. early season vs. typical summer heat);
- Duration of unusual heat expected;
- If temperatures pose an elevated risk for heat complications;
- If overnight lows and humidity allow temporary relief or enhancement of the heat wave, and;
- The approximate role of humid air using well-known physical relationships of temperature to humidity.

The purpose of the NWS experimental HeatRisk product is to help you understand what forecasted heat means to you. To make it easier to understand, the HeatRisk is divided into several categories noted in the following table:

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

Simply put, the higher the value, the greater the level of heat concern would be for that location. If both the overnight lows and daytime highs are exceptionally warm for that date at a given location over a period of at least 48 hours, at levels that pose an elevated risk for heat complications, the highest level of 4 for HeatRisk is achieved.

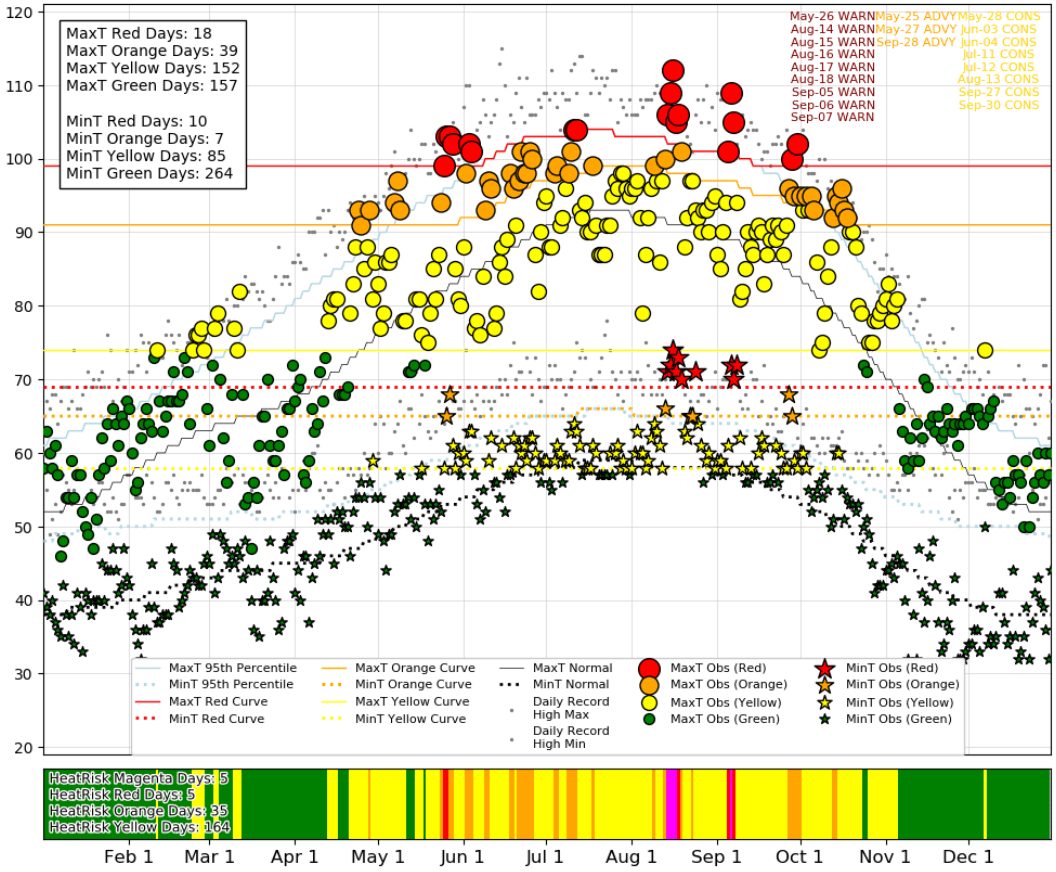
For more information on heat risk or to view the forecast page refer to the following:

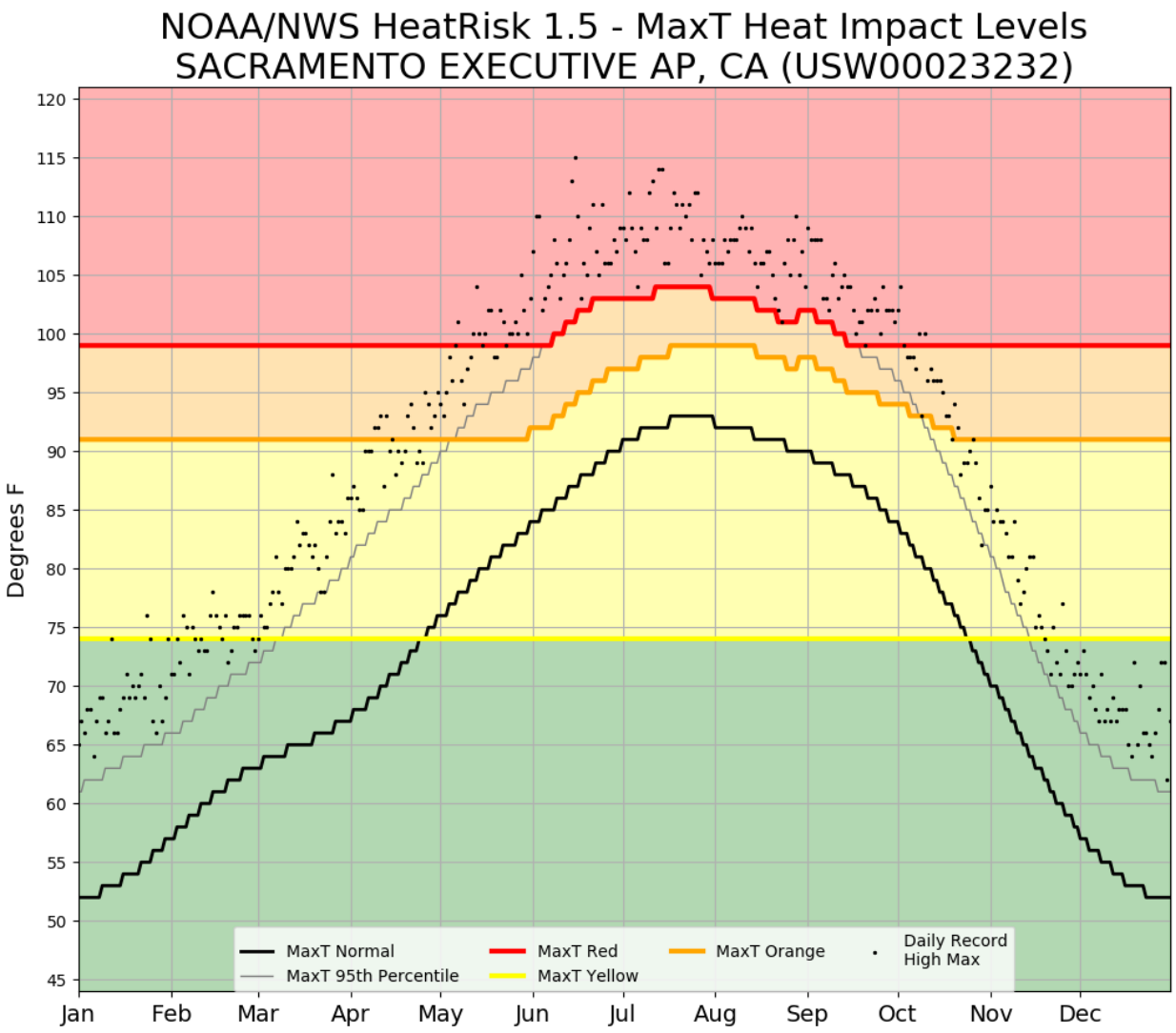
https://www.wrh.noaa.gov/wrh/heatrisk/

NOAA/NWS HEAT RISK SACRAMENTO METRO

The National Weather Service (NWS) experimental HeatRisk forecast provides a color and numeric value that places forecast heat for a specific location into an appropriate level of heat concern, along with identifying groups potentially most at risk at that level. *At this time, the experimental HeatRisk forecast is being used to influence the issuance of, and to add value, to the NWS's official heat watches, advisories, and warnings across much of the western United States in an experimental capacity*. Because heat risk takes into account past weather and climatology, it "adjusts" on a daily basis so high temperatures experienced in May that cause a response for cooling centers may not necessarily generate the same response in August. In general, the cutoff for red values based on maximum temperature increases during June from 100 degrees Fahrenheit to between 100 and 105 degrees Fahrenheit for the Sacramento metro. The red cutoff for minimum temperatures is 70 degrees Fahrenheit year round. If both the overnight lows and daytime highs are exceptionally warm for that date at a given location over a period of at least 48 hours, at levels that pose an elevated risk for heat complications, the highest level of 4 for HeatRisk is achieved. The heat risk data from the NWS may be viewed here https://www.wrh.noaa.gov/wrh/heatrisk/historical/

NOAA/NWS HeatRisk v1.5 - SACRAMENTO EXECUTIVE AP, CA - 2020
GHCN USW00023232

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SACRAMENTO EXECUTIVE AP, CA (USW00023232)
Degrees F
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115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
MaxT Normal
MaxT 95th Percentile
MaxT Red
MaxT Yellow
MaxT Orange
Daily Record High Max

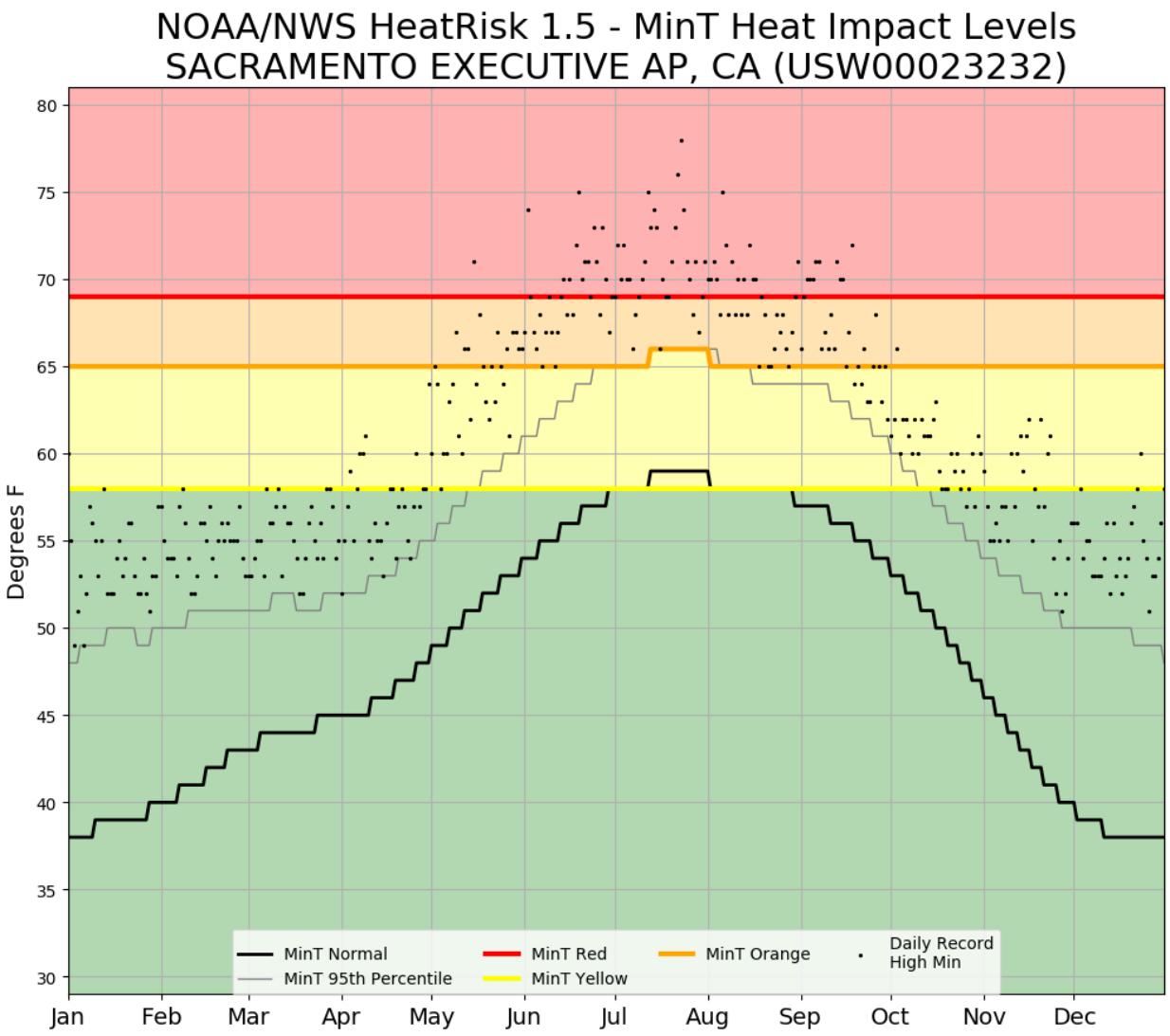
NOAA/NWS HeatRisk 1.5 - MinT Heat Impact Levels
SACRAMENTO EXECUTIVE AP, CA (USW00023232)
Degrees F
80
75
70
65
60
55
50
45
40
35
30
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
MinT Normal
MinT 95th Percentile
MinT Red
MinT Yellow
MinT Orange
Daily Record High Min

Table 1 - HeatRisk Concerns and Risks to People and Animals

	Numerical Value	Meaning	Who/What is at Risk?	How Common is this Heat?	For those at risk, what actions can be taken?
GREEN	0	• Level of heat poses **little to no risk**	• No elevated risk	• Very Common	• No preventative actions necessary
YELLOW	1	• Heat of this type is tolerated by most; however there is a low risk for sensitive groups to experience health effects	• Primarily those who are extremely sensitive to heat	• Very Common	• Increase hydration • Reduce time spent outdoors or stay in the shade when the sun is strongest • Open windows at night and use fans to bring cooler air inside buildings
ORANGE	2	• Moderate risk for members of heat sensitive groups to experience health effects • Some risk for the general population who are exposed to the sun and are active • For those without air conditioning, living spaces can become uncomfortable during the day, but should cool below dangerous levels at night	• Primarily heat sensitive groups, especially those without effective cooling or hydration • Some transportation and utilities sectors	• Verycommon	• Reduce time spent outdoors or stay in the shade when the sun is strongest • Stay hydrated • Stay in a cool place during the heat of the day • Move outdoor activities to cooler times of the day • Open windws a night

	Numerical Value	Meaning	Who/What is at Risk?	How Common is this Heat?	For those at risk, what actions can be taken?
RED	3	• High Risk for much of the populations who are (1) exposed to the sun and ative or (2) are in a heat sensitive group • Dangerous to anyone without proper hydration or adequate cooling • Poor air quality is possible • Power interruptions may occu as electrical demands increase	• Much of the population, especialy people who are heat sensitive and those without effective cooling or hydration • Transportation and utilities sectors	• Uncommon most locations	• Avoid time spent outdoors or stay in the shade when the sun is strongest • Stay hydrated • Stay in a cool lace especially during the heat of the day • If you have access to air conditioning, use it. Fans may not be adequate. • Cancel outdoor activities during the heat of the day.
MAGENTA	4	• Very High Risk for entire population • Very dangerous to anyone without proper hydration or adequate cooling. • This is a multi-day extreme heat event. A prolonged period of heat is dangerous for everyone not prepared. • Poor air quality is likely. • Power outages are increasingly likely as electrical demands ma reach critical levels.	• Entire population is at risk. • For heat sensitive groups, especially people without effective cooling, this level of heat can be deadly. • Most transportation and utilities sectors.	• Rare most locations.	• Avoid time spent outdoors or stay in the shade when the sun is strongest • Stay hydrated • Stay in a cool place, including overnight • If you have access to air conditioning, use it. Fans will not be adequate • Cancel outdoor activities during the heat of the day.

CONCEPT OF OPERATIONS

Heat Response Phases

A severe weather forecast by NWS Sacramento will be the crucial indicator regarding the event type. The Sacramento County Chief of Emergency Services or designee will determine the need to activate this guidance upon receipt of a forecast indicating such conditions will prevail.

The County uses a phased approach to extreme temperature emergencies that are consistent with the State of California's contingency plans for extreme heat emergencies.

The phases for heat are:

I. Seasonal Readiness
II. Heat Watch
III. Heat Warning

To prepare members of the public and government resources for extreme temperature conditions the series of escalating response levels are referred to as Phase I, Phase II, and Phase III activations, depending upon the severity of the threat to public health as well as animals. Severity is determined by a number of factors, including the degree of temperature deviation to the levels that threaten health, factors such as humidity and diurnal (daily) variation, the expected duration of the event, and the status of community infrastructure (e.g. utilities, transportation) to allow the public to mitigate the impact of the temperature extremes. The general criteria for gauging the severity of the threat posed by a heat emergency are described in this section.

Beginning with Phase I, the Chief of Emergency Services, Public Health Officer, Medical Health Operational Area Coordinator (MHOAC), and Agricultural Commissioner will monitor a series of extreme heat indicators. These indicators include:

- NWS warnings and advisories
- NWS *HeatRisk* forecast
- Heat related illnesses/deaths above average
- Extreme temperature accompanied by power outages/rolling black-outs
- Two or more jurisdictions declare heat-related emergencies
- State declares a severe heat emergency

NWS forecasts are an important indicator, the NWS is not the sole determinant of an extremetemperature event. For example, a single day of high heat may not trigger an emergency, but high temperatures during the day and night in excess of three days could trigger an emergency.

Phase I: Seasonal Readiness (Preparedness/Awareness)

Phase I actions are taken prior to hotter months (usually in April or early May) to prepare for and maintain a state of increased readiness.

Phase I Actions Include:

- Review of existing plans, procedures and resources with key stakeholders.

- Confirm contact information and notification methods of key stakeholders.
- Verification of use/availability of key facilities, if applicable.
- Discuss transportation methods that may be utilized in Phase II and Phase III.
- Preparing to initiate awareness campaigns.
- Provide heat safety script for 2-1-1 for Public Information campaign.
- Increase public awareness by providing general information about measures to reduce extreme heat related risks and promote preparation efforts.
- Confirm details of agency or department participation (e.g., DHA outreach to homeless providers, DCFAS outreach to seniors).
- Update information and risk communication processes for vulnerable populations.
- SacOES will coordinate with Public Health and Sacramento County PIO for media notification, press releases, updates to appropriate websites, etc., to include information about cooling center and/or protection from the elements.

Phase II: Heat Watch

Benchmarks for Phase II are monitored by local government and include but are not limited to credible predictions by the National Weather Service (NWS) of extreme heat or of power outages during warmer than normal weather conditions in Sacramento County. During this phase, contact with local agencies, stakeholders and coordination among State agencies increases.

All phase one activities shall have already taken place, Phase II actions may be initiated when one or more of the following exists:

- A partner email from the National Weather Service (NWS), giving an outlook for an extended period of above average temperatures.
- The NWS Sacramento issues an Extreme Heat Watch (Forecast issued well in advance to alert the public of the possibility of a particular weather related hazard (e.g. tornado watch, flash flood watch). The occurrence, location and timing may still be uncertain).
- Increased EMS calls or increased emergency department visits.
- Notification to/from the Office of Emergency Services (OES) that local jurisdictions have issued a special notice (warning, alert, etc.), however the EOCs have not been activated.
- Using the NWS Experimental HeatRisk forecast, projected temperatures are substantially in the Red, Level 3. This product is supplementary to the official NWS heat watch/warning/advisory program and is meant to provide continuously available heat risk guidance for decision makers.
- Projected abnormal animal mortality rates.
- Credible predictions of power outages, electrical blackouts, or rotating blackouts. SMUD has identified industry power shortages or limitations and will be asking customers to reduce or ration their electrical usage. This will typically coincide with a CAISO Level 3 warning.
- Extreme Heat accompanied by electrical blackouts or rotating outages within Sacramento Operational Area.

Phase II Actions Include:

- OES Duty Officer will make appropriate internal OES notifications including activating a seasonal incident in WebEOC
- Participate in periodic or daily calls as needed regarding weather and power updates.

- Weather coordination calls are conducted with key agencies to provide/gather weather and utility updates, upon issuance of a NWS Extreme Heat Watch and will continue each day the watch is in effect.
- OES Duty Officer and/or Mass Care and Shelter Coordinator will track and fill resource requests from cooperating agencies choosing to open cooling centers.
- Sacramento County Public Health Officer may issue a Health Alert to the Operational Area (OA).
- Collaborate to identify any anticipated needs or problems.
- Sacramento County DHA may institute their Weather Respite Motel Program and issue motel vouchers to highly vulnerable unsheltered persons, dependent upon funding and room availability.
- OES Duty Officer will coordinate to determine the readiness and availability of resources.
- OES will coordinate with PIOs to issue joint press releases increasing awareness of the risks from the extreme heat conditions for vulnerable populations and the general public.
- Release critical pre-scripted and event-related public safety information.
- Review criteria for cooling centers keeping in mind considerations for pets and possible 24-hour operations.
- Monitor impacts to agriculture including animal mortality, rendering plant impacts and coordination with industry. Determine potential impacts to landfills due to heat related animal mortality.

Phase III: Heat Warning

Phase III actions may be taken when conditions pose a severe threat and one or more of the following exists:

- The NWS Sacramento issues an Extreme Heat Warning for Sacramento County; or
- The NWS Sacramento Experimental HeatRisk is showing Magenta, Level 4 in Sacramento County for 3 or more consecutive days; or
- The NWS Sacramento issues a Partner Email, Advisory or Extreme Heat Watch or Warning in addition to:
    - Abnormal animal mortality due to extreme heat.
    - Abnormal human medical emergencies and mortality due to extreme heat conditions.
    - SMUD electrical emergency and/or extended power outages due to extreme heat conditions or supply constraints.

Phase III efforts include urgent and comprehensive actions to complement and support local actions during the most extreme heat emergency conditions. The actions expand Phase III activities and include additional efforts.

Phase III Actions Include:

- All activities under Phase II; and
- Sacramento County Public Health Officer may issue a Health Emergency.
- Opening of cooling centers, if necessary.
- Emergency Operations Center (EOC) activation, as needed to support response activities.
- Request for Local Emergency Proclamation, if applicable.
- Confirm 2-1-1 will post cooling center locations on websites, if opened or activated.
- Increase press releases and public outreach informing public of center locations and steps to take to alleviate risks of health impacts associated with extreme heat emergency conditions.

- Requests for mutual aid may occur.
- Activate transportation plan to make cooling center more accessible.
- Activate pet resources to make accessing a cooling center easier.
- Establish communication with local dialysis centers, skilled nursing facilities, and long-term care facilities to monitor for possible medical impacts if there is a concern regarding potential, prolonged, or rolling power outages or blackouts.
- Monitor rendering capacity statewide
- Coordinate with SMUD to identify and develop procedures for assigning "Critical Infrastructure" status temporarily to Cooling Centers that could be exempted from rotating blackouts

ROLES AND RESPONSIBILITIES

Role of the Private Sector

Residents

The residents of Sacramento County play an important role in managing an extreme heat event by ensuring that they and their families are prepared before an event takes place and knowing what to do during an extreme heat event. Resources on how to stay safe when extreme heat threatens is available at www.SacramentoReady.org and www.ready.gov/heat.

Businesses

An extreme heat event may negatively impact service provision by businesses as well as affect the health of employees. Preparing the workforce, building safe facilities, investing in supplier relationships, and connecting to the community are essential to building business community resilience. Businesses within Sacramento County are encouraged to develop and maintain comprehensive business emergency response plans which include a business impact analysis, business continuity plan and a training and exercise schedule to evaluate the recovery strategies and the plan. Information for developing a Business Emergency Response Plan can be found at www.ready.gov/business/implementation/emergency.

Role of Local Government and Coordinating Agencies

Local preparedness efforts must be coordinated across levels of local government, within the SEMS/NIMS framework. Associated emergency tasks and departmental responsibilities depicted below are consistent with those identified in the Sacramento Emergency Operations Plan (EOP). The level at which the Emergency Operations Center (EOC) is activated will be based on the situation and the need for a coordinated response to the emergency event.

Emergency Support Functions	Lead Coordinating Agency for Sacramento County	Specific Responsibiliites during Heat Emergencies
ESF #1 - Transportation	Regional Transit Other Transportation entities	Establish and maintain transportation routes of people to cooling centers

Emergency Support Functions	Lead Coordinating Agency for Sacramento County	Specific Responsibiliites during Heat Emergencies
ESF #2 - Communications	County Communications including 311 Local Dispatch Centers	Provide emergency communications and public alert and warning
ESF #3 – Public Works and Engineering	Public Works Departments	
ESF #4 - Firefighting	Fire Agencies	
ESF #5 – Emergency Management	Sac OES City OES Coordinators	Convene stakeholders Coordinate with NWS Sacramento and utilities Update websites and social media Circulate daily weather updates Conduct Weather Coordination Calls Implement JIC/PIO to issue heat messaging Open OES Warehouse/Stage critical resources Provide situational awareness Consider/Activate EOC Process mutual aid requests Participate in Cal OES and NWS briefings Collect EEI information Request cooling centers to open Monitor usage of cooling centers Support Cities and Special Districts as requested Provide regional and state coordination

Emergency Support Functions	Lead Coordinating Agency for Sacramento County	Specific Responsibiliites during Heat Emergencies
ESF #6 – Mass Care	Department of Human Assistance (DHA)	Update critical resource list Convene housing/shelter working group Review Cooling Center operation criteria Coordinate locating people with access and functional needs with cities Activate centers as needed Consider Care and Shelter Branch needs at County EOC Activate Weather Respite Motel Voucher program Participate in meetings and briefings Survey centers for accessibility Assess needs for commodities Coordinate needs to provide wellness checks on people with access and functional needs with cities Staff cooling centers Triage service needs
ESF #7 – Logistics and Resource Management	General Services OES Warehouse	Process resource requests Tracks resources Ensure warehouse is adequately stocked with commodities Establish distribution plan for resource orders Stock or resupply warehouse items Receive donated bulk items

Emergency Support Functions	Lead Coordinating Agency for Sacramento County	Specific Responsibiliites during Heat Emergencies
ESF #8 – Public Health and Medical	Department of Health Services Emergency Medical Services Department of Children, Family and Adult Services (DCFAS) Behavioral Health Services Environmental Management	Participate on Weather Coordination Calls Prepare to issue health advisory Assign PIO/Participate in JIC Initiate syndromic surveillance of heat-related illnesses Assign EOC Medical/Health Branch Director Coordinate/Monitor medical facilities and health agencies of heat emergency Locate BHS populations Monitory small public water systems Monitor food facilities Issue health advisories for outdoor activities Place calls to clients to ensure use of air conditioning Distribute cooling resources to clients who express a need
ESF #11 – Food and Ag	Agricultural Commissioner	Outreach to Ag Community Monitor carcass collection; disposal activities Coordinate with Cal OES and state resources for large scale rendering
ESF #12 - Energy	Utilities	Coordinate with local government on essential facility power restore power as requested
ESF #13 – Law Enforcement	Sheriff Police Departments	

Emergency Support Functions	Lead Coordinating Agency for Sacramento County	Specific Responsibiliites during Heat Emergencies
ESF #15 – External Affairs	Public information Officers Sacramento 211	Issue heat injury prevention advisories Post cooling center information on websites and social media Participate in JIC/JIS Collect and distribute social media analytics Collect information on cooling center locations and transportation options to distribute to callers Collect and disseminate call and website data on utilization of cooing center services and referralsAssist in preparing Board Alerts

State Roles and Responsibilities

For a detailed review of State Roles and responsibilities please refer to the Cal OES Contingency Plan for Extreme Heat Emergencies
https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/ExcessiveHeatContingencyPlan2014.pdf

RECOVERY

An extreme heat emergency may trigger the opening of cooling centers beyond normal duty hours. These actions will be coordinated with the Sacramento Office of Emergency Services or the Emergency Operations Center (EOC) if activated. All Departments should be aware that no provision exists for funding cooling centers or shelters outside of the provisions set forth by the California Disaster Assistance Act.

Emergency costs incurred by local governments, departments, and/or agencies in response to the extreme heat emergency conditions relating to the safety and protection of human life, may be recovered under the California Disaster Assistance Act, when the Governor has proclaimed a State of Emergency. Eligible costs may include the extra costs of establishing cooling centers, staffing the EOC, renting generators and air conditioners for emergency cooling center efforts, emergency public information costs, related morgue costs, and overtime costs for activities related to the extreme heat emergency event.

State and federal governments require detailed information to support claims for reimbursement. Funding will be approved or denied based upon the information supplied by applicant agencies. Documentation supporting all costs claimed will be required, and all information must relate back to individual original source records. Sacramento County Staff will maintain thorough and accurate documentation throughout the course of an incident or event. Incident documentation should include:

- Sign-in rosters (ICS 211, Incident Check-in List)
- Incident and damage assessment reports
- Incident Command logs (ICS 214, Activity Log)
- Cost recovery forms
- Incident critiques and After Action Reports (AARs)

The following guidelines should be followed when documenting disaster-related reimbursable expenses:

- Costs and revenues associated with emergency operations should be segregated from normal operating expenses.
- Separate records should be maintained for each vehicle and piece of heavy equipment used for emergency operations.
- Vehicle and equipment documentation should include the miles and/or hours operated by location and by operator.
- Vehicle operating expenses should include fuel, tires, tubes and maintenance.
- Labor costs should be compiled separate from vehicle and/or equipment expenses.
- Equipment documentation should include exactly where the equipment was used and for what; hours and minutes used; and the name of the equipment operator if applicable.
- Revenues and subsidies for emergency operations must be subtracted from any costs claimed.
- Requisitions, purchase orders, and invoices must be maintained for all supplies, materials and equipment expenses claimed.
- Costs for supplies and materials must include documentation of exactly where resources were used and for what purpose.
- All non-competitive procurements must be justified.

Expenditure tracking should commence upon notice or obvious occurrence of incidents or disasters that require expense of labor, equipment use, materials, and other expenses. The EOC Director, and EOC staffs are responsible for maintaining written records of all disaster-related personnel overtime, requests for supplies, equipment and contract personnel, and receipts for emergency purchases of supplies, equipment and other disaster- related expenses. The County will activate a special coding for emergency expenditure tracking which is used for both labor and equipment.

AFTER ACTION REPORTS

The purpose of after action reporting is to provide a mechanism where shortfalls and limiting factors can be captured and documented. They can then be entered into an ongoing improvement effort. OES and responding departments are responsible for compiling and developing the After Action Report (AAR).

Individuals assigned to the event will assist in the effort by providing input and attending debriefing sessions. All After Action Reports are due within 30 days of the end of the event.

PLAN MAINTENANCE

Sacramento County OES is responsible for overseeing the development and maintenance and annual review of this annex in coordination with appropriate. Sacramento County Departments and allied agencies to determine the need for revisions or updates.

AUTHORITIES AND REFERENCES

Authorities

Government Code Section (within the Emergency Services Act, Chapter 7, Division 1, Title 2):

- §8630(a): A local emergency may be proclaimed only by the governing body of a city, county, or city and county, or by an official designated by ordinance adopted by that governing body. The local health officer may proclaim a local emergency if he or she has been specifically designated to do so by ordinance adopted by the governing body of the jurisdiction.

- §8558(c): "Local emergency" means the duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestation or disease, the Governor's warning of an earthquake or volcanic prediction, or an earthquake, or other conditions, other than conditions resulting from a labor controversy, which are or are likely to be beyond the control of the services, personnel, equipment, and facilities of that political subdivision and require the combined forces of other political subdivisions to combat, or with respect to regulated energy utilities, a sudden and severe energy shortage requires extraordinary measures beyond the authority vested in the California Public Utilities Commission.

It is possible to proclaim a local emergency for health-related reasons.

- §8625: Gives the Governor the authority to proclaim a "state of emergency" when requested by local jurisdiction or when he finds that local authority is inadequate to cope with the emergency.

Health and Safety Code Section:

- §101040: Authority to take preventive measures during emergency. "The county health officer may take any preventive measure that may be necessary to protect and preserve the public health from any public health hazard during any 'state of war emergency,' 'state of emergency,' or 'local emergency,' as defined by Section §8558 of the Government Code, within his or her jurisdiction."

  "Preventive measure" means abatement, correction, removal or any other protective step that may be taken against any public health hazard that is caused by a disaster and affects the public health.

  The county health officer, upon consent of the county board of supervisors or a city governing body, may certify any public health hazard resulting from any disaster condition if certification is required for any federal or state disaster relief program.

Government Code §8588.15
This government code requires the incorporation of the disability community into the California Standardized Emergency Management System (SEMS) via representatives on the SEMS specialist committees and technical group. It also addresses funding needs for expanded emergency alerting

technology in order to ensure early alert and warning to all the disability community, especially the blind and/or vision impaired population. Early emergency alert information in emergencies and/or disasters is critical to the disability community, for example, in the case of mandatory evacuations.

References

State of California Exessive Heat Contingency Plan, June 2014

California Department of Public Health Guidance Guidance for Cooling Centers, July 23, 2021

Center for Disease Control COVID-19 and Cooling Centers Guidance, April 11, 2020

The Use of Cooling Centers to Prevent Heat-Related Illness: Summary of Evidence and Strategies for Implementation

ATTACHMENTS

The attachments in the following pages are support documents to assist in an Extreme Heat Emergency.

DEFINITIONS

Agriculture Indicators: An early indicator of an extreme heat incident may be the increased demise of livestock and poultry.

Clean Air Spaces: A Clean Air Space is a location to decrease your risk from the deadly pollution created from extreme heat and wildfires. Polluted air is rife with tiny particles creating unhealthy air which can pose significant risk to human health, particularly in people with pre-existing conditions like asthma or heart disease. Clean Air Zones may include libraries, community centers, malls, and senior centers.

Community Based Organization: or CBO means "a public or private nonprofit organization of demonstrated effectiveness that:

a. Is representative of a community or segments of a community; and

b. Provides educational or related services to individuals in the community".

Contingency Plan: Refers to a subset of an existing emergency plan focused on addressing the particulars of a specific emergency scenario (i.e., earthquake, flood, etc.).

Cooling Centers: A Cooling Center is a temporary air-conditioned public space set up by local authorities to deal with the health effects of extreme heat over an extended period of time. Usually sited at several locations throughout a city, Cooling Centers are meant to prevent hyperthermia, especially among the elderly without air conditioning at home. Cooling Centers provide shade, water, and sometimes medical attention, along with referrals to social services.

Emergency Plans: As defined in Government Code §8560 (a) "Emergency Plans" means those official and approved documents which describe the principles and method to be applied in carrying out emergency operations or rendering mutual aid during emergencies. These plans include such elements as continuity of government, the emergency services of governmental agencies, mobilization of resources, mutual aid, and public information.

Faith Based Organization or FBO: A religious-based organization that provides community services.

Heat Index (also referred to as the "apparent temperature"): A factor used to determine how hot it feels based on temperature and relative humidity. Heat index values can be up to fifteen degrees higher with exposure to direct sunlight. Heat index values assume calm wind conditions. Hot dry winds can also increase heat index factors.

Heat Wave (Extreme / Excessive Heat Event): When temperatures reach 10° or more above the average high temperature for the region, last, or predicted to last, for a prolonged period of time. A heat wave is often accompanied by high humidity.

Joint Information Center: A centralized facility for coordinating an organized, integrated, release of critical emergency information, crisis communications and public affairs functions, which is timely, accurate, and consistent.

Local Government: As defined in SEMS regulations §2402 (m), " . . . means local agencies as defined in Government Code §8680.2 and special districts defined in California Code of Regulations, Title 19, §2900(y).”

National Weather Service (NWS) Information: Using the climate-region-specific criteria, if NWS forecasters predict for a given region an extreme temperature event, then the NWS will issue alerts in the form of a Special Weather Statement that is based on several criteria, including how far in advance of the event they are making the prediction.

Operational Area: As defined in Government Code §8559 (b), "An 'Operational Area' is an intermediate level of the state emergency services organization, consisting of a county and all political subdivisions within the county area."

Rotating Blackout: A process of cutting off service to selected customers for a predetermined period (usually not more than two hours) in order to retain the integrity of the power grid.

Standardized Emergency Management System (SEMS): As defined in California Code of Regulations §2401, " . . . based upon the Incident Management System (ICS) adapted from the system originally developed by Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) program including those currently in use by state agencies, the Multi-Agency Coordination System (MACs) as developed by FIRESCOPE program, the operational area concept, and the Master Mutual Aid Agreement and related mutual aid systems."

Urban Heat Island: An urban area having higher average temperature than its rural surroundings owing to the greater absorption, retention, and generation of heat by its buildings, pavements, and human activities.

NWS Terminology

The National Weather Service (NWS) has developed a multi-tier concept for forecasting all types of hazardous weather. These are:

Advisory- Advisories are issued for weather situations that cause significant inconveniences but do not meet warning criteria and, if caution is not exercised, could lead to life-threatening situations. Advisories are issued for significant events that are occurring, are imminent, or have a very high probability of occurrence.

Extreme Heat Warning- Issued within 12 hours of the onset of the following conditions: heat index of at least 105 degrees Fahrenheit for more than 3 hours per day for 2 consecutive days or heat index more than 115 degrees Fahrenheit for any period of time.

Extreme Heat Watch- Issued for the potential of the following conditions within 12 to 36 hours: heat index of at least 105 degrees Fahrenheit for more than 3 hours per day for 2 consecutive days or heat index more than 115 degrees Fahrenheit for any period of time.

Forecast- A forecast provides a description of the most significant weather conditions expected during the current and following days. The exact content depends upon the intended user, such as the Public or Marine forecast audiences.

Heat Advisory- Issued within 12 hours of the onset of the following conditions: heat index of at least 105 degrees but less than 115 degrees for less than 3 hours per day. Nighttime lows remain above 80 degrees for 2 consecutive days.

Heat Index- An index that combines air temperature and humidity to give an apparent temperature (how hot it feels). The apparent temperature that describes the combined effect of high temperatures and high levels of humidity, which reduces the body's ability to cool itself.

Outlook - A hazardous weather outlook is issued daily to indicate that a hazardous weather or hydrologic event may occur in the next several days. The outlook will include information about potential severe thunderstorms , heavy rain or flooding, winter weather, extremes of heat, etc., that may develop over the next 7 days with an emphasis on the first 24 hours of the forecast. It is intended to provide information to those who need considerable lead time to prepare for the event.

Partner Email – Partner emails are issued when the potential exists for a weather event, such as extreme heat, in the next 1-7 days. This email is non-public product and is intended to assist our partners with making operational plans based on potential weather events

Warning- Forecast issued when a particular weather or flood hazard is "imminent" or already occurring (e.g., tornado warning, flash flood warning). A warning is used for conditions posing a threat to life or property.

Watch- Forecast issued well in advance to alert the public of the possibility of a particular weather related hazard (e.g. tornado watch, flash flood watch). The occurrence, location and timing may still be uncertain.

Weather- State of the atmosphere with respect to heat wetness or dryness, calm or storm, clearness or cloudiness. Also, weather is the meteorological day-to-day variations of the atmosphere and their effects on life and human activity. It includes temperature, pressure, humidity, clouds, wind, precipitation and fog.

ACRONYMS

Acronyms used throughout this plan and their full names are listed below as they appear in the document:

ADA	American Disabilities Act
BOS	Board of Supervisors
CAL-ISO	California Independent System Operator (for the electrical power grid)
Cal OES	California Office of Emergency Services
CEO	Chief Executive Officer
CBO	Community Based Organization
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CPUC	California Public Utility Commission
DOC	Department Operations Center
EOC	Emergency Operations Center
FBO	Faith Based Organization
DHHS	Deparment of Health and Human Services
DHA	Department of Human Assisntace
DCFAS	Department of Children, Family and Adult Services
ICS	Incident Command System
JIC	Joint Information Center
MHOAC	Medical Health Operational Area Coordinator
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OA	Operational Area

OES	Office of Emergency Services (County)
PG&E	Pacific Gas and Electric
PIO	Public Information Office (Officer)
REOC	Cal OES Regional Emergency Operations Center (Coastal, Inland, Southern)
SEMS	Standardized Emergency Management System
SMUD	Sacramento Municipal Utilities District
UHI	Urban Heat Island

PANDEMIC RELATED THREATS

Extreme heat is a major public health concern in the United States and especially in the State of California given the high threat of wildfire during the summer months, and subsequent Public Safety Power Shutoffs (PSPS) that leave many Californian's without power for extended periods. 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 during a pandemic can result in the congregating of groups of at-risk people, such as older adults or those with respiratory diseases, seasonal migrant workers, and those experiencing homelessness, and this may potentially provide a route for the transmission of a communicable disease among both visitors and staff.

This appendix to the Sacramento County Extreme Heat Hazard Annex was developed to address the challenges that may arise from the opening and operation of cooling zones or centers during a pandemic and aims to offer strategies for coordinating activities and addressing those concerns.

https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/GuidanceforCoolingCenters.aspx

To prepare members of the public and government resources for extreme heat conditions during a pandemic, adaptations to the three escalating response levels referred to as Phase I, Phase II, and Phase III activations are identified in this section.

Phase I – Pre-Seasonal Readiness

Phase I actions are taken prior to hotter months (usually in April or early May) to prepare for and maintain a state of increased readiness. During a pandemic the Emergency Operations Center and/or the Public Health Department Operations Center may be activated to support response activities. If one or both coordinating structures are activated at any level, the EOC and/or DOC directors should be included in pre-seasonal readiness communications and activities with operational area partners. Additional critical partners to include in this phase are the County Librarian and library safety officer, City Emergency Managers or identified city EOC agency representatives, and the American Red Cross disaster services representative.

The following are additional activities for this phase:

- Review and update the public facilities that are open to the public. NOTE: Many public facilities may be closed or have limited hours of operation or reduced visitor capacity

- Discuss with librarian and city representatives, facilities that may be activated as Cooling Centers during a heat emergency and provide facility adaptation recommendations from the California Department of Public Health (CDPH)

- Identify facility needs including, staffing, personal protective equipment (PPE), thermometers for screening guests, hand sanitizer, additional cleaning and sanitation services, air circulation and filter changes, and educational materials (i.e. culturally appropriate signage)

Phase II – Extreme Heat Watch

Activation criteria for Phase II includes a credible prediction from the National Weather Service of extreme heat or power outages during periods of extreme heat. When this information is received by the Office of Emergency Services additional coordination activities are required in this phase.

The following are additional activities for this phase:

- Notify EOC/DOC directors of potential heat emergency
- Coordinate a conference call with heat plan partners
- Update the facilities that may be activated as cooling centers during the period of extreme heat (these will most likely be county libraries)
- Provide updated facilities listing to PIO for public dissemination and translation if necessary

Phase III – Extreme Heat Warning

Activation criteria for Phase III includes a credible prediction from the National Weather Service of extreme heat warning or power outages during periods of extreme heat. In addition, health surveillance data from local hospitals is collected and monitored for heat related injuries/illnesses and increased calls for Emergency Medical Services (EMS) and deaths related to heat are also tracked during this phase. When this information is received by the Office of Emergency Services additional coordination activities are required for this phase.

The following are additional activities for this phase:

- Notify EOC/DOC directors of potential heat emergency
- Coordinate a conference call with heat plan partners
- Update the facilities that may be activated as cooling centers during the period of extreme heat (these will most likely be county libraries)
- Provide updated facilities listing to PIO for public dissemination and translation if necessary
- Initiate the tracking and monitoring of heat related injury/illness, increased service calls for EMS, and heat related deaths in humans or animals and provide this information to the EOC/DOC command team (if activated)

Cooling Center Facility Adaptations

During a pandemic, public facilities designated as cooling centers or those that may be activated as cooling centers during a heat emergency, may not be open to the public or may have reduced hours of operation or limited visitor capacity. To provide a safe environment for facility personnel and visitors, the following adaptations for these facilities should be implemented:

Individual Control Measures and Screenings

- Provide temperature and symptom screening for all visitors, including any volunteers, vendors, contractors, or other workers entering the Center. All staff should be screened for temperature and symptoms at the beginning of their shift.
- If possible, provide alternative cooling sites for those showing symptoms of illness. This may be a separate room within the Cooling Centers or a space that can be used to accommodate visitors with symptoms and separate them from others.
- Staff who are sick or exhibiting symptoms of illness should stay home.
- Visitors and staff should be encouraged to wear cloth face coverings while in the Center. The Center is encouraged to have a supply of face coverings to distribute to anyone who arrives without one. Face coverings must not be shared.

Cleaning and Disinfecting Protocols

- Perform thorough cleaning on high traffic areas and frequently disinfect commonly used surfaces, including tables, doorknobs, toilets, and handwashing facilities. Limit sharing of items and clean disinfect shared items between users.
- Clean touchable surfaces between shifts or between users, whichever is more frequent.
- Follow the Center for Disease Control and Prevention (CDC) cleaning and disinfection guidelines https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html for community facilities, and cleaning facilities if someone is sick.

Physical Distancing Guidelines

- Maintain physical (social) distancing of at least six feet between individuals within Centers.
- Consider creating spaces for individual family units (families who live together do not need to maintain physical distancing in a Colling Center).
- Jurisdictions may consider using facilities that have not yet been opened as part of the Governor's Roadmap and movement through Stage 2 business sector reopening, such as libraries, community centers, and move theatres, if they can be configured to safely serve as cooling centers only.

Other Considerations

- Identify and address potential language, cultural, and disability barriers associated with communicating pandemic illness information to staff, volunteers, and those visiting Colling Centers.
- Post signs at entrances and in strategic places providing instruction on hand hygiene, respiratory hygiene, cough etiquette, cloth face coverings, and physical distancing.
- Providing educational materials about the pandemic illness in multiple languages, as needed.
- Provide bottled water for patrons.
- Assess Ventilation Follow CDPH Interim guidance for Ventilation, Filtration, and Air Quality in Indoor Environments.

COOLING CENTER FIELD OPERATIONS GUIDE

How to Use the Operations Guide

This Operations Guide is a tool for Cities, special districts, non-profits, faith-based organizations, and others that intend to operate a cooling center.

All elements of the Operations Guide might not be relevant or required in all situations or in all jurisdictions. A Center can scale up or down (expand or contract) throughout an incident. The cause, scope, and duration of the incident, the demographics of the community, and the available resources will drive decisions about the size of the Center, the hours of operation, and the services that are provided.

This Operations Guide contains the most common elements of Cooling Centers. Additional considerations might be required. Operators should tailor the Operations Guide to the unique aspects of their jurisdiction.

Before opening a Center, operators should consult with their legal counsel and insurers to determine if all legal requirements are met and liability issues are covered.

Coordination with Emergency Management (Sacramento County OES)

The operation of Centers, especially during large-scale emergencies and disasters, should be coordinated with the emergency management system in the city and county where Centers are opened to:

- ☐ Ensure that the Center is meeting all applicable laws and regulations
- ☐ Avoid duplicating efforts of other agencies/organizations
- ☐ Obtain support from a broader system if public needs exceed the operator's capabilities (e.g., access to social services, additional staffing)
- ☐ Maintain situational awareness (knowing what is going on with all aspects of the emergency) so that operators can make informed decisions
- ☐ Opening and closing of Centers should be posted on the County's website.

If a Center is to be part of a larger response, successful coordination with other parts of the response requires that operators be trained in Emergency Management Systems (SEMS and NIMS) and the Incident Command System (ICS).

Services

Prior to opening Centers, operators should determine the services that the public will need and the operator's ability to meet them. Minimal needs include tables and chairs, charging stations, and information updates. Prolonged or particularly severe temperature conditions might require expanded services.

- ☐ Water is to be provided.
- ☐ Staff should be aware of how they can support individuals with functional needs. Service animals must be allowed to accompany their owners. The Center facility must be compliant with the Americans with Disabilities Act (ADA).
- ☐ Operators should be prepared to accommodate pets.

Facilities

Facilities should be selected carefully to ensure that:

- ☐ Public transportation stations are nearby and available
- ☐ Features are compliant with the Americans with Disabilities Act (ADA) (See www.ada.gov.)
- ☐ Safety hazards are mitigated
- ☐ Roads to the facility are kept open
- ☐ The facility is available for the duration of the incident
- ☐ The space will accommodate the expected number of people
- ☐ Kitchen facilities are available if food is to be served
- ☐ The heating/ventilation/air conditioning system is operable or generators are available
- ☐ Lavatory capacity is sufficient for the expected number of people
- ☐ Number of electrical outlets is sufficient for charging stations and medical equipment
- ☐ Refrigeration is available for medications
- ☐ Space is available for specialized purposes (e.g., first aid, play, quiet, pets)

Staffing

Centers can be operated by volunteers and/or employees of government agencies or non-governmental organizations (e.g., non-profit, faith-based, community).

When to Open a Center

The existence of several factors could lead to the opening of Centers:

- ☐ Heat index (combination of temperature and humidity) as indicated by the National Weather Service (NWS). Center operators will need to determine the levels that will trigger the opening of Centers in their jurisdiction. Those triggers are outlined in the Extreme Heat Hazard Annex.
- ☐ Power outages that render cooling systems inoperable
- ☐ Individuals cooling in their homes or those that are unhoused

Cooling Center Checklist	
Before an Incident (use stages in Plan)	
1. Educate the Public	
☐ Identify outreach opportunities. ☐ Consider all segments of the population (e.g., individuals with access and functional needs, pets) Determine information to be disseminated (e.g., prevention of heat illnesses) Develop pre-scripted social media messaging. ☐ Secure printed materials in languages prevalent in the community. ☐ Train presenters if presenting to groups. ☐ Disseminate information.	
2. Determine triggers for opening/closing the centers	
☐ Heat Index ☐ Power Outages	
3. Determine methods of notifying the public of Center availability	
☐ Mass notification system (phone, email, text, door-to-door, public access television, radio, television, social media) ☐ Notification methods for individuals who have access and functional needs ☐ Public Information Officer (PIO) to handle media inquiries.	
4. Determine transportation service needs.	
☐ For individuals with disabilities and access and functional needs (e.g., wheelchairs, service animals) ☐ For individuals who are not near public transportation or the Center is not near public transportation ☐ For individuals who rely on public transportation that may not be operating an emergency	
5. Determine potential facilities and establish Memorandum of Understanding (MOU) with owners	
☐ Near public transportation	☐ Ample electrical outlets
☐ Adequate capacity	☐ Lavatories
☐ Easy to find	☐ Large common area
☐ Ample, free parking	☐ Rooms for specialized purposes (e.g., first aid, play)
☐ ADA-compliant	☐ Health authorities consulted about food service
☐ Intact HVAC	☐ Accommodations for pets

Cooling Center Checklist	
Before an Incident (use stages in Plan)	
☐ Generator	
6. Determine Personnel	
☐ Center Manager	☐ Security
☐ Registration Workers	☐ Volunteer Manager
☐ Custodians	☐ Interpreters
☐ Fire Inspector	☐ PIO
7. Determine equipment, supplies, and forms. Store at facilities, if possible.	
Office	**Play Area for Children**
☐ Tables/Chairs	
☐ Television	
☐ Battery-powered Radio	**Indoor Signage**
☐ Weather Radio	☐ Registration
☐ Small Refrigerator for Medications	☐ Hours of Operation
☐ Forms	☐ Rules of Conduct
☐ Office Supplies	☐ Common Area
☐ Radios (Communications)	☐ Sitting Area
☐ Batteries	☐ Information Area
☐ Surge Protectors	☐ Entertainment/Play Area
☐ Fire Extinguisher	☐ Evacuation Plan
☐ Flashlights	☐ Lavatories
☐ Signage	☐ Emergency Exits
☐ Staff Identification (vests, shirts, badges)	
	Outdoor Signage
Registration and Common Area	☐ Street signs
☐ Tables/Chairs	☐ Door signs
☐ Registration Forms	
☐ Hand Sanitizer	**Forms**
☐ Waste Containers	☐ Media Release Templates
☐ Charging Stations	☐ Directory
☐ Pens	☐ Registration
	☐ Ground Rules
Information	☐ Staff Check-In/Out
☐ Bulleting Board	☐ Resource Check-in/Out
☐ Easel/Markers	☐ Resource Request
	☐ Staff Hours Tracking
First Aid	☐ Expense Tracking
☐ First Aid Kit/AED	☐ Inventory

Cooling Center Checklist	
Before an Incident (use stages in Plan)	
☐ Personal Protective Equipment	☐ Injury/Illness Report
☐ COVID-19 Mitigation Supplies	☐ Safety and Security Incident Report
	☐ Work Schedule
	☐ Activity Log

8. Determine policies and procedures.

- ☐ Who will authorize the opening and operation of the Center?
- ☐ How will the Center be financed?
- ☐ Does the facility and operator of the Center have appropriate insurance?
- ☐ Will personnel be paid, volunteer, or both?
- ☐ How will personnel be vetted and credentialed?
- ☐ What will the hours of operation be?
- ☐ Will registration be required?
- ☐ What will the scope of service be (e.g., seniors only)?
- ☐ How will registered sex offenders be accommodated?
- ☐ What is the policy for unaccompanied minors?
- ☐ Will food, snacks, beverages be served?
- ☐ How will food, snacks, and beverages be procured?
- ☐ How will media requests to visit the Center be handled?
- ☐ How will you handle offers of donated food and other goods?
- ☐ Where will pets be housed? Another area of Center facility or a different facility?
- ☐ How will pets be housed? (Service animals must be permitted to remain with owners.) Will emotional support animals be permitted in the Center?

- ☐ Guests must check in and out.
- ☐ Respect people, personal property, and privacy. No weapons, alcohol, illegal drugs, matches, or tobacco use.
- ☐ Media must be accompanied by the Center Manager
- ☐ News updates and emergency information will be posted at a designated location within the Center.
- ☐ Prescription and over-the-counter drugs in original containers only
- ☐ Service animals permitted in Center. Pets/therapy animals in Pet Area only.
- ☐ Guests must check in and out.
- ☐ Respect people, personal property, and privacy. No weapons, alcohol, illegal drugs, matches, or tobacco use.
- ☐ Children must be supervised at all times.
- ☐ Keep items off of the floor to prevent trips and falls and for wheelchair accessibility.
- ☐ Guests are responsible for their own valuables.
- ☐ Center is not liable for loss or damage to personal vehicles or property.
- ☐ Appropriate dress, including shirts and shoes, required at all times.
- ☐ Share electrical outlets and charging stations.

Cooling Center Checklist
Before an Incident (use stages in Plan)
☐ Wash hands frequently, especially after using the lavatory and before handling food. ☐ Management reserves the right to remove individuals from the Center for non-compliance with conduct rules.

Cooling Center Checklist
During an Incident (use stages in Plan)
9. Initial Assessment
☐ Consult National Weather Service and the NOAA for information. ☐ Temperatures to be expected? ☐ Do expected temperatures meet criteria? ☐ Expected duration of the incident? ☐ Number of calls from the public? ☐ Number of people to expect at the Center? ☐ Demographics of expected population (e.g., access and functional needs, pets)? ☐ Consult National Weather Service and the NOAA for information. ☐ Services that will be needed?
10. Activation
☐ Receive authorization to open Center from appropriate person in municipality/organization. ☐ Select facility. ☐ Receive agreement from facility and activate MOU, if applicable. ☐ Activate paid and volunteer staff. Emphasize no self-deployment. ☐ Move equipment and supplies to facility if not already staged there. ☐ Notify the following entities that a Center is being activated: ☐ Law enforcement of potential traffic increase and need for security ☐ Fire inspector ☐ Health authorities ☐ Office of Emergency Services (City and County) ☐ American Red Cross ☐ Sacramento 2-1-1 and Provide the following information: ☐ Your organization's name ☐ Street address and travel instructions, such as nearest intersection ☐ Phone number ☐ Is the facility accessible for individuals with access and functional needs? ☐ Services available ☐ Items that guests should bring ☐ Hours open ☐ Who qualifies ☐ How to access (walk in?) ☐ Determine a transportation plan.
11. Set-up

Cooling Center Checklist	
During an Incident (use stages in Plan)	
☐ Set up separate areas – Registration, Common, Dining, Information, Entertainment, Play, Quiet, Pets ☐ Post indoor signage. Outdoor signage should be posted just prior to opening. ☐ Inspect facility. Note existing damage. Mitigate hazards. ☐ Brief staff. ☐ Ensure all staff are assigned and trained according to their capabilities. ☐ Determine off-limits areas.	
12. Notification	
☐ When Center is operational, notify: ☐ City or County Office of Emergency Services ☐ 2-1-1 Sacramento ☐ Public through mass notification systems, media/social media, internet sites ☐ Use templates to craft your message. ☐ Include location, dates, and hours of operation of Center. ☐ Inform public of transportation options. ☐ Explain provisions for pets. ☐ Provide safety information.	
13. Ongoing Operation	
☐ Mitigate health and safety hazards. Ask everyone to report unsafe conditions. ☐ Document all staff hours and expenses. ☐ Establish shift and break schedules. ☐ Ensure that no one works past the maximum number of hours. ☐ Ensure that there are never fewer than two workers per shift. ☐ Ensure that an activity log is maintained (i.e., document all unusual circumstances on the designated form). ☐ Ensure that reports are completed for each incident of illness or injury to staff and guests. ☐ Ensure that guests check in and out whenever they enter or leave the premises. ☐ Ensure water is available at all times. ☐ Transport guests to and from the Center according to transportation plan. ☐ Assist guests with functional needs. ☐ Ensure sanitary conditions in all areas. ☐ Report daily census to City or County Office of Emergency Services. ☐ Begin planning for next operational period. ☐ Talk to guests to ensure that their needs are being met. ☐ Monitor need for scaling up, scaling down, and demobilizing.	
14. Closing	

Cooling Center Checklist
During an Incident (use stages in Plan)

- ☐ Give 24-hour notice of Center closing.
- ☐ Notify:
  - ☐ Employees and Volunteers
  - ☐ Guests
  - ☐ Office of Emergency Services
  - ☐ American Red Cross
  - ☐ Media/social media, internet sites
  - ☐ Law Enforcement
  - ☐ Fire Inspector
  - ☐ Public Health
- ☐ Ensure that all guests have transportation.
- ☐ Remove outdoor signage at closing time.
- ☐ Ensure equipment is clean and in good working order before storing.
- ☐ Repair or replace damaged equipment and/or signage.
- ☐ Replenish expended supplies.
- ☐ Ensure that facility is returned to its pre-activation condition or better.
- ☐ Inspect facility with owner and document concerns.
- ☐ Debrief staff and guests.
- ☐ Collect and file paperwork (registration, check-in/out, activity logs, tracking sheets, injury/illness reports).

Cooling Center Checklist
After an Incident (follow stages in Plan)
15. Follow-up

- ☐ Conduct an after-action meeting to include all paid and volunteer staff.
- ☐ Determine successes, shortfalls, and suggestions for improvement.
- ☐ Write an Improvement Plan with individuals assigned to accomplish objectives.
- ☐ Assign an individual to ensure that suggested improvements are implemented.
- ☐ Put new procedures into place for the next Center as needed.

MESSAGING TOOLKIT

TBD