



EXTREME TEMPERATURE RESILIENT PETALUMA: DEVELOPING A PROCESS AND PLAN

City of Petaluma Emergency Management Program

AGENDA

Introduction

Finding a Starting Point

The Threat

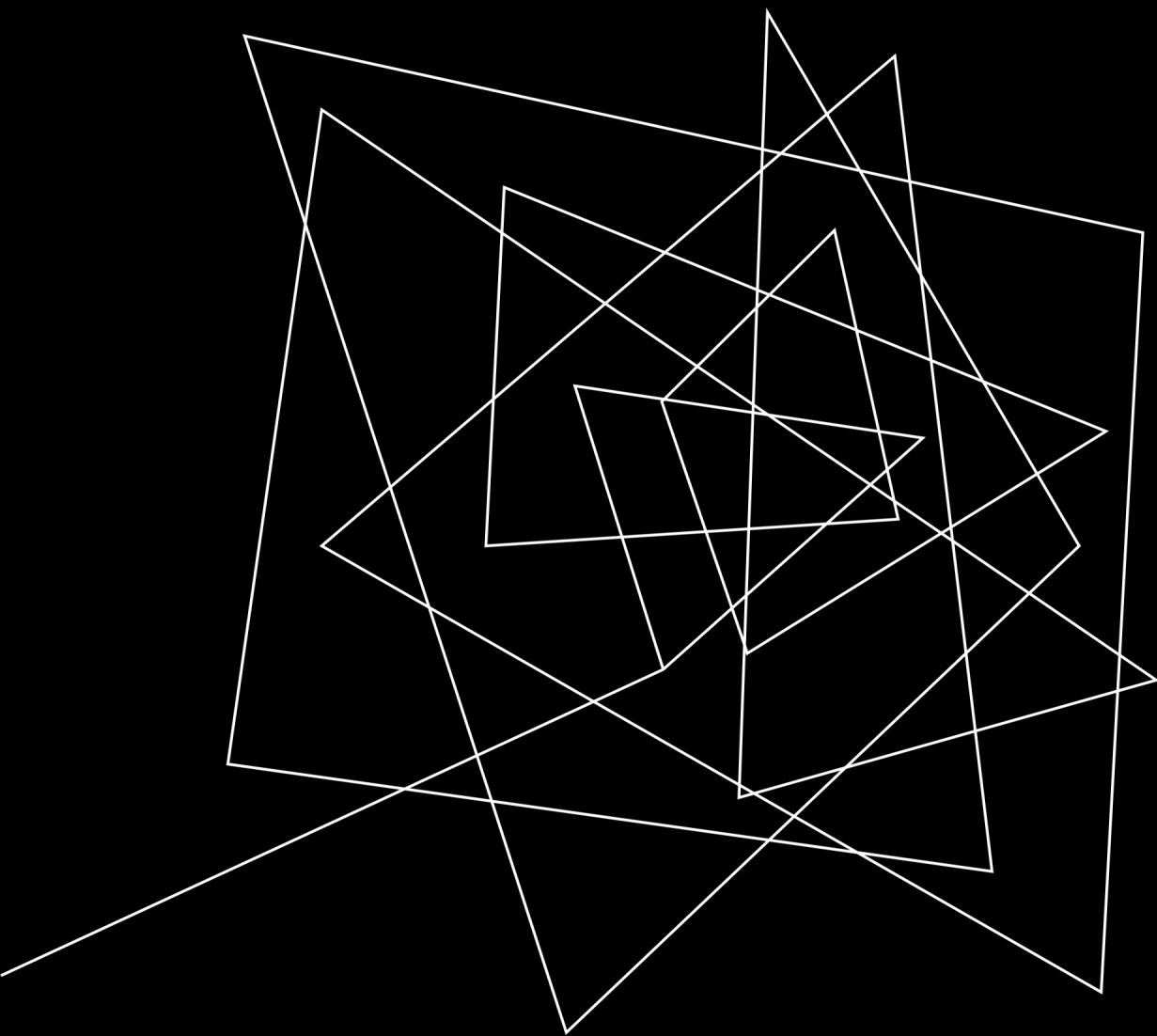
Timeline

Summary

INTRODUCTION

Our climate is changing in a manner that presents weather patterns that are unusual and which have been shown to cause disproportionate harm on vulnerable populations such as children in low-income families and senior community members. This change is predicted to grow.

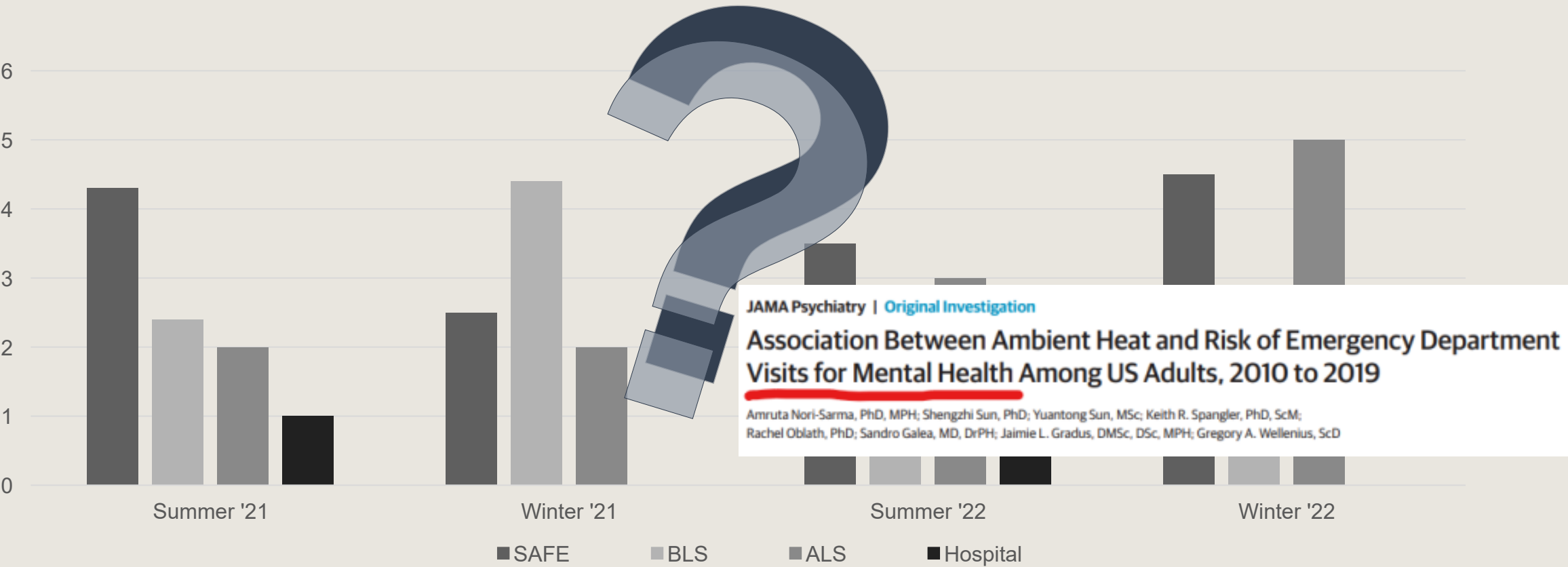
While temperatures in the Petaluma area rarely exceed safe conditions, our community is not acclimated with the consistent and extreme high temperatures of other areas, making our vulnerable populations more vulnerable than those in areas with consistently hot temperatures.

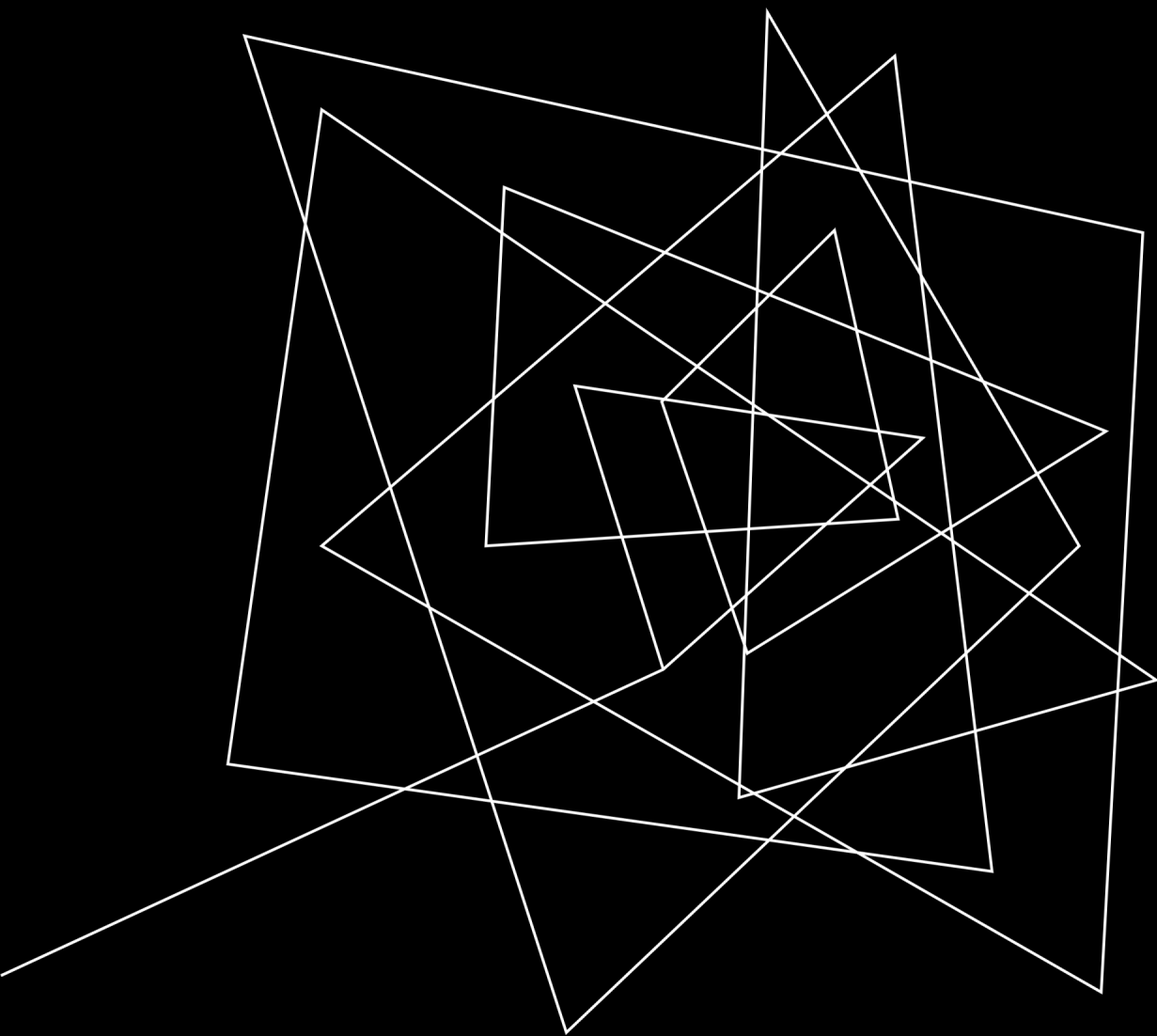


FINDING A STARTING POINT

Turning processes and partnerships into plans

PAST METRICS ON COMMUNITY EXTREME TEMPERATURE IMPACTS



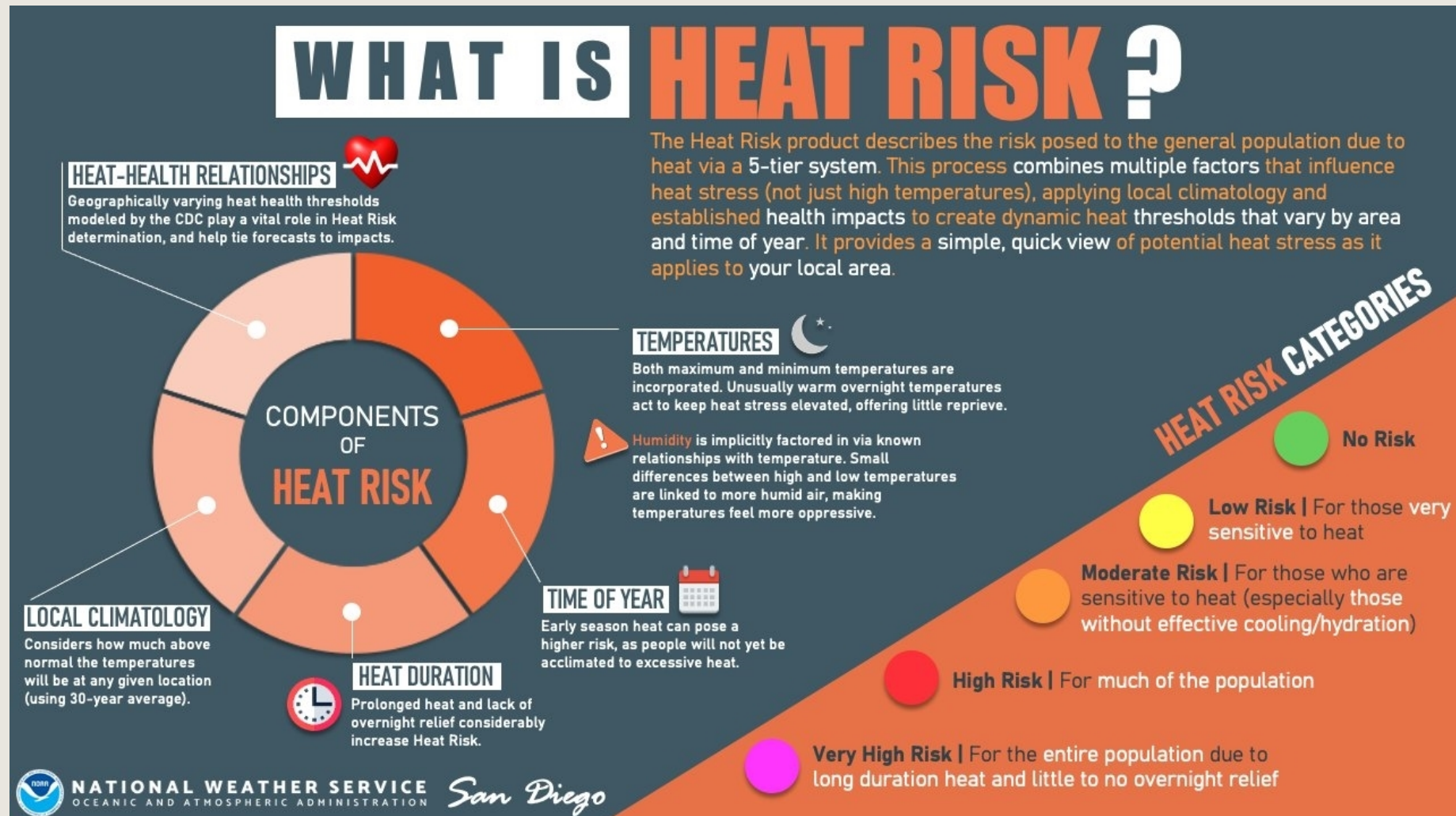


THE THREAT

What is “extreme” . . .

NATIONAL WEATHER SERVICE PRODUCT REVIEW

Heat Risk TM

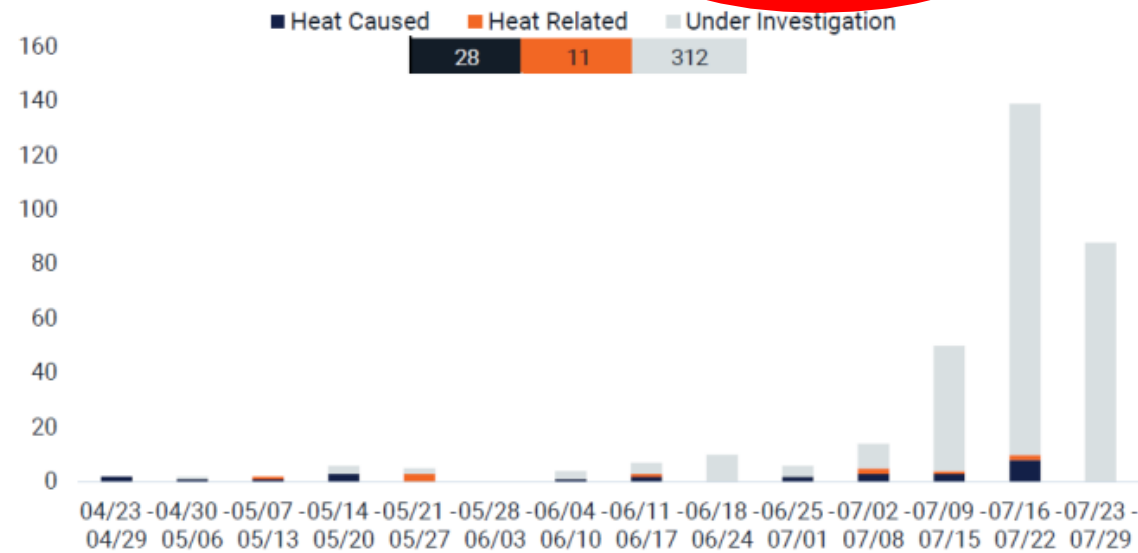


EXTREME EXTREMES

2023 Heat Associated Deaths: Week 30 07/23 - 07/29

Table 1. Summary of 2023 and 2022 heat-associated deaths year-to-date.			
2023 Cumulative Total	Confirmed	Under Investigation	First Death
	39	312	4/11/2023
2022 Cumulative Total	Confirmed	Under Investigation	First Death
	42	312	3/13/2022

Graph 1. There have been 39 heat-associated deaths in Maricopa County as of 08/01/2023



Graph 2. Heat-associated deaths and environmental temperature in Maricopa County

140 6

NATIONAL WEATHER SERVICE PRODUCT REVIEW

Heat Risk TM

NWS HeatRisk Prototype

Identifying Potential Heat Risks in the Seven Day Forecast

Sun	Mon	Tue	Wed	Thu	Fri	Sat
9/4	9/5	9/6	9/7	9/8	9/9	9/10

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

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

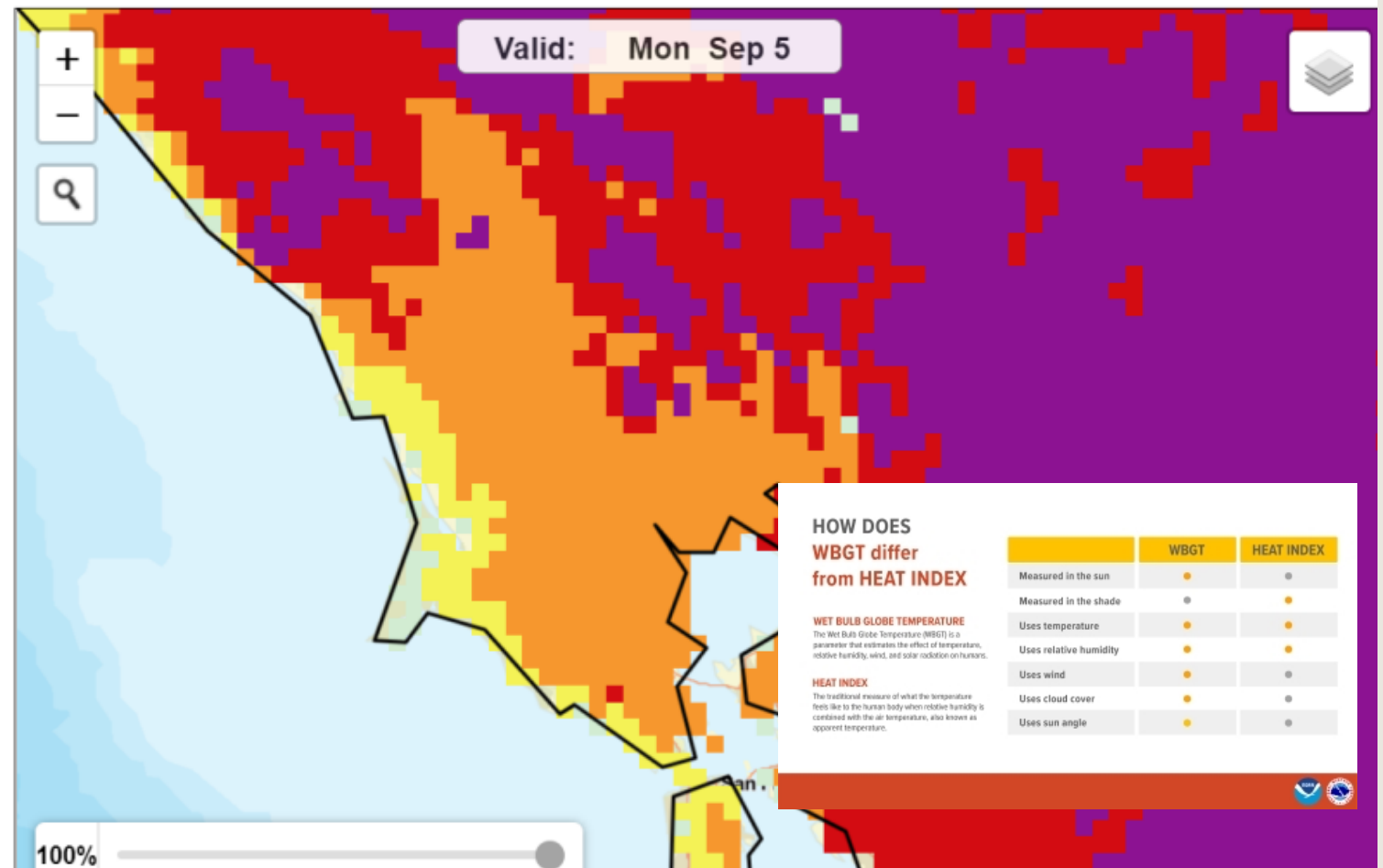
Map

Overview

What's in HeatRisk?

Understanding HeatRisk

Resources



NATIONAL WEATHER SERVICE PRODUCT REVIEW

WATCH, WARNING, ADVISORY

WATCH: A watch is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location or timing is still uncertain. It is intended to provide enough lead time so those who need to set their plans in motion can do so. A watch means that hazardous weather is possible. People should have a plan of action in case a storm threatens and they should listen for later information and possible warnings especially when planning travel or outdoor activities.

NATIONAL WEATHER SERVICE PRODUCT REVIEW

WATCH, WARNING, ADVISORY

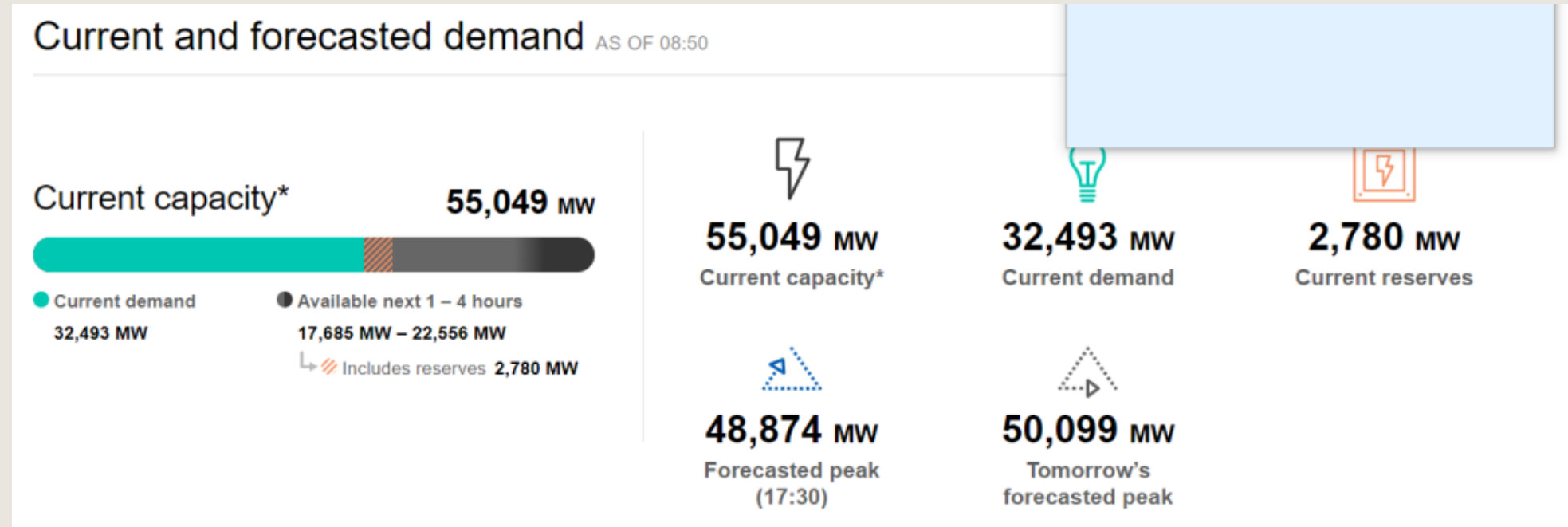
ADVISORY: An advisory is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. Advisories are for less serious conditions than warnings, that cause significant inconvenience and if caution is not exercised, could lead to situations that may threaten life or property.

NATIONAL WEATHER SERVICE PRODUCT REVIEW

WATCH, WARNING, ADVISORY

WARNING: A warning is issued when a hazardous weather or hydrologic event is occurring, imminent or likely. A warning means weather conditions pose a threat to life or property. People in the path of the storm need to take protective action.

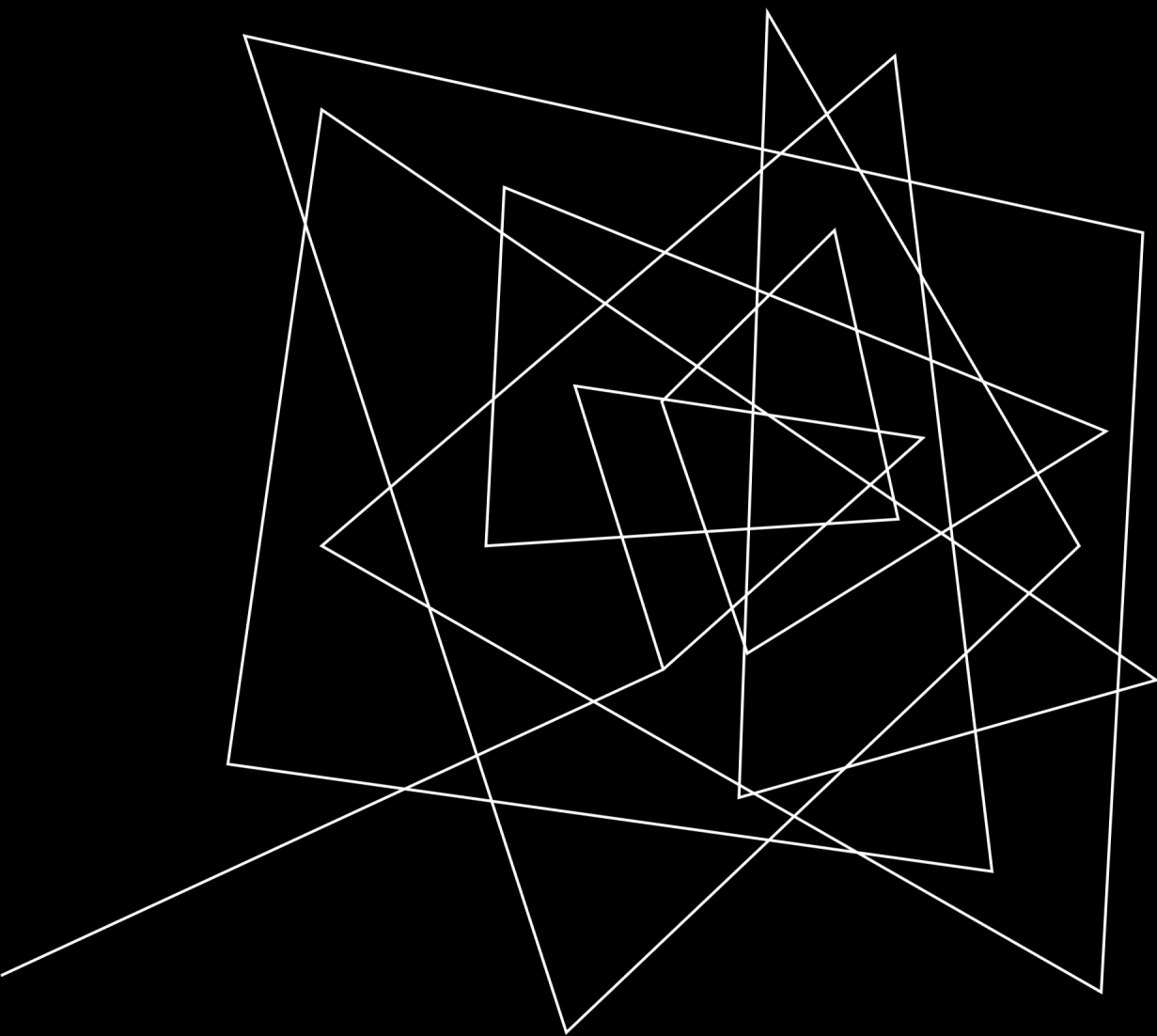
“OTHER FACTORS”



“OTHER FACTORS”

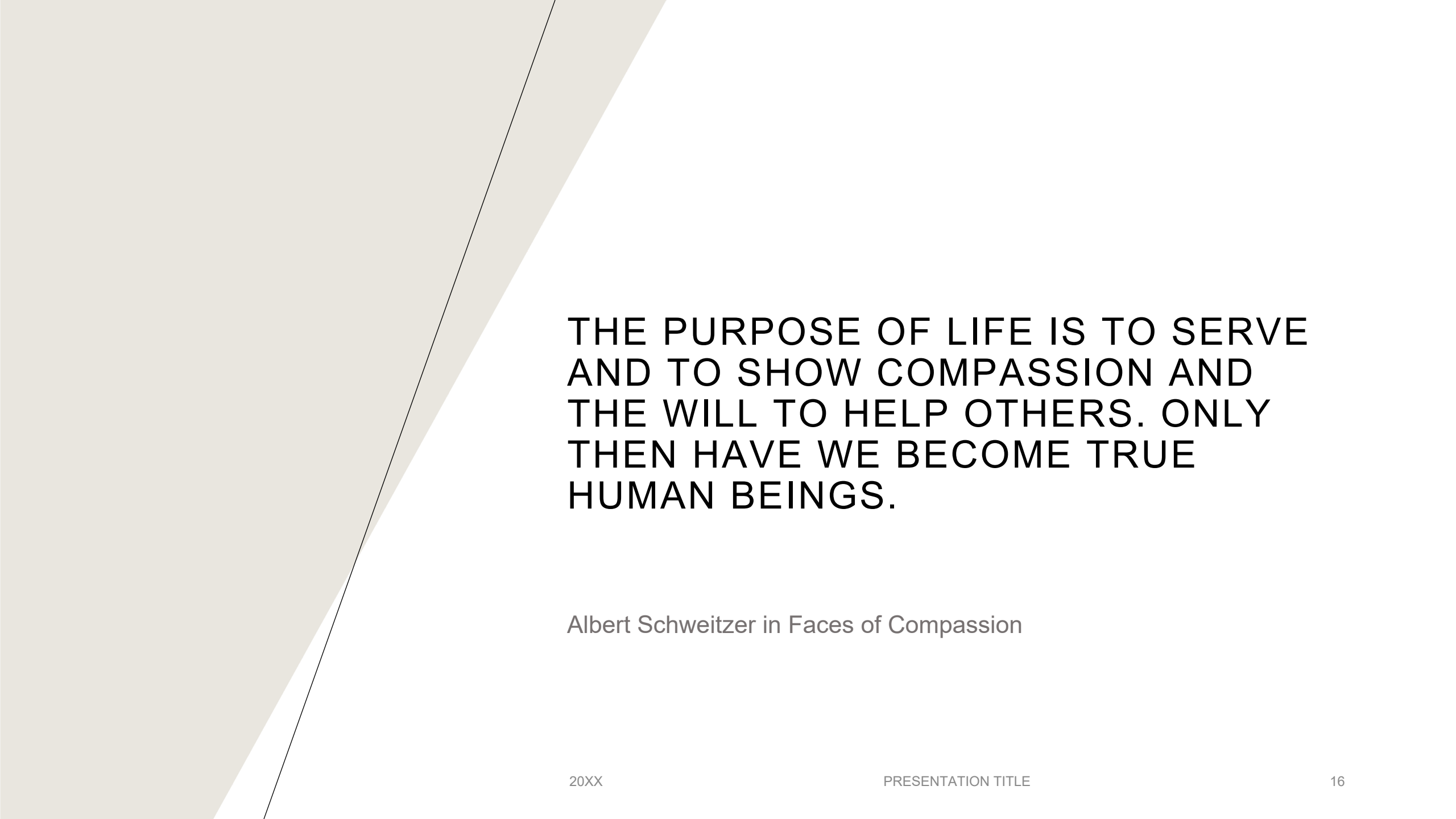
Trained
Observers:





RESPONSE PLANS

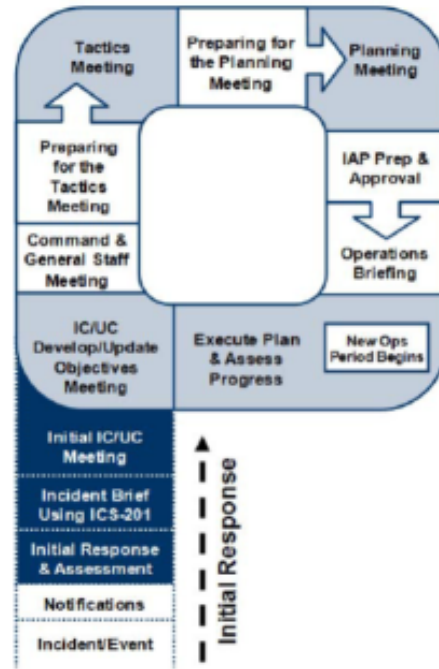
Building consensus with partners



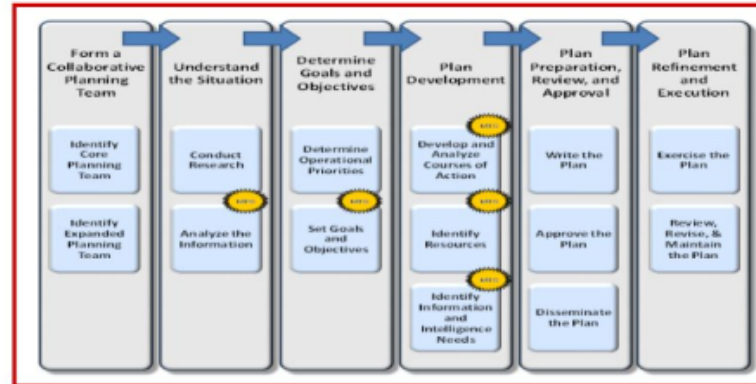
THE PURPOSE OF LIFE IS TO SERVE
AND TO SHOW COMPASSION AND
THE WILL TO HELP OTHERS. ONLY
THEN HAVE WE BECOME TRUE
HUMAN BEINGS.

Albert Schweitzer in Faces of Compassion

PLAN DEVELOPMENT PROCESSES



The CPG 101 planning process



Sonoma County Operational Area
Emergency Operations Plan Annex

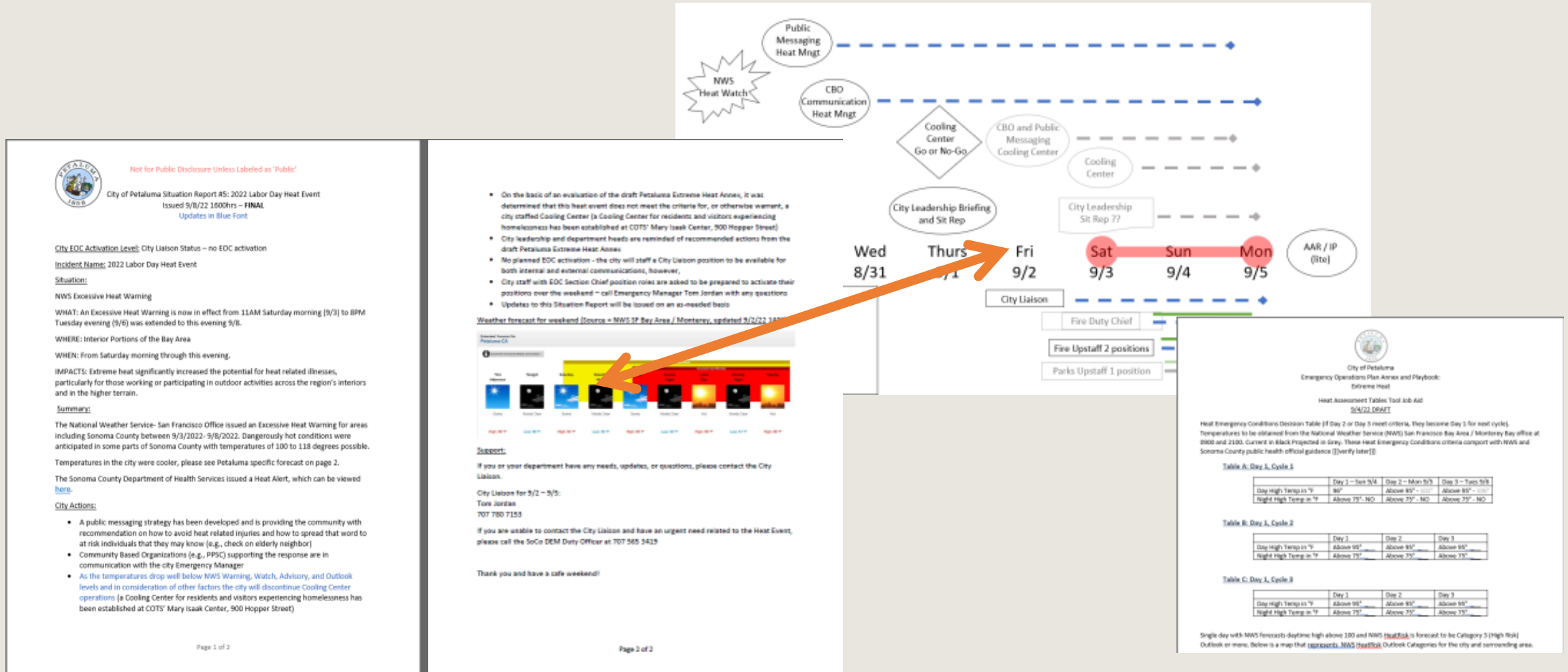
Extreme Temperature Incidents

DEPARTMENT OF EMERGENCY MANAGEMENT



June 2023

PETALUMA EXTREME TEMPERATURE PREPAREDNESS AND RESPONSE PROCESS - GETTING AHEAD OF IT -



PETALUMA EXTREME TEMPERATURE PREPAREDNESS AND RESPONSE PROCESS - PUBLIC MESSAGING -

HELPING OTHERS: **EXTREME HEAT**



NEVER leave anyone (or pets) alone in a locked car



Monitor others exercising or playing sports, ensuring frequent breaks



Bring water to outdoor activities to keep everyone hydrated



Heat Impacts: Vulnerable Populations

PREGNANT **NEWBORNS** **CHILDREN**

Everyone is at risk from the dangers of extreme heat, but these groups are more vulnerable than most. Age and certain conditions make the body less able to regulate temperature.

NEVER leave a person alone in a closed car. Use air conditioning and stay in the shade.

Heat Related Deaths ARE Preventable

LOOK BEFORE YOU LOCK

The temperature in your car can quickly become deadly!

Heat can escalate quickly.

Warm temperatures can quickly become dangerous. Heat is one of the most deadly weather hazards — don't underestimate it.

- NEVER leave people or pets alone in a closed car
- Drink plenty of water, even if you don't feel thirsty
- Wear loose-fitting, light-colored clothing
- Spend time in air conditioning and in the shade

weather.gov/heat

Pet Safety

Never leave your pets in a parked car!

Safety Tips For Your Pets

- Watch the humidity
- Heat Exhaustion
- Heat Stroke

weather.gov/heat

Heat Exhaustion vs. Heat Stroke

ACT FAST

- Move to a cooler area
- Loosen clothing
- Sip cool water
- Seek medical help if symptoms don't improve

Heat Exhaustion Symptoms: Dizziness, Thirst, Heavy Sweating, Nausea, Weakness

Heat Stroke Symptoms: Confusion, Dizziness, Becomes Unconscious

CALL 911

- Move person to a cooler area
- Loosen clothing and remove extra layers
- Cool with water or ice

Heat exhaustion can lead to heat stroke. Heat stroke can cause death or permanent disability if emergency treatment is not given.

Stay Cool, Stay Hydrated, Stay Informed!

Recent messages from: Petaluma Police Department

North McDowell Boulevard due to construction. [More »](#)
"Entered: 5 days, 21 hours ago"

Community Join us for Petaluma Night Out tomorrow, Wednesday 8/2 at the fairgrounds from 4-7pm! [More »](#)
"Entered: 5 days, 22 hours ago"

Advisory Aggressive Dog Bites Neighbor [More »](#)
"Entered: 5 days, 22 hours ago"

Advisory CANCEL - Shelter in Place Lifted for 1200 Block of San Rafael Drive, dog is secured. [More »](#)
"Entered: 5 days, 22 hours ago"

[View more messages from this agency »](#)

Receive messages by email & text message

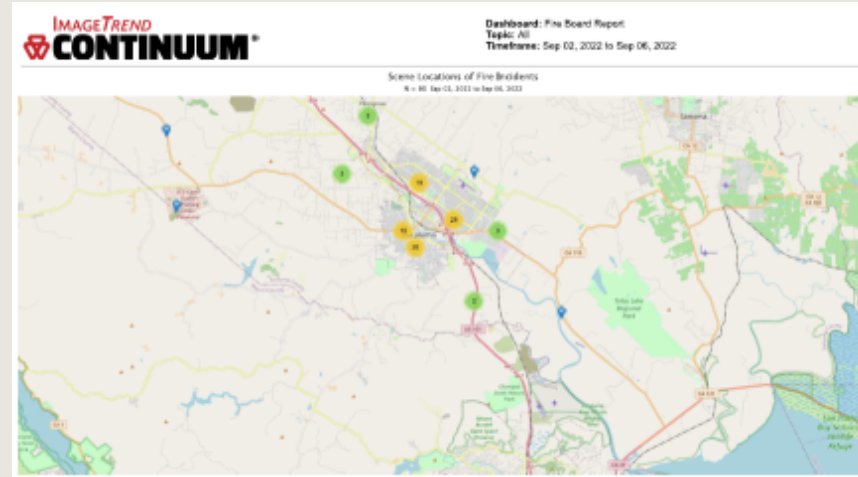
[Sign Up!](#)

powered by: NIXLE

PETALUMA EXTREME TEMPERATURE PREPAREDNESS AND RESPONSE PROCESS - ASSESSING IMPACTS -

“OTHER FACTORS”

Trained Observers:



Name	Location	Staffing Costs	Dates of Operations	Hours of Operations	# of Attendees	Additional Resources Offered
Cloverdale Citrus Fairgrounds	1 Citrus Fair Drive, Cloverdale CA 95425	\$5,960	9/5/2022 9/6/2022	1200-1800 1200-1800 1200-1800	0 0 1	WiFi, movies, children's game station, charging area, and a transportation van for those needing
Hearldsburg Senior Center	133 Mathews			1100-1900 1100-1900 1100-1900 0900-1700 0900-1700	3 3 21 12 6 0	WiFi and water
Rohnert Park Senior Center	6800 Huron			1200-1900	8	WiFi, baked goods, books, TV, pool table, games
Finley Community Center	2090 West			1100-1900 1100-1900 1100-1900 1100-1900 1100-1900 1100-1900	5-10 5-10 5-10 5-10 5-10 5-10	Wi-Fi, water and light refreshments (granola bar
Selastopol Center for the Arts	282 High St			1000-1600 1000-1600	1 1	Water
Windsor Senior Recreation Center	9231 Foxwood Drive, Windsor, CA	\$144	9/6/2022 9/7/2022 9/8/2022	0900-2000 0900-2000 0900-2000	1 0 0	WiFi

Daily Report - Cooling/Warming Centers

Center Lead/Manager: Please include as much detail as possible when completing. Please complete daily while the center is in operation.

THANK YOU for your support to the Sonoma County community!

Required

Select Jurisdiction

☐ Cloverdale

☐ Cotati

☐ Healdsburg

☐ Petaluma

☐ Windsor

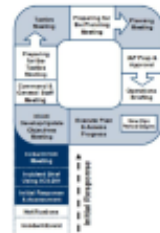
HOW DOES WBGT differ from HEAT INDEX

WET BULB GLOBE TEMPERATURE
The Wet Bulb Globe Temperature (WBGT) is a parameter that estimates the effect of temperature, relative humidity, wind, and solar radiation on humans.

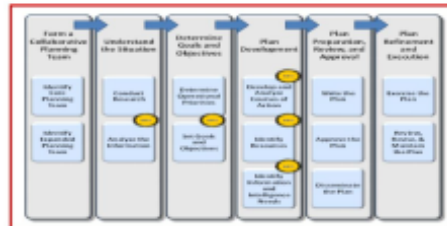
HEAT INDEX
The traditional measure of what the temperature feels like to the human body when relative humidity is combined with the air temperature, also known as apparent temperature.

	WBGT	HEAT INDEX
Measured in the sun	●	●
Measured in the shade	●	●
Uses temperature	●	●
Uses relative humidity	●	●
Uses wind	●	●
Uses cloud cover	●	●
Uses sun angle	●	●

PLAN DEVELOPMENT PROCESSES



The CPG 101 planning process



Sonoma County Operational Area
Emergency Operations Plan Annex

Extreme Temperature Incidents

DEPARTMENT OF EMERGENCY MANAGEMENT



June 2023

A QUICK STORY . . .



Temperatures have been steadily increasing over the past few days, and NWS products indicate potential for extreme heat over the holiday weekend. City staff and Community Based Organization partners have been assessing potential impacts and response resources for the weekend (e.g., staff available on holiday weekend, cooling supplies).

As the worst of the heat bears down . . .

A series of white, overlapping geometric lines and polygons on a black background, located on the left side of the slide.

SUMMARY

The City of Petaluma is deeply committed to reducing harm from extreme temperature weather systems on our most vulnerable community members. Through partnerships within and outside of the city, we will continue to develop a thoughtful approach to this aspect of our changing climate.



THANK YOU

Comments or questions:

Tom Jordan

tjordan@cityofpetaluma.org