



Extreme Heat Preparedness



Learning Objectives

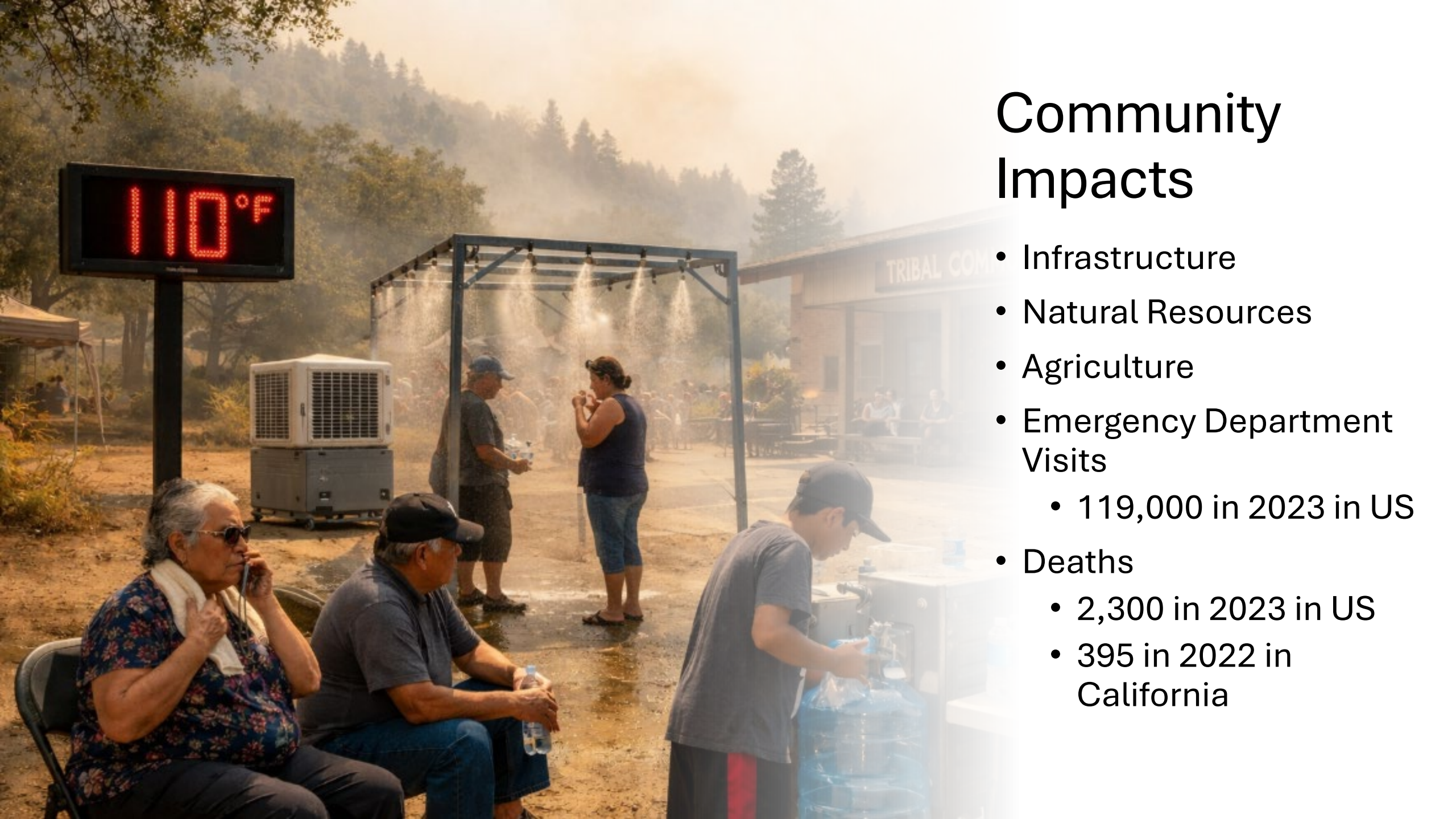
Define Extreme Heat

Health Impacts of Extreme Heat

Strategies for Managing Extreme Heat

Community Impacts

- Infrastructure
- Natural Resources
- Agriculture
- Emergency Department Visits
 - 119,000 in 2023 in US
- Deaths
 - 2,300 in 2023 in US
 - 395 in 2022 in California



Extreme Heat Defined

- High Heat and Humidity, Above 90°F More Than 2 Days
- Or
- A Temperature That Is Much Hotter and/or Humid Than Regional Average
- Heat Wave



What are the Health Risks of Extreme Heat?



Physical Impacts of Heat and Humidity

- Higher Body Temperature
- Fluid and/or Electrolyte Loss



Early Warning Signs of Heat Related Illness

- Muscle Cramping
- Unusually Heavy Sweating
- Shortness of Breath
- Dizziness
- Headaches
- Weakness
- Nausea



Types of Heat Related Illness



Heat Stroke: WHAT TO LOOK FOR

- High Body Temperature (103°F or higher)
- Hot, Red, Dry, or Damp Skin
- Fast, Strong Pulse
- Headache
- Dizziness
- Nausea
- Confusion
- Losing Consciousness (passing out)



Heat Stroke: WHAT TO DO

**Heat stroke is life threatening--
Call 911 Right Away!**

- Move the Person to a Cooler Place
- Help Lower the Person's Temperature with Cool Cloths or a Cool Bath
- Do Not Give the Person Anything to Drink



Heat Exhaustion: WHAT TO LOOK FOR

- Heavy Sweating
- Cold, Pale and Clammy Skin
- Fast, Weak Pulse
- Nausea or Vomiting
- Muscle Cramps
- Tiredness or Weakness
- Dizziness
- Headache
- Fainting (passing out)





Heat Exhaustion:

WHAT TO DO

- Move to a Cool Place
- Loosen Your Clothes
- Put Cool, Wet Cloths on Your Body or Take a Cool Bath
- Sip Water

Get Medical Help Right Away if:

- You are Throwing Up
- Your Symptoms Get Worse
- Your Symptoms Last Longer Than 1 Hour

Heat Cramps

WHAT TO LOOK FOR

- Heavy Sweating During Intense Exercise
- Muscle Pain or Spasms



WHAT TO DO

- Stop Physical Activity
- Move To A Cool Place
- Drink Water Or Sports Drink
- Wait for Cramps To Go Away Before You Do Any More Physical Activity

Get Medical Help Right Away if:

- Cramps Last Longer Than 1 Hour
- You're on a Low-Sodium Diet
- You Have Heart Problems

Sunburn

WHAT TO LOOK FOR

- Painful, Red and Warm Skin
- Blisters on the Skin



WHAT TO DO:

- Stay Out of the Sun Until your Sunburn Heals
- Put Cool Cloths on Sunburned Areas or Take a Cool Bath
- Put Moisturizing Lotion on Sunburned Areas
- Do Not Break Blisters

Heat Rash

WHAT TO LOOK FOR

- Clusters of Small, Inflamed Blister-like Bumps that can Produce Intense Itching *(usually develops in skin folds and where clothing rubs against the skin)*
- On Darker Skin these Bumps May Appear White, Gray, Purple or Dark Brown



WHAT TO DO:

- Stay in Cool, Dry Place
- Keep the Rash Dry
- Use Powder to Soothe the Rash
- See a Healthcare Provider if severe





What Type Of Heat Related Illness is This?





What Type Of Heat Related Illness is This?

Reflection Questions

Have you ever experienced a heat related illness?

What was it like and what actions did you take to remedy it?

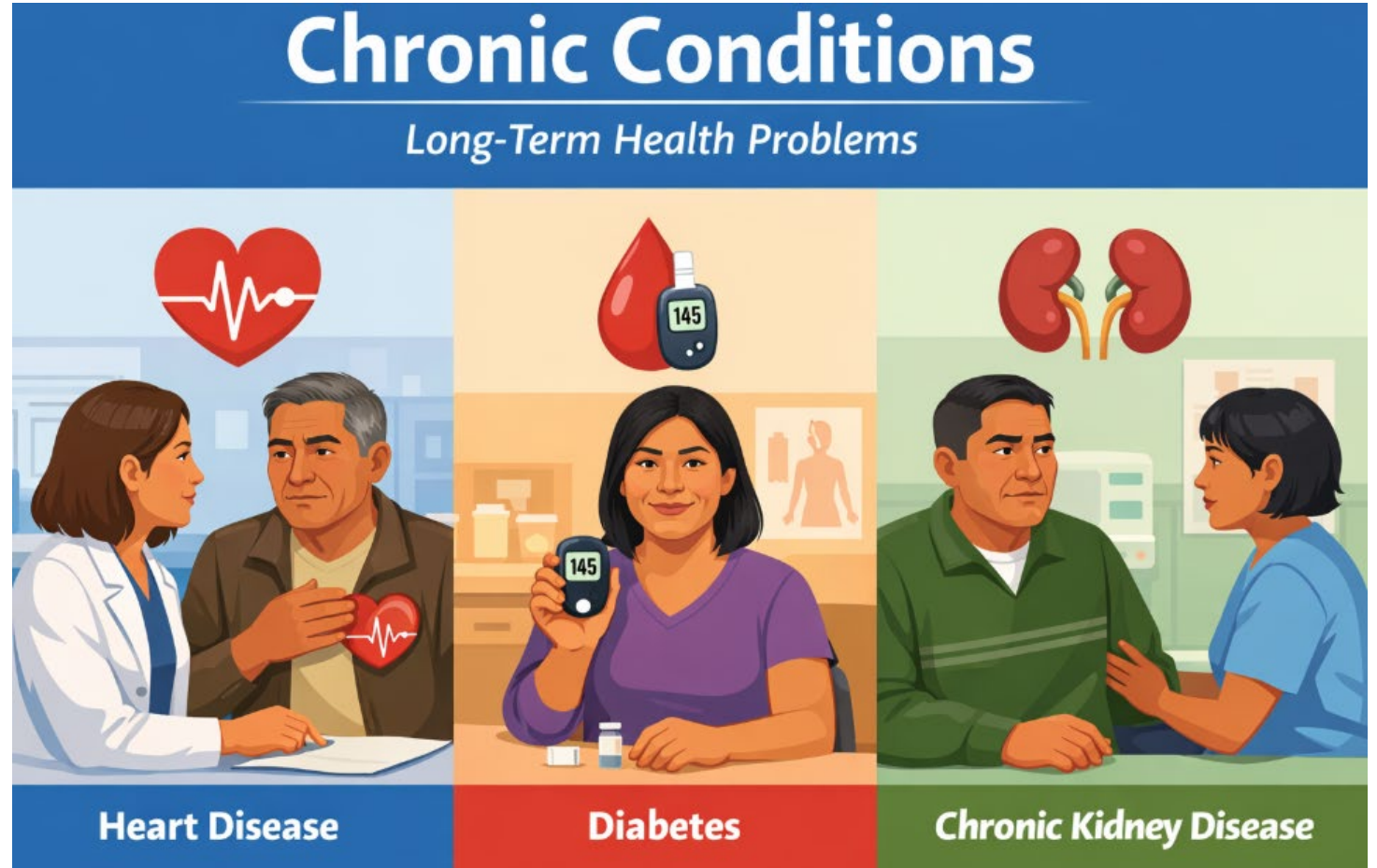


High Risk Groups

- People with Asthma
 - *Especially Children*
- People with Heart Disease
- Pregnant Women
- People over 65 years of Age
- People Working Outdoors
- Infants and Young Children

Heart Disease and other Chronic Conditions

- Increased Risk of Heart Attack
- Worsening of Respiratory Conditions
- Kidney Disease
- Diabetes
- Neurological Conditions
- Mental Health Conditions
- Many Heart Medications Interact with Heat





Extreme Heat and Asthma

- Warm Weather Increases Ground Level Ozone
 - Irritates Lungs, Aggravates Asthma
- Both Hot and Cold Air Causes Airways to Tighten and Narrow
- Hot Air is Often Stagnant, Trapping Pollutants

Infants and Young Children

- Never Leave Children in Parked Cars
 - *Not even for a couple minutes*
- Dress Infants and Children in Loose, Lightweight, Light-colored Clothing
- Make sure Children are Drinking Plenty of Fluids
- Stay Away from Drinks with too Much Sugar
- [CDPH Guidance for Schools](#)



Extreme Heat and Adults Over 65

- Body No Longer Adjusts as Well to Sudden Temperature Changes
- More Likely to Have Chronic Medical Conditions
- More Likely to be Taking Prescription Medications





Medication

- Medications That May Put You at Increased Risk:
 - Heart Disease Medications
 - Diuretics, Beta Blockers, Calcium Channel Blockers
 - Psychiatric Medications
 - Antidepressants (SSRI/SNRI), Benzodiazepines, Antipsychotic Medications
 - Antiseizure Medications
 - Certain Antihistamines
- Talk to your Doctor Before Stopping/Changing Medications

Extreme Heat and Pregnancy

- Body Must Work Harder to Cool
- Dehydration More Likely
- Additional Risks:
 - Preeclampsia
 - Decreased Placental Blood Flow
 - Preterm Labor/Birth
 - Preterm Water Breaking
 - Birth Defects
 - Low Birth Weight
 - Stillbirth
 - Swelling in Legs and Feet



Outdoor Workers

- Many in California Work in the Heat
- Prolonged Heat Exposure Can Be Life-threatening
- Call Cal/OSHA on Weekdays at [833-579-0927](tel:833-579-0927) for Questions or Concerns About Heat Illness Prevention
- Employers Use the [OSHA-NIOSH Heat Safety Tool](#)



People Experiencing Homelessness

- Make Up a Large Percent of Deaths During Extreme Heat Events
- Lack Access to:
 - Clean Drinking Water
 - Air Conditioning
 - Transportation to Cooling Centers
- Greater Exposure to Air Pollution



Beat the Heat Strategies for Tribal Members and their Community

Reflection Question

**What have you
done to overcome
extreme heat
events in the past?**

Was it effective?

General Tips

Tips for you and your Family:

- Stay Cool and Hydrated
- Take Advantage of Community Cooling Centers
- Be Prepared for Power Outages
- Stay Connected

Tips for you and your Community:

- Raise Community Awareness about Heat Health Risks
- Prepare for Extreme Heat Events
- Monitor for Extreme Heat

Stay Cool

- Outside
 - Stay in Shade
 - Take Breaks
 - Engage in Activities During Coolest Part of Day
- Inside
 - Use Fans if Under 90°F
 - Use AC, Especially if Temperature Exceeds 90°F
 - Find a Community Cooling Center



Stay Hydrated

- Carry a Water Bottle
- Limit Sugar, Caffeine and Alcohol
- Monitor your Urine Color



Find a Cooling Center

- Check with your Tribal Health Program or Tribal Office of Emergency Services
- Dial 211
- [California Cooling Center Locator - CAL OES](#)
- Check with your Local Health Department or Emergency Management Agency





Stay Connected

- Check in on those at High Risk of Heat-Related Illness
- Use a Buddy System when Working in the Heat

Tips for People who are more Vulnerable

- Asthma suffers:
 - Create an Asthma Action Plan
 - Create a Clean Air Room
- Refrigerated Medication Users:
 - Consider Portable Generator or Maintain Supply of Ice
- Powered Medical Equipment Users:
 - Consider Portable Generator/Backup Batteries
 - Sign Up with Utility as Vulnerable Customer
 - Use a PSPS Resource Center if Available

ASTHMA ACTION PLAN



The colors of a traffic light will help you use your asthma medicines.



GREEN means Go Zone!
Use preventive medicine.

YELLOW means Caution Zone!
Add quick-relief medicine.

RED means Danger Zone!
Get help from a doctor.

Name:	Date:
Doctor:	Medical Record #:
Doctor's Phone #: Day	Night/Weekend
Emergency Contact:	
Doctor's Signature:	

Personal Best Peak Flow: _____

GO	Use these daily controller medicines:		
	MEDICINE	HOW MUCH	HOW OFTEN/WHEN
You have <i>all</i> of these: • Breathing is good • No cough or wheeze • Sleep through the night • Can work & play Peak flow: from _____ to _____			
For asthma with exercise, take:			
CAUTION	Continue with green zone medicine and add:		
You have <i>any</i> of these: • First signs of a cold • Exposure to known trigger • Cough • Mild wheeze • Tight chest • Coughing at night Peak flow: from _____ to _____	MEDICINE	HOW MUCH	HOW OFTEN/ WHEN
CALL YOUR ASTHMA CARE PROVIDER.			
DANGER	Take these medicines and call your doctor now.		
Your asthma is getting worse fast: • Medicine is not helping • Breathing is hard & fast • Nose opens wide • Trouble speaking • Ribs show (in children) Peak flow: reading below _____	MEDICINE	HOW MUCH	HOW OFTEN/WHEN

GET HELP FROM A DOCTOR NOW! Your doctor will want to see you right away. It's important!
If you cannot contact your doctor, go directly to the emergency room. DO NOT WAIT.
Make an appointment with your asthma care provider within two days of an ER visit or hospitalization.



Am I drinking enough water?

Use this urine colour chart to assess how hydrated you are. It is important to drink plenty of water each day to stay healthy.

1

2

3

4

5

6

7

8

8

1 to 3: Hydrated

Pale, odourless and plentiful urine is often an indication that you are well hydrated.

Keep drinking at the same rate.

4 to 6: Mildly dehydrated

Slightly darker yellow urine can indicate that you need to drink more water.

Drink a glass of water now.

7 to 8: Dehydrated

Even darker yellow urine is often an indication that you are dehydrated.

Drink 2-3 glasses of water now.



What can change the color

Certain foods, medications and vitamin supplements may change your urine color even if you are hydrated.



Important

The colors on this chart should only be used as a guide and should not replace the advice of a health professional. Speak to your doctor if you are worried about the colour of your urine, dehydration.

Raise Community Awareness of Heat Health Risks

- Promote Staying Hydrated
 - Post Hydration Check Posters in Community Restrooms
 - Distribute Water Bottles and Extreme Heat educational materials at Community Events
- Post Information about recognizing Heat Related Illnesses in Community Spaces
- Post Extreme Heat Alerts and Guidance on Tribal Social Media

California Heat Action Plan:

<https://heatready.ca.gov/make-a-plan/>

Create your Personalized Extreme Heat Plan

Answer a few simple questions below and we'll create a personalized Extreme Heat Plan with steps to keep you safe during an extreme heat event!

This plan can be easily saved to your device, sent to your email, and more. Want to create an Extreme Heat Plan for someone else? You can create as many plans as you need. Just refresh the browser and begin again.

Get Started

Describe Yourself

View Your Checklist

My Extreme Heat Checklist

- ☒ **Stay Safe**
- ☐ Encourage children to drink plenty of water throughout the day, even if they don't feel thirsty.
- ☐ Use the buddy system! Check in on family and neighbors who are vulnerable and ask someone to check on you.
- ☐ No unsupervised parking! Even with the windows cracked, temperatures inside a parked car can rise to dangerous levels quickly. **Never leave children in a parked car for any amount of time.**
- ☐ Know the signs and symptoms of heat-related illness. Heat exhaustion signs include heavy sweating, weakness, dizziness, nausea, and headache. Heat stroke signs include a fever of 103 or higher, confusion, and loss of consciousness. Seek medical attention immediately if you experience any of the symptoms above.
- ☐ Consider supplementing with sports drinks to replenish salts and minerals to maintain healthy levels of electrolytes
- ☐ Use lunch and or break times to rehydrate. Just because you are inside doesn't mean you can't become dehydrated which can become worse if you exposure yourself to high temperatures before or after work.
- ☐ Make sure your A/C unit is in good working order or you have access to a fan.
- ☐ Cover all the windows and set your air conditioner between 75 and 80 degrees.
- ☐ Make sure your windows have blinds or keep extra towels, blankets, and sheets on hand to create a darker environment.
- ☐ Stock your fridge with cold water and sports drinks.
- ☐ Wet towels and place them in the freezer.



Monitor for Extreme Heat

Heat Index:

- Commonly Reported on Local Weather Sources during Extreme Heat Events
- Represents what the Temperature “Feels Like” on Hot Days by Accounting for Both Temperature and Humidity
- Sources of Heat Index include Local News/Weather and CDC HeatRisk

Classification	Heat Index	Effect on the body
Caution	80°F - 90°F	Fatigue possible with prolonged exposure and/or physical activity
Extreme Caution	90°F - 103°F	Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activity
Danger	103°F - 124°F	Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity
Extreme Danger	125°F or higher	Heat stroke highly likely

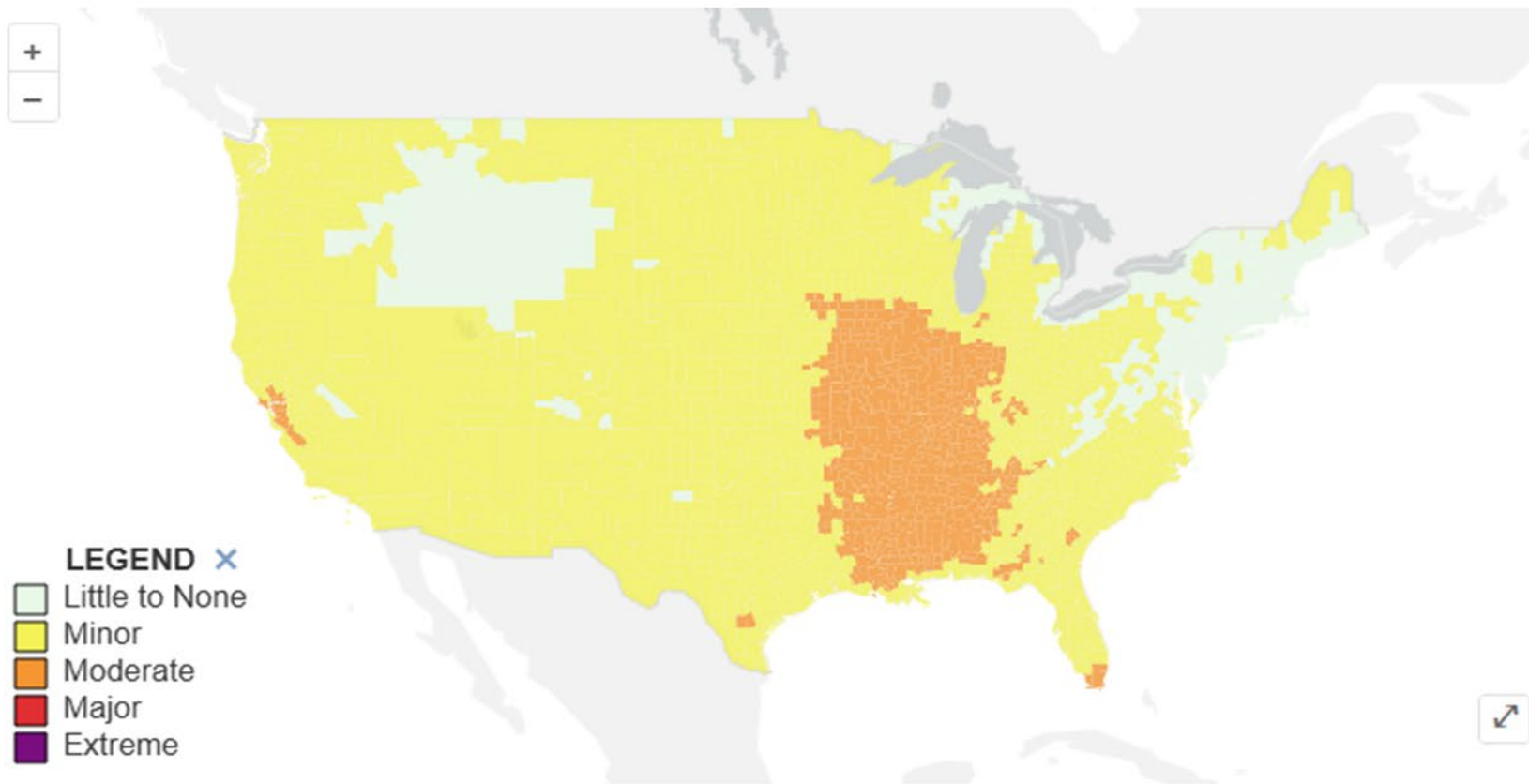
Danger
Extreme

103°F -
124°F or

Heat stroke highly likely

Get Your Local *HeatRisk*

Enter Zip Code



Daily HeatRisk

Tuesday, September 16

HeatRisk Map

This map shows *HeatRisk* across the United States for Tuesday, September 16, 2025. Select a date from the dropdown menu to view daily *HeatRisk* across the United States for the week ahead.

You can view more local *HeatRisk* data on the Environmental Public Health Tracking Program's [Data Explorer](#).

HeatRisk is an experimental product and is not supported 24/7. Changes may occur without advance notice.

Source: [NOAA/NWS](#)



CDC HeatRisk



CDC HeatRisk Specific Strategies

- “Little to None” – **Green**
 - No Elevated Risk
 - Check AQI before Heading Out
- “Minor” – **Yellow**
 - Those Who are Sensitive to Heat are at Risk
 - Stay Hydrated and Cool
 - Consider Additional Ways to Stay Cool if Very Sensitive



CDC HeatRisk

Moderate Risk—Orange

- Healthy People with Prolonged Exposure AND Heat-Sensitive Individuals at Risk
- Possible Increased Healthcare Demand
- Take Actions from Yellow, Plus:
 - Outside
 - Stay in Shade when Possible
 - Take Frequent Breaks
 - Plan Outdoor Activities During Coolest Part of Day
 - Indoors
 - Use Air-Conditioning
 - Use Fan if Less than 90°F Inside
- Check on Family, Friends, Neighbors, Pets





CDC HeatRisk

Major Risk – Red

- Most People are at Risk
- Healthcare System Impact Likely
- Power Outages Possible
- Take Actions from Yellow/Orange, plus:
 - Consider Postponing Outdoor Activities to Another Day
 - Stay in Shade if You Must Be Outside

CDC HeatRisk

Extreme – Purple/Magenta

- Everyone is at Risk
- Significant Increase in ER Visits
- Power Outages can Occur
- Long-lasting, Intense Heat
- Take Actions for Yellow/Orange/Red, Plus:
 - Use air conditioning or Cooling Center
 - Fans may not work



Another Way to Monitor Extreme Heat

CalHeatScore:

*California Communities Extreme Heat Scoring
System*



It is a warning tool to help you to stay informed and ready when temperatures rise

Translates weather and health information into a single heat score that ranges from 0 to 4

Provides a heat score specific to your community that is updated every 24 hours

Uses weather information specific to your zip code

Accounts for factors such as heat islands and geography

CalHeat Score Tool



CalHeatScore

CalHeatScore Website

Guidance

Resources

Partners

Feedback

CalHeatScore shows daily rankings of forecasted heat impacts across California ZIP codes.

How to use this map:

- Search by location or ZIP code with the [search icon](#).
- Click on a ZIP code to view additional information in the pop-up panel.
- Click on tabs below for more information on community demographics and cool center locations.
- Learn more about CalHeatScore and how this map was created [here](#).
- Please fill out this [survey](#) to tell us about your experience with the CalHeatScore tool.

CalHeatScore (CHS) Value and Impact Level

CHS 0 (Low)

CHS 1 (Mild)

CHS 2 (Moderate)

CHS 3 (High)

CHS 4 (Severe)

Please Select a Zip-Code on the CalHeatScore Map

Select a Day

Fri Mar 13

Sat Mar 14

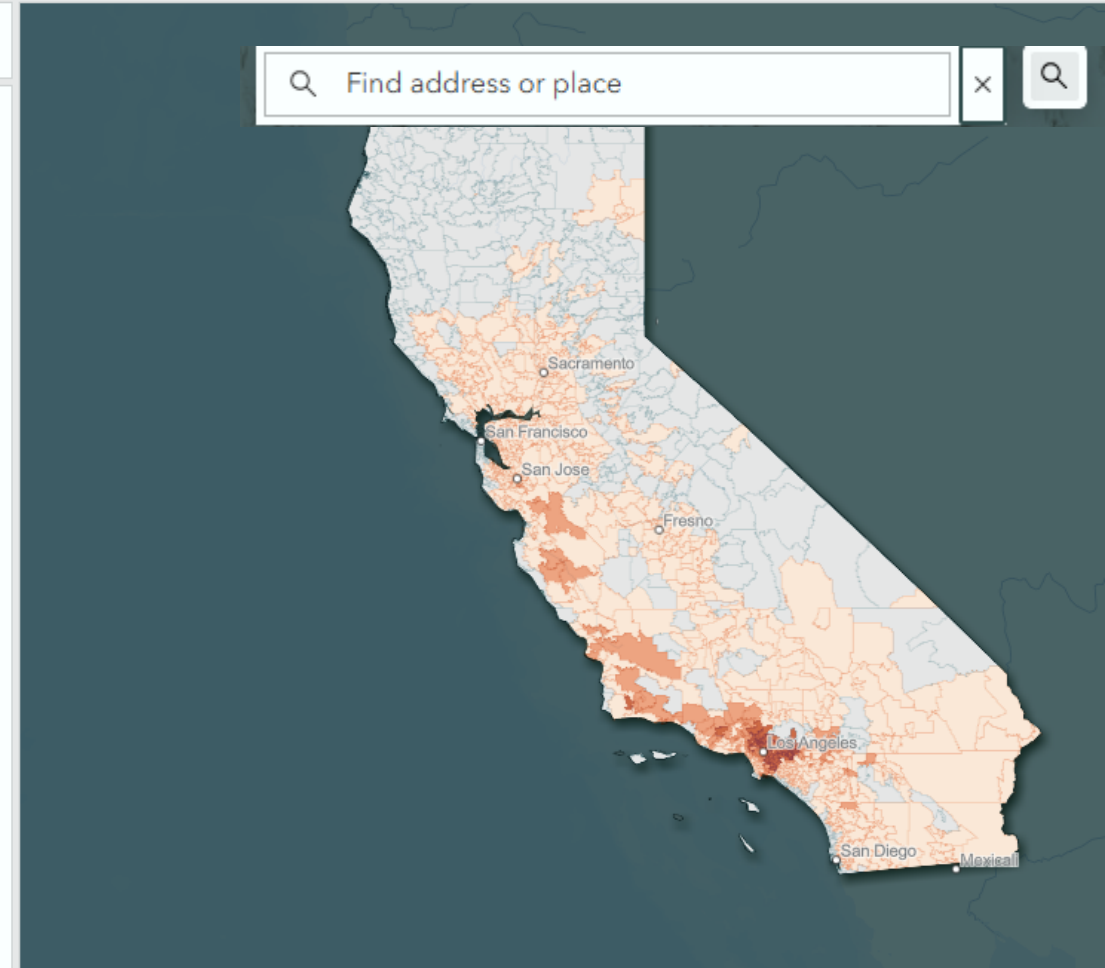
Sun Mar 15

Mon Mar 16

Tue Mar 17

Wed Mar 18

Find address or place



California State Parks | Esri | TomTom | Garmin | FAO | NOAA | USGS | EPA | USFWS | OEHHA, LCI, CDPH | Sources: Esri; U.S. Department of Commerce

[Click tab below to switch to Cool Center locations and site information.](#)

CalHeatScore Guidance

CalHeatScore	Impact Level	Meaning* <i>In your zip code...</i>
CHS 0	Low	Little to no heat-related health impacts are expected.
CHS 1	Mild	Warm day. A minor increase in heat-related health impacts is expected among those sensitive to heat.
CHS 2	Moderate	Very warm day. A moderate increase in heat-related health impacts is expected among those sensitive to heat.
CHS 3	High	Hot day. An increase in heat-related health impacts is expected for everyone, especially those without access to adequate cooling and hydration or those engaged in strenuous physical activity outdoors. This level of heat can pose a significant risk to health.
CHS 4	Severe	Extreme heat day. A major increase in heat-related health impacts is expected for everyone, especially those without access to adequate cooling and hydration or those engaged in strenuous physical activity outdoors. This level of heat can pose a very serious risk to health.



Another Reflection Question

How do you stay informed about heat forecasts?

What actions do you take?

Resources

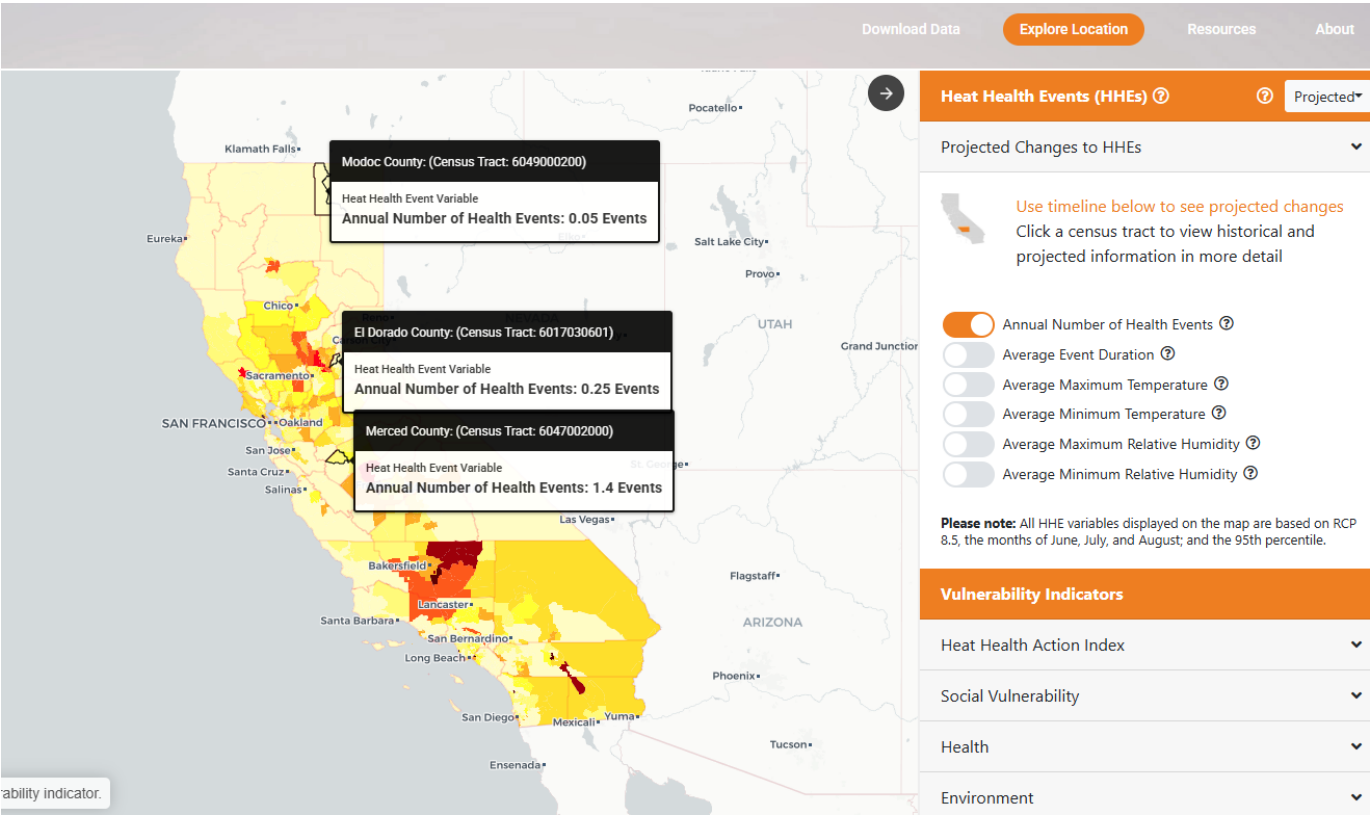
Resources for Healthcare and Emergency Planners



- *California Heat Assessment Tool*



- *ecoAmerica Network On-Demand Extreme Heat Training*



Resources: Websites

- [HeatRisk](#)
- [National Centers for Healthy Housing Cooling Center Locator](#)
- [CDC Heat Action Plan Steps](#)
- [Make a Plan | HeatReadyCA.com](#)
- [Create an Asthma Action Plan | American Lung Association](#)
- [CDC Heat Related Illness Symptom Chart](#)
- [OSHA-NIOSH Heat Safety Tool App | Heat | CDC](#)
- [CDPH Extreme Heat Guidance for Schools](#)
- [Explore Location | CHAT - California Heat Assessment Tool](#)
- [HeatReadyCA.com](#)
- [Cooling Centers and Resources | Cal OES News](#)
- [Smoke Clean Room DIY](#)
- [On-demand Extreme Heat and Health Training](#)
- [AirNow Fire and Smoke Map](#)

References: Web Addresses

- <https://www.cdc.gov/heat-health/about/index.html>
- <https://nchh.org/information-and-evidence/learn-about-healthy-housing/emergencies/extreme-heat/cooling-centers-by-state/>
- <https://www.cdc.gov/heat-health/media/pdfs/Heat-and-Health-Guidance-Infographic-508.pdf>
- <https://heat.gov/learn-about-extreme-heat/>
- <https://www.cdc.gov/heat-health/hcp/clinical-guidance/how-to-use-the-heatrisk-tool-and-air-quality-index.html>
- <https://ephtracking.cdc.gov/Applications/HeatRisk/>
- https://www.cdc.gov/disasters/extremeheat/pdf/Heat_Related_Illness.pdf
- <https://www.weather.gov/tsa/wbgt>
- <https://www.osha.gov/heat-exposure/hazards>
- <https://www.cdph.ca.gov/Programs/OPA/Pages/Communications-Toolkits/Heat-Summer-Safety.aspx>
- <https://heatready.ca.gov/>
- <https://www.unicef.org/stories/heat-waves-impact-children#facts>
- <https://www.lung.org/blog/asthma-heat-triggers>
- <https://www.unchealthsoutheastern.org/about-us/news/2025/staying-safe-in-the-heat-understanding-the-difference-between-he/>
- https://www.noaa.gov/sites/default/files/2022-05/heatindex_chart_rh.pdf

Thank you!
Questions?