

Heat and Drought Toolkit

FEMA Region 3 is using the month of July to educate the public on heat safety and drought preparedness to ensure everyone is ready for the summer heat. In June, we discussed general summer safety, to include topics like fireworks safety, grill safety, and swimming safely. We also discussed pet preparedness. We urge you to use all these resources to compile a season's worth of safety tips.

As a reminder, heat kills by pushing the human body beyond its limits. Extreme heat and high humidity slow evaporation, and the body must work extra hard to maintain a normal temperature. According to the National Oceanic and Atmospheric Administration ([NOAA](#)), there were 148 heat-related fatalities in 2022. Heat has the highest 10-year average of deaths per year at 153 fatalities, and the highest 30-year average of any hazard, with 168 fatalities.

During times of extreme heat, many areas may also see reduced rainfall or drought. As the summer continues and temperatures rise, there may be an increased risk of drought in our region. If a drought should occur, it's important to know what measures to take to decrease the impact to yourself and property.

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Heat and Drought

Talking Points for Heat Preparedness

- Heat waves can be dangerous and even life-threatening for people who don't take the proper precautions.
- According to the National Oceanic and Atmospheric Administration ([NOAA](#)), there were 375 heat-related deaths in 2021. Heat also holds the highest 10-year average of deaths per year with 153 fatalities, and the highest 30-year average of any hazard at 164 fatalities.
- Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

Key Messages for Heat Preparedness

- A heat wave is an extended period of extreme heat and can be accompanied by high humidity. These conditions can be dangerous and even life-threatening for people who don't take the proper precautions.
- Know the Terms:
 - *Heat Wave* - A period of abnormally and uncomfortably hot and unusually humid weather. Typically, a heat wave lasts two or more days.
 - *Heat Index* - The Heat Index (HI) or the "Apparent Temperature" is an accurate measure of how hot it really feels when the Relative Humidity (RH) is added to the actual air temperature.
 - *Heat Cramps* - A condition marked by sudden development of cramps in skeletal muscles. It results from prolonged work or exercise in high temperatures accompanied by profuse perspiration with loss of sodium chloride from the body.
 - *Heat Exhaustion* - A mild form of heat stroke, characterized by faintness, dizziness and heavy sweating
 - *Heat Stroke* - A life-threatening condition marked especially by cessation of sweating, extremely high body temperature, and collapse that results from prolonged exposure to high temperature – compare to
 - *Sun Stroke* - Another term for heat stroke.
 - *Excessive Heat Watch* - Issued by the National Weather Service when heat indices exceeding 105°F (41°C) during the day combined with nighttime low temperatures of 80°F (27°C) or higher are forecast to occur for two consecutive days.
 - *Excessive Heat Warning* - Issued within 12 hours of the onset of the following criteria: heat index of at least 105°F for more than three hours per day for two consecutive days, or heat index more than 115°F for any period of time.
 - *Heat Advisory* - Issued within 12 hours of the onset of the following conditions: heat index of at least 105°F but less than 115°F for less than three hours per day, or nighttime lows above 80°F for two consecutive days.
- Before extreme heat occurs, it is important to take steps now to prepare:
 - Install window air conditioners snugly; insulate if necessary.

- Check air conditioning ducts for proper insulation.
- Install temporary window reflectors (for use between windows and drapes), such as aluminum foil-covered cardboard, to reflect heat back outside.
- Weather-strip doors and sills to keep cool air in.
- Cover windows that receive morning or afternoon sun with drapes, shades, awnings or louvers. (Outdoor awnings or louvers can reduce the heat that enters a home by up to 80 percent.)
- Keep storm windows up all year.
- Listen to local weather forecasts and be aware of possible temperature changes.
- Know those in your neighborhood who might be most at risk to excessive heat and may need help.
- Be aware that people living in urban areas may be at greater risk from the effects of a prolonged heat wave than people living in rural areas.
- Get trained in first aid to learn how to treat heat-related emergencies.
- What you should do if the weather is extremely hot:
 - Listen to NOAA Weather Radio for critical updates from the National Weather Service (NWS).
 - Never leave children or pets alone in closed vehicles.
 - Stay indoors as much as possible and limit exposure to the sun.
 - Stay on the lowest floor and out of direct sunshine if air conditioning is not available.
 - Postpone outdoor games and activities.
 - If you must be outside, protect yourself by using sunscreen on exposed skin.
 - Consider spending the warmest part of the day in temperature-controlled buildings such as libraries, schools, movie theaters, shopping malls and other community facilities. Remember to practice social distancing.
 - Circulating air can cool the body by increasing the rate at which perspiration evaporates.
 - Eat well-balanced, light and regular meals. Avoid using salt tablets unless directed to do so by a physician.
 - Drink plenty of water, even if you do not feel thirsty. Avoid drinks with caffeine. Persons who have epilepsy or heart, kidney or liver disease; are on fluid-restricted diets; or have a problem with fluid retention should consult a doctor before increasing liquid intake.
 - Limit intake of alcoholic beverages.
 - Dress in loose-fitting, lightweight and light-colored clothes that cover as much skin as possible. Avoid dark colors because they absorb the sun's rays.
 - Protect your face and head by wearing a wide-brimmed hat.
 - Avoid strenuous work during the warmest part of the day. Use a buddy system when working in extreme heat and take frequent breaks.
 - Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.
 - Avoid extreme temperature changes.
 - Check on your animals frequently to ensure that they are not suffering from the heat.
 - Go to a designated public shelter if your home loses power during periods of extreme heat. Text SHELTER + your ZIP code to 43362 (4FEMA) to find the nearest shelter in your area (example: shelter 12345) and listen to your local officials for shelter locations and follow social distancing guidelines.

- People living in urban areas may be at greater risk from the effects of a prolonged heat wave than those living in rural areas. Asphalt and concrete store heat longer and gradually release heat at night, which can produce higher nighttime temperatures known as the "urban heat island effect."

Talking Points for Drought Preparedness

- During times of extreme heat, many areas can also experience periods of reduced rainfall or drought. As the summer continues and temperatures rise, there may be an increased risk of drought in our region. If a drought should occur, it's important to know what measures to take to reduce the impact to yourself and property.
- Nearly every part of our country experiences periods of reduced rainfall or drought. If we plan for drought, then we can enjoy the benefits of normal or rainy years and not be caught unprepared in dry years.

Key Messages for Drought Preparedness

- Strategies for drought preparedness focus mainly on water conservation. The below list of practices is some of the ways before a drought occurs one can act every day to help preserve this essential resource.
- *Indoor Water Conservation Tips Prior to a Drought (General, Bathroom, Kitchen)*
 - Never pour water down the drain when there may be another use for it. For example, use it to water your indoor plants or garden.
 - Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year.
 - Check all plumbing for leaks and have any leaks repaired by a plumber.
 - Retrofit all household faucets by installing aerators with flow restrictors.
 - Install an instant hot water heater on your sink.
 - Insulate your water pipes to reduce heat loss and prevent them from breaking.
 - Install a water-softening system only when the minerals in the water would damage your pipes. Turn the softener off while on vacation.
 - Choose appliances that are more energy and water efficient.
 - Consider purchasing a low-volume toilet that uses less than half the water of older models. Note: In many areas, low-volume units are required by law.
 - Install a toilet displacement device to cut down on the amount of water needed to flush. Place a one-gallon plastic jug of water into the tank to displace toilet flow (do not use a brick, it may dissolve, and loose pieces may cause damage to the internal parts). Be sure installation does not interfere with the operating parts.
 - Replace your showerhead with an ultra-low-flow version.
 - Start a compost pile as an alternate method of disposing of food waste or simply dispose of food in the garbage. (Kitchen sink disposals require a lot of water to operate properly)

- *Outdoor Water Conservation Tips Prior to a Drought (general, lawn, pool)*
 - Check your well pump periodically. If the automatic pump turns on and off while water is not being used, you have a leak.
 - Plant native and/or drought-tolerant grasses, ground covers, shrubs and trees. Once established, plants adapted to your local climate do not need water as frequently and usually will survive a dry period without watering. Small plants require less water to become established. Group plants together based on similar water needs.
 - Install irrigation devices that are the most water efficient for each use, such as micro and drip irrigation, and soaker hoses.
 - Use mulch to retain moisture in the soil. Mulch also helps control weeds that compete with landscape plants for water.
 - Avoid purchasing recreational water toys that require a constant stream of water.
 - Avoid installing ornamental water features (such as fountains) unless they use re-circulated water.
 - Consider rainwater harvesting where practical.
 - Contact your local water provider for information and assistance.
 - Position sprinklers so water lands on the lawn and shrubs and not on paved areas.
 - Repair sprinklers that spray a fine mist. Most misting issues result from a pressure problem. Properly regulating pressure in an irrigation system will prevent misting.
 - Check sprinkler systems and timing devices regularly to be sure they operate properly.
 - Raise the lawn mower blade to at least 3 inches or to its highest level. A higher cut encourages grass roots to grow deeper, shades the root system, and holds soil moisture.
 - Plant drought-resistant lawn seed. Reduce or eliminate lawn areas that are not used frequently.
 - Avoid overfertilizing your lawn. Applying fertilizer increases the need for water. Apply fertilizers that contain slow-release, water-insoluble forms of nitrogen.
 - Choose a water-efficient irrigation system such as drip irrigation for your trees, shrubs and flowers.
 - Turn irrigation down in fall and off in winter. Water manually in winter only if needed.
 - Put a layer of mulch around trees and plants to reduce evaporation and keep the soil cool. Organic mulch also improves the soil and prevents weeds.
 - Invest in a weather-based irrigation controller—or a smart controller. These devices will automatically adjust the watering time and frequency based on soil moisture, rain, wind, and evaporation and transpiration rates. Check with your local water agency to see if there is a rebate available for the purchase of a smart controller.
 - Install a new water-saving pool filter. A single back flushing with a traditional filter uses 180 to 250 gallons of water.
 - Cover pools and spas to reduce evaporation of water.

News Release Template

<ORGANIZATION> is Encouraging Everyone to Keep Cool in 2023

Know the Facts. Know How to Act.

Summer Safety

July 2023

<CITY, St.> – <INSERT ORGANIZATION> is proud to join the Federal Emergency Management Agency ([FEMA](#)) to promote heat safety and drought preparedness by spreading the word and encouraging <employees or residents> and the rest of the community to learn the facts and taking steps now to prepare. <INSERT ORGANIZATION> is <INSERT EVENT INFORMATION HERE> or <committed to be a leader for emergency preparedness>.

This July, FEMA and the [Ready Campaign](#) will be educating the public on heat and drought preparedness to ensure everyone is prepared for summer hazards. There were 148 heat-related fatalities in 2022. Heat has the highest 10-year average of deaths per year at 153 fatalities, and the highest 30-year average of any hazard at 168 fatalities.

During times of extreme heat, many areas may also experience periods of reduced rainfall or drought. As the summer continues and temperatures rise, there may be an increased risk of drought in our region. If a drought should occur, it's important to know what measure to take to reduce the impact to yourself and property.

<INSERT ORGANIZATION> will be raising awareness of how citizens can take steps to stay safe this summer through <INSERT STEPS TAKEN>. <INSERT ORGANIZATION> is committed to helping the whole community to prepare for a safe and fun summer

More information on summer hazards can be found at <INSERT ORGANIZATION WEBSITE>, The National Weather Service heat website at <https://www.weather.gov/safety/heat>, [Ready.gov](#) or the Spanish-language web site [Listo.gov](#).

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Additional Online Resources

- [FEMA's Protective Actions Research for Extreme Heat](#)
 - [FEMA's Protective Actions Research site](#) features literature review-style research for protective actions that people can take to prepare for, keep safe during, and recover from extreme heat incidents.
- [FEMA's Guide for Alerts and Warnings](#)
 - [FEMA's Guide for Alerts and Warnings](#) provides people with information about what they can do to stay safe when they receive an excessive heat watch or warning – whether at home or

in the car. This guide is based on research-backed messaging from [FEMA's Protective Actions Research for extreme heat](#).

- [FEMA's Extreme Heat Hazard Information Sheet](#)
 - [FEMA's two-page hazard information sheet for extreme heat](#) highlights the key ways that people can take steps to prepare for, stay safe after, and recover from an extreme heat incident. This information sheet is based on research-backed messaging from [FEMA's Protective Actions Research for extreme heat](#).
- [FEMA's Extreme Heat Data Digest](#)
 - [FEMA's Extreme Heat Data Digest](#) uses findings from the [2022 National Household Survey on Disaster Preparedness](#) to provide preparedness practitioners and emergency managers with key findings about preparedness for extreme heat events, research-validated protective actions, and calls to action to help motivate communities to prepare.

Social Media

Social Media for Heat Preparedness and Drought Preparedness

Hashtags:

#HeatSafety

#BeatTheHeat

#SummerSafety

#HeatstrokeKills

#KeepYourCool

#ConserveWater

#PrepGardening

#DroughtSafety

- Follow @NWS for heat advisories & excessive heat warnings so you can #BeatTheHeat this summer.
- Do you know the difference between a Heat Outlook, Watch, & Warning? Learn them today: <https://www.weather.gov/safety/heat> #BeatTheHeat
- Stay safe from the heat by drinking a lot of water, staying indoors, & calling 911 if you see someone suffering from a heat emergency: www.ready.gov/heat #BeatTheHeat
- When a child's temp reaches 107 degrees, they die. Call 911 & act fast if you see a child in danger.
- Extreme heat makes the body work extra hard to maintain a normal temperature. Know the facts & prepare: www.ready.gov/heat #HeatSafety
- Did you know that urban residences are at greater risk of the effects of prolonged #heat than rural and suburban residences? www.ready.gov/heat #HeatSafety

Heat and Drought Toolkit

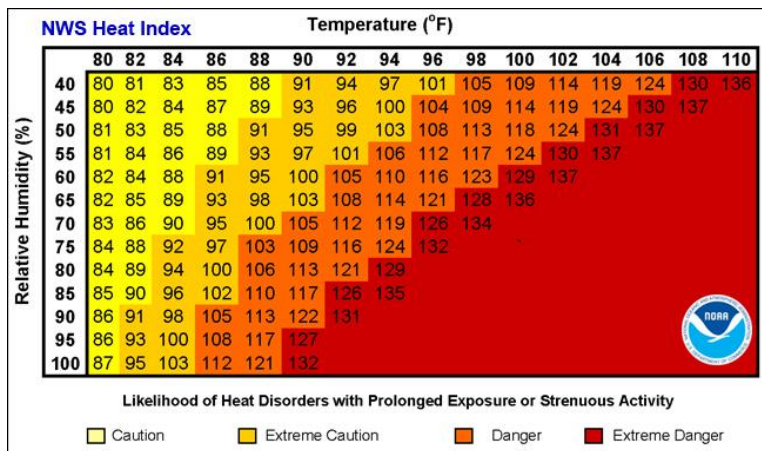
- *For Facebook:* Heat is typically the leading cause of weather-related fatalities each year. Heat waves have the potential to cover a large area, exposing a high number of people to a hazardous combination of heat and humidity, which can be very taxing on the body. Learn how to stay safe during a heat wave at www.weather.gov/heat #KeepYourCool #HeatSafety
- *For Facebook:* During extremely hot and humid weather, your body's ability to cool itself is challenged. When the body heats too rapidly to cool itself properly, or when too much fluid or salt is lost through dehydration or sweating, the body temperature will rise. As a result, you or someone you care about may experience a heat-related illness. Learn the symptoms of excessive heat exposure and the appropriate responses. weather.gov/safety/heat-illness #HeatSafety
- Learn the symptoms of excessive heat exposure and the appropriate responses. weather.gov/safety/heat-illness #HeatSafety
- In extreme heat, dress in loose-fitting, lightweight and light-colored clothes. Avoid dark colors because they absorb the sun's rays. #BeatTheHeat
- Check on your pets frequently to ensure they are safe during extreme heat. #BeatTheHeat
- Keep strenuous activity to a minimum during the hottest parts of the day (11am-2pm) and use a buddy system! #SummerSafety
- #BeatTheHeat tip: Check frequently on seniors, people who are ill or who may need extra help.
- Make sure you drink LOTS of water to stay hydrated and prevent dehydration, heat stroke & more. #SummerSafety
- During extreme heat drink plenty of water, even if you don't feel thirsty. #HeatSafety
- Got heat cramps? Rest in a cool place & drink a beverage containing electrolytes and sodium, like a sports drink. #BeatTheHeat
- Recognize when someone is suffering from dehydration or heat stroke & act quickly! Learn the signs: <https://www.cdc.gov/disasters/extremeheat/index.html> #SummerSafety
- Video: #HeatSafety information and tips in American Sign Language #ASL #FunctionalNeeds #HardofHearing <https://youtu.be/ODZF0Jowvb8>
- Too hot to play outside? www.ready.gov/kids offers plenty of games and activities that will help children learn and prepare for emergencies as they play! #SummerSafety
- Stay informed! Heat is among the highest weather-related killers in the United States.
- #KeepYourCool Reschedule or plan outdoor activities during cooler parts of the day.
- #StayHydrated out there. Drink from 2–4 cups of water every hour while working or exercising outside.
- People over 65 are vulnerable to heat. Visit elderly neighbors, friends and family members to make sure they're cool and hydrated. #SummerSafety #HeatSafety #BeatTheHeat

Social Media for Drought Preparedness

- *For Facebook:* Always observe state and local restrictions on water use during a drought. If restricted, for example, do not water your lawn, wash your car or other nonessential uses, to help ensure there is enough water for essential uses. Contact your [state or local government](#) for current information and suggestions.
- Avoid taking baths—take short showers—turn on water only to get wet and lather and then again to rinse off. #WhenInDrought #SummerSafety #DroughtSafety #ConserveWater

- Avoid letting the water run while brushing your teeth, washing your face or shaving. #WhenInDrought #SummerSafety #DroughtSafety #ConserveWater
- Avoid over watering your lawn and water only when needed #SummerSafety #DroughtSafety #WhenInDrought #SummerSafety #DroughtSafety #ConserveWater #PrepGardening
- A heavy rain eliminates the need for watering for up to two weeks. Most of the year, lawns only need 1 inch of water per week #SummerSafety #DroughtSafety #WhenInDrought #SummerSafety #DroughtSafety #ConserveWater #PrepGardening
- If your lawn does require watering, do so early in the morning or later in the evening, when temperatures are cooler. #WhenInDrought #SummerSafety #DroughtSafety #ConserveWater #PrepGardening
- Conserve water, practice fire prevention, and follow directions from local officials - watch this video to know exactly what to do during drought conditions: youtu.be/jni8YDoRP5o #SummerSafety #DroughtSafety
- When your hometown is suffering from drought conditions, do you know what to do? Visit the National Weather Service Drought Safety page to find out how you can help! [weather.gov/drought](https://www.weather.gov/drought) #DroughtSafety #SummerSafety
- For Facebook: How is drought affecting where you live? Check the Drought Meter. Enter your ZIP code for current conditions. <https://www.drought.gov/> #DroughtSafety #SummerSafety
- How is drought affecting where you live? <https://www.drought.gov/> #SummerSafety

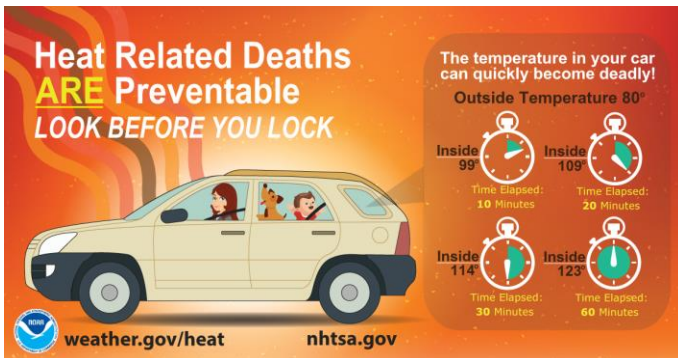
Images and Graphics



<https://www.weather.gov/safety/heat-index>



<https://twitter.com/NWSPortland/status/988479712120004613>



<https://www.facebook.com/NWSDesMoines/photos/look-before-you-lock-do-not-leave-children-or-pets-unattended-in-vehicles-with-t/1703470409731147/>

Heat and Drought Toolkit

HEAT EXHAUSTION	OR	HEAT STROKE
Faint or dizzy		Throbbing headache, confusion
Excessive sweating		No sweating
Cool, pale, clammy skin		Body temperature above 103° Red, hot, dry skin
Nausea or vomiting		Nausea or vomiting
Rapid, weak pulse		Rapid, strong pulse
Muscle cramps		May lose consciousness
<ul style="list-style-type: none"> • Get to a cooler, air conditioned place • Drink water if fully conscious • Take a cool shower or use cold compresses 		<p style="text-align: center;">CALL 9-1-1</p> <ul style="list-style-type: none"> • Move person to cooler place • Cool using cool cloths or bath • Do not give anything to drink
@NWSSacramento weather.gov/Sacramento		@SacramentoOES SacramentoReady.org

https://www.weather.gov/images/safety/Heat_Illness.jpg

Is Drought Affecting You?

Droughts are caused by an extended period of dry weather

Find out the latest information at weather.gov/drought

<https://www.weather.gov/wrn/fall2018-drought-sm>