

**JEFFERSON COUNTY**

*Emergency  
Preparedness Guide*



## Dear Jefferson County Resident,

**JEFFERSON COUNTY  
EMERGENCY MANAGEMENT  
AND PREPAREDNESS**

**303-271-4900**

We are fortunate to live in one of the most beautiful counties in the United States. However, this beauty should not lull us into a sense of complacency. In recent years we have experienced flash floods, wildfires, blizzards, and even droughts. These disasters underscore the responsibilities we all share for the safety of our families, our neighbors, and our community.

This emergency preparedness guide is designed to provide practical information on how you and your family can prepare for most disasters that could occur in our community. It includes up-to-date, hazard-specific safety tips and information about preparedness, mitigation, and prevention.

Your emergency management office works throughout the year to prepare our communities and ensure a well-coordinated response to and recovery from any potential disaster. Jefferson County is one of the largest and most populous counties in Colorado. We have 19 fire / EMS agencies, 12 law enforcement agencies, and 11 individual municipal governments to serve our citizens. Emergency management is tasked with ensuring coordination with all the agencies along with state and federal agencies, service organizations, businesses, and the general public. Despite all the organizations involved, we can't be successful without your participation.

We know that disaster preparedness works and those equipped with information and a plan will fare much better than those without. We encourage you to take action now to help prepare your family for potential emergency situations. Some of the steps you can take today include:

- Register for CodeRED - our emergency notification system (pg. 7)
- Create a safety profile at <http://jeffco.us/sheriff/emergencies>
- Prepare an emergency kit (pg. 10)
- Follow us on Twitter [www.twitter.com/JeffcoSheriffCO](http://www.twitter.com/JeffcoSheriffCO)
- Like us on Facebook [www.facebook.com/JeffersonCountySheriff](http://www.facebook.com/JeffersonCountySheriff)

We all have a personal responsibility to be ready for emergencies. By utilizing the information found in this guide you can take the first steps to ensure you and your family are ready should the unexpected happen. If you have any questions or would like additional information please see the web links within this book or contact our office at 303-271-4900.

Sincerely,  
Your Jefferson County Emergency Management and Preparedness Team

We would like to acknowledge the following organizations for their assistance in the creation of this guide:

Jefferson County Board of County Commissioners, American Red Cross, Colorado Division of Homeland Security and Emergency Management, Colorado State Forest Service, Federal Emergency Management Agency, Jefferson County Public Health, Jefferson County Sheriff's Office, National Weather Service, Urban Drainage and Flood Control District, and the U.S. Department of Homeland Security.

Cover and other photos: Amber Luttrell  
Rear cover photo: Mark Hall

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This guide is a compilation of emergency preparedness information from various sources. Emergencies and disasters are often complex events that require each of us to make our own decisions. Preparedness is a responsibility we all share. Taking steps now, before an emergency or disaster strikes, may save your life, the lives of your loved ones, your property and your pets. The guidance in this handbook is intended to help you make the best decisions for yourself, your family, your business and your community. You are encouraged to share this information. It may not be sold in part or in whole. Questions regarding this guide may be directed to the Jefferson County Emergency Management and Preparedness.



# WHY PREPARE FOR A DISASTER?

Disasters disrupt hundreds of thousands of lives every year. Each disaster has lasting effects – people are seriously injured, some are killed. Disasters can also produce billions of dollars in property damage, loss of essential services, significant disruptions of community and business activities, serious environmental damage and mental anguish.

If a disaster occurs in our community, local government and disaster-relief organizations work hard to help you. But you need to be ready as well. **Disaster preparation and response is a partnership between you, local governments and disaster-relief organizations.** Local responders may not be able to reach you immediately, or they may need to focus their efforts elsewhere.

Being prepared and understanding what to do can reduce fear, anxiety and losses that accompany disasters. In many cases, **you can reduce the impact of disasters** or possibly avoid the danger altogether.

You should know how to respond to severe weather or any disaster that can naturally occur in our area – wildfires, flooding, tornadoes, winter storms and extreme heat or cold. **You should also be ready to be self-sufficient for at least 3-5 days.** This may mean providing for your own shelter, first aid, food, water and sanitation.

This guide provides step-by-step advice on how to prepare for, respond to, and recover from most disasters. While this guide focuses on the physical hazards of disasters, there are also the emotional effects of losing a loved one, a home or treasured possessions. When under stress, people can become irritable, fatigued, hyperactive, angry and withdrawn. **Everyone is vulnerable to post-disaster psychological effects, especially children and older adults.**

SHARE THIS GUIDE WITH  
YOUR HOUSEHOLD

INCLUDE EVERYONE IN THE  
PLANNING PROCESS

TEACH CHILDREN HOW TO  
RESPOND TO AN  
EMERGENCY

BE PREPARED

UNDERSTAND YOUR RISKS

TAKE STEPS TO REDUCE  
RISKS TO MINIMIZE  
DAMAGES CAUSED BY  
DISASTERS



# In an Emergency



# Dial 911

## FIRE DEPARTMENTS / DISTRICTS Non-Emergency Numbers

**Arvada Fire Protection District**  
303-424-3012

**Coal Creek Fire Protection District**  
303-642-3121

**Edgewater Fire Department**  
303-237-2860

**Elk Creek Fire Protection District**  
303-816-9385

**Evergreen Fire Protection District**  
303-674-2323

**Fairmount Fire Protection District**  
303-279-2928

**Foothills Fire Protection District**  
303-526-0707

**Genesee Fire Protection District**  
303-526-1230

**Golden Fire Department**  
303-384-8094

**Golden Gate Fire Protection District**  
303-278-7054

**Indian Hills Fire Protection District**  
303-697-4568

**Inter-Canyon Fire Protection District**  
303-697-4413

**Lakeside Fire Protection District**  
303-739-6481

**Littleton Fire Protection District**  
303-795-3800

**North Fork Fire Protection District**  
303-838-2270

**North Metro Fire Protection District**  
303-452-9910

**Pleasant View Fire Protection District**  
303-279-4361

**West Metro Fire Protection District**  
303-989-4307

**Westminster Fire Department**  
303-658-4360

**Wheat Ridge Fire Protection District**  
303-403-5900

## LAW ENFORCEMENT AGENCIES Non-Emergency Numbers

**Arvada Police Department**  
720-898-6900

**Bowmar Police Department**  
303-347-8149

**Edgewater Police Department**  
303-277-0211

**Golden Police Department**  
303-384-8045

**Jefferson County Sheriff's Office**  
303-277-0211

**Lakeside Police Department**  
303-277-0211

**Lakewood Police Department**  
303-987-7111

**Littleton Police Department**  
303-794-1551

**Morrison Police Department**  
303-277-0211

**Mountain View Police Department**  
303-277-0211

**Westminster Police Department**  
303-658-2400

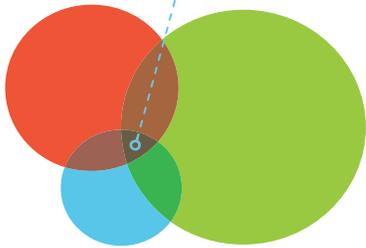
**Wheat Ridge Police Department**  
303-237-2220



Smart911 is a free service that allows citizens to create a safety profile for any cellphone, landline or VoIP phone in their household. Individuals control their own profiles and can enter as much or as little information as they choose. Safety profiles can include:

- Vital personal, medical information.
- Photos and descriptions of occupants, including children and pets.
- Emergency contacts.
- Any information you would want a first responder to have.

EVERYDAY MORE THAN 100 CALLS ARE RECEIVED BY THE JEFFERSON COUNTY SHERIFF'S OFFICE 911 CENTER FROM ACCIDENTALLY ACTIVATED CELLPHONES.



#### LOCK YOUR KEYPAD

On your belt, in your purse, or in a backpack, the keypad on your cellular phone can be pressed and cause an unintended call to 911. Cellphones with a single key programmed to dial 911 can be unintentionally activated. Lock the keypad on your cellphone to prevent this disruption of the life saving 911 service. Help keep the 911 lines open for real emergencies.



## PREPAREDNESS

*Being prepared and understanding what to do can reduce fear, anxiety and losses that accompany disasters.*



# 911 & EMERGENCY NOTIFICATIONS & ALERTS

### CALLING 911 FROM A LANDLINE PHONE

- The call routes to the Public Safety Answering Point (PSAP) that serves your area. This may be the Sheriff's Office, police department, fire department, or other agency depending on your location.
- The 911 call-taker answers your call and looks at a display on their computer screen, which gives information regarding the location of your phone and the agencies that provide your services.
- The call-taker will not assume the displayed information is correct. They will ask your name, address and phone number to confirm that you are located at the address on the screen and that they have the correct phone number, in case you are disconnected during your call.
- The call-taker will ask you the nature of your emergency and activate the appropriate emergency services to respond to your location.
- Depending on the nature of the call and whether you can safely remain on the line, the call-taker will keep you on the line until emergency help arrives. This is to ensure that emergency help can find you.

### CALLING 911 FROM A CELLPHONE

- When you dial 911 from a cellphone, the process is similar to dialing from a landline, except that the call-taker computer display will show the location of the cell tower your phone is calling through.
- Depending on the technology used by your phone, the call-taker may also be given latitude and longitude coordinates indicating the location of your phone. Emergency services may or may not be able to find the phone based on these coordinates.
- It is very important when you call from a cellphone that you are able to provide an accurate location and the number of the phone. **If we can't find you, we can't help you!**

## CODERED EMERGENCY NOTIFICATIONS

The Jefferson County Sheriff's Office utilizes the CodeRED emergency notification system to get vital, life-saving information to the public quickly and efficiently. Citizens can register multiple devices and receive alerts in the form of voice calls, texts, and emails. Traditional landline numbers are automatically included in the system, cellphones must be registered.

CodeRED notifications are used when there is a threat to public safety such as:

- Wildland fires
- Flooding
- Natural gas leaks or chemical spills
- Evacuation information
- Law enforcement activity that requires you to evacuate or take shelter
- Missing children and at-risk adults

To register for this free service, go to <http://jeffco.us/sheriff/emergencies> and click on the 'CodeRED' link. The CodeRED Mobile Alert app is also available in the App Store and Google Play.

## TEXT-TO-911

Text-to-911 refers to the ability to send text messages to local 911 call centers during an emergency. Jefferson County is equipped to receive and handle text-to-911 calls.

How do I text-to-911?

- Enter the numbers 9-1-1 into the 'to' field.
- Include the type and location of the emergency.
- Push the send button.

Be prepared to answer questions and follow instruction from the call taker.

- Text in simple words and not abbreviations.
- Keep text messages brief and concise.
- No photos or videos can be received at this time.
- Once you have initiated a text-to-911 conversation do not delete the message or turn off your phone until the dispatcher advises. Call centers can only receive and reply to text-to-911 calls; they cannot initiate a text message conversation.



## NOAA Weather Radio & SAME Code Receivers

The most comprehensive weather information is obtained by listening to a NOAA Weather Radio. Weather Radio is operated by the National Weather Service offices across the country and broadcasts frequently updated recordings containing current high climatological data. Live broadcasts issue warnings for winds, large hail, tornadoes, flash floods and winter storms. A NOAA Weather Radio can be purchased at many electronic stores.

NOAA Weather Radio Stations

Jefferson County SAME Code 008059

Jefferson County Frequencies: 162.500, 162.550, and 162.450 MHzs

Denver 162.550

For all other municipal stations visit: [www.nws.noaa.gov](http://www.nws.noaa.gov)

Also consider subscribing to local news agencies' text and weather alerts.



## CAN I TEXT-TO-911 OUTSIDE OF JEFFERSON COUNTY?

If you send a text message to 911 outside of Jefferson County and that area does not currently have the capability to receive text messages, you will receive a 'bounce back' message indicating that text-to-911 is not available in that area.



## DO ALL WIRELESS PROVIDERS OFFER TEXT-TO-911?

As of September 2015, only Verizon Wireless, Sprint, AT&T and T-Mobile offer text-to-911. Contact your wireless company directly to see if it is available.



## CALL IF YOU CAN, TEXT IF YOU MUST

Only use text-to-911 when making a voice call is not possible. Some examples are:

- The caller is deaf or hearing impaired.
- The caller is facing a threatening situation and a voice call could increase the threat.
- The caller is injured or suffered a medical condition and cannot speak.
- The caller is in a remote location and can only send out a text message.
- Phone lines and cellphone towers are overwhelmed and only a text can get through.



## PREPAREDNESS

*Immediately after an emergency, essential services may be unavailable and local disaster relief and government responders may be unable to reach you right away. Even if they can reach you, knowing what you can do to protect yourself and your household is essential.*



# EMERGENCY PLANNING

Cardiopulmonary Resuscitation (CPR) consists of mouth-to-mouth respiration and chest compressions, which causes oxygenated blood to circulate to vital organs such as the brain and heart. CPR can keep a person alive until more advanced procedures (such as defibrillation, an electric shock to the chest) can treat the cardiac arrest. CPR started by a bystander doubles the likelihood of survival for victims of cardiac arrest. Contact the American Red Cross or American Heart Association for more information on CPR.

### CREATING A DISASTER PLAN

- One of the most important things you can do to prepare for an emergency is to create a household disaster plan.
- Start by doing some research. Check with your local emergency management office or American Red Cross to learn about natural disasters that could occur in your area.
- Find out how hazardous materials are produced, stored and transported. Ask what would happen in the event of a terrorist attack.
- Check with employers and school officials about their emergency response plans.
- Talk to members of your household about different potential emergencies and what to do in each case.
- Plan how household members will stay in contact if separated. Identify two meeting places— the first near your home, the second away from your neighborhood in case you can't return home.
- Pick a friend or relative who lives out of the area that you can all call and say you're okay.
- Draw a floor plan of your home. Designate two escape routes from each room.
- Post emergency numbers by the phone.
- Teach children how and when to call 911.
- Make sure everyone in your home knows how and when to shut off water, gas and electricity at the main switches. Consult with local utilities if you have questions.
- Take a first aid and CPR class. Official certification by the American Red Cross provides "Good Samaritan" protection for those giving first aid.
- Reduce the economic impact on your property. Review property insurance policies before disaster strikes, making sure they are current and meet your coverage needs.
- Protect your family's health and financial information. Review life and health insurance policies to make sure they're current and contain what you need.
- Set up an emergency savings account for times of crisis. Keep a small amount of cash or traveler's checks in a safe place where you can get to it quickly.
- Consider ways to help household members and neighbors who may need additional assistance, such as the elderly, disabled, blind, and hearing impaired.
- Determine what to do with your pets. Except for service animals such as seeing-eye dogs, animals are not allowed in public shelters.
- If you live in a multi-story building, be familiar with posted exits and exit routes.

*Emergency workers are stretched thin during disasters. By taking a first aid course from the American Red Cross or American Heart Association, you may keep someone alive until medical help arrives.*

## FIRST AID AND CPR

These general guidelines do not replace the need for first aid training, but they are a good starting point.

- Do no harm. Well-meaning but untrained people can aggravate an injury or illness. If you have no idea what to do, better to do nothing and get help as soon as possible.
- Don't move an injured person unless danger exists. Before a person is moved it is important to restore breathing, control bleeding and splint broken bones. If possible, wait until rescue workers arrive.
- Treat for shock. Keep the person warm (normal body temperature) and slightly elevate the legs. If possible, wait until rescue workers arrive.
- **Never risk injury to yourself in an effort to assist an injured person.** Death or injury to a rescuer does nothing to help the injured person and only complicates a bad situation.



Photo Courtesy of Red Cross

## EMERGENCY PLANNING FOR PEOPLE WITH DISABILITIES

If you or a family member has a disability, you should take additional steps to protect yourself and your household. If you know of friends or neighbors with a disability, help them with these extra precautions.

- Sign up for Smart911 and CodeRED.
- *Deaf or those hard of hearing* may need to make arrangements to receive a warning.
- *People with access and functional needs* may need assistance in getting to a shelter.
- Households with a *single working parent* may need help from others both in planning for disasters and during an emergency.
- *Non-English speaking people* may need assistance. Community and cultural groups may be able to help keep these populations informed.
- *People without vehicles* may need to make arrangements for transportation.
- *People with dietary needs* should have an adequate emergency food supply.
- Create a network of neighbors, relatives, friends and co-workers to aid you in an emergency.
- To complete a customizable Emergency Plan Workbook for People With Disabilities and Their Families visit <http://jeffco.us/sheriff/emergencies>.



## OUT-OF-STATE, 24-HOUR CONTACT

Establish an out-of-state contact to call in an emergency. Make sure every member of your household knows how to reach this person—by phone and email. Send pictures of your valuables and copies of all legal papers to this contact *before* a disaster occurs.



## LEGAL PAPERS

Make copies of all legal papers:

- Marriage license
- Proof of home and property ownership
- Proof of ownership for automobiles, snowmobiles, boats, trailers, etc.
- Wills
- Driver's licenses
- Insurance policies
- Bank accounts
- Appraisals for jewelry and other valuables



## NEIGHBORHOOD ALLIANCES

One of the best ways to prepare for an emergency is to network with your neighbors. Meet with them to plan how the neighborhood could work together in a disaster. If you're a member of a neighborhood or homeowner's association or crime watch group, introduce disaster preparedness to the group. Know if your neighbors have medical, technical or other skills that might be helpful in a crisis. Consider how you would help the elderly, disabled or others with access and functional needs. Make plans for children whose parents can't make it home.



## PREPAREDNESS

Stocking water reserves should be a top priority. Drinking water in emergency situations should not be rationed. It is critical to store adequate amounts of water for your household.

Individual needs vary, depending on age, physical condition, activity, diet and climate. A normally active person needs at least two quarts of water daily just for drinking. Children, nursing mothers and ill people need more. Very hot temperatures can double the amount of water needed.

Because you also need water for sanitary purposes and, possibly, for cooking, you should store at least one gallon of water per person per day.

*Emergency kits should be individually tailored to meet the basic survival needs of your family for a period of three days to a week. After gathering the contents for your kit, put them in a plastic tub, trash can or other waterproof container. Then store the kit in a safe, easily accessible place. Remember to consider the special needs of infants, the elderly and the disabled.*



# DISASTER SUPPLY KITS

### EXTRA BEDDING AND CLOTHING

*It's a good idea to include extra clothing if time and space allows—a change of clothing for everyone in the family, extra underwear and socks, thermal underwear, rain gear, hats and gloves, sturdy work shoes/boots.*

### BASIC EMERGENCY KIT

- Batteries for hearing aids, battery information for wheel chairs
- Small cooler and ice packs for medications
- Supplies for service animals (license vaccinations certificate and food)
- List of medications
- Battery-powered radio
- Sleeping bags and blankets (wool or thermal)
- Manual can opener
- Waterproof matches
- Non-perishable food (energy bars, canned meats, juice, fruits and vegetables, powdered milk, infant foods, crackers, peanut butter, freeze-dried and dehydrated goods)
- Flashlight
- Water (one gallon/person/day)
- Water purification tablets
- Utility knife and basic tools
- Emergency candles
- Extra eyeglasses/contact lenses
- Essential medications
- Extra clothing
- Plastic bucket with tight lid (make-shift toilet)
- Toilet paper
- Plastic bags and ties
- Disinfectant
- Rope or cord
- Soap
- Paper cups and plates
- Plastic utensils
- Personal toiletries
- Baby supplies
- Aluminum foil
- Paper towels
- Pen and paper
- Address and phone numbers
- Work gloves

## FOOD - PREPARING AN EMERGENCY SUPPLY

If activity is reduced, healthy people can survive on half their usual food intake for an extended period or without any food for many days. Food, unlike water, may be rationed safely, except for children and pregnant or nursing mothers. Food items that you might consider include:

- Ready-to-eat meats
- Fruits
- Vegetables
- Canned or boxed juices, milk and soup
- High-energy foods like peanut butter, jelly, low-sodium crackers, granola bars, and trail mix
- Vitamins
- Foods for infants or persons on special diets
- Cookies
- Hard candy
- Instant coffee, cereals and powdered milk

*Replace items in your food supply every six months. Throw out any canned goods that become swollen, dented, or corroded. Use foods before they go bad, and replace them with fresh supplies. Date each food item with a marker. Place new items at the back of storage area and older ones in front.*



### FIRST AID SUPPLIES

Every emergency kit should contain a first aid kit. Common items include:

- First aid manual
- Aspirin or pain relievers
- Rubbing alcohol
- Disinfectant
- Thermometer
- Band-Aids
- Cotton balls, swabs, gauze
- Pressure dressing, padding (sanitary napkins or diapers)
- Microspore adhesive, paper tape
- Small splints, popsicle sticks
- Heavy string
- Needles and safety pins
- Scissors and tweezers
- Laxatives and diarrhea medicine
- Petroleum jelly
- Personal medications
- Extra pair of glasses



### SPECIALTY ITEMS

Remember to consider the needs of infants, elderly persons, pets, and people with disabilities. Be sure to include entertainment and comfort items for children, such as books, games, quiet toys and stuffed animals.



### SUNDRY KIT

- Paper and pencil, map, tissues, towelettes, plastic bags, essential medications
- Flashlight and batteries
- Reflectors and flares
- Waterproof matches and candles
- Extra cash



### CAR SURVIVAL KIT

- Maintain a half tank of gas at all times
- First aid kit and manual
- Class ABC fire extinguisher
- Radio and batteries
- Non-perishable food
- Bottled water
- Bag of sand, shovel, tools
- Blankets/sleeping bags
- Jumper cables
- Work gloves & some tools



## PREPAREDNESS

*When community evacuations become necessary, local officials provide information to the public through several different methods. The CodeRED system, social media, traditional media, and even the Emergency Alert System can be utilized to alert you of an evacuation order.*

To be prepared for an emergency, you should have enough water, food, clothing, and emergency supplies to last at least 3-5 days.



# EVACUATION

## EVACUATION CONSIDERATIONS

- Sometimes wide-scale events threaten whole cities or neighborhoods. You should designate at least two evacuation routes from your home or business.
- If you are told to evacuate during a disaster, public safety officials will provide directions at that time. If you do not own a car, make transportation arrangements with friends or family members.
- Talk with your household about the possibility of evacuation. Plan where you would go if you had to leave the community. Determine how you would get there. In your planning, consider different scales of evacuations based on the hazards in your community.
- Plan a place to meet in case you are separated from your family members in a disaster. Ask a friend or relative outside your town to be the “checkpoint” so that everyone in the household can call that person to say they are safe.
- Find out where children will be sent if schools are evacuated.
- Assemble a disaster supplies kit. Include a battery-powered radio, flashlight, extra batteries, medicine, food, water and clothing. Pre-pack a change of clothing for each family member.
- Keep fuel in your car if an evacuation seems likely. Gas stations may be closed during emergencies and unable to pump gas during power outages.

*The amount of time you have to evacuate will depend on the disaster. If the event can be monitored, you might have an hour or two to get ready. However, many disasters allow no time for people to gather even the most basic necessities. This is why you should prepare now.*

## WHEN YOU MUST EVACUATE

If you are instructed to evacuate immediately, gather your household and go. When possible, take one car per household. This will keep you together and reduce traffic congestion and delay. In other cases, you may have time to follow these steps:

- Gather water, food, clothing, medicines, emergency supplies, insurance and financial records.
- Wear sturdy shoes and clothing that provides some protection, such as long pants, long-sleeved shirts, cap and jacket.
- Secure your home. Close and lock doors and windows. Unplug appliances. If a hard freeze is likely during your absence, take actions needed to prevent damage to water pipes by freezing temperatures such as turning off the main water line, draining faucets and turning off inside valves for external faucets and open the outside faucets to drain.
- Turn off the main switch on electricity panel, if instructed to do so.
- Let others know where you are going, leave a note or call.
- Leave early enough to avoid being trapped by severe weather.
- Follow law enforcement evacuation routes. **DO NOT TAKE SHORTCUTS.** They may be blocked. Be alert for washed out roads and bridges. Do not drive into flooded areas. Stay away from downed power lines.

Disaster situations can be intense, stressful and confusing. Should an evacuation be necessary, our local authorities will do their best to notify the public. Do not depend solely on this, however. In the absence of evacuation instructions from local authorities, you should evacuate if you feel you and your household are threatened or endangered. “When in doubt, get out!”



## MASS CARE SHELTER

The American Red Cross works with local authorities to set up public shelters in schools, municipal buildings and churches. While they often provide water, food and basic sanitary facilities, you should plan to have your own supplies as well— especially water. Be sure to bring your own prescription medicines if needed.

Living with many people in a confined space can be difficult and unpleasant. Smoking, alcoholic beverages and weapons are prohibited in shelters. Pets, except for service animals, are also prohibited. For more information about pets, see the Animals in Disasters section in this guide.

## EVACUATION LEVELS

Below evacuation levels are supported by all fire protection districts in unincorporated Jefferson County, as well as the Jefferson County Board of County Commissioners:



### LEVEL 1

A Level 1 Evacuation means **be ready**. Residents should be aware of the danger that exists in their area. You should make preparations to be ready to leave, and then monitor local media outlets. Residents with access and functional needs (such as the elderly or those with a susceptibility to breathing problems) are advised to evacuate. People with livestock or pets should consider moving them out of the area. Evacuations at this time are voluntary, but if you have concerns, evacuate now.



### LEVEL 2

A Level 2 Evacuation means **leave soon**. There is significant potential of danger in your area, and residents should quickly gather their essential belongings and relocate outside the affected area. You need to leave as soon as possible.



### LEVEL 3

A Level 3 Evacuation means **leave immediately**. Danger in your area is current and imminent. There is no time to gather belongings. Leave immediately.



## PREPAREDNESS

Water is critical for survival. Plan to have about one gallon of water per person per day of drinking, cooking and personal hygiene. You may need more for medical emergencies.

The amount of water you need depends on age, physical activity, physical condition and time of year. Most people need at least two quarts a day. Never drink less than one quart. You can minimize the amount of water your body needs by reducing activity and staying cool.

*In-place sheltering is appropriate when conditions require seeking protection in your home, place of employment, or other location where you are located when disaster strikes. In-place sheltering may be short-term, such as going to a safe room for a fairly short period of time. Or it may be longer-term, as when you stay in your home for several days without electricity or water following a storm.*



# FOOD & WATER

### WATER TREATMENT

*If you're not sure water is pure, do not drink it or use it to cook, wash dishes, brush teeth or make ice—until you purify it. Contaminated water not only smells and tastes bad, but it can also contain microorganisms that cause Dysentery, Cholera, Typhoid and Hepatitis. There are many ways to treat water. None are perfect, but a combination of methods is often best. Before treating water, let suspended particles settle to the bottom or strain them through layers of clean cloth. The following three treatment methods are the most effective. Although all three methods kill microbes, only distillation will remove contaminants such as heavy metals, salts, chemicals and radioactive fallout.*

**Boiling** is the safest way to treat water and kill harmful bacteria/parasites. Simply bring the water to a rolling boil for one minute or more.

**Chlorination** uses liquid chlorine bleach to kill microorganisms such as bacteria. Add six drops (1/8 tsp.) of unscented liquid bleach per gallon of water, stir and let stand for 30 minutes.

**Distillation** involves boiling water and collecting the vapor that condenses back to water. Fill a pot halfway with water. Tie a cup to the handle of the lid so that the cup hangs right side up when the lid is upside-down (make sure the cup isn't dangling in the water). Boil for 20 minutes. The water that drips from the lid into the cup is distilled.

### INDOOR WATER SOURCES

- Melted ice cubes.
- Water dipped from flush tanks (not bowls) of home toilets. Use bowl water for pets.
- Liquids from canned goods such as fruit and vegetable juices.
- Water drained from the water heater faucet, if the water heater has not been damaged.
- Water drained from house pipes. (If your pipes are damaged or local authorities tell you to, turn off main water valves to prevent water from draining away in case the water main breaks. The pipes will be full of water when the main valve is closed. To use this water, turn on the faucet at the highest point in your house to let air in the system. Then draw water, as needed, from the lowest point in your house, either a faucet or the hot water tank.
- Carbonated beverages do not meet drinking-water requirements. Caffeinated drinks and alcohol dehydrate the body, increasing the need for water.

You should be able to survive for three days if cut off from utilities and all outside food and water supplies.

## MANAGING FOOD SUPPLIES

It is important to be sanitary when storing, handling and eating food:

- Keep food in covered containers.
- Keep cooking and eating utensils clean.
- Keep garbage in closed containers and dispose outside. Bury garbage, if necessary. Avoid letting garbage accumulate inside, both for fire and sanitation reasons.
- Keep hands clean. Wash frequently with soap and water that has been boiled or disinfected. Be sure to wash your hands after using the toilet, handling food or touching articles contaminated with floodwater or sewage.

Ration food for everyone except children and pregnant women. Most people can stay relatively healthy eating half as much as usual. And most can survive without any food for several days.

Avoid food high in fat and protein, since they make you thirsty. Try to eat salt-free crackers, whole grain cereals and canned foods with high liquid content.

For emergency cooking, heat food with candle warmers, chafing dishes and fondue pots, or use a fireplace. Charcoal grills and camp stoves are for outdoor use only.

Canned food can be eaten out of the can without warming. If you heat food in a can, remove the label and wash the can first. Do not eat foods from cans that are swollen, dented or corroded. Do not eat food that looks or smells abnormal, even if the can looks normal. Discard any food not in a waterproof container if there is any chance it has come into contact with contaminated floodwater, including containers with twist caps, snap lids, flip tops and home canned foods. For infants, use only prepared canned baby formula. Do not mix powdered formulas with treated water.

Your refrigerator will keep foods cool for about four hours without power if you keep it closed. After that, add block or dry ice to make food last longer.

You can usually eat thawed food if it is 'refrigerator cold', or refrozen if it still contains ice crystals. To be safe: When in doubt, throw it out. Discard any food that has been at room temperature for more than two hours or has an unusual odor, color or texture.

If you go without power for a long period:

- Ask friends to store your frozen foods in their freezers.
- Find freezer space in a store, church, school, or commercial freezer.
- Use dry ice. Twenty-five pounds of dry ice will keep a ten-cubic-foot freezer below freezing for 3-4 days. Wear dry, heavy gloves when handling dry ice to avoid injury.



Photo courtesy of FEMA



## HOW TO STORE WATER

Store your water in thoroughly washed plastic, glass, fiberglass, or enamel-lined metal containers. Never use a container that has held toxic substances. Seal your water containers tightly, label them and store them in a cool location.



## UNSAFE INDOOR WATER SOURCES

- Radiators, hot water boilers and heating systems
- Waterbeds. Fungicides added to the water of chemicals in the vinyl make water unsafe to drink
- Swimming pool and spa chemicals used to kill germs are too concentrated for safe drinking, but can be used for personal hygiene and cleaning



## OUTDOOR WATER SOURCES

If you need to find water outside your home, use these sources after purifying them:

- Rainwater
- Streams, rivers, and other moving bodies of water
- Ponds and lakes
- Natural springs
- Melted snow



## PREPAREDNESS

*Disaster disrupts and affects everything in its path, including pets, livestock and wildlife.*

Wild or stray domestic animals can pose a danger during or after many types of disasters. Remember that most animals are disoriented and displaced, too. Do not corner an animal. If an animal must be removed, contact your local animal control authorities.

If an animal bites you, seek immediate medical attention. If a snake bites you, try to accurately identify the type of snake so that, if poisonous, the correct anti-venom can be administered. Do not cut the wound or attempt to suck the venom out.

Certain animals may carry rabies. Although the virus is rare, care should be taken to avoid contact with stray animals and wildlife.

Wildlife and rodents may also be a problem during and after many disasters. Be sure to secure food supplies in animal-resistant containers.



# ANIMALS

## PETS IN DISASTER

Pets need to be included in your household disaster plan since they depend on you for their safety and well being. It is important to consider and prepare for your pets before disaster strikes. Consider the following preparedness measures:

- If you must evacuate, do not leave pets behind – there is a chance they may not survive, or get lost before you return.
- With the exception of service animals, pets are not typically permitted in emergency shelters for health reasons.
- Find out before a disaster which local hotels and motels allow pets and where pet boarding facilities are located. Be sure to include some outside your local area in case local facilities have closed.
- Know that most boarding facilities require veterinarian records to prove vaccinations are current.
- Only some animal shelters will provide care for pets during emergency and disaster situations. Use friends and family or keep them with you.
- Be sure your pet has proper identification tags securely fastened to the collar. A current photo of your pet will assist identification should it become necessary. Microchip your pet and keep microchip registration information current.
- Make sure you have a secure pet carrier or leash for your pet – they may need to be restrained during tense emergency situations.
- Assemble a disaster kit for your pet. Include pet food, water, medications, veterinary records, litter box, can opener, food dishes, first aid kit, other supplies that may not be available at a later time, and an information sheet with pet's name and such things as behavior patterns and problems. Provide the kit to whoever assumes responsibility for your pet during a disaster.
- Call your local animal control office or Colorado Parks and Wildlife for more information.

*Disaster and life-threatening stress will exacerbate the unpredictable nature of wild animals.*

## **WILDLIFE IN DISASTER**

To protect yourself and your household, avoid wildlife.

Do not approach wildlife during emergency situations. Do not corner them. Wild animals will likely feel threatened and may endanger themselves by dashing off into fire or floodwaters. If you encounter any of the below instances call your local animal control office, or Colorado Parks and Wildlife.

- If wild animals are trapped, injured or have no natural food source available contact your local animal control office or Colorado Parks and Wildlife.
- Wild animals such as snakes, opossums and raccoons often seek refuge from floodwaters on upper levels of home and have been known to remain after water recedes. If you encounter animals in this situation, open a window or other escape route and the animal will likely leave on its own. Do not attempt to capture or handle the animal.
- Avoid animal carcasses as they can present serious health risks.



## **LARGE ANIMALS IN DISASTER**

If you have large animals, such as horses or cattle on your property, be sure to prepare before a disaster.

- Evacuate animals whenever possible. Map out primary and secondary routes in advance.
- Evacuation destinations should be prepared with, or ready to obtain food, water, veterinary care and handling equipment.
- Vehicles and trailers needed for transporting and supporting each type of animal should be available along with experienced handlers and drivers. It is best to train animals to load in trailers and be familiar with vehicular travel so they are less frightened and easier to move.
- In case evacuation is not possible, animal owners must decide whether to move large animals to a shelter or turn them loose outside. This decision should be based on the disaster type, quality and location of shelter, and the risks of turning them loose outside. Consult with your local animal control office or law enforcement for recommendations.
- All animals should have some form of identification.



## PREPAREDNESS

*In the event of any community emergency, you will be asked to either stay in place or move to a place of safety. These checklists will help you and your family to be prepared.*

# ARE YOU READY?

### PREPAREDNESS CHECKLIST

- Battery powered radio and batteries
- Non-perishable food
- Manual can opener
- Water (1 gal. per person per day)
- Flashlight and batteries
- Emergency candles & matches
- Essential medications & first aid kit
- Extra glasses or contact lenses
- Blankets or sleeping bags
- Waterless hand cleaner
- Toilet paper & paper towels
- Baby supplies
- Paper cup and plates
- Plastic utensils
- Garbage bags
- Money
- Addresses and phone numbers
- Utility knife
- Extra clothing
- Work gloves
- Basic tools
- Cards & board games

### RELOCATION PLAN CHECKLIST

- Preparedness kit (take it with you!)
- Important papers
- Neighborhood meeting place
- Out-of-Town contact name  
Name: \_\_\_\_\_  
Phone: \_\_\_\_\_
- Sturdy shoes and clothing
- Pets, leashes, tags, immunization records
- Turn off
  - Water
  - Gas
  - Electricity
- Let others know where you are going
- Pre-designated evacuation route

### FIRE-WISE ANNUAL CHECKLIST

- Trees and shrubs are properly thinned and pruned within the defensible space. Slash from the thinning is disposed of.
- Roof and gutters are clear of debris.
- Branches overhanging the roof and chimney are removed.
- Chimney screens are in place and in good condition.
- Grass and weeds are mowed low.
- An outdoor water supply is available, complete with a hose and nozzle that can reach all parts of the house.
- Fire extinguishers are in working condition.
- The driveway is wide enough for clearance of emergency equipment and trees and branches are clear.
- Post your house number where it is easily visible from the road.
- There is an easily accessible tool storage area with rakes, hoes, axes and shovels for use in case of fire.
- Practice household fire drills and fire evacuation plans.
- Escape routes, meeting points and other details are known and understood by all household members.
- Attic, roof, eaves and foundation vents are screened and in good condition. Stilt foundations and decks are enclosed, screened or walled up.
- Trash and debris accumulations are removed from the defensible space.
- A checklist for fire safety needs inside the home also has been completed. This is available from your local fire department.



## RESOURCES

**JEFFERSON COUNTY  
EMERGENCY MANAGEMENT  
AND PREPAREDNESS  
303-271-4900**

Jefferson County Sheriff, Twitter, Facebook and Emergency Blogs	<a href="http://jeffco.us/sheriff">http://jeffco.us/sheriff</a>
Jefferson County Emergency Management	<a href="http://jeffco.us/sheriff/emergencies">http://jeffco.us/sheriff/emergencies</a>
U.S. Department of Homeland Security's Preparedness Website	<a href="http://www.ready.gov">www.ready.gov</a>
The Red Cross Disaster Family Plan	<a href="http://www.redcross.org/images/pdfs/code/family_disaster_plan.pdf">www.redcross.org/images/pdfs/code/family_disaster_plan.pdf</a>
Colorado Office of Emergency Management	<a href="http://www.coemergency.com/">www.coemergency.com/</a>
Colorado Water Conservation Board	<a href="http://cwcb.state.co.us/">cwcb.state.co.us/</a>
National Wildland/Urban Interface Fire Program	<a href="http://www.firewise.org">www.firewise.org</a>
U.S. Geological Survey	<a href="http://www.usgs.gov">www.usgs.gov</a>
National Weather Service	<a href="http://www.nws.noaa.gov">www.nws.noaa.gov</a>
The Urban Drainage and Flood Control District	<a href="http://www.udfcd.org">www.udfcd.org</a>
Individuals with access and functional needs	<a href="http://www.ready.gov/individuals-access-functional-needs">www.ready.gov/individuals-access-functional-needs</a>
People with disabilities preparedness	<a href="http://www.disabilitypreparedness.gov">www.disabilitypreparedness.gov</a>
Preparing makes sense for people with disabilities	<a href="http://www.ready.gov/preparing-makes-sense-people-disabilities">www.ready.gov/preparing-makes-sense-people-disabilities</a>
Ready.Colorado people with disabilities	<a href="https://www.readycolorado.com/plan/people-disabilities">https://www.readycolorado.com/plan/people-disabilities</a>
Caring for Animals from Ready.gov	<a href="http://www.ready.gov/caring-animals">http://www.ready.gov/caring-animals</a>
National Terrorism Alert System Guide	<a href="http://www.dhs.gov/ntas-public-guide">http://www.dhs.gov/ntas-public-guide</a>

### WHAT TO DO IN AN EMERGENCY

Assess the situation.

If you are unsure about the seriousness of the situation, **DO NOT HESITATE TO CALL 911.**

Call **911** and provide this information:

- Nature of the emergency
- Exact location and cross street
- Your name
- Telephone number from which you are calling

**Remain on the line.** Do not hang up before the dispatcher tells you to, as additional information may be needed and first aid instructions may be given.

Use the following symptom/situation guidelines and common sense to determine what a true medical emergency is and when to call 911:

- Persistent or sudden chest pain
- Difficulty breathing
- Uncontrollable bleeding
- Unconsciousness
- Life threatening injuries from falling, trauma to the head, severe burns, etc.
- Other potentially life-threatening emergencies.



## NATURAL HAZARDS

*Floods are one of the most common hazard in the United States. Not all floods are alike. Be aware of flood hazards no matter where you live, but especially if you live in a low-lying area, near water or downstream from a dam. Even small bodies of water that appear harmless can flood.*

Floods develop slowly, or sometimes over a period of days. Flash floods can develop quickly, sometimes in just a few minutes, without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries a deadly cargo of rocks, mud and other debris, which can sweep away many things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee or dam is breached. Flooding can also occur from a dam break producing effects similar to flash floods.



# FLOODS

## WHAT TO DO IN A HEAVY RAINFALL

- Stay away from stream beds. Natural stream beds, gullies and other drainage channels are not safe during and after rainstorms. Water runs off higher elevations very rapidly. One minute a creek bed is dry, the next minute flood water, rocks, mud, trees and other debris are raging down the hill.
- Use your map. Know where you are, and whether you are on low ground, or below a dam. You don't have to be at the bottom of a hill to be a target for the dangers of flash flooding.
- Move to higher ground. Many roads and trails parallel existing drainage patterns, and may be swept away by flood waters. Stay out of these low-lying areas when there is a possibility of flash flooding.
- Never attempt to out-run a flood on foot or in your vehicle. You can't out run or out drive a flood. Stop the car, get out and climb to safety. If you are in a canyon, try to climb directly up the hillside.
- Never try to drive through flooded areas. Twelve inches of water will float most vehicles. Flood water can rise up quickly and sweep your vehicle away. If an area is flooded, take an alternate route. Chances are you won't be able to see how deep the water is, the strength of the current or the condition of the road underneath. Many people have died trying to drive through flooded areas.
- Abandon stalled vehicles in flooded areas. If your vehicle stalls in flood water, get out and climb higher as soon as possible—before the water picks up speed and you can't get out at all.



## BEFORE A FLOOD

Ask local officials whether your property is in a flood-prone or high-risk area. (Remember that floods often occur outside high-risk areas.) Also ask how you can protect your home from flooding. It is also a good idea to identify dams in your area and determine whether they pose a hazard to you.

National Weather Service terms:

**Flash Flood Watch** means that heavy rains are occurring or may occur—and may cause flash flooding in certain areas. Be alert. A pending flood may require immediate action.

**Flash Flood Warning** means that flash flooding is occurring or imminent on certain streams or designated areas. If you live in the warning area you should act immediately.

**Small Stream and Urban Flood Advisory** is issued when minor flooding is occurring or expected. In periods of heavy rain, be prepared to protect yourself against the possibility of flash flooding. If you see any possibility of a flash flood where you are, move immediately to a safer location (don't wait for instructions to move). Notify local authorities of the danger so other people can be warned, especially during periods of heavy rainfall thunderstorms.



## DURING A FLOOD

- Be aware of possible flash flooding hazards. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Listen to radio or television stations for local information.
- Be aware of streams, drainage channels, canyons or other areas known to flood suddenly. Flash floods can occur in these areas without such typical warning signs as rain clouds or heavy rain.
- If local authorities issue a flood watch, prepare to evacuate.
- Secure your home. If you have time, tie down or bring outdoor equipment and lawn furniture inside. Move essential items to the upper floors.
- If instructed, turn off utilities at the main switches or valves. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.
- Fill bathtubs with water in case water becomes contaminated or services are cut off. Before filling the tub, sterilize it with a diluted bleach solution.
- Do not walk through moving water. Six inches of moving water can knock you off your feet. If you must walk in a flooded area, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling. A foot of water will float many vehicles. Two feet of water will wash away almost all vehicles. If floodwaters rise around your car, abandon the car and move to higher ground, if you can do so safely. You and your vehicle can be quickly swept away as floodwaters rise.



## AFTER A FLOOD

- Avoid floodwaters. The water may be contaminated by oil, gasoline or raw sewage. The water may also be electrically charged from underground or downed power lines.
- Avoid moving water. Moving water just six inches deep can sweep you off your feet.
- Be aware of areas where floodwaters have receded. Roads may have weakened and may collapse under the weight of a car.
- Stay away from downed power lines and report them to the power company.
- Stay away from designated disaster areas unless authorities ask for volunteers.
- Return home only when authorities indicate it is safe. Stay out of buildings if surrounded by floodwaters. Use extreme caution when entering buildings. There may be hidden damage, particularly in foundations.

Other dangers associated with thunderstorms include tornadoes, strong winds, hail and flash flooding.

Flash flooding causes 140 deaths annually—more than any other thunderstorm-associated hazard. Some thunderstorms do not produce rain that reaches the ground. These are generically referred to as ‘dry thunderstorms’ and are most prevalent in the western United States. Known to spawn wildfires, these storms occur when there is a large layer of dry air between the base of the cloud and the ground. The falling raindrops evaporate, but lightning can still reach the ground.



## NATURAL HAZARDS

*Thunderstorms, lightning, and tornadoes are very common and affect great numbers of people each year. Despite their small size in comparison to hurricanes and winter storms, all thunderstorms are dangerous.*



Photo courtesy of FEMA

# THUNDERSTORMS & LIGHTNING & TORNADES

## TORNADOES

A tornado is a violently rotating column of air in contact with the ground and capable of producing tremendous damage. It appears as a rotating, funnel-shaped cloud, which extends to the ground from the base of a thunderstorm. A tornado spins like a top and may sound like a roaring plane or train. These short-lived storms are the most violent of all atmospheric phenomena; and over a small area, the most destructive.

**Tornado Watch.** This means a tornado may be possible in or near the “watch” area. Keep your radio or television tuned to a local station. Seek direction from local government agencies and the National Weather Service.

**Tornado Warning.** This warning means that a tornado has actually been sighted, or has been indicated by radar. Take shelter immediately to protect yourself and your family. Your best bet is an underground shelter or a substantial steel-framed or reinforced concrete building.

## WHAT TO DO IN A TORNADO

If you are at home, go to your basement if you have one. Take cover under the basement stairs or under a sturdy workbench or table. If your home has no basement, take cover in the center part of the house, on the lowest floor in small rooms such as a closet or bathroom, or under sturdy furniture. Stay away from windows to avoid flying debris. Do not remain in a trailer or mobile home if a tornado is approaching. Take cover in the lowest lying area near you and lie down in it. If you are at work or school, follow the instructions of authorities. The designated shelter is usually the interior hallway on the lowest floor. Stay out of structures with wide, free-span roofs, such as auditoriums and gymnasiums and shopping malls. If you are outside and can’t get to shelter, take cover and lie flat in the nearest depression, such as a ditch, but beware of the possibility of rising water. DO NOT take cover under highway overpasses, this often increases your risk of injury.

- Tornadoes may strike quickly, with little or no warning.
- Tornadoes may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel. The average tornado moves southwest to northeast, but tornadoes have been known to move in any direction.
- The average forward speed is 30 mph but may vary from stationary to 70 mph with rotating winds that can exceed 200 mph.
- Tornadoes are most frequently reported east of the Rocky Mountains during spring and summer months but can occur in any state at any time of year.
- Tornadoes are most likely to occur between 3 p.m. and 9 p.m., but can occur at any time of the day or night.
- Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others.
- Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

## BEFORE THUNDERSTORMS APPROACH

Terms used by weather forecasters:

**Severe Thunderstorm Watch.** Tells you when and where severe thunderstorms are likely to occur. Watch the sky and stay tuned to the radio or television in case a warning is issued.

**Severe Thunderstorm Warning.** Indicates imminent danger to those in the path of the storm. These warnings are issued when severe weather has been reported by spotters or indicated by radar.

*Thunderstorm facts:*

- Thunderstorms may occur singly, in clusters or in lines.
- Some of the most severe weather occurs when a single thunderstorm affects one location for an extended time.
- Thunderstorms typically produce heavy rain for a brief period, anywhere from 30 minutes to an hour.
- Warm, humid conditions are very favorable for thunderstorm development.
- A typical thunderstorm is 15 miles in diameter and lasts an average of 30 minutes.
- Of the estimated 100,000 thunderstorms each year in the United States, about 10 percent are classified as severe.
- A thunderstorm is classified as severe if it produces hail at least three-quarters of an inch in diameter, has winds of 58 miles per hour or higher, or produces a tornado.
- To calculate the distance of lightning count the number of seconds between a flash of lightning and the next clap of thunder. Divide this number by 5 to determine the distance to the lightning in miles.
- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- When a thunderstorm approaches, secure outdoor objects that could blow away or cause damage.

## BEFORE LIGHTNING APPROACHES

The unpredictability of lightning increases the risk to people and property. In the United States, about 300 people are injured and 80 people are killed by lightning each year.

*Lightning facts:*

- The ingredient that defines a thunderstorm is lightning. Since lightning creates thunder, a storm producing lightning is called a thunderstorm.
- Lightning occurs during all thunderstorms.
- Lightning often strikes outside of heavy rain and may occur more than 10 miles away from any rainfall.
- Lightning-strike victims carry no electrical charge and should be attended to immediately. If breathing has stopped, begin mouth-to-mouth resuscitation. If the heart has stopped, a trained person should administer CPR. If the victim has a pulse and is breathing, look for other possible injuries. Check for burns where the lightning entered and left the body. *Be alert for nervous system damage, broken bones, and loss of hearing or eyesight.*
- “Heat lightning” is actually lightning from a thunderstorm too far away for thunder to be heard. However, the storm may be moving in your direction!
- Most lightning deaths and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.
- Lightning starts many fires in the western United States and Alaska.
- Lightning can occur from cloud-to-cloud, within a cloud, cloud-to-ground, or cloud-to-air.

## DURING THUNDERSTORMS & LIGHTNING

**If you are inside a home:**

- Avoid showering or bathing. Plumbing and bathroom fixtures can conduct electricity.
- Avoid using a corded telephone, except for emergencies. Cordless and cellular telephones are safe to use.
- Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.

**If outside, with no time to reach a safe location:**

- Remember the 30/30 lightning safety rule. Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder. It is better to postpone outdoor activities if thunderstorms are likely.
- In a forest, seek shelter in a low area under a thick growth of small trees.
- In open areas, go to a low place such as a ravine or valley. Be alert for flash floods.
- Seek shelter in a hard-topped vehicle. While rubber tires (and rubber-soled shoes) provide no protection from lightning, the steel frame helps protect you as long as you don't touch the metal. You may still be injured if lightning strikes your car, but it's much safer than being outside.
- Do not stand under a natural lightning rod such as a tall, isolated tree in an open area.
- Do not stand on a hilltop, in an open field, on a beach, or in a boat on the water.
- Avoid isolated sheds or other small structures in open areas.
- Get away from open water. If you are boating or swimming, get to land and find shelter immediately.
- Get away from anything metal – tractors, farm equipment, motorcycles, golf carts, golf clubs and bicycles.
- Stay away from wire fences, clotheslines, metal pipes, rails and other metallic paths that could carry lightning to you from some distance away.
- If you feel your hair stand on end (which indicates that lightning is about to strike), squat low to the ground on the balls of your feet. Place your hands over your ears and your head between your knees. Make yourself the smallest target possible and minimize your contact with the ground. Do not lie flat on the ground.



If you have a serious medical condition, are undergoing medical treatments such as chemotherapy or dialysis, or are scheduled for a medical procedure, consider staying with family, friends or in a hotel closer to your medical caregiver when a major winter storm is approaching.

A blizzard can isolate you for several days and emergency services may not be able to evacuate you in time for your medical treatment.



## NATURAL HAZARDS

*Heavy snowfall and extreme cold can immobilize an entire region. Even areas that normally experience mild winters can be hit, causing storm surge, closed highways, blocked roads, downed power lines and hypothermia. Protect yourself and your family from the many hazards of winter by planning ahead.*



# WINTER STORMS & EXTREME COLD

### CONSIDER PUBLIC TRANSPORTATION

*About 70 percent of winter deaths related to snow and ice occur in automobiles. Consider public transportation if you must travel. If you travel by car, travel in the day, don't travel alone and keep others informed of your schedule. Stay on main roads—avoid back-road shortcuts.*

### IF A BLIZZARD TRAPS YOU IN YOUR CAR

- Pull off the highway. Turn on your hazard lights and hang a distress flag from the radio aerial or window.
- Remain in your vehicle where rescuers are most likely to find you. Do not set out on foot unless you can see a building close by where you know you can take shelter. Be careful—distances are distorted by blowing snow. A building may seem close but be too far to walk to in deep snow.
- Run the engine and heater about ten minutes each hour to keep warm. When the engine is running, open a window slightly for ventilation. This will protect you from possible carbon monoxide poisoning. Periodically clear snow from the exhaust pipe.
- Exercise to maintain body heat, but avoid overexertion. In extreme cold, use road maps, seat covers and floor mats for insulation. Huddle with passengers and use your coat for a blanket.
- Take turns sleeping. One person should be awake at all times to look for rescue crews.
- Drink fluids to avoid dehydration.
- Be careful not to waste battery power. Balance electrical needs—lights, heat and radio—with supply.
- At night, turn on the inside light so work crews or rescuers can see you.
- If stranded in a remote area, spread a large cloth over the snow to attract the attention of rescue crews who may be surveying the area by airplane.
- Once the blizzard passes, you may need to leave the car and proceed on foot.

## BEFORE A WINTER STORM

Terms used by weather forecasters:

**Freezing rain.** Rain that freezes when it hits the ground, creating a coating of ice on roads, walkways, trees and power lines.

**Sleet.** Rain that turns to ice pellets before reaching the ground. Sleet also causes roads to freeze and become slippery.

**Winter Storm Watch.** A winter storm is possible in your area.

**Winter Storm Warning.** A winter storm is occurring or will soon occur in your area.

**Blizzard Warning.** Sustained winds or frequent gusts of 35 mph or more and considerable falling or blowing snow (reducing visibility to less than a quarter mile) are expected to last for a period of three hours or longer.

**Frost/Freeze Warning.** Below freezing temperatures are expected.

Prepare to survive on your own for at least three days:

- Assemble a disaster supply kit.
- Be sure to include winter specific items such as rock salt to melt ice on walkways, sand to improve traction, snow shovels and other snow removal equipment.
- Keep a stock of food and extra drinking water.
- Have alternative heating fuels on hand. Regular fuel sources may be cut off.
- Make sure you can keep at least one room livable with a gas fireplace, wood burning stove or fireplace. Be sure the room is well ventilated. If a thermostat controls your furnace and your electricity is cut off by a storm, you will need this emergency heat.
- Kerosene heaters are another emergency heating option. Be sure the room is well ventilated. These heaters can be dangerous. Carefully follow all directions and warnings during use and when re-fueling.
- Store a good supply of dry, seasoned wood for your fireplace or wood-burning stove. Never burn charcoal indoors.
- Winterize your home to extend the life of your fuel supply.
- Insulate walls, attics, storm windows or cover windows with plastic.
- Caulk and weather strip doors and windows.
- Maintain several days supply of medicines, water and food that need no cooking or refrigeration.

## DURING A WINTER STORM

- Listen to the radio or television for weather reports and emergency information. Have at least one battery operated radio and extra batteries.
- Eat regularly and drink ample fluids, but avoid caffeine and alcohol.
- Dress for warmth.
- Wear several layers of loose, lightweight, warm clothing rather than one layer of heavy clothing. The outer garments should be tightly woven and water repellent.
- Mittens are warmer than gloves.
- Wear a hat—most body heat is lost through the top of the head.
- Cover your mouth with a scarf to protect your lungs.
- Be careful when shoveling snow. Over-exertion can bring on a heart attack—a major cause of death in the winter. If you must shovel snow, stretch before going outside and don't overexert yourself.
- Watch for signs of frostbite. Be on the lookout for a loss of feeling and white or pale extremities—fingers, toes, earlobes or the tip of the nose. If symptoms are detected, get medical help immediately.
- Watch for signs of hypothermia. These signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and apparent exhaustion. If symptoms of hypothermia are detected, get to a warm location, remove any wet clothing and drink warm, non-alcoholic beverages. Get medical help as soon as possible.

## WINTERIZE YOUR CAR

This includes a battery check, antifreeze, wipers and windshield washer fluid, ignition system, thermostat, lights, flashing hazard lights, exhaust system, heater, brakes, defroster, oil level and tires. Snow tires are recommended for winter driving. Chains may be required in certain conditions and areas.

Carry a winter car kit in the trunk of your car that includes:

- Shovel
- Windshield scraper
- Battery-powered radio
- Flashlight
- Extra batteries
- Water
- Snack food
- Mittens
- Hat
- Blanket
- Tow chain or rope
- Tire chains
- Bag of road salt and sand
- Fluorescent distress flag
- Booster cables
- Road maps
- Emergency reflectors
- Cellphone or two-way radio



## OUTDOOR WATER CONSERVATION

*If you have a well at home, check your pump periodically. If the automatic pump turns on and off while water is not being used, you have a leak.*

### Car washing:

*Use a shut-off nozzle on your hose that can be adjusted down to a fine spray, so that water flows only as needed.*

*Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass so that you will water your lawn at the same time.*

### Lawn care:

*Don't over water your lawn. A heavy rain eliminates the need for watering for up to two weeks. Most of the year, lawns need only one inch of water per week.*

*Water in several short sessions rather than one long one. Your lawn will better absorb the moisture.*

*Position sprinklers so water lands on the lawn and not on paved areas.*

*Use your automatic lawn sprinklers timers to water in late evening or early morning hours.*

*Avoid sprinklers that spray a fine mist. Mist can evaporate before it reaches the lawn. Check sprinklers, sprinkler systems and timing devices regularly to be sure they operate properly.*

*Raise the lawn mower blade to at least three 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.*

*Avoid over-fertilizing your lawn. Applying fertilizer increases the need for water. Apply fertilizers that*

*contain slow-release, water insoluble forms of nitrogen.*

*Do not leave sprinklers or hoses unattended. A garden hose can pour out 600 gallons or more in only a few hours.*

### Pools:

*Cover pools and spas to reduce evaporation of water.*

*Consider installing a new water-saving pool filter. A single back flushing with a traditional filter uses 180 to 250 gallons of water.*

### Long-term outdoor conservation:

*Plant native and/or drought-tolerant grasses, ground covers, shrubs and trees. Once established, they 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, such as micro or drip irrigation and soaker hoses, which are the most water efficient for each use.*

*Use mulch to retain moisture in the soil. Mulch helps control weeds that compete with plants for water.*

*Avoid installing ornamental water features (such as fountains) unless they use recycled water.*

*Participate in public water conservation programs with your water management districts. Follow water conservation and shortage rules and support community efforts develop and promote a water conservation ethic. Remember that you are included in the restrictions even if your water comes from a private well.*



## NATURAL HAZARDS

*Heat kills by pushing the human body beyond its limits. Under normal conditions, the body's internal thermostat produces perspiration that evaporates and cools the body. However, in extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature.*



Photo courtesy of FEMA

# EXTREME HEAT

## CONSERVING WATER

An emergency water shortage can be caused by prolonged drought, poor water supply management or contamination of a surface water supply source or aquifer. Conserving water is very important during emergency water shortages. Water saved by one user may be enough to protect the critical needs of others. If everyone reduces water use during a drought, more water will be available to share.

## HEAT DISORDER

Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. The elderly, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

Conditions that can induce heat-related illnesses include stagnant atmospheric conditions and poor air quality. Consequently, people living in urban areas may be at greater risk from the effects of a prolonged heat wave than those living in rural areas. Also, 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'.

## BEFORE AN EXTREME HEAT EMERGENCY

Terms associated with extreme heat:

**Heat wave** – Prolonged period of excessive heat, often combined with excessive humidity.

**Heat index** – A number in degrees Fahrenheit (F) that tells how hot it feels when relative humidity is added to the air temperature. Exposure to full sunshine can increase the heat index by 15 degrees.

**Heat cramps** – Muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are often the first signal that the body is having trouble with the heat.

**Heat exhaustion** – Typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to decrease to the vital organs. This results in a form of mild shock. If not treated, the victim's condition will worsen. Body temperature will keep rising and the victim may suffer heat stroke.

**Heat/Sun stroke** – Heat stroke is life-threatening. The victim's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.

Consider the following preparedness measures when faced with the possibility of extreme heat.

- Install window air conditioners, insulate if necessary.
- Close any floor heat registers nearby and use a circulating or box fan to spread cool air.
- Check air-conditioning ducts for proper insulation.
- Install temporary reflectors, such as aluminum foil covered cardboard, to reflect heat back outside. Be sure to 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 and louvers can reduce the heat that enters a home by up to 80 percent. Consider keeping storm windows up all year.

## DURING AN EXTREME HEAT EMERGENCY

- Stay indoors as much as possible.
- If air conditioning is not available, stay on the lowest floor out of the sunshine.
- Remember that electric fans do not cool; they just blow hot air around.
- Eat well-balanced, light and regular meals. Avoid using salt tablets unless directed to do so by a physician.
- Drink plenty of water regularly even if you do not feel thirsty. Persons who have epilepsy, heart, kidney or liver disease, are on fluid-restrictive diets, or have a fluid retention problem should consult a doctor before increasing liquid intake.
- Limit intake of alcoholic beverages. Although beer and alcoholic beverages appear to satisfy thirst, they actually cause further body dehydration.
- Never leave children or pets alone in closed vehicles.
- Dress in loose-fitting clothes that cover as much skin as possible. Lightweight, light-colored clothing reflects heat and sunlight and helps maintain normal body temperature.
- Protect face and head by wearing a wide-brimmed hat.
- Avoid too much sunshine. Sunburn slows the skin's ability to cool itself. Use a sunscreen lotion with a high SPF (sun protection factor) rating.
- Avoid strenuous work during the warmest part of the day. Use a buddy system when working in extreme heat and take frequent breaks.
- Spend at least two hours per day in an air-conditioned place. If your home is not air conditioned, consider spending the warmest part of the day in public buildings such as libraries, schools, movie theaters, shopping malls and other community facilities.
- Check on family, friends and neighbors who do not have air conditioning and who spend much of their time alone.



## INDOOR WATER CONSERVATION

*Never pour water down the drain when there may be another use for it. Use it to water indoor plants or your garden.*

*Repair dripping faucets by replacing washers. One drop per second wastes 2.7 gallons of water per year!*

*Check all plumbing for leaks. Have leaks repaired by a plumber.*

*When purchasing a new appliance, choose one that is more energy and water efficient.*

### Bathroom:

*Consider purchasing a low-volume toilet that uses less than half the water of older models.*

*Replace your showerhead with an ultra-low-flow version.*

*Do not take baths – take short showers – only turn on water to get wet and lather, then turn water on again to rinse off.*

*Place a bucket in the shower to catch excess water for watering plants.*

*Don't let the water run while brushing your teeth, washing your face or shaving.*

*Don't flush the toilet unnecessarily.*

*Dispose of tissues, insects and similar waste in the trash instead of the toilet.*

### Kitchen:

*Operate automatic dishwashers only when they are fully loaded. Use the "light wash" feature if available to use less water.*

*Hand wash dishes by filling two containers – one with soapy water and the other with rinse water containing a small amount of chlorine bleach.*

*Most dishwashers can clean soiled dishes very well, so dishes do not have to be rinsed before washing. Just remove large particles of food and put the dishes in the dishwasher.*

*Store drinking water in the refrigerator. Don't let the tap run while you are waiting for cool water.*

*Do not waste water waiting for it to get hot. Capture it for other uses or heat it on the stove or in the microwave.*

*Consider installing an instant hot water heater on your sink.*

*Do not use running water to thaw frozen foods. Defrost food overnight in the refrigerator or use the defrost setting on your microwave.*

*Clean vegetables in a pan filled with water, rather than running water.*

*Kitchen sink disposals require a lot of water to operate properly. Start a compost pile as an alternate method of disposing of food waste, or simply dispose of food in the garbage.*

### Laundry:

*Operate washing machines only when they are fully loaded or set the water level for the size of your load.*



## NATURAL HAZARDS

*Make a plan and practice it. Practice escape plans at least twice a year, during the day and the night. Remember: YOUR JOB IS TO ESCAPE!*

Locate your extinguisher near an exit. Never let the fire get between you and the exit. Read and follow the directions on your fire extinguisher. The directions will tell you the size and type of fire for which you can use your extinguisher. Failure to follow these instructions can endanger your life and cause the fire to spread. Install A-B-C type fire extinguishers in the home and teach household members how to use them.

- Type A—wood or paper fires only.
- Type B—flammable liquid or grease.
- Type C—electrical fires.



# FIRE

## EMERGENCY ESCAPE PLAN

**Never open doors that are hot to the touch.** When you come to a closed door, use the back of your hand to feel the top of the door, the doorknob and the crack between the door and door frame to make sure fire is not on the other side. If it feels hot, use your secondary escape route.

**Make sure security bars have release devices.** Windows and doors with security bars must have quick release devices to allow them to be opened immediately in an emergency.

**Get a home escape ladder.** Consider purchasing home escape ladders if you live in a multi-level unit. Make sure everyone in the family knows how to use them and where they are stored.

**Leave the house immediately.** Don't waste time saving property. Take the safest exit route, but if you must escape through smoke, remember to crawl low, under the smoke and keep your mouth covered. The smoke contains toxic gases that can disorient you or worse, overcome you.

**Once out, stay out.** Remember to escape first, and then notify the fire department by dialing 911 from your neighbor's house. Never go back inside a burning building.





### BEFORE FIRE STRIKES

- Install smoke alarms. Working smoke alarms decrease your chances of dying in a fire by half.
- With your household, plan two escape routes from every room in the residence. Practice with your household escaping from each room.
- Clean out storage areas. Don't let trash such as old newspapers and magazines accumulate.
- Check the electrical wiring in your home.
- Never use gasoline, benzene, naphtha or similar liquids indoors.
- Check heating sources. Many home fires are started by faulty furnaces or stoves, cracked or rusted furnace parts and chimneys with creosote build-up. Have chimneys, wood stoves and all home heating systems inspected and cleaned annually by a certified specialist.
- Insulate chimneys and have spark arresters placed on top. The chimney should be at least three feet higher than the roof. Remove branches hanging above and around the chimney.
- Be careful when using alternative heating sources, such as wood, coal and kerosene heaters and electrical space heaters.
- Keep matches and lighters up high, away from children, and if possible, in a locked cabinet.
- Do not smoke in bed, when drowsy, or when medicated. Provide smokers with deep, sturdy ashtrays. Douse cigarettes and cigar butts with water before disposal.
- Safety experts recommend that you sleep with your door closed.
- Know the locations of the gas valve and electric fuse or circuit breaker box and how to turn them off in an emergency. If you shut off your main gas line for any reason, allow only a gas company representative to turn it on again.



### DURING A FIRE

- Use water or a fire extinguisher to put out small fires.
- Never use water on an electrical fire.
- Smother oil and grease fires in the kitchen with baking soda or salt, or put a lid over the flame if it is burning in a pan. Do not attempt to take the pan outside.
- If your clothes catch fire, stop, drop and roll until the fire is extinguished. Running only makes the fire burn faster.
- If you are escaping through a closed door, use the back of your hand to feel the top of the door, the doorknob, and the crack between the door and the doorframe *before* you open it. Never use the palm of your hand or fingers to test for heat – burning those areas could impair your ability to escape a fire.
- If you must exit through smoke, crawl low under the smoke to your exit – heavy smoke and poisonous gases collect first along the ceiling.
- Close doors behind you as you escape to delay the spread of the fire.
- Once you are safely out, stay out. Call 911.



### AFTER A FIRE

- Give first aid where needed. Cool and cover burns to reduce chance of further injury or infection.
- Do not enter a fire-damaged building unless authorities say it is okay.
- Have an electrician check your household wiring before the current is turned on.
- Do not attempt to re-connect any utilities yourself. Leave this to the proper authorities.
- Beware of structural damage, heat and smoke.
- Contact your local disaster relief service, such as the American Red Cross, if you need housing, food or basic necessities.
- Call your insurance agent.
- If you are a tenant, contact the landlord. It is the property owner's responsibility to prevent further loss or damage to the site.
- Discard food, beverages and medicines that have been exposed to heat, smoke or soot. Do not attempt to re-freeze food that has thawed.
- If you must leave your home, notify friends, relatives, police and fire departments, your insurance agent, your mortgage company, utility companies, the post office, schools, and your employer.

Recommended tree spacing is usually dictated by the species being managed and factors such as susceptibility to wind or heavy snow damage. Most thinning will be done from below (leaving the biggest and best trees) and on an individual tree basis. Thin, sanitize and improve the forest stand by removing trees that are damaged, attacked by insects, infected by disease, or are of poor form or low vigor. Pruning is a good idea from a personal safety standpoint to prune trees along trails and fire access roads. If you prefer the aesthetics of a well-manicured forest, you might prune the entire area. In any case, pruning helps reduce ladders fuels within the tree stand, thus enhancing wildlife safety. Any approved method of slash treatment is acceptable, including piling and burning, chipping of lop-and-scatter.



## NATURAL HAZARDS

*More than 4,000 Americans die each year in fires and more than 25,000 are injured. Many of these deaths could have been avoided with forethought. Plan ahead. Think about how you and your family will get out of the house in a hurry if there's a fire or other emergency.*



# WILDLAND FIRES

Tree Diameter	Recommended Average Stem Feet Between Trees
3"	10'
4"	11'
5"	12'
6"	13'
7"	14'
8"	15'
9"	16'
10"	17'
11"	19'
12"	21'
13"	23'
14"	24'
15"	26'
16"	28'
17"	29'
18"	31'
19"	33'
20"	35'
21"	36'
22"	38'
23"	40'
24"	42'

Even small steps to protect your home and property will make it better able to withstand wildfire. If you live near forests and grasslands, use fire resistant materials for roofing (Class A or better), not wood or shake shingles. Jefferson County requires Class A roofing in the Red Zone.

There are *four mitigation strategies* that can help you reduce your vulnerability to the hazards in your community.

- Alter the hazard. Act to reduce or eliminate the frequency and intensity of occurrence. An example of this is reducing fuel or ignition sources in the urban/wild land interface.
- Avert the hazard. Redirect the impacts away from vulnerable areas. An example of averting a hazard is using a levee to redirect water flow.
- Adapt to the hazard. Reduce your vulnerability by installing a roof that is hail, fire and wind resistant.
- Avoid the hazard. Remove people and structures from risk areas. Creating open space and buffer zones in floodplains or in the urban/wild land interfaces are examples of avoiding a hazard.

Ideally, mitigation measures are implemented before disaster strikes, since they can help protect your household as well as your property. However, even after a disaster strikes, actions can be taken to avoid or reduce the impact of the next disaster.

In recent years, the biggest threats to residents of Jefferson County have been wildfires. The county strongly encourages all homeowners, especially those in forested and non-urban areas, to create a defensible space around your homes to reduce loss.



**ZONE 1** is the 15-foot area from the outside edge of the home’s eaves and any attached structures, such as decks.

- Plant nothing within 3-5 feet of the structure, particularly if the building is sided with wood, logs or other flammable materials. Decorative rock creates an attractive, easily maintained and nonflammable ground cover. If the house has noncombustible siding, widely spaced foundation plantings of low growing shrubs or other “Fire Wise” plants are acceptable. Do not plant directly beneath windows or next to foundation vents. Be sure there are no areas of continuous grass adjacent to plants in this area. Frequently prune and maintain plants in this zone to ensure vigorous growth and a low growth habit. Remove dead branches, stems and leaves.
- Do not store firewood or other combustible materials in this area. Enclose or screen decks with metal screening. Extend the gravel coverage under the decks. Do not use areas under decks for storage.
- Ideally, remove all trees from Zone 1 to reduce fire hazards. If you do keep a tree, consider it part of the structure and extend the distance of the entire defensible space accordingly. Isolate the tree from any other surrounding trees. Prune it to at least 10 feet above the ground. Remove all “ladder fuels” from beneath the tree. (Ladder fuels are small shrubs, trees, tree limbs and other materials that allow fire to climb into the tree crown—the branches and foliage).



**ZONE 2** is an area of fuel reduction designed to reduce the intensity of any fire approaching your home. It is a transitional area between Zones 1 and 3. The size of the Zone 2 depends on the slope of the ground where the structure sits. Typically, it extends at least 75 – 125 feet from the structure. The following are management steps for this zone. Trim trees and large shrubs, leaving at least 10 feet between crowns. *Crown separation* is measured from the furthest branch of one tree to the nearest branch on the next tree. On steep slopes, allow more space between tree crowns. Remove all ladder fuels from under remaining trees. Carefully prune trees to a height of 10 feet. Be sure to extend thinning along either side of your driveway all the way to the main access road. You don’t want to surround your property with a continuous wildfire fuel supply. You may leave isolated shrubs, provided they are not under tree crowns. Prune and maintain these plants periodically to maintain vigorous growth. Remove dead stems from trees and shrubs annually. Remove dead trees (snags), leaving only one or two snags per acre for wildlife. Be sure any snags left for wildlife cannot fall onto the house or block roads or driveways.

During the growing season, mow grass (or use a weed trimmer) to a maximum height of 6-8 inches. This is extremely critical in the fall when grasses dry out and cure, or in the spring before the plants green up.

Stack firewood and woodpiles at least 30 feet away and uphill from the structure, or at least at the same elevation. Keep flammable vegetation 10 feet away from these woodpiles. *Do not stack wood against your house, on or under your deck, even in winter.* Many homes have burned from a woodpile that ignited as the fire passed. Wildfires can burn at almost any time in Colorado. Put propane tanks at least 30 feet away from structures, preferably on the same level as the house—fires burn uphill and gas leaks travel downhill. Keep flammable vegetation 10 feet away from tanks. Do not screen propane tanks with shrubs or vegetation.

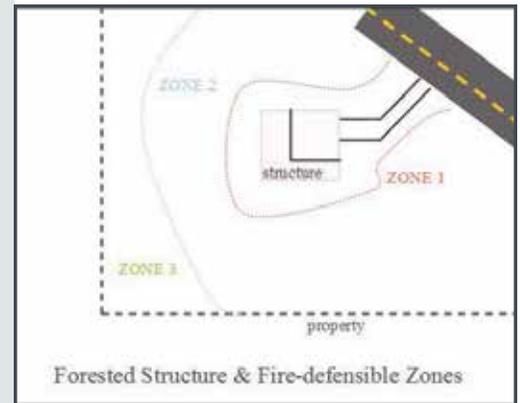
Get rid of slash (limbs, branches and other woody debris) by chipping or piling and burning. Contact your local CSFS office or county sheriff’s office for information about burning slash piles. If neither of these alternatives is possible, you may want to haul your slash out. Two or three small, widely spaced brush piles may be left for wildlife purposes. Locate these towards the outer portions of your defensible space.



**ZONE 3** is an area of traditional forest management and is of no particular size. It extends from the edge of your defensible space to your property boundaries. In this area, you are encouraged to manage your forests in a more traditional manner. Typical management objectives for forested areas surrounding home and subdivisions include:

- Providing optimum recreational opportunities.
- Enhancing aesthetics.
- Maintaining tree health and vigor.
- Providing barriers for wind, noise, dust and visual intrusions.
- Supporting limited production of firewood, fence posts and other forest commodities.
- Growing trees for transplanting.

Keep in mind that root competition for available moisture limits tree growth, and ultimately, the health of the forest.



## DEFENSIBLE SPACE

*When you treat, clear or reduce vegetation and debris from around your home, you are creating defensible space. Your house is more likely to withstand a wildfire if grasses, brush, trees and other common forest fuels are not there to feed a fire’s intensity. Defensible space also reduces the chance of a building fire moving to the surrounding forest and it gives firefighters room to do their jobs.*

*Creating effective defensible space involves developing a series of management zones that use different treatment techniques. Develop defensible space around each building on your property. Include detached garages, storage buildings, barns and other structures in your plan.*

*The actual design and development of your defensible space depends on several factors: size and shape of building, construction materials used, the slope of the ground on which the structures are built, surrounding topography, and sizes and types of vegetation on your property. You may want to request additional guidance from your local Colorado State Forest Service forester or fire department.*

## MAINTAINING YOUR DEFENSIBLE SPACE

*Your mountain home is located in a forest that is dynamic and always changing. Trees and shrubs continue to grow, plants die or are damaged, new plants begin to grow and plants drop their leaves and needles. Like other parts of your home, defensible space requires maintenance. Use the checklist to the right each year to determine if additional work or maintenance is necessary.*

*To find out more about wildfire conditions and mitigation efforts in Jefferson County check out <http://jeffco.us/sheriff/wildfire>.*

The American Red Cross and FEMA recommend that you locate the main electrical fuse box, water service and natural gas main—and teach everyone in your family how to turn them off. Keep necessary tools near gas and water shut-off valves so they are there when you need them.

Remember to turn off utilities only if you suspect the lines are damaged or if you are instructed to do so. If you turn off the gas, you will need a professional to turn it back on.



## MAN-MADE & TECHNOLOGICAL HAZARDS

*When it comes to eliminating hazards in your home, it's important to identify fire, electrical and chemical dangers, and take proactive steps against them.*



# HOME SAFETY

## CHEMICAL HAZARDS

Nearly every household uses products containing hazardous materials. Although the risk of a chemical accident is slight, knowing how to handle these products and how to react during an emergency could save a life. Follow these guidelines when storing, using and disposing of chemical substances:

- Read directions before using a new chemical product.
- Store chemicals in a safe, secure location, preferably up high and always out of the reach of children. Follow storing instructions on the label.
- Avoid mixing household chemical products. Deadly toxic fumes can result.
- Keep combustible liquids such as paint thinner, kerosene, charcoal lighter fluid and turpentine away from heat sources, including candles and cigarette lighters.
- If you spill a chemical, clean it up immediately with rags. Wear gloves and eye protection. Put the rags outdoors where the fumes can evaporate, then wet them, put them in a sealed plastic bag and throw them away.
- Read the label to see how to dispose of chemicals. Along with your own health, proper disposal protects the health of the public and the environment.
- Take large amounts of kerosene, motor oil, battery acid, diesel fuel, transmission fluid, paint thinner, stripper and turpentine to a recycling center or collection site.
- Learn to detect hazardous materials. Many hazardous substances are odorless and tasteless, and can only be detected by physical reactions such as watering eyes or nausea.
- Know the symptoms of toxic poisoning: difficulty breathing, irritation of the eyes, skin, throat or respiratory tract, changes in skin color, headaches or blurred vision, dizziness, clumsiness or lack of coordination, cramps or diarrhea.
- If someone is poisoned, call 911. They will give you emergency advice while you wait for professional help.

Contact your local public health department (Jeffco Health Department 303-271-5755) or the Environmental Protection Agency for more information about potentially dangerous household products and their antidotes. You may want to keep antidotes in your home for cleaners, detergents, home medications, liquid fuels, and paint removers.

To find out more about disposing of chemical waste in Jefferson County, call Rooney Road Recycling Center for an appointment at 303-316-6262 or 1-800-HHW-PKUP. Location: 151 S. Rooney Rd.

*To register for CodeRED, a free emergency alert service, go to <http://jeffco.us/sheriff/emergencies> and click on the 'CodeRED' link. The CodeRED Mobile Alert app is also available on the App Store and Google Play.*

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## **EMERGENCY ACCESS**

Emergency workers should have ready access to your property in the event of a crisis. Make sure:

- Emergency vehicles can easily identify your address from the road, day or night.
- Your driveway has no overhanging branches or other obstructions that would stop a fire truck from getting to your home.
- Parked cars or other obstructions are out of the way.
- Emergency workers have a key or can otherwise access your home if you live within a gated community. Work with your fire agency on how they would respond to your gated community.

## **ELECTRICAL HAZARDS**

According to the United States Fire Administration (USFA), residential electrical fires claim the lives of 700 Americans each year and injure 3,000 more. Electrical system failures and appliance defects cause some fires, but many more are caused by poor maintenance and misuse of electrical appliances, incorrectly installed wiring and overloaded circuits.

To help prevent the loss of life and property from electrical hazards, take these simple steps:

- Replace frayed or cracked extension and appliance cords, prongs and plugs.
- Repair or replace appliances that overheat, short out, smoke or spark.
- Cover exposed outlets and wiring.
- Make sure there is only one plug per outlet. If extension cords are used make sure they are Underwriters Laboratories (UL) approved.

## **FIRE HAZARDS**

One of the best ways to protect your home against fire is to keep your smoke detectors in proper working order. Check and replace their batteries every 9 to 12 months. Hint: change the batteries every time daylight saving time rolls around. Some smoke detectors beep when the batteries are low. Clean your smoke detector at least once a year as dust can damage the unit. Push the test button monthly to make sure it works.



The Jefferson County Local Emergency Planning Committee (LEPC) works with the community to identify industrial hazardous materials and keep the community informed of the potential risk. All companies that have hazardous chemicals must report annually to the LEPC. The public is encouraged to participate in the process and can start by emailing [jeffcolepc@att.net](mailto:jeffcolepc@att.net). More information about the Jefferson County LEPC and hazardous materials awareness, preparedness and responses are available on the LEPC's website at [www.gegllc.com/LEPC](http://www.gegllc.com/LEPC)



## MAN-MADE & TECHNOLOGICAL HAZARDS

*Hazardous materials are substances that, because of their chemical nature, pose a potential risk to life, health or property if they are released. Hazards can exist during production, storage, transportation, use or disposal.*



# HAZARDOUS MATERIALS INCIDENTS

### WHAT ARE HAZARDOUS MATERIALS?

- Industrial chemicals
- Toxic waste
- Household detergents
- Air fresheners

*Hazardous materials are part of our everyday lives. Affecting urban, suburban and rural areas, hazardous materials incidents can range from a chemical spill on a highway to groundwater contamination by naturally occurring methane gas.*

*Chemical plants are one source of hazardous materials, but there are many others. Your local service station stores gasoline and diesel fuel, hospitals store a range of radioactive and flammable materials.*

### DURING A HAZAROUS MATERIAL INCIDENT

If you witness (or smell) a hazardous materials accident, call 911. Upon notification by public safety officials of a hazardous materials release, listen to local radio or television stations for further information. Follow instructions carefully. Stay away from the incident site to minimize the risk of contamination.

- **If you are caught outside** during an incident, remember that gases and mists are generally heavier than air. Try to stay upstream, uphill, and upwind – hazardous materials can quickly be transported by water and wind. In general, try to go at least one-half mile (10 city blocks) from the danger area.
- **If you are in a motor vehicle**, stop and seek shelter in a permanent building if possible. If you must remain in your car, keep car windows and vents closed, and shut off the air conditioner and heater.
- **If asked to evacuate** your home, do so immediately. If authorities indicate there is enough time, close all windows, shut vents, and turn off attic heating and air conditioning fans to minimize contamination.
- **If you are asked to stay indoors** (shelter-in-place) rather than evacuate:
  - Follow all instructions given by emergency authorities.
  - Get household members and pets inside as quickly as possible.
  - Close and lock all exterior doors and windows. Close vents, fireplace dampers and as many interior doors as possible.
  - Turn off air conditioners and ventilation systems. In large buildings, building superintendents should set all ventilation systems to 100 percent re-circulation so that no outside air is drawn into the building. If this is not possible, ventilation systems should be turned off.

- Go into a pre-selected shelter room (the above-ground room with the fewest openings to the outside). Take a battery-powered radio, water, sanitary supplies, a flashlight, and the shelter kit containing plastic sheeting, duct tape, scissors, a towel and modeling clay or other materials to stuff into cracks.
- Close doors and windows in the room. Stuff a towel tightly under each door and tape around the sides and top of the door. Cover each window and vent in the room with a single piece of plastic sheeting, taping around all edges to create a continuous seal. If there are any cracks or holes in the room, such as those around pipes, fill them with modeling clay or other similar material.
- If authorities warn of the possibility of an outdoor explosion, close all curtains and shades in the room. Stay away from windows to prevent injury from breaking glass.
- Remain in the room, listening to emergency radio broadcasts until authorities advise you to leave your shelter.
- When authorities advise people in your area to leave shelters, open all doors and windows and turn on air conditioning and ventilation systems. These measures will flush out any chemicals that infiltrated into the building.
- Schools and other public buildings may institute procedures to shelter-in-place. If there is a hazardous materials incident and your children are at school, you will probably not be permitted to drive to the school to pick up your children. Even if you go to the school, the doors will probably be locked to keep your children safe. Follow the directions of your local emergency officials.
- Avoid contact with spilled liquids, airborne mists or condensed solid chemical deposits. Keep your body fully covered to provide some protection--wear gloves, socks, shoes, pants and long-sleeved shirts.
- Do not eat food or drink water that may have been contaminated.
- If indoors, fill the bathtub (first sterilize it with a diluted bleach solution – one part bleach to ten parts water) and fill large containers with water for drinking, cooking and dishwashing. Be prepared to turn off the main water intake valve in case authorities advise you to do so.

#### **AFTER A HAZARDOUS MATERIAL INCIDENT**

- Do not return home until local authorities say it is safe.
- Upon returning home, open windows, vents, and turn on fans to provide ventilation.
- A person or item that has been exposed to a hazardous chemical may be contaminated and could contaminate other people or items. If you have come in contact with or have been exposed to hazardous chemicals, you should:
  - Follow decontamination instructions from local authorities.
  - Seek medical treatment for unusual symptoms as soon as possible.
- If medical help is not immediately available and you think you might be contaminated, remove all your clothing and shower thoroughly (unless local authorities advise you to do otherwise – some chemicals are water reactive). Change into fresh, loose clothing and seek medical help as soon as possible.
- Place exposed clothing and shoes in tightly sealed containers. Do not allow them to contact other materials. Call local authorities to find out about proper disposal.
- Advise everyone who comes in contact with you that you may have been exposed to a toxic substance.
- Find out from local authorities how to clean up your land and property.

#### **BEFORE A HAZARDOUS MATERIALS INCIDENT**

- Ask your LEPC about community plans for responding to a hazardous materials accident at a plant or other facility or a transportation accident involving hazardous materials.
- Ask your LEPC about storage and usage of hazardous chemicals in your local area.
- Use the information gathered from LEPC to evaluate risks to your household. Determine how close you are to factories, freeways or railroads that may produce or transport toxic waste.
- You may be asked by public safety officials to either take shelter in place or evacuate. An evacuation could last a few hours or several days.
- Basic shelter-in-place is accomplished by going indoors, closing windows and doors, turning off your heating and air conditioning system, and monitoring the TV and radio for additional guidance. For further information on sheltering-in-place, visit [www.Ready.gov](http://www.Ready.gov).



## MAN-MADE & TECHNOLOGICAL HAZARDS

*National terrorism is the use of force of violence against persons or property in violation of the criminal laws of the United States for the purposes of intimidation, coercion, or ransom.*



# NATIONAL SECURITY & BOMB THREATS

In the United States, most terrorist incidents have involved small extremist groups that use terrorism to achieve a designated objective. Local, state, and federal law enforcement agencies monitor suspected terrorist groups to try and prevent attacks. The U. S. government also works with other countries to limit international support of terrorism.

A terrorist attack can take several forms, depending on available technology, the motivating political issue and the target's weak points. Bombings are the most frequent form of terrorism waged upon the United States. Other forms of terrorism may include attacks on transportation facilities, attacks against utilities or other public services and the use of chemical or biological agents.

### PROTECTING YOURSELF

Learn about the nature of terrorism. Terrorists often look for visible targets with easy access, such as international airports, large cities, major international events, resorts and high-profile landmarks. They are generally concerned with their own safety, and if not, they want to escape detection. To accomplish their ends they may use explosives, kidnappings, hijackings, arson or firearms. You can prepare for terrorism in many of the same ways that you prepare for other disasters. Keep your 72-hour emergency kit up-to-date; always have a supply of food and water in the house, etc.

In addition to this:

- Be alert and aware of your surroundings. The nature of terrorism suggests you may have little or no warning.
- Take precautions when traveling.
- Beware of conspicuous or unusual behavior.
- Don't accept packages from strangers.
- Don't leave luggage unattended.
- Learn where emergency exits are located.
- Think ahead about how to evacuate a building, subway or congested public area in a hurry.
- Know where staircases are located.

*Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism and to get immediate publicity for their causes.*

## **BOMB THREATS**

If you receive a bomb threat, get as much information from the caller as possible. Try to keep the caller on the line. Record the call if you can. Notify the police and the building management. Do not touch any suspicious packages. Clear the area instead. In evacuating the building, avoid standing in front of windows or other open areas. Keep sidewalks and streets clear for emergency workers. Be sure to note the tone of the caller's voice, whether the caller is a male or female, young or old, or has an accent, and any background noises that might indicate the location of the caller.

### **Ask:**

When? (Will it go off)

Where? (Is it located)

What? (Type of bomb or explosive is it)

Why? (Are you doing this)

Who? (Are you)

## **BEFORE AN EXPLOSION**

Do these things before a bomb explosion, especially if you work or live in a multi-level building:

- Review emergency evacuation procedures. Know where fire exits are located.
- Keep fire extinguishers in working order. Know where they are located, and how to use them.

Keep these items in a designated place on each floor of the building: portable battery-operated radio and extra batteries, flashlights and extra batteries, first aid kit and manual, hard hats and fluorescent tape to rope off dangerous areas.

## **DURING AN EXPLOSION**

Get out of the building as quickly and calmly as possible. If items are falling off bookshelves or from the ceiling, get under a sturdy table or desk. If there is a fire, stay low to the floor (heavy smoke and poisonous gas collect first along the ceiling). Cover your nose and mouth with a wet cloth. When approaching a closed door, use the palm of your hand and forearm to feel the lower, middle and upper parts of the door. If it is not hot, brace yourself against the door and open it slowly. If it is hot to the touch, do not open the door—seek an alternate escape route.

## **AFTER AN EXPLOSION**

If you are trapped in debris and can't get out of the building, try to stay calm and avoid kicking up toxic dust. Cover your mouth with a handkerchief or clothing. Tap on a pipe or wall so rescuers can hear where you are. Use a whistle if available, but shout only as a last resort. Shouting can cause you to inhale dangerous amounts of dust.

## **NTAS ALERT**

After reviewing the available information, the Secretary of Homeland Security will decide, in coordination with other federal entities, whether the National Terrorism Alert System should issue an alert. NTAS will only be issued when credible information is available. These alerts will include a clear statement that there is an imminent or elevated threat. In some cases, alerts will be sent directly to law enforcement or affected areas of the private sector, while in others, alerts will be issued more broadly through official media channels. An individual threat alert is issued for a specific time period and then automatically expires. It may be extended if new information becomes available or the threat evolves.

NTAS alerts contain a sunset provision indicating a specific date when the alert expires—there will not be a constant NTAS alert or blanket warning that there is an overarching threat. If threat information changes for an alert, the Secretary of Homeland Security may announce an updated alert. All changes, including the announcement that cancels the alert will be distributed the same way. For more information on NTAS alerts visit: <http://www.dhs.gov/ntas-public-guide>



## WHAT ARE CHEMICAL AND BIOLOGICAL AGENTS?

Chemical agents are poisonous gases, liquids or solids that have a toxic effect on living organisms. They can be released by bombs, sprayed from aircraft, boats, or vehicles, or be used as a liquid to create a hazardous environment. Some chemical agents may be odorless and tasteless. They may have an immediate effect (a few seconds to a few minutes) or a delayed effect (several hours to several days).

Biological agents are organisms or toxins that produce illnesses in people, livestock and crops. Since biological agents can be hard to detect, and may take time to grow, it is difficult to know when a biological attack has occurred. If government agencies have inside information on a widespread biological attack, they may instruct you to stay put or evacuate. If you know you are affected by a biological agent dial 911 immediately.

In some situations, like the anthrax letters sent in 2001, people may be alerted to a potential exposure. If this is the case, pay close attention to all official warnings and instructions on how to proceed.



## MAN-MADE & TECHNOLOGICAL HAZARDS

*Should a widespread chemical attack occur, you will be instructed to either seek shelter where you are and seal the premises, or to evacuate immediately. If you are instructed to shelter-in-place, do not leave to rescue others.*



# CHEMICAL, BIOLOGICAL, NUCLEAR & RADIOLOGICAL (CBRN) ATTACKS

### CHEMICAL AGENTS

Chemical agents are categorized into six types:

- Lung-damaging (pulmonary) agents such as phosgene
- Cyanide
- Vesicants, or blister agents such as mustard
- Nerve agents such as GB (sarin)
- Incapacitating agents such as BZ
- Riot-control agents (similar to MACE)

### BIOLOGICAL AGENTS

Biological agents are categorized into three groups:

- Bacteria are small free-living organisms that reproduce by simple division and are easy to grow. The diseases they produce often respond to treatment with antibiotics.
- Viruses are organisms which require living cells in which to reproduce and are intimately dependent upon the body they infect. Viruses produce diseases which generally do not respond to antibiotics. However, antiviral drugs are sometimes effective.
- Toxins are poisonous substances found in, and extracted from, living plants, animals or micro-organisms. Some toxins can be produced or altered by chemical means. Some toxins can be treated with specific anti toxins and selected drugs.

Biological agents can be dispersed by spraying them in the air, infecting animals which carry the disease, through food and water contamination, and through human-to-human contact.

- Biological agents are dispersed into the air, forming a fine mist that may drift for miles. Inhaling the agent may cause disease in people or animals.
- Some diseases are spread by insects and animals, such as fleas, mice, flies and mosquitoes. Deliberately spreading diseases through livestock is also referred to as agro-terrorism.
- Food and water contamination. Some pathogenic organisms and toxins may persist in food and water supplies. Most microbes can be killed, and toxins deactivated, by cooking food and boiling water.
- Person to person spread of a few infectious agents is also possible. Humans have been the source of infection for the smallpox, plague and Lassa viruses.

## BEFORE A CHEMICAL OR BIOLOGICAL ATTACK

Assemble a disaster supply kit and be sure to include:

- Battery-powered commercial radio with extra batteries.
- Non-perishable food and drinking water.
- Roll of duct tape and scissors.
- Plastic for doors, windows and vents for the room in which you will shelter in place – this should be an internal room where you can block out air that may contain hazardous agents.
- First aid kit.
- Sanitation supplies including soap, water and bleach.

## DURING A CHEMICAL OR BIOLOGICAL ATTACK

Listen to your radio for instructions from authorities such as whether to remain inside or to evacuate.

If you are instructed to remain in your current location or other shelter during a chemical or biological attack:

- Turn off all ventilation, including furnaces, air conditioners, vents and fans.
- Seek shelter in an internal room, preferably without windows. Seal the room with duct tape and plastic sheeting. Ten square feet of floor space per person will provide sufficient air to prevent carbon dioxide buildup for up to five hours.
- Remain in protected areas where toxic vapors are reduced or eliminated, and be sure to take your battery-operated radio with you.

If you are caught in an unprotected area, you should attempt to get upwind of the contaminated area and find shelter.

## AFTER A CHEMICAL/BIOLOGICAL INCIDENT

Immediate symptoms of exposure to chemical agents may include:

- Blurred vision
- Eye irritation
- Difficulty breathing
- Nausea

A person affected by a chemical or biological agent requires immediate attention by professional medical personnel. If medical help is not immediately available, follow all directions from local authorities.

Use extreme caution when helping others who have been exposed to chemical or biological agents. Decontamination within minutes of exposure is absolutely necessary to minimize health consequences. If your skin or clothing comes in contact with a visible, potentially infectious substance, you should remove and bag your clothes and personal items, then wash yourself with warm soapy water immediately. Put on clean clothes and seek medical assistance.

Contaminated clothing normally removed over the head should be cut off to avoid contact with the eyes, nose and mouth.

- Remove all items in contact with the body, including clothing and accessories. Place all of these items in a tightly secured plastic bag.
- Decontaminate hands using soap and water. Gently wash face and hair with soap and water as well, and thoroughly rinse.
- Flush eyes with plenty of water. Remove eyeglasses or contact lenses, and put glasses in a pan of household bleach to decontaminate.
- Decontaminate other body areas likely to have been contaminated. Blot (do not swab or scrape) with a cloth soaked in soapy water and rinse with clean water.
- Change into uncontaminated clothes. Clothing stored in drawers or closets is likely to be uncontaminated.
- If possible, proceed to a medical facility for screening.





## MAN-MADE & TECHNOLOGICAL HAZARDS

*If you are exposed to chemical, biological, radiological, or nuclear materials you have a good chance of surviving– if you receive immediate medical treatment. Some agents are contagious, and you may need to be quarantined.*



# CHEMICAL, BIOLOGICAL, NUCLEAR & RADIOLOGICAL (CBRN) ATTACKS

### IF YOU SUSPECT AN ATTACK

If you suspect a chemical, biological, nuclear and/or radiological attack, notify the proper authorities immediately. Early notification can save your life and the lives of others. Be ready to tell authorities the location of the incident, the number of victims, symptoms of the victims, whether there was an explosion, whether there's a fire, the type of vehicle or container involved, the time of the incident, the weather conditions and where you can meet emergency responders.

While you wait, check for physical, medical or environmental signs of attack. Depending on where you are, follow your home or work emergency plan. To protect yourself:

- Cover your nose and mouth with a cloth.
- Take frequent shallow breaths.
- Stay calm, do not panic.
- Don't T-E-S-T: Taste-Eat-Smell-Touch.
- Get away from the scene immediately and wait for the emergency responders to arrive.

Follow the self-decontamination rule: remove your outer clothing and wash them off with plenty of soap and cold water.

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## NUCLEAR AND RADIOLOGICAL ATTACK

Nuclear explosions can cause deadly effects – blinding light, intense heat (thermal radiation), instant nuclear radiation, blasts, fires started by heat pulses, and secondary fires caused by destruction. They also produce *fallout*, or radioactive particles that may be carried by the wind for hundreds of miles.

The possibility of nuclear attack has been greatly reduced in the past few years, and the challenges of acquiring and using such weapons makes the use of a nuclear device by terrorists unlikely. However, radiological dispersion devices (RDDs), or “dirty bombs,” are much simpler, and are thus considered far more likely for use in a terrorist attack. These radiological weapons are a combination of conventional explosives and radioactive material, which is designed to scatter dangerous and lethal amounts of radioactive fallout.

Protection from fallout requires taking shelter. Fallout shelters do not need to be specially constructed for that purpose. They can be any protected space, provided that the walls and roof are thick and dense enough to absorb the radiation given off by fallout particles.

The three protective factors of a fallout shelter are:

**Shielding.** Heavy, dense materials – thick walls, concrete, bricks, books and earth – between you and the fallout particles, the better.

**Distance.** The more distance between you and the fallout particles, the better. An underground area, such as a home or office building basement, offers more protection than the first floor of a building. A floor near the middle of a high-rise may be better, depending on what is nearby at the level on which significant fallout particles would collect.

**Time.** Fallout radiation loses its intensity fairly rapidly. In time, you will be able to leave the fallout shelter. Radioactive fallout poses the greatest threat to people during the first two weeks. At the two-week point, the fallout declines to about 1 percent of its initial radiation level.



Remember that any protection, however temporary, is better than none. The more shielding, distance and time you can take advantage of, the better.





## RECOVERY

*Throughout the recovery period, it's important to monitor local radio or television reports and other media sources for information about where to get emergency housing, food, first aid, clothing and financial assistance.*



# RECOVERING

Direct assistance to individuals and families may come from any number of organizations.

The American Red Cross is often stationed right at the scene to help people with their most immediate medical, food and housing needs. Other voluntary organizations, such as the Salvation Army, may also provide food, shelter and supplies to assist in post-disaster efforts. Faith based groups are often involved as well. In addition, social service agencies from local or state governments may be available to help people in shelters or provide direct assistance to families.

### RETURNING TO A DAMAGED HOME

- Keep a battery-powered radio with you so you can listen for emergency updates.
- Wear sturdy work boots and gloves.
- Before going inside, walk carefully around the outside of your home and check for loose power lines, gas leaks and structural damage. Do not enter if floodwaters remain around the building.
- If your home was damaged by fire, do not enter until authorities say it is safe.
- Check for cracks in the roof, foundation and chimneys. If it looks like the building may collapse, leave immediately.
- A battery-powered flashlight is the best source of light for inspecting a damaged home. Remember if gas fumes are present turning on your flashlight may produce a spark from the battery that could ignite leaking gas.
- Do not use oil, gas lanterns, candles or torches for lighting inside a damaged home. Leaking gas or other flammable materials may be present. Do not smoke. Do not turn on the lights until you are sure they are safe to use.
- Enter the home carefully and check for damage. Be aware of loose boards and slippery floors.
- Watch out for animals, especially poisonous snakes. Use a stick to poke through debris.
- If you smell gas or hear a hissing or blowing sound, open a window and leave immediately. Turn off the main gas valve from the outside, if you can. Call the gas company from a neighbor's residence. If you shut off the gas supply at the main valve, you will need a professional to turn it back on.
- Check the electrical system where visible and accessible. If you see sparks, broken or frayed wires, or if you smell hot insulation, turn off the electricity at the main fuse box or circuit breaker. If you are wet or standing in water, do not touch anything electrical. Instead, leave the building and call for help.
- Check appliances. If appliances are wet, turn off the electricity at the main fuse box or circuit breaker. Then unplug appliances and let them dry out. Have appliances checked by a professional before using them again. Also, have the electrical system checked by an electrician before turning the power back on.



- Check the water and sewage systems. If pipes are damaged, turn off the main water valve. Check with local authorities before using any water; the water could be contaminated. Pump out wells and have the water tested by authorities before drinking. Do not flush toilets until you know that sewage lines are intact.
- Clean up spilled medicines, bleaches and gasoline. Open cabinets carefully. Be aware of objects that may fall.
- Try to protect your home from further damage. Open windows and doors to get air moving through them.
- Mud left behind by floodwaters can contain sewage, bacteria or chemicals. Clean and disinfect salvageable items.
- If your basement has flooded, pump it out gradually (about one third of the water per day) to avoid damage. The walls may collapse and the floor may buckle if the basement is pumped out while the surrounding ground is still waterlogged.
- Throw out fresh food, cosmetics and medicines that have come in contact with floodwaters.
- Check refrigerated food for spoilage – your power supply may have been disrupted during the emergency. Throw out all spoiled food and any food that you suspect might be spoiled.
- Call your insurance agent. Take pictures of the damages. Keep good records of repair and cleaning costs. (Picture should be taken before a disaster for insurance records).

*Your first concern after a disaster is your household's health and safety.*

#### HEALTH AND SAFETY

- Be aware of new hazards created by the disaster. Watch for washed out roads, contaminated buildings, contaminated water, gas leaks, broken glass, damaged wires.
- Be aware of exhaustion. Don't try to do too much at once. Set priorities and pace yourself.
- Drink plenty of clean water. Eat well and get enough rest.
- Wear sturdy work boots and gloves. Wash your hands thoroughly with soap and clean water often when working in debris.
- Inform local authorities about health and safety hazards, including chemical releases, downed power lines, washed out roads, smoldering insulation or dead animals.



#### FEDERAL ASSISTANCE

In most severe disasters, the federal government is also called in to help individuals and families with temporary housing, counseling (for post-disaster trauma), low interest loans and grants, and other assistance. Small businesses and farmers are also eligible.



#### MAJOR DISASTER

Most Federal assistance becomes available when the President of the United States declares a 'Major Disaster' for the affected area at the request of the state governor. When this happens, FEMA may establish a Disaster Recovery Center.



#### DISASTER RECOVER CENTER

A Disaster Recover Center (DRC) is established, or near to, the community affected by the disaster. At the DRC, people can meet face-to-face with represented federal, state, local and volunteer agencies to:

- Discuss their disaster-related needs
- Obtain information about disaster assistance programs
- Tele-register for assistance
- Update registration information
- Learn about measures for rebuilding that can eliminate or reduce risk for future loss
- Learn how to complete the Small Business Administration Loan application
- Request the status of their Disaster Housing Application





## RECOVERY

The compassion and generosity of people is never more evident than after a disaster. People want to help. In addition to the people you care for on a day-to-day basis, consider the needs of your neighbors and people with access and functional needs.



# COPING

## STRESS OF A DISASTER

**No one who sees a disaster is untouched by it.**

- It is normal to feel anxious about your own safety and that of your family and close friends.
- Profound sadness, grief and anger are normal reactions to such an event.
- Acknowledging your feelings helps you recover.
- Focusing on your strengths and abilities will help you to heal.
- Accepting help from community programs and resources is healthy.
- We each have different needs and different ways of coping.
- It is common to want to strike back at people who have caused great pain.

**Signs that adults need crisis counseling/stress management assistance:**

- Difficulty communicating thoughts.
- Difficulty sleeping.
- Difficulty maintaining balance in their lives.
- Easily frustrated.
- Increased use of drugs/alcohol.
- Limited attention span.
- Poor work performance.
- Headaches/stomach problems.
- Tunnel vision/muffled hearing.
- Colds or flu-like symptoms.
- Disorientation or confusion.
- Difficulty concentrating.
- Reluctance to leave home.
- Depression, sadness.
- Feelings of hopelessness.
- Mood-swings and crying easily.
- Overwhelming guilt and self-doubt.
- Fear of crowds, strangers or being alone.

### MENTAL HEALTH AND CRISIS COUNSELING

*The emotional toll that disaster brings can sometimes be even more devastating than the financial strains of damage and loss of home, business or personal property.*

*Children and the elderly are of special concern in the aftermath of disasters. Even individuals who experience a disaster "second hand" through exposure to extensive media coverage can be affected.*

*Crisis counseling programs often include community outreach, consultation and education. If you feel you need assistance – get help. FEMA, state and local governments of the affected area may provide crisis-counseling assistance to help people cope with and recover from disaster.*



## HELPING CHILDREN COPE WITH DISASTER

- Disasters can leave children feeling frightened, confused and insecure. Whether a child has personally experienced trauma, has seen the event on television, or heard it discussed by adults, it is important for parents and teachers to be informed and ready to help if reactions to stress begin to occur.
- Children respond to trauma in many different ways. Some may have reactions very soon after the event; others may seem to be doing fine for weeks or months and then begin to show worrisome behavior. Knowing the signs that are common at different ages can help parents and teachers to recognize problems and respond appropriately.
- Reassurance is the key to helping children through a traumatic time. Very young children need a lot of cuddling, as well as verbal support. Answer questions about the disaster honestly, but don't dwell on frightening details or allow the subject to dominate family or classroom time indefinitely.
- Encourage children of all ages to express emotions through conversation, drawing or painting, and to find a way to help others who were affected by the disaster. Also, limit the amount of disaster-related material (television, print, radio, etc.) your children are seeing or hearing.
- Try to maintain a normal household or classroom routine and encourage children to participate in recreational activities. Reduce your expectations temporarily about performance in school and at home, perhaps by substituting less demanding chores.



### Ways to ease disaster related stress:

- Talk with someone about your feelings – anger, sorrow and other emotions – even though it may be difficult.
- Seek help from professional counselors who deal with post-disaster stress.
- Don't hold yourself responsible for the disastrous event or be frustrated because you feel that you cannot help directly in the rescue work.
- Take steps to promote your own physical and emotional healing by staying active in your daily life patterns or by adjusting them. This healthy outlook will help you and your household (e.g., healthy eating, rest, exercise, relaxation, meditation).
- Maintain a normal household and daily routine, limiting demanding responsibilities of you and your household.
- Spend time with family and friends.
- Use existing support groups of family, friends and faith-based groups.
- Establish a family emergency plan.
- Ensure you're ready for the next event by restocking your disaster kits and update your family disaster plan. Doing these positive actions can be comforting.

## HELPING OTHERS

- *If you want to volunteer, check with local organizations or listen to local news reports for information about where volunteers are needed. Until volunteers are specifically requested, stay away from disaster areas.*
- *If you are needed in a disaster area, bring your own food, water and emergency supplies. This is especially important in cases where a large area has been affected and emergency items are in short supply.*
- *Do not drop off food, clothing or any other item to a government agency or disaster relief organization unless a particular item has been requested. Normally these organizations do not have the resources to sort through the donated items.*
- *You can give a check or money order to a recognized disaster relief organization. These groups are organized to process checks, purchase what is needed and get it to the people who need it most.*
- *If your company wants to donate emergency supplies, donate a quantity of a given item or class of items (such as non-perishable food) rather than a mix of different items. Also, determine where your donation is going, how it's going to get there, who is going to unload it, and how it's going to be distributed. Without sufficient planning, much needed supplies will be left unused.*

# Notes

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# Notes

SHARE THIS GUIDE WITH  
YOUR HOUSEHOLD

INCLUDE EVERYONE IN THE  
PLANNING PROCESS

TEACH CHILDREN HOW TO  
RESPOND TO AN  
EMERGENCY

BE PREPARED

UNDERSTAND YOUR RISKS

TAKE STEPS TO REDUCE  
RISKS TO MINIMIZE  
DAMAGES CAUSED BY  
DISASTERS



**MISSION:**

*To provide a comprehensive and integrated emergency management system that coordinates community resources to protect lives, property and the environment from all natural and man-made hazards that may impact Jefferson County.*

