

LARIMER COUNTY EMERGENCY PREPAREDNESS GUIDE



Larimer County
Office of Emergency Management
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www.larimer.org/emergency

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Message from the Larimer County Commissioners



The Board of Commissioners is pleased to release this updated version of the Larimer County Emergency Preparedness Guide. As you all know, Larimer County is no stranger to disaster. Long before the 2012 High Park Wildfire and the 2013 Flood, the county dealt with wildfires, floods and tornados that caused damage and destruction. As you will see in this guide, a wide range of hazards affect our communities. These hazards, coupled with the diversity of the county, lead to a unique environment for emergencies and disasters.

Preparing for and responding to natural and human-caused disasters is one of the most important and challenging responsibilities county government must face. The Board of Commissioners takes this responsibility seriously and we understand that this endeavor is a partnership between the county and our citizens. One

Photo Credits:

Left: Legacy Land and Trust

Above: The Coloradoan

Right: High Park Wildfire—CNN

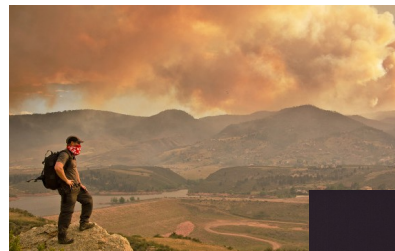
Windsor Tornado—D. Burgess, NOAA Photo Library

Larimer Flood—Loveland Fire Rescue Authority

thing that has become clear over the last several years is that individuals and families have a much greater chance of ensuring personal safety and recovery when educated and prepared for the disasters that may affect their area. This includes home fire safety as well as the preparedness involved in the larger disasters such as community-wide flooding or wildfires.

This preparedness guide has been developed by the Office of Emergency Management, in coordination with the Sheriff's Office, to provide community members and visitors of Larimer County with the tools and resources needed to prepare for various emergencies and disasters. It is our hope that this information will ultimately decrease the fear and anxiety associated with disasters and empower citizens to make quality decisions for themselves and their families before a disaster occurs.

- Board of Larimer County Commissioners



Please Note:

This guide is a compilation of emergency preparedness information from various sources. While we endorse the general concept of being prepared for emergencies, both individually and as a community, we are not directing anyone to implement all of the listed measures. Situations differ, and everyone should make their own decisions as to the extent of their preparedness.

This publication is a living document. The information contained within it will be updated and revised as necessary in a continued effort to build a safer, stronger community.

All About 9-1-1

When you dial 9-1-1 in Larimer County, your call, whether by landline or cell phone, will be received by any one of 5 dispatch centers. The operators at these centers will help you by determining the nature of your emergency and what type of response will be needed based on your location and circumstances.

Call Boxes

Throughout Larimer County, there are numerous call boxes placed so citizens can reach an emergency phone. Picking up the receiver transmits a call immediately to a 9-1-1 center. This initiative was undertaken in the early 90's - before the proliferation of cell phones. Now, some have been or will be removed because of lack of use (a few phones have never logged a single call) but it is anticipated that several, particularly in mountain areas where cell service is problematic, will remain for the safety of public.

Text to 911

A new service in Larimer County allows people to text 9-1-1 in the event they are unable to call or it is unsafe to do so. Please see the Larimer Emergency Telephone Authority (LETA) website for more information.

Medical Emergencies

In addition to sending emergency responders, the operator may give you medical instructions or direct you in specific actions to assist you with your emergency until help arrives. Remember that when an ambulance arrives to assess the situation, it's free - but if you are transported, fees may be involved for you or your insurance company.

A 9-1-1 call for assistance in areas far removed from a hospital may require an air ambulance to provide transportation to a medical facility as soon as possible. With medical emergencies, fires, law enforcement calls or whatever the

Call if you can...Text if you must

Larimer Emergency Telephone Authority
www.leta911.org

Please go online to register your cell or VoIP phone for emergency notifications and to learn more about the text to 9-1-1 feature

9-1-1 is...

- The number to call to report a crime in progress
- The number to call if an emergency threatening life or property exists
- The number to call if you need medical help
- The number to call if you see an accident
- The number to call if you see smoke or flames

9-1-1 is NOT...

- The number to call for phone numbers
- The number to call for animal problems
- The number to call for directions
- The number to call for road conditions
- The number to call for power outages

situation, 9-1-1 operators are on duty, very well trained and ready to help you in every way possible.

All 9-1-1 Centers in Larimer County provide Emergency Medical Dispatch whenever a call for an ambulance is placed. EMD is made up of protocols designed by emergency medical physicians to assist the caller until the ambulance arrives. The 9-1-1 call taker will ask specific questions depending on the situation. Instructions given to the caller can vary from simple medical information and instructions to more complex procedures such as delivering a baby or performing



Message from the Larimer County Sheriff

Colorado is a wonderful place to live, work, and play, but the potential for natural disasters as well as potential human caused threats should never be ignored. Larimer County has recently faced devastating wildfires and floods and the citizens of this great county have endured. It is vitally important that all citizens prepare themselves for such events to help reduce the threats to their personal safety and their property.

The men and women of the Larimer County Sheriff's Office are committed to protecting life, liberty, and property throughout the county. This Emergency Preparedness guide provides very useful information to help you prepare for and protect your families and property during a disaster.



Emergency Alerts and Warnings

Many county residents have received Reverse 9-1-1™ phone calls since Larimer County acquired this type of warning capability. The system we use is called Everbridge. In an emergency, it allows dispatch centers in the county to contact you on your hard wired home phone with recorded warnings and important information and can be very area specific.

No warning system is perfect and Everbridge is no exception. First of all, the data base for making these recorded calls depends on there being some specific geographical destination for the call...like your home. Cell phones are mobile and, as such, are not in the data base. If this is your only phone service, you will need to register your cell phone at www.leta911.org. Secondly, if you have a new home, call your local dispatch center and ask to make a 9-1-1 test call to confirm the address and phone number appear correctly.

Lastly, Everbridge will not work if you have blocking mechanisms in place to prevent unwanted calls. If you have such blocks or prompts which require a caller to press a key in order to complete the call, consider removing them temporarily in times of potential danger, such as a bad fire season.

If you receive an Everbridge call, do not call 9-1-1 for clarification or to ask questions unless you have an actual emergency. Our dispatchers will be so busy that only emergency calls will be handled anyway. Instead, access the web address or the county emergency telephone information line listed below.

Another source of information for county residents is "United Way 2 -1-1." To access it, simply dial 2-1-1. During disasters, 2-1-1 offers information from the Office of Emergency management. At other times, 2-1-1 provides information on volunteering your expertise to the community and offers assistance in finding the right county or city offices, services and activities to fit your needs. Their website is www.uwaylc.org.

**Larimer County Emergency Information Line:
970-498-5500**

**Emergency Information on the Internet:
Larimer.org/emergency**



Severe Weather and other Hazards to Larimer County

Get Educated and Be Aware!

Education and Awareness are the two keys to protecting yourself and your family in an extreme weather event. There have been countless instances in the history of search and rescue in Larimer County where victims placed themselves in harm's way by refusing to pay attention to a weather forecast or their surroundings. Remember, 4-wheel drive vehicles are not indestructible and may offer a false sense of security. They can and do get stuck in snow, and are easily swept away in floods as any other vehicle!

Pay attention to weather advisories, watches, and warnings. Educate yourself on the differences between them, know the best way to respond, and share this knowledge with your family and friends. Practice situational awareness by learning to be aware of your surroundings, and seek further information if you sense imminent danger. Keep tune to the latest hazardous weather information and weather forecasts, and always have an emergency plan set in place within your family.

Watches and Warnings—What is the Difference?

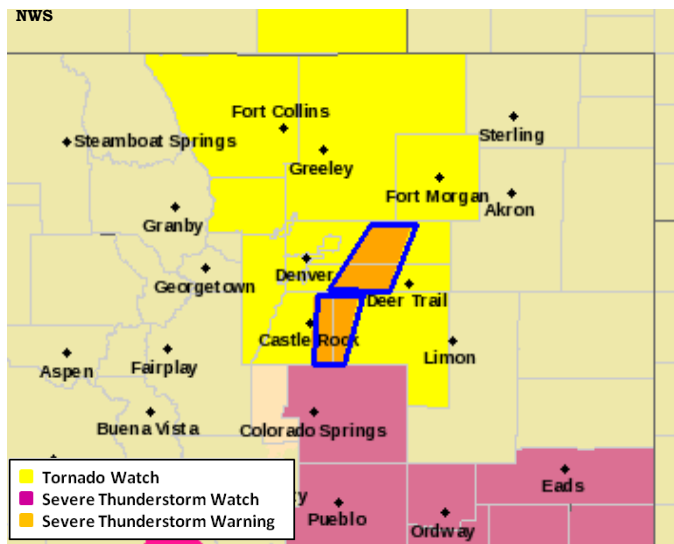


Fig. 1: An example of severe weather watches and warnings issued by the National Weather Service.

A Weather **Watch** is issued when the conditions are favorable for the development of severe weather over the next several hours. If there is a weather watch issued for your area, stay tuned to your local media for the latest weather information and closely monitor the situation. Review your emergency plan with your family and have your emergency kit close

by. Be alert for changing weather conditions and possible warnings. Weather watches are large areas (typically 20,000 to 40,000 square miles) and are issued by county. If a weather watch is issued close to your location, but does not include your county, you should still remain alert as weather conditions can change suddenly.

A Weather **Warning** is issued when a dangerous weather event is imminent or currently in progress. A weather warning requires immediate action and may be life threatening. You and your family should take the appropriate actions necessary to seek shelter and safety.

Weather warnings are usually issued as irregular shapes that may cover only part of the county (see Fig. 1). Warnings are also communicated in a variety of ways and some may include local cities and landmarks. Therefore, know where you are relative to your home county, local cities, and notable landmarks, as well as neighboring counties to better understand the threats relative to you and your family.

Larimer County Hazards

In Larimer County, our primary natural hazards are:



City of Fort Collins

FLASH FLOODS



Kate Gehring, The Denver Post

WILDLAND (FOREST) FIRES



City of Fort Collins

WINTER STORMS

However, other natural hazards can and do occur, such as:



Paul Agee Photography

DANGEROUS LIGHTNING



Sharon Thomas

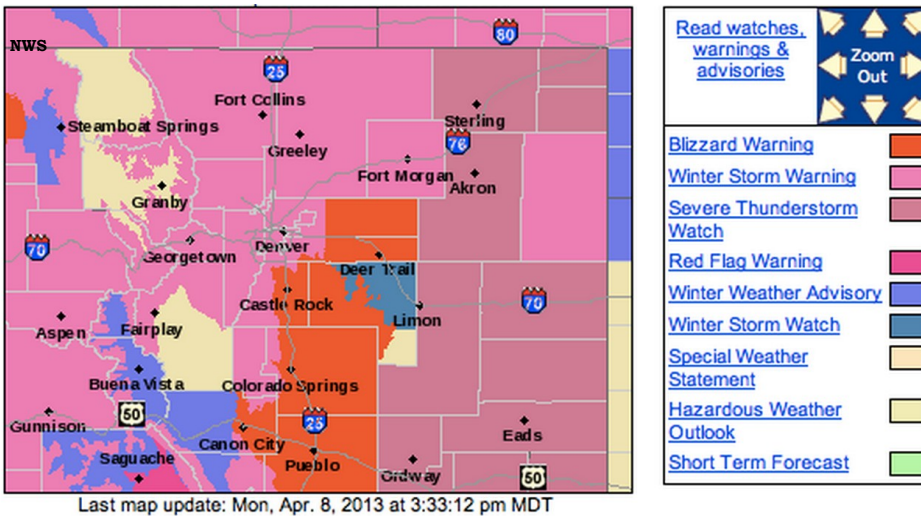
HAIL STORMS



KTTV

TORNADOES

Wacky Colorado Weather



Remember that Colorado weather is dynamic. Weather conditions can change rapidly and the weather across the plains can be radically different from the high country. For example, take a look at the weather situation during the afternoon of April 8, 2013 (see Fig. 2). The Front Range and mountainous areas were experiencing winter weather, while severe weather was expected out on the high plains and blizzard weather was affecting areas in between!

Fig. 2: An example of the severe weather advisories, watches, and warnings issued by the National Weather Service on April 8, 2013.

Thunderstorms



A **thunderstorm** is a local storm produced by a cumulonimbus cloud that **is accompanied by lightning and thunder**. An estimated 100,000 thunderstorms occur across the U.S. each year, and are especially prevalent along the Front Range during the spring and summer. While many Colorado residents enjoy taking part in recreational outdoor activities during this time of year, it is important to keep in mind that it is also the peak season for thunderstorms. In Colorado, thunderstorms are most common during the afternoon and evening hours. Thunderstorms can pose a variety of hazards that may lead to property damage and loss of life, such as dangerous lightning, hail, and strong winds. What ingredients are needed for thunderstorms to develop? What can we do to stay safe from their hazards? Read below and find out!

**“When the Thunder Roars,
Go Indoors!”**

3 Ingredients to Make Thunderstorms

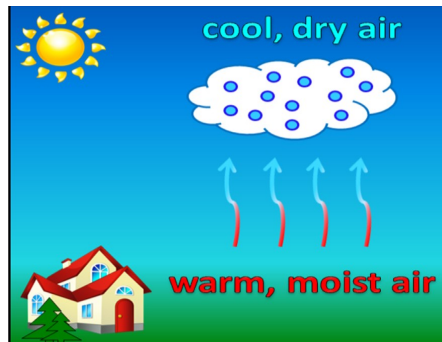
1. MOISTURE



Colorado has two major sources of moisture - the Pacific Ocean and the Gulf of Mexico.

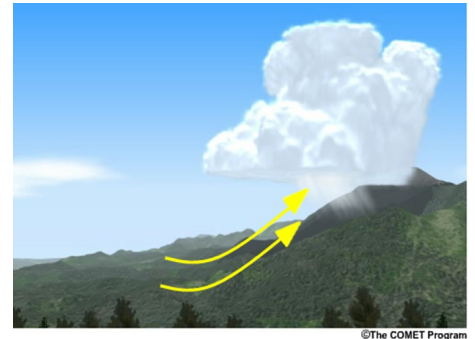
Fun Fact:
On average, July is when the most thunderstorm activity occurs across the eastern half of Colorado. The western slopes see most of their thunderstorm activity in August.

2. INSTABILITY



The atmosphere is “unstable” when there is warm, moist air near the ground and cool, dry air higher up in the atmosphere. In this situation, if a “bubble” of warm, moist air near the ground is forced upward it will continue to rise so long as it is warmer than its surroundings. As the bubble rises, it cools and the water vapor condenses to form **water droplets**, which we see as **clouds!**

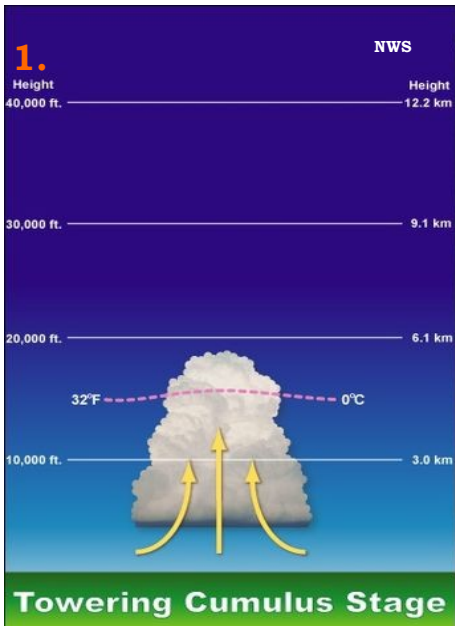
3. A SOURCE OF LIFT



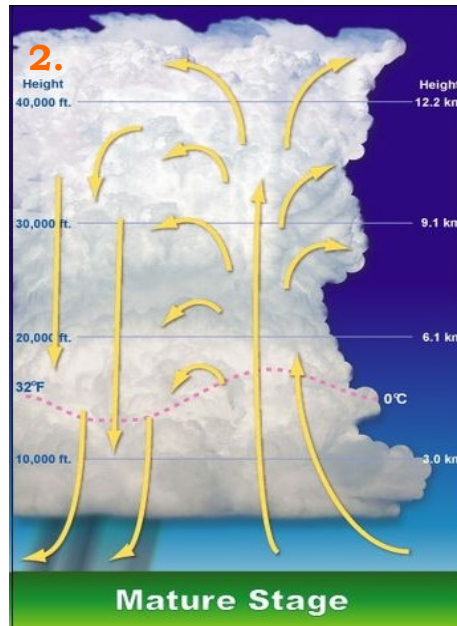
To develop a thunderstorm, there needs to be something that pushes the air upwards. Some of the common lifting mechanisms in Colorado are cold or warm fronts, drylines, air rising up the mountains (upslope), the mountains heating up faster than the plains (differential heating), and strong winds that push the air upward as they rush away from thunderstorms (outflow boundaries).

The Life of a Thunderstorm

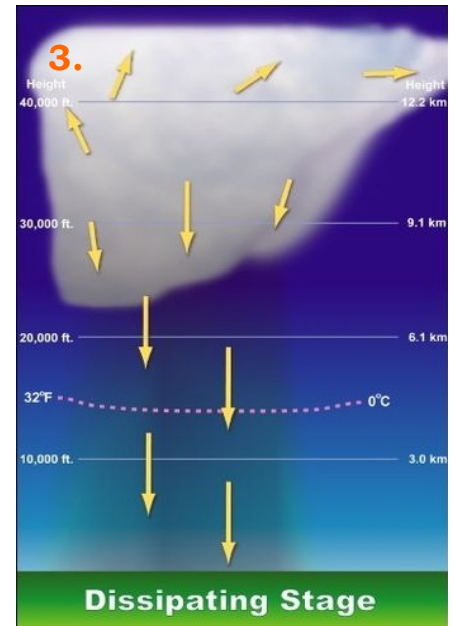
There are 3 stages of a thunderstorm: 1. towering cumulus stage, 2. mature stage, 3. dissipating stage. The lifecycle of an ordinary thunderstorm typically lasts about 30 minutes.



An updraft develops where warm, moist air rises and cools. The water vapor condenses and forms water droplets that build **cumulus clouds**. As more warm, moist air continues to rise and condense, the cumulus cloud grows.



The cumulus cloud grows taller as water droplets accumulate and grow in size. Eventually, these drops become heavy enough to fall out of the cloud as rain, in what is called the downdraft. At this stage, the cloud would be called a **cumulonimbus cloud** because it is producing rain.



As more rain continues to fall out of the storm, the downdraft becomes stronger. Once the downdraft overtakes the updraft, or cuts off the source of warm, moist air, the storm begins to weaken.

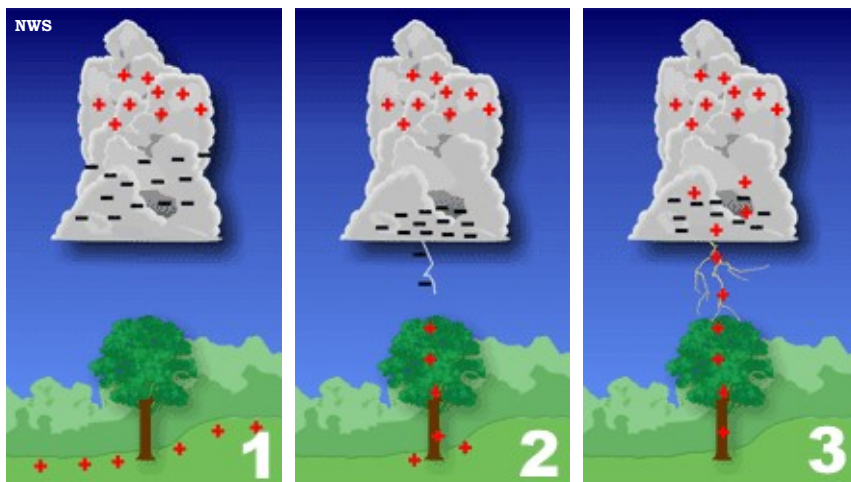
Thunderstorm Hazards

All thunderstorms produce lightning, which is the number one life threatening weather hazard in Colorado. In an average year, 3 people are killed by lightning and 13 are injured. Even those who are not killed by a lightning strike are often left to cope with permanent disabilities. Most people are struck by lightning while doing outdoor activities, such as working, hiking, or playing sports. Many people are unaware of how far lightning can strike from its parent thunderstorm. In fact, lightning can strike as far as 10 miles away from a storm.

Many deaths from lightning occur ahead of the storm because people wait until the last minute before taking cover.

It is not yet possible to forecast where and when lightning will strike. By learning about lightning and some basic safety rules, you can protect yourself from one of the most unpredictable forces of nature.

How is Lightning Created? Here is the Basic Idea...



1. Inside a thunderstorm, it is very turbulent. Rising water droplets are constantly colliding with falling ice, building a separation of charge within the cloud (positive charge at the top, negative charge at the bottom). Meanwhile, a pool of positive charge gathers on the ground.

2. Have you ever heard of the saying “opposites attract”? The positive charges on the ground rise up through taller objects towards the negative charges at the bottom of the cloud, and vice-versa.

3. When the positive charges connect with the negative charges, we see the electrical transfer as lightning!

Fun Fact: Lightning heats the air to as hot as 54,000 °F! The heated air expands explosively and creates a shockwave, the thunder, which spreads out through the air in all directions.

Lightning Safety

- If thunderstorms are in the forecast, plan indoor activities and know where you can take cover quickly if you have to be outdoors.
- Keep an eye on the sky! Look for darkening clouds and/or flashes of lightning. Listen for the sound of thunder. It is a warning to anyone outside that they are within striking distance of the storm and need to get to a safe place quickly.
- If you see or hear a thunderstorm, postpone activities promptly and do not wait for rain to start to seek shelter. Many people take shelter from the rain, but most people struck by lightning are not in the rain!
- Seek shelter in a sturdy, enclosed building but not in a carport, open garage, covered patio, or shed. Sturdy buildings are the safest place to be. Once inside, stay away from electrical appliances and plumbing fixtures.
- If no sturdy building is nearby, get inside a hard-topped, all-metal vehicle. Once in a vehicle, roll up the windows and avoid contact with any conducting paths leading to the outside of the vehicle (e.g. radio).
- If you are in the mountains and above tree line, you are the highest object around. Quickly get below tree line and get into a grove of small trees. Try not to be the second tallest object during a thunderstorm!
- If you are in an open area, crouch down and keep twice as far away from a tree as it is tall. Do not lie flat on the ground! When lightning strikes the surface, it induces currents in the ground that can be fatal up to 100 feet away. You have to minimize your height AND contact with the surface.
- If you are in water, get out! Water is a great conductor of electricity. Stay off the beach and out of small boats or canoes. If you are caught in a boat, crouch down in the center of the boat away from metal hardware.
- Avoid metal. Drop metal backpacks, stay away from clothes lines, fences, exposed sheds and electrically conductive elevated objects. Do not hold on to metal items such as golf clubs, fishing rods, tennis rackets or tools.

Wildland Fire

With lightning comes one of Larimer County's greatest hazards - Wildfire. For most of our history, Larimer County's largest wildfires usually encompassed two to three thousand acres. In the year 2000, the situation changed with the Bobcat Fire at 10,665 acres. Then in 2002 the Big Elk Fire burned more than 4,000 and threatened the Town of Estes Park. In 2004, the Picnic Rock Fire burned nearly 9,000 acres. In 2012, Larimer county experienced its most destructive fire season on record with the Woodland Heights Wildfire burning down 22 houses and two outbuildings near Estes Park, and the High Park Wildfire, which burned 87,250 acres and destroyed more than 259 homes. The High Park Wildfire was the most destructive fire in Colorado history, in terms of the number of

homes it burned, until it was surpassed by the Waldo Canyon Wildfire in El Paso County.

In the past few decades there has been a proliferation of homes in what is now called the Wildland/Urban Interface - cluster developments or individual homes located in the mountainous and forested areas of our county. When these developments and mountain homes are threatened, our firefighters must divert attention and resources to saving them and away from the effort to flank and stop the fire. In the pages following, under the title "Defensible Space," we will look at emergency preparedness for fire with a discussion of this problem and what landowners in the areas potentially threatened by fire can do to make their homes safer.

Evacuations

The Larimer County Sheriff's Office will use an emergency phone notification system in order to notify most residents of danger or an evacuation. Please consult the 9-1-1 section of this manual for important information you need to know before you get that call. We will allow as much time as possible, however circumstances may be such that your first call will be to tell you to get out now.

PRE-EVACUATION ("Get Ready"): This type of notification, if sent at all, is an advisement only that there is a problem with a fire or other hazard requiring you to pay attention to the situation and to consider your own plans for evacuation, if needed, including the evacuation of pets and animals.

EVACUATION ORDER ("GO!"): Evacuate right now and not 5 minutes from now! Your life and that of your family isn't worth getting a few more possessions packed. Information on recommended route and a destination, such as a designated shelter for those who need it, will also be included.

Tips for Evacuees - Before, During and After a Wildfire

The Office of Emergency Management's "Emergency Information Webpage," www.larimer.org/emergency, offers a wealth of information which all home owners are encour-

aged to review before each fire season. Click on the titles on the web page to read a full account, but some highlights are included here:

- The time to start thinking about your evacuation plans is not when you receive our emergency notification, but now - or immediately upon seeing or hearing about a fire within several miles of your location.
- When you leave your home, hang a towel on your front door, either from the knob or shut between the door and the jamb, to let fire fighters know it's unoccupied.
- If there is time, open pens or corral gates to let animals fend for themselves if you have not transported them out and cannot because of approaching fire.
- If there is time, take a home inventory, video-cam or photo records of possessions and financial documents with you along with your driver's license, credit cards, cash and checkbook.
- If there is time, bring medications upon which you depend. If you evacuate without them, you will be able to refill the prescriptions later or get emergency help in doing so after the evacuation.
- As soon as you are evacuated, call friends and family to let them know your situation and that you are okay.

Defensible Space

Whenever disasters strike, it is incumbent upon all of us to learn and prepare so that the next time our individual and collective preparations and responses will be more effective, and our losses, hopefully, less. As more people choose to build homes, operate businesses and recreate in areas where wildlands border more urban areas, the threat to private property from wildland fire increases. Creating “defensible” or “survivable” space around structures can make the difference between returning to an intact home or a smoldering pile of ashes if a wildfire moves through the area.

Neither wildland firefighting agencies nor local fire districts can adequately protect the growing number of structures in interface areas. **It is critical that private landowners take steps on their own to protect their property.** There are now many resources available to assist property owners, including a number of web-sites with excellent information on fire-resistant building materials, landscaping techniques and evacuation procedures.



The actual design and development of your defensible space depends on several factors: size and shape of buildings, materials used in their construction, 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 your local fire district.

Defensible Space and FireWise

Annual Checklist

- Trees and shrubs are properly thinned and pruned within the defensible space.
- Slash from the thinning is eliminated.
- 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 to a low height.
- An outdoor water supply is available, complete with a hose and nozzle that can reach all parts of the house.
- Fire extinguishers are checked and in working condition.
- The driveway is wide enough. The clearance of trees and branches is adequate for fire and emergency equipment. (Check with your local fire district/department)
- Road signs and your name and house number are posted and easily visible.
- There is an easily accessible tool storage area with rakes, hoes, axes and shovels for use in case of fire.



Photos: Courtesy of
Wildlandfire.com

Fire is capricious. It can find the weak link in your home’s fire protection scheme and gain the upper hand because of a small, overlooked or seemingly inconsequential factor. While you may not be able to accomplish all the recommended measures, each will increase your home’s, and possibly your family’s, safety. Start with the easiest and least expensive ac-

tions. Begin your work closest to your house and move outward. Keep working on the more difficult items until you have completed your entire project.

- You have practiced family fire drills and your fire evacuation plan.
- Your escape routes, meeting points and other details are known and understood by all family members.
- Attic, roof, eaves and foundation vents are screened and in good condition. Stilt foundations and decks are enclosed, screened or walled up.

Creating Wildfire Defensible Zones

(Excerpts Courtesy of the Colorado State Forest Service)

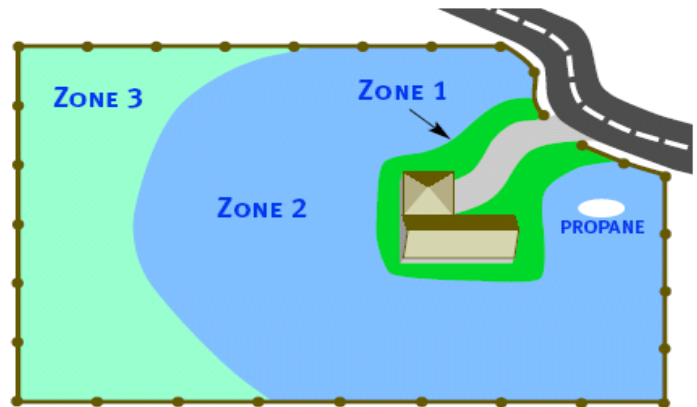
Two factors have emerged as the primary determinants of a home's ability to survive wildfire. These are the home's roofing material and the quality of the "defensible space" surrounding it.

Roofing Material

Use fire-resistive materials (Class C or better rating), not wood or shake shingles, to roof homes in or near forests and grasslands. When your roof needs significant repairs or replacement, do so with a fire resistant roofing material. Larimer County currently requires new construction to have Class A roofs only. Check with the county building department for further details at (970) 498-7700.

Defensible space is an area around a structure where fuels and vegetation are treated, cleared or reduced to slow the spread of wildfire towards the structure. It also reduces the chance of a structure fire moving from the building to

the surrounding forest. Defensible space provides room for firefighters to do their jobs. Your house is more likely to withstand a wildfire if grasses, brush, trees and other common forest fuels are managed to reduce a fire's intensity. Creating an effective defensible space involves developing a series of management zones in which different treatment techniques are used. Develop defensible space around each building on your property.



Zone 1 is the area of maximum modification and treatment. It consists of an area of 15 feet around the structure in which all flammable vegetation is removed. This 15 feet is measured from the outside edge of the home's eaves and any attached structures, such as decks.

Zone 2 is an area of fuel reduction. It is a transitional area between Zones 1 and 3. The size of Zone 2 depends on the slope of the ground where the structure is built. Within this zone, the continuity and arrangement of vegetation should be modified. Remove stressed, diseased, dead or dying trees and shrubs. Thin and prune the remaining larger trees and shrubs. Be sure to extend thinning along either side of your driveway all the way to your main access road. These actions help eliminate the continuous fuel surrounding a structure while enhancing safety and the aesthetics of the property.

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.



Photo: Courtesy of the Colorado State Forest Service

Home Fire Safety

Some Fire Facts:

- Cooking fires are the number one cause of home fires and home fire injuries. Unattended cooking was by far the leading contributing factor in these fires.
- Heating equipment fires are the second leading cause of home fires and accounted for 18% of all reported home fires in 2009. Failure to clean heating equipment, principally creosote from solid fueled heating equipment, primarily chimneys, was the leading contributing factor of these fires.
- Smoking-material fires are the number one cause of fatal home fires. The majority of fatal home fires take place at night when people are sleeping. Nearly one-half of fatalities related to smoking-material fires are age 65 or older. U.S. fire departments responded to an estimated 90,800 smoking-material fires in 2010

Home Safety Tips

- Have an escape plan and practice it. Sit down with your family and talk about what you should do in case of a fire. Make sure you have a set meeting place outside the home.
- Know two ways out. Discuss and diagram two ways out from every room, especially the bedrooms.
- Place your smoke detectors smartly. Have a working smoke detector outside each bedroom. If you can afford more, place them in your bedrooms as well. If you cannot afford a detector, go to any fire station and you will get one free.
- Check batteries in your smoke detectors often. A good way to remember is when you change your clocks in the Fall and Spring, change your smoke detector batteries.
- Clean your smoke detector often. Take off the cover and blow or vacuum it out on a regular basis.
- Always maintain a safe fireplace and chimney. Clean the fireplace regularly and have the chimney cleaned and inspected annually by a qualified technician.
- Check your wiring. Have a professional electrician check your house for faulty wiring, especially if you own an older home.
- Check your dryer hose. Lint can cause a fire. Clean the hose and dryer at least annually, especially behind the dryer.
- Watch out for portable heaters. Keep blankets, clothing, curtains and anything that could get hot and catch fire away from heaters.
- Practice safe cooking. Keep items away from the stove that could catch fire, such as towels, clothing and curtains. Wear tight-fitting sleeves when cooking. Loose sleeves, flowing robes, frilly aprons or even long hair might touch the burner and catch fire.
- Keep matches and lighters away from children. Check to see where your matches and lighters are located. Keep them where children cannot reach them. They tend to be curious about fire and may play with them.

Accessibility for Emergency Personnel
Make sure that responding emergency vehicles can easily identify your address from the road, day or night.

When a Fire Occurs...

- Never open doors which are hot to the touch. Feel the knob and the top of the door. If hot, use a secondary escape route.
- Do not waste time trying to save property! Your life isn't worth it. Leave immediately and call 9-1-1 from a cell phone or neighbor's house.
- Always use the stairs - never the elevators unless directed by the fire department.
- If you encounter smoke, try another escape route.
- If you must escape through smoke, crawl low on your hands and knees keeping your head no more than two feet above the floor where the air is cleanest.
- As with home fires, never re-enter a burning building.
- Take the safest pre-planned escape route.

If you must leave through smoke, crawl low under the smoke and try to keep your mouth covered. Smoke contains toxic gases which can disorient and overcome you very rapidly.

- Once out, stay out! Never enter a burning building. It just might be the last thing you ever do.



Fire Safety at your Office

- Read your building's evacuation plan. If there isn't one, ask why not.
- Count the doors or desks between your work area and the nearest exits. You may need to navigate with little or no light.
- Know at least two ways out of your work area and participate in regular fire drills.
- Know where the fire alarms are located and make sure you and your co-workers know how to use them.
- Never ignore a fire alarm. Fire can move so rapidly that every moment may count toward saving your life.
- Have an assigned outside meeting place where employees can meet and be accounted for.
- If you have a physical disability, make sure your employer includes your special needs in office evacuation plans.

Fire Hazard from Filling Portable Gas Cans in Pickup Trucks and Cars

In incidents reported to the National Institute for Occupational Safety and Health (NIOSH), fires spontaneously ignited when people attempted to fill portable gasoline containers in the backs of pickup trucks equipped with plastic bed liners or in cars with carpeted surfaces. Serious injuries have resulted. These fires result from the buildup of static electricity. The insulating effect of the bed liner or carpet prevents the static charge generated by gasoline flowing into the container or other sources from grounding. The discharge of this buildup to the grounded gasoline dispenser nozzle may cause a spark and ignite the gasoline. Safe Practice: Always place gas can on ground before refueling. Touch can with gas dispenser nozzle before removing can lid. Keep gas dispenser nozzle in contact with can inlet when filling.

Hail and Strong Winds

Of the estimated 100,000 thunderstorms that occur each year in the U.S., about 10% are classified as severe. A thunderstorm is **severe** if it produces one or more of the following:



Severe Thunderstorm Watch

Issued when: conditions are favorable for the development of severe thunderstorms in and close to the watch box area.

If you are in/near the watch, you should: review your emergency plan with your family and be prepared to seek shelter if threatening weather approaches. Stay tuned to your local news broadcasts, radio, or weather radio for the latest weather information and warnings. If strong winds are a threat, move loose patio furniture and other outdoor objects indoors. If hail is a threat, protecting your vehicle would be a good idea.

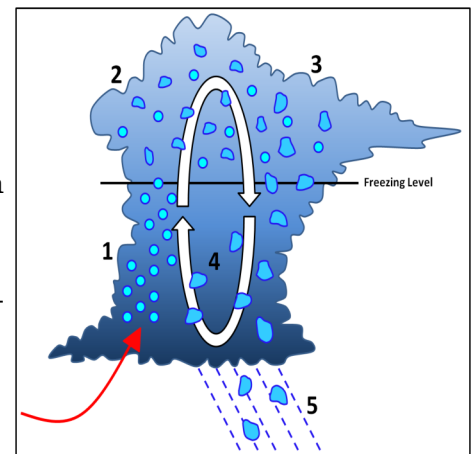
Severe Thunderstorm Warning

Issued when: a severe thunderstorm has been indicated by radar or reported by trained weather spotters.

If you are in/near the warning, you should: seek safe shelter immediately. Severe thunderstorm warnings can be issued without a Severe Thunderstorm Watch already in effect.

How Does Hail Form?

1. Water droplets are carried up high in the atmosphere by the updraft of a thunderstorm.
2. In stronger updrafts, these water droplets may encounter temperatures that are well below the freezing level (the height where the temperature is 32 °F), causing the water droplets to freeze into ice.
3. These small hailstones grow as they collide with other water droplets that freeze onto its surface. As the hailstones grow larger, they start to fall out of the storm in the downdraft.
4. However, these hailstones can get caught back in the updraft, where they are carried back up into the atmosphere. This cycle can happen many times over. With each trip the hailstones take above and below the freezing level, another layer of ice will be added.
5. The hailstones continue to accumulate layers of ice until the updraft is no longer able to suspend them in air. At that point, the hailstones are heavy enough to fall out of the downdraft as large hailstones!



Cool Air After the Storm - Where Does It Come From?

The cool winds that come out a thunderstorm originate within the downdraft. Remember, as warm, moist air rises, it cools and condenses to form water droplets. These water droplets collide and combine to form larger rain drops and even hailstones, which fall out in the downdraft. As the rain and hail fall out of the storm, they drag with them the much cooler air found higher up in the cloud (see Fig. 3). Also, some of the falling rain drops will evaporate as they fall. When the rain drops evaporate, heat energy is taken away from the surrounding air, which cools the air around the rain. This dense, “rain-cooled” air quickly sinks towards the ground and spreads out along the ground. Often times, the leading edge of this cool air forms what is called a “gust front”. Behind the gust front,

there is a sharp decrease in temperature and an increase in wind speed.



Fig. 3: A severe thunderstorm in southern Kansas. Yellow arrows show the direction of rain-cooled air.

Do You Remember? June 2014 Fort Collins Hailstorm

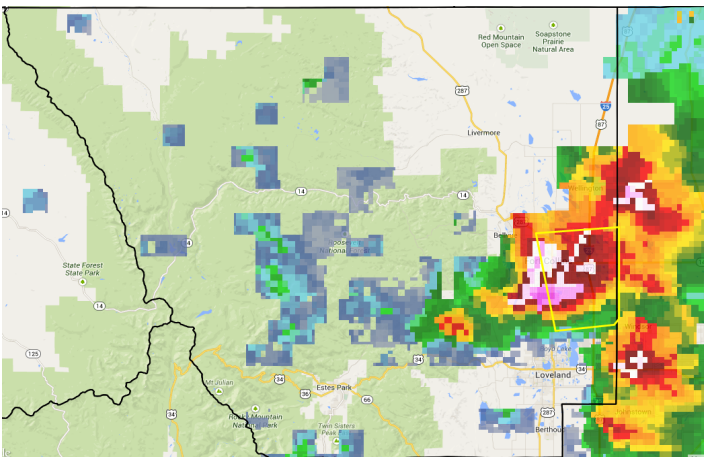


Fig. 4: Radar image showing the storm cell over Fort Collins. The severe thunderstorm warning is outlined in yellow.

On the night of June 24th, a severe thunderstorm developed near Red Feather Lakes and moved southeast over Fort Collins (see Fig. 4). A severe thunderstorm warning was issued for parts of southeastern Larimer County, as the strong storm brought ping pong sized hail, gusty winds, and continuous cloud to ground lightning (see Fig. 5). Heavy rain also came with the storm, where as much as 2 inches fell within a 30 minute period over some areas.



Fig. 5: Several measurements of hailstones that fell near the intersection of Harmony and Timberline in Fort Collins.



Fun fact: To date, the largest and heaviest hailstone ever recorded in the U.S. fell in Vivian, South Dakota. It measured 8.0 inches in diameter and weighed nearly 2 pounds!

Tornadoes in Colorado



Chris Collura

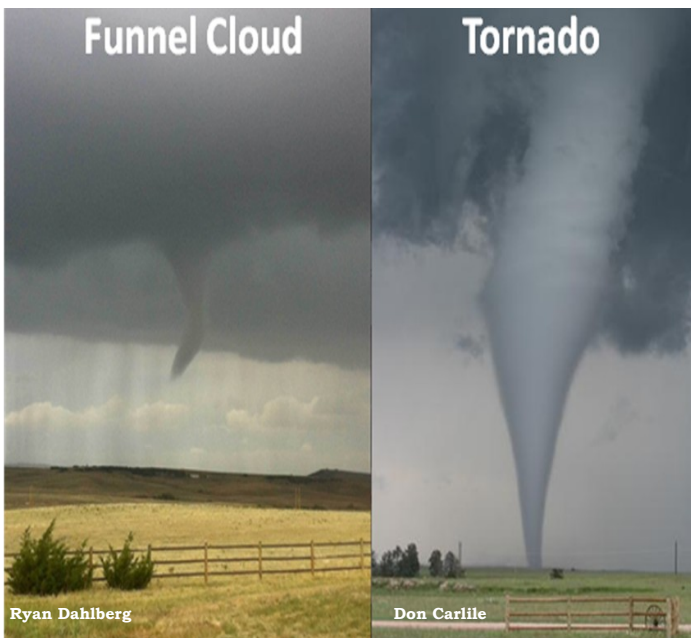
Fig. 6: A supercell thunderstorm crossing from Weld County into Morgan County, Colorado.

An average of about 60 tornadoes occur in Colorado each year, with a peak season typically between mid-May and mid-July. Most of these tornadoes develop east of the Continental Divide and are weak and short-lived. Although Larimer County does not often experience tornadoes, it is not unacquainted with such events either. On June 18th, 1987, a tornado touched down at Colorado State University's Pingree Park. On the ground for about a mile, it uprooted nearly 1,500 trees and destroyed a ropes course. Most, but not all, tornadoes develop from supercell thunderstorms.

A **supercell thunderstorm** is an organized thunderstorm with a rotating updraft (see Fig. 6). Supercells often persist for several hours, making them some of the most dangerous type of storms because they often produce destructive tornadoes, large hail, strong winds, and flash flooding during their long lifecycles.

What is a Tornado?

A **tornado** is a rapidly rotating column of air descending from the base of a severe thunderstorm and **in contact with the ground**. Tornadoes nearly always start as a funnel cloud, but the circulation must reach the ground in order to be classified as a tornado (see Fig. 7).



Funnel Cloud

Tornado

Ryan Dahlberg

Don Carlile

Fig. 7: Left, a funnel cloud east of Larkspur, Colorado. Right, a tornado 12 miles south of Elizabeth, Colorado.

Tornado Watch

Issued when: conditions are favorable for the development of tornadoes in and close to the watch box area.

If you are in/near the watch, you should: review your tornado safety rules and be prepared to seek shelter if threatening weather approaches. Stay tune to your local news, radio, or weather radio for the latest weather information and warnings.

Tornado Warning

Issued when: when a tornado is indicated by radar, or has been sighted by a trained weather spotter.

If you are in/near the warning, you should: seek safe shelter immediately. Go to the lowest level of your home (e.g. basement) and stay away from all windows and outside walls. If a basement is not an option, go to an interior room, closet, or bathroom and try to put as many walls in between you and the tornado as possible. Protect your head from flying debris by wearing a helmet or cover yourself with a mattress. Most people killed by tornadoes are as a result of head trauma from flying debris! Tornado warnings can be issued without a Tornado Watch already in effect.

How Does a Tornado Form? General Idea...

Most tornadoes come from supercell thunderstorms because of their persistent rotating updraft. This rotation develops when the atmosphere has strong wind shear. **Wind shear** is simply a change in wind speed or direction with height. For example, say there are weak winds from the west near the ground (10 mph), and really strong winds from the west higher up in the atmosphere (50 mph). This type of wind shear will create a rotating, horizontal column of air (see Fig. 8A)

The updraft of a thunderstorm may lift this horizontally-rotating column of air into the vertical (see Fig. 8B), which causes the entire storm to rotate. This storm-scale rotation is known as a

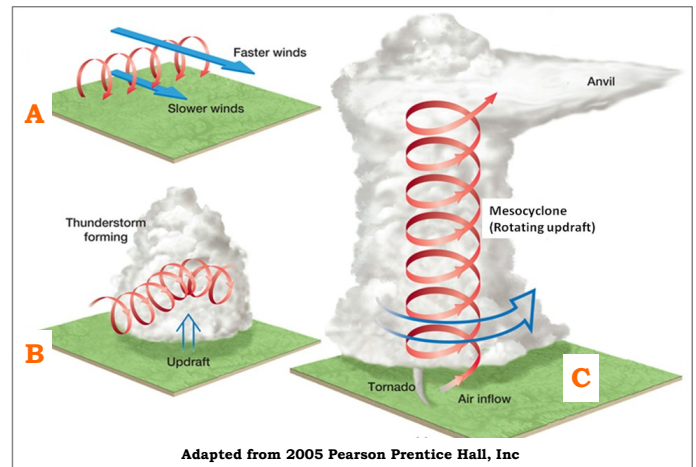


Fig. 8: An illustration of how wind shear (solid blue arrows) contributes to storm rotation (red spirals).

Trained weather spotters may observe this rotation as a corkscrew appearance to the storm's updraft with curved cloud bands (see picture to the left). The circulation associated with a mesocyclone covers an area much larger than the tornado that may develop within it (that is, a mesocyclone is not a tornado, but may be a precursor to it). Often times, a localized cloud lowering occurs beneath the mesocyclone called a "wall cloud". A funnel cloud may descend from the wall cloud, and becomes a tornado when it makes contact with the ground.

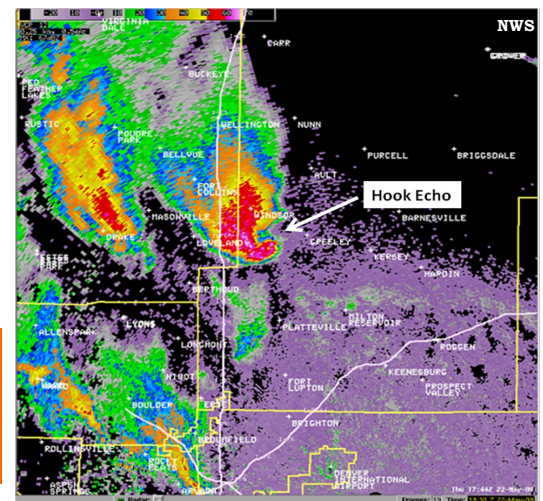


Fun Fact:
Many of the tornadoes that form along the Front Range come from non-supercell thunderstorms, often called "landspouts". See this picture from the Parker/Castle Rock area!

National Weather Service Radar

National Weather Service forecasters use radar to monitor the type, movement, and intensity of precipitation, especially during times of severe weather. If the radar reflectivity pattern shows a "hook echo", this is a good sign that a mesocyclone is present and favorable conditions exist for tornado development. For example, check out the radar image to the right of the supercell responsible for producing the Windsor, CO tornado in 2008.

Fun Fact: The highest wind speed ever recorded from a tornado was the one that hit the suburbs of Oklahoma City on May 3, 1999 - 318 mph!



Tornado Safety



AT HOME

An EF2 tornado causes significant damage to a home in Elbert County, Colorado.



IN MOBILE HOME/RV

The same Elbert County EF2 tornado threw a pickup truck into an RV.

Did You Know? Tornado strength is rated by the damage it causes. The Enhanced-Fujita scale is a set of wind estimates based on this damage and assigns a rating to the tornado that is surveyed.

EF 0	65-85 mph
EF 1	86-110 mph
EF 2	111-135 mph
EF 3	136-165 mph
EF 4	166-200 mph
EF 5	Over 200 mph

- Seek shelter in a sturdy building with a basement or underground storm shelter. If these options are not available, move to a hallway or a small interior room on the lowest floor, such as a bathroom or closet and stay away from windows.
- Cover yourself! Wear a helmet to protect your head. Use blankets or get under a sturdy piece of furniture such as a workbench to protect yourself from flying debris (this

is the greatest risk of injury from tornadoes!).

- If you live in a mobile home, have a plan of where to seek shelter in the event of severe weather.
- If severe weather is imminent, abandon your mobile home in advance of the storm and seek shelter in a nearby sturdy building or storm shelter. Mobile homes offer little protection from tornadoes!



DO NOT TAKE SHELTER BENEATH AN OVERPASS OR BRIDGE! These structures act like wind tunnels, creating faster wind speeds!

- If you are in open country and see a tornado, drive away from the tornado and its path if time permits.
- If the tornado is fast approaching and you don't have time to drive away, you have one of two options:
 1. Safest option - Abandon your vehicle and seek shelter in the lowest level of a sturdy building.
 2. Abandon your vehicle and lie in a ditch or culvert away from your vehicle and protect your head. However, be aware that tornadic storms often produce heavy rainfall, which can flood ditches and culverts. Make sure you know what you are getting into and how easily you can get out of these structures if they flood.
- Do not take shelter under an overpass/bridge. By doing so, you are: 1. Blocking the roadway with your vehicle. When the tornado comes by and turns all the parked vehicles beneath the overpass into mangled balls of metal, how will emergency vehicles get through? 2. By climbing to higher ground underneath the overpass/bridge, you will place yourself at greater risk from the tornado and flying debris.

Tornado Myths vs. Facts

Myth: All tornadoes are visible and look like a classic funnel.

Fact: Many tornadoes are obscured by heavy rain and hail (rain-wrapped) and may not be visible until they are already upon you! Also, the visible part of the funnel may not extend all the way to the ground, while the swirling winds do. Moreover, the violent winds of a tornado may extend well outside the visible funnel. Finally, some tornadoes are tall and skinny, while others are short and wide. Sometimes they are so large that they are mistaken for just really low clouds!

Myth: Bigger tornadoes are stronger and more destructive than smaller tornadoes.

Fact: The size and shape of a tornado does not say anything about its strength. There is no way to know how strong a tornado is just by looking at it.

Myth: During a tornado, you should open all the windows in your home to equalize the pressure.

Fact: Opening the windows of your home to decrease the air pressure does nothing to de-

crease the damage. Instead, it lets the wind in, making it easier to blow your house apart!

Myth: Tornadoes do not hit big cities

Fact: Tornadoes have hit several large cities, such as Dallas, Oklahoma City, Miami, and Salt Lake City. An urban tornado will have a lot more debris than a rural one.

Myth: The southwest corner of the basement is the safest place to be in during a tornado.

Fact: The worst place to be is on the side from which the tornado is approaching, which is commonly the south or southwest side.

Myth: Tornadoes do not develop over mountains.

Fact: Tornadoes can and have occurred in the mountains. On July 7th 2004, a hiker observed and photographed a tornado at 12,000 feet in Sequoia National Park, California, making it the highest ever observed in the U.S. On July 28th 2014, a tornado touched down near 11,900 feet in Mt. Evans, Colorado, making it the 2nd highest elevation a tornado was observed.

Do You Remember? May 22, 2008 Windsor Tornado



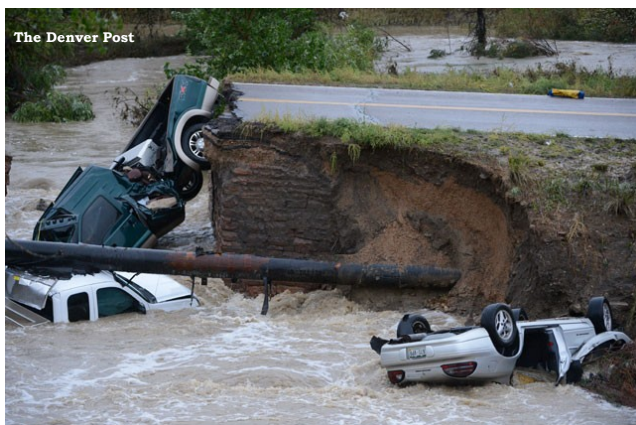
Myth: Strong tornadoes do not happen in northern Colorado.

Fact: While strong tornadoes are not common in northern Colorado, they can happen. An example is the EF3 tornado that caused extensive damage to areas in and near Windsor, Colorado on May 22, 2008 (see picture to the left). It is the costliest tornado to date in northern Colorado history, causing an estimated \$193.5 million in damage along a 39 mile track. There was one fatality, 78 injuries, and at least 850 damaged homes (see picture at the bottom left).



There were several characteristics to this tornado event that made it unusual for the region, including the time of day when it formed, its intensity, its long track, and its direction of motion. The storm developed in the late morning, in contrast to the late afternoon when most tornadoes strike. It was also strong and long-lived, while most tornadoes this close to the Front Range are typically weak and short-lived. Although we often observe tornadoes to have an eastward motion to their track, this tornado moved very quickly toward the north-northwest.

Flash Flooding



Flash floods are the number one thunderstorm killer of all thunderstorm hazards, and nearly half of all flash flood fatalities are vehicle-related. Most flash floods are caused by slow-moving thunderstorms, a series of thunderstorms moving repeatedly over the same area, or heavy rainfall from tropical storm systems. There are some cases where flash floods also occur from dam failures, ice jams, or irrigation ditch breaches. Also, it takes much less rainfall to create flash flood conditions in the vicinity of an area burned by a forest fire.

Flash floods are dangerous, **sudden rises in water levels** along streams, rivers, and creeks above a predetermined flood level. Flash floods can also be rapid flows of high water moving into a normally dry area. Ongoing flooding can intensify to flash flooding in cases where intense rainfall leads to a rapid surge of rising flood waters. Depending on the intensity and duration of the rainfall, the landscape, and soil conditions, flash floods can develop within minutes or hours. They can also move with surprising speed, offering little or no warning of approach. Even without rivers going over their banks, heavy rain can trigger mud and rock slides. Some rain induced rock slides occur days after heavy rain has lubricated internal surfaces of rock formations. Such conditions create hazardous situations for driving in mountain canyons when rocks or debris are washed onto the road surface. These types of slides have closed both the Poudre and Big Thompson canyons for days at a time.

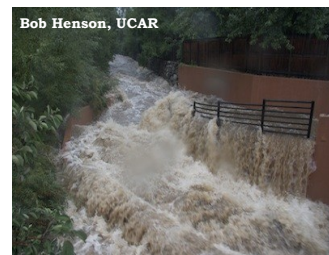


Many people underestimate the force and power of water. It takes 6 inches of fast-moving flood water to knock you off your feet. Flash floods can roll big boulders, tear out trees, destroy bridges and buildings, and even scour out new channels. Whether you are driving or walking, if you come to a flooded road, do not drive or walk through it!

Flash Flood Watch

Issued when: conditions are favorable for flash flooding in and close to the watch area.

If you are in/near the watch, you should: review your emergency plan with your family and be prepared to take action if threatening weather approaches. Stay tuned to your local news or weather radio for current and expected weather conditions.



Flash Flood Warning

Issued when: flash flooding is in progress or highly likely.

If you are in/near the warning, you should: seek higher ground immediately!

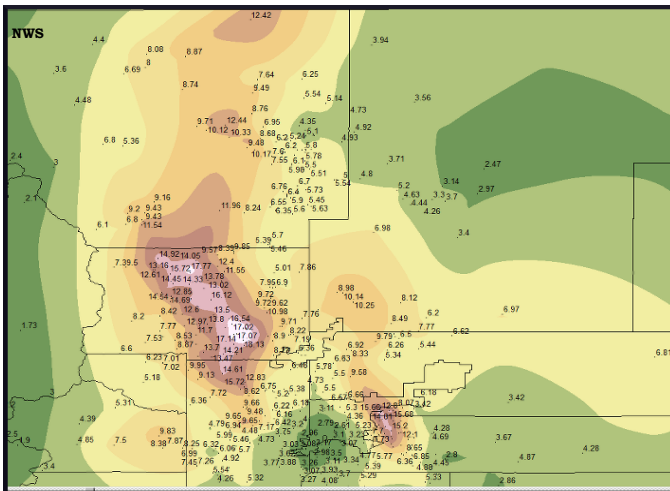


Flash Flood Safety

- Do not depend on official warnings reaching you before a problem arises. Keep alert to signs of heavy rain, both in your location and far upstream. Know where higher ground is and how to get there.
- If you suspect that flooding is imminent, or if it is occurring, get to higher ground quickly. Get out of areas subject to flooding, such as low spots and canyons.
- Avoid flooded and rapid flow areas! Do not try to cross flowing streams.
- NEVER DRIVE THROUGH FLOODED ROADWAYS! It takes only 2 feet of running water to move a vehicle (even an SUV!). Even if you see parts of the road on the opposite side of a flooded area, you do not know the depth of the water or the condition of the road under the water.
- If your vehicle stalls, abandon your car and seek higher ground. Rapidly rising water may engulf your vehicle and sweep you/passengers downstream.
- Do not camp or park your vehicle near streams, especially during threatening weather conditions.
- Be very cautious at night during high water conditions. It is more difficult to recognize flood dangers and the darkness can disorient you from the safest route when trying to seek safety.



Do You Remember? September 2013 Front Range Flood



During mid-September 2013, portions of northern Colorado experienced one of the most extreme rainfall events in its history that led to destructive flooding and loss of life. The combination of a slow-moving weather system with a stalled cold front, deep moisture from the Pacific Ocean and Gulf of Mexico, upslope flow along the Front Range, and already saturated soils resulted in several episodes of torrential rain and flash flooding across the area. The total rainfall amounts ranged from 4 inches to over 15 inches. Boulder was one of the hardest hit spots along the Front Range, with a storm total of 17.15 inches! There were a total of 8 fatalities associated with this widespread flood event.

Winter Storms and Extreme Cold

City of Fort Collins



Across Larimer County, snow is most common between November and April, but we have seen snow fall as early as September and as late as June. Typically, March and April are Colorado's snowiest months. The Colorado winter snow is an important resource to many businesses within the state, including agriculture and tourism, as well as for filling up our reservoirs. The snowpack that builds from each winter's snow is a major source of freshwater for Front Range communities. However, winter storms can bring us heavy snow, freezing rain or sleet, ice, bitterly cold temperatures and wind, low visibilities, and slick roads. These weather conditions

lead to dangerous travel situations, avalanches and low wind chill temperatures. If you must travel, stay informed about the current weather, road conditions, and latest weather forecasts before departing.

Is Your Vehicle Ready for Winter Travels?



Winter Weather Advisory

Issued when: a combination of winter weather is expected (snow, freezing rain, sleet, etc.) that present a hazard, but do not meet warning criteria.

Winter Storm Watch

Issued when: there is a potential for heavy snow or significant ice accumulations.

If you are in/near the warning, you should: review your emergency plan with your family and be prepared to take action if threatening weather approaches. Stay tuned to your local news or weather radio for current and expected weather conditions.

Winter Storm Warning

Issued when: a winter storm is producing or is forecast to produce heavy snow and/or significant accumulations.

If you are in/near the warning, you should: remain indoors if possible and continue to monitor the weather conditions.

Stay indoors during winter storms and extreme cold. If you have to go outside, avoid over exertion as cold weather puts an extra strain on the heart. Pushing yourself to shovel snow or push your car may increase your risk of heart attack or stroke.

Indoor Winter Safety

Winter weather can keep you indoors, and lead to power outages because of heavy snow and ice bringing down power lines. Having an emergency preparedness kit at home in the case of a winter storm will definitely be handy, especially if the power goes out in your home. Check out the post-it note to see what items should be in your winter emergency preparedness kit!



- If your furnace does not work, only use alternative heat sources such as kerosene heaters, large camp stoves, or camp grills with proper ventilation. Carbon monoxide poisoning is a deadly killer.
- Close off any unoccupied rooms and stuff towels under the doors to prevent drafts into the room.
- Dress in layers of warm, light-weight clothing.
- If you have elderly neighbors, or know people with disabilities that may be at risk, check on them regularly.

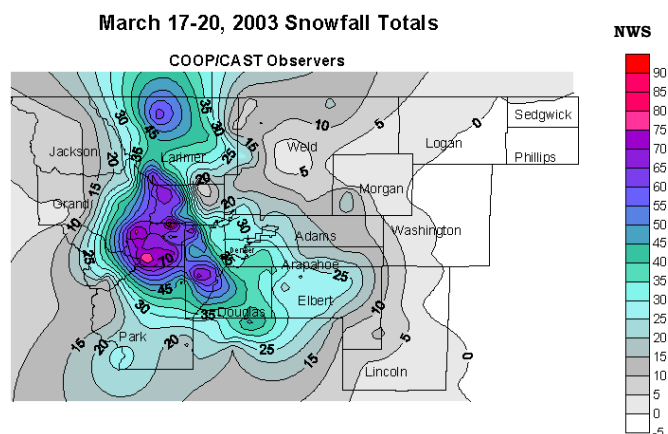
Outdoor Winter Safety - Keeping Warm is Important!



- If you are caught outside in a winter storm, the first thing to do is to find shelter and try to stay dry. If you have to build a simple wind break, do so quickly.
- Cover all exposed parts of your body, especially your head. A lot of heat can escape from an uncovered head!
- Build a fire to attract attention and to provide heat. Place rocks around the rim to absorb and reflect heat.
- If you are traveling alone, make sure you tell someone of your travel route and stick to it.
- Have a fully charged cell phone (with a charger or extra batteries) ready to go.
- Travel by daylight, use major highways, and keep your radio turned on for the latest weather and travel reports.
- If you are driving at night, be aware that roads may be covered in a thin layer of ice called black ice. Black ice can cause you to rapidly lose control of your vehicle and is most common during the nighttime. Please drive with caution and reduce your speed.
- If you get stranded with your vehicle during a winter storm, stay in your vehicle. Run the motor for 10 minutes every hour to keep warm, but keep the windows open a little to prevent the buildup of carbon dioxide.
- Be sure the tailpipe is clear of snow while the engine is on.
- Do not hydrate by eating snow as it will lower your body temperature. Melt the snow if you can before drinking it.
- Keep the car visible to rescuers by tying brightly colored cloths to the side view mirrors/door handles/antennas.
- Turn on the interior light at night when the engine is on.
- Be sure to exercise from time to time by vigorously moving your arms, legs, fingers, and toes to keep your blood circulating and increase body warmth.

Do You Remember? March 17-20, 2003 Snowstorm

On March 17, 2003, a slow-moving weather system from the Pacific Ocean moved into the Four Corners region of the U.S. Associated with this storm system were strong winds from the east that resulted in strong upslope flow across the Front Range. Also, there was a plume of moist air coming into Colorado from the Gulf of Mexico. A slow-moving system, moisture, and upslope are the ingredients needed to produce a major snowstorm in Colorado. From this particular snow storm, about 3 feet of heavy, wet snow fell in Denver, and up to 7 feet of snow fell across the foothills. The winter snowstorm caused an estimated \$93 million in property damage alone, making it the costliest snowstorm in Colorado history. Across Larimer County, nearly 30 inches of heavy snow fell over a three day period. This damaged many homes and businesses, and closed CSU and other local area schools for days.



Emergency Preparedness for the Whole Family



Natural and human-caused emergencies, such as floods and acts of terrorism, can present a real challenge to individuals and families. These challenges can be even more overwhelming for the elderly, people with disabilities, and other populations that may have access and/or functional needs.

Preparing an emergency plan in advance can help protect yourself and your family when disaster strikes. Creating a personal support network and completing a personal assessment are the first steps in your preparedness planning. You will also need to get informed of the services in your community and make a plan that considers your needs. It is important to discuss these items with your family, friends, and personal care attendants.

STEP 1: Create a Personal Support Network

These members can help you identify and get the resources you need to cope with disasters effectively:

- Organize a network that includes your home, school, work, and other places that you spend much time in.
- The members of your network are not limited to family. They can be friends, neighbors, coworkers or other individuals that you trust and who know your capabilities and needs.
- Have at least 3 people in your network for each place you spend much of your time in.



Emergency Preparedness for the Whole Family (cont...)

STEP 2: Complete a Personal Assessment

What will you be able to do for yourself? What help may you need before, during, and after a disaster? These are the questions you need to answer in your personal assessment:

- Make a list of your personal needs and the resources to meet those needs in a disaster environment. Think about these items, your capabilities, and the assistance you will need:
 - * Calling for help
 - * Transportation
 - * Running errands
 - * Service animals and pets
 - * Adaptive feeding utensils
 - * Personal care and equipment
 - * Building evacuations and exits
 - * Mobility aids and ramp access
 - * Equipment that depends on electricity



STEP 3: Get Informed

Contact your local emergency management office or American Red Cross to get the information you will need to create a plan. Be sure to consider the following questions:

- What hazards threaten your community, and what are your risks from those hazards?
- What response plans, evacuation plans, and emergency shelters exist in your community?
- How will local authorities provide you information before, during, and after a disaster?
- Are there special assistance programs available in the event of an emergency in your community?

STEP 4: Make A Plan

It is important for you to create a back-up because a disaster can disrupt your primary emergency plan.

- Share the information you gathered about community hazards and emergency plans with your family, personal care attendants, and building manager.
- Ask an out-of-town friend or relative to be your contact, and make sure your family knows their contact information. After a disaster, have your family members call this person and tell them where they are. It is easier to make a long distance call than a local call from a disaster area where phone lines are busy.
- Designate a location outside your home where all family members/personal care attendants can meet in case of an emergency. Choose a location outside your neighborhood in case you cannot return home.
- Complete a communication plan and share it with your family members. Check out www.ready.gov and www.redcross.org for handy forms to use. Make sure everyone in the family knows the best escape routes out of your home and where the safe places are in your home for each type of disaster.
- If you or someone in your home uses a wheelchair, determine what the alternative shelters will be and how you will get there. For evacuations, make sure escape routes are wheelchair accessible.
- Practice your emergency drills and be sure to include all family and personal care attendants in the drill.
- Prepare a list of family, friends, boarding facilities, veterinarians, and pet-friendly hotels that could shelter your service pets in an emergency.
- For more information on preparing for disasters for people with disabilities and other special needs, please visit www.fema.gov.



Pets and Livestock Preparedness

If you own pets, service animals or livestock, it is very important to include them in your emergency preparedness. Our pets and animals are members of the family and they depend on us for their safety and wellbeing. If an emergency were to happen, it is important for you and your family, including your pets and animals, to be prepared. There are many things to consider before, during, and after an emergency to keep your animals safe.

Know a Safe Place to Take Your Pets in an Emergency

- Find out what places in your area can take care of your pets if you were to be evacuated.
- Contact your local animal shelter, humane society, veterinarian or emergency management office to get information on caring for pets during an emergency.
- Contact hotels/motels outside of your area to check their policies on accepting pets and their restrictions on the number, size, and species. If they have a “no pet” policy, ask if it can be waived in an emergency situation.
- If you and your pets plan to use a hotel as your evacuation location during an emergency, make sure you call ahead for reservations as soon as you know that you may need to evacuate.
- Ask friends, relatives, or others outside the emergency area if they would be willing to watch your pets if you were to have to evacuate your home.
- After you have contacted hotels, motels, shelters, your veterinarian, and the other suggested places, make a list of all the “pet friendly” facilities, including their 24-hour phone numbers.
- After an emergency, some people may not be able to return to their homes right away. Being out of your home for an extended period of time may mean that you need to board your pet. You should find out where the boarding facilities are in your area and be sure to research some outside your local area too in case the local facilities are closed due to the emergency or other reasons.
- When animals become lost during a disaster, they often end up at a local shelter. Keep handy the locations and phone numbers of the shelters in your area.

Most American Red Cross shelters cannot accept pets during an evacuation because of health and safety concerns. Service animals that assist people with disabilities are allowed in the shelters.

Pet-Friendly Accommodations

- If you find that you are having trouble finding “pet-friendly” accommodations, check out the websites on the computer screen to assist you with your search!

Larimer Humane Society can be reached at www.larimerhumane.org or 970-226-3647



Emergency Preparedness Precautions for Pets/Livestock

- Emergencies can happen with very little warning, which is why it is important that you and your pets and livestock are prepared in case of emergency.
- Include your pets in your family evacuation drills in the hopes that it will help them become comfortable with entering and traveling in their carriers calmly.
- You can train your pet to become comfortable with their carrier by placing their favorite toy or blanket inside the carrier. Make sure that you have a pet carrier that allows your pet to stand up and turn around inside.
- Make sure that your pets are wearing collars that have securely fastened and up-to-date identification tags on them. Other forms of identification to consider using are a dog license or a micro chip.
- Your livestock should also have a few different forms of identification. Consider having your livestock micro chipped or freeze marked now.
- If an emergency happens and you feel your animals do not have proper forms of identification, try writing your name and phone number on their hooves. Use a livestock crayon to write your name, phone number and address on them. Braiding into the horse's mane an ID tag with your name, address, and phone number written on it is one more method. Talk to your veterinarian about other ways to have your animals marked for identification purposes.
- Have an evacuation plan for your animals, which should include a list of resources such as trucks, trailers, pasture and/or feed. The plan should also list a person or persons (along with their phone numbers) who will be able to unlock gates and doors and make it easy for emergency workers to reach your animals.

Assemble a Pet Emergency Preparedness Kit!

Keep your pet's essential supplies in sturdy containers that can be easily accessed and carried (e.g. a duffle bag). You should give this kit to whoever you are leaving your pets with during the evacuation.

Your pet emergency preparedness kit should include:

- * Pet first aid kit
- * Pet carriers
- * Food, water, and treats for at least three days
- * Dishes, bowls, a spoon
- * Large capacity self-feeder and water dispenser
- * Cat litter, pan, poop scooper
- * Paper towels, plastic trash bags and bottle of spray disinfectant
- * Alcohol-based hand sanitizer
- * List of animal emergency contacts (animal control, animal shelter, veterinarians)
- * Manual can opener
- * Information on feeding schedules, medical conditions, behavior problems
- * Pet bed and favorite toys
- * Photos of you with your pet (in case your pet gets lost)
- * Current sticker on a house window with pet list for fire/emergency/rescue personnel
- * Leashes or harnesses, and a collar with tags and/or microchip information
- * Grooming supplies
- * Cloth or thermal blanket
- * Registration and/or adoption papers, and veterinary records (including a note that allows rescuers to give your pet medical treatment if needed)
- * Medications and medical records with copies of up-to-date vaccination records



Assemble a Livestock Emergency Preparedness Kit!

Here is a list of things you should have available for your livestock and/or have in their emergency kits:

- Halters and lead straps/ropes
- Medical records and a list of necessary medicines
- At least three days of hay and/or other feed, water
- Livestock first aid kit
- Hoof care and grooming tools
- Water and feed buckets
- Registration papers and brand inspection cards
- Medications
- Fly spray
- Horse blanket
- Tack (in order to exercise your horse)
- Muck bucket, rake and shovel
- List of animal emergency contacts (animal control, animal shelter, veterinarians)



Protect Your Pet During an Emergency

You should NEVER leave your pets behind if you evacuate, but if you have absolutely no alternative but to leave your pets at home during an evacuation, there are some things you should know in order to prepare them and keep them safe. Remember, leaving your pet at home can place your animal in great danger!

- Animals have instincts about severe weather changes and will often isolate themselves if they are afraid. During these changes, to prevent your pets from running away, you should bring them inside immediately.
- Leave a two or three day supply of dry food in a sturdy container that the pet cannot overturn. Water should also be left in a sturdy, no spill container.
- If possible, open a faucet slightly and let water drip into a big container. Large dogs may be able to obtain water from a partially filled bathtub.
- If your dog wears a chain link collar, have a leather or nylon collar available for when you have to leave your dog alone for several days. Chain link collars can get caught on items around the house which can be dangerous and even deadly for your dog.

The “Buddy” Plan

- Create a “buddy plan” with nearby relatives, friends, or neighbors to help you with evacuating your animals if you are not home when the evacuation order is given.
- Include written permission for transport and care of your animals, and access to animal ID information and your animal emergency kit.
- If animals are stranded at your home during an emergency, contact local emergency management, law enforcement, or a community animal agency to arrange for evacuation assistance at your house.
- You should post somewhere in your barn area the number and types of animals you own, the location of your emergency kit, and your emergency contact information. This is important to do so that if someone has to evacuate your livestock, they will know how to help your animals and how to contact you.

Help Emergency Workers/Rescuers Help Your Pets

If you have no alternative but to leave your pets at your home during an emergency evacuation, there are a number of things you should do to help emergency workers, rescuers, and your pets:

- The ASPCA recommends that if you have to evacuate without taking your pets with you, leave a sign or rescue sticker high up on either a window or a glass door, somewhere that rescuers can easily see it.
- On this sign you should have written the number and type of pets that are inside your home.
- If your pets are located in one specific area of the house, you should have that location written on the sign as well.
- Remember to leave plenty of food and water with feeding instructions for the rescue workers.
- Leave the rescuers a note with a phone number where you can be reached, and the name and phone number of your veterinarian.
- If you evacuate with your pets it is still a good idea to make a sign or write on the rescue sticker that everyone is out of the house including pets. By doing this rescue workers won't waste time looking for anyone in your house.



Helping Pets Recover After an Emergency

Going through an emergency can be a very traumatic event for pets. Their behavior may change drastically after an emergency. Even normally quiet and friendly pets may become aggressive or defensive. You can help keep your pets safe after an emergency and return them to a life of normalcy.

- In the first few weeks after an emergency, leash your pets when they go outside and always maintain close contact with them.
- It is important to watch your animals closely and keep them under your direct control because fences and gates may have been damaged or destroyed.
- Familiar scents and landmarks may be altered and your pet may become confused and lost. Pets may become disoriented, particularly if an emergency has affected scent markers that normally allow them to find their home.
- It may be awhile before your pets are okay with being separated from you or being left home alone so take your pets with you when you can.
- When you let your pet go or play outside, be aware of other hazards such as downed power lines. Be aware of hazards at nose, paw or hoof level, particularly debris, spilled chemicals, and fertilizers and other substances that might not seem to be dangerous to humans.

Protect Yourself Against Criminals—In Your Home

- You cannot make a residence absolutely burglar proof, but you can make entry extremely difficult.
- Lock your doors during the day, even if you are home or only leave for a few minutes.
- Never open the door automatically after a knock. Use a peephole or ask for identification.
- If a stranger asks to use the phone, do not permit entry. Offer to call for emergency assistance.
- If a window or door has been forced or broken while you were gone, DO NOT ENTER or call out! Use a neighbor's phone to immediately call 9-1-1 and wait until help arrives.
- Always close and lock garage doors before you drive away.
- When you return home, do not leave your house key in your door, even for a minute, after you open it.
- Never put your keys and purse down just inside the open door, while carrying packages inside.
- Make sure every external door has a sturdy, well installed deadbolt lock with a minimum of 1 1/2" bolt.
- Doors should be of good quality with the exterior doors being made of metal or solid 1 3/4" hardwood.
- Secure sliding glass doors with commercially available locks or with a wood dowel in the track to jam the door closed.
- Make sure windows are of good quality and have strong locks. Don't forget about basement windows.
- Keys shouldn't be hidden in mailboxes, planters or under doormats. Give an extra key to a neighbor you trust.
- When moving to a new house or apartment, have the locks changed.
- Install a peephole. Door chains are NOT security devices.
- Chains won't keep an intruder out.
- Trim shrubbery that hides doors or windows. Cut tree limbs that could help an intruder climb into windows.
- Never leave ladders or other tools outside.
- Turn on outside lights after dark near porches, entrances and yards, front and back. Consider using timers that turn on outside and inside lights or install motion detector lights.
- Clearly display your house number so police and emergency vehicles can find your home quickly.
- Update your home inventory list with serial numbers.
- Use a still or video camera. Store the list and photos at another location in case of fire.
- If you hear a noise that sounds like someone breaking in or moving around, quietly call 9-1-1 and wait until they arrive. If you and your family can leave safely, do so. Otherwise, lock everyone in a room. Don't be a hero.
- Don't leave a "We're not at home" message on your answering machine or let newspapers accumulate on your driveway or porch.



Protect Yourself Against Criminals—In the Car

- Always lock the car doors after entering or leaving your vehicle.
- Check the inside of your car for would-be attackers before getting behind the wheel.
- Park in well lit areas.
- Have your car keys in hand, ready to open and enter the car.
- If you think you are being followed, drive to a well lit public place.
- If your car breaks down, open the hood and attach a white cloth to the car antenna. If someone stops to help, stay in your locked car and ask him/her to call the local law enforcement agency or garage.
- Don't stop to aid broken down motorists. Phone in a request for help.
- When being driven home, ask the driver to wait until you are inside.

If you have doubts about the legitimacy of a traffic stop by an unmarked law enforcement vehicle, drive slowly, with emergency flashers on, to a well-lit, public place. If you have a cell phone, call 9-1-1, tell the dispatcher your location and ask him/her to find out if it is a legitimate stop. If not, help will be on the way.

Protecting Yourself Against Criminals—In the Office

- If you are on the elevator with a stranger, stand near the control panel. If attacked, press the alarm and as many of the control buttons as possible.
- Be alert to pickpockets on crowded elevators.
- If you work along or outside of normal business hours, keep the office door locked.
- Be aware of escape routes for emergencies and post emergency numbers near telephones.
- Never leave your purse or billfold in plain view or in the pockets of a jacket by the door.
- Mark personal property with identification.
- Don't leave cash or other valuables at the office.

RUN—HIDE—FIGHT

For specific actions to take in the event of an attacker at the office, please go online and review the Run-Hide-Fight video specifically outlining strategies and actions for people in the workplace

Protect Yourself Against Criminals—On the Street

- Always be alert to your surroundings and the people around you.
- Walk confidently and at a steady pace.
- Make eye contact with people when walking.
- Whenever possible, travel with a friend.
- Stay in well-lit areas as much as possible.
- Avoid doorways, bushes and alleys where someone might be hiding.
- If you carry a purse, your personal safety might depend on NOT clinging to it.
- Do not respond to conversation from strangers on the street - continue walking.

Preparing a Disaster Supply Kit

What is a 3-day (72 hour) Disaster Supply Kit?

A 3-day disaster supply kit should contain items to provide for the basic needs of each member of the family in the event of an emergency.

Having a disaster supply kit ready to take with you at a moment's notice ensures that you will have necessary supplies no matter how fast you may need to evacuate. Pack supplies in duffel bags or backpacks and keep them in a designated place. Your kit will also come in handy if you must take shelter in your home.

The lists on the following pages will help ensure that your disaster supply kit includes all the essentials.

Emergency Needs

Emergency Needs

- Battery Powered Radio
- First Aid Kit & Manual
- Sleeping Bags & Blankets (wool & thermal)
- Manual Can Opener
- Waterproof/Windproof Matches
- Non-Perishable Foods (3 days worth)
- Flashlights
- Water Storage (1 gal./person/day)
- Water purification tablets
- Utility Knife
- Emergency Candles
- Extra Eyeglasses/Contact Lenses
- Essential Medications
- Extra Clothing and raingear
- Extra Batteries
- Special items for infants, elderly or disabled members of your household

Other Emergency Needs

- Pen & Paper
- Money

Each individual should customize the kit to meet his or her personal needs, but keep in mind that this reserve should be an all-hazards kit. You must ask yourself, "What are the potential hazards in my community?"

In rural areas of Larimer County, a 72-hour kit may not be sufficient to meet the needs of the disaster. Consider the needs for the area you live in and design a kit that meets those specific needs. This could include a shelter-in-place kit that can sustain the family for several weeks, or a go kit that will sustain the family for a short term until permanent arrangements can be made.

- Personal Identification
- Address & Phone Numbers
- Work Gloves
- Basic Tools
- Insurance company information
- Medical insurance and other information

Sanitation Kit

- Plastic Bucket with Tight Lid
- Plastic Bags & Ties
- Disinfectant
- Improvised Toilet Seat
- Paper Cups & Plates
- Personal Toiletries
- Baby Supplies
- Aluminum Foil
- Paper Towels
- Personal Hygienic Needs
- Plastic Utensils
- Soap

Preparing a Disaster Supply Kit (Cont...)

Suggested non-perishable food items:

Ready-to-eat goods in unbreakable containers, canned meats, juice, fruits & vegetables, powdered milk, infant care foods, crackers, peanut butter, freeze-dried & dehydrated goods.

Standard First Aid Kit

- First Aid Manual
- Aspirin or Pain Relievers
- Laxatives
- Rubbing Alcohol
- Diarrhea Medicine
- Petroleum Jelly
- Soap
- Salt
- Gauze
- Band-Aid
- Triangular Bandage (36"x36"x52")
- Elastic Bandage
- Cotton Balls
- Cotton Swabs
- Safety Pins
- Scissors
- Thermometer
- Sanitary Napkins (Pressure Dressing)
- Disposable Diapers
- Micropore Adhesive, Paper Tape
- Matches
- Needles
- Tweezers
- Small Splints, Popsicle Sticks
- Heavy String
- Individual Medical Needs
- Baking Soda (1/2 tsp. soda + 1 tsp. salt + 1 qt. water for shock)



Car Survival Kit

- Always Maintain at Least 1/2 Tank of Gas
- First Aid Kit & Manual
- Class ABC Fire Extinguisher
- Radio & Batteries
- Non-Perishable Food Stored in Coffee Can
- Bottled Water
- Bag of Sand, Shovel & Tools
- Blankets or Sleeping Bags
- Sundry Kit, Paper & Pencil, Map, Tissues, Pre-moistened Towels, Plastic Bags, Essential Medications
- Flashlights & Batteries
- Reflectors & Flares
- Waterproof Matches & Candles
- Jumper Cables
- Short Rubber Hose to Siphon

PLAN FOR YOUR PET:

- Food (Large Capacity Self-Feeder and Water Dispenser)
- Water
- Cat litter and pan
- Can opener
- Medications / Medical Records
- Pet bed and toys
- Sturdy leashes, harnesses and carrier to transport pets safely
- Current photo of pet in case they get lost
- Designate someone to care for pets in case of an emergency.
- Name and number of veterinarian



Law Enforcement Agencies

**IN THE EVENT OF AN EMERGENCY
CALL 9-1-1**



LARIMER COUNTY SHERIFF'S OFFICE

970-498-5100

<http://www.larimer.org/sheriff/>

Facebook: <https://www.facebook.com/larimersheriff>

Twitter: <https://twitter.com/LarimerSheriff>

ESTES PARK POLICE DEPARTMENT

970-586-4000

<http://www.visitestespark.com/>

FORT COLLINS POLICE DEPARTMENT

970-221-6540

<http://www.fcgov.com/police/>

LOVELAND POLICE DEPARTMENT

970-667-2151

<http://www.ci.loveland.co.us/index.aspx?page=156>

WINDSOR POLICE DEPARTMENT

970-674-6400

<http://www.windsorgov.com/index.aspx?nid=89>



Emergency Medical Services



ESTES PARK MEDICAL CENTER EMS

970-586-2317

www.epmedcenter.com

POUDRE VALLEY HOSPITAL EMS UNIVERSITY OF COLORADO HEALTH

970-689-2462

www.uchealth.org

THOMPSON VALLEY EMS

970-663-6025

www.tvems.com

Fire Departments and Districts

ALLENSPARK FIRE PROTECTION DISTRICT

Station: 303-747-2586
www.allensparkfire.com

BERTHOUD FIRE PROTECTION DISTRICT

970-532-2264
www.berthoudfire.org/

BIG ELK MEADOWS VOLUNTEER FIRE DEPT.

303-823-5717
www.bigelkvfd.org/

BIG THOMPSON VOLUNTEER FIRE DEPT.

970-203-0348
<http://bigthompsoncanyonvfd.org/>

CRYSTAL LAKES FIRE PROTECTION DISTRICT

970-881-3521
<http://clvfd.org/>

ESTES VALLEY FIRE PROTECTION DISTRICT

970-577-0900
<http://estesvalleyfire.org/>

GLACIER VIEW FIRE PROTECTION DISTRICT

970-493-3353
www.glacierviewfiredept.com

GLEN HAVEN VOLUNTEER FIRE DEPARTMENT

970-586-5406
<http://glenhavenfire.org/>

LIVERMORE FIRE PROTECTION DISTRICT

970-472-5592
<http://livermorefire.com/>

LOVELAND FIRE RESCUE AUTHORITY

970-962-2471
<http://www.ci.loveland.co.us/index.aspx?page=135>

LYONS FIRE PROTECTION DISTRICT

303-823-6611
<http://lyonsfire.org/>

PINEWOOD SPRINGS FIRE PROT. DISTRICT

303-823-5086
www.pinewoodspringsfire.org/

POUDRE CANYON FIRE PROTECTION DISTRICT

970-881-2472
www.poudrecanyonfiredistrict.org/

POUDRE FIRE AUTHORITY

970-221-6570
www.poudre-fire.org/

RED FEATHER LAKES VOLUNTEER FIRE DEPT.

970-881-2565
www.rflvfd.org/

RIST CANYON VOLUNTEER FIRE DEPARTMENT

970-218-5201
www.rcvfd.org/

WELLINGTON FIRE PROTECTION DISTRICT

970-568-3232
www.wfpd.org/

WINDSOR SEVERANCE FIRE RESCUE

970-686-2626
<http://www.wsfr.us/>



Emergency Management

LARIMER COUNTY OFFICE OF EMERGENCY MANAGEMENT

970-416-2878

<http://www.larimer.org/emergency>

FORT COLLINS OFFICE OF EMERGENCY MGMT

970-221-6570

<http://www.poudre-fire.org/emergency-preparedness>

Facebook:

<https://www.facebook.com/FortCollinsOfficeOfEmergencyManagement>

Twitter: <https://twitter.com/FtCollinsOEM>

CITY OF LOVELAND OFFICE OF EMERGENCY MANAGEMENT

970-962-2534

<http://www.cityofloveland.org/index.aspx?page=762>

ESTES PARK OFFICE OF EMERGENCY MGMT

970-577-3827

<http://townofestespark.blogspot.com/>



Other Resources

LETA911

970-962-2170

<http://www.leta911.org/>

LARIMER COUNTY GOVERNMENT

<http://www.larimer.org>

Facebook: <https://www.facebook.com/>

Twitter: <https://twitter.com/LarimerCounty>

LARIMER COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT

<http://larimer.org/health/>

CITY OF FORT COLLINS

<http://www.fcgov.com/news/>

Facebook:

<https://www.facebook.com/cityoffortcollins>

Twitter: <https://twitter.com/fortcollinsgov>

CITY OF LOVELAND

<http://www.cityofloveland.org/index.aspx?page=1993>

Facebook:

<https://www.facebook.com/CityofLovelandCO>

Twitter: <https://twitter.com/CityofLoveland>

TOWN OF ESTES PARK

<http://www.colorado.gov/cs/Satellite/TownofEstesPark/CBON/1251595939060>

Facebook:

<https://www.facebook.com/TownofEstesParkCO>

Twitter: <https://twitter.com/townofestespark>

COLORADO DEPARTMENT OF TRANSPORTATION

<http://www.coloradodot.info/>

Facebook: <https://www.facebook.com/coloradodot>

Twitter: <https://twitter.com/ColoradoDOT>

Volunteer Opportunities:

Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS): <http://www.cocorahs.org/>
National Weather Service SKYWARN:
http://www.crh.noaa.gov/bou/?n=wx_spotter

Weather Information:

National Weather Service Denver/Boulder

Web: <http://www.crh.noaa.gov/bou/>

Facebook: <https://www.facebook.com/>

US.NationalWeatherService.DenverBoulder.gov

Twitter: <https://twitter.com/NWSBoulder>

National Weather Service Advanced Hydrologic Prediction Service

Web:

<http://water.weather.gov/ahps/region.php?state=co>

Emergency Contact Information

Emergency Contact Information:

Emergency contact person: _____

Emergency contact phone and address: _____

Meeting place #1 (near home): _____

Meeting place #2 (away from home): _____

Cell/home phone and address: _____

Hospital (name, address and phone): _____

Neighborhood Association: _____

Veterinarian: _____

Emergency shelter for pets: _____

Other: _____

Other: _____



**Larimer Office of Emergency Management
200 West Oak Street
Fort Collins, CO 80521**

970-498-7147

www.larimer.org/emergency