

We know Utah is "Earthquake Country". But it's also "Flood Country" and "Fire Country".

A LANDSLIDE DAMAGED STATE ROUTE 14 EAST OF CEDAR CITY, 2011.

STAY OR GO

UTAH GEOLOGICAL SURVEY

"People think they have to wait until they are told to leave. In some cases, that may be waiting too long," said Joe Dougherty, spokesman for the Utah Division of Emergency Management. "If you feel you are in danger, you don't have to stay... But if first responders do come knocking, telling you to go, please heed their advice."

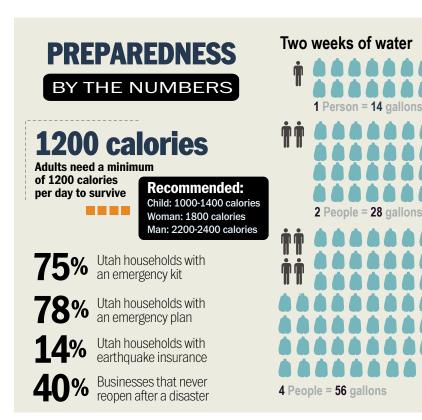
If you leave because of fire, shut off ventilation systems like air conditioning and close the fireplace flue and windows and blinds. Otherwise, smoke can be sucked in, causing expensive smoke damage to buildings otherwise spared.

You probably won't evacuate in a mass disaster, like an earthquake or toxic spill. Home may be the safest or only option. Be ready to hunker down and be self-sufficient for an extended period, Dougherty said.

In community disasters, like a chemical spill, local experts will likely decide whether you stay or go.

Make sure you have a way to get information from radio, TV or online. Have sources that don't rely on power, which may not be available.

Keep emergency supplies at home, at work and in your vehicle.







STUART JOHNSON, DESERET NEWS

1 gallon per -person/day

for 14 days **is the minimum** recommended amount of water to store for drinking and light sanitation in case of an emergency. TOP: THE SANDY FIRE DEPARTMENT RESPONDS TO A HOUSE FIRE, 2013. BELOW: A BADLY DAMAGED HOME IN GREEN VALLEY, BY ST. GEORGE. FLOOD WATERS ALONG THE SANTA CLARA RIVER WASHED AWAY MORE THAN 20 HOMES, 2004.

Prepare for what you don't expect



TARYN AND REBECCA RICH RETURNED HOME TO FIND IT BURNING JUST DAYS BEFORE CHRISTMAS.

TARYN RICH

NORTH SALT LAKE — Just days before Christmas, Taryn Rich put away most of his groceries, then gathered up his kids, 2 and 4, and headed out to pick up his wife, Rebecca. When they got home not long after, they were greeted by their excited, barking dogs, which was nothing new.

As they started to get out of the vehicle, though, they could hear the smoke alarm going off and see smoke rising from the paneling of their home.

Rebecca Rich stayed outside to call the fire department and keep the kids away from danger. He rushed inside to grab the fire extinguisher in the coat closet. But it was already too late. What had started as a normal day had turned into a family's disaster.

Fires are the most common emergency the American Red Cross responds to in Utah, according to Page Neal, the Utah chapter's individual and community preparedness manager. In fiscal year 2012-13, staff statewide responded to 156 disasters, mostly house fires. They typically respond to a couple a month, but recently they got called to three in a single week, she said.

Tim Givan will tell you that fire doesn't even have to burn your house down to create chaos in your life. The 2012 Rose Canyon fire in Herriman erupted when a car caught fire in a very dry area. The wind picked up sparks and off it raged, burning anything in its path. Several houses were damaged and four were destroyed.

The fire was confined to one end of Givan's house, but his family ended up unable to live there for months. He lost buildings that were on the grounds and everything in them, including a

What had started as a normal day had turned into a family's disaster. boat and two vintage vehicles he'd been restoring. He and his wife had to find housing for themselves, their daughter who still lived at home, two dogs and a cat. Their horse suffered minor burns on her hooves. It took a lot longer than they expected to make the house safe to live in again.

In a large-scale emergency, it may take several days or a week for help to come, experts say. A kit that will allow you to stay alive for a week is important, said Rocky Mountain Power's Margaret Oler.

Things that impact one family may not impact a neighbor, she noted. Emergency planning includes not just what to do in an earthquake or power outage, but also a job loss or extended illness. "You have to think through the various things that could interrupt daily life and plan for those. Today's the day to look at it, see what's there and start your plan."



FIRE BURNS HOMES AND OUTBUILDINGS IN THE HERRIMAN AREA, 2012.

RAVELL CALL, DESERET NEWS

A SMALL AMOUNT OF FIRE CONTINUES TO BURN ON THE CHIMNEY AT A TWO-ALARM HOUSE FIRE IN TAYLORSVILLE, 2013.



SCOTT G. WINTERTON, DESERET NEWS



A CAR FIRE SPARKED THE ROSE CREST CANYON, BURNING HOMES AND OUTBUILDINGS, 2012.

SCOTT G. WINTERTON, DESERET NEWS

Home fires

Each year more than 2,500 people die and 12,600 are injured in home fires in the United States, with direct property loss due to home fires estimated at \$7.3 billion annually.

Fire is FAST!

In less than 30 seconds a small flame can get completely out of control and turn into

- a major fire. It only takes minutes for thick black smoke to fill a house or for it to be
- engulfed in flames. Most deadly fires occur in the home when people are asleep. If you
- wake up to a fire, you won't have time to grab valuables. There is only time to escape.

Fire is HOT!

- A fire's heat alone can kill. Room temperatures in a fire can be 100 degrees at floor level
- and rise to 600 degrees at eye level. Inhaling this super-hot air will scorch your lungs.
- This heat can melt clothes to your skin. In five minutes, a room can get so hot that everything in it ignites at once: This is called flashover.

Fire is DARK!

Fire starts bright, but quickly produces black smoke and complete darkness. If you wake up to a fire you may be blinded, disoriented and unable to find your way around the home you've lived in for years.

Fire is DEADLY!

- Smoke and toxic gases kill more people than flames do. The odorless, colorless fumes
- can lull you into a deep sleep before the flames reach your door. You may not wake up in time to escape.

WHAT TO DO DURING A FIRE

Teach children not to hide from firefighters.

Smoke is toxic. Crawl low under any smoke to your exit - heavy smoke and poisonous gases collect first along the ceiling.

If there is smoke blocking your door or first way out, use your second way out.

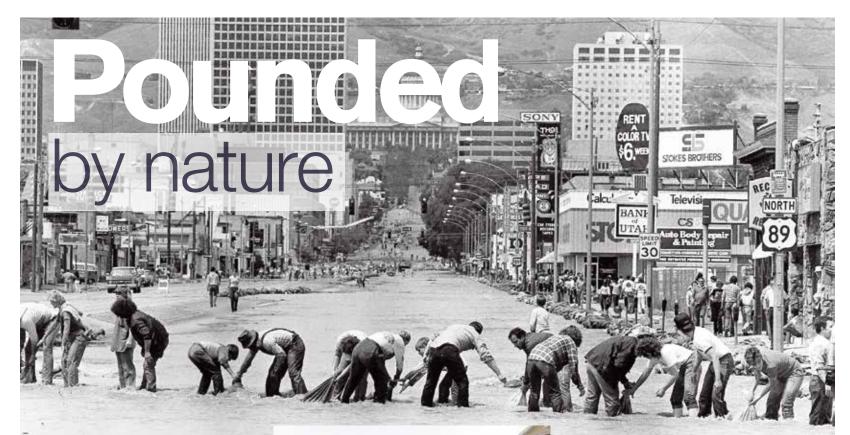
Smoke is toxic. If you must escape through smoke, get low and go under the smoke to escape.

If you can't get to someone needing assistance, leave the home. Tell the emergency operator where the person is located.

If pets are trapped inside your home, tell firefighters right away.

If you can't get out, close the door and cover cracks around doors. Call 9-1-1, say where you are and signal for help at the window.

If your clothes catch fire, stop, drop and roll.



"Flooding is the most common natural disaster and you don't have to live in a flood plain to be a victim," said Joe Dougherty, spokesman for the Utah Division of Emergency Management. You don't have to be near a creek or stream.

These real weather disasters happened recently in Utah:

 Torrential rain flooded 30 homes, collapsed the roof of a building and took out power to thousands of customers in Cedar City.

A breach in a retention basin flooded a Santa
Clara neighborhood, damaging more than 25
homes and a dozen businesses. Residents had to
evacuate.

- The St. George area has been pounded with flash floods, damage ranging from flooded basements to houses rendered uninhabitable.

 Heavy rains have triggered landslides and turned roads into small rivers. Remember when runoff helped turn State Street into a river in 1983? You needn't reach back that far to see weather change lives. In 2011, 18 counties had major flooding.



JASON OLSON, DESERET NEWS

 In 2011, hurricane-force winds ripped through Davis County, downing power lines, tossing trees, trashing homes and vehicles. At one point, 50,000 customers had no electricity.

 The past summer's "monsoon season" caused slides across the Wasatch Front.

— In northern Utah, heavy snowfalls have closed roads and collapsed roofs. They've caused slideoffs and stranded motorists. Experts say every car should have an emergency kit not just for first aid, but with basics for warmth and food.

- Utah averages four tornadoes a year.

- By late summer 2013, more than 300 wildfires burned around the state, some of them threatening homes. And there were house fires on top of that, from various causes. It's the top disaster to which the American Red Cross Utah Chapter responds.

SANDBAGGERS WORK ON 700 SOUTH AS CREWS FORCED MORE WATER INTO THE STATE STREET RIVER, WHICH REACHES TO 13TH SOUTH, 1983.

TOM SMART, DESERET NEWS

RICHARD LOPER KEEPS THE STORM DRAIN CLEAR OF DEBRIS AS THE REMAINING FLOOD WATERS RECEDE NEAR HIS HOME IN FARR WEST, 2004.

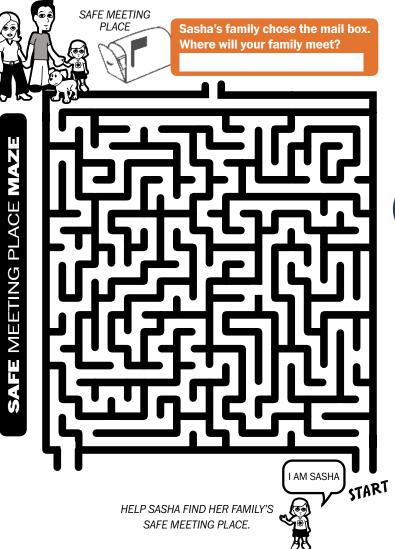
Be prepared

Experts say being prepared makes the unpredictable manageable.

Make a plan. Practice. Make sure the whole family knows what to do. Build an emergency kit for home. Put supplies in the car. Add cash in small bills in case you have to leave. Pack your medicine and know how you'll keep it cold if needed.

You can do this.

Will everyone in your home know how to react when a disaster strikes?



Make a plan.



Share your disaster plan with your neighbors and discuss key points with babysitters, house sitters and house guests.

PREPARED

Every plan should include:

A safe meeting place. If your family isn't there, find a trusted adult.

How to be safe.

How to respond.

How to communicate.

Emergency phone numbers

An out-of-state contact everyone can call if you're not together.

Evacuation plan that includes potential places to stay away from home.

Provisions for natural disasters that are likely to occur in your area.

YOUR CELL PHONE FRIEND:

In a disaster, it may be easier to reach people by text than by phone.

Smart phones can be used to look up emergency information at sites like Rockymountainpower.net. In a widespread outage, they update every 15 minutes.

> Call 911 to save a life.

Complete a contact card for each adult

Visit www.ready.gov and click on Ready Kids for a family scavenger hunt to create your family's emergency supply kit!

It's important to be able to contact your family if there is an unexpected event. Fill in the following information and keep a copy on the refrigerator, in your car, and in your child's backpack.

	family member. Have
Parents/Guardians Contact Names:	them keep these cards
Telephone numbers:	handy in a wallet, purse
	or briefcase, etc.
Out-of-State Contact Name:	Additionally, complete
Telephone number:	contact cards for each
	child in your family. Put
Neighborhood Meeting Place:	the cards in their back-
Meeting Place Telephone:	packs or book bags.

Dial 9-1-1 for Emergencies!





When preparing for an emergency, consider the basics of survival: water, food, warmth and shelter.



Food Storage

The average American household has less than a week's supply of food on hand. If you had to shelter at home in an emergency, would you be prepared to meet your nutritional and caloric needs?

Without being paranoid or panicked, there are many valid reasons to put extra food away:

- Loss of electricity
- Sudden unemployment
- Loss of income due to illness or injury
- Unexpected medical bills
- Large-scale emergency

Food storage is a wise investment. Consider the following to get the most out of your food storage supplies:

- Know how to use what you store.
- Food storage that matches your family's lifestyle is more likely to be used.
- Rotate your food storage from time to time. This will keep your food supply fresher - and it's great practice.
- Store to meet your daily caloric intake requirement, not a specific number of servings daily.

Food storage is intended to keep you alive and nourished during times of difficulty. It should fulfill your caloric needs. Those needs are based on your age, gender, and activity level.

APPROXIMATE CALORIC NEEDS					
		MALE		FEMALE	
AGE		MODERATE	ACTIVE	MODERATE	ACTIVE
0-3		1000-1200	1000-1400	1000-1400	1000-1400
4-8		1600	1800	1600	1600
9-13		1800	2300	1800	2000
14-18	3	2400	3000	2000	2400
19-30)	2600	3000	2000	2400
31-50)	2400	2900	2000	2200
51+		2200	2500	1800	2000



Water is one of the most important things in an emergency situation, said Dawn Kaufman, who manages Emergency Essentials stores. Individuals need a gallon a day in a disaster, about half to drink and the rest for other needs.

In a challenging situation, it is critical to be able to find, store or treat water. Our bodies are about 80% liquids. We lose water in three ways: perspiration, breathing and urination. Dehydration of 6 to 8% of the body's weight results in decreased body efficiency. Within three days of water depletion or loss, the body and organs can experience severe damage.

Because a disaster can last days and it's hard to carry or

store enough water for everyone, it's a good idea to have a filter to clean water. People with a compromised immune system might want to invest in a UV sterilizer.

For a long-term emergency plan, you need to have a method to make questionable water "potable" and safe. You should also have a method of replenishing your drinking water.

Warmth



How will you keep warm? An emergency sleeping bag, blankets, handwarmers and other aids can help.

Fuel-burning stoves and heaters need ventilation to work properly. Only use fuel-burning stoves and heaters that have an automatic shut-off in case oxygen levels are too low. This will protect you from carbon monoxide poisoning Candles are usually fine and can produce heat in a camp coffee pot or can. You can buy indoor-safe heaters with a fuel similar to Sterno.



What people forget:

People often forget to plan a place to go to the bathroom. A simple solution is a bucket with a toilet seat that fits it and garbage bags to dispose of the waste. Dawn Kaufman of Emergency Essentials recommends making a sanitation kit out of a bucket and getting sanitizers that use environmentally safe enzymes. It's portable, so you can use it at home if the water is out or grab it when you leave home.

You need a gas shut-off wrench, Kaufman said. Learn to use it and when. But don't turn off gas in an earthquake unless you smell a leak. It takes time to get the gas turned back on. Do not use anything electric that can create a spark if you smell gas.

> Get great tips for what to look for when shopping for food storage at BePrepared.com/15Tips



JANUARY 24, 2014

Floods are one of the most common disasters in the United States; however not all floods are alike. Some floods develop slowly, while others, such as a flash flood. can develop in just a few minutes and without visible signs of rain. flood, can develop in just a few minutes and without visible signs of rain.

> Flash floods can occur within a few minutes of excessive rainfall, a dam or levee failure, or a sudden release of water held by an ice jam. Flash floods often have a dangerous wall of roaring water carrying rocks, mud and other debris. Overland flooding, the most common type of flooding event, typically occurs when waterways such as rivers or streams overflow their banks as a result of rainwater or a possible levee breach. It can also occur when rainfall or snowmelt exceeds the capacity of underground pipes or street drains.

Be aware of flood hazards no matter where you live or work, especially if you are in low-lying areas, behind a levee or downstream from a dam. Even very small streams, gullies, creeks, dry streambeds or low-lying ground that appear harmless in dry weather can flood.

When driving in flood conditions

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 rushing water can carry away most vehicles, including sport utility vehicles (SUVs) and pick-ups.

Do not attempt to drive through a flooded road. The depth of water is not always obvious. The road bed may be washed out under the water. and you could be stranded or trapped.

Be especially cautious driving at night when it is harder to recognize flood dangers.

Landslides

Landslides can be caused by a variety of factors including earthquakes, storms, fire and land mismanagement. Landslides often occur quickly.

In a landslide, masses of rock, earth or debris move down a slope. They develop when water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt, changing the earth into a flowing river of mud. They can flow rapidly, striking with little or no warning at avalanche speeds. They also can travel several miles from their source, growing in size as they pick up trees, boulders, cars and other materials.

Avoid building near steep slopes, close to mountain edges, near drainage ways or along natural erosion valleys.



VOLUNTEERS AND RESIDENTS IN SANTA CLARA WORK TO CLEAN UP AFTER FLOOD WATERS BROKE THE DIKE, 2012.

ALT LAKE CITY FLOOD

SCOTT G. WINTERTON, DESERFT NEWS



PHOTO COURTESY OF KSU BOULDERS FROM A ROCK SLIDE THAT CRUSHED A HOME AND KILLED TWO PEOPLE ALONG STATE ROUTE 9 ON THE WEST END OF ROCKVILLE, 2013.

Slopes where debris flows have occurred in the past are likely to experience them in the future.

Protect your property by planting ground cover on slopes and building retaining walls.

AFTER A LANDSLIDE

Stay away from the slide area. There may be danger of additional slides.

Watch for flooding, which may occur after a landslide or debris flow. Floods sometimes follow landslides and debris flows because they may both be started by the same event.

Look for and report broken utility lines. Reporting potential hazards will get the utilities turned off as quickly as possible.

Check the building foundation, chimney, and surrounding land for damage.



Winter storms & extreme cold

RAVELL CALL, DESERET NEWS

Winter storms can range from a moderate snow over a few hours to a blizzard with blinding, wind-driven snow that lasts for several days. Many winter storms are accompanied by dangerously low temperatures and sometimes by strong winds, icing, sleet and freezing rain.

One of the primary concerns is the winter weather's ability to knock out heat, power and communications services to your home or office, sometimes for days at a time.

Winter storms are "Deceptive Killers" because most deaths are indirectly related to the storm. Instead, people die in traffic accidents on icy roads and of hypothermia from prolonged exposure to cold. It is important to be prepared for winter weather before it strikes.

Car survival & emergency kit

Before winter approaches, add the following to your emergency supplies and your winter routine: Rock salt or products to melt ice on walkways.

Snow shovels and other snow removal equipment.

Sufficient heating fuel. You may become isolated in your home and regular fuel sources may be cut off.

Adequate clothing and blankets to keep you warm.

Minimize travel. If travel is necessary, keep a disaster supplies kit in your vehicle.

Bring pets inside during winter weather. Move other animals or livestock to sheltered areas with non-frozen drinking water.

Shovel Extra hats, socks and mittens Windshield scraper Small broom Extra hats, socks and mittens

Windomena Seraper	11130
Small broom	Nece
Flashlight	Blan
Battery-powered radio	Tow
Extra batteries	Road
Water	Boos
Snack food	Eme
Matches	Fluo

TOM SMART. DESERET NEWS

First aid kit with pocket knife Necessary medications Blanket(s) Tow chain or rope Road salt and sand Booster cables Emergency flares Fluorescent distress flag



A BACKHOE DEMOLISHES A HOME IN THE PATHWAY OF A LANDSLIDE IN NORTH SALT LAKE CITY, UTAH, 2011.

Emergency kits aren't just for the home. Have one in your car and at work. It's the best way to remind yourself you're ready to cope with an emergency.

Everyone in your family should have a **personal disaster kit** stored in an easy-to-grab location. Pack the supplies in a backpack or small bag that can be easily carried in the event of an evacuation.

PERSONAL DISASTER KITS

- Medications, a list of prescriptions, copies of medical insurance cards, doctors' names and contact information
- Medical consent forms for dependents
- First aid kit and handbook
- Spare eyeglasses, personal hygiene supplies and sturdy shoes
- Bottled water
- Whistle (to alert rescuers to your location)
- Emergency cash
- Personal identification
- List of emergency contact phone numbers
- Snack foods high in calories
- Emergency lighting: light sticks and/or a working flashlight with extra batteries and light bulbs (hand-powered flashlights are also available)
- Comfort items such as games, crayons, writing materials and teddy bears



Enclose the extra clothing, matches, personal documents and other items that could be damaged by smoke or water in plastic to protect them.



0.999-18

equally between family member's kits.





PACKING TIPS

Keep a light souce in the top of your kit, so you can find it quickly in the dark. a 3- to 5-day supply of these items: HOUSEHOLD DISASTER KIT

a safe, accessible location. Pack at least

Store this **household disaster kit** inside a large portable watertight container in

- Drinking water (minimum one gallon per person per day)
- First aid supplies, medications, and essential hygiene items such as soap, toothpaste and toilet paper
- Emergency lighting: light sticks and/or a working flashlight with extra batteries and light bulbs (hand-powered flashlights are also available)
- A hand-cranked or battery-operated radio and spare batteries
- Canned and packaged foods and cooking utensils, including a manual can opener
- Items to protect you from the elements, such as warm clothing, sturdy shoes, extra socks, blankets and perhaps even a tent
- Heavy-duty plastic bags for waste and to serve other uses, such as tarps and rain ponchos
- Work gloves and protective goggles
- Pet food and pet restraints
- Copies of vital documents, such as insurance policies and personal identification



Don't forget your pets

"Take your pets with you if you evacuate," said Joe Dougherty of the Utah Division of Emergency Management. Take cats and dogs in carriers or kennels. If the human family members have to go to an emergency shelter, only service animals are allowed. But in crisis, pet shelters can be set up alongside those shelters.

Don't forget to pack their emergency supplies, too. Include food, water, medicine and toys.

Insurance

Know your policies and be specific as you ask questions. When fire burned outbuildings on Tim Givan's property, he learned they were not adequately covered to allow replacement.

His boat insurance didn't cover a boat parked at home and hit by fire.

Homeowners have found, to their dismay, they didn't have separate riders to cover jewelry or the coins they collect.

Documents

Keep a copy of important documents elsewhere. You can scan photos, passports, insurance papers and other vital paperwork to a thumb drive or external hard drive.





Birth certificates

- Marriage license/divorce papers and child custody papers
- Passports and driver's licenses
- Social security cards
- Naturalization papers and residency documents
- Military/veteran's papers
- Critical medical information
- Cash, in the event ATM or bank services are disrupted
- Certificates for stocks, bonds and other investments
- Bank statements
- Credit card numbers
- A list of phone numbers for financial institutions and credit card companies where you have accounts
- Insurance policies
- An inventory of your household possessions
- Appraisals of valuable jewelry, art, antiques and heirlooms
- Home improvement records
- A list of names, phone numbers and e-mail addresses of critical personal and business contacts
- Deeds, titles, and other ownership records for property such as homes, autos, RVs and boats
- Powers of attorney, including healthcare powers of attorney
- Wills or trust documents



Safety is the first thing to remember about electricity, according to Margaret Oler of Rocky Mountain Power. "If you see a power line down, always assume that line is live and stay away. Electricity is a great servant that does a lot for each of us, but it has to be respected. Call if there's a problem, let people who are trained to deal with electricity handle it."

FEMA offers other tips about electricity:

Keep your car tank at least half full because gas stations rely on electricity to power their pumps.

Know where the manual release lever of your electric garage door opener is located and how to operate it.

Keep a key to your house with you if you regularly use the garage as the primary means of entering your home.

Use only flashlights for emergency lighting. Use caution when using candles to avoid a fire.

Leave on one light so that you'll know when your power returns.

Use a cellular phone, radio or pager if your phone requires electricity to work, as do cordless phones and answering machines. Use the phone for emergencies only. Listen to a portable radio for the latest information.

Use the phone for life-threatening emergencies only.

Do not call 9-1-1 for information. Call only to report a life-threatening emergency.

Put on layers of warm clothing if it is cold outside. Never burn charcoal for heating or cooking indoors. Never use your oven as a source of heat. If the power may be out for a prolonged period, plan to go to another location that has heat to keep warm.

Take steps to remain cool if it is hot outside. Consider going somewhere cool if power is likely to be out long. If you stay home, move to the lowest level of your home.

Provide plenty of fresh, cool water for your pets.

Eliminate unnecessary travel, especially by car. Traffic signals will stop working during an outage, creating traffic congestion.

Remember that equipment such as automated teller machines (ATMs) and elevators may not work during a power outage.

JASON OLSON, DESERET NEWS

A CREW WORKS TO RECOVER A POWER LINE THAT FELL ON A HOUSE IN SOUTH-WEST PROVO CAUSED BY A POWERFUL MICROBURST, 2006.



This educational section from the Deseret News' Newspapers in Education program was designed by Lou Ann Reineke and contributing writer Lois M. Collins. Expert advice from Emergency Essentials, the Utah Division of Emergency Management, Fema and Rocky Mountain Power. The project was under the direction of Cindy Richards, Newspapers in Education director, with special thanks to Dean Hale and Sarah Knight, Emergency Essentials LLC.

Additional copies of this Deseret News educational section on The Great Utah ShakeOut are available at all Emergency Essentials store locations: Bountiful, Murray, South Jordan and Orem. Visit Beprepared.com/Stores for hours or call 1-800-999-1863.

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