

## DISASTER TIPS

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### Preparations are Essential

This chapter will help families prepare for and respond to different types of natural and man-caused disasters that might occur in our area. Most of this information is taken from FEMA, the Red Cross, the CDC, and Logan City Emergency Preparedness. See those websites for more complete details since the sole responsibility for preparation and decisions rest on the individual. The author and Mt Logan Stake assume no liability for the use or misuse of any information in this binder.

These tip sheets presuppose you have prepared the following, since every family will be better able to handle emergencies if they have: (See *Chapter 9 - Family Helps* for more information on these topics).

- Family Plan (including gathering location and contacts)
- Family Plan practice
- 72 Hour Kit (make that a 7 day kit)
- Car Emergency Kit
- First-Aid Kit
- Needed prescriptions and medical supplies
- Portable radio and batteries
- Two-way radios for communications
- Water storage
- Alternate heat source
- Alternate lighting

Mt. Logan Stake suggests that family heads pick one disaster topic each month for a family home evening this coming year. Discuss, prepare for, and practice for each disaster.

### We are OK – We Need Help

#### RED Flag / GREEN Flag

- |                |   |                                                                    |
|----------------|---|--------------------------------------------------------------------|
| ▶ Red Banner   | = | Critical – Emergency medical assistance needed NOW                 |
| ▶ Green Banner | = | All is Well – Family members at this location OK and accounted for |

Each family should make two assessment communication banners and store them with their emergency preparedness materials. A good place to keep them is near the front door. These RED AND GREEN banners should be 4" by 36". In the event of an emergency, immediately hang a banner in a visible place near the front entrance or tie to the front door knob. These banners immediately communicate the status of your family. This ensures that your Block Captain and the civil authorities will be able to quickly help families that require assistance. If possible, also send a family member outside to meet the block captain when he comes by your sidewalk, and give him your family report. These flags can be made from red and green plastic picnic table coverings from a dollar store.

CERTs will use these additional colors for triaging the injured:

- ▶ Yellow = We can wait – someone is injured but it is not critical
- ▶ White = Gone – no one home

## Local Communications

Communications during a disaster will be by telephone unless services are down or overloaded. Then it will be by two-way radio (GMRS hand-helds and amateur radio), with communication centers set up at the church meetinghouses and schools in our area. Any other method necessary will also be used, such as runners. Keep airways free for emergency info.

## Types of Disasters

### Natural Disasters

- Drought
- \*Earthquakes
- Epidemics/Pandemics
- \*Fire
- \*Fire – Wildfires
- \*Floods
- \*Heat Waves
- \*High Winds
- \*Landslides
- Natural Gas Outages
- \*Power Outages
- Road Closures (main access)
- \*Thunderstorms and Lightning
- Volcanic Eruptions
- Tornados/Hurricanes
- \*Winter Severe Storms & Extreme Cold

### Technological Disasters

- \*Chemical
- \*Chemical - Household
- Hazardous Material Spills

### Terrorism

- General Info
- Biological Threats – Bio-Warfare
- \*Chemical Threats
- Civil Disorder
- Dirty Bombs – RDD (Radiological Dispersion Device)
- Explosions
- \*Nuclear Blast

## Disaster Helps

### Emotional First Aid

- \*Children
- Adults

### People with Special Needs

### Pet Safety

### Shelter-in-Place

- \*Chemical
- \*Dirty Bombs (RDD)
- \*Nuclear Blast

### Utilities Shutoffs

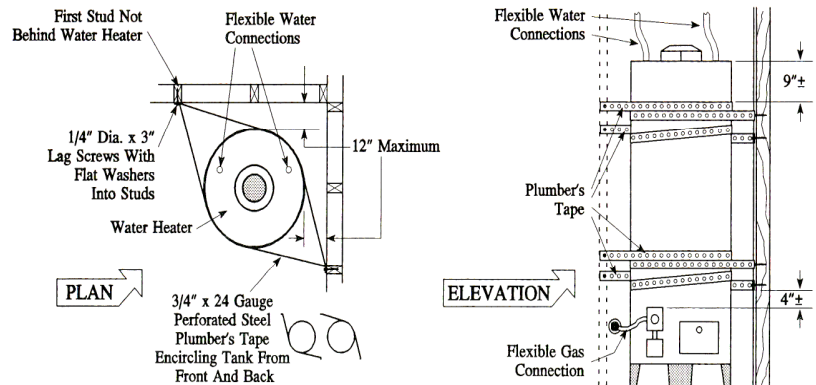
- \*Gas
- \*Electricity
- \*Water
- \*Sewer Control

\*This chapter contains tips for these emergencies, which are the most likely for our valley. The other topics might be added later.

## **EARTHQUAKES**

### **Before**

- Identify potential hazards in your home and correct them.
- Identify your building's potential weaknesses and fix them.
- Bolt down or provide strong support for water heaters and other appliances.
- Know how to turn off water and electricity to the house.
- Know how to turn off gas to house if you smell gas. Have wrench available.
- Store breakable items in secured cabinets.
- Store near bed: flashlight, light stick, battery-operated radio, pair of sturdy shoes and work gloves.
- Position bed away from heavy objects that could fall.
- Consider earthquake insurance.
- Prepare a family emergency plan, have a common meeting place, & practice evacuation drill yearly.



### **During**

- STAY CALM – DROP, COVER, HOLD ON
- If you are indoors, stay inside and find protection under (and hold on to) a sturdy desk or other piece of furniture. Stay away from windows, glass, tall furniture, outside doors and walls; avoid masonry walls (brick), chimneys (fireplaces) or anything that could fall. Stay in bed and cover head with pillow.
- Outside: Stand away from buildings, trees, telephone and electric lines. Move to an open area.
- On the Road: Stay in the vehicle. Drive away from underpasses/overpasses. Stop in a safe area.
- In an Office Building: Stay next to a pillar or support column or under a heavy table or desk and hold on. Do not use elevators and check stairways carefully before using.

### **After**

- Check for injuries. Provide first aid.
- Tune radio to an emergency station and listen for instructions from public safety agencies.
- Check for damages and safety – smell of gas, water, sewage breaks; check for downed electric lines; turn off interrupted utilities as necessary (see *Utilities Shut Off*); check for building damage and potential safety problems during aftershocks, such as cracks around chimney and foundation; check for fires. If major damages – get out of house. Inspect stairs carefully before using.
- Put on sturdy shoes.
- Clean up dangerous spills – fumes that could affect you.
- Use the telephone only for emergencies.
- As soon as possible, notify your family that you are okay.
- Do not use matches or open flames in the home until you are sure there are no gas leaks.
- Don't turn light switches off and on. Sparks created by the switch contacts can ignite gas fumes.
- In public buildings, follow evacuation procedures immediately and return only after the building has been declared safe by the appropriate authorities.
- Report damages or needs to your Block Captain.



## **FIRE**

### **Before**

- Install smoke alarms in all rooms and have some carbon monoxide detectors on lower floors. Replace every five years.
- Have fire extinguishers in car and house, especially in the kitchen. ABC type extinguishers (at least 10 lbs) are good. Try to keep a fire extinguisher within 10 feet of your stove.
- Store matches away from children.
- Make sure home is free of combustible materials (closets, attics, basement, garage and yard).
- Keep stoves and ovens free of grease.
- Never store flammable fluids indoors (gasoline, kerosene, benzene, naphtha, etc.)
- Check your wiring system. Many fires are due to overloaded electrical circuits, worn out cords and extension cords as well as careless use of appliances.
- Don't run wires under carpets or rugs.
- Keep space heaters away from traffic areas.
- Never use flammable liquids to start a fire.
- Use a metal screen on your fireplaces.
- Know avenues of escape. HAVE A FAMILY PLAN and PRACTICE fire drills.
- Have escape ladders for all windows higher than eight feet off the ground (especially for children). Determine primary and secondary exits.
- HAVE A PLACE TO MEET - so no one tries to go back into a burning building looking for someone needlessly.
- Store important documents in a fire safe container.



### **During**

- If you are outside, do not return for anything.
- Go to the nearest house or building and call your fire department by dialing 911. REPORT THE ADDRESS AND TYPE OF FIRE. LISTEN TO AND FOLLOW INSTRUCTIONS.
- If you are inside and have time, make sure everyone is out.
- If anyone else is home, report to the meeting place, then see that the telephone call to the fire department is made.
- If you are in a closed room or office, do not open the door without first feeling it with the back of your hand, or the doorknob. If it is warm or hot, do not open it, but unlock it to assist rescue or fire personnel.
- If there is smoke coming under the door, use clothes, sheets, etc. to stop smoke from coming in.

- If you are at home and there is a window, stay close to the floor and exit through the window, using the escape ladder if necessary. There is more oxygen near the floor, so crawl.
- If you should catch on fire, do not run. Drop to the ground and start rolling over and over to smother the flames.
- If you see someone on fire, use a coat or blanket, etc., not your bare hands to smother the flames.
- Watch to see that children don't go back inside to rescue a pet or prize possession. Turn off the gas and electricity, if possible, from the outside of the house.
- Do not use water on oil, grease, or electrical fires as the fire will explode into a larger fire.
- In a public building, follow the established evacuation procedures. Do not use the elevators.



- Take away fuel – remove burning material before the fire spreads, if possible.
- Take away air – a rug or blanket will smother the fire.
- Take away heat – you can't have too much water on hand.

### After

- Do not re-enter the building until appropriate authorities have given permission.
- Take pictures for your insurance.
- Plan and practice a family drill at least once a year.



## **WILDFIRE – Forest and Wildland**

### **Before**

- People start most wildfires. Design and landscape your home with wildfire safety in mind. Select materials and plants that can help contain fire, rather than fuel it. Hardwood trees are less flammable than pine, evergreen, eucalyptus or fir trees.
- Use fire resistant or non-combustible materials on the roof and exterior of your home.
- Create a 30-50 foot safety zone around your home. Homes built in pine forests should have a minimum safety zone of 100 feet.
- Protect your home by doing the following:
  - Regularly clean roof and gutters.
  - Remove leaves and rubbish from under structures.
  - Remove limbs of trees within 15 feet of ground.
  - Remove dead branches that extend over the roof.
  - Prune tree branches and shrubs within 15 feet of a stovepipe.
  - Clear branches from power lines (call Power Company to do this).
  - Remove vines from the walls of the home.
  - Clear a 10-foot area around propane tanks and the barbecue.
  - Regularly dispose of newspapers and rubbish.
  - Store gasoline, oily rags and other flammable materials in approved safety cans.
  - Stack firewood at least 100 feet away and uphill from your home.
  - Inspect chimneys at least twice a year. Clean them at least once a year.
  - Consider installing protective shutters or heavy fire-resistant drapes.
  - Keep handy household items that can be used as fire tools: a rake, axe, handsaw or chainsaw, bucket, and shovel. You may need to fight small fires before firemen arrive.
  - Identify and maintain an adequate outside water source such as a small pond, cistern, well, swimming pool, or hydrant.
  - Install freeze-proof exterior water outlets on at least two sides of the home and near other structures on the property.



### **During – When Wildfire threatens:**

- Keep posted on fire's progress – listen to radio and TV. Civil Defense will issue instructions.
- If you spot a fire, report it immediately by phone to local police, fire department, or county fire marshal. (See *Chapter 12 – Contact Info.*)
- If you have a fire in your fireplace or are burning trash outside, put out the fire immediately.
- Be ready to leave at a moment's notice. Back your car into the garage or park it in an open space facing the direction of escape. Shut doors and roll up windows. Leave the key in the ignition. Close garage windows and doors, but leave them unlocked. Disconnect automatic garage door openers. Place 72 Hour Kit, drinking water, substantial shoes, and your camera in the car.
- Confine pets to one room. Protect and secure your pets and livestock and make plans for them during an evacuation.

- Arrange for temporary housing outside the threatened area.
- Limit exposure to smoke or dust: listen to air quality reports, keep windows closed, don't use candles or the vacuum as it stirs up particles already in your home.
  
- **To protect your home:**
  - Inside**
    - Close windows, vents, doors, blinds and heavy drapes. Remove lightweight curtains.
    - Shut off gas at the meter. Turn off pilot lights.
    - Open fireplace damper. Close fireplace screens.
    - Move flammable furniture into the center of the home away from windows and sliding-glass doors.
    - Turn on a light in each room to increase the visibility of your home in heavy smoke.
  
  - Outside**
    - Hook up garden hoses.
    - Seal attic and ground vents with pre-cut plywood or commercial seals.
    - Turn off propane tanks.
    - Place combustible patio furniture inside.
    - Connect garden hose to outside taps.
    - Place lawn sprinklers on the roof and near above-ground fuel tanks. Wet the roof.
    - Wet or remove shrubs within 15 -30 feet of the home and other structures.
    - Gather fire tools.

### **During – Evacuation**

- If area evacuation is ordered, get full info on exit routes and relocation areas and follow directions.
- Do not use fire fighting entrance routes.
- Cooperate with local authorities and keep posted by radio.
- Be ready to assist in constructing community fire breaks, if asked to do so.
- If you are between ages 18 to 50 and able-bodied, assist in community fire fighting if asked to do so. Make certain you are under the supervision of designated fire fighters. All others should stay clear of the fire area.
- Always know where the fire is in relation to you. Know your escape route.

### **After**

- Return to home only when instructed you may do so.
- Use caution when entering burned areas as hazards may still exist, including hot spots which may flare up again without warning.
- Avoid damaged or fallen power lines, poles, and downed wires.
- Have respirators and disposable gloves ready to use.
- Watch animals closely and keep them under your control. Hidden embers could burn pets' paws.
- Wet down debris to minimize breathing dust particles.
- Wear protective clothing, e.g., leather gloves, heavy soled shoes.
- Properly discard cleaning products, paint, batteries, and damaged fuel containers to avoid risk.
- Discard contaminated food or water.
- Take pictures for your insurance.

## **FLOODS**

### **Before**

- Know the elevation of your property in relation to flood plains, streams, canyons, and other waterways. Determine if your property could be flooded. Consider flood insurance.
- Keep materials like sandbags, plywood, plastic sheeting, and lumber handy for waterproofing.
- Make advance plans of what to do and where to go.
- Store 3-day supply of food, water, and critical medical supplies (prescriptions, etc.) in a 72 Hour Kit.
- Make copies of personal documents and put in your 72 Hour Kit (medication lists, medical info, deed/lease to home, birth certificates, insurance policies).
- Have a portable radio, flashlights with extra batteries, cell phone and charger handy.
- Fill your car with gas in case you must evacuate.
- If time permits, move essential items, valuables, and furniture to upper floors or higher elevation. Enclose valuables in plastic bags.
- Turn off main water valve to protect the uncontaminated water in your home's water heater and pipes.
- If flooding is of significant depth, open basement windows to equalize water pressure on foundations and walls. Let water enter.
- Secure house.



### **During - Evacuation**

- Listen to area radio or TV and NOAA Weather Radio for information – flood warnings, etc.
- Prepare to evacuate. Be aware that flash flooding can occur without typical warnings such as rain clouds or heavy rain. Move immediately to higher ground. Do not wait for instructions to move.
- If you are asked to evacuate, shut off main power switch, main gas valve and water valve.
- Disconnect electrical appliances, unless you are wet or standing in water, then don't touch them.
- Stay away from floodwaters. Follow local evacuation plan and routes. Keep children out of the water.
- Do not attempt to drive over a flooded road, as it might be washed out. While you are on the road, watch for possible flooding at bridges, dips, and low areas. One foot of water can float a vehicle.
- Watch out for damaged roads, slides, and fallen wires.
- Drive slowly in water; use low gear. If floodwaters rise rapidly around car, abandon it. Move to higher ground. Most cars can be swept away by less than two feet of moving water.

- If your vehicle stalls, abandon it immediately and seek higher ground.
- Do not attempt to cross a flowing stream on foot where water is above your ankles. Six inches of swiftly moving water can sweep you off your feet.
- If you have to walk in water, use a stick to check the firmness of the ground in front of you.
- Register at your designated Evacuation Center and remain at the Evacuation Center until informed that you may leave.

### **After**

- Return home only when authorities indicate it is safe.
- Be wary of wildlife and other animals, including poisonous snakes.
- Check for structural damage before entering home or other buildings. DO NOT enter if you smell gas, if floodwaters remain around the building, or if the home was structurally damaged.
- Make sure electricity is off; watch for electrical wires and downed power lines.
- Do not turn the electrical system back on until it is checked by an electrician.
- Do not turn the gas back on – have a professional do so.
- Do not handle live electrical equipment in wet areas. Check and dry it before using.
- Do not use an open flame as a light source because of possibility of escaping gas. Turn flashlights on outside before entering. Beware of dangerous sparks even from cell phones.
- Listen for news reports of when the water supply is safe to drink.
- Toss items that have come in contact with floodwater, e.g., fresh food, plastic containers, water bottles, plastic utensils, baby bottles and nipples. Before opening canned goods, sterilize the can with bleach. Disinfect everything that got wet. When in doubt, throw it out.
- Test drinking water potability.
- During cleanup, wear protective clothing, e.g., rubber boots, rubber gloves, and N95 respirators.
- Get a copy of the Red Cross's *Repairing Your Flooded Home*.

### **FLOODING ADVISORIES**—Know the Difference

1. Flood/Flash Flood **Watch**—possible in your area.
2. Flood/Flash Flood **Warning**—is already occurring or will occur soon in your area.



## **HEAT WAVES**

In recent years excessive heat has caused more deaths than all other weather events, including floods. A heat wave is a prolonged period of excessive heat, often combined with excessive humidity. Temps are generally 10 degrees or more above the region's average summer high temperature, last for a long period of time, and occur with high humidity as well.

### **Before**

- Listen to local weather forecasts and stay aware of upcoming temperature changes.
- The heat index is the temperature the body feels when the effects of heat and humidity are combined. Exposure to direct sunlight can increase the heat index by as much as 15° F.
- Discuss heat safety precautions with members of your household. Have a plan for wherever you spend time—home, work, and school—and prepare for the possibility of power outages.
- Check the contents of your emergency preparedness kit in case a power outage occurs.
- Know those in your neighborhood who are elderly, young, sick or overweight. They are more likely to become victims of excessive heat and may need help.
- If you do not have air conditioning, choose places you could go for relief from the heat during the warmest part of the day (schools, libraries, theaters, malls, etc.).
- Be aware that people living in urban areas may be at greater risk from the effects of a prolonged heat wave than are people living in rural areas.
- Get trained in first aid to learn how to treat heat-related emergencies.
- Ensure that your animals' needs for water and shade are met.

### **During**

- Listen to a NOAA Weather Radio for critical updates from the National Weather Service (NWS).
- Never leave children or pets alone in enclosed vehicles.
- Stay hydrated by drinking plenty of fluids even if you do not feel thirsty. Avoid drinks with caffeine or alcohol.
- Eat small meals and eat more often.
- Avoid extreme temperature changes.
- Wear loose-fitting, lightweight, light-colored clothing. Avoid dark colors because they absorb the sun's rays. Cotton clothing retains moisture, and as the moisture evaporates, it cools you.
- Slow down, stay indoors and avoid strenuous exercise during the hottest part of the day.
- Postpone outdoor games and activities.
- Use a buddy system when working in excessive heat.
- Take frequent breaks if you must work outdoors and wear a hat.
- Check on family, friends, and neighbors who do not have air conditioning, who spend much of their time alone, or who are more likely to be affected by the heat.
- Check on your animals frequently to ensure that they are not suffering from the heat.

## **After – Recognize and care for heat-related emergencies**

### **Heat Cramps**

Heat cramps are muscular pains and spasms that usually occur in the legs or abdomen caused by exposure to high heat and humidity and loss of fluids and electrolytes. Heat cramps are often an early sign that the body is having trouble with the heat.

### **Heat Exhaustion**

Heat exhaustion typically involves the loss of body fluids through heavy sweating during strenuous exercise or physical labor in high heat and humidity.

- Signs of heat exhaustion include cool, moist, pale, or flushed skin; heavy sweating; headache; nausea; dizziness; weakness; and exhaustion.
- Move the person to a cooler place. Remove or loosen tight clothing and apply cool, wet clothes or towels to the skin. Fan the person. If the person is conscious, give small amounts of cool water to drink. Make sure the person drinks slowly. Watch for changes in condition.
- If the person refuses water, vomits or begins to lose consciousness, **call 9-1-1** or the local emergency number.

### **Heat stroke**

Heat stroke (also known as sunstroke) is a life-threatening condition in which a person's temperature control system stops working and the body is unable to cool itself.

- Signs of heat stroke include hot, red skin which may be dry or moist; changes in consciousness; vomiting; and high body temperature.
- Heat stroke is life-threatening. **Call 9-1-1** or the local emergency number immediately.
- Move the person to a cooler place. Quickly cool the person's body by giving care as you would for heat exhaustion. If needed, continue rapid cooling by applying ice or cold packs wrapped in a cloth to the wrists, ankles, groin, neck, and armpits.

## **HEAT ADVISORIES—Know the Difference**

1. Excessive Heat **Watch**—Conditions are favorable for an excessive heat event to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.
2. Excessive Heat **Warning**—Heat Index values are forecast to meet or exceed locally defined warning criteria for at least 2 days (daytime highs = 105-110° Fahrenheit).
3. Heat **Advisory**—Heat Index values are forecast to meet locally defined advisory criteria for 1 to 2 days (daytime highs = 100-105° F).

## **HIGH WINDS**

### **Before**

- Survey your home and/or property. Take note of materials stored, placed, or used, which in the event of high winds could become missiles and destroy other structures or be destroyed. Devise methods of securing these materials where they will still be accessible for day-to-day needs.
- Keep radio and/or TV on and monitor for wind advisories.
- Have a battery-powered radio as electricity often goes down during high winds – it might be essential.
- Have a supply of flashlights, spare batteries, candles, first aid equipment, medicines, cooking equipment, etc., available for emergency use.
- When a high-wind advisory is given:
  - Larger windows may be broken by wind pressure. To relieve wind pressure, open windows about one inch at opposite ends of the home.
  - Small windows are mainly broken by flying debris. Make a large X across the window with tape.
  - If possible, board up, tape or shutter all windows.
  - Draw some water for emergency use in the event water service is interrupted. City water delivery often requires electrical pumps.
  - Secure outdoor furniture, trashcans, tools, etc. that might be blown into your windows, car, or blown away.

### **During**

- Take shelter in hallways, closets, and away from windows and flying glass.
- Remain indoors during the storm in the most reinforced area of the home.
- Stay out of areas where flying objects may hit you or destroy your place of refuge.

### **After Winds Subside**

- Stay away from fallen or damaged electric wires; these may still be dangerous.
- Inspect for structural damage.
- Check all utilities for damage and proper operation.
- Monitor radio and TV for instruction from local authorities.
- Report damage and needs to your Block Captain.





## **LANDSLIDES**

Landslides have occurred in almost every state and can cause significant damage. The term landslide describes downhill earth movements that can move slowly and cause damage gradually, or move rapidly, destroying property and taking lives suddenly and unexpectedly. Most landslides are caused by natural forces or events, such as heavy rain and snowmelt, earthquake shaking, volcanic eruptions and gravity. Landslides are typically associated with periods of heavy rainfall or rapid snowmelt and tend to worsen the effects of flooding. Areas burned by forest and brush fires are also particularly susceptible to landslides.

### **Before**

- Landslides generally happen in areas where they have occurred in the past. Learn about your area's landslide risk. Landslides can also be referred to as mudslides, debris flows, mudflows or debris avalanches.
- Learn about local emergency response and evacuation plans.
- Talk to everyone in your household about what to do if a landslide occurs.
- Create and practice an evacuation plan for your family and your business.
- Assemble and maintain an emergency preparedness kit (72 Hour Kit).
- Become familiar with the land around where you live and work so that you understand your risk in different situations.
- Watch the patterns of storm water drainage on slopes near your home, especially where runoff water converges.
- Debris flows and other landslides onto roadways are common during rainstorms.
- Heavily saturated ground is very susceptible to mudflows and debris flows.
- Be aware that, generally, landslide insurance is not available, but that debris flow damage may be covered by flood insurance policies from the National Flood Insurance Program (NFIP) at [www.fema.gov/business/nfip](http://www.fema.gov/business/nfip).

### **During**

- If you suspect imminent danger, evacuate immediately. Inform affected neighbors if you can, and contact your public works, fire, or police department.
- Listen for unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together.
- If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and notice whether the water changes from clear to muddy. Such changes may mean there is debris flow activity upstream, so be prepared to move quickly.

- Be especially alert when driving—watch for collapsed pavement, mud, fallen rocks, and other indications of possible debris flow.
- If you are ordered or decide to evacuate, take your animals with you.
- Consider a precautionary evacuation of large or numerous animals as soon as you are aware of impending danger.
- **During Severe Storms**
  - Stay alert and awake. Many deaths from landslides occur while people are sleeping.
  - Listen to local news stations on a battery-powered radio for warnings of heavy rainfall.
  - Consider leaving if it is safe to do so.

### **After**

- Stay away from the slide area until local officials say it is safe to enter.
- Listen to local stations on a portable, battery-powered radio for the latest emergency information.
- Watch for flooding—floods sometimes follow landslides and debris flows.
- Check for injured and trapped persons and animals near the slide, without entering the slide area.
- Help people who require special assistance.
- Look for and report broken utility lines to appropriate authorities.
- Check your home's foundation, chimney, and surrounding land for damage.
- Replant damaged ground as soon as possible because erosion caused by loss of ground cover can lead to flash flooding.



Above: July 2009 – Canyon Road Mudslide and Canal Failure  
Right: Mt Logan Stake Volunteers working to remove the debris.



## **POWER OUTAGES**

### **Before**

- Learn location of your home's fuse box or circuit breaker(s).
- Store candles, flashlights and extra batteries in a handy place.
- Have food and water supplies on hand, since an outage may last awhile.
- Know the location of all camping equipment (stove, lantern, sleeping bags). You may need them. Make sure the equipment is operational and that you know how to use them. **REMEMBER THAT CAMPING EQUIPMENT REQUIRING GASOLINE, WHITE GAS, COLEMAN FUEL OR CHARCOAL BRIQUETTES SHOULD NOT BE USED INSIDE THE HOUSE - ONLY OUTSIDE.**
- Have a heat source that is not dependent on electrical power.
- Keep adequate supply of fuel on hand. Propane, white gas, gasoline and Coleman fuel must not be stored in the house or garage, as they are too volatile. Only kerosene and propane may be used in the house, if ventilation is adequate. Kerosene is limited in quantity to one 55-gallon drum on a person's property in Logan.
- Keep your refrigerator well defrosted. Built-up ice works against your freezer. Keep your freezer as full as possible. Full freezers could hold a cold temperature for three days without electricity, depending on outside temperature and location of freezer.
- Keep your car fuel tank at least half full because gas stations use electricity for their pumps.
- Keep your computer files backed up regularly and use a high-quality surge protector.

### **During**

- Turn off and unplug all your appliances. The surge of power that comes when power is restored could ruin your appliances.
- Turn off all but one light. When it turns on you will know your power has returned.
- Check on your neighbors (especially the elderly.)
- A major problem during an outage is food thawing in the refrigerator or freezer. Open door only to take food out, and do so as quickly as possible. If you have access to dry ice, place it in a cardboard box and then on top of food.
- When using camping equipment during an outage, remember to do so outside. Use only a fireplace, a properly installed wood stove, a new-style kerosene heater, and some propane heaters in a safe area with the room vented, i.e., open the window a little.
- Do not run a generator inside a home or garage or connect it to a home's electrical system. Connect only equipment you want to run to the generator's power outlet.
- Report any downed lines.
- Do not allow children to carry lanterns, candles, or fuel.
- Keep your car fuel tank at least half full as the gas station pumps require electricity.

### **After**

- When power is restored, plug in appliances one by one, waiting a few minutes in between each one. This may prevent an overload on the system.
- Be patient. Energy may first be restored to police and fire departments and hospitals.
- Examine your frozen food. If it still contains ice crystal, it may be refrozen. If meat is off-color or has an odd odor, throw it away.

## **THUNDERSTORMS AND LIGHTNING**

### **Before**

- Pick a safe place in your home for members to gather during a thunderstorm – away from windows, skylights, and glass doors that could be broken by strong winds.
- Make the trees and shrubbery around your house more wind resistant – keep them trimmed.
- Arrange for an emergency heat supply in case of power failure.
- Get trained in first aid and prepare a first aid kit.
- Have and practice a family emergency plan



### **During – Protect Yourself**

- When a thunderstorm or lightning threatens, go inside a home or large building, or inside an all-metal vehicle (not a convertible) and close doors. Stay indoors and don't venture outside unless absolutely necessary. Stay inside for at least 30 minutes after the last thunder clap.
- Stay away from open doors and windows, fireplaces, radiators, stoves, metal pipes, sinks and plug-in appliances. Do not take a shower, bath or use the plumbing.
- Don't use plug-in electrical equipment such as hair dryers, electric blankets or electric razors during the storm. Listen to local news or NOAA Weather. Use a battery-powered Radio.
- Except for emergencies, don't use the telephone during the storm. Lightning may strike telephone lines outside.
- If outside, with no time to reach a safe building or an automobile, follow these rules:
  - Do not stand underneath a natural lightning rod such as a tall, isolated tree in an open area.
  - Avoid projecting yourself above the surrounding landscape, as you would do if you were standing on a hilltop, in an open field, on the beach, or fishing from a small boat.
  - Get out of the water and off small boats.
  - Get away from tractors and other metal farm equipment.
  - Stay away from wire fences, clotheslines, metal pipes, rails, exposed sheds, picnic shelters, or anything that is high that would conduct electricity. Some of these could carry electricity to you from some distance away. Stay away from downed power lines.
  - Don't use metal objects like fishing rods and golf clubs. Golfer's cleated shoes are particularly good lightning rods.
  - Stay in your automobile if you are traveling and pull off roadway; turn on emergency flashers until heavy raining ends. Automobiles offer excellent lightning protection.
  - Get off and away from motorcycles, scooters, golf carts and bicycles.
  - If no buildings are available, your best protection is a cave, ditch or canyon, or under head-high clumps of trees or shrubs.
  - If only isolated trees are nearby, your best protection is to crouch in the open, keeping twice as far away from isolated trees as the trees are high.
  - When you feel the electrical charge - if your hair stands on end or your skin tingles - lightning may be about to strike. Drop to the ground immediately.

### **After – First Aid**

- Persons struck by lightning receive a severe electrical shock and may be burned, but they carry no electrical charge and may be handled safely. Call 911 as they need medical assistance.
- A person "killed" by lightning can often be revived by prompt mouth-to-mouth resuscitation, cardiac massage, and prolonged artificial respiration.
- In a group struck by lightning, the apparently dead should be treated first; those who show vital signs will probably recover spontaneously, although burns and other injuries may require treatment.

## **WINTER SEVERE STORMS**

### **Before**

- Be prepared for isolation at home. If you live in a rural area, make sure you can survive at home for a week or two in case a storm isolates you and makes it impossible for you to leave.
- Insulate your home and install weather stripping and storm windows (or have plastic sheeting ready).
- Maintain heating equipment and chimneys. Arrange for an emergency heat supply in case of power failure. All fuel-burning equipment should be vented to the outside and kept clean.
- Install fire and carbon-monoxide alarms on every level of your home and outside sleeping areas.
- Prepare automobile, battery-operated equipment, food, heating fuel, and other supplies.
- Winterize your vehicle and keep fuel tank above half full. A full tank will keep fuel line from freezing.
- Prepare a winter survival kit. You should have the following items in your car: Blankets or sleeping bags, flares, high-energy foods (candy, raisins, nuts, etc.), first aid kit, flashlights, extra clothing, knives, compass, emergency candles and matches, maps, jumper cable, tow chain, shovel, windshield scraper, and sack of sand.
- Have sand, rock salt or non-clumping kitty litter to make walkways and steps less slippery.
- Listen to radio or TV or NOAA Weather Radio *Winter Storm Advisories* for critical information.



### **During**

- Dress warmly using layering – multiple layers of thermals, tops, pants, vests, coats, scarves, mittens, and hoods (synthetic and wool). Stay dry as possible. Wet clothing loses up to 90% of its insulating value. Replace wet clothes with dry ones. Wear waterproof insulated boots.
- Cover the mouth and nose to protect lungs from extremely cold air.
- Stay home, if possible.
- Bring pets inside during winter weather.
- Running water, even a trickle, helps prevent pipes from freezing.
- If trapped at home:
  - Move into room with fireplace, wood burning stove, or kerosene heater
  - Close off the remainder of the house
  - Stay together
  - Monitor your heating fuel supply
  - Check on neighbors, especially the elderly, if possible
- Avoid travel as ice and severe snowstorms make streets dangerous and hypothermia is a real threat.
- If you must travel, try not to go alone. Give others your route and arrival time. Take your winter survival kit - see above.
- If you are in a vehicle and become stranded, stay in your vehicle. Your car will keep you warm, visible, and alive. Keep car ventilated, bundle up, light an emergency candle for warmth or run the car intermittently (not continuously) for heat, occasionally change positions, keep snow away

from the exhaust pipe, and DON'T PANIC.

- Beware of the chill factor if winds are present.
- Watch for signs of hypothermia.
- CAUTION – Carbon Monoxide Kills

### **After**

- Avoid over exertion. Heart attacks are a major cause of deaths during and after winter storms. Shoveling snow or freeing stuck vehicles can be extremely hard work. Don't overdo it!
- If your home has lost power or heat, go to a neighbor's home or designated public shelter.
- Protect yourself from frostbite and hypothermia by wearing warm clothing layers.
- Help people who require special assistance.
- Check on your animals and make sure they have access to food and water.

### **COLD-RELATED MEDICAL EMERGENCIES**

Anyone exposed to cold temperatures, whether for work or recreation, may be at risk of becoming too cold. Frostbite and hypothermia are both cold-related emergencies. Understand the warning signs, how to treat the conditions, and when to obtain professional medical help.

1. **Frostbite.** Frostbite occurs when tissues freeze. This condition happens when you are exposed to temperatures below the freezing point of skin.
2. **Hypothermia.** Hypothermia is the condition of developing an abnormally low body temperature. Hypothermia (the decrease in core body temperature) can slow down your normal muscular and cerebral functions and can kill you. Any body temperature less than 98.6 degrees can be linked to hypothermia or peripheral circulation problems.

### **WINTER STORM ADVISORIES**—*if a warning is issued, the Storm is imminent.*

1. Winter Storm **OUTLOOK.** Winter storm conditions are possible in the next 2 to 5 days.
2. Winter Weather **ADVISORY.** Winter weather conditions are expected to cause significant inconveniences and may be hazardous. When caution is used, these situations should not be life threatening.
3. Winter Storm **WATCH.** A winter storm is approaching within the next 36-48 hours. Keep informed.
4. Winter Storm **WARNING.** Life-threatening, severe winter conditions have begun or will begin within 24 hours. People in a warning area should take precautions immediately.
5. **FLURRIES.** Intermittent snowfall that may reduce visibility.
6. **SLEET.** Small particles of ice usually mixed with rain. If enough sleet accumulates on the ground, it will make the roads slippery.
7. **HEAVY SNOW.** When four or more inches are expected within a 12-hour period.
8. **FREEZING RAIN OR FREEZING DRIZZLE.** When expected rain is likely to freeze as soon as it strikes the ground, putting a coating of ice or glaze on roads and everything else that is exposed. If a substantial layer of ice is expected to accumulate from the freezing rain, an ICE STORM is forecast.
9. **BLIZZARD.** A blizzard is the most dangerous of all winter storms. It combines cold air, heavy snow and strong winds that blow the snow about and may reduce visibility to only a few yards. Winds 35 mph. Temperature 20° F. or less.
10. **SEVERE BLIZZARD WARNING.** This means that a very heavy snowfall is expected, with winds of at least 45 mph or temperatures of 10° or lower.

## **CHEMICAL EMERGENCIES**

**You may be exposed to a chemical even though you may not be able to see or smell anything unusual.** You may be exposed in four ways:

1. Breathing the chemical.
2. Swallowing contaminated food, water, or medication.
3. Touching the chemical, or coming into contact with clothing or things that have touched the chemical.
4. Eye exposure.

### **Before – Preventing Chemical Emergencies in the Home**

- Keep all medicines, cosmetics, cleaning products, and other household chemicals out of sight and out of reach of children.
- Flush medicines that are no longer being used or that are outdated down the toilet, and place the empty container in the trash.
- Store household chemicals according to the instructions on the label.
- Avoid mixing together common household chemical products.
- Always read the directions before using a new product.
- Read instructions on how to dispose of chemicals properly.
- Never smoke while using household chemicals. Avoid using hair spray, cleaning solutions, paint products, or pesticides near the open flame of an appliance, pilot light, lighted candle, fireplace, wood burning stove, etc.
- If you should spill a chemical, clean it up immediately with rags, being careful to protect your eyes and skin.
- Buy only as much of a chemical as you think you will use.
- Keep an A-B-C-rated fire extinguisher in the home and car, and get training from your local fire department on how to use them.
- Post the number of the nearest poison control center by all telephones .
- Learn to recognize the symptoms of toxic poisoning:
  - Difficulty in breathing.
  - Irritation of the eyes, skin, throat, or respiratory tract.
  - Changes in skin color.
  - Headache or blurred vision.
  - Dizziness.
  - Clumsiness or lack of coordination.
  - Cramps or diarrhea.



### **During – a Home Chemical Emergency**

- If your child should eat or drink a non-food substance, find any containers immediately and take them to the phone.
- Call the poison control center, 9-1-1, emergency medical services (EMS), or the operator.
- Follow the emergency operator's or dispatcher's instructions carefully.
- If a hazardous substance comes into contact with an eye, it is important to take immediate action. Delaying first aid can greatly increase the likelihood of injury. Flush the eye with clear, lukewarm water for a minimum of 15 minutes, unless authorities instruct you not to use water on the particular chemical involved.
- If there is danger of a fire or explosion from the chemical, get out of the house immediately.

- If there is a fire or explosion, call the fire department from outside (a cellular phone or a neighbor's phone).
- Stay away from the house to avoid the possibility of breathing toxic fumes.
- Wash hands, arms, or other parts of the body that may have been exposed to the chemical.
- Discard any clothing that may have been contaminated.
- Administer first aid treatment to victims of chemical burns.
  - Call 9-1-1 for emergency help.
  - Remove clothing and jewelry from around the injury.
  - Pour clean, cool water over the burn for 15 to 30 minutes.
  - Loosely cover the burn with a sterile or clean dressing. Be sure that the dressing will not stick to the burn.
  - Refer victim to a medical professional for further treatment.

### **During – A Major Chemical Emergency**

- If you hear a siren or other warning signal, turn on a radio or television for further emergency information.
- Strictly follow instructions.
- You will be told the following:
  - The type of health hazard.
  - The area affected.
  - How to protect yourself.
  - Evacuation routes (if necessary).
  - Shelter locations.
  - Type and location of medical facilities.
  - The phone numbers to call if you need extra help.
- Call EMS, 911, or the operator only for a possible life-threatening emergency. Keep phone lines free for emergency responders and critically injured.
- Your children may be sheltered in place or evacuated from school. If protective actions are being taken at your children's school, do not go to the school or call the school. For further information, listen to local emergency radio and TV stations to learn when and where you can pick up your children.



## **SHELTER-IN-PLACE – Chemical**

*(From Cache County Local Emergency Planning Committee's, **In-Place Sheltering** during a Chemical Emergency, and from the American Red Cross's Fact Sheet on Shelter-in-Place)*

One of the instructions you may be given in an emergency where hazardous materials may have been released into the atmosphere is to shelter-in-place. Shelter-in-Place simply means staying inside your home, business or other facility, or seeking shelter in the nearest available building. In-place sheltering keeps you inside a more protected area when chemical, biological, or radiological contaminants have been released accidentally or intentionally and air quality may be threatened. Most likely you will only need to shelter for a few hours and there will be sufficient oxygen in the room for all.

### **When Should You Shelter-in-Place?**

Local authorities are responsible for issuing orders for Sheltering-in-Place during chemical or hazardous material emergencies. You may receive notice from Police, Fire and Emergency Management Officials, directly or through radio or television broadcasts. An emergency vehicle going through your area with a Hi-Lo Siren sounding continuously means an emergency situation may exist in your area. You should immediately tune to your local Emergency Alert System (EAS) for more information. The primary EAS stations for Cache Valley are KVNU 610 AM and Cache County Sheriff's WQKB 1610 AM. Emergency information, including steps to be taken, will be broadcast continuously until the emergency is over.

### **During – At Home, entire house**

- Go inside as quickly as possible. Bring any outdoor pets indoors and gather additional food and water for them.
- Turn on your radio or TV and find a portable radio and extra batteries for backup.
- Close and lock all windows and exterior doors. Close the window shades, blinds, or curtains.
- Turn off all fans, air conditioners and force-air heating units that bring in fresh air from the outside. Only use units that re-circulate air already in the building. Switch inlets or vents to the "closed" position.
- Close all fireplace dampers..
- Seal gaps around doors, windows, window-type air conditioners, and fireplace dampers, with tape, plastic sheeting, wax paper, aluminum wrap, or other material. Make unbroken seals.
- Seal all bathroom exhaust fans or grills, range vents, dryer vents, and all other openings, as much as possible.
- Sink and toilet drain traps should have water in them. You can use the sink and toilet as you normally would but don't drink water from the taps.
- Tape plastic over any windows
- Stay away from windows and doors.
- Remain inside until you are informed by Police, Fire and Emergency Management Officials directly, or through radio broadcasts, that it is safe to leave.

### **During – At Home, One Room**

- If time does not permit you to seal the entire home, close exterior doors and windows and as many internal doors as possible. Then move to a room that can be easily sealed and seal that room. A large room with a water supply is best, like a bedroom with adjoining bathroom.
- The interior room should have no windows and should be as high as possible above ground level

for chemical emergencies, as some chemicals are heavier than air, and may seep into basements even if the windows are closed. For radiological events, the room should be below ground.

- It is ideal to have a hard-wired telephone in the room you select.
- Call your emergency contact and keep the phone available to report a life-threatening condition.
- Use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door and any vents into the room.
- Remain in room until told all is safe OR you are told to evacuate. High risk areas might be asked to evacuate.

### **During – At your Workplace**

In addition to the directions listed for your home, you should take the following steps:

- Close the business.
- Bring everyone into the room(s). Ask customers or visitors to stay.
- Ask everyone to call their emergency contact and let them know where they are and they are safe.
- Change the telephone voicemail to indicate that the business is closed and staff and visitors are safe and will remain until authorities advise it is safe to leave. Turn on call-forwarding or alternative answering systems or services, if appropriate.
- Close and lock all windows, exterior doors, and any other openings to outside.
- If told there is danger of explosion, close the window shades, blinds, or curtains.
- Have employees familiar with your building's mechanical systems check all fans, heating and air-conditioning systems. Ensure that all ventilation systems are set to 100 percent re-circulation so that no outside air is drawn into the building. Seal where necessary.
- If 100 percent re-circulation is not possible, ventilating systems should be turned off.
- Gather essential disaster supplies: Food, bottled water, battery-powered radios, first-aid supplies, flashlights, batteries, duct tape, plastic sheeting, towels, garbage bags, etc.
- Minimize use of elevators as they tend to "pump" air in and out of a building while moving up and down.
- Select interior room(s) above the ground floor for chemical events, below ground for radiological. Choose rooms with no or the fewest windows or vents. Avoid overcrowding. Large storage closets, pantries, and copy and conference rooms will work well.
- Seal all cracks around the doors and windows and any vents with duct tape and plastic sheeting.
- It is ideal to have a hard-wired telephone in the room(s) you select. Call emergency contacts.
- Write down names of everyone in the room(s) and call your business's designated emergency contact to report those present.
- Again, remain inside until you receive notice from Police, Fire and Emergency Management Officials directly or through radio broadcasts that it is safe to leave.

### **During – At School:**

- Close the school. Activate the school's emergency plan. Follow reverse evacuation procedures to bring faculty, students, and staff indoors.
- Ask visitors to stay to ensure their safety.
- Have one hard-wired phone in the room designated for the person who will answer calls from concerned parents. This room should also be sealed.
- Provide a way for shelter-in-place rooms to communicate. Provide a way to make announcements over the public address system from the room where the top school official takes shelter.

- If children have cell phones, allow them to call their parents and let them know they are safe and will remain at the school.
- Change the school's telephone recording to indicate that the school is closed and all are safe and will remain until authorities advise it is safe to leave.
- Provide directions to close and lock all windows, exterior doors and any other openings to the outside.
- Follow the other steps outlined in *Steps in the Workplace*, above.

### **During – In Your Vehicle**

While driving, if you hear advice on the radio to “shelter-in-place,” take these steps:

- Have an emergency kit in your car that includes maps, water, food, duct tape, flashlight, etc.
- If you are very close to home, your office or a public building, go there immediately and go inside.
- If unable to reach a safe building, pull over to the side of the road. Stop your vehicle in the safest place possible. If it is sunny, it is best to stop under a bridge or in a shady spot to avoid overheating.
- Turn off engine.
- Close windows and vents.
- If possible, seal the heating/air conditioning vents with duct tape.
- Listen to the radio regularly for updated instructions and advice.
- Stay where you are until you are told it is safe to get back on the road.
- Be aware that some roads may be closed or traffic detoured. Follow directions of law enforcement officials.

When Shelter-in-Place has been ordered because of an accidental release of toxic chemicals, remember to DO the following:

1. Stay inside your place of business, home or in another enclosed building.
2. Stay tuned to the Emergency Alert System (EAS) on your radio or television for more information.
3. Do NOT call 911 unless it is a life threatening emergency.
4. Do NOT go outside unless specifically instructed to evacuate.

## **Shelter-in-Place – Dirty Bombs (RDD)**

*(RDD – Radiological Dispersal Device; info from the Center for Disease Control and FEMA websites)*

Sheltering-in-Place during a dirty bomb or nuclear incident means staying inside your home, business or other facility, or seeking shelter in the nearest available building. In-place sheltering keeps you inside a more protected area where nuclear fallout will not touch you.

### **When Should You In-Place Shelter?**

Authorities will issue orders for Sheltering-in-Place or evacuating to a Fallout Shelter during a nuclear emergency. You may receive notice from Police, Fire and Emergency Management Officials directly, or through radio or television broadcasts.

**WARNING SIGNAL OF NUCLEAR ATTACK.** The standardized warning signal of a nuclear attack is a 3 to 5 minute wavering sound of a siren or series of short blasts on whistles, horns, or other similar devices. This signal will be used for no other purpose. There is also an attention or alert

signal which is a steady 3-5 minute blast of the same sirens, whistles, or horns. If this signal is heard, you should turn on your radio or television for important information that is about to be broadcast. You would be instructed which station to tune to and also what action should be taken in an emergency.

You should immediately tune to your local Emergency Alert System (EAS) for more information. The primary EAS stations for Cache Valley are KVNU 610 AM and WQKB 1610 AM. Emergency information, including steps to be taken, will be broadcast continuously until the emergency is over.

### **During**

- Begin executing your family plan. Everyone has a job they have practiced and does it quickly.
- If outside when the alert is given, try to remove clothing and shoes and place them in a plastic bag before entering the house. This is to avoid bringing radioactive materials inside. Removing clothing removes 90% of contaminants which reduces your exposure and risk of radiation poisoning. You could also remove clothing in your garage, immediately put the clothing bag outside, and rinse off with the hose, but then you would not be able to enter the garage afterwards because of radioactive contamination.
- Shower and wash your body with soap and water.
- If possible, bring pets inside and wash them with soap and water. You shower afterwards.
- Close and lock all doors and windows to the outside. Locking windows makes the seal tighter.
- Turn off all fans, air conditioners, and force-air heating units that bring in fresh air from the outside. Only use units to re-circulate air already in the building. Switch inlets or vents to the "closed" position.
- Close all fireplace dampers.
- If there is time, seal gaps around window-type air conditioners, fireplace dampers, doors, and windows with tape, plastic sheeting, wax paper, aluminum wrap, or other material.
- If there is time, seal all bathroom exhaust fans or grills, range vents, dryer vents, and all other openings, as much as possible.
- Move into your shelter room – the interior, windowless basement room you have pre-chosen.
- Have supplies already in the room or bring them into the room. A bedroom with attached bathroom would be a good room as you would have a toilet. If not, provide for toileting.
- Seal any doors, windows, vents, and electrical outlets in the room with duct tape and plastic sheeting.
- Stay away from windows and doors.
- Remain inside until you are informed by Police, Fire, and Emergency Management Officials directly, or through radio broadcasts, that it is safe to leave. It could take up to two weeks.

If time does not permit you to seal the entire home, close and lock exterior doors and windows and as many internal doors as possible, then move to a room that can be easily sealed.



## **Nuclear Blast**

None of us likes to think about the possibility of a nuclear attack. Even though the possibility is remote, preparation is still essential. Our families can survive nuclear fallout and avoid radiation sickness if we get them and our supplies into a proper shelter and safely wait it out. The following is an introduction. For complete information you will need to read *Nuclear War Survival Skills* by Cresson H. Kearny (hardcopy or online at [http://www.ki4u.com/free\\_book/s73p904.htm](http://www.ki4u.com/free_book/s73p904.htm)) OR *11 Steps to Survival* by Canada Emergency Measures Organization, Dept. of National Defense at <http://www.ki4u.com/survive/index.htm>. Download and print a copy now so it will be ready when you need it.

**If it is ONLY a 'Dirty Bomb' attack**, (not the vastly more devastating nuclear weapon blast and fallout discussed below), you can expect localized and downwind contamination from the explosion and dispersed radioactive materials. If you are near enough to see or hear any local bomb blast, assume that it includes radiological or chemical agents. You should move away from the blast area as quickly as possible. If the wind is blowing toward you from the direction of the blast, travel in a direction that is crosswise or perpendicular to the wind as you move away from the blast area. If possible cover your face with a dust mask or cloth to avoid inhaling potentially radioactive dust. Upon reaching a safe location, remove your outer clothing outside and shower as soon as possible. Refer to local news sources for additional instructions about sheltering or evacuation. The government is better prepared to direct and assist the public in a 'dirty bomb' incident, unlike an actual nuclear weapon attack discussed below.

### **Long Before**

- Know the effects of nuclear explosions.
- Know the facts about radioactive fallout.
- Know the warning signal and have a battery-powered radio so you can listen to emergency alert stations.
- Know how to take shelter.
- Have 14 days of emergency food and supplies.
- Have a family sheltering plan that is practiced and can be executed quickly.
- Know how to prevent and fight fires.
- Know first aid and home nursing.
- Know emergency cleanliness.
- Know how to get rid of radioactive dust.
- Know your city plans for a radiation emergency.

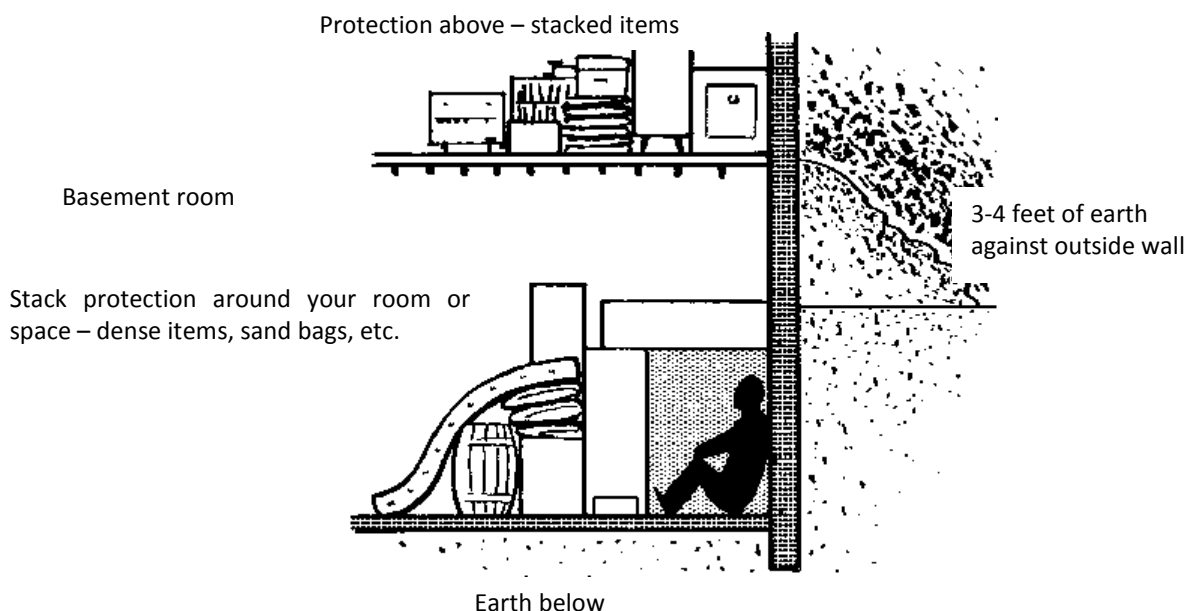
### **Directly Before**

- **WARNING SIGNAL OF NUCLEAR ATTACK.** The standardized warning signal of a nuclear attack is a 3 to 5 minute wavering sound of a siren or series of short blasts on whistles, horns, or other similar devices. This signal will be used for no other purpose. There is also an attention or alert signal which is a steady 3-5 minute blast of the same sirens, whistles, or horns. If this signal is heard, you should turn on your radio or television for important information that is about to be broadcast. You will be instructed which station to tune to and also what action should be taken in an emergency.

- Turn your battery-powered radio to the emergency alert radio station KVNU 610 AM or Logan 1610. Local Authorities will monitor the radiation levels and give instructions.
- If you are advised to shelter-in-place, you should do the following:
  - Close and lock all doors and windows
  - Turn off fans, air conditioners, and forced-air
- If you are unable to evacuate, construct a shelter in your basement or crawl space. Your main concern will be to protect yourself and your family from radioactive fallout. Nuclear fallout can be expected anywhere from 20 minutes to a few hours depending on how close the blast was and also wind and weather conditions.
- There are three ways to protect yourself from nuclear fallout. They are:
  - **Distance.** The more distance between you and the fallout particles the less radiation received.
  - **Mass.** The more heavy, dense materials between you and the fallout particles the better. Materials such as concrete, bricks, sandbags, and earth will absorb much of the radiation and keep it from reaching you.
  - **Time.** Fallout radiation decays rapidly. As time passes, fallout loses its radioactivity. Be prepared to spend anywhere from 3 days to 2 weeks in your shelter.

### During & After

- Turn your battery-powered radio to the emergency alert radio station KVNU 610 AM or WQKB 1610 AM. Local authorities will monitor the radiation levels and give instructions.
- Do not leave your shelter until instructed that you may (about 3 to 14 days).
- There are three types of radiation – alpha particles, beta particles and gamma rays. Alpha and beta particles can simply be washed off the skin and clothing. Gamma rays are the most feared and difficult to protect you from, but occur only in the immediate aftermath of the blast. They can be stopped with 18-24 inches of concrete, or 3-4 feet of earth.
- After many studies, the Federal Government feels that most remaining food supplies would be safe for use after an attack. Food must simply be washed to clean off any of the fallout particles.



## **EMOTIONAL FIRST AID**

(From *Helping Children Cope with Disaster* by the American Red Cross and FEMA)

Children can feel very frightened during a disaster and afterwards some children will show temporary changes of behavior. For most children these changes will be mild, not last long, and diminish with time. However, reminders of what happened could cause upsetting feelings to return and behavior changes to emerge again. Watching scenes of the disaster on television can be distressing for children, especially for younger children.



Younger children may return to bed-wetting, have difficulty sleeping, and not want to be separated from their caregivers. Older children may show more anger than usual, find concentrating at school harder, and want to spend more time alone than usual. Some children are more vulnerable, and their reactions can be more severe and last for a longer period of time.

### **Factors that contribute to greater vulnerability include:**

- Direct exposure to the disaster  
This includes being evacuated, seeing injured or dying people, being injured themselves, and feeling that their own lives are threatened.
- Personal loss  
This includes the death or serious injury of a family member, close friend, or family pet.
- On-going stress from the secondary effects of disaster  
This includes temporarily living elsewhere, losing contact with their friends and neighbors, losing things that are important to them, parental job loss, and the financial costs of reestablishing their previous living conditions.
- Prior exposure to disaster or other traumatic event.

How parents and caregivers react to and cope with a disaster or emergency situation can affect the way their children react. When parents and caregivers or other family members are able to deal with the situation calmly and confidently, they are often the best source of support for their children. One way to help children feel more confident and in control is to involve them in preparing a family disaster plan.

### **Children's' Reactions to Disasters**

- Birth through 6 years. Infants can retain memories. They may react by being more irritable, crying more, wanting to be held more. Preschool and kindergarten children can feel helpless, powerless and frightened.
- 7 to 10 years. Can understand permanence of loss. May become preoccupied with details of the traumatic event and want to talk. May hear inaccurate information from their peers. May fear it will happen again.
- 11-18 years. Response more like an adult's. World may seem more dangerous. May become involved in reckless behavior. May become fearful of leaving the home. May be overwhelmed

and unable to talk about their feelings.

- Children are most afraid of:
  - The event will happen again.
  - Someone close to them will be killed or injured.
  - They will be left alone or separated from their family.

## **Before**

### **Prepare your family**

- Get informed; learn about the hazards in your community and your risks.
- Learn about the emergency plans of your community, your workplace, and your children's schools.
- Create a Family Disaster Plan
  - Discuss with your family the possible hazards.
  - Discuss the potential for evacuation and sheltering.
  - Discuss your community's warning systems and what they are used for.
  - Determine where to meet. Designate one location right outside your home and another location outside your neighborhood in case you cannot return home.
  - Ask an out-of-town relative or friend to be your emergency contact. Following a disaster, family members will call this person and tell them where they are.
  - Make a communication plan so all members will know how to contact each other.
  - Include provisions for your pets.
  - Practice the plan. Once you have developed your plan, you need to practice and maintain it. For example, ask questions to make sure your family remembers meeting places, phone numbers, and safety rules. Practicing before makes responses more automatic during a disaster.
  - Conduct routine fire and emergency evacuation drills, test fire alarms.
  - Replace and update disaster supplies.
- Assemble a disaster supplies kit (72 Hour Kit). All emergency response agencies urge every family to make one. (See *Chapter 9, Family Helps*.)

## **After**

### **Talk and Listen**

- Encourage your child to talk and listen to him/her.
- Acknowledge child's concerns.
- Clarify child's misunderstandings of risks and dangers.
- Discuss family preparedness plans – calmly provide factual info about your plans for ensuring their ongoing safety.
- Answer young children's questions simply without elaboration.
- Answer older children's questions and give the necessary elaboration.
- Remember, children vary in the amount of info they need and can use.
- Allow children who have difficulty talking about it to draw a picture and tell a story of what happened.

### **Go Over Family Plan**

- Calmly talk as a family and listen to your children's concerns.
- Involve your children in updating your family disaster plans.
- Give your children specific tasks so they know they can help restore family and community life.
- Involve your children in preparing your disaster supplies kit.

### Make Sure You

- Spend extra time with your children.
- Re-establish daily routines for work, school, play, meals, and rest.
- Monitor and limit your family’s exposure to the media. News coverage can cause fear, confusion, and anxiety in children. Repeatedly watching event images can cause children to believe the event is occurring again and again.
- If children do see news coverage, talk with them about it and provide explanations.
- Parents can limit their own exposure to anxiety-provoking information.
- If the child continues to be upset, talk with your physician or a mental health provider who specializes in children’s needs.

### Handle Your Own Emotions

- Understand your own feelings and fears. Have ways to cope with them.
- Use a social support system of family, friends, church, and community organizations.

For more information, visit [www.redcross.org](http://www.redcross.org) or [fema.com](http://fema.com).

For more detailed help on handling adult and child emotional trauma, visit [www.prepareyourark.org](http://www.prepareyourark.org),  
Classes –Coping Skills.



## **Coping with Disaster**

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

### **Understand Disaster Events**

- Everyone who sees or experiences a disaster is affected by it in some way.
- It is normal to feel anxious about your own safety and that of your family and close friends.
- Profound sadness, grief, and anger are normal reactions to an abnormal event.
- Acknowledging your feelings helps you recover.
- Focusing on your strengths and abilities helps you heal.
- Accepting help from community programs and resources is healthy.
- Everyone has different needs and different ways of coping.
- It is common to want to strike back at people who have caused great pain.

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

Contact local faith-based organizations, voluntary agencies, or professional counselors for counseling. Additionally, FEMA and state and local governments of the affected area may provide crisis counseling assistance.

### **Recognize Signs of Disaster Related Stress**

When adults have the following signs, they might need crisis counseling or stress management assistance:

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

### **Easing Disaster-Related Stress**

The following are ways to ease disaster-related stress:

- Talk with someone about your feelings - anger, sorrow, and other emotions - even though it may be difficult.
- Seek help from professional counselors who deal with post-disaster stress.

- Do not hold yourself responsible for the disastrous event or be frustrated because you feel you cannot help directly in the rescue work.
- Take steps to promote your own physical and emotional healing by healthy eating, rest, exercise, relaxation, and meditation.
- Maintain a normal family and daily routine, limiting demanding responsibilities on yourself and your family.
- Spend time with family and friends.
- Participate in memorials.
- Use existing support groups of family, friends, and religious institutions.
- Ensure you are ready for future events by restocking your disaster supplies kits and updating your family disaster plan. Doing these positive actions can be comforting

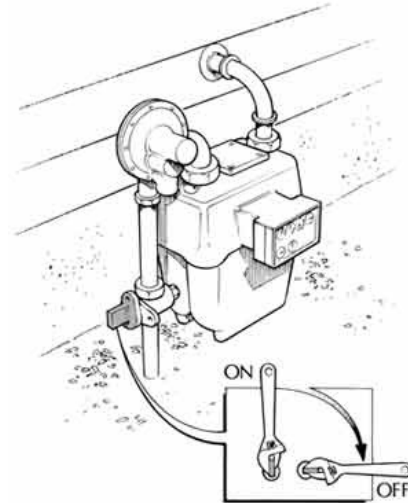
<http://www.fema.gov/rebuild/recover/cope.shtm>

## UTILITIES SHUT OFF

All responsible family members need to know how to turn utilities off in case of emergency. They need to know what the utilities look like in both on and off positions. Shut utilities off in the following order to prevent dangerous fires, explosions, and contamination:

### Natural Gas

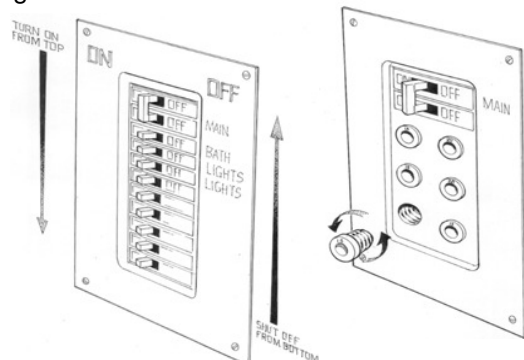
- Beforehand, familiarize yourself and family with the gas meter location. Attach an appropriate turn-off wrench to gas meter.
- During/after an emergency, first check for the smell or sound of gas escaping. If you smell or hear gas:
  - Evacuate all people from the home or building.
  - Turn off the meter immediately to avoid fire and explosions.
  - Ventilate the building by opening windows and doors.
  - Go to a neighbor's house to call for assistance.
- Also turn off the gas if a) your gas water heater or other appliance has been knocked over and/or pulled from its wall connection, b) your building has suffered damage and you suspect the gas lines are damaged (but don't go inside to check), c) if you smell smoke or see a fire.
- **WARNING:** Turn flashlights on before entering areas with gas-fed equipment. Chemical sticks are a safe light in case of a gas leak.
- **WARNING:** Do not use matches, lighters, or other open flames to check for leaks.
- **WARNING:** Do not turn electrical switches on or off, or operate appliances and battery-operated devices (including cell phones) if natural gas leaks are suspected. This could create sparks that might ignite gas from broken lines.
- Check your house gas lines and appliances for damage.
- Check for fires or fire hazards.
- You will need a qualified professional to turn the gas on. Never attempt to turn it back on yourself. After an earthquake a professional will need to check extensively for leaks and relight all the pilot lights.



### Home Electrical Circuits

Because an earthquake or fire could damage electrical wiring in the walls, ceiling and floor, turn electricity off either at the inside breaker panel (some homes have older fuse boxes) or at the outside electrical meter. Also, electrical sparks can ignite natural gas.

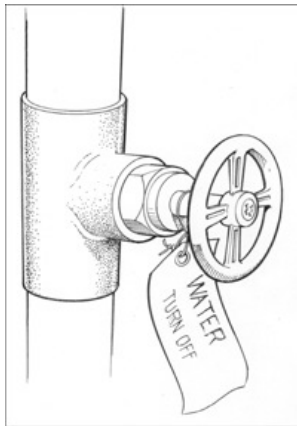
- Familiarize yourself and family with the location of your home's electrical circuit breaker panel(s) (or fuse box).
- Turn off breakers (or pull out all fuses) for areas of concern.
- **FOR YOUR SAFETY**, trip the individual circuits before turning off the box's main circuit breaker because shorts can develop.



- In cases of basement flooding:
  - Think before stepping in any water.
  - A shock hazard may exist even in an inch of water if an extension cord connection is on the floor.
  - If the electrical panel is upstairs, shut off all circuits.
  - If the electrical panel is in the basement, determine whether it can be reached on dry ground. If not refer to the next step.
- Check your house electrical meter, usually outside. If it is mounted on your home there may be a main disconnect switch (breaker) next to it. If the meter is on an underground service, it may be in front of your home; but there should be a main breaker where the line enters the home. Shut it off!
- When electrical service is restored, power surges may occur. To avoid damage, turn on the main breaker and then turn on each circuit breaker, one at a time (reverse order from shutoff).

## Water

In order to protect your water heater's water supply from contamination, turn off the house's main water valve as soon as possible. There are two places it can be turned off:



- Home Shut-off Valve. This is usually located in your basement where the water line enters your home. You may need pliers to turn it off. (Check beforehand to make sure it will turn (it might be rusted) and attach a wrench to the pipe so it will be there when needed.) Most valves turn off clockwise. Label it with a tag for easy identification.
- Outside Meter and Valve Box. This is usually located between the curb and the sidewalk. It is harder to get to, and you will need a long turn-off key or a wrench.
- Drain Water Lines. Also, if you have to evacuate your home during the freezing weather, and there is no heat, turn off the water valve. Drain water lines by opening all water faucets and the water-heater drain valve so your lines won't freeze and burst. Make sure to refill the water heater before turning back on its gas pilot.

## Sewer – Prevent Back-Up

- Have on hand non-porous rubber balls of different sizes. Think “downstream.”
- Basement floor drains – remove grate and put a ball in (there are also commercial products available that swell to fit the hole.) This will prevent basement sewer from backing up into your house. Loosen the floor drain cover screws now.
- Basement bathtub – jam a small rubber ball into the drain.
- Basement toilet – pull toilet off and plug hole.
- Plug EVERY basement drain!
- The best solution is to install a “Backwater valve.” This is a one-way check valve that will automatically stop the sewage from backing up into the house, and works especially well for sudden flooding backups. If all else fails, locate the “cleanout” located in your yard near the house. Learn how to plug the line. This will stop the sewage line at street level before it reaches your house. Again, remember where you are in the line.
- Make sure the city sewer system is functioning properly before using it after a disaster. This will prevent contamination of your home and possibly of your drinking water supply.