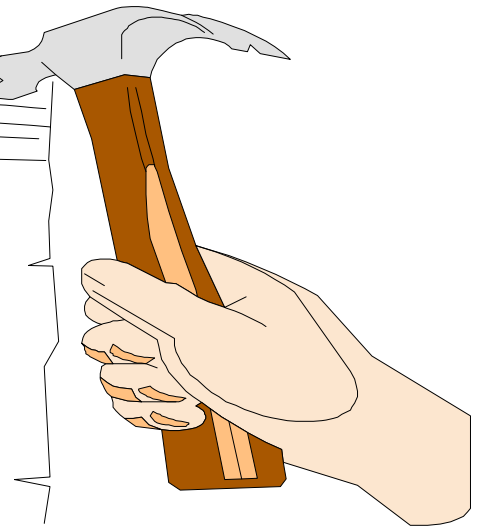


T E A C H T O O L S

May 1999

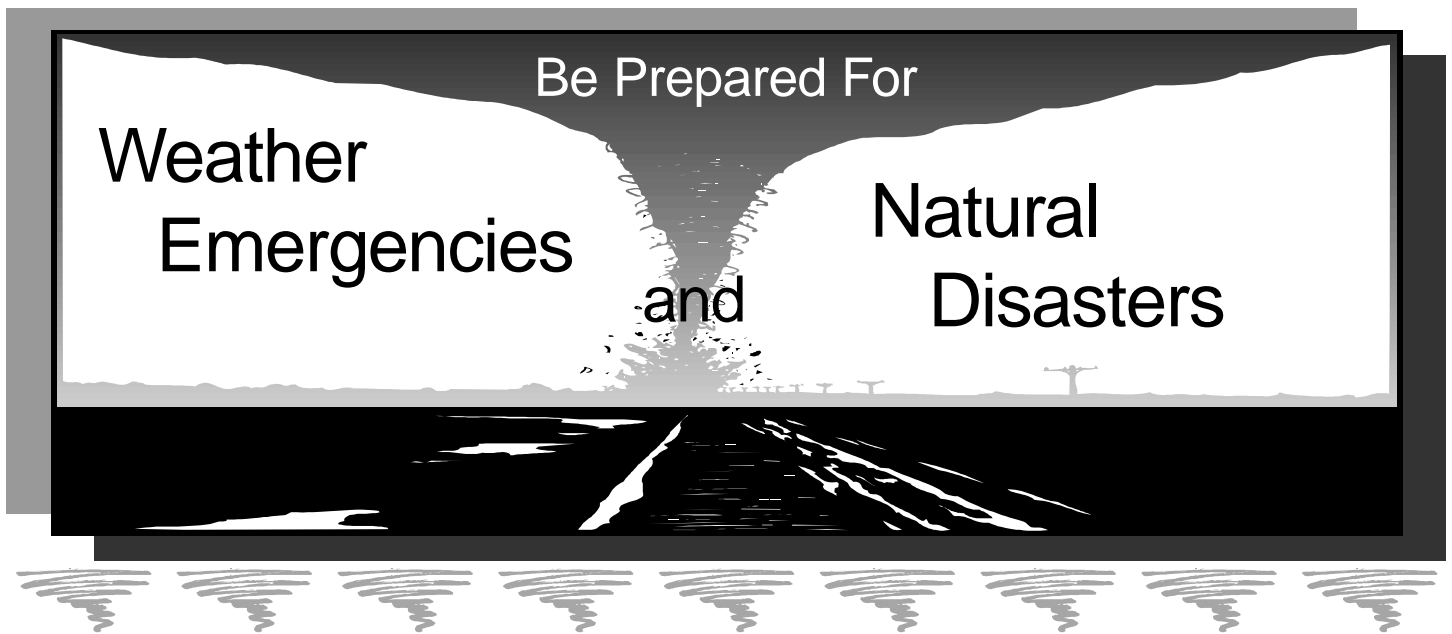


A guide to assist in training employees.

#21 - Weather Emergencies and Natural Disasters

provided by:

Kansas Municipal Insurance Trust



Meeting Objectives—

To review city emergency procedures and guidelines related to preparing for weather emergencies and other natural disasters. The result should be fast and effective response to a disaster, whether it occurs during or outside of working hours.

Suggested Materials to Have on Hand—

- City emergency response plan
- Evacuation map or drawing
- List of emergency information sources: city personnel, local police/fire departments, etc., radio stations on emergency network

Introduction/Overview—

There is an old saying that you cannot do anything about the weather. That statement is true, but you can eliminate some of the worry and danger associated with weather hazards.

Usually, our weather worries are things such as, “Will it rain during the ball game?” or “Should I wear a heavier jacket?” Sometimes, however, nature gets very dramatic and creates serious hazards. As with any type of emergency, we will face a lot less risk with weather emergencies if we follow the Boy Scout motto “Be Prepared”.

Today, we will review emergency plans and procedures, along with ways you can prepare your home and family to cope with natural disasters. We will also look at specific risks and precautions for specific kinds of disasters.

You will find that the approach you take to other safety issues applies here, too. In other words, if you know what hazards you may face and what protective measures to take, the likelihood of serious injury or other undesirable outcomes is greatly diminished.

General Hazards—

There are a lot of different types of weather emergencies. Let's look briefly at the hazards they pose.

- Floods. One huge downpour or days and days of continued rain can flood low-lying and coastal areas. Floods can also erode soil, causing mud slides that can bury cars, seriously damage buildings, and trap people inside.
- Lightning. Lightning can occur during thunderstorms, with occasionally fatal results. Since lightning carries electrical current, it can cause deaths and injuries from shock and burns.
- Snowstorms. A major snowstorm can make it impossible to get from place to place. Hazards include being trapped in a car or an unheated building, with possible risks of frostbite or even death from exposure.
- Tornadoes. Occasionally, tornadoes accompany severe thunderstorms. Tornadoes usually travel from southwest to northeast and occur most often between noon and midnight. A tornado's funnel cloud can have tremendous winds of up to 350 miles per hour, tearing up everything—and sometimes everyone—in its path.

Regulations—

Every part of the country is subject to at least some of these natural disasters. While the real disasters are rare, there is still a chance of major destruction and even death. While regulatory organizations do not try to regulate nature, they do recognize that these and other emergencies can happen. Therefore, regulations require employers to have plans and procedures in place, so that we can all respond quickly and properly to any emergency including: a hazardous chemical spill, a fire, a weather disaster.

Many standards require written emergency plans. OSHA's emergency planning regulation (29 CFR 1910.38) says these plans have to include:

- Emergency escape procedures and assigned evacuation routes
- Procedures for employees who leave only after performing critical functions, such as seeing to power and water supplies
- Procedures to account for all employees after evacuation
- Assignments and duties for evacuation wardens and rescue and medical personnel.

Cities must also train employees to carry out their roles in emergencies, including evacuation. You have to know what alarms and other sources will alert you to the emergency. Of course, rescue and medical staff and those who supervise evacuations need special training.

A lot of cities fail to develop emergency plan.. People do not always realize that it is a lot easier to plan for a smooth and safe emergency response than to create one during an actual emergency.

OSHA also has other standards designed to assure safety in emergencies. Cities must have enough clearly visible unlocked exits to allow prompt escape (29 CFR 1910.36, 37) and an alarm system to warn of emergencies in a distinct way (29 CFR 1910.165). The alarm standard also requires cities to let employees know city procedures for reporting emergencies.

Identifying Hazards—

No one can fully predict weather disasters, but most do give us some warning. It is a good idea to check the weather forecasts at least once a day to learn if any big storm is expected. The weather forecaster is not always right, but at least knows when a potential storm is being predicted. It is much harder to predict how big a storm will get and exactly when it will arrive. Since it is better to be safe than sorry, respond to any storm prediction by checking the “be prepared” plans that will be discussed shortly.

When the forecasters predict a big storm, stay tuned. As storms get closer, the predictions get better and more detailed. It is especially important to stay tuned for tornado forecasts. Tornadoes can come fast and furiously. Any advance notice is valuable.

Know the meaning of weather terminology. If the weather service issues a watch, that means a tornado, hurricane, etc., is possible. A warning means it is almost there, and you will have to act fast.

The weather forecaster is not your only source of weather emergency warnings. If you are at work, you will either hear the evacuation alarm or receive notice from the City Office that you need to move to a safer location within the city.

Do not ignore these warnings! They can save lives.

Protection Against Hazards—

It only makes sense to be prepared when you know that a certain kind of natural disaster is possible—if not likely—where you live and work.

At work, that preparation is management’s responsibility. It is up to you to know, and follow, the rules. That starts with notification. As mentioned, for some disasters, you will hear the alarm that means “evacuate.” If an alarm sounds, try to turn off any machines or equipment. If there is not enough time, try to notify any personnel assigned to safely shut down systems. If even that is not possible, simply concentrate on getting out safely.

If you hear an alarm to evacuate from your work area, go immediately to your assigned location. Do not go anywhere else. Once everyone is evacuated, assigned personnel will have to count heads to make sure everyone has gotten out safely. They cannot do that unless you are in your assigned place. Be sure you stay there until you receive permission to go elsewhere.

Practice these procedures to make sure that you can act quickly if there is a real emergency. Take the drills seriously. You want to be able to do the right thing automatically, without panic.

Family Emergency Plan—

You and your family should also have an emergency plan. First, you need a plan to reduce confusion and worry if there is a big storm or other problem while you are all at work or school. You also need a plan to follow if you are all at home.

A workday plan should include knowing the emergency plans of each family member’s employer, school, day-care center, etc. Try to find out where every family member will go.

For disasters that do not block roads or make travel impossible, choose a place where you will all meet. Often that will not be possible, so choose a person you will all call to indicate you are safe. Someone outside the area may be best, because it is often easier to call long distance in an emergency. Give each family member the phone number and, of course, let the contact person know he or she will be serving as a contact.

Post police, fire, and other emergency numbers next to each phone in your home. Teach everyone, including young children, how and when to call emergency numbers. Also show each person who is old enough how to turn off the power, water, and gas and explain when it is necessary to take these actions.

Identify exits you could use to evacuate quickly in an emergency and conduct practice drills. Try to find two ways out of each room. As at work, choose a place right outside your home where you can assemble and count heads after an escape.

Think about a disaster hitting your home. Decide what place inside your home, if any, would be safest for each disaster. Then act to make your home and belongings as safe as possible. Keep important family documents like bank papers and insurance policies in a waterproof container. And be sure you have enough home owner's insurance if the worst happens.

Here are some ways to help protect your home from damage:

- Flood. Keep some sandbags and plastic sheeting on hand. When floods are predicted, bring outdoor furniture, garbage cans, and other items inside. Do not keep valuables on the lowest floor—or be prepared to move them higher at very short notice.
- Tornado. Tornadoes come fast, so limit what you keep outside. A tornado could sweep it away forever or send it crashing through a house—maybe yours.

Every home should have emergency supplies to be used during a disaster. First be sure your car always has at least half a tank of gas. If there is a storm coming, fill the tank.

Assemble the following items and keep them in large bags or even covered garbage cans so you can carry them to a safe place in the home or take them with you in an evacuation. Here is what you should have:

- A battery-operated radio, flashlight and extra batteries
- Three days' worth of water—a gallon per person per day
- Dry/canned food and a manual can opener
- One blanket or sleeping bag per person
- One change of clothes and shoes per person
- A first-aid kit, including any prescription drugs
- Soap, toothpaste, toilet paper, and other sanitary supplies
- Extra keys and a credit card and/or cash
- Extra eyeglasses.

Safety Procedures—

We have talked about what to do to prepare for disaster. Now let's look at what to do to stay as safe as possible if disaster strikes.

If you are at work, follow the emergency procedures that have been discussed. If you cannot make it in to work, call the city office.

If you are at home and the town issues an evacuation order, leave! Stay with a friend or relative out of the area or go to an assigned shelter. Wear proper clothes and sturdy shoes and take the disaster supplies you have already organized. If authorities suggest it, and if there is time, turn off the electricity, gas, and water. Then lock up and go.

Some disasters hit too fast for evacuation. Or, you may be caught on the road or outdoors. Here are some tips for staying safe:

- **Floods.** Get out of the flood zone as quickly as possible, following a route that has no streams, storm drains, or roads that are already covered with water. If water stalls your car, leave it there and get to higher ground.

If you are caught at home, go to a higher floor. Take warm clothes, a flashlight, portable radio, and valuable papers, jewelry etc. Wait for rescue. Do not try to swim!

- **Lightning.** You are less likely to be hit by lightning if you are indoors. Stay away from open doors and windows, fireplaces, and water sources, including faucets. If you are outside, try to get into a car or a building. If that is not possible, crouch on the ground in a low place—do not lie flat—or among low trees. Do not stand near a tree, open water, or anything metal such as fences, pipes, or machinery that could conduct electricity. If you are in a group of people, spread out.
- **Snowstorms.** Dress in warm layers if you must go out. Be sure to cover your face and head. If you have to drive, clear snow off the entire car before you start, and stock the car with sand or a mat you can use for traction if you get stuck.

Take it much slower than usual and keep extra distance between you and the vehicle in front of you. Use your defroster and windshield wipers. Be especially careful on hills. You want to be able to see what is coming as you go up and to prepare for loss of traction going down. Look out for icy patches, which are most likely on bridges and in shady spots. If you start to skid, take your foot off the gas and turn in the direction you want the car to go. Do not brake.

If you get stuck in a blizzard, stay in your vehicle. Open the window for ventilation and turn the heater on every so often for warmth. Keep your hands, arms, and legs moving.

- **Tornadoes.** Remember that a tornado watch means there is one coming and a warning means it is almost here. If a tornado watch is issued, plan what you will do. Do not get caught in a mobile home or car. You want to be in a solid building if at all possible. Once inside, stay away from doors, windows, and outer walls. Go to the center of the building and get under heavy upholstered furniture or into an interior windowless bathroom or closet.

If you are caught outside in a tornado and cannot get into a building, lie flat in a ditch and cover your head with your hands.

Downed power lines are a big hazard in any kind of natural disaster. Stay away from them. Assume they are live, and report them to the power company, the police, or fire department.

If you are at home without power, disconnect appliances and turn off all but one light, to limit damage or an overload when power comes back. The one light will alert you when you have power. Beware of fire hazards. Keep candles in holders that cannot tip over, away from flammables. Do not use a gas stove for heat.

Suggested Discussion Questions—

1. How will you know if an emergency occurs while you are at work?
2. What is our evacuation exit and route, and where will you gather?
3. How do you find out if the city is closed for bad weather?
4. What do you do if you cannot get indoors because of a weather emergency?
5. What kinds of natural disasters might occur in your area?
6. What kinds of disaster supplies should you assemble at home?
7. What kinds of plans should you make with your family if a natural disaster strikes during the work and school day?
8. How can you prepare your home to better withstand a(pick an emergency most likely to occur in your area)?
9. What should you do in the event of a(pick an emergency most likely to occur in your area)?
10. Are there any other questions?

Wrap-up—

Natural disasters and weather emergencies do not happen often, but they do happen. We cannot prevent them, but we can prepare for them and make injury and major damage less likely. At the very least, preparation and planning take some of the worry and panic out of these situations. You will always do better if you face a tough situation calmly.

Here at work, we have an emergency plan, and we all have a role to play in it. Know exactly what you have to do so you can do it quickly and calmly. If you hear an alarm or receive notification to evacuate, do so immediately. Go to our assigned location, so we will not have to worry about you.

Set up a similar system at home. Be sure everyone knows how to get out and where to go. Have emergency supplies ready. Also, set up a communication plan if you are separated when heavy weather hits. Everyone will feel a lot better if they know the others are safe. Check your home for things that could become hazards in a weather emergency, and move or secure them as best you can. Make sure you know exactly where you will go and what you will do in an emergency, and it will be less likely to turn into a disaster.

Weather Emergency Preparation Checklist

Be aware of weather emergency hazards

- Falling trees, poles, and buildings
- Gas leaks
- Downed power lines
- Flooding
- Lightning

Know and follow the city's emergency plan

- Respond to an alarm signal or evacuation notice.
- Turn off equipment if possible.
- Use assigned evacuation exit(s).
- Assemble in an assigned meeting place.

Be prepared for weather emergencies

- Listen to weather reports.
- A watch means serious weather is possible.
- A warning means serious weather is almost here.
- Develop and practice home evacuation plans.
- Post emergency numbers at all phones and teach them to children.
- Know all family members' work and school emergency plans.
- Identify a family meeting place and an out-of area phone contact.
- Keep important documents in a waterproof container.
- Maintain adequate home insurance.
- Keep car gas tank at least half full.
- Assemble a disaster kit: battery-operated radio and flashlight; extra batteries; three days of water (one gallon per person per day); dry and canned food; manual can opener; one blanket or sleeping bag and change of clothes and shoes per person; first-aid kit; prescription drugs; sanitary supplies; extra keys and eyeglasses; credit card and/or cash.
- Secure large breakable objects.
- Act quickly and safely in an emergency.
- Find out if the city is open.
- Notify the city if you cannot make it in to work.
- Follow any evacuation orders at work or home.
- Turn off home power, gas, and water if recommended, and if time permits.
- Flood.
 - Evacuate on roads with no streams, storm drains, or standing water.
 - Leave stalled car.
 - At home, take disaster kit to higher floor and wait for rescue.
- Lightning.
 - Get inside, away from open doors and windows, fireplaces, and water sources.
 - Outside, crouch, don't lie flat, on ground in low place or among low trees.
 - Avoid trees, open water, or anything metal.
- Snowstorm.
 - Dress in warm layers, covering face and head.
 - Clear snow off car before driving, and take sand or mat for traction.
 - Drive very slowly, far behind next vehicle.
 - Use defroster and wipers.
 - Turn into a skid, with foot off gas and brake.
 - If stuck in a vehicle, stay there, opening window and turning on heater sporadically.
 - Move hands, arms and legs regularly.
- Tornado
 - Avoid being in car or mobile home.
 - In building, stay away from doors, windows, and outer walls.
 - Get under heavy furniture in building center, or into interior windowless bathroom or closet.
 - If outside, lie flat in ditch and cover head with hands.