Today we’re going to talk about preparing for weather emergencies and other natural disasters. We’ll discuss the hazards often associated with these events as well as the precautions you need to take on the job to keep safe. We’ll also talk about what you need to do at home to protect your family and your property.
The main objective of this session is to tell you about how you can prepare for weather emergencies and other natural disasters and what you should do when these events occur so that you can survive them safely. By the time this session is over, you should be able to:

- Recognize the hazards of weather emergencies and other natural disasters;
- Follow workplace emergency procedures;
- Develop a family emergency plan; and
- Increase your chances of surviving emergencies and minimizing property damage.
There are so many hazards associated with weather emergencies and natural disasters that we don’t have time to cover them all today. But let’s highlight some of the most common and most serious hazards.

- Walls and whole buildings could collapse;
- People might be injured or trapped under debris or in their workplaces, homes, or vehicles;
- Bridges and roads could become impassable;
- Power and telecommunication lines might be downed, not only cutting off power but also creating a risk of electrocution; and
- Utilities such as phones, water, natural gas, and sewer systems could become damaged and not function for days or longer.
Windows might be broken, exposing your workplace or home to the elements and creating an injury hazard due to falling or flying shards of glass;

Water from floods or heavy rains could damage buildings, electrical and heating/cooling systems, workplace equipment, and your furniture and other possessions at home;

Objects left outside could be blown or washed away;

Extreme cold or heat could pose health problems and interfere with cleanup efforts;

Lightning strikes could severely injure or kill those unfortunate enough to be caught outside, as well as start wildfires that could threaten homes and businesses; and

Downed trees or tree limbs can impact structures and vehicles and can create impassable conditions.

Can you think of any other hazards, especially for weather emergencies and natural disasters that commonly occur in our area?
Because of the potentially severe workplace hazards related to weather emergencies and other disasters, OSHA requires us to have an emergency plan so that we can respond to these events and prevent damage and injuries on the job. An emergency plan must include:

- Evacuation routes and procedures;
- Provisions for maintaining critical operations that must be monitored or shut down slowly and cannot be left unattended when an evacuation is necessary;
- Procedures for accounting for all evacuees to make sure no one is left behind;
- Plans for training and equipping rescue and medical response personnel, if appropriate; and
- Procedures for reporting emergencies and notifying employees of evacuations or other appropriate emergency responses.

Are you familiar with the important safety information contained in our emergency plan? You should be.
If you are at work when a weather emergency or other natural disaster strikes, wait for instructions from management before taking action.

- You might be instructed to leave for home promptly before a storm hits and makes travel difficult or dangerous.
- On the other hand, if a weather emergency is approaching rapidly and it’s too dangerous to risk getting caught on the road—such as in the case of a tornado—you might be instructed to stay at work until it’s safe to leave the building.
- In such cases, you might be told to take shelter in a designated safe refuge area within the facility.
- We might ask some of you to volunteer to help get the facility ready to weather the event. For example, some people might be responsible for securing outdoor items, while others are working inside backing up computer files and moving other vital documents to a secure location.
In some emergency situations, you will be instructed to evacuate the building immediately. It’s important, therefore, that you understand our evacuation procedures.

- Learn to recognize the evacuation signal and then listen for instructions over the paging system. Instructions might include total evacuation, partial evacuation, or taking shelter in a secure area within the facility.
- When an evacuation is called for, shut down nearby equipment, such as production machinery and computers, close windows, and shut doors behind you.
- Go the nearest safe exit, moving quickly but calmly.
- Once outside the building, go directly to your designated assembly area. We’ll take a head count to make sure everyone is safely out of the building. We’ll also take head counts in shelter-in-place situations. Be sure to stay in the assembly area, keeping out of the way of emergency personnel, until you are told that it is safe to reenter the building or until you are instructed to go home.
- We also want to take this opportunity to emphasize that we need everyone to participate fully in drills and provide feedback about evacuation performance. Drills not only help you to prepare for an emergency but also help our emergency planners to determine the effectiveness of our emergency plans and procedures.
Just as we have a workplace emergency plan to protect our employees, you should have one at home to protect your family.

- When developing your family plan take into account all kinds of weather emergencies and other natural disasters that could occur in your community. For each event, develop a short action plan that describes what your family needs to do before, during, and after the emergency. Once your plan is in writing, be sure to practice it with the whole family.

- Your plan should include evacuation routes and assembly areas outside. Make sure to plan for two ways out of each room of your house as well as at least two ways out of your neighborhood or town in case you have to evacuate the region.

- Also, pick safe rooms inside your house in case going outside is unsafe—for example, with a rapidly approaching tornado or rising floodwaters.
As part of your emergency planning process, teach family members how to safely turn off utilities, such as natural gas, electrical power, water, and so on. Keep required tools near each utility shut-off. Only turn off utilities if you can safely get to them.

Also make a list of phone numbers that includes the number of an out-of-state contact person—a relative or friend who can be contacted if family members are separated in an emergency and want to let one another know they are safe and where they are. We suggest an out-of-state contact because it is often easier to call long distance during an emergency.

When making and practicing a family emergency plan, be sure to discuss any signals your community might use to warn people of an incoming weather emergency—for example, sirens or emergency warning systems that broadcast instructions within the community over loudspeakers.

And finally, don’t forget to provide first-aid and fire extinguisher training for family members. It’s also a good idea for at least one person to have CPR and first-aid training.
In addition to a family emergency plan, your family should also have a disaster supply kit. Store it in your safe room or near a door so that it can be easily accessed when you evacuate. Use a container that can be easily transported such as a duffel bag or backpack. Also keep a small supply kit in each of your vehicles. Disaster supply kits should have:

- A battery-operated radio and flashlight with extra batteries;
- A 3-day supply of fresh drinking water—or 1 gallon per person per day—and a supply of dry or canned food;
- Blankets or sleeping bags and dry, warm clothes for each person;
- A first-aid kit, prescription medications, and hygiene supplies such as soap, toothpaste, toilet paper, and so on;
- A map of the local area showing evacuation routes, essential phone numbers, and important information such as bank account numbers, copies of insurance policies, an inventory of household goods, and copies of family medical records;
- Enough cash to purchase gas and supplies if utilities are down and credit cards can’t be used;
- A mirror and a whistle for signaling; and
- A multipurpose pocketknife.
Now let’s review what we’ve discussed about weather emergency hazards and preparedness with a short *true or false* quiz.

- OSHA requires us to have a workplace emergency plan for weather emergencies. The correct answer is *true*. You should be familiar with the information contained in this plan.

- You should always evacuate the building in a weather emergency. The correct answer is *false*. Sometimes it’s safer to shelter in place—for example, during a tornado.

- After a total workplace evacuation, you should go home. The correct answer is *false*. You should proceed to the designated assembly area outside the facility for a head count and stay there for further instructions.

- Your family emergency plan should include evacuation routes from your neighborhood. The correct answer is *true*. You should have two evacuation routes from your neighborhood as well as two evacuation routes from every room in your house.

How did you do? Did you get all the answers right?
Now it’s time to ask yourself if you understand the information presented so far.

- Do you understand what we’ve discussed about our emergency procedures? Are you prepared to develop and carry out a family emergency plan?

This information is very important. Your life or the lives of family members could depend on your making the right decisions in a weather emergency.

Now let’s continue to the next slide and begin talking about specific natural disasters. We’ll begin with earthquake preparation.
Here are some tips for preparing for earthquakes on the job. Some of these tips also apply to the home.

- Stationary machinery and equipment should be anchored to the floor or structurally sound walls so that they won’t move during a quake.
- Gas lines, water pipes, electrical lines, and other things that are suspended from the ceiling should be braced to reduce movement.
- Tall bookcases, file cabinets, shelves, racks, and so on should be bolted to structurally sound walls, if possible. To keep items from falling from shelves, rods or dowels can be installed across the front of each shelf.
- Be sure to store heavy items near the ground. That way if they come down during a quake, they are less likely to hurt someone.
- Also, secure breakable items such as computers so that they won’t fall and smash during a quake.
- And make sure materials are safely stored so that containers won’t rupture during a quake and release hazardous liquids, vapors, or gases.
Since there is no warning system for earthquakes, you have to be prepared to act on the spur of the moment to protect your safety.

- Move away from windows, office partitions, tall machinery, shelves, and other things that could shatter or fall on you.

- Get under a strong piece of furniture such as a desk or work bench, or stand in a door frame.

- Once the shaking stops, evacuate the building. Use stairs to evacuate. Avoid elevators.

- If you’re outside when a quake strikes, move away from buildings, power lines, utility poles, trees, and anything else that could fall on you.

- If you’re in a vehicle, pull over to the side of the road in a clear spot and stay in your car.

After the quake, be wary of aftershocks. Continue to avoid buildings and other structures that could collapse until you’re sure it’s safe. Check yourself and others for injuries, and help those who are injured or trapped, if possible. Be careful of downed power lines, ruptured gas and water mains, and other hazards.
To prepare for a tornado, inspect your home and workplace to make sure that structural items such as roofs and metal siding are secure.

Permanent shutters or temporary plywood covers can protect windows and prevent injuries from flying glass. Alternatives include replacing existing glass with impact-resistant glass or covering existing glass with protective film.

Secure outside items so that they can’t be picked up by winds and turned into dangerous projectiles. Items that can’t be secured should be brought inside, if possible.

Trees or tree limbs could be knocked down by strong winds and damage buildings. Consider removing or trimming nearby trees to minimize the risk of damage to your home or workplace.

Garage doors and double entry doors are especially vulnerable to winds. Garage doors can be reinforced to withstand high winds. Double entry doors should be secured with slide bolts top and bottom and a heavy-duty deadbolt should be used to connect the doors.

Think about steps you can take at home and at work to prepare for tornadoes.
If the weather service issues a tornado “watch,” it means that a tornado is possible in the area and you should make preparations. A tornado “warning” means that a tornado is in the area and you should immediately take shelter. When a warning is issued:

- Get into a solid building.
- Stay away from doors and windows.
- Go to the center of the building.
- Hide under furniture or in a closet or bathroom.
- If outside, lie flat in a ditch and cover your head with your hands.

Think about how you should react to a tornado watch or warning. Tornadoes move very quickly, so you have to be prepared to act swiftly and effectively to protect your safety.
Flood damage can be devastating and costly. Here are some tips for preparing for floods that can help minimize damage:

- Take steps to protect electrical and heating and cooling equipment from water.
- Anchor fuel and hazardous material storage tanks to prevent them from floating away and from water intrusion.
- Install sewer backflow valves to prevent raw sewage from backing up into your home or workplace and install sump pumps to help control rising groundwater.
- Be prepared to move important or valuable objects to a higher floor and secure outdoor items.
- Finally, have sandbags and plastic sheeting on hand so that you can build small dams to protect doorways, garages, and other areas where floodwaters could enter.

Think about these and other steps you can take at work and at home to protect against floodwaters and minimize flood damage.
A flood “watch” is issued when flooding may occur due to heavy and prolonged rains. A flood “warning” is issued when floodwaters are rising and are predicted to flood the area. When a warning is issued, you may be told to go home and take care of your family.

• Whether you are at home or at work, however, evacuate the flood zone when a flood warning is issued or when local officials advise such action.

• Move to higher ground away from rivers and streams.

• Don’t try to drive across flooded roads. If your car gets stuck, abandon the car and move to higher ground on foot. Don’t attempt to push your vehicle out of floodwaters.

• If you are trapped by floodwaters at home or work, go to a higher floor or the roof and wait for rescue. Do not attempt to walk through floodwaters. Even a shallow depth of 6 inches of flowing water can sweep you off your feet.

Think about the steps you would need to take if the workplace or your home was threatened by rising floodwaters.
Hurricanes bring a deadly combination of high winds and floodwaters. And sometimes tornadoes and severe thunderstorms follow hurricanes. People who live in hurricane zones need to prepare for these dangerous storms and know what to do to survive the storm. For example:

- Prepare for high winds and floodwaters at work and at home.
- Heed hurricane watches and warnings. Be sure to listen to weather updates and stay abreast of changing conditions.
- Evacuate the area if advised by local officials.
- If advised to shelter in place, go to a designated secure area at home or in the workplace in the center of the building away from windows and doors.
- And, remember to be wary of the eye of a hurricane—it may seem that the storm is over and it’s safe to leave your refuge, but in fact the winds might return, so you should stay put until the hurricane has completely passed.
Severe thunderstorms also bring multiple hazards such as high winds, heavy rain, lightning, and flooding. Sometimes they also spawn tornadoes. So when a severe thunderstorm warning is issued, take it seriously and:

- Go inside a sturdy building or stay in your vehicle if you’re on the road;
- Stay away from windows, faucets, and electrical items. Don’t touch metal objects and try to stay dry;
- If you’re caught outside, crouch down in a low lying area with only your feet touching the ground—do not lie flat on the ground—and keep away from trees, open water, light poles, or metal fences or pipes to lessen the risk of being struck by lightning.

Think about the steps you need to take to keep safe during a severe thunderstorm.
When a winter storm warning is issued, take the following precautions:

• Stay indoors and be prepared to wait out the storm.

• Dress warmly if you must go out, including a hat, gloves, and boots with good traction.

• Drive only if necessary, use extreme caution, and remember that bridges and overpasses may be especially slippery.

• If you get stuck on the road, stay in your vehicle and hang a brightly colored cloth on the antenna to show you need help. Always keep a warm blanket, nonperishable food, and water in your vehicle.

• And, whenever you’re outdoors in a winter storm, watch for signs of hypothermia, which include uncontrollable shivering, memory lapse, numbness, and drowsiness.
Extreme heat can also be hazardous. Heatstroke is the greatest danger because it can kill. Other heat-related illnesses, which are less serious but also require attention, include heat exhaustion and heat cramps. If you start to overheat, get into a cool spot, rest, and drink lots of fluids. Do not take salt pills.

If your home doesn’t have air conditioning, spend some time in places that are air conditioned such as the mall or town library.

Avoid strenuous outdoor work, if possible. But if you can’t avoid it, remember to drink plenty of fluids, wear a hat, take frequent breaks, and keep alert to symptoms of heat stress including fatigue, weakness, dizziness, and chills.

Definitely postpone outdoor games and other activities until the weather cools. And if you exercise outdoors, do so early in the morning or in the evening when it’s cooler.

Drink plenty of fluids all day long. Stick to water or juice, and avoid alcohol and caffeine, which contribute to dehydration.

And during a heat wave, don’t forget to check on family, neighbors, and friends who live alone, particularly the elderly.

Think about the steps you need to take to keep safe during a heat wave.
• Volcanoes bring multiple hazards such as mudflows, earthquakes, and ash fall. If you are in a volcano area, add goggles and dust masks to your disaster supply kit.

• Also learn about community warning systems and disaster plans. Your community might have sirens or lights that warn of eruptions. Your community will also have disaster plans that show recommended evacuation routes.

• Evacuate if advised. You may not have much time, so remember it’s more important to save lives than things. Just get out of the area as quickly as possible, avoiding rivers and valleys, if possible, which may be subject to mudflows.

• If advised to shelter in place, close windows and doors, and bring in animals, vehicles, and outdoor equipment, if possible.

• If you are caught outdoors during an eruption, evacuate to a safe area, or seek shelter if you can’t get out of the area.
Wildfires can spread quickly and sometimes unpredictably, and can damage or destroy homes, businesses, and whole areas of affected communities. People who get trapped in wildfires can be injured or killed. To minimize the damage take these precautions:

- Trim trees and remove combustible debris from around your home and workplace;
- Plan for water sources that may be needed to protect structures; and
- Plan and practice evacuation routes.
If a wildfire is approaching, take these precautions to prevent injuries and protect a home or building:

• Shut off gas and electricity, and close windows and doors;
• Prepare the outside of structures by putting sprinklers on the roof and watering surrounding vegetation to keep the fire from reaching the structure; and
• If you are trapped outside by a wildfire, try to find a pond or river and crouch down in the water. If there is no water nearby, move to an open area away from trees, shrubs, and tall grasses. Breathe through a wet cloth to protect your lungs from hot air and smoke.
Now let’s take a little matching test. Your job is to match the weather emergency on the left with the proper response on the right.

- When floodwaters rise, go to a higher floor.
- During a tornado, go to an inner room away from windows and outer doors.
- During a heat wave, drink plenty of fluids.
- And during a thunderstorm, stay away from electrical items.

How did you do? Did you get all the answers right?
We’ve covered a lot of information in the previous slides. Make sure you understand all the safety information about:

• Weather emergencies and natural disasters that might strike our area.
• How to prepare for these events as well as how to survive them.

Now let’s wind up the session with some key points to remember.
Here are the main points to remember from this session on preparing for weather emergencies:

- Know the hazards of weather emergencies;
- Understand our workplace emergency plan;
- Develop a family emergency plan;
- Put together a disaster supply kit; and
- Be prepared to take the proper precautions to survive any natural disasters that could strike our area.

This concludes the preparing for weather emergencies training session.