

FEATURES:

WINTER STORM SAFETY



INSIDE THIS ISSUE: WINTER STORM SAFETY

Workers At Risk 1

Public Warnings 2

Electrocution 2

Driving 3

Overexposure 3

Types of Storms 4

WINTER STORM SAFETY: Workers At Risk

A major winter storm can be lethal. Preparing for cold weather conditions and responding to them effectively can reduce the dangers caused by winter storms. While most workers can stay inside during a winter storm, some workers may be required to go into the storm. These may include utility workers, law enforcement personnel, firefighters, emergency medical personnel, federal, state and local government personnel, military personnel, highway personnel, and sanitation workers.

According to National Weather Service about 25 percent of injuries result from being caught out in the storm. Some of the hazards associated with working in winter storms include:

- Driving accidents due to slippery roadways
- Carbon monoxide poisoning
- Slips and falls due to slippery walkways
- Hypothermia and frostbite due to the cold weather exposure
- Struck by falling objects such as icicles, tree limbs, and utility poles
- Electrocution due to downed power lines or downed objects in contact with power lines
- Falls from heights (falls from roof or skylights while removing snow)
- Roof collapse under weight of snow (or melting snow if drains are clogged)
- Burns from fires caused by energized line contact or equipment failure
- Exhaustion from working extended shifts
- Dehydration
- Back injuries or heart attack while removing snow

WINTER STORM SAFETY: Public Warnings

Winter storm watch: Be alert, a storm is likely.

Winter weather advisory: Winter weather conditions are expected to cause significant inconveniences and may be hazardous, especially to motorists.

Frost/freeze warning: Below freezing temperatures are expected and may cause damage to plants, crops, or fruit trees.

Winter storm warning: Take action, the storm is in or entering the area.

Blizzard warning: Snow and strong winds combined will produce blinding snow, near zero visibility, deep drifts, and life-threatening wind chill--seek refuge immediately.



WINTER STORM SAFETY: Electrocution



The work activities involved with repairing downed or damaged lines entail many of the activities involved in installing and removing overhead lines and in general maintenance on overhead lines. The crucial difference is that in emergency conditions, such as winter storms, there are unknown hazards and the potential for changing hazards as work progresses. Under these conditions workers must be extra vigilant and cautious.

Potential hazards include: electrocution by contacting downed energized lines, or contacting objects, in contact with fallen lines; falls from heights; being struck or crushed (by falling poles, towers or parts thereof, tree limbs, ice accumulation on lines, towers and poles); being injured in vehicular accidents when responding to an emergency situation; burns from fires caused by energized line contact or equipment failure. The protective measures that should be utilized when working on or around downed or damaged power lines are as followed: establish a safe distance, well clear of any downed or damaged power lines, and report the incident to the responsible authority; and **only properly-trained electrical utility workers should handle damaged power lines.**

When working on downed or damaged power lines, qualified electrical utility workers should utilize proper electrical safety work practices and personal protective equipment, as usual. Extra caution should be exercised when working in winter storms, due to the adverse conditions present. When winter storms occur, downed trees can block public roads and damage power lines. Some of the hazards that exist are the same as those that exist for non-qualified electrical utility workers and include: electrocution by contacting downed energized lines or contacting broken tree limbs in contact with fallen lines; falls from trees; being struck or crushed by falling tree limbs or ice; being injured by emergency equipment such as chain saws and chippers. Proper PPE including gloves, chaps, foot protection, eye protection, fall protection, hearing protection, and head protection should be worn by workers using chainsaws and chippers to clear downed trees.

Only appropriate power equipment that is built to be used outdoors and in wet conditions should be used. All saws, chippers, and other tools should be used properly and according to their intended application. It is important that all equipment is well-maintained and functioning correctly in order for use. In addition, all equipment should have proper guarding, working controls, and other safety features as installed by the manufacturer.

WINTER STORM SAFETY: Driving

Do not leave the vehicle to search for assistance unless help is visible within 100 yards. You may become disoriented and lost in blowing and drifting snow. Display a trouble sign by hanging a brightly colored cloth on the radio antenna and raising the hood. Turn on the vehicle's engine for about 10 minutes each hour and run the heat to keep warm. Also, turn on the vehicle's dome light when the vehicle is running as an additional signal. Beware of carbon monoxide poisoning. Keep the exhaust pipe clear of snow, and open a downwind window slightly for ventilation. The following tips are preventative measures to help in extreme conditions.

Inspect the vehicle to ensure the following are operating properly:

- Brakes should provide even and balanced braking. Also check that brake fluid is at the proper level.
- Ensure a proper mixture of 50/50 antifreeze and water in the cooling system at the proper level.
- Check that battery is fully charged and that connections are clean. Check that the alternator belt is in good condition with proper tension.
- Inspect all engine systems.
- Check exhaust for leaks and that all clamps and hangers are snug.
- Check tires for proper tread depth and no signs of damage or uneven wear. Check for proper tire inflation.
- Check that oil is at proper level.
- Inspect all exterior lights, defrosters and wipers. Install winter windshield wipers.

Carry an emergency kit in the vehicle with the following items:

- Blankets/sleeping bags
- Cellular telephone or two-way radio
- Windshield scraper
- Snow brush
- Flashlight with fresh/extra batteries
- Extra winter clothes
- Shovel
- Tow chain
- Matches
- Traction aids (bag of sand or cat litter)
- Emergency flares
- Jumper cables
- Snacks
- Water
- Road maps

WINTER STORM SAFETY: Overexposure

Unprotected portions of the body, such as the face or hands, can chill rapidly and should be protected as much as possible from the cold wind. When outside you are at risk for frostbite, which is a severe reaction to cold exposure that causes freezing in the deep layers of skin and tissue. Frostbite can cause permanent damage. It is recognizable by a loss of feeling and a waxy-white or pale appearance in fingers, toes, nose, or ear lobes. You are also at risk of hypothermia, which occurs when the body temperature drops to less than 95°F. Symptoms of hypothermia include uncontrollable shivering, slow speech, memory lapses, frequent stumbling, drowsiness, and exhaustion.

These things can be done to avoid frostbite and hypothermia. Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries. Learn the signs and symptoms of cold-induced illnesses/injuries. Train the workforce about cold-induced illnesses and injuries. Select proper clothing. Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves, and under garments that will keep water away from the skin (polypropylene). Take frequent short breaks in warm dry shelters to allow the body to warm up. Perform work during the warmest part of the day. Avoid exhaustion or fatigue because energy is needed to keep muscles warm. Use the buddy system (work in pairs). Drink warm, sweet beverages, while avoiding caffeine and alcohol. Eat warm, high-calorie foods like hot pasta dishes.

For more information, see [A Prevention Guide to Promote Your Personal Health and Safety](#).



TASK TALK

“For safety is not a gadget but a state of mind”

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[Factsheet: Winter Storms and Extreme Cold](#) - FEMA

[The Cold Stress Equation](#) - OSHA Publication 3156, (1999)

[Winter Storm](#) - American Red Cross

[Winter Weather Safety and Awareness](#) - National Weather Service

[DOT Offers Winter Driving Tips](#) - Iowa Department of Transportation

Winter, Your Car and You - NSC, (2009 April)

[A Prevention Guide to Promote Your Personal Health and Safety](#) - US Department of Health and Human Services, and the CDC

WINTER STORM SAFETY: Types of Storms

- Blizzards: Winds of 35 mph or more with snow and blowing snow reducing visibility to less than ¼ mile for at least 3 hours.
- Blowing Snow: Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- Snow Squalls: Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- Snow Showers: Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- Snow Flurries: Light snow falling for short durations with little or no accumulation.