

Working Environment Hazards

The environments that you work in have a significant effect on the potential for occurrence of accidents. Knowing the hazards associated with your environment allows you to take the necessary precautions to keep your working environment safe.

Working at Night

Low visibility at night presents several potential hazards including the following:

- Inability of oncoming traffic to see workers
- Inability of the worker to see hazards in the work area
- Increased crime
- Threatening feeling of the unknown in the dark

To ensure your safety when working at night, the following guidelines should be followed:

- Make sure you are as visible as possible.
 - Wear your reflective vest.
 - Place the Men Working sign well ahead of your work zone.
 - Use cones with visi-flares to enhance the visibility of your work zone. Turn on the emergency flashers and roof beacon light on your truck.
- Use the buddy system, and check in with the office regularly.
- Never enter a customer's home if you feel uncomfortable with the customer or situation, e.g., illegal activities ongoing, only a minor is at home, or indication of domestic violence.
- Climbing a ladder at night is dangerous. Refrain from climbing ladders at night whenever possible. Always use adequate lighting when you do have to climb at night.
- Do not stay out on the street if you feel threatened by people or a dangerous situation.
- Make sure there is proper lighting to allow you to do your job safely and correctly. A flashlight might be sufficient in some cases, but a freestanding spotlight or a miner's light on your hat should be part of your equipment for night work.

If you are unable to perform your job competently in the dark or you are uncomfortable with the situation, contact your supervisor before continuing.

Bad Weather

The weather will create safety hazards that you must be aware of when performing work outside. Ice, snow, rain, fog, wind, and lightning are all hazards created due to the weather.

Snow and Ice

Along with the cold and wet conditions, which will be discussed later in this module, the biggest hazard created due to snow and ice is the slippery conditions. Extreme care must be taken while driving, walking, or climbing due to reduced traction.

The following are some suggestions to help keep you safe during snow and icy conditions:

- When driving, leave extra distance between you and the vehicle in front of you (use the 4- second rule). Always brake slowly and smoothly to avoid sliding out of control.
- Be prepared for slippery roads and deep snow by carrying a shovel, sand, and/or chains.
- Keep extra clothing and water in your truck if you are going to be in rural areas.
- Make sure your heater and defroster are working properly and that you have an ice scraper in the truck.
- Be careful when walking on icy ground.

Rain and Fog

Rain and fog present a slip hazard as well as a visibility hazard. The following should be followed when working in rainy or foggy conditions:

- Use your truck's parking lights to mark your position.
- Remember that roads are the most slippery when rain begins to fall because the oil and grease on the surface have not yet washed away.
- Reduce your speed and allow twice the normal following distances (use the 4-second rule).
- When raining, drive with your lights on even during the daytime.
- When driving in fog, reduce your speed and turn on your headlights (low beams) to help improve visibility.
- If the fog is too dense to see through, pull completely off the road and stop at a safe and legal place until visibility improves.

High Winds

High winds can cause objects to be blown over, creating severe hazards on the work site. Objects such as ladders, tree limbs, and trash can be blown over, striking and injuring the worker. The following guidelines should be followed to minimize injuries during high wind conditions:

- Extreme caution should be used when carrying large objects, such as ladders, during windy conditions. A gust can knock you off balance, causing you to fall and possibly resulting in an injury.
- Do not stand on a ladder during windy conditions unless you are properly belted-off. If the winds cause your ladder to be unstable, stop work until winds calm down.
- Remove the ladder when not in use, even if only for a few minutes.
- Wear your chinstrap with your hard hat.

Hot and Dry Weather

In hot and dry weather, the higher air temperatures increase the heat-stress risk factors. With these increased risk factors, employees must take special precautions to prevent the occurrence of heat-stress conditions. The table below lists the heat-stress conditions.

Heat-Stress Conditions	
Heat-Stress Disorders	Possible Signs and Symptoms
Heat rash Usually the earliest and least serious form of heat stroke.	Excessive sweating, muscle spasms, prickly heat bumps, irritability, mild dizziness or weakness.
Heat Exhaustion A more serious form of heat stroke.	Excessive sweating, cold, moist, clammy, pale skin, thirst, headaches, nausea or loss of appetite, dilated pupils, dizziness or giddiness, rapid or weak pulse.
Heat stroke A serious, life-threatening medical emergency	Lack of sweat and hot, dry, flush skin, deep, rapid breathing, rapid, weak, and possibly irregular pulse, headache, nausea, dizziness or confusion, convulsions or loss of consciousness.

If you or a coworker is suffering from heat-stress disorder, the following actions should be taken:

- Heat fatigue - notify supervisor immediately. Then, move the victim to a cool place out of the sun and give him/her water to drink.
- Heat exhaustion- Notify supervisor immediately. Then, move victim to a cool place and watch for signs of shock. Place the victim on his/her back with the feet slightly elevated. Use wet cloths to cool the victim, and give him/her a small glass of water about every 15 minutes.
- Heat stroke- Notify supervisor immediately. Then, get victim out of the heat quickly, and call for medical assistance.

The following are some guidelines to help prevent heat stress:

- Know your environment - recognize that high temperature, high humidity, and a high exertion level can increase the risk of heat stress. For example, working in a hot attic can place you at an increased risk for heat stress.
- Drink plenty of water - increasing the amount of water you drink replenishes the water lost due to sweating. Drink small amounts of water frequently throughout the day.
- Take appropriate breaks - monitor air temperature, humidity, sun exposure, and physical exertion and take breaks as often as needed.
- Wear proper clothing - when possible; wear loose, lightweight clothing that allows the body heat to escape.
- Acclimate yourself to the heat - work short periods of time in the heat, and increase the work periods gradually.
- Stay or get in shape - people in good condition tend to adapt to heat better because their cardiovascular system responds better.
- Eat wisely - avoid heavy meals during the day.
- Know special risks - alcohol, caffeine, medications such as those used to control high blood pressure or allergies, and increased age all increase your risk of heat stress.

Sunburn is another hazard of working in hot, dry conditions. The best treatment for sunburn is the use of a sunscreen prior to exposure. If you do become sunburned, using various sunburn ointments and limiting exposure of the affected areas to air can relieve the burning sensation. Medical assistance should be obtained in cases of severe sunburn.

Cold and Wet Weather

When working in cold weather, you must stay aware of the cold-related risk factors and illnesses. The table below describes the cold-related illnesses:

Cold Weather Illness	Possible Signs and Symptoms	Treatment for Cold Weather Illnesses
Hypothermia: A condition in which the body core temperature drops below normal. This can occur at temperatures above or below freezing.	• Feeling of excessive cold, especially in the abdomen and back. • Slurred speech. • Shivering. • Fumbling hands. • Tingling or pain usually in the nose, cheek, ears, fingers or toes. • Reduced mental alertness. • Poor coordination. • Loss of consciousness. • Sleeping.	• Get the victim to a warm place as soon as possible. • Warm the victim slowly; do not rub or massage the affected areas. • Loosely bandage any frostbite areas. • If the victim is suffering from hypothermia, do not give the victim anything to eat or drink. • Monitor vital signs.
Frostbite: The freezing of body tissue that occurs when the temperature drops below freezing.	• Rigid skin. • White or gray color. • Numbness, tingling or aching in the affected area. Typically the feet, hands, ears or nose. • Pain that later subsides because the skin and nerves are damaged. • Blisters appearing in 12 to 36 hours.	

The following guidelines can reduce cold weather illnesses or injury:

- Keep arms, legs, face, and ears well covered.
- Keep dry.
- Keep others informed of where you are and when you will return.
- Dress in layers. The layers of clothes trap air between them helping to insulate your body.
- Wool and hollow-fill clothing provide the best insulation in cold weather.
- Wear a hat to help keep you warm.
- Protect yourself from the wind, and use extra caution during windy conditions.
- Wear proper footwear.
- Go indoors when you become fatigued or sweaty.

Health Hazards

During the course of your work, you may encounter hazards, such as gas leaks, asbestos, creosote, and unsanitary conditions that could be detrimental to your health. The following sections describe how to identify and protect yourself from these hazards.

Gas

Gas leaks may be present in basements, crawl spaces, near furnaces, or by the outside gas meter. A gas leak can be recognized by the natural gas odor in the area. If exposed to the gas leak, you may become suddenly nauseated, suffer a headache, or feel tired.

If you suspect a gas leak, inform the customer of your suspicion and recommend he/she have the gas company check for leaks. Avoid the area of the leak and inform your supervisor. If necessary, reschedule the work after the gas line repairs are completed.

Asbestos

Asbestos may be present in basements, crawl spaces, or insulation for a furnace room or exterior walls. In homes built prior to 1972, asbestos could have been used in floor tiles, carpeting, dry wall, hot water pipe wrapping, or anything that may require a flame-retardant makeup.

When evaluating conditions for an asbestos hazard, look for indications that asbestos fibers have been disturbed; indications such as torn paper covering over old insulation, scratched paint, and exposed drywall chalk could indicate a condition that may result in your exposure to asbestos fibers.

If you suspect an asbestos problem, inform the customer. Attempt to reroute the installation to avoid disturbing the asbestos. If the problem is severe, inform your supervisor and reschedule the install if necessary.

Creosote

Creosote is used on utility poles, wooden foundations, decks, porches, landscaping ties, and fence posts. It can be recognized by the dark discoloration of the wood and its distinct odor.

When working around creosote, wear leather gloves, long sleeved shirts, and leatherwork boots to protect against exposure to your skin. If you receive a splinter or get creosote on exposed skin, remove the entire splinter and thoroughly clean the area.

Unsanitary Conditions

You may have the occasion to service a house where the sanitary conditions are less than expected. This may occur in homes that have several pets that are primarily confined to the house. In this case, proceed with the installation if possible and stay clear of the problem areas. If you are unable to continue, inform the customer and report the incident to your supervisor.