

Safely Working and Driving in Winter Conditions



As temperatures drop, safety managers face new hazards on construction, maintenance, and industrial job sites. Cold stress, icy roads, and freezing equipment can turn routine work into serious safety risks. Preparing workers and equipment before the first frost hits is essential to preventing injuries, illnesses, and costly downtime.

This guide outlines how to protect crews from cold stress, keep job sites running smoothly, and ensure everyone drives safely to and from work in winter conditions.

Understanding Cold Stress

Cold stress occurs when the body can no longer maintain its normal temperature, causing conditions such as hypothermia, frostbite, and trench foot. Even temperatures above freezing can be dangerous when combined with wind, rain, or fatigue.

Early warning signs include shivering, confusion, slurred speech, numbness in the extremities, and bluish skin. If these symptoms appear, workers must seek warmth and medical attention immediately.

Proper PPE for Cold Weather Work

The first line of defense against cold stress is appropriate personal protective equipment (PPE). Safety managers should

verify that each worker's gear is suitable for the conditions.

Outerwear and Layering

- Use the layering system – a moisture-wicking inner layer, an insulating middle layer, and a waterproof, windproof outer layer.
- Avoid cotton; it traps moisture and speeds heat loss.
- Choose jackets and bibs rated for the job's temperature range and work intensity.

Head and Hand Protection

- Up to 40% of body heat can escape through the head – ensure workers wear insulated, flame-resistant (if required) headgear under hard hats.
- Provide thermal gloves or mitts rated for dexterity and protection; liners can add warmth without compromising grip.

Footwear

- Waterproof, insulated boots with slip-resistant soles are essential.
- Encourage moisture-wicking socks and the use of boot dryers after shifts to prevent frostbite and trench foot.

Visibility

- Short daylight hours and blowing snow reduce visibility.
- Workers should wear high-visibility (hi-vis) outerwear with reflective striping that remains visible in low light or snow glare.

Preventing Frostbite and Hypothermia

Safety managers should post a Cold Stress Prevention Plan at every site and train workers on cold injury symptoms and responses.

Best practices:

- Schedule heavier work during the warmest part of the day.
- Provide warm-up shelters or heated vehicles for regular breaks.
- Rotate workers in extreme cold or wind-chill conditions.
- Supply warm beverages and discourage alcohol before or during shifts – it speeds up heat loss.
- Maintain dry conditions: wet clothing greatly increases risk.

For suspected frostbite, move the worker indoors, remove wet clothing, and warm affected areas gently—never rub or apply direct heat. For hypothermia, call emergency services, wrap the person in blankets, and monitor breathing until help arrives.

Reducing Illness During Cold Weather

Cold stress is not the only winter hazard. Seasonal illnesses like influenza and respiratory infections can spread quickly among crews sharing equipment and break spaces.

Prevention checklist:

- Encourage annual flu vaccinations and, if applicable,

COVID-19 boosters.

- Disinfect shared tools, door handles, and vehicle interiors regularly.
- Ensure adequate ventilation in enclosed work areas.
- Encourage workers to stay home when sick to avoid outbreaks that affect productivity.

Safe Driving in Icy and Snowy Conditions

Winter driving adds a layer of risk for workers commuting to, from, and around job sites – especially for those operating large machinery, dump trucks, or service vehicles.

Before Driving

- Inspect vehicles daily for tire tread, lights, defrosters, and wiper performance.
- Keep emergency kits with blankets, flashlights, traction aids, and first-aid supplies.
- Allow engines and hydraulic systems to warm up fully before use to prevent mechanical failure.

While Driving

- Reduce speed and increase following distance – stopping distances on ice can triple.
- Avoid sudden braking or sharp turns.
- Use low-beam headlights in snow or fog to improve visibility.
- Watch for black ice on bridges, ramps, and shaded areas.

On the Worksite:

- Apply sand or salt to high-traffic pathways and vehicle routes.
- Mark icy zones clearly with cones or signage.
- Require backup spotters or cameras when operating heavy equipment in slippery conditions.
- Establish a no-cellphone policy for drivers and equipment operators unless communication is hands-free and work-related.

Manager's Winter Safety Checklist

Before the season starts, safety managers should review this checklist:

- Cold Stress Prevention Plan posted and reviewed
- Workers trained to recognize frostbite and hypothermia
- Heated shelters and warm-up breaks scheduled
- Winter-rated PPE inspected and distributed
- Vehicles and machinery winterized
- Site access routes salted and cleared
- Emergency supplies stocked and accessible
- Incident response plan updated for winter hazards
- Flu and illness prevention program implemented

Final Thoughts

Cold weather doesn't have to halt productivity. With proper planning, PPE, and vigilance, safety managers can keep crews healthy and operations running smoothly all winter. When workers know how to protect themselves—and when supervisors model those behaviors—the risk of cold stress, frostbite, and driving accidents drops dramatically. Every minute spent preparing before the snow falls pays off in fewer injuries,

fewer lost-time incidents, and safer, more resilient teams.