

SAFETY BRIEF: WINTER FACILITY PREPARATION

Winter in Alaska can present many challenges for property maintenance and safety, including heavy rain, snow and ice, gale force winds, extreme cold, and long hours of darkness. Maybe you've even experienced all of the above in a single winter season. Winter storms take a toll all across the U.S. In 2020, winter storms caused \$1.1 billion in insured losses, a mild year compared to the \$2 billion in losses in 2019. In 2021, southern states experienced catastrophic cold and icy conditions leading to a record \$15.1 billion in insured losses this year.

Fortunately Alaskans understand winter storms better than our school and municipal peers in the southern states, but don't let familiarity lead to complacency. Facilities preparations, both outside and inside, can help you protect and extend the life of your property and ensure a safe environment for employees, students, and the public.

Maintenance strategies that protect property from damage during the cold winter months also creates energy efficiencies. Buildings account for 40% of energy consumption in the U.S., and 76% of electricity consumption. Energy often represents a property's single largest operating expense. Proper maintenance and weatherization not only reduces risk of loss due from harsh winter conditions but also reduces costs by reducing energy consumption.

Prepare the Building and Property

Keep your roof in good condition; the roof provides support on the walls of the building and provides protection against rain, snow, ice, sunlight, extreme temperatures, and wind. Take some time to inspect and prepare your building and roof and schedule any necessary maintenance or repairs before winter arrives. If you do not have a qualified, knowledgeable, and trained staff to inspect your building or structure, contact a qualified licensed contractor.

Outside Building and Property Preparations

Qualified trained staff or qualified licensed contractors need to inspect, maintain, or prepare the building or property infrastructure for colder weather. Not properly preparing the property's infrastructure can lead to operational and business interruptions.

- Inspect the roof for missing shingles or ice shield: Check if the flashing is in good condition and if your vents, gutters, and downspouts are clear of debris or blockage.
- Inspect the roof for possible leaks: Are there missing shingles or holes on the outside? From underneath, is water staining developing on the sheathing or roof trusses? Are there water stained ceiling tiles or watermarks on the walls starting at the ceiling?
- Check for missing or broken siding: Check weather stripping, caulking, flashing, and weeps for damage on walls to prevent moisture from getting in or collecting behind the exterior wall.
- Make sure windows, exterior outlets, and doors work properly and are sealed and caulked to prevent air and moisture from getting inside the building.



- Check the ground around the foundation: Is the final grade sloping away from the building so storm water and snowmelt runs away from the building?
- Is your foundation in good condition and not cracked or seeping water inside?
- Are your sidewalks, curbs, and parking lots in good condition with no cracks and potholes to fill with water that will ice over and cause slippery spots? When water fills in a crack or pothole and freezes, it expands in the hole and makes it bigger and more costly to repair later.
- Are all outside lights and parking lot lights in proper working order, and timed to turn on near dusk and remain on during hours of business?
- Emergency back-up generators should be scheduled for maintenance and tested. Generators should start-up and operate weekly according to the manufacturer's specification. The generator's fuel tank should be on a keep-filled maintenance program.
- Are there exposed water pipes that need to be drained or wrapped to protect them from freezing or bursting?
- Are the building's water spigots frost-proof or anti-freeze spigots? If not, are the water lines off and drained and the spigot left open?
- Inspect the outside of emergency doors and ensure pathways are open and not blocked.
- Blow out the irrigation system and disconnect it from its water source.
- Vacant buildings should be managed in the same fashion as occupied buildings, with utilities such as heat and electricity maintained. They should have regular and frequent inspections for broken pipes, functioning smoke and fire detection, intrusions, and broken windows or doors.



Inside the Building Preparations

It is just as important to prepare the inside of the building as it is the outside of the building. Hazardous conditions can develop inside that can cause illness or death if mechanical instruments are not in good working condition. Colder weather can cause mechanical systems to work harder during winter months and can lead to system failures and breakdowns. The building's emergency warning devices can fail and impede your emergency evacuation plans. Make sure to do the following:

- Schedule furnaces and HVAC systems for maintenance and test them for proper working order. Change their filters regularly according to manufacturer's specifications.
- Water supply pipes are susceptible to freezing in cold weather. Water pipes should be winterized which may mean drained, insulation wrapped, or heat taped wrapped.
- Have a plan in place to shut off the water supply to the building when you lose power during freezing conditions and open faucets to allow water and ice to vacate the waterlines. If it is not possible to shut off the water supply, leave faucets open so water flows out in a steady stream about the size of a pencil.

- Develop a monthly checklist to inspect portable fire extinguishers; test emergency exit signs and back-up batteries; test carbon monoxide (CO) detectors, smoke and fire alarms; test emergency lighting; and if necessary, replace back-up batteries on any equipment.
- Develop a program to regularly check that emergency exits and exit pathways remain clear and free of storage.
- Develop a program to regularly check that fire doors are not blocked and will close in the event of a fire alarm. Train employees not to block open fire doors.
- Check emergency kit supplies, make sure flashlights work, and maintain a supply of extra flashlight batteries and a working emergency radio.
- Consider keeping extra emergency supplies such as blankets, water, and food on hand in the event employees are stranded at the building due to weather.
- Educate employees about being prepared in the event they become stranded and must shelter at work. Do they have necessary medications? A change of clothes? Do they have comfortable shoes or boots? Educate staff on the importance of keeping an overnight bag in their vehicle at all times in case they are stranded.
- Educate employees on emergency preparedness, fire evacuation, business continuity plans, and the meaning of storm alerts such as weather advisory, storm watch, and storm warnings.
- Educate employees on slip, trip, and fall prevention and safe winter driving.
- Educate employees to wear appropriate shoes with good soles and tread when coming to or leaving the building to prevent slip and fall injuries according to weather conditions. Educate employees who wear business attire to wear appropriate shoes for conditions and change into dress shoes after entering the building.
- Add extra runners and mats inside entrances. Runners and mats should be at least fifteen feet long—enough for a person to take at least five steps before walking on hard surface floors. Depending on weather conditions, mats and runners may need to be changed out at regular intervals throughout the day.
 - Develop a maintenance program to mop up snow, water, and ice at the entrances regularly to prevent slip and fall injuries. A blower can be employed to speed up the drying time of wet floors.



Outside Safety and Working Outside

It is important to train staff and create safety programs about working outdoors. Many accidents are preventable with preparation, proper tools, equipment, and training.

- Ensure employee and guest safety from falling snow and ice over walkways and at entrances.
- Ensure sidewalks are clear of both snow and ice conditions. After shoveling snow from walkways, you may need to add traction sand, ice melt, or other supplements to prevent slips and falls.
- Implement a maintenance program to ensure the exterior of emergency exit doors and exit pathways leading away from the building remain free of snow and ice.
- Ensure employees are trained to prevent frostbite and hypothermia and take the following steps:

- Dress properly for cold weather conditions
 - Drink plenty of warm fluids and water
 - Stay active to maintain body heat
 - Take frequent breaks from the cold
 - Get out of the cold immediately if they have signs of frostbite or hypothermia
- Make sure employees wear appropriate personal protection equipment (PPE) such as high-visibility safety vests or jackets, ice grippers, etc. Require outdoor workers to wear a headlamp or carry a flashlight during dark or nighttime activities.
 - Train employees on working in winter conditions; monitor employees working in extreme conditions to prevent exhaustion and other potential health conditions or illnesses such as strokes or heart attacks.



Winter Equipment and Vehicles

Proper vehicle maintenance and operation, and equipment maintenance programs are critical to maintain business operations safely. Harsh winter conditions cause additional wear and tear on both vehicles and equipment and can cause a higher frequency of breakdowns. It is important to have maintenance programs to cover both your vehicles and equipment. Make sure to take the following steps:

- Have appropriate and adequate snow removal equipment and make sure equipment is properly maintained and in good working order.
- Carry extra fuel and parts for snow removal equipment in case of a surprise storm.
- Assure vehicles are maintained and ready for harsh winter conditions; regularly check all vehicles' lights for proper working conditions
- Review winter safe driving tips with employees. This should be done at the beginning of every winter.
- Make sure vehicles have emergency kits, flares, fire extinguishers, and first-aid kits, and train employees on how to use the supplies.
- Train employees to keep emergency kits and overnight bags in their personal vehicles in case they become stranded at work or when driving to and from their homes.



Remember, the AMLJIA offers free online training for many health and safety topics including Slip, Trip, and Fall Prevention, Winter Driving, and Snow Plow Safety. If you need assistance with online training or setting up new learner accounts, call us at 800-337-3682.