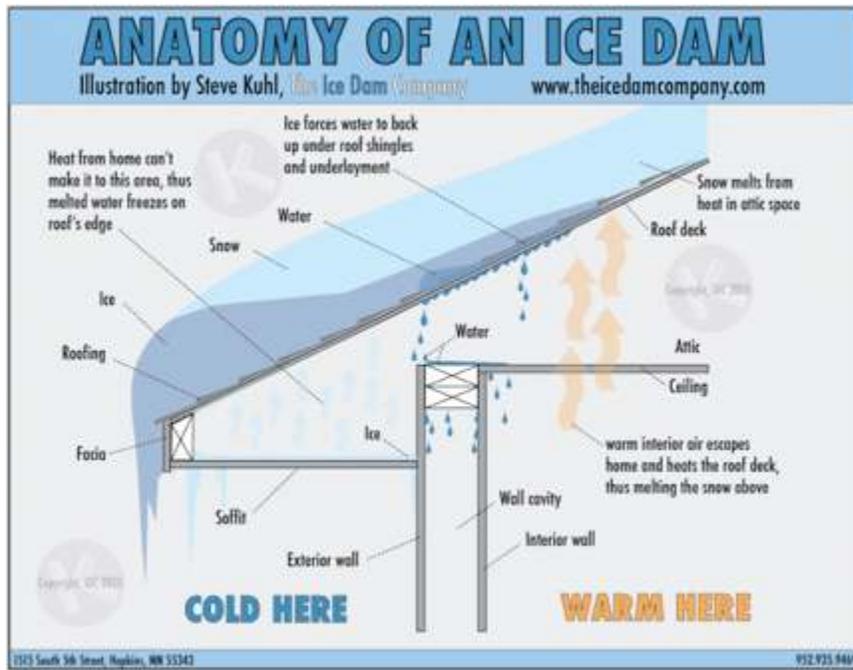


Mother Nature often doesn't provide advance warning that she's about to unleash freezing cold temperatures and mountains of snow (let's hope). Knowing how to winterize a home is more than half the battle. Here are some ideas, suggestions and reminders to help you prepare for the winter:

### Ice dams

Accumulations of ice form at a roof's edge and prevent melting snow from draining properly. Water backs up behind the ice and often leaks into the house, damaging walls, ceilings, insulation, floors, furniture, and more.

**Why they happen:** The dams result from multiple variables interacting: the home's quality of insulation, amount of ventilation, and architectural design; the climate; and the home owners' lifestyle. Ice dams are primarily the result of heat escaping into areas of the roofline where it's not supposed to be. The heat melts the snow on higher roof areas, and the melted water travels to areas where it's below freezing such as the eaves. It then refreezes and accumulates into a dam that prevents melted water from leaving the roof.



**Solutions:** Two main strategies help eliminate ice dams. The first is architectural and more expensive. Home owners can increase their insulation and ventilation, which often costs between \$8,000 and \$15,000. The advantage is that the work improves the home's

energy efficiency. The second involves installing heat cables on the lower edge of a roof in a serpentine pattern to stop water from freezing and backing up. That typically runs between \$1,000 and \$2,000.

**Extra tips:** Have your roof raked. Roof rakes are available at most home stores (Home Depot, Lowe's, etc.). Removing snow from your eaves and one to two feet above them will help prevent ice damming. This "raking" needs to be done on a regular basis and not when the ice forms (too late in most instances). Make this a regular task when you shovel your walkways and decks. Better yet, have a contractor shovel your whole roof when additional snow accumulates.

### **Nonfunctioning furnace**

Just when you need heat, the furnace conks out.

**Why it happens:** There are multiple causes: Maybe it's old and needs to be replaced, dirty and needs cleaning, or the filter needs replacing. If it's a high-efficiency model, the exhaust pipe may be clogged and the system's computer has alerted the furnace to stop producing heat to prevent carbon monoxide from entering the house.

**Solutions:** Home owners to be proactive and service a furnace annually before winter starts. Your fuel supplier should be able to perform these services and most have a service plan available.

### **Take Steps to Stockpile Supplies**

Many home owners get so busy in fall that they forget to stock up for winter. Then, when emergencies occur, many stores sell out of essential equipment quickly. Advise your clients to source supplies early on, including a good snow shovel or blower, bags of deicer, multiple flashlights, and extra batteries in case power fails. A good source of information is the [federal government's disaster preparedness site](#), which also recommends stockpiling canned or dry food for people and pets, clean bottles for fresh water, an emergency radio, and warm blankets.

## **Heat loss**

Feel a draft? It doesn't happen just in old houses.

**Why it happens:** Cold air can enter where windows and doors aren't sealed well and cracks can occur in foundations, walls, roofs, and other places.

**Solutions:** A few simple solutions are to replace broken window panes before winter, add storm windows and doors, caulk window frames and weather-strip doors to cut down on leaks. According to the Environmental Protection Agency's Energy Star program, the average home owner can save 15 percent on heating and cooling costs by air-sealing a home and adding proper insulation.

**Extra tip:** Consider a professional home energy audit to check for leaks and measure your home's insulation values.

## **Frozen pipes**

Any pipes connected to appliances or fixtures on outside walls can cause ice to build up and pipes to freeze and perhaps burst.

**Why it happens:** Insufficient insulation or air leakage near a toilet, sink, dishwasher, or other water-using appliance can cause this common problem in below-freezing temperatures.

**Solutions:** All pipes leading to the units cited above should be wrapped with pipe insulation, and walls or crawl spaces near them should be checked for holes and sealed. When the weather drops below freezing, home owners should open cabinet doors in a kitchen or bathroom that has plumbing on an outside wall. Heat in areas where there are pipes should be kept at a minimum of 50 degrees and turn off your water main whenever you leave the home for any length of time.

**Extra tips:** For those of you with crawl spaces make sure your crawl spaces are heated and foundation vents are closed and insulated. Most of your distribution water pipes are in your crawl space and will freeze very quickly if not heated and checked for leaks. If you are not using your home for the winter season, drain and winterize your water

system. Many people think that just shutting off their water and draining the system will prevent freezing; what they forget about is water in the toilets, drain traps, washing machine and ice maker lines etc. which may not drain or fully drain. Have a professional do the work.

### **Frozen exterior faucets or septic tank**

The result can be an unappealing flood or backup of waste.

**Why it happens:** When outside water sources are left on, water can freeze in pipes, burst them open, and flood a home. A septic system can also freeze and cause waste to back up in toilets or sinks.

**Solutions:** When temperatures dip, home owners should turn off the outside water for the season and disconnect drained hoses from faucets. A septic system should be checked and cleaned every few years to be certain it's not full and prone to overflow.

### **Icy driveway, walkways, and steps**

They can easily become slippery and cause falls and broken bones. They may also cause home owners liability issues.

**Why it happens:** When snow and ice aren't removed promptly, they can form highly treacherous surfaces and paths — sometimes as slippery as an ice skating rink.

**Solutions:** Home owners shovel as soon as a snowfall ends, and spread sand or other snow- and ice-mitigating material around. Salt, which can hurt pets' paws and soil alike, should be avoided.

**Extra tip:** Home owners should also replace chipped or cracked stones and bricks in walkways and loose or raised boards on decks, which may not be visible when covered with snow or sand but can easily cause accidents.

### **Trespassing animals**

Come cold weather, many critters seek warm shelter and your home might provide the perfect spot.

**Why it happens:** Animals get in any way they can, whether through the top of a chimney or by chewing away at a home's exterior to form or enlarge an entryway.

**Solutions:** Trimming branches will help keep trees from becoming a launching pad for animals looking to break in. Also close small gaps or cracks that mice and squirrels can use as a way inside.