# SAFETY ZONE

## Personal Risk Management

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# Ice Dams 101

The icicles hanging from your home's eaves may look beautiful, but they actually may be a sign that a ridge of ice is forming at the edge of your roof. This ridge, known as an ice dam, can prevent melting snow from draining properly. This is a concern because the water that backs up behind the ice dam can seep under your roof materials and into your home, potentially causing damage to interior walls, ceilings, and insulation.

Ice dams are typically the result of uneven heat loss from your home during ideal winter conditions, which include snow, heat to melt the snow, and cold temperatures to refreeze the melted snow into ice. The heat is typically caused by inadequate attic insulation or from warm air seeping into the attic from the living space below, which warms the roof to a point above freezing. This causes the snow on the roof to melt, only to refreeze before reaching the roof's edge. If the cycle repeats itself, an ice dam forms, behind which water collects. The pooling water can then back up under your roofing material.

Fortunately, there are some basic steps you can take now to avoid problems later:

✓ Keep the attic well vented. According to the Department of Energy, one square foot of free ventilation opening is

# Winning the Winter War: Preventing Frozen Pipes

Thousands of families will experience the agony of having to deal with frozen pipes each winter season. This experience is disruptive to daily life and can be quite costly to repair.

Pipes in your home can burst because water expands as it freezes. Accompanied by water's expanding property and extreme pressure, the pipe does not have the strength to hold in the liquid. This applies to metal and plastic pipes alike. Generally, pipes that are exposed to cold temperatures freeze more readily, such as outdoor hose bibs, swimming pool supply lines, water sprinkler lines and pipes in unheated interior areas such as basements, crawl spaces and attics. Also, pipes that run along exterior walls in the home with minimum insulation tend to freeze easier as well.

However, there are many preventative



recommended for every 150 square feet of attic space.

- ✓ Seal air leaks to prevent warm air leakage from common thermal shortcuts, such as from plumbing vents, junction boxes for ceiling light fixtures, or attic hatches.
- ✓ To minimize the amount of heat rising into the attic from below, keep the attic floor well-insulated (at least 12 inches of insulation). The colder the attic, the less likely you will have melting and refreezing on the roof.
- ✓ Clean leaves and other debris from gutters before the first snow. This will help prevent ice buildup in gutters. Consider adding an ice shield under the shingles. This is

typically done when the house is being re-roofed or built.

- ✓ Use a roof rake to clear the snow above the gutters. Clear as much as 3 to 4 feet above the gutter to allow water to drain freely.
- ✓ If an ice dam forms, sprinkle a melting compound to break it up. Avoid the use of rock salt, as it may cause further damage and faster deterioration of the gutters.
- ✓ Avoid the use of ladders, as they may be hazardous due to icy, wet or snowy conditions.
- ✓ Consider hiring an energy specialist to evaluate the energy efficiency of your home. ■

#### PREVENTING FROZEN PIPES CONTINUED

measures homeowners can take to avoid dealing with this winter nightmare.

Before the temperature drops:

- Insulate pipes in unheated interior areas such as crawl spaces and attics. The more insulation, the better.
- Wrap pipes in heat tape or thermostatically controlled heat cables.
- Seal any leaks with caulk or insulation that may allow cold air to ventilate pipes.
- Disconnect outdoor items such as hoses or faucets; shut off these items completely using an indoor valve and allow the excess water to drain out. Avoid using antifreeze on these items as it is environmentally harmful.
- Trickle a little water out of your faucets to keep water moving within the pipe.
- Open cabinet doors to expose the pipes to warm air.

If you turn on your faucet and no water or only a trickle comes out, your pipes are probably frozen.

- Turn off the main water valve and keep the faucet on.
- Apply heat to the pipe using an electric heating pad, hair dryer, portable space heater or by wrapping the pipe in towels soaked in hot water. NEVER use an open flame to thaw a frozen pipe.
- Apply heat until you regain water pressure. If this does not occur, call a licensed plumber.

### Other Tips to Avoid Frozen Pipes

- ✓ Keep your garage door closed if there is a water supply located inside.
- ✓ Keep the thermostat set at the same temperature during the day and overnight. If you lower your temperature at night, you are at risk of freezing your pipes even though your heating bill will be higher.
- ✓ If you are going on vacation, do not set your thermostat lower than 55°F.
- $\checkmark$  Ask a neighbor or friend to periodically check the temperature in your home to ensure the pipes will not freeze.

