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ICE DAMS



What is an Ice Dam:

An Ice dam is a barrier of ice that forms at the edge of a roof or within the gutter system of a home. Melting snow is prevented from properly draining off the roof. Water can pool up behind the dam and leak into the home primarily beneath the roof covering.

What Causes and Ice Dam:

An ice dam can form when the temperature in the attic space is warm enough to melt the snow on the roof and the outside temperature is below freezing which prevents the ice on the perimeter of the roof or in the gutter from melting. This can create a pool of water on the roof.

The photos below show a home with no insulation in the attic. Heat from the interior of the home passed through the attic space and warmed up the roof. This caused the snow to melt from the bottom up. The outside temperature was in the mid 20°'s Fahrenheit. The water from snow melting slowly drained down the roof until it reached the edge of the roof and gutter system. Because the gutter system is not receiving heat from the attic space the water froze and created an ice dam.

In this particular instance the water leaking into the home caused wood rot on the roof decking and mold growth in the attic space.



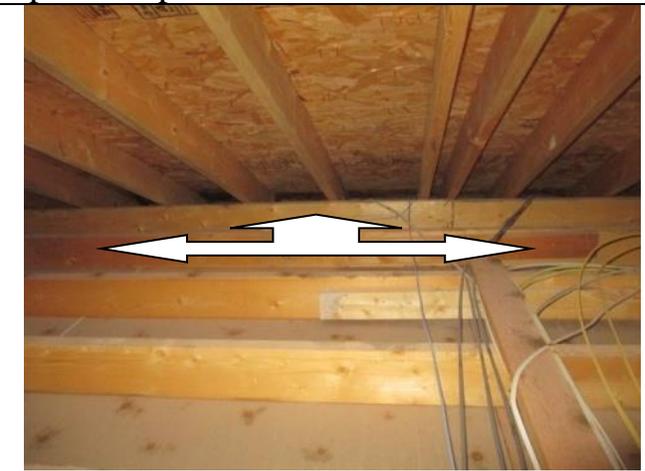
Recent snow fall over a few days caused build up on the roof.



Ice dams formed in the gutters and backed up on the perimeter of the roof.



Water damage and mold/mildew growth on the interior drywall and wood framing and roof decking can be clearly seen here.



The dark staining on the lower section of roof decking is where water had begun to cause wood rot.

As you can see there is no insulation in the attic space of this home. The water began to leak into the attic space and caused water stains that were visible from the living areas below, mold and mildew growth, and wood rot on the decking.

Ice dams can occur where attics are generally well insulated but other factors cause heat to be released into the attic space, such as:

- Damaged or improper installation of kitchen exhaust fans;
- Damaged or improper installation of dryer vents;
- Damaged or improper installation of bathroom vent fans;
- Whole home fans or attic access holes that have not been properly insulated;
- Inadequate insulation of HVAC ductwork;
- Leaking HVAC ductwork;
- Exhaust systems that terminate just above the roof line may cause snow to melt from the outside, even if they appear properly installed. This is more frequent in regions of greater snow fall.