



North Dakota
INSURANCE
DEPARTMENT
PROTECTING THE PUBLIC GOOD
SPECIAL FUNDS DIVISION

Advisory

Preventing Rooftop Ice Dams

Long, hanging icicles are normally a sign that colder winter temperatures have arrived. This condition, commonly referred to as ice damming, can cause costly structural damage to both commercial and residential properties.

An ice dam is a ridge of ice that forms at the edge of a roof and prevents melting snow (water) from draining off the roof. Ice dams form when heat from the structure's interior rises and warms the underside of a snow covered roof slope. The melting snow runs down the roof until it reaches the cold roof edge, where it freezes again. Eventually, ice builds up along the eaves forming a dam that forces water back up underneath the roof surface into the attic or eave cavity. The water that backs up behind the ice dam can leak into a building causing damage to walls, ceilings, insulation and framing. Heavy concentrations of ice along a roof edge can cause damage to roofing materials, gutters, soffit, fascia, eaves and downspouts.

Heavy snowfalls followed by periods of warmer weather provide prime conditions for ice dams to form. Roofs with large surface areas exposed to the sun and small run-off areas are prone to ice build-up.

The most effective way to prevent ice dams is to ensure your building has adequate insulation and attic ventilation. Finding and sealing areas where warm air may be leaking into the attic or under the roof cavity is also important. For roofs that are prone to ice damming, products such as ice and water shield and heat tape can reduce or eliminate the potential for damage.

Experienced roofing and insulation contractors can provide you with recommendations to improving the insulation and ventilation characteristics of your building along with methods to reduce the formation of ice dams.