

ICE DAMS

WHAT IS AN ICE DAM?

An ice dam is a build up of ice that forms at the edge of a roof, in the valleys, or in the gutters and prevents melting snow (water) from draining off the roof. The water that backs up behind the dam can leak through the roof into a home and cause damage to walls, ceilings, insulation, and other areas.¹

WHAT CAUSES ICE DAMS?

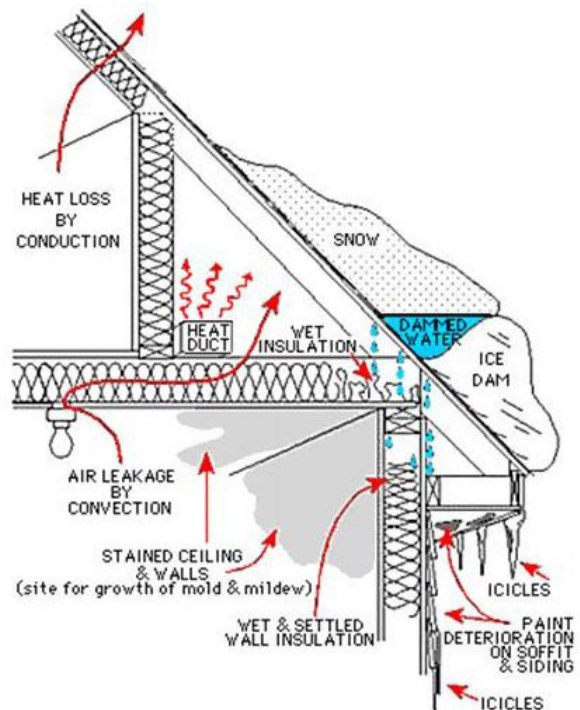
For ice dams to form, two conditions must exist:

- There must be snow on the roof
- Portions of the roof's outside surface closer to the ridge must be above freezing, while lower surfaces are below freezing

The snow on the roof's surface that is not frozen will melt. As water flows down the roof it reaches the portion that is colder and solidifies.

Voila!—an ice dam.

The dam grows as it is fed by the melting snow above, allowing water above to back up behind the ice dam and remain a liquid. This water finds cracks and openings in the exterior roof covering and flows into the attic space. From the attic it could flow into exterior walls or through the ceiling insulation and stain the ceiling finish.



DEALING WITH ICE DAMS

Immediate action:

- Remove snow from the roof. This eliminates one of the ingredients necessary for the formation of an ice dam. A “roof rake” and push broom can be used to remove snow, but may damage the roofing materials.
- In an emergency situation where water is flowing into the house structure, making channels through the ice dam allows the water behind the dam to drain off the roof. Hosing with tap water on a warm day will do this job. Work upward from the lower edge of the dam. The channel will become ineffective within days and is only a temporary solution to ice dam damage.

Long-term action:

- First, make your ceiling air tight so no warm, moist air can flow from the house into the attic space. Nonuniform roof surface temperatures lead to ice dams.
- After sealing air leakage paths between the house and attic space, consider increasing the ceiling/roof insulation to cut down on heat loss by conduction.

¹ information gleaned from The University of Minnesota