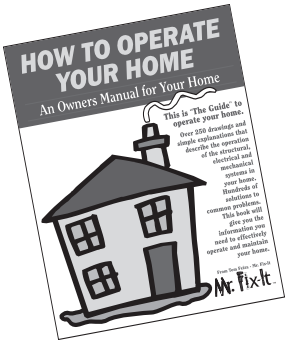


Mr. Fix-It™ HOME TIPS
Tom Feiza's Tips For Operating Your Home

THE ICE DAM COMETH!

WHAT'S A HOMEOWNER TO DO?

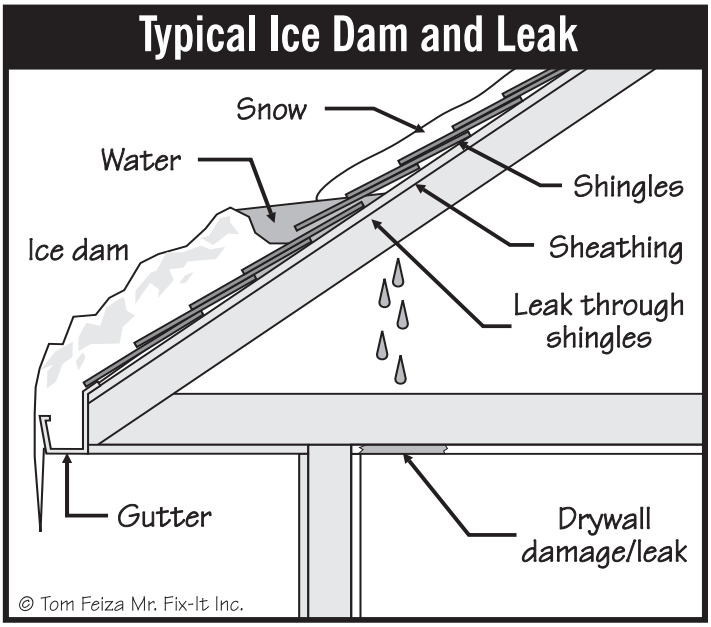
Remember those snowy winters? Beautiful snow and ice made for great winter beauty and fun. But then, as the weather warmed a little, that beauty became an ugly, damaging, watery mess inside some homes. In many cases, ice dams were the culprit. Let's talk about winter ice damming and how to prevent problems.

WHAT IS AN ICE DAM?

An ice dam is a ridge of ice that builds up along the edge of a roof. The ice creates a dam that backs water up and under the roof shingles. Once the water is deep enough, it penetrates the roofing system and creates water damage inside the home. (SEE FIGURE R002)

To recognize an ice dam, look for a bulge of ice attached to the eaves or overhang of a roof. There may be icicles ("Aren't they pretty!") hanging from the edge, and you may see stains on the siding. The rain gutters may be overflowing with ice.

Often, the bulge of ice is covered with several inches of snow, so you may not see it. Under the buildup of frozen snow is the melting snow and ice—water that is entering your home. If interior damage has already occurred, you will see a wet ceiling and wall or water flowing into widows.



R002

RELATED DAMAGE

Beneath the ice dam, undetectable damage is occurring in the attic and wall cavities. The wood framing is wet and may be rotting. Insulation is soaked, which makes it inefficient. Mildew and mold can grow in hidden spots, causing odors and other problems inside your home.

Soaked framing and insulation will take a long time to dry out and will continue to contribute to wall damage and interior moisture problems. Uncorrected, the water can cause serious structural damage.

UNDER COVER: A CLOSE LOOK AT THE CAUSE

Ice dam problems are most common in snowbelt regions. They begin when snow accumulates on a roof. Generally, deeper snow and colder temperatures increase the formation of ice dams. North or northwest winds usually accompany snowfalls, so more snow is deposited on north and west roof planes. Complex roof structures that trap snow compound its depth and the problems it creates.

Once the snow has built up on the roof, it acts as an effective insulator. (Light snow has a insulation value of about R-1 per inch.) Heat from the attic warms the underside of the roof and melts the bottom snow into a slush/ice/water mixture. This mixture slides under the snow cover and runs down the roof till it meets a cold surface like the overhang. The slush then re-freezes. As more slush accumulates, the layer becomes thicker and thicker, creating an ice dam. All of this action occurs hidden from view under the snow cover.

Once the ice dam is high enough to overcome the pitch of the roof, water seeps under asphalt shingles. Standard roof shingle construction is not designed to resist the attack of water pooling on its surface. The