Of the two ice dams illustrated above, the Double Dam presents a couple of challenges beyond those of the regular ice dam. First, because ice has grown further up the roof slope, the subsequent leaks inside will cover a wider area. The second problem with a Double Dam is the cost of removal. Although half the thickness, it may take two to three times longer to remove than a regular ice dam. More time equals more money.

Shown right is a very typical Double Dam. This home in Minnetonka, Minnesota had leaking from both ice dams and the cost to remove them was tremendous. Area A is where the average ice dam likes to form. Area B only forms when someone does an incomplete snow removal job from the roof. So what is the take-away from this case study? Remove all the snow from roof slopes that may produce an ice dam or remove none at all. While the latter may result in an ice dam happening on the lowest edge of the eave, at the very least it won’t be a Double Dam.

You may have read that removing snow from your roof will prevent ice dams, and for the most part that is true. Ice dams get their fuel (i.e., water) from the snow on your roof after all. Remove the snow, remove the problem. So this winter you buy a roof rake, brave the cold and remove as much snow from your roof as you can, leaving a section of snow still in place higher on the roof that you couldn’t reach. A few weeks pass and bam! You see water leaking through your ceiling. How can this be? The answer lies in a phenomenon we call the ‘double dam’, something we have seen over a hundred times in the past decade alone. Our graphic below helps explain the how and why.

**How the Double-Dam Forms**

Snow removed from the lower edge of the roof creates an expanded ‘cold zone’ (A). Meltwater from the remaining blanket of snow above (B) refreezes across the entire cold zone. The resulting ice dam is typically thinner than a traditional ice dam and grows higher up the roof.

Ice forms higher on the roof, creating more severe, widespread leaking

**Ice dam prevention: How much snow should be shoveled from a roof?**

Of the two ice dams illustrated above, the Double Dam presents a couple of challenges beyond those of the regular ice dam. First, because ice has grown further up the roof slope, the subsequent leaks inside will cover a wider area. The second problem with a Double Dam is the cost of removal. Although half the thickness, it may take two to three times longer to remove than a regular ice dam. More time equals more money.

Shown right is a very typical Double Dam. This home in Minnetonka, Minnesota had leaking from both ice dams and the cost to remove them was tremendous. Area A is where the average ice dam likes to form. Area B only forms when someone does an incomplete snow removal job from the roof. So what is the take-away from this case study? Remove all the snow from roof slopes that may produce an ice dam or remove none at all. While the latter may result in an ice dam happening on the lowest edge of the eave, at the very least it won’t be a Double Dam.