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When To Give Your Roof A Snow Job

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We've had a "snowier" winter than last year and I think most Alaskans are thrilled, particularly those who enjoy the winter sports. From dog-mushers to skiers, we are all celebrating. Roads can be tricky at times but the MOA Street Maintenance crew do a terrific job. You should give them a call at 343-8277 and compliment them sometime.

On the downside, some folks start to panic when they see the depth of snow on their roof. Does it need to be shoveled? Probably not yet, but the following may assist you.

There is no simple 'rule of thumb' on when snow (and ice) removal is necessary for your roof system, due to the fact that roofs vary in construction, design and age, but here are some thoughts:-

The questions to be answered are:- How much weight can your roof trusses support, what weight is it already carrying in roofing materials, and how heavy is the snow/ice accumulation on various parts of your roof?

Anchorage Municipal Code requires that roofs be constructed to accommodate a minimum sustained load of 40 pounds per square foot. However, older homes may be weaker or, in some cases, stronger than this. Also, keep in mind that many architects design to at least 150% of code, which means that your newer home may be built to an even higher standard. One prominent Anchorage builder works on 55 pounds per square foot.

A roof system can suffer drifting snow (e.g. where an upper roof spills onto a lower roof). This requires a higher standard and builders are required to submit calculations with the Permit Application which will then be reviewed by Building Safety at the Municipality.

You could have a structural engineer calculate your particular roof's strength or, at least, inspect the attic for signs of

rafter deflection, the pre-cursor of collapse. You should also take into account that the buildup of snow or ice is not necessarily consistent across the entire roof. Valleys may have greater accumulation, and eaves may have ice build-up.

However, putting all the exceptions aside, you can measure the weight of a particular area in the following manner. Take an old 6 pound coffee can (6 inches in diameter) and thrust it repeatedly into a vertical core in the snow until you have a full 6 inch diameter core all the way to the shingle surface. Empty the snow into a bucket and melt it. Pour the water back into the can and measure its depth in inches. Multiply the result by 5.2 and the answer equals the weight per square foot in pounds.

For example, if the entire core of snow measures out at 4 inches of water in the can, the pressure on the roof is 4×5.2 , or 20.8 pounds per square foot. With ice, simply measure its depth, without trying to remove it, and multiply by the same 5.2 factor.

Nobody on a local newscast can tell you what your snow load totals based on snow fall year-to-date. The variables are too many. Snow varies in kind and amount across the Anchorage bowl. Light, fluffy snow that falls when temperatures are low is not 'heavy' snow. Snow also 'sublimes' over a period of time (i.e. evaporates). Your particular home may experience more snow blown off the roof than a neighboring suburb. However, the snow load on an average, pitched roof home in Anchorage, built to current codes, is probably between 15 and 25 pounds per square foot as we enter February 2017.

Of more concern than cleaning the entire roof at this time is to ensure that vents extending through the roof are not blocked by snow. Generally, stacks associated with the heating system keep themselves clear because of heat, but drain vents, bathroom exhaust vents and attic ridge vents may become buried.

Also of particular concern would be homes

with large, overhanging eaves where there is less support, and roofs of enclosed decks, sheds, carports and other lightweight structures possibly not built to any code at all.

Decks can worry some people as well but, like roofs, are also subject to a Building Permit Code at 40 psft. minimum. All decks that are more than 30 inches above ground must be 'Permitted' and may also have a 'Drifting Snow' factor if below a roof where wind can add an additional burden.

Should you need authoritative guidance on roof or deck loads you can always call M.O.A. Building Safety at 907-343-8301.

The bottom line is that it may be time soon to get out that shovel or, better still, have a contractor advise since we have now had over 6 feet of snow and likely more to come before the Spring thaw. However, it is not time to panic yet. A 100 inch winter-to-date snowfall might be a general call to action stations for homes built before 1980 but newer homes will hold the weight. The only other alarm is if you start having water in the home. Ventilation, insulation and so many factors can impact your experience.

