Roof Snow Load Advisory

Emergency Management
Simcoe County

What are Snow loads?

Snow loads refer to the weight of accumulated snow and ice that a roof can safely support before its structural integrity is at risk.

Problems often arise when the load is unevenly distributed across the roof surface. These non-uniform loads create concentrated areas of stress, placing excessive pressure on specific sections that are not designed to support more than a certain weight. Over time, this imbalance can lead to structural damage or even roof failure if not properly managed.

The County of Simcoe encompasses a diverse range of geographic areas, each affected differently by winter weather conditions. As a result, potential roof-related issues can vary depending on your location and the type of roof you have. This information page is designed to help you understand how these factors may impact your property and to provide guidance on safely assessing and addressing potential roof concerns.

Different types of roofs pose different challenges



Steep pitched roof (A-frame/Gable)

Good for shedding snow and reducing weight load. However, wind may blow snow from one area of roof to another, putting unbalanced load on roof joints. Potential need for snow guards as there are concerns for sudden large volume slides if not stabilized.



Flat or low-sloped roof

Prone to high, consistent snow accumulation. Stronger structural reinforcements are required to prevent collapse. During winter months, these roofs require more consistent monitoring and active snow removal.



Complex roof (with valleys/dormers)

Creates "drift" areas where the snow can accumulate deeper.
This accumulation significantly increases localized loads and can hold meltwater causing winter dams. The potential for roof leaks and interior or structural damage increases.



Metal roof

Ideal for high volume snow areas. Prevents ice dams and promotes snow shedding from roof. May also require snow guards to protect areas below and prevent injuries from sudden snow shedding.

What to look for when inspecting your roof/building:

New cracks forming in ceilings or walls, particularly during periods of heavy snowfall

Doors or windows becoming difficult to open or close, which may indicate frame distortion

New or repetitive popping and creaking **noises** when the structure is under load

Bowing or deflection of roof sheathing, visible from the attic (between rafters or trusses)



Snow Removal as Risk Management

When is it time to consider snow removal?

1. **There have been multiple snowfalls** without a melting period in-between
2. **Snow is wet and heavy** or rain is saturating existing snow
3. Your building has a **flat or low-slope roof**
4. **You have observed any of the warning signs** listed above in the "what to look for" section
5. Your roof has accumulated **2 to 3 feet** (60 to 90 cm) **of snow**

Prepare Your Roof Before Winter

1. **Inspect the roof structure** for any damage or deterioration and repair or reinforce as needed
2. **Ensure adequate attic insulation** to prevent heat loss that can melt snow and contribute to ice dam formation
3. **Check and clean all roof drains and downspouts** to prevent blockages in the drainage system
4. **Trim nearby tree branches** that are close or in contact with the roof to reduce the risk of damage from falling limbs
5. **Prepare necessary equipment** for potential snow removal before the winter season begins
6. **Document the roof's condition** with photos after maintenance to support any future insurance claims





Safety First

Unbalanced removal can create uneven loading. Do not clear one side of the roof completely while leaving the other side heavily covered. Always remove snow gradually and in layers. Prevent roof damage by using care with snow removal equipment. It is not necessary to remove snow all the way down to the roof surface as long as melting snow and water can flow freely to drains. When in doubt, hire insured professionals to safely complete the work.

Information Sourced From: Ministry of Labour, Training, and Skills Development, National Research Council, & CNA Insurance