



## North Tahoe and Meeks Bay Fire Protection Districts



March 27, 2017

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### **Chief's Corner: Sierra Sun and Bonanza Too much snow can destroy your home.**

It's easy to think "it's not going to happen to me" when the thought of your home/roof collapsing from too much or an unbalanced snow load comes to mind. But the truth is; it is a very real problem when Mother Nature provides a winter like we've seen this year in the Lake Tahoe area. The combination of massive amounts of snowfall, and unbalanced snow loading on homes has left the North Tahoe Fire Protection District responding to several calls for collapsed roofs. Thankfully, all of the homes have been unoccupied, and as a result no injuries have been reported.

Like most Fire Departments, when North Tahoe Fire or Meeks Bay Fire Protection District personnel respond to a structure collapse their first priority is life safety. Life safety as a priority includes determining the potential for trapped victims or the possibility of occupants in the structure at the time of collapse. Responder safety and civilian bystander safety are also Life Safety priorities that are a part of the Incident Commanders initial considerations. Securing the buildings utility services such as gas and electric is done early to prevent secondary fire, electrocution or explosion caused by damaged or downed lines. After rescue operations and the utilities are secured the area may be taped off with caution tape to warn visitors of the danger and notifications are made to the local building officials and utility companies.

The Building Services Division of the Placer County Community Development Resource Agency says potential heavy snow danger signs include:

- Visual deformation or sagging of beams and other parts of a building's structural-support system.
- Newly developed cracks, particularly any which appear above windows or doors and where beams and other support structures are located. Minor cracks that expand or contract could be indications of building movement.
- Doors and windows that suddenly become significantly harder to open or do not open at all, a sign that a building is potentially settling.
- Water leakages inside buildings.
- Recent buckling of interior or exterior siding and finishes, which may be a symptom of settling.
- Sprinkler heads being pushed down below ceiling levels.

Ground snow load is defined as the weight of snow on the ground surface. Ground snow load values are established using data collected by the National Weather Service. The ground snow load in the Lake Tahoe area ranges from 223 to 300 lbs per square foot. Lake level is considered 6,300 feet, with a ground snow load of 243 lbs, increasing by 11 lbs per 100 ft increments of elevation. According to the Federal Emergency Management Agency (FEMA) roof snow load is defined as the weight of snow on the roof surface used in design of the building structure. It is determined based on multiple factors, including: ground snow load value, importance, occupancy, and use of the building, wind exposure of roof, roof slope, roof shape, roof obstructions, and thermal condition of the building

The primary thing to remember when clearing your roof is to be safe. North Tahoe Fire Protection District recommends snow removal is performed by a licensed, insured professional roofing contractor who has experience in removing snow from roofs. According to the Zachary Engineering website, each side of the roof should be cleared at the same time whenever possible; meaning that one side of the roof should not be completely cleared until the opposite side of the ridge is also cleared. It is recommend clearing in stages. This will help avoid unbalanced snow loads on the roof. You may



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have heard of roofs that fail during or immediately after clearing, and the primary reason for this is inadvertently creating unbalanced snow loads for which a roof might not have been designed.

If you witness or find a structure collapse, immediately call 911, do not enter as it may be unsafe, beware of any smell of gas or downed power-lines and the possibility of secondary collapse.

To check your snow load for your home, you can visit [zacharyengineering.com](http://zacharyengineering.com) where you will find their free snow load calculator. A snow load safety guide is available at [FEMA.gov](http://FEMA.gov).

*Michael Schwartz joined the North Tahoe Fire Protection District as its Fire Chief in 2012, after serving 29 years with a neighboring fire agency. Along with his wife Jean, they have been a part of the Lake Tahoe community since 1978.*

***Picture on following page***



3/21/17 House collapse in Tahoma. The deck fell away from the house and took half the house with it. House was unoccupied, no injuries. House had been unattended all winter. Meeks Bay Fire Protection District and North Tahoe Fire Protection District Responded