

PLUMAS COUNTY BUILDING DEPARTMENT

Roof Snow Loads and Design Criteria



<u>Area</u>	<u>Lbs / Sq.Ft.</u>	<u>Area</u>	<u>Lbs / Sq.Ft.</u>
	P_f		P_f
Beckwourth	60	Lake Almanor	100
Belden	40	Lake Davis	100
Blairsdan	80	La Porte	200
Bucks Lake	200	Little Grass Valley	200
Canyon Dam	100	Meadow Valley	80
Chester	100	Portola	60
Chilcoot	60	Quincy	60
Clio	80	River Valley Estates	60
Crocker Mountain Estates	100	Sierra Valley	60
Dixie Valley	100	Tobin	40
Frenchman Lake	100	Twain	40
Genesee	80	Valley Ranch Estates	80
Graeagle	80	Warner Valley	125-150
Greenville	60	Whitehawk Ranch	80
Indian Valley	60	Thompson Valley	60-80
Johnsville	150	Taylorsville	60

1. **IMPORTANT NOTE:** Before proceeding with a design, call and verify snow load for your specific project. Please provide us with the assessor parcel number (APN). For areas not specifically listed above, snow loads are determined from the Snow Load Map posted in the Building Department.
2. The snow loads listed above are the snow loads on **FLAT ROOFS (NOT Ground Snow loads)**. If desired or required by your engineering software, use ASCE equation 7.3-1 $P_f = 0.7 C_e C_t I P_g$, to determine the ground snow load where the P_f listed above is based on an exposure factor $C_e = 0.9$, thermal factor $C_t = 1.1$, and importance factor $I = 1.0$ per ASCE Standard 7-10 equation 7.3-1. The flat roof snow load for each site should have these factors adjusted as appropriate.
3. For elevations above 7,000 feet, the snow load is 50 psf greater than that indicated for the adjacent highest snow load.
4. Snow loads may be reduced for sloped roofs in accordance with ASCE Standard 7-10 Section 7.4 **providing** a minimum of 8-feet of vertical eave height is provided for each 100 pounds of snow load. This minimum eave height is measured from the eave down to either grade or the first obstruction, such as a deck, etc., and must be maintained for a minimum distance of 10-feet out from the eave. In areas with snow loads in excess of 100-lbs. which do not have a 16-foot or greater eave height, the allowable slope reduction can be pro-rated (i.e., snow load greater than 100 lbs. eave height of 9-feet; 9/16 of the allowable reduction can be taken).
5. Snow reduction for sloped roofs shall not be used for structural members affected by valleys, dormers, slope changes, chimney chases or other areas where the snow may be restricted from sliding.
6. Metal roofing with **exposed fasteners**, Asphalt shingles, wood shingles and shakes shall not be considered “slippery” for the purposes of snow reduction for sloped roofs per ASCE Standard 7-10 section 7.4.
7. Uncovered decks, and all similar structures, may be designed for the flat roof snow load listed above. Covered, but not fully enclosed decks and all similar structures shall be designed for floor loads from CBC Table 1607.1 or 50% of the flat roof snow load, whichever is greater.
8. "The nominal 3-second gust basic design wind speed (when using allowable stress design) in Plumas County is VASD = 85mph. Per the 2013 CBC, Table 1609.3.1, the ultimate 3-second gust basic design wind speed is VULT = 110mph".
9. Designer may reduce roof design snow load up to 80% for use in seismic calculations per CBC Section 1605.3.1.
10. Allowable soil bearing without special soils report is 2000 psf.
11. Frost depth is 18” below finished grade. Footings shall extend a minimum of 12” into undisturbed native soil. Exterior finished grade shall provide a minimum footing coverage of 18”
12. Conventional Light-Frame Construction is not permitted in Plumas County per CBC section 2308.2.3.3.
13. This document may be revised/updated periodically. Please contact the Building Department to obtain the latest version.