Snow

Snow on the ground is a familiar concept for many humans, and its vertical load on exposed surfaces is easy to understand. But how deep can the snow get at a location, and how much does it weigh? The weight of dry snow is around 100kg/m^3 while the weight of wet snow is near 350kg/m^3. In comparison, water weighs 1,000kg/m^3.

In areas around Vancouver the building code has "1 in 50" snow load on the ground ranging from around 2.5kN/m^2 near sea level, gradually increasing to nearly 6kN/m^2 at 400 meter elevations. In snowy parts of the province, such as near the Whistler ski resort, ground snow load can approach 8kN/m^2. Using the mass densities given above those three load values correspond to roughly 2.5m, 6m, and 8m of dry snow on the ground. The corresponding **depths of wet snow are 0.73m, 1.75m, and 2.33m**.