Climate change will contribute to variable and unpredictable snowfall in California’s mountainous areas. As extreme weather becomes more frequent, buildings and infrastructure must undergo renovations to withstand the impacts of these events. Donner Trail Elementary School in the Tahoe-Truckee Joint Unified School District is prone to receiving between 200-400 inches of snow in the wintertime. The school building, with a snow load rating of approximately 130 pounds per square foot in the winter (well below the Nevada County Building code’s required 252 pounds per square foot) was at risk of collapse under the weight of an increased snow load. Recognizing the dangers to the building and the public health risk in the event of heavy snow accumulation, the District applied for the California Office of Emergency Services’ Hazard Mitigation Grant for support in renovating the roof of the school and increasing the school’s snow load capability to meet building code requirements. In January 2017 after the project was complete, the area experienced one of the worst winter storms and snowfalls on record with approximately 300 inches of snow. As a result of the facility’s structural improvements, the school withstood what could have previously been a catastrophic winter event.

Image provided by the California Office of Emergency Services. Clockwise from left: Donner Trail Elementary School from the outside, the interior of the roof before it was renovated to meet local building code specifications; the interior of the roof after it was renovated to meet building code requirements.

For more information about Safeguarding California and Climate Change Adaptation efforts in California, visit: http://resources.ca.gov/climate/safeguarding/