

I-90 Snoqualmie Pass Project: evolution of an Interstate Highway Avalanche Program

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Interstate 90 over Snoqualmie Pass, WA (921 m) is the major highway through the Cascade Mountains of Washington State. Snoqualmie Pass receives an average of 1100 cm of snowfall annually. I-90 is affected by 5 active avalanche areas containing nearly 40 individual paths. Increasing traffic volumes have exceeded the capacity of the 4 lane highway. Avalanche delays and closures have an economic impact that often exceeds several million dollars (USD), depending on the length of the closures. The current two-lane snow shed was built in 1950, and additional lanes were added in the 1960's. These lanes are unprotected from avalanches. Avalanche control along I-90 over Snoqualmie Pass will be dramatically reduced by building passive defense structures. WSDOT has started a \$595 million (USD) project to upgrade and expand an existing 8 km section of I-90. Plans include replacing the existing 2-lane 152 m snow shed with a 6-lane snow shed 335 m long. Approximately 1200 m of snow supporting structures will be installed in other avalanche starting zones. This will be one of the largest highway snow sheds and the most extensive fencing projects in North America.