

A Practical Use of Historical Data To Mitigate Worker Exposure to Avalanche Hazard

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In the forty-one seasons of avalanche mitigation at the Jackson Hole Mountain Resort, avalanche hazard reduction routes have been run from the top down. During the 2007/08 season, the resort's aerial tramway was being replaced and was inoperable. To gain access to the top of their routes ski patrollers would be required to pass beneath unmitigated avalanche terrain. The ski patrol director had a plan to address this challenge. Some members of the patrol were concerned about their safety and the patrol's ability to manage this hazard. A search of an historical database with over 18,000 avalanche events was conducted to characterize the hazard on the avalanche paths of concern. Data analyses tools were created to perform this search and a Geographic Information System (GIS) was used to present a summary of this study along with operation modifications to the patrol during a preseason training session. This methodology was extremely effective in characterizing the avalanche hazard and communicating the results of this effort to the staff. Operations were safely conducted with surety and confidence. This example highlights the value of historical data as a practical tool for mitigating worker exposure to avalanche hazards.