

## **Mission: Avalanche Rescue**

### **Students learn to use avalanche beacons and other rescue techniques**

**By JASON AUSLANDER - The New Mexican**

This rare treat is, of course, a boon to winter sports enthusiasts — whether skiers, snowboarders, snowmobilers or hikers — who have flocked into the backcountry in increasing numbers in recent years. The popularity of the backcountry — especially this winter — has also been a boon to the skills possessed by the various men, women and dogs who make up the Santa Fe area's search and rescue personnel.

Still, one can never be too prepared.

With that in mind, approximately 40 search and rescue volunteers (not including dogs) and prospective volunteers gathered last month at Pajarito Ski Mountain for a workshop on avalanche training, awareness and rescue operations. The goals of the event, put on by Pajarito Mountain Ski Patrol, K-9 Search and Rescue and the New Mexico Emergency Service Council, were to teach the skills necessary for mountain and avalanche rescues.

**The workshop began on a bright Friday morning with a quick welcome by Sue Purvis, a wilderness medical instructor from Crested Butte, Colorado, who was the course's main instructor.**

This workshop “is about what to do when, as searchers, you find yourself suddenly in avalanche country,” she said. “This is really about how not to get killed.”

Pulling off such a rescue requires good communication, solid organization, knowledge of how to deploy teams, how to provide basic medical assistance and evacuation.

“Avalanche training combines all the elements of search and rescue,” Purvis said. “Avalanche training is a lot of fun.”

With that, volunteers broke into smaller groups of seven to 10 and began a rotation through four stations, each meant to teach a different winter backcountry skill.

First up for one group was avalanche-beacon use and theory. Scott Hsu, a member of the Pajarito Mountain Ski Patrol and training leader, said there are about six beacon models on the market with an average cost of about \$200. Many claim an effective range of 40-80 meters, but are most effective within 10-20 meters, Hsu said.

“The most important thing to know is how to use the one you picked,” he said.

However, using an avalanche beacon — or, more to the point, finding one buried beneath the snow — is trickier than you might think.

When rescuers arrive at an avalanche scene, the most important thing to do first is

establish their own safety, Hsu said. After that, the next step is to make sure the beacon is turned to “receive” and not “transmit” mode. Finally, look around the avalanche fall for any visual clues — clothing, poles or skis sticking out of the snow — that might give away the person’s position, he said.

Then comes the hard part.

Picking up an avalanche beacon signal is not like operating a metal detector, said Peter Dickson, the director of Pajarito Mountain and volunteer search and rescue coordinator for the New Mexico State Police, who also helped with the training. You can’t walk around the avalanche debris field waving the device over the top and expect to find anyone, he said.

It’s helpful to think of the signal coming out of the beacon a bit like the lines depicting elevation on a topography map. A signal from a beacon comes out differently depending on how it’s positioned beneath the snow, he said. If the beacon is vertical in the snow, the signal is thrown straight up like a fountain. If it’s horizontal, the signal will be parallel to the ground. The trick is figuring out how the signal from the beacon you’re tracking is being emitted, and where the middle — the person — is situated.

Oh, yeah — all of this must be done very quickly because the person buried may have as little as three minutes of breathing time, unless he has been able to clear an air pocket in front of his face.

Quickly finding a buried beacon takes lots of practice — the time to learn how to use an avalanche beacon is not while looking for your buried ski buddy.

Next up was “Probe Line Practice and Avalanche Scene Organization.” The former entailed what Philip Rae, another member of the Pajarito Ski Patrol, called “the least efficient” method of finding someone buried in an avalanche.

Here’s what you do: Line up across the avalanche-ravaged slope, standing 12- to 18-inches from your neighbor’s shoulder and holding an eight-foot-long metal pole in your hand. On one person’s count, you probe the snow next to your left foot, then your right foot, and then you take two small steps uphill and repeat. You will be able to tell if you hit something other than snow.

“If you hit a body, you will know it,” Rae said. “Bodies are kind of squishy.”

As always, volunteers were reminded that every second counts in an avalanche rescue as the person’s chances of survival quickly dwindle.

“Backcountry Litter Packaging” was the next stop, and while a novice might be excused for thinking otherwise, it had nothing to do with trash. Purvis, the main instructor, conducted the training on how to deal with an injured person in the backcountry for an extended period of time.

In such situations, rescuers must keep the person alive and warm, Purvis said. To do this, teams learned to build a “hypothermia wrap” out of a sled, blankets and lightweight foam pads like those used for camping. Once wrapped up and tied down, the injured person can remain in that position for hours — unless they have to go to the bathroom, Purvis said, reminding teams to make sure that is taken care of before they begin wrapping the person. She also emphasized that rescuers must take care of themselves while on a mission by eating and drinking a lot.

The last stop was learning how to drive a snowmobile, which was a challenge mainly for those who brought dogs.

Later in the day, Purvis spoke to the large group about snow safety and the factors to look for when in the backcountry. Three questions to ask yourself in such situations are: Is this avalanche terrain (a slope of 25 to 40 degrees), am I a trigger (yes, almost always) and is the snow unstable?

The latter — being able to examine a cross-section of the snow pack and reckon whether it will slide — can take years to master and requires specialized classes in snow science, Purvis said. Often, one patch of snow is different from another just a few feet away, she said. Still, if the snow is new or wet and heavy, and if other avalanche activity has occurred nearby, watch out, Purvis said.

Colorado and New Mexico are particularly dangerous because of the abundance of steep slopes, she said.

So, get out there and enjoy the fantastic snow conditions. But if you want Purvis’ advice, don’t try to ski or ride any slope you even barely suspect might slide.