

**AVALANCHES:** Thaw and freeze changes make ripe conditions

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backcountry skier, at Crystal Mountain in the Washington Cascades earlier this month. Experience counts for nothing if you find yourself in the wrong place at the wrong time. There is no substitute for caution and foresight.

As if the huge amount of snow from a steady stream of storms wasn't enough, last week's mid-winter thaw exacerbated avalanche conditions. Thawing compacted the season's early snowpack, creating distinct icy layers. When new snow falls on top of that layer, it's like snow falling on a metal roof; and it is easily shed at the slightest provocation.

New snow that falls now instantly poses an avalanche threat to backcountry travelers. Potential problems can exist on any snow-covered slope, but some slope and snow conditions present greater potential danger. If different layers from different snowstorms are not sufficiently melded, the layers can more easily separate and slide apart, causing an avalanche.

Last week, Forest Service Trails Specialist Chris Sabo issued a bulletin for the Deschutes National Forest stating, "Deep snow conditions exist at many elevations. Skiing, snowmobiling and snowshoeing can be very difficult on untracked or untracked trails. Backcountry avalanche danger is possibly elevated with recent storm activity. Warming temperatures, with rain and snow ... may also elevate avalanche danger and possibly cause localized water and slush hazards in the snow pack. On- and off-trail caution is advised with changing weather conditions."

Each snowstorm has its own set of conditions; and, accordingly, the resulting snowfall has its own unique properties. These different characteristics result in poor



PHOTO BY CRAIG F. EISENBEIS

Backcountry travelers should always be aware of conditions that can lead to avalanches, especially on and around steeper slopes.

bonding between the layers. As a result, the individual layers that are not bonded shed easily off the underlying layer.

While an avalanche can occur on any slope, they more frequently occur on slopes between 25 and 65 degrees, with the most common range between 30 and 45 degrees. Less steep slopes can be more stable, and extremely steep slopes may slough snow continually, preventing large build-ups of snow. Generally, it is best to stay away from all slopes in excess of 30 degrees.

The avalanche danger is constantly changing day to day, even hour by hour. It is important for backcountry users not only to understand the underlying factors involved in avalanche danger, but to heed those signs as well. Being properly equipped and trained is also vital. Backcountry users should have a good understanding of avalanche principles and carry the right tools, which include a beacon, probe, and shovel. Of course, it is also necessary that you know how to use those tools if traveling in avalanche country.

It is also important for backcountry travelers to learn to recognize potentially dangerous situations. A convex

contour on a slope profile can make the area more avalanche-prone, while a concave surface may have the opposite effect.

In addition to slope, wind and snow conditions can play a big role in setting the stage for avalanche danger. For example, windswept slopes may be less prone to avalanche if falling snow is carried away. At the same time, when that snow is blown and transported to the lee side of a slope, even more snow may accumulate in those locations, exacerbating already unstable conditions.

One sure method of developing avalanche savvy lies in recognizing areas where avalanches have occurred before. A steep slope, swept clean of trees, can be a likely sign of past and future avalanche activity. Areas studded with trees or rock outcroppings are indications of areas that may be better equipped to anchor the snow in place.

Ultimately, backcountry users must be responsible for their own safety and that of others. Travelers must learn to make their own snowpack evaluations and safe route

decisions. Whenever avalanche danger is high, it is better to select paths through low-angled terrain that are also away from avalanche runouts.

Offices of the Deschutes National Forest Service offer a very useful, free brochure entitled "Basic Principles to Avoid and Survive Snow Avalanches." At a minimum, winter backcountry users should be familiar with the principles outlined therein. The brochure is usually available locally at the Sisters Ranger District office. Last week, however, local supplies of the brochure were exhausted; but more have been ordered and should be available soon. Regardless, the office stands ready to provide safety information and advice.

Backcountry enthusiasts should always be aware that strong and fast-moving winter storms can change outdoor conditions very quickly. Always check weather forecasts beforehand, always be prepared, and always use sound judgment to make sure that you don't become a search-and-rescue statistic.

**Ammon Bundy expected to testify at next Oregon standoff trial**

PORTLAND (AP) — A judge will let Ammon Bundy testify in the upcoming trial of seven defendants charged in the armed occupation of the Malheur National Wildlife Refuge in Oregon.

The leader of last year's takeover sits in a Nevada jail, awaiting trial on charges stemming from a 2014 standoff with federal agents at his father's ranch.

U.S. District Judge Anna Brown said Friday she will work to ensure that Bundy is transferred to Portland to testify, but not if he argues the brief transfer will hurt his ability to prepare for his trial.

*The Oregonian/OregonLive* reports that Brown wants Bundy's time on the witness stand limited to what's necessary.

Bundy testified for three days at his trial in Portland last fall, when he and six co-defendants were acquitted of federal conspiracy and weapons charges.

The second trial stemming from the 41-day occupation begins February 14.

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