

Snow and boulders slide with warming



Outdoors

By John T. Unger

Windy and warm conditions last weekend created an appealing time to prune my 20-foot tall apricot tree and to change my vehicle's oil and filter. Of course, too much wind makes a ladder unstable, while too much warmth in winter makes the high-country snowpack unstable.

Such was the case a few weekends ago, when temperatures near 10,000 feet elevation had been 10 degrees above freezing, nearly breaking records. Not only is the snow less appealing when upper layers warm enough to melt and then refreeze at night, but different types of avalanche dangers begin to appear.

Even if you do not ski the high-altitude backcountry, you likely have seen some signs of this if you have driven over high mountain passes in the winter. Pinwheels and rollerballs are the common terms for snow on a slope that has warmed enough, even briefly, to spontaneously form a wheel as it rolls down the slope.

Avalanche potential is increased then. When large, these pinwheels look very much like the size and shape of the wheel of a golf cart.

Incidentally, the preceding paragraph might be one of the only times that the words "avalanche" and "golf cart" have occurred together in the same article. In any event, this warmed, gloppy, snow is not quite slushy, but signals that free water is making its way down into the snowpack, lubricating it.



Mike Nadiak carries his skis over a newly fallen and shattered giant boulder blocking Engineer Pass Road. (Submitted photo/John T. Unger)

Terrain traps

When this occurs, know that there is a greater risk for what is termed a "Loose Wet" avalanche. These avalanches were naturally sliding on the south-facing slopes surrounding the Engineer Pass Road, south of Ouray, during a very warm day recently. Just more than 48 hours later, cloudy and much colder conditions arrived with a cold wind, and that is the day a group of us considered a ski tour up that unplowed road. More cold meant more stable snow that day.

Knowing that the Colorado Avalanche Information Center had just lowered the day's avalanche danger rating from moderate to low, we still had to consider the rather steep slopes flanking Engineer Pass Road on the uphill side. Even with a low danger rating generally, many of these slopes are steeper than 40 degrees and therefore at higher risk of sliding.

In addition, one must consider local terrain features when selecting where

to ski in the backcountry. Those of you who have driven or biked up this road in the summer know that its right side often consists of a steep drop-off down to the Uncompahgre River. This situation is technically termed a Terrain Trap, and can allow even a very shallow slide to bury a person many feet deep.

Of course, each member of the party should carry his or her own shovel, probe pole and avalanche transceiver. A beacon check at the start of the trailhead is always important, as shown by the mid-February tragedy in the Flattops Wilderness Area. There, both motorized snow riders had airbag backpacks and shovels, but only the individual who survived the avalanche was wearing a transceiver, which sadly delayed his ability to locate his buddy in time.

Character counts

One might wonder why it matters to know whether the day's likely avalanche

character is technically termed Wind Slab, Loose Wet, Loose Dry, Wet Slab, Persistent Slab, Deep Persistent Slab, Cornice Fall or Glide. That is an honest question, and I have heard more than a few experienced skiers, snowboarders and snowshoers question why.

The answer involves how one's group chooses the terrain they will travel upon on any particular day.

Some types of snowslides are commonly triggered from above (Loose Dry), others from below. A person can even trigger certain types of avalanches by skiing across the flats hundreds of feet away from the bottom of the slope (Persistent Slab).

One type of avalanche may have extreme consequences (Deep Persistent Slab), another may have minimal consequences (Loose Dry). Some may only be likely to be triggered for a few days after the storm during which they were deposited (Storm Slab), others for up to a week (Wind Slab), and others remain sensitive to triggering for several weeks (Persistent Slab) or even months (Deep Persistent Slab).

As if those distinctions were not enough reason to be concerned about what character of avalanches are predicted for the day you choose to travel in the Rockies' backcountry, some avalanche types are more likely in early to mid-winter (Loose Dry) and others only in spring (Glide).

There is much useful and even intriguing information available by searching the web for "Colorado Avalanche Information Center" and then clicking deeper into, for instance, "Avalanche Character" at the foot of the daily avalanche forecast.

If we decide that that is a little too much work for a snow sports day, or that today is a little too windy, or even too warm, there are always other options.

Somebody's oil needs changing; and it is the right timing to prune.

John T. Unger is a diplomate of the American Chiropractic Board of Sports Physicians with more than 25 years of practice in Montrose. He hopes the trees don't blossom too soon this year to bear. Ideas for future columns are welcomed at sportsdocunger.com.

Understanding Wind Chill

We hear the terms "wind chill" and "feels like temperature" all the time from the winter weather forecasts, but most of us really don't pay that much attention. If you lead an active outdoor lifestyle in the cold months, you should be aware of wind chill and how it can affect you.

American explorers Charles Passel and Paul Siple conducted the first research into wind chill during an expedition in the Antarctic in 1940. These gentlemen suspended bottles of water outside and measured how long it took the water to freeze under various wind conditions. Before long, the pair had a good idea how rapidly heat was lost at various wind speeds.

The original science measured heat loss in an esoteric unit as watts per square meter. It was not until the 1970s that TV weathermen began using terms like "wind chill factor" and "feels like" during their forecasts. This made it easier for viewers to relate to what they were saying.

In short, when wind blows across the surface of exposed skin, it draws heat away from your body. The higher the wind speed, the more heat it draws away from your body. Therefore, exposed skin will cool more quickly in the wind than it would on a still day.

The core temperature of your body is 98.6 degrees Fahrenheit. When the core drops below 97 degrees, it becomes hypothermic and can turn deadly very quickly.



Tips from the Posse

By Mark Rackay

The wind chill factor you hear reported assumes your exposed face is five feet off the ground, it's nighttime and you are walking directly into a headwind at 3 mph. If you are dressed warmly or standing in the sun, perhaps blocked from the wind, you will feel significantly warmer.

The science behind wind chill calculations is still being debated, but that does not mean the measurements should not be taken seriously. The basic concept of wind chill is that stronger winds will cause exposed skin to cool more quickly. The quicker that the skin cools, the faster frostbite will set in. With a wind chill of minus 50 degrees, frostbite can take as little as five minutes.

If your activity outside involves little movement, it would be wise to avoid having any exposed skin when the wind is up. You can also try to avoid open areas and seek refuge behind trees or other structure to stay out of the wind.



Bikers experiencing wind chill. (Submitted photo)

When your outdoor activity is more strenuous the wind becomes even more of a factor. Perspiration will increase the effects of wind chill, promoting frostbite and hypothermia even quicker.

Wearing clothing made of synthetics next to your skin, avoiding all cottons, will help wick moisture away from you. If you find yourself really sweated up, it is a good idea to shed the wet clothing immediately.

Many folks carry extra base layer clothing along if they know that perspiration is going to be a problem. Staying dry and avoiding skin exposure is the secret to avoiding cold

weather problems.

If I am hiking in the cold, I will take off my outer layer before I begin to perspire. Preventing a sweat is better than having to deal with wet clothing. When stopping for a rest, you can always throw that layer back on before you begin to chill.

And just for fun, the coldest wind chill ever recorded, occurred July 4, 2003, at a remote weather station in east Antarctica. The temperature was minus-94 degrees, with the wind blowing at 75 mph, making a wind chill of minus 150 degrees.

Staying safe while outdoors in the cold requires that you

pay close and constant attention to what your body tells you. Even when the temperatures are in the 40s or 50s, a wind can make it feel much colder. You should also be mindful of the constantly changing environment we recreate in.

Until next time, keep the wind at your back and see you on the trail.

Mark Rackay is a freelance writer who serves as a director and public information officer for the Montrose County Sheriff's Posse. For information about the posse call 970-252-4033 (leave a message) or email info@mcsppi.org.



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