



THE Beacon

"It just seems better when it's snowing."

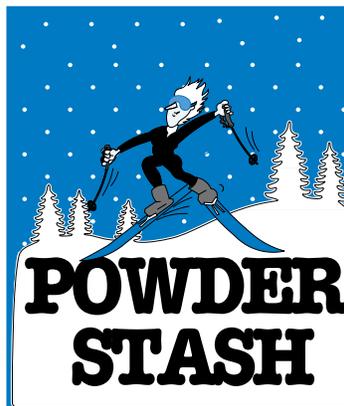
—Ethan Greene

I was teaching an avalanche class on Cameron Pass this winter with Ethan Greene, a graduate student at CSU and previously a forecaster with the Utah Avalanche Center. It was one of those bone-chilling, damp, cold January days. The winds were blowing the moderate snowfall almost horizontally across the parking lot. People were flailing and jumping around to stay warm, yet there was a discrete smell of excitement in the air that I hadn't picked up on. Ethan said, "It just seems better when it's snowing, doesn't it?" At first I was a little confused. The cold seemed to have numbed my thought process, and I was having a hard time getting pumped up to stand around in snowpits all day. Within seconds I came to my senses, laughed, and said, "How right you are, Ethan." The smile was back on my face, the excitement of the new snow warmed my veins, and the rest of the day was magnificent.

On another cold and snowy tour this winter, my friend Billy Mattison and I did the Commando Run. As usual, I spent most of the trip straining at maximum effort to keep up with Billy as he sauntered through the eight inches of new fluff for the 15 miles to the top of Red, the high point of the tour. The Commando Run has been one of my favorite tours since first doing it in the early 1980s. It is a great way to get in shape, the views can be spectacular, plus there's a host of different ways to finish it off. When we finally skied to Billy's front door in East Vail, we both agreed that our run down West Marvins had to be one of the best powder runs ever.

Even though you may almost blow a gasket from physical effort, the temperatures may be hovering near zero, and views may be lost in the clouds, if it's snowing, it really doesn't matter. It's just better when the white stuff is flying.

On a different note, I had an interesting experience on a day it wasn't snowing (fortunately). Some friends and I were skinning up Peak 5 in the Tenmile Range outside Breckenridge. Our



by Scott Toepfer

forecast called for clear skies and cold temperatures. Breaking trail in Colorado mid-winter can be an arduous chore. Bottomless depth hoar, downed logs, and hidden stumps can make every step an adventure. It is easy to stay warm as your heart rate hits high gear. We stopped after about an hour to shed a layer or two. With the forecasted cold temps I had dressed accordingly that morning. Before leaving the house I put my beacon on over my sweater, and under a vest and soft shell jacket. At the first break, I took the vest, soft shell jacket, and my sweater off; the exercise was generating too much heat for me.

After a quick spot of tea we were off again. About half-an-hour later I looked down and saw the shadow of something swinging below my pack. To my horror I suddenly realized I had forgotten to put my beacon back on. Fortunately the strap had just barely hooked onto one of the side straps of my pack, purely by accident.

I was at the end of the conga line so no one else saw the dangling beacon. If the sun had not been at our backs on the way up, most likely I would have lost the beacon and not have noted its absence until I got home. I felt like a carpenter without his hammer and wondered if I had lost the beeper, would it have altered my ability to do my job? It would certainly have kept me from performing a beacon search in the event someone was buried. But would not having it make me change the day's goal? It's a good question.

As it was, we backed off our goal on Peak 5 because strong winds had loaded a stiff wind slab onto our intended line. But you can bet that I will now remember to heed my own advice from avalanche classes: Always wear your beacon in a way that you will never need to remove it.

We have another full issue of *The Beacon* as we close the 2003-04 season. First up is Q&A. Each season we hear many great questions regarding snow, weather and avalanches, and we answer some of these in this issue.

Next, Nicole Greene is an avalanche educator and an observer for the CAIC in the Ophir area. This past winter a friend of hers had a close encounter with an avalanche in the San Juan backcountry. Nicole had a chance to interview her

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Powder Stash

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while on a backcountry hut trip in March, and graciously offered it to *The Beacon*.

Then, we have a wrap-up of this winter's avalanche activity. It was a rather quiet year, and through mid-April there have been three avalanche fatalities in the state, only half the annual average.

Finally, for the second season running, the A Basin ski patrol hosted "The Beacon Bowl." This is a little festival that offers pointers on the use of avalanche transceivers and includes a contest on a timed course. Winners received great prizes after a really fun day on snow. We have included a short piece on that event.

I hope you all have a safe and enjoyable spring and summer. We'll be back next winter, and so will the snow and avalanches.



You've got questions? We've got answers.

by Scott Toepfer

Q: "Would it be possible to generate a map of the mountains with past slide activity superimposed?"

—Bruce Berkowitz

A: This is a question we have been asked many times. Nick Logan of the CAIC has created two avalanche maps, one for the Loveland Pass area and one for the Vail Pass area. (These are available from the CAIC, the Colorado Geological Survey, and local USFS offices and outdoor shops.) We can create avalanche maps for high-use areas such as these because we have good data and we can display a small area on a useable scale. But this does not work for large backcountry areas, for several reasons.

First, the number of avalanches in the backcountry is seriously under-reported, which would make the map inaccurate. Second, many avalanches large enough to bury someone are too small to show up on a map with a reasonable scale. We think it is better for backcountry skiers, snowboarders, and snowmobilers to develop good skills of terrain recognition, safe travel habits, and stability recognition, rather than relying on inadequate maps. To check out what is available, you can view some maps of avalanche paths for the United States at www.avalanchemapping.org.

Q: "While reading your reports I noted that you often do not include units of measure. I was wondering if you had considered going to a metric scale. Since the study of weather and avalanches is a scientific process, metric units would seem to be the unit of choice. Also, since your reports are posted on the world wide web, people from around the planet are probably looking at your site. Have you considered going in this direction?"

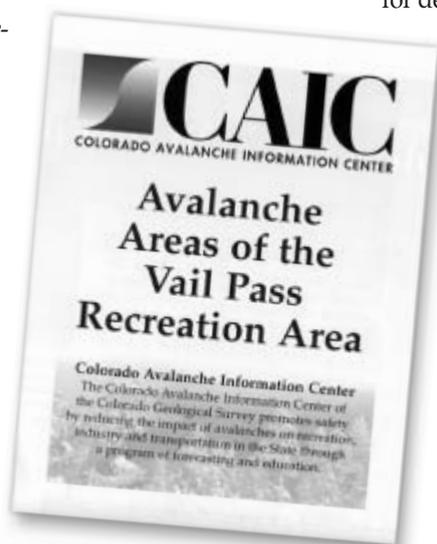
—Bruce Raup

A: An interesting question Bruce, and certainly U.S. avalanche professionals have considered going all metric. The American Avalanche Association is writing a manual of weather, snow and avalanche guidelines, and it will recommend a strong preference for all metric. For the time being, however, we will continue to use units that our users are most comfortable with. Almost all users of our voice hotlines, Friends e-mails, and Web site want to see snowfall in inches (not centimeters), wind in miles per hour (not meters per second), and temperatures in Fahrenheit (not Celsius). Snowpit data will continue to be in metric, which has been the U.S. convention for decades.

Q: "It seems that the danger level around Wolf Creek Pass is always one notch less than everywhere else in the state. Is that because of a generally deeper snowpack or the type of terrain?"

—Chad Driggers

A: The terrain around Wolf Creek Pass is certainly capable of producing plenty of avalanches, so that is not the reason for a lower danger rating on most days. However, as you noted, the snowpack around Wolf Creek Pass is often quite deep, and generally that snowpack gets deep early in the season. That helps lessen the temperature gradient within the snowpack so we do not often see depth hoar to the extent we do in the rest of the state. From a climate perspective, Wolf Creek fits more with an inter-mountain snowpack (similar to Alta, Utah) than the continental snow climate that plagues the rest of the state (with one other exception). An inter-mountain snowpack often stabilizes quickly after storm cycles. This is much different than a continental climate with lots of depth hoar, where instabilities can persist day after day for long periods of time. Therefore, the Wolf Creek area often has a less risky snowpack. The other area where the danger level is often a little lower is the Steamboat zone, which too may not have the depth hoar found elsewhere. Buffalo Pass, near Steamboat, is actually the snowiest place in the state historically. ❄️



A Brush With The Avalanche Dragon

by Nicole Greene

“Staying alive in avalanche terrain probably has more to do with mastering yourself than mastering any knowledge of avalanches.”

—Roger Atkins,
Helicopter Ski Guide

Author’s Note to the Reader: *When we read about avalanche accidents, it is all too easy to think about the ways in which it could not have possibly happened to us. We think, “I wouldn’t have been there—not then. I would have communicated with my group. I would have dug a pit. I would have ski-cut the slope.” We employ these defense mechanisms to justify future ventures into avalanche terrain. However, it is precisely this behavior that inevitably puts us into a non-thinking state of denial. While reading the following accident account, I ask you to think of all the ways in which you could have been there—how it could have been you and your friends on that slope, how you could have made the same flawed decisions, and how you may not have been as lucky. This is a simple story of human dynamics gone awry—the primary cause of 85 percent of avalanche accidents, according to a study by Dale Atkins (International Snow Science Workshop 2002). Perhaps this story will make you ask the question, “What have I gotten away with?”*

“You know, I wouldn’t ski this run if I wasn’t with you guys,” she said while evaluating the slope just before she dropped in. Rationally, Lisa* knew that her friends couldn’t protect her from the elusive avalanche dragon, but somehow it was easy to be lured into thinking that their collective knowledge would keep her safe. Her boyfriend Chris is a ski guide and avalanche educator, Matt is an accomplished mountaineer, and Ed, an avid backcountry traveler. In her own right, Lisa is a strong and graceful skier with avalanche training; and as a medical professional, she is accustomed to making decisions in stressful and often life-threatening situations. It was not until she heard Chris frantically yelling, “Go right, hard right!” and she felt the snow starting to move under her feet that she regretted not listening to her instincts.

Lisa was lucky. She entered the slope high and had an escape route pre-planned in her mind. She was adequately warned by her fellow party members and managed to take the “hard right” and ski out of the avalanche unscathed. Although it was a relatively small slide—

the crown was one foot deep and 175 feet wide, and ran approximately 500 vertical feet—the consequences could have been grim. The bowl was dotted with conifers with an average slope angle of 30 degrees and had an unseen cliff and gully below—classic terrain traps.

“After I got out of the avalanche, I wasn’t really that shaken.” To Lisa, the experience didn’t initially feel like a brush with death. “It wasn’t until Chris and I went back two days later to look at the slide from below that it hit me.” When Lisa looked up at the fracture line she was overcome with nausea. “What would have happened to me if I hadn’t been able to ski out of the slide?” she thought. She and Chris stared up at the evidence of a narrowly averted tragedy and questioned their judgment. Had they looked at the bowl from below, they would not have considered skiing the slope. “How could we have allowed ourselves to be there?” they thought. “We know better; this could have been avoided.”

It was a bluebird February day in the beautiful San Juan Mountains of southwest Colorado. Chris and Lisa were trying to get out into the backcountry as much as possible in anticipation of an upcoming hut trip. They had made plans to go skiing with Ed, a relatively frequent backcountry buddy, and at the last minute invited Matt along as well. They had never skied with him before but knew he was experienced and knowledgeable of local terrain. They did not talk about where they would ski until the four of them were in the car together driving up the pass. Scoping out potential lines, Matt pointed out an area he had been eyeing. No one in the group had toured there previously, and they agreed to check it out, though no specific slope was discussed.

Matt started out at a strong pace and within moments, he and Ed were out of sight from the rest of the group. They skinned up a crusty southerly aspect onto a wind scoured ridge. Lisa was confused about where they would ski since the snow on the skin

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Site of avalanche accident. Lisa* cut to skiers right.

*All names have been changed.

A Brush With The Avalanche Dragon

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route was terrible and much of the surrounding terrain looked obviously dangerous, but Matt and Ed were too far ahead to discuss the possibilities. So, she followed.

Their group reconvened at the top of the ridge to discuss their options. They could drop in to the south and ski low-angle but crusty terrain that would be safe from avalanche hazard, or they could choose the eastern aspect that had better snow but was unknown territory with potentially steeper slopes. In their discussion, priority was placed on snow quality—not necessarily snow stability and hazard reduction. Considering this was new terrain for all four skiers, their conversation was simply too short and incomplete; they did not adequately discuss the situation and analyze their options. Later, when Chris, Lisa and Ed were recounting the day's events, they all commented that this decision—to take the higher risk route without knowing the terrain—was extremely uncharacteristic of their usual backcountry behavior. It was not a decision they would have made on their own.

They skied the first two pitches safely, employing good avalanche protocol. They skied one at a time, from island-of-safety to island-of-safety with an escape route planned. The skiing was good and Lisa's nerves were somewhat eased.

Matt and Chris got to the top of the third pitch first. Chris looked down at the steep convex rollover and felt nervous. "You know, we should ski cut this," he said and skied along the ridge to the right to get a better look. Matt followed, leaving Lisa and Ed behind. Their party was now split up into two groups with limited communication between them. Ed and Lisa moved to the left into a stand of trees to avoid the steep rollover and discussed the slope as well as their escape route. Without any new information from Chris and not knowing that he had wanted to ski cut the slope, Ed looked over at Lisa: "Do you want to go first or should I?" Lisa always let other people go first and thought that she should push herself to take more initiative. "I'll go," she said and cut into the slope. Eight turns later, she initiated the avalanche. She had warning and momentum; she was able to escape without losing control. Again, she was lucky. There is no other explanation for it. The crown of the slide was right at the convex roll that Chris wanted to ski cut.

"In retrospect, I know a lot more than I had thought," Lisa realized. "Sometimes, I get intimidated by the whole snow science thing but what I've realized is that it is not the scientific details that will keep me alive—it's the easily recognizable signs." In a recent study of 715 avalanche accidents done by Ian

McCammon (*The Avalanche Review*, Vol. 22, No.2, Dec 2003), he found that 82 percent occurred on obvious avalanche paths; 50 percent were effected by terrain traps; 35 percent of the victims saw recent avalanche activity; 17 percent reported collapsing, cracking, or whumping; 66 percent reported recent loading; 55 percent were days with a considerable, high, or extreme hazard rating; and 20 percent had thaw instability. Indeed, Lisa is right; the subtleties are not what cause avalanche accidents—it is the obvious indicators. In most cases several red lights are present. As Lisa said, "I knew we were in avalanche terrain and there was weakness in the snowpack. I knew I was skiing with a new group in new terrain, and still, I glossed over the obvious and allowed myself to get too focused in skiing and carried away in the momentum of the day." It didn't feel good to her, but for various reasons, she chose not to listen to her instincts.

Interestingly, McCammon has also done studies that show that groups of males with one female are more likely to be involved in an avalanche accident than either all male groups or groups with multiple females. Lisa mentioned that in her group there was "a subtle energy to push it further" that may not have been present if there had been another woman present or in a group of women. Lisa didn't want to be the weak link—she didn't want to be the "woman" in the group who held them back from the desired goal of finding better, softer snow.

A few weeks later, we sat together and chat over hot cocoa at a backcountry lodge after a long day of skiing fluffy powder. Lisa and Chris reflected on their close call and thought about all of the things that went wrong. "Communication is the biggie, of course," Lisa said. "We weren't all on the same page. Everyone in our party should have had a clear picture of what we were planning to do, before we put our skis on." Chris agreed: "Everyone has a different idea of how to travel in the backcountry—whether to dig a pit, how to evaluate terrain, and what information one needs to make decisions. In order to find a way to integrate these differences in human tendencies and reconcile them with the objective facts, group communication has to be effective." Chris and Lisa have agreed that they will be more careful in how they choose to communicate with their ski buddies and the situations into which they allow themselves to enter. Ultimately, they are lucky and humbled to have such a valuable learning experience without severe consequences.

(Nicole Greene is the Director of the San Juan Outdoor School and an avalanche educator living in Ophir, Colorado. She fervently recognizes that, as with all humans, she is the greatest hazard in the backcountry needing to be evaluated. ❄️)

Season Wrap-Up

by Scott Toepfer

Another season of snow, wind, and avalanches is now behind us. While we were below the averages of reported avalanches and avalanche accidents, the season still had moments of high drama and unusual circumstances. In Colorado the average is six fatalities per season, and as of this moment in April, there have been only three. For those with a

penchant for detail, here is a month-by-month synopsis of the avalanche season for 2003–2004.

November

The CAIC opened for public forecasting on November 7.

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Early season snows fell with high water content, which helped to develop an initial strong base. The first reported avalanche of the season came on November 9th when a park ranger in Rocky Mountain National Park triggered a sizable but shallow hard slab in Jim's Grove, near Longs Peak.

Then on November 10–11, up to 10" of new snow fell across the state with moderate to strong winds. Seven avalanches were reported from the Loveland Pass area on the 12th. At Wolf Creek Pass 21" of snow fell from the 13th–15th. This storm triggered three slides in the San Juans. The pattern of warm storms with high water content continued to build a strong base layer in our southern mountain snowpack.

By the 18th, strong winds and a little more snow continued the slab build-up. The Copper Mountain ski patrol released two large slides that fell 800 to 1,000 vertical feet and took almost the entire winter snowpack to date. In the San Juans 15 slides were reported on the 18th as well, many running naturally. This mid-month avalanche cycle ran itself out by the 19th with all mountain areas of the state having seen some avalanche activity. With the exception of the northern Front Range and Summit County, the base layers of the snowpack remained fairly strong across the state.

For November, the northern mountains reported 27 slab avalanches; the central mountains, seven; and the southern mountains, 29. Only three people were caught in slides, with no injuries for the month.

December

December started as November had ended, warm and dry. By the 7th, though, light snow began in most mountain areas. The Buffalo Pass area near Steamboat defied the norm with nearly 20" of new snow on the morning of the 8th. By the 9th the rest of the state began to catch up as Telluride recorded 11" of new snow. This triggered the first avalanche cycle of December. CDOT crews released five slides on Loveland Pass on the morning of the 8th. In the central mountains and the San Juans where up to two feet of snow fell on the 8th and 9th, avalanche activity came fast and furious. Telluride and Red Mountain Pass were hit the hardest. The Telluride ski patrol triggered eight slides, while 21 slides were tabulated on Red Mountain Pass. Several of these slides hit the highway. From the central mountains 13 slides were reported, most coming from control work by ski patrol crews. This first cycle was over by the 10th, and 48 slides were reported statewide.

The next avalanche cycle would rear up after 6–16" of new snow with strong winds roared through the mountains on the 14th and 15th. Fourteen slabs were spotted in the northern mountains, mostly around the Berthoud and Loveland Pass areas. These slides helped verify just how weak the snowpack was in the Summit County and northern Continental Divide areas. This same storm cycle favored the Telluride area too, with the ski patrol triggering 28 slides.

Beginning on the 22nd, a large and persistent trough pattern brought unsettled and colder weather through the holidays. This storm cycle led to our first truly major avalanche cycle of the season. It took a couple of days of steady snow and wind for the snowpack to become overly stressed and trigger the slide cycle. On December 26, 25 natural and triggered slabs ran along the Highway 550 corridor in the San Juans. By the 30th avalanche activity had picked up statewide. CDOT crews put in

some long days as numerous control missions were called for in both the northern and southern mountain highway corridors.

Most of the slides affecting the highway corridors did not run long distances. This is the ideal circumstance for highway corridors, for minimal clean-up means short closure times. One big slide ran, however, above County Road 361 in Ouray County and dropped 1,500 vertical feet. It was an indicator that the backcountry snowpack was growing weaker.

For December there were 81 slides reported from the northern mountains, 33 from the central mountains, and 124 from the San Juans. Only four people were caught in these slides. In the one close call of the month, three people were caught in a slide on Cameron Pass west of Fort Collins. One person was completely buried but was quickly dug out by his friends. For the record, no one was hurt in the avalanche cycles of December.

January

The leading line for our January 2 snowpack discussion was a quote from the robot in the Space Family Robinson television series of the 1960's: "Danger, danger, Will Robinson!" The storm cycle of late December roared into January with large snowfall amounts for the central and southern mountains of Colorado. On the morning of Friday, January 2, 2004, snowfall of 8–12" was reported from the San Juans, 5–12" reported from the central mountains, but only minimal amounts from the northern mountains. Because strong winds accompanied the snow, the CAIC issued its first avalanche warning of the season.

By the 3rd, 27–31" of new snow was reported from the Molas and Coal Bank Pass areas on Highway 550. Crested Butte had 19", and 24" was reported from Monarch Pass. All the major San Juan passes were closed because of natural avalanches and CDOT-triggered slides. Nearly 220 avalanches were reported before we dropped the avalanche warning late on the 3rd.

Following the storm cycle, strong winds built hard slab that would serve as the bed surface for future slides. Observers were also reporting buried weak layers such as sun crusts and facets in the middle of the snowpack. Our snowpack was not graphing out like the norm for Colorado. For the most part, base layers were strong; it was the mid-pack weak layers that were the greatest concern. On January 15, a telemark skier triggered a deep hard slab near Loveland Pass. This particular path had been skied for weeks before failing 4–6 feet deep. Fortunately, he escaped the slide.

The dry and mild weather following the January avalanche cycle was turning the upper snowpack to faceted grains on the colder aspects, while sun crusts formed on top of faceted layers on the sunny, warmer aspects. These layers would define our avalanche season well into February and March. All that was missing was fresh slab; another storm cycle would stress these new, weak surface layers. Right on cue, a series of small storms on January 22–26 did the trick and triggered a second avalanche cycle for January. By the afternoon of the 28th, 45 avalanches were reported from across the state. A couple of noteworthy incidents were reported. The first was near Snowmass in the Elk Range, when a skier triggered a sizable slab from some distance away. The second was near Red Mountain Pass in the San Juans when a skier triggered a slide from 200 feet away. Observers noted that our snowpack was very tender now that the mid-January weak layers were buried. When people are triggering

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Avalanche accident on Mt. Guyot, the "X" marks where the victim was found. (Photo: Brad Sawtell)

Season Wrap-Up

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avalanches from several hundred feet away, forecasters will always take note.

In January, 72 avalanches were reported from the northern mountains, 74 from the central mountains, and 252 from the southern mountains. There were 10 avalanche incidents that caught eight people. One power line was damaged by a slide on Ouray County Road 361 on the 4th. Also on the 4th, one back-country skier, one snowboarder, and one dog were caught in a slide on Berthoud Pass; all three escaped unharmed. Three buildings were hit by avalanches in Crested Butte during the first avalanche cycle of January. They sustained only minor damage.

February

Avalanches were reported almost every day of February. The first overly active avalanche period was on the 5th–10th when 177 slides were reported. These avalanches were precipitated by general snows in the north and central mountains. On the 15th the worst avalanche accident of the season to date happened a few miles east of Eisenhower Tunnel. Two people ascending a large avalanche path triggered a slide that swept them approximately 700 vertical feet into a gully. One person was critically injured. This incident was not a surprise; conditions were such that it was not a matter of if, but rather a matter of when an accident would happen.

On the 17th a quick warm-up in the San Juans produced the first wet avalanche cycle of the season. Observers reported 26 wet slab and wet loose slides from Red Mountain Pass to Ophir. The Telescope slide path on Red Mountain Pass ran 1,800 vertical feet on a south aspect.

By the 21st, a stalled southerly storm system brought persistent snowfall to the San Juans through the end of the month, with the heaviest snow coming by the morning of the 28th when Durango Mountain Resort got 26". This potent little burst brought on the second avalanche warning of the season. From the 22nd–29th, 269 avalanches were called in to the Center.

Avalanche activity forced the closure of Highway 550 until it was deemed safe to perform mitigation measures on the 29th.

In February, there were 174 avalanches reported in northern mountains, 59 in the central mountains, and 363 in the San Juans. There were 21 people reported caught in slides, with two serious injuries.

Some of the more interesting avalanches were: one car was struck by a slide on Grand Mesa on the 4th; an ice climber was caught near the ghost town of Eureka on the 21st and broke his leg; a snowmobiler was buried for 20 minutes on Groundhog Mountain near Dolores on the 23rd and was found with a beacon and dug out with no injuries; and an avalanche in the Spring Gulch Path near Ophir on the 29th damaged a power line.

March

The run of avalanche activity starting at the end of February continued into March. Not much new snow fell on any given day for the first week, but it did snow, and avalanches continued to fall. The northern mountains saw the most active early March cycle. By the 10th, 135 avalanches had been reported, including the first avalanche fatality of the season, also on the 10th. A snowmobiler on Mt. Guyot in Summit County triggered a large slide. He was buried about 3 feet deep for an hour and a half before found by a random probe by a rescue team member.

Warm, dry weather would ease the avalanche danger through the second week of March. However, this warm dry spell brought about a significant melt down. A wet avalanche cycle began on the 18th and by the 27th, 198 wet slides had been reported. This warm-up also played a role in the second avalanche fatality of the season. On the 20th, a 22-year-old climber was swept 1,600 feet down and buried by a wet-slab avalanche on the west slope of La Plata Peak in Chaffee County. One other person was caught in the same slide but escaped serious injury.

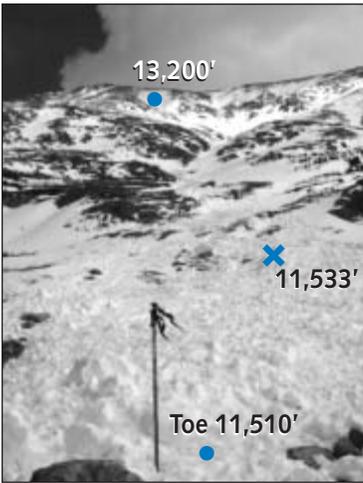
The wet avalanche cycle ended abruptly on the 27th when a digging trough brought frigid temperatures along with some much-needed snow across the mountains. It was one of the most active wet slide cycles we had seen in Colorado for years.

Avalanche totals for March were 337 in the northern mountains, 157 in the central mountains, and 119 in the southern mountains. In all there were only seven avalanche incidents, but 10 people were caught in these. Five people were partly buried, one was injured and two people were killed.

April

Early April brought welcome snowfall, following a March that had been much drier than normal. Some of the better snow totals from April 3–12 were: in the Front Range, Eldora, 28" and Bear Lake in Rocky Mountain National Park, 37"; in the central mountains, Gothic, 29"; and in the San Juans, Red Mountain Pass, 35". On the 9th, the third avalanche death of the season occurred on Browns Peak, which is just north of Huron Peak, a fourteener in the Sawatch Range. A snowshoer triggered a large slide on a west aspect that turned into a wet avalanche lower on the slope. He was buried and killed, while two others escaped being caught.

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Site of avalanche accident from La Plata Peak on March 20th. (Photo: Brad Sawtell)



New State Geologist

Dr. Vince Matthews became the new Director of the Colorado Geological Survey (CGS) on March 9th. He joined the CGS in 2000 as Senior Science Advisor, after careers in academia and the energy industry. Vince is a strong advocate of the Survey's CAIC.

"Knox and I recently visited all our avalanche forecast offices around the state. It was a tremendous pleasure for me to learn more about the important work these forecasters do. This team of interesting, hardy, experienced, intelligent, and dedicated people work hard during the dangerous avalanche season to keep our citizens and visitors safe on Colorado's highways and backcountry. I am honored to be associated with them and look forward to helping them find ways to be even more effective." 

The Beacon Bowl

by Alan Henceroth

Under a perfect Rocky Mountain bluebird day, Colorado Avalanche Information Center staff, the Breckenridge and Arapahoe Basin Ski Patrols, and the folks from Ortovox and Backcountry Access held the 2nd Annual Beacon Bowl and Avalanche Awareness Day at Arapahoe Basin on February 7, 2004. The event had four goals. First, to reach out to as many people as possible about avalanche safety and give them a chance for hands-on practice with beacons and other avalanche equipment. Second, to raise a few dollars for the CAIC. Third, to have a timed beacon contest for both recreational and professional snow enthusiasts. And finally, to have some fun.

At the base of the East Wall, peppered with fresh slides from the previous day's snow safety work, beacon clinics were conducted by Ortovox and Backcountry Access (BCA). BCA debuted its "Beacon Basin" which is a designated area set up specifically for transceiver training. Breckenridge and A-Basin patrollers conducted the Beacon Bowl nearby. The professional winner this year was Jeff Ferragi from Breckenridge, and the recreational winner, using a beacon for the very first time, was

Andrew Rosengren. CAIC staff hosted an "open house snowpit session" where skiers and riders could pick up a few tips from the pros. The *Summit Daily News*, the *Independent Daily*, and Denver's Channel 7 gave great media attention to the event.

Following the mountain activities, the crowd moved to the Arapahoe A-Frame and, doing what snow people do best, tapped the keg donated by New Belgian Brewery. A raffle was held with snow tools donated by Wilderness Sports in Silverthorne, Mountain Outfitters in Breckenridge, BCA, Ortovox, Descent, and K2 Helmets. When all was said and done, people had learned a few new things about snow and beacons, over \$1,100 was raised for the CAIC, a few new friends were made, and everyone enjoyed a stellar, sunny, mid-winter "Arapahoe Basin" day. 



This year's Beacon Bowl at A Basin provided great weather and instruction for all those attending. We're looking forward to next year's festivities. See you there. (Photo: Nick Logan)

Renewal Notice (or recruit a Friend)

Yes, I will join the Friends of the Avalanche Center. Enclosed is my donation of:

- \$30*, which gives me a CAIC window decal (if I am a new Friend), *The Beacon* newsletter, the *Avalanche Wise* booklet, and a morning forecast by e-mail.
- \$45*, which gives me all the stuff above, plus an afternoon forecast sent by e-mail.
- Please accept my additional donation of \$_____*
- I'm a renewing member.
- I'm a new member. Please send a CAIC decal.

* Your donation may be tax deductible and your canceled check is your receipt.

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