

# Sawtooth National Forest Avalanche Center Annual Report 2009-2010



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## Snowpack Summary

For most of the 2009-10 season, it seemed like Old Man Winter was on a bender – somewhere else. Yet the season proved busy with forecasting challenges for the SNFAC. We saw numerous weak layers, long periods of instability, a remarkably widespread avalanche cycle, and two avalanche fatalities.

The winter started with the development of an unusual snowpack. By late November, two feet of snow and 5.6" of SWE had accumulated at Galena Summit, more than double that for the same period in 2009. But a 17-day dry spell metamorphosed the early season snow into facets and depth hoar on nearly every shaded slope. The slab above it built very slowly – there was no Christmas-week storm to suddenly overload the weak layer, as happens many years. In fact, it took another two weeks for two more inches of SWE to accumulate.

On New Year's Eve, stability took a dramatic and extended turn for the worse. The six inches of snow and 0.3 inches of SWE didn't seem like much, but it was the proverbial straw on a camel's back and resulted in ubiquitous shooting cracks, collapses, and triggered avalanches in the northern regions of our advisory area. The instability continued with every seemingly trivial nudge to the snowpack, and we rated the hazard as Considerable or higher for 34 straight days, an unusually extended period of instability for our area.

The instability was initially confined to the northern half of our advisory area because of minimal snowpacks elsewhere. In late January, a series of storms on a southerly flow dumped over 30 inches of snow and 2.6 inches of SWE in five days, mostly in the southern regions of our advisory area. The storms produced a natural avalanche cycle that was among the most impressive of the past 25 years. Because of the shallow snowpack, the slides were not very destructive; because of the uniform distribution of the weak layer, they were remarkably widespread.

Sadly, the instability also led to two fatal avalanche accidents. The first, on January 22, involved a small avalanche on an off-trail but inbounds run at Bald Mountain ski area. The second, on January 28, occurred in the Soldier Mountains near Boardman Pass. A snowmobiler died after he triggered an ava-



**Unstable conditions didn't end in the spring. The biggest storm of the winter arrived in late March. These four avalanches on Titus Ridge were remotely triggered from the "X" on March 31st.**

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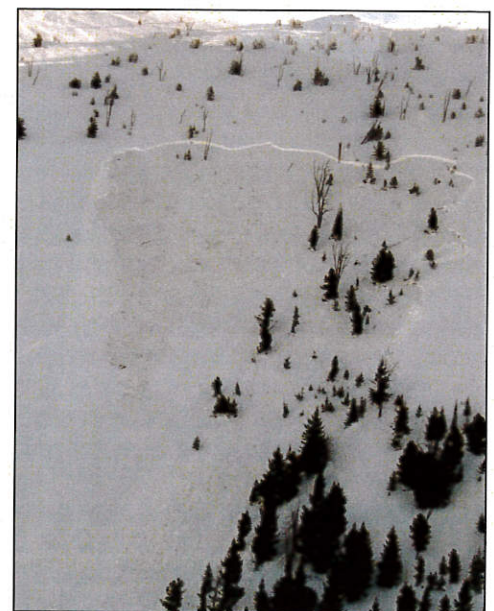


lanche while climbing a large slope; the slide carried him over 1000 vertical feet and buried him about five feet deep.

The snowpack stabilized enough to drop the hazard to Moderate in early February, and that's where it stayed for nearly the entire month while a new set of weak layers – near-surface facets and buried surface hoar - developed. An early March storm that dropped 10 inches of snow activated these layers. We were off on another round of natural and triggered avalanches. In one close call, an experienced local skier triggered a slab in exposed alpine terrain that carried him over a small cliff; fortunately, he was uninjured.

For most of March, conditions moderated. Weak storms brought a few inches of snow that interrupted a dependable corn cycle. We ended daily advisories the last week of March with the snowpack a dismal 57% of the 30-year average.

Then Old Man Winter finally got wise and returned. A strong, westerly flow hammered our area with over two feet of snow, 1.5-3 inches of SWE, and average wind speeds 30 mph or more. The avalanche danger jumped to high with the season's third cycle of natural and remotely-triggered avalanches. The SNFAC posted regular condition updates into the second week of April. The weak layers in the snowpack left the threat of large, deep avalanches hanging for later in the spring.



**Facets at the base of the snowpack caused prolonged instability during early winter. On January 28th, a snowmobiler was killed by this avalanche in the Soldier Mountains.**





We updated the photos on our home page and added a "What's New?" section along with links to our social networking sites.

## Accomplishments



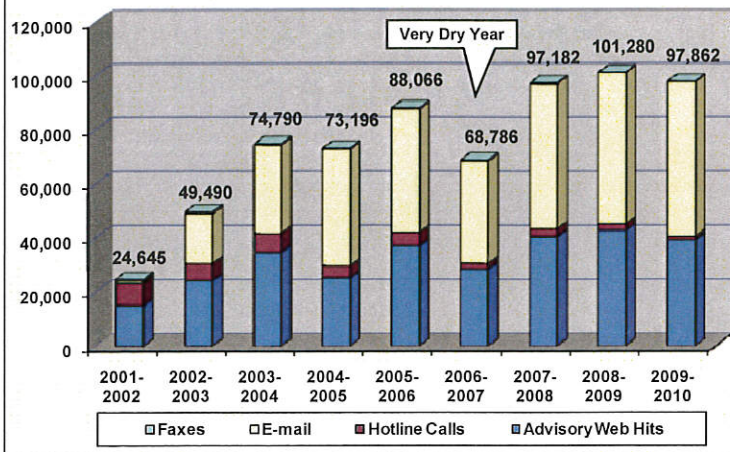
With a late start to the winter and numerous dry spells, we were able to complete a number of projects and made several improvements to the Avalanche Center's operations.

The most significant change in SNFAC operations this winter was the formal inclusion of the Sawtooth Mountains and Soldier Mountain/Fairfield area into the Avalanche Advisory. In order to accommodate this addition, the advisory format was changed to include "Bottom Lines" and danger roses for four different regions: the North Wood River Valley, the South and Central Wood River Valley, the Salmon Headwaters and Sawtooth Mountains, and the Soldier Mountains. We are currently focusing on ways to obtain more data from the Soldier region and hope to expand coverage from 3 days per week to 7 days a week next winter.

We made several improvements to our web presence. To keep the appearance of our homepage fresh, we replaced the old photos with new ones and created a "What's New" section where people can see what's happening at a glance. A new "Stay Connected" section now has links to videos on YouTube and our social networking pages on Facebook and Twitter. We made an effort to post more YouTube videos this season, and the 11 videos on this winter's playlist received a total of 4219 views. Facebook in particular was well-received and our number of "Fans" quickly jumped to over 700. It provided an excellent means of publicizing classes, showing videos and photos, and providing informal updates on backcountry conditions. In response to public requests, we added an accident report page where past reports can be found and downloaded in pdf format.

The SNFAC professional observation system continued to be an invaluable resource for the Avalanche Center as well as the local community of avalanche professionals. This winter, over 200 observations were submitted through the web-based system by the SNFAC, Sun Valley Heli Ski, Sun Valley Trekking, Sawtooth Mountain Guides, Sun Valley Snow Safety, and Forest Service winter rangers. This system has not only improved the accuracy of the Avalanche Advisory, but has also enhanced the safety of local guiding operations through the sharing of snowpack stability information.

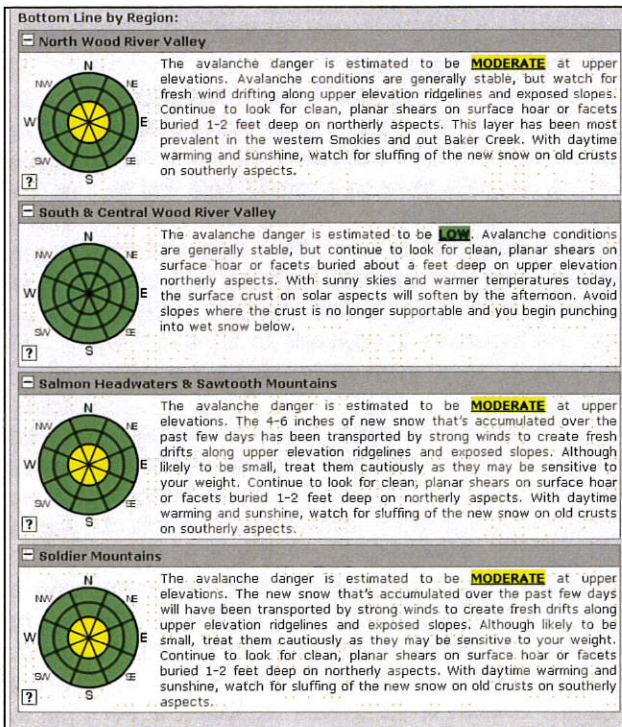
## Sawtooth National Forest Avalanche Center Advisory Use Comparison



We continue to make great strides in our avalanche education programs, especially with our classes oriented towards snowmobilers. By taking our own photos and downloading snowmobile avalanche footage from YouTube, our sledder-specific PowerPoint presentations have finally seen the last of skier photos.

Avalanche Center staff continued to be involved with national-scale projects including the launch of a new, redesigned American Avalanche Association website and the development of an online avalanche accident reporting system.

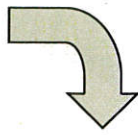
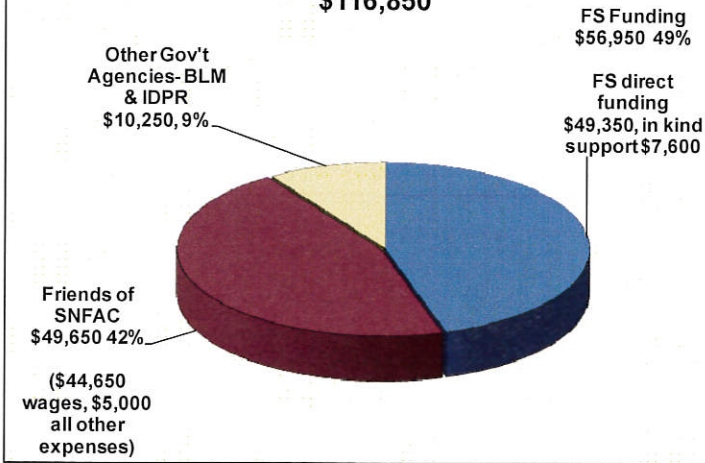
Given the small size of our center and budget, we are proud to run a state-of-the-art program that helps lead the way locally and nationally.



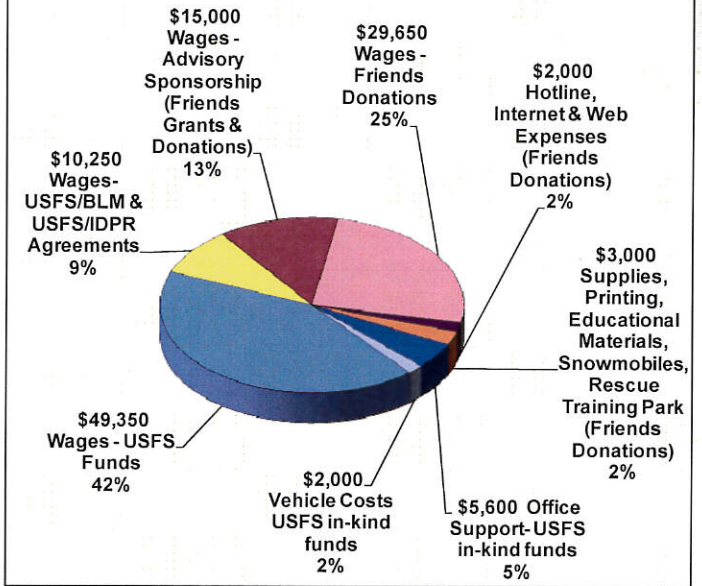
This season we formally included the Sawtooth and Soldier Mountains into the advisory. We divided the forecast area into four regions and provided a "Bottom Line" and danger rose for each.



**Sawtooth National Forest Avalanche Center  
Budget 2009-10  
\$116,850**



**Sawtooth National Forest Avalanche Center  
Budget (Detail) 2009-10  
\$116,850**



## Education & Outreach



SNFAC education efforts reached over 750 people with a wide-range of interests and experiences during the 2009-10 season. Before the winter began, Janet and Chris attended the annual forecasters meeting and professional development program held this year in Leadville, Colorado. Janet also taught at the 5-day National Avalanche School at Snowbird.

Local avalanche classes started with an Avalanche Basics classroom session Dec. 1<sup>st</sup> and field session Dec. 5<sup>th</sup>; we taught two more in early January, including one oriented to snowmachiners that included a field day in Baker Creek. This year 112 people attended the classroom sessions, while 49 participated in the field component. Several other classes, including two beacon clinics, drew an additional 58 people. An extremely late start to the winter and an unusually thin snowpack impacted class numbers, with many people simply losing interest in getting out in the back-country.

Because avalanches can threaten some roads and residences in the Wood River Valley and Fairfield, the SNFAC directs several classes a year at people whose work can take them into these areas when the avalanche

danger is high. This year we taught four classes directed primarily at this group; the 93 participants included U.S. Forest Service and Idaho Fish and Game employees, fire department personnel and emergency responders from Ketchum and Blaine County, and line crews from Idaho Power Company. Eight wardens from the Shoshone-Bannock tribe attended an Idaho Parks and Recreation-organized class for which Chris and Blase taught the field session. All told, our scheduled classes had almost 350 participants during the season.

A number of our education efforts are less formal. A grant from the Wattis-Dumke Foundation allowed us to host a presentation by avalanche researcher and educator Ian McCammon. 180 people enthusiastically attended Ian's talk, titled "Beyond the Void: Combating Fatal Decisions in Avalanche Terrain", at the NexStage Theatre. Sara Lundy continued to present the "Know Before You Go" program to area youth, including students at the Wood River Middle school and racers from the SVSEF ski and snowboard programs. Our avalanche awareness week ran from Feb. 1-7 this year, and the avalanche training park was operational for over two months, from mid-January through late March. While it's hard to determine exactly how many people participated in the last two programs, it looks like the SNFAC's more informal education efforts directly reached well over 400 people.

We revise our courses each season to reflect evolving knowledge about avalanche safety and changes in recreational and social factors in our area. We are already scheduling programs for 2010-11 and these can be found at [www.SawtoothAvalanche.com](http://www.SawtoothAvalanche.com).



**Our education and outreach to the snowmobile community continues to improve each winter. Stanley IDPR class, February 28th.**



SNFAC is a program of the USFS Sawtooth National Forest. The SNFAC is only partly funded by National Forest dollars. Additional funding comes from the Friends of the Sawtooth Avalanche Center and state and local grants and partnerships.

## Funding & Partnerships

Steady partnerships have developed with local, state and federal agencies, providing more dependable funding than the avalanche center had even 5 years ago. The City of Ketchum, Blaine County Search and Rescue, the Twin Falls-Shoshone BLM and Idaho State Department of Parks and Recreation are advisory sponsors and often are education partners. Idaho Parks and Rec generously loans us two 2008, backcountry Polaris snowmobiles, allowing us to better reach the snowmobile community with educational programs and snowmobile specific advisories. Additional supporters and advisory sponsors are the Wattis Dumke Foundation, the Sawtooth Society, Smiley Creek Lodge and Mountain Niceness Productions. KECH radio and all of their sponsors provide air time for the 7:50AM avalanche report, reaching thousands of listeners each weekday morning. Special thanks go to USFS Region 4 for providing \$35,000 and the Sawtooth Forest for more than \$10,000 towards operations.

The Friends of the Sawtooth NF Avalanche Center continue to be our guardian angel. Annually they fundraise close to \$40,000 through

some of these partnerships and grants and from the donors in our local community. This provides more than 40% of our operating budget; we could not function without the Friends. The fall mail campaign and the mid-winter Best of Banff Film Festival with the "Friends Incredible Raffle" are the two key fundraising events. Special thanks go to the Friends advisory committee, especially Sara Lundy and Lindy Cogan.

Operational partners are the NRCS-SNOTEL crew in Boise and the National Weather Service staff in Pocatello. Local guide services and ski area snow safety operations share valuable snow and weather observations throughout the winter: Sun Valley Heli-Ski, Sun Valley Trekking, Sawtooth Mountain Guides, Sun Valley Bald Mountain Snow Safety Director Rich Bingham and Soldier Mountain Ski Patrol. A number of backcountry skiers and snowmobilers provided us with valuable field observations this past winter; we consider all of you valuable partners and value your contributions.

Each and every partner and supporter has helped to create the Sawtooth NF Avalanche Center, and keep us operating as one of the leading avalanche centers in the country.



**SNFAC team (L-R) Chris Lundy, Blase Reardon, and Janet Kellam happy after another successful season. Thanks for the support!**



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The Avalanche Center begins operations in November and ends in the first weeks of April. Early season general snow and weather updates are posted until there is enough snow for backcountry recreation. After that, daily advisories are issued (phone hotline, web, email, RSS feed, and podcast) by 7:30am each morning until approximately April 1<sup>st</sup>. General snow and weather information is posted until mid April, funding permitting.