
Sawtooth National Forest Avalanche Center

Annual Report 2011-12



Photo courtesy Patrick Graham



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Acknowledgements

The Avalanche Center could not operate in the capacity we do without the generous support of our community. The SNFAC receives nearly half of its funding from the Friends of the SNFAC, raised through Advisory Sponsorships and donations from individuals and organizations.

On behalf the Avalanche Center staff, a huge THANKS!! to the Friends of the SNFAC and to all of you who contributed this season!

This season’s Advisory Sponsors:

- Sun Valley Company
- Smiley Creek Lodge
- The Wattis Dumke Foundation
- Ketchum Fire Department
- Blaine County Search and Rescue
- Twin Falls District Bureau of Land Management
- Idaho Department of Parks and Recreation through the Idaho Snowmobile License Plate Program
- The Sawtooth Society through Idaho’s SNRA Mountain Goat License Plate Program





From the Director

After last year's transition, we found the groove during the 2011-12 season with a fully returning staff and more community support than ever. It was an interesting winter (of course I always say that!) with early promises of La Nina dashed by interminable dry spells and below average snowfall. But when it did snow, we saw some of the more significant storm cycles in recent memory. We had plenty of unstable conditions and impressive avalanches, but our second season in a row with no avalanche fatalities! That during the midst of a tragic year at a national level. Of course there is always luck involved, but we like to believe that with the help and support of the community and the Friends of the SNFAC, we're making a difference.



Sincerely,

A handwritten signature in black ink that reads "Chris Lundy".

Chris Lundy
SNFAC Director

Season Highlights

- It was a fatality-free season despite challenging snowpack conditions, several avalanche warnings, and a tragic winter nationally. Although our area averages 1-2 fatalities per winter, this is the second accident free season in a row!
- Despite promises of a strong La Nina, it was a late start to the winter and we didn't begin advisories until December 27th.
- We issued Daily Advisories through April 15th. In total, we produced 119 advisories this winter.
- Our advisory received over 130,000 views via the web, email subscription, and recorded hotline. Advisories were accessed an average of 1095 times each – a 15% jump over last season!
- Public outreach continues to be very successful through the local newspaper, radio, and social media. Our "Likes" on Facebook increased from 960 to 1150, and we have 99 followers on Twitter.
- Thanks to a Resource Advisory Committee grant, we installed a new remote weather station in the Soldier Mountains that provides invaluable snowfall data for the Soldier forecast zone.
- We expanded our education programs this season, teaching classes for the Blaine County Road & Bridge Dept., the National Brotherhood of Skiers, and a new sidecountry program on Baldy. All told we taught nearly 600 skiers, snowboarders, snowmachiners, and snow professionals – kids and adults alike!
- We made significant improvements to our website backend. While invisible to the public, it helps ensure that advisories are produced efficiently and on time!
- The Friends of the SNFAC added new board members and had several successful fundraisers. The "Skin It 2 Win It" uphill-downhill race on Dollar Mountain was a huge hit and promises to be even more popular next winter. They continue to pursue their own 501(c)(3) status, independent of the current American Avalanche Association umbrella.



Staff



This season's SNFAC crew (L to R): Blase Reardon, Chris Lundy, Simon Trautman.

It was smooth sailing this season with a fully returning staff. Chris Lundy returned as Director, Blase Reardon returned for his 4th winter, and Simon Trautman was back for his sophomore season. Between the three of these snow nerds, there are more Masters degrees and years of avalanche experience than you can shake a stick at.

We received permission this winter to convert the Lead Forecaster position into a permanent position. This will likely take place sometime next season. Permanent status will help ensure forecaster retention which is critical to maintain local knowledge and credibility with the public. Although this position will continue to be funded by non-Forest Service dollars, it is a strong sign of the Sawtooth National Forest's commitment to the Avalanche Center.

After eight winters with the SNFAC, Chris will be stepping down from the Avalanche Center at the end of the season to pursue other goals closer to his home in Stanley.

Accomplishments

At the SNFAC, we're always trying to take avalanche safety to the next level. We take pride in seeking out new, better, or more efficient ways to help backcountry recreationalist make good decisions in the mountains. Our innovation is what keeps us among the most respected avalanche centers in the country.

- Thanks to a Southcentral Idaho Resource Advisory Committee (RAC) grant, we installed a remote weather station in the Soldier Mountains. See *New Soldier Weather Station* section later in this report.
- We overhauled the backend of our website, which is invisible to the public but still has significant tangible benefits. These changes greatly improved the way we look at weather data and increased our efficiency in producing the advisory. This means better advisories in a more timely fashion.
- We also made updates to our professional observation network, which continues to be an important resource for local avalanche pros and greatly improves the accuracy of the advisory. We had 250 professional observations this season.
- Blase wrote an article for the professional publication *The Avalanche Review* about the MLK weak layer from last winter.
- Chris published an article in *Backcountry Magazine* about the role of rational and intuitive thought in backcountry decision making processes.



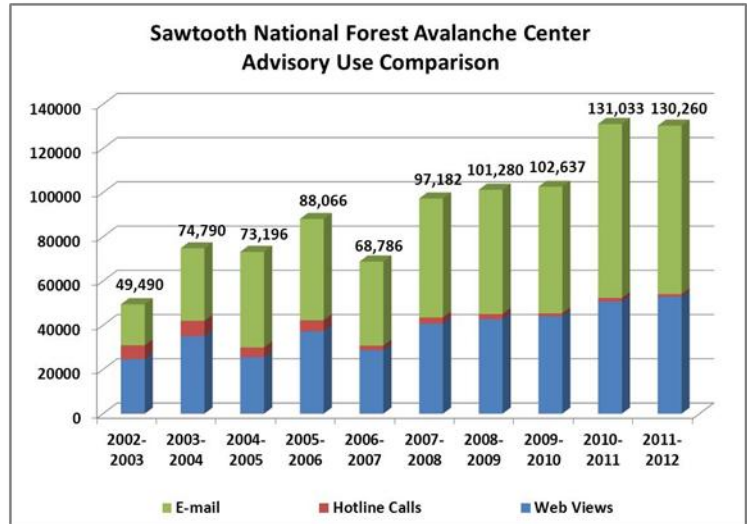
We revamped the administrative side of our website, greatly improving the efficiency and ease with which we can produce avalanche advisories.

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Advisory Use

Like death and taxes, we can count on the advisory receiving more use each season. Due to a late start, we issued 119 advisories this winter – down 19 from last season. Despite the below average conditions much of the winter, advisories were accessed an average of 1095 times each – a 15% jump over last season! The number of email advisory subscribers increased 12% from 570 last year to 640 this season. Accessing the advisory via the recorded hotline continues to become less common as web technology becomes more dominant in our daily lives.

We also issued 76 morning avalanche condition summaries at 7:45am on KECH radio, which reach thousands of people during prime commuting time.



Advisory use totals over the past 10 years show a steady increase. Despite low snow and 19 less advisories issued this winter, total advisory use remained constant compared to last season.

Media & Outreach

We continue to have success using web-based social media to communicate avalanche conditions. This season we ramped up our posts on popular social sites, and their use increased as a result – we now have 1150 “likes” on Facebook, and 99 followers on Twitter. When we get back from the field or on particularly dangerous days, we’d post brief updates or photos to these sites. As always, our YouTube vides are very popular and this season received 5116 views.

We had critical help from Kate Wutz and Idaho Mountain Express in communicating the conditions during periods of heightened avalanche danger or warnings. Four articles on avalanche conditions and one on our Sidecountry Avalanche Class appeared in this winter’s papers.



Facebook continued to be a successful way to communicate avalanche information. This photo, posted January 19th, received 37 comments, 42 “likes”, and 73 “shares”! An avalanche warning was issued two days later.



Educational Programs

The Avalanche Center provides a number of free or minimal cost avalanche classes throughout the winter. These typically include an engaging PowerPoint presentation as well as a hands-on field component. We not only teach programs for backcountry recreationalists of all varieties, but also for local snow professionals, kids, and workers that may face avalanche risk on the job. In total, our educational programs reached 600 people this winter.

- All of our avalanche education presentations were revamped this season, making them more organized and easier to follow. We continue to discover that simpler is better.
- We provided continuing education programs for the Sun Valley Ski Patrol and for Sun Valley Heli Ski.
- 117 people attended our “bread & butter” Avalanche Basics classes held in Ketchum and Hailey. 50 of these attendees joined us on our Field Sessions.
- An SNFAC presentation at the Elephant’s Perch Backcountry Awareness Night reached 50 new and experienced backcountry users.
- We had a unique opportunity to teach a class for the National Brotherhood of Skiers on Bald Mountain.
- We taught a 3-hour program for the Blaine Country Road and Bridge Department. Responsible for plowing Warm Springs Canyon, these workers can be exposed to avalanche paths that frequently hit the road.
- The Sawtooth Hotel in Stanley hosted an avalanche program taught by SNFAC staff.
- Working alongside the Sun Valley Ski Patrol, we designed a new avalanche education program targeting sidecountry (out-of-bounds) skiers. It is our hope that this program takes off in upcoming seasons!
- In conjunction with a Friends of the SNFAC avalanche educator, we taught a number of youth-oriented avalanche classes including the Winter Outdoor Science School and the Woodside Elementary 5th grade. All told, we reached over 125 kids this winter!
- We made brief presentations at a number of Level 1 courses as well as for several college programs.



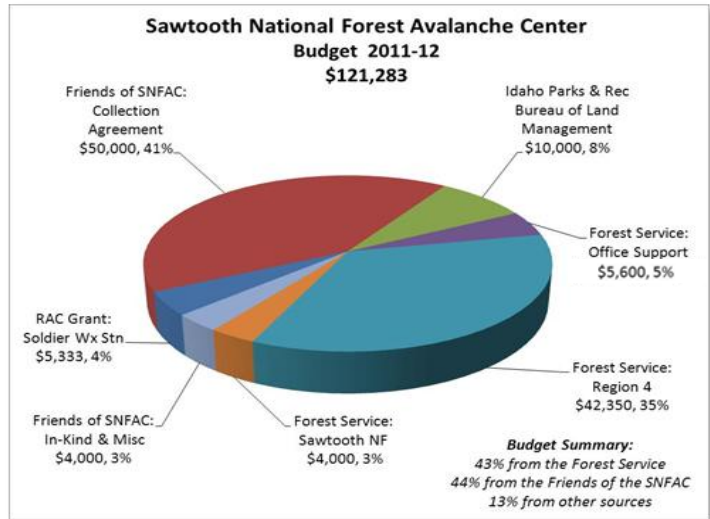
The SNFAC provides free or low cost avalanche classes for a variety of user groups, reaching hundreds of people each winter. Many of these classes feature a field component, which provides great hands-on training and an opportunity to spend the day with an avalanche forecaster or highly experienced instructor.



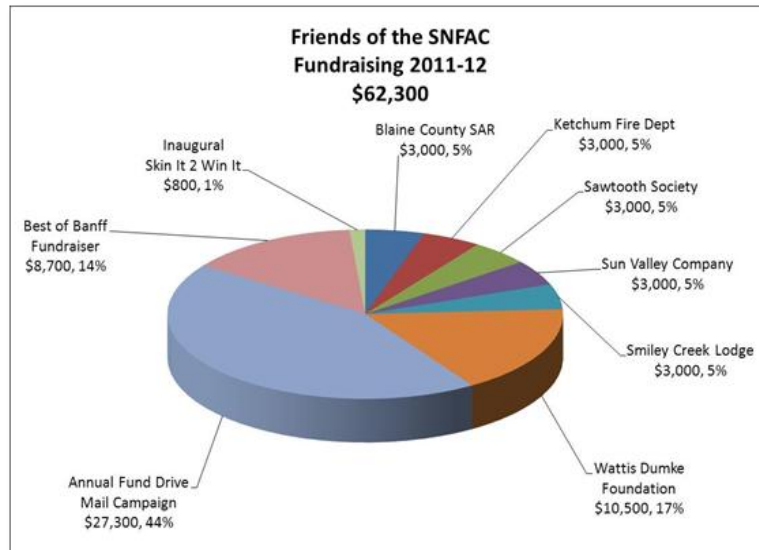
Funding & Partnerships

The Avalanche Center relies on a variety of partnerships to operate in the capacity that the public has come to expect, with over half of this winter's budget coming from outside of the Forest Service. Despite shrinking federal budgets, Region 4 increased our Forest Service funding by 10% this winter – a sign of their commitment to Avalanche Centers and keeping the public safe.

Thanks to Rich Gummersall and his colleagues at the Idaho Department of Parks and Recreation, this state agency is making a significant contribution and commitment to avalanche safety throughout the state. In addition to the \$5000 they contribute to fund avalanche advisories and education, they gifted our two loaner 2010 Polaris 600 RMK snow machines to the Friends of the SNFAC.



The Avalanche Center budget comes from a variety of sources, providing a unique example of a public-private partnership.



The Friends of the SNFAC had a successful fundraising season, drawing funds from a diverse portfolio of sources.

The Friends of the SNFAC continue to grow and remain absolutely critical to the mission of the Avalanche Center. This season, the Friends supplied \$50,000 through two Forest Service collection agreements and covered \$4,000 in expenses such as website and phone hotline costs, educational materials, and matching funds for the Soldier Weather Station. In total, 44% of our budget this season came from the Friend of the SNFAC. They had a successful fundraising season, raising over \$60,000 to cover next winter's forecaster salaries and operating expenses. Working in partnership with the SNFAC, the Friends received another generous grant from the Watis Dumke Foundation this winter in the amount of \$10,500.

This season, Smiley Creek Lodge stepped up from a half advisory sponsorship to a full sponsorship, Sun Valley Company continued their second season of support, and we received renewed commitments from longtime sponsors Ketchum Fire Department, Blaine County Search and Rescue, the Sawtooth Society, and the Twin Falls Bureau of Land Management. Advisory sponsorships cover the cost of providing one advisory per week for the entire winter.

Snowpack Summary

The 2011-12 winter was memorable for dramatic storms and uncommon loading patterns. Our typical cycle of dry spells followed by slow, incremental loading rarely happened. Instead, our area experienced 2-4 week droughts followed by extended, wet storm cycles. Our northern and western zones had a near-normal snowpack by season's end, but our southern and eastern zones remained well below average most of the winter.

A Thanksgiving storm provided enough snow for an early start to backcountry recreation, but remarkably dry weather left us with 48% of average snowpack by Christmas. When a storm finally appeared on the horizon, the forecast was for an almost unbelievable 3.5 inches of SWE. We got that, and then some, over the holiday week, and a widespread cycle of natural and remotely-triggered slides ensued. The pattern repeated again in mid-January – two weeks of drought followed by another three feet of new snow in five days across our northern and western zones. The sudden load produced a second widespread cycle of natural and triggered avalanches.

By mid-February clear, cold weather had produced a faceted snow surface. Snowfall buried this layer on Feb. 17th, with 1-2 feet of light-density, new snow accumulating during each of the next two weeks. This layer proved the most troublesome of the season. Its distribution was variable, and it produced inconsistent results in stability tests, yet several parties triggered slides in which one or more people were caught and carried but uninjured. By mid-March, it seemed as if the 2/17 weak layer had strengthened enough that it posed only an isolated danger.

The largest storm cycle in years proved that assumption untrue. Between March 12th and 18th, our advisory area recorded an average of 4.7 inches of SWE, with several stations in the southern Sawtooths recording over 6 inches.



The winter's wettest storm cycle in mid-March dropped an average of 4.7" of SWE across our area, producing large and destructive avalanches like this one on Galena Peak.



The "2/17" layer became the most significant weak layer of the winter and produced slides over 5' deep later in March. This photo was taken on February 26th.

The rapid loading led to the most destructive avalanche cycle of the winter; several slides ran to valley bottoms and two on Galena Peak ran over a mile and half, filling the gullies with dense debris and broken trees. Most of these slides ran on the month-old 2/17 weak layer. Heating and sun triggered several more natural slides on this layer a few days later.

The last storm of the forecasting season blew in March 28th and ended March 31st, producing 2 inches of SWE but rain to over 9500 feet. Despite the load and the rain, this storm did not produce widespread avalanches. A freeze-thaw cycle dominated the last few weeks of the season, and we issued our last advisory of the winter with Low avalanche danger and generally stable conditions.

New Soldier Weather Station

Last spring, we received a grant from the Southcentral Idaho Resource Advisory Committee (RAC) to install a new weather station in the Soldier Mountains. The SNFAC began providing Friday, Saturday, and Sunday advisories for this zone in 2009-10, but have been significantly challenged by the lack of accurate snowfall data for the area.

The new weather station ("Lower Soldier") is located on a bench above the Soldier Ski Area at an elevation of 8000 feet. It provides total snow depth and air temperature; this data can be accessed real-time through our website. Combined with wind speeds from the site on Peak 2 ("Upper Soldier"), these stations paint the more complete weather picture necessary to provide accurate avalanche advisories for the Soldier Mountains.



New Lower Soldier station.

Next Season's Goals

As the winter wraps up, it's a great time to take a close look at the season, evaluate what can be done new or differently, and set goals and priorities for the following winter:

- With Chris stepping down as the Director, the primary focus will be staffing, training, and making the transition as seamless as possible.
- Continue working with Sun Valley Company, stakeholders and local sidecountry skiers to promote our new Sidecountry Avalanche Basics.
- Convert the Lead Forecaster position from a term (temporary) into a permanent position. This will aid in employee retention, maintain our credibility with the public, and lend some permanency to the program.
- Add some educational graphics to our enclosed snowmobile trailer.
- Make improvements and updates to our website. There is some momentum to move to a web design that would be shared amongst several US avalanche centers.