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**Sawtooth National Forest Avalanche Center**

**Annual Report 2010-11**



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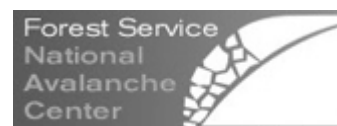
## Acknowledgements

The Avalanche Center could not operate in the capacity we do without the generous support of the community. The SNFAC receives nearly 50% of its funding from the Friends of the SNFAC, raised through Advisory Sponsorships and donations from individuals and organizations.

***On behalf of all of us at the SNFAC, thank you so much to the Friends  
of the SNFAC and to all of you who contributed this season!***

This season's Advisory Sponsors:

- Sun Valley Company
- The Wattis-Dumke Foundation
- The City of Ketchum/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
- Smiley Creek Lodge





## From the Director

The 2010-11 winter was one of significant transition for the Avalanche Center, with the retirement of long time Director Janet Kellam leaving huge shoes to fill – even for my size 13 feet! Janet fostered a tradition of achievement, dedication, and service at the SNFAC, and we feel comfortable saying that we stayed true to these roots. With the generous support of the community and the Friends of the SNFAC, we were able to continue our normal programs and services, while expanding and enhancing many others. We at the Center are very passionate about avalanche safety and what we do is truly a labor of love. I believe this dedication shows in all we do. Have a great spring and summer, and we'll see you next winter!



Sincerely,

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

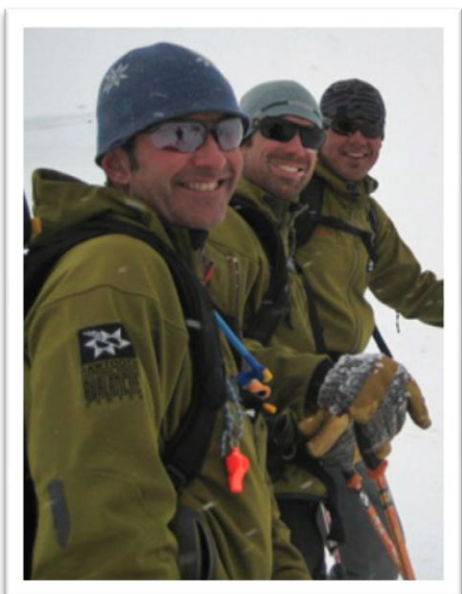
Chris Lundy  
SNFAC Director

## Season Highlights & Accomplishments

- Although late-spring accidents are not unheard of, so far it's been an fatality-free season despite challenging snowpack conditions.
- El Nino brought an early start to winter, and we began Daily Advisories on December 4<sup>th</sup>.
- Due to public feedback and increased support, we offered Daily Advisories through April 10<sup>th</sup>, more than a week longer than we have in the past. Combined with the early start, we issued more advisories than ever before – 138 in total!
- Our website and the web-based advisory received 15% more traffic than last winter. All told, our advisory received 131,000 views – a 30% increase over last season!
- We had unprecedented public outreach – utilizing social media and the local newspaper and radio to get our message out.
- Over 200 people responded to our online survey, providing invaluable information about advisory use demographics and feedback on our programs and services.
- We expanded our education programs this season, adding a professional development workshop for local avalanche pros as well as presentations for the Sun Valley Ski Patrol. Class participation was up from last winter – all told we taught nearly 700 skiers, snowboarders, snowmachiners, and snow professionals.
- In partnership with Sun Valley Company, we laid the groundwork for tackling the out-of-bounds avalanche problem on Baldy. Over 120 people attended an informal discussion hosted by the SNFAC and the Sun Valley Ski Patrol to discuss how to prevent a sidecountry accident.
- The Friends of the SNFAC hired a part time Executive Director, recruited new board members, and are pursuing their own 501(c)(3) status, independent of the American Avalanche Association nonprofit umbrella.



## Staff



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

This was a season of transition for the Avalanche Center, with former director Janet Kellam retiring after 14 years of dedicated service to the community. Chris Lundy returned for his 7<sup>th</sup> season, and was hired into the newly vacant Director position. Blase Reardon moved into the Lead Forecaster role, returning for his 3<sup>rd</sup> winter with the SNFAC. A surprising number of applicants vied for the third Forecaster position, and the Avalanche Center was extremely fortunate to pick up Simon Trautman from Eugene, Oregon. Simon brings substantial avalanche experience, having forecasted with the Colorado Avalanche Information Center in Boulder and ski patrolled at Moonlight Basin in Montana. He also completed an MS in Earth Sciences from Montana State University with studies in wet snow avalanches.

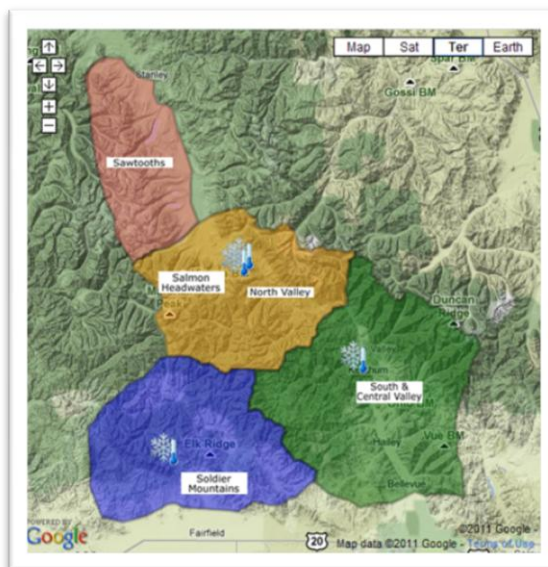
The Avalanche Center operates with a 3-person team of avalanche forecasters. One of us is in the field daily throughout the winter, typically joined by volunteer partners. Our staffing breakdown is as follows:

Position	Months Employed	Grade	Benefits?
Director	6	GS-9	Yes
Lead Forecaster	5-6	GS-8	Yes
Forecaster	5	GS-8	No

## Operations

With all of us learning new positions, not to mention an early start to the winter, we had a bit less time this season for significant projects. Still, we managed to make some changes to our website and completed a number of smaller projects while maintaining all of our current programs:

- The largest project was one we hope was transparent to our users. We upgraded our website hosting to a virtual server, which provides an added level of performance, flexibility, and security. However, this required updating a number of old scripts and outdated programming on our website.
- We added an interactive advisory area map to our website that clearly depicts the zones used in the advisory. A staff bio page was also added, along with advisory sponsor logos on our homepage. The "What's New" section of our homepage continued to be an effective way of communicating the latest information or important announcements.



*Interactive forecast area map.*

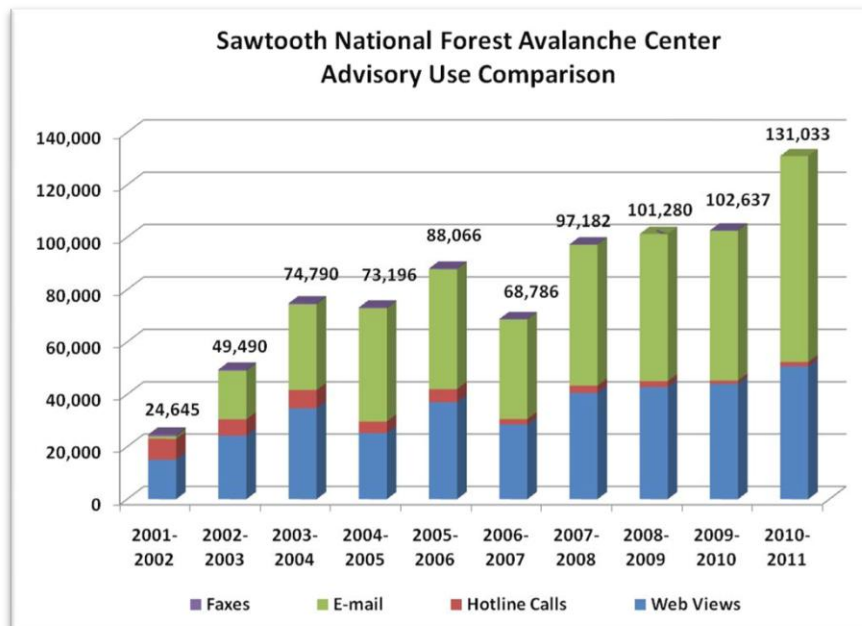


- Our professional observation network continues to be an important resource for local avalanche pros and greatly improves the accuracy of the advisory. We had nearly 250 observations this season.
- Partnering with the Friends of the SNFAC, we implemented an online survey to better understand our user demographics and to get feedback on SNFAC products and services. We achieved our goal of over 200 respondents (see Survey section for more details).
- We applied for and received a grant through the Southcentral Idaho Resource Advisory Committee (RAC) to install a remote weather station for measuring snowfall in the Soldier Mountains. The lack of accurate snowfall data for this zone is a significant avalanche forecasting challenge, and we look forward to this station being installed next fall.



*We made a few changes to our homepage, including the addition of advisory sponsor logos. These logos are unobtrusive, yet provide more incentive for sponsors.*

## Advisory Use



Each season, the avalanche advisory receives more use, and this winter was no different. The web-based advisory saw a 15% jump in views this winter, and total usage of the advisory (web, email, and phone) increased 30%! Undoubtedly, this increase is in part due to the growing popularity of winter backcountry recreation, but each season we get more people checking the advisory before they head into the backcountry. We also issued 89 morning avalanche condition summaries at 7:45am on KECH radio, which reach thousands of people during prime commuting time.





## Educational Programs

In part due to a good snow year, attendance at all of our educational programs increased from last year. We also expanded our offerings to include programs for local avalanche professionals.

- We started out the season educating ourselves. Chris, Blase, and Simon all attended the biennial International Snow Science Workshop, held this past October at Squaw Valley in California.
- A fall Professional Development Workshop provided continuing education for 40 local guides, ski patrollers, and avalanche educators. We also did two educational presentations for the Sun Valley Ski Patrol.
- 164 people attended our Avalanche Basics classes held in Ketchum, Hailey, and Fairfield. 74 of these attendees joined us on our Field Sessions.
- We reached a number of other backcountry users through a presentation at the Backcountry Awareness Night at the Elephants Perch, as well as an Avalanche Awareness Lecture and Beacon Clinic during the 5<sup>th</sup> annual Avalanche Awareness Week.
- Sara Lundy, the Friends of the SNFAC Executive Director, taught a 50-minute “Know Before You Go” program for the third winter in a row at the Wood River Middle School and at the Sage School – reaching over 200 kids. She also received a grant from the Hans Saari Memorial Fund to take this program on the road, teaching 300 middle schoolers in Salmon and Fairfield.

## Media & Outreach

We continue to have success using web-based social media and networks 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 over 960 “likes” on Facebook, and 55 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 2236 views.

Local media were also instrumental in getting our message out. There were seven well-written and informative articles in the Idaho Mountain Express newspaper, covering SNFAC operations, events, and avalanche conditions. In addition, there were three online news updates on the Express website. Sun Valley Magazine had a feature article on the Avalanche Center with an educational sidebar outlining backcountry clues that indicate unstable conditions. As noted earlier, KECH 95.3 radio played a 60 second avalanche conditions summary each weekday morning at 7:45.





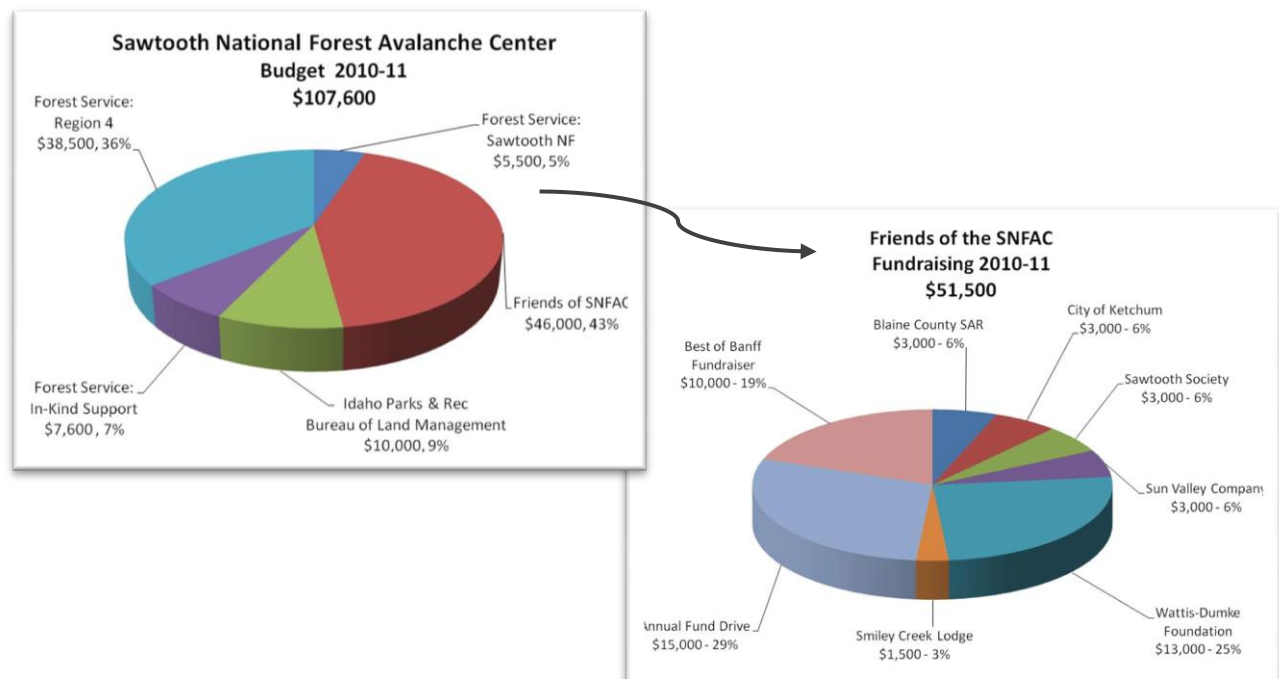
## Funding & Partnerships

The Avalanche Center continues to rely on a variety of partnerships to operate in the capacity that the public has come to expect, with just over half of this winter's budget coming from outside of the Forest Service. Funds from other state and federal agencies – the Bureau of Land Management and Idaho Department of Parks – accounted for 9% of our operating budget. The Friends of the SNFAC, our non-profit fundraising organization, provided 43% of our funding.

The Friends of the SNFAC developed a life of their own this season, recruiting new board members and hiring a (very) part-time Executive Director. They have also initiated the steps to form their own 501(c)(3), which will grant them more autonomy and eliminate the fees required to operate under the American Avalanche Association's non-profit umbrella. They had a successful fundraising season, raising over \$50,000 to cover forecaster salaries and operating expenses.

This season Sun Valley Company stepped up as an advisory sponsor, contributing \$3000 to pay for one advisory per week. This support solidified a strong partnership between the SNFAC and Sun Valley Company, and our commitment to working together to help prevent an out-of-bounds avalanche accident.

Idaho Department of Parks and Recreation remains committed to avalanche safety throughout the state. In addition to the \$5000 they contribute to fund avalanche advisories and education, they also renewed their snowmobile loan agreement this winter and replaced our (somewhat) older sleds with two new 2010 Polaris 600 RMK machines.







## Snowpack Summary

After a slow start to the winter La Nina flipped to "On!" in mid-November. The stormy weather continued, and the SNFAC started daily advisories Dec. 4<sup>th</sup> – two weeks earlier than the previous year. The dry start and mild temperatures prevented a widespread basal weak layer, and subsequent steady accumulation lead to a supportable early season snowpack.

After the New Year, the near-daily snowfall gave way to six weeks of dry, windy conditions. During this period Galena Summit recorded just 27" of snow, while Bald Mountain recorded only 7.5". Much of that precipitation fell during a warm mid-January storm that left a rain crust to nearly 8000 feet. By mid-February, the snowpack had fallen from 110% to 80% of average, and a persistent weak layer had formed on many mid and upper elevation slopes.

Once the weather pattern finally shifted and snowfall resumed, snowpack instability became widespread and several close calls ensued. In the most serious, a party of two triggered a deep hard slab in the Salmon Headwaters while climbing a steep ridge. The resulting slide ran 1700 feet down a path that averaged 40 degrees and piled debris into a deep gully. One of the party narrowly escaped with his life when he was hung up on a small tree after several tumbling hundred feet.



*March 11 – The aftermath of the close call in the Salmon Headwaters.*



*March 11 – Natural avalanche on Sun Peak showing ghost ski track on bed surface.*

This was the prelude to a widespread cycle of destructive natural avalanches caused by two back-to-back storms in mid March. These storms packed gusty winds and lots of snow – the 2<sup>nd</sup> produced 24" of new snow on Bald Mountain in 24 hours – and led to the SNFAC issuing two avalanche warnings. Some of the larger natural avalanches in the cycle ran to valley bottoms, while others on mid-elevation slopes put debris into gullies and other terrain traps.

A week-long warmup at end of March and start of April produced wet slides at lower elevations, but stormy weather returned and we closed out the season with a winter snowpack in the high country. Several close calls occurred as people ventured into higher terrain, including one in which three people were swept 1200 feet down a couloir in the Pioneer Mountains after triggering a small wind slab near the top. We ended operations April 22<sup>nd</sup> with the snowpack at 110% of average and 175% of the 2010 season. During the season we tallied at least seven close calls, but no fatalities – the first time since the 2007-8 winter.



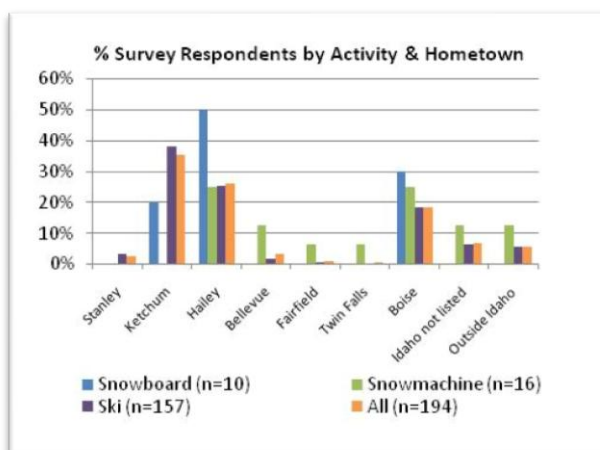
## Survey Results

We're always interested in knowing who uses SNFAC products and services and how they view them so we can improve their effectiveness. Though we often glean that information informally, this year we designed a survey with 28 open-ended and multiple choice questions that was open for three weeks in March. We collected 202 responses – two more than our goal and at least 30% of our daily average advisory use. The responses to open-ended questions produced some great suggestions that we'll incorporate next season. Among the results:

- Most respondents are satisfied with our advisories and website; over 95% report that the advisory and website have just the right amount of information.
- Satisfaction rates didn't seem to vary much between user groups or gender.

Most survey respondents were primarily skiers (74%), and most were male (79%). They also reported they are:

- 46-55 years old (30%) and live in Ketchum (36%)
- Access the advisory more than 3x/ week (86%)
- Recreate in the backcountry 1-2 times a week (42%), most often in the North Valley (36%)
- Have completed Level I avalanche training (36%)
- Have donated to the Friends of the SNFAC (54%)
- Have not submitted observations (57%)



*Most respondents were from the Wood River Valley (68%) or Boise (19%), but snowmachiners tend to live in a wide variety of locations.*

## Next Season's Goals

The SNFAC has been successful because it has never rested on its laurels; we're always looking for new and innovative ways to complete our mission. As the season 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:

- Install a new weather station in the Soldier Mountains to measure snowfall. The lack of snowfall data has made avalanche forecasting for this zone a challenge.
- Develop a new Avalanche Basics class and curriculum specifically designed for sidecountry skiers.
- In partnership with Sun Valley Company, continue to brainstorm ways to reach sidecountry skiers – the user group we consider to be most at-risk.
- Convert the Lead Forecaster position from a term (temporary) into a permanent position. This will aid in employee retention and lend some permanency to the program.
- Update our data retrieval system for our weather stations. This will improve our efficiency on early mornings, and could lead to improved weather data displays on our website.



*In partnership with Sun Valley Company we'll continue to seek solutions to the sidecountry avalanche problem. Photo: Mountain Express.*