
Annual Report 2015 – 2016

Sawtooth Avalanche Center



Slab avalanche near Baker Lake (Olin Glenne photo)



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Acknowledgements

The Avalanche Center could not operate in its current capacity without the generous support of our community. We receive half of our funding from the Friends of the SNFAC, who raise money through sponsorships, donations, and events. For a list of recent private donors, please visit:

<http://sawtoothavalanche.com/friends/SNFAC-Newsletter.pdf>

Advisory Sponsors:



Fundraising and support generously provided by:



These organizations provided hundreds of observations to our professional observations database this season. Many thanks to:



Partners:



USFS Staff:

A special thanks to Zach Poff, Susan James, Steve Frost, Sarah Stalker, Robert Garcia, and Matt Ganguet for going above and beyond the call of duty to support the avalanche center.

Observers and field partners:

Thanks to all the kind souls who accompanied us in the field and/or provided us with critical information about what they were seeing during their rides or tours. The following individuals were regular contributors/field partners: Terry O'Connor, Ed Binnie, Simone Kastner, Brad Hatch, Johnny Unser, Jamie Shaw, Jeremy Lato, and Robyn Davis.

From the Director

The mission of the Sawtooth Avalanche Center is to provide actionable weather and avalanche information and education to people recreating, working, and/or travelling in the mountains of south central Idaho. We celebrated the center's 25th anniversary this season! The year was marked by two new staff members (hopefully for the last time!), a "December to remember", completing our new office space, installing and troubleshooting 3 new remote weather stations, retrofitting our existing stations to provide year-round data, and greeting new faces within the Friends of the Sawtooth Avalanche Center. Ethan and Matt not only kept up with the workload...they excelled. A huge thanks to them, and the Friends' Board, for "kicking butt and taking names." I'd also like to thank all of the individuals, businesses, and agencies that help the avalanche center provide valuable public safety information. The SAC wouldn't be what it is without the amazing community support we receive. Happy turns to all this spring and summer – be it on boards, sleds, dirt bikes, mountain bikes, kayaks, or whatever strikes your fancy.

Sincerely,

Scott Savage
Director, Sawtooth Avalanche Center

Season Highlights

- We issued our first General Snow and Weather Information product on November 3rd. Daily Avalanche Advisories began on December 8th and continued through April 17th. In total, we produced 132 avalanche advisories this winter in addition to 9 General Snow and Weather Information updates.
- We issued 4 Avalanche Warnings and had 11 days with HIGH avalanche danger (compared to 2 Warnings and 5 days of HIGH danger last year).
- While there were no fatalities within the advisory area, a skier was partially buried and seriously injured in an avalanche in the backcountry outside the Sun Valley Ski Area boundary on Bald Mountain. Four skiers and one snowmobiler were caught in avalanches this season.
- December started the year off strong, depositing 80-100" of snow across the advisory area - this prompted 7 days of HIGH danger and all 4 avalanche warnings.



December snow was hard to keep up with!

- Out of 150 days in the field, we used skis 65% of the time, snowmobiles 24%, and hiked or used binoculars from the highway on 19%. Local professional groups contributed over 300 observations while the public sent us about 100 observations.
- Staff gave 22 interviews to local, regional, and national news organizations. You may have seen Scott on national TV serving as a subject matter expert for the Weather Channel's 'So You Think You'd Survive'.
- Volunteers worked over 400 hours on Friends' of the SAC fundraising events and over 5200 hours in the field.
- Our advisory received over 207,000 views via the web and email subscriptions. Advisories were accessed an average of over 1450 times each day – a 7% jump over last season.
- Public outreach continues to be very successful through the local newspaper, radio, and social media. The "Total Reach" of our Facebook page was 190,500 and our "Likes" increased from 1733 to 2263 – a 31% increase!
- Avalanche Center staff gave 34 educational presentations to both recreational and professional audiences. Our educational programs reached over 1600 individuals this season.
- The US Forest Service increased its annual funding to the SAC once again, demonstrating its commitment to providing quality avalanche information and education.
- We traveled to the Wallowa Mountains in Oregon to perform an incident report on behalf of the USFS National Avalanche Center.
- The Friends of the Sawtooth Avalanche Center provided approximately 50% of our funding and debuted a new mountain film festival, '5 Points', in Ketchum. The Avalanche Center would not exist in its current state without the Friends!!!

Staff

The Sawtooth Avalanche Center employs three full time employees during the winter season:

1. Avalanche Center Director: Permanent Federal Position, supported by the US Forest Service
2. Lead Forecaster: Permanent Federal Position; supported by the Friends of SAC and USFS
3. Forecaster: Seasonal Federal Position; supported by the Friends of SAC



Scott Savage

Scott Savage returned for his fourth season at the avalanche center and second year as the Director. Prior to coming to the Sawtooth in 2012, Scott spent the better part of two decades as an avalanche forecaster and snow safety director at Big Sky Resort. He has frequently contributed articles to The Avalanche Review, written columns for regional Montana newspapers, presented at international conferences and regional professional development seminars, and is currently the secretary of the American Avalanche Association.



Ethan Davis

Ethan's interest in snow started at Anthony Lakes, a mom-and-pop ski hill in rural Eastern Oregon. He attended the University of Idaho, where he earned his Bachelor of Science in Geography and a minor in Mathematics. Following an interest in winter storms he earned his Master's degree in Meteorology from Pennsylvania State University. After three years in a dark lab growing ice crystals, Ethan returned to the light as a forecaster in Alaska and Colorado before making his way home to Idaho. When not in the snow, you can find him and his wife Robyn brewing beer, fishing, biking or tying-in to climb at a local crag.



Matt Wieland

Matt grew up playing and getting lost in the mountains of Montana and northern Wyoming. He moved to Bozeman to attend college and realized working as a ski patroller at Moonlight Basin Ski Area was pretty fun. He eventually became an avalanche forecaster and worked at the ski hill for over a decade. Along the way he earned a Bachelor's of Science degree in Snow Geography at Montana State University - Bozeman. Not satisfied, he went back to MSU to earn a Master's degree focusing on surface hoar formation in meadow openings. He began forecasting for the Sawtooth Avalanche Center in 2015. In the winter he enjoys going out for a rip on his sled and occasionally brings his skis along. He spends his summers riding singletrack trails on anything with two wheels.

Innovation and Accomplishment

Public safety is the root of our mission at the avalanche center. We achieve this through daily avalanche advisories and weather products, time in the field, education, and outreach. We take pride in seeking out new, better, or more efficient ways to give backcountry recreationists quality information to make sound decisions in the mountains.

In addition to refining our website, the avalanche center:

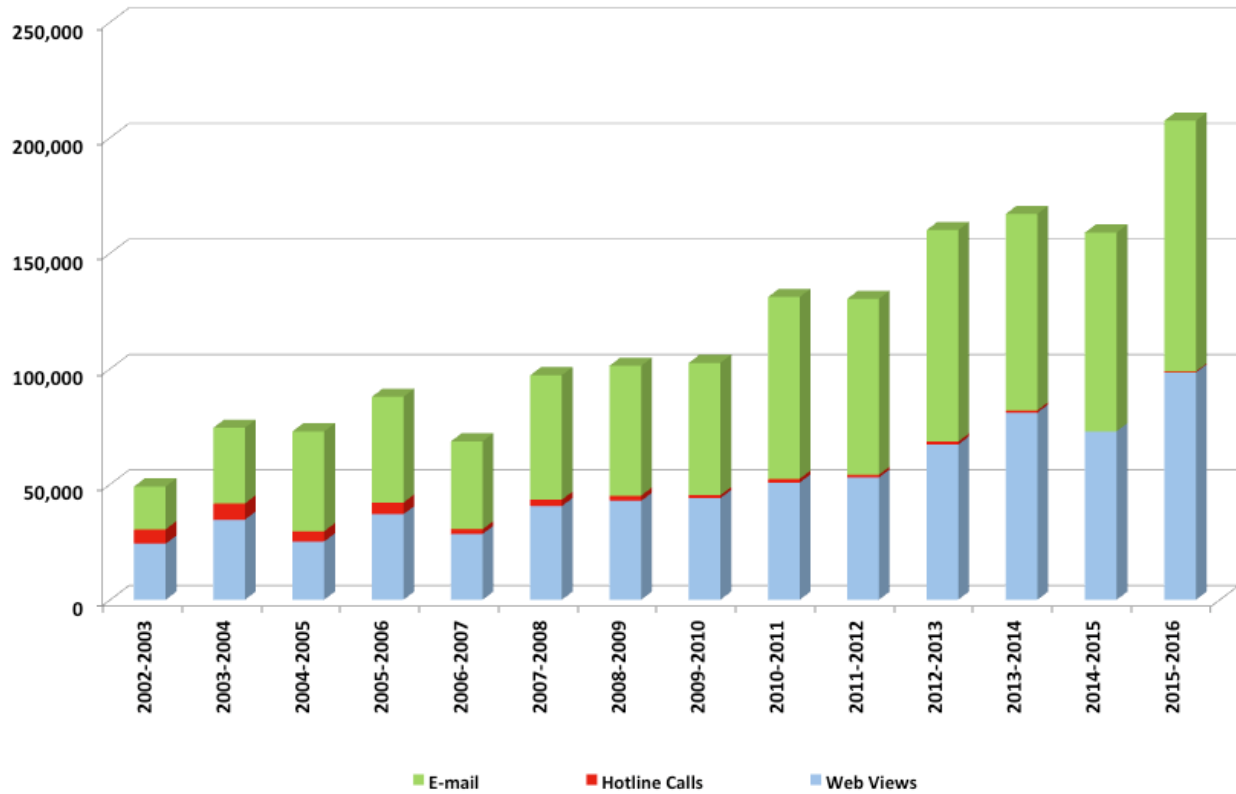
- Completed installation of 3 new remote weather stations: Bench Lakes, Skeleton Creek, and Upper Vienna.
- Taught another successful Motorized Level 1 Avalanche Course instructing 18 students and following the American Avalanche Association's guidelines.
- Partnered with Sun Valley to educate Sun Valley Ski Education Foundation youth athletes at Baldy.
- Educated youth in the classroom on four occasions, focusing on avalanche awareness and companion rescue.
- Put the finishing touches on our new office space at the Sawtooth NF Work Center on Lewis Street in Ketchum.

Website and Advisory Use

We issued our first general snow and avalanche update on November 3rd and began daily advisories on December 8th, issuing 132 advisories this season (compared to 115 last season, and 118 two seasons ago). Advisory usage went up 7% and the number of email advisory subscribers increased to 770, up from 748 last season. After taking a sabbatical due to technical issues, our advisory telephone hotline was operational again in January.

Sawtooth National Forest Avalanche Center

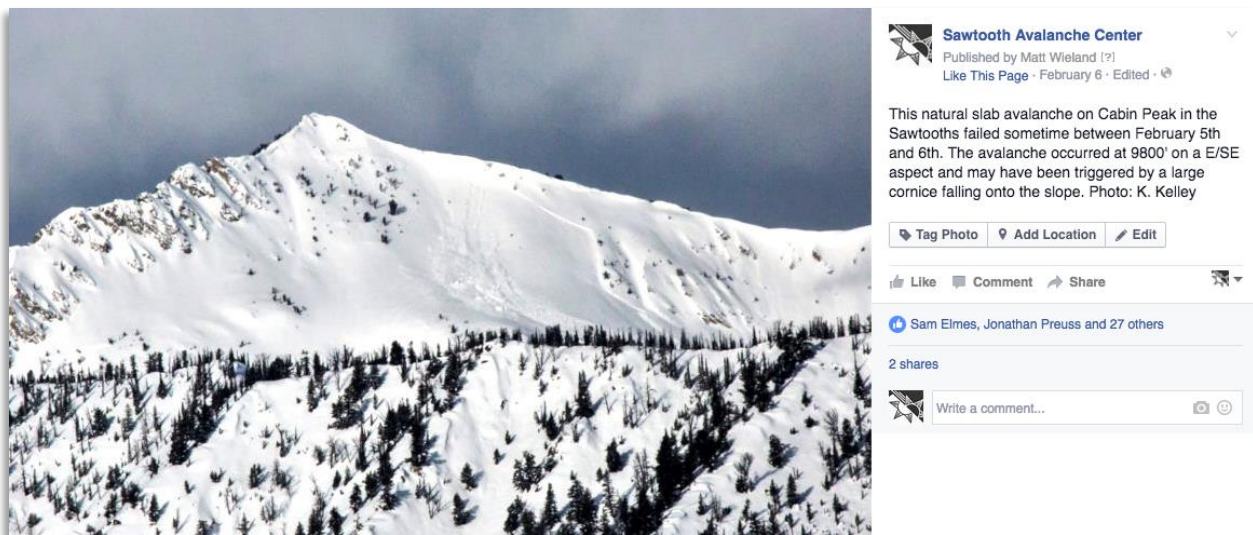
Advisory Use Comparison



Social Media & Outreach

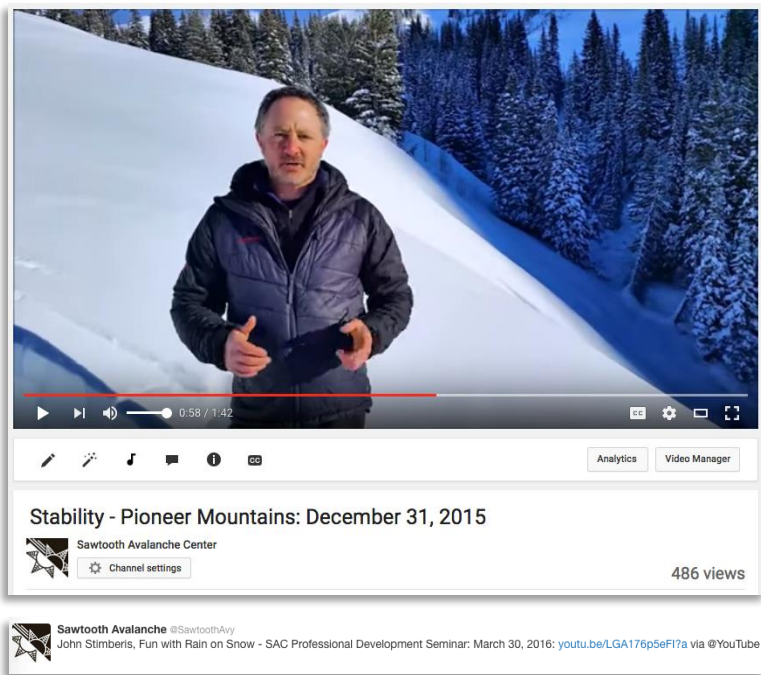
Web-based social media plays a crucial role in communicating avalanche conditions and event information:

- We now have 2263 followers on Facebook (up 30% from last year) and our “Total Reach” increased to 190,500.



We focus on media-rich, eye-catching content for our Facebook posts.

- YouTube continues to be a successful educational tool; this season we posted 8 videos that were viewed 1,931 times.
- Videos on our YouTube channel have been viewed over 59,000 times since 2007.
- We now have 333 followers on Twitter, reaching a wider audience of businesses, government organizations, towns, and news agencies.
- New for this season is our Instagram account which already has 179 followers.
- Looking ahead, we will develop a Social Media Plan based on industry best practices to guide post frequency, channel focus, and content.



Examples of Instagram (left), YouTube (upper right) and Twitter (bottom right) posts.

Thanks to the generous support of local Dr. Glen Shapiro, KECH, KDPI, and KBOI Radio once again broadcast conditions during periods of heightened avalanche danger and provided daily 60 second spots during the morning commute hour. This year we issued 94 weekday morning avalanche forecasts broadcast 208 times via our radio partners.



Operations

Winter began on schedule, bringing amazing early season riding conditions. With new staff and steady snowfall, getting weather stations up and running, a steady stream of education events, and putting the finishing touches on a new office space, things were hopping at the center.



Matt installing the beacon park.

We logged 148 days in the field; 65% of the time was spent on skis, 24% on snowmobiles, and 19% either hiking or with binoculars on the highway. We received over 400 total observations; approximately 5% of these were from motorized users. Local ski guides and snow safety workers contributed 311 observations to our professional observations database. A big thank-you to the guides at Sawtooth Mountain Guides, Sun Valley Heli Ski, and Sun Valley Trekking, and the ski patrols at Sun Valley - Bald Mountain and Soldier Mountain ski areas.

Educational Programs

Avalanche Center staff conducted 33 education presentations, including professional and recreational audiences. ***All told, our education program reached over 1600 people this season.***



Scott presenting to a packed Avalanche Basics class.

We held two Avalanche Awareness and Basics classes in December and January; 103 people attended the classroom sessions and 38 attended the field sessions. We hosted Basic Beacon and Rescue clinics at the Baker Creek Rescue Training Park and at the Smiley Creek Lodge. Area youth were visited in the classroom on four occasions focusing on avalanche awareness and companion rescue.

Avalanche Center staff hosted a Professional Development Seminar on March 30th; the evening session upstairs at Whiskey Jacques was well attended by approximately 40 local and regional avalanche professionals. Our keynote speakers included: John

Stimberis (Avalanche Mitigation Supervisor for the Washington state Department of Transportation), Travis Wyatt (Forecaster for the National Weather Service-Pocatello and Avalanche Program Lead), Jaime Musnicki (Executive Director of the American Avalanche Association), Matt Wieland (SAC Forecaster), Jim Christian and Katie Van Riper (Avatech).

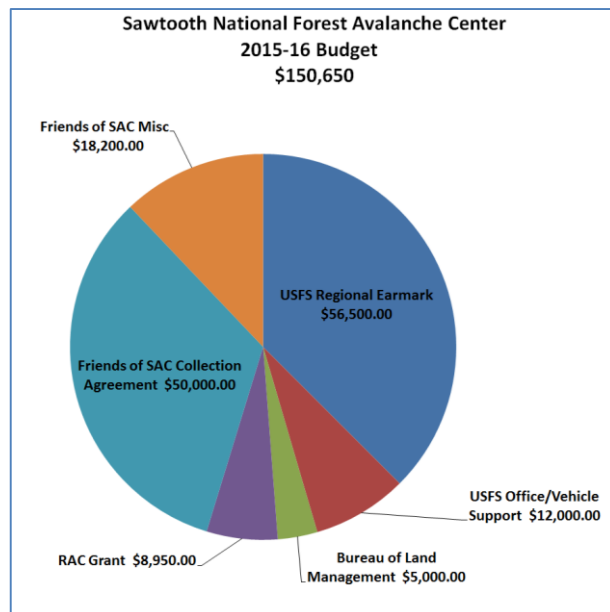


WRMS students learning companion rescue.

Scott presented at the National Avalanche School in Snowbird, Utah as well as the Colorado Snow Avalanche Workshop (CSAW) in Breckenridge, Colorado reaching over 850 people. Locally, Avalanche Center staff presented to Baldy Ski Patrol, the Sun Valley Ski Education Foundation, Soldier Mountain Ski Patrol, Blaine County Search and Rescue, Sun Valley Trekking, Wood River Fire and Rescue, Ketchum Fire Department, the USFS, a Level 3 avalanche class, and a number of area classrooms.

Funding & Partnerships

The Avalanche Center relies on a variety of partnerships to fund its operation. Approximately half of the Center's budget comes from the Forest Service. Despite shrinking federal budgets, Region 4 (of the USFS) continues to increase our funding; this support shows their continuing commitment to public safety. The Ketchum Ranger District provides vehicles, office and administrative support, and maintenance facilities. The Bureau of Land Management contributes \$5000 annually.



The Sawtooth Avalanche Center is an example of a successful public-private partnership.

The Friends of the Sawtooth Avalanche Center (501c3) are a critical partner in our mission; the center would not exist without their support. The Friends contribution covers salaries for 2 of our 3 forecasting positions and provides funds for safety equipment, field equipment, website updates, educational supplies, etc. Approximately half of our budget this season came from the Friends.

The Friends of the Sawtooth Avalanche Center raise funds through sponsorship, private donations, grants and fundraising events. The Friends success is indicative of strong community buy-in and support of the Avalanche Center mission.

Snowpack Summary



Crown of an early season avalanche
near Galena Summit.

Any early-season long-range snowfall forecast coming from a Meteorologist brave enough to post their thoughts is quickly touted as gospel. Snow enthusiasts cringed at the predictions as the experts and mega-computers agreed - the Pacific Decadal Oscillation and El Niño-Southern Oscillation were pointing to a mediocre ski season at best in Idaho. Luckily for us, with the bar set low it was easy to overachieve and then some! What was set to be a lack-luster year turned out to provide great coverage studded with memorable powder days and stretches of good stability. Folks near Soldier Mountain and in the “South Valley” around Hailey and Bellevue enjoyed some of the best backyard skiing in recent memory.

We issued our first General Snow and Weather Information product on Nov 3rd and watched intently as snow coated upper elevations. By December, the stage was set; a dry spell and cold temperatures allowed the early season snowpack to facet, creating our first persistent weak layer. We were off and running. Daily Avalanche Advisories began with an Avalanche Warning on December 8th. Talk about kicking it into HIGH gear! December accounted for nearly half of the seasons snowfall in some areas, dropping 80-110” across the advisory area and prompting 7 days of HIGH danger and all 4 avalanche warnings. A serious injury occurred on Dec 14th in an area commonly known as the Baldy out of bounds. The skier was buried 2 feet deep and sustained serious chest and internal injuries. The avalanche was roughly 120 feet wide, and traveled approximately 1,300 vertical feet.



Natural avalanches in Quigley Canyon running on (1/13) buried surface hoar.

A dry spell to start 2016 formed a weak layer of surface hoar in the Wood River Valley and facets in the Smoky and Boulder Mountains that would keep us on our toes into February. Two snowy periods starting on Jan 13th (30-40") and Jan 28th (12-16") were enough to tip the scales. Several large avalanches and a few skier-triggered avalanches failed on the weak Jan 13th interface. Some of these slides were triggered remotely from several hundred feet away.

February was unusually dry but was notable for its wet loose

avalanche cycle. The sun climbed higher in the sky and a strong high-pressure set up over the advisory area, allowing pass-level temperatures to soar into the 50's F. During this warm spell, several loose wet avalanches occurred on steep sunny slopes, including two that blocked highway 75 north of Ketchum and a dozen others that reached or crossed Warm Springs Road.

Our final HIGH danger of the season occurred on Mar 14th during an extended storm that dropped 30-60" of snow. During and immediately following the storm, riders reported the conditions as "all-time"; deep powder, almost too deep to ski on all but the steepest slopes. As the fluff settled and wind whipped the fresh snow into a firm slab, we saw a healthy amount of avalanche activity (see cover photo). Several large D2 and D3 slabs were reported from across the advisory area as crowns reached 4-6' deep and greater than 1,000' wide.



The thaw has arrived – path of large loose wet slide in Eagle Creek.

One final storm brought about a foot of new snow in April, but that would be all she wrote. Spring arrived with authority and the snowpack on sunny lower elevation slopes of the Wood River Valley and Soldier Mountains were the first to throw in the towel. The thaw had arrived and our primary avalanche concern for much of the end of the season was loose wet avalanches. As water percolated deeper into the snowpack, some of these slides would gouge to the ground and run impressive distances such as the slide in Eagle Creek pictured at left.

Next Season's Goals

- Remote weather station work: complete the Lower Vienna station installation and rebuild the Lower Titus station, adding a precipitation sensor. Fine tune recent installations.
- Test and implement a new Professional Observations platform to ensure crucial information sharing between Avalanche Center staff and local guiding and patrol operations.
- Plan and secure funding for significant website upgrades in 2017-18.
- Continue to make inroads with, and increase outreach to, the motorized community.
- Increase the quantity and quality of observations we receive from the public by improving our public observation platform and database.
- Create, test, and implement a web platform to share observations with the public.
- Develop a formal Social Media Plan to expand outreach.
- Streamline our digital file storage systems to improve efficiency.
- Investigate avalanche center operational safety and present findings to increase worker safety.
- Continue working with the SVSEF program and area schools to educate athletes, students and parents.
- Continue to partner with Boise State University to advance research in applied snow and avalanche science.
- Work with the USFS National Avalanche Center to begin developing a strategic plan to provide avalanche information and education resources to nearby areas outside our advisory area.
- Continue running motorized Level 1 courses and working on our riding skills!



Ethan showing he can keep his sled right-side-up on occasion.