



UTAH AVALANCHE CENTER ANNUAL REPORT

24|25



24|25 REPORT CONTENTS

To navigate to a specific section, please click on the section headers below. When you see a QR code, scan to learn more or visit the link provided. All text appearing in the report that *appears like this*, is clickable.

- 03 POINTS OF INTEREST
- 04 DIRECTORS' MESSAGE
- 05 ABOUT THE UAC
- 06 MEET THE TEAM
- 07 SEASON IN REVIEW
- 14 AVALANCHE ACCIDENTS
- 16 AWARENESS
- 18 EDUCATION
- 20 OBSERVER PROGRAM
- 21 UAC MACHINE LEARNING PROJECT
- 22 INTERNSHIP
- 23 COMMUNICATIONS & MARKETING
- 24 DEVELOPMENT & FUNDRAISING
- 25 FINANCIAL SUMMARY
- 26 PARTNERSHIP & SUPPORT
- 27 SPONSORS
- 29 CONTACT US

REPORT WRITING | UAC STAFF
REPORT COMPOSITION | ANDREW NASSETTA



A large avalanche that was triggered in Upper Weber Canyon in the Uintas. This avalanche was 4-6' deep and failed on a layer of thinly buried facets that were preserved in early February. (UAC via B. Torrey)



**KEEPING YOU
ON TOP**
FOR **45** YEARS.



A grey-bird field day in the alpine on the north slope of the Uintas fixing the Camp Steiner snow site, managed by the UAC. Remote sites like this are only accessible by snowmobile during the season. (UAC Staff, A. Nassetta)

24|25 POINTS OF INTEREST

Below is an overview of highlights and interesting data from this past season. More details pertaining to this section will be highlighted throughout the report.

803 AVALANCHES REPORTED

There were over **800 avalanches** reported from the backcountry in a 150 day forecast season.

FIVE AVALANCHE FATALITIES

Unfortunately the Utah backcountry community suffered **5 avalanche fatalities** this season, all of which hit close to home.

1,796 PUBLIC OBSERVATIONS

The public submitted a **generous amount of field observations** that assisted forecasters and the rest of the backcountry community.

625 FORECAST FIELD DAYS

Our forecast team had **625 field days** across the state with **0 injuries**.

KNOW BEFORE YOU GO

From August to April, over **100 KBYG presentations** were delivered across the state. We had over **3500 attendees** participate with nearly half being students in grades K-12.

UTAH SNOW & AVALANCHE WORKSHOPS

We sold out the Utah Snow & Avalanche Workshop with nearly **350 attendees**. At PROSAW, we had record attendance with **423 in-person** and **178 virtual** attendees.

SOCIAL MEDIA

This season we **increased our following by 458%** across all rural social media channels. These channels help to communicate region-specific, avalanche-related safety information.

DEVELOPMENT & FUNDRAISING

We finished the season with **430 members** including 11 Pinnacle members – our new tier! Of our **1.5M budget**, nearly **60% is raised from the public**, and our backcountry community. Being a member is a great way to support the UAC mission!

THE UAC MISSION

The Utah Avalanche Center's mission is to keep people on top of The Greatest Snow on Earth® by providing avalanche forecasting, awareness, and education throughout the State of Utah.

24|25 DIRECTORS' MESSAGE



Director Pagnucco and Executive Director Miller at a team ski day on a blue-bird spring day in April. (UAC Staff, J.Manship)

A MESSAGE FROM OUR LEADERSHIP

As the 2024–25 winter season comes to a close, we at the Utah Avalanche Center (UAC) reflect with deep gratitude and humility on a season marked by change, uncertainty, and remarkable resilience.

This year brought new leadership on both sides of our organization. Paige Pagnucco stepped into the role of USFS Avalanche Center Director with the U.S. Forest Service after nearly two decades of commitment to the nonprofit.

Meanwhile, Caroline Miller joined as Executive Director of the nonprofit in June 2024. They are both honored to lead such an incredible team. Thanks to the support of our donors, sponsors, and agency partners, we continued to provide life-saving avalanche information across Utah. Despite a slow start, most regions ended the season with near-average snow water equivalent—the La Sals being a notable exception.

The 2024-2025 season started off slow and lean, naturally leading to a thin and weak snowpack across the state. As storms rolled in across the state during the holidays, avalanche season was off to the races. Over the Christmas and New Year's, the Wasatch received 30-50" of snow and upwards of 6" of snow-water-equivalent. Avalanche danger spiked in lockstep with the storms. The next couple of months brought a series of close calls and accidents across the state.

We are heartbroken to report that there were five avalanche fatalities across the state. Thank you to the many parties that helped with recovery and brought the victims off the mountain.

The partnership between the Utah Avalanche Center and the U.S. Forest Service is a powerful example of collaboration that directly benefits everyone who enjoys Utah's National Forests. By combining the Forest Service's public land stewardship with the Avalanche Center's forecasting expertise, this partnership ensures timely, accurate avalanche information that helps keep backcountry users safe. It's a positive, long-standing relationship rooted in shared goals —

protecting lives, promoting responsible recreation, and supporting a thriving outdoor community.

We're excited to share some new developments from this promoting responsible recreation, and supporting a thriving outdoor community.

This year, we launched an updated version of our mobile app—now available on both Android and iOS. The improved app offers a more streamlined experience for accessing daily forecasts, viewing and submitting observations, and more. A big thank you to Kuhl and the Division of Outdoor Recreation for sponsoring this much-needed upgrade.

This summer, we're also launching our new website! While the design will remain familiar, the updated platform includes necessary behind-the-scenes improvements.

And last, but certainly not least, we're proud to have received a \$1,000,000 grant from the Outdoor Adventure Commission to kick off a machine learning project that will enhance support for our forecasters. Read more on page 21.

The work we do is only possible because of you. Whether you contributed an observation, made a donation, volunteered at an event, or simply checked the forecast before heading into the backcountry, your involvement makes a difference. Your trust in us allows the UAC to reach thousands of users with critical avalanche education and awareness, and we never take that for granted.

While the year was marked by change, our goal remained the same: to ensure the backcountry community across Utah has quick and easy access to the information they need to make safe decisions in the backcountry.

Thank you for standing with us. We are proud to be a community-driven organization, and we look forward to continuing this vital work together.



Paige Pagnucco
PAIGE PAGNUCCO
DIRECTOR
Forest Service UAC



Caroline Miller
CAROLINE MILLER
EXECUTIVE DIRECTOR
Nonprofit UAC



24|25 ABOUT THE AVALANCHE CENTER

The Utah Avalanche Center (UAC) exists to keep people on top of The Greatest Snow On Earth® by providing avalanche forecasting, education, and awareness throughout the state of Utah.

UAC HISTORY

In the mid-1970s, avalanche information was recorded on a phone line in the Salt Lake District Office of the Wasatch National Forest. The UAC officially started 45 years ago in 1980 when the Forest Service and the National Weather Service (NWS) signed an agreement to formally establish the Utah Avalanche Forecast Center at the NWS office in Salt Lake City with three basic charters -- issue avalanche forecasts, provide avalanche education, and issue mountain weather forecasts.

Thirty-five years ago, in 1990, the nonprofit Friends of the Utah Avalanche Center was formed to bridge the gap between the available funding and the actual expenses of running the avalanche center and assure long-term sustainability. The collaborative partnership between the Forest Service and the nonprofit, collectively known as the Utah Avalanche Center, has grown to a staff of 21 working across Utah delivering avalanche forecasts, awareness, and education.

AVALANCHE FORECASTING

Avalanche forecasts are the most widely used UAC product. Our forecasts inform the public about what types of avalanches to expect, where they might occur, how big they may be, how sensitive they are, and how to avoid them.

We forecast for 8 regions across Utah and these free forecasts can be accessed online via our website and new mobile app, or in a daily email delivered to your inbox.

Additionally, the forecast is recorded to our telephone line each day at 7:30am with an early morning "Dawn Patrol" telephone message updated daily at 5:30 AM. Finally, tune into KPCW public radio every day at 8:08 AM for the daily forecast.

OBSERVATION PROGRAM

Forecasters, pro observers, and the public submitted 1,796 field reports that were viewed over 1.5M times. These observations include details about what people are seeing out in the backcountry and are our website's second most used source of avalanche information.

Forecasters use these field reports to create the daily avalanche forecast and the backcountry community uses them to gain a deeper understanding of backcountry conditions.



Director Paige Pagnucco on a spring outing with staff. The UAC team is spread across the state and traveling to different regions help us be a more cohesive and creative team. (UAC Staff, P. Pagnucco)

AVALANCHE AWARENESS

The goal of avalanche awareness is to inform people of the dangers of avalanches and what they can do to decrease their risk. We accomplish this through in-person and virtual presentations and by meeting with backcountry users where they access the mountains. Our primary awareness program is the Know Before You Go (KBYG.org) program. We offer custom presentations on various topics ranging from the science of avalanches to terrain management to snowpack updates. We provide free transceiver training during the fall and winter at parks and trailheads and we have our trailhead avalanche awareness program, where we meet with backcountry users to discuss avalanche conditions at trailheads across the state.





















AVALANCHE EDUCATION


The UAC's on-snow avalanche education program focuses on providing backcountry users with introductory avalanche classes. Basic avalanche education is the foundation of providing people with the tools to make good decisions in the backcountry and come home safely each day. Our core classes include Introduction to Companion Rescue, Introduction to Avalanches (Backcountry 101, Motorized Backcountry 101), and Backcountry 201 classes. Learn more about the education program on page 18.

Learn more about the UAC > bit.ly/abouttheUAC



The UAC team on top of Hidden Peak enjoying spring conditions and a beautiful day on snow together in early April. (UAC Staff, J. Manship)

 <p>PAIGE PAGNUCCO DIRECTOR Forest Service UAC</p>	 <p>DAVE GARCIA COMMUNITY COORDINATOR & AVALANCHE FORECASTER Moab</p>	 <p>JEREMY COLLETT KNOW BEFORE YOU GO COORDINATOR Salt Lake City</p>	 <p>NIKKI CHAMPION AVALANCHE FORECASTER Ogden, Salt Lake City, Provo</p>
 <p>CAROLINE MILLER EXECUTIVE DIRECTOR Nonprofit UAC</p>	 <p>DAVE KELLY AVALANCHE FORECASTER Ogden, Salt Lake City, Provo</p>	 <p>JOSEPH MANSHIP MOTORIZED EDUCATION COORDINATOR Salt Lake City, Uintas</p>	 <p>TOBY WEED AVALANCHE FORECASTER Logan</p>
 <p>ANDREW NASSETTA COMMUNICATION MANAGER & AVALANCHE FORECASTER Uintas</p>	 <p>DREW HARDESTY AVALANCHE FORECASTER Ogden, Salt Lake City, Provo</p>	 <p>KATE WALLER DEVELOPMENT DIRECTOR Salt Lake City</p>	 <p>TRENT MEISENHEIMER AVALANCHE FORECASTER Ogden, Salt Lake City, Provo</p>
 <p>BRETT KOBERNIK AVALANCHE FORECASTER Skyline</p>	 <p>ERIC TRENBEATH AVALANCHE FORECASTER Moab</p>	 <p>LIAM MCDONALD AWARENESS COORDINATOR Salt Lake City</p>	 <p>CHAD BRACKELSBURG SPECIAL PROJECTS LEAD Salt Lake City</p>
 <p>CLAIRE HURTY COMMUNICATION & DEVELOPMENT COORDINATOR Salt Lake City</p>	 <p>GREG GAGNE AVALANCHE FORECASTER Ogden, Salt Lake City, Provo</p>	 <p>MCKINLEY TALTY EDUCATION MANAGER Salt Lake City</p>	 <p>TRAVIS MORRIS RESEARCH & TECHNOLOGY MANAGER Salt Lake City</p>



CRAIG GORDON
AVALANCHE FORECASTER
Uintas

BOARD OF DIRECTORS

Alan Richards	Sara Goeking	Holli Slack	Caitlin Hansen
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UAC INTERNS

Nicole Sumner	TJ Kolanko	Eric Quilter	Kate Bowman
PRESIDENT	VICE-PRESIDENT	TREASURER	SECRETARY

Matt Barry	Chloe Mortensen	Jacob Sczezina
LOGAN	OGDEN	SALT LAKE

Hannah Follender	Kirk Chester	Ted Roxbury	Rich Mrazik	Christian Schauf
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24|25 SEASON IN-REVIEW



A close call in the northern part of the state near Logan where a rider was caught, carried and got very lucky at the end of the day. This avalanche was a couple hundred feet wide and up to 4' deep. (UAC Staff, T. Weed)

DANGER LEVELS ISSUED ACROSS THE STATE



125



473



305



74



1

DASHBOARD FORECAST

TOTAL FORECASTER
FIELD DAYS

625

AVAILANCES
REPORTED

803

HUMAN-TRIGGERED
AVAILANCES

366

CAUGHT &
CARRIED

73

FULLY
BURIED

13

AVAILANCHE
FATALITIES

5



"The Utah Avalanche Center's weather tools, website, and forecasts exceed those of other places I have lived. Thank you all for your hard work!"

William G, Central Wasatch

The Logan area mountains in northern Utah are part of the Bear River Range, a subrange of the Wasatch Mountains. These mountains are known for their prominent peaks such as Naomi Peak, the highest in the area.



An assortment of crowns near the Wellsville Range near the Logan zone after a natural avalanche cycle occurred in late February. Although the avalanches seem shallow, what is impressive is how connected the crowns are. (UAC Staff, T. Weed)



Looking down the avalanche path in Boss Canyon where a rider had a close call. Steep slopes, rocks, and trees make consequences that can increase the chances of trauma. (UAC Staff, T. Weed)

SEASON HIGHLIGHTS

This season, we were fortunate to have Matt Barry serve as an intern for the UAC in Logan. His contributions were invaluable: presenting Know Before You Go avalanche awareness talks, supporting avalanche classes, maintaining trailhead beacon checkers and the beacon park, and organizing and staffing the Logan-area Trailhead Avalanche Awareness Program. We are deeply grateful for his commitment. As always, our efforts were strengthened by the support of the UAC Board of Directors, the nonprofit team, and our new Executive Director, Caroline Miller—especially during our popular annual Pray for Snow fundraiser.

The 2024–25 avalanche season in the Logan zone began slowly, with minimal snowfall in November. Early December brought a shallow, faceted snowpack limited to shady, upper-elevation slopes. By mid-December, snow began to accumulate in the Bear River Range, capping the weak base and creating a persistent weak layer (PWL) that remained active through January.

WINTER REVIEW

A December 15 storm dropped over a foot of snow at upper elevations. Wind-loading from the southwest triggered natural activity, and we observed large natural slabs on Naomi Peak

and the Seven Sisters. Dangerous conditions persisted, with widespread reports of collapsing and cracking.

On Christmas Eve, a local family of snowmobilers triggered a 700-foot-wide avalanche in Steep Hollow. One rider was fully buried but was quickly located and rescued by his brother. His deployed airbag was damaged during the slide, but their preparedness and fast action prevented a tragedy.

Between Christmas and New Year's, nearly 6 inches of SWE accumulated. On December 27, we issued an Avalanche Warning. The following day, during heavy snowfall, we remotely triggered a 2-foot-deep, 200-foot-wide slab while exiting low-angle terrain south of Tony Grove Lake.

Snowfall and wind again elevated avalanche danger on January 4. A snowmobiler was caught and carried in Snowslide Canyon but avoided being buried thanks to an airbag. As January progressed, stability improved. Our focus shifted from deep PWLs to wind slabs and near-surface facets. On January 24, a snowboarder in Franklin Basin triggered a small wind slab and deployed their airbag, which was damaged during the ride.

Early February brought complex conditions: heavy snow, wind-drifting, and rain into mid-elevations. We issued another Avalanche Warning on February 1–2. On February 3, a snowmobiler was killed by a wind slab avalanche in the Monte Cristo area (Ogden Zone).

In the Logan zone, a February 7 avalanche in Franklin Basin caught and buried a snowmobiler. He was quickly located and rescued by his partner. While the deep snowpack in the Central Bear River Range generally helped stability, wind slabs, cornice falls, and wet snow avalanches remained threats. On February 21 and 22, two separate incidents—one involving a cornice fall and the other a rider triggering a slide above a group—resulted in injuries and partial burials.

On February 25, a snowbiker in Eightmile Canyon was fully buried. He radioed for help and was rescued by companions.

Though no fatalities occurred in the Logan Zone, there were several close calls, including three full burials and four airbag deployments—two of which were significantly damaged. Notably, three major incidents occurred north of the Utah/Idaho state line in the Northern Bear River Range.



Andrew Nassetta (left) and Joey Manship (right) on a field day on the south slope of the Uintas near Strawberry Reservoir. (Photo Credit - T. Katz)

The Uinta Mountains, located on the Wyoming/Utah border, are the only mountain range in North America that run east to west. They are home to a continental snowpack and the highest peak in Utah, King's Peak.

SEASON HIGHLIGHTS

Andrew Nassetta joined the Uinta forecasting team and it was a perfect fit. Andy's decade-long tenure of behind the scenes work with the non-profit arm of the UAC made for a smooth transition to public forecasting. Andy is a natural addition to the Uinta program and he hit the ground running with his usual dedication, hard work, determination, and devotion. He not only made it through his freshman year of forecasting without any speed bumps, he demonstrated his expertise and contributed greatly to our mission.

In addition, we were super stoked to have Joey Manship contributing avalanche forecasts, fieldwork, outreach, and avalanche education to the eastern front. We're looking forward to having him play an important role in the future of the Uinta program.

WINTER REVIEW

Late Autumn storms delivered shallow coats of snow to the western Uintas. However, the moisture tap dried out in early December as the jet stream shifted far to the north of the Uinta region, setting the stage for a weak snowpack and basal faceting, along with a few early season avalanches. Unfortunately, the blueprint for a structurally challenged snowpack was written.

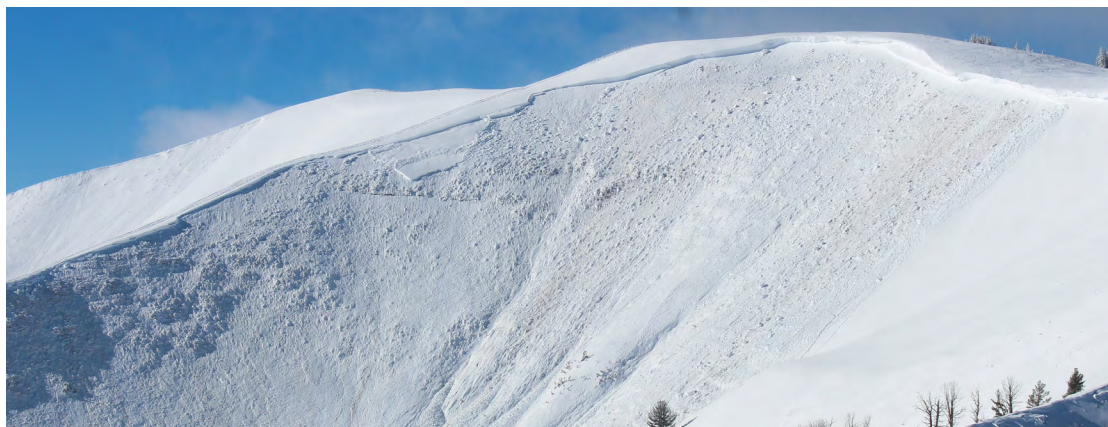
Winter returned from its hiatus during the Christmas and New Year's holidays with a powerful storm stacking up a couple of feet of dense, heavy snow, producing a widespread avalanche cycle across the range. Storminess looked promising going into the New Year. However, those

hopes faded as most of the energy evaporated and once powerful storm systems weakened substantially as they came onshore. Drips and drabs of moisture would offer the leftovers, but the nickel and dime nature of these storms never produced a deep, robust, mid-winter snowpack.

Early February was marked with a warm, wet, and very windy storm, but little snow accumulated, while a mid-month storm got things rolling for Valentine's Day. Hurricane force winds and dense, water-laden snow delivered a one-two punch to an already wavering snowpack and the range experienced a widespread, tree-snapping, natural avalanche cycle.

Minor storminess produced a couple of inches of snow for the first week of March, but that was the precursor to a larger, more energetic system that slid into the Uinta zone on March 4 through the 7. It was not quite as much energy as the Valentine's cycle, but the storm was right-side-up, meaning the dense snow was at the bottom and lighter on top, and the riding conditions were excellent. Unfortunately, following the storm on the March 7, an avalanche fatality occurred on Hoyt Peak.

Winter wasn't quite over with and cold spring storms lined up to deliver a truly Magical March that piled up over 55" of snow. Longer days, high sun angle, and warmer temperatures helped the snowpack settle and gain strength. Skiing and riding conditions were all time and avalanche hazard became more straight-forward. One last solid gasp of winter carried us into early April and we concluded our regularly scheduled daily avalanche forecasts on Sunday April 13.



A large avalanche with a crown up to 10' that ran naturally during the New Years Eve cycle near Chalk Creek on the north slope." (UAC Staff, A. Nassetta)



Joey Manship (left) and Craig Gordon (right) on a late-spring corn mission on a classic Uinta alpine day, with the UAC Ski-Doo fleet in the foreground. (UAC Staff, A. Nassetta)

24|25 OGDEN, SALT LAKE, PROVO SEASON IN-REVIEW

The Central Wasatch Mountains, including the Provo and Ogden areas, are part of the Wasatch Range and are known for their rugged terrain and prominent peaks such as Mount Timpanogos near Provo and Mount Ogden above the Ogden Valley.

SEASON HIGHLIGHTS

The 2024–25 winter in the Ogden, Salt Lake, and Provo area mountains was defined by a fragile snowpack and persistent weak layers (PWLs), stressed by a series of small storms. Major avalanche activity began in late December after heavier snowfalls, leading to multiple fatalities, in Mill Creek Canyon, Big Cottonwood Canyon, and the Monte Cristo area.

We tracked four primary weak layers — basal facets, repeater slopes, late-January facets, and facet-crust combos which created ongoing, widespread avalanche danger. Dubbed the “Year of the Repeater,” the season underscored the high risk of long-lasting PWLs and the need for increased caution in the backcountry.

WINTER REVIEW

The 2024–25 winter began with a fragile snowpack and a pattern of being “nickel-and-dimed”—a series of small storms that gradually overloaded persistent weak layers (PWLs). These early-season conditions kept forecasters and backcountry users in a long, uneasy waiting game, watching and wondering when the first real slab would arrive.

By December 24, a key warning sign appeared: a remotely triggered avalanche on facets at Rocky Point, following a series of small storms and steady wind-loading. While Christmas brought rain and rime to mid-elevations, it wasn’t a major contributor.

The real shift came between Christmas and New Year’s, when a consistent westerly flow delivered significant snow and water to the Wasatch: Alta received 6.07” SWE, Park City 4.0”, Provo 18” of snow with 2.0” SWE, and Ogden 30” with 4.75” SWE. This finally pushed the weak snowpack past its tipping point.

The first serious incident occurred on Christmas Eve in Logan’s Steep Hollow area, where a snowmobiler was fully buried and rescued by his brother. Just days later, on December 28, a splitboarder went missing in Main Porter Fork of Mill Creek Canyon. He was found deceased on December 30, buried under two to three feet of debris. As his body was being recovered on New Year’s Eve, another fatality occurred nearby on Davenport Hill, where a solo splitboarder was caught and buried 20’ deep. January brought variable weather.

On January 4, an “Alta Special” storm (22”/1.32” SWE) cont’d



Looking upslope at the fatal avalanche that occurred in the Monte Cristo area of the Ogden Mountains. Two sledgers were highmarking the slope when one triggered, was caught, buried and killed by an avalanche. (UAC Staff, P. Pagnucco)

24|25 OGDEN, SALT LAKE, PROVO SEASON IN-REVIEW

(cont'd) triggered natural avalanches into deeper weak layers. From January 5–10, both east and northwest wind events further weakened the snow surface. Another storm followed on January 11, adding more stress to an already precarious snowpack.

On February 1, a new weak layer was buried, resulting in widespread avalanche activity. On February 3, a snowmobiler was killed on Beer Hill in the Monte Cristo area by a large, hard slab avalanche. On February 8, two skiers were caught in a slide in East Bowl of Silver Fork (Big Cottonwood Canyon). One was killed; the other sustained severe injuries. By this time, forecasters were tracking four primary problem layers:

- ♦ Old facets near the ground, especially in shallow (<4') or rocky terrain
- ♦ Repeater slopes—those that had avalanched earlier in the season
- ♦ Late January facets, present on many aspects throughout the range
- ♦ Facet/crust combinations on solar slopes, even at low elevations (e.g., Circle Awl, Snake Creek)

A troubling and unusual pattern emerged: avalanches on solar aspects with crusts, sometimes triggered remotely below 8000', as seen on Mt. Aire and Summit Park.

Around February 11, yet another facet-crust layer formed across all solar aspects, further complicating the snowpack. A mid-February storm produced numerous avalanches and close calls in areas like Butler Basin and Mill A.

On February 22, two notable close calls occurred—one in Mt. Aire where a skier was caught and carried on the uptrack, and another on Ant Knolls, where a snowmobiler triggered a slide after dropping off a cornice.

By early March, five fatalities had occurred in Utah's backcountry. The fifth, occurring on Hoyt Peak in the Uintas, involved a long-time friend and observer for the UAC. We are deeply saddened by these losses and remain committed to learning from each tragedy to better inform and protect our backcountry community.

Many have called this the "Year of the Repeater," underscoring the difficulty of managing risk amid long-lasting, persistent weak layers. Unlike recent winters with deeper and more stable snowpacks, this season served

as a sobering reminder of the need to lower our risk tolerance when uncertainty is high. Persistent weak layers are unforgiving—and their healing can take far longer than expected.

REGIONAL NOTES

- ♦ In Ogden, PWL issues largely subsided after the holidays, with the tragic exception of a February 3 fatality on Beer Hill in the Monte Cristo area
- ♦ Down in Provo, the Valentine's Day storm delivered over 4" SWE in just 18 hours—roughly a third of the region's seasonal snowfall. This was followed by rapid warming and widespread natural avalanches on February 22.



"I just wanted to say thanks again for being such a significant influence in my growth as a backcountry recreationalist!"

Mike V, Central Wasatch



A natural avalanche that occurred near Little Cottonwood Canyon after a storm was followed by a classic Utah-blue day. (UAC Staff, G.Gagne)



The scene of a close call where a deployed airbag aided in the sledder being rescued. (UAC via Skyline User)

The Manti-Skyline Mountains in central Utah are part of the Wasatch Plateau and are known for their high-elevation ridgelines and prominent peaks such as South Tent Mountain, the highest in the range.

SEASON HIGHLIGHTS

The 2024–25 Skyline snowpack began with a lean early and mid-season marked by three dry spells that created weak, faceted layers and an unsupportable snowpack into February. Significant storms in late February through March added dense snow on top of these weak layers, leading to deep, dangerous avalanches, especially snowmobile-triggered slides—though miraculously, no fatalities occurred. A warm spell in late March helped stabilize the snowpack, and an early April storm added snow without triggering avalanches. The season ended with a dramatic warm-up that caused rapid snowmelt but no major avalanche activity.

WINTER REVIEW

The Skyline seasonal snowpack could be characterized as a lean early and mid season and a more normal or above average late season. Snow started accumulating in late October, which is fairly average. However, this was followed by three distinct dry spells. November was quite dry, followed by a large snow event around Thanksgiving. December was also abnormally dry, followed by a large Christmas storm event. January was again very dry. These three dry periods took a toll on the snowpack, producing lots of faceted snow. The snowpack was unsupportable well into February, which is quite unusual. The snowpack structure was very weak. A small number of natural slides

accompanied each storm through the first half of the winter, but no single significant avalanche cycle occurred.

Finally, a series of healthy storms started late February and lasted into late March. This produced the layering on top of the old weak layers that was needed to produce dangerous avalanche conditions.

Touchy conditions ramped up about March 8 with a report of a very deep snowmobile-triggered avalanche. From then until March 20, there continued to be deep snowmobile-triggered avalanches, including at least three full burials on the Skyline and at least two more just south in the Gooseberry zone of Fish Lake. These were deep avalanches breaking to the ground. Miraculously, no one was killed in any of these slides.

A warm-up in late March lasted about a week and seemed enough to settle and stabilize the old, persistent weak layers. One last significant storm happened from April 1-5, which produced 18" of new snow. The new snow was stable, and there was no avalanche activity.

The season ended with a very dramatic warm-up, which lasted over a week. This did not produce any significant avalanche activity but instead just rapidly melted the snow with a loss of over 2 feet in depth during that period.



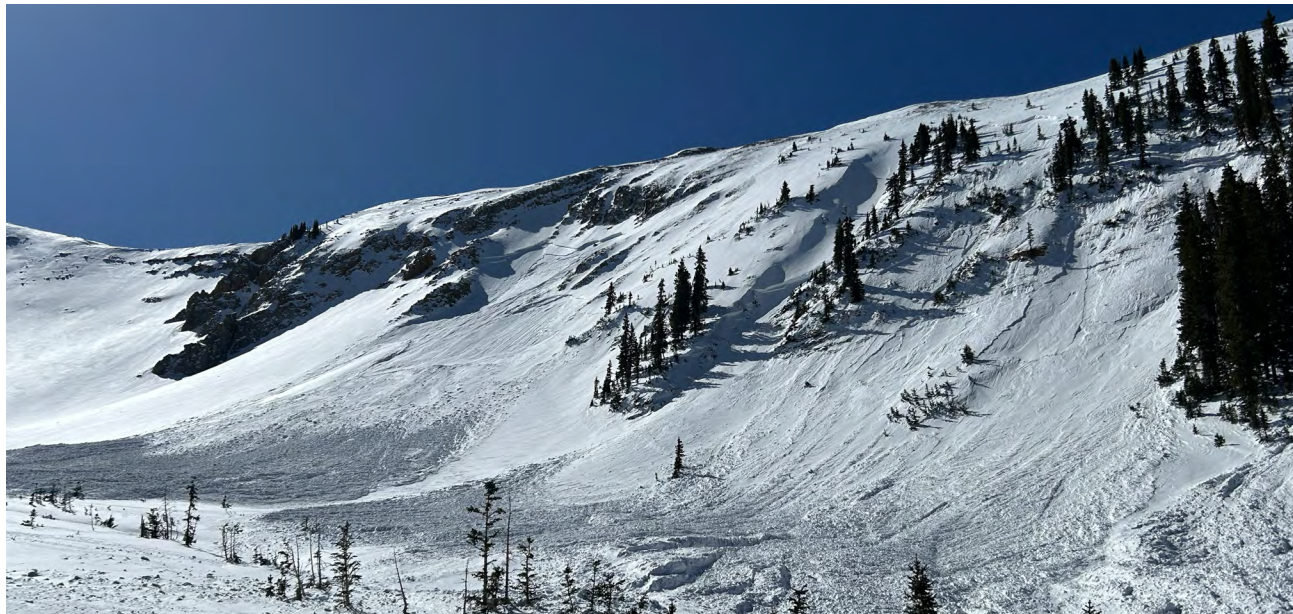
Forecaster Brett Kobernik investigating the crown of a large avalanche that was triggered by a sledder. This avalanche was nearly 10' deep and a couple hundred feet wide. (UAC Staff, B. Kobernik)



Brett "Kowboy" Kobernik doing some snow testing and quality control on a late-spring day. Conditions at this point of the season turned on, and riding was all time. (UAC via Skyline User)

24|25 MOAB SEASON IN-REVIEW

The La Sal Mountains in southeastern Utah are part of the Rocky Mountains and are known for their prominent peaks such as Mount Peale, the highest in the range.



Full depth 1000' wide natural avalanche in Horse Creek on or around March 7, 2025. (UAC Staff, Eric Trenbeath)

SEASON HIGHLIGHTS

The 2024-25 winter season in Southeast Utah was exceedingly dry except for a handful of storms with unusually high water content. A few weak storms punctuated long periods of high pressure, and by mid-February, we had the worst snowpack structure imaginable. From then on, regular snowfall added to a growing slab, producing hair-trigger instabilities and occasional large natural avalanches. The problem stayed with us through the end of March.

WINTER REVIEW

Three storms in October set the foundation with a combined 20" of snow and 3.0" SWE. It didn't snow again until late November when a wet storm system favoring the southern part of the state brought 18" of snow at a whopping 3.7" of SWE! This created a dense slab over top of the October facets, prompting a high danger rating and producing a widespread avalanche cycle on north through easterly aspects, including a massive slide in Beaver Basin measuring over 2500' wide.

The dense slab created an instant base, and we had the best early-season conditions in the state. But alas, the pattern that would affect us for the majority of the season took hold. Only a couple of weak storms passed through during December and January, and by the end of the period, the entire snowpack

was faceted through. Things finally turned around on February 14 when the "Valentine's Day Storm" delivered 15" of snow at 2.5" SWE, bringing our base up to 40". This prompted an Avalanche Warning, and although we experienced widespread collapsing and cracking, we had surprisingly few natural avalanches, and everything was left hanging in a tenuous balance.

The scales tipped in early March when an additional 1.2" SWE produced a 1000' wide, full-depth avalanche on a northeast aspect in Horse Creek. Continued snowfall kept things dangerous while also producing the best conditions of the season. Record-breaking temperatures at the end of the month resulted in numerous wet loose and wet slab avalanches, including a large R 2.5 D3 wet slab in upper Talking Mountain Cirque.

The month closed out with a remarkable incident that could have had dire consequences in the snow-starved Abajo Mountains. Two snowboarders chose to ride the Horse's Head slide path. Northeast facing and topping out near 11,000', it was one of the few slopes that even held snow. Dropping in, the first rider triggered a relatively shallow slab 10"-18" deep. Failing on a mid-pack faceted weak layer, the slab propagated to over 800' wide, taking out



Mt. Tukuhiwikivatz in the background on a crystal clear, freshly blanketed day in the La Sal's. (UAC Staff, C. Hurty)

the entire bowl. The rider deployed his airbag and came out on top after a several hundred foot ride.

The March heatwave locked up our PWL problem, and storms the first week of April brought a return to powder skiing. Folks enthusiastically ventured into steep, north-facing terrain, and numerous parties skied from the summit of Mount Tukuhiwikivatz. It was a fine finish, though short-lived as sun and warm temperatures took over, and we finished the season with a well below average snowpack.

24|25 AVALANCHE FATALITIES SEASON IN-REVIEW

OVERVIEW OF ACCIDENTS

The 2024-25 season left us with the highest number of avalanche fatalities since 2021, the year the Wilson Glade accident occurred.. This season's long-lasting persistent weak layers were the key element in all five fatalities. We offer our condolences to all affected by these tragedies and share this information to help prevent future avalanche accidents and improve backcountry safety.

DECEMBER 28, 2024 | SLC | PORTER FORK

On Saturday, December 28, 2024, a backcountry skier found an unattended dog in Porter Fork. The next day, Salt Lake County SAR and Sheriff's Office began investigating a missing person after discovering an unattended van in the parking area. A microchip and license plate linked the dog to David Ethier, 38, from Quebec, who was road-tripping in the western U.S. GPS pings, snowpack history, and eyewitness accounts helped narrow the search area.

On December 30, a local skier recalled a debris pile from the day before. Acting on a hunch, and despite HIGH avalanche danger, he and a partner returned to the site, conducted a beacon search, and located David buried under avalanche debris near Porter Fork Pass.

On December 31, SAR teams used explosives to trigger additional avalanches before rescuers could safely extract the body with helicopter support.

Based on snowpack data, David likely ascended to a ridgeline east of the pass and descended a steep northwest-facing slope (9,400') where he triggered a 1–2-foot-deep, 70-foot-wide wind slab avalanche that failed on a persistent weak layer.

The tragic accident occurred during a prolonged storm that began on December 25, building dense, wind-drifted snow over a weak, faceted base. Forecast avalanche danger was rated HIGH, and an avalanche warning was in effect.

View the full report here > bit.ly/fatality_porterfork

DECEMBER 31, 2024 | SLC | DAVENPORT HILL

On December 31, 2024, Reed Heil, a solo splitboarder, dropped into north-facing terrain off Davenport Hill in Big Cottonwood Canyon's Silver Fork drainage. He was caught, carried, and buried approximately 20' deep in an avalanche and did not survive.

Another party skiing in nearby Little Cottonwood Canyon noticed a single track into fresh avalanche debris with no



Forecasters investigating the crown of the fatal avalanche that killed Scott Wright. The team visited the site the following day to collect data and ascertain the chain of events and snowpack conditions that led up to the accident. (UAC Staff, P. Pagnucco)

exit and reported it to Alta Central around noon. A signal detected by an aerial search prompted a multi-agency rescue. After avalanche control secured the area, rescue teams located the buried victim and excavated him. Despite rescue efforts, he did not survive. The avalanche released on a steep, north-facing slope around 9,850' and was 400' wide.

The victim likely triggered the avalanche, which failed on weak, faceted snow near the ground. At the time, avalanche danger was rated HIGH, with persistent weak layers noted in the forecast.

View the full report here > bit.ly/fatality_davenporthill

FEBRUARY 3, 2025 | OGDEN | BEER HILL

On February 3, 2025, Scott Wright and a friend snowmobiled into the Monte Cristo area from the Woodruff trailhead.

While ascending a slope known as Beer Hill, Scott was caught in a large avalanche that buried him completely. His friend Warren called 911 but had no rescue gear and was unsure if Scott had a beacon. Rich County Search

and Rescue was dispatched, and a rescue helicopter later provided Warren with a rescue pack.

Rescue efforts were delayed due to the lack of a beacon signal. Avalanche rescue dogs, patrollers, and search teams from multiple agencies joined the search. A dog alert led to the discovery of Scott's snowmobile, buried 3–4 feet deep near a tree, and Scott was found nearby a few minutes later. He unfortunately did not survive.

The avalanche occurred on an east-facing slope at 8,800 feet and was about 400 feet wide, failing on buried weak layers, including near-surface facets and deeper December faceted snow. Strong winds had built a thick, dense wind slab, and terrain features like a large fetch meadow to the west contributed to extensive wind loading.

Before the incident, the area experienced a significant storm cycle with heavy snow, warming temperatures, and sustained strong winds. The avalanche forecast for the region was **CONSIDERABLE** due to wind-drifted snow over persistent weak layers.

View the full report here > bit.ly/fatality_montecristo



Craig Gordon pointing down the path of the avalanche that took the life of Michael Janulaitis on March, 7, 2025. This slope was 45 degrees in steepness where the avalanche occurred, and ran its course through a nasty string of trees below towards the runoff. (UAC Staff, A. Nassetta)

FEBRUARY 8, 2025 | SLC | EAST BOWL

On February 8, 2025, veteran ski guide, Higinio “Quino” Gonzalez, and his client were out for a backcountry tour in Utah’s Wasatch Mountains. After skiing two south-facing runs in Michigan City, they ascended near Honeycomb Peak to assess the steep, west-facing East Bowl. The guide planned to ski cut the slope before descending and instructed his client to follow after 15 seconds.

After minor sluffing during the ski cut, the client followed, and was caught in a large avalanche. He was swept down the slope, hitting a tree and suffering a broken leg and facial injuries. Unaware at first, he later realized his guide had also been caught and fatally injured in the slide. Nearby skiers, including a doctor and EMT, responded quickly, locating the injured client and attempting CPR on the ski guide for 30 minutes. A helicopter soon arrived with guides and ski patrol, and the client was hoisted out and hospitalized. The deceased guide’s body was recovered the following day due to inclement weather. The avalanche occurred on a west-facing slope near

10,200', with a 2 foot deep crown and an 800' vertical run. It likely failed on weak layers formed earlier in the season, reactivated by recent storms that delivered up to 20" of snow.

Dangerous conditions existed due to multiple persistent weak layers, including depth hoar and faceted snow buried under recent snowfall. The avalanche danger was rated CONSIDERABLE that day.

View the full report here > bit.ly/fatality_eastbowl

MARCH 7, 2025 | UINTAS | HOYT PEAK

On March 7, Michael Janulaitis left his home in Marion, Utah, around 8:30 AM, snow-biked to a low-angle, south-facing slope near Hoyt Peak, and skied two laps safely. At 12:10 PM, he texted his wife that all was well. His third ascent suggested intent to ski a complex, north-facing slope. This is where he was caught, carried, and fatally

buried him. Michael was not wearing a transceiver. At 5:00 PM, the Summit County Sheriff's Office received a report of an overdue skier. SAR efforts began immediately but were suspended that evening due to hazardous conditions. The search resumed at daybreak on March 8 with support from UAC forecasters and avalanche mitigation teams. Around mid-morning, rescue dog teams located Michael buried 2-3 feet deep. The avalanche occurred on a steep, northeast-facing slope near Hoyt Peak, featuring trees, rocks, and breakovers.

The snowpack was shallow and weak, shaped by early-season storms followed by dry spells, forming faceted layers. February’s Valentine’s storm and a strong early March system added heavy, dense snow, increasing instability. At the time of the avalanche, the avalanche danger was rated CONSIDERABLE.

View the full report here > bit.ly/fatality_hoytpeak

24|25 AWARENESS PROGRAM

The Utah Avalanche Center Awareness Program focuses on bringing avalanche awareness information, education and forecasting products to the general public.

YEAR IN-REVIEW

Avalanche awareness is about helping people feel informed, confident, and connected before they head into the mountains—and this season, the Utah Avalanche Center's Awareness Program focused on doing exactly that. Whether we were chatting with riders at trailheads, teaching beacon skills in the park, or tabling at films and gear swaps, our goal stayed the same: to make avalanche safety approachable and part of the culture.

This past fall, former education and outreach intern Liam McDonald stepped into the role of Awareness Coordinator. With a background in wilderness medicine, avalanche instruction, and outdoor leadership, Liam brings a hands-on, people-first approach to public outreach. He's quickly growing into the role of coordinating this dynamic, far-reaching program.

In the fall, we prioritized visibility, attending more than 80 events across Utah. From ski movie premieres and Cirque Series races to brewery nights and local gear swaps, UAC staff connected with more than 9,000 people. These informal conversations introduced new users to avalanche safety and reminded seasoned backcountry travelers to check the forecast and keep their skills sharp.

The 6th Annual Avalanche Awareness Week was another

highlight. Utah remains the only state with a formally recognized Avalanche Awareness Week, and this year we hosted 16 events across the state during the first week of December. From Moab to Logan, our staff reached over 1,000 people! The week kicked off with a public beacon practice and community gathering at Sugarhouse Park in Salt Lake City, in partnership with groups like the National Weather Service, Salt Lake County Search and Rescue, and Wasatch Backcountry Rescue.

Once the snow began to fall, the Trailhead Avalanche Awareness Program (TAAP) became the centerpiece of our winter outreach. Through TAAP, UAC staff visited 17 high-use trailheads across Utah to connect with backcountry users as they entered or exited the mountains. We answered questions, shared the day's forecast, promoted safe radio use, and encouraged open communication between partners. More than 1,300 people stopped by our trailhead tents throughout the season. We're grateful to Rocky Talkie and other key sponsors for making these events possible.

We also continued expanding and maintaining our trailhead infrastructure, which now includes 32 'You Are Entering Avalanche Terrain' beacon check signs across the

state. This season, we installed two new motorized-specific signs at Snake Creek and Lake Creek trailheads, in partnership with the Utah Snowmobile Association. These new signs feature upgraded ARVA beacon checkers that not only confirm signal functionality but also count users. In just five weeks, we recorded more than 500 beacon-equipped users. Thanks to everyone who helped brush off solar panels and dig out signs after storms!

Four public beacon parks remained open all winter for free practice. We also hosted five Community Avalanche Rescue Practices (CARPs), which brought over 150 participants to build hands-on rescue skills.

Our Batteries for Beacons program returned as well, distributing free batteries to more than 300 users at 21 local shops. A mid-season battery recall became a valuable learning opportunity, reinforcing the importance of regular gear checks and beacon reliability.

The Avalanche Awareness Program plays a vital role in fostering a strong culture of safety in Utah's backcountry. By showing up face-to-face, we make avalanche education personal, practical, and accessible for everyone heading into Utah's snow-covered mountains.



A Trailhead Avalanche Awareness Program event (TAAP) at Tibble Fork Trailhead in American Fork Canyon. This trailhead serves a variety of users such as snowmobilers, snowbikers, hikers, snowshoers and even snow-angels. (UAC Staff, L. McDonald)

DASHBOARD AWARENESS

TOTAL AWARENESS EVENTS	TRAILHEAD AWARENESS DAYS
211	15
TRAILHEAD SIGNS MAINTAINED	TOTAL EVENT ATTENDEES
31	14,931

"I really appreciate how the UAC assists me in making educating and informed decisions whenever I enter the backcountry. Your forecasts and weather info are such great tools."

Danielle K, Uintas

24|25 **KNOW BEFORE YOU GO**



Forecaster Craig Gordon seen here, created the Know Before You Go program in 2003 after the tragic accident on Mt. Timpanogos. (UAC Staff, A. Nassetta)

Know Before You Go is the first step in your journey through avalanche education. The program introduces you to avalanche safety with some simple steps you can take to stay safe and have fun in snow-covered mountains.

YEAR IN-REVIEW

This past season marked the 21st anniversary of the Know Before You Go (KBYG) program. This program was launched in response to the tragic avalanche at Aspen Grove on December 26, 2003, that claimed the lives of three teenagers.

Founded with a clear mission to save lives through free avalanche awareness, the KBYG program delivers engaging, informative presentations to anyone recreating in snow-covered mountains. Our knowledgeable instructor team, made up of ski patrollers, guides, avalanche educators, and forecasters, is passionate about safety and skilled at engaging a wide variety of audiences through our interactive presentations.

Since its inception, the program has expanded beyond Utah's schools and youth organizations to reach universities, outdoor clubs, retail shops, community organizations, and industry partners worldwide. Our KBYG online learning platform alone has reached users in nearly 40 countries. What began as a local initiative has grown into a global movement!

Here in Utah, the KBYG program reached over 3,300 students and hosted 100 in-person presentations this season, half of which were delivered to students under the age of 18.

We were especially excited to expand our outreach to the motorized recreation community, hosting 10 snowmobile-specific KBYG presentations. As we move into the summer and begin preparing for next season, we look forward to building on this momentum. Our goals include expanding outreach to motorized users, modernizing our presentation materials, and continuing to deliver the life-saving education that has defined KBYG for over two decades.

We are proud to offer the KBYG program free of charge to our incredible community. If you're interested in hosting a presentation for your business, school, club, ski or snowboard team, or any group involved in mountain recreation, please contact us ahead of next season. We're always seeking new partnerships and opportunities to promote avalanche safety. For more information, visit kbyg.org.



Brett Kobernik educating users at Big Pine Sports, down in the Skyline forecast region. Brett is the sole forecaster for the Skyline region, which stretches from Highway 6 near Spanish Fork, south to the I-70 Corridor. (UAC via Big Pine Sports)

DASHBOARD **KBYG**

**TOTAL
PRESENTATIONS**

100

**TOTAL
ATTENDEES**

3,535

**ATTENDEES
K-12**

46%

**COUNTRIES
REACHED**

38

"At an early KBYG I asked if I need an AIARE 1 to go backcountry skiing. You helped me understand that there's a lot of fun you can have in the backcountry without getting into any avalanche terrain. That advice was spot on and helped me learn more about skiing, touring, and backcountry navigation in order to be prepared to step into the next layer of terrain complexity."

Mike V, Central Wasatch

24|25 AVALANCHE EDUCATION

The Utah Avalanche Center Avalanche Education Program provides quality entry-level avalanche education to motorized and non-motorized users as a solid starting point of avalanche education.

Avalanche education is the best way to reduce your risk in the mountains, and it's a lifelong journey! The UAC is committed to keeping people on top of The Greatest Snow on Earth by offering a wide range of avalanche classes for all types of backcountry recreationists.

This season, the UAC hosted 34 on-snow classes, reaching 465 students eager to deepen their avalanche knowledge. We continued offering our flagship Backcountry 101: Introduction to Avalanches, Introduction to Avalanche Rescue, and Backcountry 201: Terrain Management courses. Also this year, we successfully debuted a brand new offering: Introduction to Avalanche Rescue & Wilderness Medicine.

In partnership with local wilderness medicine provider, Backcountry Ready, we developed a dynamic 8-hour course that combines avalanche rescue techniques with essential wilderness medicine skills tailored to avalanche-related incidents. Students learned wilderness CPR, practiced basic splinting, identified the stages of hypothermia and how to treat other cold-related injuries, plus they received all the core content from our standard Introduction to Avalanche Rescue course. Keep an eye out for more of these course offerings next season! We also introduced our family-style Backcountry 101 course, designed for parents who want to learn about avalanches alongside their kids. During our time

on snow, youth participants learned about avalanche rescue gear and basic rescue techniques, while adults practiced their own rescue skills, explored snowpack structure in a snowpit, and learned simple travel strategies, all while getting familiar with their gear.

Finally, our Women's Backcountry 101 and Snowshoe Backcountry 101 courses returned this season, and we look forward to offering these classes again next season.

We are always striving to meet the evolving needs of our community when it comes to avalanche education. As this season wraps up, our team is actively brainstorming ways to improve our curriculum ahead of next winter.

Over the past decade, research shows a troubling trend of educated and experienced backcountry travelers involved in avalanche accidents. How do we, as a community, respond to this increasing trend? Industry professionals suggest that avalanche education needs to emphasize the limitations of our avalanche knowledge and the importance of building safety margins to account for inevitable uncertainty. At the UAC, we plan to integrate these concepts into our terrain-focused Backcountry 201 course with an updated curriculum launching in the fall of 2025.



Long-time educator and skier Pat Lambrose teaches a BC 101 course in Upper Little Cottonwood. (UAC Intern, C. Mortensen)

DASHBOARD EDU

ON-SNOW
ATTENDEES

465

TOTAL
CLASSES

34

REGIONS
VISITED

6

"I can't express enough how much I appreciate the opportunity to take part in the women's backcountry class. This experience was not only about learning technical skills but also about building confidence, fostering community, and empowering each other in a space where we could feel comfortable and supported."

Sadie D, Central Wasatch



UAC CURRICULUM IS PROUDLY ACCREDITED
BY THE AMERICAN AVALANCHE ASSOCIATION



Andrew Nassetta teaches the in's and out's of avalanche transceivers near Mt. Nebo to an avid, and savvy crew of riders, (UAC Staff, J. Manship)

24|25 **MOTORIZED OUTREACH**

To better serve rural and motorized user groups, the UAC launched a new motorized outreach program this season—hiring a dedicated coordinator, partnering with local organizations, and hosting statewide educational events to expand avalanche awareness and strengthen community connections.



Leading motorized education for the UAC is Joseph Manship (Middle), shown here on a field-day in the Mt. Nebo area after teaching an avalanche rescue clinic at the Soldier Hollow Trailhead. (UAC Staff, A. Nassetta)



Staff members on the Skyline setting-up for avalanche rescue practice and trailhead awareness on a cold Saturday in mid-February. (UAC Staff, J. Manship)

YEAR IN-REVIEW

As the UAC continues to expand its reach, we've recognized the need to strengthen our connections with rural and motorized user groups. To meet this need, we hired a Motorized Coordinator this season to grow our network within these communities and engage with as many individuals as possible.

We partnered with well-established community organizations, including local snowmobile clubs, search and rescue teams, and the Department of Outdoor Recreation, to launch the program through targeted boots-on-the-ground educational events. In addition, we hosted motorized avalanche awareness events across the state in Vernal, Midway, Kamas, Salt Lake, Logan, Ogden, Nephi, and beyond. To help winter

recreationalists find the education they needed, we collaborated with providers such as Mountain Slayers, Inspired Summit Adventures, and the Backcountry Institute. We also organized events like the Alpine Assassins movie screening at Brewvies, an event we're excited to host again next season.

One highlight of the season was a custom motorized awareness course for Wasatch Excursions along the Wasatch Back. This course reached nearly twenty snowmobilers who work and play in the mountains, many of whom never received formal avalanche education, and sparked meaningful conversations about avalanche awareness and risk management. We also saw great

success in our partnership with Backcountry Institute to offer a Level 1 avalanche course for DOR rangers across the state. These state employees, who are deeply embedded in their respective regions, have become invaluable members of our outreach network and are now helping to educate others in their local zones.

Looking ahead to next season, we're excited to build on the connections we've made and expand our motorized programming. In particular, we plan to bring more programs to the Southern Wasatch and Southwest Utah regions, offer at least one weekend motorized avalanche class per month in a unique forecast zone, and host another large community event similar to this year's Brewvies screening.

24|25 OBSERVER PROGRAM

In 1987, the UAC became the first avalanche center in the US to receive and publish public observations. This was the beginning of the UAC Observation program.

YEAR IN-REVIEW

Observations are an integral component of a tour plan. The UAC observer program began in 1987 to crowdsource avalanche information, and nearly forty years later, we still receive an impressive number of observations from recreational and professional backcountry users across the state.

Observations include information about recent avalanches, weather, snow characteristics, red flags, snow profiles, and more. After analyzing these observations, we publish them on our website, helping create a more informed and engaged backcountry community. This year, observers submitted over 1,700 observations across the state!

Last season, we launched our new web-based Observation Explorer tool, allowing users to quickly filter through these reports to find the information they seek. Having the Explorer fully available this season made data collection both easy and accessible. Thank you to our partners and the Utah Division of Outdoor Recreation for helping bring this to life! You can access this new tool from our website's Observations & Avalanches menu option.

In addition to public observations, the UAC has a team of 110 professional observers consisting of avalanche professionals, ski guides, patrollers, and snow and weather scientists across the state. We are incredibly grateful for their commitment to submitting high-quality observations for forecasters and the public.

While public observations are an indispensable resource for everyday recreationists, they are also invaluable to our forecasters. Receiving valuable data from multiple locations in a forecast zone helps our forecasters understand what is happening throughout the entire region, which enables us to create a more accurate and high-quality forecast.

Check out the Data Explorer > bit.ly/dataexplorer2025



A backcountry user making turns in the Monitors area off the Park City ridgeline on a February day. (UAC Staff, A.Nassetta)



From zooming in on a crystal card, to feeling what's happening under your skis or ride. All observations matter to our team. (UAC via T. Katz)

24|25 UAC MACHINE LEARNING PROJECT

At the UAC, our top priority is communicating lifesaving information like avalanche forecasts, weather updates, and educational materials.



McKinley Talty (left) and Chad Brackelsberg (right) discussing weather station plans for the SNOWPACK project. (UAC Staff, T. Morrison)

U-CAAST: LEVERAGING SNOWPACK MODELING FOR SMARTER FORECASTING

The 2024–2025 season marked the official launch of the Utah Computer-Assisted Avalanche Support Tool (U-CAAST) project. After two years of testing computer models to backcast avalanche events and identify weak layers in the snowpack, we reached a key milestone: enough high-quality data to integrate these tools into operational forecasting with confidence. This project is only possible because of the generous grant support of the Outdoor Adventure Commission! The goals of U-CAAST are to:

- ◆ Improve the accuracy of avalanche forecasts
- ◆ Provide intuitive visual representations of complex snowpack data
- ◆ Increase staff efficiency
- ◆ Reveal patterns and trends that might otherwise go undetected

At the heart of the project is SNOWPACK, a sophisticated snowpack evolution model developed by Switzerland's SLF (Swiss Institute for Snow and Avalanche Research). SNOWPACK simulates snowpack stratigraphy, temperature, and other physical properties using hourly weather station inputs. It can project snowpack conditions up to 48 hours in advance when paired with forecast weather data.

This model is integrated into a broader system that combines multiple software packages. Together, they process and

estimate avalanche danger levels, through easy-to-visualize key outputs, such as snow instability, and use a dashboard tailored for forecasters.

Model validation is a cornerstone of the U-CAAST program. To ensure accurate and reliable outputs, we use a mix of standardized test cases and real-world observations. Next, avalanche reports from the UAC database and radar-based detection systems feed into a robust validation process. U-CAAST aims to deliver consistent, science-backed insights into snowpack instability by quantifying uncertainty and refining predictive outputs. The Central Wasatch region, with its dense observation network, is a perfect testing ground for model development and refinement. Once validated, these tools will bring even greater value to data-sparse areas throughout Utah.

In the 2024–2025 season, weather stations across all forecast regions were upgraded with instruments needed to gather more regionally specific snow and weather data for SNOWPACK modeling. Thanks to the Utah Division of Outdoor Recreation for supporting these weather station upgrades. These updates allowed us to build a comprehensive data pipeline, along with a forecaster-facing dashboard. We launched the first version of this dashboard in February and updated it frequently based on staff feedback. Over the summer, additional improvements will focus on dashboard usability, model tuning, and continued validation work, paving the way for more robust operational use next season.

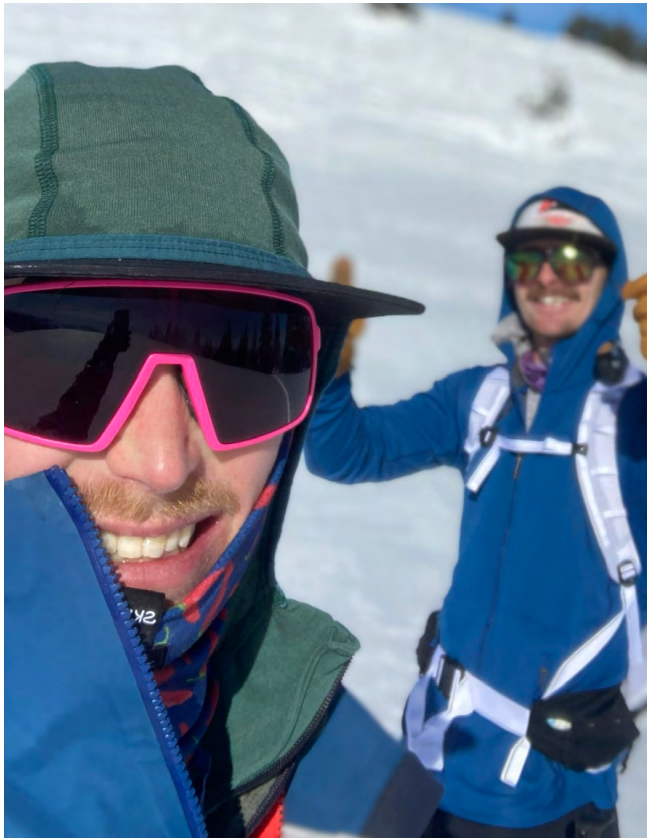


Travis Morrison and Chad Brackelsberg installing modeling at the Card Canyon weather station near Logan Peak. (UAC Staff, P. Pagnucco)

24|25 INTERNSHIP PROGRAM



Claire Hurty (center) and Chloe Mortensen out with an avalanche course in Big Cottonwood Canyon. (UAC Intern, C. Mortensen)



Awareness Coordinator Liam M and Intern Matt Berry on a field-day after setting up UAC trailhead signs. (UAC Staff, L. McDonald)

The Utah Avalanche Center Internship Program provides aspiring professionals with hands-on experience in education, outreach, and fundraising within the snow and avalanche industry.

YEAR IN-REVIEW

The Utah Avalanche Center internship program offers a comprehensive, hands-on experience that gives interns insight into the inner workings of a small non-profit organization. Geared toward individuals passionate about outdoor recreation and fundraising, the internship provides a unique opportunity to work alongside seasoned professionals in the avalanche industry. What began as a small opportunity for young, motivated individuals has become a vital program add to our organization's success.

The program focuses on mentorship and professional development for young adults seeking experience in the non-profit side of avalanche work. Interns receive guidance from experienced snow professionals, educators, guides, and forecasters, gaining firsthand knowledge of avalanche education and public safety messaging. They support on-snow courses, contribute to fundraising and development

efforts, and help deliver public awareness presentations to the backcountry community. In addition, interns build essential skills in teamwork, technical training, communication, and leadership competencies for any non-profit role.

Interns begin their experience in mid-August as we prepare for our annual Backcountry Benefit and stay engaged through the spring season. This full-season commitment allows them to experience the complete range of programs we offer and develop a deeper understanding of the challenges associated with working for an avalanche center as conditions change throughout the winter.

If you or someone you know is interested in an internship that blends avalanche education, non-profit work, and professional growth, watch for our 2025-2026 internship posting early this summer.



This year's Interns Chloe (center) and Jacob (right) hanging out with Staff Member Liam McDonald at the Cirque Series race. Events like the Series are a great opportunity for us to continue boots on the ground efforts, even through the off-season! (UAC Staff, C. Hurty)

24|25 COMMUNICATION PROGRAM

At the UAC, our top priority is communicating lifesaving information including avalanche forecasts, weather updates, and educational materials.



Ski-Doo was a huge supporter and partner of ours this year. In many of our rural regions we could not do our jobs without these machines. Here they're taking us to stretches of the north slope in the Uintas. (UAC Staff, A. Nassetta)

YEAR IN-REVIEW

We reach the public through various methods to contribute to the organization's overall mission. Continued growth in website traffic, email engagement, mobile app usage, and social media interactions shows how engaged the community is and how they obtain their information through a variety of mediums.

The pre-season kicked off with hiring a Communications and Development Coordinator, Claire Hurty. A previous intern, Claire plays a crucial role in growing our communication reach across the state through social media, newsletter communications, and growing our membership program.

In mid-December, we launched a new mobile app, funded by the generous support of KUHL and the Department of Natural Resources. Previously only available on iOS, this new app is now available for Android devices. In addition to the redesigned user interface, the app features new tools while providing all the info you are accustomed to, and more! Our social media presence continues to grow along with the backcountry community and avalanche industry. Our platforms across the state saw a 10% increase in following, most notably on our rural accounts. As folks venture further into the mountains across the state, these accounts aim to

provide more regionally specific snow, avalanche and educational information.

Every month, we send out the Powder Cloud, our official newsletter packed with timely updates and insights. In each issue, you'll find info on upcoming events and classes, critical snowpack conditions, and key news from the backcountry community. This year we introduced the Education Corner—a dedicated section offering deeper dives into topics including risk management and decision-making.

Compelling photos and videos drive our message out to the public, and our creative team remains fresh and ahead of the curve. This year, we piloted a series of short-format videos called "UAC Edu." We dropped our first episode this year, "How to Read a Forecast," featuring Brett Kobernik, and sponsored by Gordini. Stay tuned for more next winter.

Our dedicated team is committed to constantly improving the quality, effectiveness and stoke of our messaging to keep you informed and safe on The Greatest Snow on Earth®.

DASHBOARD COMMUNICATION

TOTAL FOLLOWERS

174K

TOTAL INTERACTIONS

630K

TOTAL CONTENT VIEWS

7.1 M

TOTAL LINK CLICKS

31 K

110K

5.6M VIDEO VIEWS

28K

500K POST VIEWS

23K

110 POSTS

13K

901K VIDEO VIEWS

PODCAST

154K TOTAL DOWNLOADS

WEBSITE

3.1M PAGE VIEWS

E-MAIL

1.3M EMAILS SENT | 809K OPENED

CONTACTS

7.6K PHONE CALLS | 52K MOBILE APP SESSIONS

SMS MESSAGES

7.6K PHONE CALLS | 52K MOBILE APP SESSIONS

24|25 DEVELOPMENT PROGRAM

Donor generosity is the force behind our life-saving work.

YEAR IN-REVIEW

This year, the Development team strengthened our key partnerships and diversified our revenue streams to support avalanche safety, forecasting, and education statewide.

A major highlight was our growing collaboration with the Utah Division of Outdoor Recreation (DOR). Through four state-administered grant programs—RTP Motorized, RTP Non-Motorized, UCORE, and OHVR—we secured a total of \$275,000. These critical public funds help expand our reach to underserved communities, improve technology and signage, and deliver high-quality education programs like Know Before You Go.

We also launched our newest membership level, Pinnacle, designed for individuals who want to make a deeper impact. At \$1,200 per year or \$100 monthly, Pinnacle members receive exclusive benefits and help sustain our work at the highest level. In total, we now have 430 active members whose support generates over \$150,000 in annual revenue—an impressive testament to the strength of the community.

In addition to membership growth, we continued building strong relationships with corporate partners, leveraging both in-kind and financial support to scale our programs. Longtime partners like KUHL, Mammut, Black Diamond, BCA, and Backcountry renewed their commitments, while new sponsors joined us in promoting awareness and safety across Utah’s mountains.

Our Development team also supported the success of the 31st Annual Backcountry Benefit and the 2nd Annual Blizzard Ball, which both brought hundreds of community members together and raised essential funds supporting operations.

Looking forward, we are investing in deeper donor stewardship, expanding workplace giving opportunities, and strengthening our grant strategy to ensure long-term sustainability. We are grateful to every supporter who fuels our mission—your belief in our work allows us to save lives and build a safer backcountry culture for all.

DEVELOPMENT DASHBOARD

TOTAL # OF DONORS

1,796

TOTAL \$ OF DONATIONS

\$474k

AVERAGE DONATION

\$230

UAC MEMBERSHIP PATRONS

430



UAC Board Member Eric Quilter (left) helps a guest out at the Heiner Ranch fly fishing donor event last September where our team gets together with past, present, and potential future supporters of the UAC. (UAC Staff, C. Miller)



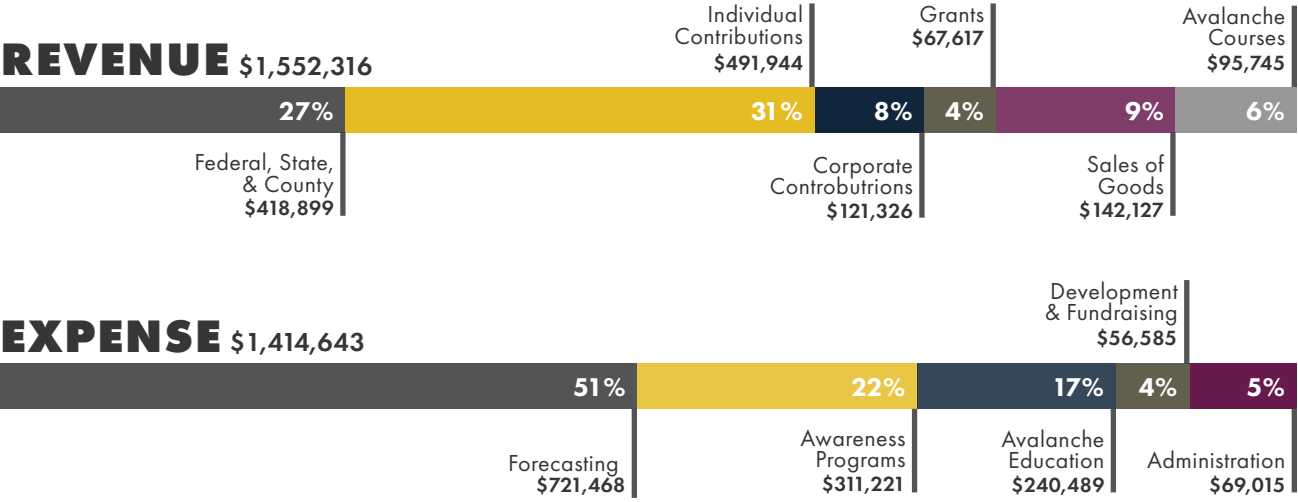
The UAC Gala is a high-end fundraising event that took place at Deer Valley this year. It features a cocktail hour, live music, and this year, keynote speaker Bruce Tremper. (UAC Staff, K. Waller)

24|25 FINANCIAL SUMMARY

YEAR IN-REVIEW

Since 2000, backcountry use in Utah has surged nearly 20-fold. This has driven a 25-fold increase in the costs required to support avalanche forecasting, education, and awareness. While inflation has climbed about 75% over the same period, our reach has far outpaced it; each dollar we invest today reaches four times as many people as it did in 2000, a testament to the efficiency and innovation behind our work.

Our funding structure is resilient and community-driven: about 74% of our program costs are covered by the nonprofit UAC through contributions from individuals, businesses, and local partners. The remaining 27% is funded by federal, state, and county agencies. This enduring partnership with the backcountry community and industry leaders is what powers our mission. Thank you for your integral role in powering our work.



Looking East from Bald Mountain Pass, early season snow from October blankets the high-alpine, a sign of troubles to come later in the season. This view here is of iconic, Hayden Peak. (UAC Staff, A. Nassetta)

24|25 PARTNERSHIP & SUPPORT

RESORT PARTNERSHIP

Utah Ski Resorts help us keep our lights on! This season, many resorts generously donated lift tickets to the UAC, which we then sell to fund lifesaving programs. We continue to enjoy a great relationship with Utah ski resorts and Ski Utah, communicating regularly on snow conditions and cooperating on avalanche education for professionals and the public.

Thank you to Ski Utah, Alta, Beaver Mountain, Brighton, Deer Valley, Park City Resort, Powder Mountain, Snowbasin, Snowbird, Solitude, and Sundance for supporting this program.

MOTORIZED SUPPORT

We would like to give a big thank you to Ski-doo who generously provided our forecasters with six snowmobiles for the season. Snowmobiles are essential for our forecasters, enabling them to venture into the field to gather crucial snow and weather data for our forecasts, as well as engage with users in the backcountry. This allows us to better access terrain throughout Utah to get you the most up-to-date avalanche information possible.

Our motorized sponsors Big Pine Sports, Snow Big Deal, Ultimate Outdoors, DNR, Weller Recreation, Utah Snowmobile Association, International Snowmobile Manufacturers Association, and many others allow us to spread avalanche information across the state. Thank you to these businesses and clubs for their dedication to avalanche safety and support of the UAC.

FOUNDATIONAL SUPPORT

- ◆ American Avalanche Association
- ◆ Canyonlands Natural History Association
- ◆ George S. and Dolores Doré Eccles Foundation
- ◆ IRONMAN Foundation
- ◆ Park City Community Foundation
- ◆ Park City Special Services
- ◆ Snowbird Play Forever Wednesdays
- ◆ Summit County
- ◆ Vail EpicPromise
- ◆ Utah Division of Outdoor Recreation
- ◆ W.L. Eccles Foundation

The Utah Avalanche Center is incredibly grateful to our ski resort and motorized partners for their generous support, which helps fund our lifesaving programs and expand our reach.



Wasatch County SAR, Canyons Snow Safety, and DNR stage near the base of Hoyt Peak for an avalanche mitigation mission during the morning of March 8th in the Uintas, near Hoyt Peak. (Photo Credit - A.Nassetta)

FORECASTING

Avalanche forecasting provides the information necessary to stay safe in avalanche terrain.

Our team publishes daily avalanche forecasts using field observations, stability testing, weather data, and other tools and technology.

AWARENESS

Avalanche awareness empowers anyone to understand the dangers of avalanches. Through Know Before You Go, trailhead events, and other outreach opportunities, our team provides free avalanche information to people of any experience level.

EDUCATION

Avalanche education is necessary to deepen one's knowledge as a backcountry user and prevent avalanche accidents. Our team provides on-snow education and continuing education for professionals and the general public.

OPERATIONS

The UAC's programs are made possible by working toward a strategic vision of a resilient and financially stable organization. Our team works year-round to carry out essential planning, training, fundraising, and other operational tasks to fulfill the UAC's mission.

24|25 SPONSORSHIP

\$20K +



\$10K - \$20K



\$5K - \$10K



\$1K - \$5K



\$500-\$1K



Scan the code, or visit to contact us
bit.ly/contactuacAR



THANK YOU

The Utah Avalanche Center truly is a team effort; every individual donor, local business, sponsor, supporter, and community member plays a vital role in helping us Keep You on Top.

Thank you to who has helped to make our work possible for 45 years.



Fall-line skiing in the Uinta's on a blue, crisp, 5-star powder day. On a lean snow year, days like this remind you what it is all about, and why we do it. (UAC via B. Torrey)

**24|25 UNTIL NEXT TIME,
LET'S STAY CONNECTED!**



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THE UAC MISSION

The Utah Avalanche Center's mission is to keep people on top of The Greatest Snow on Earth[®] by providing avalanche forecasting, awareness, and education throughout the State of Utah.

