

# ANNUAL REPORT 2021



Keeping people on top of the Greatest  
Snow on Earth® for 41 years.

# DIRECTORS' MESSAGE

We all have a tremendous appetite for the backcountry. It's a place where we can spend time with friends, get some exercise, escape from some of life's stresses, and marvel at the beauty of the winter landscape. With the chaos of 2020/2021, record numbers of people flocked to the backcountry.

With the global pandemic, we started our season with many unknowns. How would we do our fieldwork due to the pandemic? Would we be able to host avalanche classes? How would we deliver Know Before You Go presentations? How would we fundraise? Despite these uncertainties, we knew that it would snow, there would be avalanches, and we would do whatever it took to serve the public with avalanche forecasting, education, and awareness. We were incredibly humbled by the tremendous support from partner agencies, groups, and organizations as well as the backcountry community. We wouldn't exist without their support.

With a record number of users in the backcountry, demand for our products was at an all-time high. Classes had large waiting lists and we had to increase the capacity of our website to handle the surge in traffic. Our staff worked tirelessly all winter long to deliver the services the backcountry community relies on and we are extremely proud of what they accomplished. Even more important is that the entire team finished the season without any injuries or accidents.

Staying safe was a challenge for everyone in the backcountry because the snowpack was dangerous and unstable for much of the winter. Sadly, there were six avalanche fatalities in Utah and one just across the border in southeast Idaho. Each of these was an incredibly tragic accident that impacted the backcountry community and left us deeply saddened for the family and friends of the victims.

We look forward to a long list of summer projects to meet the challenges of next winter and help everyone stay on top of The Greatest Snow on Earth®.

Sincerely,



Mark Staples  
Director,  
Forest Service UAC



Chad Brackelsberg  
Executive Director,  
Nonprofit UAC



**2020-2021 UAC Staff**

# Utah Avalanche Center 2020-2021 Season Review

More reported avalanches demonstrated the dangerous nature of the snowpack as well as a more engaged backcountry community who notified us of these avalanches.

**40%  
MORE  
AVALANCHES**

**246**  
human  
triggered  
avalanches

**46**  
people  
caught

**10**  
people  
buried

**7**  
killed



**\$\$\$**

**\$1,325,000**  
statewide budget

**25%**  
from federal,  
state and  
county govts

**74%**  
private  
sponsorship

**32%**  
spent on  
education



**18**  
employees

**422**  
field days

**1134**  
avalanche  
forecasts  
posted



**3.9 Million**  
page views

**420**  
videos  
produced

**2.6 Million**  
video views



**114**  
classes or  
presentations

**13,100**  
class or  
presentation  
attendees

**Keeping people on top of The Greatest Snow on Earth® for 41 years!**

# POINTS OF INTEREST

## **40th and 30th anniversaries**

We celebrated the 40th anniversary of forecasting and 30th anniversary of the nonprofit.

## **Overwhelming community support during a time of uncertainty**

The community stepped up to support the UAC to help ensure we could successfully delivery forecasts, education, and awareness during the pandemic.

## **40% more avalanches**

Demonstrates the dangerous nature of the snowpack as well as a more engaged backcountry community who helped report these avalanches.

## **Increased media coverage of avalanche forecasts**

Local news stations regularly published the daily avalanche forecast on the morning news.

## **Record number of avalanche classes**

Avalanche education demand was high and the UAC delivered 2x the number of classes to over twice the number of students than any other year.

## **Near Perfect Safety Record**

No COVID cases and 1 minor injury with over 2,000 staff, instructor, and student field days.

## **Second largest number of fatalities**

Seven fatalities this season made it the second most deadly avalanche season since the early 1900s.

## **Successful launch of Trailhead Avalanche Awareness Program and Beacons in the Park**

Through 15 events we reached over 1,350 people.

# WHO WE ARE

**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 nearly **41 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 - to issue avalanche forecasts, provide avalanche education, and issue mountain weather forecasts. **31 years ago** in 1990, the nonprofit Friends of the UAC 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 non-profit, collectively known as the **Utah Avalanche Center**, has grown to a staff of 18 working across 8 regions of Utah delivering avalanche forecasts, awareness, and education.

The Utah Avalanche Center provides avalanche forecasting, awareness, and education in the State of Utah giving backcountry travelers the tools they need to make wise decisions in the backcountry.

**Avalanche Forecasts** 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. The forecasts are the most widely used UAC product. We forecast for 8 regions from Moab to Logan. The public accesses these forecasts in the following ways:

- UAC Desktop and Mobile website
- UAC IOS App
- Recorded telephone message updated each day at 7:30 a.m.
- Early morning "Dawn Patrol" telephone message updated each day at 5 a.m.
- Live interview on KPCW public radio each morning at 8:06 a.m.
- E-Mail

Backcountry Observations: Forecasters, pro observers, and the public published 1,856 field reports that were viewed over 655,000 times. These observations include details about what people are seeing out in the backcountry and are the second most used source of avalanche information on our website. These field reports are a crucial source of information used by the forecasters to create the daily avalanche forecast.

**Awareness** The UAC released the Know Before You Go Avalanche Awareness Program in 2004 after the tragic death of 3 teenagers at Aspen Grove on December 26, 2003. KBYG is now globally recognized as the standard for avalanche awareness, has been translated into 12 languages, and is being used in over 35 countries. The UAC offers this program free of charge to schools, youth groups, and community organizations. The UAC also provides public avalanche safety information and presentations at community events and in retail shops.

**Education** The UAC's on-snow avalanche education program focuses on providing backcountry users with introductory classes. Our core classes include Introduction to Companion Rescue and Introduction to Avalanches (Backcountry 101, Motorized 101) classes. In addition, we provide Recreation Level 1 and 2 and Avalanche Rescue classes as needed to fill community demand.



**Eric Trenbeath doing field work in the La Sal Mountains**

The Utah Avalanche Center is a partnership effort between the Uinta-Wasatch-Cache National Forest and the nonprofit Utah Avalanche Center. Two-thirds of the total program funding is raised through the nonprofit from personal and business donations, grants, and fundraising events. The remaining funding comes from the Forest Service, State of Utah, Utah Division of Parks and Recreation, Utah Division of Emergency Management, Utah Department of Transportation, and Salt Lake County.



## UAC Staff

- **Chad Brackelsberg:** Executive Director - Nonprofit UAC
- **Mark Staples:** Director - Forest Service UAC
- **Andrew Nassetta:** Education Program Manager - SLC
- **Brett Kobernik:** Forecaster - Manti Skyline
- **Craig Gordon:** Forecaster - Uintas
- **Christian Raguse:** Digital Media Coordinator - SLC
- **Dave Coyne:** Community Awareness Coordinator - SLC
- **Drew Hardesty:** Forecaster - Provo/SLC/Ogden
- **Eric Trenbeath:** Forecaster - Moab
- **Francine Mullen:** Education Program Coordinator - SLC
- **Greg Gagne:** Forecaster - Provo/SLC/Ogden
- **Hannah Whitney:** Development Director - SLC
- **McKinley Talty:** KBYG Coordinator - SLC
- **Nikki Champion:** Forecaster - Provo/SLC/Ogden
- **Paige Pagnucco:** Forecaster/Awareness Prog Mgr - Logan
- **Paul Diegel:** Special Projects Director - SLC
- **Toby Weed:** Forecaster - Logan
- **Trent Meisenheimer:** Forecaster/Educator - Provo/SLC/Ogden

## UAC Board of Directors

- |                                |                |
|--------------------------------|----------------|
| ● Kate Bowman - President      | ● Eric Quilter |
| ● Rich Mrazik - Vice President | ● Jacob Splan  |
| ● Michael Brill - Treasurer    | ● Kim Reid     |
| ● Nicole Sumner - Secretary    | ● Michael Shea |
| ● Alan Richards                | ● Sara Gibbs   |
| ● Caitlin Hansen               | ● Ted Roxbury  |
| ● Christian Schauf             | ● TJ Kolanko   |
| ● Dara Cohen                   | ● Tyler Hansen |



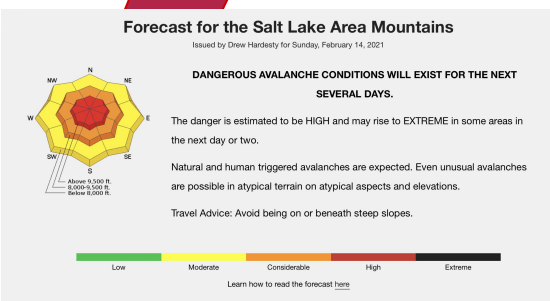
**Top to bottom:  
UAC Trailhead Awareness Program;  
Trailhead transceiver check;  
Trent Meisenheimer evaluating snow  
stability;  
UAC avalanche class;**

# IT'S ABOUT THE COMMUNITY

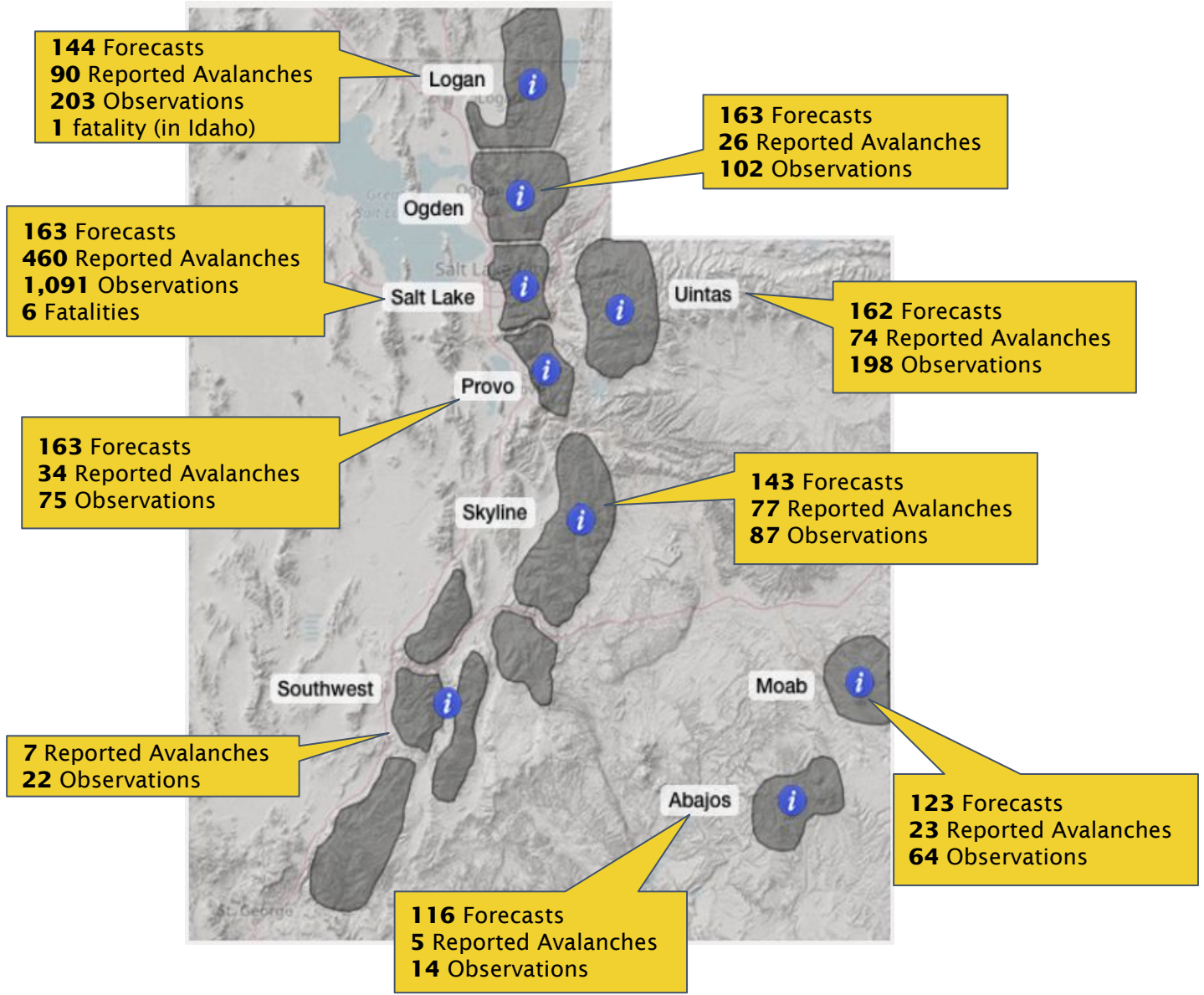
The UAC is a keystone in the backcountry community facilitating a two-way flow of information and constant dialogue among the community. Maintaining the trust of the backcountry community allows us to work as an effective public safety organization. Not only are we part of the community, but we actively work to foster and build the community through:

- Events and parties that bring people together
- Educational events for professionals and the general public interact and share knowledge
- Supporting common values of all backcountry users

This winter was different in how we operated as we learned to engage with the community virtually. The 40+ years of community building allowed us to continue to be successful. As things begin to return to normal, we look forward to seeing everyone in person next winter.



# AVALANCHE INFORMATION TO THE STATE OF UTAH




**1,134** Total Forecasts  
**797** Reported Avalanches  
**1,856** Total Observations

"Thanks to you and the UAC staff for the Wilson debrief. I found it to be more beneficial than I expected. It was similar to a CISD used in public safety. The transparency was also key in helping the winter community to better understand the events that took place, including the effects on the rescuers, which often go unnoticed. I just wanted to say thanks!"

- **Provo Fire & Rescue Member**



# SNOW & AVALANCHES

AVALANCHE INCIDENTS 2020-2021	UNINTENTIONALLY TRIGGERED	CAUGHT	BURIED	KILLED
	<b>246</b>	<b>46</b>	<b>10</b>	<b>7</b>

The winter of 2020/2021 was a complex and challenging season for all backcountry users. Compared to the previous winter, there were 40% more avalanches, 22% fewer human triggered avalanches, and 64% more people were caught in avalanches.

The first significant snowfall arrived in early November followed by minimal snowfall across most of the state the rest of the month. December was generally dry and cold with a shallow snowpack. Cold, clear nights weakened and faceted the early season snow and created a persistent weak layer near the ground throughout most of the state. This weak layer existed on shady, north, east, and some west-facing slopes. In many places a brief period of warm weather created an ice crust adjacent to this weak layer. Unfortunately this layer persisted throughout the majority of the winter and caused avalanches every time it was loaded by new snow or wind blown snow.

The Logan and Unita area mountains closely mirrored the Central Wasatch, with a widespread persistent weak layer covering their north, east, and west facing slopes. An ice crust existed next to this layer on many slopes as well. The Skyline region of central Utah had an even more dramatic persistent weak layer which continued to weaken and facet as the snowpack remained shallow well into January. Snowfall totals in the Skyline region for November, December, and January were below 50% of average.

The mountains near Moab suffered a similar fate with minimal, early season snow. Most skiing and riding was confined to groomed trails and roads until early February when the storm track finally made a welcome drop into the Four Corners region and brought more snow. With a persistent weak layer near the ground, each storm led to hair-trigger avalanche conditions and pockety, natural avalanche activity.

A low snow year near Moab did not deter winter recreation, and users flocked to the Geyser Pass Winter Trailhead like never before – first to the groomed trails and then into the backcountry once there was more snow on the ground.

The season’s first avalanche fatality occurred on January 8th in the backcountry in Dutch Draw near Park City after 8-10” of new snow, accompanied by strong winds, had fallen in the area. This avalanche failed on the weak faceted snow near the ground. Following this fatality, January continued to have more storms with more avalanche cycles, all failing on those facets. The increase in snowfall continued to create a thicker slab, and avalanches grew larger with each storm.

January 30th brought the second tragic avalanche fatality on Square Top Peak, also near Park City. This avalanche directly followed 20” of new snow and increased winds. That weekend over 30 human-triggered avalanches were reported. The following week, winds increased to speeds up to 100 mph and another 10-15” fell across the Central Cottonwoods.



***Nikki Champion monitoring the very thin early season snowpack.***

On February 6th, a significant and heartbreaking avalanche occurred in the Wilson Glades area in Millcreek Canyon involving two parties with six people caught, carried, and fully buried. After a heroic rescue, two of the six were recovered alive. Sadly, four of the six did not survive. This avalanche again failed on the persistent weak layer near the ground.

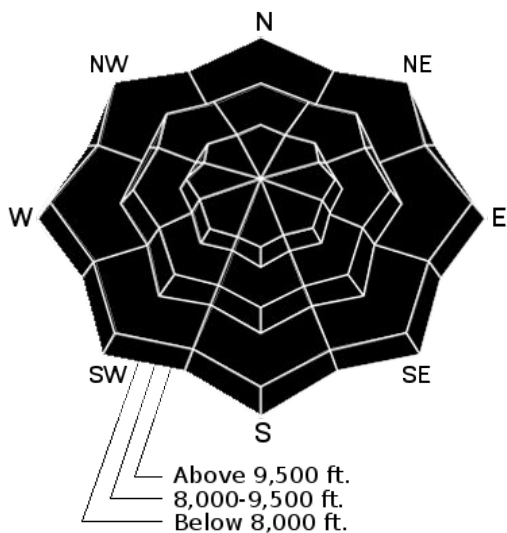
The following week, February 12th through February 18th, a series of significant storms led to a historic avalanche cycle, especially in Little Cottonwood Canyon. Snow and snow water equivalent (SWE) totals for that storm were:

Little Cottonwood: 60-80" snow/4.0-6.65" SWE

Big Cottonwood: 20-60" snow/1.5-5.0" SWE

Park City Ridgeline: 20-30" snow/1.5-2.0 SWE.

Avalanche danger remained elevated throughout the week, peaking with Tuesday and Wednesday at Extreme Danger at all elevations and aspects, the first such danger rating on record for the Salt Lake City region.



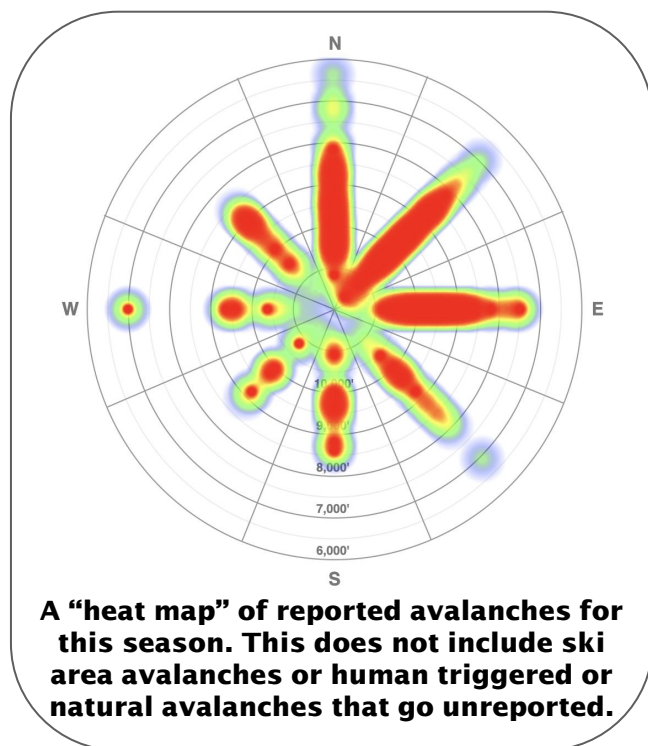
**EXTREME danger rose issued on Wednesday, February 17 for the Salt Lake area**

On February 20, just north of the Logan forecast zone on Sherman Peak, a snowmobiler was killed by an avalanche that was remotely triggered by his party. The last reported remotely triggered avalanche in the Logan Zone occurred on February 28 on a mid-elevation slope in the Elk Valley Area. Around the same time, the Skyline region was experiencing a large avalanche cycle and reported one avalanche up to 1.3 miles wide.

After many stressful months, the troublesome layer gradually became dormant by the end of February. For the first time in 33 days, the overall avalanche danger dropped below Considerable and finally, backcountry riders enjoyed some good turns and generally stable conditions for a few weeks.

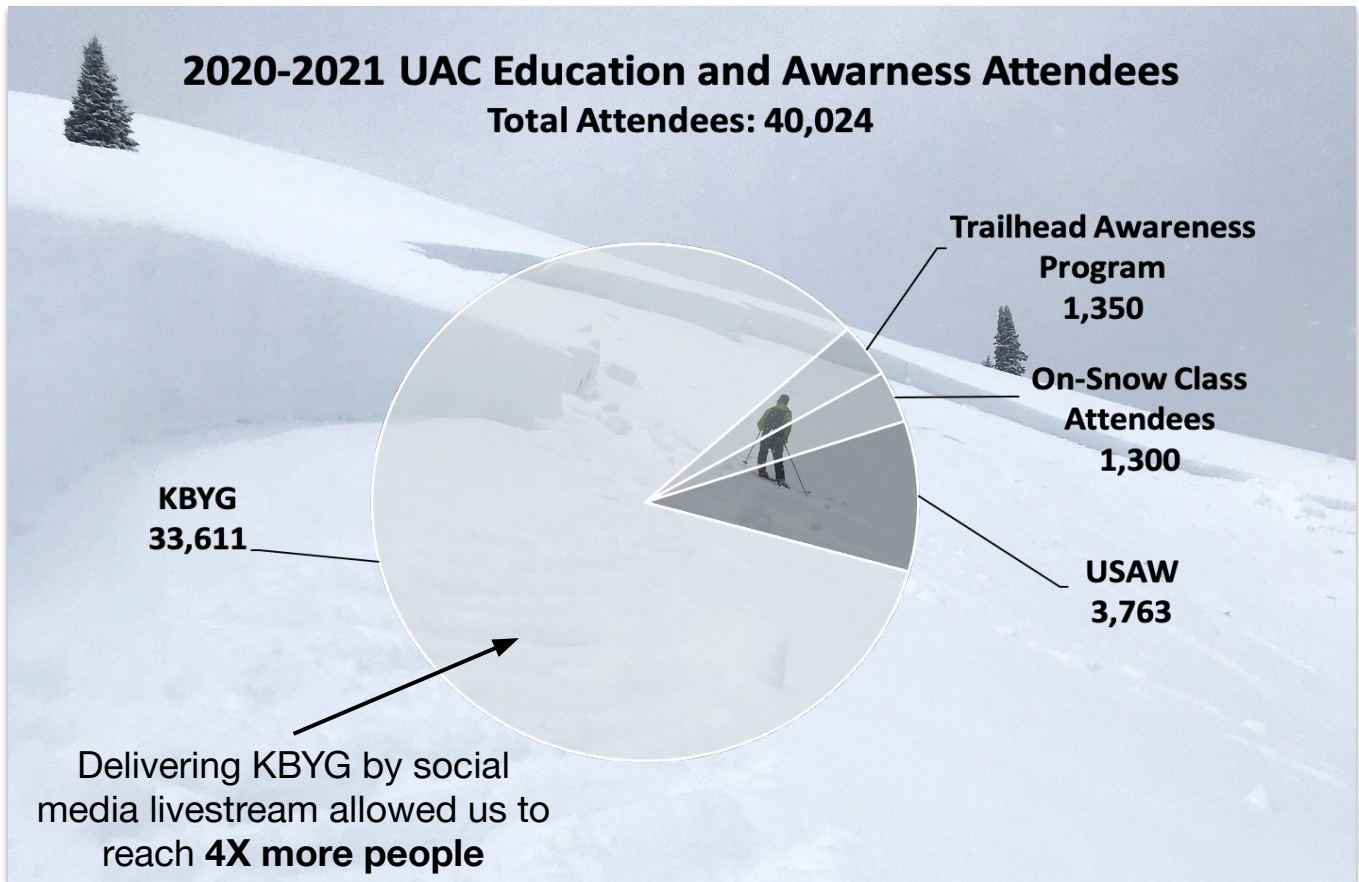
A large storm arrived in the Moab area on March 14, when 30" of snow with 3.5" SWE fell over the course of three days producing the most widespread avalanche cycle of the season. Relative stability followed until an extreme heatwave between April 3-5 produced some large, wet slab avalanches in both the La Sal and Abajo Mountains. With region-wide dangerous avalanche conditions through much of the winter, folks seemed to have gotten the message about the persistent weak layer problem, and it wasn't until mid-March that people started getting into larger terrain. Then the floodgates opened with multiple parties a day descending the high peaks, especially Mount Tukuhnivatz, with their enthusiasm extending through mid-April.

April brought a statewide warmup, and a significant warm up bringing multiple nights without a solid refreeze. Despite this entire warmup, no significant avalanche activity was reported across the state, and a challenging and eventful backcountry season in Utah came to a rather quiet close.



**A "heat map" of reported avalanches for this season. This does not include ski area avalanches or human triggered or natural avalanches that go unreported.**

# AWARENESS & EDUCATION



## ON-SNOW EDUCATION

To safely deliver avalanche education during a pandemic, pre-recorded content was used in place of the classroom. In the field masks were required for all instructors and student. This season the UAC delivered **60 on-snow classes to 1300 students.**

## KNOW BEFORE YOU GO

The Know Before You Go (KBYG) program continues to be the flagship avalanche awareness program throughout Utah and the United States. Due to the pandemic, we delivered the KBYG program virtually this season. This led to fewer total presentations, but a much larger reach. Noteworthy KBYG accomplishments:

- We delivered 40 presentations to over almost 27,000 people.
- We released the KBYG program as a full recording as well as an eLearning course.
- Over 7,243 people from 48 US States and 63 countries completed 1 of the 6 KBYG eLearning courses.
- We kicked off an 18-month project to rebuild the entire KBYG Program. This will feature new video content, presentation content, eLearning, and website.

## ADDITIONAL AWARENESS PROJECTS

- The UAC produced **420 videos** receiving over **2.6M views** this season.
- The UAC released the Trailhead Avalanche Awareness Program where staff and volunteers were at popular trailheads during the winter talking to users as they enter the backcountry. We were at **15 locations** during the season and reached over **1,350 people.**

# AVALANCHE FATALITIES

## A note about recent avalanche fatalities in Utah

Record numbers of people safely recreated in the backcountry during the 2020/2021 winter. Unfortunately, a widespread persistent weak layer of facets near the ground created dangerous avalanche conditions for a large part of the winter.

The average number of fatalities has been in a slow decline until very dangerous conditions reversed that trend this winter, and sadly there were seven fatalities investigated by the Utah Avalanche Center. Six were in Utah and one in Idaho immediately adjacent to the Logan forecast zone which includes part of Southeast Idaho.



**Fatal avalanche in Dutch Draw. The left portion was triggered by the victim, the right portion was subsequently triggered by explosives**

## ← Dutch Draw - Jan 8

Kevin Jack Steuterman was killed in an avalanche while snowboarding in Dutch Draw. He and his ski partner had accessed the area by riding four chairlifts at the adjacent ski area and then entering the backcountry through a resort exit gate. Neither of them were carrying avalanche rescue gear. After explosive work was performed to make the area safe from more avalanches, an avalanche rescue dog was used to locate the victim. [Read the full report here.](#)

## Square Top Peak - Jan 30 →

Kurt Damschroder and his partner made several runs in the backcountry near Square Top Peak using chairlifts for access. As they were descending Squaretop Mountain, they stopped halfway down where Kurt elected to go one way while his partner was going to ski another way. Kurt continued on his chosen path when he was caught, carried and almost fully buried in an avalanche. They had avalanche rescue gear, and his partner was able to find him and dig him out. [Read the full report here.](#)



**Square Top fatal avalanche showing where it was triggered just as the victim entered the slope.**

# AVALANCHE FATALITIES



**Two UAC staff members examining the crown face of the Wilson Glades avalanche.**

## ← Wilson Glades - Feb 6

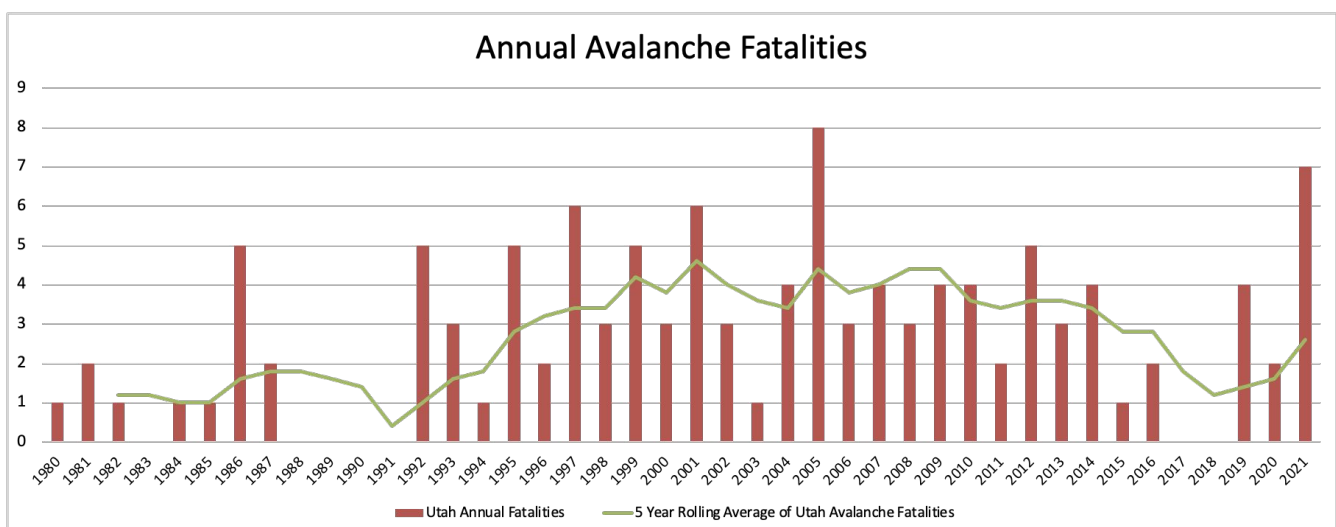
Six people were fully buried in an avalanche on Wilson Peak in the area known as Wilson Glades. Sarah Moughamian, Louis Holian, Thomas Steinbrecher, Stephanie Ann Hopkins were fully buried and died. Two others were fully buried and recovered alive. The rescue performed by other members of the groups involved was nothing short of heroic. Saving the lives of two fully buried people in an avalanche that buried six is truly amazing. [Read the full report here.](#)

## Sherman Peak - Feb 20 →

A group of three snowmobilers rode under a slope on Sherman Peak in lower angle terrain. As Allen Foss, one of the group, crossed a gully, the avalanche caught, carried and deeply buried him. Allen's partners thought he was wearing an avalanche transceiver but he was not. A local search and rescue team recovered him about an hour and fifteen minutes later. [Read the full report here.](#)



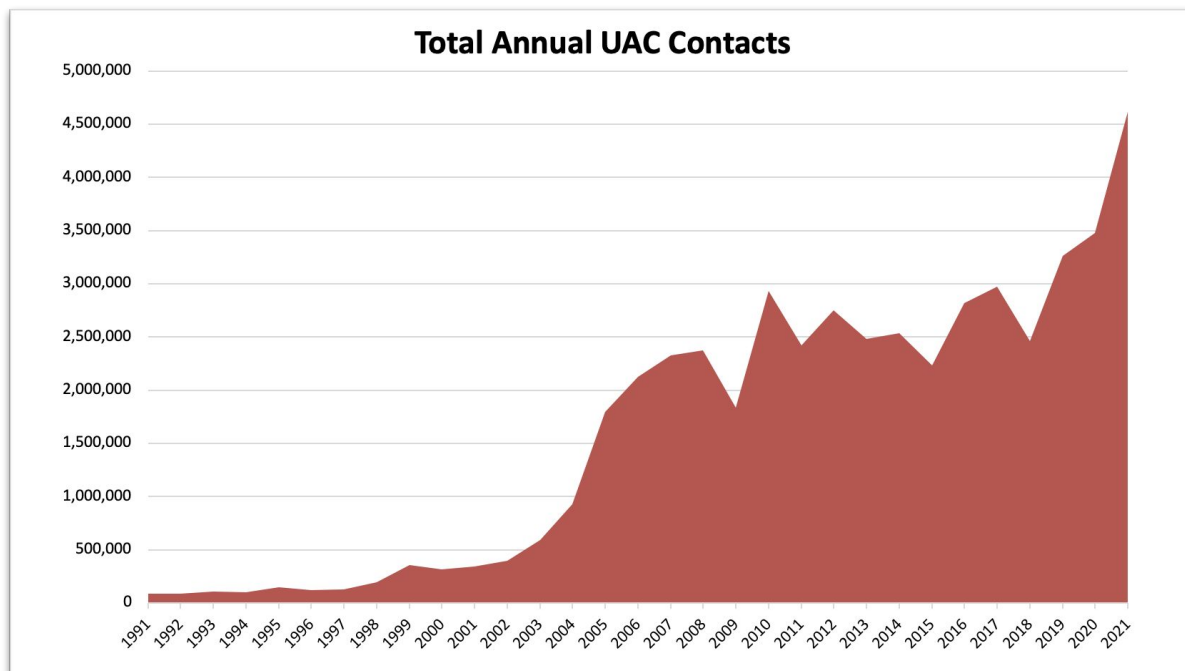
**The Sherman Peak avalanche was triggered from a low angle gully far below the starting zone.**



# CONTACTS & OUTREACH

The following figures summarize how the UAC provides information to the public by medium and how that has changed over the years. In addition, the UAC regularly broadcasted forecasts by daily call-ins to KPCW radio and distributed avalanche-related news and education via weekly Fox 13 news appearances.

## 38% increase in contacts over last season



"So thankful for your social media channels always being so up to date, full of useful info, and keeping people informed! "  
**- UAC Supporter**

"This donation is for the hard work and dedication that went into developing a history of the events in Wilson Glade, MC - two weekends ago. Thank you for all you do. It does not go unnoticed."  
**- UAC Supporter**

# Social media continues to be a critical communication medium for the UAC

The UAC uses social media to deliver avalanche information and educational content. The importance of using social media to deliver information continues to increase.

During the 2020-2021 season, across the four platforms, the UAC's social media followers increased by **47%**.



## Instagram

Overall UAC: [@utavy](#)  
Logan: [@utavy\\_logan](#)  
Uintas: [@utavy\\_uintas](#)  
Skyline: [@skyline\\_avalanche](#)  
Moab: [@utavy\\_moab](#)

## Facebook

[@Utah.Avalanche.Center](#)

## Twitter

[@UACWasatch](#)



*Brett Kobernick fixing a broken throttle cable*

# We are making a difference in people's lives

**The UAC gives people the information and education** to safely enjoy the mountains in winter. While we know how many accidents happen, we will never know how many lives were saved and all the accidents that never happened. We do know that people change what they do in the mountains based on our services, and the value of **saving just one life is priceless.**

I just wanted to pass along a Great Big Thanks for the UAC's work in this particularly challenging year. It was fun seeing you at the start of the season at the top of Beaver, and since then I know there have been some tough moments. I look at the forecast several times a week and always before I head into the mtns, which has been a fair bit this year. And I've been watching the incident videos and reading the reports. I just greatly appreciate the work you all do...

So thanks again... so very much appreciated. Stay well...

**- UAC Supporter**

"We just made our annual donation, a little earlier than usual, to reflect our deep gratitude for the amazing actions and teamwork, and community presentations, following the tragic Wilson Glade avalanche. Our donation also honors the lives of Sarah, Steph, Thomas and Louis-people we did not know, but certainly might have."

**- UAC Supporter**

I attended your avalanche partner rescue course at Snowbasin this past weekend with my son. I am writing to tell you that it was an exceptional course. The information you had us go through ahead of time was really insightful and all of the instructors were so patient and knowledgeable. So, thank you again!

**- Avalanche Rescue Class Attendee**

Hope your spring is going well. Big thanks from me personally to you and your team for the phenomenal work done during this "heavy" winter. I appreciate the daily reporting, weekly summary, and the incredibly-well-done post-incident reports. I've lost too many friends and colleagues over the years, this one included. However, I continue to love and respect the mountains and hope we can all safely recreate there for as long as possible.

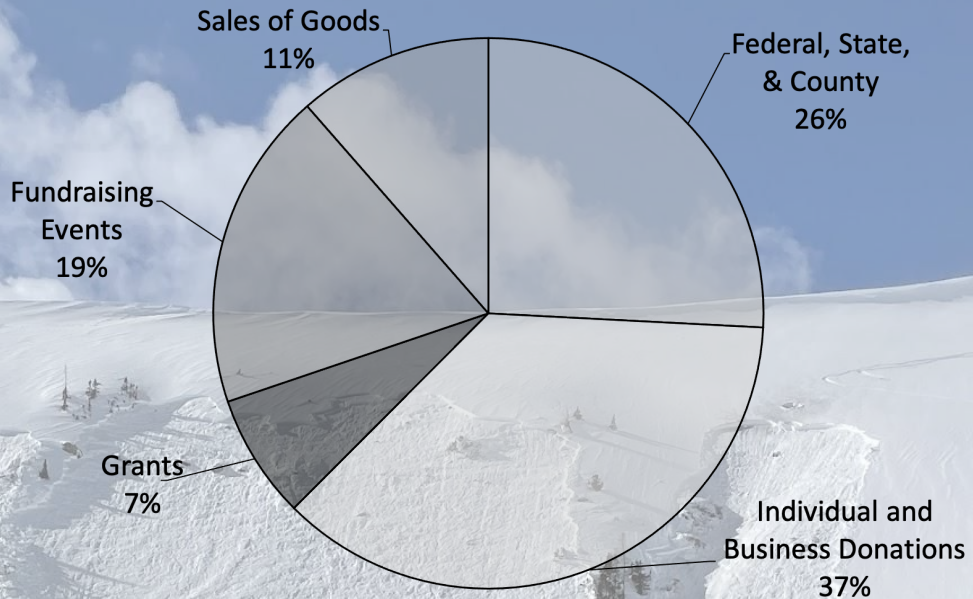
**- UAC Business Partner**



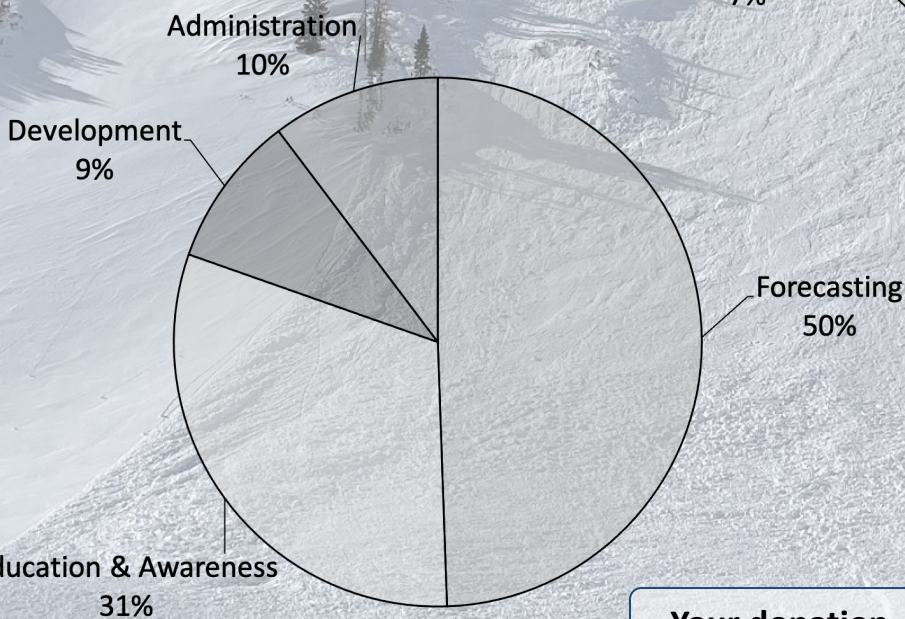
# FINANCIAL SUMMARY

**Total program budget: \$1,325,000**

## Revenue



## Expenses



The nonprofit UAC raises  $\frac{3}{4}$  of the total cost to run the programs of the UAC with the remaining  $\frac{1}{4}$  coming from government sources.

**Thank you to everyone who contributed through the season to support the UAC. We could not do this without you!**

**Your donation**

### Avalanche Forecasts

- Salaries
- Equipment
- Travel
- Training

### Avalanche Awareness & Education

- Instructors
- Equipment
- Travel
- Materials
- Content & curriculum development

### Administration

- Website
- Office
- Events
- Communications

**The information you need to have a great day in the backcountry.**

# PARTNERSHIPS & SPONSORS

Thank you to all of the UAC partners, individual donors, and sponsors who allow us to sustain operations and deliver our forecasting, awareness, and education programs across the state of Utah.

**We could not do this without your support!**

## SKI RESORT PARTNERSHIPS

Utah ski resorts once again graciously donated lift tickets to the UAC. The tickets were sold through Backcountry and Park City Sports. We continue to enjoy a great relationship with the Utah resorts, communicating regularly on snow conditions and cooperating on avalanche education for professionals and the public. Participants include: Alta, Beaver Mountain, Brighton, Deer Valley, Powder Mountain, Snowbasin, Solitude, and Snowbird.

## SNOWMOBILE PARTNERSHIPS

The generous support of local dealerships is crucial in providing the UAC with the ability to get into the mountains during our field days and to provide motorized avalanche classes. Young Powersports in Centerville and Polaris donated two 2021 Pro RMK's for the season. ADS Motorsports and Ski-Doo donated two 2021 Summits. Northstar of Logan and Polaris donated a 2021 Pro RMK. Karl Malone Polaris donated a Polaris Pro RMK. We use these machines to monitor the snowpack across the state of Utah. We also use these machines to teach life-saving classes.

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## FOUNDATION SUPPORT

George S. and Dolores Dore  
Eccles Foundation

Chris and Ellen Rossi  
Charitable Fund

Jennifer P. Speers  
Family Trust

JoAnne L. Shrontz Family  
Foundation

Park City Community  
Foundation

Rocky Mountain Power  
Foundation

Steiner Foundation

Steven B. Achelis Foundation

Union Pacific Foundation

W.L. Eccles Foundation

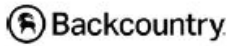
## Extreme Sponsors (\$10,000-\$19,999)



**MAMMUT**  
SWISS 1862



## High Sponsors (\$10,000-\$19,999)



## Considerable Sponsors (\$4,000-\$9,999)



## Moderate Sponsors (\$1,000-\$3,999)



## Low Sponsors (\$500-\$999)

