

# ANNUAL REPORT 2019



**Keeping people on top of the  
Greatest Snow on Earth  
for 39 years.**

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*Cover photo: Crown of a near miss avalanche near Logan which was a precursor of a series of close calls in January*

*This page: Natural avalanche in the La Sal mountains during a historic avalanche cycle in mid March*

# Utah Avalanche Center 2018-19 Season Review

More snow equals more avalanches!  
Human interaction with avalanches more than doubled over the previous season.

**168%**  
OF AVERAGE  
SNOWPACK

**250**  
human  
triggered  
avalanches

**23**  
people  
caught

**6**  
people  
buried

**4**  
killed



**\$\$\$**

**\$1,019,000**  
statewide budget

**33%**  
from federal,  
state and  
county govts

**67%**  
private  
sponsorship

**46%**  
spent on  
education



**14**  
employees

**470**  
field days

**1157**  
avalanche  
forecasts  
posted



**2.6 Million**  
page views

**259**  
videos  
produced

**2.7 Million**  
video views



**6725**  
class or  
presentation  
attendees

**196,655**  
KBYG  
attendees

Keeping people on top of the greatest snow on earth for 39 years!

# DIRECTORS' MESSAGE

What a winter throughout the state of Utah! We came off of last year's 49% of average snowpack to have an amazing 168% snowpack as of the end of April. Unfortunately there were four avalanche fatalities following the two previous winters with no avalanche fatalities in the state. These fatal accidents occurred outside the heavily-used Wasatch Front and in each case the parties were missing critical pieces of avalanche rescue gear.

The UAC had a season of growth with 16% more forecasts than last season, a 15% increase in the Know Before You Go program, and 35% more on-snow students. You can find more details about our programs below.

We continue to receive amazing financial support from the backcountry community, local businesses, and state and federal programs. Without all of this support, the UAC would not be able to provide the forecasting, awareness, and education programs that the community relies on. Thank you to everyone who provided support this season.

We have a busy summer ahead of us with some large projects including:

- Finishing the website redesign project
- Updating the Know Before You Go presentation materials
- Updating the Introduction to Companion Rescue and Backcountry 101 curriculum
- Creating an Avalanche Awareness Training program for US Ski and Snowboard

We look forward to seeing you all this fall at one of our fundraisers, an avalanche awareness event, or the Utah Snow and Avalanche Workshop. You can find a full list of events as they are scheduled at [utahavalanchecenter.org](http://utahavalanchecenter.org).

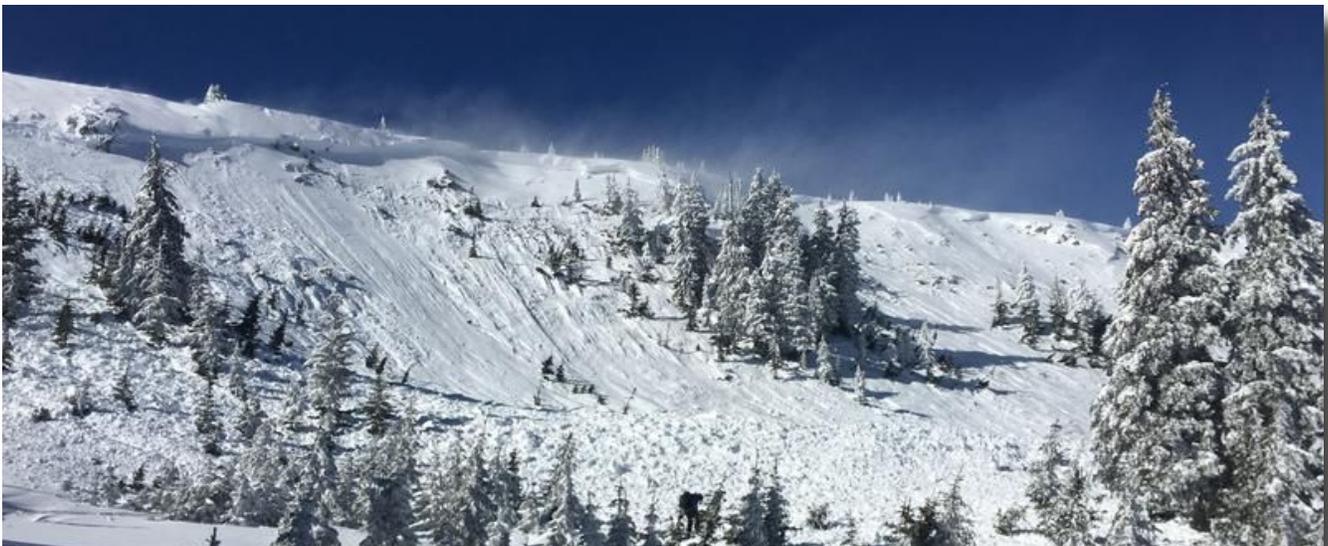
Sincerely,



Mark Staples  
Director,  
Forest Service UAC



Chad Brackelsberg  
Executive Director,  
Nonprofit UAC



*Fatal avalanche near Circleville Mountain on February 7, 2019 that claimed the life of a snowmobiler.*

# POINTS OF INTEREST

## **168% of average snowfall**

Snowfall across the state ranged from 130% to 200% of average

## **Media Coverage**

Local media throughout the state covered avalanche danger on a regular basis

## **History Maker Award**

UAC received the University of Utah J. Willard Marriott Library's Ski Archives History Maker Award

## **New Website**

We launched a fully redesigned and mobile friendly website and an updated iOS app

## **Avalanche Skills eLearning**

Know Before You Go Avalanche Skills eLearning Program launched in November 2018 with over 46,000 course views

## **Off Piste - Tragedy in the Alps Video**

We finished the production of the Off Piste video in partnership with BRASS Foundation

## **Fundraising Successes**

25th Annual Fall Fundraising Party and 15th Annual Logan Pray for Snow Party as well as our first spring fundraiser which exceeded our fundraising goal and had 59% first-time donors

## **Avalanche Awareness Week**

The Utah Legislature passed H.B. 380 designating the first week of December each year as Avalanche Awareness Week

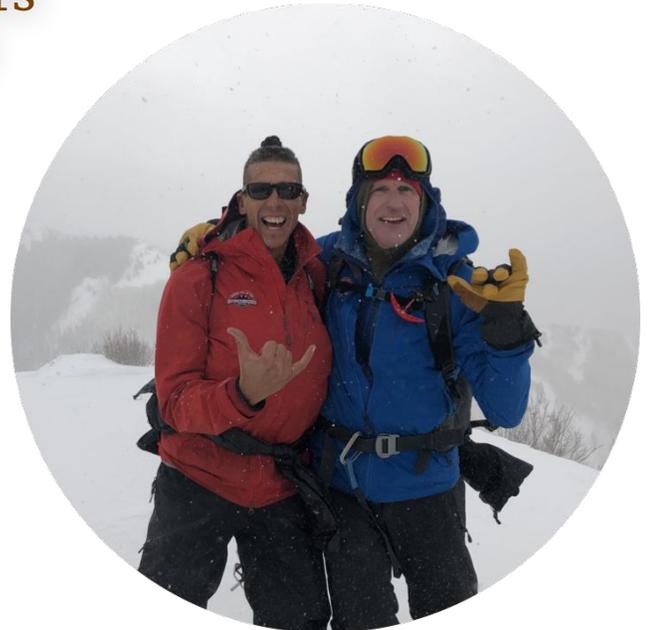
## **33,331 Downloads of UAC Podcast**

We released 13 episodes for Season 2

# WHO WE ARE

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.

**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 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. 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 14 working across 8 regions of Utah delivering avalanche forecasts, awareness, and education.



*Forecasters Craig Gordon and Greg Gagne*

**Avalanche Forecasts** Our forecasts inform the public 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 advisories 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 1,233 field reports that were viewed almost 500,000 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 11 languages, and is being used in over 30 countries. The UAC offers this program free of charge to schools, youth groups, and community organizations. The UAC also attends community events and retail shops where we provide public avalanche safety information.

**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 needs.

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 State Parks and Recreation, Utah Division of Emergency Management, and Salt Lake County.



## UAC Staff

- **Mark Staples:** Director - Forest Service UAC
- **Chad Brackelsberg:** Executive Director - Nonprofit UAC
- **Andrew Nassetta:** Outreach & Awareness Specialist - SLC
- **Bo Torrey:** Education Program Manager - SLC
- **Brett Kobernick:** Forecaster - Manti Skyline
- **Craig Gordon:** Forecaster - Uintas
- **Drew Hardesty:** Forecaster - Provo/SLC/Ogden
- **Eric Trenbeath:** Forecaster - Moab
- **Evelyn Lees:** Forecaster - Provo/SLC/Ogden
- **Greg Gagne:** Forecaster - Provo/SLC/Ogden
- **Paige Pagnucco:** Forecaster/Program Manager - Logan
- **Paul Diegel:** Special Projects Director - SLC
- **Toby Weed:** Forecaster - Logan
- **Trent Meisenheimer:** Forecaster/Education & Awareness Specialist - Provo/SLC/Ogden

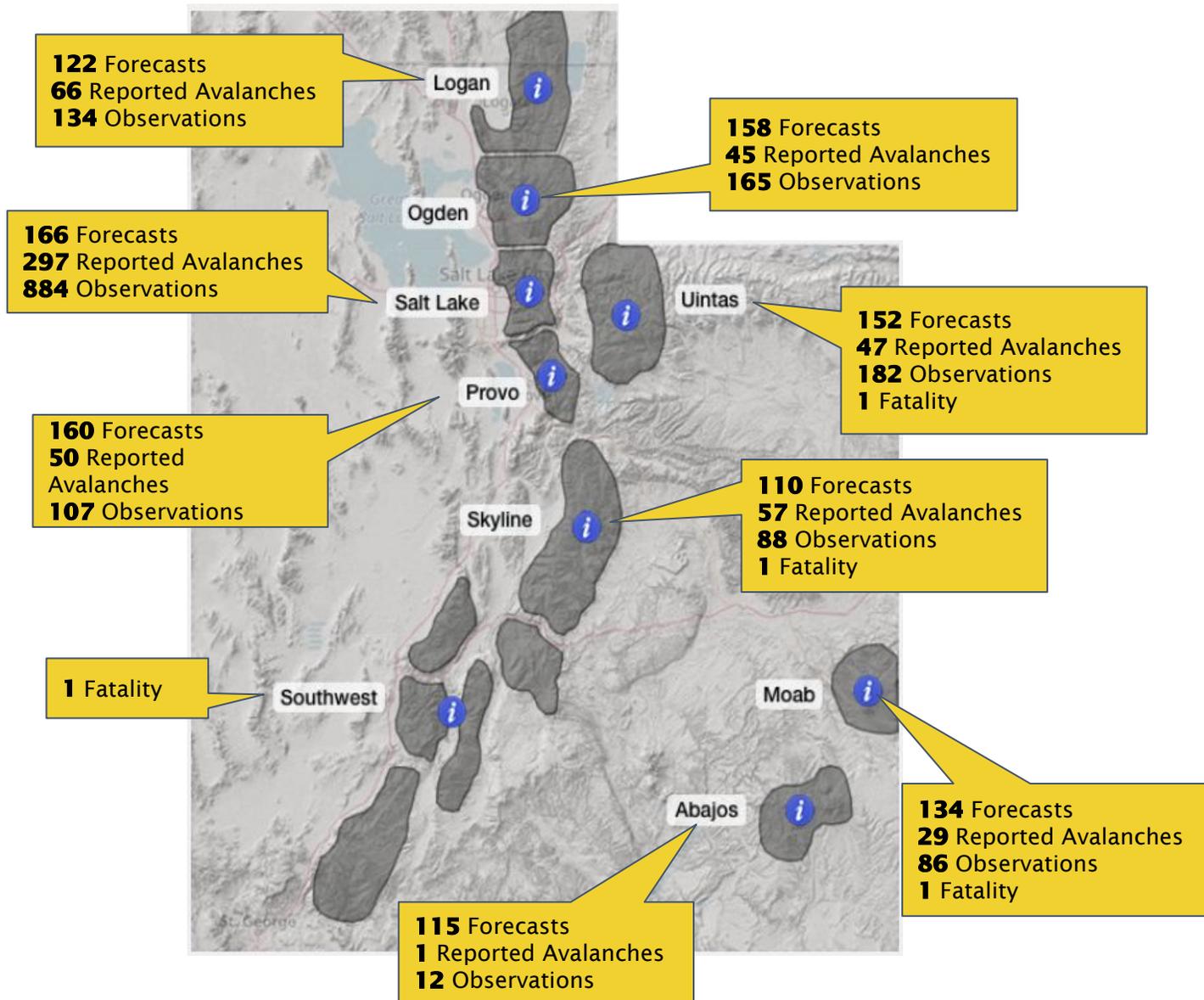
## UAC Board of Directors

- |                 |                  |
|-----------------|------------------|
| • Reid Persing  | • Nicole Sumner  |
| • Michael Brill | • Caitlin Hansen |
| • Kate Bowman   | • Alan Richards  |
| • Ted Roxbury   | • Tyler Hansen   |
| • Steve Achelis | • Jacob Splan    |
| • Michael Brehm |                  |



Top to bottom: Craig Gordon teaching avalanche class; Avalanche beacon checker, Evelyn Lees digging snowpit; Greg Gagne investigating an avalanche crown

# AVALANCHE INFORMATION TO THE STATE OF UTAH



**1,157** Total Forecasts  
**1,112** Total Observations

"We are very fortunate to have the **Utah Avalanche Center** Team watching out for us. Be thankful and review the website every day so you remain informed as to the development of the snowpack and conditions."  
 - Park City Backcountry Skier

"I have been using your site for years. I like the new format. It's easy to understand, gives me all the info I need and should be very user friendly, even for beginning backcountry users, Good job !!!"  
 - Ogden Backcountry User

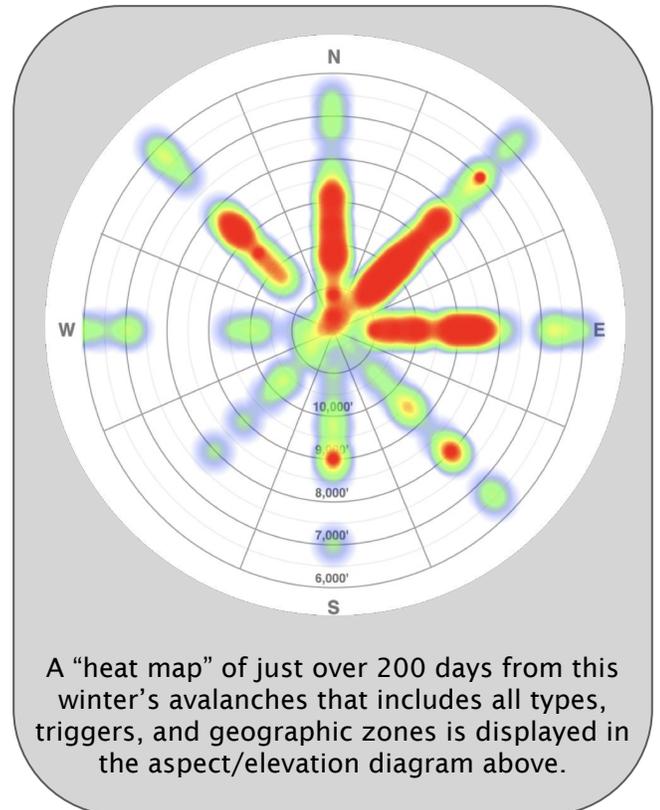
# SNOW & AVALANCHES

AVALANCHE INCIDENTS 2018-2019	UNINTENTIONALLY TRIGGERED	CAUGHT	INJURED	KILLED
	<b>250</b>	<b>23</b>	<b>6</b>	<b>4</b>

The winter of 2018/19 was a fantastic winter for backcountry enthusiasts and a welcome relief from the previous year's 2<sup>nd</sup> driest winter on record. Records on snowfall at the Alta Guard Station from November through April have been kept since 1944 and by the end of April, this season's snowfall totaled 475". But in a winter that refused to quit, powder hounds continued to ride deep powder into May. Storms covered the entire state with most areas exceeding average snowfall and snow water equivalent. Colder temperatures allowed mid and low elevations to accumulate more snow than in recent years, allowing for more access and varied terrain opportunities.

Early season snowfall quickly became weak and faceted at or near the base of the snowpack, with October/November weak layers and mid-December weak layers conspiring to keep backcountry riders on their toes well into the new year. In some cases, these early weak layers avalanched not once but many times – “repeaters” – into January. In the La Sals, these layers roared back to life as late in March when a storm produced 32" of snow in 36 hours and resulted in an historic avalanche cycle. These suspect layers were the culprit in all four of Utah's avalanche related fatalities across the state.

These fatalities were a tough blow after the previous two fatality-free winters. In three of the recoveries, avalanche dog teams from Wasatch Backcountry Rescue proved their worth in locating the buried victims who were not wearing avalanche transceivers. For perspective, these four fatalities stack up among 250 *reported* unintentionally triggered avalanches with 23 riders caught and carried in these events. Utah's four and Colorado's eight avalanche related fatalities made up just under half of a nation-wide total of 25 deaths.

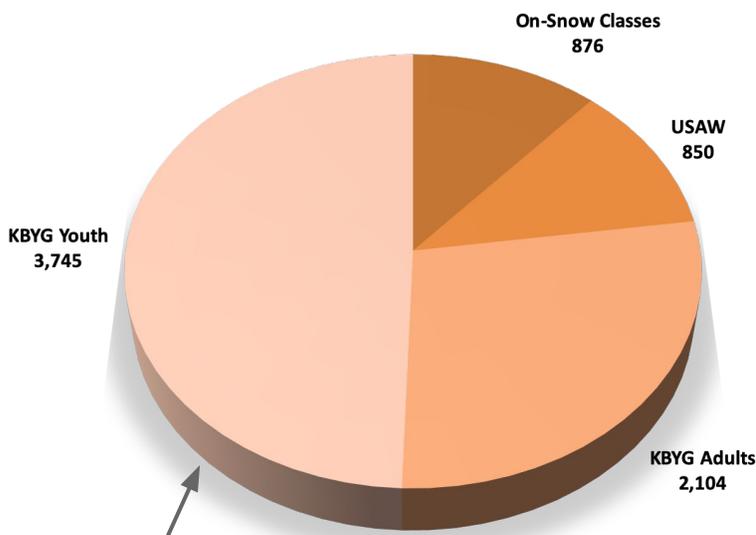


Mark Staples examining layers in snowpit near Mt. Nebo

# AWARENESS & EDUCATION

## 2018-2019 UAC Education Attendees

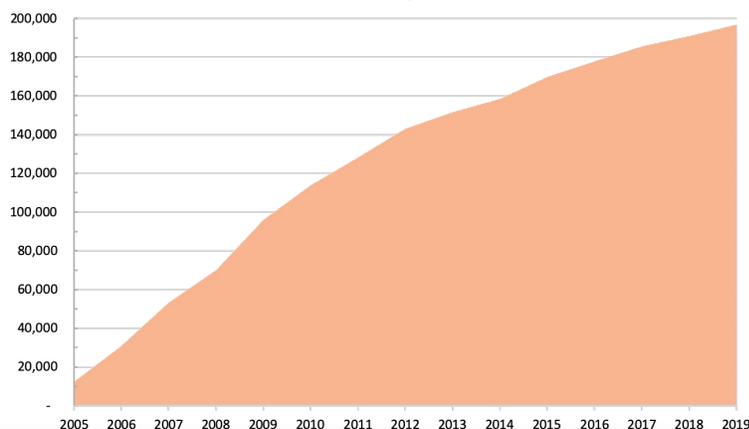
Total Students: 7,575



~50% of students were under 18 years old!

Course Type	# of Classes	# of Attendees
AIARE Avalanche Rescue Course	2	24
AIARE Level 1	4	54
AIARE Level 2	1	12
Avalanche Awareness	7	222
Backcountry 101	10	259
Beacon Clinic	1	65
Introduction to Companion Rescue	5	66
Motorized Avalanche Course	11	174
<b>Grand Total</b>	<b>41</b>	<b>876</b>

## Total KBYG Participants in Utah



## ON-SNOW EDUCATION

The UAC delivered on-snow education to **35% more students** that last season reaching **876 students** with an on-snow class.

## 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. Noteworthy KBYG accomplishments:

- In November 2018 we released the first 5 [Know Before You Go eLearning Modules](#). The modules have seen over **46,000 completions** since the program was released. The [eLearning introductory video](#) has been viewed over 300,000 times.
- The KBYG program was presented to **118 groups** this season bringing the total participants in Utah since 2004 to about **196,655** people throughout Utah.
- The total online views of the KBYG video increased to over **753,000** since fall 2015 release with **>55,000** views in the past 12 months.

## ADDITIONAL AWARENESS PROJECTS

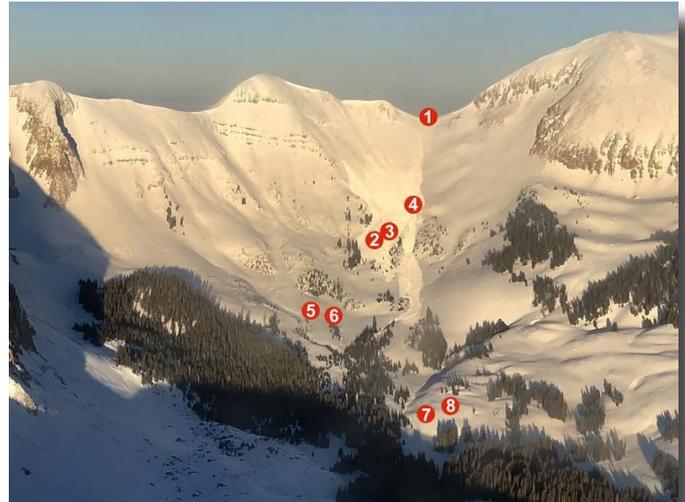
- The UAC produced **324 videos** receiving over **3.6M views** this season.
- We completed the “Off-Piste: Tragedy in the Alps” video for the BRASS Foundation and US Ski and Snowboard. The video has received over **1.2M views** since release in September 2018.
- We have begun working with US Ski and Snowboard to create a 90 minute Avalanche Awareness Training program for their athletes and coaches with a goal release of fall 2019.
- The UAC attended over **40 awareness** events from October to January providing avalanche information to attendees.

# AVALANCHE FATALITIES



## ← Electric Lake - Jan 18

Michael Besendorfer triggered an avalanche in the Skyline zone near Electric Lake. The avalanche caught and buried him but his partner was not able to find him because neither had avalanche transceivers. SAR teams recovered his body the following day with help from an avalanche rescue dog. [Full report](#)



## East Face Laurel Peak - Jan 25 →

Scott Pehrson, Jr was caught in an avalanche in Dark Canyon in the La Sal Mountains near Moab. His group only had a few pieces of rescue gear collectively and Scott was not wearing his transceiver. SAR teams recovered him the following day with help from an avalanche rescue dog. [Full report](#)



## ← Circleville Mountain - Feb 7

Brad Stapley was caught in an avalanche in the Tushar Mountains just east of Beaver Utah. One of his partners escaped the avalanche and the other was partially buried. None had avalanche rescue gear and Brad was recovered the following day with help from an avalanche rescue dog. [Full report](#)



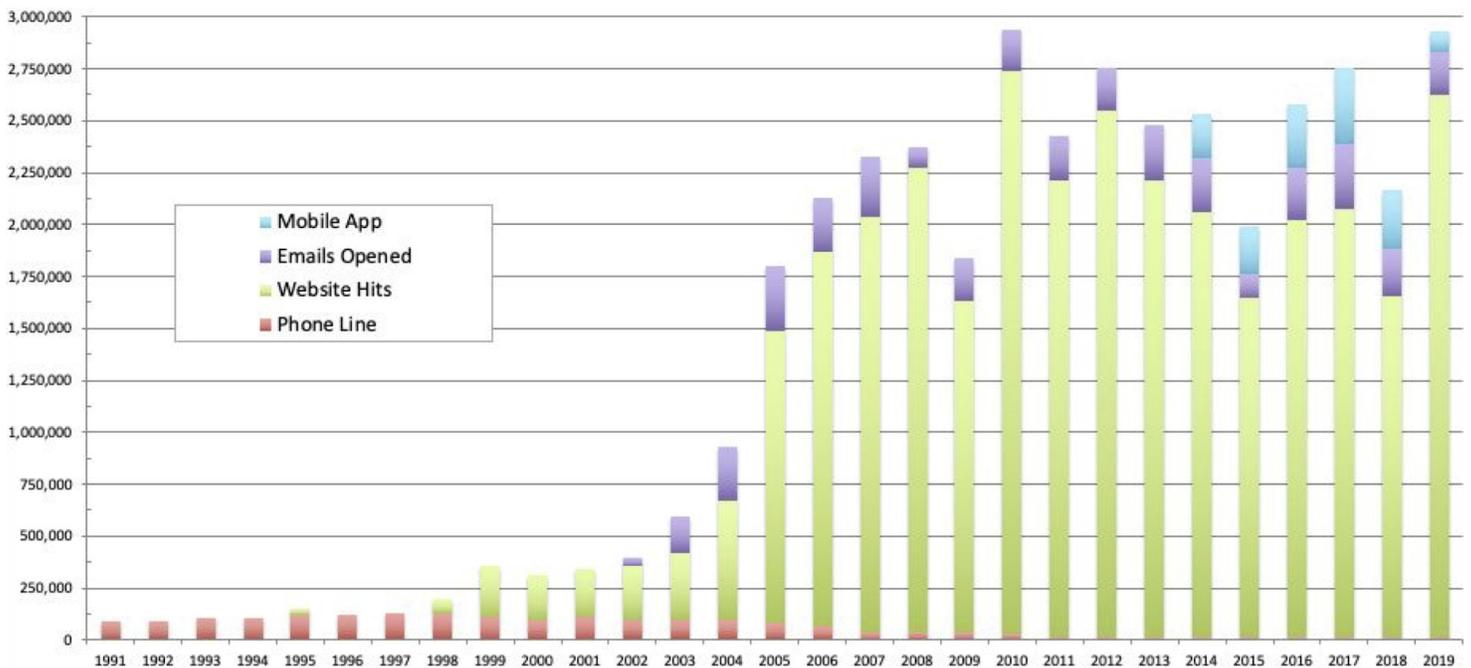
## Chalk Creek - Feb 9 →

Jason Lyman was caught in an avalanche in the Uinta Mountains. His partners did not have an avalanche probe and could not pinpoint his location. Another group arrived with probes and helped find him but it was too late. [Full report](#)

# 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 advisories by daily call-ins to KPCW radio and distributed avalanche-related news and education via weekly Fox news appearances.

## 35% increase in contacts over last season



Four years ago my boyfriend was killed in an accident while skiing Teewinot. If I had heard this talk from these powerful women back then, I would have been more likely to have spoken up and the outcome of that tragic day may have been different.

- Female Ski Mountaineer

We had another great assembly at Churchill Jr! Andy was super. He kept those kids engaged for an hour. The photography in the video was spectacular! Thanks again for bringing this important message to Churchill.

- Churchill Jr High Science Teacher

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



## Instagram

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

## Facebook

[@Utah.Avalanche.Center](#)

## Twitter

[@UACWasatch](#)

I have a 17 year old daughter who I wish could have heard this talk. I am always telling her she has a voice and to speak up as she knows more than many of the people she skis with. For her to hear this from fellow women skiers would be so good for her.  
 - Executive Director, American Avalanche Association



A forecaster skinning uphill near the Pfeifferhorn on the way to Hogum Fork.

# We are making a difference in people's lives

The average avalanche fatality rate in Utah for the last 5 years is 1.4 fatalities per year and the average over the last 25 years is 3.4 fatalities per year. Backcountry use has grown an estimated 20 times in that time. Backcountry users are better educated and better informed than ever before which is helping keep the average annual fatality rate flat and even decreasing.

Protecting local public safety and the winter tourism industry are critical to the Governor's Office of Economic Development. Winter outdoor recreation is an important part of living, working, and recreating in Utah. The Utah Avalanche Center is a valuable public safety resource; providing avalanche forecasting and education services essential for recreating, living, and working in the mountains in winter. The Utah Avalanche Center is a world-leader in the development of innovative avalanche awareness and educational tools and is a valuable asset to our community. The Utah Avalanche Center is also a great example of a non-profit - government partnership that provides a popular, valuable, and effective public service at an affordable cost.

*- Director, Utah Office of Outdoor Recreation*

I would like to recognize the continued excellence the Utah Avalanche Center provides in its cutting-edge products and services and incredible public service to the increasing number of users enjoying their public lands in the winter. The UAC has a legacy of folks who have, and continue to make a difference in promoting safe backcountry recreation!

*- Recreation Special Uses Program Manager,  
Intermountain Region*

I want to publicly thank the Utah Avalanche Center, Beaver County Sheriffs Dpt, Beaver County S.A.R, DPS, and WBR for all of their support, hard work, and efforts. I was the fortunate one able to unbury myself as mentioned in the video. Without my arm raised, I never would have made it out due to the conditions.

The morning of the recovery, I witnessed a room full of the best that can be offered, so professionally and accurately draw up a game plan, then perfectly act and execute. Thank-you to all men, women and dogs that came for these efforts. You all are at the top of my list!

Also Thank You to the Beaver County Hospital team that received me that night, as well as Beaver Comfort Inn for their hospitality. #UtahAvalancheCenter

*- Snowmobiler from Washington, UT*

# “Your class literally saved my life!”

The UAC teaches a wide variety of classes and partners with many different groups. Our goal is to offer avalanche education to groups and in settings **where there are no other options**. One new user group is motorized **snowbikes**. Many users in this new sport only have a background riding dirtbikes. They have no or very limited knowledge of avalanches.

The UAC partnered with the Backcountry Institute to provide a class this winter with one night of lectures and one day on snow. **Below is an account** from a snowbiker who took this class.



*Rob partially dug out of the avalanche  
(photo K. Love)*

**We talked** about going to an avalanche course ever since we started snowmobiling. Two years ago a small avalanche ago caught my twin brother, it made us really want to take a class, but we didn't. We didn't want to give up a sacred day of riding.

**This winter another avalanche** caught my friend Rob. We were heading back to the truck at the end of the day, and I saw a small hill along the trail with some tracks on it. Thinking it was safe, I rode up the hill on my snowbike. Rob was riding right behind me, but when I looked back for him, the whole hillside had avalanched and **he was gone**.

We got lucky and found Rob because his hand was sticking out of the avalanche debris. We didn't know what to do. We didn't know how to use our avalanche rescue gear. We didn't know anything about avalanches and decided it was **time to learn**.

We called the UAC and the Backcountry Institute to set up a class. It was just an intro class with one night of lectures and one day on the snow, but we learned a ton of life saving skills. We learned how to read terrain and measure slope angles. We learned how to use our avalanche rescue gear and more importantly how to perform an efficient rescue. **The best part** about it was our fear of sacrificing a day of riding was in vain! It was still an awesome day of riding in the mountains.



*Rob and Karl standing in the hole  
where Rob was buried. (photo K. Love)*



*Backcountry Institute and UAC teaching the on-snow portion of the class in the Uinta Mountains on February 22nd. Snowbikes travel differently than snowmobiles and need classes specific for them. (photo K. Love)*

**A week after the class**, we went to Togwotee Pass where it had been dumping snow and there was a serious avalanche danger. We rode in some awesome areas. At one point I was following my friend Garret into a canyon when he turned around and said “we can’t keep going, it’s a terrain trap with a slope steeper than 30 degrees above it.” I had to follow his tracks a short distance to turn around and, sure enough, he unknowingly triggered an avalanche that covered his tracks.

We saw multiple slides that weekend. One day we wanted to ride a big loop out to a lodge for lunch and back. Along part of that loop is a long, steep pass. We knew it would be sketchy and **decided to avoid the steep pass**. Instead of completing the loop, we decided to go back the way we came. The next day - at the same pass - a rider died in an avalanche. It could have been one of us.

The avalanche course undoubtedly **saved our lives multiple times that trip**, and I now have more confidence in the backcountry. Everyone at the Utah Avalanche Center and Backcountry Institute are awesome! I hope they keep teaching more courses. The only regret that I have is not taking the course sooner. We got lucky. Pulling a good friend out of the snow is not the time to decide to take a course!

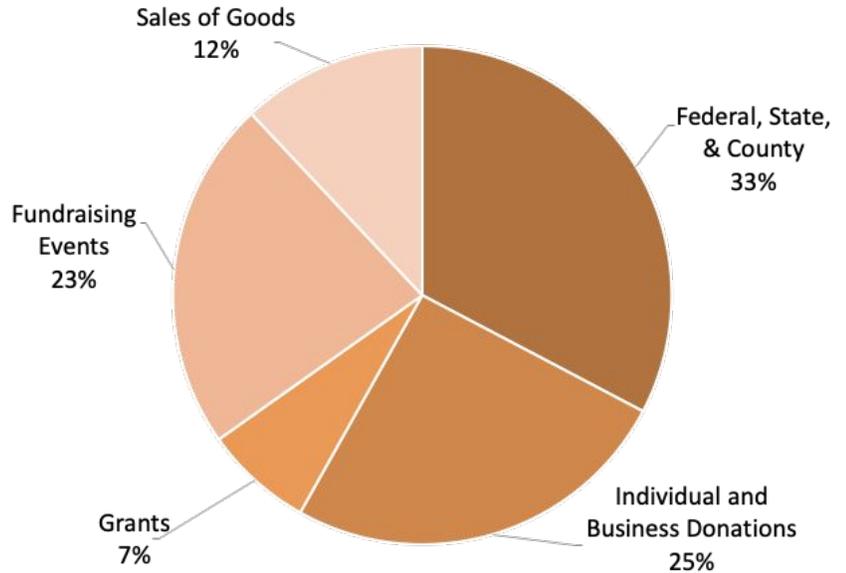


*One of the avalanches the group observed and avoided while riding near Togwotee Pass. (photo K. Love)*

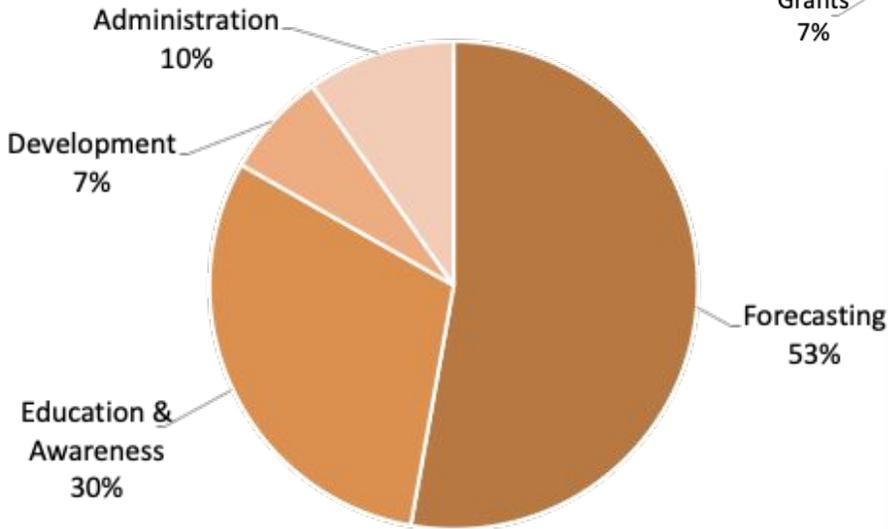
# FINANCIAL SUMMARY

Total program budget:  
**\$1,019,000**

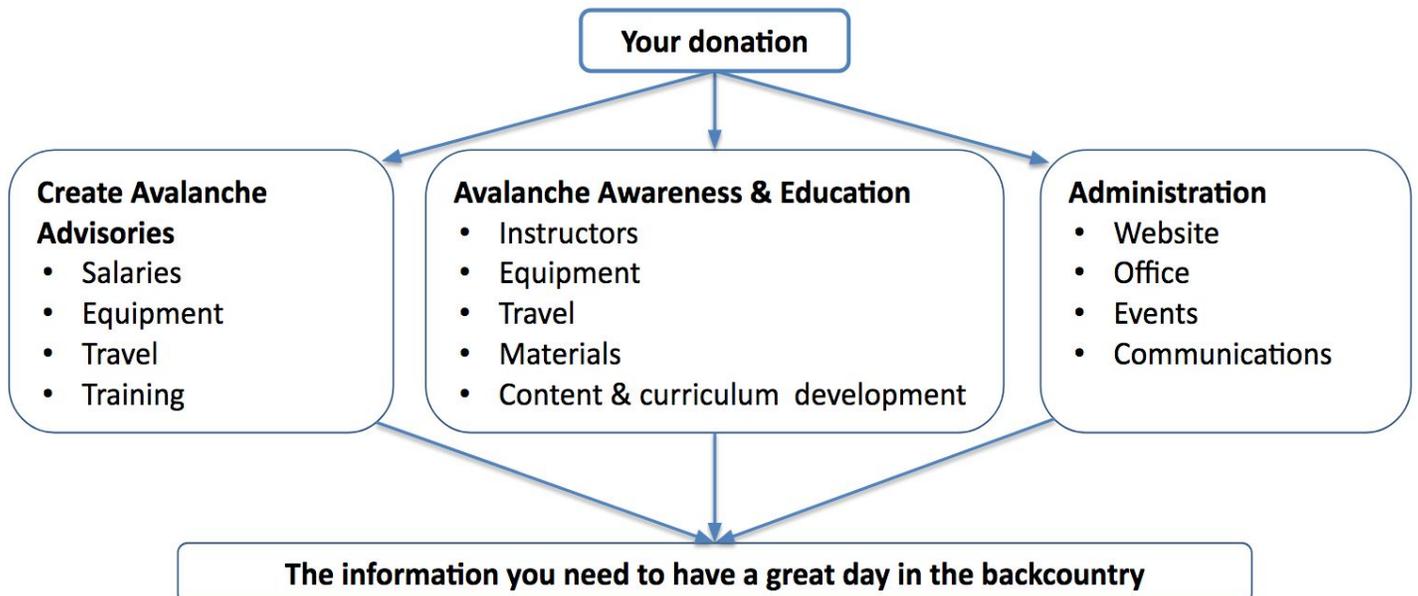
## Revenue by Source



## Expenses By Class



The nonprofit UAC raises  $\frac{2}{3}$  of the total cost to run the programs of the UAC with the remaining  $\frac{1}{3}$  coming from government sources. Thank you to everyone who contributed through the season to support the UAC. We could not do this without you!



# Partnerships and Sponsors

Thank you to all of the UAC partners 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, Vail Resorts, Deer Valley, Powder Mountain, Snowbasin, Solitude, Sundance and Snowbird.

## SNOWMOBILE PARTNERSHIPS

Tri-City Performance and Polaris donated two 2018 Pro-RMK's for the season. Weller Recreation and Ski-Doo donated a 2019 Summit. Northstar of Logan and Arctic Cat donated a 2019 M8000 sled. Morgan Valley Polaris, KTM, and Timbersled donated a 2019 KTM XC-F 450 with a 2019 120 Aero kit. We use these machines to monitor the snowpack across the state of Utah. We also use these machines to teach life-saving classes.

[Check out our fleet in action.](#)

## FOUNDATION SUPPORT

BRASS Foundation

The George S. and Dolores  
Dore Eccles Foundation

Jennifer Speers Family Trust

Chris and Ellen Rossi  
Charitable Fund

JoAnne L. Shrontz Family  
Foundation

Steiner Foundation

Steven B. Achelis Foundation

Frey Foundation

Pi Foundation

## Extreme Sponsors (\$20,000+)

Black Diamond

SALT LAKE COUNTY



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

Backcountry

OR OUTDOOR RESEARCH

PARK CITY POWDER CATS & HELI-SKI

SNOCRU

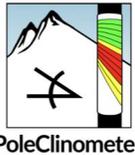
LDOT Keeping Utah Moving

RECREATION UTAH OUTDOOR RECREATION GRANT

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

Adobe

ALBION FINANCIAL GROUP GLOBAL INSIGHT. LOCAL PRESENCE



snowbasin A SUN VALLEY RESORT



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

ARC'TERYX



CAMP TECHNICAL ADVENTURE EQUIPMENT

CHIMERA BACKCOUNTRY PERFORMANCE



HOWIEGARBER|IMAGES

ISMA International Snowmobile Manufacturers Association

lululemon



patagonia



ROCK STEADY WELLNESS ACADEMY

TALKING MOUNTAIN YUTIS



TREW

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



ALSCO Linen and Uniform Rental Services



AMERICAN AVALANCHE ASSOCIATION



arva



beaver mountain



dps

Jaybird



mizu



MSR MOUNTAIN SAFETY RESEARCH

NAAWK

ORTOVOX

POLARIS THE WOOD COOK



PRIVAL

RXBAR



SKIMOD



SKYCALL SATELLITE



TRUCK



UTAH FOOD SERVICES



WHITE PINE FOURSIDE