

# 2019-20 Annual Report



## Gallatin National Forest AVALANCHE CENTER



**GRIZZLY OUTFITTERS**  
**YOUR MONTANA CHEVY DEALERS**  
**SPARK R&D**  
**YC COMMUNITY FOUNDATION**  
**MONTANA FISH, WILDLIFE & PARKS**  
**YELLOWSTONE ARCTIC YAMAHA**

**Highline Partners**  
**Uphill Pursuits**  
**World Boards**  
**Mystery Ranch**  
**Bridger Bowl**  
**Cooke City Super 8**

Alpine Orthopedics  
Stronghold Fabrication  
Gallatin Valley Snowmobile Assoc.  
Ticket River  
Gallatin County SAR  
MAP Brewing

Cooke City Motorsports  
Knoff Group Real Estate  
Community Food Co-op  
Swiss Fit  
Werner Wealth Management  
Ph.D Skis

**GNFAC Staff:**

**Doug Chabot**  
**Alex Marienthal**  
**Ian Hoyer**  
**Dave Zinn**

# 2019-2020 Annual Report

## GALLATIN NATIONAL FOREST AVALANCHE CENTER

Winter is not going down without a fight, but we have concluded our 30<sup>th</sup> season of daily avalanche forecasts. A 10” early snowstorm prompted our first bulletin of the year on September 26. Snow continued, folks flocked to the mountains and we issued 17 bulletins before our daily advisories started on November 30. By April 5<sup>th</sup> we had issued 128 daily advisories including 2 days of avalanche warnings, and will continue posting weather and snowpack updates twice a week through April. This was a good winter on many fronts: no avalanche fatalities and plenty of snowfall. Our snowpack depth (SWE) is currently measured to be 113-119% of average.

This winter Dave Zinn joined our team as a part-time forecaster and will return next year in full-time capacity. Additionally, 32 volunteers and our intern Spencer Jonas partnered with us in the field when we were not out with each other.

The United States has 23 avalanche fatalities this season. On the Custer Gallatin National Forest there were 59 avalanche incidents (aka. close calls) that we are aware of: 27 skiers or snowboarders, 30 motorized and 2 ice climbers. Our records show 12 people were caught with 2 snowmobilers and one snowcat partially buried. This is the first winter since 2012-13 without an avalanche fatality.

We worked with the Friends of the Avalanche Center and their 42 instructors to teach 125 classes reaching 4,240 people. Many of these were snowmobilers (678) and kids under 18 years old (995), two of our target audiences. Most classes were 1-hour *Avalanche Awareness*, *Companion Rescue* and *Introduction to Avalanches with a Field Session*. With funding from Montana Parks we continued our weekly Cooke City education program of Friday night awareness and Saturday rescue practice. This is the 4<sup>th</sup> year of the program and 4<sup>th</sup> year without a fatality in Cooke City.



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## GNFAC INDEX

Total email subscribers to the avalanche forecast: 5,245

Number of daily views to our Forecast page: 1,526

Increase from last year: 20%

Percentage of people accessing mta-avalanche.com on a smartphone, desktop, or tablet: 61%, 35%, 4

Percentage of iOS vs Android: 67% and 33%

Number of field days: 122

No. of times Doug forgot his shovel handle at home: 1

Total # of snowpits we recorded on snowpilot.org: 137

Reported avalanches and incidents: 318 and 59

The most avalanches recorded in a single day this season: 21 on February 9

Deepest measured crown depth: 15' in Cooke City

Number of videos and total views: 116 and 583,000

Really, over half a million views? Yup.

Maximum number of takes to make a 1-minute video: 6, a new record by Dave\*

\*Alex once had 8 takes. None were good enough to publish, so the record is debatable.

Total followers on Facebook, Instagram, YouTube and Twitter: 12,097; 12,260; 4,120; and 2,092

Percentage increase from last year: 18%

### MTAVALANCHE.COM

Our website views keep growing, which is not a surprise as the Gallatin Valley and back-country recreation are growing. Last season our site had 924,000 pageviews. The top three most popular pages on our website are the forecast page, the Lobo weather station at Big Sky followed by the Bridger Bowl Lift weather station. In 2017 we revamped our website and, among others, added the Regional Pages, Avalanche Incidents and Weather and Avalanche Log. The pages were redesigned to accommodate the growing use of mobile devices. This year 61% of our website traffic was on a mobile phone, 35% on a desktop and 4% on a tablet.

*The GNFAC had a 20% increase in people visiting our avalanche forecast webpage. In total, our advisory is accessed 6,771 times a day.*

## AVALANCHE ADVISORIES

The daily avalanche forecasts are the cornerstone of our program and this year we wrote 128 of them. All four of us take turns arriving in the office at 4 a.m. with a 7:30 a.m. deadline to have the forecast completed. Some days are easy and others a struggle. A storm that starts while we are writing is one of the most challenging times and this season had more than average.

Besides the daily forecast, we also issue avalanche bulletins pre and post season as storms roll through. This year our first was on September 26 and the final on April 27.

There are many ways to get our advisory: through email, on our forecast webpage, on the Regional web pages, by phone, RSS feed and audio recording. The email subscription and forecast page are our 2 most popular and average 6,771 views a day.





*A snowcat was hit by an avalanche while grooming near Storm Castle on February 27. No one was injured.*

## AVALANCHE ACTIVITY AND INCIDENTS

This season we had many avalanches reported, a few incidents involving people getting surprised when they triggered slides and no fatalities. This is the first year since the winter of 2012-13 (7 years) without a fatality. We have been averaging 2.5 deaths a year, so this is a welcome relieve.

In this year's database we had 318 avalanches reported with 59 of these being triggered by people unintentionally. Motorized (30) and human-powered users (29) were split equally. When it is dangerous for skiers it is dangerous for snowmobilers. In these 59 incidents, 12 folks were caught and 2 snowmobilers and a snowcat were partially buried.

From avalanche observations that people sent it was determined that 122 were soft slabs, 65 hard slabs and 11 were wet loose. The avalanches broke in 70 cases with a persistent weak layer, 54 times from wind-drifted snow and 34 times in new snow. These do not add up to the 318 avalanches total because complete reporting is not always possible.

Over the last ten years Montana is ranked third in the nation in avalanche fatalities (29) and first in snowmobiler avalanche fatalities (16). Pages 13-15 have graphs showing the last 10 years of avalanche incidents grouped by activity and state.

## VIDEOS

This year we made 116 videos from our 122 field days which serve as an afternoon avalanche conditions update and a teaser for the next day's forecast. These are immensely popular and we upload them to all our social media platforms. A person who only watched our videos would have a pretty good understanding of our snowpack and avalanche concerns for the next day. The videos are around 1 minute in length in a non-jargon, easy to understand format. These 116 videos were viewed over 583,000 times, more than any other season.

## INSTAGRAM, FACEBOOK, TWITTER AND YOUTUBE

Social Media is integral to the way we communicate with the public. We use it multiple times a day to showcase the daily forecast, our afternoon videos, relevant avalanche activity and general safety information. The number of our followers continues to grow with Facebook and Instagram having over 12,000 each and Twitter 2,092. YouTube archives all our videos since we started using it in 2006 and our *AvalancheGuys* channel has 4,120 subscribers.

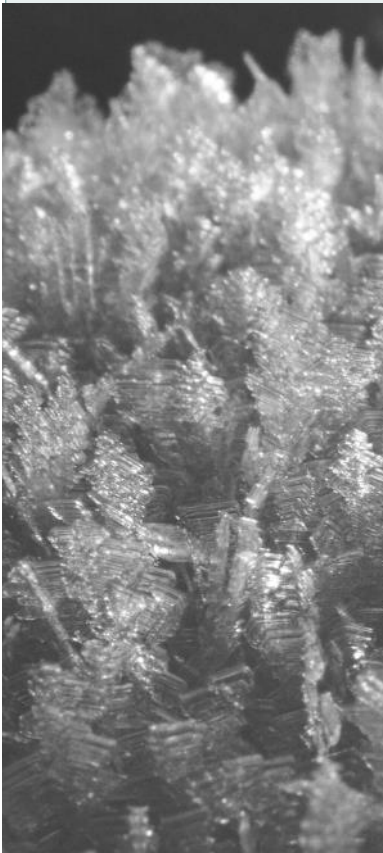
## SEASON TOTALS

124 Classes  
4,240 Total participants  
995 Youth Participants  
678 Sled Specific Participants  
42 Friends Instructors  
30 Field Instructors working ASMSU Programs  
Cooke City had 326 participants in class and field sessions  
56 sledders in the new ASMSU Sled Specific Field Session

We expanded our program with BSF – 57 KBYG Classroom and 35 Field Session at Bridger.

We developed a SAR specific training presentation that was taught to Anaconda SAR, Red Lodge SAR, Gallatin County SAR, Stillwater/ Sweetgrass SAR, Beaverhead SAR, Ruby/Deerlodge SAR, Silver Bow SAR.

We covered a large geographic area with avalanche awareness: Gallatin Valley, West Yellowstone, Helena, Dillon, Livingston, Red Lodge, Cooke City, Billings, Butte, Big Sky.



## AVALANCHE EDUCATION

The Friends of the Avalanche Center (FOAC) work closely with the GNFAC to bring high quality avalanche education to the public. Nina Hance and Jodi Redfield are the Education Coordinators responsible for training, scheduling, staffing and teaching. Jodi took over Dave Zinn's position since he will be a full-time forecaster next year.

The Friends coordinated 124 classes that reached over 4,200 people. We try to accommodate all requests for classes, no matter the age or user group: motorized or hu-

man-powered. We have 42 instructors; many are outdoor professionals and all are extremely competent. We could not offer so many classes without their dedication.

This year 995 kids and young adults attended our classes. Snowmobilers are a huge audience and we taught 678 riders this season. We lecture to ski patrols, Search and Rescue groups, local snowmobile clubs, MSU and ski and outdoor stores throughout southwest Montana and the surrounding communities.

## COOKE CITY

Our education in Cooke City is tailored to visiting snowmobilers. Since 1996 Cooke City has had 17 snowmobile avalanche fatalities, but **since we began a targeted education campaign 4 years ago there has not been a single fatality.** Seth McArthur of Montana State Parks has funded this effort. Every Friday night, starting at Thanksgiving through the 2<sup>nd</sup> weekend in March, we teach a 1-hour snowpack conditions and avalanche awareness class. The next day we host a rescue practice at the Round Lake Warming hut. Businesses in town support our efforts and direct their guests to the classes. We will continue this program next year with new curriculum and focus in order to attract all riders, even those that have attended in the past.

## BEACON CHECKERS

Beacon checkers are wonderfully simple to use: stand next to it and it blinks green if your avalanche transceiver is on. These are life-saving devices. We have one at the northern boundary of Bridger Bowl and another on the trail leaving Cooke City. This year we partnered with the Gallatin Valley Snowmobile Association and put beacon checkers at the Sage Creek (Taylor Fork) and Buck Ridge Trailheads. We also put one at the Beehive Basin trailhead for skiers in cooperation with Big Sky Owners Association. These 3 new stations saw a lot of action and all 5 of them will be operational again next season.



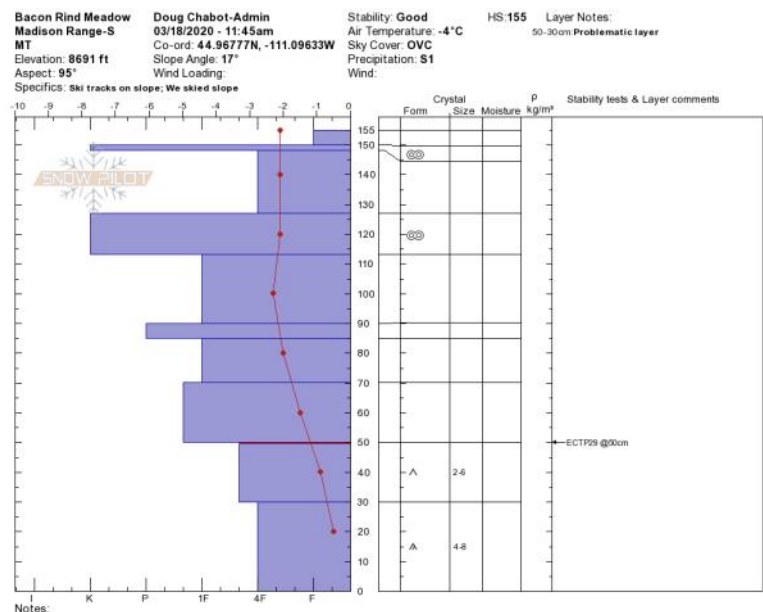
*We installed 3 new solar powered beacon checkers at the trail-heads in Beehive Basin, Buck Ridge and Taylor Fork.*

*“The Friends coordinated 124 classes that reached over 4,200 people.”*

## SNOWPILOT

*SnowPilot* ([www.snowpilot.org](http://www.snowpilot.org)) is open-source, free software that allows users to graph, record and database snowpit information. We created it during the winter of 2004. In 2016 it was restructured to allow users worldwide to enter their data on a website. In exchange for providing a free platform to enter snowpit data, *SnowPilot* gets an expanding database that is readily shared with researchers to advance the field of snow science. Over 5,000 people use it. We have over 22,000 snowpits in the world’s largest database in 4 languages (English, Spanish, Icelandic and Swedish), reflecting the languages of the countries with the most snowpits.

SnowPilot is funded by a restricted donation given to the Friends in 2004.





## BOARD OF DIRECTORS

### Friends of the Avalanche Center

Jeannie Wall—President

Emily Stifler-Wolfe

Ben Nobel

Tyler Allen

Mark Greeno

Laura Ryan

Dawn Brown

Leah Knickerbocker

Rob Lininger



## FINANCES OF THE GNFAC

The Custer Gallatin National Forest provided the Avalanche Center with 48% of its funding which covered salaries, benefits, travel, vehicles, computers and office space. We rely on our long-term supporters, Friends of the Avalanche Center (38%) and Montana Fish, Wildlife & Parks (14%), for the shortfall.

*Since 1992 the Friends of the Avalanche Center have donated over \$854,249 to the operation of the GNFAC.*

## FRIENDS OF THE AVALANCHE CENTER

The Friends of the Avalanche Center is a nonprofit organization whose mission is simple and focused:

*The Friends of GNFAC supports the Gallatin National Forest Avalanche Center in providing quality avalanche education and awareness programs to the greater Gallatin community and all backcountry users in southwest Montana.*

*Their support falls into 3 core areas:*

- 1. Direct support of the GNFAC,*
- 2. Avalanche Education Program,*
- 3. SnowPilot (funded through a restricted donation).*

The Friends cover expenses related to the avalanche education program, as well as administrative, snowmobile, weather station and website costs. The Friends is run by a Board of Directors, all volunteers, with three paid, part-time staff: 2 Education Coordinators (Nina Hance and Jodi Redfield) and Treasurer (Allyson Fauver).

The Friends were founded in 1992 and have donated over \$854,249 to the operation of the GNFAC. This year their total contribution was \$116,126. This total reflects spending \$79,442 for avalanche education and \$30,709 for direct GNFAC support. Almost all monies came from local businesses and individuals in southwest Montana with the following long term, recurring support:

- 21<sup>st</sup> Annual Powder Blast
- Yellowstone Club Community Foundation
- 18<sup>th</sup> Annual King and Queen of the Ridge at Bridger Bowl
- Ullr and Skadi Fest
- Bozeman SplitFest
- Give Big Gallatin Valley



## DONATED LABOR AND EQUIPMENT

The Avalanche Center could not operate at its current level without the local community donating time, expertise and equipment. Added up, their donated work totals \$34,020, a dollar estimate of what it would cost to hire people and buy/rent equipment. Our donors include: Bridger Bow, Big Sky and Yellowstone Club Ski areas; NRCS; NWS; volunteer observers and field volunteers.

## AVALANCHE INTERN

This winter Spencer Jonas was our intern. Spencer is a long-time skier, guide and educator. He was our field partner a few times a week and helped us at the end of the day when we had to post pictures, videos and snowpits. He also became a good snowmobiler and was able to rally with us to popular riding areas.

## FIELD VOLUNTEERS/OBSERVERS

We do not go in the field solo and it's not always possible for us to partner with each other, so we rely on a team of skilled volunteers to help. Thirty-two volunteers accompanied us on 65 field days: Tyler Allen, Alexis Alloway, Conrad Anker, Tim Baucom, Lucas Browning, Anneka Door, David Ennis, Eric Knoff, Allyson Fauver, Isaac Fleming, Nina Hance, Jordy Hendrikx, Jerry Johnson, Spencer Jonas, Brenna Kelleher, Nathaniel Kenney, Annie Magill, Jordan Mancey, Kyle Marvinney, Zachary Miller, Andrew Morehouse, Andy Olson, Elise Otto, Ry Phipps, Chris Pierce, Claire Qubain, Jodi Redfield, Nicholas Rustigian, Andrew Schauer, Yogesh Simpson, Martin Stefan, Leila Sterman, Sam Verplanck.

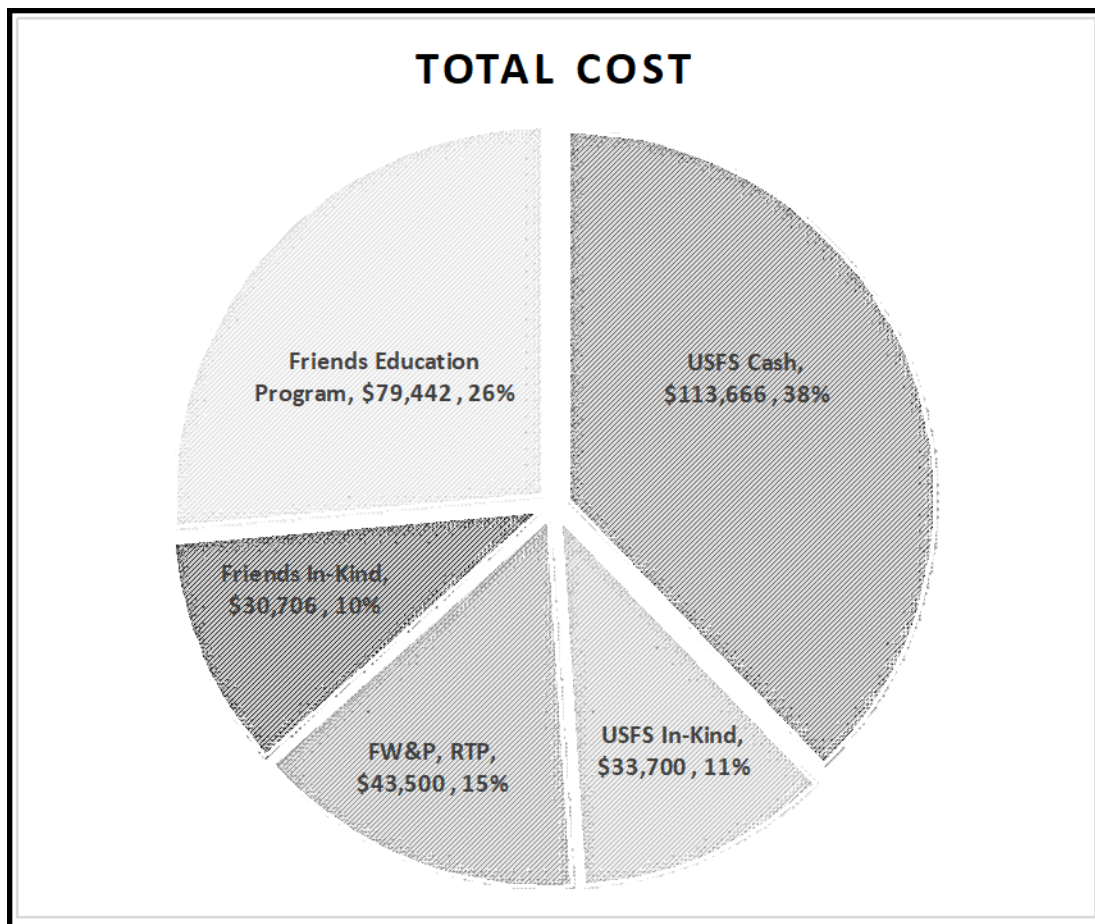
These folks are our peers and several are professional snow workers. We also count on folks emailing their personal field observations, stability test results and snowpits. The accuracy of our forecasts is a direct reflection of their detailed and steady reports. We owe a special thanks to Big Sky and Bridger Bowl Ski Patrols for their daily observations as well as Bear-tooth Powder Guides, Yellowstone Ski Tours and Montana Alpine Guides.



*This season we saw HUGE avalanches. This 15' crown was on Henderson Mountain outside Cooke City in January.*

## TOTAL COSTS

Custer Gallatin National Forest (salaries/benefits)	\$113,666
• CGNF In-Kind (vehicles, office, etc)	\$33,700
Montana FW&P Rec Trails Program (salaries)	\$43,500
Friends of the Avalanche Center: Education Program	\$79,442
Friends of the Avalanche Center: Direct Support	\$30,709
Friends of the Avalanche Center: SnowPilot	\$5,975
<b>Total Costs</b>	<b>\$306,992(100%)</b>
<i>CGNF Contribution</i>	<i>\$147,366(48%)</i>
<i>Outside Contributions (non federal government)</i>	<i>\$155,626 (52%)</i>



## SNOWPACK AND WEATHER SUMMARY

Alex Marienthal, Avalanche Forecaster, Gallatin National Forest Avalanche Center

In the Rocky Mountains early season snow is typically not good for stability. In southwest Montana, this year was on the worse end of the spectrum for bad stability caused by early season snow. Weak snow near the base of the snowpack resulted in large avalanches all season. The poor snowpack structure prompted months of strongly worded forecasts with phrases such as,

“Avoid avalanche terrain. Avoid heavily wind loaded slopes... As weak layers get deeper there are fewer warning signs. Multiple tracks can cross a slope before one finds the weak spot and collapses the whole hillside... A conservative mindset is essential. Big objectives should wait until late spring or next season... Think carefully about the terrain you plan to ride... Come home alive.”

Avalanche activity peaked with a widespread deep slab avalanche cycle in February. More snow followed and there was steady avalanche activity through April. For the first winter since 2012-13 there were zero avalanche fatalities in southwest Montana.

On September 21 the first 9” of snow in the mountains was enough to create small wet loose avalanches when the sun came out. By the start of November settled snow depth was 1-1.5 feet (30-50 cm) near West Yellowstone, Big Sky and in the Bridger Range, and 2-3 feet (60-90 cm) in Hyalite and Cooke City. The mountains got 1-2 feet of snow at the start of November followed by dry, warm weather through Thanksgiving. The shallow snowpack became weak and faceted with various crusts.

We began daily forecasts on November 30. The mountains got 2-4 feet of snow over the first couple weeks of December, then were mostly dry until the New Year. During the second half of December avalanche danger was Low in the mountains near Bozeman and Moderate elsewhere. Near West Yellowstone heavy snow on Christmas Day spiked danger to High for a day. To start 2020 the mountains throughout our area received steady snowfall which brought danger to High and Considerable on January 2.

Through January 9 there had been six days with High danger somewhere, and 15 days with Low danger in the mountains near Bozeman. Near West Yellowstone, Big Sky and Cooke City danger was at least Moderate every day through mid-February, except one day with Low danger near Cooke City.

Small storms slowly increased the snowpack’s total snow water equivalent (SWE) 50-80% from January 1 to January 20. Loading events were relatively small storms followed by steady wind. This kept slopes from breaking all at once in a widespread natural avalanche cycle--, but kept weak layers sensitive to human triggers and maintained heightened avalanche danger.

We saw three snowmobile triggered avalanches with crowns 10-15 feet deep during the first half of January. There were more than 50 avalanches reported over the first 20 days of 2020. As the snow piled up there were eventually fewer warning signs like collapsing or natural avalanches, but the snowpack structure remained poor and human triggered avalanches continued to break deeper and larger. Most avalanches were triggered on persistent weak layers near the ground and on heavily wind loaded slopes. The biggest were on slopes where many small snowstorms were drifted into thick, heavy slabs by strong southwesterly winds.

We issued our first and only avalanche warning of the season on February 6 and 7 at the start of a storm that dropped 3-4 feet of snow equal to 3-4” of SWE over four days. Danger was high near Bozeman and Big sky through February 10. Snow and wind continued the following week and a widespread deep slab avalanche cycle occurred in the Bridger Range, Hyalite and near Big Sky. From February 6-18 we recorded 98 avalanches. Danger dropped to Low near West Yellowstone on February 18, and near Bozeman and Big Sky remained Considerable or Moderate until March 9.

On February 27 a snowcat grooming a trail between Bozeman and Big Sky triggered a slide which rolled and badly damaged the vehicle with no serious injury to the operator. The avalanche broke on weak, sugary snow on the ground, and was on a low elevation slope (7800', W aspect) with a relatively shallow, 2-4 foot deep snowpack.

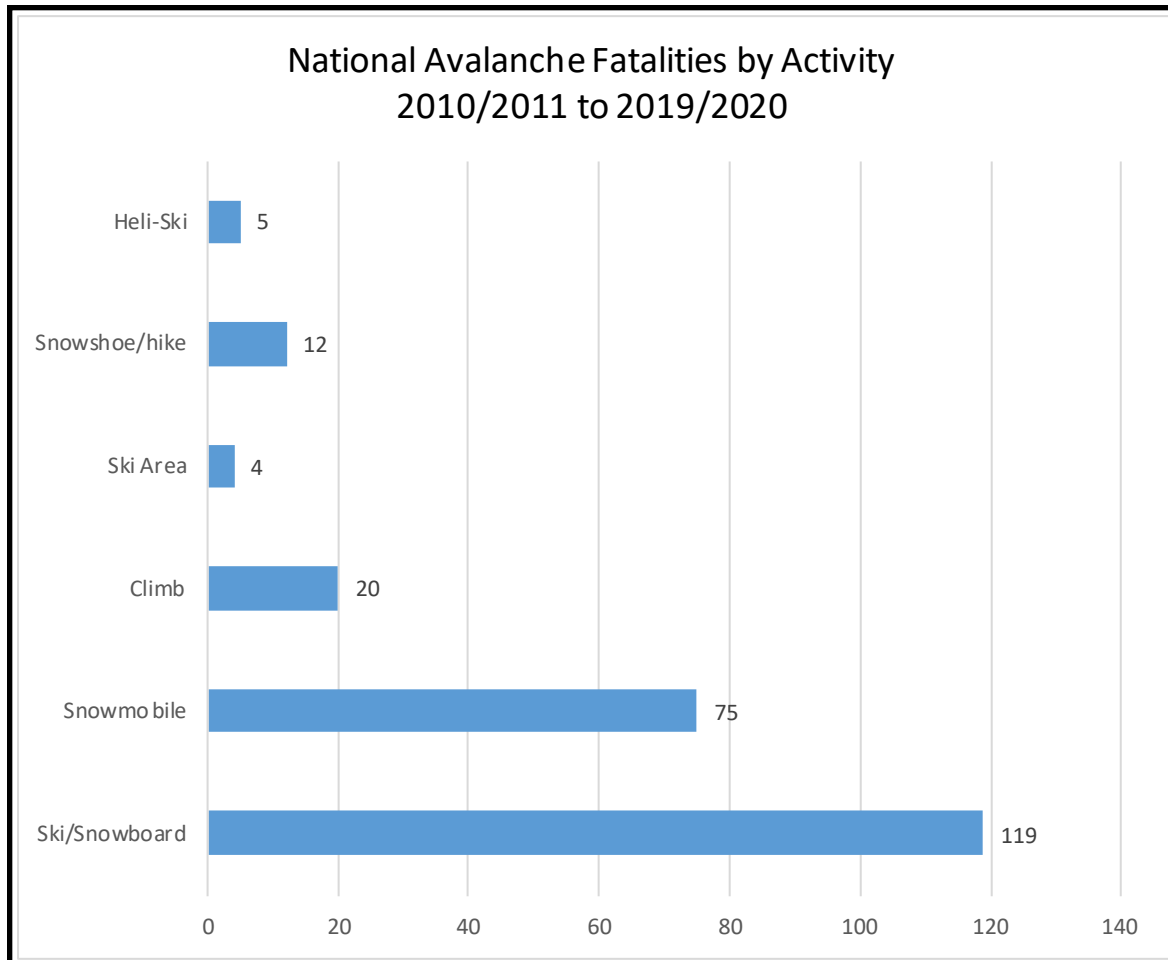
Through March avalanches mostly involved snow from recent storms, and at the end of the month a crust/facet/surface hoar persistent weak layer buried 2-3 feet deep was reactive for a few weeks.

As of mid-April, we have not had a significant warm up or extended above freezing temperatures to induce deeper wet slab avalanches. Temperatures have been generally cool and maintained most of the snowpack. Wet snow avalanche activity has been limited to mostly wet loose slides 1-2 feet deep. There is still a chance for very large wet slabs to fail on weak layers at the base of the snowpack during the spring thaw. The snowpack will melt more with each sunny day, and there is sure to be a few more storms. We expect wet snow and new snow avalanche activity to continue through May.

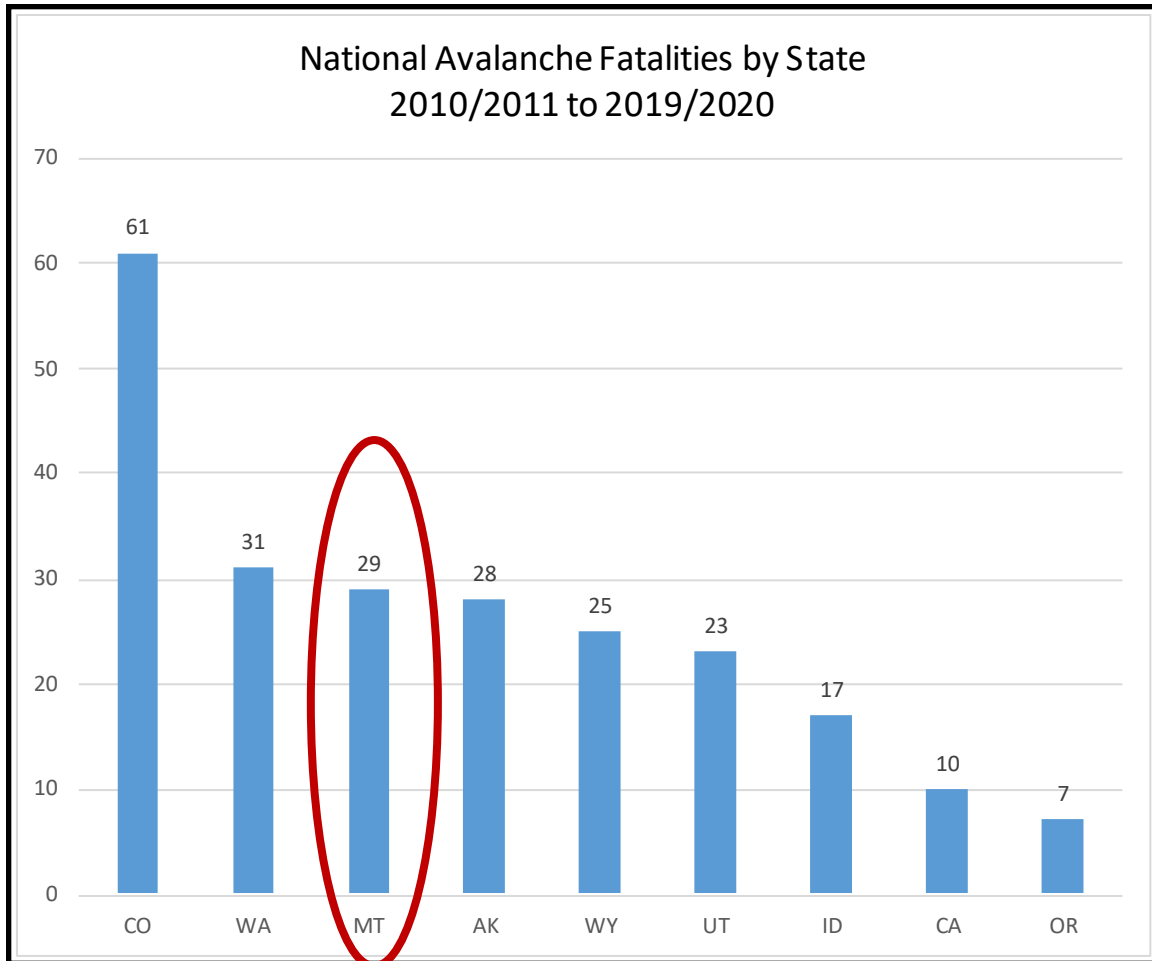




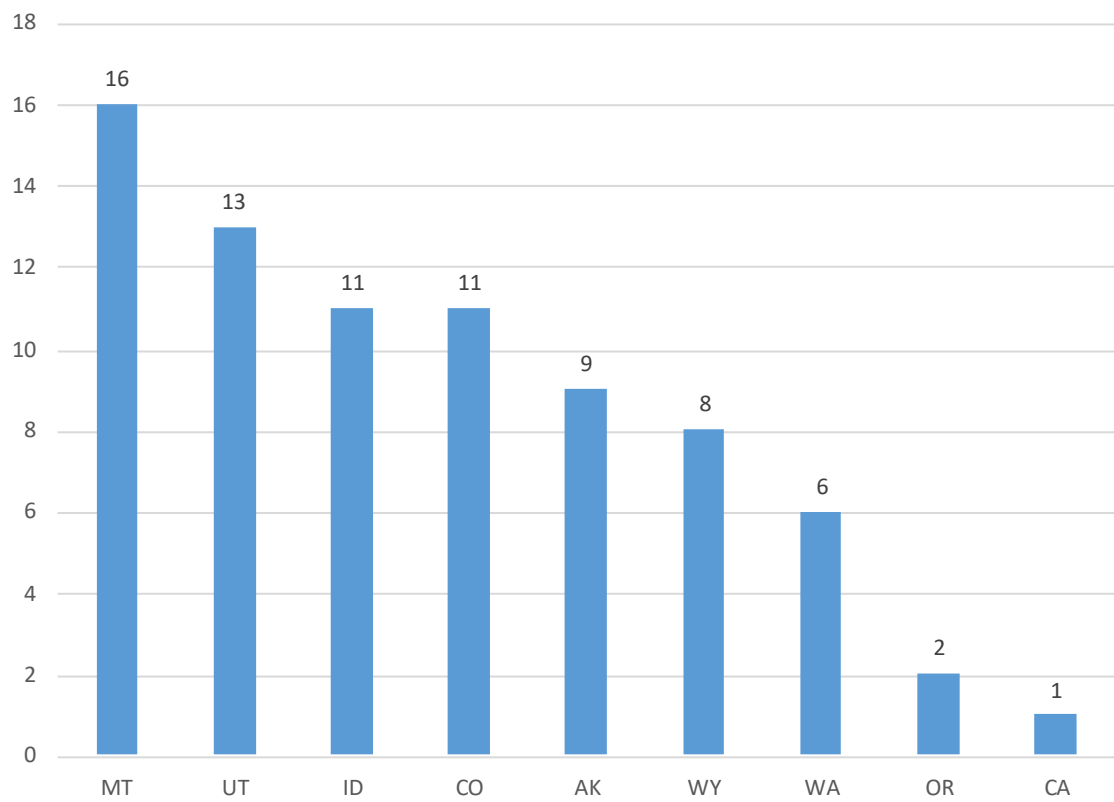
## AVALANCHE INCIDENT GRAPHS: 10 YEARS



National Avalanche Fatalities by State  
2010/2011 to 2019/2020



Snowmobiler Avalanche Fatalities by State  
2010/2011 to 2019/2020



AVALANCHE EDUCATION:

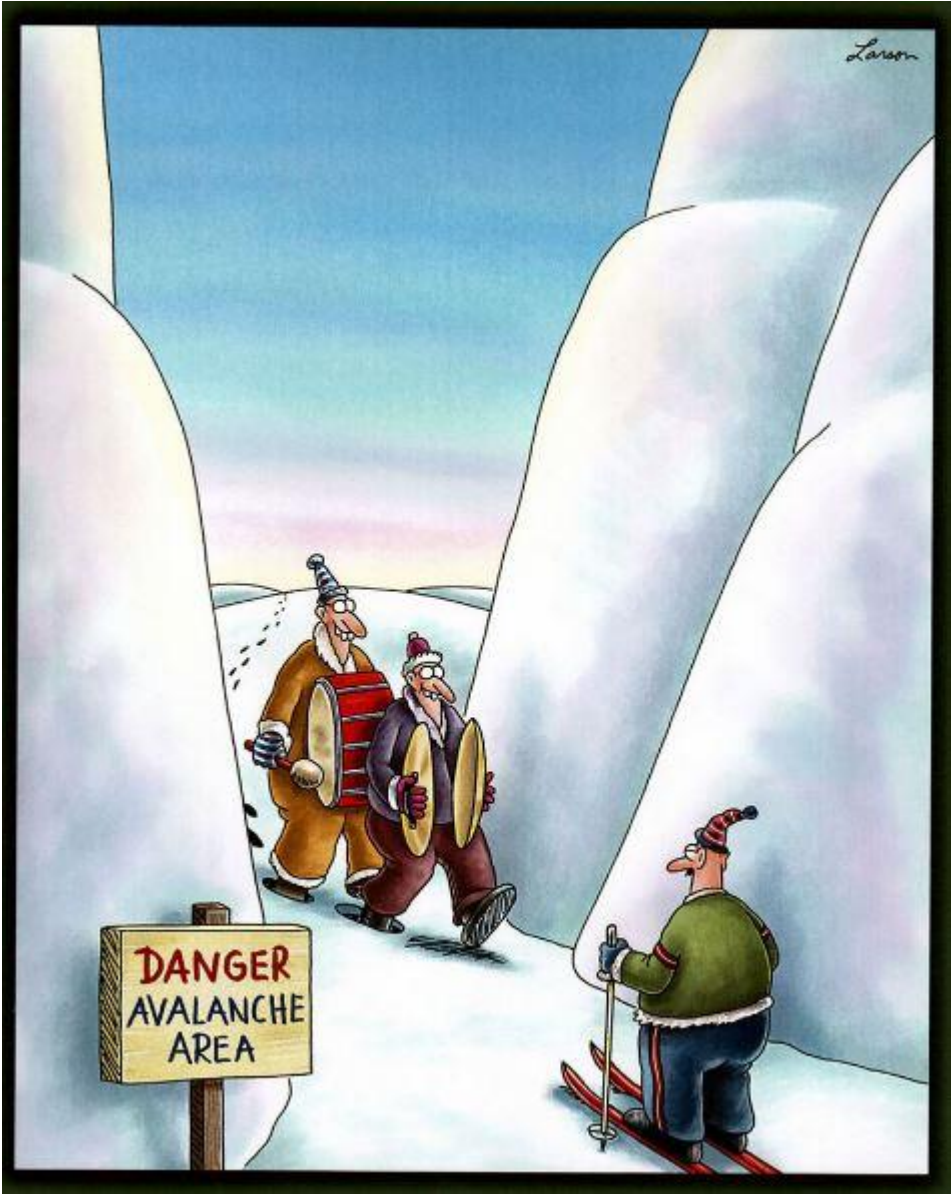
TOTAL: 4,240 (995 KIDS; 978 SNOWMOBILERS)

<b>Date</b>	<b>Instructor</b>	<b>Group/Topic</b>	<b>Total</b>
10/9/19	Zinn, Chabot, Marienthal	MSU SAW	350
10/21/19	Chabot	National Avalanche School	135
11/4/19	Redfield	Big Sky Middle School	17
11/5/19	Greeno, Regan	Big Sky Middle School	17
11/6/19	Regan	KBYG @ The Basecamp Helena	45
11/6/19	Darham	KBYG @ REI Bozeman	40
11/7/19	Olsen	KBYG @ Langford Hall, MSU	30
11/8/19	Greeno, Ramos	Ullr Fest	150
11/12/19	Darham	KBYG @ MT Ski Tuning & Boot Fitting	16
11/13/2019	Maily	Education Program Intro: Splitboard Film	70
11/13/2019	Greeno	KBYG @ Bob Ward's - Staff Training	16
11/14/2019	Olsen	KBYG @ Uphill Pursuits	50
11/14/19	Antonioli	KBYG @ South Hedges, MSU	25
11/19/19	Regan	KBYG @ The Basecamp Billings	55
11/19/19	Olson	KBYG @ Redline Sports Butte	19
11/19/19	Greeno	KBYG @ Round House Bozeman	68
11/21/19	Olsen	KBYG @ The Mountain Project	25
11/22/19	Greeno	Backcountry Film Fest	30
11/23/2019	Gidley, Steckmest	KBYG + Rescue (6 hrs) Helena Snowdrifters	35
11/26/2019	Maily, Regan, Zitzer, Marsh- ell, Schauer, Redfield, Birke-	KBYG, Avy Board, Beacon Park @ CJMS	120
11/29/2019	Olson	Cooke City Update and KBYG	2
11/30/2019	Olson	Cooke City Rescue Training Round Lake	0
12/2/2019	Greeno	Park High School Awareness	35
12/3/2019	Greeno	Bozeman High School	12
12/3-5/2019	Chabot, Redfield, Zavora	Cooke City Level 1 - Motorized	9
12/4/19	Greeno	Bozeman High School	20
12/4/2019	Ian, Alex, Andrew, Dave	ASMSU Intro to Avalanches	250
12/5/2019	Greeno	Capital High School Helena - KBYG	48
12/6/2019	Schauer	PSIA Fall Fest - KBYG	6
12/6/2019	Olson	Cooke City Update and KBYG	4
12/7/2019	Olson	Cooke City Rescue Training Round Lake	4
12/9/2019	Zinn, Norlander	West Yellowstone Guide Class	38
12/9/19	Greeno	KBYG @ Manhattan High School (Public)	14



12/10/19	Greeno	KBYG @ Helena High School	53
12/11/2019	Darham	KBYG @ REI Bozeman	21
12/11/2019	Regan	Ice Fest Booth	5
12/12/2019	Greeno, Alloway	KBYG @ Lone Peak High School	75
12/12/2019	Jonas	KBYG @ Story Mill Community Center	25
12/13/2019	Larson	Cooke City Update and KBYG	15
12/14/2019	Larson	Cooke City Rescue Training Round Lake	15
12/15/2019	Schauer	Beacon Rescue and Update @ BBowl Ski	21
12/17/2019	Olson	KBYG @ Elevated Powersports Billings	50
12/18/2019	Darham	KBYG @ Uphill Pursuits	22
12/19/2019	Greeno	KBYG @ Choteau High School (public)	57
12/20/2019	Regan, Zitzer, Freeman, Allo-	KBYG, Avy Board, Beacon Park @ CJMS	130
12/20/2019	Regan	KBYG: Bridger Ski Foundation Athletes	57
12/21/2019	Regan, Freeman, Maily, Roe	BSF Field Session Intro to Avalanches	35
12/27/2019	Olson	Cooke City Update and KBYG	12
12/28/2019	Olson	Cooke City Rescue Training Round Lake	7
1/3/2020	Olson	Cooke City Update and KBYG	15
1/4/2020	Olson	Cooke City Rescue Training Round Lake	5
1/4/2020	Smith	KBYG: Holiday Inn West Yellowstone	10
1/4/2020	Freeman, Schauer	Field Session: BSSEF	10
1/5/2020	Freeman, Schauer	Field Session: BSSEF	12
1/7/2020	Freeman	Women's KBYG: Story Mill Community Cen-	7
1/8/2020	Darham	KBYG: REI	26
1/9/2020	Freeman	KBYG: Grizzly Outfitters	6
1/10/2020	Marienthal	FS snow rangers, snowpack update	11
1/10/2020	Regan	CRC: REI	16
1/10/2020	Andy, Quint	Cooke City Update and KBYG	15
1/11/2020	Andy, Quint	Cooke City Rescue Training Round Lake	20
1/11/2020	Zolynski	Info Booth: Winter Moon Fest Butte	40
1/12/2020	Regan	KBYG: Women of Winter @ SHINE	20
1/15/2020	Zolynski	KBYG: 5518 Designs Butte	32
1/15/2020	Dunn	KBYG: UM Western Dillon	12
1/15/2020	Zinn, Schauer, Marienthal	ASMSU Intro to Avalanches	162
1/17/2020	Marienthal	Bozeman FS LEO meeting	20
1/17/2020	Gidley	Cooke City Update and KBYG	6
1/18/2020	Gidley	Cooke City Rescue Training Round Lake	44
1/18/2020	Zolynski	KBYG: Snowflinga (Whitehall)	50
1/19/2020	Chabot	Cooke City Update and KBYG	11
1/21/2020	Zolynski	KBYG: NW Energy Butte	60
1/21/2020	Zolynski	KBYG: NW Energy Butte	107
1/21/2020	Zolynski	KBYG: Butte SAR 15-90	32

1/22/2020	Lucas Z	Avy Rescue: GCSAR	32
1/24/2020	Greeno	Anderson School Avalanche Program	56
1/24/2020	Regan	CRC: Backcountry Squatters	24
1/24/2020	Maclean	Cooke City Update and KBYG	5
1/25/2020	Maclean	Cooke City Rescue Training Round Lake	30
1/25/2020	Zolynski	KBYG: Anaconda SAR	20
1/25/2020	Norlander	KBYG: Holiday Inn West Yellowstone	6
1/25/2020	A. Norlander/Yates	GVSA Poker Ride, Beacon Park	60
1/26/2020	Zolynski	KBYG: Rudy Deerlodge SAR	18
1/26/2020	Lucas, Ladean, Regan	Avy Rescue: GCSAR	25
1/27/2020	Roe, Marshall	Montana Science Center: Avy Board Demo	25
1/28/2020	Mailly	KBYG: Carroll College	20
1/29/2020	Hoyer	Avalanche Myth Busters: Uphill Pursuits	50
1/29/2020	Dunn	Intro to Avalanches: UM Western	11
1/30/2020	Regan	Intro to Avalanches: Livingston	32
1/31/2020	Marienthal	Cooke City Update and KBYG	11
1/31/2020	Regan	CRC: She Jumps @ REI Bozeman	24
2/1/2020	Smith	KBYG: Holiday Inn West Yellowstone	11
2/4/2020	Regan	Sidecountry Awareness: Beall Community	10
2/5/2020	Darham	Women's KBYG: REI Bozeman	6
2/7/2020	Regan	CRC: REI Bozeman	15
2/7/2020	Reed	Cooke City Update and KBYG	10
2/10	Marshall	KBYG: Bozeman YMCA	4
2/10/2020	Alloway	KBYG: Lone Peak Middle School	40
2/11/2020	Redfield	KBYG: Lone Peak Middle School	40
2/11/2020	Greeno, Alloway	KBYG: Park High School, Livingston	150
2/12/2020	Madsen, Regan	Intro to Avalanches: YNP	11
2/14/2020	Lucas Z	Cooke City Update and KBYG	20
2/15/2020	Lucas Z	Cooke City Rescue Training Round Lake	35
2/15/2020	Dunn, Steckmest	Beaverhead SAR	12
2/15/2020	Regan	Stillwater, Sweet Grass SAR	14
2/20/2020	Marshall	Morning Star STEM EXPO	50
2/21/2020	Youngbar	Cooke City Update and KBYG	7
2/21/2020	Regan	CRC: MSU Backcountry Club	21
2/22/2020	Norlander	KBYG: Holiday Inn West Yellowstone	4
2/22/2020	Olson, Regan	Red Lodge SAR: Intro to Avalanches	14
2/23/2020	Olson, Regan, Gidley	Red Lodge SAR: Field Session	14
2/28/2020	Youngbar	Cooke City Update and KBYG	0
2/28/2020	Regan	SplitFest Field	6
2/28/2020	Lucas Z	SplitFest Rescue Training	15
3/4/2020	Alloway, Zitzer, Roe	Beacon Park: Headwaters Academy	23
3/4/2020	Dunn	KBYG: Kenworthy Electric Sheridan	11
3/4/2020	Regan	KBYG: REI Bozeman	19
3/6/2020	Regan	CRC: She Jumps @ REI Bozeman	8
3/6/2020	Larson	Cooke City Update and KBYG	11
3/7/2020	Larson	Cooke City Rescue Training Round Lake	20
3/9/2020	Regan	Lone Peak Middle School	14
3/10/2020	Regan	Lone Peak Middle School	16
3/12/2020	Regan	KBYG: Basecamp Billings	11
3/13/2020	Zinn	Cooke City Update and KBYG	15
3/14/2020	Zinn	Cooke City Rescue Training Round Lake	30





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