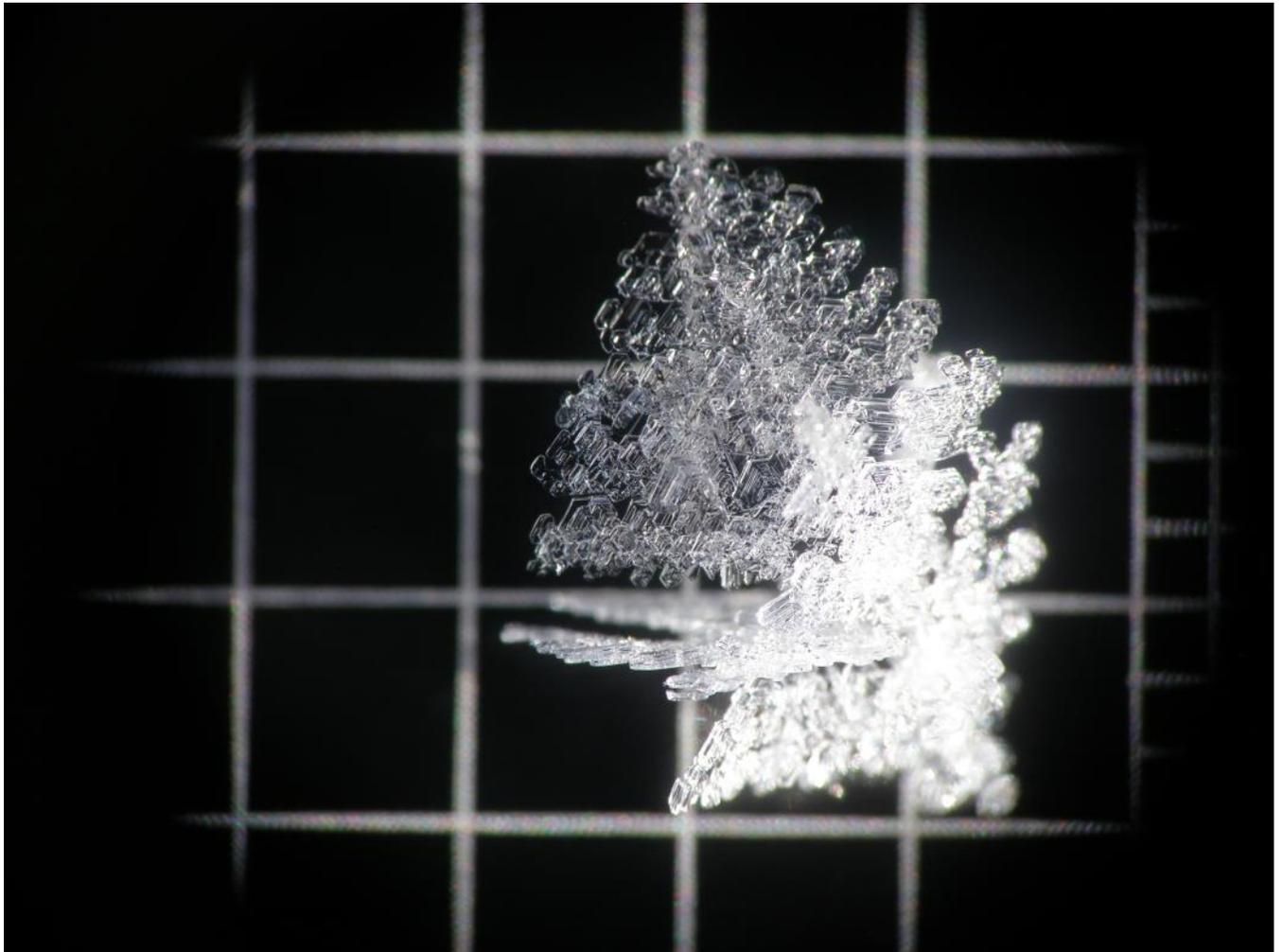


2014-15 ANNUAL REPORT



GALLATIN NATIONAL FOREST AVALANCHE CENTER



COOKE CITY MOTORSPORTS
BRIDGER BOWL
YC COMMUNITY FOUNDATION
GALLATIN SUBARU

Grizzly Outfitters
Mystery Ranch
Montana Ale Works
Community Food Coop

ASMSU Outdoor Recreation
Alpine Orthopedics
Javaman
Buck Products
Outlaw Partners
Gallatin Valley Snowmobile Association
Upper Yellowstone Snowmobile Club
World Boards
Bountiful Table
Lone Peak Brewery
Northern Lights Trading Company
Ticket River
ISMA

Bozeman Ski Guide
Edward Jones
Spark R&D
Cliff Gullett Memorial Fund
Montana Telemark Cooperation
Cooke City Bearclaw/Super 8
Soda Butte Lodge
Gallatin Roller Girlz
Gallatin County SAR
Polaris Industries
Select Stone
Phillips 66, Billings

Report by: Doug Chabot, Mark Staples, Eric Knoff

PO Box 130, Bozeman, MT 59771

mtavalanche@gmail.com/406-587-6984

Cover photo from the Yellowstone Club Ski Patrol of a large surface hoar crystal that formed mid-January.



2014-15 ANNUAL REPORT GALLATIN NATIONAL FOREST AVALANCHE CENTER

APRIL 2015

Season Summary

What a strange year it has been. We started strong with many storms and early season snow, followed by spring weather in February and March and then one of the biggest snowfalls of the season the day we closed. Go figure. Although skiing and snowmobiling conditions were bipolar, the snowpack was generally stable with more days of "Low" avalanche danger than any of us can remember.



This was our 25th season, a Silver Jubilee Anniversary year, which began with our first Avalanche Information bulletin on November 10 and was followed by the first skier triggered avalanche on November 20. Daily Avalanche Advisories began with an Avalanche Warning the day before Thanksgiving, November 26, after three feet of snow fell in the mountains. That same day a snowmobiler was killed in an avalanche near Cooke City, the first avalanche fatality this season in the nation. On the last weekend of the season a skier died after a small avalanche pushed him over a cliff on Beehive Peak in the northern Madison Range. These two tragedies were bookends to a relatively quiet winter. We issued 140 daily avalanche advisories including six days of avalanche warnings.

Along with issuing avalanche advisories we also prioritize avalanche education. Safety is the US Forest Service's first priority for the National Recreation Program and we do our best to reach as many people as possible through our advisories and classes. This year, with help from the Friends of the Avalanche Center (FOAC), we taught a record number of courses.

Instead of using generic adjectives like more, most or many, I'll put numbers to the relevant information regarding our work this season.

GNFAC Index

- Number of people who get our daily avalanche advisory: 4,559
- Total number of avalanche classes and attendees: 102 and 5,652
 - Number of snowmobile classes and participants: 32 and 984
- Number of kids: 1,132
- Number of YouTube videos and views this year: 58 and 59,000
 - Total number of videos and views since our first video in 2006: 409 and 1,112,416
- Number of avalanche incidents: 43
 - Number of people caught, buried and killed: 8, 4 and 2
- Number of days volunteers partnered with us in the field: 71
- Number of field days Doug Chabot crossed his ski tips and face-planted: 3
 - Number of times he did this in front of other forecasters: 1

Inside this issue:

<i>Advisories / Incidents</i>	4
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GNFAC Index Con't

- Number of Avalanche fatalities in the US this year: 9
 - Number who were snowmobilers, skiers/snowboarders and climbers: 2, 6 and 1
- Number of Facebook “likes” and Twitter followers: 4,154 and 1,575
- Advisories that mentioned a “Low” avalanche danger somewhere in the forecast area: 80
- The best snowmobiler among the forecasters: Mark Staples
 - The forecaster who did the most damage to the sleds: Mark Staples
- Number of times Eric Knoff locked himself out of the office: 6
 - Percentage increase from last year: 100%
- Articles the GNFAC wrote for outside publications: 12
- Number of media interviews the GNFAC gave: 43

Avalanche Advisories

THIS WINTER
4,559 PEOPLE A
DAY ACCESSED
OUR AVALANCHE
ADVISORY.

Our daily avalanche advisories are the cornerstone of the GNFAC. Every morning all season, one of us shows up at 4 a.m. to look at the weather, read the field reports and craft a memorable, accurate assessment of the snow stability. We issued 140 advisories this season, beginning November 26th with an Avalanche Warning and ending April 16th. Some days the advisory is easy to write while other days are challenging, but by 7:30 a.m. it is distributed for all to read or hear. This year an average of 4,559 people received the advisory each day, most via email (3,820), others from the web page (681) and the remainder calling our hotline (28) or getting a fax (30). Many people get the advisory on the GNFAC app, but these numbers are not tallied since we cannot tell who reads it each day. Next season we will work closely with NSA surveillance to get these numbers (just joking!). So far the iOS app had 699 downloads and the Android had 893.

47% of our users access the advisory on their desktop, the first time it has fallen below half. Smartphone use has soared to 44%, a 10% jump from last year, while tablets are 9%. iPhones and iPads make up the bulk of these mobile devices measuring 68% of the use versus Android's 32%.

Contrary to the myth that folks only digest sound bite information, we are happy to report that people actually read our advisories. They average 2:47 minutes on the advisory page, about as long as it takes to voice record it.

YouTube

The more videos we make, the more convinced we are that if people only watched our videos and never read the advisory they would get enough valuable information to make good decisions in the backcountry. Our videos are part of the “show and tell” package of information we provide in the daily advisories. This season we made 58 videos that were viewed over 62,000 times. Since we made our first video in 2006 we have a library of 408 videos that breached the million view mark in October.



Facebook, Twitter and Instagram

Facebook, Twitter and Instagram continue to be popular vehicles for us to get the avalanche message out. We post our advisories every morning and give updates in the afternoon, both of which drive people to our website. Facebook dominates the social media world and we currently have 4,160 “Likes” that “Reached” 247,000 people during the advisory season. We don’t really know what a “reach” is but we do like the big number! Our Twitter account has 1,575 followers while Instagram has 1,405. The three social media outlets allow us to reach a wider and more diverse audience about the avalanche message of the day.

Media

Traditional print and television media remain an important part of getting avalanche information out to the public, especially during dangerous times. This season we had 16 print media requests and 27 television interviews, which included National Geographic and Powder Magazine. The local TV stations (KBZK, KTVM and ABC FOX) were a reliable partner in our ongoing messaging campaign.

Avalanche Articles

We write avalanche articles for publication on a regular basis. These are typically 700-1,000 words printed in the *Montana Snowmobile News*, the *Bozeman Daily Chronicle* and *The Avalanche Review*. This year we wrote 12 articles, all of which are posted on our Blog page of the website. The top three articles were “Sidecountry Rated-R”, “Human Factors and Digging” and “Some Thoughts on Surface Hoar”.

THIS SEASON WE
MADE 58 VIDEOS
THAT WERE
VIEWED 62,000
TIMES.



Avalanche Incidents

Avalanche Incidents are defined as someone triggering an avalanche unintentionally. This season 43 incidents were reported to us, most involving small avalanches, but even small avalanches can be deadly. Out of these 43 incidents eight people were caught, four were buried (2 full burial and 2 partial burials) and two

were killed. The first fatality occurred on the first day of the season, November 26th. In addition to the day’s advisory we also issued an Avalanche Warning that morning since the mountains were covered with three feet of snow. Unfortunately a snowmobiler was killed outside of Cooke City that day. On the last weekend of the season a skier died when he was

pushed off a cliff by a small avalanche on Beehive Peak in the northern Madison Range. These two tragedies bracketed a relatively quiet season.

Over the last ten years Montana is ranked second in the nation in avalanche fatalities and first in snowmobiler avalanche fatalities, a distinction that does not make us happy. The first snowmobile avalanche fatality in the U.S. occurred in 1992 in Cooke City. Since then there have been 18 snowmobiler fatalities in Cooke City making it the deadliest piece of avalanche real estate in the U.S. Forest Service. Pages 14 and 15 have graphs showing the last 10 years of avalanche incidents grouped by activity and state.

Avalanche education and awareness are the best methods of keeping people alive and we continue to broaden our efforts to capture those most at risk. Pages 16 and 17 have a table of all incidents.

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SERVICE.

Avalanche Education

The GNFAC and Friends of the Avalanche Center work in tandem to provide avalanche education to the public.

Our goal is to accommodate all requests no matter the age or user group. Skiers, snowboarders,

snowmobilers,

snowshoers, climbers, and motorized snow bikers are all welcome. This winter we offered 102 classes to 5,652 people. One in four were kids and one in five were snowmobilers. Our most popular class is the *Avalanche Awareness Class with Field Session* through ASMSU. Hundreds attended to get an in-depth education in avalanches during two evening sessions and an all-day field session. A table on page 18 lists all our classes this winter.

Alex Marienthal is our education coordinator with responsibility for booking and staffing all the classes as well as teaching when he is not ski patrolling. We are also grateful for the work of Mark Greeno, a retired college outdoor educator. He designed and taught a popular avalanche class at Bozeman High School as well as made the rounds at Livingston High School, Hawthorne School, and Cooke City. He has rejuvenated our avalanche awareness program for kids and we are very excited about what he has up his sleeve for next year.

This April we hosted the 6th *Professional Development Workshop for Avalanche Professionals*. This one-day event featured six avalanche professionals, each with decades of avalanche experience, talking about “What I would tell myself as a 25 year-old rookie”. Over 60 professionals attended from Montana, Idaho, Oregon, Alaska, Utah and Wyoming. The lectures were filmed and are posted on our YouTube channel for everyone to watch.



Digging snowpits during the ASMSU Basic course.



Finances of the GNFAC

Custer Gallatin National Forest (CGNF): 124,420

The CGNF provides the Avalanche Center with 62% of its funding covering benefits, travel, vehicles, computers office space and 80% of our overall salaries. We rely on other sources for the shortfall, namely our long-term supporters listed below.



WE TAUGHT 102
 AVALANCHE
 CLASSES TO
 5,652 PEOPLE;
 ONE IN FOUR WERE
 KIDS.

The Friends of the Avalanche Center: \$50,929

The Friends cover expenses related to the avalanche education program, as well as administrative, snowmobile, weather station and website costs.

Montana Fish, Wildlife and Parks: \$45,000

Gallatin County Search and Rescue: \$4,000

Friends of the Avalanche Center

The Friends of the Avalanche Center is a nonprofit organization whose mission is to financially support the work of the Avalanche Center. They were founded in 1992 and have donated over \$406,000 since then. This year their total contribution to the GNFAC was \$50,929. Almost all the monies came from local businesses and individuals in southwest Montana with the following being long term, recurring support:

- 16th Annual Powder Blast: \$29,584

- Yellowstone Club Community Foundation: \$8,000
- 13th Annual King and Queen of the Ridge at Bridger Bowl: \$8,600
- 7th Annual Avalanche Dinner at Montana Ale Works: \$2,382

The Board of Directors represents a varied slice of the winter recreating community. They are a volunteer board with two part-time staff, the Education Coordinator and Treasurer, both paid hourly. They are a lean, effective and backcountry savvy group led by Board President Jeannie Wall. They include: Laura Jones (Treasurer), Laura Ryan (Secretary), Ben Nobel, Alex Marienthal, Adam Knoff, Ben Zavora, Mark Greeno and Dawn Brown.

Where the Friends money got spent:

Avalanche Education Program: \$37,457

The Avalanche Education Program is funded by the Friends. They started helping the GNFAC manage the teaching load in 2002, but it has grown into an impressive program employing 20 instructors who teach 75% of all the avalanche classes. The costs associated with running the program include liability insurance, payroll, lodging, teaching supplies, beacon checkers and beacon parks.

GNFAC Support: \$13,472

The Friends financial support falls into four categories:

- General Support: \$4,733
 - General support are the things outside our normal operation: an iOS and Android app, GPS units, software, avalanche safety brochures, educational materials, beacons, office supplies, editing services, email subscription fees.
- Snowmobiles: \$2,727
 - Cooke City Motorsports secured us two snowmobiles again this year, a Yamaha Viper and Nytro MTX. The Friends paid for maintenance, insurance and repairs.
- Weather Stations: \$2,754
 - The Friends pay for the repair, upkeep and annual installation of our four weather stations located up Hyalite Canyon, in Taylor Fork, on Lionhead and at Lulu Pass outside Cooke City.
- Website Maintenance: \$3,258

Donated Labor and Equipment

The Avalanche Center would not be able to operate at its current level without the local community donating time, expertise and equipment. When it's all added up their donated work totals \$35,960. These donations reflect a dollar estimate of what it would cost to hire people or buy/rent equipment.

Field Volunteers/Observers

It's not possible for the three of us to always go in the field with each other so we rely on a team of skilled volunteers to be our partners. Volunteers donated 71 field days to the GNFAC, the equivalent of one half-time position. These folks are our peers with many being

38% OF OUR
ANNUAL BUDGET
COMES FROM
THE FRIENDS OF
THE AVALANCHE
CENTER AND
MONTANA FISH,
WILDLIFE AND
PARKS.



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



Mark checking out a slope that collapsed.

Bridger Bowl ski patrols for their daily observations.

We also had a part-time intern this season, Nina Hance, who helped us in the field and in the office. She is Level 3 avalanche certified, is a cat and heli-ski guide in Alaska and is pursuing her AMGA certification. Although we were disappointed that she did not wax and tune our skis, she was quick to dig a hole, could out ski us, and professionally recorded all our snowpits which secured her intern position for next year.

Cooke City Motorsports and Yamaha

Shannon and Mona Abelseth, owners of Cooke City Motorsports, make sure we have snowmobiles to ride every year. They secured us two new snowmobiles, a Yamaha Viper and Nytro this season. A large part of our job requires field work on snowmobiles and we could not do our jobs without their dedication and generosity.

VOLUNTEER LABOR(billed at \$15/hour):

NRCS	\$3,600
Big Sky Ski Area (~175 hours)	\$2,625
Bridger Bowl Ski Area (~130 hours)	\$1,950
Yellowstone Club (~130 hours)	\$1,950
National Weather Service (121 hours)	\$1,815
Volunteer observers (~500hours)	\$7,500
Field volunteers (568 hours)	\$8,520

EQUIPMENT RENTAL (Contributed):

Cooke City Motorsports and Yamaha (two sleds loaned):	\$8,000
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TOTAL	\$35,960
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OVER \$37,457
WAS SPENT BY
THE FRIENDS ON
AVALANCHE
EDUCATION.

Income

Income

Montana FW&P Rec Trails Program

◆ RTP 2014 \$23,970

Friends of the Avalanche Center

◆ Avalanche Education Program \$37,457

◆ General Support \$4,733

◆ Snowmobile Expenses \$2,727

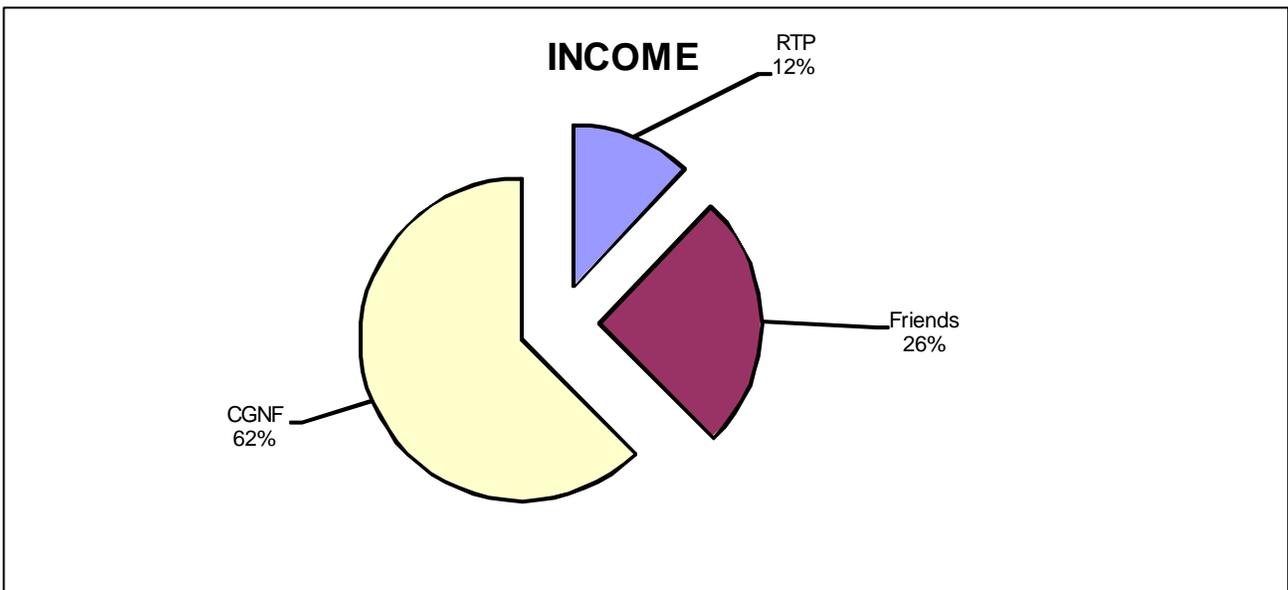
◆ Weather Stations \$2,754

◆ Website Development \$3,258

TOTAL OUTSIDE CONTRIBUTIONS (Non-Gov) \$74,899 (38%)

TOTAL CUSTER GALLATIN NATIONAL FOREST CONTRIBUTION \$124,420 (62%)

TOTAL INCOME \$199,319 (100%)

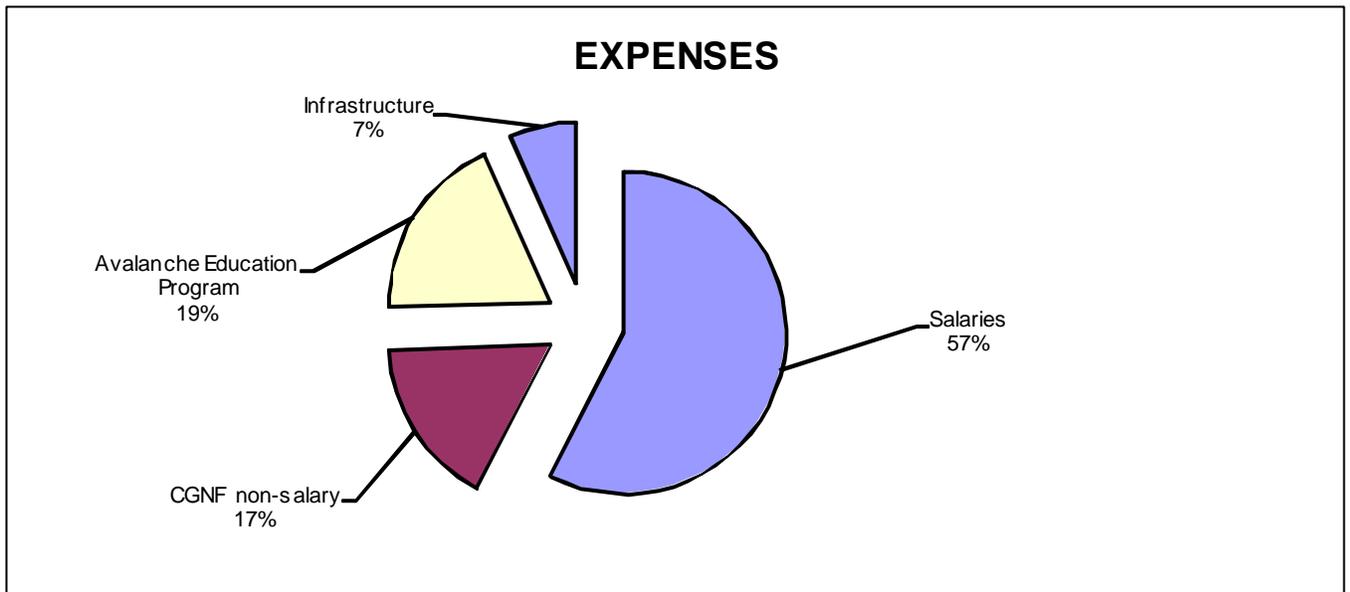




Expenses

Expenses

Salaries/OT/Benefits	<\$114,690>
CGNF <\$90,720>	
RTP <\$23,970>	
Office space vehicles, travel, gas (CGNF)	<\$33,700>
Avalanche Education Program (Friends)	<\$37,457>
Infrastructure (Friends)	<\$13,472>
Weather Stations <\$2,754>	
Website Development <\$3,258	
Snowmobiles Expenses <\$13,472>	
Avalanche gear, supplies, AV equip <\$4,733>	
<hr/>	
TOTAL EXPENSES	<\$199,319>





Measuring fracture speed using high definition cameras.

Snowpack and Weather Summary

It was a strange winter in terms of weather but, fortunately, the snowpack was generally stable and the avalanche danger frequently Low. A combination of lower than normal snowfall and generally warm conditions contributed to stable conditions.

The season didn't start with stable conditions. Total snow depths in early November were 10-16 inches of snow near Cooke City and West Yellowstone and half this amount in other areas. In the second week of November four days of very cold weather (-20 F) faceted this snow. By the fourth week of November heavy snowfall overloaded these facets and a snowmobiler died near Cooke City in an avalanche breaking at the ground during an Avalanche Warning. During that week the mountains near Cooke City received 5.6 inches of snow water equivalent (SWE), near Bozeman 3-4 inches of SWE, and near Big Sky and West Yellowstone 2 inches of SWE. We issued Avalanche Warnings on three separate days during that snowfall.

A dry period in the second week of December formed a layer of surface hoar and/or near surface facets. These were capped by snowfall in the third and fourth weeks when 1-1.5 inches of SWE and 2-3 inches of SWE fell respectively. Another Avalanche Warning was issued on Christmas Day. A four day period of high pressure at the end of the month formed another layer of surface hoar. This layer was capped by another storm in the first full week of January when Cooke City and the Bridger Range got 3.5 inches of SWE while all other places received 2 inches. Avalanche Warnings were issued on January 5 and 6. By this time facets near the ground were no longer a problem; instead, weak layers in the middle of the snowpack were producing avalanches but their distribution was not widespread.

One notable weather factor in January was a lack of wind. There was also a bit of rain at the onset of the early January storm. Warm weather returned near the end of the month with 2



nights of above freezing temperatures on January 25 and 26.

Very strong winds returned February 5 and 6 knocking over large trees at Bridger Bowl and closing the ski area for a day. The second week of February had decent snowfall in the mountains but drenching rain in valleys. The rest of February had some snow and generally warm weather. March was drier and warmer and wet snow avalanches were the main problem, especially during a three day period in the middle of the month when the snowpack didn't refreeze at night. Fortunately, the melting and refreezing process happened gradually enough that the snowpack adjusted without any big, wet, loose avalanches and no wet slab avalanches. April came with colder temperatures and two decent storms around April 6 and April 11. Unfortunately, strong winds on April 11 formed a small wind slab that avalanched and killed a skier in the Hanging Garden Couloir on the north side of Beehive Peak.

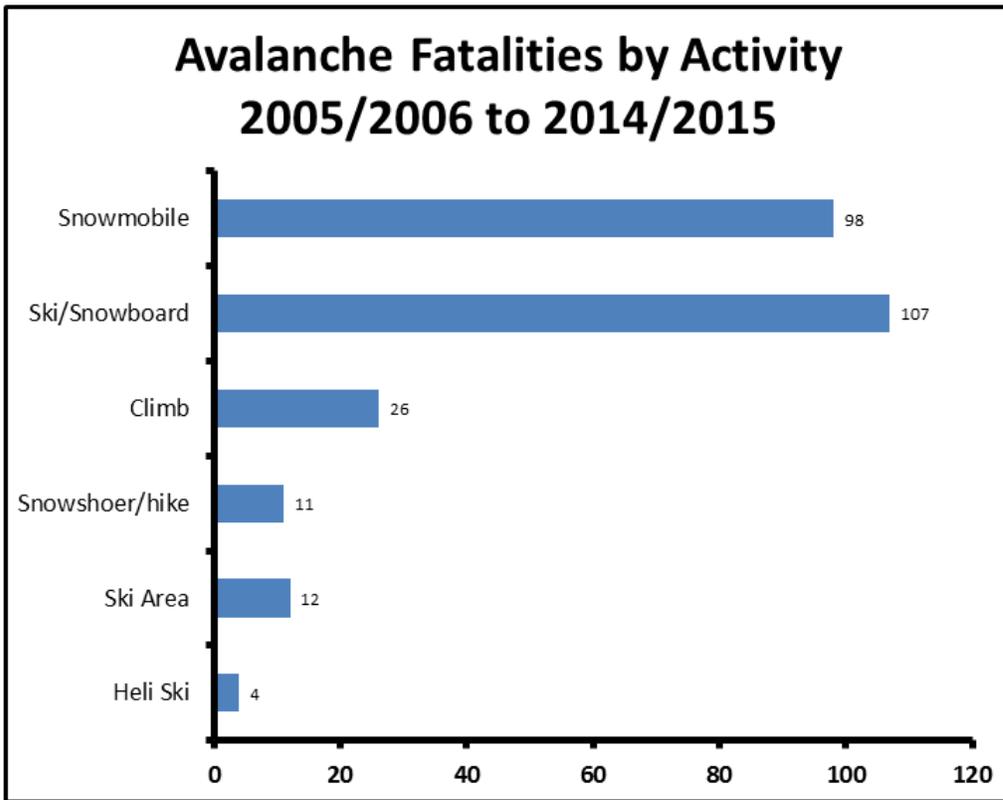
By the last advisory on April 15, all areas in southwest Montana were below the 30 year average for snowpack water content. Many places were in the 70-80% range, better than much of the western U.S. which had many areas showing less than 50% of average.



Eric in deep pow in the Bridgers in January.

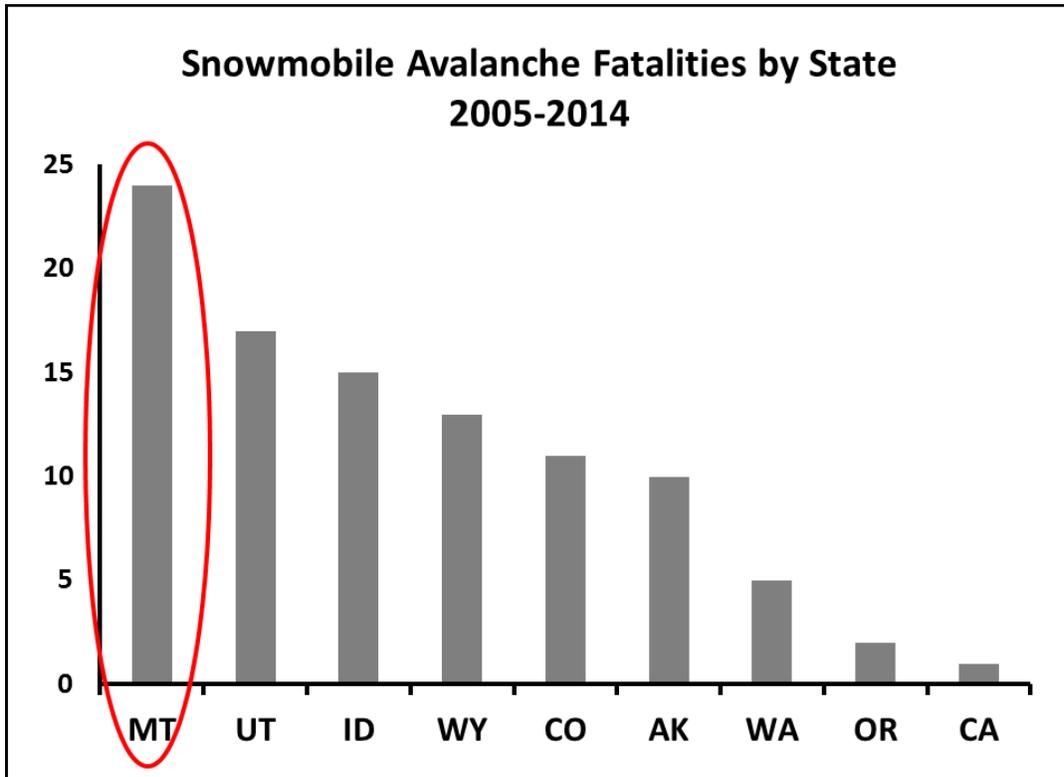
Avalanche Incident Graphs: 10 Years

Graph 1: *NATIONALLY*, 10 years of Incidents by Activity

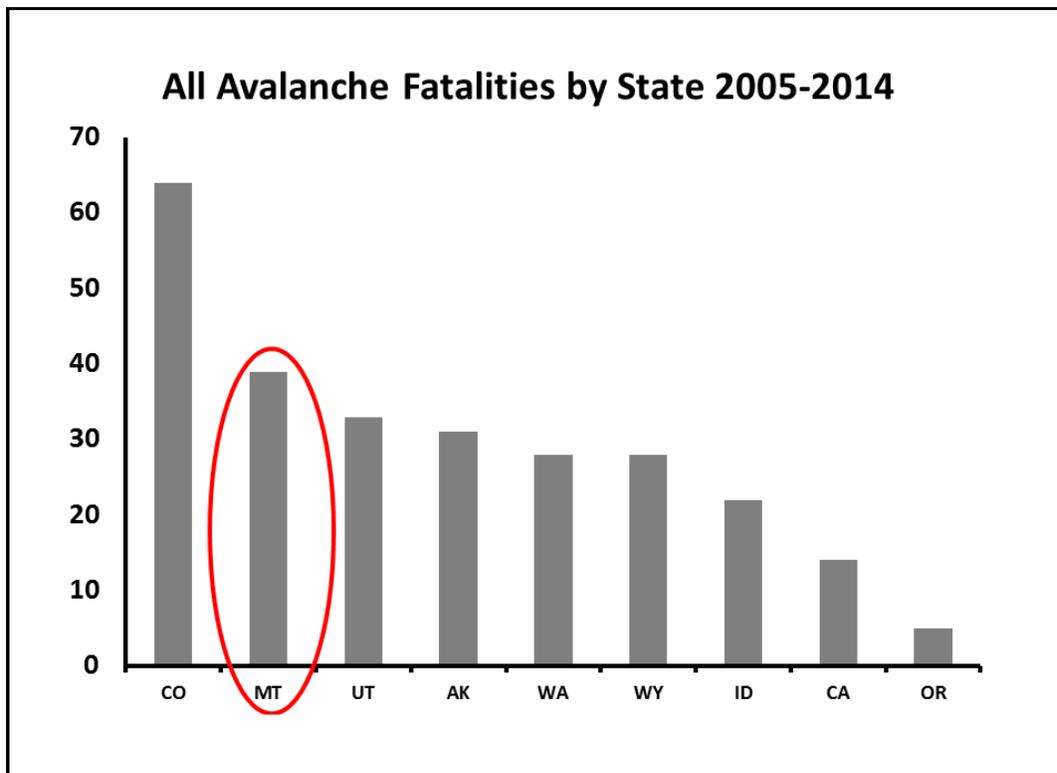




Graph 2



Graph 3



Avalanche Incidents Table

43 Incidents resulting in 2 full burials, 2 partial burials and 2 deaths.

DATE	LOCATION	DETAILS
11/20/2014	Bridger Range-bowl north of	1 skier caught -
11/25/2014	Northern Bridger Range	2 remote skier triggered avalanches - northern Bridgers
11/26/2014	Bridger Range-Bridger Bowl	Many skier triggered slides, no one caught
11/26/2014	Cooke City-Henderson Peak	Fatality
11/28/2014	Cooke City-Henderson Peak	2 snowmobilers caught, 1 not buried with airbag, 1 buried 7' deep
12/6/2014	Cooke City-Crown Butte	1 snowmobiler triggered, caught, not buried
12/10/2014	Cooke City - Cown Butte	1 snowmobiler triggered, not caught
12/11/2014	Cooke City - Henderson, Chim-	1 snwomobiler triggered, not caught
12/17/2014	Northern Bridgers - Frazier	1 skier triggered, not caught
12/21/2014	N. Gallatin - Silken Slot in Hya-	2 climbers almost swept off Silken Slot
12/21/2014	N. Gallatin - Killer Piller in Flan-	Climbers nearly hit at the base of climb
1/3/2015	Cooke City - N of Lulu Pass	1 snowmobiler triggered, not caught
1/4/2015	Bridgers West Side	1 skier triggered, not caught
1/5/2015	Cooke City - near Lulu Pass	1 skier triggered avalanche (small: 50' x 100'), not caught
1/5/2015	Bridger Range - "in your face" backside of Hidden Gulley	1 skier triggered, not caught
1/5/2015	N. Gallatin - Flanders	1 cornice triggered, not caught
1/7/2015	Cooke City - near Lulu	1 snow bike triggered, not caught
1/8/2015	Cooke City - near Daisy	Snow bike triggered, 2 caught, not buried (100' x 150')
1/8/2015	Cooke City - Miller Ck	1 snowmobiler triggered, not caught
1/13/2015	Northern Bridgers - Frazier	1 skier triggered, not caught - wind slabs
1/14/2015	Northern Gallatin Range - Ele-	1 skier triggered not caught - wind slab
1/19/2015	S. Gallatin	1 skier triggered, remote, not caught (10-30" x 75' x 700')
1/19/2015	S. Madison	1 skier triggered, not caught
1/20/2015	Cooke City - Barronette	1 skier triggered, remote, not caught (14-16" x 25' wide)
1/20/2015	Cooke City - Round Lake	1 snowmbobiler triggered, caught, partially buried
1/24/2015	Lionhead	1 snowmobiler triggered, not caught
1/29/2015	Cooke City - Goose Creek	1 snowmobiler triggered, not caught
1/31/2015	Silver Gate	1 skier triggered, not caught
2/2/2015	Cooke City -Crown Butte	1 snowmobiler triggered, not caught (small: 20' wide)



2/2/2015	N. Gallatin - Maid of Mist	1 skier triggered, not caught (small: 20' wide)
2/5/2015	Cooke City - Wolverine	1 skier triggered, not caught
2/8/2015	S. Madison - Taylor Fork	1 snowmobiler triggered, not caught
2/12/2015	N. Madison - Lone Moun-	1 skier triggered, not caught (small)
2/12/2015	Bridger Range	1 skier triggered, not caught (small)
2/20/2015	Bridger Range - Wolver-	2 skier triggered, not caught (small)
2/22/2015	N. Gallatin - Blackmore	1 skier triggered, not caught (small)
2/22/2015	N. Gallatin - Maid of Mist	1 skier triggered, not caught (small)
2/23/2015	Bridger Range - quarter	2 skier triggered wind slabs, not caught
3/4/2015	N. Madison - Lone Moun-	1 snowboarder triggered wind slab, not caught (600' wide)
3/19/2015	Bridger Range - Fairy	1 skier triggered, not caught
4/4/2015	N. Madison Range	2 skier triggered slides, not caught (small)
4/6/2015	Cooke City	1 skier triggered, not caught
4/11/2015	Hanging Garden - Bee-	1 skier, caught, carried and killed. Trauma

Avalanche Education (next 3 pages)

Date	Instructor	Group/Topic	Total
9/22/2014	Knoff	Ice Climbing and Avalanches/ISSW	
9/26/2014	Staples	Snowmobile Education/ISSW	700
9/29/2014	Marienthal	Deep Slabs/ISSW	
10/15/2014	Marienthal	Awareness @ Backpacker Light	8
10/27/2014	Greeno	Awareness @ Roundhouse	24
11/5/2014	Bilbrey	Awareness in Livingston	30
11/6/2014	Bilbrey	Awareness @ Basecamp, Billings	50
11/11/2014	Marienthal	Awareness @ Basecamp, Helena	35
11/12/2014	Bilbrey	Awareness @ REI, Bozeman	30
11/13/2014	Marienthal	Awareness @ Madison Valley SAR, Ennis	8
11/9/2014	Chabot	Avalanche Accidents recap/ GCSAR	30
11/18/2014	Darham/Marienthal	Awareness @ Big Timber	13
11/19/2014	Marienthal	Awareness @ Grizzly Outfitters, Big Sky	65
11/20/2014	Marienthal/Hance	Awareness @ Sleeping Giant M.S., Livingston	230
11/20/2014	Nobel	Awareness @ Roskie Hall, MSU	35
11/21/2014	Chabot	Effects of Changing Slope Angle on CTs	175
11/24/2014	Greeno	Awareness @ Livingston H.S.	156
11/24/2014	Staples	Awareness @ Northern Lights	45
11/25/2014	Greeno	Awareness @ Chief Joseph M.S.	280
11/25/2014	Greeno	Awareness @ Anderson M.S.	24
12/3/2014	Birkeland/Staples	Friends/ASMSU Intro to Avalanches, Lecture Night 1	168
12/4/2014	Knoff/Marienthal	Friends/ASMSU Intro to Avalanches, Lecture Night 2	168
12/6/2014	Field Instructors	Friends/ASMSU Intro to Avalanches, Field 1	91
12/7/2014	Field Instructors	Friends/ASMSU Intro to Avalanches, Field 2	77
12/10/2014	Marienthal	Awareness @ REI, Bozeman	35
12/11/2014	Gidley	Awareness @ Summit Motorsports, Bozeman	15
12/14/2014	Gidley	Awareness @ Redline Motrosports, Butte	4
12/10/2014	Chabot	Current Conditions for Bozeman Ice Fest	250
12/17/2014	Pape	Awareness @ Beall Park	19
12/18/2014	Chabot	Avalanche Awareness in Red Lodge	40
12/18/2014	Bilbrey	Awareness at Yellowstone Association in Gardiner	15
12/18/2014	Bilbrey	Awareness at YA in Gardiner (public)	15
12/18-19/14	Knoff/Gullett	Intro to Avalanches for Snowmobiles, West Yellowstone	30
12/27/2014	Zevora/Stechmest	Companion Rescue Clinic - Cooke City	12
12/29/2014	Staples	Snowmobile Avalanche Training for Polaris - Roseau, MN	140
12/30/2014	Staples	Snowmobile Rescue training for Polaris - Roseau, MN	40
12/29/2014	Gullett	Basic Snowmobile Avalanche Awareness for Snow Rangers	2



1/3/2015	Campbell	Awareness in West Yellowstone	31
1/5/2015	Gullett	Avalanche Awareness in Cooke City	20
1/6/2015	Greeno	Awareness @ Bozeman High School	114
1/7/2015	Wieland	Awareness @ Wilderness Medicine Residen-	18
1/7/2015	Wieland	Awareness and Rescue talk @ Hi-Tech,	80
1/8/2015	Bilbrey	Awareness @ Alder SAR	10
1/9/2015	Bilbrey	CRC Lecture @ REI	11
1/10/2015	Campbell	Awareness in West Yellowstone	11
1/10/2015	Bilbrey	CRC Field @ Hyalite	10
1/10/2015	Chabot	Cooke City SAR - avalanche statistics	37
1/11/2015	Chabot	Cooke City SAR - avalanche scenario debrief	20
1/12/2015	Greeno	Beacons @ Bozeman High School	112
1/12/2015	Bilbrey	Avalanche Awareness in Three Forks	12
1/13/2015	Thompson	Avalanche Awareness and Beacons for Wom-	30
1/14/2015	Marienthal	Sidecountry avalanche awareness @ REI	29
1/14/2015	Gullett	Rescue Talk @ GVSA Groomer Building	37
1/17/2015	Turnage	Rescue Training @ Ruby Valley SAR	14
1/18/2015	Gullett, Gidley, Steckmest	CRC in Cooke with Hi-Tech	26
1/19/2015	Knoff	SAR Posse	30
1/21/2015	Birkeland/Staples	Friends/ASMSU Intro to Avalanches, Lecture	150
1/22/2015	Knoff/Marienthal	Friends/ASMSU Intro to Avalanches, Lecture	150
1/22/2015	Greeno	Awareness @ Hawthorn School, STEAM night	127
1/24/2015	Campbell	Awareness in West Yellowstone	17
1/24/2015	Field Instructors	Friends/ASMSU Intro to Avalanches, Field 1	80
1/25/2015	Field Instructors	Friends/ASMSU Intro to Avalanches, Field 2	70
1/26/2015	Pape	Info session at Elks club	16
1/26/2015	Hance	Awareness @ Headwaters	40
1/27/2015	Bilbrey	Awareness @ UM Western, Dillon	22
1/27/2015	Gidley	Awareness for Snowmo @ USFS Livingston	
1/28/2015	Schmidty&Fay	Level I Snowmobile, Lecture Night 1	20
1/28/2015	Birkeland/Staples	Friends/ASMSU Advanced Ava. Workshop,	50
1/29/2015	Birkeland/Staples	Friends/ASMSU Advanced Ava. Workshop,	50
1/29/2015	Schmidty&Fay	Level I Snowmobile, Lecture Night 2	20
1/31/2015	Field Instructors	Friends/ASMSU Advanced Field workshop	42
1/31/2015	Schmidty, Staples, Wieland	Snowmobile Level 1	18
1/31/2015	Gullett	Awarness at Thunderstruck Premier, Lewis-	37
1/31/2015	Campbell	Awareness in West Yellowstone	20

2/3/2015	Greeno	Awareness for BWAGS	16
2/4/2015	Darham	Awareness @ REI, Bozeman	37
2/5/2015	Marienthal	Awareness @ Great Falls	80
2/6/2015	Zavora/Fredlund	Conditions briefing/awareness @ Cooke	25
2/7/2015	Norlander	Awareness @ West Yellowstone	
2/11/2015	Darham	Women's avy Awareness @ REI, Bozeman	35
2/11/2015	Greeno	Table @ Backcountry Film festival	30
2/17/2015	Thompson	Awareness and Beacons with Mountain Belles	4
2/15/2015	Gullett	Avalanche Awareness for Snowmobilers	12
2/17/2015	Chabot	Sidcountry and Pit Diging @ MSU	180
2/20/2015	Bilbrey	Rescue talk @ REI	16
2/21/2015	Bilbrey/Hance	CRC Field @ Hyalite	16
2/21/2015	Norlander	Awareness @ West Yellowstone	
2/24/2015	Knoff	Sidcountry and Pit Diging @ Big Sky	100
2/26/2015	Gidley & Bilbrey	Snowshoot in West Yellowstone	75
2/26/2015	Greeno	BHS ski and snowboard Club	15
3/27/2015	Hance	Montforton Awareness	21
3/2/2015	Greeno	Livingston H.S	22
3/3/2015	Gidley & Ciminetti	SnowShoot in West Yellowstone	40
3/5/2015	Greeno	BHS ski and snowboard Club	15
3/11/2015	Bilbrey	Awareness @ REI, Bozeman	6
3/13/2015	Bilbrey	Awareness @ West Yellowstone HS	12
3/18/2015	Darham	Awareness @ Sac Middle School	200
3/19/2015	Greeno	BHS ski and snowboard Club	15
3/21/2015	Greeno	BHS ski and snowboard Club, field	6
3/30/2015	Chabot	Avalanche Forecasting and Awareness @ YC	30
3/31/2015	Greeno	Cooke City School	4
4/1/2015	Various speakers	Pro Development Workshop	60
		TOTAL = 5652	



District Ranger, Lisa Stoeffler, on the ridge in the Bridger Range.

Letters of Support



YELLOWSTONE CLUB

Gallatin National Forest Avalanche Center
Doug Chabot, Director
PO Box 130
Bozeman, MT. 59771

April 1, 2015

Dear Doug,

I want to thank you and your crew for the great service you provide. Now that the winter season is winding down I would like to thank you, Mark, and Eric for your first rate job of weather and avalanche forecasting. Even though there was not a lot of snow this season there were interesting and significant challenges throughout the season dealing with weak surface snow and then wet snow issues. It was extremely valuable to read, on your web page, your advisories and weather forecasts and to have up to the minute avalanche pictures, snow pits, and stability videos available.

Also, I wanted to thank Eric for presenting a great session during our preseason Snow Safety Refresher. Feedback from the Ski Patrol indicated that the classroom time, as well as the field session, was a great way to prepare for the season.

Sincerely,

Tom Leonard
Ski Patrol/Snow Safety Director
Yellowstone Mountain Club



1804 North Pouse Ave., Bozeman, MT 59715
Phone (406) 586-7147 Fax (406)586-0095

Dear Sir or Ma'am:

As someone who relies on their daily avalanche advisories, I fully support the Recreation Trails Grant application by the Gallatin National Forest Avalanche Center. I and my customers value all the avalanche education they provide to the snowmobiling community. Last year alone they taught 91 classes to over 4,300 people of all user groups. Their website is a valuable resource for avalanche information, weather information, accident reports, avalanche articles, snowpack data, and online tutorials.

They have been operating for 25 years and in the last decade have been providing photos and videos which are helpful in understanding the snowpack and avalanche danger. Unfortunately Montana leads the nation in snowmobile avalanche fatalities, and they have been working hard to change this statistic. If it were not for their efforts the number would be much higher. Every year the level of education and understanding of avalanches increases. We support the Avalanche Center and have hosted several of their avalanche classes this year including the first Snowmobile Avalanche Level 1 course offered in the southwest Montana and one of the few offered in the entire country.

Sincerely,





Subaru of America, Inc.
Subaru Plaza
PO Box 6000
Cherry Hill, NJ 08034-6000
856-488-8500
www.subaru.com

Friends of the Gallatin National Forest Avalanche Center
Attn: Mark Staples
PO Box 6799
Bozeman, MT 59771

3/20/2015

Dear Mark,

We at Subaru of America, Inc. would like to thank Friends of the Gallatin National Forest Avalanche Center for participating in the 2014 Subaru "Share the Love" event! As we wrap up reporting for the event, below is the written accounting per unit basis reflecting sales that your organization received during the event. Please note that if you have not already received your check, you will be receiving it soon from the Subaru retailer you have partnered with during the "Share the Love" event.

Subaru of America, Inc. total donation amount: \$5,773.00

Thank you again for making this year's event a success, we look forward to working with you again soon.

Sincerely,
The Subaru Marketing Team



Toll free: (888) 237-1000
(406) 763-3027
Fax (406) 763-3029

December 15, 2014

Mr. Doug Chabot
Friends of the Avalanche Center
PO Box 6799
Bozeman, MT 59771-6779

Dear Doug,

As the year comes to a close, we have been given the opportunity by our employer, Select Stone, Inc., to donate money to a charity of our choice in the Gallatin Valley. As avid backcountry skiers and outdoorsmen, we feel your services are something to which we would like to contribute.

We believe you and the members of your team do a great service for everyone that recreates in our local mountains in the wintertime. Your daily avalanche reports, snow pit analyses, and videos help educate a large variety of winter enthusiasts. For this commitment, we would like for you to accept our donation of \$1,000 to help with the 2014-2015 season.

Thank you so much for your dedication to helping others.

Sincerely,

SELECT STONE, INC.

Jon Wingo
Kevin Dillendaffer
Mike Carey
Chris Luckay



203 EATON STREET -- P.O. Box 1120 - COOKE CITY, MT 59020
(406) 838-2231 - FAX (406) 838-2225 -- COOKECITYMOTORSPORTS.COM

2-9-2015

To whom it may concern;

We are writing in support of the GNFS Avalanche centers RTP grant funding.

Simply put: this is a 25 year strong organization that has done an awesome job in bringing avalanche awareness to winter sport enthusiasts.

A bit about us;

In 2010 we purchased the Arctic Cat/ Yamaha snowmobile dealership in Cooke City, Montana. We were introduced to the members of the GNFAC. The 10-11 season brought lots of snow and a stable snowpack.

The 11-12 snow season was not as much fun.

New Years Eve of 2012 we lost a customer and friend to an avalanche. The 11-12 seasons resulted in 3 deaths to avalanches in the Cooke City area.

The 13-14 season was a wild one as well; we lost an 18 year old boy that was with a group that ignored the warnings. This group had no beacons, shovels or probes, the basic tools for backcountry adventures.

We had a burial this season the left a man several feet under the surface but was able to survive because his group was prepared. They found him with their beacons gave him CPR and he was able to ride out on his own. This group has spent time studying the GNFAC warnings and rescue training.

This heightened our determination to educate our customers in avalanche awareness, safety and protection.

We quickly determined that the single, most essential tool to keeping our customers safe was the daily avalanche report emailed and faxed to local businesses by the Avalanche Center.

The daily report gives us the opportunity to discuss the conditions with our customers and warn them of dangerous situations before they encounter them. The majority of snow enthusiasts that come to Cooke City are on vacation and are eager to get to the snow. Many times, in their excitement, they forget or fail to realize how dangerous the conditions can be. When we have the daily avalanche report at 7am we are able to open a dialog with our customers that make them think about the conditions before they head out to the snow.



We also have the "hands-on" guidance of the Avalanche Center. They consistently visit our area and ride, test and determine conditions. They are always willing to visit with riders, skiers and boarders about the conditions and the service they provide.

The Avalanche Center has become a vital tool in our business. Without them riding in our area would be like flying thru the mountains in an airplane blindfolded. The Avalanche Centers subscribers will continue to grow with the use of smart phones and their app.

Their website, www.mtavalanche.com provides incredible video, pictures and accounts of the snow conditions past, present and future.

We follow several agencies that provide the weather and conditions so that we can best determine the conditions and best areas for our customers. We have found that the GNFAAC is consistently the most accurate in their reporting.

We will continue to support the GNFAAC because of the stellar work they do and their true commitment to protecting snow enthusiasts. We encourage all businesses, individuals and government agencies to support the GNFAAC in any capacity they can.

Mona & Shannon Abelseth
Cooke City Motorsports



Billings Refinery

P.O. Box 30198
Billings, MT 59107
406-255-2552

To: Mark Staples
Avalanche Ctr

From: Bonnie D. Burks
Community Relations - Phillips 66

Subject: Phillips 66 Sponsorship

Date: January 29, 2015

Dear Mr. Staples:

As you might well imagine, Phillips 66 receives literally hundreds of funding requests every year. We make an effort to consider every request based on the merit of how the organization/event might impact the Billings community and if the request supports Phillips 66 philanthropic guidelines as well as our core values.

In addition, we have a limited budget and make every attempt to fund as many events/organizations as possible.

After careful consideration, we have decided to fund the "Avalanche Ctr program" with a sponsorship of \$500.00. Please send me a confirmation letter that I may use as an invoice.

Sincerely,

A handwritten signature in cursive script that reads "Bonnie D. Burks".

Bonnie D. Burks
Community Relations & Events Coordinator

Sent 2/4/15
Dog 2/4/15



Mystery Ranch, Ltd.
1750 Evergreen Drive
Bozeman, MT 59715

Letter of Support for the Gallatin National Forest Avalanche Center

To the Board of the Recreation Trails Grant Committee,

On behalf of Mystery Ranch, LTD – a leading designer & manufacturer of outdoor products including backpacks for expedition, skiing, firefighting, hunting and military - we are writing to show our unflinching support of the Gallatin National Forest Avalanche Center [GNFAC] and their application for the Recreation Trails Grant application.

We, as a locally owned and operated company, employing over 110 people in Bozeman, rely heavily on the GNFAC daily advisories for regional avalanche information as a large percentage of our employees are backcountry users. In addition to the daily advisory, the GNFAC's education opportunities offer not only our employees, but our community, gold standard education on avalanche awareness & safety and teaches us the value of good judgment in the backcountry. A mandatory skill, that unfortunately without the help of the GNFAC, many users would not have, and could potentially be putting themselves at serious risk.

The GNFAC website offers us valuable information on a daily basis including weather, accident reporting, avalanche articles for further education, snowpit data and online tutorials to further their exposure to the backcountry community. Without this priceless information, our residents would not be as safe in the backcountry as they are.

The GNFAC offers a multimedia platform including photos, videos and articles to help further understand the snowpack and widen their reach to younger demographics (important as more and more kids are entering the backcountry).

In their 25 years of operation the GNFAC has offered the SW Montana community precious information on how to stay safe in the backcountry, reduce fatalities, and encourage good decision making. Unfortunately Montana still ranks 2nd in avalanche related fatalities in the last 10 years, so we firmly believe in the continued support of all the GNFAC offers, and then some. We will continue to support the GNFAC for years to come.

Sincerely,
Ben Nobel
North American Sales Director
Mystery Ranch Backpacks



International Snowmobile Manufacturers Association

1640 Haslett Rd., Suite 170 • Haslett • Michigan 48840 • (517)339-7788 • Fax: (517)339-7798



Web: www.snowmobile.org

October 20, 2014

Jay Pape
Friends of the Gallatin NF Avalanche Center
PO Box 6799
Bozeman, MT 59771

Dear Jay,

On behalf of the snowmobile manufacturer members of ISMA (Arctic Cat, BRP, Polaris, and Yamaha) I am pleased to send you the enclosed check for \$750.00 for the Friends of the Gallatin National Forest Avalanche Center. The snowmobile manufacturers and the snowmobile community are pleased to support all of your efforts in safeguarding our National Forests.

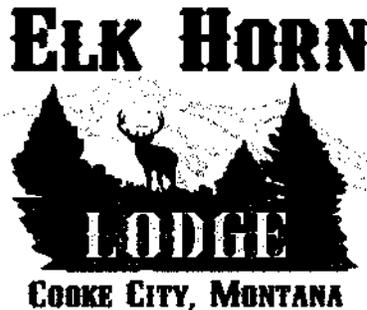
We are thankful for all of the work you are doing in supporting avalanche safety education and in particular the advancement of safety classes specifically designed for snowmobilers. Your avalanche safety training teams are recognized as leaders in their field.

We look forward to working with you, encouraging and welcoming visitors to enjoy our great National Forests.

Sincerely,

Ed Klim
President, ISMA

enclosure



February 14, 2015,

To Whom It May Concern:

I am writing this letter in support of the Gallatin National Forest Avalanche Center. My husband and I own the Elk Horn Lodge located in Cooke City, Montana. We operate during the winter season and depend on the Avalanche Center Advisories that we receive by 7:30 am each morning during the winter season. Living in a remote high avalanche area it is crucial that we receive these advisories as it provides us with information about the conditions on the mountain! We in turn, provide this information to our customers so they can make good riding or skiing decisions. Our customers depend on these advisories to determine if it's safe for them to go out snowmobiling or skiing. When the avalanche danger is HIGH we recommend to our customers to not go out! These reports also provide us information on the weather, helps us understand the snowpack and provides us with accident reports. Not only does the Gallatin National Forest Avalanche Center provide advisories daily they also conduct avalanche education here in Cooke City. We had some customers from Canada (Flat Landers) who planned their trip so they could attend one of these classes.

We fully support the Gallatin National Forest Avalanche Center's Recreation Trails Grant application. We recommend that you consider how vital the information is needed that they provide to business owners, customers, and search and rescue personnel in our remote area when making your grant decision.

Thank you in advance for your consideration!

Lisa and Jeff Ohlinger
Owners
Elk Horn Lodge

LETTER SENT
12/30/14

Bozeman Women's Activity Groups (B.W.A.G.s)
Bozeman, Montana
<http://www.bwags.org/>

Bozeman Women's Activity Groups (B.W.A.G.s)
c/o Patti Steinmuller
14665 Spanish Breaks Trail
Gallatin Gateway, MT 59730

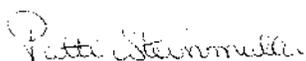
December 20, 2014

Friends of the Gallatin National Forest Avalanche Center
PO Box 130
Bozeman, MT 59717

Dear Gallatin National Forest Avalanche Center:

Enclosed is a check for \$75.00 as a donation to the Gallatin National Forest Avalanche Center from the Bozeman Women's Activity Groups (B.W.A.G.s). Many of us receive the Avalanche Center report each morning and have attended your educational sessions. Thank you for your service to our community.

Sincerely,



Patti Steinmuller
B.W.A.G.s Treasurer

Enclosure



104 Michelle Court
Missoula, MT 59803
February 7, 2015

Jay Pape, Treasurer
Friends of the GNFAC
PO Box 130
Bozeman, MT 59771

Dear Jay,

From what I can gather you are still treasurer of the GNFAC. Thank you for your long service to such a worthy, important organization.

I am enclosing a donation for \$100 in Ben's memory. If GNFAC is still posting remembrances on the current advisory page, I would appreciate Ben being remembered on March 3. And do relay to Doug and the others that I really appreciate the "Note to Parents" article on the dangers of sidecountry skiing. I think it is a real service. I hope it is widely read and used.

Gratefully,

A handwritten signature in cursive script that reads "Becky".

Becky Richards

February 23, 2015

Letter of Support for the Gallatin National Forest Avalanche Center;

The Gallatin National Forest Avalanche Center is such an amazing resource for this recreational, snow motivated community. I am a manager of a popular restaurant here in Bozeman that employees up to 130 employees (most of them choose the restaurant profession as a way to make money while focusing on their skiing/climbing/snowmobiling etc passions).

Throughout the years I have witnessed the far reach that the Avalanche Center has had in educating the population, not only on snow pack but on group dynamics, terrain management, and equipment use and knowledge. I have attended several avalanche classes that were both very affordable and incredibly informative. My staff, friends, family and self are so fortunate to have the website, daily advisories and videos, just a click away.

The guys that operate the avalanche center really care about what they are doing. They are passionate, humble, and ingrained in the community. Because of their constant strides to reach more diverse user groups I have personally witnessed groups of people become more engaged in conversations pertaining to snow pack and decision making. Younger and younger groups are becoming educated which is awesome as a parent myself! I am grateful to live in a community that has an avalanche center with such a commitment to keeping people safe and informed regardless of age and preferred method of travel.

Living in a place that has such extreme weather scenarios, temperatures, and questionable snowpack, we are so very fortunate to have people out in the trenches assessing snow and sharing their knowledge with the rest of us.

Cheers,
Dawn Brown
Montana Ale Works
Human Resources & Office Manager
Events Coordinator



To whom it may concern,

My name is Jeff Watt, I am a guide for Ace Powder Guides, LLC. located in West Yellowstone, MT. Ace Powder Guides specializes in backcountry snowmobile trips in the Gallatin and Beaverhead-Deerlodge National Forests. Each season we provide over 100 guided tours to clients with all levels of experience in backcountry snowmobiling, backcountry travel and avalanche knowledge. The Gallatin National Forest Avalanche Center is a vital resource for our service.

Each morning when our trips get started we cover a variety of business and safety factors with each group, two of which are providing the clients with avalanche safety equipment and a brief update of the current avalanche conditions. All our guides are Level 1 &/or 2 avalanche certified and have a first hand view of the snow conditions in the areas we ride. However, there is no way we can keep up with the subtle and constant changes in the snow pack as the experts Doug Chabot and the rest of the crew at the GNFAC does. Their daily avalanche advisory is valuable tool for our business by keeping our guides up to speed with these constant changes. The GNFAC has provided level 1 and level 2 classes for our guides, guides of other snowmobiling businesses and the general public. These classes have given us the tools to further educate our user group, renters and guided clients about proper use of beacons, navigating avalanche terrain safely, proper rescue techniques and assessing snow stability. The GNFAC crew's knowledge, proficiency and commitment to avalanche study is vital to the safety of our clients through the education they provide.

Brochures, podcasts, emails, phone advisories, youtube videos, 1 hour classes, level 1 & 2 cert. classes are a small list of services the GNFAC provides to our community and visiting tourists, not to mention the countless hours in the field for snow and avalanche assessments, accident reports, weather stations, etc. I am certain the important work of the GNFAC has kept the backcountry of SW Montana a safer and more enjoyable place for all winter user groups. We thank them for their hard work and can only hope it continues.

Jeff Watt