

**FLATHEAD NATIONAL FOREST  
FLATHEAD AVALANCHE CENTER  
2014-2015 ANNUAL REPORT**



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### Cover Images

Center: *Flathead Avalanche Center Logo*. Courtesy of and designed by Brad Lamson.

Upper Left: *Surface hoar in Kimmerly Basin, southern Whitefish Range*. Photo: FAC

Upper Right: *Looking east from Mt. Aeneas, Swan Range*. Photo: FAC

Lower Left: *Crown of avalanche near Beaver Ponds/Ghoulie's Ridge outside the Whitefish Mountain Resort Boundary, Whitefish Range*. Photo: FAC

Lower Right: *Snowmobile and fracture on a cut bank along the trail in Red Meadow, Whitefish Range*. Photo: FAC

## **Background**

The Flathead Avalanche Center (FAC) began issuing public avalanche information on October 29, 2014. Prior to this date, avalanche specialists attended and presented at the International Snow Science Workshop in Banff, Alberta, Canada in September. Flathead Avalanche Center Director Erich Peitzsch presented at the Northern Rockies Avalanche Safety Workshop in Whitefish in October. The FAC advisory area consists of portions of the Swan Range, Flathead Range, Lewis Range (southern Glacier National Park), Apgar Range (Glacier National Park), and portions of the Whitefish Range (Figure 1). This season, the FAC began transitioning from a Type 3 avalanche center (meaning it employs part-time avalanche specialists who work for the avalanche center in addition to other non-FAC related duties) to a Type 2 avalanche center. Type 1 and 2 avalanche centers have a minimum level of funding necessary to meet personnel and equipment requirements, issue daily advisories, and provide ample avalanche education throughout the season. FAC avalanche specialists collected snowpack and weather data from various locations within the advisory area and increased the frequency of advisories from three to four advisories per week this year (Tuesday, Thursday, Saturday, and Sunday). This season's current funding and resources for FAC allowed for four regularly scheduled advisories per week (and associated field days) and numerous education classes including free avalanche awareness and Introduction to Avalanche courses. However, FAC personnel were committed to providing quality and timely products. Therefore, extra updates, advisories, and avalanche classes were deemed necessary this season. Avalanche information product season totals:

- Pre-season avalanche information updates (beginning on 10/29/2014) = 3
- Scheduled avalanche advisories (through April 5) = 72
- Extra avalanche information updates/bulletins/special advisories = 22



Figure 1: Overview of the Flathead Avalanche Center advisory area (shaded in gray) as well as portions of the Kootenai National Forest. The FAC hosts the Kootenai National Forest advisory on their website.

In the transition to a larger and growing avalanche center, the FAC continued to experience change this season on many fronts. Personnel for the FAC included Erich Peitzsch as the full-time Director and lead avalanche specialist and Todd Hannan as a part-time avalanche specialist. Erich and Todd completed the majority of the field work and published all the advisories this season, and were the regular employees of the FAC. Flathead National Forest

snowmobile stewards Lucas Stacy and Guy Zoellner worked part-time for the FAC as snowmobile observers as well. Their duties included education about appropriate motorized recreation zones, avalanche education, and collecting field data for the FAC. Their efforts were extremely valuable in assisting avalanche specialists with observations while completing their other duties. Seth Carbonari also assisted with educational efforts this season. Overall, it was a team effort that produced the public products issued by the FAC.

### Website

The website was completely redesigned during the summer and fall and unveiled to the public in October at the Northern Rockies Avalanche Safety Workshop (Figure 2 and <http://flatheadavalanche.org>). The Friends of the Flathead Avalanche Center (FOFAC) assumed ownership of the website and helped fund the creation of this website and committed to funding associated fees in the future. The advisory page became more intuitive, user friendly, and consistent with other avalanche centers in terms of iconography and graphics. It included a Bottom Line summary of the avalanche hazard and an avalanche rating for three elevation bands and for each of the three mountain ranges in the advisory area. A synopsis of previous mountain weather as well as expected weather was the first section in the advisory. Then, recent observations from FAC avalanche specialists, other avalanche professionals (i.e. BNSF Avalanche Safety) and from the public were summarized in this section along with pertinent photos and videos (videos were also on our YouTube channel (<http://www.youtube.com/user/FlatheadAvalanche>)). The snowpack discussion lists the current avalanche problems and associated travel advice for each problem.

The screenshot shows the homepage of the Flathead Avalanche Center. At the top is a banner image of a snowy mountain range with the text "FLATHEAD AVALANCHE CENTER" and a subtext: "The Flathead Avalanche Center is administered by the UAS in PARTNERSHIP with the Friends Of the Flathead Avalanche Center." Below the banner is a navigation bar with links: HOME, ADVISORIES, OBSERVATIONS, EDUCATION, FOFAC, and DONATE. To the right of the navigation bar are social media icons for Facebook, Twitter, and YouTube, along with a search bar. The main content area is split into two columns. The left column is titled "ANNOUNCEMENTS AND NEWS:" and contains several news items, each with a "More" link. The right column features an "Advisory Hotline: 406.257.8402" and a map of the Flathead region with shaded areas indicating danger ratings. Below the map are social media sharing buttons for Facebook and Twitter.

Figure 2: FAC homepage

Website statistics were collected since the introduction of the new site (flatheadavalanche.org) in November 2012. Site visits and use increased substantially since 2012-2013 (Table 1). Last year's (2013-2014) values for these metrics were higher than this past year likely due to an above average snowfall and active avalanche season last year and a below average snowfall and relatively quiet avalanche activity this year.

Table 1: Descriptive statistics of the FAC website for 2014-2015.

Total Visits (#)	Total Unique Visitors (#)	Page Views (#)	Pages/Visit (#)	Avg. Visit Duration (minutes)
45,243 Increase of 70% from 2012-2013	16,281 Increase of 90% from 2012-2013	117,585 Increase of 16% from 2012-2013	2.6	2:26

### **Media**

FAC staff conducted 14 interviews throughout the season with television, print, and radio outlets. FAC was featured on KPAX TV, KTMF TV, KECI-KCFW TV, KAJ TV, KGEZ radio, Montana Public Radio, Daily Interlake, Flathead Beacon, Hungry Horse News, and Whitefish Pilot. Many of these focused on current avalanche conditions, but a few were features of the new weather station located atop Big Mountain at Whitefish Mountain Resort and the beacon checkers throughout the National Forest installed by Flathead Backcountry Ski Patrol and the Flathead National Forest. Other topics discussed were avalanche education opportunities throughout the season.

The Bottom Line for weekday advisories were also recorded and broadcast on 103.1 The River between 7:30 and 8:30 am every Tuesday and Thursday morning.

The FAC Twitter account (@FACAvalanche) continued to be a popular form of communicating new and updated avalanche information. Followers increased from 176 to 277 this season. We published 211 tweets with 222 retweets, 34 favorites, 41,650 impressions, and 1248 engagements through this season. There were 576 URL clicks from our tweets this season.

This year the Friends of the Flathead Avalanche Center (FOFAC) created a Facebook page (<https://www.facebook.com/friendsofflatheadavalanchecenter>) to host both FOFAC and FAC content. A total of 371 page likes and 67,051 times (reaches) a person saw our content over the entire season. A new Instagram account (<https://instagram.com/flatheadavalanche/> and @flatheadavalanche) also featured images from the field and various education classes where we have 166 follower thus far.

We produced 83 videos this year with 5,282 total views (6,837 minutes watched) and 41 subscribers to the Flathead Avalanche YouTube channel (<http://www.youtube.com/user/FlatheadAvalanche>). Anecdotal feedback from the backcountry user community showed that videos and photos were once again welcome and helpful in communicating the avalanche hazard. The most viewed videos were avalanche site investigations.

### **Weather, Snowpack, and Avalanche Summary**

Overall, it was an active avalanche season from mid-December through mid-January caused by a buried surface hoar layer and then relatively quiet with a few short storms interspersed. We issued 6 avalanche warnings for at least one portion of our advisory area this season. Often, the FAC avalanche specialists issue multiple hazard ratings for our advisory area based on terrain (i.e. slope angle), location (mountain range), or elevation. The highest hazard of the day was rated LOW 4 days, MODERATE 39 days, CONSIDERABLE 38 days, and HIGH 12 days. The lowest hazard of the day was rated LOW 55 days, MODERATE 41 days, CONSIDERABLE 4 days, and

HIGH 3 days. Precipitation this season resulted in a below average snowpack where snow accumulated early in the winter and storm frequency tapered substantially as the season progressed (Figure 3-5 and Appendix A).

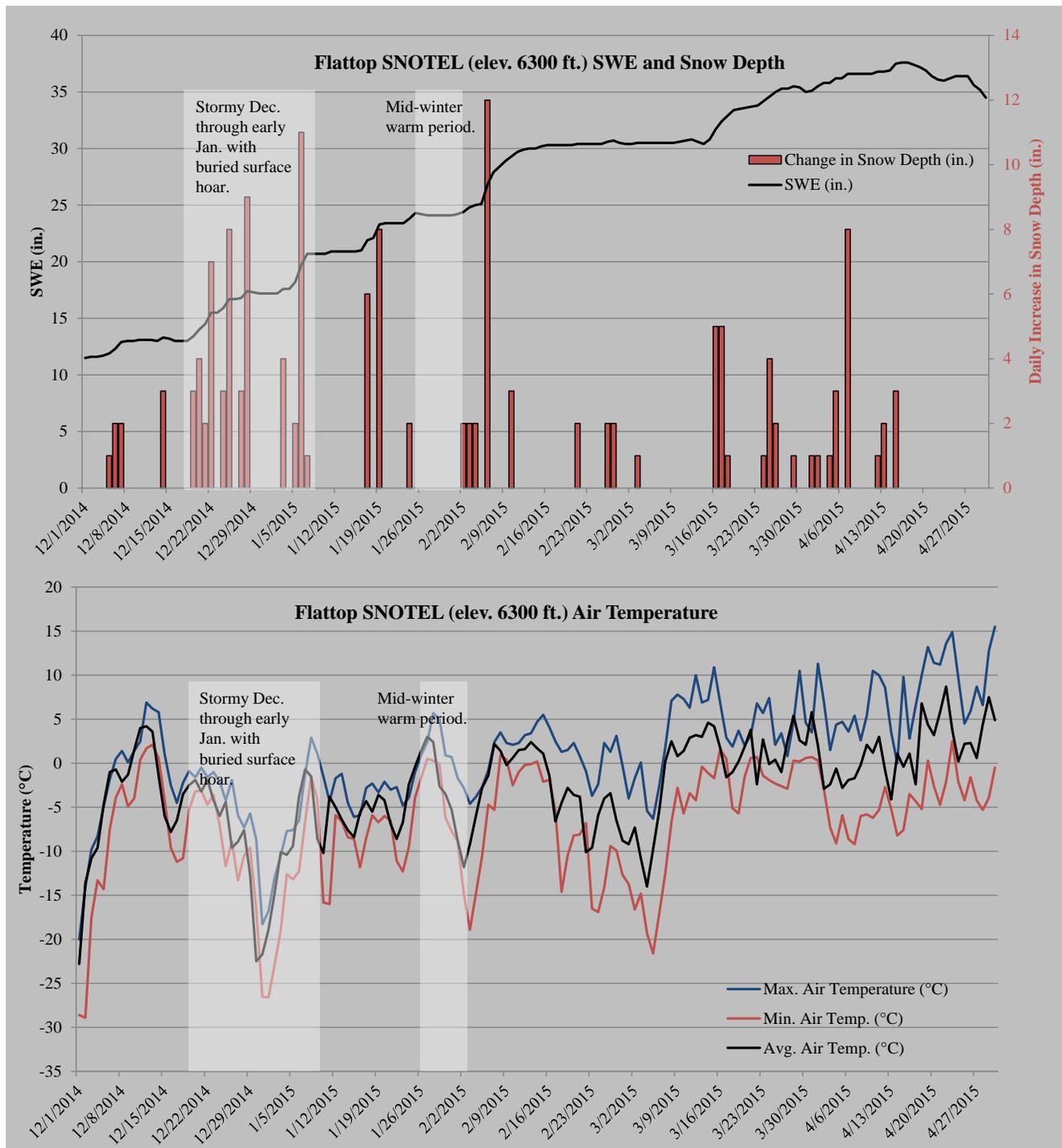


Figure 3: SWE, snow depth, and air temperature for Flattop Mountain SNOTEL (6300 ft.) in the Lewis Range. This SNOTEL station is adjacent to the advisory area but is representative of the Flathead Range and portions of southern Glacier Park which is within our advisory area. Three important periods of the season: the formation and subsequent burial of a surface hoar layer combined with a stormy period, a mid-winter warm period that caused widespread wet loose and small wet slab avalanches, and the rest of the season characterized by mostly dry and warm conditions interspersed with a few storms.

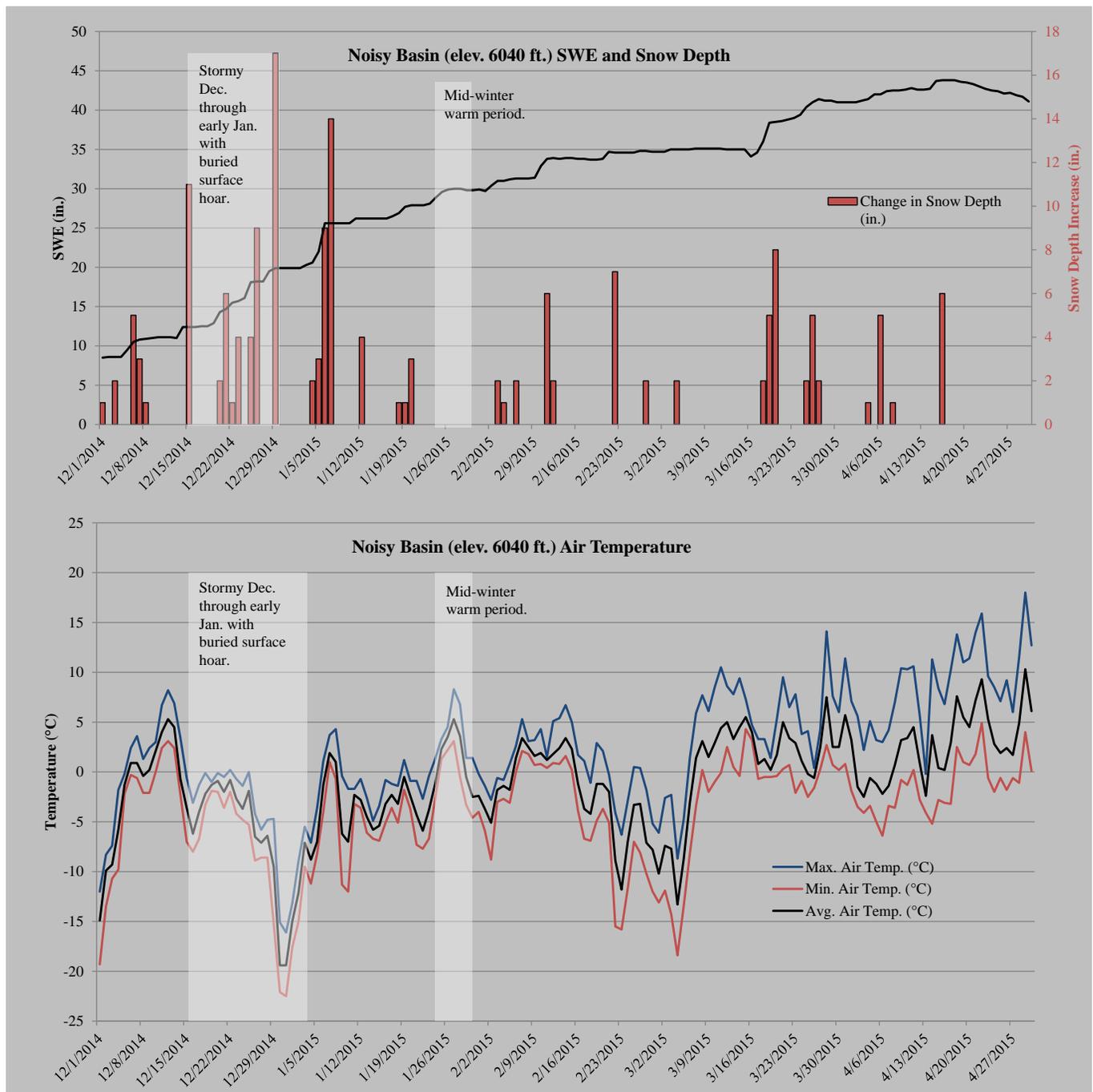


Figure 4: SWE, snow depth, and air temperature for Noisy Basin SNOTEL (6040 ft.) in the central Swan Range. This SNOTEL station is fairly representative of the Swan Range. Three important periods of the season: the formation and subsequent burial of a surface hoar layer combined with a stormy period, a mid-winter warm period that caused widespread wet loose and small wet slab avalanches, and the rest of the season characterized by mostly dry and warm conditions interspersed with a few storms.

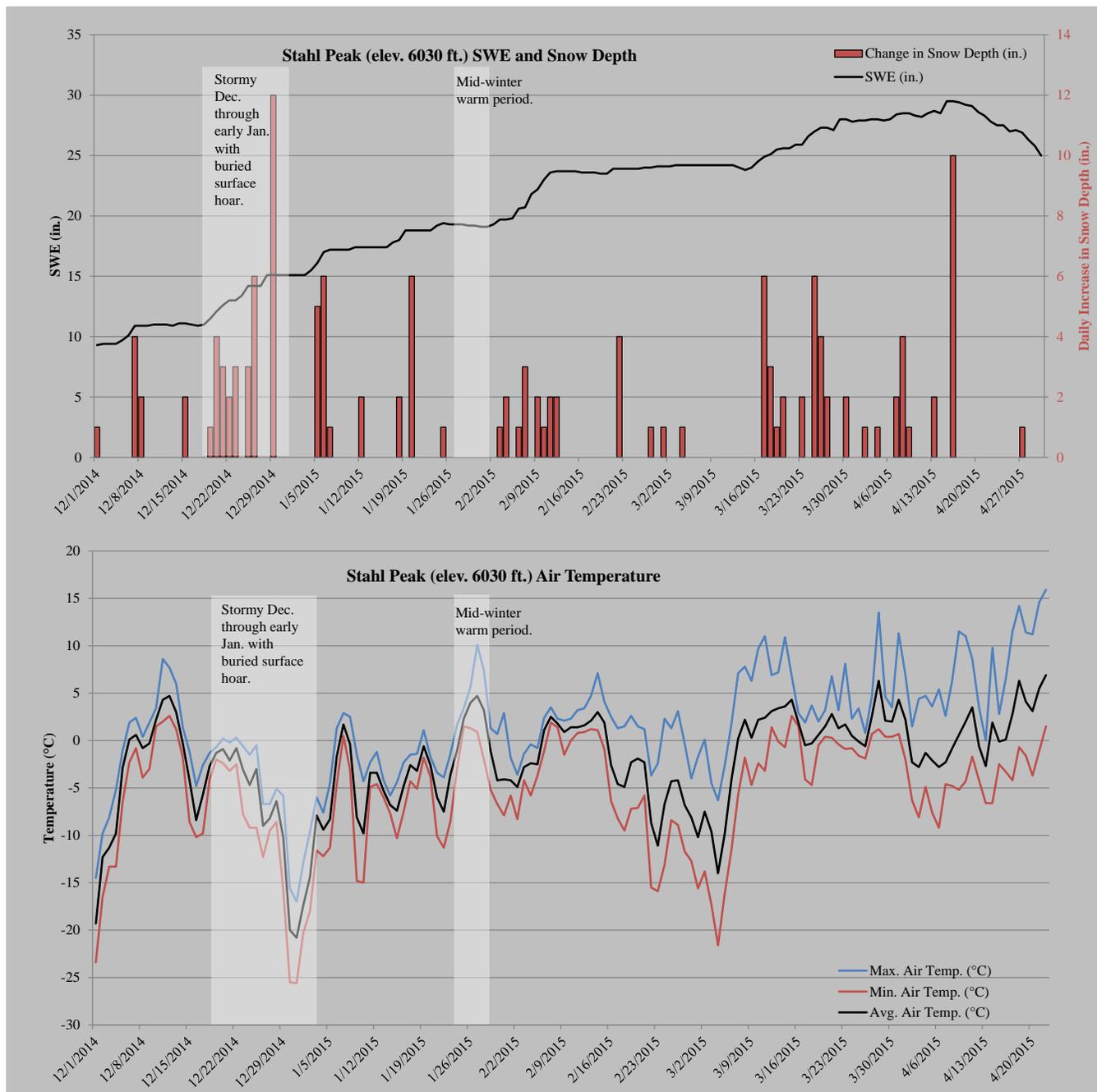


Figure 5: SWE, snow depth, and air temperature for Stahl Peak SNOTEL (6030 ft.) in the northern Whitefish Range. This station is adjacent to the advisory area and is fairly representative of the northern Whitefish Range. Three important periods of the season: the formation and subsequent burial of a surface hoar layer combined with a stormy period, a mid-winter warm period that caused widespread wet loose and small wet slab avalanches, and the rest of the season characterized by mostly dry and warm conditions interspersed with a few storms

*November*

The typical start to winter was a bit sluggish with the first real storm arriving around Thanksgiving. Avalanche information updates began on 11/24/2014 with general early season avalanche condition information.

### *December*

The month of December had backcountry enthusiasts satiated with great early season riding and skiing conditions and a consistent pattern of storms through the month. A dry, cold, and clear period resulted in fairly widespread surface hoar formation throughout the advisory area in the middle part of December. This layer was subsequently buried by larger storms during the latter part of the month. Snowfall continued across the advisory area and we issued our first avalanche warning of the season on December 21 and then another on December 24-25. Widespread natural and human triggered avalanches occurred throughout the advisory area during this time. From December 21 through December 30 either natural or human triggered avalanches were reported every day (Figure 7). The layer of buried surface hoar was about 20-30 inches from the surface and caused numerous problems. Fortunately, backcountry travelers remained mostly unscathed with no injuries reported to the avalanche center.



Figure 6: This slide occurred Sunday (12/28/2015) in the Canyon Creek area in the southern Whitefish Range outside the Whitefish Mountain Resort boundary ([video](#)). This avalanche failed on the surface hoar layer with a crown depth ranging from 1.0 - 3.5 feet deep and approximately 100 feet wide on a 38 degree slope. No one was caught. This avalanche was about 30 feet away (on the same slope) from an avalanche that we triggered safely from the ridge on 12/24/2015.

### *January*

The first week in January saw a storm that deposited nearly 30 inches to the valley and upwards of 50 inches of new snow to some mountain locations. Another avalanche warning was issued for January 5-6. This was undoubtedly the largest storm of the season. In terms of storm frequency and potency it all went downhill from this point in time. Mid-January saw a decent storm of 12-20 inches of new snow and associated natural and human triggered avalanche cycle. Then, temperatures rose in late January and a widespread wet loose and wet slab avalanche cycle occurred (Figure 8).

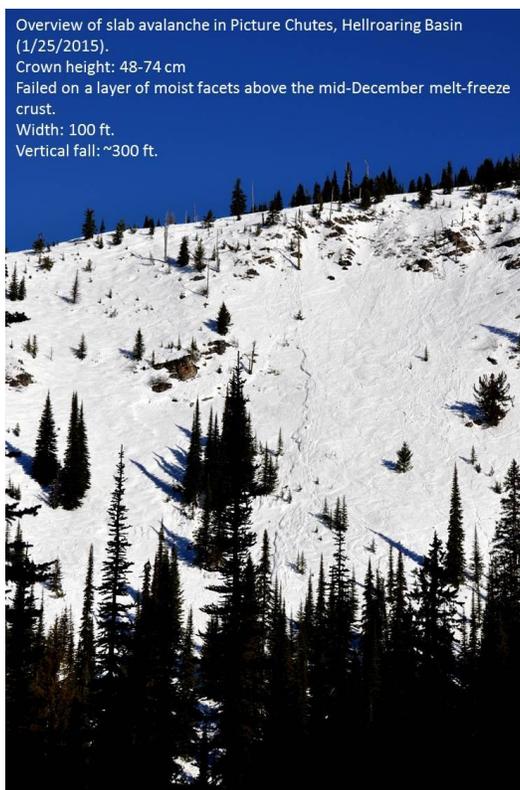


Figure 7: Overview of wet slab avalanche in Picture Chutes, Hellroaring Basin, Whitefish Mountain Resort (top) and wet loose avalanche debris on Werner Peak in the Whitefish Range (bottom).

### *February*

Early February saw another warm, wet storm deposit up to 20 inches of wet heavy snow above 5500 ft. causing another natural avalanche cycle up to size D3 in the Flathead Range and mostly D2 in the Whitefish and Swan

Ranges. The rest of the month was fairly unremarkable save for a few small storms that spiked the avalanche hazard for short periods of time but never to a High rating again this month.

### *March*

The rather stale nature of the snowpack continued until mid-March when a warm, potent storm dropped a substantial amount of rain throughout the advisory area. The Flathead Range and Glacier National Park saw up to 4.5 inches of rain in some locations, while the Whitefish and Swan Ranges saw less (up to 2 inches of rain). Wet slab activity occurred throughout the advisory area, but did not persist for very long (about 1-2 days) (Figure 9).



Figure 8: Substantial rain on snow caused damage on motorized access roads like this one on Pinnacle Road near Paola and Tunnel Creeks in the Middle Fork corridor of the Flathead Range.

### *April*

We issued our last advisory on April 5. A rather dry and warm spring continued to exacerbate a below average snowpack (~80-85% of normal) through April and May.

### **Incidents**

Fortunately, within the Flathead Avalanche Center advisory areas as well as the Kootenai National Forest advisory area there were no avalanche fatalities and no reported injuries due to avalanches this season. There were numerous observed avalanches (<http://www.flatheadavalanche.org/observations>), but only four **reported** incidents where individuals were caught (<http://www.flatheadavalanche.org/incidents>).

## Education

The Flathead Avalanche Center conducted five free Introduction to Avalanche courses this season which conformed to American Avalanche Association Guidelines. The FAC hosted a variety of classes this year including 15 avalanche awareness classes. Many of these were held at various retailers and businesses throughout northwest Montana. The FAC would like to thank those entities for their support in hosting these very valuable classes. Other classes are listed in the table below (Table 2).

Table 2: List of education classes provided by FAC or affiliated with FAC

Date	Class	Location	City	# Attendees
10/25/2015	Northern Rockies Avalanche Safety Workshop	Grouse Mountain Lodge	Whitefish	236
11/19/2014	Motorized Avalanche Awareness	Penco Power Products	Kalispell	20
11/20/2014	General Avalanche Awareness	Sportsman and Ski Haus	Kalispell	40
11/21/2014	General Avalanche Awareness	Stonefly Lounge	Coram	15
11/22/2014	General Avalanche Awareness	Replay Sports	Kalispell	25
12/1/2014	Motorized Avalanche Awareness	Moose Lodge	Cut Bank	34
12/10/2014	Motorized Avalanche Awareness	Penco Power Products	Kalispell	12
12/13/2015	Avalanche Awareness	Stryker Ridge - ALERT training	Olney	25
12/14/2015	Avalanche Awareness	Canyon Creek - Guides training	Columbia Falls	4
12/16/2014	Motorized Avalanche Awareness	Fastoys	Kalispell	18
12/16/2014	General Avalanche Awareness	Kootenai Outdoor Adventure Program	Libby	40
12/17/2014	Intro. To Avalanches	USFS SO	Kalispell	30
12/18/2014	Rescue Class	CanAm SAR	Eureka	15
12/20/2014	Intro. To Avalanches	CanAm SAR	Pinkham Mountain	30
1/3/2015	Field Course - Cut Bank Snowmobile Club	Skyland	Marias Pass	40
1/7/2015	Intro. To Avalanches	USFS SO	Kalispell	10
1/15/2015	General Avalanche Awareness	Sportsman and Ski Haus	Whitefish	32
1/16/2015	Intro. To Avalanches	David Thomson SAR	Libby	5
1/20/2015	Ladies Avalanche Awareness	The White Room	Whitefish	53
2/5/2015	General Avalanche Awareness	Columbia Falls HS	Columbia Falls	80
2/11/2015	Avalanche Awareness	Hungry Horse VFD	Hungry Horse	15
2/11/2015	Ladies Intro. to Avalanches	The Wave	Whitefish	20
2/13/2015	General Avalanche Awareness	Ruder Elementary	Columbia Falls	95
2/20/2015	General Avalanche Awareness	Edgerton Elementary	Kalispell	110
2/23/2015	General Avalanche Awareness	Glacier High School	Kalispell	30
3/7/2015	Terrain Management	Whitefish Range	Whitefish	3
3/25/2015	General Avalanche Awareness	The Back Room Restaurant	Columbia Falls	25
<b>FAC TOTAL</b>				1062
1/23-3/9/2015	FNF Nature Center Winter Program Sessions (8)	Whitefish Mountain Resort	Whitefish	210
<b>FAC and FNF TOTAL</b>				1272

Table 3: Participant totals of avalanche education component of FAC and Flathead National Forest.

All classes (taught by Friends and Center)	All students	Motorized specific classes	Motorized Users
27	1272	6	134
Students (<21 y/o)	Awareness Classes	Intro. To Avalanches Classes	Companion Rescue Classes
541	15	5	2

Youth (school-aged) programs for Flathead Valley Schools and other northwest Montana schools continued this year and reached 525 total students with 13 different classes 2<sup>nd</sup>-12<sup>th</sup> grade. This is a combined effort of in-class sessions with FAC instructors and field classes with the Flathead National Forest Winter Program at Whitefish Mountain Resort. Teresa Wenum coordinates and leads the winter education program for school-aged children with Jennifer Cloutier and Megan Chaisson. This is a program where students learn how to be safe while having fun in the winter environment. Students also explore the dynamics of snow while learning about avalanches.

### Finances

The Avalanche Center was funded by federal dollars and grants last year, and this year, with the development of FOFAC (a 501(c)3 organization) was able to work with community partners in a wide variety of ways. Federal and state contributors include the U.S. Forest Service Region 1, Flathead National Forest, the United States Geological Survey, and yearly grants from Montana Department of Fish Wildlife and Parks Recreation Trails Program.

Table 4: Income for the Flathead Avalanche Center Winter 2013-2014.

Forest Service cash (\$)	22,500	Flathead National Forest
Forest Service cash (\$)	50,000	*This amount is from the U.S. Forest Service Region 1. These funds were allocated in March 2015, and are a one time allocation to the Flathead Avalanche Center with the requirement that all funds be used before September 30, 2015. Therefore, they were unable to be spent for most of the 2014-2015 year in terms of staff salary. This is not a yearly allocation for FAC from the USFS.
Forest Service office, vehicles, & in-kind (\$)	5335.46	Flathead National Forest
Other agencies cash(\$)	35,000.00	Montana Department of Fish, Wildlife and Parks (FWP) Recreational Trails Program (RTP) Grant. This amount includes \$11,500 budgeted for snowmobile observers through the season.
Other agencies in-kind (\$)	6,000.00	Kootenai National Forest for their own avalanche specialist that produced a 2x/week advisory for Kootenai NF. FAC hosted this advisory and posted it for KNF personnel.
Outside support cash (\$)	1,200.00	These are outside funds provided to FAC (Flathead National Forest). This amount does not include income to FOFAC (see FOFAC section for finances related to their endeavors.)
Outside support in-kind (\$)	16,300.00	<ul style="list-style-type: none"> <li>• Northern Rockies Avalanche Safety Workshop Steering Committee, Burlington Northern Sante Fe Foundation, and Whitefish Mountain Resort (WMR) purchased a new weather station atop Big Mountain at WMR.</li> <li>• FOFAC assisted with new website development in 2014.</li> </ul>
<b>Total Budget(\$)</b>	<b>120,035*</b>	*The total amount includes a one time allocation of funds from the U.S. Forest Service Region 1 of \$50,000.

### Observations

With the new website upgrade the Observations page also change. The Observation page very user friendly for observers and easy to navigate as a viewer. This page was developed to provide a simple, quick method to use crowd-sourced information to assist avalanche specialists with additional objective based field data related to avalanche, snowpack, and weather. These additional data helped improve advisory accuracy and allowed for observer-based observations to be posted at any time. The need for this observation network was based on the fact that the FAC advisory provides an avalanche forecast that covers a large geographic area, and objective accuracy of the FAC advisory is dependent on the amount of data available from different locations within the advisory area. Simply, the more data available to FAC avalanche specialists, the more accurately the FAC advisory will represent current conditions.

Thank you to all of you who provided us with important and valuable observations! There was a steady flow of observations this season during December and the first part of January. Then, as conditions (read: powder) deteriorated, there were fewer observations. A total of 88 observations were posted on the FAC website. There were another 18 observations submitted that did not prefer to be posted. These observations are still utilized, and often mentioned, in creating the daily advisory.

We also greatly appreciate the support and continual data flow from Ted Steiner and Mark Dundas of the BNSF Railway Avalanche Safety Department. Their expertise and observations are a tremendous asset to the avalanche specialists of FAC. Their detailed observations are a key component to FAC advisories. FAC is looking forward to continuing to work with BNSF Avalanche Safety.

### Volunteers

Volunteers for FAC were extremely valuable and without their efforts much of the work we do would not be possible. These volunteers assisted with field days as well as educational classes (Figure 10). We at FAC personally extend our gratitude to these amazing individuals:

Kate Atha	Robert Montague
Brock Bolin	Lloyd Morisett
Seth Carbonari	Amy Moore
Jen Carpenedo	Craig Moore
Adam Clark	Dan'l Moore
Jenny Cloutier	Conor O'Neil
Kim Corrette	Emily O'Neil
Mark Dundas	Ben Parsons
Laura Fay	Susan Purvis
Jim Flint	Louis Schmidt
Greg Fortin	Lisa Steiner
Zach Gidley	Ted Steiner
Carl Kohnstamm	Reudi Steiner
Brad Lamson	Tony Willits.
Zach Miller	

These volunteers donated over **480** hours to FAC this season! This is an astonishing amount of time from dedicated individuals.

A special mention must be given to Ted Steiner who donated over **80** hours of his time during the summer and fall of 2014 to help install the weather station atop Big Mountain at Whitefish Mountain Resort. This illustrates Ted's passion for avalanche safety and this community.



Figure 9: FAC volunteer Zack Gidley stands next to a fracture along a cut bank near Red Meadow Lake in the northern Whitefish Range in on December 22, 2015.

### **Partnerships**

The FAC strengthened existing partnerships and forged new ones this season. The FAC Director position was collaboration with the Flathead National Forest and the U.S. Geological Survey Northern Rocky Mountain Science Center (USGS). The USGS supports Erich Peitzsch in this position through both salary and some infrastructure. This position is a great example of interagency cooperation focusing on both an applied/operational program as well as combining it with a research component. This allows for opportune and systematic data collection to answer specific research questions that, in turn, will aid operational avalanche forecasting. We hope to continue this mutually beneficial partnership for the agencies that ultimately benefits the public.

The wildly successful Northern Rockies Avalanche Safety Workshop (held annually in the fall) contributed funds from the 2013 workshop toward a new remote weather station to be located atop Big Mountain at the Whitefish Mountain Resort that was installed in September. This weather station is a collaborative project funded and supported by the Burlington Northern Sante Fe Foundation, Flathead National Forest (FNF), Flathead Nordic Backcountry Patrol (FNBP), Northern Rockies Avalanche Safety Workshop, and Whitefish Mountain Resort. FAC/FNF will maintain the weather station. This station will become a tremendous resource for the FAC as well as the recreating public by providing valuable weather data adjacent to a popular backcountry area (Figure 11).



Figure 10: Big Mountain Summit Weather station located near the top of Whitefish Mountain Resort.

The FAC also collaborated with the Flathead Snowmobile Association and Penco Power Products in Kalispell and Fastoys in Kalispell to provide free motorized specific avalanche education seminars. These businesses hosted classes and often provided discounts to attendees. FAC also partnered with The White Room, Sportsman & Ski Haus, and Rocky Mountain Outfitter to host general avalanche awareness classes as well. These retailers also offered discounts on avalanche safety gear. The generous support of these community retailers continues to foster a thriving and educated backcountry community.

Penco Power Products in Kalispell and Yamaha Motorsports also partnered with the Flathead Avalanche Center by graciously donating two Yamaha Viper M-TX snowmobiles for FAC staff use during this season, and Penco is continuing their generosity by donating two snow bikes for next season's use. Yamaha and Penco support safety organization such as FAC by supplying them with the tools they need to successfully complete their duties. Without the support of Penco and Yamaha, FAC would not be able to provide the quality and quantity of education and advisories as much of that funding would be consumed by purchasing snow machines.

The FAC partnered with the Flathead Beacon, Flathead County Search and Rescue, North Valley Search and Rescue, and Two Bear Aviation to produce a 30 second avalanche education video targeted toward the motorized community. These organizations provided financial support for this project and the final video will be unveiled this

coming fall. This is a tremendous educational opportunity that allows us to reach a wide and broad audience, and will showcase the Flathead Avalanche Center's goal and purpose.

The FAC also worked with Flathead Nordic Backcountry Patrol during the field days of the Introduction to Avalanches courses. FNBP's involvement was essential to accommodate the participation of these popular courses. FNBP and FAC also conducted a general awareness and companion rescue skills field day at the Rescue Creek trailhead in the Middle Fork corridor in the Flathead Range.

The National Weather Service-Missoula (NWS) continues to be a strong operational partner with FAC in assisting with weather products as well as disseminating avalanche information via their numerous outlets, including social media. When FAC issues an avalanche warning the NWS publishes the information with their daily products for the given area. This expands the reach throughout the community. Glacier National Park continued as an agency partner in terms of submitting occasional observations and is working with Flathead National Forest and FAC staff for future cooperation and support.

The Flathead National Forest and FAC hosted avalanche advisories for the Kootenai National Forest. FAC staff provided avalanche advisories for the Flathead National Forest advisory area while Kootenai National Forest staff focused their efforts in the Cabinet and Purcell mountain ranges on the Kootenai National Forest. Jon Jeresek has been the avalanche specialist for the Kootenai National Forest providing two advisories a week for many years. Jon has retired and we at the FAC appreciate his commitment to avalanche safety, and wish him good luck in the future.

### **Friends of the Flathead Avalanche Center**

The 2014-2015 season was the first complete season of the new non-profit Friends of the Flathead Avalanche Center (FOFAC) dedicated to supporting avalanche education and the FAC (<http://www.flatheadavalanche.org/friends-flathead-avalanche-center-fofac>). The mission of the Friends of the Flathead Avalanche Center (FOFAC) is to ensure the financial viability of the Flathead Avalanche Center and to save lives through public education and awareness about avalanches and avalanche safety. This group is modeled after other successful "Friends Of" groups affiliated with other backcountry avalanche centers throughout the United States. This group of dedicated individuals truly believes in avalanche education, and works diligently to help raise funds and provide resources for FAC. The current President of the Board of Directors is Mike Block. For more information about FOFAC email [friends@flatheadavalanche.org](mailto:friends@flatheadavalanche.org).

#### *Board of Directors and Members*

President - Mike Block  
Vice President – Ronald Bachrach  
Secretary - Lloyd Morsett  
Treasurer - Roland Frey  
Member - Ben Parsons  
Member - Dow Powell  
Member - Jennifer Cloutier  
Member - Adam Clark  
Member - Lisa Slagle

FOFAC's purpose is to help inform and educate the community and businesses about the impact of snow avalanches on recreation, tourism, and industry. Overarching organizational goals are to help provide the public with current avalanche, snowpack, and mountain weather information, as well as provide basic avalanche education and educational resources. Currently advisories are published four days a week. FOFAC's five year goal is to produce advisories seven days a week. FOFAC's five year goal is to serve 2,500 students a year, with double the number of youth participants contacted. Expansion of corporate funding, private donations, fees for courses provided, and increased membership are the organization's long term funding goals.

The Flathead National Forest has been supporting avalanche information and education since the 1980s. There continues to be a solid level of support from the Forest. However, with ever shrinking budgets, growth for the avalanche center will not be possible without private donors and fundraising efforts by FOFAC. Thus, part of FOFAC’s mission is to financially support the FAC. 2014-2015 was the first season FOFAC generated income through private donations. Total income for FOFAC for 2014-2015 season was **\$21,028.00**. FOFAC appreciates all business and community members who supported FOFAC during this time (Table 5). The *Extreme* sponsors include American Avalanche Institute, Big Mountain Ski Patrol, Inc., Dow’s Custom Construction, Flathead Nordic Backcountry Patrol, Flathead Snowmobile Association, Rocky Mountain Outfitter (RMO), and Whitefish Credit Union. The Flathead Snowmobile Association provided \$1800 and sponsored 2 advisories a week for the entire season. The program of sponsoring an advisory (<http://www.flatheadavalanche.org/how-to-help>) will continue next season as well.

Table 5: Donation structure and number of supporters for FOFAC for 2014-2015 season.

**SUPPORTERS OF FRIENDS OF THE FLATHEAD AVALANCHE CENTER**

EXTREME SPONSORS (\$500 AND ABOVE)				
				
				
HIGH SPONSORS (\$250 TO \$499)				
Kalispell Regional Healthcare Foundation			Whitefish Lake Services	
CONSIDERABLE SPONSORS (\$100 TO \$249)				
Ron Bachrach	Camas Creek Lawn Care	Seth Carbonari	The Danczyk Family	
Glacier Adventure Guides	Joe Grabowski	Great Northern Cycle and Ski	John Linn	
George Michels	Jeremy Rossman	David Russell	The White Room	
MODERATE SPONSORS (\$50 TO \$99)				
Andrew Brown	Adam and Aubrey Clark	Kim Corette	Kim Givler	Matt Kennedy
Don Lewis	Stephanie Morsett	William Sugars	Brad Watson	
LOW SPONSORS (\$25 TO \$49)				
Anders Broste	Dow Powell	Jordan Gilbert	Martha Hunt	
Andy Burbine	Erick Gelbke	Karen Black	Mollie Busby	
Becky Smith-Powell	Felicia Ennis	Katie Borgen	Riley Polumbus	
Ben Parsons	George Giavasis	Kent Hamman	Sean Busby	
Brigid Fray	Jack Beard	Kim Richards	Seth Settles	
Chelaine Penrod	Jeff Metsky	Kristine Goemaat	Simon Trautman	
Chip Weber	Jeff Soyland	Kristy Bly	Tim Strand	
Chris Holdhusen	Jenny Cloutier	LeeAnn Allegretto	Tomas Alarcon	
David Ericson	JerLundgren	Louis Schmidt		

During the 2014-15 winter season the Friends of the Flathead Avalanche Center (FOFAC) collaborated with the Flathead Avalanche Center (FAC) in providing avalanche awareness clinics. These clinics were free to attend, indoor based, roughly two hours in length, and hosted by various outdoor retailers/ organizations throughout northwest Montana. Most clinics took place in either December or January.

Target audience for these clinics was either motorized or non-motorized winter backcountry enthusiasts with very little knowledge in regards to avalanche formation, terrain management, and/or avalanche rescue.

The primary focus at each clinic was to introduce attendees to what avalanches are, dangers associated with avalanches, basics in avoiding avalanches, and an overview of avalanche rescue. In presenting this information a secondary focus was to inform those attending to what the FAC is about and how the FAC can assist them with additional avalanche education opportunities, avalanche advisories, and web-based avalanche information products. It was also stressed that the success of the FAC is dependent on community involvement and the financial support of the FOFAC.

These clinics, of which there were plenty over the past season, may appear to the casual observer to not be much of an impact as they are short in duration and a basic overview of avalanche safety and the avalanche center. On the contrary, these avalanche awareness clinics are vital part of the avalanche safety loop. Clinics provide the foundation to attendees who may have never considered hazards associated with avalanches, where and how to obtain avalanche-related information, and perhaps advancing their avalanche safety skills by taking a more in-depth avalanche course. These clinics are critical to improving avalanche safety in our region and for our family and friends. We are so fortunate to have the dedication of FOFAC and FAC in making these clinics a part of our avalanche safety network.

### **The Future of FAC**

The Flathead National Forest has outlined a general plan looking into the future for the FAC.

#### 2016 Goals:

- With secured funds, complete a classified job description for a full time seasonal avalanche forecaster
- Create a staff of 1 full time avalanche director/avalanche specialist, 1 full time avalanche specialist, and 1 part-time avalanche specialist.
- Host an intern program.
- Provide training for avalanche specialists.
- Provide 5-6 avalanche advisories per week.
- Organize a fall meeting for all agency, organizations, individuals, and partners involved with avalanche information and education.
- Continue partnership with Friends of the Flathead Avalanche Center group; actively supporting community outreach and public involvement.
- Continue to provide Avalanche Awareness, Introduction to Avalanches, motorized specific classes, and potentially host the first motorized specific Level 1 class in northwest Montana.
- Provide a hotline phone for recorded messages.
- Incorporate social media as appropriate and approved by USDA.
- Be responsive to requests for short avalanche education classes such as evening classes, one day field days, or other requests that can be accommodated within the given budget.
- Continue working with partners that share common goals and working relationship; i.e. GNP, USGS, Big Mountain Ski Patrol Inc., FNBP, and others.
- Accept community support when and where appropriate

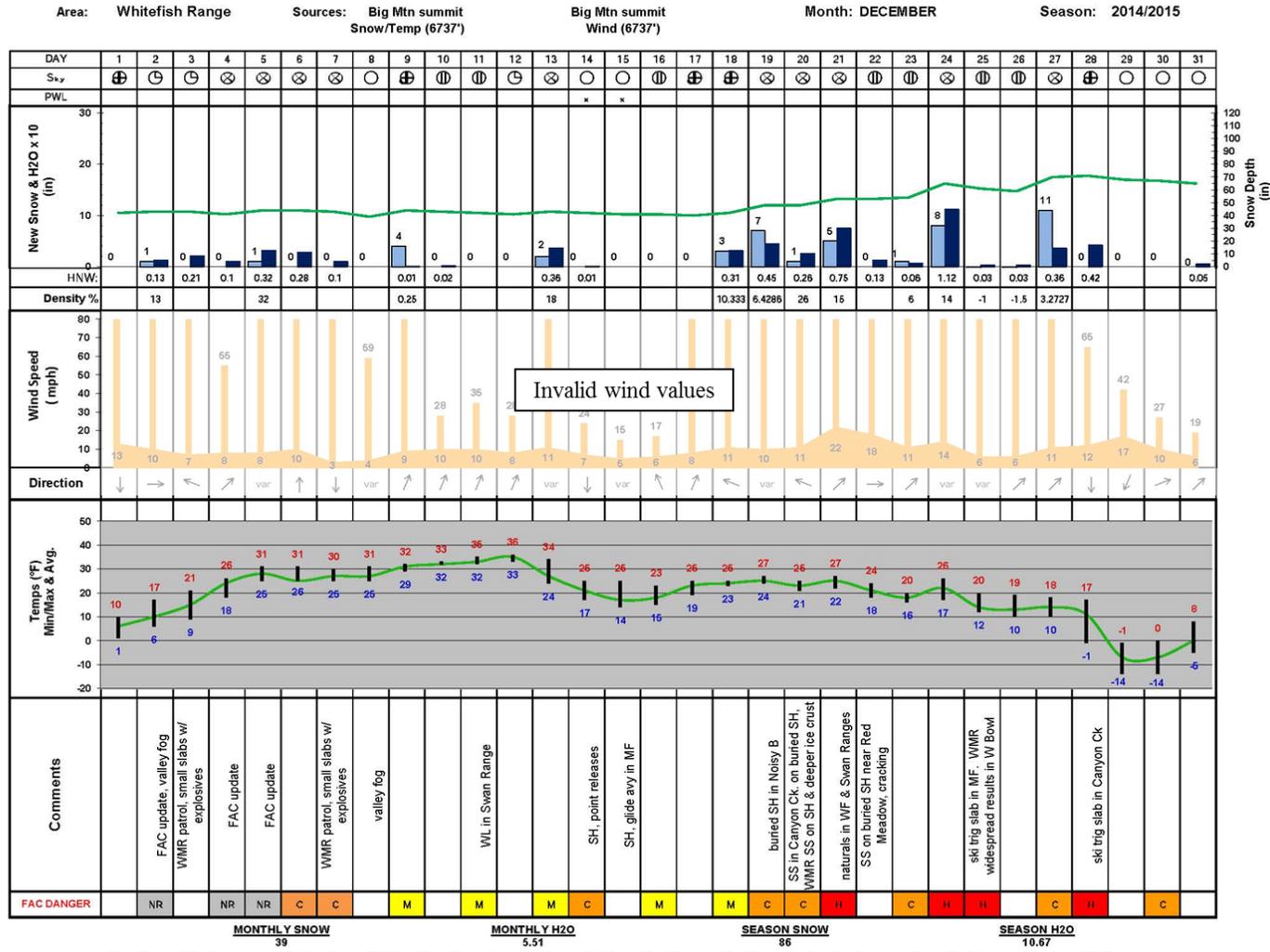
- Respond when an incident occurs and work closely with all rescue agencies and personnel involved. Prepare a timely report on incident.
- Write the Montana Fish, Wildlife, and Parks Recreation Trails Program grant for out year funding.

FAC would like to extend our gratitude to all of the partners, collaborators, volunteers, supporters, and USDA Forest Service personnel who helped FAC produce advisories, teach classes, provide observations, and generally help in disseminating avalanche information. Thank You!

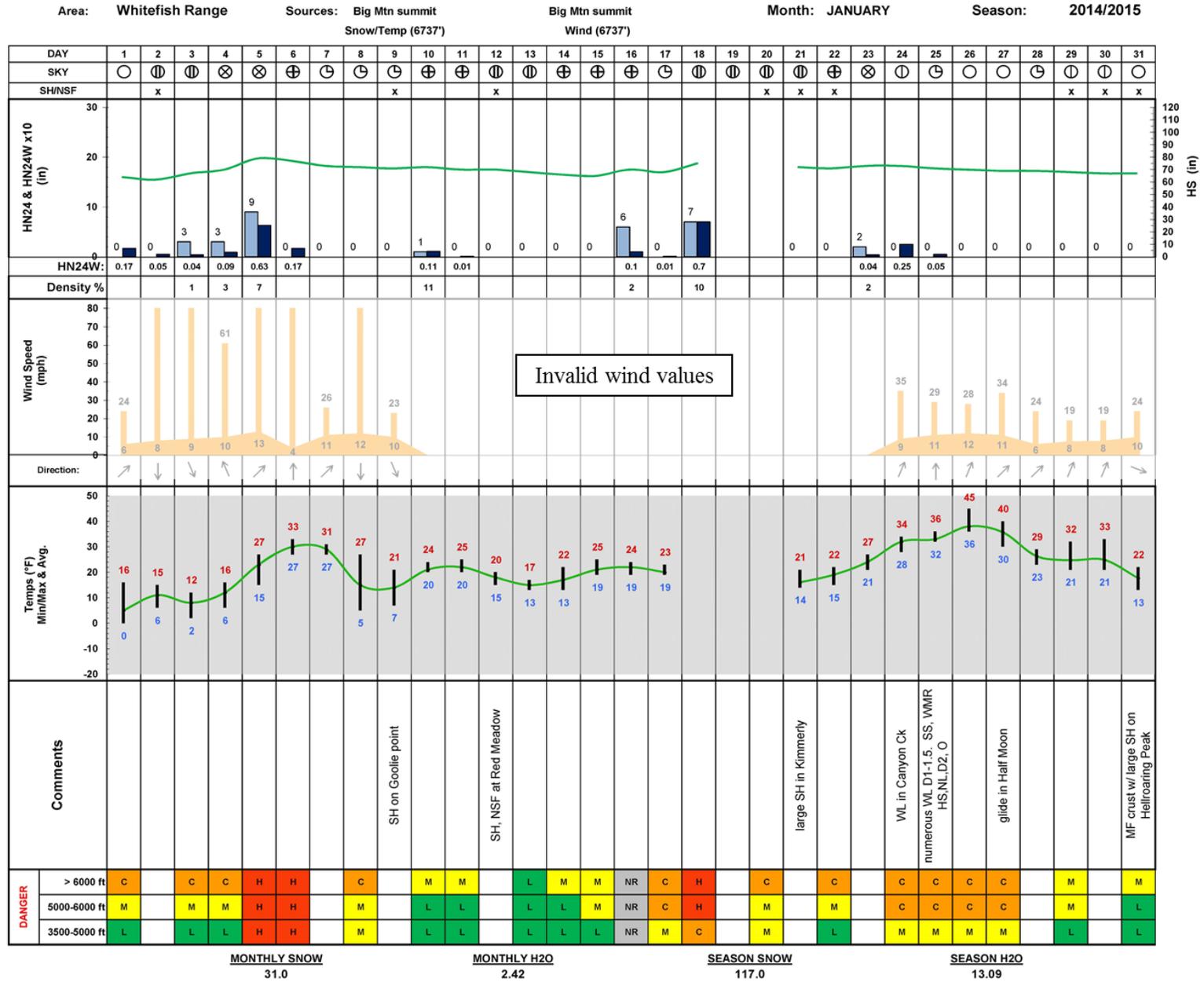
Any questions regarding this report or the Flathead Avalanche Center can be directed to Erich Peitzsch, 406.888.7925 or 406.387.3835 or [erich@flatheadavalanche.org](mailto:erich@flatheadavalanche.org)

Appendix A:

Seasonal weather information from November 1, 2014 to March 31, 2015 for the Big Mountain Summit Weather Station (6737 ft.). This is a new station installed in the fall of 2014. These data are provisional. The wind sensor intermittently malfunctioned during the season, but was replaced and in working order by mid-February. Thus, wind values may be inaccurate or missing in this figure until this time. These values are labeled and slightly shaded.



\*Key for precipitation graph: Light blue bars = Height of New Snow. Dark blue bars = Height of New Water X 10. (For example, when bars are of equal height, snow density is 10%.)



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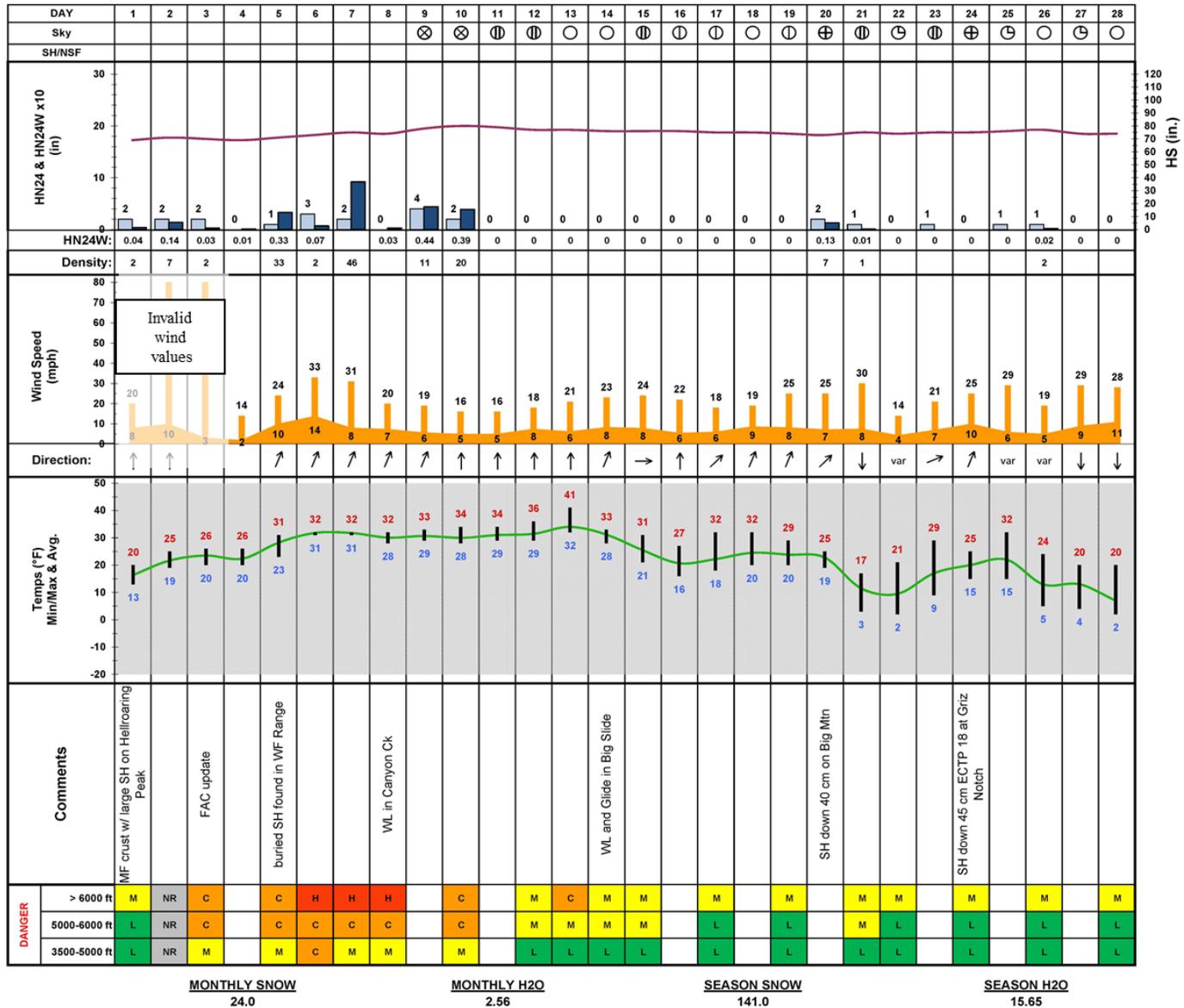
Area: Whitefish Range

Sources: Big Mtn summit  
Snow/Temp (6737')

Big Mtn summit  
Wind (6737')

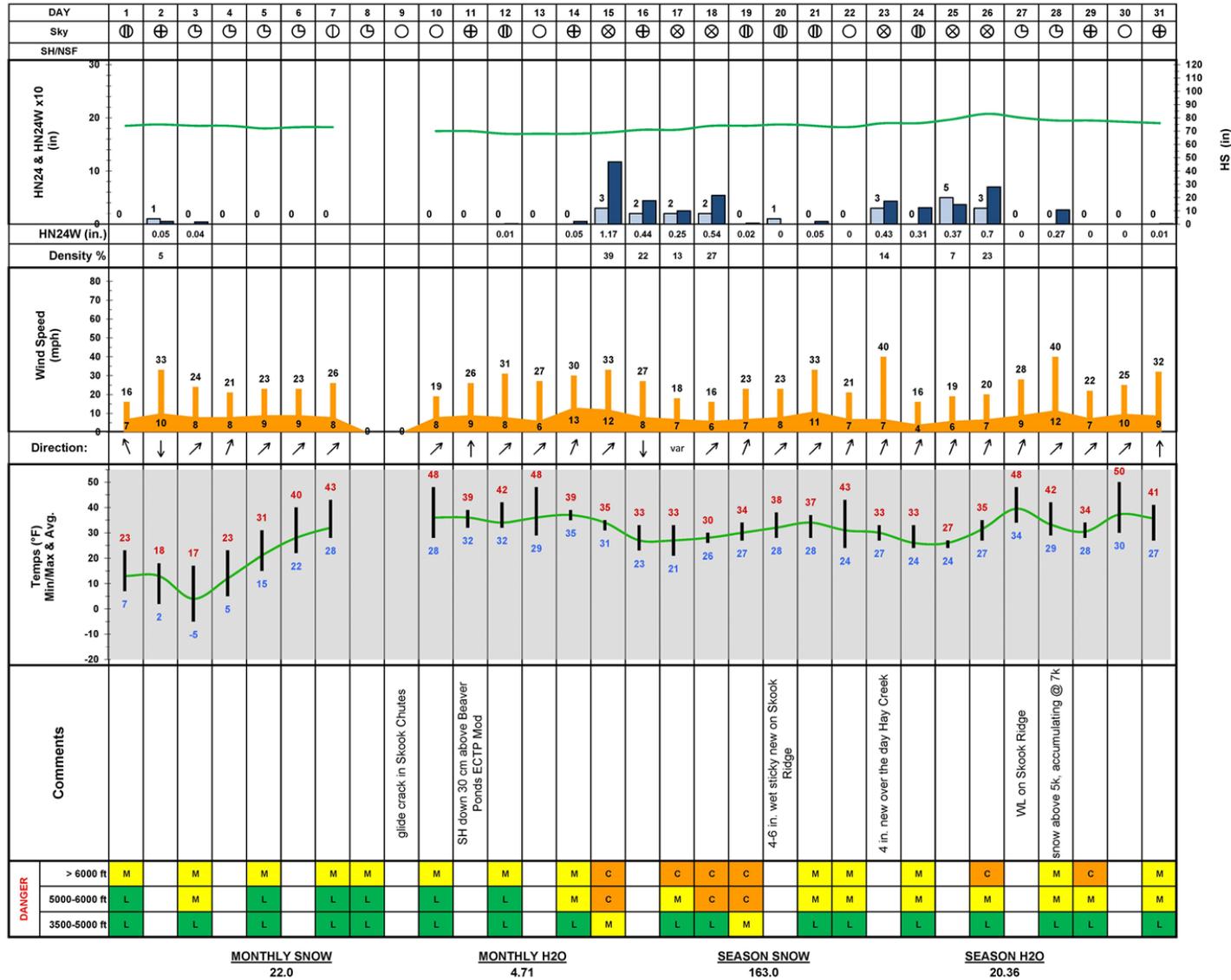
Month: February

Season: 2014/2015



\*Key for precipitation graph: Light blue bars = Height of New Snow (labelled with number). Dark blue bars = Height of New Water X 10. (For example, when bars are of equal height, snow density is 10%.)

Area: Whitefish Range Sources: Big Mtn summit Snow/Temp (6737') Big Mtn summit Wind (6737') Month: March Season: 2014/2015



\*Key for precipitation graph: Light blue bars = Height of New Snow (labelled with number). Dark blue bars = Height of New Water X 10. (For example, when bars are of equal height, snow density is 10%.)