

# 23 | ANNUAL 24 | REPORT



**Flathead  
Avalanche**







# IN THIS REPORT

Mission	3
10,000-Foot View	4
Welcome	5-6
Team	7
Sponsors & Partners	8
Forecasting: Products, Ratings, Observations and Near-Misses and Accidents	9-19
Education	20-21
Infrastructure	22-24
Financials	25-27
Looking Forward	28





## **Daily forecasting, avalanche education, and outreach in northwest Montana**

Flathead Avalanche is a partnership between the Flathead National Forest Avalanche Center (FAC) and the Friends of the Flathead Avalanche Center (FOFAC), a 501(c)(3) organization. The FAC and FOFAC are united by our commitment to sharing information that reduces avalanche incidents and fatalities.

The FAC is a Type 1 Avalanche Center operating out of the Hungry Horse Ranger Station in Region One of the USDA National Forest. We forecast for approximately 1.2 million acres of public land, encompassing the Whitefish, Flathead, and Swan Ranges, as well as portions of the Apgar, Livingston, and Lewis Ranges in Glacier National Park.

As the non-profit arm of Flathead Avalanche, FOFAC is guided by a community board. Our mission is to financially support the FAC and save lives through avalanche education. We teach more than 2,000 people every season and have secured funding for major projects to improve weather stations and our website. We also focus on community building and outreach through public communications and events.

Flathead Avalanche programs help improve the chances of safe backcountry outcomes for winter recreation in our region.

# 10,000 Foot View

Fulfilling our mission to provide life-saving information

## Forecasting

125

Daily forecasts

228

Total advisory products

1,037

Avalanches reported

## Education

2,500

Participants in courses and workshops

24

Public educational opportunities

## Outreach

80,000

Web sessions

12,000

Meta followers (Facebook & IG combined)

705

Subscribers to daily forecast emails (4/9)

125

Radio broadcasts

# FAC Director's Letter

Some factors associated with avalanches can be easy to measure. Air temperature, for instance. Or snow height. Proxy measurements can also be useful, when they track well, like temperature gradient for vapor pressure gradient. More often than not, however, those metrics and proxies aren't that meaningful. The parameters we want to know on a given day are different - snowfall rates are typically more critical than air temperature. Or they're much less reducible to numbers. A sintering rate, for instance. Or slab stiffness and critical crack length. Some days, our measurements, tests, and observations are best used to isolate what we don't know. That can be surprisingly useful.

This report is something like that. We've compiled what we know about our program. Counted what we can. Yet those metrics remain an incomplete assessment of the work we do. They don't tally the tips heard in an avalanche class, applied in the backcountry, and passed on to a friend. They don't capture the conversations between riders who read a forecast and decided to change plans, thus avoiding an accident.

While we don't know exactly how, this season the measurable and intangible metrics ultimately summed to zero. Zero avalanche fatalities, for the third straight winter. We - the backcountry community in northwest Montana - can keep practicing the things that seem to be positive terms in that equation. Things like submitting observations, continuing to learn, and riding mindfully. Ideally, the 2024-5 annual report will record another zero avalanche fatalities.



Blase Reardon  
FAC Director



# FOFAC President's Letter

What a year it has been! As an organization, we navigated through some challenges, and at times the snow wasn't the deepest. Behind the scenes at FOFAC, we witnessed significant changes and reveled in the launch of our new web platform.

We bid farewell to our talented Executive Director, Emily Struss, and our creative Communications Manager, Clare Menzel, both of whom brought professionalism and infectious energy to our organization. We wish them every success in their future endeavors, and they will be greatly missed.

Our steadfast Education Director, Meg Killen, tirelessly led numerous classes and remains committed to supporting our mission of providing educational opportunities to our community.

Despite a few hiccups, our beautiful new website launched successfully, albeit with a brief hiatus over the summer.

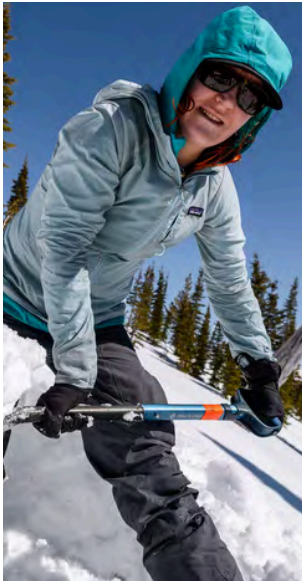
Once again, I find myself leading an organization I love, and I'm delighted to share that we are now navigating much calmer waters. We're advancing with a knowledgeable and dedicated board, a strong partnership with local agencies, a committed staff, and many dedicated volunteers.

Our heartfelt gratitude goes out to everyone who supports our crucial public safety mission. I look forward to seeing you all on the snow!



Jenny Cloutier  
FOFAC Director

# Our Team



**Staff** from upper left: FAC Director Blase Reardon, FOFAC Education Director Meg Killen, FAC Lead Forecaster Mark Dundas, and FAC Avalanche Specialists Cam Johnson, Guy Zoellner, Sarah Williams, Rob Millspaugh, and Jeff Metsky

**FOFAC Board of Directors**

Zak Anderson (President), Ed Visnovske (Vice President), Caroline Hill (Treasurer), Lloyd Morsett, James Heckman, and Mikaela Bourret

**Contact FOFAC**

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**Flathead National Forest**

Chris Prew (Recreation Program Manager)  
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Tad Wehunt (Partnership Coordinator)

**Contact FAC**

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# Forecasting

## A summary of 2023/2024 snow and avalanche conditions

**143**

Days with forecast products

**14**

Reported Near-Misses or Accidents

**11**

Days with High danger

**46**

Days with at least one D2 or larger reported

**D4**

Largest slides reported (January)

While dry conditions marked the start of the 2023-24 winter, the most notable weather occurred at the end of January. Roughly 10 days of sustained snowfall ended with a wet, warm Atmospheric River. A brief high pressure system followed. Above-freezing temperatures and solar radiation produced a widespread cycle of large, historic natural avalanches.

That series of weather events also created a melt-freeze crust and facet combination that plagued the region for nearly six weeks. That structure was the culprit in at least a half-dozen near-misses and accidents during that period. The hazard peaked in mid-February, after a string of storms buried it with a slab two or more feet thick. Two accidents resulted in injuries, with one of the injured requiring evacuation by helicopter.

Mid-March warming led to another period of High danger and a natural cycle of large but not historic natural avalanches. A smaller cycle occurred as the month closed. Spring brought precipitation we could have used early season.



L-R: (1) Historic natural avalanches in the Swan Range, late January. (2) Infra-red image of an accident site above Marion Lake, Feb. 17. Courtesy Two Bear Air. (3) Cam in his happy place. Austin Seback image.



# Forecast Products

We started issuing daily forecasts on December 5 and continued issuing daily forecasts to April 8. We issued 210 forecast products during that 125-day period. We also published 18 early and late-season conditions summaries with no danger rating, for a total of 228 forecast products. We did not publish weekly conditions summaries during the 2023-24 season; website data suggests they weren't used much previously.

This winter's 143 days of products is just above the average (140) since the FAC started issuing 7-day per week forecasts in the 2016 winter. The total number of products (228) is also slightly above the average (205). This total varies substantially year-to-year and depends on how much conditions across the three forecast zones diverge and require more frequent zone-specific forecasts.

Season	First product	Start Daily Forecast	End Daily Forecast	Last Product	Days of Daily Forecast	Total # of Products
23/24	10/27	12/5	4/8	5/3	125	228
22/23	11/6	12/3	4/9	4/28	128	302
21/22	11/10	12/6	4/10	5/27	125	177
20/21	10/19	12/9	4/11	5/21	123	183
19/20	9/22	12/7	4/5	4/23	119	258
18/19	10/12	12/9	4/6	4/15	118	198
17/18	10/2	12/9	4/8	4/15	120	205
16/17	10/9	12/5	4/9	4/30	125	143
15/16	10/28	12/9	4/10	4/11	123	152
14/15	10/29	12/6	4/5	4/5	120	110

Figure 13: Tallies comparing this winter to previous seasons



# Danger Ratings

FAC issued 210 products that included a danger rating for one or more zones during the 2023-24 winter. The distribution of the ratings was typical of the eight seasons (2016-23) that the FAC has issued daily forecasts, with one exception. By far the most common rating (108) was Moderate, with Considerable as the second most common (60), and Low as the third most common (25). FAC issued 17 products with High Danger, double the average for the previous eight winters.

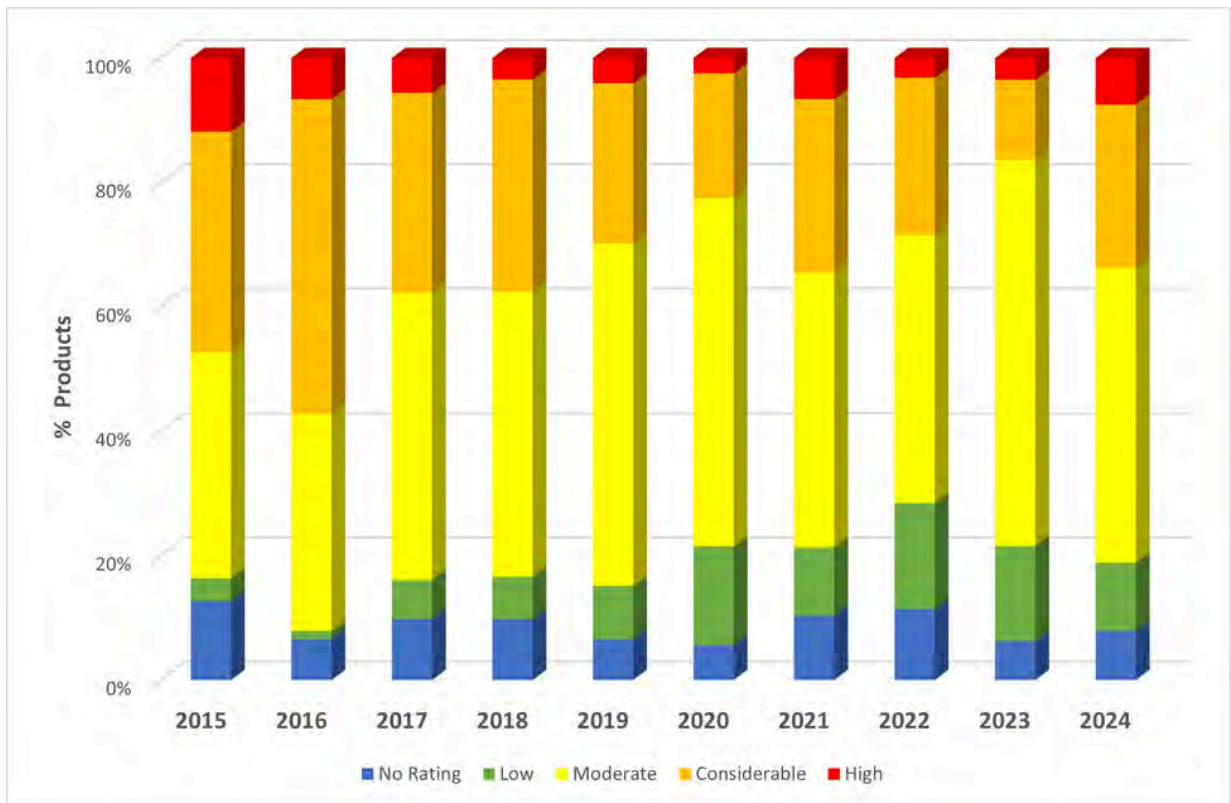


Figure 1: Colors represent the percentage of total products issued with a given rating for each season since 2014/15. Total number of products per season varies from 110 (2015) to 288(2023).



# Observations

Field observations – the lifeblood of any avalanche center – help compensate for the challenge of forecasting for a large region whose avalanche paths are rarely visible from highways due to topography and cloud cover. Observations help describe avalanche hazards, validate predicted avalanche activity, and alert forecasters to snowpack variations and changes in weather conditions.

The FAC is fortunate – and very grateful – to have an active and dedicated community of riders who submit reports of the conditions they've experienced on a given day. During the 2023-24 winter, the FAC logged a total of 525 observations, down 46 (9%) from the previous winter. The public and partners submitted 388 (74%) of those.

During the 2024 winter, 119 individuals submitted observations to the FAC, down 16% from 142 individuals the previous winter. We ascribe the decline in the number of people submitting and the total number of observations to the slow start of the winter. FAC received 164 observations by January 31 but 224 by season's end. The majority (254; 66%) came from the 26 riders who submitted five or more.

Observations submitted by FAC staff (137) decreased from the past three seasons, though they make up a similar share (26%) of the total as they have in recent winters (26-30%). That decline is partially due to the slow start to the season. In addition, the FAC team paired up far more frequently than in previous winters. This decision was a deliberate shift to improve safety and consistency. During the 2023-24 winter, 59 of the forecaster observations (43%) were from field days in which at least two FAC staff made up the field team. In past seasons, those forecasters might have gone to individual destinations. Given that change, it appears FAC staff were in the field more often than in recent years.



Season	Total Obs Logged	Change	Forecaster Obs	Partner & Public Obs	Share Public & Partner
23/24	525	-9%	137	388	74%
22/23	574	15%	146	428	75%
21/22	500	-3%	152	348	70%
20/21	517	5%	151	366	62%
19/20	491	9%	184	307	55%
18/19	451	14%	201	250	63%
17/18	394	74%	148	246	71%
16/17	203	7%	61	142	70%
15/16	189	-	73	116	74%

Special thanks to Northwest MT snow workers, including Ted Steiner and Adam Clark of BNSF Railway and Dave Hamre Associates, Lloyd Morsett and the ski patrol at Whitefish Mountain Resort, and Zach Miller, Gabrielle Antonioli, and John Hageness of the GNP/ USGS Going-to-the-Sun Road program. Similarly, our gratitude to two of the professional outfitters in the region, Great Northern Powder Guides and Swan Mountain Outfitters, who also submitted observations regularly. Thank you all for sharing your expertise!

15+ Observations	Jackson George, Adam Clark, Chris Gotschalk, Kevin Oberholser, Zach Miller
10+ Observations	Alex Slader, David Kerner, Michael Reavis
5+ Observations	Cyros Strickland, Pete Costain, Cody Moore, David Steele, Jessica Bonomo/ Swan Mtn Outfitters, Great Northern Powder Guides, Jake Frerk, Josh McElrath, Kaleb Retz, Paul Fotter, Aaron Street, Anders Soyland, Mark Ambre, Sam Bourret, Sara Boilen, Jacob Malkin

# Near Misses, Incidents & Accidents

The FAC received reports of 14 near-misses and accidents during the 2023-24 winter. Several riders suffered minor injuries in these events, and one accident resulted in a helicopter evacuation. That tally represents a small increase over the previous season, continuing a slow but steady rise in the total number of reported events since the 2021-22 winter. Nonetheless, the tally remains only half of the post-pandemic spike of 28 in 2020-21.

## OUTCOME DEFINITIONS

*Near Miss:* An unintentionally-triggered slide in which no one was caught but which had a high potential for burying, injuring or killing someone should something have gone differently

*Incident:* Any time a rider comes into contact with moving avalanche debris

*Accident:* A person is partially or fully buried, injured, or killed by an avalanche

EVENTS BY OUTCOME, 2017-2024

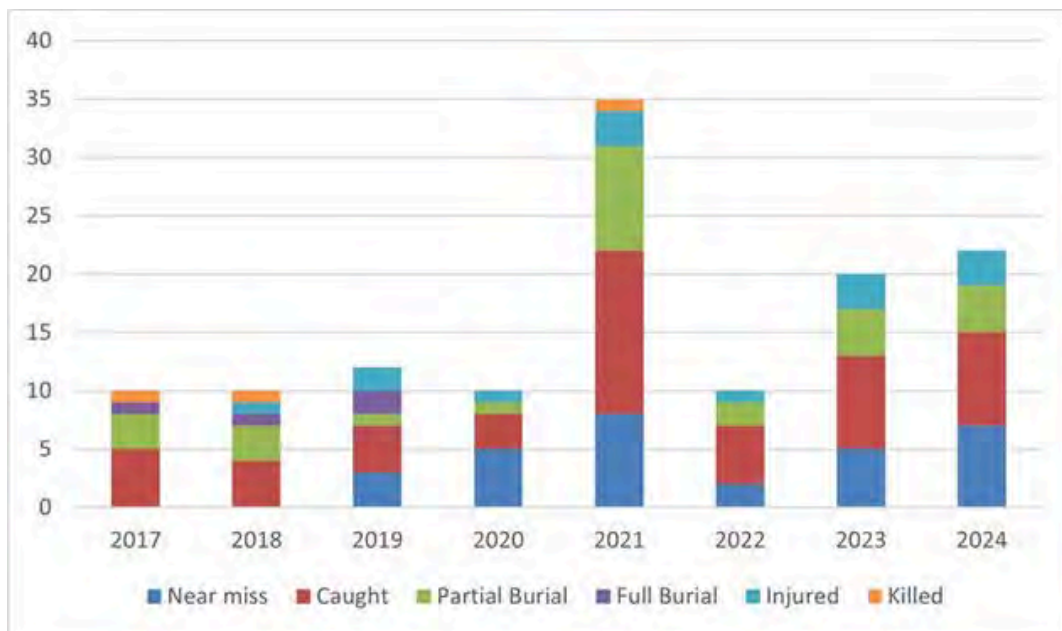


Figure 4: Near-misses and accidents by winter and outcome for the 2017-24 seasons. For the second straight winter, the number of reported events increased, though the total remains below the pandemic spike of 2020-21. Note that in this graph, the bars represent the total number of people involved in near-misses, incidents, and accidents.



Date	Site/Zone	Outcome	D Size	Aspect/ Elevation	Activity/Mode of Travel	Rating at elevation of event
12/14	Crown Bowl/ Swan	Incident/1 Rider caught	1	NW/6750	Backcountry Tourer/ Ski	1
12/23	Mt. Brown/ Flathead	Accident/1 climber caught, injured	2.5	NW/6900	Climber/Foot	1
02/10	Gibraltar Ridge/ Whitefish	Incident/1 rider caught	2	NW/6400	Backcountry Tourer/ Ski	1
02/17	Pt. 7180/ Flathead	Near Miss	2.5	N/7100	Backcountry Tourer/ Ski	2
02/17	S. Dickey/ Flathead	Near Miss	1.5	N/7200	Backcountry Tourer/ Snowboard	2
02/17	Marion Lake/ Flathead	Accident/1 skier caught, carried, partially buried, injured	2.5	NE/7100	Backcountry Tourer/ Ski	2
02/19	Marion Lake/ Flathead	Accident/1 skier caught, carried, injured	2	NE/7000	Backcountry Tourer/ Ski	2
02/26	Slippery Bill South/ Flathead	Near Miss	2	w/6875	Hybrid Rider/Ski	3
03/04	Chicken Bones/ Whitefish	Incident/1 rider caught	2	SE/6025	Sidecountry rider/ Snowboard	2
03/04	Chicken Bones/ Whitefish	Near Miss	2	SE/6025	Sidecountry Rider/ Ski	2
03/29	Haskill Slide/ Whitefish	Incident/1 rider caught	1	SE/5800	Ski Patroller/ Ski	1
03/31	Mt. Liebig/ Flathead	Incident/1 rider caught	1	SE/7200	Backcountry Tourer/ Ski	2
04/06	Spruces/ Whitefish	Accident/1 rider caught, carried, partially buried	1.5	NE/6350	Sidecountry Rider/ Ski	2

Figure 3: 2023-2024 Incidents, accidents, and near misses. These numbers reflect all of the incidents that people reported to us. Where possible, we confirmed details with at least one member of the party involved. Undoubtedly, there are other near-misses or accidents that go unreported.

Of the 14 reports the FAC received during the 2023-24 winter, we classified five as near-misses. Perhaps the most serious of these involved two motorized riders who triggered a large (D2.5) hard slab avalanche when they were climbing a steep, southeasterly slope in the southern Whitefish Range. Fortunately, the avalanche released as they neared the top of the slope, and they escaped unharmed. Because of the size, the amount of debris, and the trees below the slope, this slide might not have been survivable had they been caught and carried. Other near-misses included a large slab triggered by two skiers operating from Challenge Cabin in the Skyland area.

Two other significant near-misses occurred on Feb. 17 a mile or so apart, on the Marion/South Dickey ridgeline. Two riders unintentionally triggered large slabs in steep, consequential terrain. Fortunately, both riders escaped without being caught and carried. An accident occurred at roughly the same time, also in the Marion Lake drainage and involving the same buried persistent weak layer. See below for details.

We classified five of the remaining nine events as incidents. That is, riders came into contact with moving debris but were not partially buried or injured.

- On Dec.14, the second skier in a party triggered a small wind slab in a gully adjacent to Crown Bowl in Noisy Basin. The rider was carried a few feet before escaping to the side of the slab.
- A skier was caught in a large soft slab in a steep chute on Gibraltar Ridge on Feb. 10. He was carried roughly 75 feet but not buried or injured.
- A solo snowboarder was surprised by an unintentionally-triggered slab in a steep chute east of Whitefish Mountain Resort on March 4. Fortunately, he was able to turn out of it, because getting carried into the scattered trees at the bottom could have had serious consequences.
- A patroller was knocked off her feet by sluff in Haskill Slide at Whitefish Mountain Resort on March 29.
- On March 31, a skier climbing towards the summit of Mt. Liebig in the Flathead Range noted wind slab on the slope above him. He deliberately triggered a wind slab that broke wider than he expected. Fortunately, he was on the edge of the slab and not buried or injured.

Four of the events reported to FAC involved partial burials and/ or injuries:

- On Dec. 23, a large natural avalanche overran a climber on Mt. Brown



in Glacier National Park. His partner was not involved, and the two climbers self-evacuated. The climber suffered rib injuries.

- On Feb. 17, the second skier on a slope above Marion Lake triggered a large slab that overran his partner. The debris carried the first skier through some small trees, where he suffered rib, back, and arm injuries. Two Bear Air evacuated the victim.
- Two days later, an avalanche forecaster returning from investigating the Feb. 17 accident triggered a slab that caught, carried and injured him. He and his partner self-evacuated.
- On April 6, a skier in the terrain east of Whitefish Mountain Resort triggered a loose dry snow avalanche that entrained more snow than expected. The debris carried the skier into a tree and left her partially buried.

The reported events occurred on a variety of aspects – all but south and southwest. Most slopes had an easterly component (northeast or southeast). Eight of the reported events happened in the upper elevation band (above 6500 feet), with a mean elevation of 6600 feet. Nine were large avalanches (D2 or larger), with four classified as D2.5.

Through our accident reports and this summary, the FAC aims to document what happened when things went wrong so that readers can learn lessons that will keep them safer. We're thankful to those who reported events and corroborated details. This information is invaluable.



*An injured skier awaits evacuation above Marion Lake, Feb. 17.*

## EVENTS BY DANGER RATING, 2017-2024

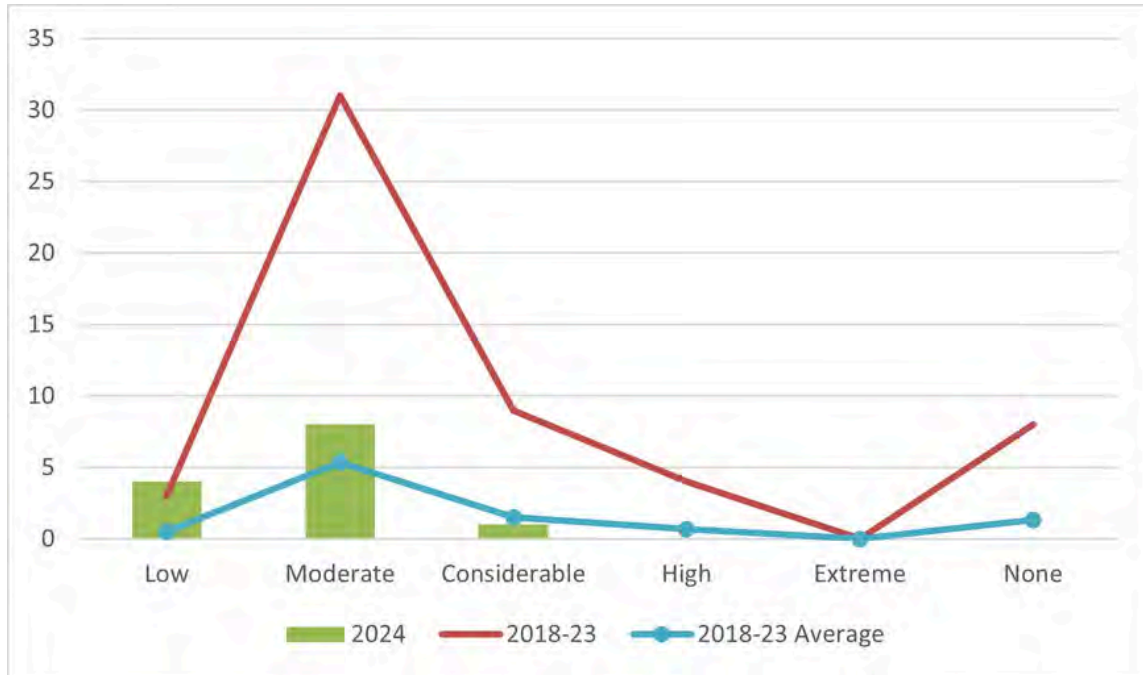


Figure 5: Near-misses and accidents by danger rating in 2024 (green bars) compared to totals (red line) and averages (blue line) for the 2018-23 winters. As is typical, most incidents occurred when FAC rated the danger as Moderate. However, the FAC received reports of four events at Low Danger, the highest tally for that rating in the past seven winters.

## EVENTS BY SETTING 2017-2024

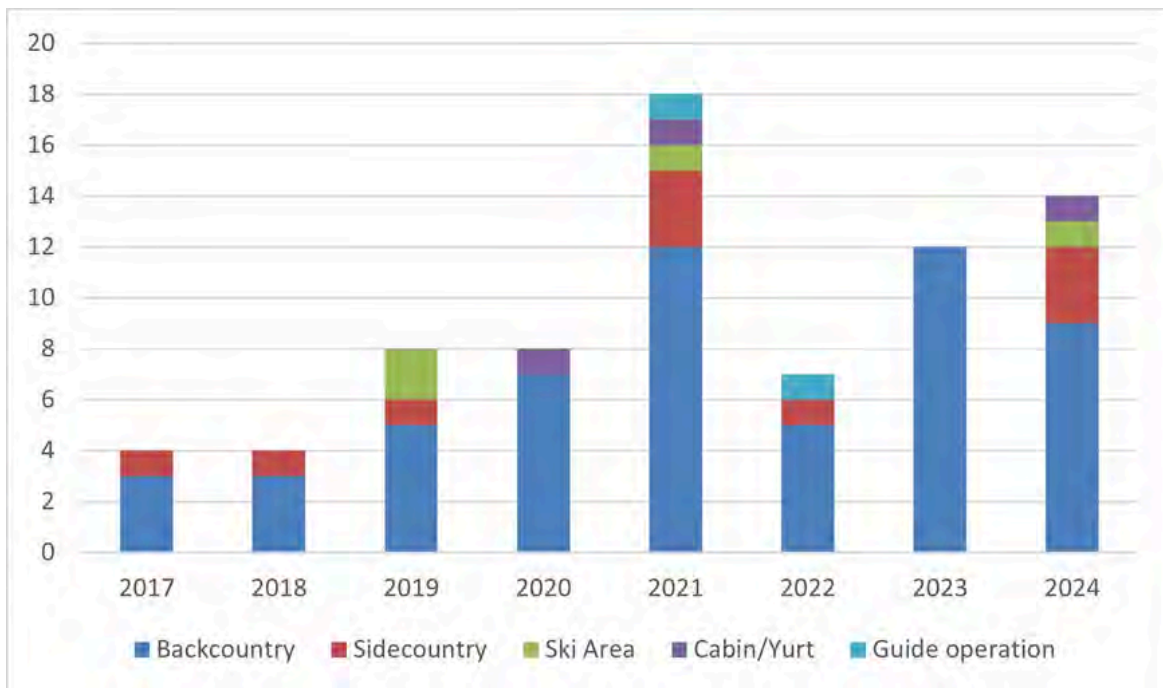


Figure 6: Near-misses and accidents by setting for the 2017-24 winters. As in most winters, the 2024 incidents occurred primarily in the backcountry – the riders accessed avalanche terrain from a roadside trailhead. Other events occurred in terrain within a ski area, terrain accessed by leaving a ski area, or from a backcountry cabin or yurt.



## EVENTS BY FORECAST ZONE, 2017-2024

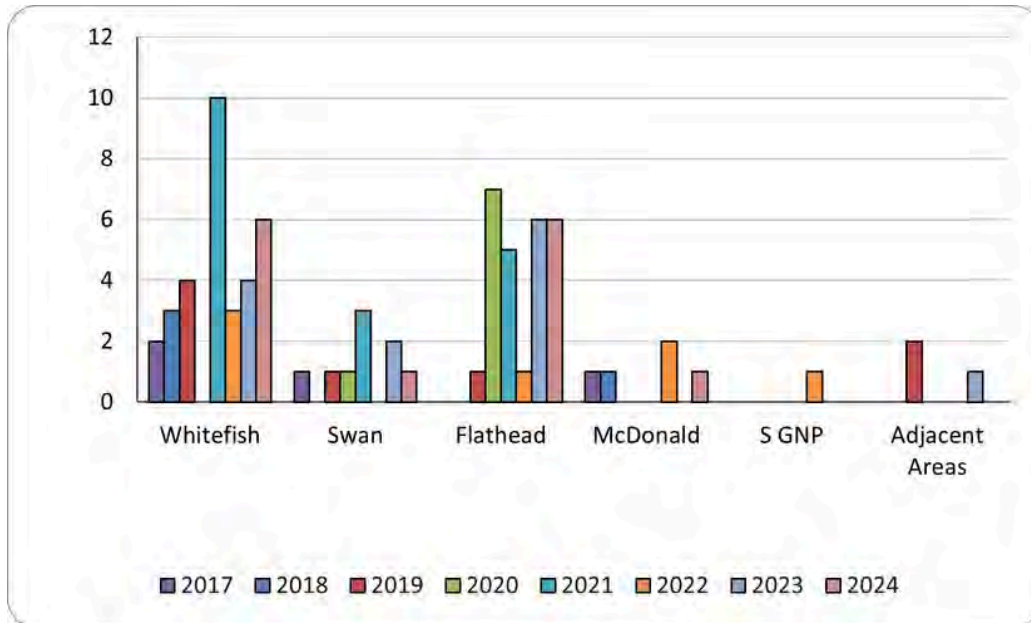


Figure 7: Reported near-misses and accidents by forecast zone for the 2024 winter. Most events (13 of 14) occurred in the Whitefish and Flathead zones. The parts of Glacier National Park included in the Flathead forecast region are split between two zones. The Apgar Range is included in the Whitefish Forecast zone. Both the Lake McDonald valley, where one accident occurred, and Southern Glacier National Park are covered by the Flathead Zone forecast..

## EVENTS BY MONTH, 2017-2024



Figure 8: Reported near-misses and accidents by month for the 2024 winter (green bars) compared to totals (red line) and averages for the 2017 through 2023 winters. As is typical, February saw the most events. However, FAC recorded more events in March (6) than typical.

# Education

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## Preparing students for informed backcountry decision-making

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**8**

Public field courses

**224**

Youth from 15 schools

**785**

Hot dog winners

**375**

NRSAW audience

**154**

Avalanche Awareness attendees

Once again, we broke our previous attendance record with a total of 2,442 students participating in one or more of our courses and workshops this season. We were thrilled to offer a wide range of courses for all education and experience levels. This will continue to be one of our goals moving forward. Our season started with a snowy December, then our temps quickly plummeted... with a low of -37 degrees. This made forecasting and teaching in the field quite difficult, but thankfully temperatures returned to normal as we entered the new year. The snowpack continued to build, providing excellent teaching opportunities when we were in the field.

As we finished up our season, we were thrilled to tally up our final numbers. Even with a few cancellations due to weather, we were still able to follow through with educating our public and our community. We are already looking forward to next year and how we can continue to improve.



(1) Kicking off NRSAW with the American Avalanche Association (2) Motorized students search for a beacon at the Canyon Creek trailhead (3) The winning team celebrates the last round of Name that Tune/Name that Avalanche. Austin Seback photos



We kicked off our season as usual with the 13th Annual Northern Rockies Snow & Avalanche Workshop. Shifting venues to the Whitefish Performing Arts Center, our reach increased and we brought in 375 attendees. We also brought back Pro Night for its second year, gathering 125 snow and avalanche workers in our region together for an evening of talks on professional topics. Our staff also attended ISSW Bend, so we hit the ground running with a lot of inspiration and ideas.



*Meg demonstrates how to dig snowpit and Clare shadows a fine beacon search. Austin Seback photos*

After workshop season, we rolled out our Awareness Program, with stops in each Flathead Valley community, as well as Eureka—10 total. Our field season kicked off mid-December. With Partner Rescue Clinics and Intro to Avalanche Courses for both motorized and human-powered users, as well as a motorized Recreation Level 1, the field course lineup was similar to past years. Cheers to the Flathead Snowmobile Association for offering full reimbursement on motorized education once again. Youth education was a blast as always! In February, we hosted Flathead Avalanche Friends Fest, with four days of events, including beacon clinics, Name that Tune/Name that Avalanche, and a Topics Workshop with Erich Peitzsch and Zach Miller of USGS that focused on climate and avalanches, with a focus on wet avalanches. We appreciate the FAC team for continuing to share their expertise with the community through State of the Snowpack presentations throughout the winter. A huge thanks to all our instructors and students!

# Infrastructure

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## Weather stations, our website, and more

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4

Weather stations in our network

For an avalanche center and education program, “get the gear” is a little more complicated than a beacon, shovel, and probe.

When we installed the Link Mountain weather station in 2022, we completed our long-time goal to establish remote weather stations in all three of our forecasting zones. This network of coverage helped our forecasters visualize conditions each morning as they assessed overnight changes and developing weather trends.

4

Snowmobiles

3

Public beacon parks

Our next chapter of growth has been the website, which underwent a renovation this year. As our primary means of communicating avalanche information to the public, this digital infrastructure is essential for our mission.

6

Youth avy packs

Looking forward, the main focus will be on updating our snowmobile fleet. These machines are essential for forecasting across our 1.2 million-acre region and in motorized zones. They also play a key role in the maintenance of our weather stations.



(1) Sarah using this year's Ski-Doo loaner to access the Whitefish Range. (2) Sarah inspects the Tunnel Ridge wind station. Austin Seback photo (3) Clare and Jenny putting new signage to work at Hot Dog Days. Austin Seback photo

The forecast team and multiple other professional organizations and recreational users rely heavily on automated weather stations (AWS). These stations provide critical meteorological for remote areas throughout the forecast region. FAC forecasters use data from the stations to determine how the weather is affecting snow and avalanche conditions.

We currently maintain five AWS spread out throughout the forecast region. They're sited at mid and upper elevations, mostly on exposed ridgelines. Those sites provide the most valuable data, though they're harsh environments for sophisticated electronics. During the 2023-2024 season, the FAC forecast team spent 14 days doing site visits and routine maintenance. The time invested paid off with reliable and consistent information throughout the winter season.

Station	Year Installed	Primary Data
Link Mountain, Central Whitefish Range at Red Meadow Pass	2022	Wind speed and direction, air temperature
Tunnel Snow (Pinnacle Creek)	2020	Snow height, air temperature
Tunnel Ridge Wind (between Paola and Pinnacle Creeks)	2020	Wind speed and direction, air temperature
Aeneas Ridge, Swan Crest, Jewel Basin	2019	Wind speed and direction, air temperature
Whitefish Mountain Resort Summit	2014, upgraded in 2021	Wind speed and direction, air temperature, snow height, precip

Installing and maintaining weather stations would not be possible without the help of Dan "Howie" Howlett of NoHow Inc. Howie designs the FAC stations and monitors the data network, upgrading programs, adjusting reporting schedules, and responding promptly to urgent phone calls. Thank you, Howie, for your unique expertise and generosity.

Others who help keep these stations or their data displays alive are Dr. John Snook (Colorado Avalanche Information Center), Patrick Wright and Tobey Carmen (Inversion Labs), Adam Clark and Ted Steiner (Dave Hamre and Associates), and the Whitefish Mountain Resort Ski Patrol. We also want to thank Two Bear Air Rescue and Flathead Helitack for delivering equipment to their difficult locations.



# Website

Since 2012, FOFAC has owned and administered FlatheadAvalanche.org, which includes funding, maintaining, and developing the site. Over the past decade, the number of visitors has grown significantly, from 20,000 users each season in the 2010s to around 30,000 in the 2020s. This season saw 26,000, a slight dip likely correlated with challenging season conditions.

Users	Sessions	Page views	Record sessions in one day	Avg. sessions per user	Avg. pages per session
26,154	91,963	209,699	1,038	2.86	2.28

The FAC team uses the National Avalanche Center's Avalanche forecasting, observation, and weather station platforms. NAC products are well-designed, continually updated, and offer a standardized user experience across the United States. We also use the Snowpack Tracker from Inversion Labs.

This year, FOFAC rolled out a major website update for flatheadavalanche.org, improving the experience for users and staff. Keeping all the NAC forecast products in place, we updated the look and feel of the website around these widgets. We refined site navigation, redeveloped content on key pages including How to Read the Forecast, and added new assets like the Avalanche Resources Library. Professional photography and promotional videos help tell our story and connect with users. These visuals, along with cohesive branding and effective funnels for donors and sponsors, elevates our development capacity. Additionally, the update site is fully responsive for mobile devices, which represent more than 60% of our sessions.

Cheers to donors in the Great Fish Community Challenge, the Round Up for Safety community grant program, and our fantastic web developers from Flathead Beacon Productions, Pierce Ware and Patrick Sappington. Thank you all for helping make this project possible!

# Financials

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## A unique partnership with strengths on both sides

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**\$250,000**

Total  
Operating  
Budget

**\$52,000**

Grant dollars

**\$16,000**

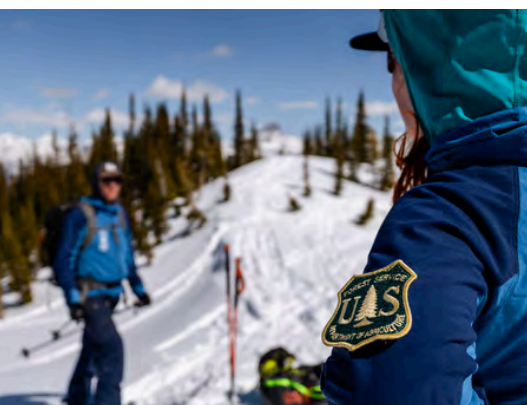
Corporate  
Sponsors

**250**

Individual  
donors

Since 2014, a Challenge Cost Share agreement has enabled FOFAC to support the Flathead National Forest's avalanche center with a website, education programming, outreach, staff and volunteer capacity, and more. FOFAC has three main areas of fixed expenses: education programs, forecast support, and staff time. In addition, we invest time and resources in certain special focus areas each year. One of the strengths of our public-private partnership is FOFAC's ability to secure funding from the community, businesses, and granting partners for strategic infrastructure investments.

Flathead National Forest's contributions to the partnership include funding for many equipment purchases and most of the forecaster wages. The Flathead NF also provides vehicles, several snowmobiles and a trailer, staff laptops, and IT and administrative support. Less tangible support includes all the resources of a large federal agency, such as the Public Information Officers who help publicize Watches and Warnings.



(1) The FAC is a program of the Flathead National Forest 2) Meg, Emily, Clare, and Ted kick off the 2023 Great Fish Community Challenge (3) Emily checks the winning raffle ticket for a Schafer Meadows flight. Austin Seback photos

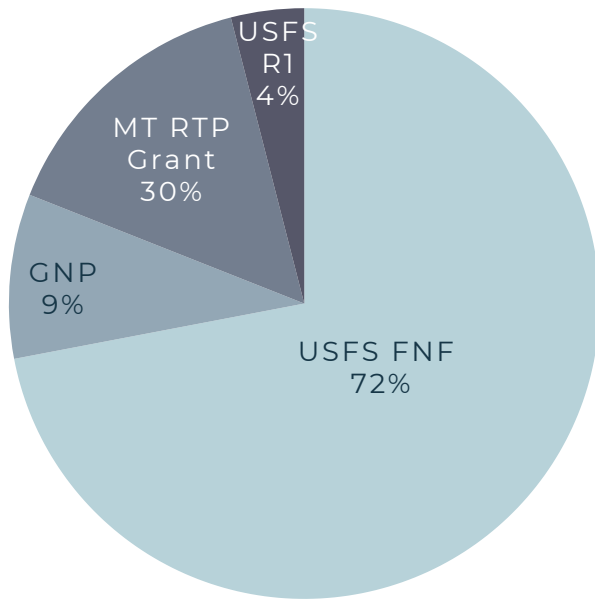


Figure 10: FAC funding sources

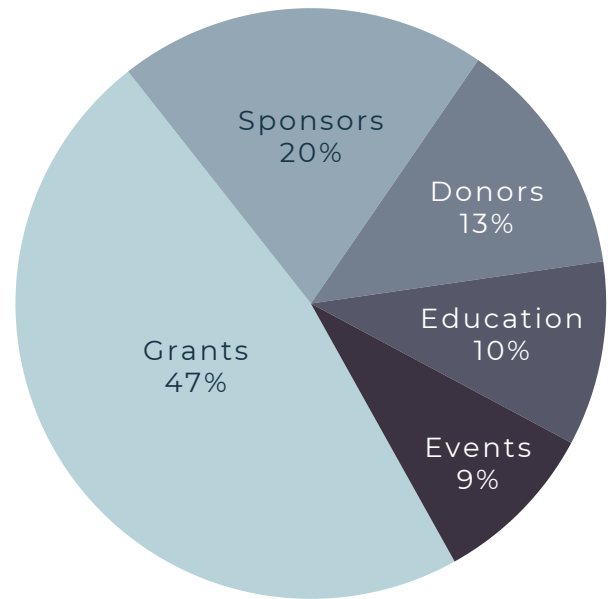


Figure 10: FOFAC funding sources

FOFAC CONTRIBUTIONS TO FLATHEAD AVALANCHE	
FOFAC Staff Time	\$55-65,000
Education Program	\$25,000
Website and Communications	\$15,000
Weather Stations	\$9,000
Snowmobiles	\$9,000
FAC CONTRIBUTIONS TO FLATHEAD AVALANCHE	
USDA Forest Service, Flathead National Forest - Permanent Forecaster Salary	\$185,000
USDA Forest Service, Northern Region (R1) - Avalanche Center Funding-Expenses	\$10,000
MT FWP, Recreational Trails Program (RTP) Grant - Seasonal Forecaster Salary	\$39,906
USDI National Park Service, Glacier National Park - Interagency agreement-Salary & Expenses	\$23,000

Figure 10: FAC & FOFAC contributions to the partnership



# Community Donors

## **\$1,000 +**

Monica Pastor, Dow Powell and Becky Smith-Powell, Thomas and Teresa Quinn

## **\$500 +**

Felicia Ennis, Jean Agather, Ted and Lisa Steiner, Sweetgrass Psychological Services, Tamarack Foundation Inc.

## **\$200 +**

KLIM, Richard Gordon and Cheryl Watkins, Seth Carbonari, Fred and Sarah Jones, Steven Lefever, Don and Colleen Scharfe, Kent and Kim Taylor, Summerfield and Julie Baldrige, William and Elizabeth Bayne, Aron Bosworth, Kim Givler, Kim and Jan Richards, Scott and Jane Wheeler, Noah and Erin Bodman, Jeff and Cheri DuBeau Carlson, Charles and Linda Maetzold, Selah Charitable Trust

## **\$5 - \$150**

Wink and Joy Jordan, Mark Mance and Katie Callahan, Matt and Sadie Baldwin, Josie Bestwick, Maggie Doherty, Nathan Drendel, Glacier Mortgage, Inc., Mike and Lindsey Hromadka, Hungry Horse-Glacier View Employee Association, Terry Knupp, Zachary Miller and Grete Gansauer, Kevin Oberholser, Sydney Lillard and Karen Perser, Adam Streeter, Bill Sugars, John and Lydia Fleming, Ron Bahrmann, Ronald and Katherine Bachrach, Gary and Annell Danczyk, Alexander Gray and Cameron Blake, Hidden Moose Lodge, Abbey Hughes, Will and Leslie Hunt, James and Catherine Heitel Foundation, Ken and Karen McFadden, Devonna Morgan, Alan Myers-Davis, North Valley Hospital, Marc and Kelly O'Brien, Jeremy Rossman, Annika Silverman, Timothy Strand and Sukey Pfirman, The Towne Printer, Jim Watson and Carol Bibler, Terry Chute and Jane Kollmeyer, Frank Sweeney, Adam and Aubrey Clark, Peter Francisco, Meg Killen, Stan and Liz Makman, Bolars Matson, Chantel McCormick, Brian Miller, Louis Schmidt, Nicholas Goodwin, Brendon Donoghue, Michael Contrada, Robyn Hall, Bank of America Charitable Foundation, Inc., Danielle Coffman, Shannon Freix, Kenny Gasch, David Grady and Linda Engh-Grady, Allyson Hakala, Trevor and Kacy Howard, Neil and Jennifer Huether, Paul Moffatt, Alan Myers-Davis and Frances Montanye, Larry and Val Parsons, Carl and Kellsey Perkins, Elizabeth Schellberg and Julie Seby, Daniel Short, Beth Sobba, Charles Stearns and Rita Braun, Emily Struss, John Muhlfeld and Stephanie Sunshine, The ZaneRay Group, Becca Wheeler, Jennifer Cloutier, Lloyd and Stephanie Morsett, Travis Vaughan, Bradford Ress, Jerry Lundgren and Alice Ford, Jeremiah Martin, Genevieve Bennett, Matthew Blake, Rebecca Briber, Gabriel Dillon, Andrea DiNino, Shannon Donaldson, Megan Eandi, Jim Finneran and Martha Hunt, Judah and Tanya Gersh, Deborah Huntington, Matt Kennedy, Keith Meehan, Clare Menzel, Jen Parsons, Helen Pilling, The Cuisine Machine/Last Chair Kitchen & Bar, Cynthia Woods, Steven Cook, Brigid Fray, Richard and Glenda Gehri, Doug Griesel, Jane Hunt, Burket and Claire Kniveton, Bruce Lieffring and Brenda Winkler, Rebecca Powell, Rob Conte, Brandon and Katie French, Susan Wheeler, Marc Sugars, Tim and Deidre Corson, Emily Harkness, Keegan Siebenaler, Gordon Johnson, Craig and Holly Kemp, Brian and Denise Manning, Will and Bonnie Smith, Tim and Hilary Shaw



# Looking Forward

*Summer is a seemingly-quiet time for the Flathead Avalanche Team. Yet as you read this, the team is planning for another excellent NRSAW on November 9th 2024, finalizing the always-evolving menu of Youth and Adult program offerings, dialing in our weather station network, and making sure our website is there for you, the public, to find observations, current conditions, and seven-day-a-week forecasts.*

*Flathead Avalanche is much more visible when winter starts. Even then, however, we are just one part of a larger community of snow workers and avalanche professionals across western Montana, northern Idaho, and southwestern British Columbia. We share observations, ideas, and best practices. We support our respective teams through storms and losses.*

*Keep that in mind as the weather cools and the snowpack starts building. A community that comes together is what keeps us safe. Let's all keep doing the small things that can have large effects.*

*Jenny Cloutier  
blase reardon*