

# Chugach National Forest Avalanche Center

## 2022-2023 ANNUAL REPORT



*One of three very large slabs triggered remotely, at the same time, in Seattle Creek on March 25.  
Photo by Mike Hofmayner.*

Chugach National Forest Avalanche Center  
chugachavalanche.org  
145 Forest Station Road  
Girdwood, AK 99587  
Phone: (907) 783-3242



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John Sykes



Wendy Wagner



Andrew Schauer



Graham Predeger



Megan Guinn (CNFAIC Intern)



## Letter from the Director

I get queasy when I think about the 2022/23 winter season at Turnagain Pass. Our sole purpose at the avalanche center is to help people have fun in the mountains without having a run-in with an avalanche. We are a public safety entity. Two significant weak layers developed this year, both associated with crusts. One formed around Thanksgiving with the other in mid-March. These buried weak layers caused over 20 very large human-triggered avalanches (Size D3 or more on the destructive scale). They were unsurvivable slides. Somehow only 10 people were caught with 5 sustaining injuries, the worst a broken femur. The rest of these big slabs were triggered remotely without impacting anyone below, amazingly enough. In mid-May these layers sprang back to life and caused a historic shed cycle before melting away into the streams.

Besides the nail-biting snowpack, we had an array of highlights. We incorporated the much asked for 'problem rose' into the advisory. Ironically, a brief survey at the end of the season rated this addition as 'not all that useful'. Most likely because we often do not have aspect dependent snowpacks (i.e., facets survive on southern slopes as well as northern). Another requested product was to create a 'stability test' cheat sheet for those reading the observations. Lead Forecaster Andrew Schauer drew this up mid-season and you can find it [here](#).

Behind the scenes we are always looking for ways to streamline our workflow and advance the center as a whole. Forecaster



*The crew gathering in mid-April for some laughs, thank you's and to send off Megan Guinn, our 2023 Intern.*

John Sykes created and refined many internal checklists and documents we use to keep us on track. Some have even been adopted by other centers. We were also able to lay the groundwork to increase pay rates for all staff. With efforts from our non-profit arm, Friends of the Chugach Avalanche Center, and the financial support of the Chugach National Forest, the pay structure next season will compensate all avalanche specialists at the national standard – very exciting for retaining our experienced and exceptional forecasters!

I am truly thankful to work with such a positive and professional team, including another stellar intern this season, Megan Guinn. A sincere thank you to these folks, Friends of the Chugach Avalanche Center, the USFS Chugach National Forest, and the community for their long-standing support and dedication.

*-Wendy Wagner, Chugach NF Avalanche Center Director*

# Acknowledgements

## *Avalanche Safety is a community effort!*

There are so many facets of support for the Avalanche Center. All the public and professional users that submit their field reports and avalanche observations, making our forecasts more accurate. All those who become members and donate to our non-profit Friends of the Chugach Avalanche Center. All the businesses that support us with direct funds, service, and in-kind assistance through our Friends group. It truly is a community effort and we

**THANK YOU** all immensely!!



*Andy Moderow joins Wendy Wagner on a field day up Spokane Creek.*

In the end, assessing snow stability comes down to forecasting the weather, field-based snowpack assessments, recording data endlessly, and assimilating professional and public observations. The entities listed below are absolutely critical for producing accurate avalanche forecasts. We would like to extend a special thank you to the following organizations and individuals for sharing their valuable information and insight:



*Paul Wunnicke eyes the faceted layer responsible for a large slab he triggered.*

- Alaska Avalanche School
- Alaska DOT&PF
- Alaska Railroad
- Alaska Guide Collective
- Alaska Pacific University
- Alyeska Ski Patrol and Snow Safety
- Chugach Powder Guides
- Chugach Electric
- David Hamre and Associates
- The over 250 public users who submitted observations!!



*Friends we meet out in the mountains!*



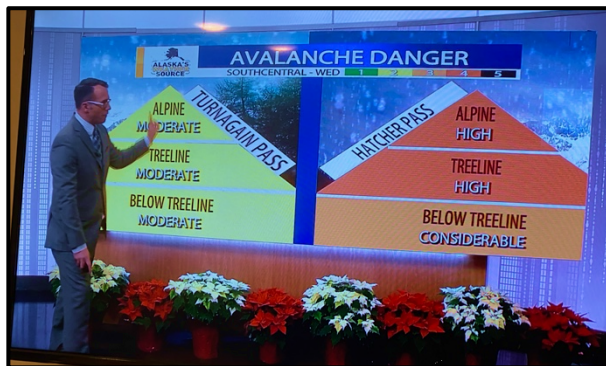
# Partnerships

*Getting the job done right needs the right resources, gear and data.*

**Resources and Gear:** Having the proper gear to perform the job safely is vital. We are grateful for support from **Black Diamond** (avalanche safety equipment), **Alaska Mining and Diving Supply** (AMDS – snowmachine gear, support and the machines themselves through a ‘loaner’ program), **A2D Sledworks** (snowmachine parts and labor) and **Powderhound Ski Shop** (donations and gear).



*Big thank you to Ski-Doo / BRP for again providing a loaner snowmachine to the center!*



*Alaska News Source reporting the danger of the day for Turnagain and Hatcher.*

**Data:** Avalanche science is based on data. We rely heavily on our partners at the **National Weather Service** (who provide tailored mountain weather forecasts, weekly

briefings, and issues avalanche warnings), **BeadedStream/KCI** (provides the equipment and hosts snow temperature data on Tincan), **Alaska Pacific University Snow Science Program** (installs and monitors snow study equipment and observations), and **Alaska News Source** (reporting our daily danger rating on their morning news casts).



*Turnagain Pass Avalanche Awareness Day, March 25, 2023.*



# Internship Program

It was a pleasure to have Megan Guinn as our 2023 intern. Megan grew up in Golden, Colorado, spending weekends skiing with her dad. Her passion for skiing drove her to pursue an undergraduate degree in Civil Engineering at Montana State University in Bozeman. Here Megan fell in love with the dynamic and fascinating nature of snow. Determined to couple her love for skiing with her future pursuits, she decided to pursue a Master's degree at Portland State University in Snow Hydrology. She researched the effects of forest fires in the Pacific Northwest and their effect on snow hydrology and water resources.

During the internship, Megan focused on daily operations at the center. She not only assisted in

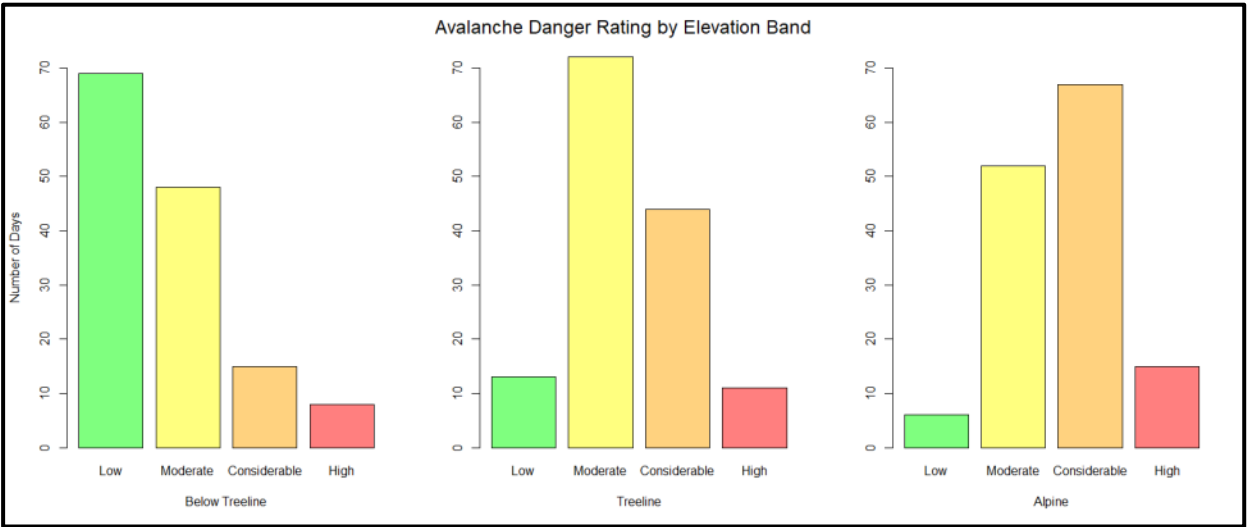


forecaster field days, but did many key field days with her own team. She compiled countless field reports, several videos, and was keen to produce her own mock avalanche forecasts. She is a powerful skier, but knows that snowmachine skills are also a requirement for most avalanche forecasting positions. Hence, she fully embraced the motorized community and took every chance she got to squeeze-the-throttle.

We wish Megan the best of luck in her future endeavors and thank her for all her hard work and enthusiasm!



# Forecasts and Statistics



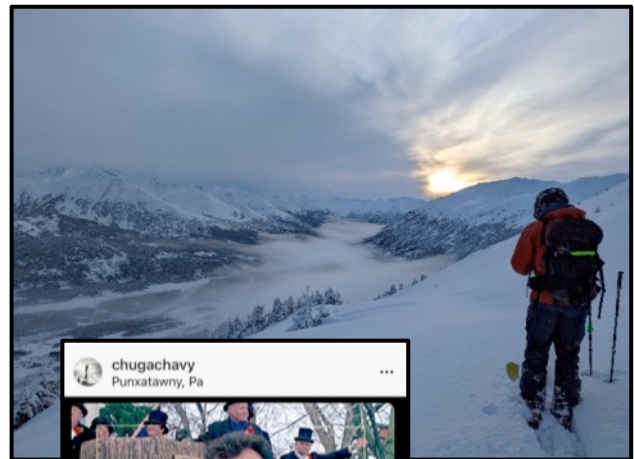
Number of days at each avalanche danger rating split up by elevation band. Below treeline had the most days at low danger, treeline most at moderate, and alpine most at considerable.

## Forecast Summary

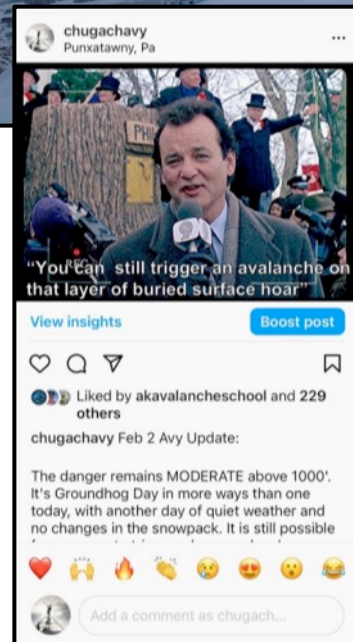
**Turnagain Pass Forecasts: 153**  
**Avalanche Warnings: 2**  
**Special Avalanche Bulletins: 2**

Wendy started issuing conditions updates in early November this year. Despite thin snow cover there were a handful of avalanches observed with really wide propagation on a layer of basal facets. That was just the first persistent weak layer in a year with several cycles of very large avalanches on layers of surface hoar and facets. The first daily forecast was issued by Andrew on Wednesday November 23<sup>rd</sup>.

The final forecast was issued by John on Sunday April 30<sup>th</sup>. For the last two weeks of the season forecasts were issued 4 days a week. By the time we closed up shop the conditions were still cold and snowy, so Andrew and Wendy stayed on into May to monitor conditions and issue updates as necessary.

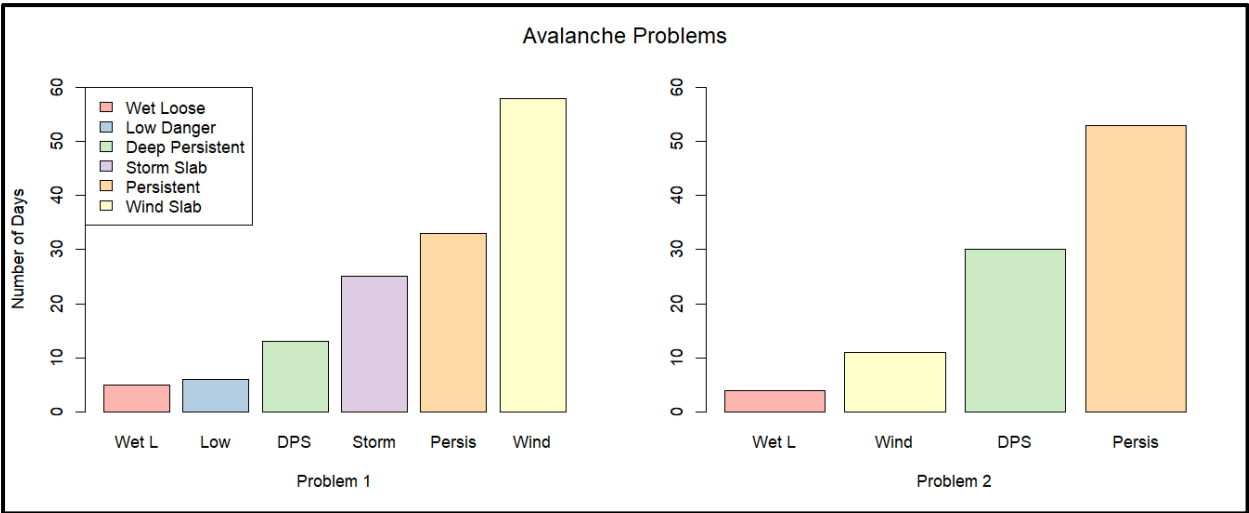


November light and thin early season snow cover on Seattle Ridge.



Andrew's solution to message fatigue during stagnant but dangerous Moderate conditions.

# Forecasts and Statistics



Number of days we issued each avalanche problem, split up into problem 1 and problem 2. Wind slabs were by far the most common problem 1 with persistent slabs coming in second. For problem 2 persistent and deep persistent were by far the most common.

## ChugachAvalanche.org

**Unique users: 79,058**  
**Total visits: 302,076**  
**Pageviews: 879,331**  
**Average pageviews: 2.9**  
**Average visit: 2 min 47 sec**

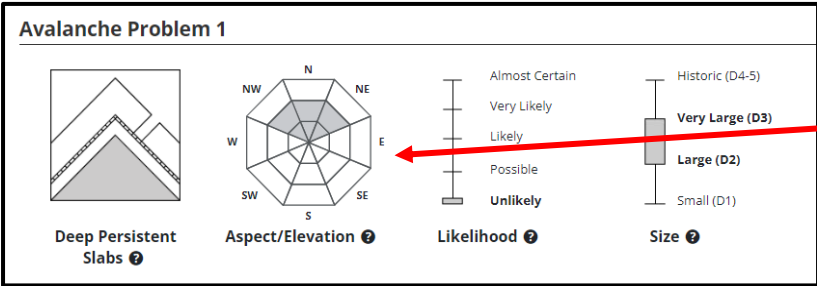
**Avalanche Forecast**  
 Turnagain Pass  
 Issued Thu, April 27th, 2023  
 Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.

**Recent Observations**

Date	Region	Location
04/26/23	Turnagain	Observation: Tiran
04/23/23	Chugach State Park	Observation: ANCFE Foot Slopes
04/24/23	Turnagain	Observation: Skutumpah
04/23/23	Turnagain	Avalanche: People Involved: Foddes Trees
04/23/23	Chugach State Park	Observation: Hare Mountain Trailhead
04/23/23	Chugach State Park	Avalanche: Olden Alos, Chugach Insect Slabs
04/23/23	Hatcher Pass	Observation: Two Lakes Valley/Dupe
04/22/23	Seward	Avalanche: Snow Harbor to Lost Lake
04/22/23	Gridwood	Observation: Roof avalanches on roofs not meant to slide
04/22/23	Hatcher Pass	Observation: Rex Wallace Bowl

**News**  
 FRU, APRIL 21, 2023  
**The Avalanche Center is HIRING!**  
 Big changes are on the horizon for the Chugach NF Avalanche Center. Up to two new avalanche specialists are being hired to assist with avalanche forecasting and outreach for the Seward Peninsula as well as one avalanche specialist/professional observer to be hired for the Anchorage Front Range (Chugach State Park). Funding from the Seward Ranger District has enabled them to have one new forecaster added to the Chugach NF Avalanche Center staff. The goal is to better cover high use...

**Upcoming Events**



We added an aspect/elevation rose to our problem icons this year. At the end of the season we collected survey data about how our users felt it worked.



# Forecasts and Statistics

## Social Media

### Facebook:

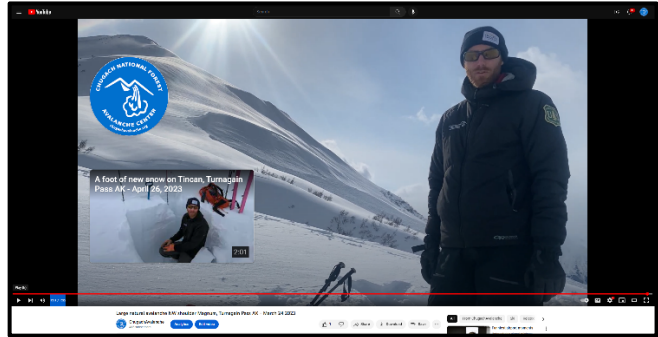


**Page Likes: 8,477**  
**Posts: 215**  
**Reach: 102,314**

### Instagram:



**Followers: 11,685**  
**Profile visits: 12,026**  
**Reach: 65,133**

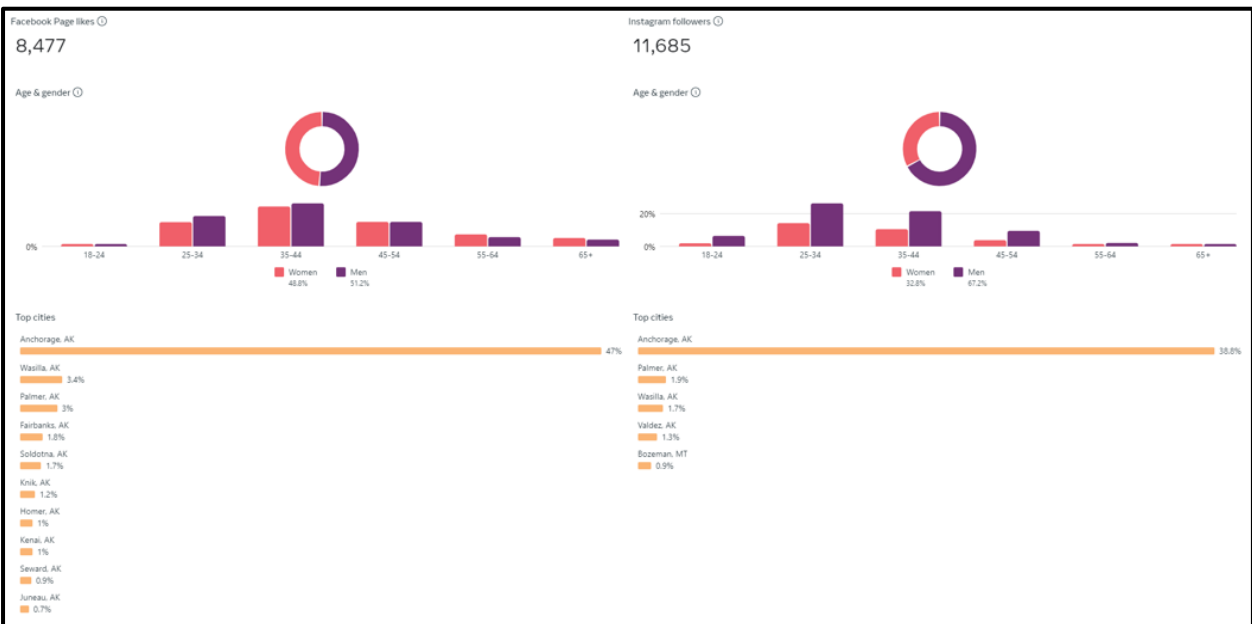


*Field videos were back by popular demand and got by far the most positive feedback on the end of the season survey. We posted these to YouTube, Facebook, Instagram, and of course ChugachAvalanche.org*

### YouTube:



**Subscribers: 415**  
**Views: 24,031**  
**Videos posted: 85**



# Forecasts and Statistics

## Observations

Our deepest thanks go out to everyone who contributed to our observations page this season! You make our job possible and provide so much valuable information to the development of the forecast. Here's to another year of collaborating as a backcountry community to provide the best information possible!



Former forecaster and now observer Heather Thamm investigates the Summit snowpack.



Trusty observers investigating a recent avalanche when forecasters were unavailable to take advantage of a good weather window.

<b>Total Observations: 244</b>
<b>Turnagain Pass: 102</b>
<b>Hatcher Pass: 71</b>
<b>Chugach State Park: 27</b>
<b>Summit Lake: 21</b>
<b>Girdwood: 14</b>
<b>Seward: 5</b>
<b>Other Areas: 4</b>

Date	Region	Location	Observer
04/29/23	Turnagain	Observation: Tincan	John Sykes
04/28/23	Turnagain	Avalanche: Taylor Pass/Pastoral	Schauer/ Creighton FORECASTER
04/28/23	Turnagain	Avalanche: Tincan	Andy Moderow
04/26/23	Turnagain	Observation: Tincan	John Sykes

We added some functionality to our observation page this year to make it searchable so users can more easily access older observations that are relevant to their trip planning.



# Public Outreach



Michael Smith (Friends Board President) kicks off Andrew Schauer's evening awareness talk at the Girdwood Brewing Company.



TV News Interview: 13  
 Radio/Podcast Interview: 11  
 Print News Article: 14  
 Public Presentations: 6

**Chugach National Forest Avalanche Center**  
 Forecaster Chat # 1

When: Thursday December 15, 2022 @ 7-8 pm  
 Where: Alaska Mountaineering and Hiking  
 2633 Spenard Road, Anchorage, AK  
 Cost: Free!!!

**Part 1: We need your help!**  
 Tips for submitting quick and quality observations

**Part 2: Strategies for decision-making with a complex snowpack**  
 Reflections from cutting the line too close with an active surface hoar layer in 2021/22 season

John Sykes - CNFAC avalanche forecaster and PhD candidate focused on decision-making in avalanche terrain

**CHUGACH NATIONAL FOREST AVALANCHE CENTER**  
 FORECASTER CHAT #2

**DOES THE TERRAIN MATCH THE SNOWPACK?**

LINKING AVALANCHE PROBLEMS TO TERRAIN MANAGEMENT

**AK ALASKA PUBLIC MEDIA** | PBS | P | F

TV RADIO NEWS EDUCATION SUPPORT ABOUT DONOR PORTAL DONATE

**Unstable January Snowpack Causes Avalanches in Southcentral Alaska | Alaska Insight**

By Valerie Kane January 28, 2023

Unstable January Snowpack Causes Avalanches in Southcentral Alaska | Alaska Insight

Southcentral Alaska has seen an extreme mix of winter weather so far, and while Alaskans are eager to go explore the snow-covered mountains, avalanche danger is an ever-present threat in the Alaskan backcountry.

**ALASKA'S NEWS SOURCE**

Live News Feed AK Construction Map Political Blog Weather Podcasts Contacts Submit News Tip Submit Photo

**Avalanche center warns of warming temps after skier rescued off mountain**

The skier was airlifted to a local area hospital by the Alaska National Guard

By Caryn Schreck  
 Published Apr 21, 2023 at 6:48 PM AKDT

GIRDWOOD, Alaska (KTUU) - A backcountry skier had to be rescued off a mountain in Girdwood after a human-triggered avalanche roared from approximately 1,000 feet. According to a report submitted to the Chugach National Forest Avalanche Information Center, a slope broke about 30 feet above where he was skiing, immediately falling out of sight to the group he was skiing with.

**SATURDAY MARCH 25**  
 \*PENDING PARKING CONDITIONS SO CHECK BACK AFTER 5PM THE DAY BEFORE (P/R)\*

**TURNAGAIN PASS**  
**AVALANCHE AWARENESS DAY**  
 MOTORIZED PARKING LOT - NOON TO 5PM

**\*TEST YOUR BEACON SKILLS\***  
**\*BRING YOUR QUESTIONS\***

Beacon Park to practice our skills! | Snowmachine Demos | ANFAIC | ANCHORAGE MOUNTAIN SAFETY CENTER

**BOTTOM LINE: FREE HOT DOGS - INFO - GOOD TIMES!**

# Public Outreach

## SAAW 2022

The 2022 Southcentral Alaska Avalanche Workshop was held on November 4th. The event was a huge success thanks to the organization of Alaska Avalanche School and CNFAIC, the support of the American Avalanche Association, and the amazing topics shared by all the presenters.

### Presentations:

#### A3 Update

*Jayne Thompson Nolan – A3 Executive Director*

#### Avalanche Transceiver Interference

*Doug Latimer, Ivars Finvers – Alpine Club of CA*

#### Change Your Lenses; Cultivating Intellectual Humility

*Amy Pertuz – Silverton Mountain*

#### A Pattern of Deep Persistent Slabs in the Washington Cascades

*Matt Primomo – Northwest Avalanche Center*

#### Avalanche Modeling for Door 4 RACS Placements

*Matt McKee – Alaska Railroad*  
*Katreen Wickstrom-Jones – Alaska Division of Geological & Geophysical Surveys*



*John Sykes speaks to the crowd at APU*



#### Automated Avalanche Terrain Exposure Scale (ATES) Mapping

*John Sykes – CNFAIC*

#### A case study of the Hatcher Pass 2022 Valentine's Storm Cycle

*Allie Barker – Hatcher Pass Avalanche Center*  
*Kyle Van Peurse – National Weather Service*

#### The Story of the Hiland Road Avalanche

*Trip Kinney – Arctic Valley Ski Patrol*

#### An Analysis of a Close Call on Eddie's Ridge

*Mike Welch – Sundog Ski Guides*  
*George Creighton – Chugach Powder Guides*

#### Season Outlook/ Avalanche Fx products

*Carson Jones – National Weather Service*

#### Community Snow Observations

*Gabe Wolken – Alaska Division of Geological & Geophysical Surveys*



# Avalanche Incidents

## *A season with multiple near-misses*

We recorded 14 notable avalanche incidents over the 2022/23 season, involving people getting caught, carried, buried or injured, or triggering unusually large avalanches. Despite all of these scary incidents, we managed to make it through the season without an avalanche fatality in our advisory area. This is due in part to the noticeable response of people adjusting their travel habits in response to the scary snowpack we were dealing with, and also a healthy dose of luck. Details of two near-misses are given below, one incident involving 15 people on the ridgeline that avalanched, and another involving a skier getting carried over very big terrain and sustaining a fractured femur, resulting in a helicopter evacuation. In addition to these events, we also saw a skier-triggered avalanche on Captain's Chair that carried a skier for close to 2,000 vertical feet over rocks and cliffs but miraculously did not result in any injuries, and a two-week stretch in the end of March with multiple human-triggered D3-D4 avalanches, some of which were triggered remotely up to ½ mile away.

Sadly, a skier died in an avalanche well outside of our advisory area near Denali Park on May 4. He was a Denali National Park and Preserve employee and was well known in the community. Our condolences go out to his family, friends, and coworkers. This was the only wintertime backcountry fatality in Alaska during the 2022-23 season. The Alaska climbing season gets underway in May and at the time of publishing there have been two additional avalanche fatalities as of mid-May. These were a team of climbers on the Moose's Tooth who fell due to a small slab on May 5. All avalanche incidents can be found on our accidents page at [chugachavalanche.org](http://chugachavalanche.org).



*CNFAC Forecaster John Sykes investigating a natural avalanche in Bertha Creek the day before a major incident on Cornbiscuit. 01.07.2023*



# Avalanche Incidents

Date	Location	Notes
5-Jan	Seattle Ridge	Multiple remote-triggered avalanches by two snowmachiners on Seattle Ridge. One rider carried with a falling cornice, and the snowmachine was damaged and had to be flown out.
7-Jan	Cornbiscuit	Skier-triggered deep slab on Cornbiscuit. 15 people on slope, 2 carried, one partially buried.
21-Jan	Seattle Ridge (Warmup Bowl)	Snowboarder caught, buried up to their nipples, able to self-rescue.
21-Jan	Cornbiscuit	Skier caught, partially buried. Lost one ski, minor injuries.
9-Feb	Seattle Ridge (BBQ Bowl)	Skier caught and carried roughly 150'.
19-Feb	Library	Two skiers caught and carried, one partially buried with multiple fractured ribs.
20-Mar	Tenderfoot	Remote triggered D3.5
25-Mar	Skookum Valley	Remote triggered D4. Nobody caught, carried, or buried.
25-Mar	Seattle Ridge (Third Bowl)	Multiple D3+ avalanches remote-triggered simultaneously from up to 1/2 mile away.
25-Mar	Seattle Ridge (-3 Bowl)	Multiple D3 remote triggered.
26-Mar	Palmer Creek	Skier-triggered D4. Ran across the valley, burying two snowmacines.
28-Mar	Winner Creek	Skier-triggered D3. Four feet deep, 6th skier on slope.
15-Apr	Captain's Chair	Skier caught, carried 2000' through rocks and cliffs.
19-Apr	Big League	Skier caught, carried 1000', over rocks and cliffs. Skier sustained a fractured femur and was evacuated by helicopter.
11-22 May	Region-wide	Widespread large wet slab avalanche cycle

*Table 1: List of notable avalanche incidents from this season.*

# Avalanche Incidents

## Avalanche Near Misses

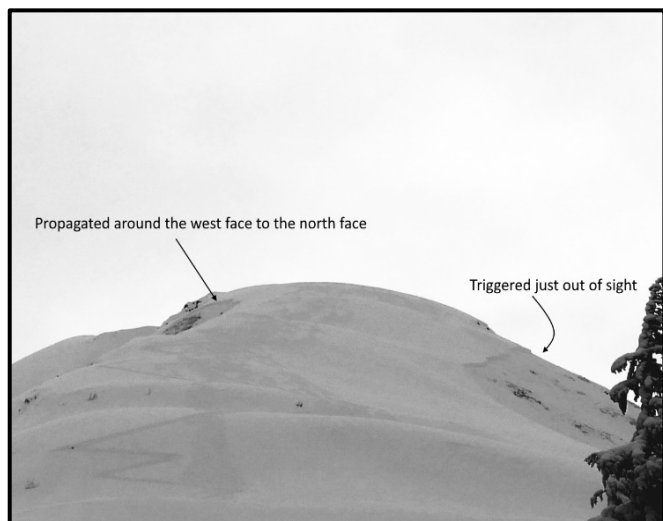
### *Cornbiscuit - Jan. 7*

- **Skier-triggered**, initiated on SW face and propagated around ridge to N face.
- **15 people** on slope.
- **2 skiers caught**, one carried, partially buried, and self-rescued.
- 2.5-6' deep, 2 slabs 900-1000' wide, 1000' vertical run. **HS-ASu-R3-D3-O**

Several groups were out touring on Cornbiscuit ridge at Turnagain Pass. At 12:40 pm, an estimated 13-15 people were on one of two up-tracks (NW ridge, or W/SW broad ridge/face), higher along the ridge itself, and two were skiing down the SW face. At this time, a very large avalanche was triggered by a skier at the top of the SW face who was moving to watch two partners descend the slope. The two skiers were caught; one escaped and the other was carried, partially buried, and self-rescued uninjured. Around 20 minutes before the avalanche, 5 people had skied the slope without incident.

After the avalanche, when the two skiers on the slope were known to be safe, around 7 people from other groups initiated a beacon search of the debris in case there was an unknown person(s) caught. No signals were found and after speaking to the groups in the area, all persons were accounted for.

The avalanche failed on a fist-hard layer of facets sandwiched between two melt-freeze crusts. The layer was below the uppermost crust of the Thanksgiving crust/facet combo that the CNFAIC had been watching as a layer of concern since the first week in December.



# Avalanche Incidents

## *Big League – April 19*

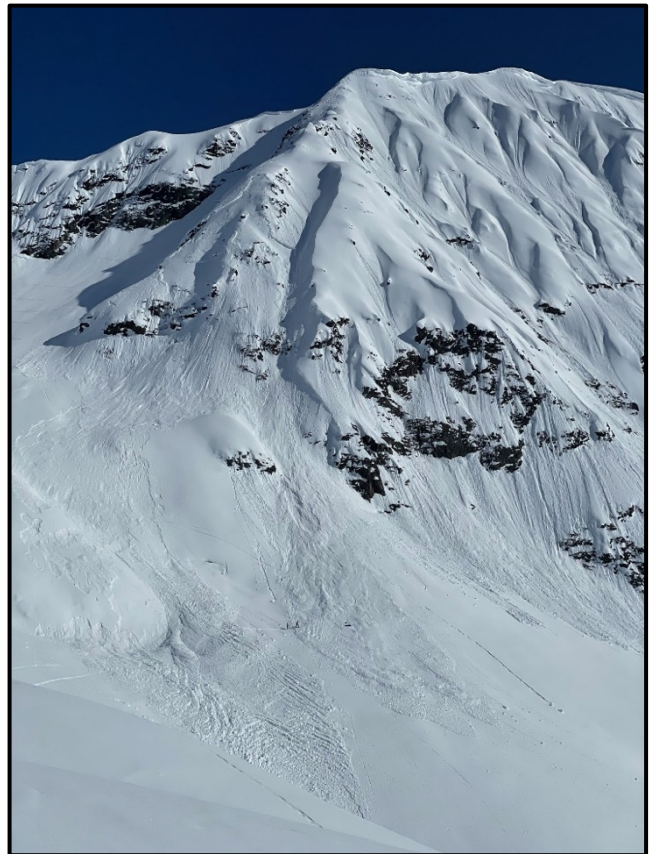
- **Skier Triggered** by the third skier on the slope
- **1 person** caught, carried, partially buried, and injured.
- **Crown Depth:** 2-6'
- **Width:** 400'
- **Vertical Run:** 1500'
- HS-ASu-R2-D2.5-O

A group of three backcountry skiers left the Virgin Creek trailhead to ski Big League (4423' in elevation, also labeled Hibbs Pk on some maps). They noted that the weather was clear and warm with no wind. On their approach the group observed obvious shedding (wet loose avalanches) on solar aspects. The snow surface was composed of various crusts below 2000 feet, then soft snow on N to WNW aspects above that.

After considering alternative routes in the area, the group ultimately decided on skiing the northern most spine off of Big League as it had good coverage and excellent dry snow quality. They were aware of a recent skier triggered avalanche on Captains Chair, however were reassured by the lack of wind effect in the Virgin creek area, and the relatively isolated nature of the terrain feature they were planning on skiing. At around 3pm the first two skiers each skied down the NW facing spine, enjoying good snow with no evidence of instability. About halfway down, the third skier triggered a large slab avalanche. It released in the middle of the slope, 2-6' deep and propagated 400'+ wide across multiple aspects. The skier was caught and fell over

multiple cliff bands as he was carried by the debris.

The rest of the party lost sight of the skier after he triggered the slide. Once the debris stopped they quickly saw him partially buried near the toe of the debris and made verbal contact. Once he was partially excavated it was clear he had a femur fracture. Rescue services were contacted via 911 using a cell phone, but the group was also carrying a satellite communication device. After 1.5-2 hours the skier was airlifted by the Alaska Army National Guard to an Anchorage hospital.



*Photo taken immediately after the avalanche. The crown wraps around out of sight to the looker's left of the prominent spine. 04.27.2023*



# Weather and Snowpack Summary

## Season Overview

### Turnagain Pass Snotel Stats

Season Snowfall: 345"

SWE: 32.3"

% Median SWE (1991-2020): 79%

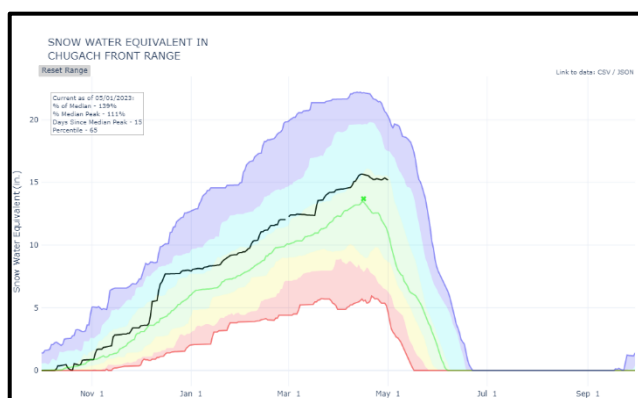
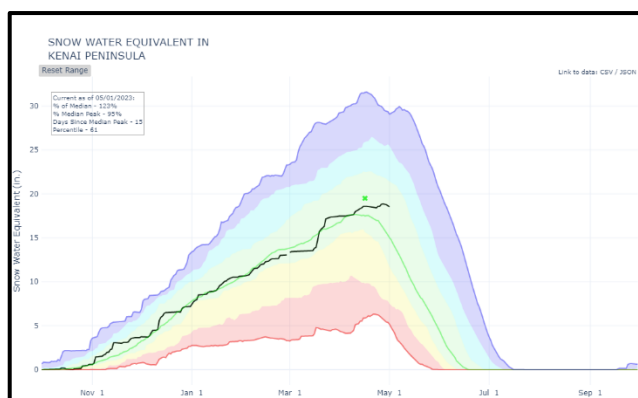
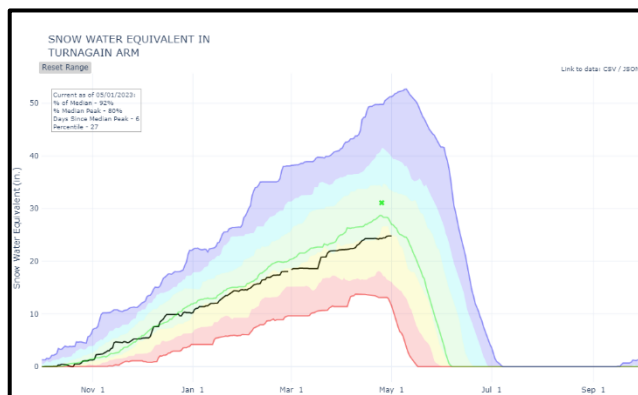
Snow Climate: Intermountain

This season got a later start compared to recent years, and we didn't really see enough coverage for skiing until early November when a storm right at the beginning of the month brought 12-18" snow to Turnagain Pass. An unprecedented temperature inversion during the middle of the month would form the 'Thanksgiving Crust'— a feature that would plague us for months to come.

December's weather pattern would set snowfall records in Anchorage while leaving the CNFAIC advisory area thin until a series of storms at the end of the month led to widespread natural avalanche activity.

Avalanche activity got scary in January, starting with a massive skier-triggered avalanche on Cornbiscuit (details in the 'Near-Miss' section of this annual report), and followed weeks of unstable conditions and human-triggered avalanches on the Jan. 10 surface hoar layer.

The middle of the season was quiet from February through mid-March. That would change after a series of storms between March 14-22 brought around 9" SWE, equaling 80-90" snowfall at Turnagain Pass and even more in Portage and Placer Valleys. The storms buried facets and crusts, leading to one of the biggest human-triggered deep



Seasonal SWE as of May 1 for the Turnagain Arm (top), Kenai Peninsula (middle), and Chugach Front Range (bottom). Black line represents this season, green line represents median 1991-2020 values, and the shaded areas represent 10<sup>th</sup>, 30<sup>th</sup>, 70<sup>th</sup>, and 90<sup>th</sup> percentiles.

## Weather and Snowpack Summary

slab avalanche cycles in recent memory, with **18 human-triggered avalanches during the week of March 24-31**. We saw multiple D4 avalanches during this period, with avalanches being triggered from up to 1/2 mile away with crown depths ranging from 3-6' deep or deeper.

Temperatures remained below normal for the month of April. As of May 1, we have seen slightly above average precipitation on the Kenai Peninsula and in the Chugach

Front Range, with slightly below normal precipitation for the Turnagain Arm area.

The springtime shed cycle started very late this season, with the first major wet slab avalanches starting May 10 and continuing through mid May.



*CNFAIC Intern Megan Guinn on the way up Magpie in early March with the Western Chugach out in all its glory.*

## November

**Snowfall: 53"**

**SWE: 5.3"**

### *Weather events*

- Heavy snow followed by strong outflow winds 11/1-11/2
- 11/15-18 inversion followed by 11/19 rain event would create setup for the 'Thanksgiving Crust'

### *Avalanches*

- Cycle with very wide propagation on basal facets following 11/2 storm.
- Similar activity was seen during 11/13-14 outflow event. Multiple repeat paths.



*Super Bowl slid wall-to-wall during two separate outflow events in November.*



*The entire west face of Magnum avalanched naturally during or immediately following the 11/2 storm. Photo submitted anonymously, 11.03.2022*

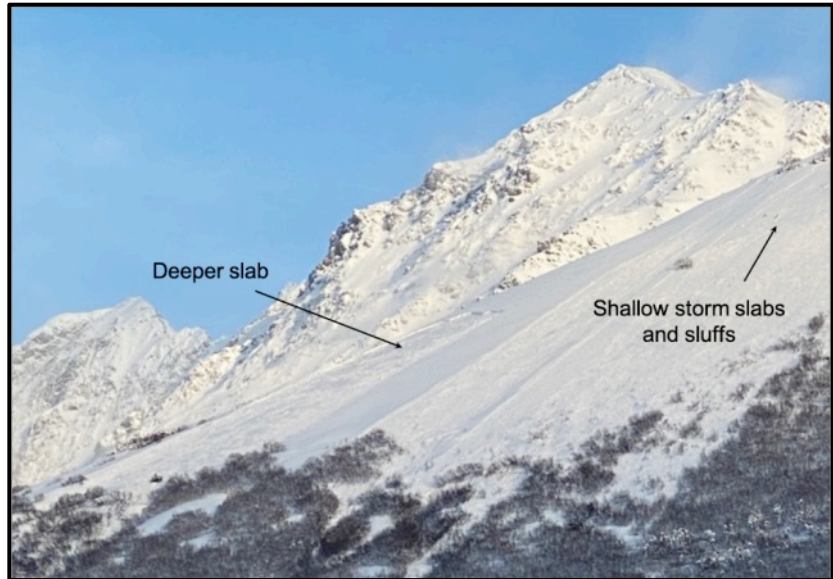


## December

**Snowfall: 60"**  
**SWE: 6.5"**

### *Weather events:*

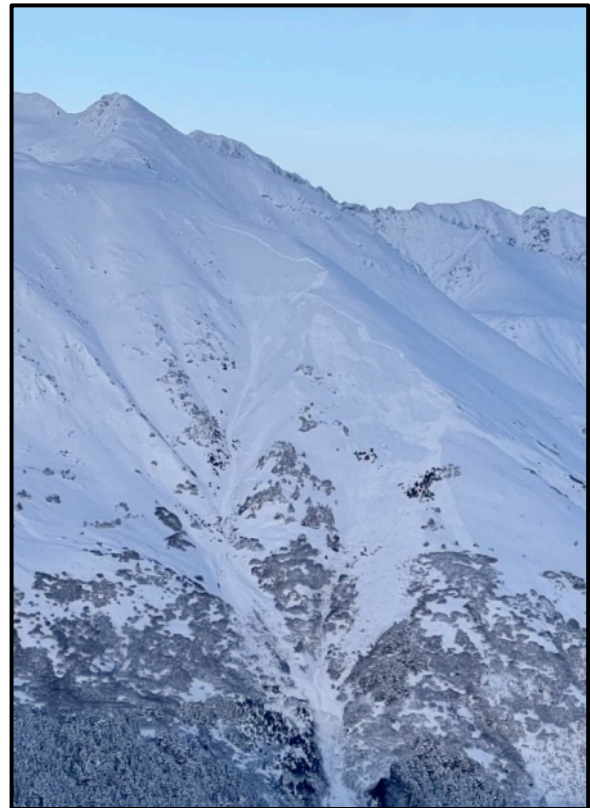
- 12/11-12: 1.5-2' snow equalling 1.5-2" SWE
- Back-to-back warm storms during Christmas/New Year's. Christmas storm brought 2-5" SWE, favoring Portage/Placer and Girdwood, with mixed rain and snow to 2500'.



*Slab failing on Thanksgiving Crust on Goat Mountain. 12.14.2022*

### *Avalanches*

- Natural cycle following the 12/11-12 storm, with some paths failing down to Thanksgiving crust with wide propagation.
- Natural cycle following the Christmas storm.



*Wide-propagating avalanche on Raggedtop.  
12.14.2023*

## January

**Snowfall:** 54"

**SWE:** 5.2"

### Weather events

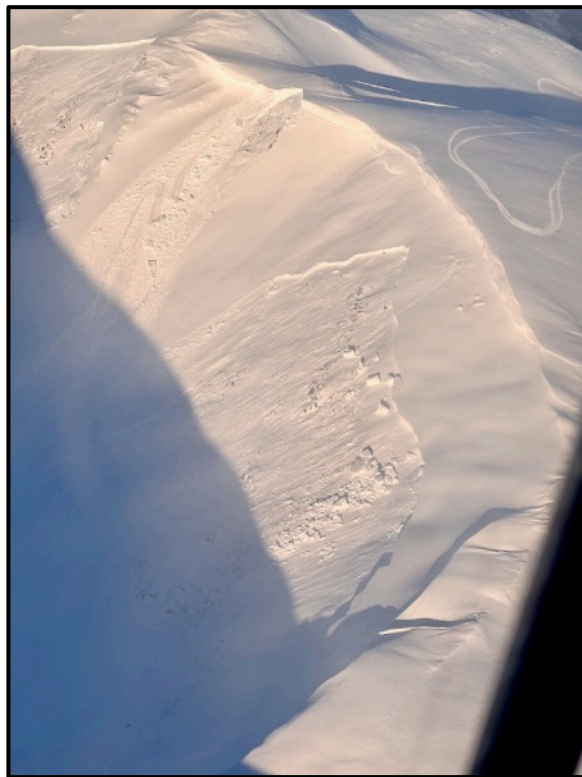
- New Year's storm brought 3-7" SWE, pushing holiday storm totals up to 5-12" SWE between Christmas and New Year's.
- 1/10 Buried Surface Hoar would be a problem for weeks to come.
- A brief warm spell 1/26-27 would make the 'Fun at work day' crust, which would be associated with a reactive weak layer that got buried in early February and produced avalanches into March.



*A portion of the skier-triggered avalanche on Cornbiscuit. 01.07.2023*

### Avalanches

- **Widespread activity following the New Year's storm**, with wide-propagating avalanches suspected failing on the Thanksgiving Crust. This includes natural and human-triggered avalanches.
- **1/5: One party remotely triggered several avalanches riding along Seattle Ridge.** This includes multiple avalanches on both sides of the ridge. Later in the day one of the riders triggered a cornice fall and was caught and carried in the avalanche the cornice triggered. The snowmachine had to be flown out but the rider was OK.
- **1/7: Very large avalanche on Cornbiscuit.** 15 people on slope, 2 people caught, 1 carried, partially buried.



*Multiple remotely triggered avalanches and a cornice fall on Seattle Ridge. 01.05.2023*



## February

Snowfall: 46"  
SWE: 3.2"

### Weather events

- **1/26-2/4:** Dry spell with cool temps left a faceted surface that was buried on **2/5**. That interface would be a problem for weeks to come, and was noteworthy in how geographically confined it was, producing avalanches from Pete's North to Groundhog and the west side of Bench Peak as late as **3/6**.

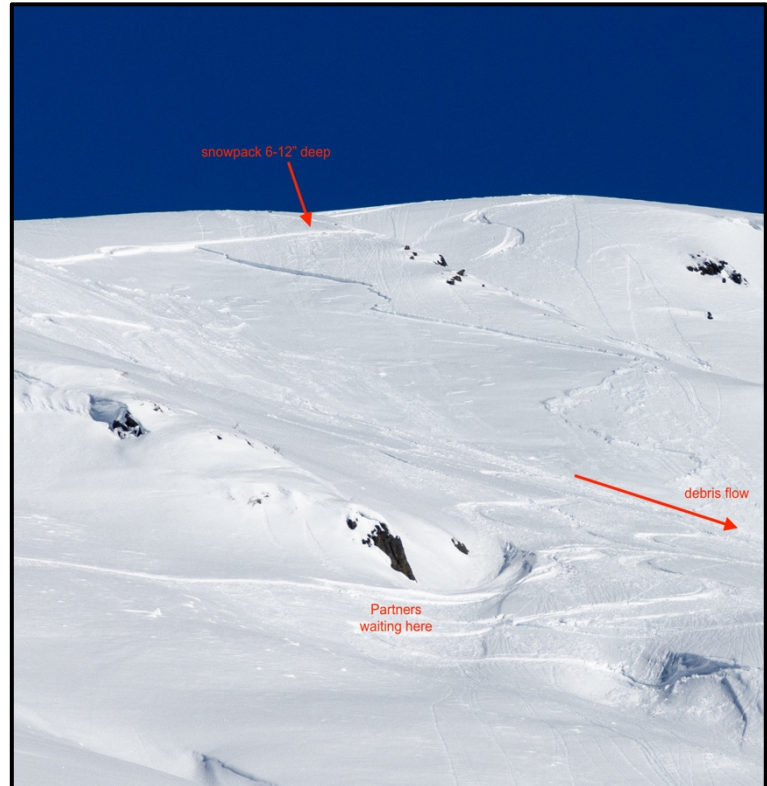


*Crown of a skier-triggered avalanche in the Library. 02.19.2023*

### Avalanches

- **2/19:** Skier-triggered avalanche in the Library. Two people caught with one person partially buried sustaining minor injuries. The avalanche was an estimated 1-3' deep and was one of the first avalanches of the season in which solar input played a role.

*Annotated image of an avalanche on the SW face of Cornbiscuit. Skier was able to ski off the slab and was not caught. 02.09.23.*





## March

Snowfall: 83"

SWE: 7.9"

### Weather events

- Zero measurable precipitation from 3/1-3/13
- **3/6-3/8:** Strong inversion, 3 days and two nights with ambient air temps above freezing.
- **3/14-3/22:** 8" SWE, bringing 3-6 feet settled storm snow on top of 3/14 facets and crusts.

### Avalanches

- **3/25:** Skier triggered D4 Skookum (remote). Snowmachine triggered D3+ (three at the same time), remote tr. From ½ mile away in Third bowl.
- **3/20-3/30: 20 D2-D4 avalanches triggered in 10 days**, all failing on the



Remote-triggered D4 in the Skookum Valley. 03.25.2023



*This massive avalanche in Palmer Creek was one of at least 20 avalanches triggered over a 10 day span from 3/20-3/30. Photo: 03.26.2023*

3/14 interface. These occurred on multiple aspects, with shaded slopes harboring well-developed fist hard facets at that interface, and a layer of facets below a crust on solar aspects.

- **3/30:** The last confirmed avalanche on the 3/14 layer was a helicopter-triggered slab in the Winner Creek drainage.

## April

**Snowfall:** 45"

**SWE:** 3.9"

### Weather events

- **4/9-4/12:** 1.5-2" SWE equaling 1.5-2' of snow in Girdwood and Turnagain Pass. 3.5" SWE for 3+ snow in Portage/Placer. Highest totals in Portage/Placer.
- A persistent upper-level low pressure cell over northern Alaska kept temperatures well below average, leading to a very late transition to a warm spring snowpack. By the end of the month, northerly aspects were still completely dry, with saturated snow confined to the upper foot of the southerly slopes.



*Skier-triggered avalanche on Captain's Chair. The skier was caught and carried for 2000' over rocks and cliffs, but somehow managed to escape with minor injuries. 04.15.2023*

### Avalanches

- **4/15:** Skier caught and carried 2000' on an older wind slab on Captain's Chair. The avalanche consisted of the most recent snow from the 4/9-4/13 storm event. The skier was able to self-evacuate with minor injuries.
- **4/19:** Skier caught, carried, partially buried on Big League. The avalanche failed 2-6' deep, and most likely failed on the 3/14 weak interface. The skier suffered a fractured femur and was evacuated by the Army National Guard.



*Skier-triggered avalanche on Big League. The skier was caught, carried, and partially buried. They sustained a femur fracture and were evacuated via helicopter by the Army National Guard. 04.19.2023*



## May

**Snowfall:** 6"

**SWE:** +0.7 then -12.9"

**Rain:** 4.7"

### Weather events

- **5/9 -5/12:** 3-5" of rain up to 2,500' in Girdwood and Turnagain Pass. 8" of rain in Portage/Placer Valleys.
- Warm wet days during the early May storm followed by warm sunny days.



*Large wet slabs releasing on May 15 in the Tincan Trees. Photo by Heather Thamm.*

### Avalanches

- **4/11-19:** Widespread natural wet slab avalanche cycle. Most slabs are suspected to be failing at the old Thanksgiving interface. Peak of the cycle was May 11-15. Cycle slowed down by May 19-20.



*An example of the wide propagating wet slab avalanche cycle seen from Girdwood to Whittier to Portage during the middle of May.*



# Finances and Fundraising - Friends of the Chugach Avalanche Center

Thank you, Friends!

The Chugach NF Avalanche Center is funded over 50% by the backcountry recreation community.



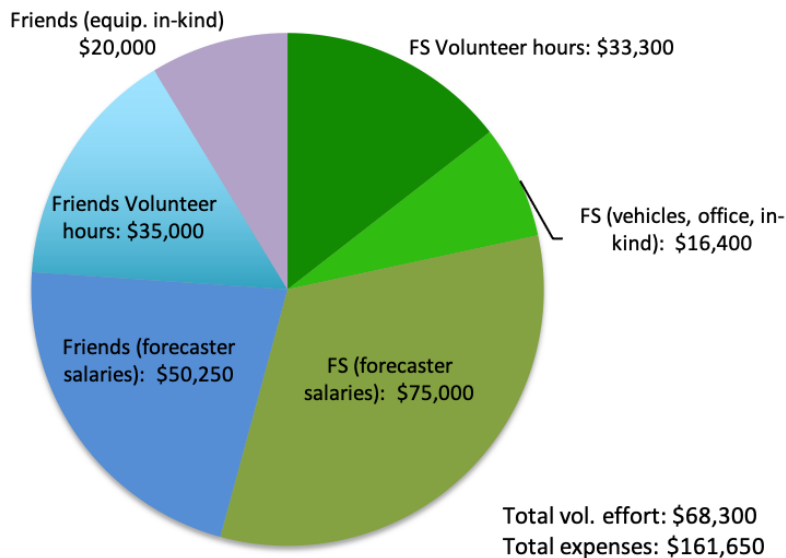
Established in 2003, our nonprofit partner, Friends of the Chugach Avalanche Center, works together with the US Forest Service to bridge the gap between federal funds and the actual expenses of operating an avalanche center. Volunteers and generous donations are essential to funding the daily avalanche advisories through supporting forecasters' salaries and equipment, as well as maintenance of the website and network of weather stations. It's easy to [donate online](#), through Pick.Click.Give, employee giving programs, purchasing memberships, and joining us at fundraiser events. When



our website users, local businesses, and partners give to Friends of the Chugach Avalanche Center, those dollars help save lives in Southcentral Alaska.

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