Chugach National Forest Avalanche Center

2014 - 2015 Annual Report

Chugach National Forest Avalanche Information Center
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Photo: Wendy Wagner
Message from the Director

The 2014/15 winter season will go down in the record books, but for reasons many of us would rather forget... Similar to most avalanche centers across the country, it was one of the leanest snowfall seasons – ever. If you wanted to ride Turnagain Pass you had to hike to the snow in order to ski or snowboard. If you wanted to ride your snowmachine, you had to go elsewhere in the State, as we never – not even for a day – had enough snow for the Forest Service to open to motorized use. Unprecedented. What was amazing about this season however was the community support across the board. Although we had to adjust our tactics, we still provided free avalanche outreach to over 1,000 individuals. Roughly half of these were motorized users and the other half non-motorized.

Another exciting thing for the CNFAIC was the hiring of Heather Thamm as our third forecaster. Not only is Heather a Girdwood local with 10 years as an Alyeska Ski Patroller, but she is also an amazing photographer - hence why many of the photos within are Heather’s! Other staff changes consisted of myself filling Kevin Wright’s big shoes as director and Fitz (John Fitzgerald) moving into the Lead Forecaster role.

Other highlights for the year include a new and sleeker observations page and observation submission page; many thanks to Scott Fennell and Billy Finley for their hard work on this and entertaining our endless tweaks. Lastly, I am proud that we have continued to grow our relationship with the snowmachine community. This has mainly stemmed from Graham Predeger’s tireless efforts. We already have several snowmachine outreach events on tap next season in addition to the many multiple-user and non-motorized outreach events. But for now, we have to wait for it to snow on the Pass!!

-Wendy Wagner, CNFAIC Director
Acknowledgements

We would like to send out a **HUGE THANK YOU** to all of you who have supported the CNFAIC through donations, observations and a wide variety of other means. This is the foundation we continue to build upon. We would also like to thank the **Friends of the CNFAIC**. We would NOT be here without their support and hard work! This amazing and selfless group has a tireless passion for keeping all of us safe in the backcountry.

Last but far from least, we would like to thank the following for sharing the valuable avalanche information that helps to greatly improve our forecasts:

- All the folks out there who submitted observations
- Alyeska Ski Patrol and Snow Safety
- Alaska DOT&PF
- Chugach Powder Guides
- Alaska Railroad
- Alaska Avalanche School
- Alaska Pacific University
- and many others

Industry and Individual sponsorships are also instrumental in providing CNFAIC products and programs. The following are our Gold Level Sponsors:

**Gold Level Sponsors**
Advisories and Stats

Our forecast season kicked off with intermittent updates in early November and on Thanksgiving weekend we started issuing 5 day/week advisories. By December 18th we began issuing advisories 7 days a week and continued this through the 12th of April, adding up to 144 advisories for Turnagain Pass. The Summit Lake Summary was posted on Saturdays from mid November through mid April.

Advisories
Turnagain: 144 (with danger ratings, does not include early season updates)
Summit Weekly Summaries: 24

Website
Total visits Nov-Apr: 318,274
Unique visitors Nov-Apr: 81,524

* compare to 2013/2014 website stats:
Total Visits: 243,923
Unique visitors: 55,012

Official Warnings
Avalanche Warnings: 0
Special Av Bulletin: 1

Observations
Total: 320
Public: 77
Pro: 60
CNFAIC: 192

* compare to 2013/2014 Observations:
Total: 265
Public: 104
Pro: 19
CNFAIC: 142

Instagram
Followers as of Dec 1: 30
Followers as of May 1: 938
Posts: 71

YouTube
Videos: 40
Views: 5,310

Outreach
Total people reached: 1,132

Traditional Media Appearances
TV- on camera: 15
TV - off camera: 20
Radio - weekly over 15 weeks
Print/Online news: 12
Public Outreach

Southcentral Alaska Avalanche Workshop (SAAW)

November, 7th 2014 marked the third annual SAAW. Organized by CNFAIC staff, Alaska Pacific University and Alaska Avalanche School, this workshop is a gathering of snow professionals and interested public for a day of learning, presentation, discussion and networking. In the spirit of the International Snow Science Workshop, the intention is a merging of theory and practice to facilitate professional development in our community.

Photo: Wendy Wagner
Don Sharaf discusses the ‘damnation facets’ that plagued Valdez during the late winter of 2014.
Arctic Man 2015

Continuing Outreach to the Snowmachine Community

For the fourth season in a row, the CNFAIC provided avalanche outreach at the world-renown Arctic Man Ski and SnoGo Classic. A uniquely Alaskan event, Arctic Man consists of teams of two (skier/snowmachiner) racing head to head over a 5-mile course. This spectator event north of Paxson, Alaska in the Hoodoo Mountains attracts 10-15,000 (mostly) snowmachiners annually for a week in April. Forecasters Graham Predeger and Wendy Wagner, with the help of Dan Keeler (FS employee), Brook Predeger (F-CNFAIC Board member), Jaime Anderson (former F-CNFAIC Board member) and Kevin Salys (Valdez Avalanche Center Forecaster), organized the largest field-based rescue workshop to date for the CNFAIC. Over the course of three days, we introduced over 100 snowmachiners to avalanche rescue basics by utilizing a wireless beacon park that was set up directly adjacent to camp. This event is also a unique opportunity to work closely with the Alaska State Troopers and continue to build this multi-agency partnership. A special thanks is due to A2D Sledworks, Alaska Mining and Diving Supply, Backcountry Access and Black Diamond for supporting these rescue workshops!

Photo: Brook Predeger

The ‘Avalanche Outpost’ was set in an ideal location - near the Alaska State Trooper command center and the beer tent!
Arctic Man continued...

Photo: Matt Kennedy

Photo: Graham Predeger

Photo: Matt Kennedy

Photo: Matt Kennedy

Photo: Matt Kennedy
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
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<th>People Present</th>
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<td>Oxygen and Octane Show</td>
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<td>Skiers</td>
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<td>Skiers</td>
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<td>Skiers</td>
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<td>Wendy/</td>
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<td>Mixed</td>
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<td>Rescue Workshop</td>
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<td>Math and Science Night, Awareness</td>
<td>Wendy</td>
<td>80</td>
<td>Youth</td>
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<td>KWHL Radio show</td>
<td>On air Discussion of Cantwell avalanche accident.</td>
<td>Graham</td>
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<td>Avalanche rescue workshop x 2</td>
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<td>Snowmachine</td>
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<td>Youth</td>
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<td>Custom avalanche awareness and rescue</td>
<td>Wendy/Heather/</td>
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<td>Nov. - April</td>
<td>AMDS Radio</td>
<td>Weekly updates through Winter months. 15 total appearances.</td>
<td>Graham</td>
<td>Hundreds</td>
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<td>3/28/2015</td>
<td>Hilltop</td>
<td>SNOGO 120cc Races</td>
<td>Fitz/Heather</td>
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<td>Snowmachine</td>
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Internship Program

Each season the CNFAIC hires a winter intern. The intern works closely with staff, both in the field on skis and snowmachines as well as helps out with outreach events. This individual also completes a project of their choice, which is ultimately written up in an ISSW format and posted to our website at the end of the season. The application process is during the summer and can be quite competitive, with over 30 applicants applying during the last few years.

This season we were very fortunate to have John Sykes come on board as our 2014/15 intern. John is an Alaska Pacific University graduate, Alaska Avalanche School instructor and adjunct instructor for Alaska Pacific University’s Glaciology and Glacier Travel course. During the spring and summer, he is a guide and instructor for Alaska Mountaineering School in Denali National Park.

John’s research project is titled: “Tracking Stability in a Near Surface Facet Layer in Turnagain Pass, Alaska.” You can find it on the resource link at cnfaic.org.

In the photo to the right you can see several of John’s snow pits with three remotely triggered avalanches in steeper terrain.

Photo: John Fitzgerald

John Sykes records stability tests during his 2014/15 field study on Tincan at Turnagain Pass.

Photo: Wendy Wagner
The 2014-2015 season can be classified as unusually warm. The majority of storms to impact the area saw the rain/snow line well above road level (~1,000'). This prevented a snowmachine opening for the entire season and required hiking up to snow line for large stretches of the winter for skiers and snowboarders. Several avalanche cycles occurred throughout the season with the largest events occurring in April.

Precipitation was below normal and snowpack depth was at record low. There was only one cold snap for the entire season, which took place in the second week of March and lasted 1 week.

**Early Season**
October saw the beginning of what was to become a warm year. The first recorded storm of the season happened with 12” of wet snow falling on the 19th. That snow settled and “shrunk” down to a thinner layer. November saw a continuation of warmth and moisture. The “Nuri” cycle, named after the tropical cyclone, saw the beginning of a glide cycle and wet avalanche activity.

By Thanksgiving there was a solid base to the snowpack due to most storms being warm and wet. Good stability was found throughout the forecast area during this time.

After a slow start to the season, good snow and stability were had for Thanksgiving!

Photo: Wendy Wagner

**December**
This month began with small doses of precipitation and mild temperatures. A 3-4 day stretch around the 10th brought the development of our first widespread persistent weak layer, with surface hoar being the predominant layer. This layer was capped by a slowly building storm that had very little wind and the surface hoar was persevered intact on a large scale. As several storms built up a slab above this
layer the perfect recipe was in place for avalanche activity. December 18th was the only day of the season with a skier being fully buried. The second skier descending the South side of Sunburst triggered a slab and took a substantial ride. The skier was recovered and uninjured (photo below).

![Crown of the skier triggered slab on Sunburst’s Southerly face taken by another party.](image)

**January**
January was a generally dry month with a crescendo of precipitation in the middle. Warm temperatures continued. A glide cycle began slowly and continued through the month. A majority of glides that were observed never fully released but the occasional slab pulled out with the East side of Seattle Ridge experiencing a shed cycle of sorts.

The longest dry spell of the season began on the 17th and extended to Feb 8th. Stability improved greatly throughout this time period and allowed for travel into steep Alpine terrain. This dry spell also allowed for another round of widespread weak layer development. This time around, near surface facets were the predominant grain type.

**February**
Between the 10th and the 16th of the month, storm cycles formed slabs up to 2’ thick that were very sensitive to triggers, including a handful of remotely triggered slides. Stability tests during this time were very poor and showed dramatic results. Fortunately, skier traffic into steep terrain was minimal.

**March**
March brought several more storm and avalanche cycles, with most people staying out of trouble and natural activity being the best teacher. The last week of the month brought a series of warm sticky storms that showed generally good stability. Incremental loading and good bonding within storm layers would turn out to be misleading as we saw an increase in avalanche activity as we went into April.
April

April 1st brought the second significant human triggered avalanche of the season, with a local ski patroller taking a ride over 1,000’ on the North side of Magnum. The outcome was the same as the December event in that the skier was uninjured.

Beginning on April 6th another series of warm and wet storms delivered slabs in the 2-3’ range in the higher elevations. A brief pause was sharply interrupted on the 14th with additional snowfall (19” in 19 hours) then another round of 2-3’ of snow from the 17th through the 19th. The ensuing result was the largest cycle of the season taking place between the 17th and the 19th. Deep slabs were releasing naturally and remotely. The most concerning of these was an avalanche on Tincan that released on both the North and South sides of CFR ridge and leaving 5’ crowns and significant debris in its wake. (photo below). This cycle could be termed as a “crush and flush” event in that many deep slabs were observed throughout the area. By the end of the month warm temps and a lack of precipitation lent itself to better stability.

Schwacking was the norm all season long.....

Photos: Heather Thamm
Large avalanche on Tincan’s south side, not seen is the larger slide on the North side of the ridge. Photo: Jeff Nelson

Sustained warmth at the end of the forecasting season has left a snowpack that is quickly deteriorating. The final field day of the season showed cornices to be very sensitive (photo below) and wet snow avalanches beginning to release to the ground – the shed cycle was beginning.

Close call with a Cornice on Sunburst Ridge... Photo: Wendy Wagner

In summary, it was a warm and wet season. Two periods of dry conditions provided for significant weak layer development. Large storms in the final month of the season produced large avalanches. Human involvement in avalanches was minimal and we have now gone over 5 years without a fatality.
Near Misses and Fatalities

For the fifth season now, Turnagain Pass has squeaked by with zero avalanche fatalities. What we did have were three close calls. These are written up in detail on our website ‘accidents’ page. However, there were three avalanche fatalities in the State. One in the Eastern Alaska Range, one in the Wrangell Mountains and one North of Anchorage near Cantwell (these reports are listed on avalanche.org). Graham Predeger took the lead on the fatality in the Cantwell area, just South of the Alaska Range. Although this region is not in our forecast zone, the individuals involved are Turnagain Pass users and we were fortunate to have enough information to write an accident report.

Sunburst Near Miss

Location: Sunburst Ridge, Turnagain Pass, Alaska  
Date: 12-18-2014, Time: 1330-1400

Synopsis:
Second skier on slope triggered an avalanche on the Southwest face of Sunburst. One person was caught, carried and fully buried. Recovered with no injuries.

Detailed report:  

Photo: Heather Thamm
Magnum Near Miss

Location: Magnum, “Basketball Chute”, Turnagain Pass, Alaska
Date: 4-1-2015, ~5:00pm

Synopsis:
Skier triggered a slide on a Northern aspect of Magnum in a place commonly known as “Basketball Chute.” One person caught; carried about 900 ft. Skier was not buried and did not have any injuries. All gear stayed on and no equipment was lost.


Photo: Heather Thamm
**Tincan Near Miss**

**Location:** Tincan, CFR Ridgeline, Turnagain Pass, Alaska

**Date:** 4-17-2015, 1:45pm

**Synopsis:**
As four snowboarders were descending Tincan’s CRF ridgeline, two very large slab avalanches were triggered remotely. One avalanche released on the North side of the ridge (D3.5), and one released on the Southwest side of the ridge (D2.5). No one was caught, which was lucky as debris covered tracks from 1-2 hours prior.


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Photo: Alaska DOT&PF RWIS camera at Turnagain Pass
Cantwell Avalanche Accident

Location: Squaw Creek drainage, near Cantwell, Alaska (N 63° 14′ 130″ W 149° 17′ 552″)
Matanuska-Susitna Borough

Date: 14 March 2015
Fatalities: 1

Synopsis:
One snowmachiner caught, fully buried, recovered and flown to an Anchorage area hospital with serious injuries, later succumbed to injuries on 18 March 2015. This avalanche was in very small terrain and the victim was buried in a terrain trap. Please read the detailed report linked below as there are valuable lessons learned in light of this tragedy.

Detailed report:

Photo: Member of victim’s group
Finances and Fundraising - The Friends of the CNFAIC

The Friends of the CNFAIC is instrumental to our operations. Fundraising continued to be very successful with a fall slide show by Luc Mehl, annual memberships and corporate and private donations. The Avalanche Center could not function in its current capacity without the financial and volunteer support of this dedicated group of people.

The Friends of the Chugach National Forest Avalanche Information Center (F-CNFAIC) is a nonprofit 501(c)(3) corporation, organized to support and contribute to the educational and scientific activities provided for the public by the CNFAIC. Formed in 2003, F-CNFAIC works to help bridge the gap between available US Forest Service funding and the actual expenses of operating the Center.

Ongoing Goals:

- Supporting CNFAIC forecaster salaries
- Maintaining, expanding, and updating weather stations
- Enhancing avalanche awareness by providing information to the public
- Promoting avalanche education

Photo: Snowball 2015. The Rabbit Creek Ramblers were able to get all the ‘dancing curmudgeons’ out on the floor!

Operating Costs

To continue this work, we need a minimum of $76,950 to provide funds for forecaster salaries, updating equipment, and maintaining weather stations.

Please donate to help F-CNFAIC continue to provide forecasting activities and avalanche education to Southcentral Alaska.
THANK YOU from the CNFAIC Team!!

The forecasters would like to thank everyone who has extended such incredible support to the Avalanche Center. This service would not be possible without such a strong community desire to make it happen. Have a great summer everyone and we look forward to seeing you next fall!!

-Wendy Wagner