KPAC Home

2016/2017 Snowpack Summary Archive (old website prior to January 20, 2017)

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Agassiz Peak Station (APS) at 11500' Snowslide Canyon Snotel (SCS) at 9730'

Snowpack Summary for Friday, January 13, 2017

Overall:

Year to date precipitation is now at 115". Despite no reports of natural or human triggered avalanches on the San Francisco Peaks, statistically, January has the highest occurrence of avalanche accidents. Reactive weak layers have been identified in the snowpack below and sandwiched between the December 16 and December 23 ice layers. The snowpack currently displays widespread variability based on aspect and elevation.

Soft carvable snow may be found in wind protected terrain, primarily below treeline. Overall snow coverage is fair to good right now. There's also hard windblown snow and/or rime ice near and above treeline, creating slick conditions.

HAZARD TREND: Over the next 48 hours, the potential for new windslab development will increase as up to a foot of new snow, or .25 to .75 inch of precipitation is forecast for Saturday into Sunday. Above treeline terrain will be subject to the highest likelihood of wind loading. Initially, this storm is projected to have south, southeast winds of 10-20 mph, followed by 10 mph north winds Sunday. Snowline is expected to be at 7500-8500 ft.

Today, windslabs were observed building in **Humphreys cirque**, just below the low saddle.

Near and above treeline:

Southerly, southwesterly and westerly slopes have shown stable snowpack structures, however, the possibility of persistent slab instabilities still exists, especially on northern aspects.

Field observers have reported basal facet failures during tests of northwest slopes in the Temptation chutes, and north facing terrain along Core Ridge. At this time a significant load would be required to trigger a propagating failure in these basal facets. But still, this is certainly something to think about. Perhaps a new windslab avalanche might be enough of a load to trigger these deeper instabilities...another factor contributing to instability relates to high elevation starting zones now having adequate snow coverage, burying the rugged rock substrate, thus fewer anchors impeding a propagating fracture in new slabs.

Depending on your route selection, you may encounter hard windblown snow and/or rime ice near and above treeline. Ice axe and crampons may be helpful and can prevent an uncontrolled slide on steep slopes.

Below treeline:

Generally, conditions at lower elevations are more stable than up high and human triggered avalanches are less likely below treeline. Nice carvable snow can be found but you may also find some wind-affected snow along with rime ice chunder that fell out of the trees. Shallow snow coverage remains a challenge below 9500 ft. However, the USFS recently did some wood cutting work on the Humphrey's trail to improve your west side approach/egress experience! Thank you USFS!

Below ~9000 ft the snowpack depth drops off dramatically.



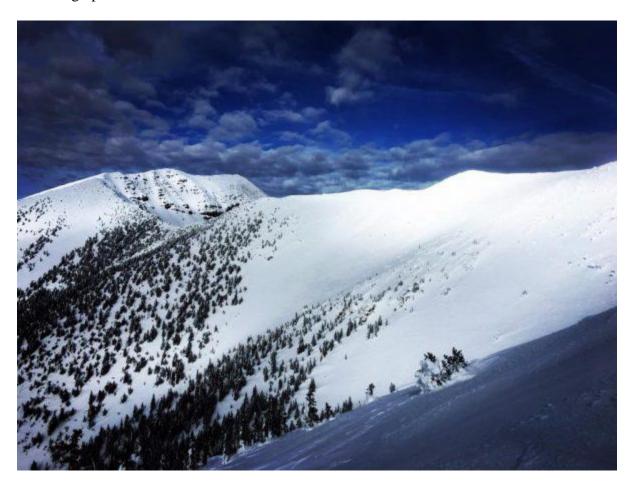


On January 3rd and 7th we received reports of reactive windslabs on northerly and easterly slopes near treeline in the Core Ridge/Humphrey's Cirque area. Today we went up to investigate and found some reaction about 30cm below the surface, but overall these slabs appear to have healed. However, it should be noted that we observed new windslabs actively building!

Over the next 48 hours, moderate amounts of snow, along with southerly winds may create new unstable windslabs. If the forecast is to be trusted, watch for wind loading on northerly slopes, and cross loading on westerly and easterly slopes, primarily near and above treeline. Cross slope winds (cross loading) typically deposit snow in gullies and chutes. By Sunday we may have North winds, so watch for windslab development on southerly slopes.

Travelers are advised to exercise caution and make slope specific evaluations. As always, please treat this summary with appropriately guarded skepticism, make your own assessments, and contribute to our body of knowledge by <u>reporting your observations</u>.

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January 10, 2017: Coverage getting good up high! But now that those rock anchors are covered, what will the new snow anchor to? Josh Langdon Photo.

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Weather

We remain on the sideline of a series of mid-latitude and subtropical storm systems, some tracking to our north and others to our south. This has led to modest rain, high elevation snow flurries and icy, wet fog, a classic wintery mix. Looking forward, local snowfall is hard to accurately predict as the forecast models have varied significantly and changed quickly. Over the

past few days, precipitation has been light with an inch here and there. This pattern is likely to continue, with the possible exception of some enhanced wraparound moister from a storm currently tracking to our south during the weekend.

Winds have been mainly out of the southwest in the teens and twenties (mph). The rime storm on Thursday January 5th obliterated the Agassiz Station anemometer, so since then we have been without accurate high elevation velocities. Saturday afternoon through Sunday morning offer the best chances for significant snow at high elevation. Up to ten inches is possible with 1/2 to 3/4 inch of snow water equivalent (SWE). Fair weather is expected to return to northern Arizona by midweek.

On Friday January 13th the Inner Basin SNOTEL site (Snowslide) reported a snow depth of 48 inches (123 cm) at 9700 ft, and Arizona Snowbowl reported 58 inches (147 cm) at 10800 ft. These values are expected to increase somewhat over the next few days. Since January 7th SNOTEL temperatures ranged between 17 and 41°F and Agassiz station between 12 and 33°F.

***Saturday January 07, 2017 Update: Depending on your route selection, you may encounter hard windblown snow and/or rime ice near and above treeline. Ice axe and crampons may be helpful and can prevent an uncontrolled slide on steep slopes.

Snowpack Summary for Friday, January 06, 2017

Overall:

So far this season, no natural or human triggered slab avalanches have been reported on the San Francisco Peaks. Several small loose snow avalanches have occurred. The snowpack has become more complex than usual due to alternating warm and cold storm events. Reactive weak layers have been found, but not consistently. Northerly slopes should still be considered suspect, as they have remained the coldest which can prevent the snowpack from strengthening. Currently old and new windslabs near treeline are our primary concern. There's good powder skiing below treeline.

Near and above treeline:

Wind and rime ice are the flavors of the week. We are still concerned about the possibility of deep slab instabilities, but thankfully no deep slab avalanches have occurred. We've received no reports of basal facet failures since December 29th, when tests near 11000 ft on NE slopes of Doyle produced failures at the bottom of the snowpack. These results appeared to be isolated to that area...

S-SW-W slopes are setting up and stabilizing nicely, even with the new January 5th storm. On these aspects, there is about 6 to 8" of new soft snow above an ~1cm thick rime/rain layer/crust. That rime overlays weaker soft snow and graupel. It's quite loud underfoot and does produce some cracking, however numerous tests on 33° WSW slopes revealed that it is very unlikely to

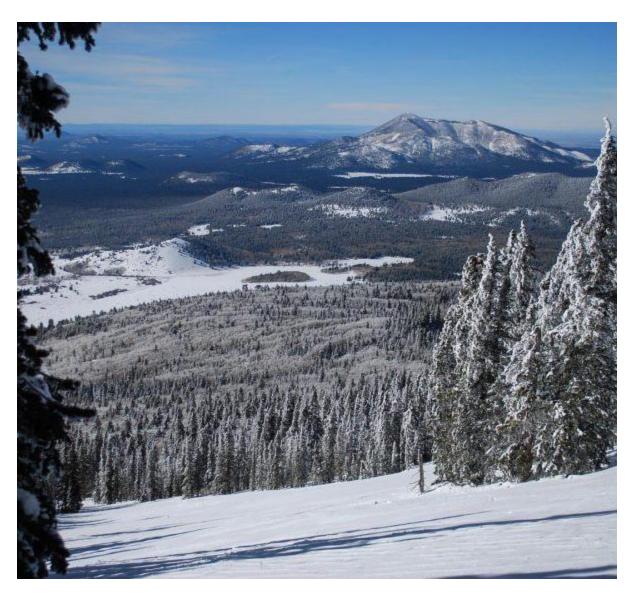
propagate. But keep in mind that this may change should it get loaded with a new cohesive windslab.



On January 3rd we received reports of sketchy, reactive windslabs on northerly and easterly slopes near treeline. Recent southwesterly winds may have exacerbated the problem on those slopes. Watch for wind loaded and cross loaded slopes, primarily near and above treeline. We've had winds in many directions over the last 24 hours so any slope is suspect. West winds are in the forecast, so those "easy access" northerly and easterly high-elevation slopes just over the ridge from AZ Snowbowl may continue to be suspect.

Below treeline:

Due to the highly changeable freeze lines characterizing recent storms, the snow depth is correspondingly variable by elevation and to a lesser degree aspect. Generally, conditions at lower elevations are more stable than up high. This factor seems particularly true this year. Human triggered avalanches are unlikely below treeline, except in narrow steep gullies, or new wind drifts. Shallow snow coverage remains a challenge on some low elevation approaches/egresses and obstacle-strewn slopes. In particular, lower Humphrey's trail is littered with many blown-down trees, making west-side exits more challenging, especially for snowboarders. But... the coverage is getting better and the season continues to slowly get deeper.



Fair to good powder riding in the trees this week. Coverage continues to improve, one storm at a time.

Photo by Carlos Danel, January 6, 2017

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Weather

After four days of average temperatures, partly due to completely overcast skies and gusty winds, precipitation returned to San Francisco Peaks on Thursday January 5th. We are on the southern boundary of a major mid latitude storm system receiving only the leftover from huge dumps in the Sierra Nevada. Local snowfall is hard to accurately predict, as once again the storm enters warm and exits cold giving us highly variable snow line elevations. On Thursday, mist and rain droplets were the theme below 10000 ft at Snowbowl. Cooling conditions on the Peaks, and up to a foot of new snow were expected by mid-day on Friday January 6th, but totals fell a little short. Snotel (9700 ft) reports about 6" from this storm, but it did come in heavy at about 1 inch of snow water equivalent.

Over the weekend a short-lived high-pressure ridge is expected to build, bringing us sunny weather and well above average temperatures. Fair weather will soon be displaced by more unsettled conditions during the upcoming week. We are in the zonal storm track flow, though on the far southern margin where only moderate moisture is available to fall to the ground.

On the morning of Friday January 6th the Inner Basin SNOTEL site (Snowslide) reported a snow depth of 45 inches (114cm) at 9700 ft, and Arizona Snowbowl reported 61 inches (155cm) at 10800 ft. AZ Snowbowl reports 110 inches for the season to date total. Since the first of the year SNOTEL temperatures ranged between 19 and 36°F and Agassiz station between 5 and 25°F.

Snowpack Summary for Friday, December 30, 2016 - Happy New Year!

Overall:

So far this season, no natural or human triggers slab avalanches have been reported on the San Francisco Peaks. Several small loose snow avalanches have occurred.

This weekend's weather resembles the last, a warm storm preceding a cold one. Rain and high elevation snow will inundate the region late Friday evening through Saturday, followed by a more potent cold system that may or may not deliver a punch on Sunday and Monday. The productivity of the cold storm depends on how the storm tracks on its final approach to northern Arizona.

Our current snowpack is a highly variable and faceted. Reactive weak layers have been found, but not consistently.

Depending on snow accumulation, storm slab avalanches of a foot or more in thickness may become a concern, with a possibility of travelers triggering these in the backcountry.

Near and above treeline:

Last week's snowfall has bonded to the old snow below. Stability improved quickly due to unseasonable warm conditions during the days and freezing at night, creating almost spring-like conditions in the upper snowpack. We are still seeing some spatially variable instability resulting from failure of basal facets (depth hoar). On rare occurrences, on NE aspects near 11000ft, the entire upper snowpack has suddenly collapsed under moderate load when tested. Although locations of sensitivity seem few and far between, this is a sobering reminder of the potential for the development of a persistent slab problem. Some wind slab still remains from the St. Nick's storm, but thankfully most of this has become unreactive.

<u>Cornices</u> are elegant, cantilevered snow structures formed when wind drifts snow onto the leeward side of an obstacle, such as a ridge line. The San Francisco Peaks are not known for widespread or large cornice development, but we do get them. Stay well back from ridge line areas with cornices, as they can break off. See photo below.



New snow brought forth by the upcoming storms may create new problems or may reinvigorate old ones. **Stay on your toes and evaluate each slope prior to skiing.** Watch for wind loaded and cross loaded slopes. If we do get a big dump, then stay away from steep slopes until they have time to adjust to the new load.

Below treeline:

Due to the highly changeable freeze lines characterizing recent storms, the snow depth is correspondingly variable by elevation and to a lesser degree aspect. Generally, conditions at lower elevations are more stable than up high. This factor seems particularly true this year. Shallow snow coverage remains a challenge on some low elevation approaches/egresses and obstacle-strewn slopes. Human triggered avalanches are unlikely below treeline, except in narrow steep gullies, or new wind drifts.

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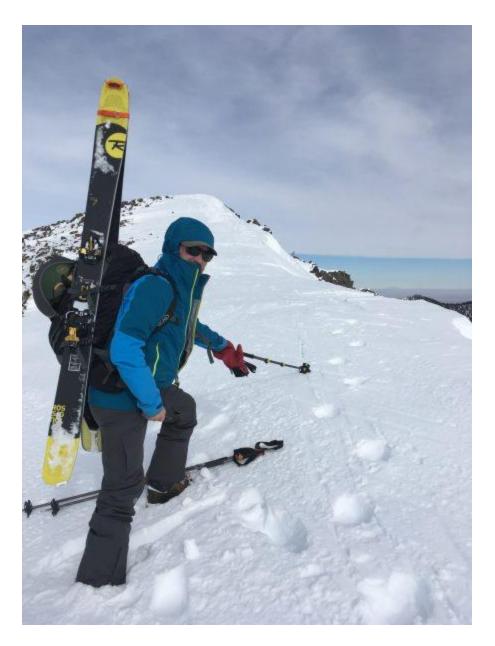
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Weather

After a week of dry air, rising temperatures and variable gusty winds exceeding 30 mph on Wednesday December 28 th, precipitation will return to our region. On Friday late afternoon through Saturday a dying Pacific cut off low-pressure system will approach from the south bring light to moderate rain and high elevation snowfall. Precipitation totals are not expected to exceed 1 inch of snow water equivalent (SWE) even up high. The freeze line will start above 8000 ft, dropping to 6500 ft as the storm passes. A second colder weather system will enter the region late Saturday and last through Sunday. The snow level will be around 5500 ft. Accumulation totals are uncertain for this colder storm as much of the energy may track south of the Mogollon Rim. If the storm track swings north, we could see as much as a foot of new snow on the Peaks, but currently model predictions are for a lesser amount in the range of 4-6 inches. Looking into the future, cooler than average temperatures and continue unsettled weather are predicted. Light snow showers and breezy conditions will become a daily norm, during the first week of 2017.

On the morning of Friday December 30 the Inner Basin SNOTEL site (Snowslide) reported a snow depth of 36 inches (91.5 cm) at 9700 ft, and Arizona Snowbowl reported 49 inches (124.5 cm) at 10,800 ft. These values are expected to increase as precipitation starts to fall during the weekend and into next week. Since December 24 th SNOTEL temperatures ranged between 2 and 45 degrees F and Agassiz station between 2 and 43 degrees F.



Don't walk out on cornices. Especially when they have cracks! Note boot prints past the crack (next to pole). Photo: Paul Dawson

Dec. 27, 2016 Update: Warm daytime temperatures and light to moderate winds have contributed to relatively rapid snowpack settlement. It now appears that new snow from the Christmas Eve storm has bonded fairly well with the old from the previous sub-tropical rain and snow event. Previously forecasted signs of instability seem to have been short-lived, thankfully without incident. No reports of skier triggered avalanches have surfaced. After 48 hours (since the "St. Nick storm") large natural avalanches seem unlikely, but be aware of the possibility of small to medium sized human triggered slides, particularly in wind loaded areas. Reports of excellent powder skiing abound.

Watch for loose wet snow (primarily on sun affected slopes) as treeline temperatures climb to near 40°F over the next 2 days. By Friday the possibility of relatively warm baja rain and snow returns.

Snowpack Summary for Saturday, December 24, 2016 - It's a snowy Festivus Miracle! Happy Holidays!

Overall:

High levels of uncertainty exist with the coming storm, but with forecasted strong SW winds and new snow totals of 2+ ft, **natural avalanches are possible and human triggered avalanches are likely**. These conditions correlate to an avalanche advisory rating of CONSIDERABLE backcountry hazard.

The snowpack is adjusting to the heavy snow/rain (~2" of snow water equivalent, snow totals in amounts) from the Dec 21-23 storm. Test results at 11600' west aspect, confirm a reactive weak layer beneath the ice crust formed on December 16. This fragile snowpack may need time to adequately adjust to and support an additional 1 to 2ft of snow forecasted for Christmas Eve, particularly in wind loaded areas.

There are a variety of rime, rain and sun crusts that vary by aspect and elevation.

Near and above treeline:

The recent December 21-23 storm resulted in up to 12" of dense snow at 11500', with periods of rain at 9000', with 1-2" of water equivalent.

Prior to this event, overall snow coverage averaged a meter or less, limited to wind loaded areas and west and north aspects. This thin snowpack is a mix of hard snow and rime ice layers, with weak basal facets at the ground. Coverage improved dramatically with the dense foot of snow, but added significant weight to a weak snowpack.

At higher elevations, crampons/ice axes may prevent a slide for life on hard layers. Current winds from the South and Southwest of 40-60 mph are actively transporting new precipitation, which is expected to increase throughout the evening.

Below treeline:

On Dec 19th we found 2 to 2.5 ft of snow at 10200' in the inner basin. About 7" (18cm) down, there was a moderately reactive layer of facets above a crust. More info. Look for this, as it may become touchy with the new rain/snow.

Coverage has improved with the Dec 16/17 and Solstice rain/heavy snow and subsequent cold temperatures.



Keep an eye out for rapid loading and wind transporting of snow with the approaching Christmas eve storm.

With strong SW winds and forecasted amounts of 2 ft of new snow, the likelihood of natural and human triggered avalanches will increase. Most avalanches occur within 24 hours of snow and/or wind events. Let's finish out 2016 with wise decisions, like staying away from slopes >30° until the new snow/windslabs have time to settle and bond.

Keep an eye out for unstable <u>windslabs</u> on NW-N-NE aspects, and isolated windslabs on any aspect or crossloaded terrain.

Treeline temperatures are expected to hit 37°F by the end of the week, so watch for destabilization due to warming, especially on more sun affected slopes.

Small loose snow avalanches have been observed (Dec. 3rd), but so far this season no human triggered avalanches have been reported. On December 19th there was some evidence of an avalanche debris pile in a gully of snowslide canyon, but it is inconclusive. Take a look at the photo.

Thin coverage continues to make backcountry approaches and egresses challenging and hard on ski and snowboard bases... but it is getting better and this next system may do the trick.

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"Failure to practice companion rescue is spitting in the face of your partners!" -Doug Krause on Slide: The Avalanche Podcast

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Weather

The December 16th warm wet storm was followed by much cooler temperatures and temperature inversions. More warm wet weather and light southerly winds moved in Dec 22-23. The snow line went as high as 11500' for a brief period on Dec 22.

On December 24th at 8am, the Inner Basin Snotel reported a snow depth of 28" (71cm) at 9700' and Arizona Snowbowl reported 38" (97 cm) at 10800'. Since December 17th, the Snowslide Snotel temperatures ranged between 1 and 48°F. and Agassiz station between 6 and 37°F.

Snowpack Summary for Friday, December 16, 2016

Overall:

With the new storm precipitation and wind, watch for hazardous snow conditions in specific terrain features. This may include cohensionless/faceted snow covered by new snow or windslabs.

With snotel reporting 2" of snow water equivalent (SWE) accumulation in the last 16 hours, cautious route choices and conservative decisions may be essential – evaluate terrain carefully. This weather came in warm, wet and heavy... give the snowpack some time to adjust.

Rocks and logs scarcely covered by a shallow snowpack continue to be a hazard.

Below treeline:

The snowpack is still thin. Under shallow snowpack conditions, temperature gradients between surface snow and the ground have caused water-vapor diffusion - <u>faceting</u> and weakening the snowpack. Sun exposed slopes have a variety of crusts and/or have lost most snow coverage.

Above treeline:

Before todays storm, areas are widely wind affected with loading along ridgelines, cross loading on leeward slide of gullies, and widespread wind hardening.

Small loose snow avalanches have been observed (~Dec 3rd), but so far this season no natural or human triggered slab avalanches have been reported. The arriving storm may change this. If the 2" of SWE reported by the snotel is accurate, then the likelihood of natural and human triggered avalanches has increased. This condition is most likely on north and northeast aspects, where faceted weak layers exist.

Thin coverage continues to make backcountry approaches and egresses challenging and hard on ski and snowboard bases. On December 3rd, the Inner Basin snowpack depth was about 30" (75cm) at 10800' on northerly aspects of Fremont Peak. Since then some settling and densification has occurred probably improving conditions by reducing ski penetration.



Keep an eye out for rapid loading and wind transporting of snow from the approaching storm. If the 2" of SWE reported by the snotel is accurate, then the likelihood of natural and human triggered avalanches has increased.

There has been some speculation about surface hoar formation in the Inner Basin, although no firm observations have come forth. The high relative humidity, light winds and inverted nighttime temperatures foster the growth of this potentially deadly weak layer. New snow falling gently on top of surface hoar could create a recipe for avalanching, particularly human triggered slides. Such conditions are likely to occur on lower slopes near valley and basin bottoms. Today's storm has come in wet and heavy so surface hoar (if it existed) may not have been preserved.

Keep an eye out for unstable windslabs and crossloaded terrain.



View from North Agassiz Ridge, earlier this week. Photo by Carlos Danel

Always exercise normal caution in avalanche terrain. Carry a beacon, probe, shovel and first aid gear. Know how to use that gear, always evaluate your decisions, and never expose more than one person at a time to steep avalanche prone slopes.

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Weather

Over the past week the drought has continued with a gradual warming trend of moderate temperatures ranging from the upper teens to just above freezing at 10500'. Winds have been out of the west and northwest with velocities in the teens and twenties, occasionally gusting into the 30s (mph). High pressure has been the dominant theme with accompanying nighttime temperature inversion, creating dew and frost in valleys and basins.

The high pressure began breaking down on Thursday as a rapidly moving low-pressure system approached the region. This storm has come in warm and wet, with the snowline quite high today, between 9000' and 10000'. The Inner Basin snotel (9700') has remained above freezing for most of the day and reported 34°F at 7pm this evening. Temps are expected to drop with the passing of the cold front sometime this evening.

North pacific pressure cells appear to be shifting, which may redirect future storms towards our region.

Weather station information:

During the second week of December weather was dry with normal to slightly above normal temperatures. Light to moderate NNW winds have characterized the week. On December 16th at 8pm, the Inner Basin Snotel reported a snow depth of 24" (61cm) at 9700' and Arizona Snowbowl reported 20" (51 cm) at 10800'. Since December 10th, Snotel temperatures ranged between 27 and 49°F. and Agassiz station between 24 and 38°F.

Snowpack Summary for Sunday, December 11, 2016

Overall:

Rocks and logs scarcely covered by a shallow snowpack will be your primary hazard. Watch for unstable snow in specific terrain features. This may include cohensionless/faceted snow or windslabs.

Below treeline, the snowpack is thin and strong temperature gradients have caused rapid water-vapor diffusion – <u>faceting</u> and weakening the snowpack. Sun exposed slopes have a variety of crusts and lost snow coverage.

Above treeline areas are widely wind affected with loading along ridgelines, crossloading, and significant wind hardening.

Thin coverage will make backcountry approaches and egresses difficult. On December 3rd, the Inner Basin snowpack depth was about 30" (75cm) at 10800" on northerly aspects of Fremont Peak.

Surprisingly, coverage near and above treeline is fairly good for early season...but these slopes are steep and speed checking is more difficult. Hitting a rock in the thin coverage and at high

speed can have grave consequences. You may find some undisturbed powder there but it may be too thin for safe riding...



Cold clear weather combined with a thin snowpack has resulted in faceted cohensionless snow – at least below treeline in the Inner Basin on northerly slopes. This snow could potentially get weaker if cold temps continue. Faceted snow provides less support, and can cause "submarining" into rocks and logs of the thin snowpack.

Warming temperature and solar input will increase the chances of human triggered loose snow avalanches (sloughs) in the cohesiveness snow. These sloughs could potentially send a person into rocks, trees or over a cliff, but are unlikely to have the volume to completely bury someone. Generally this would happen on steeper slopes at and above 38°.

Strong winds can transport and sublimate this low density snow, effectively removing this hazard. However, we observed undisturbed recrystallized surface-powder and calm wind on northerly Fremont Peak, Saturday, December 3rd – even though ridgetop winds were moderate to strong at that time.

We found evidence of a buried, harder wind-skin about 25cm below the surface – <u>pit data</u>. This could act as a sliding surface for a cohensionless snow avalanche (loose dry snow).



With low density recrystallized powder snow available for transport, and the moderate to strong NNW and SW winds (Dec. 6-7 and the 11th), there has been a plethora of transport. Agassiz station reported moderate north-northwesterly winds on December 11th.

Watch for cracking slabs and crossloaded slopes in isolated terrain.



Diurnal recrystalization or recycled power as it is sometimes called. This is one of the near surface faceting processes. Dec. 3 2016, Inner Basin, Fremont Peak, NE Aspect 10800'



Small loose snow slides. Likely caused by solar input. Dec. 3 2016, Fremont Peak, ENE aspect 10500'

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Weather

Fall weather was mostly warm and dry until several low-pressure systems resulted in moderate accumulations for the month of November.

Agassiz station reported strong northerly winds last weekend.

Moderate to strong NNW and SW winds blew on Dec. 6th and 7th. Moderate NNW winds blew on Dec. 11th.

On December 9th, the Inner Basin snotel reported a snow depth of 17" (43cm) at 9700' and Arizona Snowbowl reported 20" (51cm) at 10800'. Since November 28th, snotel temperatures ranged between -1 and 46°F. and Agassiz station between 3 and 37°F.

Snowpack Summary for Sunday, November 27, 2016 - Welcome to the 2016/2017 Season!

Weather

Fall weather has been mostly warm and dry. Several inches of snow fell at higher elevations during the first week of November. Most of that snow melted or sublimated, however pockets of basal facets developed on northerly sheltered aspects above 11000′. On November 20th and 21st the first significant winter storm arrived, resulting in moderate to heavy snow accumulation above 9000′. Agassiz station reported moderate to strong winds from the South. Mid to high mountain elevations received 20″ of high density snow, followed by NNW winds up to 60 mph gusts on November 22-23.

Cold, clear weather and strong temperature gradients associated with a thin snowpack resulted in the lower half of the new 20" rapidly faceting. Also, <u>surface hoar</u> formed in wind sheltered locations, which has probably been mitigated by the vigorous wind events over this weekend as two new systems entered the area.

November 28 Morning Update: Snotel reports 18" (46cm) at 9700' and AZ Snowbowl reports 22" at 10800'. Light to moderate accumulations may continue today and tonight. By Tuesday (Nov 29th), treeline wind-chill values may drop below -10° F. with northerly winds of 13 to 17 mph. Treeline temps are looking to stay below freezing this week, with a chance of precipitation returning Thursday/Friday.

Summary

Powder conditions exist in sheltered northerly aspect tree areas... but it's early season. Rocks and logs scarcely covered by a shallow snowpack will be your primary hazard. Thin coverage will make backcountry approaches and egresses difficult.



Winds have created a series of crusts and <u>windslabs</u> on all exposed aspects. Where the ground lacks large anchors, basal facets (<u>depth hoar</u>) may not be strong enough to support the weight of both new windslabs and backcountry travelers. Watch out for windslabs that are poorly bonded to basal facets.

Also look for <u>storm slabs</u> overlaying preserved and buried surface hoar – particularly on northerly and wind sheltered slopes.

Until we get better backcountry information, you should (always) exercise normal caution in avalanche terrain. Carry a beacon, probe, shovel and first aid gear. Know how to use that gear, always evaluate your decisions, and never expose more than one person at a time to steep avalanche prone slopes.

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Failure to practice companion rescue is spitting in the face of your partners! -Doug Krause on the Avalanche Podcast

KPAC offers level I and II avalanche courses.

Kachina Peaks Wilderness Access permits, commonly known as backcountry permits, are required in winter for access to the Kachina Peaks Wilderness area. More info

Note: The Arizona Snowbowl may restrict uphill access to the ski area while snowmaking and resort set up are in progress. Access to the Humphreys Summit trailhead is always available from the lower lots of the ski area, below the gate. Travel safe!

Travelers are advised to exercise caution and make slope specific evaluations. As always, please treat this summary with appropriately guarded skepticism, make your own assessments, and contribute to our body of knowledge by <u>reporting your observations</u>.

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