



# Stevens Pass

Issued: 9:11 PM PST Wednesday, February 7, 2018

by Kenny Kramer

NWAC avalanche forecasts apply to backcountry avalanche terrain in the Olympics, Washington Cascades and Mt Hood area. These forecasts do not apply to developed ski areas, avalanche terrain affecting highways and higher terrain on the volcanic peaks above the Cascade crest level.

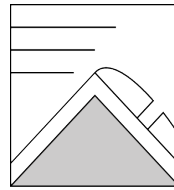
**The Bottom Line:** Wind slabs will build Thursday afternoon. With uncertainty in snowfall rates, adjust your terrain selection according to how much new snow is falling and being transported. Watch for blowing snow and avoid leeward slopes, particularly near and above treeline. Before cooling occurs on Thursday, you may be able to trigger a loose wet slide on steep or unsupported slopes. Avoid wet snow more than a few inches deep.

Elevation	Thursday		Outlook for Friday
Above Treeline	Moderate	Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify problem features.	Moderate
Near Treeline	Moderate	Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify problem features.	Moderate
Below Treeline	Moderate	Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify problem features.	Moderate

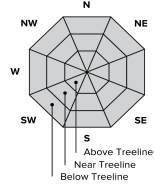
## Avalanche Problems for Thursday

### Wind Slab

Wind slabs can take up to a week to stabilize. They are confined to lee and cross-loaded terrain features and can be avoided by sticking to sheltered or wind scoured areas.



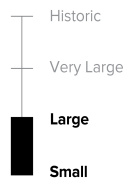
Avalanche Problem



Aspect/Elevation



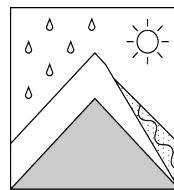
Likelihood



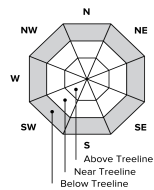
Size

### Loose Wet

Loose wet avalanches occur where water is running through the snowpack, and release at or below the trigger point. Avoid terrain traps such as cliffs, gullies, or tree wells. Exit avalanche terrain when you see pinwheels, roller balls, a slushy surface, or during rain-on-snow events.



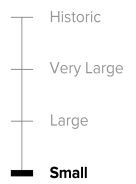
Avalanche Problem



Aspect/Elevation



Likelihood



Size

# Avalanche Forecast for Thursday

Thursday will feature moderate to strong W-SW winds along with a significant cooling trend and post-frontal rain and snow showers following a frontal passage.

With no old snow instabilities observed in the snowpack recently, anticipated winds will form wind slabs as new snow falls, initially at higher elevations in the north and central Cascades and progressing to near treeline terrain or below (given the strength of the winds) as snow levels drop. Precipitation intensities and snow accumulations will be sporadic, so expect elevated wind slab danger in areas receiving more fresh snow and more intense transport and an increase in danger with elevation. Watch for blowing snow as a sign that wind slabs are forming and avoid lee slopes. Wind slabs will be more prevalent on NW-N-NE-E-SE aspects.

South of Snoqualmie pass, insufficient new snow is forecast during the day tomorrow to pose a wind slab hazard near or below treeline, but we cannot rule out the possibility that the strong winds will transport older snow above treeline and form fresh slabs. It is unlikely that much older snow exists that has not already been scoured or moistened, given recent winds and temperatures.

Loose wet avalanches hazard will linger below treeline, particularly in the south Cascades on solar slopes in the late morning hours. With a cooling trend, these avalanches are expected not to entrain significant snow and should remain small and less easily triggered than earlier in the week. However, even a small loose wet avalanche can be dangerous. Avoid deep wet snow on steep or unsupported slopes and avoid exposure to cliffs, gullies, or rocky slopes.

Recent warm weather has created other hazards in the terrain:

Cornices are increasingly large now and they have been sagging. Don't be tempted to spend time under corniced slopes as warming, rain or direct sunshine will all increase the chances of an unpredictable cornice failure.

Although the snow is showing signs of draining, water continues moving through the snowpack near and below treeline, glide cracks are widespread in the terrain and glide avalanches are unlikely, but still possible on Thursday. Exposing yourself to terrain under visible glide cracks is ill advised. The cracks themselves will pose a more significant hazard in poor visibility conditions or as they start to get covered with fresh snow.

## Avalanche Summary

Rising snow levels on Wednesday accompanied light rain or drizzle in many areas to moisten or wet up to 6" of post-frontal snow which fell between Sunday evening and Tuesday. Below 6,000 feet, the upper snowpack saw very significant rainfall last weekend which created moist or wet snow, in some cases, extends more than a meter down. Water has generally been draining from this snowpack rather than pooling, given minimal weather inputs the past few days.

Above 6,000 feet, the snowpack is likely to have dry snow with some crusts extending into the above treeline band, but no recent observations have been taken in this terrain.

Sunday night through Tuesday, moderate gusty winds created reactive wind slabs on east-facing aspects capable of producing small to large avalanches, but warming temperatures and water added to the snowpack is quickly mitigating further slab formation and wind slab hazard below 6,000 ft. Above 6,000 feet, there have been no recent observations, but with temperatures rising above freezing at Camp Muir on Wednesday, it is likely that these slabs are healing rapidly in all areas and that we won't have to worry about old wind slabs going forward.

### Observations

#### North

On Wednesday, NWAC Pro Observer Lee Lazzara was touring around Table Mountain, travelling on all aspects. He found 2-6" of recent snow now moist on the surface above a mostly strong snowpack with no lingering instabilities. Small loose wet avalanches were possible in steeper terrain. He saw lots of glide cracks which could create traps, particularly if covered by fresh snowfall in the future.

Mt. Baker Pro Patrol reported glide cracks were still a problem in the inbounds terrain on Tuesday. On Wednesday, they saw no natural wet activity and ski patrol was able to cut one pocket of wind slab.

#### Stevens Pass

On Monday, Stevens Pass Pro Patrol reported evidence of a widespread wet loose/glide/wet slab natural cycle from the past weekend. The most notable events were large avalanches that ran off steep rock faces during the day yesterday. A patroller triggered a small wind slab in an isolated wind-loading prone feature where the 3 inches of fresh snowfall had been redistributed by winds gusting to nearly 50 mph. At 5000 feet, rain saturated rounded grains constituted the upper 150 cm of the snowpack with the 1/5 rain crust still notable down 150-180 cm with no recent activity on that layer. The 1/29 is discernible down 30-40 cm, but the 1/16 is simply a change of grain size at this point.

#### Snoqualmie Pass

On Wednesday, NWAC forecasters Dallas Glass and Josh Hirshberg visited uncompacted terrain near Alpental. Moist or wet snow extended down to the Jan 5 crust (57" down). The top 4" was recent snow. They witnessed no new avalanches and thought it might be possible to trigger a loose wet avalanche in specific or isolated terrain.

On Tuesday, NWAC Pro Observer Ian Nicholson was on Granite Mountain. The party easily triggered loose wet avalanches below 4100' on steep, unsupported terrain: They were heavy and traveled far in the moist or wet snow extending at least a meter down. Above 4100', up to 5-6" of new snow was bonding very well to a crust. Winds had recently transported significant snow, scouring ridgelines, cross-loading the south face, and creating the potential for small to large avalanches. The party intentionally triggered a small wind slab in a wind-loaded location. Winds had generally loaded E-facing aspects. Evidence of 3 recent

cornice-fall avalanches was also observed near the summit of Granite Mountain. Over the weekend, all of the 3 main slide paths of granite released naturally as large to very large wet slabs or loose wet slides.

*Ian Nicholson on a corniced ridgeline, Granite Mountain, 2/6/2018. Note debris from cornice failure (bottom right).*

*Wind slabs up to 16" or deeper on Granite Mountain 2/6/2018. Ian Nicholson. Rotate your head left to view.*

### South

Crystal Mountain Ski Patrol reported mostly firm surface conditions with minor melt freeze on solar aspects on Monday and Tuesday.

Crystal Mountain Ski Patrol reported seeing debris from a widespread natural loose wet avalanche cycle. The avalanches were large and ran far into the runouts. Cornices are sagging, but many didn't release during the recent warmup. The snow surfaces were mostly refrozen and firm on Monday and Tuesday with some softening on solar aspects.

## Mountain Weather Synopsis for Thursday & Friday

Strong WNW flow near and above crest level persists across the Pacific Northwest Thursday afternoon. The region is being squeezed between an upper ridge offshore and a trough across western Canada, thus tightening the gradients over the forecast area. A weak frontal boundary moved across the region early Thursday causing a period of mostly light precipitation at high freezing levels. Low level moisture is now being lifted along the west slopes in moderate onshore flow, maintaining light precipitation along the west slopes and over the volcanoes. Little moisture will make it much further south than about Mt Rainier Thursday afternoon and night. The greatest expected precipitation will be over the Stevens to Snoqualmie Pass area in an active convergence zone which should gradually weaken Thursday night. Freezing levels remain relatively high Thursday afternoon and should lower significantly in the wake of the passing disturbance Thursday evening and overnight. The ridge offshore gains strength Friday and turns the upper level flow to a more northerly direction. This should cause further cooling but more drying with only a few scattered showers expected Friday.

24 Hour Quantitative Precipitation ending at 4 am			Snow Level/Freezing Level in feet					
Location	Fri	Sat	Day	Northwest	Northeast	Central	South	Easterly
				Olympics	Cascades	Cascades	Cascades	Cascades
Hurricane Ridge	lt .10	0	Thursday Afternoon	3500'	3500'	3500'	4000'	7500'
Mt Baker Ski Area	.50	lt .10	Thursday Night	2500'	2000'	2000'	2500'	6000'
Washington Pass	.25	0	Friday Morning	2000'	1500'	1500'	2000'	3000'
Stevens Pass	.75	lt .10	Friday Afternoon	2000'	1500'	1500'	2000'	3000'
Snoqualmie Pass	.50	lt .10	Friday Night	1500'	500'	500'	2000'	2000'
Mission Ridge	0	0						
Crystal Mt	lt .10	0						
Paradise	.25 - .50	lt .10						
White Pass	lt .10	0						
Mt Hood Meadows	lt .10	0						
Timberline	lt .10	0						

Cascade Snow / Freezing Levels noted above refer to the north (approximately Mt Baker and Washington Pass), central (approximately Stevens to White Pass) and south (near Mt Hood). Freezing Level is when no precipitation is forecast.

\* Note that surface snow levels are common near the passes during easterly pass flow and may result in multiple snow / freezing levels.

LT = less than; WE or Water equivalent is the liquid water equivalent of melted snow in hundredths of inches. As a rough approximation 1 inch of snow = about .10 inches WE, or 10 inches of snow = about 1 inch WE.

## USE AT YOUR OWN RISK

This Backcountry Avalanche Forecast is provided in conjunction with the US Forest Service, and is intended for personal and recreational purposes only. Safe backcountry travel requires preparation and planning, and this information may be used for planning purposes but does not provide all the information necessary for backcountry travel. Advanced avalanche education is strongly encouraged.

The user acknowledges that it is impossible to accurately predict natural events such as avalanches in every instance, and the accuracy or reliability of the data provided here is not guaranteed in any way. This forecast describes general avalanche conditions and local variations will always occur. This forecast expires 24 hours after the posted time unless noted otherwise.