

# Stevens Pass

Issued: 6:20 PM PST Saturday, December 30, 2017 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.

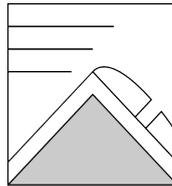
**The Bottom Line:** Significant new snow and strong winds over the last several days continue to warrant patience and conservative terrain use. The snowpack is slowly gaining strength, but caution should be taken before stepping into larger terrain.

Elevation	Sunday, December 31, 2017		Outlook for Monday
 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.	 Low

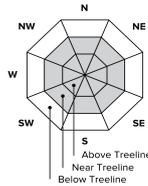
## Avalanche Problems for Sunday

### Wind Slab

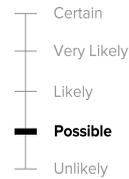
Wind slabs can take up to a week to stabilize. They are confined to lee and cross-loaded terrain features and can be avoided by sticking to sheltered or wind scoured areas.



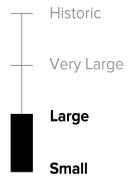
Avalanche Problem



Aspect/Elevation



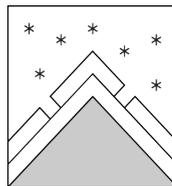
Likelihood



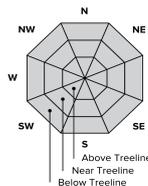
Size

### Storm Slab

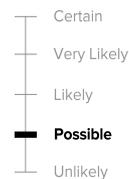
Storm slabs usually stabilize within a few days, and release at or below the trigger point. They exist throughout the terrain, and can be avoided by waiting for the storm snow to stabilize.



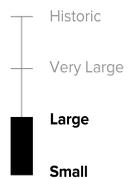
Avalanche Problem



Aspect/Elevation



Likelihood



Size

## Avalanche Forecast for Sunday

Easterly flow will continue to bring cooler temperatures and low elevation clouds to the Passes Sunday.

Newly formed wind slabs will continue to be a problem into Sunday. Look for areas of recently wind transported snow such as fresh cornices, snow drifts, and uneven snow surfaces. Identify and avoid locations where recent wind loading has occurred. Strong ridge top winds may have loaded slopes well below ridgeline.

While we expect wind slabs to primarily exist near and above treeline, keep a watchful eye out for exposed terrain features below treeline where wind slabs may have formed.

*Wind slabs can be deceptively difficult to manage in the terrain. Take a moment and read our recent [blog post](#) by NWAC Pro Observer Jeremy Allyn on wind slabs.*

With the lack of significant warming in the Passes, Storm Slab instabilities will continue to linger into Sunday. While these layers are settling and gaining strength, the shear amount of new snow warrants caution. Avalanches originating within the new snow may entrain additional snow from lower layers. Storm slabs will have the potential to be their largest at higher elevations where significant new snow loads and colder temperatures exist.

The snowpack is quite deep in many locations. Small trees can present a non-avalanche, snow immersion hazard. Keep visual and verbal communication with your travel partners when traveling in treed terrain.

Despite all this new snow, early season hazards still exist at some lower elevation locales and especially around creek beds that are not filled in.

## Avalanche Summary

Saturday afternoon brought a close to a wet and wild storm pattern which began on Thursday. East flow in the passes maintained cooler temperatures, allowing for mostly snow throughout the storm systems. Snoqualmie pass did receive short rain, and freezing rain events Friday during the day, but the passes did not receive the same warm temperatures experienced across much of the west slopes of the Cascades.

One to two feet of snow fell from Thursday to Saturday afternoon. Temperature fluctuations during the storm created several layers within the new snow. Settlement and strengthening of the upper snowpack can be seen in weather station data and has been confirmed by recent field observations.

Moderate winds associated with the end of the storm cycle have redistributed snow in exposed terrain, creating newly formed wind slabs on a variety of aspects.

The upper snowpack is generally right-side-up and gaining strength. Freezing rain and freezing fog crust buried 12/29 and 12/28 respectively exist in the Snoqualmie pass area. The extent of these crusts is not well known.

### Observations

#### Stevens Pass

On Friday, a professional guide in the Stevens backcountry reported a resistance increase within the 15" of storm snow and that storm snow was bonding well with the old snow interface. The layers were not producing significant test results.

#### Snoqualmie Pass

On Friday, the WSDOT crew at Snoqualmie Pass reported numerous small loose wet avalanches on steep NW-facing terrain and at that elevation there was not much snow to entrain.

On Friday, Alpentel Pro Patrol reported evidence of a natural cycle from 1' of storm slab in the early morning hours on Friday. The snow switched to rain and rain was reported to the top of Alpentel by late morning.

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## Mountain Weather Synopsis for Sunday & Monday

An upper level ridge of high pressure continues to build northward along the coast of the PNW Sunday. This is providing mostly sunny and warming conditions by Sunday afternoon under weakening NW flow aloft. Building surface high pressure east of the Cascades has shifted the low level winds to easterly across the Cascade Passes and Cascade crest. This is resulting in cool temperatures and low clouds and areas of fog in some low elevation east slope areas and passes. Little change is expected for New Years Day with areas away from the passes expecting more sunshine and further warming, while the low clouds and areas of fog persist in the passes and some lower elevation east slope areas .

**Precipitation Forecast**

Location	Mon	Tue
Hurricane Ridge	0	0
Mt Baker Ski Area	0	0
Washington Pass	0	0
Stevens Pass	0	0
Snoqualmie Pass	0	0
Mission Ridge	0	0
Crystal Mt	0	0
Paradise	0	0
White Pass	0	0
Mt Hood Meadows	0	0
Timberline	0	0

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.

**Snow/Freezing Level (ft)**

Day	Snow/Freezing Level (ft)							Mt. Hood	Easterly Flow in the Cascade Passes
	Hurricane Ridge	Mt. Washington Baker Pass	Stevens Pass	Leavenworth Pass	Snoqualmie Pass	Crystal Mt. Rainier and			
Sunday Afternoon	8000'	5000'	3000'	None'	None'	7000'	None'	8500'	*
Sunday Night	8000'	6000'	4000'	None'	None'	7000'	None'	8500'	*
Monday Morning	9000'	6000'	5500'	None'	None'	8500'	None'	9000'	*
Monday Afternoon	9000'	7000'	6500'	None'	None'	8500'	None'	9000'	*
Monday Night	9000'	7000'	6500'	None'	None'	8000'	None'	9000'	*

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.

\* Easterly flow in the Cascade Passes can cause locally lower Snow or Freezing levels than areas further west.