



# West Slopes North - Canadian Border to Skagit River

Issued: 7:59 PM PST Monday, March 5, 2018 by Dennis D'Amico

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.

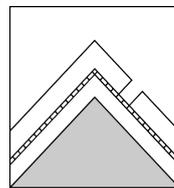
**The Bottom Line:** Persistent Slab avalanches claimed lives along the east slopes of the Cascades over the weekend. Avoid complex terrain and sit out this low likelihood - high consequence problem; ensure a wide buffer between where you travel and open slopes over 35 degrees as well as large avalanche paths. Slopes on the south half of the compass are of particular concern. Also watch for lingering wind slabs at higher elevations and small loose wet avalanches on sunny slopes Tuesday.

Elevation	Tuesday, March 6, 2018		Outlook for Wednesday
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

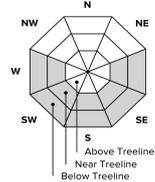
## Avalanche Problems for Tuesday

### Persistent Slab

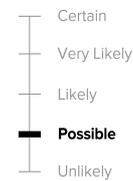
Persistent slabs can be triggered by light loads and weeks after the last storm. You can trigger them remotely and they often propagate across and beyond terrain features that would otherwise confine wind and storm slabs. Give yourself a wide safety buffer to handle the uncertainty.



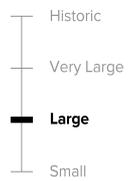
Avalanche Problem



Aspect/Elevation



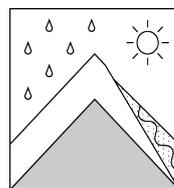
Likelihood



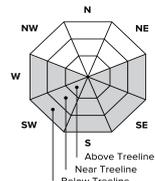
Size

### 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.



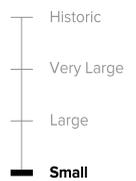
Avalanche Problem



Aspect/Elevation



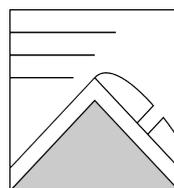
Likelihood



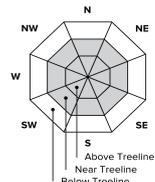
Size

### 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.



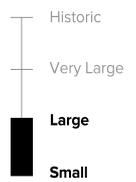
Avalanche Problem



Aspect/Elevation



Likelihood



Size

# Avalanche Forecast for Tuesday

[Fatal avalanche incidents](#) along the east slopes of the Cascades occurred this weekend in the Teanaways near Long's Pass (Saturday) and north of the Methow Valley at Setting Sun Mountain (Sunday). Persistent Slab avalanches were reported both the Long's Pass and Setting Sun incidents. Recent Persistent Slab avalanche activity has been confined to the Stevens Pass area along the west slopes of the Cascades, but a similar snowpack structure exists in other areas along the west slopes.

You may be able to trigger Persistent Slab avalanches in the upper snowpack on sun-exposed slopes (generally southerly aspects) greater than 35 degrees. These avalanches are difficult to manage. To reduce your risk of being caught, avoid steep, open, sunny slopes, and large avalanche paths. Also watch out for unsupported slopes that end in rocks, cliffs or steep rolls. If you experience collapsing or audible whumphs, avoid any nearby avalanche terrain. **This interface was involved in two fatal avalanche incidents in the Snoqualmie Pass area 2/25.**

Deep Persistent Slab avalanches are unlikely and difficult to trigger, but are also very difficult to predict. You would likely not survive a Deep Persistent Slab avalanche. Stay safe by avoiding triggering smaller avalanches in the surface snow and staying off the previously mentioned steep slopes.

Wind Slabs are trending toward unlikely, but may still exist in isolated areas especially above treeline where there have been few recent observations. Generally avoid areas of recently drifted snow, deeply pillowed features, and fresh cornices on slopes 35 degrees and steeper. These areas may exist well below ridge-lines. Soft non-wind-affected snow may cover new wind slabs making them harder to identify.

Small loose wet avalanches are likely on Tuesday on steep solar slopes. They have the potential to be slightly larger in the Snoqualmie Pass area. Avoid steep sunny slopes near terrain traps as the surface snow becomes moist and watch for signs of natural pinwheeling and rollerballing as a clear signal to change aspects.

## Avalanche Summary

3-6" of low density snow accumulated through early Monday morning, with an anomaly of around 12" in the Snoqualmie Pass area. Temperatures remained cool Monday for early March with limited sun effects across the west slopes of the Cascades. The previous snow surface consisted of sun crusts on solar aspects and several feet of settled powder from last week in sheltered terrain. Widespread surface hoar was reported in the Stevens Pass area early in the weekend. Sunshine on Saturday triggered small wet loose avalanches on steep sunny slopes throughout the Cascades. The most recent storm with significant snow and wind ended Thursday morning 3/1. The most recent human triggered wind slab avalanches were observed on Mt. Baker Saturday.

On E-S-W aspects, a thin breakable sun crust was buried on 2/23. Very small weak facets have been reported surrounding the crust. This was the weak layer found or suspected in several avalanches. This layer has not yet had significant time to heal. It is found 1-3 feet below the surface on steeper slopes that have received direct sun during the past week. Snow profiles and snowpack tests can confirm the presence of this layer; however they are not good for proving its absences. That said, the crust has not been found in near treeline terrain and is more likely to be found at lower elevations in the below treeline band. Several other crusts exist within the upper snowpack on slopes that received direct sunshine.

Some observations from last week suggest other persistent grains at this same 2/23 interface on shaded slopes. Buried surface hoar and large preserved stellars were reported in avalanches and snowpack tests at this interface about one week ago.

Avalanche and snowpack observations continue to indicate that avalanches are possible on a layer of weak sugary facets buried on 2/13. This weak layer is generally 3 to 6 feet below the snow surface and just above a very firm melt-freeze crust (2/8). In the southern Cascades, recent observations suggest it may be easier to trigger avalanches on the 2/13 facets near the Crystal Mountain area compared to terrain near the Paradise side of Mount Rainier where the layer is considerably deeper.

There are no significant layers of concern below the 2/8 crust.

Observations

### North

On Saturday, an NWAC professional observed two large wind slab avalanches several feet deep triggered by snowmobilers on the Easton Glacier around 6000'.

On Saturday, an avalanche professional in the Bagley Lakes area noted recent wind transported snow in the near treeline zone, but no skier triggered avalanches on that wind-affected snow. Small loose avalanches were triggered by sunshine and the sun influenced the release of slab avalanches that approached large (D2) in specific terrain features on the south side of Mt. Herman. On east aspects, the 2/8 crust was down 60 inches or more and facet crystals above this layer were rounding. No other significant layers were present on this aspect.

### Central

Several pertinent observations were reported Saturday on our observations page, including an avalanche professional that observed a loose wet avalanche step down and trigger a deeper avalanche on an east aspect of [Jim Hill near Stevens Pass](#) that potentially ran on the 2/23 facet/crust interface.

On Saturday, NWAC professional Observer Jeremy Allyn was in the Mt. Snoqualmie area where he observed a right-side-up density profile to the 2/8 crust down 5' (150 cm) on a SW aspect at 5100 feet. No 2/23 crust was observed at this location. No new or recent avalanche activity was observed.

On Friday, a guide and avalanche professional reported a large avalanche near Highland Bowl on a SSE aspect near treeline on Stevens Pass. This slope had seen recent wind loading and likely ran on the 2/23 facet/crust interface about 2 feet below the surface.

Stevens DOT reported two avalanches Wednesday morning 2/28. One failed on the 2/23 interface on a NE aspect. The weak layer appeared to be buried surface hoar. An avalanche from earlier in the week was larger and suspected of failing on the 2/13 facet/crust combination. This is the most recent avalanche report we have on the 2/13 PWL from the West Slopes of the Cascades.

Snowpack tests from around the west slopes of the Cascades and Passes continue to indicate that propagation of an avalanche on the 2/13 facets is possible. This layer has been found 2.5 to 4 feet below the snow surface.

**South**

On Thursday, Forecaster Dallas Glass reported natural slab avalanches in wind-loaded terrain near treeline in the Crystal backcountry. Dallas reported snowpack tests showing potential for triggering avalanches on crust/facet combinations in the upper snowpack as well as up to 3 feet down on the older faceted 2/13 layer.

**Mountain Weather Synopsis for Tuesday & Wednesday**

Upper level ridging will build offshore today with a dry and eventually sunny day forecast across the Pacific Northwest. Before the sunshine, a mid level cloud deck is hanging tough around for the Olympics and central and north Cascades this morning while clearer skies are seen further south. In the cloudier areas, skies should clear later this morning with just some afternoon cumulus buildup expected. Mostly clear and dry weather will continue overnight. Flat upper level ridging will move over the region on Wednesday, with freezing levels rising further. However, a closed upper low well off the California coast will spread mid and high clouds over the region from the south during the day, dampening an otherwise warm day for early March. A weakening frontal band extending from the low pressure system will pass over the area Wednesday night producing light precipitation.

Precipitation Forecast			Snow/Freezing Level (ft)								
Location	Wed	Thu					Mt. Rainier and Crystal Mt.	Mt. Hood	Easterly Flow in the Cascade Passes		
			Day	Hurricane Ridge	Mt. Washington Baker	Stevens Pass	Snoqualmie Pass	Crystal Mt.	Mt. Hood		
Hurricane Ridge	0	lt .10	Tuesday Afternoon	3500'	3500'	4000'	None'	None'	4000'	None'	5000'
Mt Baker Ski Area	0	lt .10	Tuesday Night	3500'	2000'	500'	None'	None'	2000'	None'	4500'
Washington Pass	0	lt .10	Wednesday Morning	4500'	3500'	3000'	None'	None'	4000'	None'	6000'
Stevens Pass	0	lt .10	Wednesday Afternoon	7000'	6000'	5500'	None'	None'	6500'	None'	8000'
Snoqualmie Pass	0	lt .25	Wednesday Night	4500'	4000'	3000'	None'	None'	4000'	None'	4500'
Mission Ridge	0	lt .10									
Crystal Mt	0	lt .10									
Paradise	0	lt .25									
White Pass	0	lt .10									
Mt Hood Meadows	0	lt .10									
Timberline	0	lt .10									*

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.

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.