



Northwest  
Avalanche  
Center



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## West Slopes South - South of I-90 to Columbia River

Issued: 6:25 PM PST Tuesday, February 13, 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.

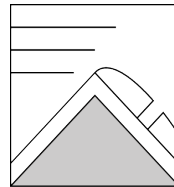
**The Bottom Line:** Avalanche conditions will change Wednesday due to a quick moving frontal system bringing fresh snowfall to the Cascades. Heightened avalanche conditions will exist on any slope greater than 35 degrees where significant new snowfall bonds poorly to the underlying surface including older weaker snow or a smooth crust.

Elevation	Wednesday		Outlook for Thursday
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

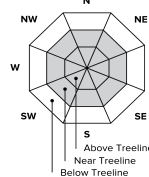
### Avalanche Problems for Wednesday

#### Wind Slab

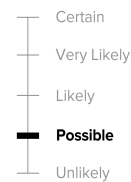
Wind slabs can take up to a week to stabilize. They are confined to lee and cross-loaded terrain features and can be avoided by sticking to sheltered or wind scoured areas.



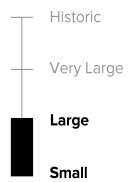
Avalanche Problem



Aspect/Elevation



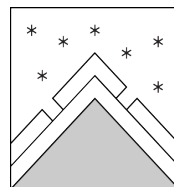
Likelihood



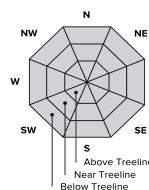
Size

#### Storm Slabs

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.



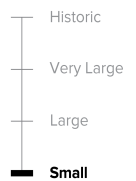
Avalanche Problem



Aspect/Elevation



Likelihood



Size

## Avalanche Forecast for Wednesday

Avalanche conditions will change on Wednesday as a quick moving frontal system brings fresh snowfall to the Cascades Tuesday night and Wednesday along with much cooler temperatures.

On average, 6 to 12 inches of new snow may bond poorly to a medley of snow surfaces including weak surface snow in the form of persistent grain types, wind sculpted snow surfaces or various surface crusts. Heightened avalanche conditions will exist on any slope greater than 35 degrees where significant new snowfall bonds poorly to the underlying surface.

Shallow storm slabs will be more sensitive to human triggering in specific areas if they develop over weaker snow (near surface facets) found in wind sheltered, non solar aspects. Also watch for developing storm slab instabilities in areas that experience extended periods of intense snowfall.

While winds are not forecast to be especially strong with this system, westerly winds should build fresh wind slabs on lee slopes near and above treeline. Avoid steep slopes with wind deposited snow such as below cornices, on wind drifts, and near uneven snow surfaces. Wind slabs will be more likely to trigger in areas where wind deposited snow bonds poorly to an underlying crust or weak surface snow.

Loose dry avalanches will not be listed as a problem but will be possible on very steep slopes. Be aware of the consequences of a loose dry avalanche near terrain traps such as cliffs, gullies, or open creeks. In areas where shallow loose new snow bonds poorly to the underlying crust, avoid steep icy slopes where it will be difficult to stop a fall.

Continue to avoid other non-avalanche-related hazards such as glide cracks, creeks, and openings within the snowpack formed during warm wet weather in early February. Falling into these holes poses a danger to backcountry travelers.

## Avalanche Summary

Heading into Tuesday night's storm, a strong and stable snowpack exists around the region. Up to 6 inches of older weak snow sits on the supportable 2/8 crust in most wind and sun sheltered locations along the west slopes of the Cascades. On slopes that have received direct sun over the past few days, spring-like conditions have developed. Above treeline and to a lesser extent near treeline, a medley of wind sculpted snow surfaces or surface crusts exist.

Warm wet weather from the beginning of February created a well consolidated snowpack. While we are tracking some deeper buried crust layers, there are no significant layers of concern.

There have not been any reports of avalanches in several days.

### Observations from the West Slopes of the Cascades

NWAC field staff over the last several days have reported a strong snowpack and no recent avalanche activity throughout the west slopes of the Cascades. Older debris from the 2/4 avalanche cycle is still visible in many areas.

In non-wind or sun affected terrain, several inches of weak surface snow sits upon the 2/8 crust mainly in the form of near surface facets although some observations of surface hoar were also noted. NWAC staff in the Mt. Baker and the Paradise backcountry near and above treeline on Tuesday reported landscapes reshaped by recent winds and sun. Highly variable snow surfaces consisted of melt-freeze crusts, sastrugi, old wind deposits and scoured surfaces exposing slick crusts to name a few.

Over the weekend, numerous glide cracks and openings in the snowpack were present and created a non-avalanche travel hazard.

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## Mountain Weather Synopsis for Wednesday & Thursday

On Wednesday, a shortwave trough embedded in Northwest flow aloft is sliding over the Pacific Northwest and has replaced a tongue of Tuesday's offshore high pressure ridge which had kept us under warm and generally fair weather. The trough axis has moved just east of the Cascades by Wednesday afternoon. The relatively stationary Pacific High pressure dominates all but the peripheries of the North Pacific Ocean and the next frontal wave to affect the region is currently riding over the top of the ridge and is located just south of Alaska. A surface cold front which passed to our east on Tuesday night brought a significant decrease in temperatures (now most stations are in the 20's and 10's) with decreasing post-frontal westerly flow and generally decreasing light to moderate snow showers. A band of heavier convergence is currently moving south of Stevens pass toward Snoqualmie pass. Snow showers will be heaviest along the west slopes of the Cascades from the central Cascades to Mt. Hood. Any snow shower activity should be light by the afternoon and most areas will see snow showers ending by evening. Upper-level northwest flow will continue with a break between the systems generally Wednesday night through Thursday, with some very light snow shower activity continuing in the Mt. Hood area during this period. Thursday night, another upper shortwave approaches from the northwest, spreading increasing light to occasional moderate snow into the region along with increasing moderate westerly winds at crest-level. The brunt of this system won't arrive until daylight hours on Friday.

**24 Hour Quantitative Precipitation ending at 4 am**

Location	Thu	Fri
Hurricane Ridge	lt .25	lt .25
Mt Baker Ski Area	lt .25	lt .25
Washington Pass	lt .25	lt .10
Stevens Pass	.25	.25
Snoqualmie Pass	.25	.25 - .50
Mission Ridge	lt .10	lt .10
Crystal Mt	.25 - .50	lt .10
Paradise	.75 - 1.00	.25
White Pass	.25 - .50	.25
Mt Hood Meadows	1.00 - 1.25	lt .10
Timberline	1.00 - 1.50	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.

**Snow Level/Freezing Level in feet**

Day	Northwest Northeast Central South					Easterly Flow in Passes
	Olympics	Cascades	Cascades	Cascades	Cascades	
Wednesday Afternoon	2500'	2000'	2000'	2000'	2500'	
Wednesday Night	1500'	1000'	500'	1000'	2000'	
Thursday Morning	1500'	1000'	1000'	2000'	2000'	
Thursday Afternoon	2000'	1500'	1500'	2000'	2500'	
Thursday Night	1500'	1500'	1500'	2000'	2000'	

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.

**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.