



# Olympics

Issued: 7:41 PM PST Friday, December 30, 2016 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.

A preliminary incident report completed by the White Pass Ski Patrol and NWAC for the avalanche fatality that occurred on Tuesday December 27th, 2016 is finished and will be uploaded to the accidents page Friday night. <http://www.nwac.us/accidents/accident-reports/>

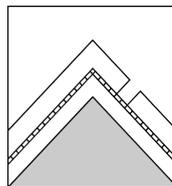
**The Bottom Line:** The 12/17 persistent slab remains the main avalanche problem in the Hurricane Ridge area but this layer should be less likely to trigger Saturday except in isolated areas. Continue to avoid steeper slopes of consequence especially in less skied areas at Hurricane Ridge until we can confirm this layer is un-reactive to human triggering. While wind affected snow should be widespread, wind slab will likely be stubborn to trigger Saturday.

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

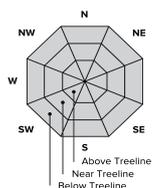
## Avalanche Problems for Saturday

### Persistent Slab

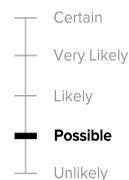
Persistent slabs can be triggered by light loads and weeks after the last storm. You can trigger them remotely and they often propagate across and beyond terrain features that would otherwise confine wind and storm slabs. Give yourself a wide safety buffer to handle the uncertainty.



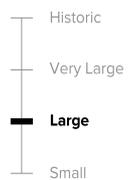
Avalanche Problem



Aspect/Elevation



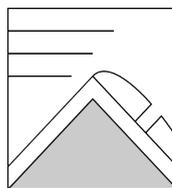
Likelihood



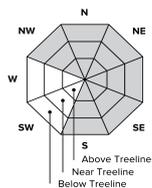
Size

### Wind Slab

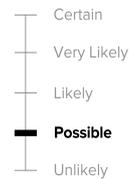
Wind slabs can take up to a week to stabilize. They are confined to lee and cross-loaded terrain features and can be avoided by sticking to sheltered or wind scoured areas.



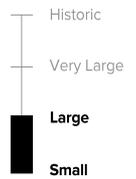
Avalanche Problem



Aspect/Elevation



Likelihood



Size

# Snowpack Analysis

## Weather and Snowpack

A strong front and strong west flow aloft was seen over the Olympics and Cascades on Monday and Tuesday. The NWAC station indicated strong south to southwest winds Monday and Tuesday with almost 2 feet of new snow for the 48 hours ending Wednesday morning with a cooling trend.

A warm front caused moderate to strong winds and periods of light to moderate snow Thursday with about half an inch of water through Thursday evening at the Hurricane Ridge station. New snow initially fell during a warming trend with moderate S-SW winds but stormy conditions quickly subsided behind the front Thursday evening.

## Recent Observations

NWAC pro-observer, Matt Schonwald was at Hurricane Ridge on Wednesday and reported the 12/17 PWL is still causing collapsing on all aspects especially in less skied areas below ridge lines. Recent natural wind slab releases of 10-12 inches were also seen on N-NE slopes off ridges at about 6000 feet. A 2-4 foot x 150 foot wide wind slab crown on the convex north slope below the visitor overlook was seen which may have released on a buried surface hoar layer from around Christmas Eve. The road to Hurricane was closed on Thursday.

On Friday, NPS rangers reported wind affected snow surfaces well below treeline with about 4" of dense new storm snow. No natural avalanches from Thursday or Thursday night were observed with good visibility Friday morning. Little loose surface snow was available for future transport.

## Detailed Avalanche Forecast for Saturday

After a mostly clear start to Saturday, a fast moving frontal system will bring light snow to the Olympics by late morning which should continue through the day. New snow amounts through 4 pm will generally be light, but westerly winds, especially near and above treeline, are expected spike up by mid-day.

The 12/17 persistent slab remains the main avalanche problem in the Hurricane Ridge area but this layer should be less likely to trigger Saturday except in isolated areas. Continue to avoid steeper slopes of consequence especially in less skied areas at Hurricane Ridge until we can confirm this layer is un-reactive to human triggering.

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## Mountain Weather Synopsis for Saturday & Sunday

An east to west oriented upper trough is developing across northern B.C. early Saturday morning. This disturbance is tracking southward along with the developing surface low pressure circulation and should spread increasing cloud across the NW Washington Cascades and Olympics Saturday morning and bring light precipitation to those areas by late morning or midday. The trough and surface low should be over western Washington by early Sunday morning and continue to slowly move south and east through the day. This disturbance will provide a shot of light to moderate precipitation mainly from Saturday evening through early New Year's Day. Showers should gradually diminish through the day Sunday, ending most areas by late morning or early afternoon, with the exception of the Mt Hood area and east slopes of WA Cascades where snowfall may persist into the evening Sunday. A cold north to northeasterly flow will develop over the region in the wake of the disturbance on New Year's. This drop the snow level to near sea level overnight and Sunday. Dry and cold conditions are expected Sunday night and through much of the upcoming week.

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

Location	Sun	Mon
Hurricane Ridge	.25 - .50	lt .10
Mt Baker Ski Area	.25 - .50	lt .10
Washington Pass	lt .25	lt .25
Stevens Pass	.25 - .50	lt .25
Snoqualmie Pass	.25 - .50	lt .25
Mission Ridge	lt .25	.25
Crystal Mt	.25	lt .10
Paradise	.25 - .50	lt .25
White Pass	.25 - .50	lt .25
Mt Hood Meadows	.25 - .50	.25 - .50
Timberline	.25 - .50	.25 - .50

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	
Saturday Morning	1500'	1500'	500'	1000'	2000'	
Saturday Mid-day	2500'	1000'	500'	1000'	4500'	
Saturday Afternoon	1500'	1000'	500'	1500'	1500'	
Saturday Night - Sunday Night	0'	0'	0'	0'	500'	

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.