

Olympics

Issued: 6:02 PM PST Monday, December 26, 2016 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.

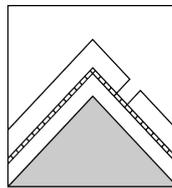
The Bottom Line: Very dangerous avalanche conditions are expected in much of the terrain Tuesday. Storm or persistent slabs will be sensitive Tuesday in the Olympics. The safest plan is to avoid avalanche terrain of consequence until storm and persistent slabs stabilize.

Elevation	Tuesday		Outlook for Wednesday
 Above Treeline	 High	Very dangerous avalanche conditions. Travel in avalanche terrain not recommended.	 High
 Near Treeline	 High	Very dangerous avalanche conditions. Travel in avalanche terrain not recommended.	 High
 Below Treeline	 Considerable	Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	 Considerable

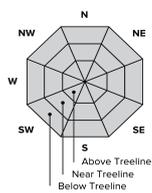
Avalanche Problems for Tuesday

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.



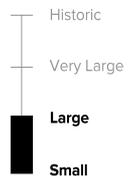
Avalanche Problem



Aspect/Elevation



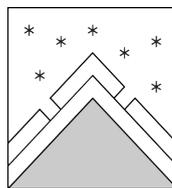
Likelihood



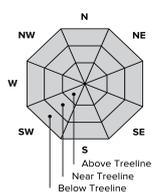
Size

Storm Slabs

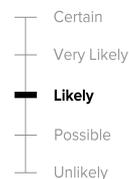
Storm slabs usually stabilize within a few days, and release at or below the trigger point. They exist throughout the terrain, and can be avoided by waiting for the storm snow to stabilize.



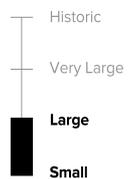
Avalanche Problem



Aspect/Elevation



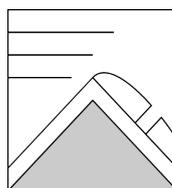
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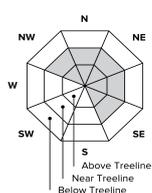
Size

Wind Slab

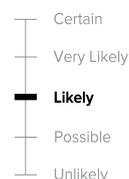
Wind slabs can take up to a week to stabilize. They are confined to lee and cross-loaded terrain features and can be avoided by sticking to sheltered or wind scoured areas.



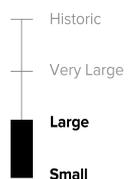
Avalanche Problem



Aspect/Elevation



Likelihood



Size

Snowpack Analysis

Weather and Snowpack

A front crossed the Northwest on Thursday, followed by an upper trough on Friday. This produced about 8-10 inches of snow at Hurricane Ridge.

Scattered snow showers, a mix of sun and clouds, and generally light winds summed up the weather on Saturday with fair and cold weather on Christmas Day.

A quiet Monday morning became a storm as the snow arrived with winds increasing to 25-40 mph at Hurricane Ridge by Monday afternoon.

Recent Observations

NWAC pro-observer, Matt Schonwald was at Hurricane Ridge on Friday, 12/23, and gave an important report. He was triggering collapsing (whumpfung) in every open area that he visited on Friday. In two test snowpits on slopes less than 30 degrees, Matt found the December 17th persistent weak layer (PWL) consisting of well preserved, buried surface hoar and faceted snow at about 45-50 cm below the surface, propagating in extended column tests. While the ski conditions were excellent, the persistent slab problem prohibited safe access to steeper and more open terrain, limiting further investigation as to the distribution and sensitivity of the persistent slab layer.

Matt also reported that cornices were growing on the lee northeast sides of ridges on Friday.

On Saturday NPS rangers indicated several 30-40 cm slabs had been skier triggered on S-SE aspects above the Hurricane Ridge Road, with one larger slide hitting the road. In the more north facing terrain, backcountry skiers reported no whumpfung, shooting cracks or general signs of instability to NPS rangers on Saturday. The road to Hurricane was closed on Christmas Day.

No additional observations were received Monday.

Detailed Avalanche Forecast for Tuesday

Stormy conditions Monday night into Tuesday will cause an increasing avalanche danger through Tuesday.

Storm slabs will continue to build over a variety of weak surface conditions with increased load. Natural or triggered storm slabs may break down to deeper persistent layers, making larger and more dangerous avalanches possible Tuesday.

The persistent slab problem should become more sensitive to natural or triggered avalanches as the load increases.

Fresh wind slabs should continue to build Monday night and Tuesday near and above treeline.

The persistent slab problem warrants your attention in the Olympics, especially with significant loading by Tuesday. Remember that persistent weak layers are generally involved in larger avalanches and cautious route-finding and conservative decision making will be essential for safe travel Tuesday. Err on the side of caution Tuesday by avoiding avalanche terrain of consequence.

Mountain Weather Synopsis for Tuesday & Wednesday

A strong front moved across the Olympic range overnight and the Cascades early Tuesday morning. Moist post frontal flow is being carried into the Pacific Northwest by a very strong westerly jet stream directed precisely at us! The jet is in excess of 150 kts and will provide the punch to maintain moderate to at times heavy orographic precipitation along the west slopes and over the volcanoes through the day and overnight. A short wave disturbance rapidly approaching the coast should enhance precipitation near midday through the afternoon. Showers slowly taper Tuesday night into early Wednesday as brief high pressure rebuilds over the region midday Wednesday. This should cause showers to diminish or end by late morning, Wednesday with a brief break Wednesday night. Not much change in freezing levels is expected with snow levels generally between 1-2000 feet most areas into Wednesday. The next frontal system to affect the region should arrive late night Wednesday and early Thursday to renew the precipitation once again.

24 Hour Quantitative Precipitation ending at 4 am

Location	Wed	Thu
Hurricane Ridge	.25 - .50	.25 - .50
Mt Baker Ski Area	1.00	.25 - .50
Washington Pass	.25 - .50	.25 - .50
Stevens Pass	1.00	.25 - .50
Snoqualmie Pass	1.00	.25 - .50
Mission Ridge	lt .25	lt .10
Crystal Mt	.50	lt .25
Paradise	1.00 - 1.50	.25
White Pass	.75 - 1.00	lt .25
Mt Hood Meadows	1.50	lt .25
Timberline	1.50 - 2.00	lt .25

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	
Tuesday	2000'	2000'	1000'	2000'	2000'	
Tuesday Night	1500'	1500'	500'	1500'	2000'	
Wednesday	2000'	2000'	1000'	2000'	2000'	
Wednesday Night	2500'	2000'	1500'	2000'	2500'	*

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.