

Olympics

Issued: 6:00 PM PST Sunday, December 25, 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.

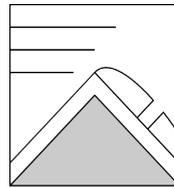
The Bottom Line: Pay attention to changing weather and avalanche conditions! New wind and storm slab will develop Monday. The avalanche danger will ramp up quickly Monday afternoon and evening, so plan accordingly for deteriorating conditions. Persistent slabs still warrant your attention in the Olympics. Err on the side of caution Monday and dial back your objectives by choosing more conservative terrain.

Elevation	Monday		Outlook for Tuesday
 Above Treeline	 Considerable	Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	 High
 Near Treeline	 Considerable	Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	 High
 Below Treeline	 Considerable	Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	 Considerable

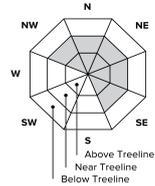
Avalanche Problems for Monday

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.



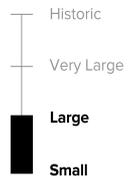
Avalanche Problem



Aspect/Elevation



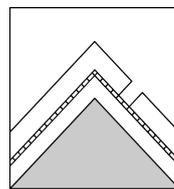
Likelihood



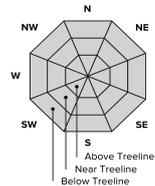
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Persistent Slab

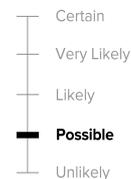
Persistent slabs can be triggered by light loads and weeks after the last storm. You can trigger them remotely and they often propagate across and beyond terrain features that would otherwise confine wind and storm slabs. Give yourself a wide safety buffer to handle the uncertainty.



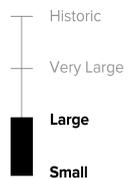
Avalanche Problem



Aspect/Elevation



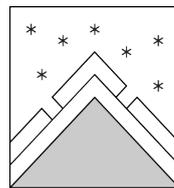
Likelihood



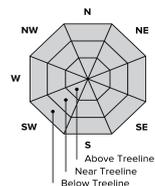
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Storm Slabs

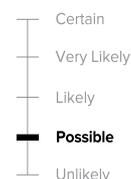
Storm slabs usually stabilize within a few days, and release at or below the trigger point. They exist throughout the terrain, and can be avoided by waiting for the storm snow to stabilize.



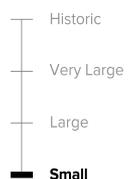
Avalanche Problem



Aspect/Elevation



Likelihood



Size

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 seen on Christmas Day.

Recent Observations

NWAC pro-observer Matt Schonwald was at Hurricane Ridge on Friday 12/23, and gave an important report. He was triggering collapsing and whumping in every open area that he visited on Friday. In 2 snowpits on slopes less than 30 degrees he found the December 17th persistent weak layer (PWL) consisting of preserved surface hoar and faceted snow at about 46-50 cm below the surface propagating in extended column tests. While the ski conditions were excellent he was unable to access steeper and more open terrain safely.

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. However, outside of this slab avalanche activity, only small loose slides were noted in steep terrain. In more north facing terrain, backcountry skiers reported no whumping, shooting cracks or general signs of instability to NPS rangers on Saturday. The road to Hurricane was closed on Christmas Day.

Detailed Avalanche Forecast for Monday

After a benign start to Monday, an incoming frontal system will quickly spread light to moderate rain and snow over the Olympics with precipitation beginning late Monday morning. Near and above treeline winds should quickly ramp up in the afternoon. Expect stormy conditions to develop Monday evening with increasing avalanche danger late in the day and overnight.

Fresh wind slab should begin to build Monday afternoon near and above treeline.

Shallow storm slabs may also develop in the Hurricane Ridge area by Monday afternoon as the storm intensifies.

Persistent slabs still warrant your attention in the Olympics especially with new snow arriving Monday. Remember that persistent weak layers are generally involved in larger avalanches and above normal caution is still advised. Careful snowpack evaluation will be essential for safe travel Monday. Err on the side of caution Monday and dial back your objectives by choosing more conservative terrain.

Mountain Weather Synopsis for Monday & Tuesday

A quiet morning in the Pacific Northwest will soon change into an active next 36 hours as a very strong westerly jet stream in the eastern North Pacific begins to carry Pacific moisture inland later Monday. Winds should increase later Monday with precipitation initiating in the Olympics and NW Washington Cascades, by late morning, spreading to the remainder of the forecast region through the day. The first wave will bring heavy snowfall at low, but slightly rising freezing levels in all the west slope areas and volcanoes overnight Monday, with light to moderate precipitation along the east slopes. Strong and moist westerly flow Tuesday and Tuesday night will maintain moderate to heavy precipitation along the west slopes and volcanic peaks with significantly less precipitation expected along the east slopes, especially further east, away from the crest. Freezing levels should remain relatively low through this event, well below pass levels.

24 Hour Quantitative Precipitation ending at 4 am

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

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	Snow Level/Freezing Level in feet					Easterly Flow in Passes
	Olympics	Northwest Cascades	Northeast Cascades	Central Cascades	South Cascades	
Monday Morning	2000'	500'	500'	1000'	1500'	*
Monday Afternoon - Monday Evening	2500'	1500'	500'	1500'	2000'	*
Monday Night	3000'	2500'	1500'	2500'	3000'	*
Tuesday - Tuesday Night	2000'	2000'	1000'	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.