Mt Hood

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.

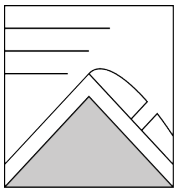
The Bottom Line: Pay attention to changing weather and avalanche conditions late in the day! New wind slab may develop near and above treeline by early Monday evening and should be particularly sensitive on lee slopes with an underlying crust. The avalanche danger will ramp up quickly Monday evening, so plan accordingly for deteriorating conditions. The surface crust formed last week is hard enough to present an out-of-control fall danger.

Elevation	Monday		Outlook for Tuesday
Above Treeline	Moderate	Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify problem features.	High
Near Treeline	Low	Generally safe, watch for unstable snow on isolated terrain features.	High
Below Treeline	Low	Generally safe, watch for unstable snow on isolated terrain features.	Considerable

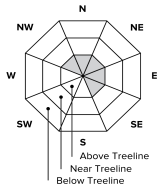
Avalanche Problems for Monday

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.

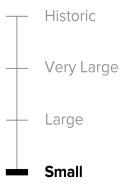


Avalanche Problem



Aspect/Elevation

Likelihood



Size

Snowpack Analysis

Weather and Snowpack

Strong westerly flow directed two Pacific frontal systems into the PNW Sunday night and again Monday night (12/18-12/19) with generally 3 inches of water accumulating at NWAC stations at Mt Hood through early Tuesday morning.

Unfortunately, much of the heavy precipitation fell in liquid form with rain likely reaching up to at least 7000 feet late Monday night and Tuesday morning.

A sharp cooling trend followed mid-day Tuesday with about 2 inches of snow in post-frontal showers. A strengthening rain crust was noted near and below treeline by late in the day Tuesday with the arrival of colder air.

Another front crossed the Northwest on Thursday followed by an upper trough on Friday. This produced about 5 inches of snow at NWAC stations on Mt Hood.

NW winds near and above treeline were moderate at Mt. Hood Friday night through mid-day Saturday. Christmas Day was partly to mostly sunny with light winds and cold temperatures.

Recent Observations

Reports from the Mt Hood Meadows pro-patrol Wednesday reported a significantly different snowpack following rain, avalanches and cooling. A stout surface crust was found on all elevations up to at least 7200 feet. On exposed terrain, the crust was very supportable while in treed terrain the crust ranged from breakable to supportable.

The Meadows patrol checked in early Sunday morning to report NW winds had scoured windward aspects near and above treeline exposing the thick crust on many aspects. The crust was slick enough that Santa had trouble landing his sled on any slope steeper than 20 degrees.

Detailed Avalanche Forecast for Monday

After a benign start to Monday, an incoming frontal system will spread light rain and snow south, reaching Mt. Hood late in the day on Monday. Above treeline winds will quickly ramp up in the afternoon. Expect stormy conditions Monday night with increasing avalanche danger. Pay attention to changing weather and avalanche conditions late in the day!

Fresh wind slab may develop by late Monday afternoon or early Monday evening near and above treeline. Wind slab will likely be the most sensitive in areas where it poorly bonds to an underlying crust.

The surface crust formed last week is hard enough to present an out-of-control fall danger.

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	Olympics	Northwest Cascades	Northeast Cascades	Central Cascades	South Cascades	Easterly Flow in Passes
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.