

## ***Mt Hood Meadows Avalanche Accident***

**February 28, 2011**

**Date:** Noon on Monday, 2/28/2011

**Submitted by:** Joe Sillman, Mt Hood Meadows Pro Patrol and Mark Moore, NWAC

**Place:** Heather Canyon Drainage, Backyards, Private Reserve, Mt Hood Meadows Resort

**State:** OR

**Country:** USA

**Slope specifics:** 4500 ft elevation, ENE aspect, 43 degree slope angle

**Avalanche specifics:** SS-AS-R2D1.5; 7-10 inch fracture by 35 ft across with vertical fall of ~80 ft

**Fatalities:** 0

**Summary:** 1 skier (off duty patroller) caught and buried with a hand and ski exposed. Nearby snowboarder and another patroller collaborated to reach, uncover and rescue the victim in about 5 minutes (80 seconds before the airway was cleared). Victim was uninjured.

### **Accident Summary:**

Off-duty Patroller(s) free skiing in the Private Reserve at Mt Hood Meadows Ski Resort with detailed knowledge of terrain and existing hazards and full complement of rescue gear (probe, shovel, beacon). First run in the reserve was in FBW and the snow was very deep. Skier triggered soft slab approx 12 in. deep that ran through the trees into the flats, filling in tree wells. Second run in the Reserve was accessed through the Elk/Yoda Gate. Patrollers skied the trees skiers Right of Yoda in creek drainage. At the bottom of the run, the creek drops approx 35 ft into a field of snow that funnels into Bucket Creek. From the top of the waterfall to Bucket Creek is a total vertical drop of approx 80ft. The party the victim was with was waiting at the bottom of the slope behind a tree approximately 20 meters away from burial site.

### **Victim narrative:**

I took two turns skiers R above the water and aired into the bowl at the bottom of the falls. Upon landing, the slope broke sympathetically approx 30ft above my tracks and as I took my first turn, the moving snow caused me to lose my balance and I got spun backwards and fell head down, face up in the confluence of the bowl. The snow quickly buried me over my head and settled out, trapping my hands away from my face and rendering me unable to protect my airway. When it settled out, I could feel that my right hand was partially sticking out of the snow, but I was unable to move my arm and just kept it out of the snow and visible. My ski buddy spotted a snowboarder uphill of my location and told him not to drop in. He asked if he could see me and the boarder replied that he could see a ski tip and a hand sticking out of the snow. My buddy told him to ride down to me and begin to dig (boarder had no safety gear at all). My buddy then began to make his way back up, but was held back due to the very deep snow. Half-way up, my buddy threw his backpack up to the snowboarder and told him to get his shovel out and start digging. I ran out of available air and was beginning to pass out when I felt someone grab my hand and try to pull me out. [Note: it is estimated that it took approx 80 seconds

for the snowboarder to reach the victim and clear an airway, with approximately 4.5 minutes before the victim was totally uncovered]. I threw the hand away quickly and began to point downwards towards the snow surface to designate the direction he needed to dig to get to my airway. He managed to get to my airway with his hands, and got the shovel out shortly after and dug me out. If I were skiing by myself in there, I would not have been able to rescue myself and would have suffocated. Had my ski and hand not been sticking out of the snow, rescue would have required a beacon search and extended burial time, increasing the chance of injury or death. Gear up, ski with a buddy...

### **Ancillary Accident Information:**

Comments: The following is the detailed avalanche forecast issued for the Mt Hood area for the day of the accident. An avalanche warning had been issued for high to extreme danger on Sunday with generally high danger below 7000 feet continuing on Monday. Having already triggered a slide on their first run, the off duty patrollers were certainly aware of the danger, and fortunately stayed close together, with the patroller's buddy providing guidance and assistance to the snowboarder who reached the victim first. High danger is not a recipe for no skiing, but perhaps the 40 plus degree slope could have been approached with more caution than afforded by a jump into the steep bowl.

Even though a plan was made with a viable exit strategy and full awareness of the danger, skier ability to implement the plan was highly compromised due to the release of the snow pack and subsequent moving snow. Fortunately, the needed rescuers were close by and prevented a longer burial and more serious outcome for this incident.

### **Detailed Avalanche Forecast**

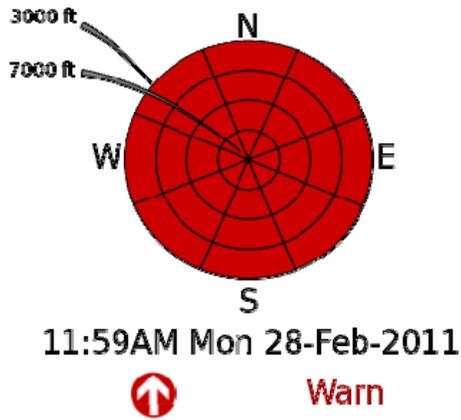
Northwest Weather and Avalanche Center Seattle Washington

1159 AM PST Mon Feb 28 2011

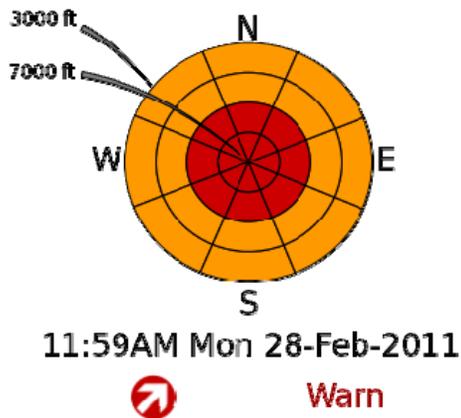
Remember that these forecasts apply to back country avalanche terrain below 7000 feet and not to developed ski areas or highways.

## Mt Hood area

### Danger Rose for Monday



### Danger Rose for Tuesday



Click [here](#) for complete definitions of the avalanche danger scale.

## Forecast

### AVALANCHE WARNING MONDAY AND TUESDAY

**Monday:** High avalanche danger below 7000 feet. Danger gradually decreasing Monday night.

**Tuesday:** High avalanche danger above 5000 feet and considerable below.

## **Snowpack Analysis**

The biggest snow producing storm of the season is upon us! This storm began late Saturday and Saturday night, depositing the initial 6 to 12 inches of snow at cold temperatures with increasing winds. Temperatures rose some 10 degrees F Sunday in most areas with an additional 1 to 2 feet of snow deposited by Monday morning over the Mt Hood areas.

Thus far some 20 to 40 inches of snow has fallen in about 36 hours during this storm with very strong winds in most locations. Wind sensors on Mt Hood just above 7000 feet were averaging 70 mph early Monday morning! These strong winds have made it difficult to get accurate snowfall data as snow study plots have been disturbed by the winds.

All this new snow has been deposited on an existing very weak snow pack, consisting of 1 to 3 feet or more of gradually settling, but relatively low density snow received last week. In addition to the generally weak underlying snow, there have been many reports of recent avalanches involving a hoar frost layer that became buried over a week ago as well as weak faceted snow layers over thin sun crusts on many previously sun exposed slopes.

A successful search and rescue effort found two lost backcountry skiers in the central Washington Cascades near Stevens Pass Sunday afternoon. Fortunately, this had a good outcome, however there was evidence of fresh natural avalanches in the area with estimated crown depths of 5 feet, likely down to the known buried hoar frost layer. There is now an additional 2 to 3 feet of snow load on these layers!

Given the strong winds and white out conditions over the past 36 hours, there has been little to no recent avalanche information reported in the Mt Hood area.

Also note that some slides that begin in surface layers may step down to more deeply buried crust layers making possible very large and destructive avalanches.

The current avalanche conditions remain very dangerous and travel in avalanche terrain is not recommended.

## **Detailed Forecasts**

### **Monday and Monday night**

Moderate to heavy snowfall at gradually cooling temperatures with strong ridge top winds changing to moderate snow showers late Monday and further cooling. The new snow deposits will add additional loads to an already very stressed snowpack. This should maintain or increase the already very high avalanche danger. triggered or natural

avalanches should remain likely. We are highly encouraging any would be back country travelers to avoid avalanche terrain until these conditions improve.

Decreasing winds and snowfall with further cooling late Monday and Monday night should begin to allow for a slow decrease in danger.

### **Tuesday and Tuesday night**

Cloudy with light winds and cool temperatures early Tuesday should allow for a further slow decrease in danger. However increasing winds and gradual warming along with increasing light rain or snow is expected by late morning in the Mt Hood area. Rain, snow and winds should further increase Tuesday afternoon and night causing an increasing danger by late Tuesday.