Avalanche Danger

An avalanche occurs when a layer of snow looses its grip on a slope and slides downhill. Although avalanches occur by the thousands every winter in mountainous terrain, *almost all avalanches involving people are triggered by people*. The more time you are engaged in winter activities, the greater your chances of being caught by an avalanche.

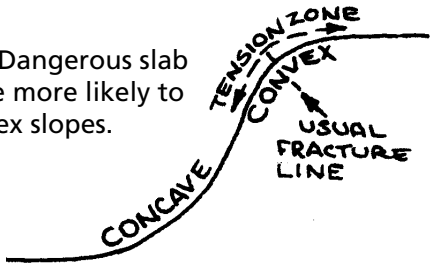
At Mount Rainier, the avalanche danger is forecast daily for the Paradise area. Familiarize yourself with what these danger levels mean. Learn the terrain and weather factors that influence avalanche danger. Put that knowledge to good use when selecting the route you will travel, or even *if* you will travel. Knowledge can help you avoid being caught by a snow avalanche and will help you survive if you are caught.

The Northwest Weather and Avalanche Center (**www.nwac.us**) provides local avalanche forecasts and other important information throughout the snow season.

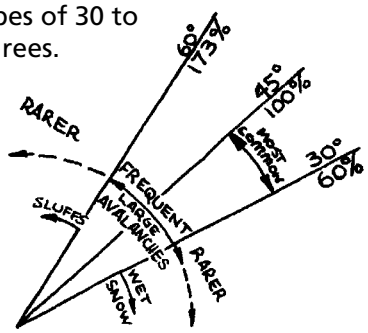
What is the danger level forecast for Paradise (6500 feet and below)?	What does the danger level indicate about snow conditions?	What should skiers, snowboarders and others know before leaving?
LOW	The snow is generally stable with isolated areas of instability. Natural avalanches are very unlikely. Human triggered avalanches are unlikely.	Travel is generally safe. Normal caution is advised.
MODERATE	Unstable snow slabs are possible on steep terrain. Natural avalanches are unlikely. Human triggered avalanches are possible.	Use caution in steeper terrain on certain slope aspects.
CONSIDERABLE	Unstable snow slabs are probable on steep terrain. Natural avalanches are possible. Human-triggered avalanches are probable.	Be increasingly cautious in steeper terrain.
HIGH	Unstable snow slabs are likely on a variety of aspects and slope angles. Natural and human-triggered avalanches are likely.	Travel is not recommended. Safest travel will be on windward ridges & low angle slopes without steeper terrain above.
EXTREME	Extremely unstable snow slabs certain on most aspects & slope angles. Large destructive avalanches possible. Widespread natural or human-triggered avalanches are certain.	Travel in avalanche terrain should be avoided and travel confined to low-angle terrain well away from avalanche path run-outs.

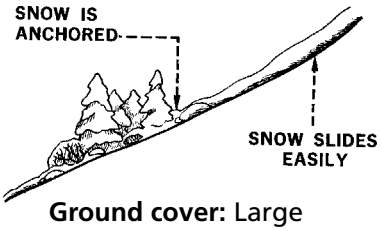
Terrain Factors

Slope profile: Dangerous slab avalanches are more likely to occur on convex slopes.

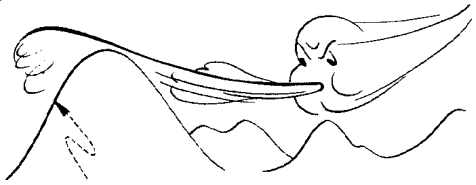


Slope steepness: Snow avalanches are most common on slopes of 30 to 45 degrees.





Ground cover: Large rocks, trees and heavy shrubs help anchor snow.



Slope aspect: Leeward slopes are dangerous because windblown snows add depth and create unconsolidated slabs. South facing slopes are most dangerous during springtime.

Weather Factors

Storms: About 80% of all snow avalanches occur during, and shortly after, storms.

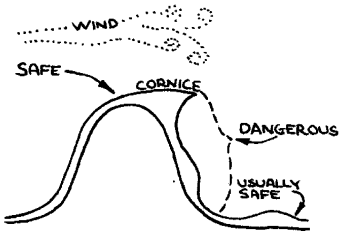
Rate of snowfall: Snow falling at the rate of 1 inch per hour, or more, rapidly increases avalanche danger.

Temperature: Storms starting with low temperatures and dry snow, followed by rising temperatures and wetter snow, are more likely to cause avalanches.

Wet snow: Rainstorms or spring weather with warm winds and cloudy nights can warm the snow cover resulting in wet snow avalanches. Wet snow avalanches are more likely on south slopes and below exposed rock.

Route Selection

The safest routes are on ridgetops and slightly on the windward side of ridgelines, away from cornices. If you can't travel on ridges, the next safest routes are out in the valleys, far from the bottom of slopes.



Avalanche Survival

Treat avalanche danger with utmost caution. Taking a route around an avalanche track is advisable under any circumstance, but becomes essential during the more hazardous conditions. Consider the value of having everyone in your group wear an avalanche transceiver (an electronic device whose beeps help locate buried victims) and be familiar with its use. A readily available shovel and avalanche probe can also allow you, as a survivor, to rescue a victim.

If you are caught in an avalanche:

- Discard all equipment.
- Make swimming motions. Try to stay on top of the snow and work your way to the side of the avalanche.
- Before coming to a stop, get your hands in front of your face and try to make an air space in the snow.
- Try to remain calm.

If you are the survivor:

- Mark the place where you last saw the victim.
- Search directly downslope below the last seen point. If the victim is not on the surface, scuff or probe snow with a ski pole or stick.
- Keep searching! Don't leave unless help is only a few minutes away. Only 50% of victims survive 1 hour after burial.

Avalanche Forecasts and Information

For local avalanche forecasts and other important information, visit the Northwest Weather and Avalanche Center online at *www.nwac.us*. To further enhance your knowledge of avalanche conditions and safety practices, ask a park ranger or look for publications at the park's book sales areas and gift shops, or in your local library.