

# High alpine snowdrifts, wet-snow avalanches from rainfall and solar radiation

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## Avalanche danger

### Dry-snow avalanches

Central sector of the southern flank of the Alps, Val Bregaglia and Bernina region: fresh fallen and freshly drifted snow of recent days is still prone to triggering in some places above approximately 2500 m. The danger tends to increase with ascending altitude. On north and east-facing slopes in high alpine regions more than anywhere else, avalanches can be triggered even by one sole skier or freerider. Backcountry tours make experience in assessing avalanche dangers on-site imperative.

Remaining regions of Switzerland: More than anywhere else on north-facing slopes in high alpine regions, snowdrift accumulations have been formed which in some places are prone to triggering. These drifted masses are for the most part small-sized, but in very steep terrain need to be evaluated with particular caution. In the Valais section of the Main Alpine Ridge there has been a greater amount of new fallen snow registered; thus, the snowdrift accumulations there are more widespread and larger-sized. In addition, at very least in the Davos-Lower Engadine area, avalanches can be triggered in a weakened snowpack layer of coarse-grained snow crystals in the uppermost part of the snow cover. These avalanche prone locations cannot be recognized with the naked eye. Particularly on north-facing slopes, caution is urged.

### Wet-snow avalanches

In case of rainfall, but also as a result of solar radiation and daytime warming, wet-snow avalanches can be expected below approximately 2600 m. On north-facing slopes more than anywhere else, these releases can sweep away the entire snow cover with them. In the southern regions, wet slides and avalanches can be expected in the fresh fallen snow in high alpine regions as a result of the solar radiation.

## Snow and weather

### Snowpack

The southerly wind has transported the fresh fallen snow in southern regions, and also the older snow to some extent in other high alpine regions on north-facing slopes. In the Davos-Lower Engadine areas in the last few days, there have been several avalanches triggered from the weakened layer of coarse-grained snow crystals in the uppermost part of the snow cover. It is not clear how far this layer of surface hoar extends geographically.

On north-facing slopes the snowpack below approximately 2400 m is thoroughly wet. Above that altitude, the snow cover still contains a weak layer in its lowermost fundament, particularly in the inneralpine regions of the Valais and Grisons. In those regions, when this weakened layer is moistened for the first time, avalanches can trigger which subsequently can sweep away the whole snow cover with them.

### Weather review on Friday, 12 May

In southern regions there was precipitation on Thursday night, on Friday during the daytime skies were overcast. In the remaining regions of Switzerland it was partly sunny on Friday morning, then skies became increasingly overcast. The midday temperature at 2000 m was +5 °C. During the early part of the night, southerly winds were blowing to some extent at storm-strength, while in the Alpine valleys foehn wind prevailed. During the daytime on Friday, winds slackened off, were blowing at light strength. Between Wednesday evening and Friday afternoon above approximately 2500 m, the following amounts of fresh fallen snow were registered:

- central sector of the southern flank of the Alps: 30 to 50 cm;
- Upper Valais part of the Main Alpine Ridge along the Italian border, Val Bregaglia and Bernina region: 10 to 30 cm;
- further to the north: for the most part less than 10 cm.

### Weather outlook through Saturday 13.05

During the course of the night, conditions will become drier in western and southern regions and the overcast skies will break up somewhat. In eastern regions, a small amount of light precipitation is possible by the early morning hours; thus, the snow cover will not be able to cool adequately. On Saturday morning it will be quite sunny in all regions of Switzerland, subsequently showers are expected to come up again. The snowfall level will be approximately 2500 m. Apart from local shower activity, less than 10 cm of new fallen snow is expected in most places. Winds will be blowing at moderate strength from westerly directions.

## Outlook

Following overcast nocturnal skies conditions will be instable, with variably cloudy skies and showers on Sunday, particularly in the latter part of the day. The snowfall level will be at approximately 2600 m. On Monday it will be partly sunny, in southern regions predominantly so, as a result of northerly winds. It will become milder.

The danger of dry-snow avalanches is not expected to change significantly. On Sunday, wet-snow avalanches can be expected as a result of solar radiation on both days, together with rainfall. This applies especially to north-facing slopes at altitudes of approximately 2500 m.

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