

United States Avalanche Centers
& Avalanche Advisories
www.avalanche.org

Note: Avalanche advisories are for the backcountry only
and do not apply to highway programs or operating ski areas.

More people are killed during Considerable Avalanche Danger than any other Danger Rating.

North American Public Avalanche Danger Scale Avalanche danger is determined by the likelihood, size and distribution of avalanches.				
Danger Level	Travel Advice		Likelihood of Avalanches	Avalanche Size and Distribution
5 Extreme		Avoid all avalanche terrain.	Natural and human-triggered avalanches certain.	Large to very large avalanches in many areas.
4 High		Very dangerous avalanche conditions. Travel in avalanche terrain <u>not</u> recommended.	Natural avalanches likely; human-triggered avalanches very likely.	Large avalanches in many areas; or very large avalanches in specific areas.
3 Considerable		Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.	Natural avalanches possible; human-triggered avalanches likely.	Small avalanches in many areas; or large avalanches in specific areas; or very large avalanches in isolated areas.
2 Moderate		Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify features of concern.	Natural avalanches unlikely; human-triggered avalanches possible.	Small avalanches in specific areas; or large avalanches in isolated areas.
1 Low		Generally safe avalanche conditions. Watch for unstable snow on isolated terrain features.	Natural and human-triggered avalanches unlikely.	Small avalanches in isolated areas or extreme terrain.

Safe backcountry travel requires training and experience. You control your own risk by choosing where, when and how you travel.

Additional Resources:

www.fsavalanche.org • www.americanavalancheassociation.org

Snow Sense by Jill Fredston and Doug Fesler

Staying Alive in Avalanche Terrain by Bruce Tremper

The Avalanche Handbook: 3rd Edition by David McClung and Peter Schaerer

Take a Class! Check www.avalanche.org for course providers

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AVALANCHE SAFETY

Photo by MarkGallup.com

AVALANCHE FACTS:

Some days the steep slopes are safe, some days they are unstable. Avalanche conditions are predictable.

90% of avalanche victims die in slides triggered by themselves or a member of their group.

After 35 minutes, a buried victim has only a 27% chance of survival.

WHAT YOU CAN DO

YOU CAN:

RECOGNIZE RED FLAGS

1) Recent Avalanches

If there are new avalanches, more are possible.

2) Signs of Unstable Snow as You Travel

MOTHER NATURE'S WARNING SIGNS

- Cracking or Collapsing Snowpack
- Whumpfung sounds
- Hollow drum-like sounds on hard snow

3) Heavy Snowfall or Rain in the Past 24 Hours

Significant snowfall or rain can make the snowpack unstable.

Avalanches are often triggered the first clear day after a storm. Because it is sunny does not mean it is safe.

4) Wind Blown Snow

Wind blown snow loads leeward slopes, even when it is not snowing out.



5) Significant Warming or Rapidly Increasing Temperatures

Warm temperatures and gravity can cause the snow to creep downhill and become less stable.

6) Persistent Weak Layers

When these are buried in the snowpack, you may trigger an avalanche weeks after a storm or when no other Red Flags are present. They can be difficult to identify - check the Avalanche Advisory for your area.

AVALANCHE RESCUE

You Don't Have Time to go For Help. It is Up to You! You only have 15 minutes for a good chance to recover someone alive.

- ▶ Yell, alert others. Watch the victim! Establish a last seen point.
- ▶ Make sure it is safe to search. Don't become a victim yourself.
- ▶ Establish a leader, make a plan.
- ▶ Look for and check surface clues: gloves, boots, equipment. Put them back in place. Listen.
- ▶ Conduct a beacon search. Get close and probe BEFORE you dig.
- ▶ If the victim is not wearing a beacon, do not give up! Probe around surface clues and in likely catchment areas.
- ▶ Are you prepared to perform first aid and possibly spend the night out?

It is critical to practice rescues before you are faced with the real thing.

Remember, the BEST DEFENSE is not to get caught. 25-30% of fatalities are due to trauma during the slide. If you get completely buried, the odds for survival are only 30%.

If You Are Caught in an Avalanche:

- ▶ Attempt to get off the slab, hang onto the downhill side of trees – Angle to get to the edge of the slide. Snowmobilers in a few but not all cases may be able to outrun a slide.
- ▶ Skiers and snowboarders: Attempt to discard skis, poles, or board.
- ▶ Snowmobiles often end up at or near the surface and victims are found nearby.
- ▶ Attempt to roll onto your back with feet downhill. Swim hard, fight, grab trees, dig into the bed surface.
- ▶ As the avalanche slows or even before, thrust some part of your body above the surface and try to make an airspace around your mouth.
- ▶ If completely buried, attempt to remain calm – your life is in the hands your partners.

RECOGNIZE AVALANCHE TERRAIN

SLOPE ANGLE

Avalanches generally occur on slopes steeper than 30 degrees and most often occur on slopes 35 to 50 degrees. Most expert ski runs have sections 34 degrees or steeper.

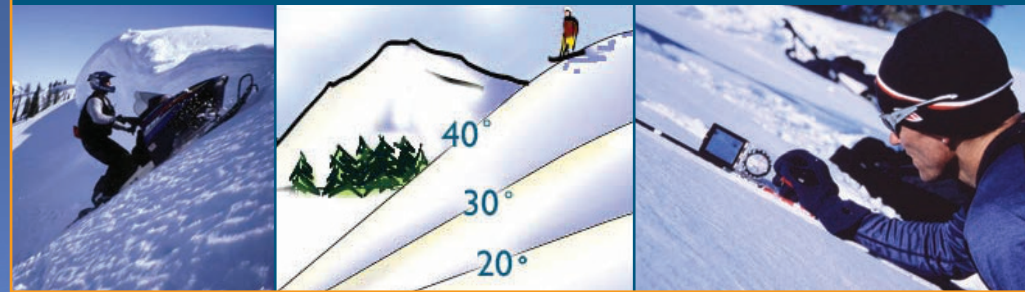


Photo: Sawtooth NF Avalanche Center



TERRAIN TRAPS

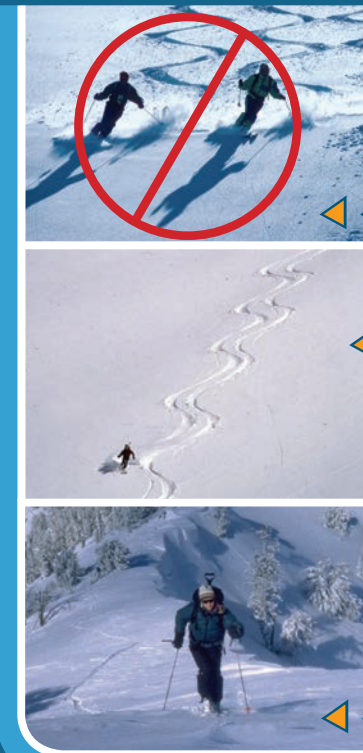
Anything that increases the consequences of being caught in a slide.

COMMON TRIGGER POINTS

Under certain conditions avalanches may be triggered from flatter areas in the runout zone or along ridge crests.

ASPECT

Which way does the slope face in relation to sun, wind? Avalanche problems may only exist on certain aspects.



SAFE TRAVEL PROTOCOL

Better Your Odds, Minimize the Risk

- ▶ Never expose more than one person to avalanche danger at a time.
 - One on a slope at a time (*stay well spread out if you must expose others*).
- ▶ Watch each other closely from safe locations.
 - Avoid stopping in or beneath avalanche paths.
 - Never descend directly above a partner or other group.
- ▶ Stay alert to changing snow stability due to changes in aspect, elevation, or weather factors (*heavy precipitation, wind, or warming*).
- ▶ Communicate within your group, have options.
- ▶ Be prepared to do a rescue.

Skiers and Snowboarders:

- ▶ Always choose the safest route possible on the ascent. Stick to low angle ridges and dense trees.
- ▶ On the descent, ski or board one at a time, from one safe point to the next.

Snowmobilers:

- ▶ Highmark one at a time and never ride up to help a partner get unstuck.
- ▶ While highmarking, the rest of the group should park in a safe zone and watch.
- ▶ Snowmobilers cover much more terrain on a given day. If an instability exists you are more likely to find it. Remain alert to changing conditions and don't let your guard down.

Snowshoers:

- ▶ If you travel into avalanche terrain you are at just as much risk as other recreationists.

