Cooke City snowpack

Date
Thu, 01/19/2023 - 16:35
Activity
Snowmobiling

On January 19 we rode north of Cooke City to dig in a variety of locations and look for the surface hoar layer that is buried 1-2 feet deep. Over the past week, forecasters and other groups have found unstable test scores on this layer, and there was at least one rider triggered avalanche and one natural avalanche that broke on this layer 3-5 days ago. These two known avalanches were on east to northeast aspects at 9,200-9,800'.

We dug five snowpits and performed extended column tests in each on 1/19/23 (I said "four pits" in the attached video, but I forgot to count one that was 15 feet away from another). Four snowpits were on northeast to north facing slopes between 9,200-10,000', and one pit was on a southwest facing slope at 9,200'. In one pit on a NE aspect at 9,200' we had an ECTP 15 on the surface hoar 35 cm below the surface. In all other pits we had ECTN14-19 at the depth of the surface hoar, and no obvious feathery crystals were visible. The layers where the ECTNs broke appeared to be decomposing, preserved dendrites or maybe decomposing surface hoar.

There was about 6" of low density snow that slowly accumulated over the last few days. Below and within this new snow are layers of near surface facets and surface hoar that formed during clear, cold nights. These may be future weak layers. There was almost no wind the last 3-4+ days, so this snow is still available to be drifted into thick slabs when the wind increases.

We stopped on a couple west facing slopes that were heavily wind-affected, and we sunk about 3 feet to the ground when we got off our sleds. These areas of shallow snow hold very weak, sugary facets that will be a problem if loaded with heavy snowfall.

At the moment, the general snowpack stability is improving with an extended break from heavy snow or wind-loading. I suspect there are a few lingering pockets of unstable surface hoar that could be triggered, and there is plenty of weak snow near the surface. If the wind blows snow into thick drifts, or more snow falls than expected, stability could quickly become worse.

Photos of avalanches are those previously reported on Monday on Miller (photo taken 1/18) and Henderson (taken 1/17).

Region
Cooke City
Location (from list)
COOKE CITY
Observer Name
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