

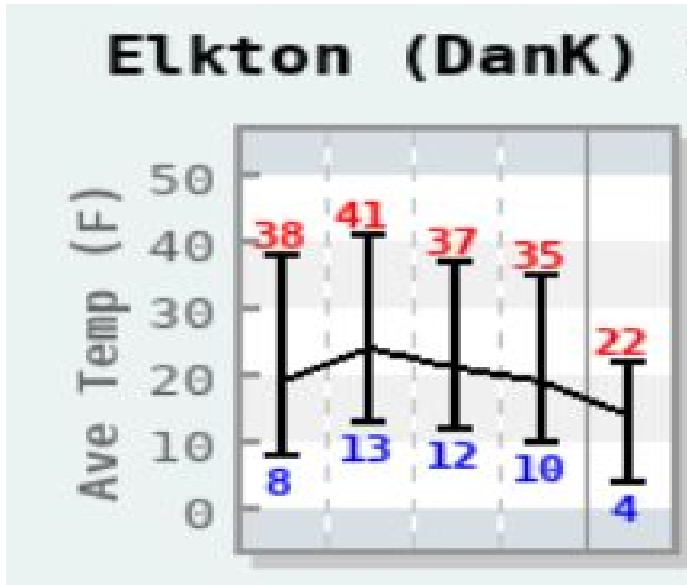
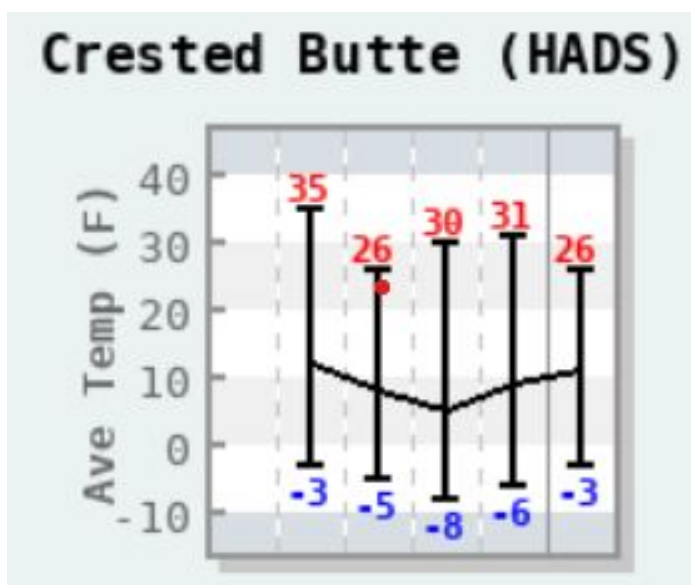
Backcountry Weekly Summary

Name:	Jack Caprio
Week and Year	11/27/20-12/4/20
Backcountry zone:	Crested Butte Area

Notable Weather Events (snowfall, SWE, winds, temps, etc.)

This week began with a high-pressure ridge entering the forecast zone from the 28th through the end of November. Warm days and cold nights created down-valley temperature inversions. Overnight lows were in the negatives in Crested Butte and Gunnison, and at 11,000 ft temperatures remained in the mid-teens overnight. Throughout the day, highs reached 41 degrees in Elkton (11,000), while down valley temps topped out in the late 20's. Moisture was nowhere to be found, and northerly winds remained calm making for very pleasant days in the alpine.

Shown below shows low temps at the valley bottoms (Crested Butte 8860') and warm temps at 11,000' (Elkton) which caused daily inversions from 11/27-12/1.



As we transitioned into the new month of December, a cold-front with associated moisture moved into our forecast zone. Was this the start of DEEPCember? Powder day? Not exactly. The storm ended up favoring the Northern Mountains of Colorado with up to 10" near Steamboat. However, our forecast zone in Crested Butte gained a whopping 1-2" of POW in our Northwestern Mountains. We might need to change up our snow dances a little bit. Cold temperatures associated with this front brought overnight lows in Crested Butte and Gunnison into the negatives, while temperatures at 11,000 hung around the early teens. Mountaintop Northerly winds averaged 17 mph throughout this storm, however, due to the little amount of precipitation, not much new wind loading was observed on lee ridges.

After our angry inch or two, another high-pressure ridge returned with a vengeance over Colorado. This ridge is expected to linger through the weekend and into next week. While decent skiing conditions can be found at high northerly faces (as long as you don't mind hitting rocks), it may not be a bad idea to get the mountain bike and fly rod back out and enjoy springtime in December!

Snowpack (weak layer date(s) and status, structure, stability trends)

11/7/20 Interface

The dry and sunny period after our October snowfall caused all of the snow to melt off on E S and W aspects. The only snow left on November 6th was on [northerly facing aspects above treeline and heavily shaded north-facing aspects near treeline](#). Throughout November, we received periodic loading events in between periods of high pressure and wind events. These events built soft slabs on top of this persistent weak layer at the bottom of the pack. Our first notable skier triggered persistent slab came on the [27th of November](#). This avalanche was triggered on an isolated, previous wind loaded convexity. Finding all the proper ingredients to trigger a persistent slab has become harder and harder to find. The likelihood of triggering an avalanche on this weak layer has trended from stubborn to unreactive throughout the week. By the end of the month, avalanches became unlikely and the persistent slab problem related to this interface was taken off our problem list.

Southeastern Mountains

After the high-pressure ridge moved over our zone on the 28th, a large temperature gradient and valley bottom inversions began to eat away at all slabs like Thanksgiving leftovers. At lower elevations on the northern half of the compass, the snowpack transformed into a rotten smorgasbord of facets. As the slabs continued to rot, our main avalanche problem changed from **persistent slab** to **dry loose avalanche**. CBAC forecasters traveling through northerly and east-facing terrain observed a [weak, rotten snowpack below treeline](#). The December 1st storm did not change the avalanche danger, and instead just buried surface hoar, near-surface facets, and melt-freeze crust under about an inch or two of new snow. In the southeastern mountains, the dry weather ahead will continue to rot the snowpack near and below treeline, and dry loose avalanches will continue as the main avalanche problem.

The examples below show the very weak snow near the surface.



Northwest Mountains

The mountains outside the inversion zone such as the Upper Slate, Paradise Divide, and Ruby Range zones have not faceted out as completely as the mountains closer to town. In the snow favored mountains, faceted snow has been found closer to the surface, with more [supportable snow in the lower snowpack](#). However, the dry loose avalanche problem still exists near and below treeline on shady aspects. On the snow surface, around the compass, it is getting hard to not find a persistent weak layer. On southerly aspects, the surface is melt-freeze crusts of varying hardness with small-grained facets above and/or below. On slopes with open sky cover, surface hoar can be consistently found up to 10,000' and in isolated areas above that. The mass faceting of our snowpack will become a widespread persistent weak layer when we get another storm that builds slabs.

Avalanches

Picture of a small (D1) skier triggered persistent slab on a NE face below treeline



This avalanche marked our second persistent slab of the season. The slab was about 10 ft wide, 18" deep, and entrained the entire snowpack. This slab failed on the 11/7/20 basal facets at the bottom of the snowpack.

This particular terrain feature had all the right ingredients for a "hard to find" persistent slab problem:

- 1) **Basal facets** from the late October storm
- 2) **Wind exposed** feature where slightly harder slabs had a chance to form
- 3) **Smooth** underlying surface where the weak layer is not disrupted by shrubs or talus.

This avalanche occurred on Thursday the 11/26/20. Since then, high pressure and widespread faceting of slabs in the southeastern mountains have caused the 11/7 basal facet layer to transition from stubborn to unreactive.

From Snodgrass to [Happy Chutes](#), to the Ruby range, all other avalanches during this period have been small, dry loose avalanches.

NE Face of Snodgrass (Southeastern Mountains)



Daisy Pass (Northwest Mountains)



Comments (anything unusual/noteworthy, thoughts on the near future)

The dry, cold conditions have been taking a toll on the snowpack around Crested Butte. Widespread faceting of our snowpack is going to eventually become a major problem when we get another loading event. Until then, avalanche conditions remain generally safe near and above treeline. It is a great time to explore new terrain as many access roads remain drivable. Keep an eye out for facet sluffs that could knock you off your feet into early season obstacles such as rocks and trees. The forecast for the following seven days has one main theme across the western US – drier and warmer than average. Our next chance of precipitation will be on December 11th.

