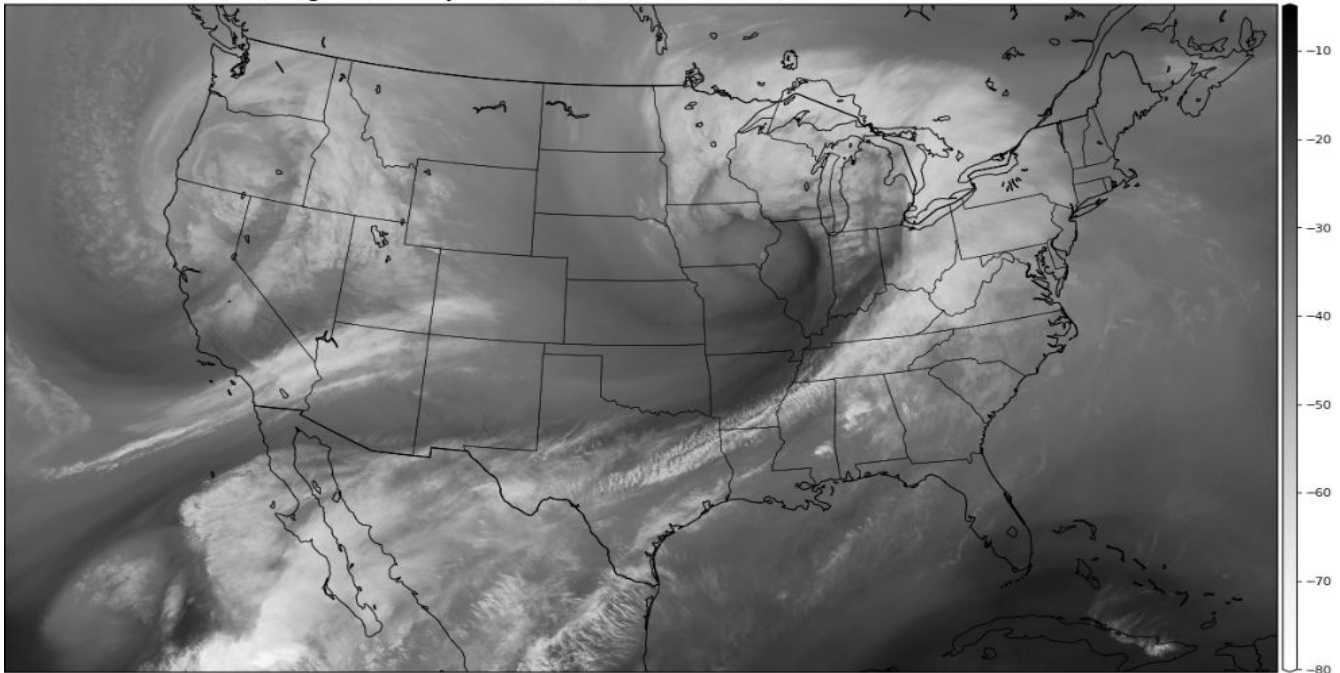


Backcountry Weekly Summary

Staff:	Zach Kinler
Week and Year	November 22-28, 2019
Backcountry zone:	Crested Butte Area

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

GOES-16 Channel 9 (WV) Brightness Temperature (°C) at 09:05Z Nov 27, 2019



Water Vapor imagery showing the 11/25 storm moving towards the East Coast while our Turkey Day storm drops into the Great Basin

This period begins with a strong trough diving down the West Coast and merging with a closed low with tropical origins. This brought anomalous values of moisture to the area, unfortunately with no jet support, an unfavorable south wind and warm temperatures near and just below freezing, we did not see huge totals. After frontal passage, additional snowfall in colder NW flow began behind the main trough. Winds were generally light for most of the storm with moderate speeds after frontal passage.

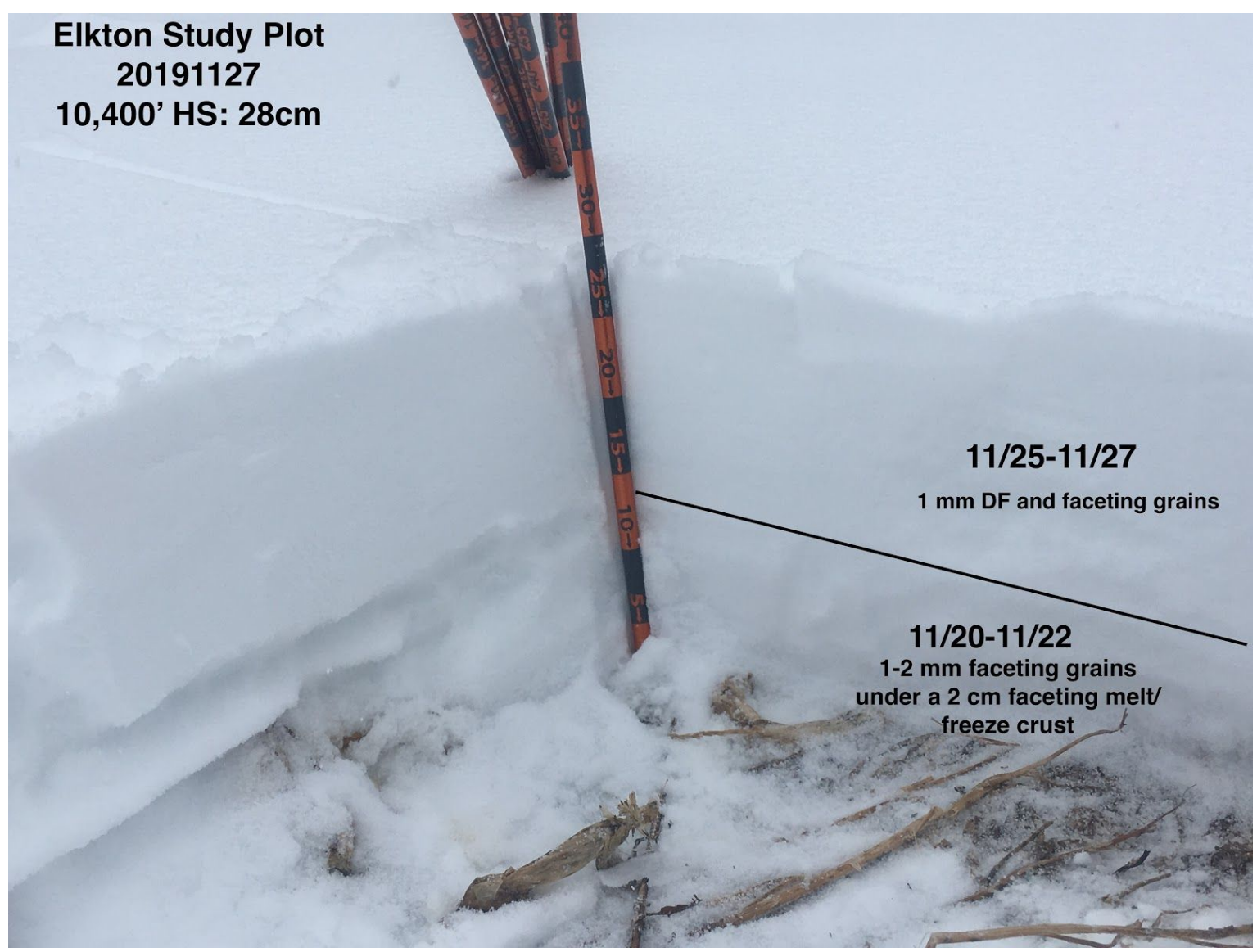
After a break in the action from 11/23-11/24, an energetic and cold shortwave trough dropped down from the Pacific NW on 11/25. This system had much less moisture than the previous but much colder temperatures and a stronger jet stream which maximized snow production. Mountain temps started in the mid 20s but steadily dropped into the single digits by the 26th. Ridgeline winds reached 20-30 mph from the W and NW. Clouds, cold temps in the teens and light orographic snowfall continued through the day on 11/27 before moist SW flow returned on 11/28 in front of the turkey day storm.

Storm Totals 11/20-11/22

Kebler Pass: 12" snow
Schofield Snotel: 10" snow/ 0.8" SWE
CBMR: 8" snow(estimated from cam)
Butte Snotel: 7" snow/ 0.5" SWE

Storm Totals 11/25-11/27

Irwin: 10" snow
Schofield Snotel: 6" snow/ .6" SWE
Butte Snotel: 3" snow/ .2" SWE
Upper Taylor Snotel: 5"/ .3 SWE



Elkton Study Plot
20191127
10,400' HS: 28cm

11/25-11/27

1 mm DF and faceting grains

11/20-11/22

**1-2 mm faceting grains
under a 2 cm faceting melt/
freeze crust**

11/20/19 Interface: Multiple early season storms dropped 1-2 feet of snow throughout our area in October. An extended dry period followed for most of November with warm temps and sunny skies which left the southern half of the compass mostly bare while continuous old snow remained on shady aspects facing N-E from around 10,000 ft. and up. Sheltered areas free of wind and sun harbor the weakest grains. This old snow was buried on 11/20 and is now our layer of most concern. Initially, a thin crust was observed on top of this old snow as seen in this [Paradise Divide Ob](#) with facets and early stage Depth Hoar growing to 4mm underneath. This [Kebler Pass](#) ob highlights this interface and where it was found west of town. Despite modest loading, this very old snow has shown many signs of failure and is responsible for the avalanches we have seen so far.

11/25/19 Interface: Following the 11/20 cycle, the area saw 2 days of sunny skies and cold clear nights which effectively melted or crusted the recent snow from the southerlies while near surface facets and large grain Surface Hoar were able to form on the northern half of the compass. This weak snow is observed on the surface in this [Photo](#) and this [Photo](#). A ski cut released a very small avalanche on this layer in this [Ob](#), and time will tell if this layer remains active with additional loading.



Once buried, the October weak layer became active with very little load causing collapsing and shooting cracks on 11/22 as seen in this [Mt. Baldy](#) ob. On 11/23, this [Schuykill](#) ob highlights 2 slab avalanches which failed after our first loading event. As we continued to add snow and skier weight throughout this week, numerous reports of shooting cracks, collapsing and small avalanches rolled in. This [recent CBAC](#) ob shows the continued sensitivity of this persistent weak layer.

Distribution of the avalanche problem is directly related to distribution of October snow which is pictured well in this [Early Season](#) snow coverage observation. Slopes facing N-E, particularly those in the snow favored areas North and West of Crested Butte are where you will find the most old weak snow. Sun and strong winds limited the distribution on the westerly aspects although cross-loaded gullies and sheltered terrain features were able to hold on to snow. The problem appears even more isolated near and East of Crested Butte where much less snow has fallen.

All natural and human triggered avalanches have been small, D1-D1.5 generally as snowfall has been incremental and modest. Slabs have been very soft and shallow where the old snow is the weakest below tree line which has limited propagation. As the next storm looks to deliver an inch or more of water with strong winds, we will see the potential for larger avalanches to form.



11/26/19
North aspect BTL
SS-ASu-R2-D1-O

Incident, accidents, close calls

The small skier-triggered slide pictured above is the closest call reported to the CBAC. This event occurred on a small, steep terrain feature and was relatively harmless to humans but is a good reminder of the avalanche and non-avalanche early season hazards present right now.

