

# Backcountry Weekly Summary

Staff:	Zach Kinler
Week and Year	February 14-20, 2020
Backcountry zone:	Crested Butte Area

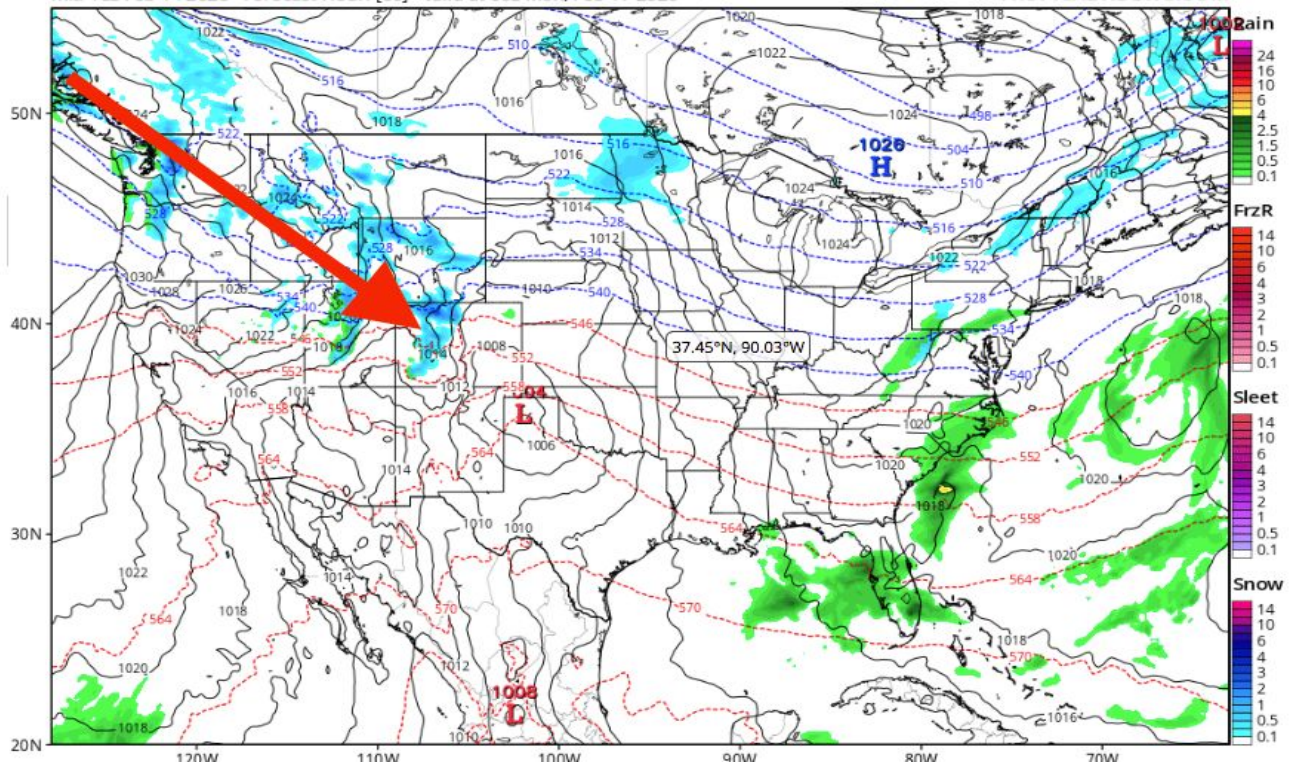
## Notable Weather Events (snowfall, SWE, winds, temps, etc.)

**NW flow dominated the weather pattern this week as multiple storms moved through the area. Remnants of another atmospheric river event produced the best totals this week on Sunday and Monday.**

GFS 6-hour Averaged Precip Rate (mm/hr), MSLP (hPa), & 1000-500mb Thick (dam)

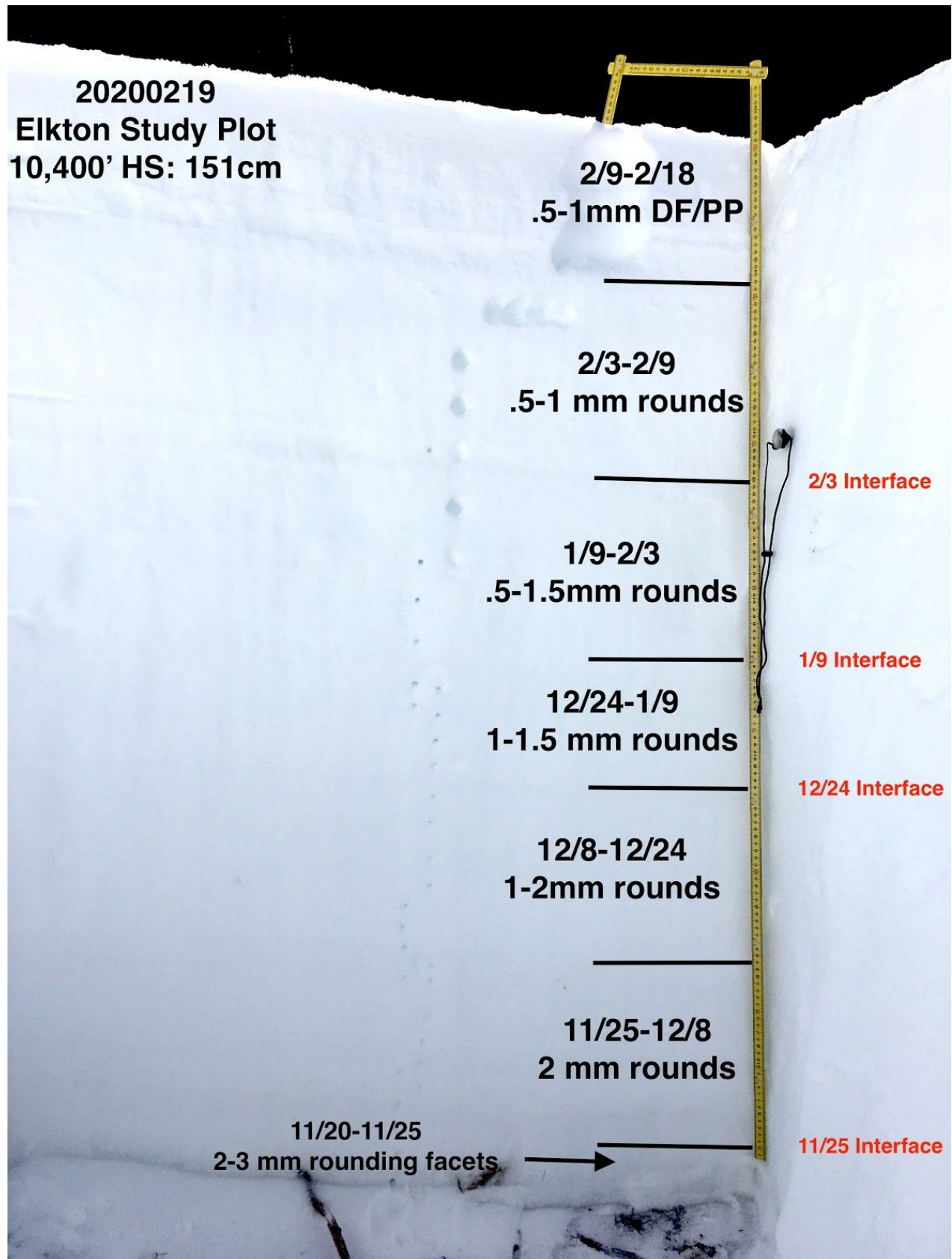
Init: 18z Feb 14 2020 Forecast Hour: [60] valid at 06z Mon, Feb 17 2020

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This period began on 2/14 with mostly clear skies under WSW flow which contributed to consistent winds averaging in the teens and gusting to the 20-30 mph range. Highs at 11K were in the upper 20s to near 30F. 2/15 saw a modest increase in temps as west winds began transporting moisture and cloud cover ahead of the next storm. 11K temps were around the freezing mark while strong westerly winds increased to 25-30 mph with gusts to 60 mph. 2/16 saw the remnants of an atmospheric river event make its way towards Colorado as a strong WNW jet stream was transporting healthy amounts of Pacific moisture into the area. Temps were warm in the upper 20s to near freezing under this warmer air mass. Moderate westerly winds continued as snowfall began overnight and continued throughout the day.

On 2/17, zonal flow remained in place as the moisture tap began to diminish. Snow tapered but strong westerly winds of 20-30 mph gusting to 50 mph continued with 11K highs in the upper 20s. During the overnight hours of 2/18 a weak shortwave moving through the broad, low amplitude mid-level trough over the Rockies produced another 2-4" of snow. Skies cleared fairly quickly behind this feature leading to a partly cloudy day with temps in the upper 20s. On 2/19 weak disturbances north and south of the area kept clouds and very light snow around followed by clear skies and calm weather on 2/20. 11K highs were near to just above freezing with strong solar.



[\\*\\*Click here for full profile and test results\\*\\*](#)

**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. Moderate snow and wind loading stressed this layer leading to our first widespread avalanche cycle around 11/30 as seen [here](#). This [Cement Creek Ob](#) shows this layer is more isolated but present at upper elevation drifted spots near and East of town. Check out this [natural avalanche ob](#) from Kebler Pass area highlighting large, persistent slabs failing on this layer. A widespread natural avalanche cycle followed the 12/12 cycle with large avalanches breaking near the ground on this interface. No avalanches were reported to fail on this interface from mid-December through early January until strong northerly winds cross-loaded Westerly slopes near treeline. This put a slab on very weak layers near the ground and led to several large avalanches. While stubborn, large triggers such as [cornice falls](#) have shown this layer to still be a concern and the possibility of smaller avalanches breaking down to this layer remains. This layer is now buried ~150-250 cm deep.

**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. At the [Elkton Study Plot](#) on 12/4, propagating results were observed on this layer as the slab on top has settled into a 1F slab with warmer temps. On 12/5 a [rider-triggered D2](#) avalanche failed on this layer. This interface is near the ground where October snow did not exist, and rests on melt forms or large grain facets where snow remained from October. On 1/8 at the Elkton Study Plot, further rounding of the 2 mm facets was observed as well as consolidation into 1F hardness from 4F. PST results on 1/22 at the Elkton plot were 107/121 with propagation to END, marking the first time results greater than 50 were observed. This interface is generally ~100-150 cm deep.

**12/24/19 Interface:** After a week of sunny and warm weather, crusts formed on south aspects as well as small surface hoar and near surface facets on the shadier aspects. On 12/26 at the Elkton Study Plot, 1 mm near surface facets were observed at this interface with CT9 Q3 results and ECTN10 results. This [Kebler Pass ob](#) and this [Coon Basin ob](#) highlight this interface on southerlies while this [Paradise Divide area ob](#) illustrates the issue on shady aspects. On 1/1 at the Elkton Plot, this layer was observed as 1.5 mm near surface facets 28 cm below the surface with 1.5" SWE resting on top and hard Q2 CT results. Non-propagating ECT results were seen in this [ob](#) and on 1/8 at the Elkton Study Plot CT and ECT test revealed no failure here while a PST (40/100) SF was observed. Rounding and sintering of grains is occurring in these areas. PST END results less than 50 cm were observed the last three weeks at the Elkton plot on this interface which remains somewhat weak. Several human-triggered avalanches in the upper snowpack this week point to this layer as a possible culprit. This large [scary avalanche](#) is the most recent evidence of this weak interface. PST results on 2/19 on this layer were PST 70/100 (END) with continued rounding. It is now buried ~70-120 cm.

**1/9/20 Interface:** Following the New Year's storm, skies cleared Colorado style with very cold nights and sunny skies during the day with freezing level pushing to 11K. This created thin crusts on southerly slopes while near surface facets and surface hoar formed on shady slopes. This [Kebler Pass area ob](#) highlights this layer on each side of the compass. This [Paradise Divide ob](#) documents propagating ECT results on a crust/facet combo. This interface is a scary [Surface Hoar](#) layer which produced an intentionally triggered avalanche in the Anthracite range on 1/13. Recent human-triggered avalanches in the upper snowpack point to this layer as the culprit. On 2/19 at the Elkton plot site this layer continues to show rounding and sintering with neighboring slabs with no alarming results on short and long column test. This layer is buried ~50-90 cm.

**2/3/20 Interface:** Temperatures the first 2 days of February were well above average with 2/2 being the warmest day of the season. This led to the formation of crusts on many slopes from E-S-W. This was followed by some of the coldest temperatures of the season promoting faceting around the crust. CBAC staff documented this layer in this ob from a [West aspect](#). This [observation from NNE aspects](#) highlights this layer on the shady side of the compass as 1 mm facets. Following the 2/6-2/7 cycle this [Ruby Range](#) ob shows several large avalanches likely initiating on this interface, with some of them stepping down. Recent [very large avalanches](#) on south aspects appear to be failing near this interface in the upper snowpack and stepping down. This layer is buried ~30-60 cm.

## Avalanches

D3 in Coon basin on a SE aspect. This avalanche ran overnight on 2/14 or early 2/15.



This was a very active week with isolated yet destructive avalanches breaking after a modest loading event. The largest avalanches of the season were observed on southerly aspects near and above tree line. Multiple crust/facet combos throughout the snowpack have been incrementally loaded all season by modest storms and wind and the extra weight added this week proved to much for certain slopes. This action occurred on SE and SW aspects where these crust/facet combos are the weakest and persistent westerly winds this week continued to move snow. Three D3 avalanches were documented along with several other D2s. This [observation](#) highlights a few more of these avalanches.

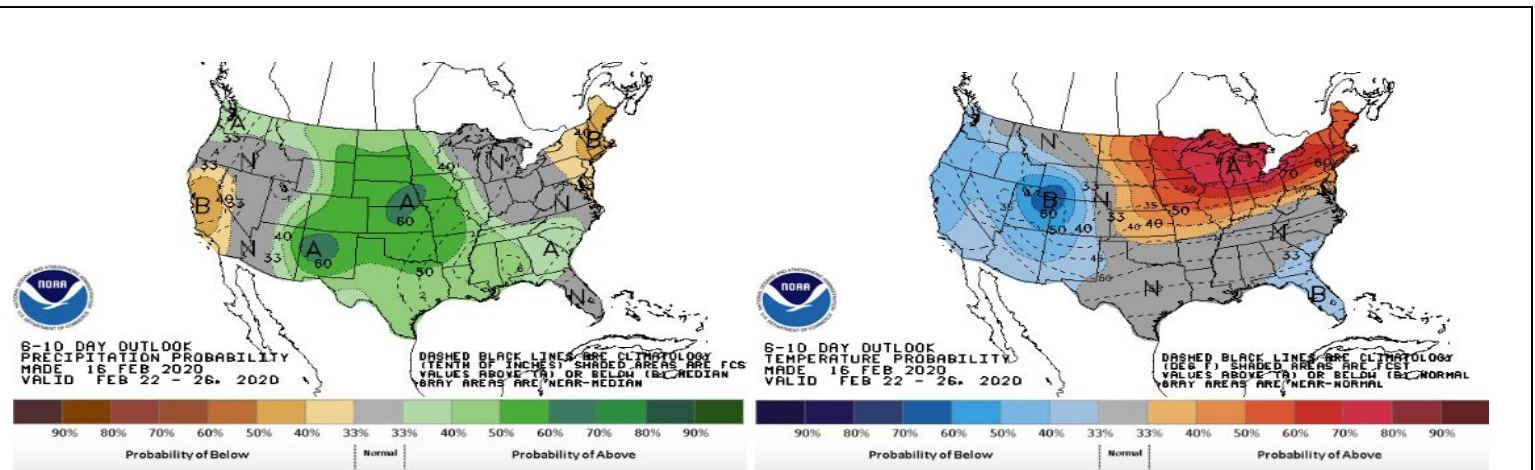
D3 near Rustler's Gulch. This avalanche ran sometime on 2/15 after relentless west winds cross-loaded these slopes.



### Incident, accidents, close calls

On 2/18 a skier reported a sizable [remote-triggered](#) avalanche on the north side of Snodgrass Mountain. This was an ENE slope at 10,000 and had avalanched previously this season leaving it shallow and weak. The overlying slab was only 4F hard but able to propagate on the very weak snow below. The slope was triggered from a distance above with nobody caught or buried, just a good reminder of conditions on certain slopes around the area.

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



The week ahead promises above average precipitation and below average temperatures as our area looks to be impacted by a storm from the SW this weekend followed by another from the NW early next week. Stay tuned for more excitement.