

# Backcountry Weekly Summary



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Week and Year	1/23/21 - 1/29/21
Backcountry zone:	Crested Butte Area

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

The highlight of this week was new snow that fell from late last week (**1/19**) through **Tuesday (1/26)** and the strong winds associated with it.

The first half of the week was windy and snowy as a continuation from last week's snow event. Starting on **Tuesday (1/19)** several periods of snow showers moved across Colorado from both the southwest and northwest before skies began to clear a week later on **Tuesday (1/26)**. During this time strong winds blew in from various directions (**SW-NW-N**) loading new snow onto leeward aspects in upper elevation terrain.

Snow totals drastically varied depending where you were in the central mountains. Generally the northwest mountains received larger totals deeper in the zone. Check out the snow totals **since 1/19** around the Crested Butte area below:

**Gothic:** 21.5" / 1.64" snow water equivalent (SWE)

**Irwin:** 25.6" / 2.4" SWE

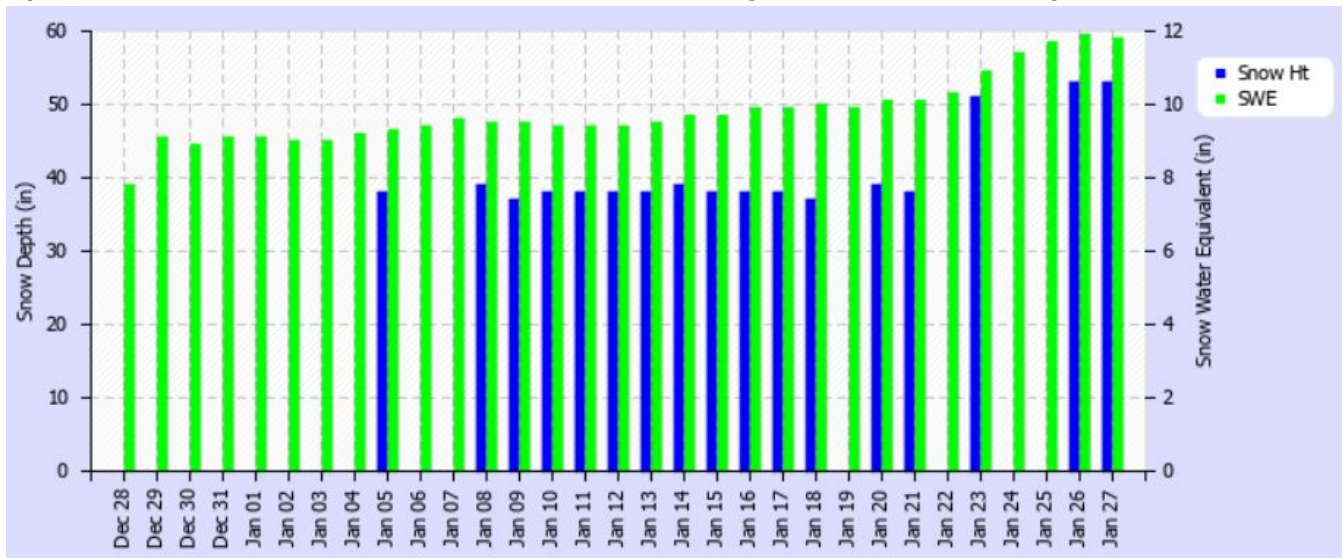
**Schofield (SNOTEL):** 22" / 2.4" SWE

**CB Ski Area (SNOTEL):** 9" / .9" SWE

**Upper Taylor (SNOTEL):** 12" / 1.0" SWE

Despite some areas only receiving 6 or 7 inches, strong and moderate winds throughout the week created deep drifts near and above treeline on leeward slopes.

*This graphic shows the Schofield SNOTEL station snow height and snow water equivalent from 12/28 - 1/27.*



Following the week's snow, skies cleared for the day on **Wednesday (1/27)** although strong winds persisted from the west with **30mph** winds, **45mph** gusts, and plenty of snow to transport.

***Strong winds transporting snow in the alpine on Wednesday (1/27).***



The remainder of the week (**Thursday 1/28** and **Friday 1/29**), the action died down with cloudy skies and **light winds** from the **south and southwest**.

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

We now got all the ingredients needed to produce large avalanches. No surprise we've had weak snow sitting around for sometime now but that's only the first ingredient. The next ingredient we need for an avalanche is a slab over the weak snow, and since **1/19**, new snow and strong winds gave us the slab structure needed to produce sensitive avalanches across the Crested Butte mountains.

As a result, stability around the Crested Butte mountains has been on the decline and avalanche danger has been rated as **considerable** 6 out of 7 days this week. **Considerable danger** means human triggered avalanches are likely and naturals are possible and we have seen this through reports of avalanche activity almost everyday this week.

Here are the two most important flavors of avalanches we dealt with these last 7 days:

The first is a **persistent avalanche problem** that has once again become active in our area. Distribution of this problem is widespread across north - east - southeast aspects at all elevations. These slabs are failing on a variety of bed surfaces that formed at the snowpack surface prior to **1/19**. On north and northeast aspects, new and wind drifted snow is resting on top of a cocktail of facets and wind crusts. East and southeast aspects also have new and wind drifted snow resting on top a mix of thin sun crusts, facets and wind crusts. Needless to say, none of these weak surfaces are strong and many slopes are still primed, waiting for a trigger.

The second avalanche problem has been **wind slabs** forming since early last week. Consistent strong and moderate winds from various directions (**southwest, west, northwest, north**) have redistributed snow onto leeward slopes near and above treeline. These slabs are failing within the new snow as well as failing at the old/new interface. As

winds persisted throughout the week, loading continued to stress our weak snowpack and avalanches became larger and larger. Many small (D1) were reported earlier in the week until **Wednesday 1/27** when numerous large (D2) naturals were reported in the upper elevation bands.

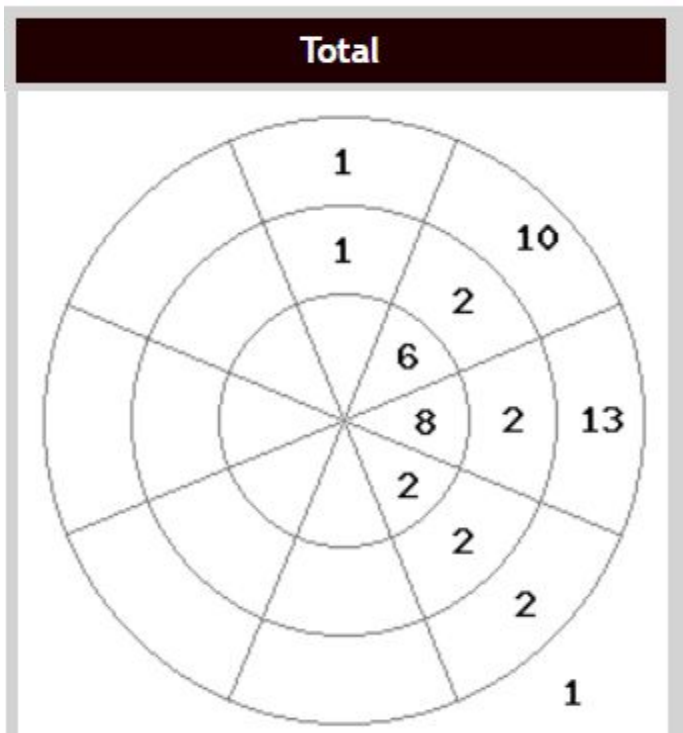
**Daily avalanche danger this week in the NW Mountains from 1/23 - 1/28**

PUBLISHED ±1	DANGER
January 28, 2021 - 7:12AM	CONSIDERABLE
January 27, 2021 - 7:08AM	CONSIDERABLE
January 26, 2021 - 6:14AM	CONSIDERABLE
January 25, 2021 - 7:10AM	CONSIDERABLE
January 24, 2021 - 7:16AM	CONSIDERABLE
January 23, 2021 - 7:15AM	CONSIDERABLE

**Daily avalanche danger this week in the SE Mountains from 1/23 - 1/28**

PUBLISHED ±1	DANGER
January 28, 2021 - 7:25AM	CONSIDERABLE
January 27, 2021 - 7:03AM	CONSIDERABLE
January 26, 2021 - 6:25AM	CONSIDERABLE
January 25, 2021 - 7:11AM	MODERATE
January 24, 2021 - 7:24AM	CONSIDERABLE
January 23, 2021 - 7:21AM	CONSIDERABLE

**Distribution of natural and human triggered avalanches from 1/19-1/28 across the Gunnison Zone**



Our last major loading event occurred on 1/26, and although natural avalanche activity seems to be dwindling, human triggered avalanches remain possible on specific terrain features.

In the **Southeast Mountains**, snow totals from this week's storm were lower and the snowpack is generally thinner. However, wind drifted snow on leeward slopes at upper elevations have created thick dense slabs. These slabs will persist into next week and are most suspected above and near treeline. Below treeline, wind didn't have as much of an effect. As a result, slabs are not as thick and persistent avalanches will be smaller.

In the **Northwest Mountains**, where there is significantly more seasonal snow, slabs are deep and capable of producing much larger avalanches. Older slabs still exist in this zone and avalanches may step down into buried weak layers deeper in the snowpack. Above and near treeline on leeward slopes are most suspect and where slabs are

thickest. In many places in and around sheltered terrain near and below treeline, slabs are thinner as they were less affected by wind loading.

See below for a breakdown of concerning weak layers in our snowpack.

## 12/10 Interface

The Crested Butte area, along with most of Colorado, suffered through high pressure from 11/23 through 12/9. During this dry period, all areas where snow didn't [melt away](#) aggressively faceted. On shadier aspects, this interface has consisted of 1-2 feet of cohesionless faceted grains. These faceted grains have developed into depth hoar near the ground in some areas. On aspects with more solar radiation, these facets are associated with melt-freeze crusts. On 12/10, new snow buried this assortment of persistent weak layers. This interface has caused widespread avalanche activity over the past month, such as this [helicopter evacuation](#) and this [fatality](#). This persistent weak layer of basal facets/ depth hoar is the worst we've seen in many years. We are nearing two months after it was buried, and we continue to see failure in snowpit tests.

## 12/22 and 12/26 Interface

These are two moderately weak interfaces in the upper snowpack, caused by brief dry spells during late December. With the upper snowpack faceting in early January, these two layers have become unreactive and have mostly faceted away.

## 1/19 Interface

Continued dry periods with another round of strong inverted temperatures down low and heavy winds up high, during the first 2 weeks of January continued to weaken our snowpack in the Central mountains. As all aspects experienced continued faceting, winds stripped snow off west and northerly aspects redistributing the snow into dense slabs on easterly facing terrain near and above treeline. On sunny South, South-East, and East facing slopes, thin melt-freeze crusts formed resting on top of weak facets down to the ground. From 1/19-1/28, several storms accompanied by wind, buried this assortment of persistent weak layers. As a result, many [remote triggers](#), [natural](#) and [human triggered](#) avalanches occurred. This interface is now our primary concern and will be a problem for the foreseeable future.

## Avalanches

This week there have been at least **50 natural** and **human triggered** avalanches reported across the central mountains. Here are some of the noteworthy ones:

### ***Persistent Slabs:***

***A remotely triggered avalanche in the Ruby/Dyke area (1/25)***



***A skier triggered avalanche on Schuykill Ridge (1/26)***



**Wind Slabs:**

***A large wind slab avalanche off Gothic (1/23)***

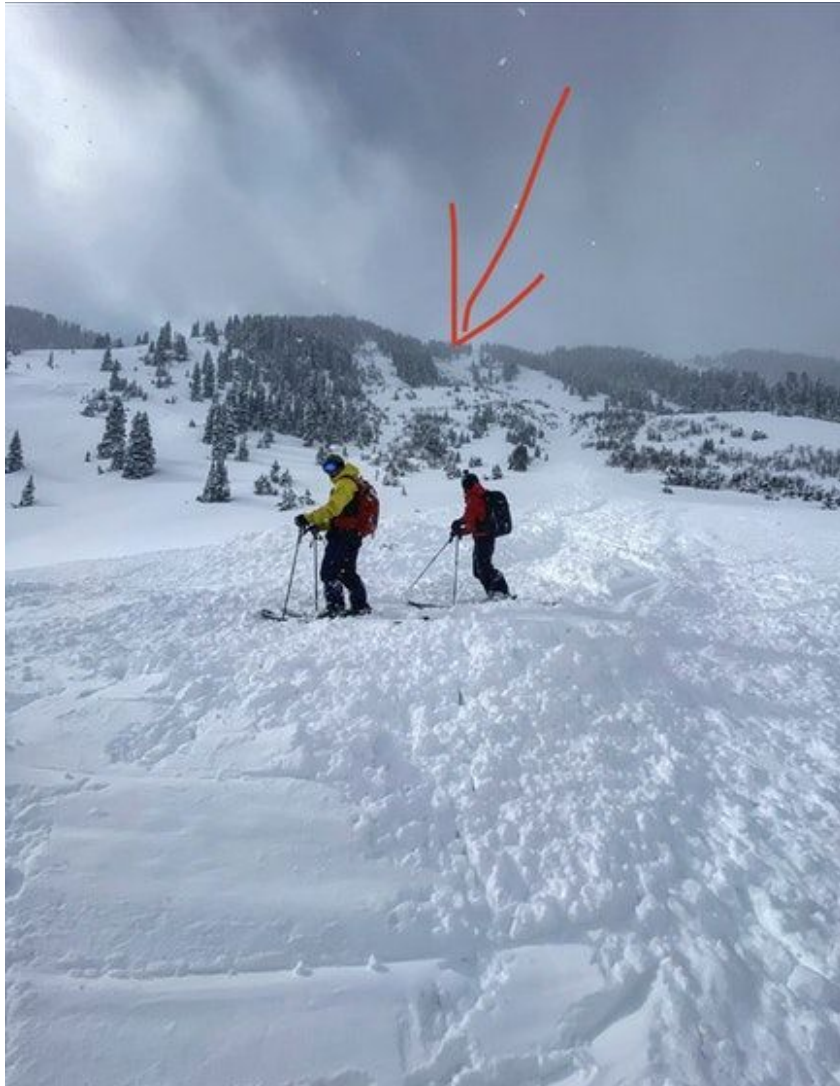


***A large wind slab avalanche off Mt. Axtell (1/27)***



## Incident, accidents, close calls

On **Monday (1/25)**, a group of skiers were skiing off Schuylkill Ridge when an avalanche was unintentionally triggered during their descent. As the skier descended, the avalanche broke above them but was able to get out of the way of moving debris due to good radio communication from partners. This avalanche was large in size (**D2**) breaking initially at the 1/19 interface before stepping to the ground in spots where snowpack was the weakest on a northeast aspect near treeline.



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

Well it feels like winter again in the mountains which means powder is plentiful, the snow feels deep, and avalanches should be on everyone's radar. This past week we received more snowfall than the rest of January combined. All this new snow combined with wind means that we are well into a new persistent avalanche problem that is fresh and still sensitive to human triggers. This week we saw an uptick in avalanche danger to **CONSIDERABLE** with many avalanches being reported. On **Friday (1/28)** the danger dropped to **MODERATE**, however this will be short lived. Do not let your guard down. Expect to be skiing with a persistent avalanche problem for sometime to come.

Friday night (1/29) models show another storm moving across the west that will bring more snow and wind to our zone. If models are correct, moderate danger may jump back up to considerable danger come the weekend.

Looking ahead models are turning around showing good outlooks for precipitation over the next week.

In the meantime, stay vigilant, stay safe, and keep ripping that pow!

The graphic below shows a 6-10 day outlook of precipitation probability

