

## Backcountry Weekly Summary

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Week and Year:	4/3/21- 4/9/21
Backcountry zone:	Crested Butte Area

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

Well spring is here and the melt has begun. Although, unfortunately a little earlier than we would have all hoped. Our last significant storm was almost 2 weeks ago and since then, above average temperatures have been the main event as far as weather goes.

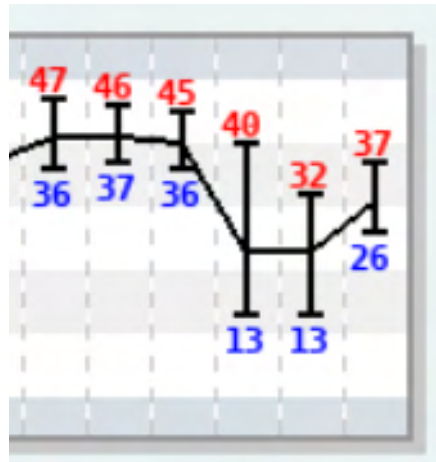
Kicking of the week from last **Saturday (4/3) through Monday (4/5)** temperatures raged into the high 40's and 50's near treeline with temperatures even blasting well above freezing all the way up to 12,000ft. Skies were sunny and the winds were light.

Finally mid-week on **Tuesday (4/6)** the jetstream dipped south into Colorado bringing cooler air with it. Temperatures dramatically dropped and winds increased from the northwest cooling both the air and our very wet snow.

**Wednesday (4/7)** was the coldest day of the week with highs barely reaching above freezing near treeline and lows down in the teens.

From **Thursday (4/9)** through the remainder of the week temperatures once again began to warm and clouds cleared as the weak low pressure system passed and the jet stream pushed back to the north of the state.

#### *Daily Highs and Lows from Saturday (4/3) - Thursday (4/8) - CBMR Weather Station at 11,300ft.*



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

After many days of above average temperatures, our snowpack rapidly lost strength during the first half of the week. This was especially apparent on westerly, southerly and easterly aspects as melt water reached interfaces that still contain a multitude of persistent weak grains. Towards the end of the week, temperatures cooled and the snowpack has been in a more normal spring melt-freeze cycle. We are currently in a **downward trend** in danger until we start to see weak freezes at night.

In the meantime, check out the important interfaces to keep an eye on as melt-water reaches these interfaces again:

### 3/10 Interface

Small incremental loading with long periods of dry weather persisted from mid-February through early March forming a variety of near-surface facets and crust/facet combos in the upper snowpack. This interface was buried by a measurable amount of snow on March 10th. Since buried, we have seen multiple skier-triggered avalanches fail on this interface ([example A](#), [example B](#)).

**More recently**, this interface rests under a slab of about 12". Warm weather has caused meltwater to drip down deep in the snowpack which has been the result of many wet slab avalanches.

### 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 aggressively faceted where snow didn't melt away. On shadier aspects, this interface consists of large-grained depth hoar near the ground. On 12/10, new snow buried this layer ushering us into a season-long persistent slab problem. This interface caused widespread avalanche activity during the latter half of December and again in February. This layer has shown signs of gaining strength with depth hoar rounding and sintering in many places.

**More recently**, this interface briefly woke as warm temperatures caused melt water to reach the ground which weakened grains causing wet slabs to release. A warning that although gaining strength, this weak layer is still very much present.

Now let's check out our most concerning avalanche problems to keep an eye on:

### Persistent Slab:

The likelihood of triggering a persistent slab is currently **unlikely**. There have been no recent reports of persistent slab avalanche although the structure still exists especially at the ground where large grained depth hoar is still present with deep, stiff slabs resting on top. Most suspect slopes are north-northeast-east aspects especially where snowpack is thin such as rocky outcroppings or where avalanches have previously run. Extreme terrain such as slopes greater than 40 degrees should also be considered suspect.

### Wet Slab/Wet Loose

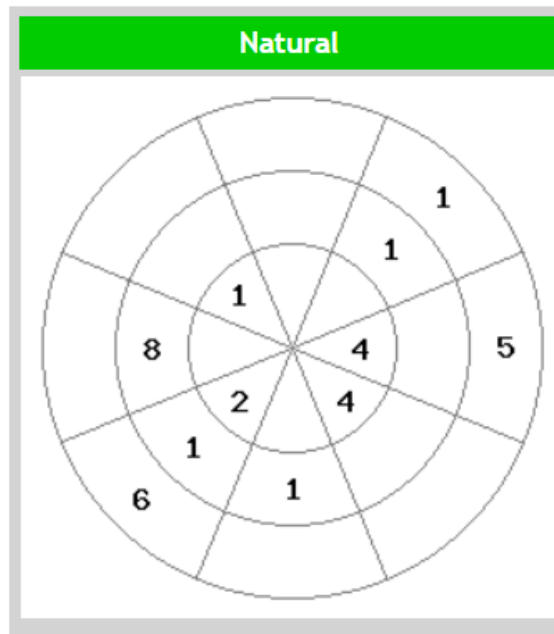
Earlier in the week, the Crested Butte Area along with most of the state experienced an impressive wet slab cycle. Avalanche conditions were **considerable** as rapid thawing caused melt water to seep into the snowpack weakening bonds between grains. Weak layers such as our **3/10 and 12/10 Interface** were responsible for the majority of these avalanches as water decreased the strength of these weak layers. More recently cooler temperatures have re-froze water within the snowpack making **wet slab** and **wet loose unlikely** by the end of the week and into early next week.

This should be taken as a warning that wet slab will be a possibility in the future as our snowpack once again begins to thaw and free water reaches these weak layers once more.

## Avalanches

Our early week wet avalanche cycle was the highlight of avalanches this week. Check out some photos below

*Spatial distribution of **Natural Wet Slab** activity this week*



***Large Wet Slab on SW aspect***





***Full depth Wet Slab on NE slope below treeline***



***Wet Slab triggering a Wet Loose which gouged to the ground***





***Numerous small Wet Loose avalanches off Scarp Ridge***



***Wet Slab triggering a Wet Loose. SW aspect above treeline***



## Incident, accidents, close calls

As large as this last wet avalanche cycle was, all reported avalanches were **naturals**. Thankfully, **no human triggered** avalanches or close calls were reported this week.

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

We made it through a large avalanche cycle with no incidents or close calls! I have a suspicion it's because of people reading the forecast and making good decisions in the field. Regardless of the reason, lets keep this trend going as we move into our next wet avalanche cycle. As of the end of this week, our snowpack is mostly frozen once more but this won't last. Spring is here and Summer is just around the corner. As temperatures continue to warm, weak freezes will be in our future. Pay attention to nights where temperatures do not dip below freezing and don't forget to read the forecast. We are not out of the woods yet. Once water reaches weak layers in the snowpack again, grains will lose cohesion and we will see another wet avalanche problem. Don't know how far down water has percolated in the snow? Dig a pit and see! In the meantime, enjoy the warm weather and don't forget your sunscreen and pool noodles!

**Snow Water Equivalent (SWE) in the Gunnison River Basin.**  
**The black line shows less snow than normal melting off earlier than in seasons past.**

