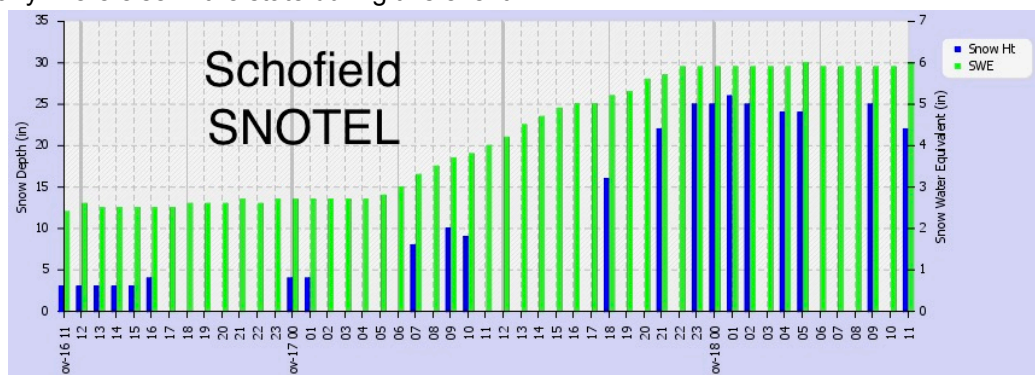


# Backcountry Weekly Summary

Intern/Forecaster:	Eric Murrow / Ben Pritchett
Week and Year:	November 17-23, 2017
Location:	Crested Butte area

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

Our first strong system of the 2017-18 winter impacted the Crested Butte area late evening on Thursday November 16, and continued through late Friday November 17. This warm atmospheric river began with rain up to 11,000' with snow levels falling to 7,500' by the time the storm departed Saturday morning. The Schofield SNOTEL site recorded a storm total of 3.5" of snow water equivalent (SWE) which piled up 22" of dense snow. Billy Barr at the Rocky Mountain Biological Lab in Gothic measured an average of 13% density for the storm- the densest he's ever recorded in November with records going back over 50 years. Irwin received around 10" of snow at lake level as did Crested Butte Mountain Resort, and the Upper Taylor SNOTEL site recorded about 1.5" of SWE with 15" of snow. Paradise Divide and high peaks of the central Elk Mountains received more snow than anywhere else in the state during this event.



Local wind data was unavailable for this storm because local wind sites were not yet running for the season. The storm was ushered in with southwest winds, and left under a northwest flow. Evidence from the field, along with weather stations from around the state suggest that wind speeds were strong to extreme. Gusts were likely over 60 mph.

From Saturday, November 18 through Monday, November 20 the weather was generally mild with lows ranging from 15-25 °F. Daytime highs reached above the freezing to the mid 30's °F.

Tuesday morning November 21 a small system ran to our north, dropping 3" of snow (.2" SWE) at Schofield and 2" in Crested Butte.

Wednesday, November 22 and Thursday, November 23 had abnormally warm temperatures at many mountain locations. Valley bottoms experienced freezing temperatures overnight, but locations above valley bottoms (near treeline) barely froze at all. The CBMR upper mountain weather station did not show freezing temperatures Thursday night, November 23 (11,400 ft).

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

*Note, we date interfaces on the day the prior snow surface is buried.*

**November 17th interface:** Prior to the November 17 storm, most terrain on the southern half of the compass was snow free. Northerly aspects held faceted snow initially deposited during October and the first week of November (photo 1). [This video](#) illustrates general patterns in snow coverage prior to the November 17th storm, and [this video](#) illustrates the problem developed after these old layers were buried (photo 2).

## Snowpack continued



photo 1

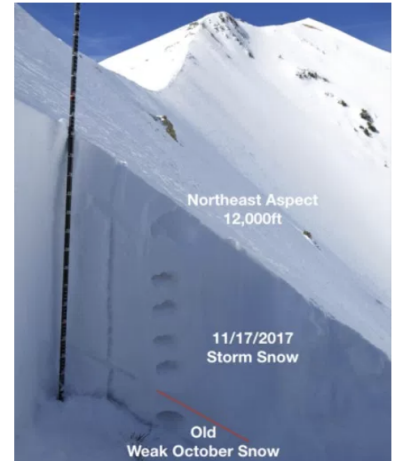


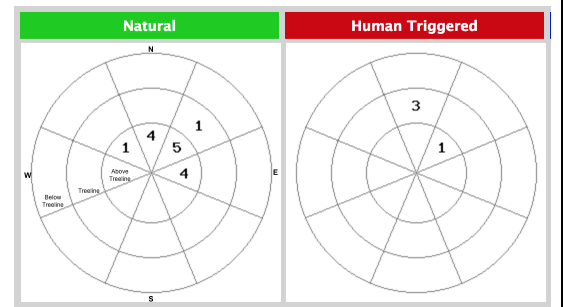
photo 2

During the middle of this last storm graupel fell, leaving a mid-storm weak-layer. There has been no avalanches observed to fail on this graupel layer, but it remains clearly present in many snow profiles, especially in sheltered terrain or at the base of steep terrain where the graupel rolled and pooled up mid-storm.

## Avalanches

The November 17 storm produced the first avalanche cycle of the winter for the Crested Butte area. The cycle was centered around the Paradise divide area. Numerous natural avalanches ran up to D2.5 in size, including two human triggered slides. Every avalanche failed below the November 17th interface in October's facets.

The chart to the right illustrates the number of avalanches from the last week, organized by aspect and elevation.



## Incident, accidents, close calls

On Saturday, 11/18, there was an accident in the Aspen zone to our north involving two people, partially burying one of them. Details of this accident on Greg Mace Peak can be found [here](#).

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

Winter 2017-18 kicked off with an unusually warm and dense storm, dubbed by some as “Thunderslush.” In one way or another, this storm will be a memorable start.

Persistent Slab avalanche problems will haunt us on the alpine North faces for a while to come, but the dense blanket of snow from last weekend has the potential to become a solid base to our winter's snowpack if it's buried soon.

The warm weather through the second half of this past week left crusts on sunny slopes at all elevations, and even on Northern aspects at low elevations. If this crust lingers near the surface of the snowpack too long, faceting near the crust may become a problem down the road.