

# Weather Forecast and Snow Summary

***Forecast Period:***

***7AM Tuesday Feb 26 -***

***7AM Wednesday Feb 27***



## Forecast Details

- Backcountry skiers and riders collecting data
- Mountain Boy area

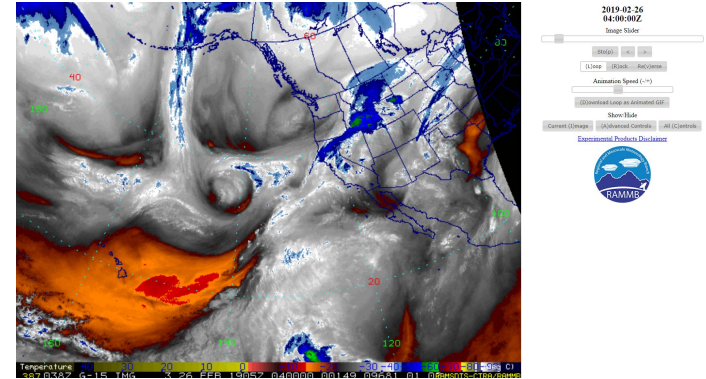
# GOES West - Water Vapor

16km:

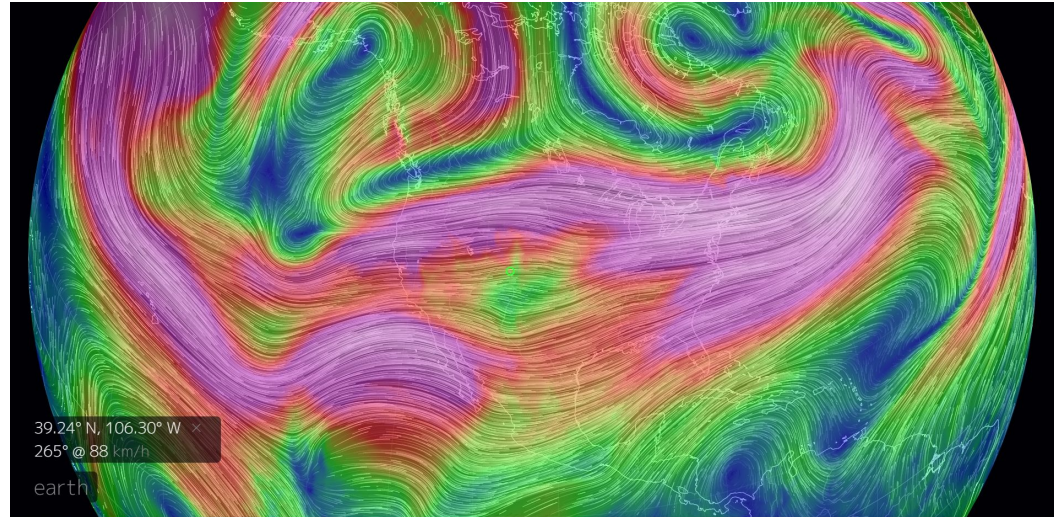
[http://rammb.cira.colostate.edu/ramsdisk/online/loop.asp?data\\_folder=goes-west\\_goes-east/goes-west\\_16km\\_psr3&width=640&height=480](http://rammb.cira.colostate.edu/ramsdisk/online/loop.asp?data_folder=goes-west_goes-east/goes-west_16km_psr3&width=640&height=480)

4km:

[http://rammb.cira.colostate.edu/ramsdisk/online/loop.asp?data\\_folder=goes-west\\_goes-east/gwir304&width=640&height=480](http://rammb.cira.colostate.edu/ramsdisk/online/loop.asp?data_folder=goes-west_goes-east/gwir304&width=640&height=480)



# Jet Stream



[https://www.meteoblue.com/en/weather-maps/leadville\\_united-states-of-america\\_5428184?variable=wind\\_streamlines &level=250mb&lines=none&mapcenter=39.5379N-106.5674&zoom=5](https://www.meteoblue.com/en/weather-maps/leadville_united-states-of-america_5428184?variable=wind_streamlines&level=250mb&lines=none&mapcenter=39.5379N-106.5674&zoom=5)

<https://earth.nullschool.net/#current/wind/isobaric/250hPa/orthographic=-85.10,39.95,918/loc=-126.639,40.045>

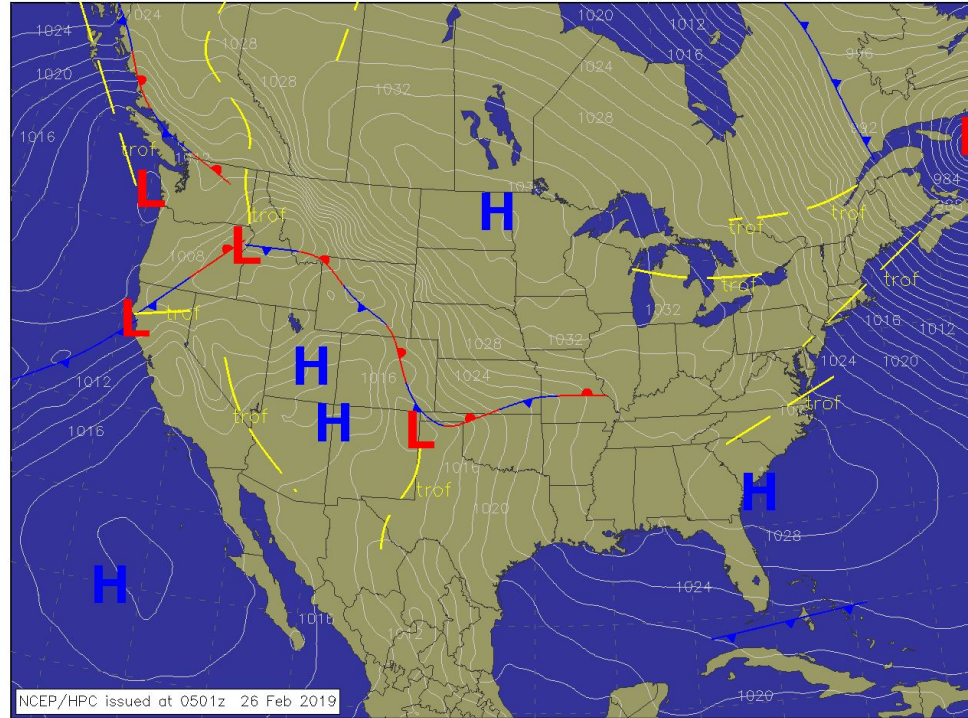
# Pressure map



<http://weather.rap.ucar.edu/progs/index.php?prog=00>

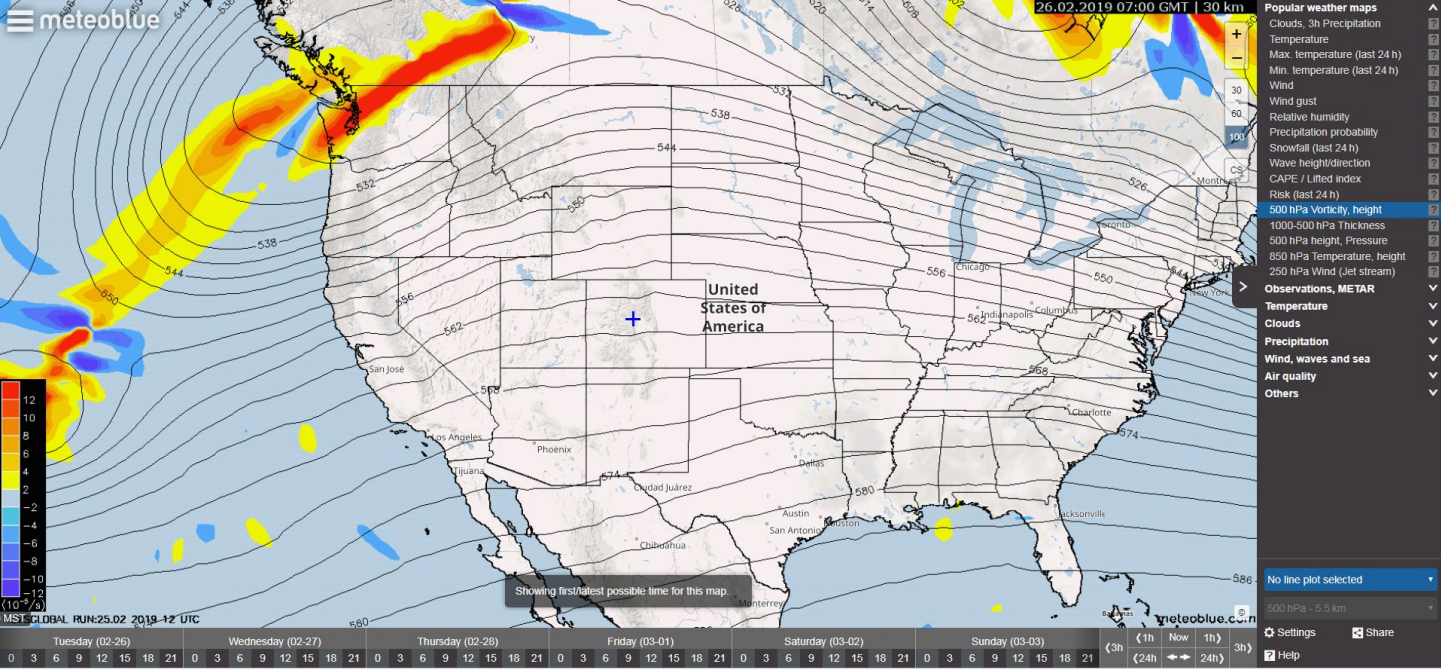
<https://www.wunderground.com/maps/current-weather/mixed-surface-analysis>

Analysis valid 0300 UTC Tue 26 Feb 2019



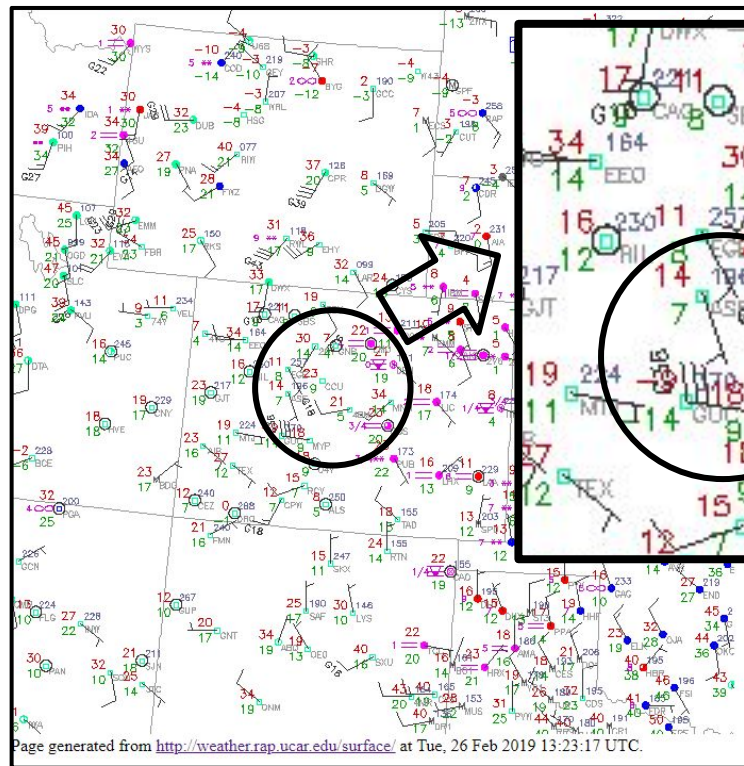
Stationary front





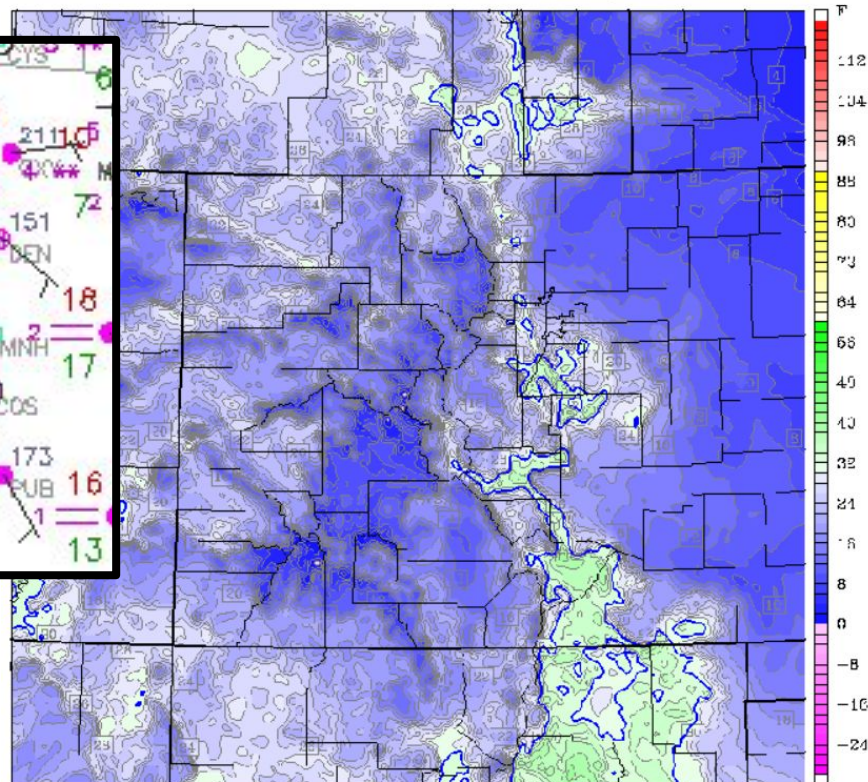
[https://www.meteoblue.com/en/weather-maps/leadville\\_united-states-of-america\\_5428184?variable=precipitation\\_gph&level=500mb&lines=none&mapcenter=39.5379N-106.5674&zoom=5](https://www.meteoblue.com/en/weather-maps/leadville_united-states-of-america_5428184?variable=precipitation_gph&level=500mb&lines=none&mapcenter=39.5379N-106.5674&zoom=5)

# Temperatures - Current



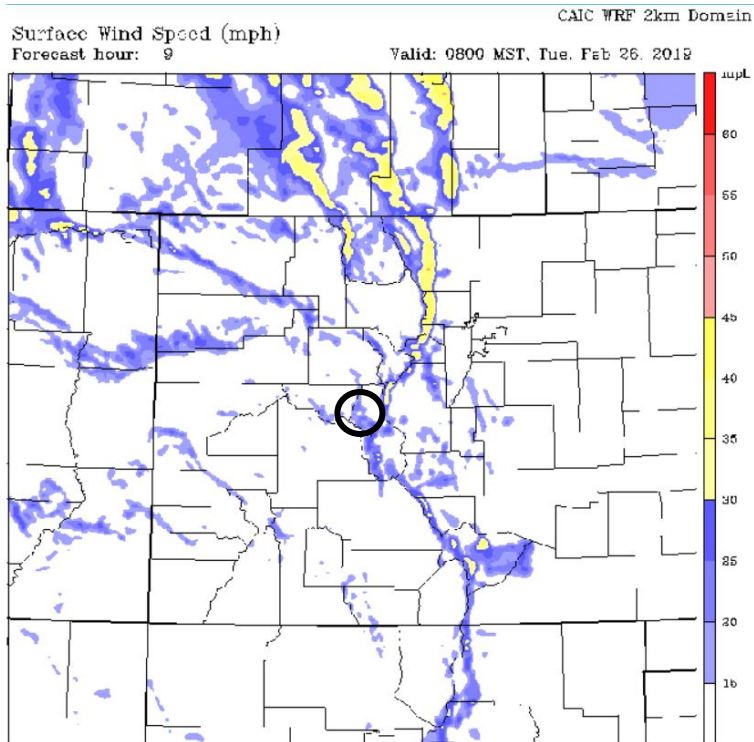
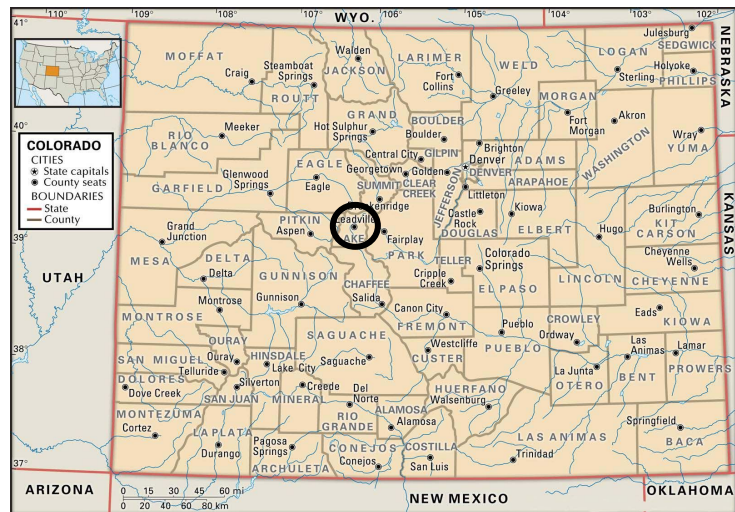
Surface Temperature (F)  
Forecast hour: 8

Valid: 0700 MST, Tue, Feb 26, 2019





# Surface Winds - current





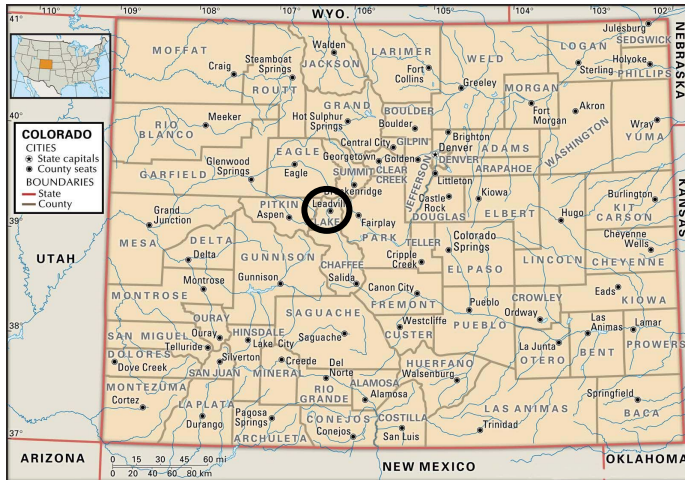
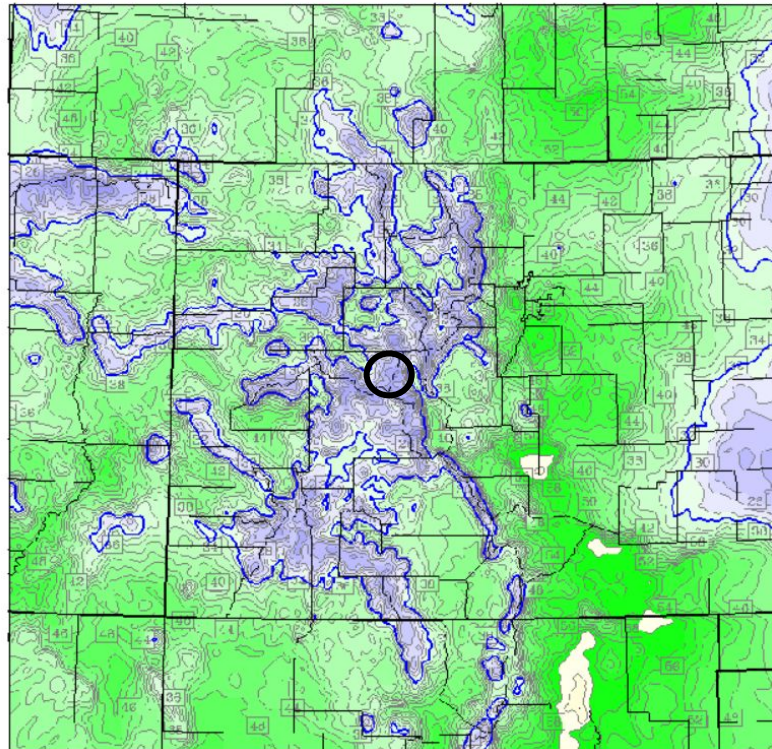
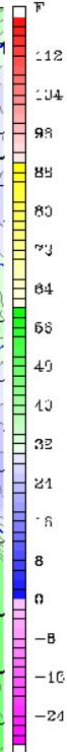
# Temperatures - forecast

CAIC WRF 2km Domain

Surface Temperature (F)

Forecast hour: 15

Valid: 1400 MST, Tue, Feb 26, 2013



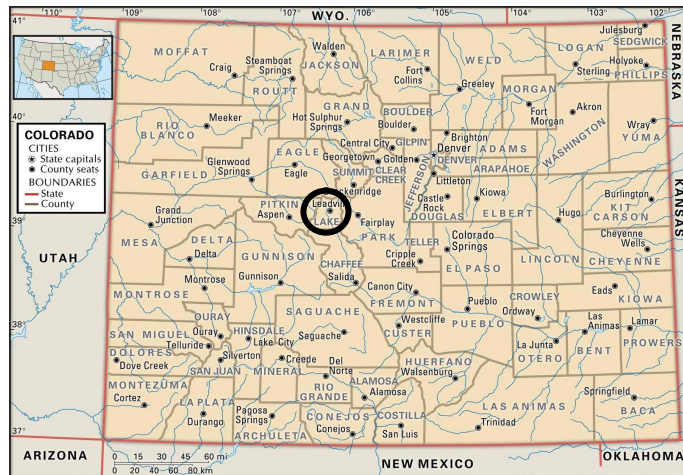
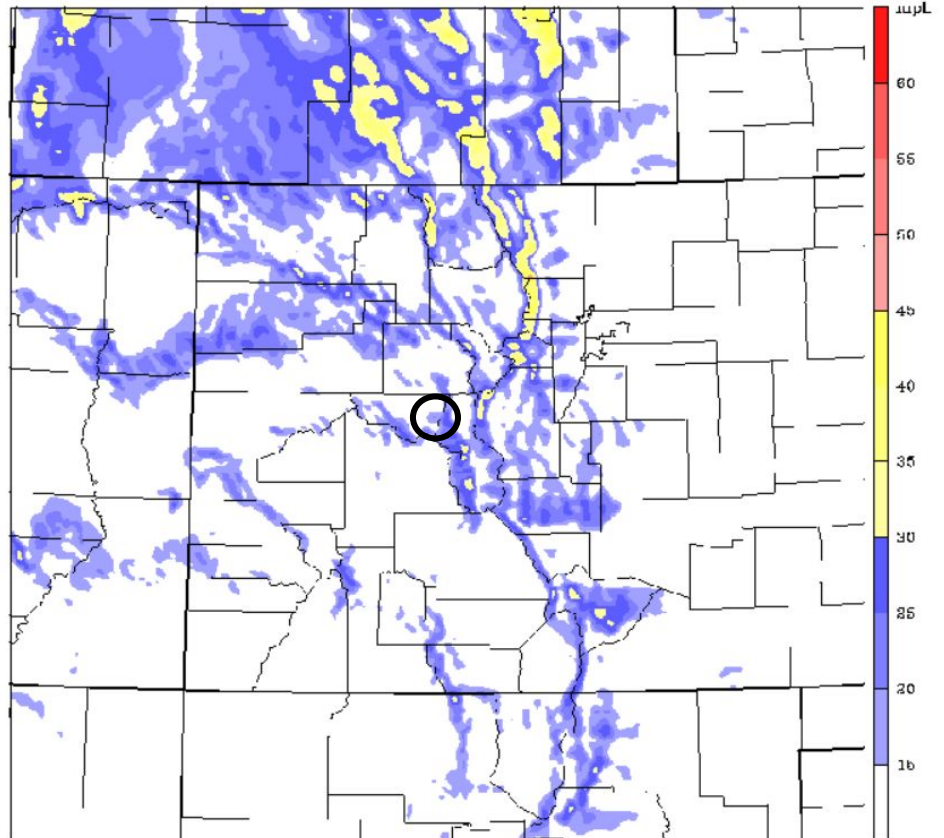
# Surface Winds - forecast

CAIC WRF 2km Domain

Surface Wind Speed (mph)

Forecast hour: 11

Valid: 1300 MST, Tue, Feb 26, 2019

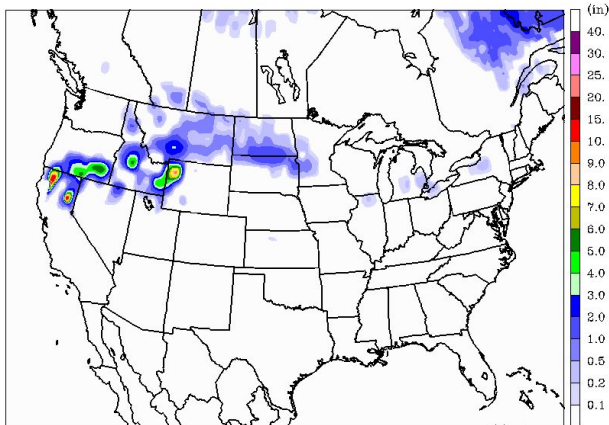


# Precip Forecast



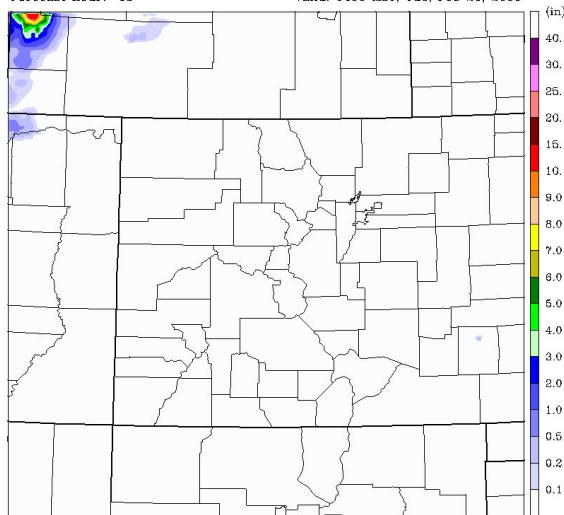
(all images for 1400 Tues 2/26)

12-h Snow Accumulation (in)  
Forecast hour: 15  
Valid: 1400 MST, Tue, Feb 26, 2019  
NCEP GFS



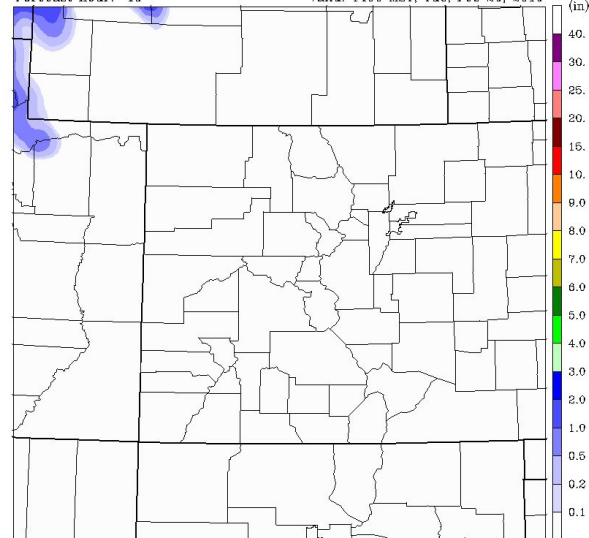
GFS

12-h Snow Accumulation (in)  
Forecast hour: 15  
Valid: 1400 MST, Tue, Feb 26, 2019  
CAIC WRF 2km Domain



Hi Res WRF

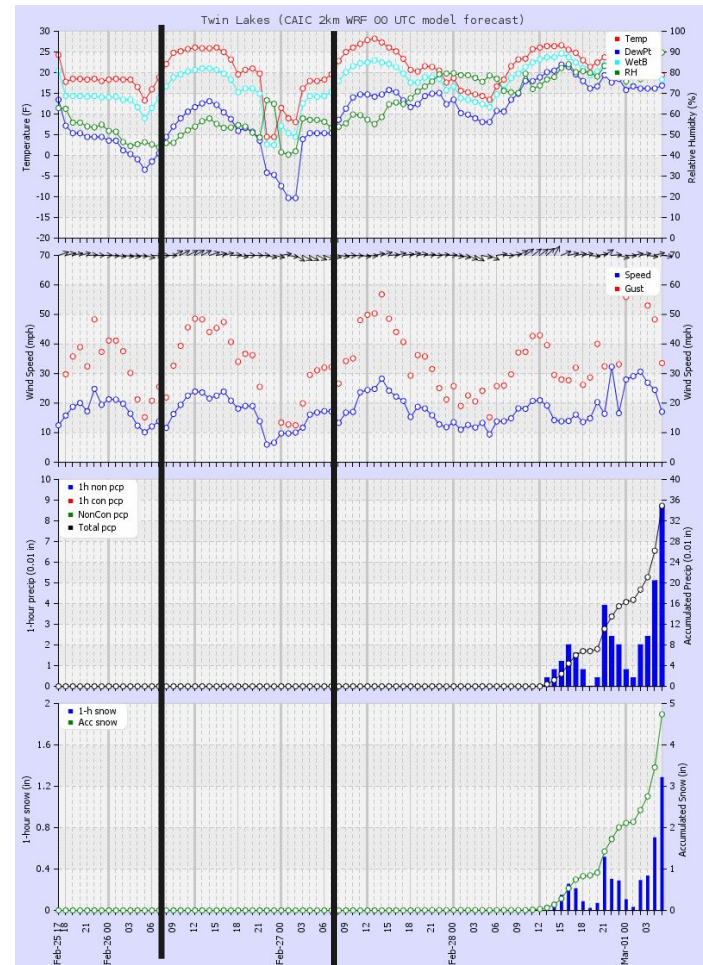
12-h Snow Accumulation (in)  
Forecast hour: 15  
Valid: 1400 MST, Tue, Feb 26, 2019  
NCEP NAM



NAM



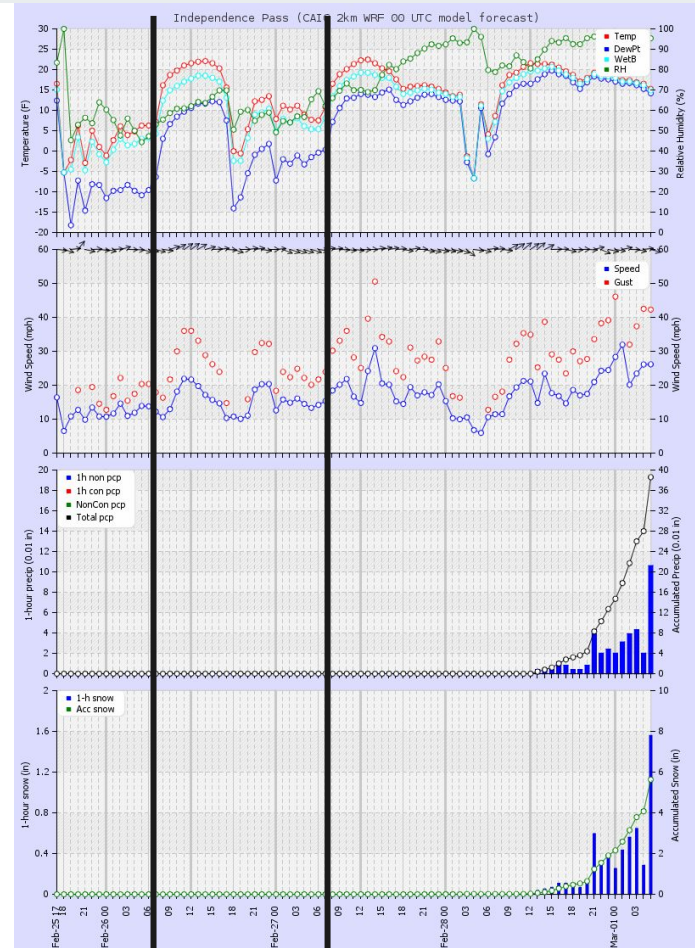
Hi Rec WDE





# Point Forecast - Indy Pass

Hi Res WRF





## Summary - Mountain Boy Area

	<b>Tues</b>	<b>Tues Night</b>
<b>Temp (F)</b>	25 to 30	5 to 15
<b>Wind Speed (mph)</b>	15-25 G40	10 to 20
<b>Wind Direction</b>	W / SW	W
<b>Sky</b>	Mostly Clear	Mostly Clear, Cloud cover increasing into Wed Morn
<b>Snow (in)</b>	0	0

# Critical weather factors



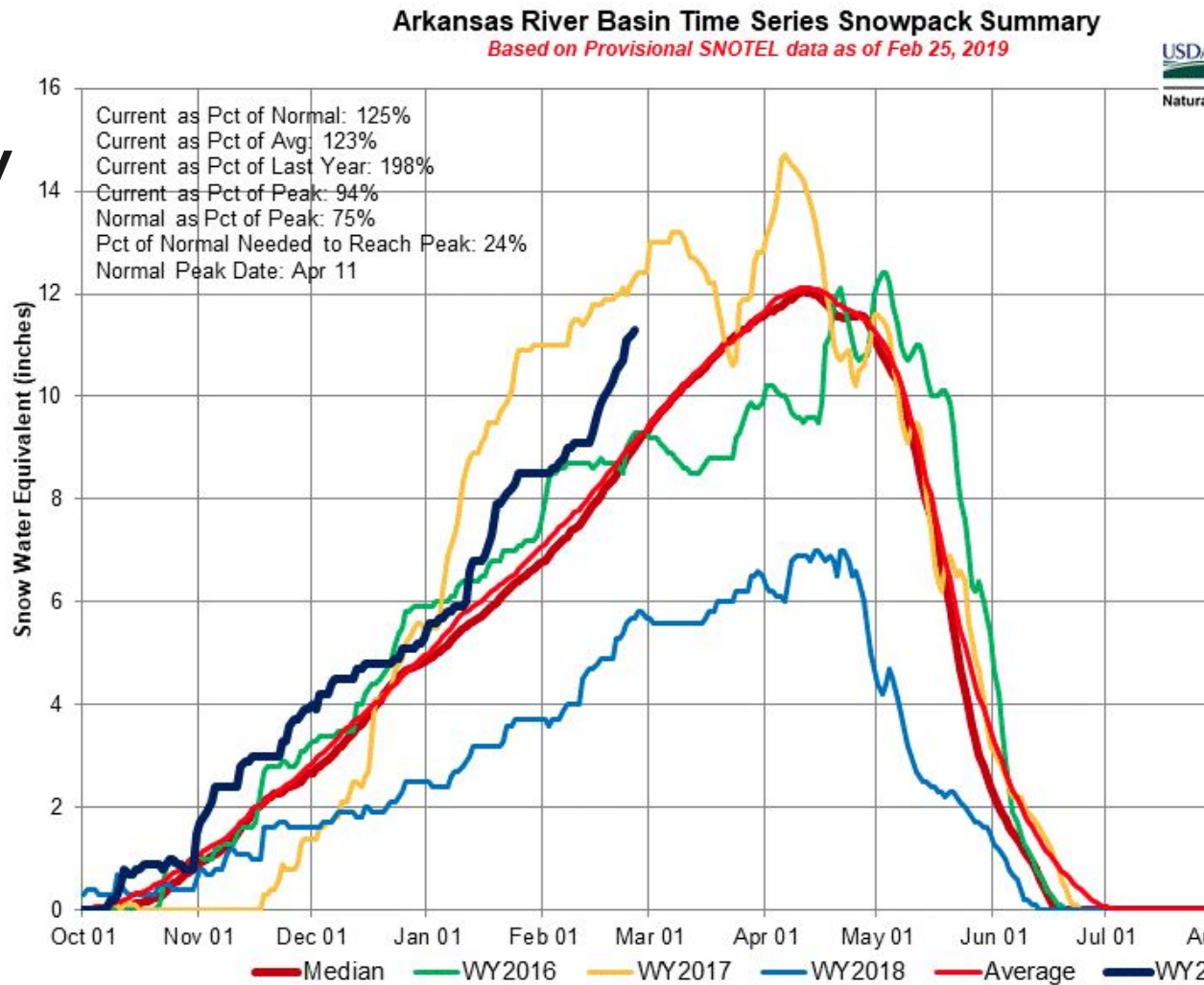
- Moderate to strong west winds, look for snow transport
- There will be a sharp drop in the evening temps, with clear skies. Keep this in mind for how it will affect the snowpack in the future. (especially if cloudy wed)
  - Today's fairytale can be tomorrow's (or next week's) nightmare

## What's coming up

Starting Wednesday eve, a series of storms arriving with strong westerly winds.

# Snowpack Overview

- 198% As of this day last winter! or 6 inches SWE more
- 94% of average peak (apr. 11)





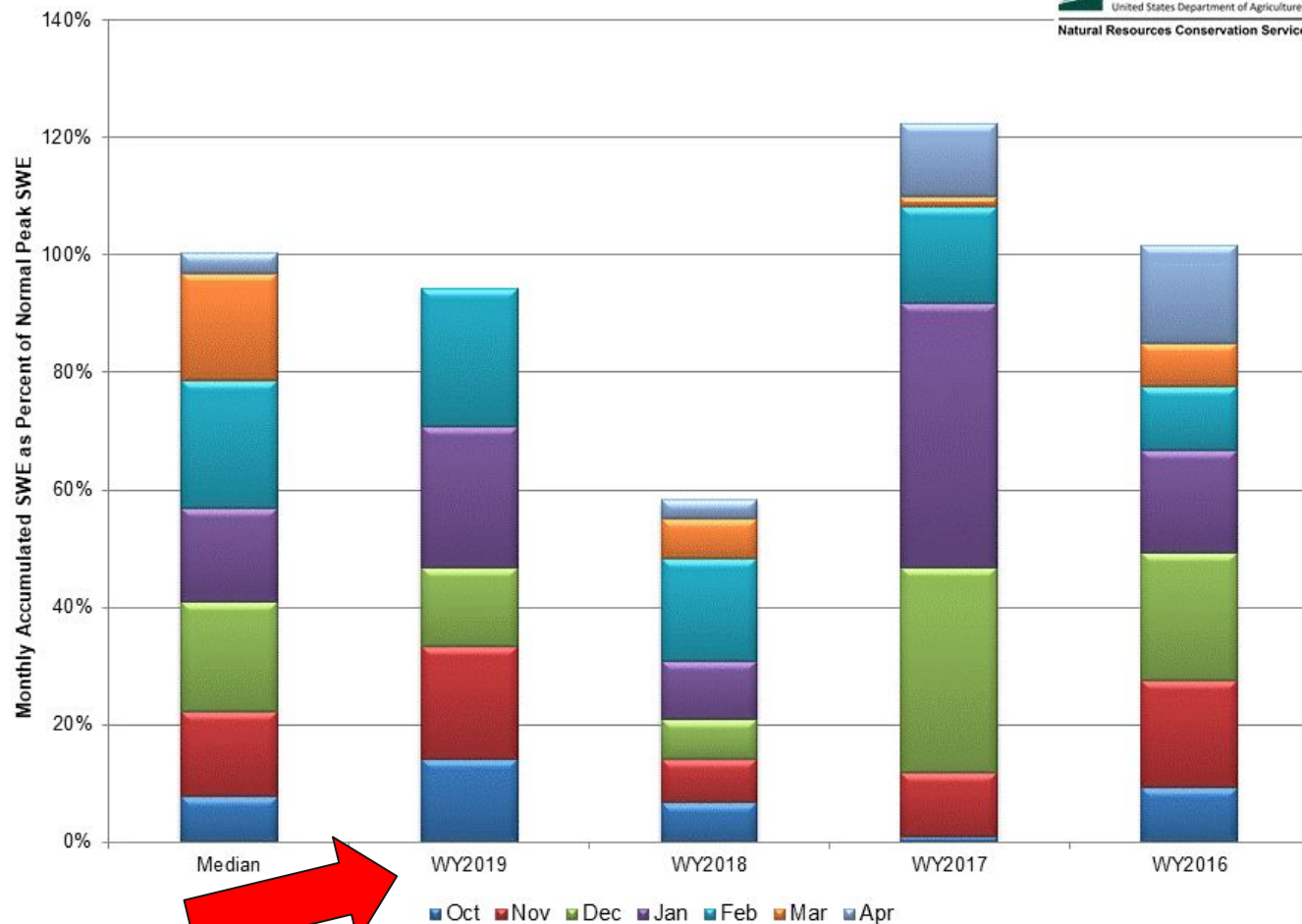
# Snowpack Overview

## Arkansas River Basin Time Series Monthly Snowpack Summary

Based on Provisional SNOTEL data as of Feb 25, 2019

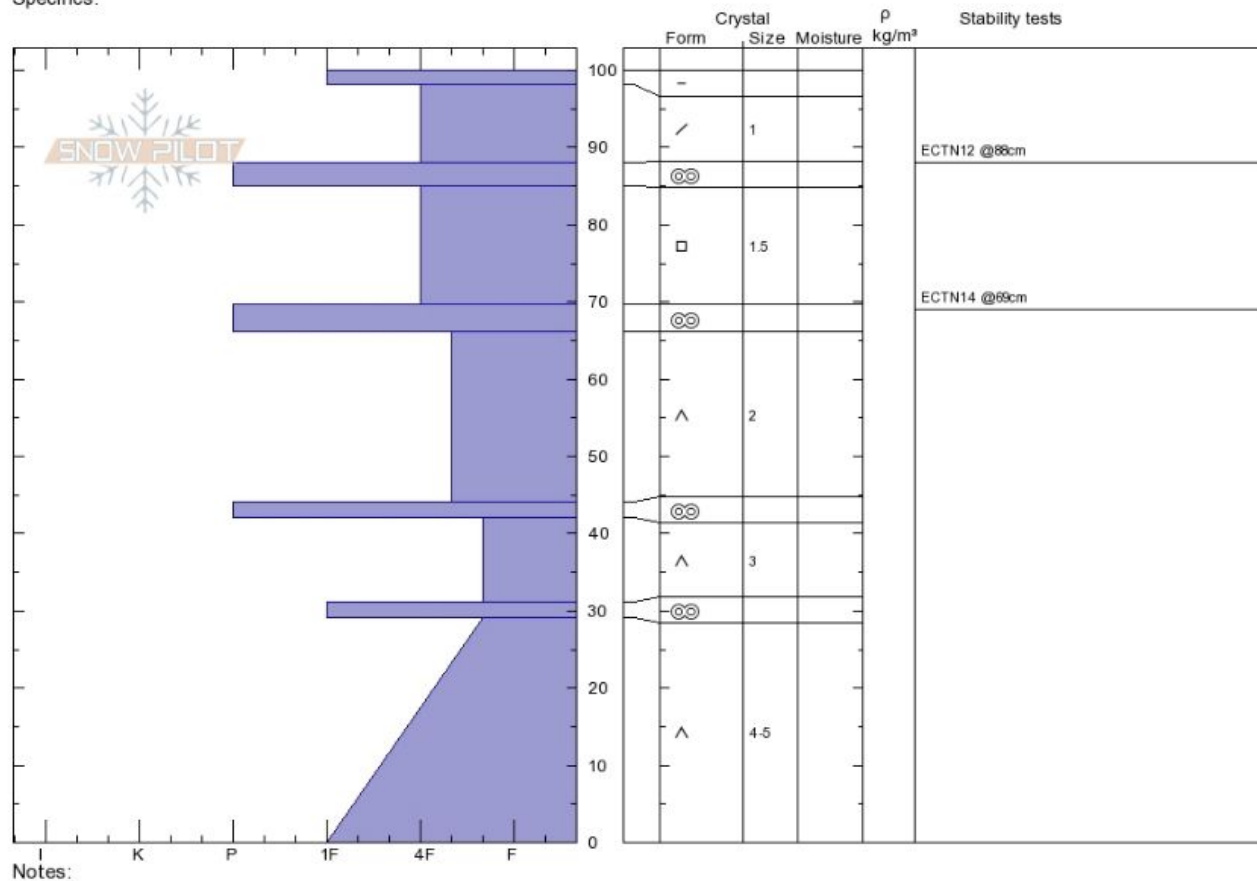
USDA  
United States Department of Agriculture  
Natural Resources Conservation Service

- Gained ~45% since Jan 10
- Gained ~18% of SWE in last ~ 12 days!!!



### South Aspect

Layer Notes  
0-29: Problematic layer



2/23/19 Richmond Ridge Matt Huber  
Aspen Mountain Boundaries  
CO  
Elevation: 11000 ft  
Aspect: NE  
Specifics:

Sat Feb 23 12:00 2019  
Co-ord: 39.10888N, -106.80692W  
Slope Angle: 15°  
Wind Loading:

Stability:  
Air Temperature:  
Sky Cover: FEW  
Precipitation: NO  
Wind: W Calm

HS152 PS30  
Stability Test Notes

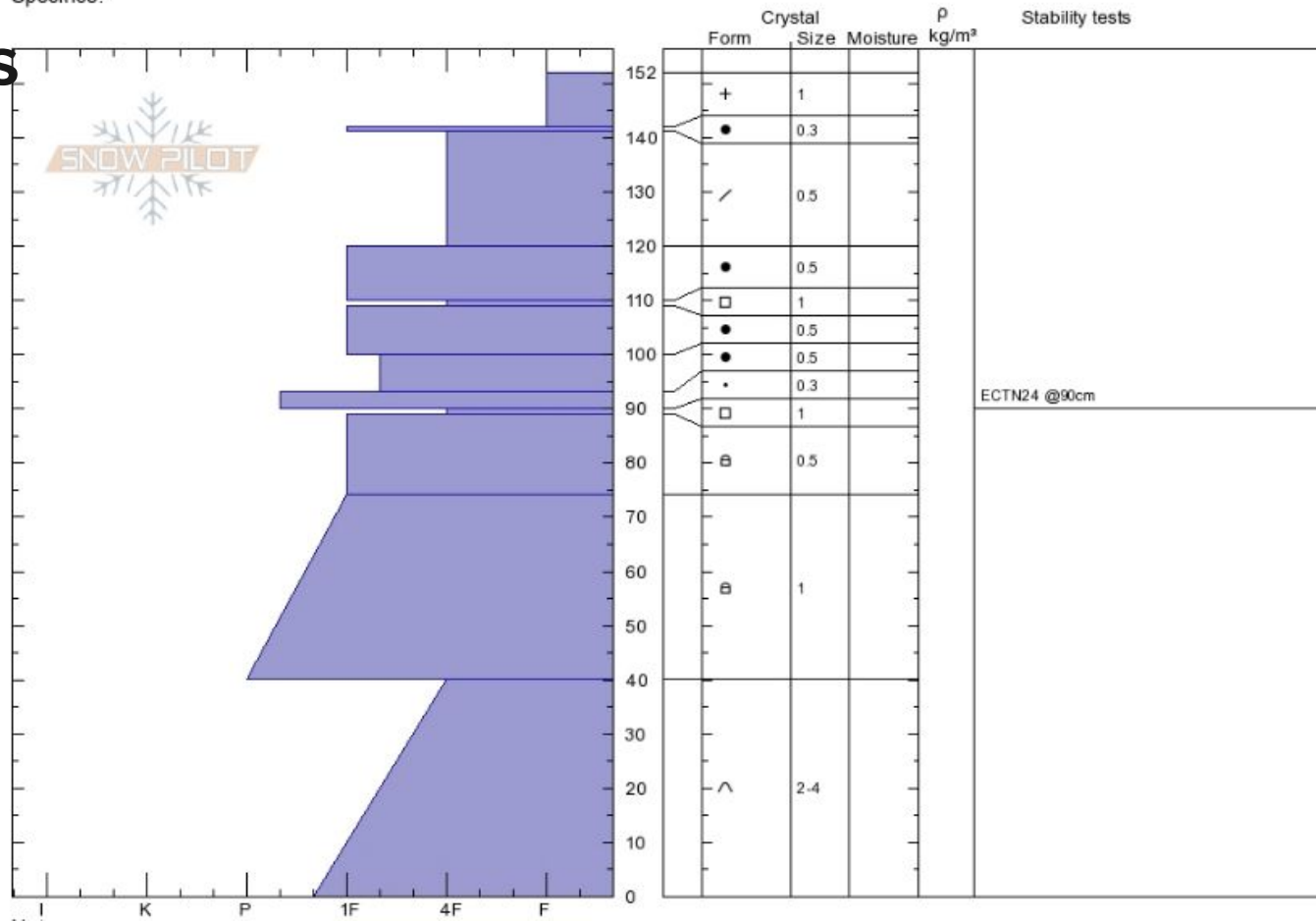
Layer Notes  
89-90: Problematic layer  
40-74: old ski track

# Recent Snow Obs

FEB 23

NE

11k Ft



# Snowpack Summary



- Facted lower portion of snowpack
  - Large DH in areas
- Multiple PWL mid to upper pack
- Lots of new snow/wind in last 20 days
  - Thin areas of slab are the trigger area





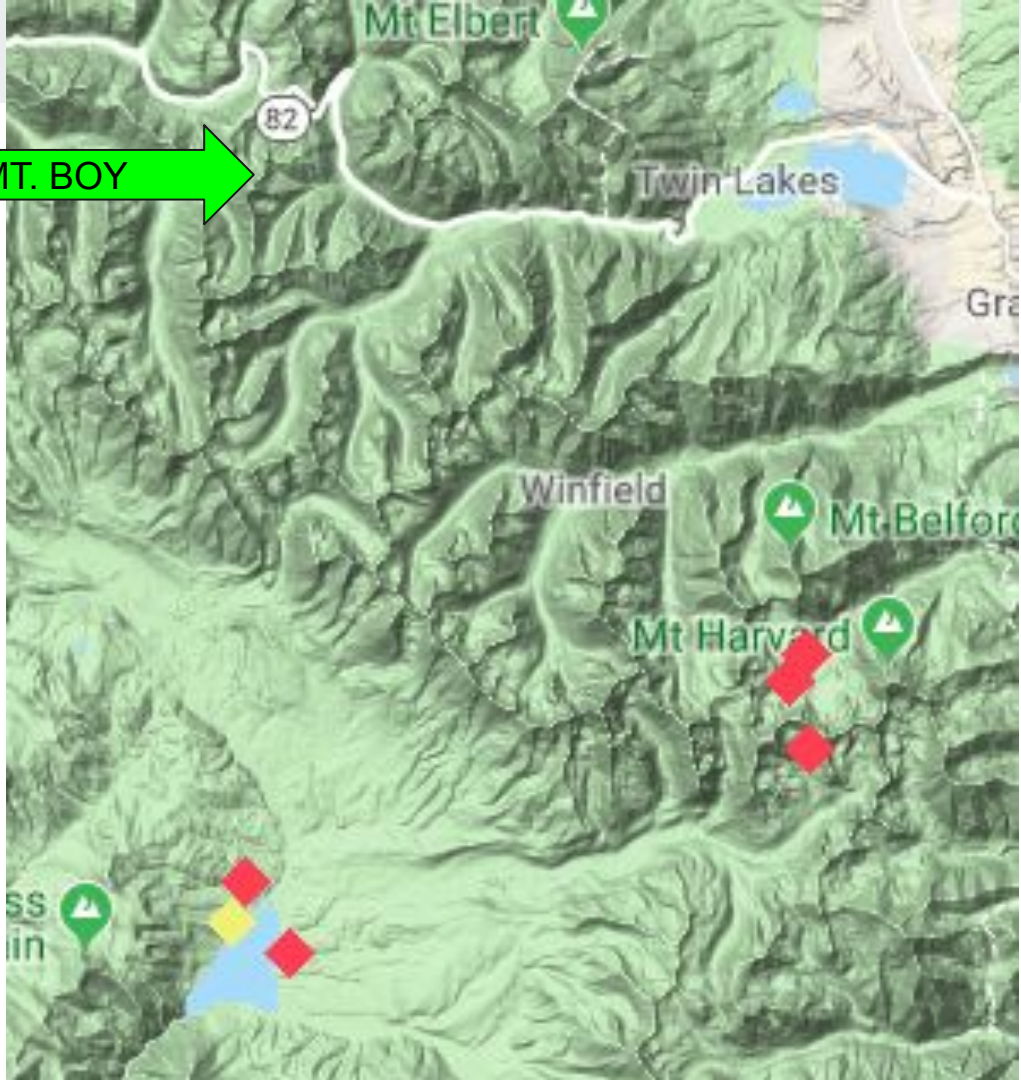
# Avalanches

# Avalanche Observation



Cottonwood Pass area

MT. BOY



# Avalanche Observation



Feb 24 - Cottonwood Pass

@TL, NE , ~12k Ft

Snowmobile/bike triggered

Possible caught, few details

[CAIC](#)



# Avalanche Observation



Feb 24 - Cottonwood Pass

@TL, W , ~12k Ft???

Unknown trigger





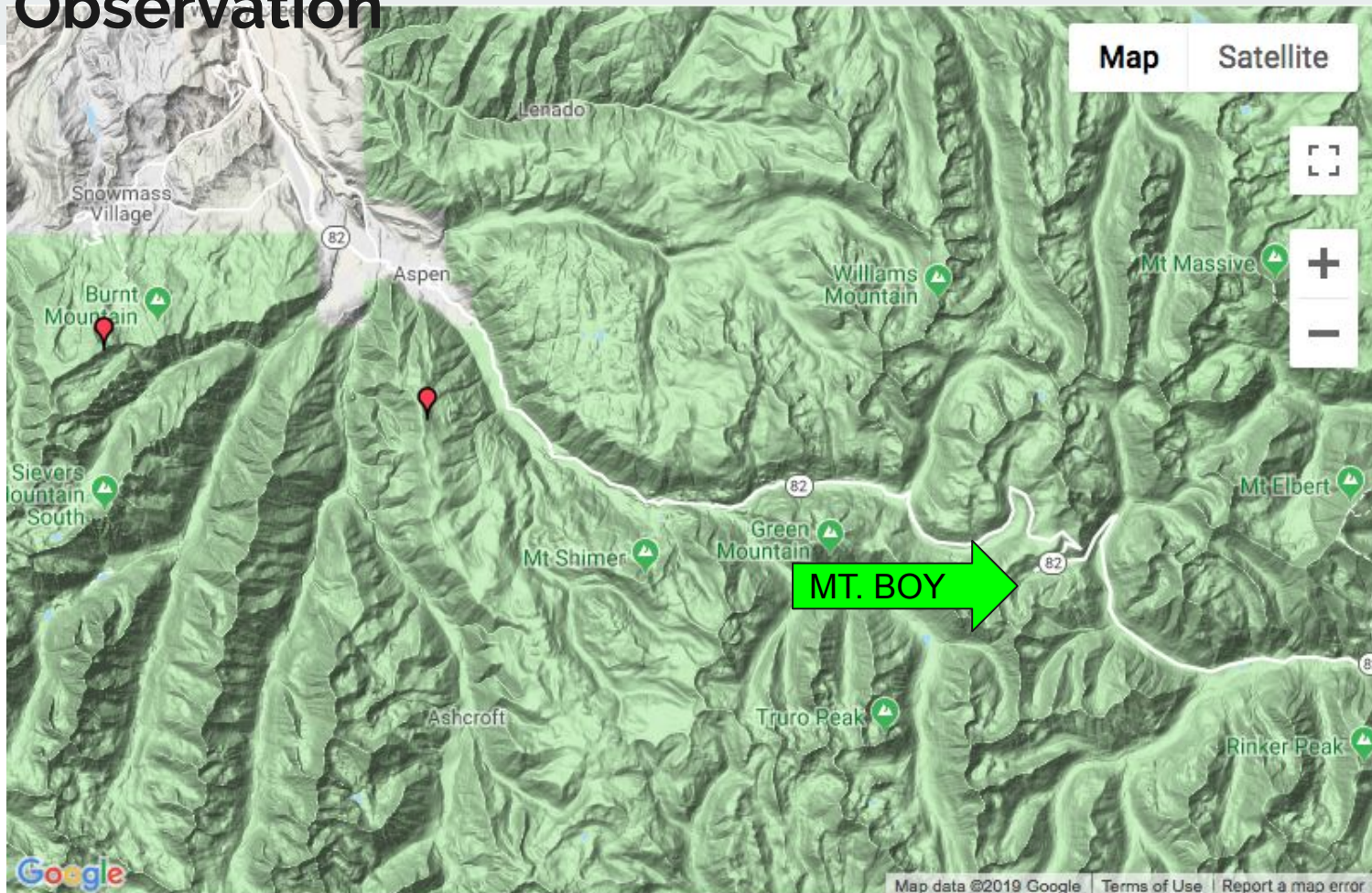
# Avalanche Observation





CAIC


# Avalanche Observation

Aspen Area



Field Obs  Location Known  Unknown

Avalanche Obs  Location Known  Unknown

Cluster of Obs 

# Avalanche Observation

Aspen Area

R3,D3

>TL, 13k ft, North

Natural trigger

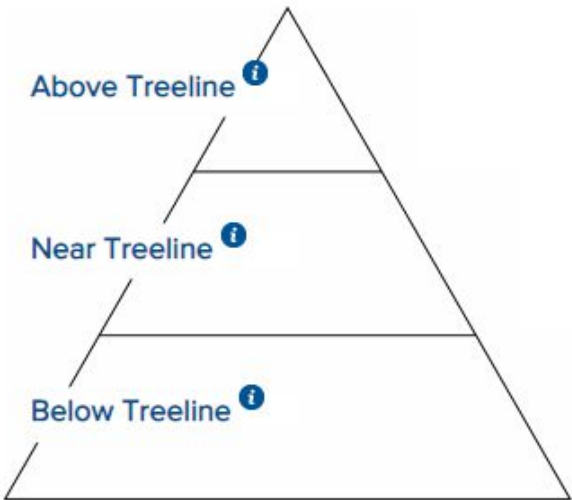






# Avalanche Danger Trend in Sawatch

## Five Day Trend



Saturday

Sunday

Monday

Today

Tomorrow



Danger Scale ⓘ





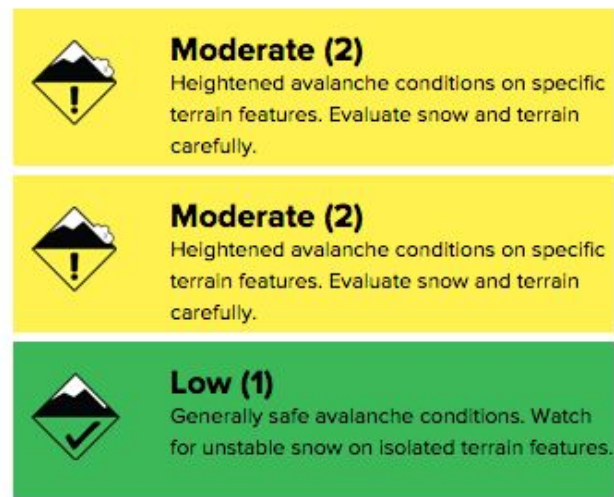
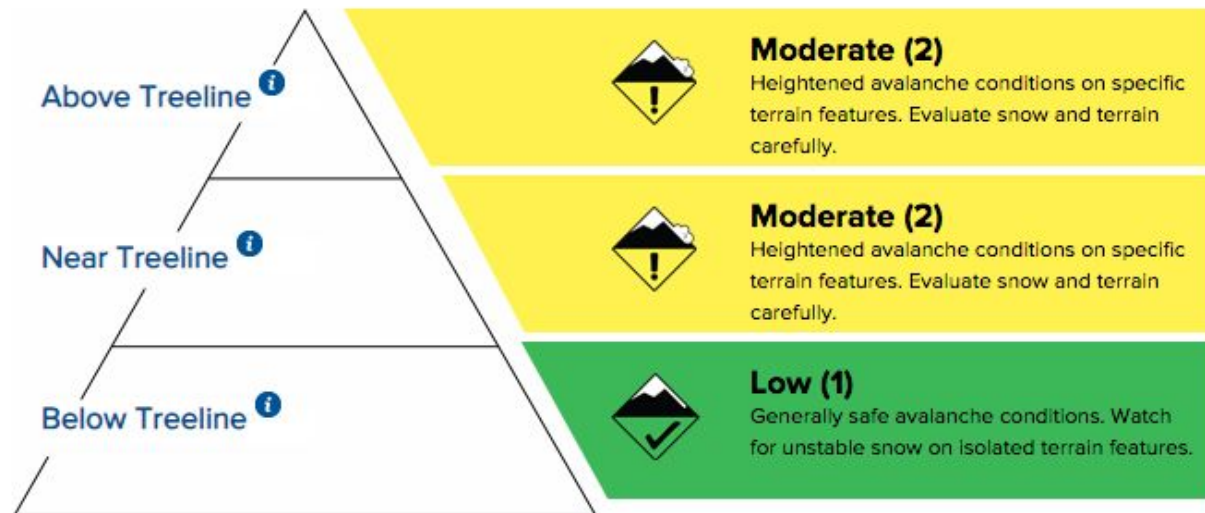
# Avalanche Danger in Sawatch

Tue, Feb 26, 2019 at 7:14 AM

Issued by: Mike Cooperstein

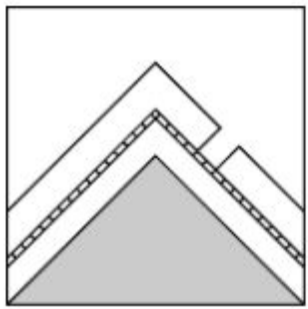
Today

Tomorrow

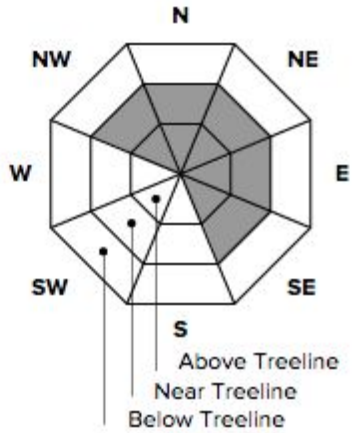


# Avalanche Problem in Sawatch

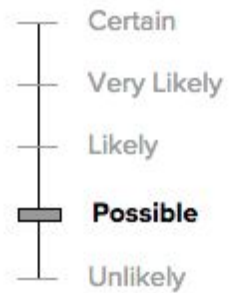
## Avalanche Problem Persistent Slab i



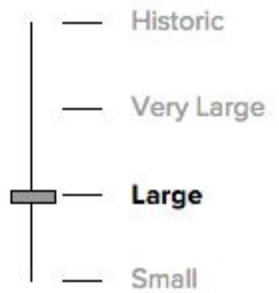
Avalanche Character i



Aspect/Elevation i



Likelihood i



Size i

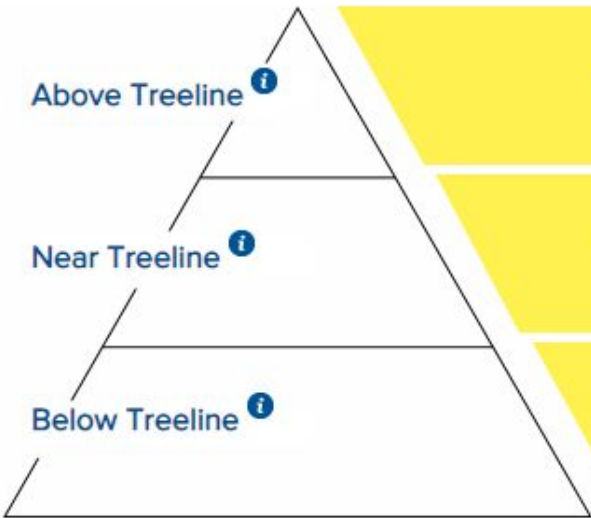
# Avalanche Danger in ASPEN

Tue, Feb 26, 2019 at 7:04 AM

Issued by: Matt Huber

Today

Tomorrow



## Moderate (2)

Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully.



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Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully.



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## Moderate (2)

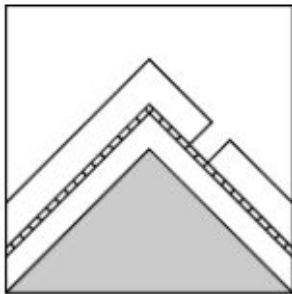
Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully.

Danger Scale

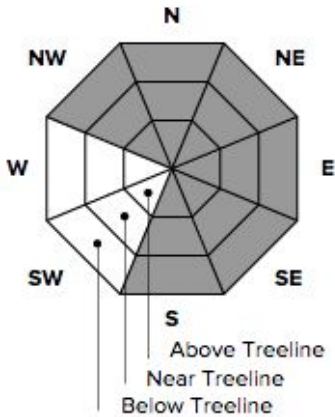


# Avalanche Problem in ASPEN

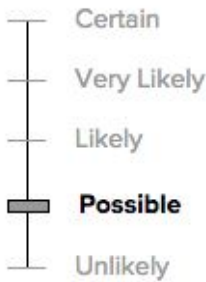
Avalanche Problem Persistent Slab i



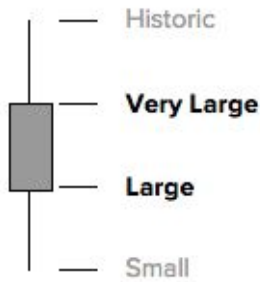
Avalanche Character i



Aspect/Elevation i



Likelihood i



Size i

# Avalanche Danger in Mt. Boy zone

@ and >TL



- Windloaded areas
  - Cross load in weird places
  - Strong winds 15-25 G40 today
    - Naturals if fetch adequate?



# Avalanche Danger in Mt. Boy zone

@ and >TL



- Windloaded areas
  - Cross load in weird places
  - Strong winds 15-25 G40 today
    - Naturals if fetch adequate?
- Could Step Down To Ground

# Avalanche Danger in Mt. Boy zone

@ and >TL



- Windloaded areas
  - Cross load in weird places
  - Strong winds 15-25 G40 today
    - Naturals if fetch adequate?
- Could Step Down To Ground
- NW to NE to SE
  - Don't inherently trust WEST or SOUTH aspects

# Avalanche Danger in Mt. Boy zone

@ and >TL



- Windloaded areas
  - Cross load in weird places
  - Strong winds 15-25 G40 today
    - Naturals if fetch adequate?
- Could Step Down To Ground
- NW to NE to SE
  - Don't inherently trust WEST or SOUTH aspects
- LARGE to VERY LARGE avalanches POSSIBLE
  - Moving away from very large

# Avalanche Danger in Mt. Boy zone

## @ and >TL



- Windloaded areas
  - Cross load in weird places
  - Strong winds 15-25 G40 today
    - Naturals if fetch adequate?
- Could Step Down To Ground
- NW to NE to SE
  - Don't inherently trust WEST or SOUTH aspects
- LARGE to VERY LARGE avalanches POSSIBLE
  - Moving away from very large
- Snowpack stability slowly increasing- for now.

# Avalanche Danger in Mt. Boy zone



## Moderate (2)

Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully.



## Moderate (2)

Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully.



# TRAVEL TIPS



- Cross paths 1 at a time
- Constant Obs and discussion w/ group
- Look Out for wind-loaded slopes
- Stay off 30° + slopes
- Be aware of alpha angles
- Conservative Decision making
- Stop at key decision points

# Closing Words



**“Stubborn, but catastrophic, seems to be a common and fitting description of the types of avalanches we have seen recently.”**

Matt Huber, Aspen zone forecast discussion, CAIC - 20180225