Snowpack Update: Physically Based Snowpack Model

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- Physically based snow model
  - NO CALIBRATION!
- Weekly snowpack updates
- Resolution
  - 100 m spatial
  - 1 hour time
- Forcing data
  - Meteorological stations
  - Air temperature, precip, wind, solar
Current Results: SWE Distribution

- Snow mainly in upper elevations
- Low to mid elevation snowpack is ripe and ready to melt
Current Results: SWE vs. Elevation

- Large range in Snow Water Equivalent (SWE) for each elevation
Current Results: Potential Melt Volume vs Elevation

- Mores Creek Basin is almost fully ripe and has a high potential for melt.
- Still a good portion of colder snow at higher elevations.
Changes: SWE Distribution

- Higher elevations gained
- Lower elevations rapidly melting
Changes:  
SWE vs. Elevation

- Some higher elevations gained
- Lower elevations rapidly melting
Changes:
Water Volume

- Mid elevations lost the most since March 15
- Twin Springs lost most
Summary

- High resolution snowpack model
  - Look at water distribution and melt
  - Not sensitive to extreme years

- Lower to mid elevations:
  - Lots of melt - ~150 KAF for BRB

- Upper elevations
  - Gained some water
  - Less potential to melt

- Since last week
  - Slight increase in SWE
  - No significant melt