Short and Long Range Weather Outlook June 1st, 2011 Flood Task Force

(1-to-30 days)

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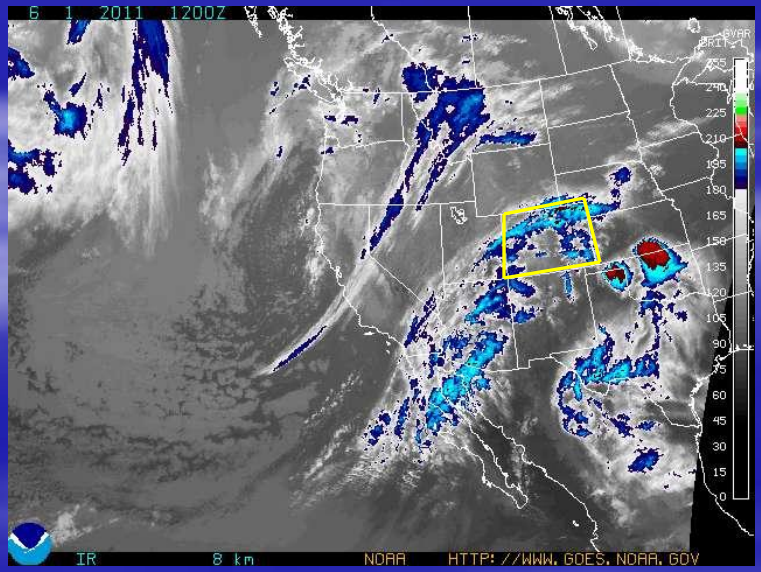
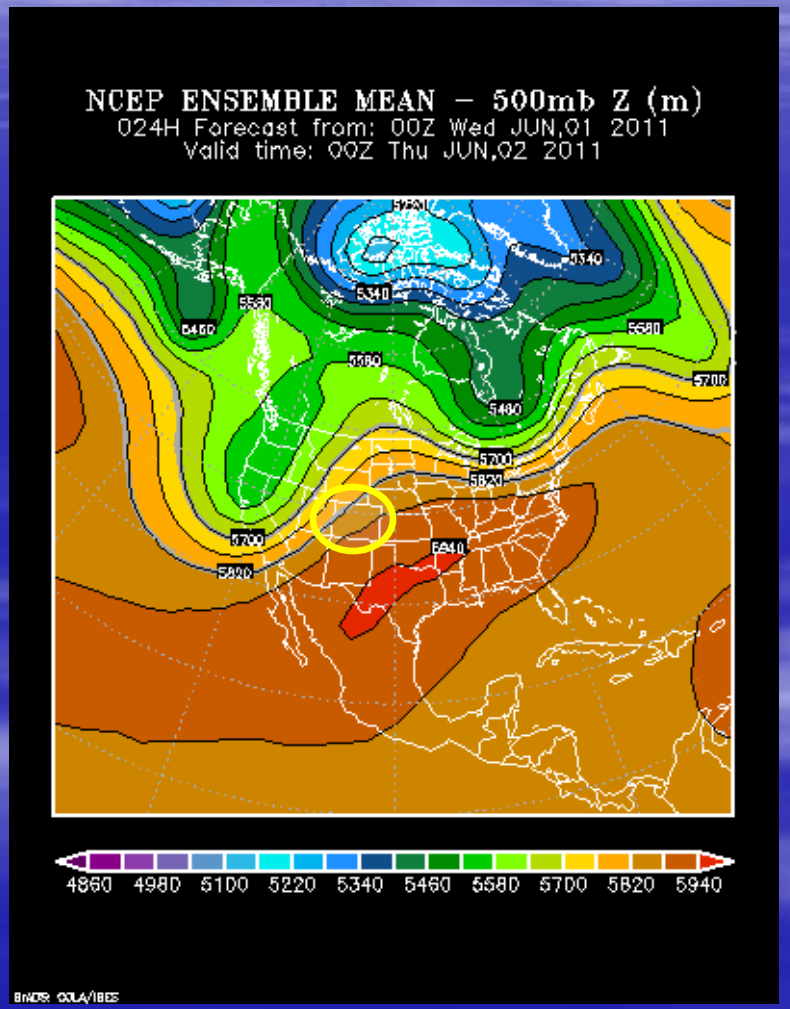
Short Term – Next 5 days

- Well above normal temperatures today and most locations Thursday
- 24-36 hour ‘break’ back to normal thanks to passing system clipping to north
- Late Saturday through at least Monday/Tuesday of next week…well above normal temps looking to return

Short Term – Next 5 days

- Well above normal temperatures today and most locations Thursday. Lots of cloud cover on way might mitigate things a little.

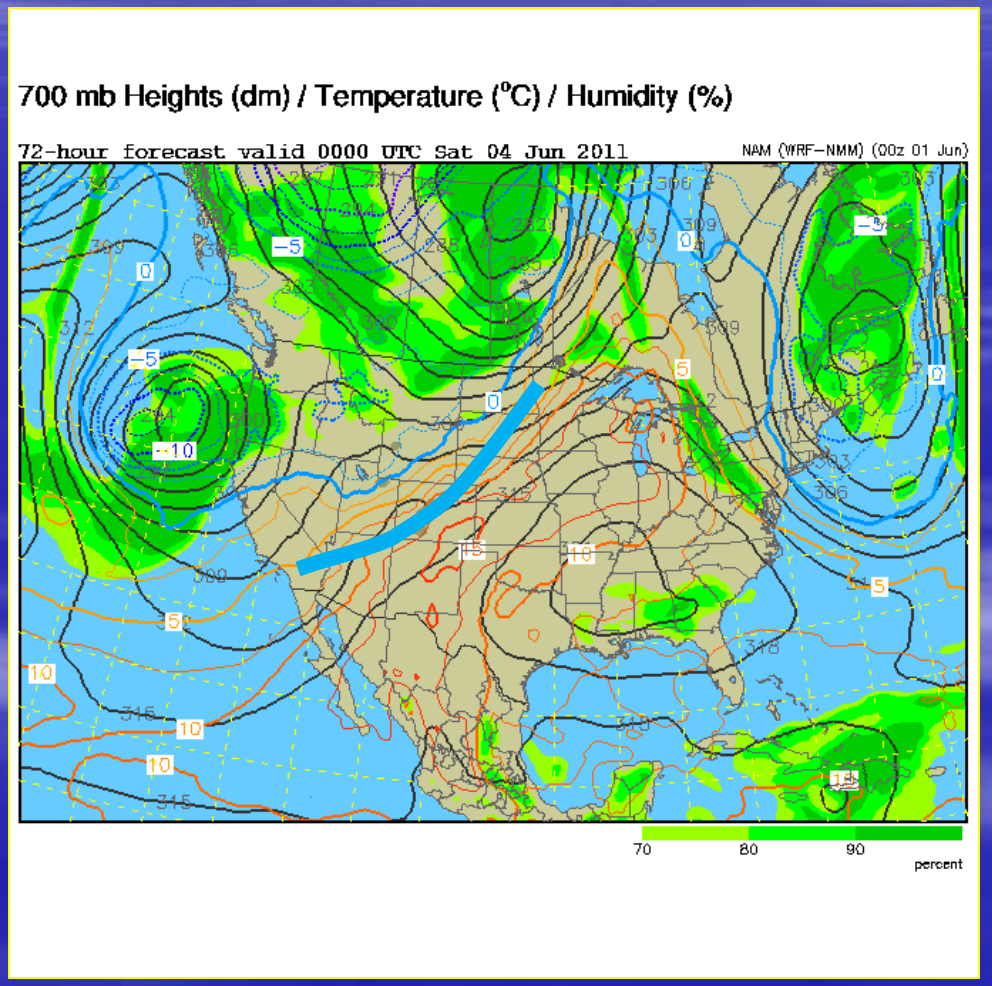




Short Term – Next 5 days

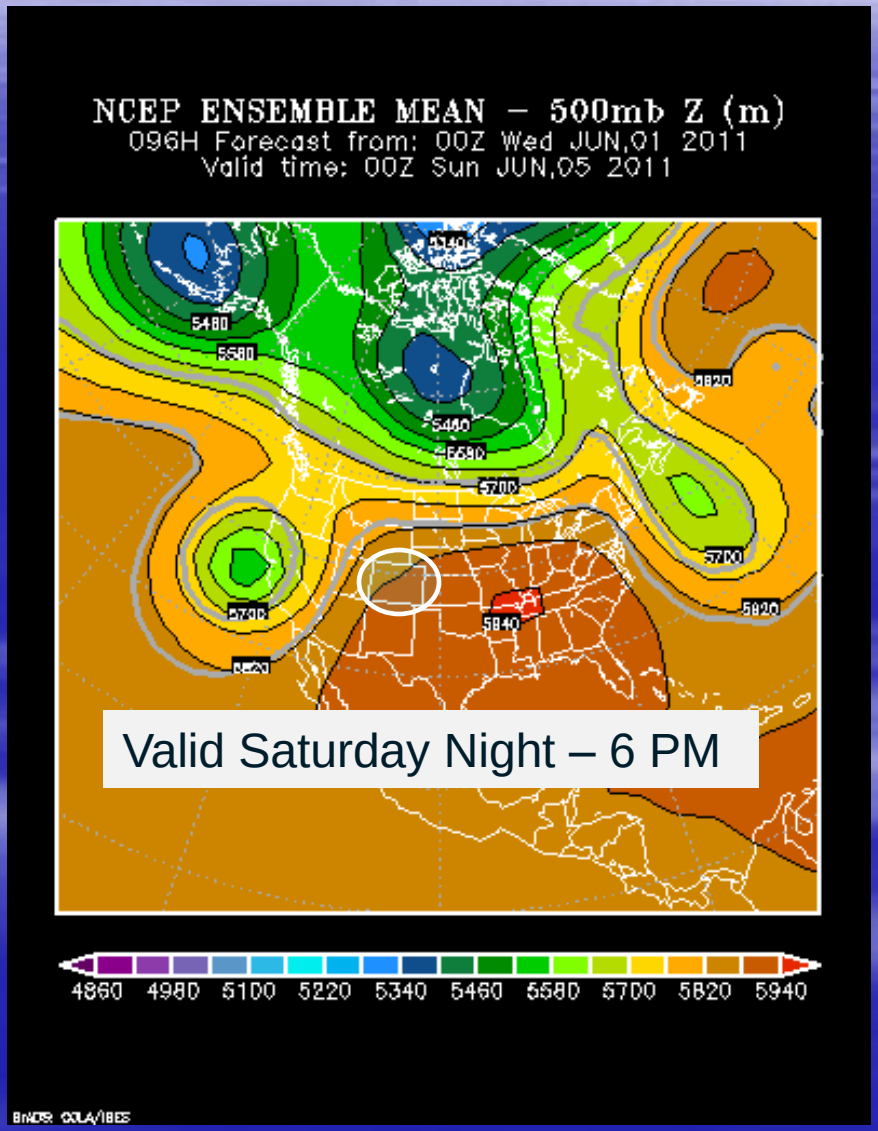
- 24-36 hour ‘break’ back to normal thanks to passing system clipping to north

Friday Night – 6 PM



Short Term – Next 5 days

- Later Saturday through at the very least Monday of next week…well above normal temps looking to return en masse…

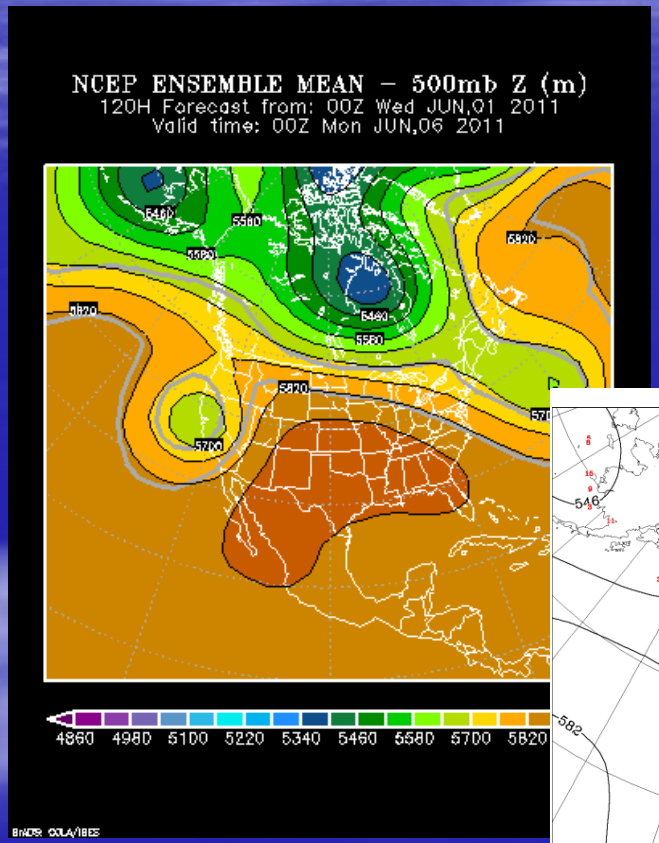


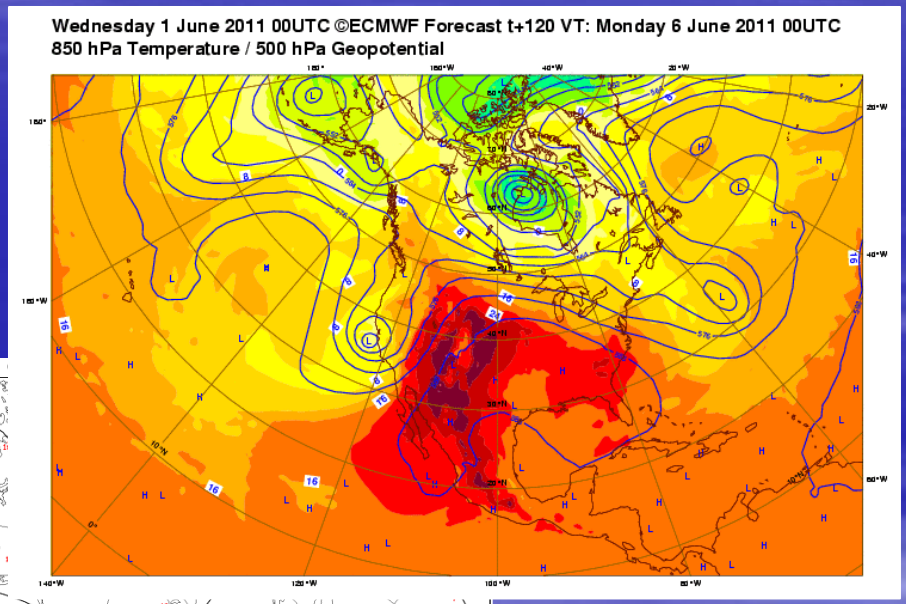
How certain about next week and how long for the warmth?

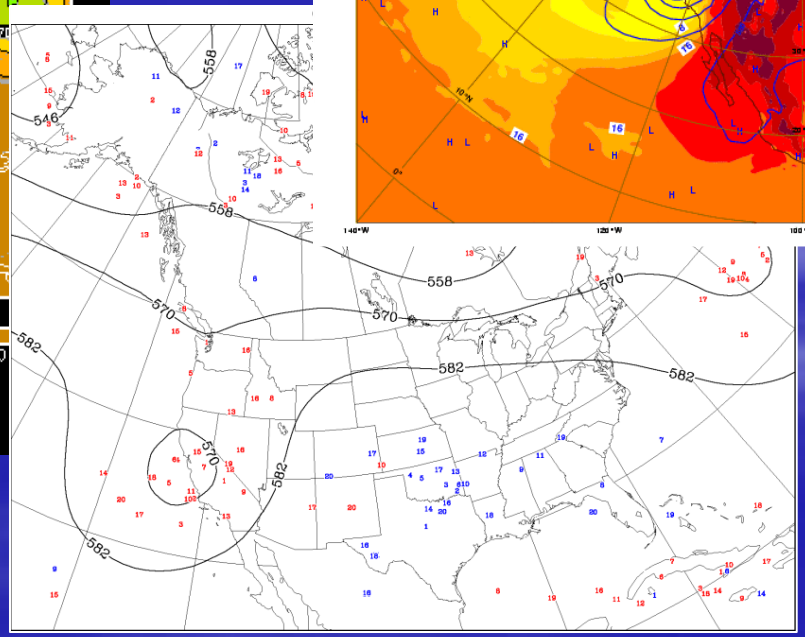
Comparison – Guidance_ Different Models:

Sunday Night (6/5) GFS(US), Canadian Ensemble means and European model…All models have upper level low at or very near Calf. Bay Area.

<u>High degree of agreement</u>

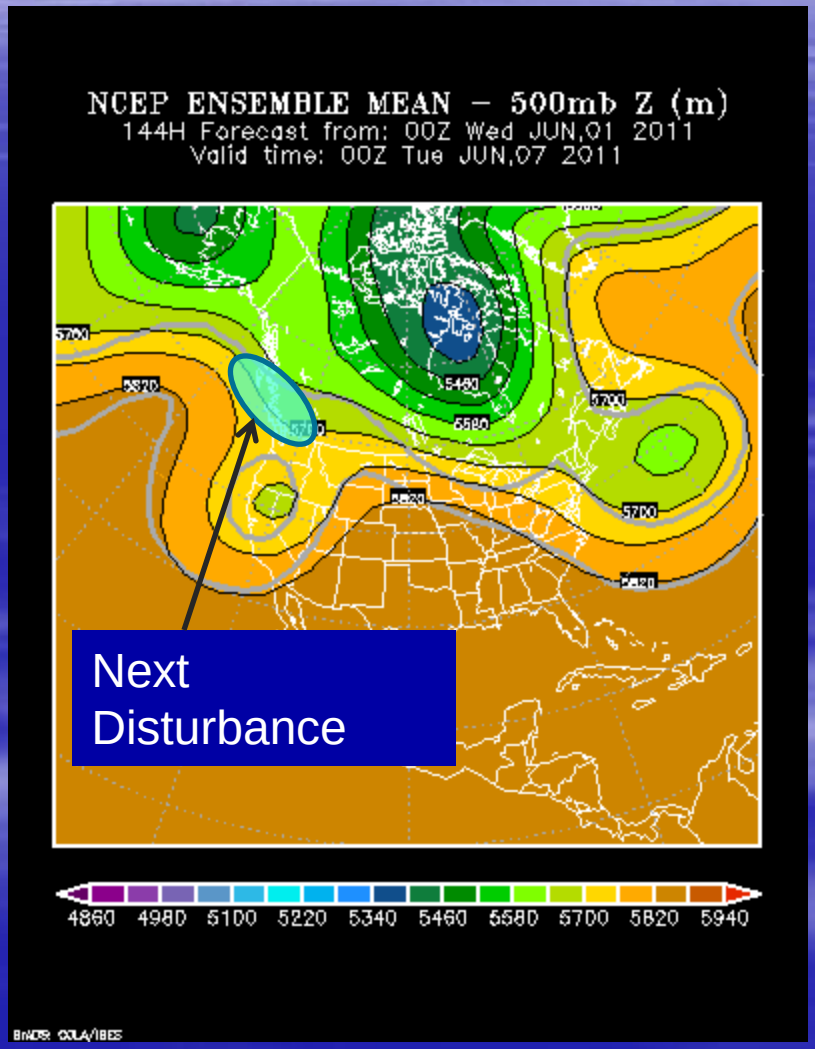






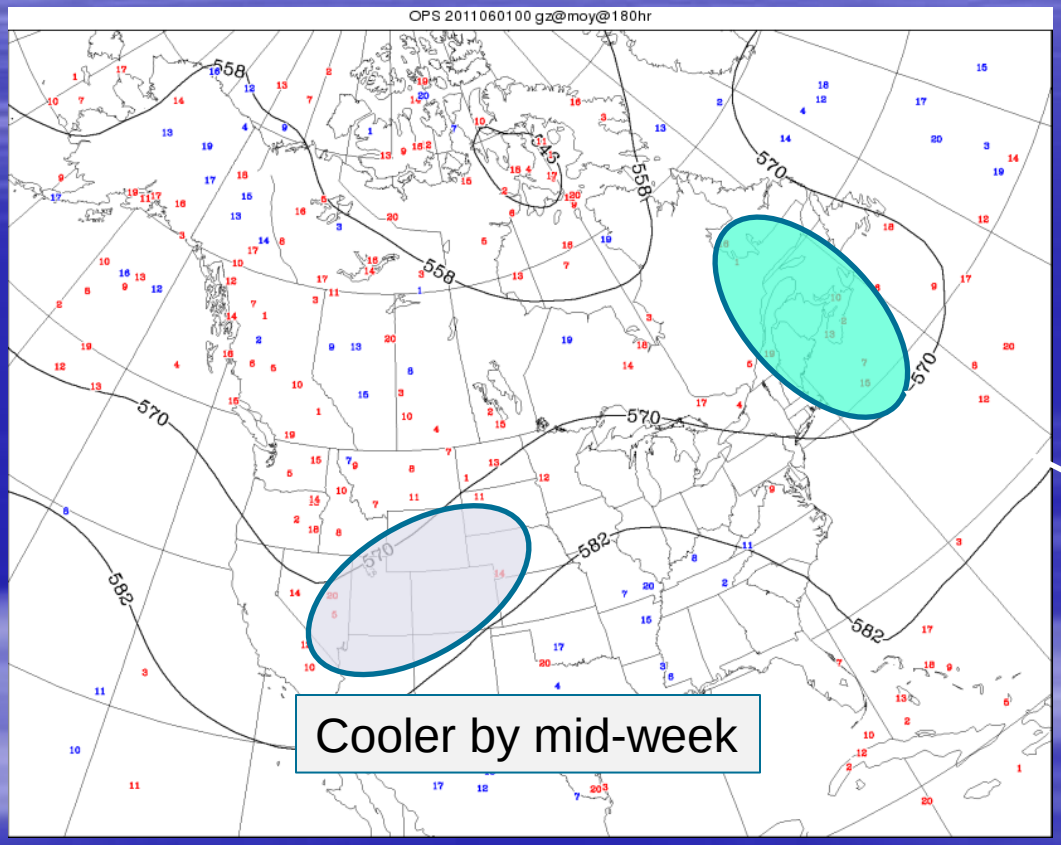
What can ‘change’ the forecast?

- Short waves in Pacific not picked up on that would shove West Coast trough inland sooner ..(very warm air for Sun./Mon. will still happen)



Anticipated result – some cooling

(return to normal by Wed. of next week)



Other ‘key’ will be forecasted trough

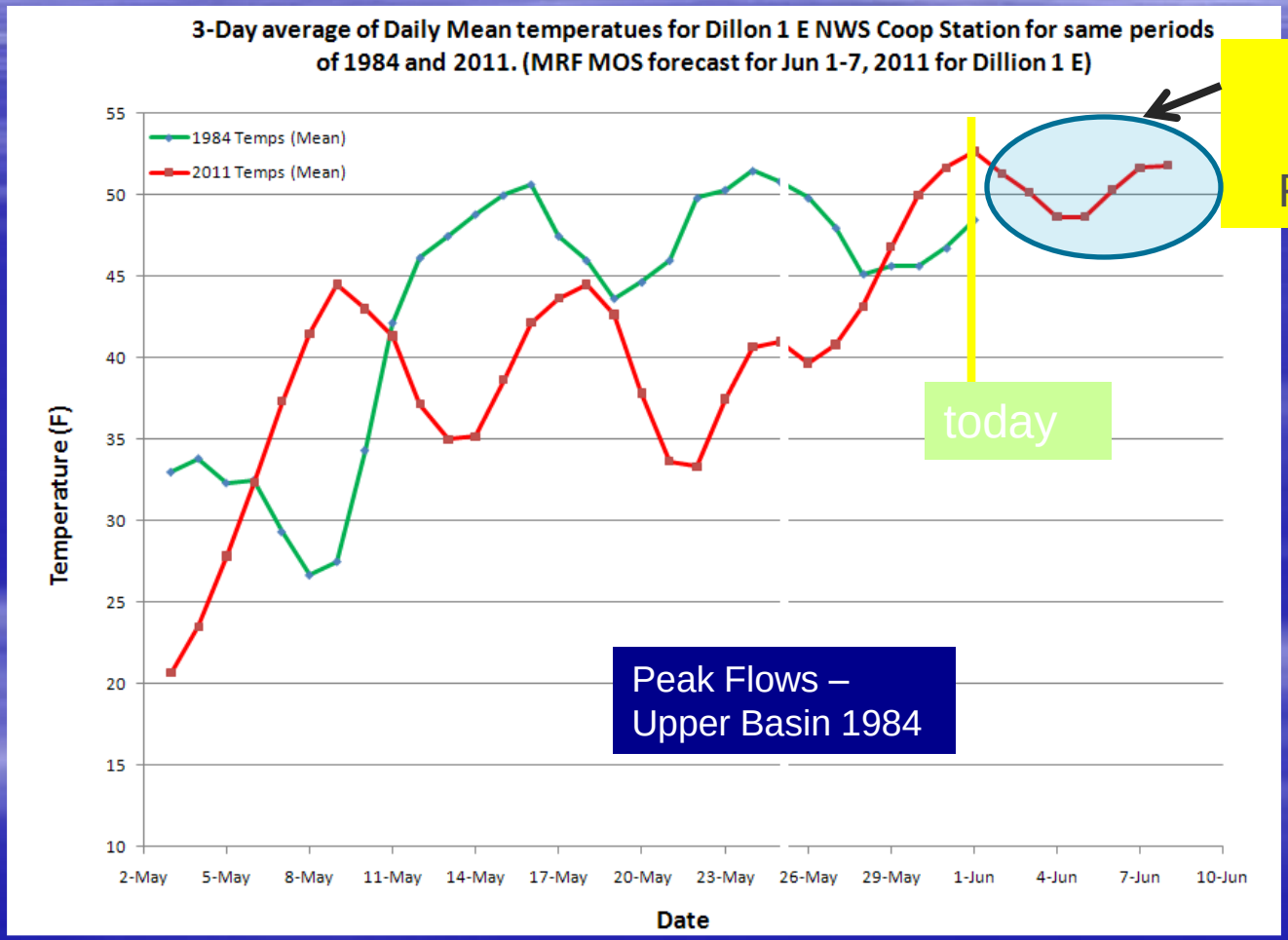
How does this forecast look in context with past late spring mass runoff events??

- Whispers of ‘1984’ (no not Orson Wells) have been used as an analogue in recent weeks with the massive Late April-Early May snowpack.

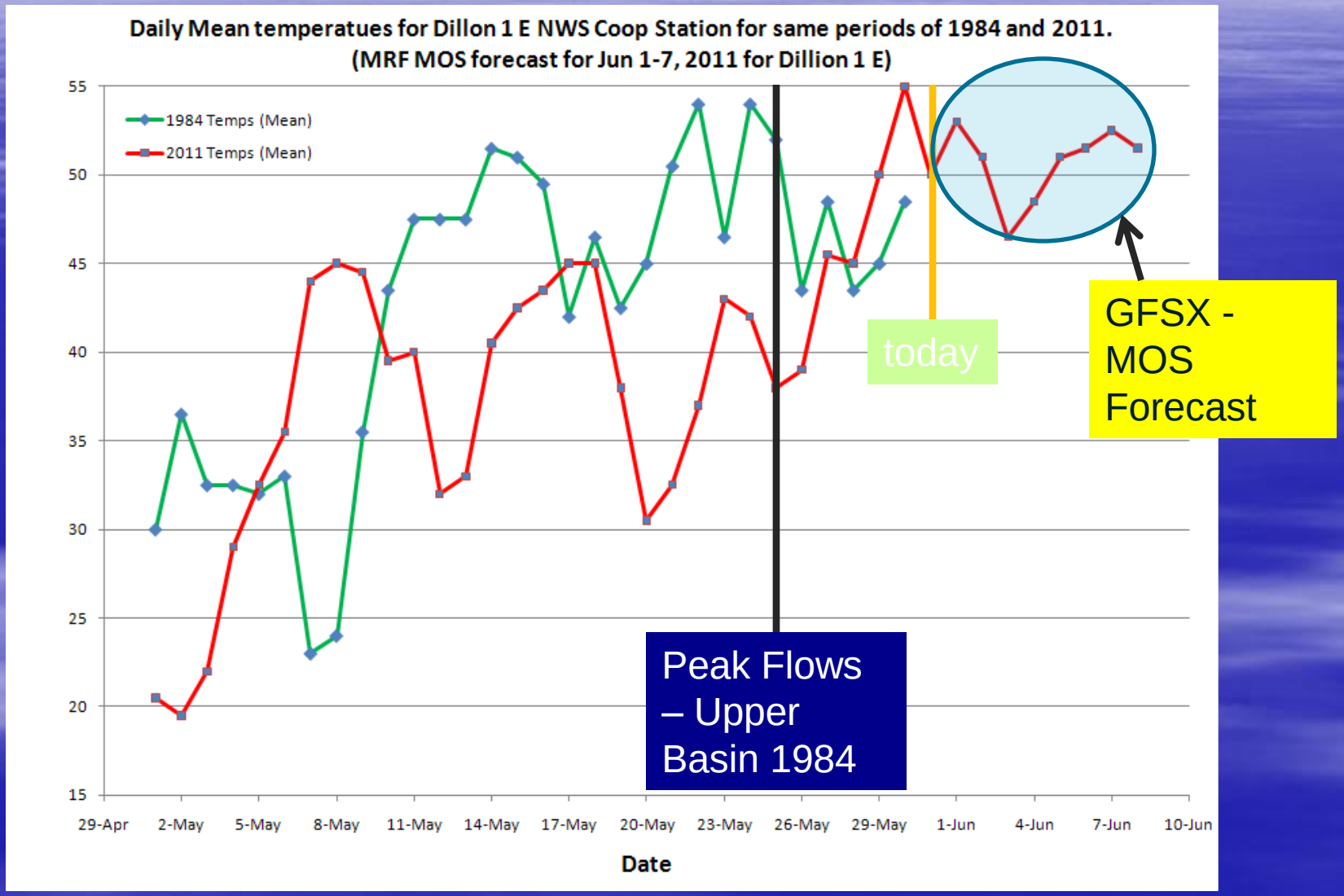
Brief Comparison of 1984' vs. 2011'

- Examined temperatures at nearly fixed National Weather Service Cooperative (once-a-day observation) site Dillon 1 E (currently located not far from NE shore of Lake Dillon).
- Looked at mean temperature for each day and by month to get a fixed observation at a higher elevation site in Central Colorado (mean = maximum + minimum divided by 2)

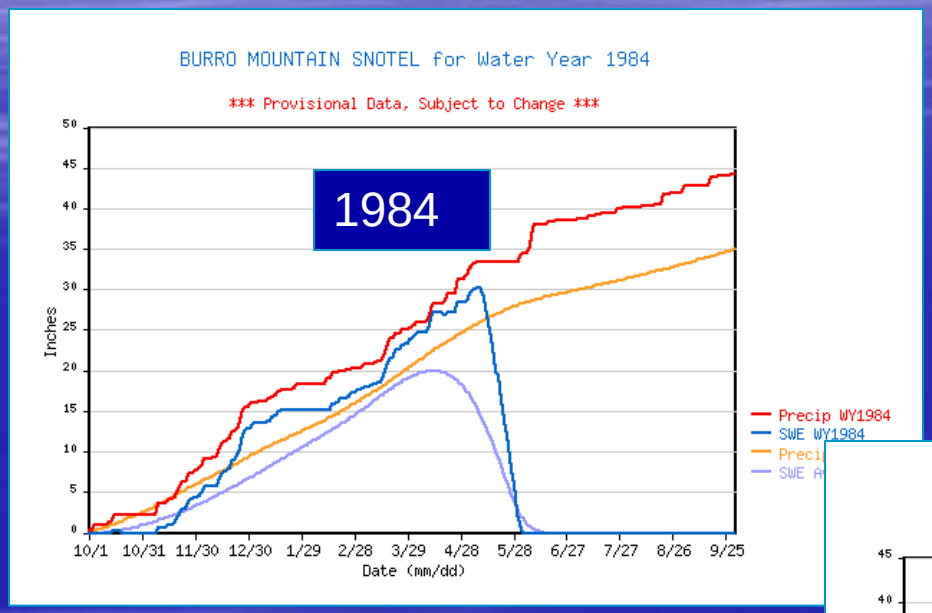
Temperature comparison 1984 vs. 2011 at Dillon 1 E (Summit Co. - Elev. ~ 9,060')

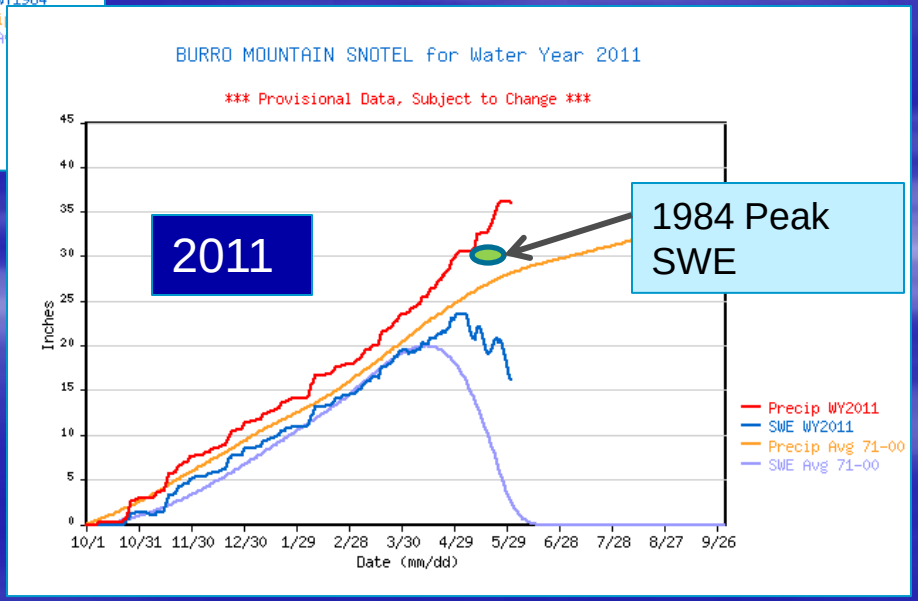


Same chart- but with daily data and forecasts

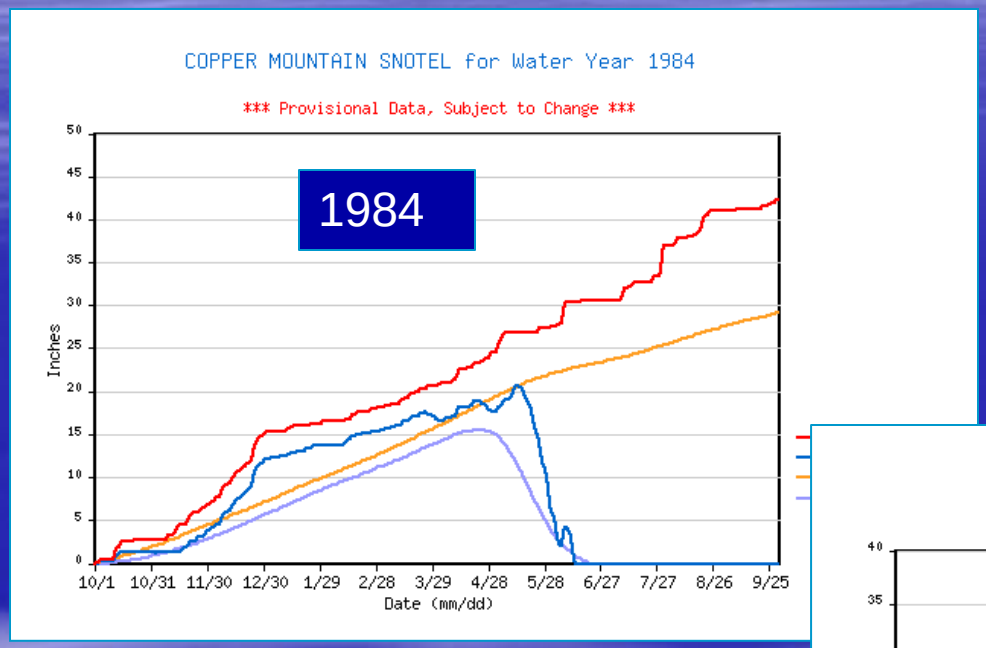


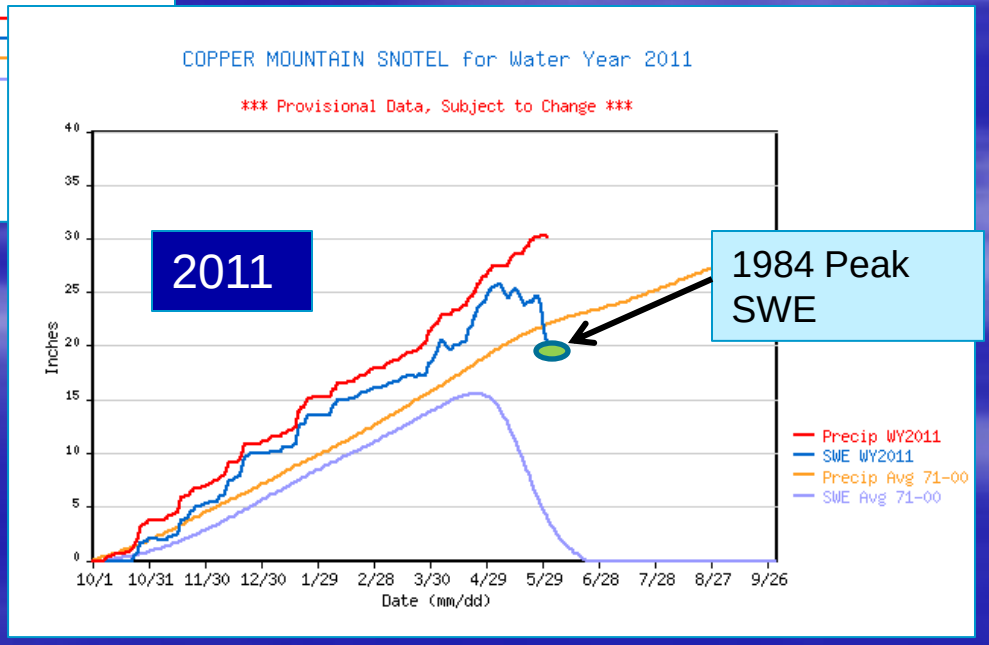
How did snow respond?
1984-2011 Burro Mountain (Yampa)



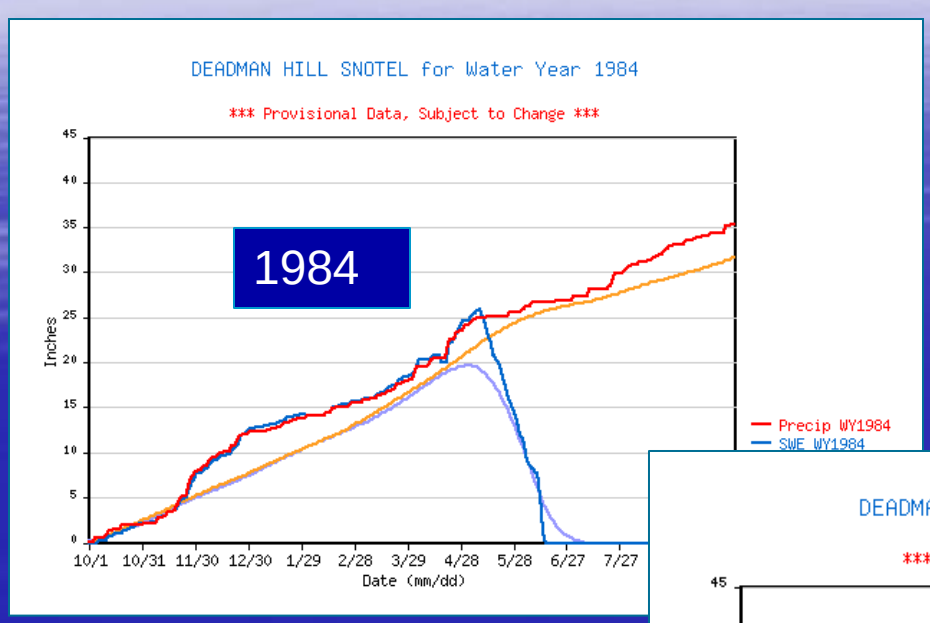


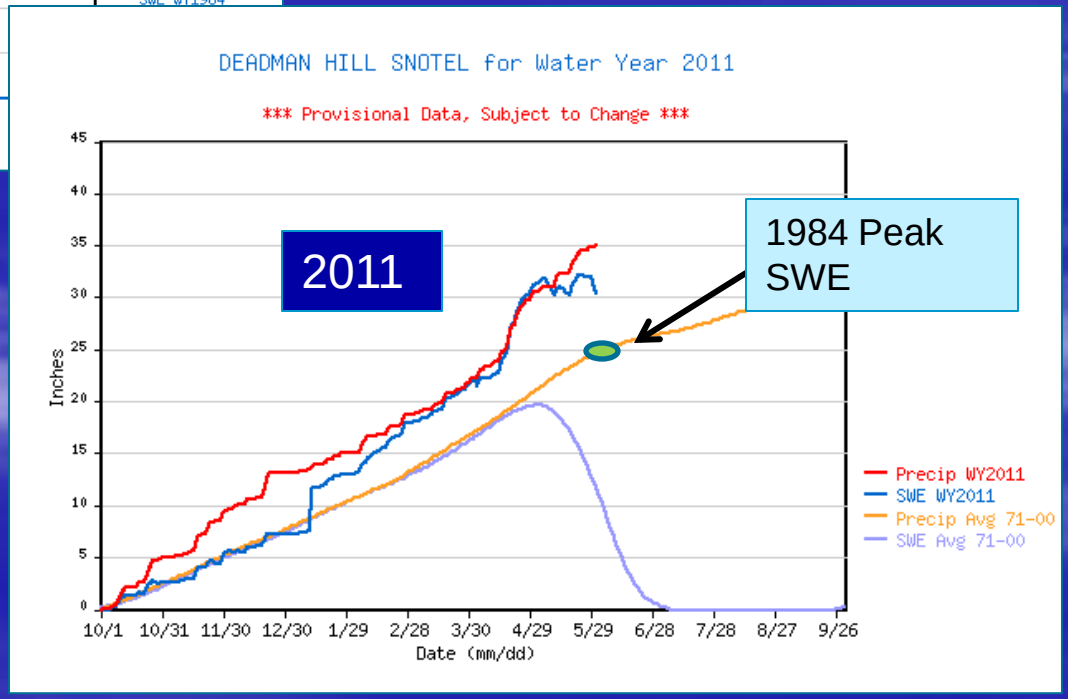
How did snow respond?
1984 vs. 2011 Copper Mountain (Blue)



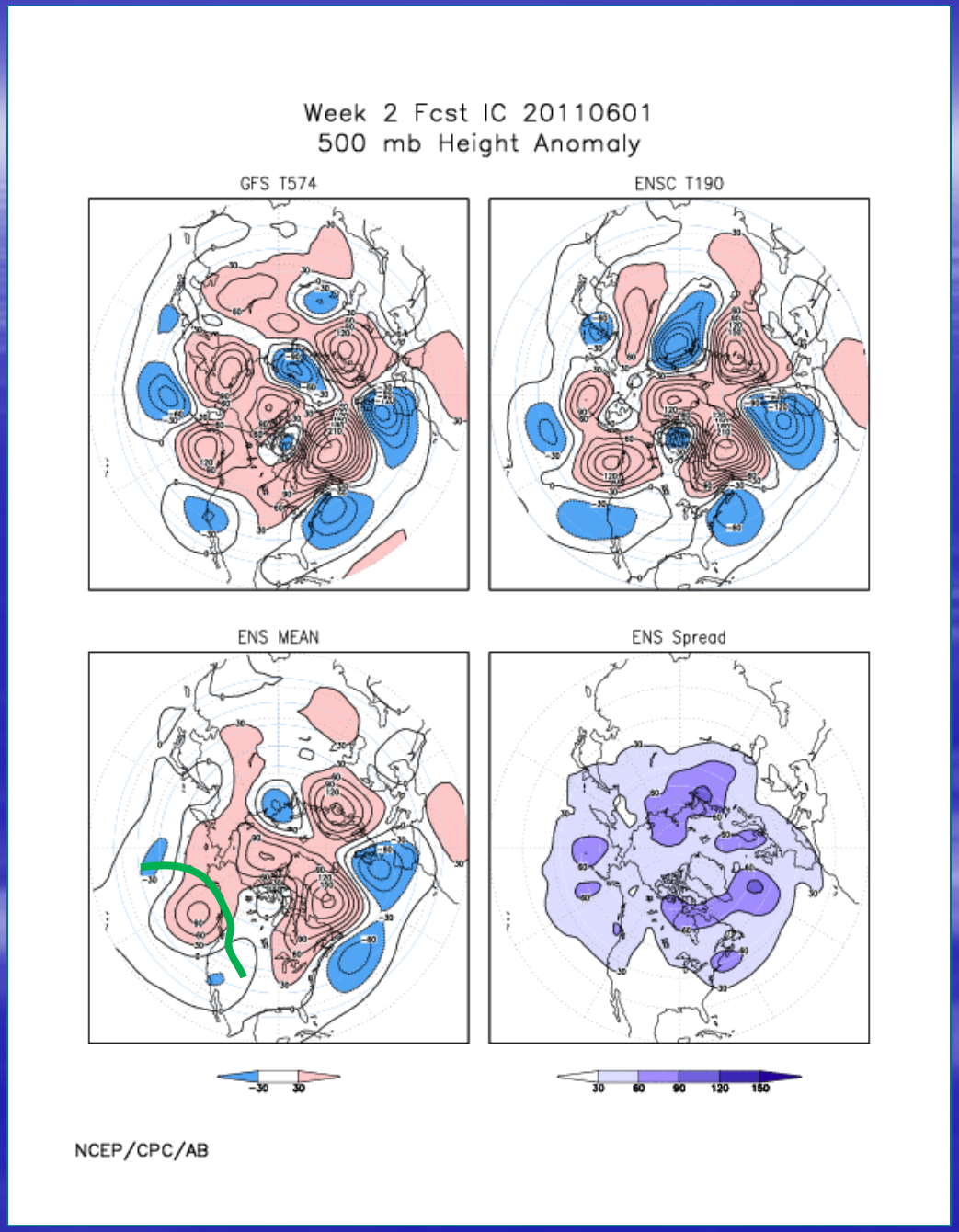


Final one….Deadman Hill (Cache La Poudre)





For Mid-June: Key Factors CPC 7-15 day 500 MB height anomalies

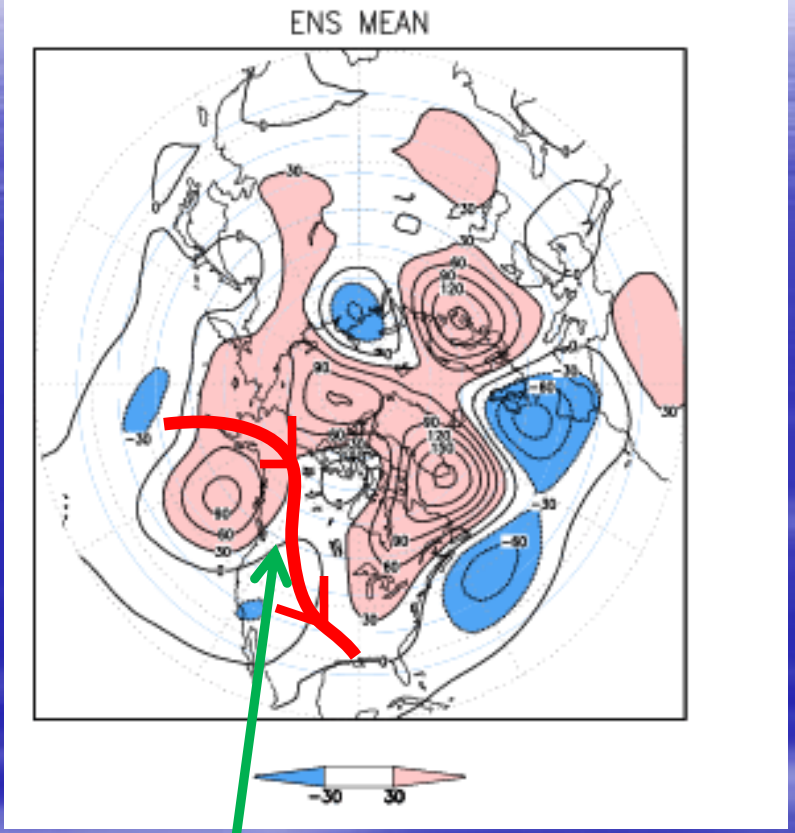


For June – Key Factors
CPC 7-15 day 500 MB height anomalies.

Generalized Impacts.

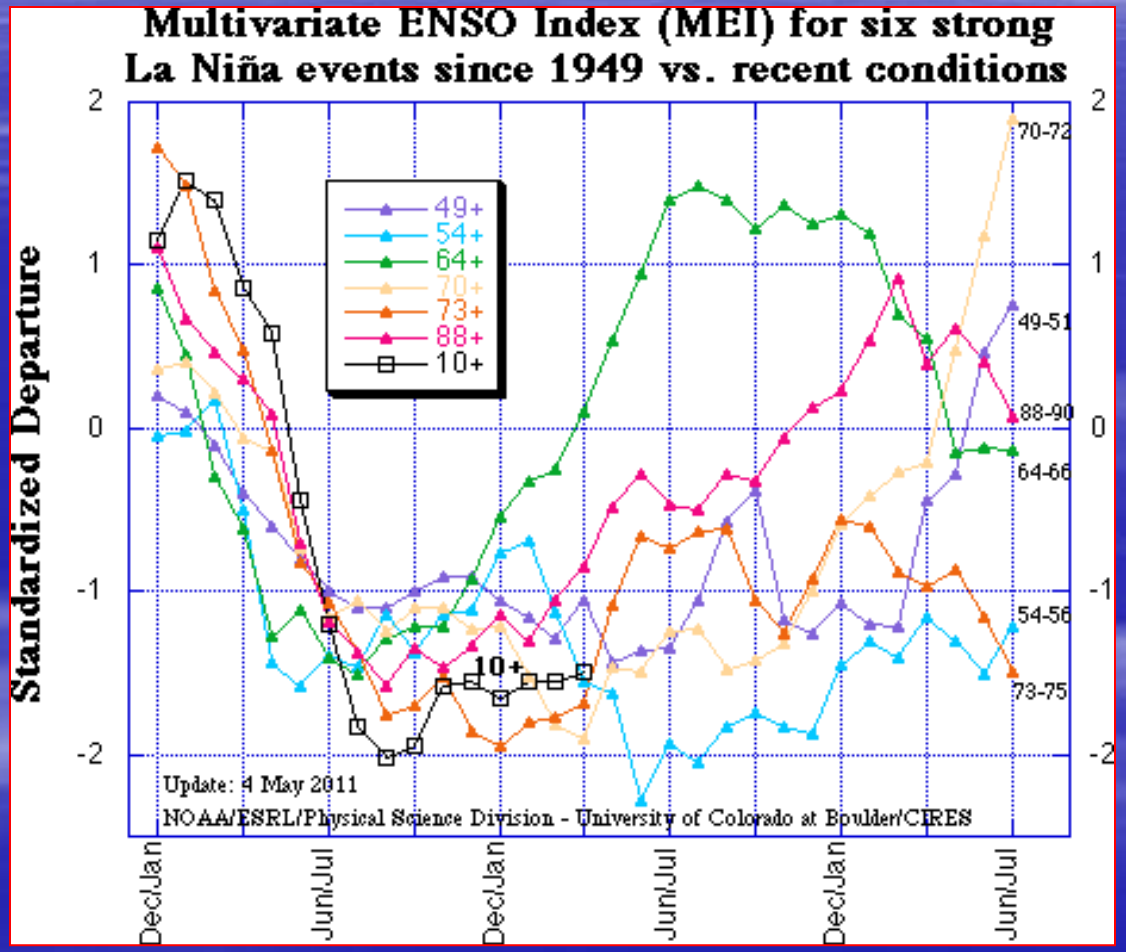
Precipitation: Seasonal to dry east of Divide..Slightly wet north, slightly dry south (W. of Divide).

Temperatures: Mountains : Seasonable (when June is all said and done). Thus some cooler weather towards June 9-13 would be suggested.

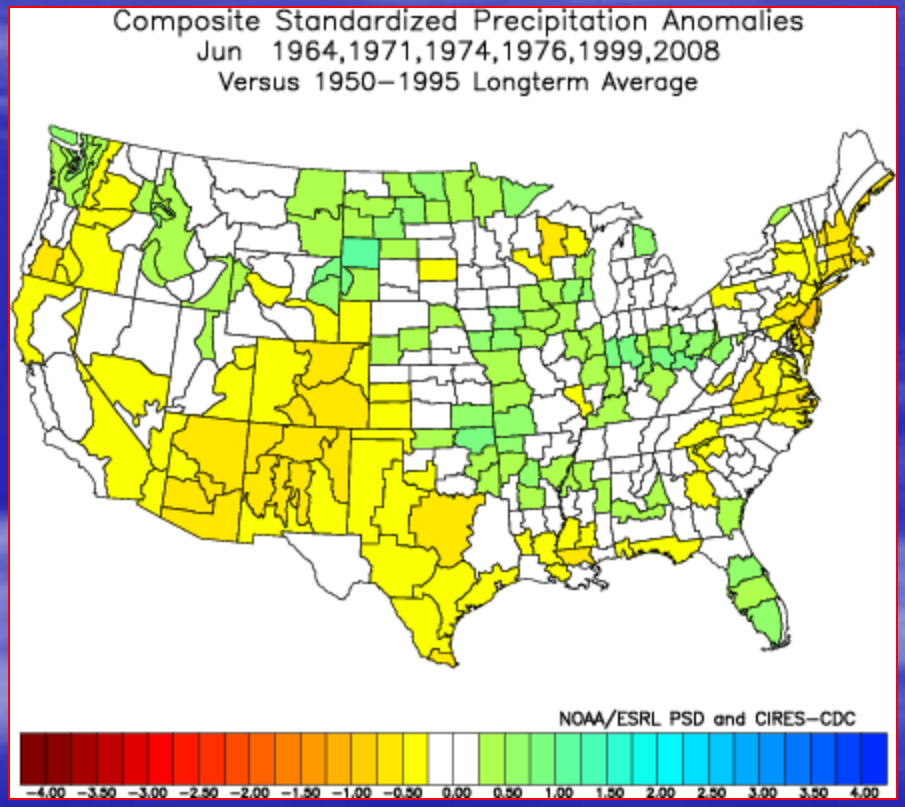


General Jet Stream track

Using ENSO as guidance for June…



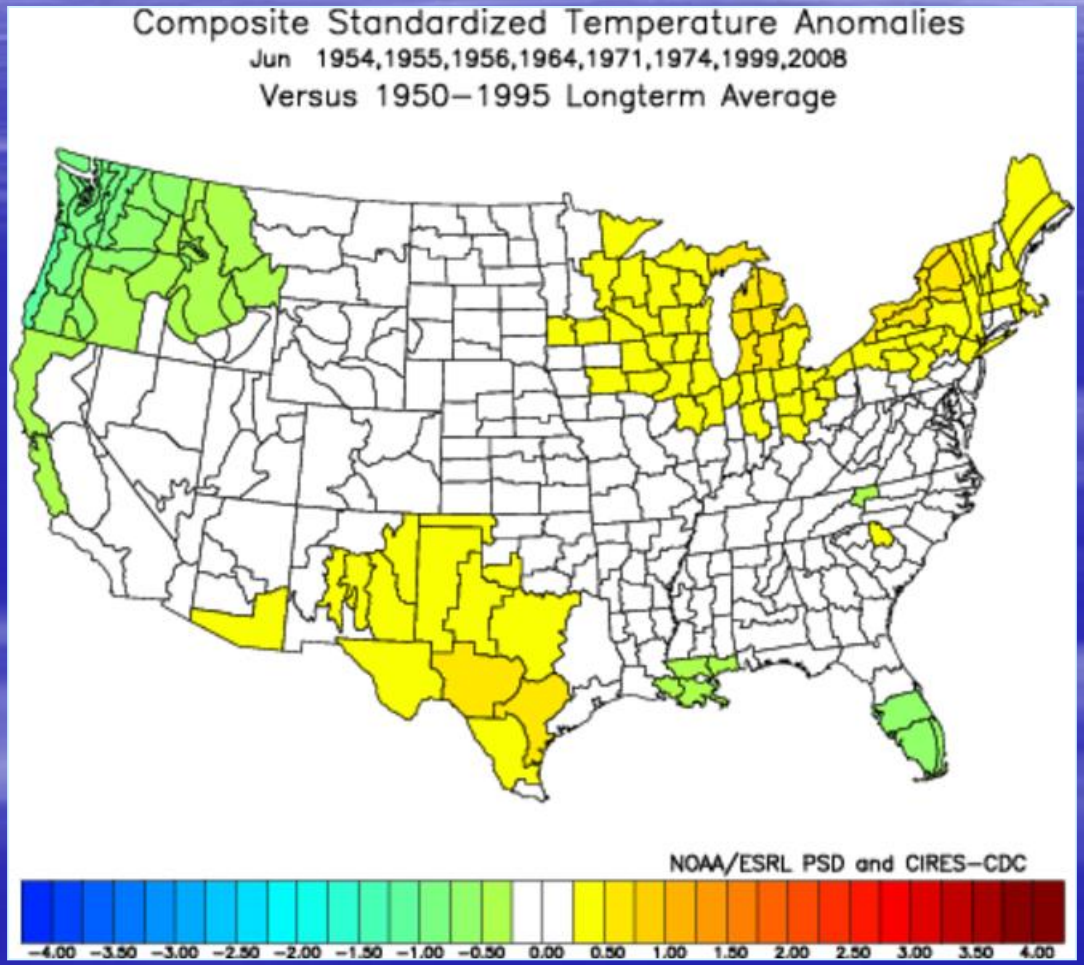
Analogue years (felt was appropriate)



Above normal years for precipitation on Front Range difficult to find…

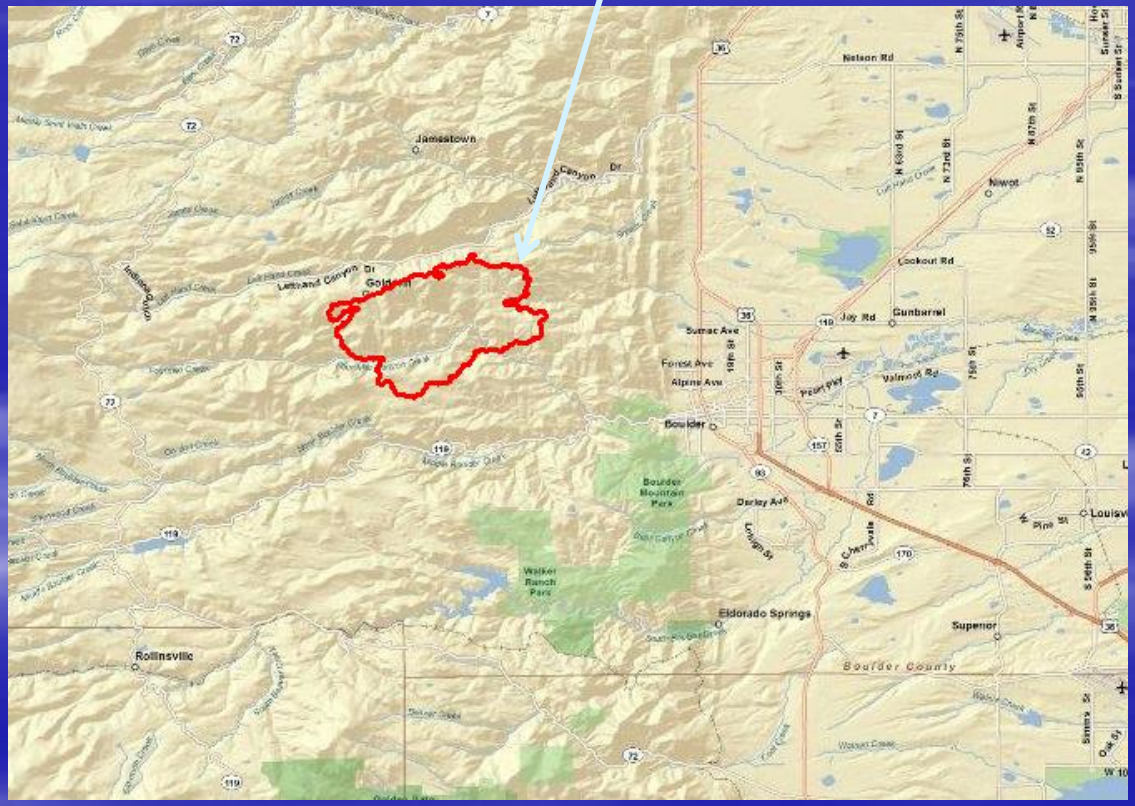
Thus, normal to slightly dry conditions favored over period on Front Range.

Same could be said for mean monthly Temperatures.



Special Note as well…

However… NW flow still can lead to some short duration-high intensity storm events…..mainly on the Front Range and some extra caution for the Fourmile burn area based on experience.



Summary

- Yes….two well above normal days today/tomorrow (slight cooling far west later)
- 24-36 hours of a return to normal temps in central and northern mountains.
- Weekend…'heat' return for a minimum of 3-days *(equivalent to current spell with respect to mean daily temps…some more cloud cover..but warmer overnight temps)*
- Burst of long term temps near one of the May 1984 'bursts' of warmth in magnitude..break between shorter and less 'cool' but total duration of warmth maybe net shorter.
- 14-day mean temperature at Dillon 1 E (as a high elevation proxy) equals the 14-day mean for 1984 by Tuesday of next week.

Summary (cont.)

- Different angles of data analysis suggest above normal temps will not be sustained but break and average out the month near normal …(thus we should have below normal temperatures for a multi-day average near the mid-section of month)
- June temps near normal with slight chance of below normal in mountains.
- Direct precipitation threats relatively low…precipitation over state to average near to below normal for month.
- Still decent chance of short-duration high intensity minor flooding events but with pattern Fourmile burn area will be an area of above average concern mid/late June.