Spring 2010

Weekly Climate, Water & Drought Assessment

Today's Agenda

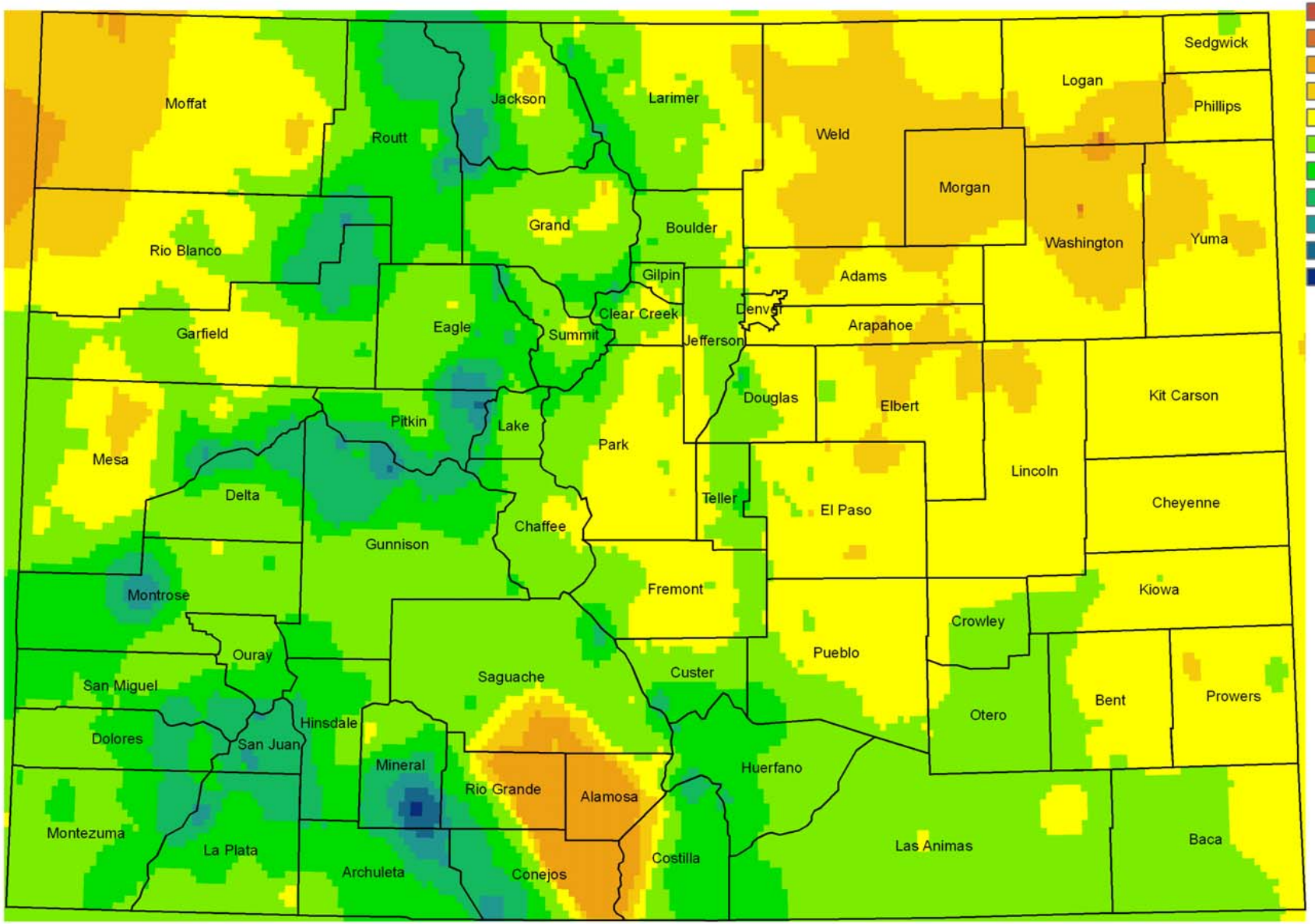
-Assessment of current water conditions

- Precipitation Forecast

- Recommendations for Drought Monitor

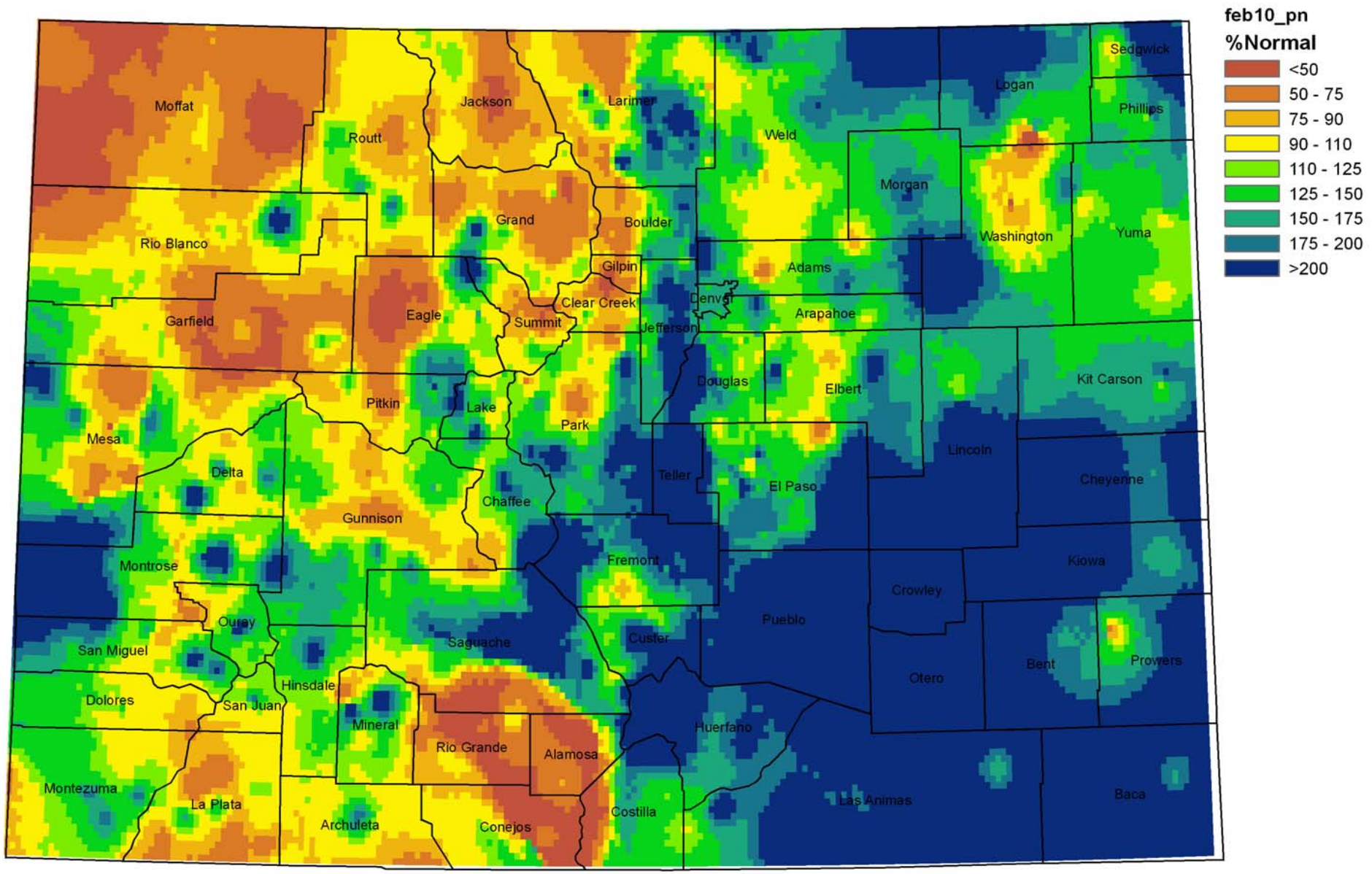
Precipitation/Snowpack Update

February 2010 Precipitation (in)



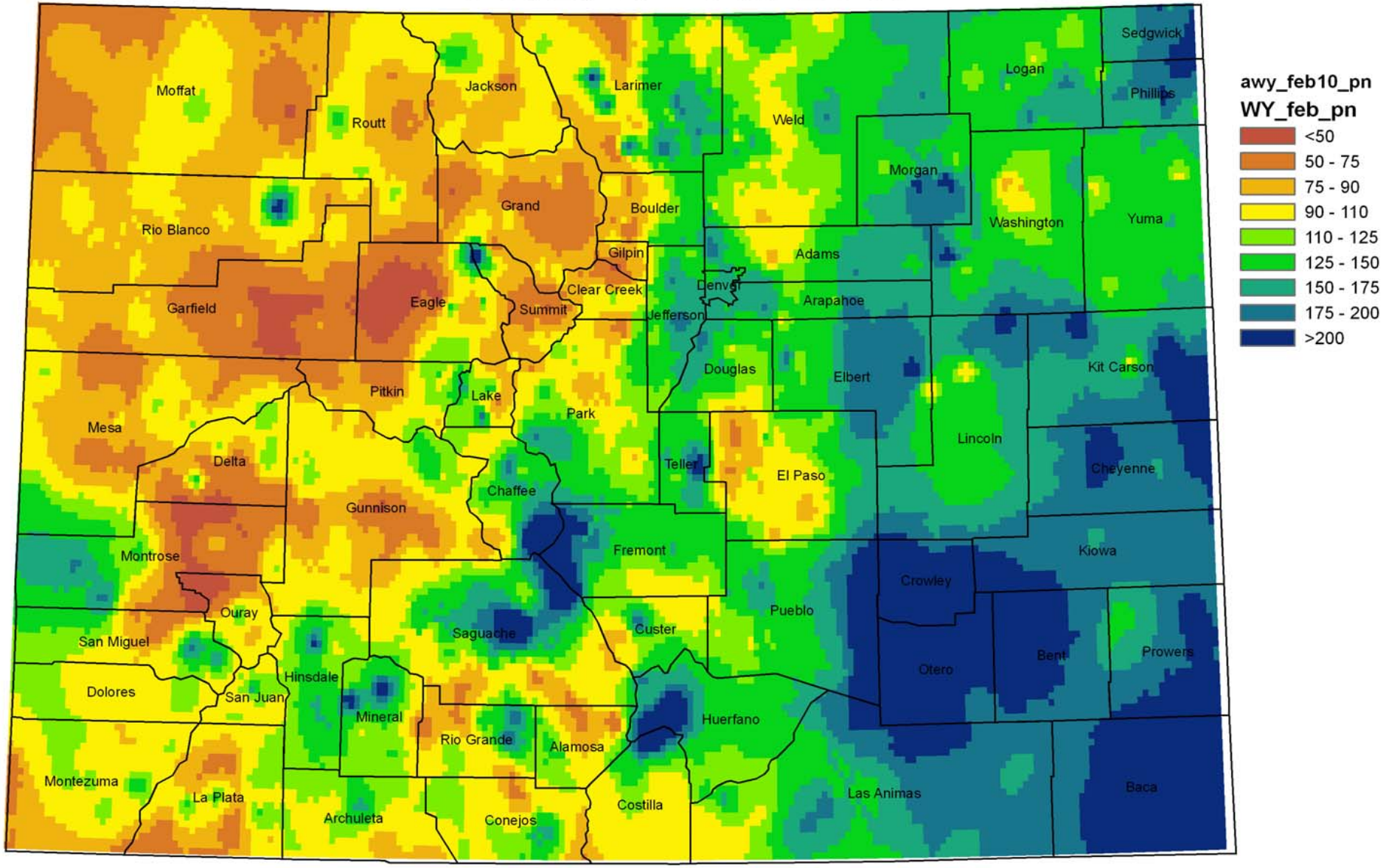
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

February 2010 Precipitation as Percent of Average



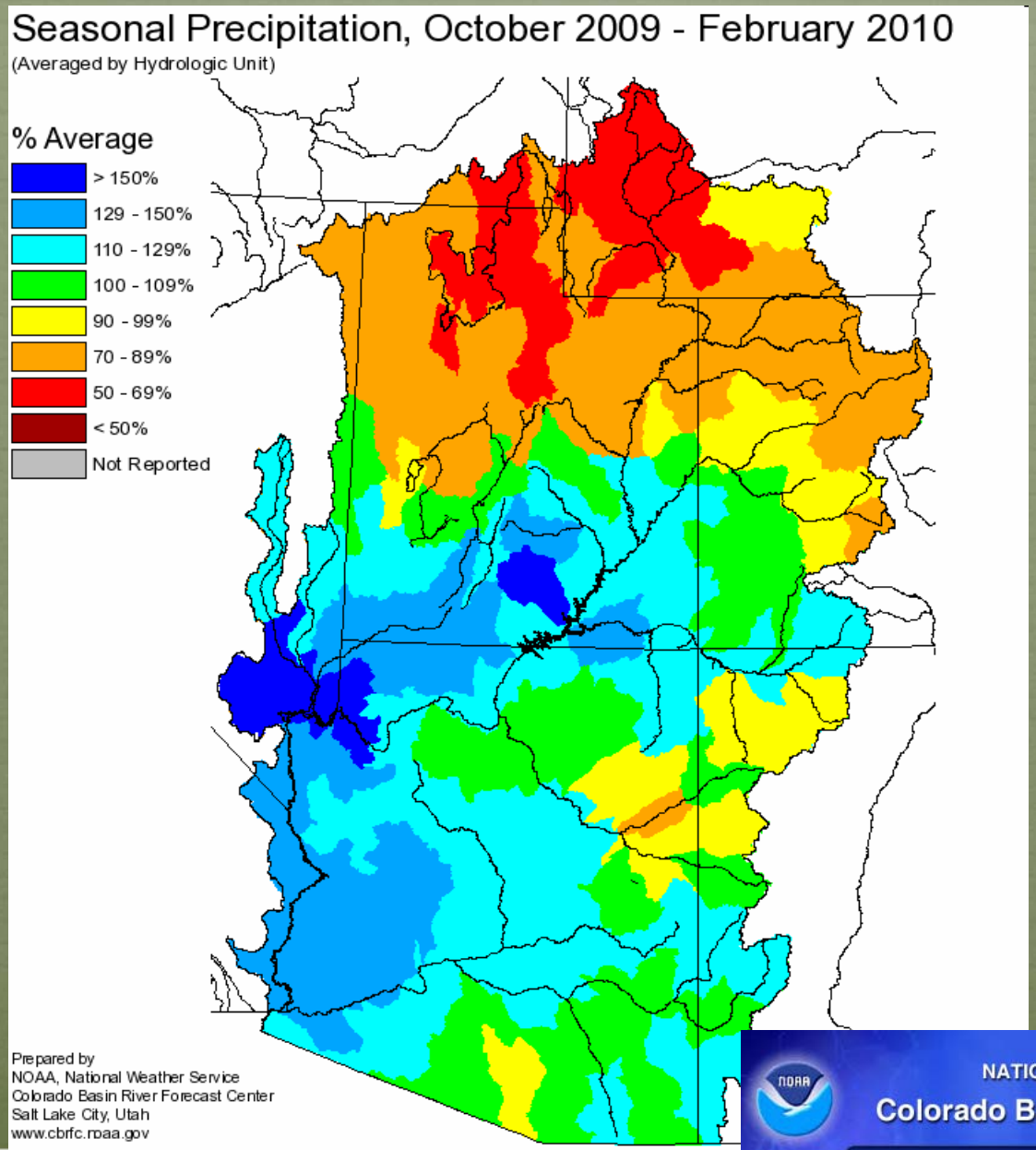
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

Colorado Water Year 2010 Precipitation as Percent of Normal
Oct 2009 - Feb 2010

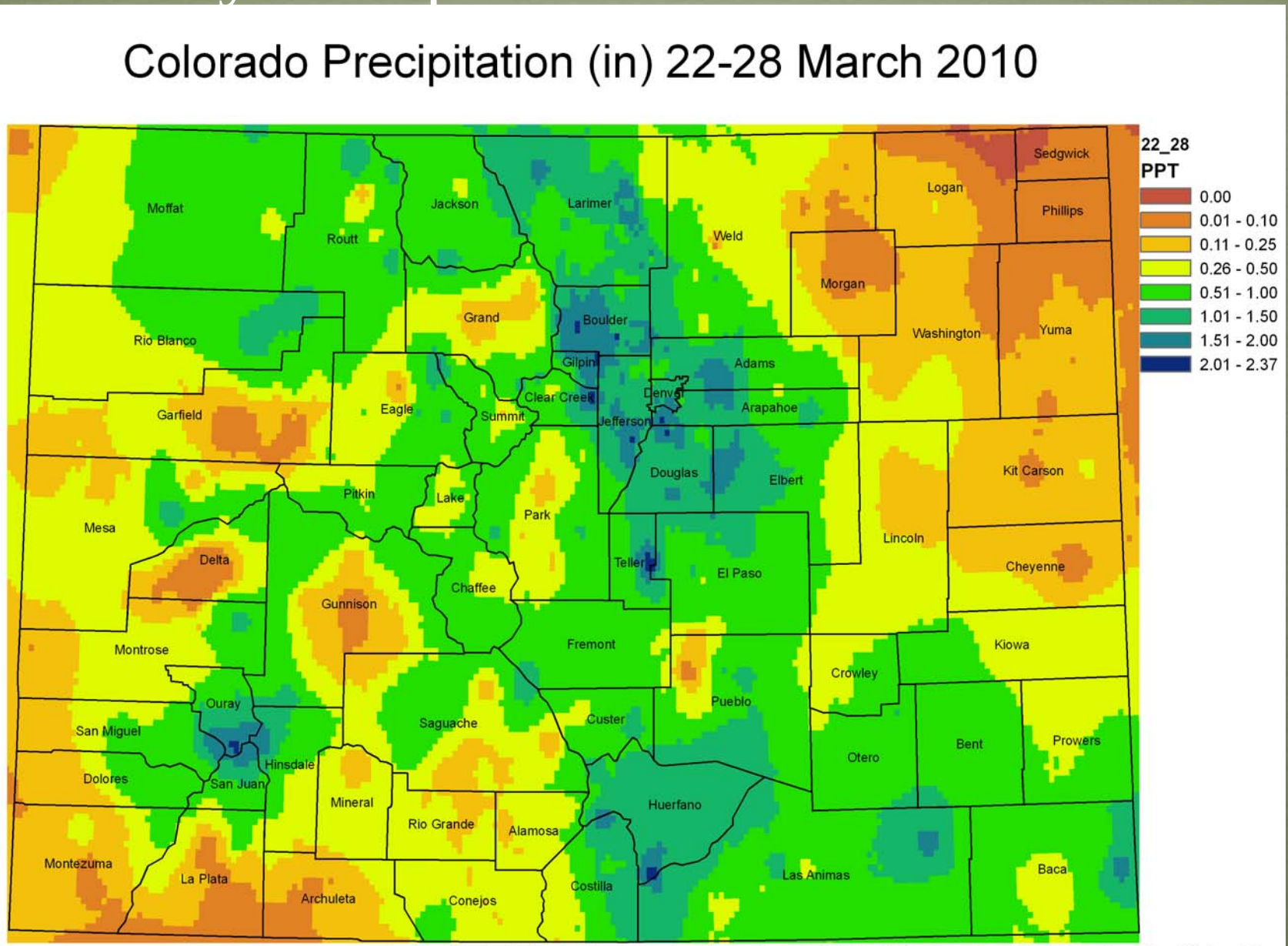


Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

WY 2010 Precipitation

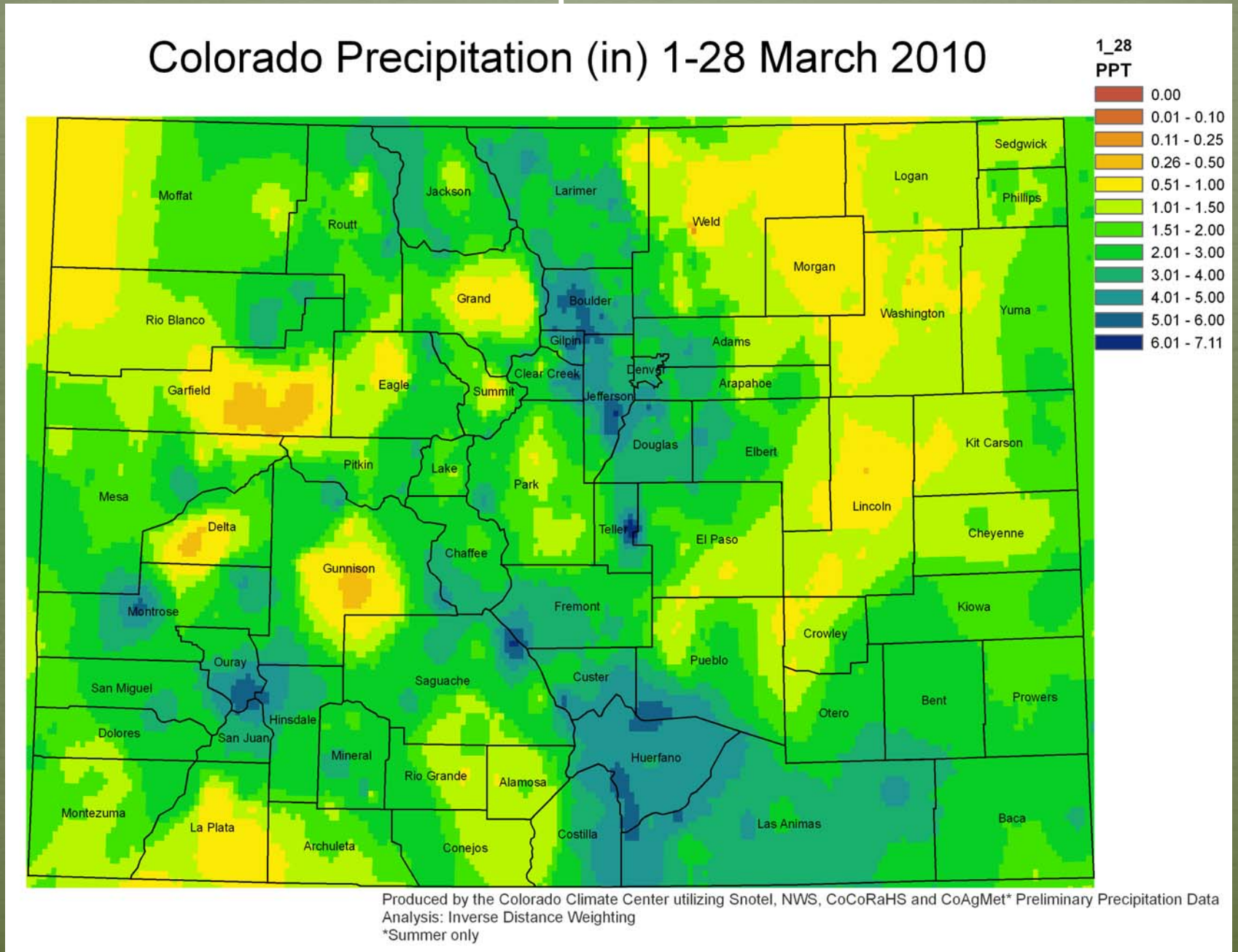


7 Day Precipitation 22-28 March 2010



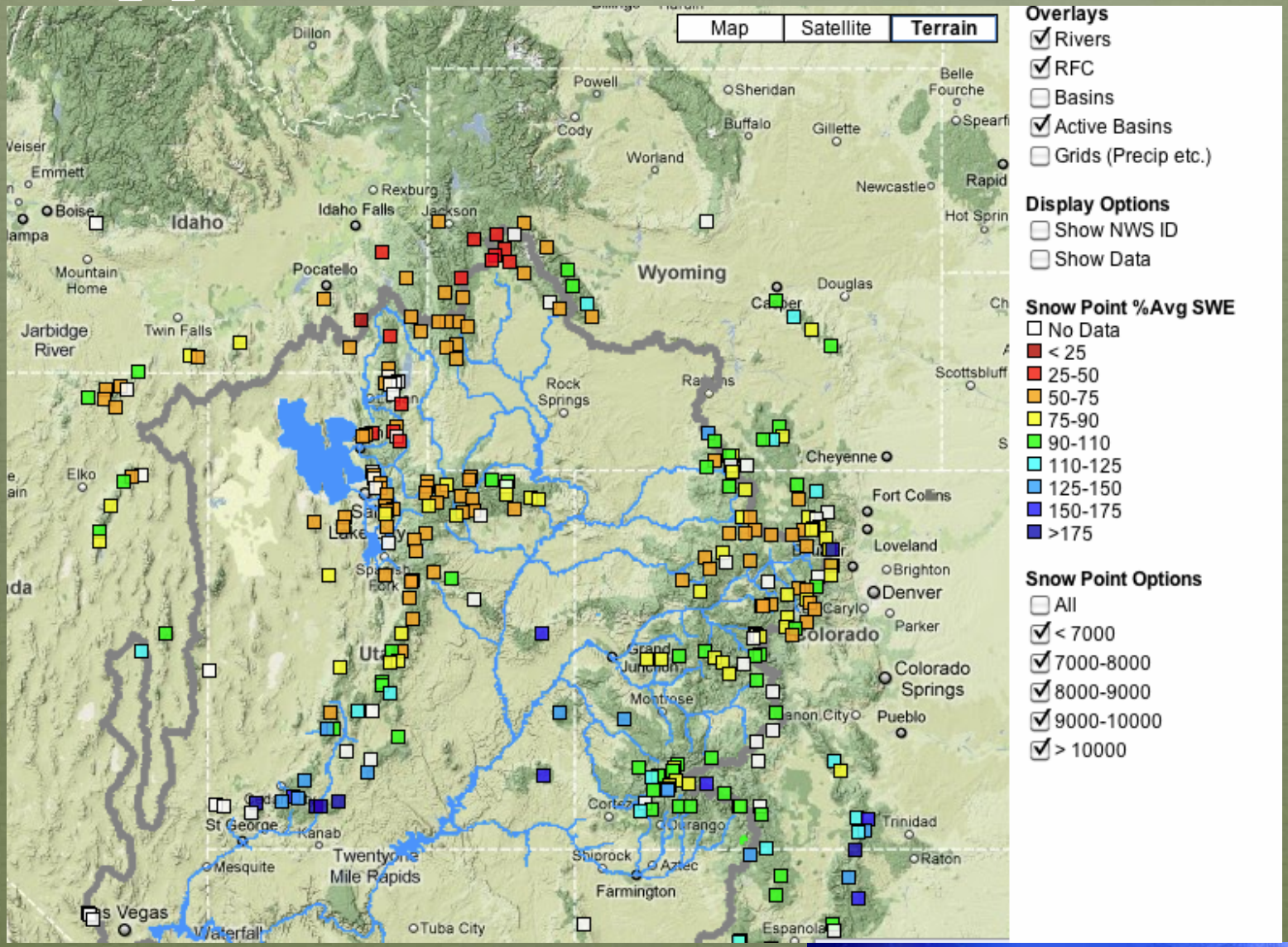
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

Month-to-Date Precipitation 1-28 March 2010



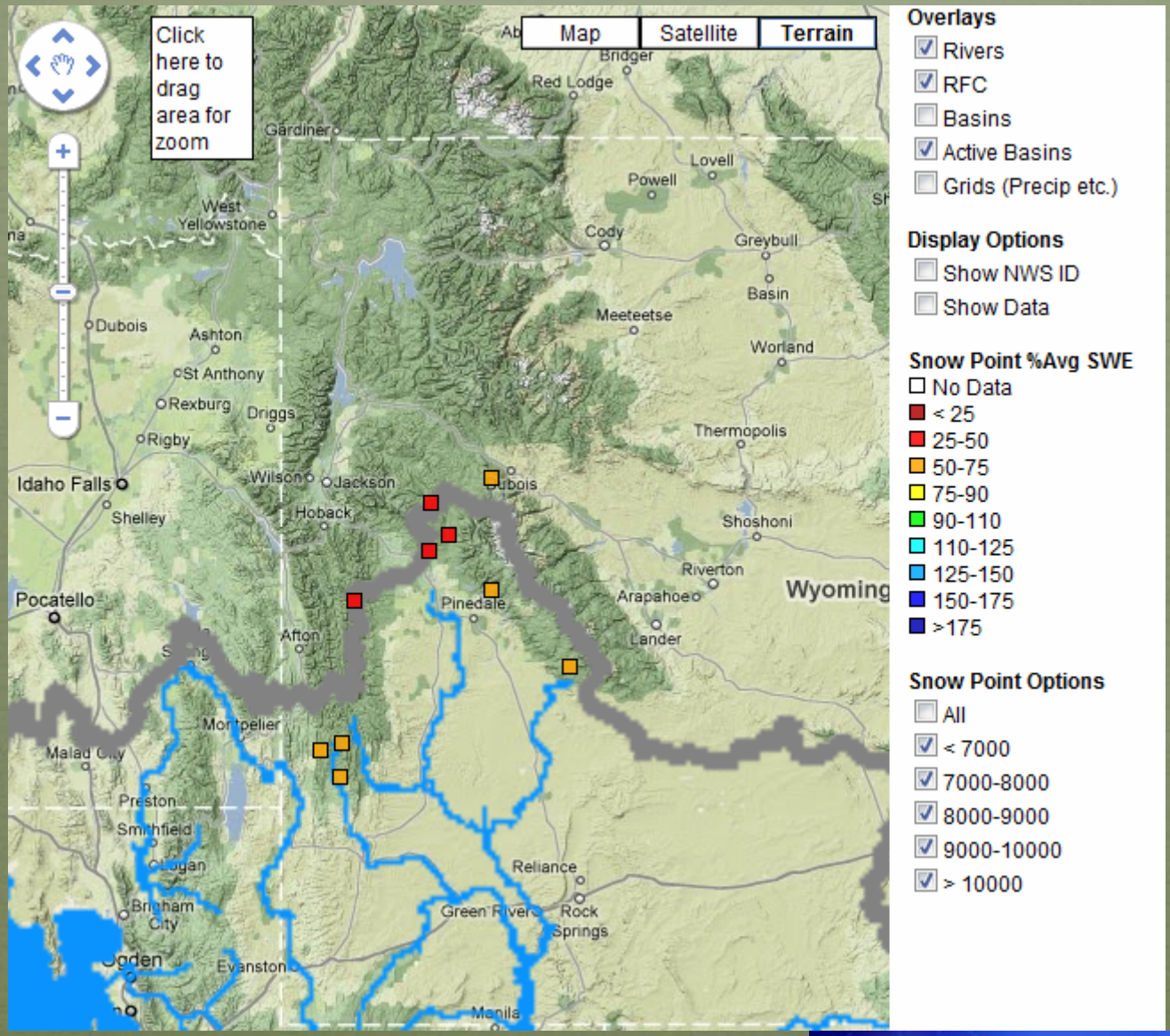
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

Upper Colorado River Basin

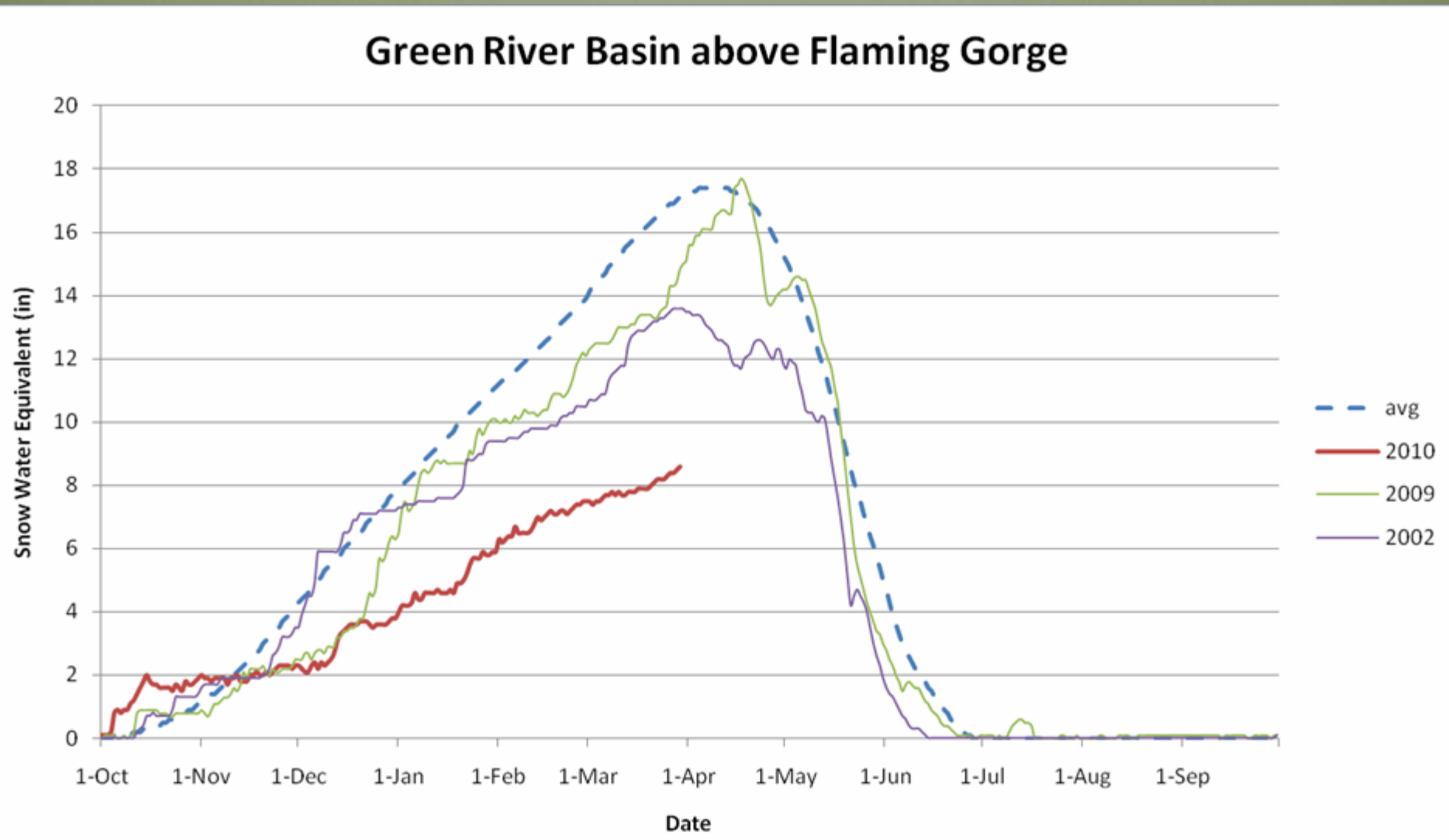


NATIONAL WEATHER SERVICE
Colorado Basin River Forecast Center

Green River Basin above Flaming Gorge



NATIONAL WEATHER SERVICE
Colorado Basin River Forecast Center



Basin Snowpack: 50%

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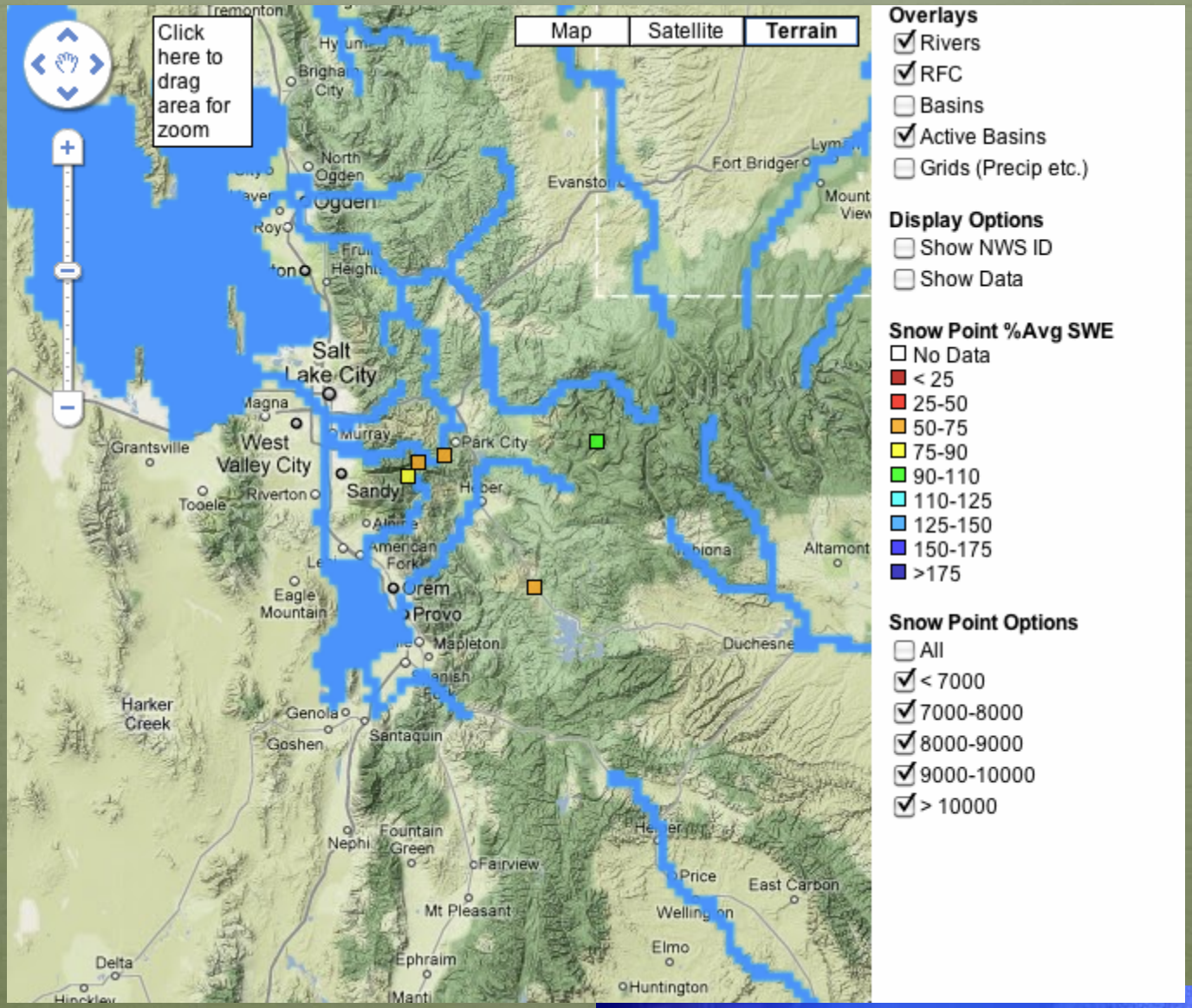
Provo River Basin



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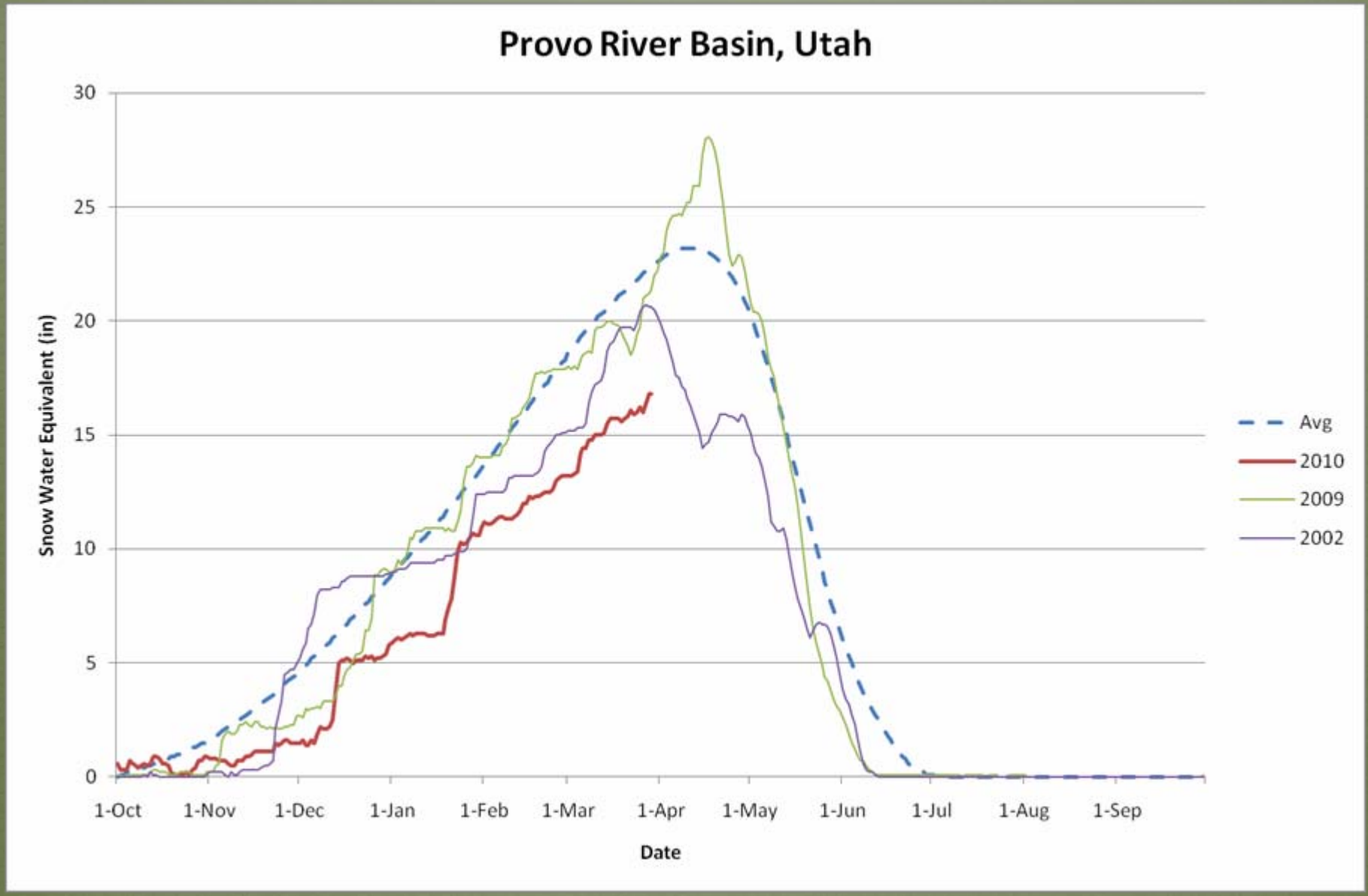
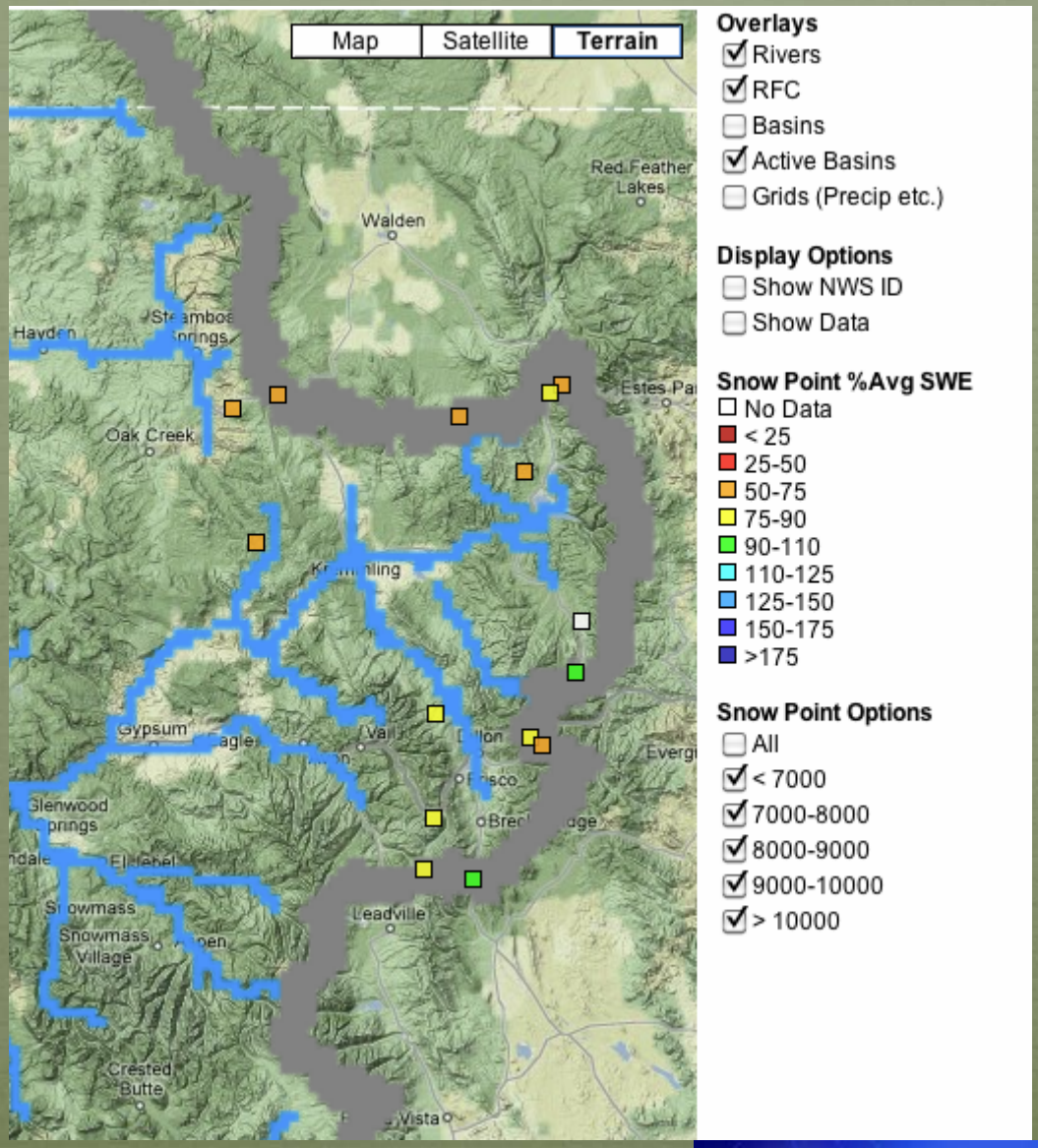


Basin snowpack: 75%

Upper Colorado above Kremmling



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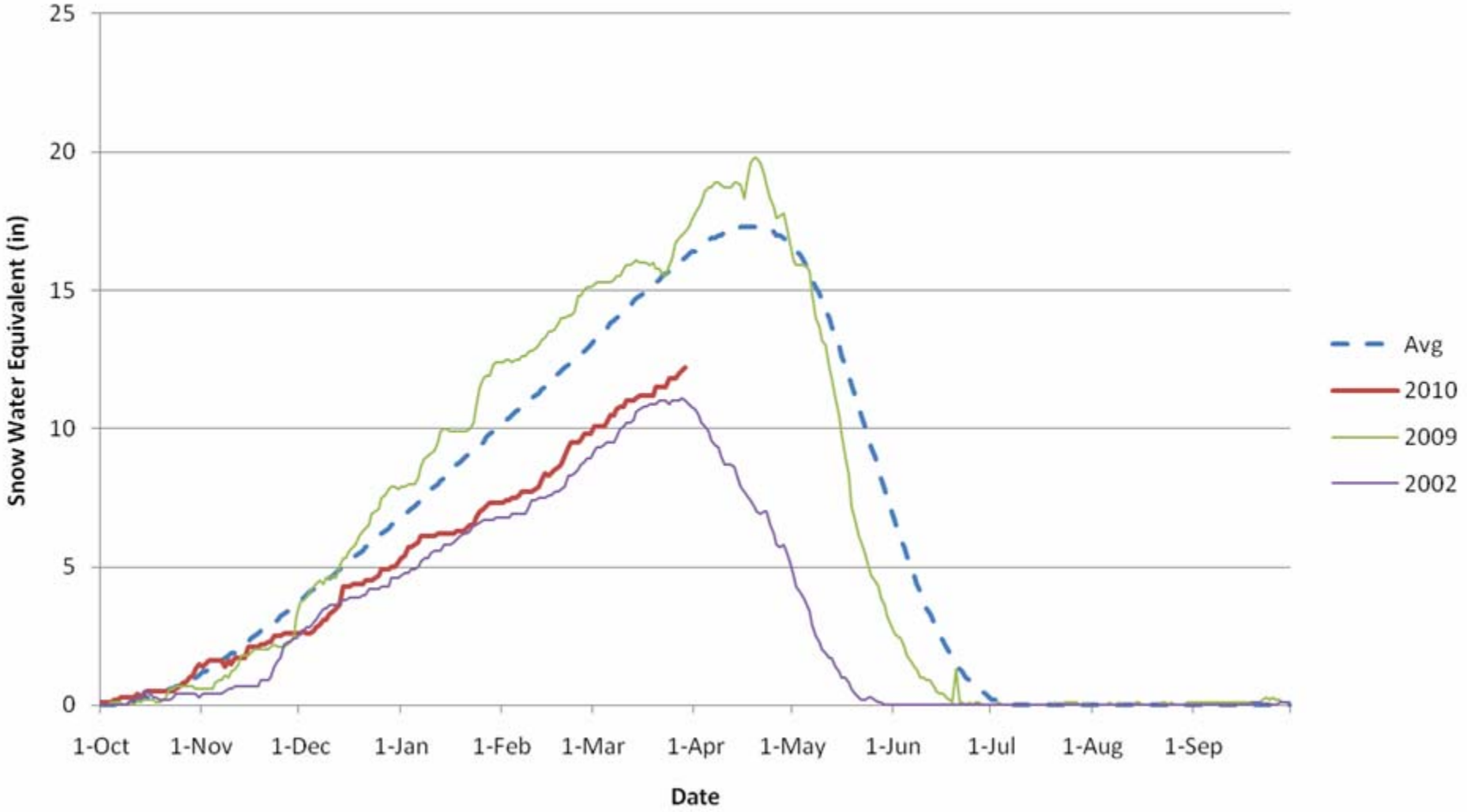
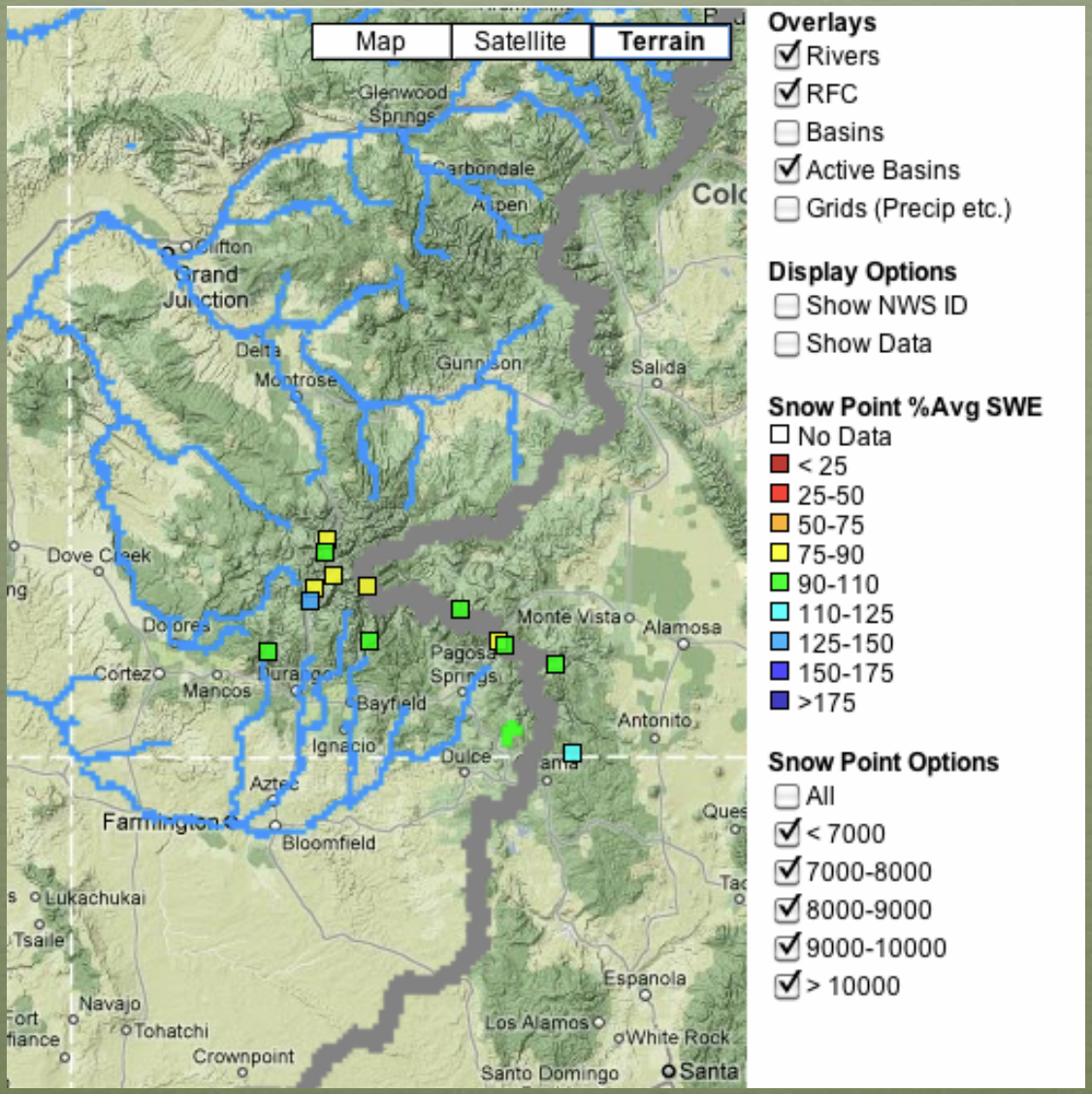
Colorado Basin River Forecast Center

Colorado River above Kremmling



Basin Snowpack: 76%

San Juan Basin



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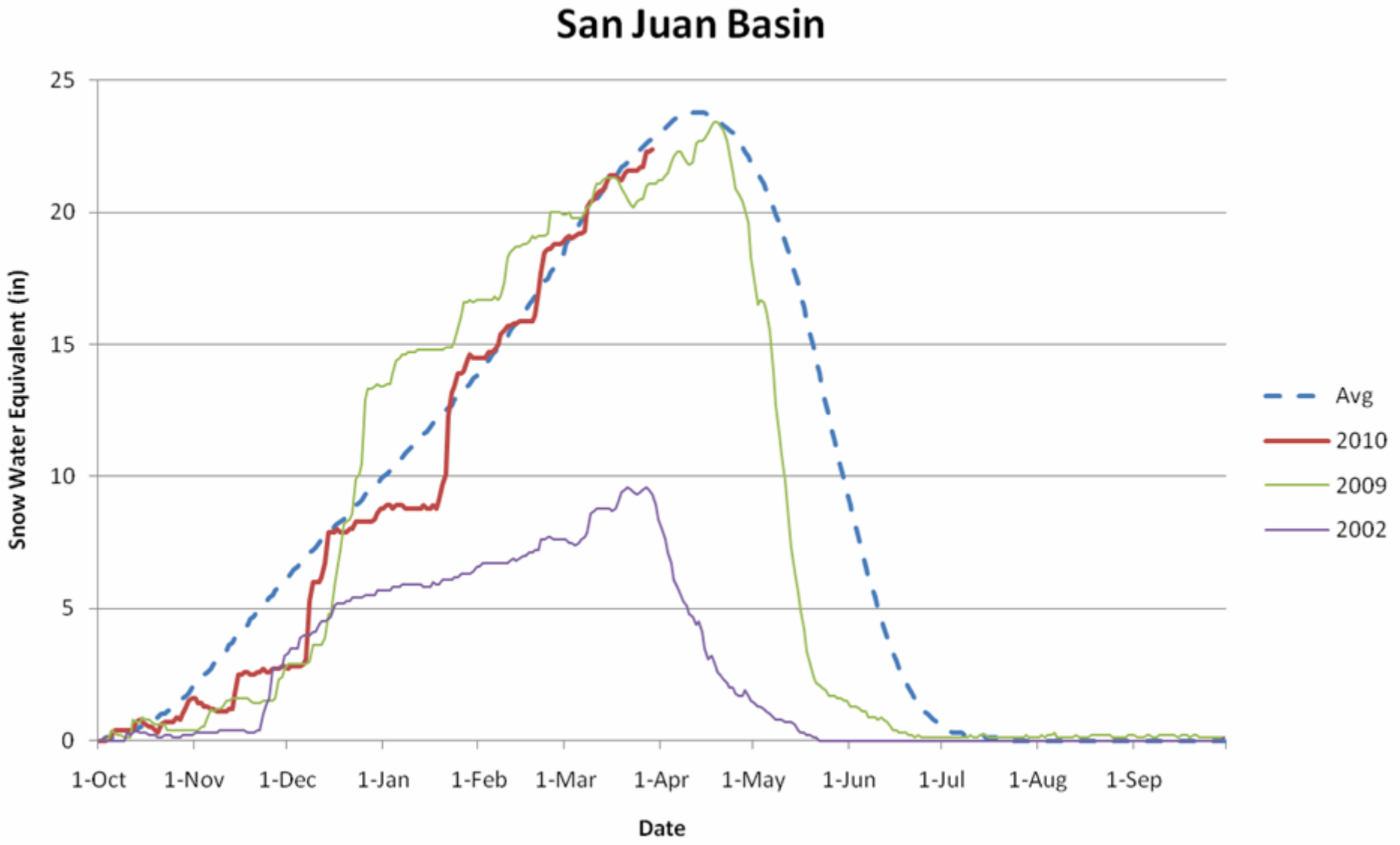
Colorado Basin River Forecast Center



Basin Snowpack: 98%

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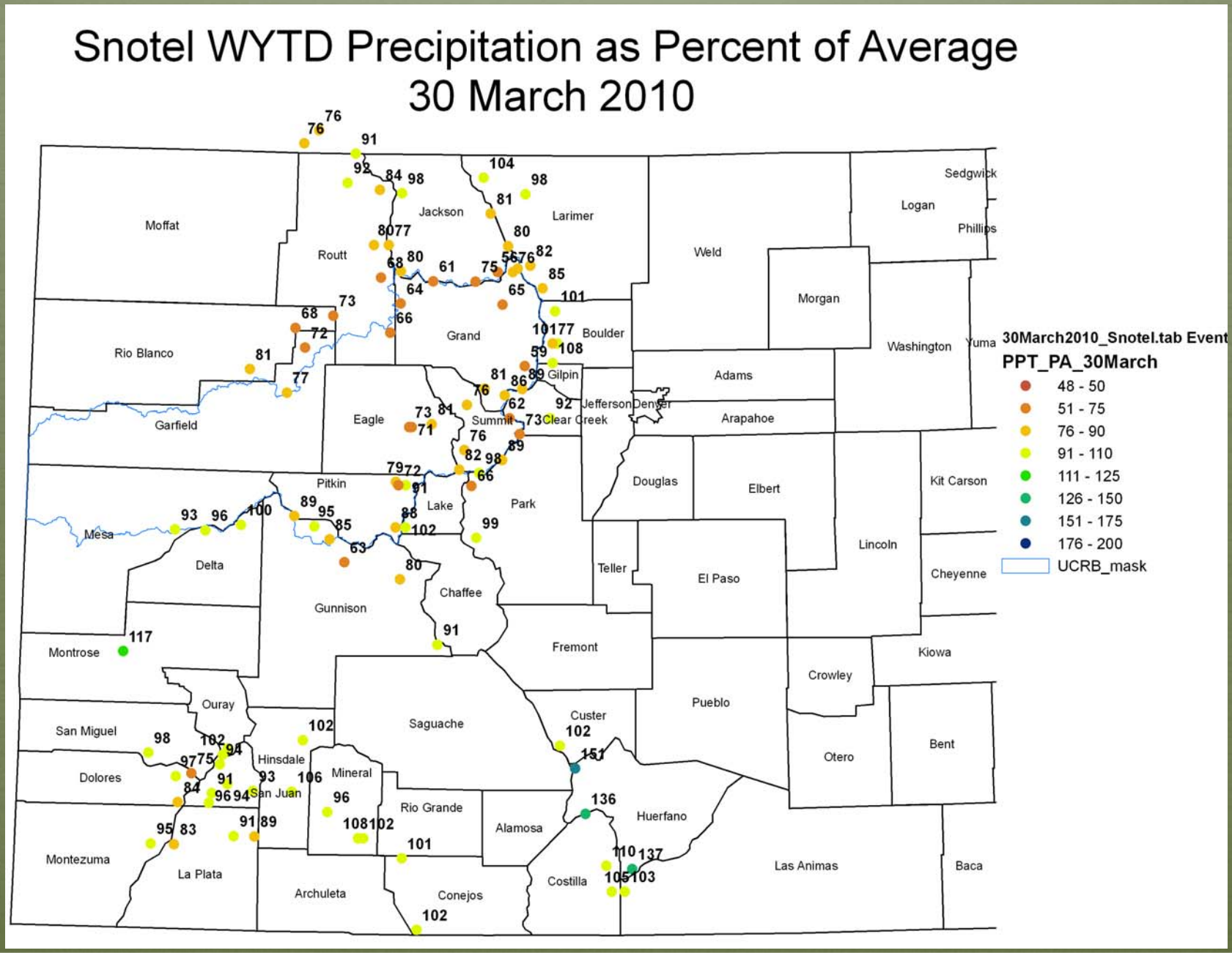
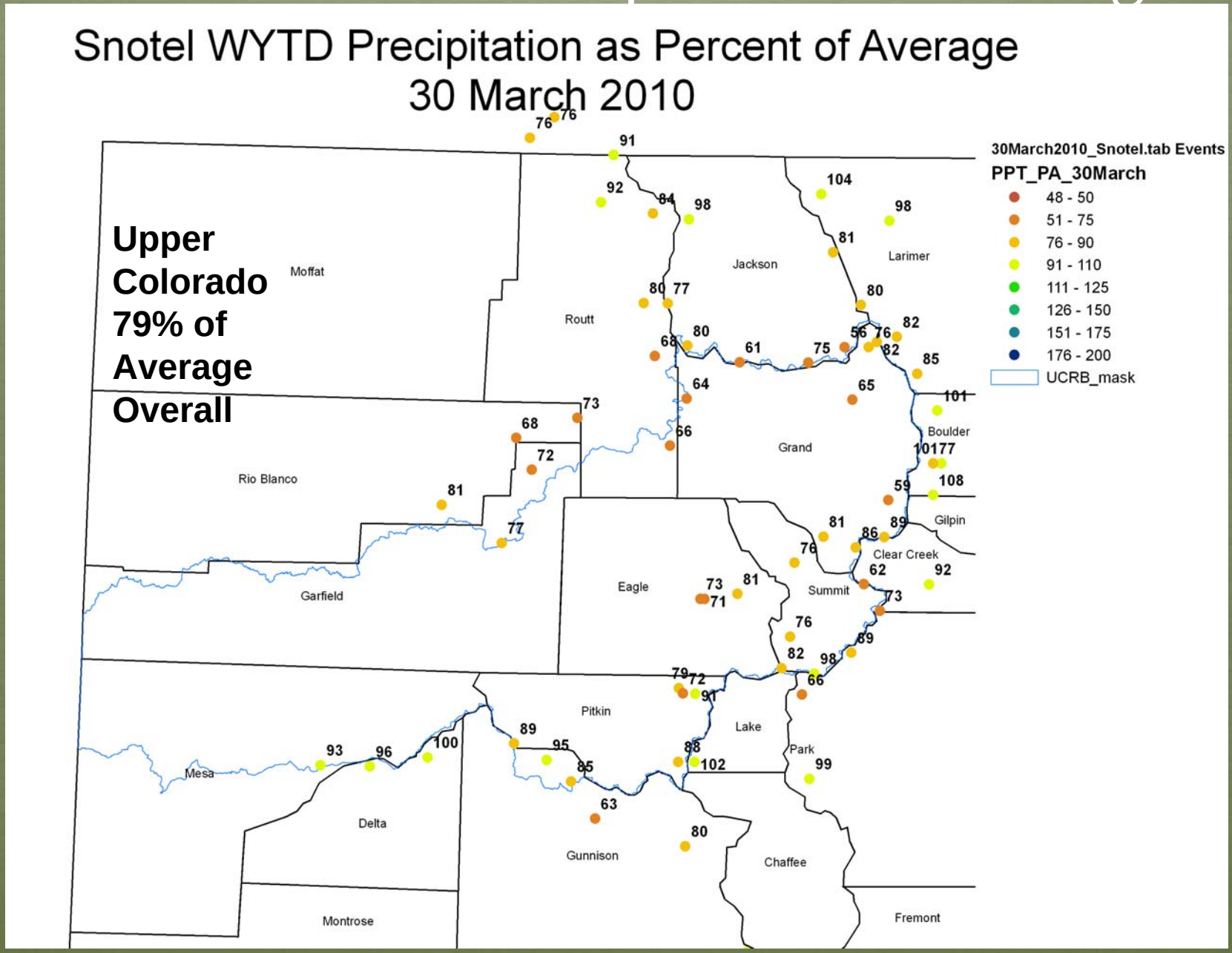
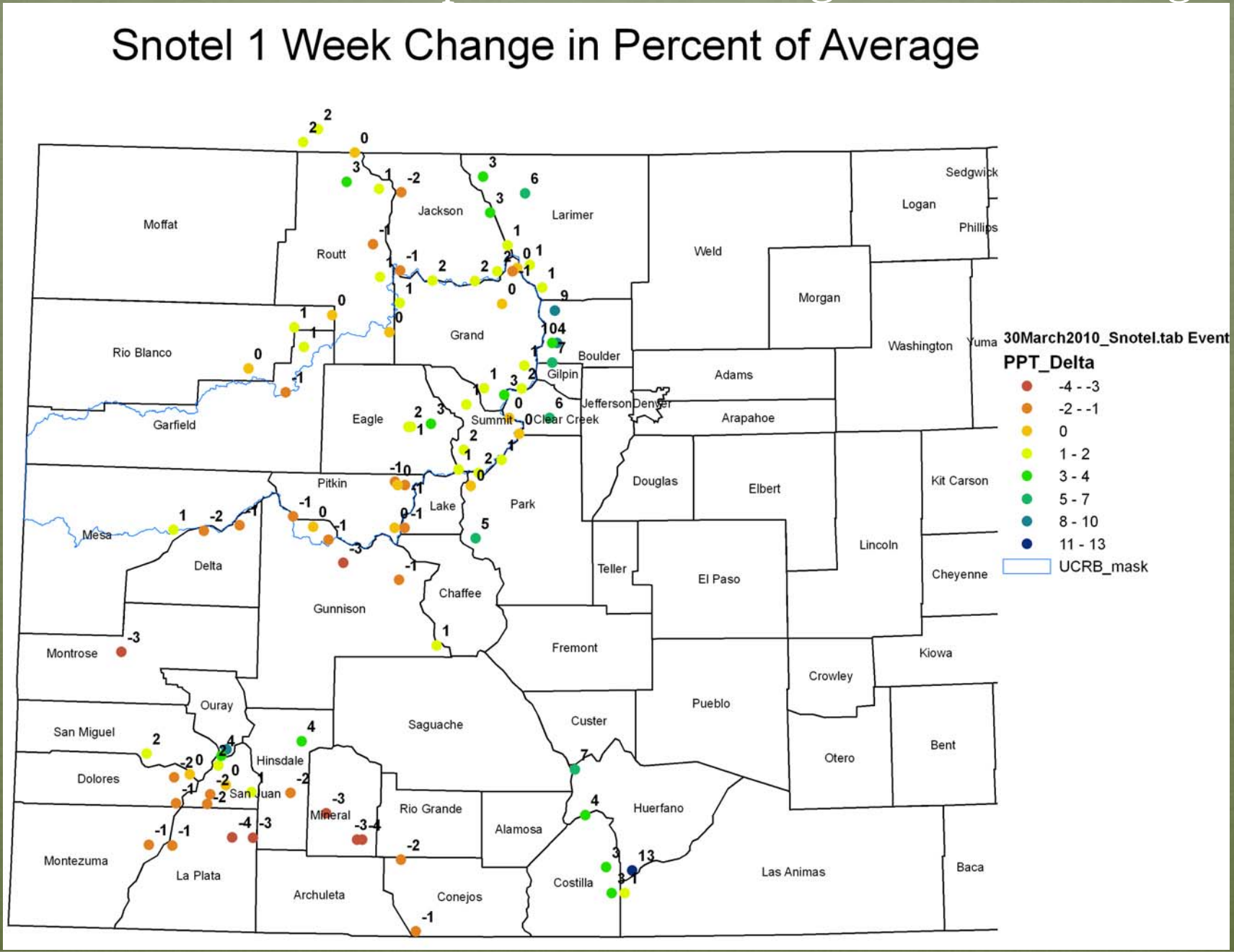
Snotel WYTD Precipitation % Average



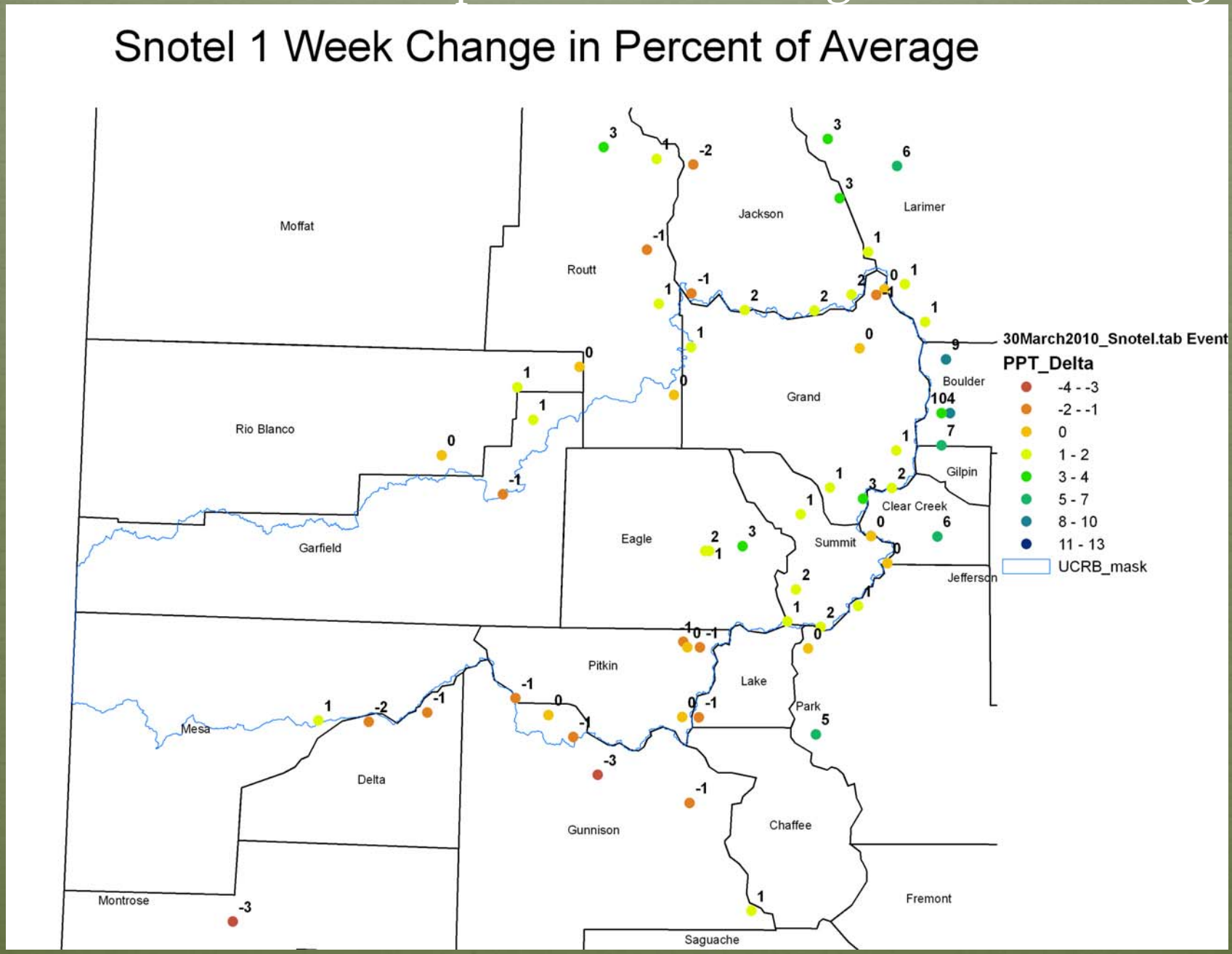
Snotel WYTD Precipitation % Average



Snotel WYTD Precipitation % Average 1 Week Change



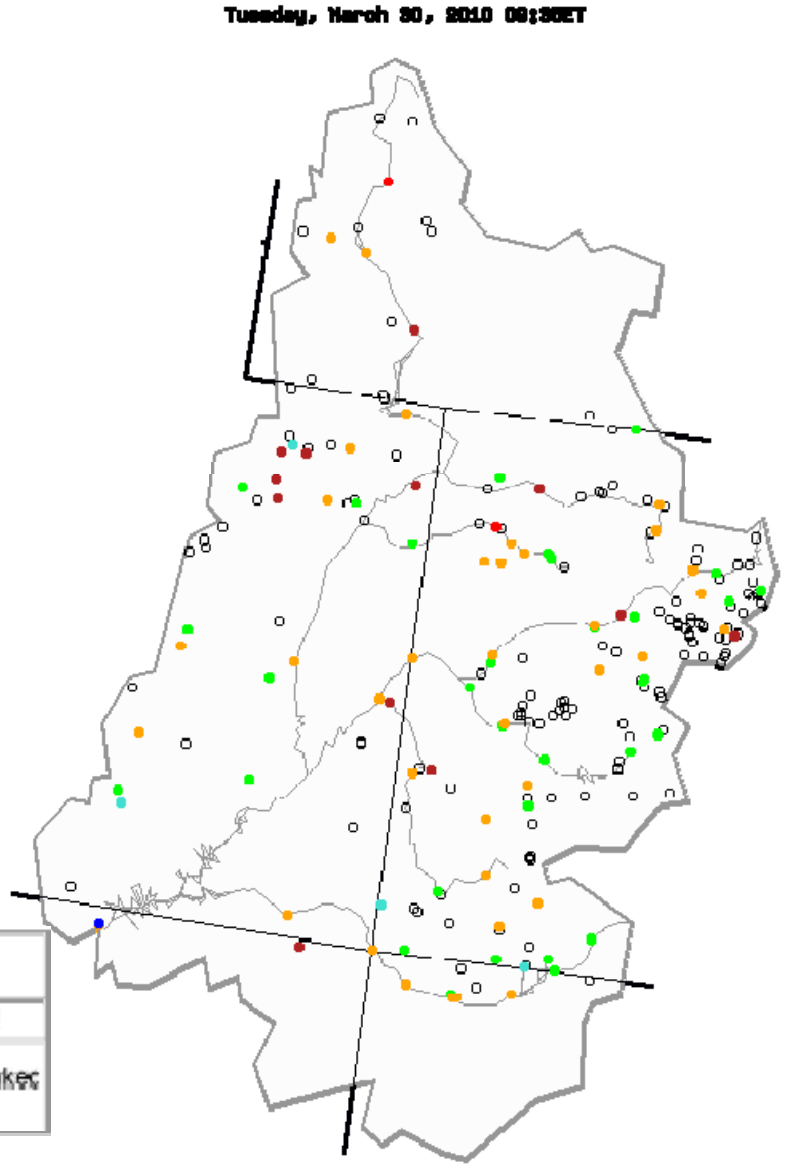
Snotel WYTD Precipitation % Average 1 Week Change



Streamflow Update

Michael E. Lewis - USGS

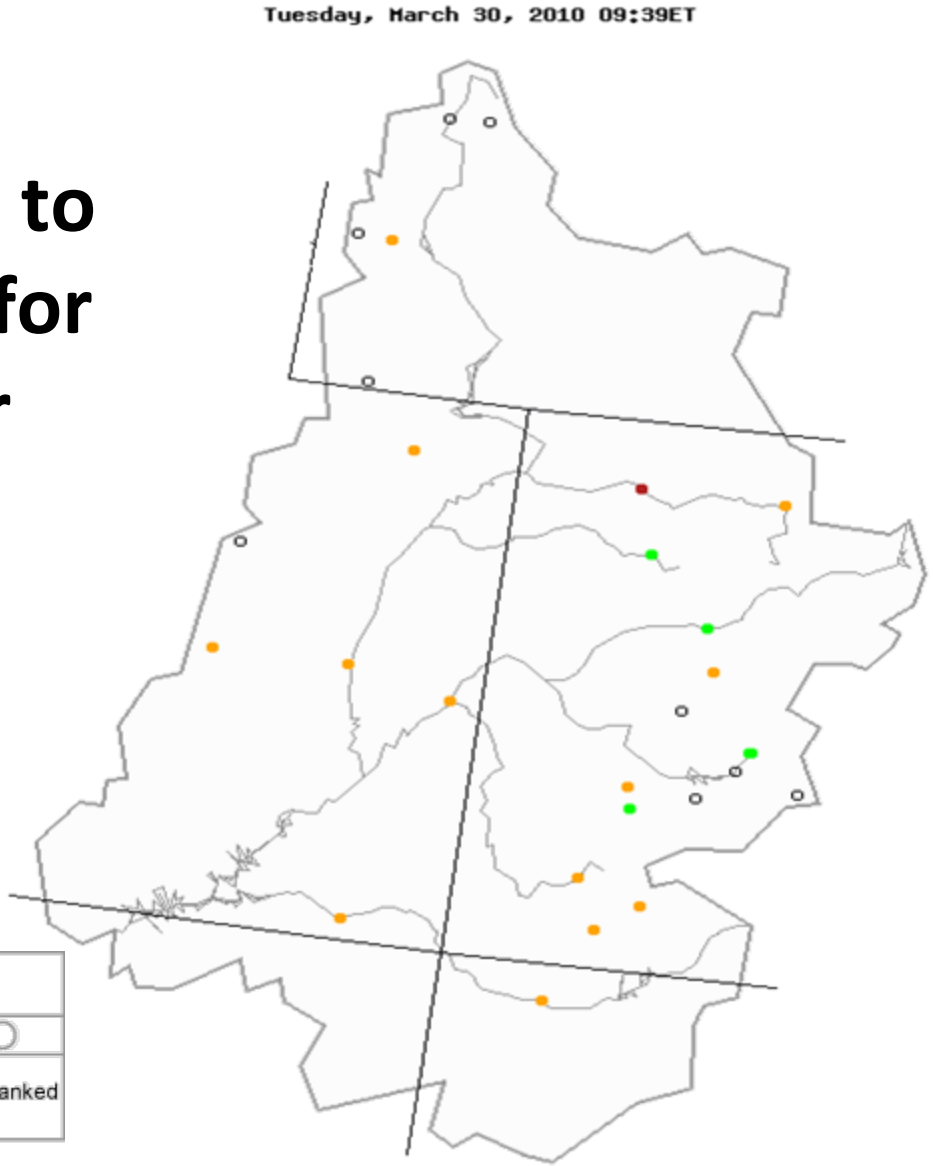
Map of real-time streamflow compared to historical streamflow for the day of the year (Upper Colorado)



Explanation - Percentile classes							
Low	≤10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

USGS

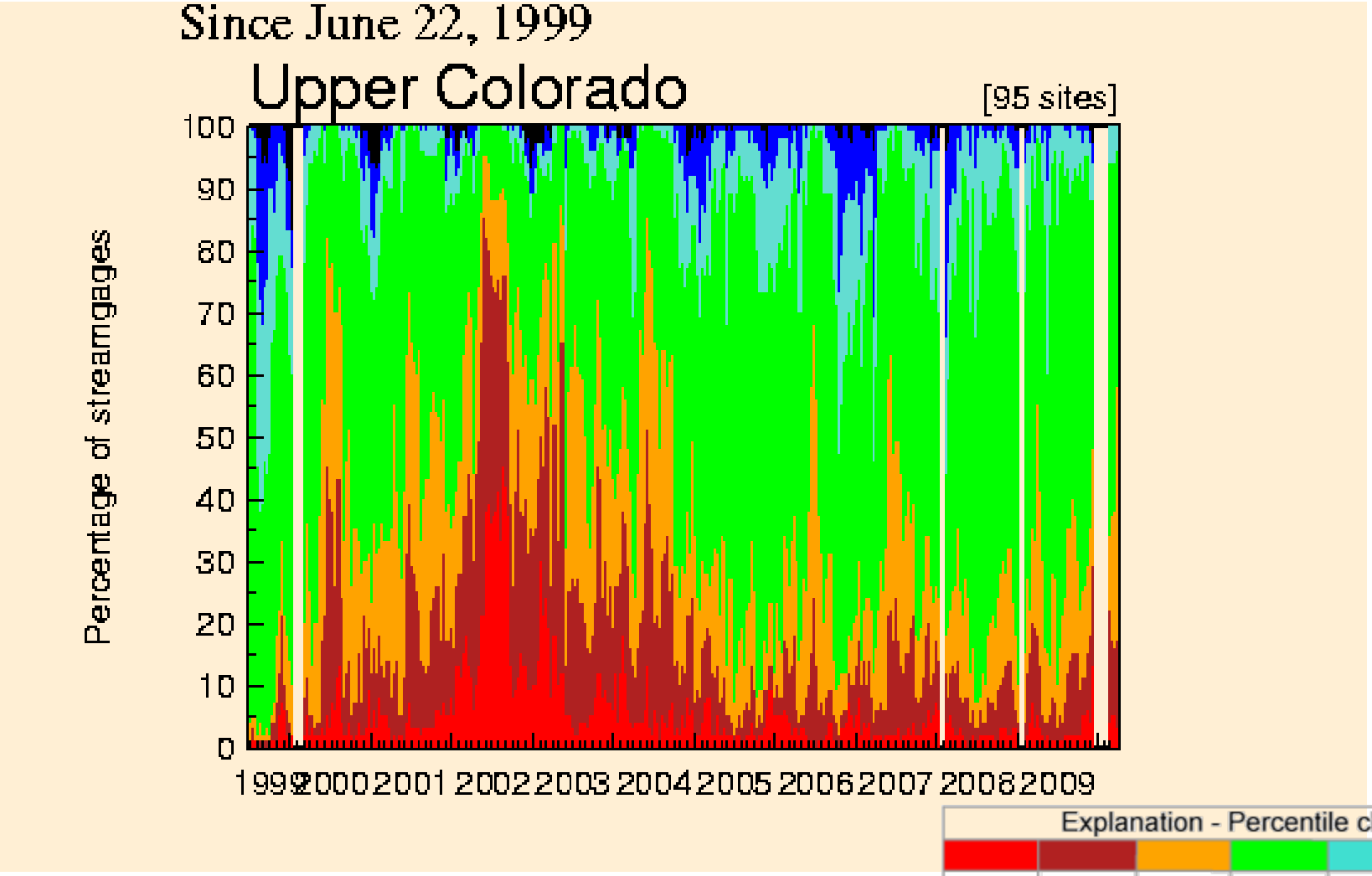
Map of real-time streamflow compared to historical streamflow for the day of the year for HCDN sites (Upper Colorado)



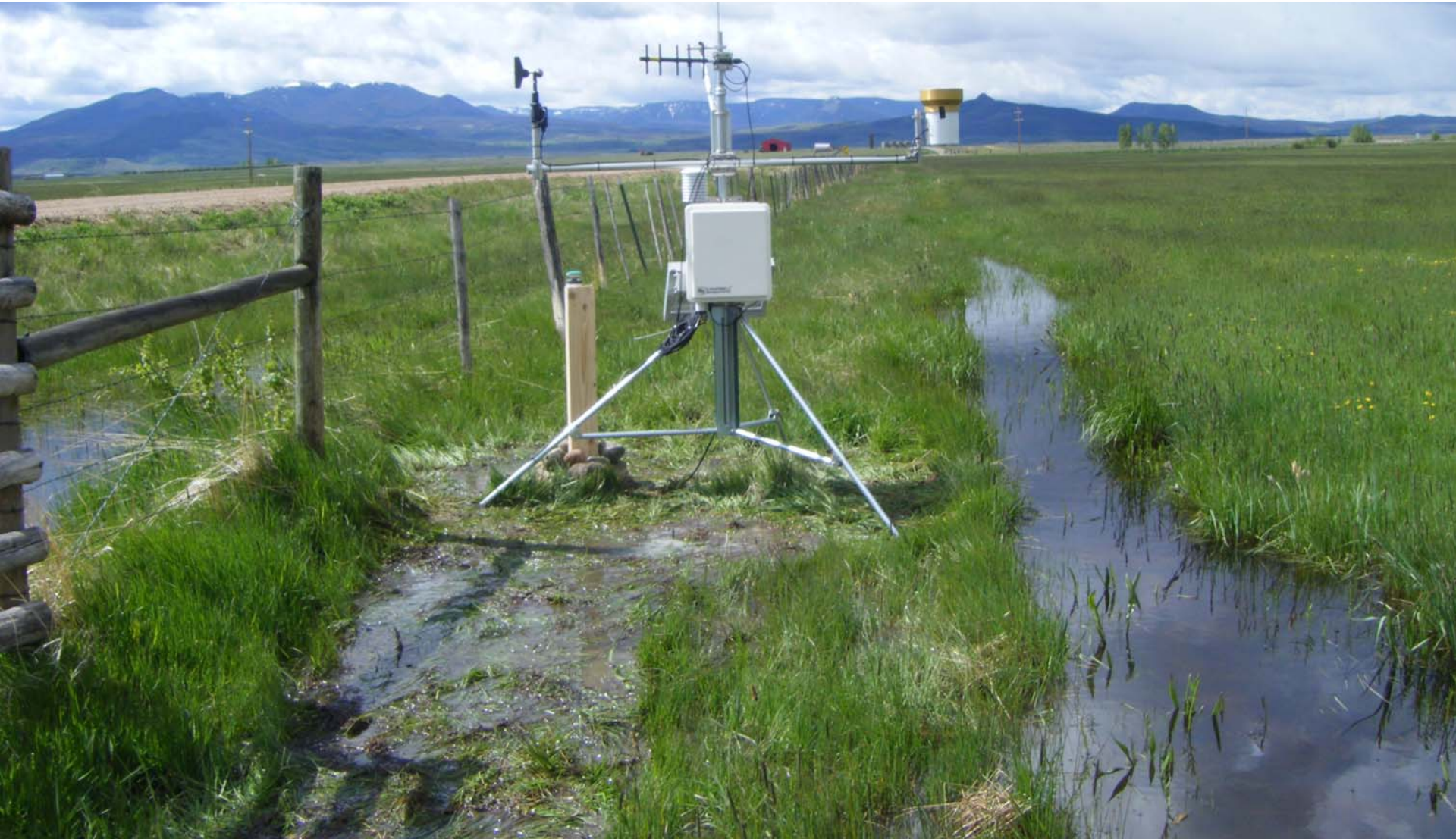
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

USGS

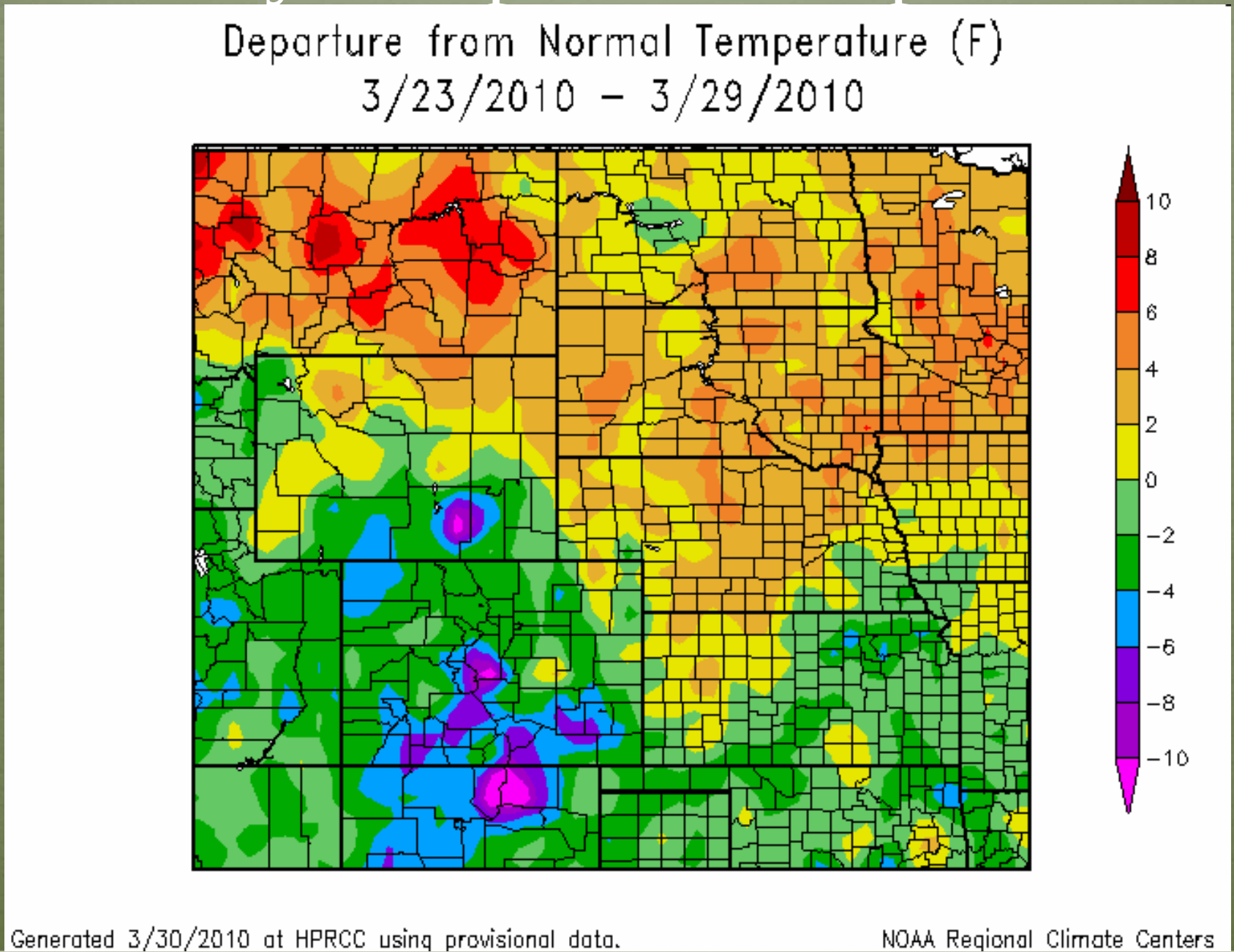
Time series plot of real-time streamflow compared to historical streamflow for the day of the year



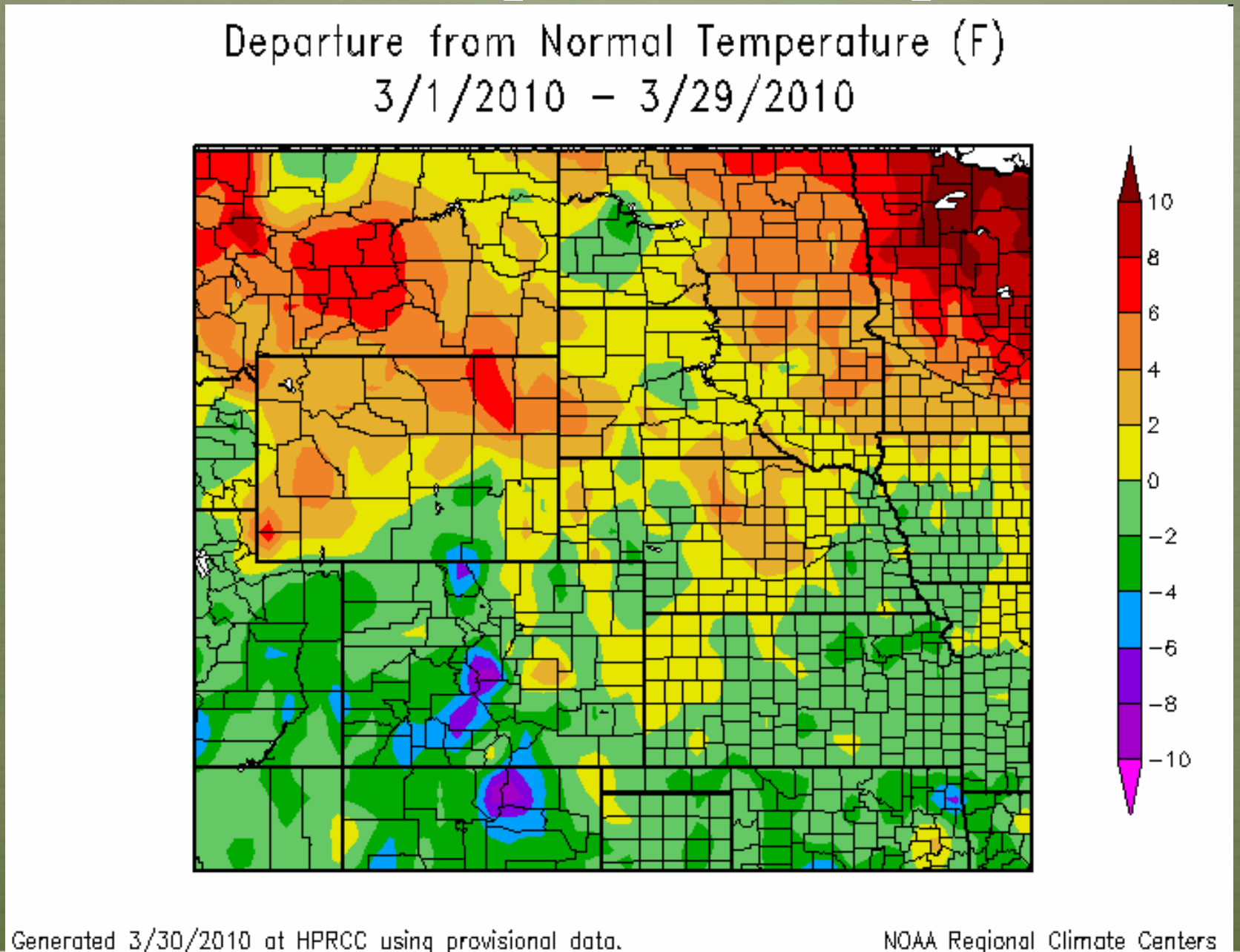
Water Demand

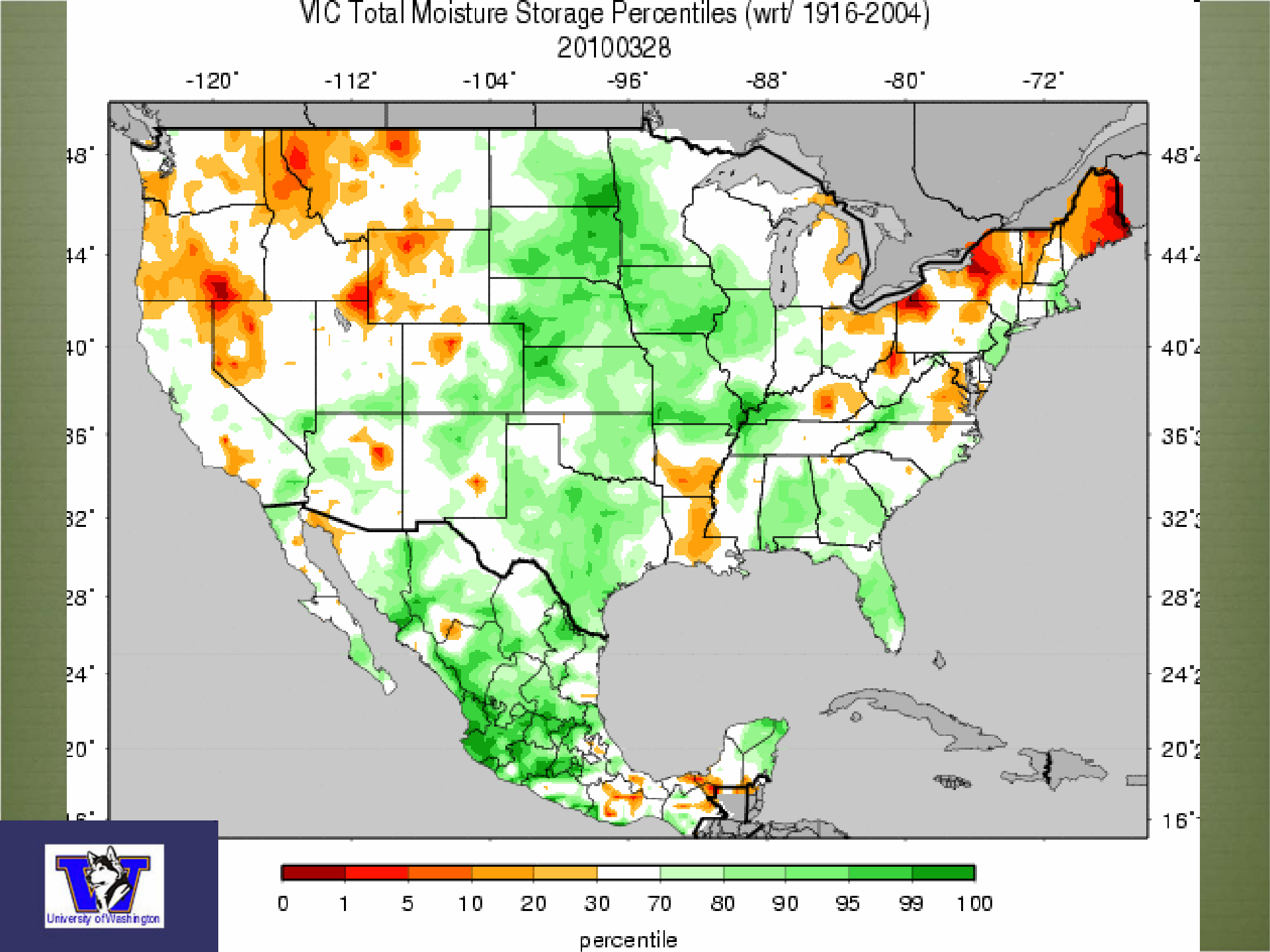


7 Day Temperature Departure



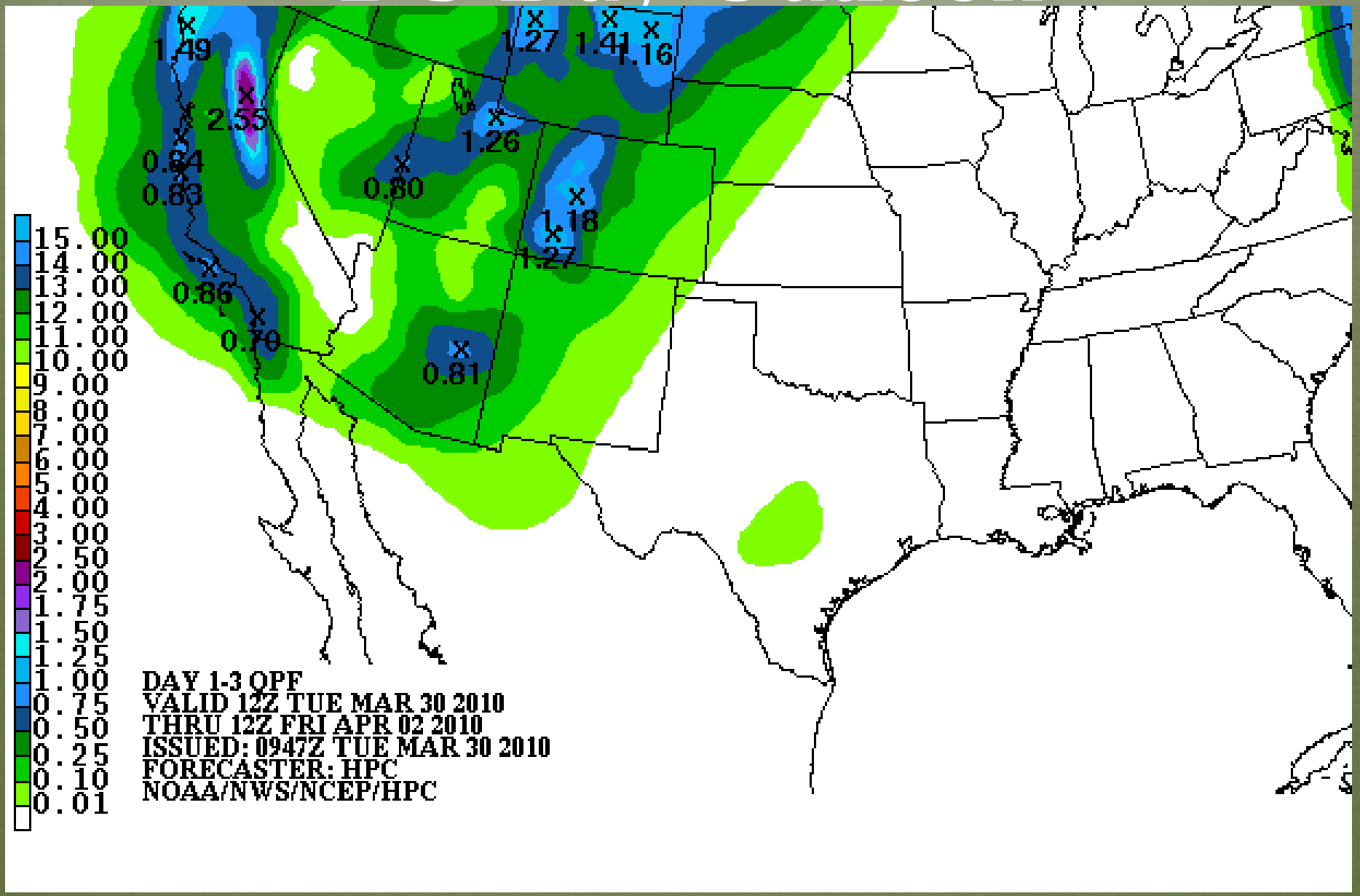
March Temperature Departure




VIC Total Moisture Storage Percentiles (wrt/ 1916-2004)
20100328
-120°
-112°
-104°
-96°
-88°
-80°
-72°
48°
44°
40°
36°
32°
28°
24°
20°
16°
0
1
5
10
20
30
70
80
90
95
99
100
percentile
University of Washington

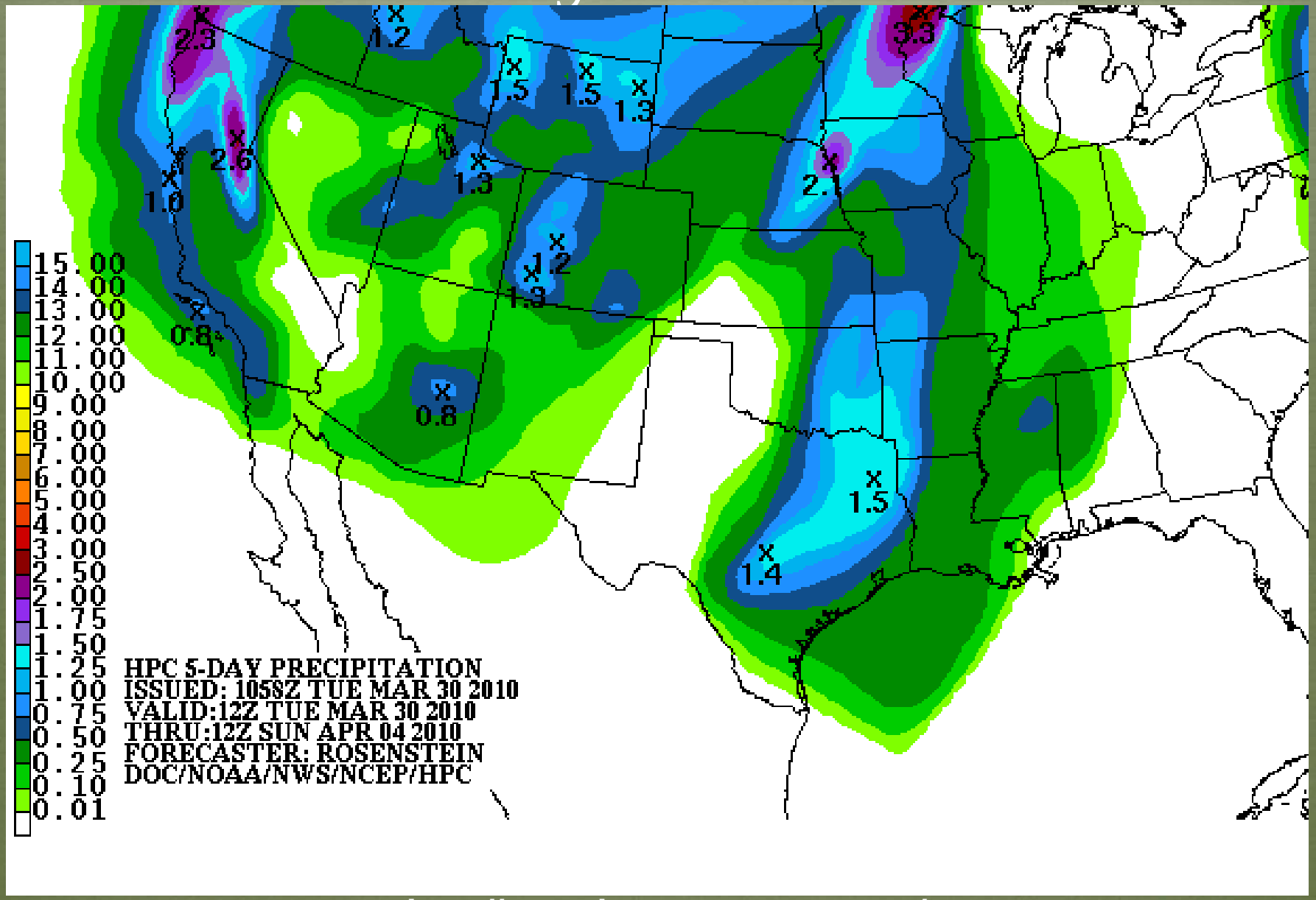
Precipitation Forecast

1-3 Day Outlook



http://www.hpc.ncep.noaa.gov/

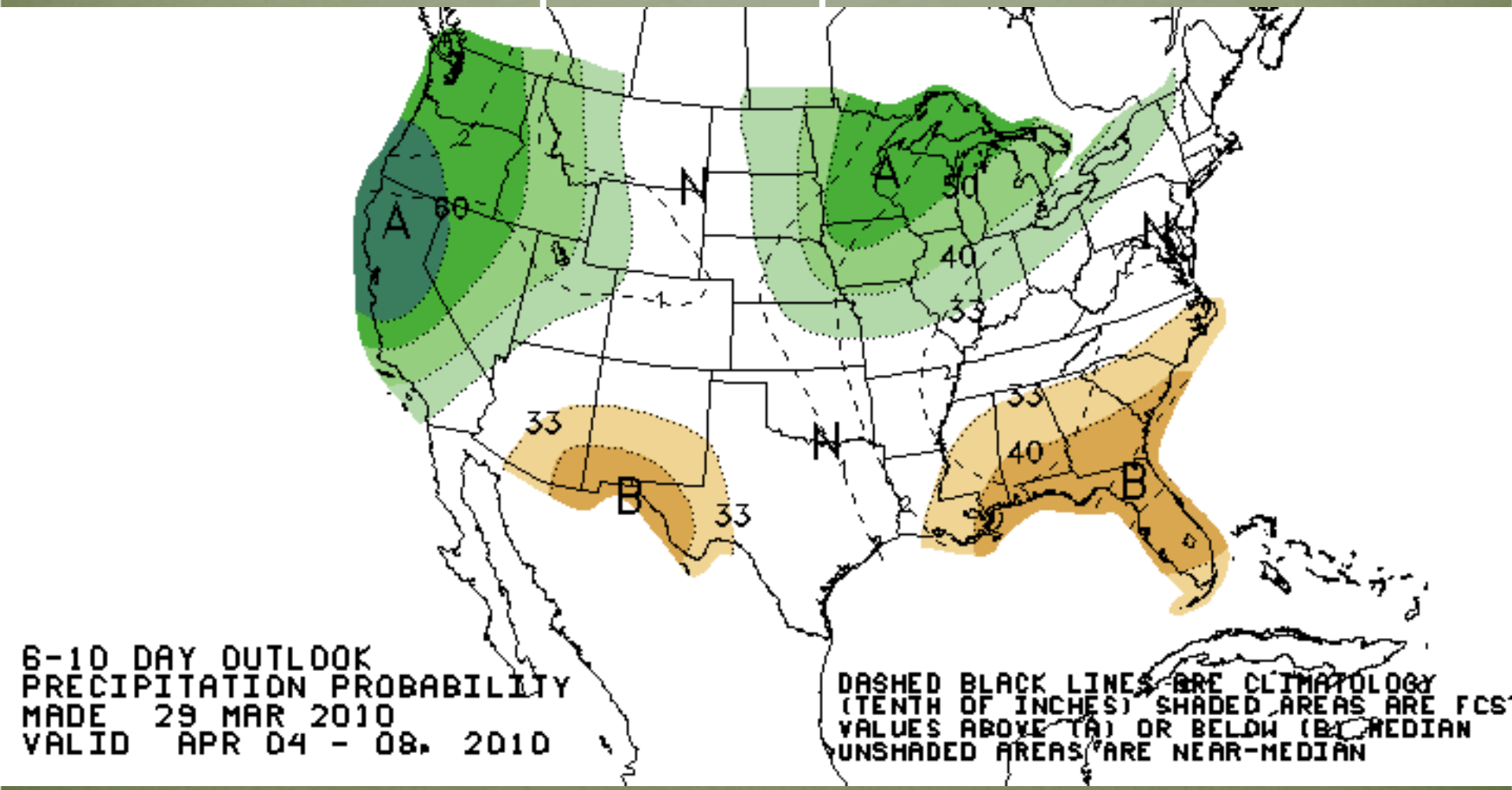
5 Day Outlook



http://www.hpc.ncep.noaa.gov/

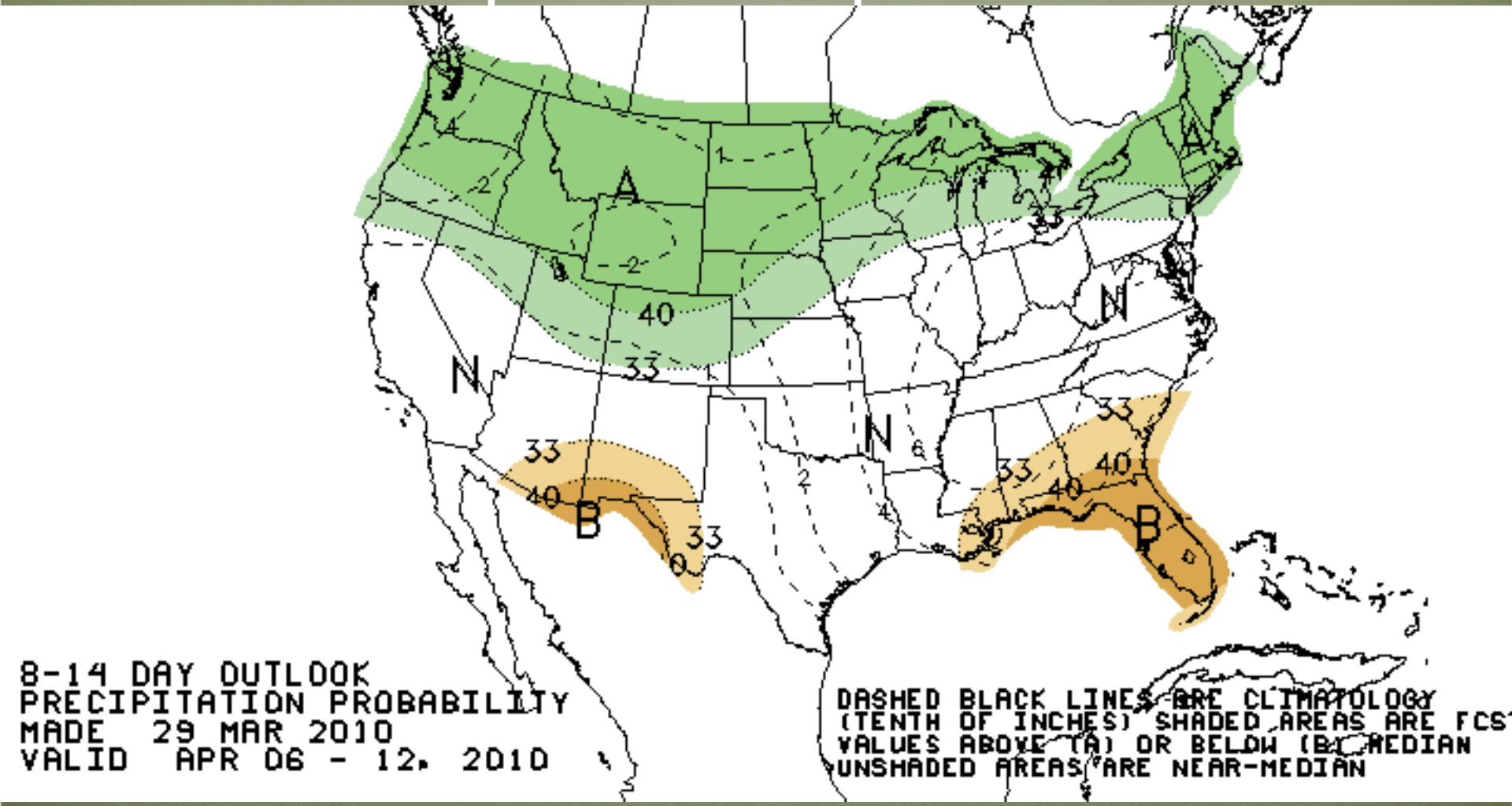
6-10 Day Outlook

4 April - 8 April 2010



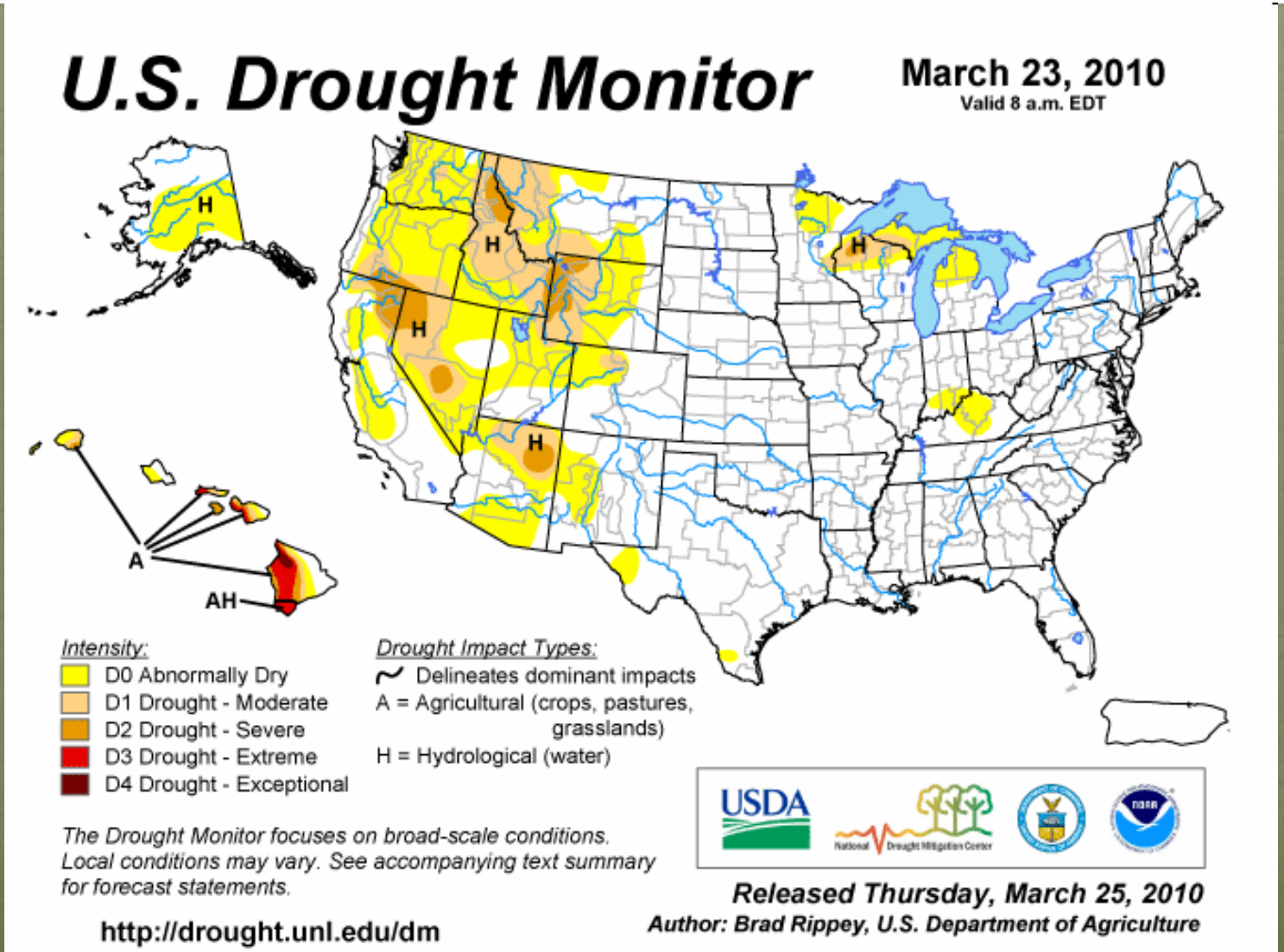
http://www.cpc.ncep.noaa.gov/

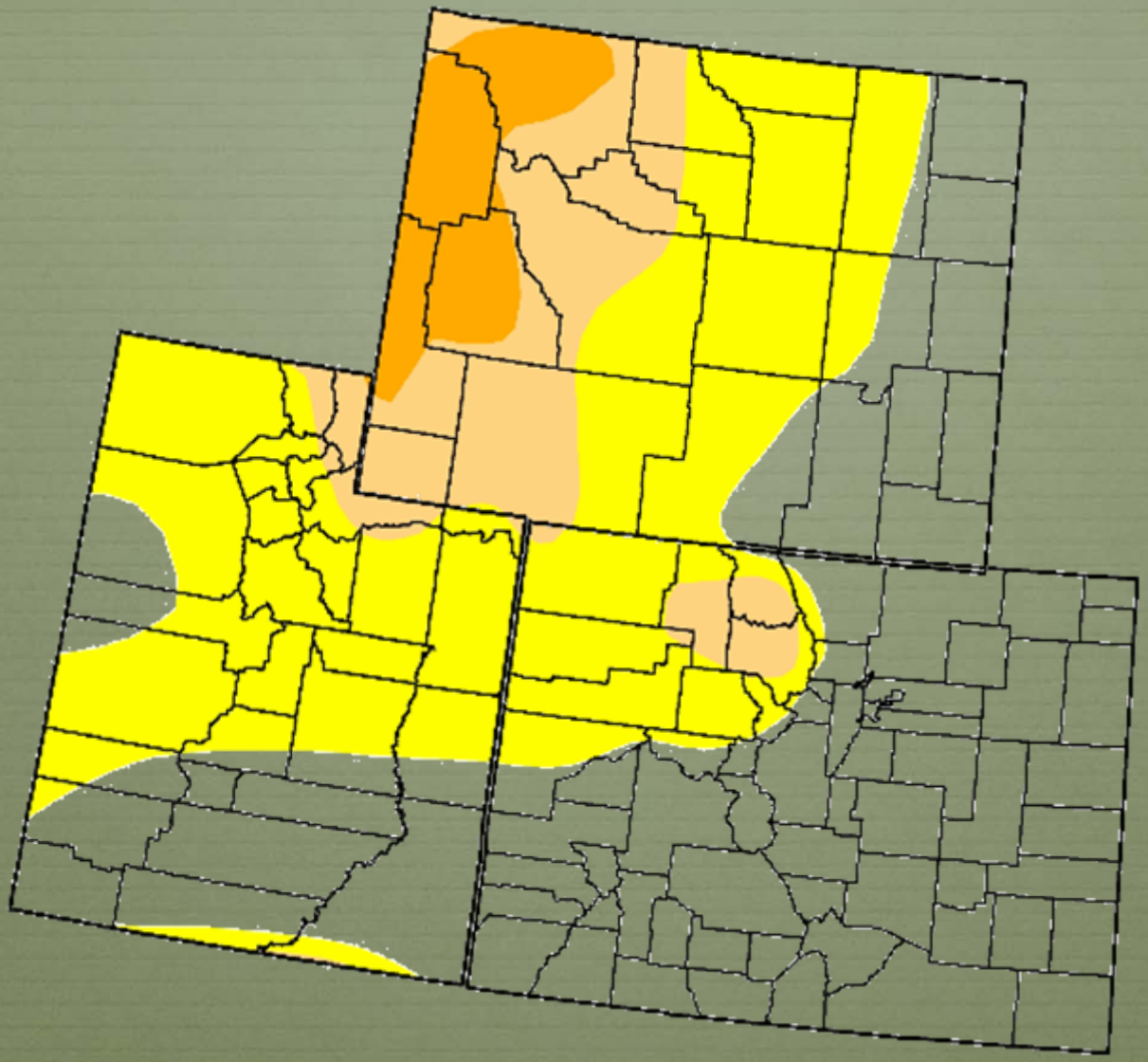
8-14 Day Outlook
6 April – 12 April 2010

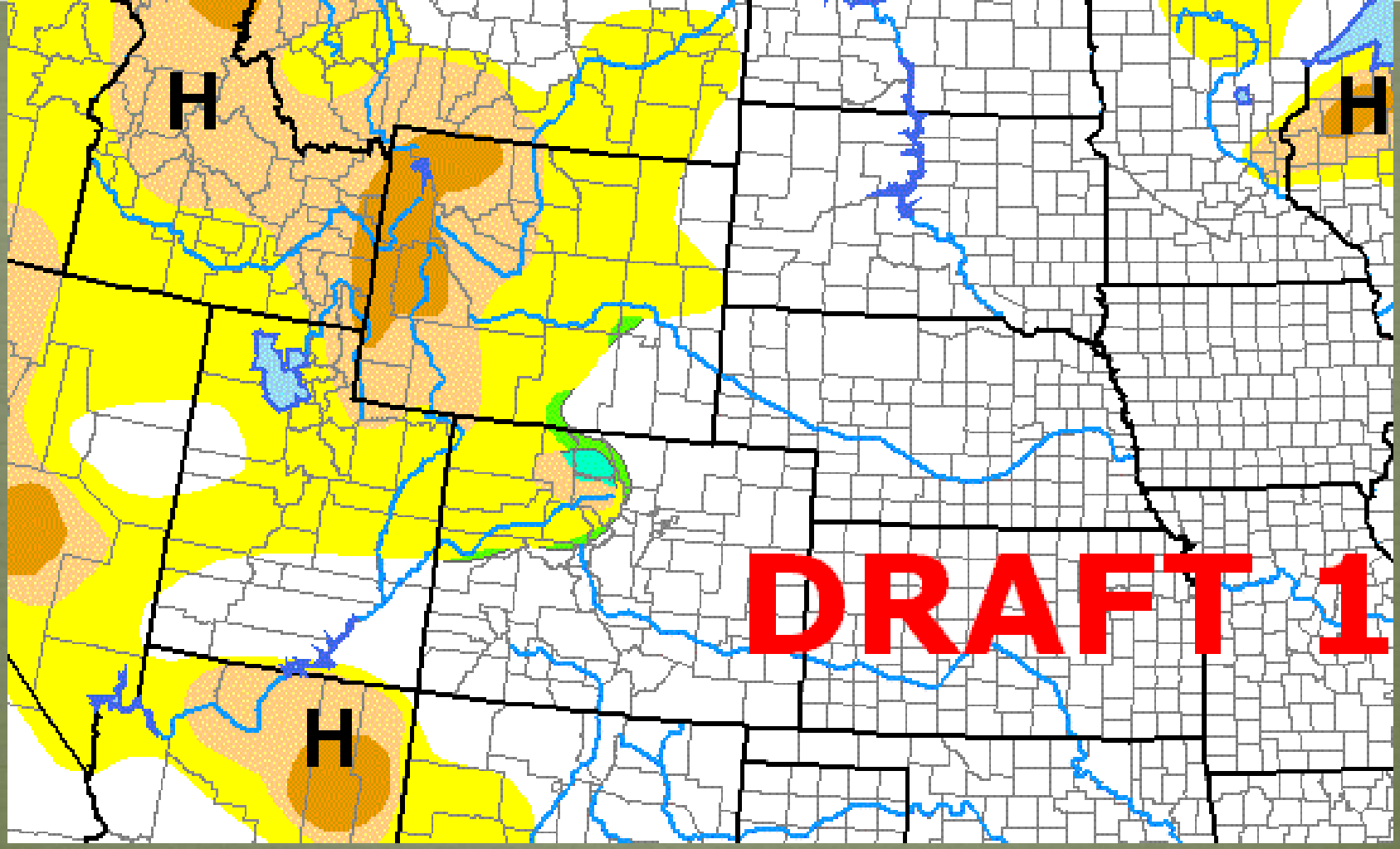


http://www.cpc.ncep.noaa.gov/

Recommendations







- nrnCO - I trimmed the areas that got some precip. Eastern and northern facing areas seemed to do much better, so east of the divide got some improvement (hopefully my topo map was good, will add terrain to ArcMap tomorrow to get a definitive line).

- **wrnWY** - For 5 days, rains of 0.5 to 1.0 inch. Will wait for 6 and 7 day totals before making the final determination.

INFO

For more information

Summary

- **Summary of weekly precipitation, snowpack and water supply assessment for the Upper Colorado River Basin for week ending Tuesday, March 30, 2010**

  Cooler than average temperatures prevailed again this past week across most of Colorado, Utah and southern portions of Utah retarding any early melt of high and mid elevation snowpack. Streamflow conditions reported by the USGS showed that of those stations that are now ice free, the majority are showing below average streamflow for this time of year. Measurable precipitation was observed over the entire area this past week but with heaviest amounts along and east of the Continental Divide in Colorado and in some parts of western Colorado. Snow pack and water year to date precipitation remain below average over most of the Colorado River mainstem in Colorado and tributaries north of approximately I-70. The Green River basin did receive moisture this past week but is still tracking near 50% of average snow water equivalent for this time. Peak SWE values in the basin normally occur in early to mid April except at very high elevations.

  With respect to drought conditions, there was not enough change since last week to warrant significant changes to the USDM. Some minor northward shifts in the D0 line (retraction) are recommended near the Grand Mesa in west central Colorado. Also, due to heavy precip this past week along the mountain crest in north central Colorado, a minor reduction of D1 and D0 were suggested in Jackson County, Colorado and along the upper fringe of the basin in Grand and Summit counties. No changes were discussed for Utah and Wyoming.