Winter 2010

Weekly Climate, Water & Drought Assessment

Today's Agenda

-Background Information

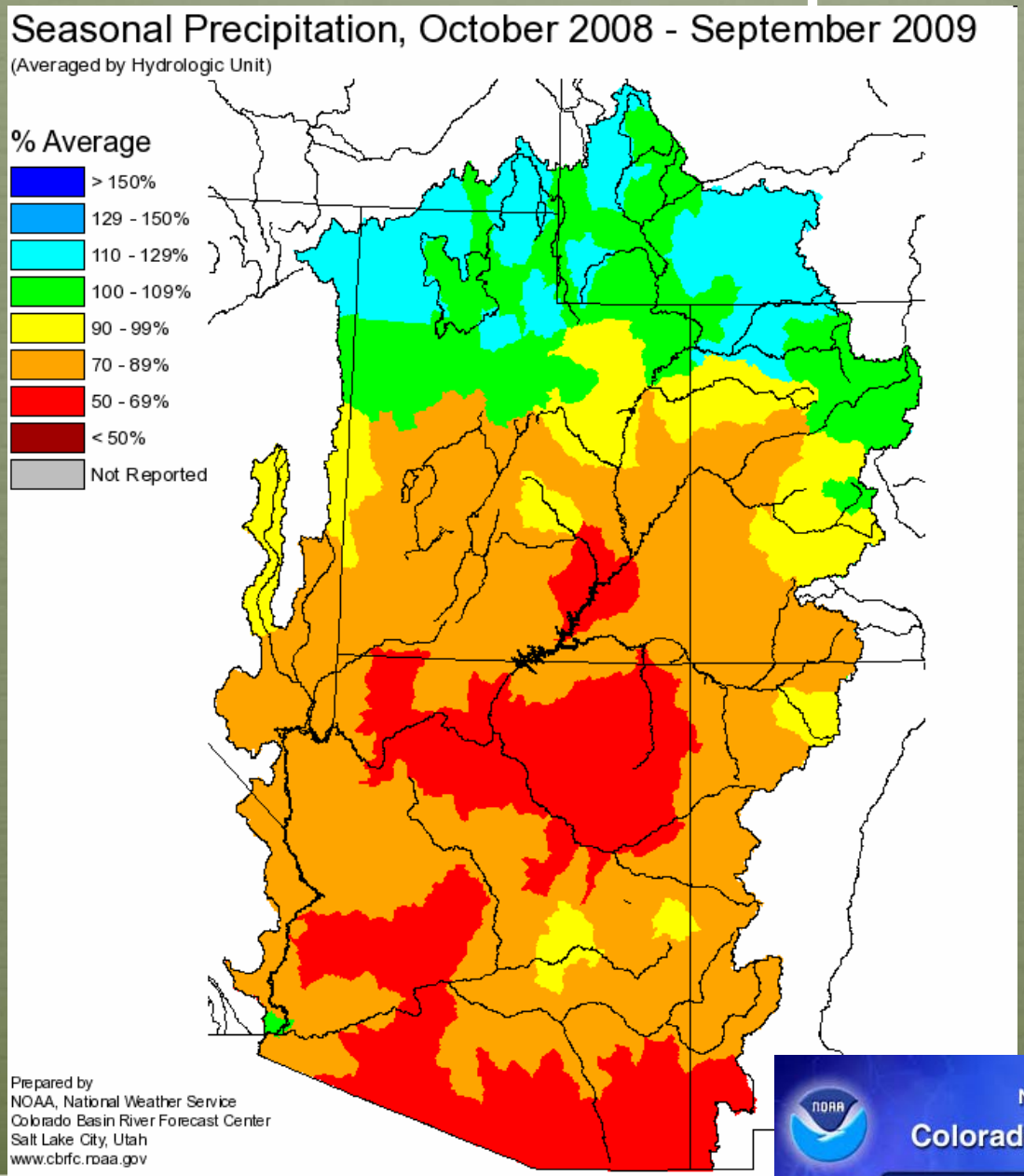
-Assessment of current water conditions

- Precipitation Forecast

- Recommendations for Drought Monitor

Background

WY 2009 Precipitation



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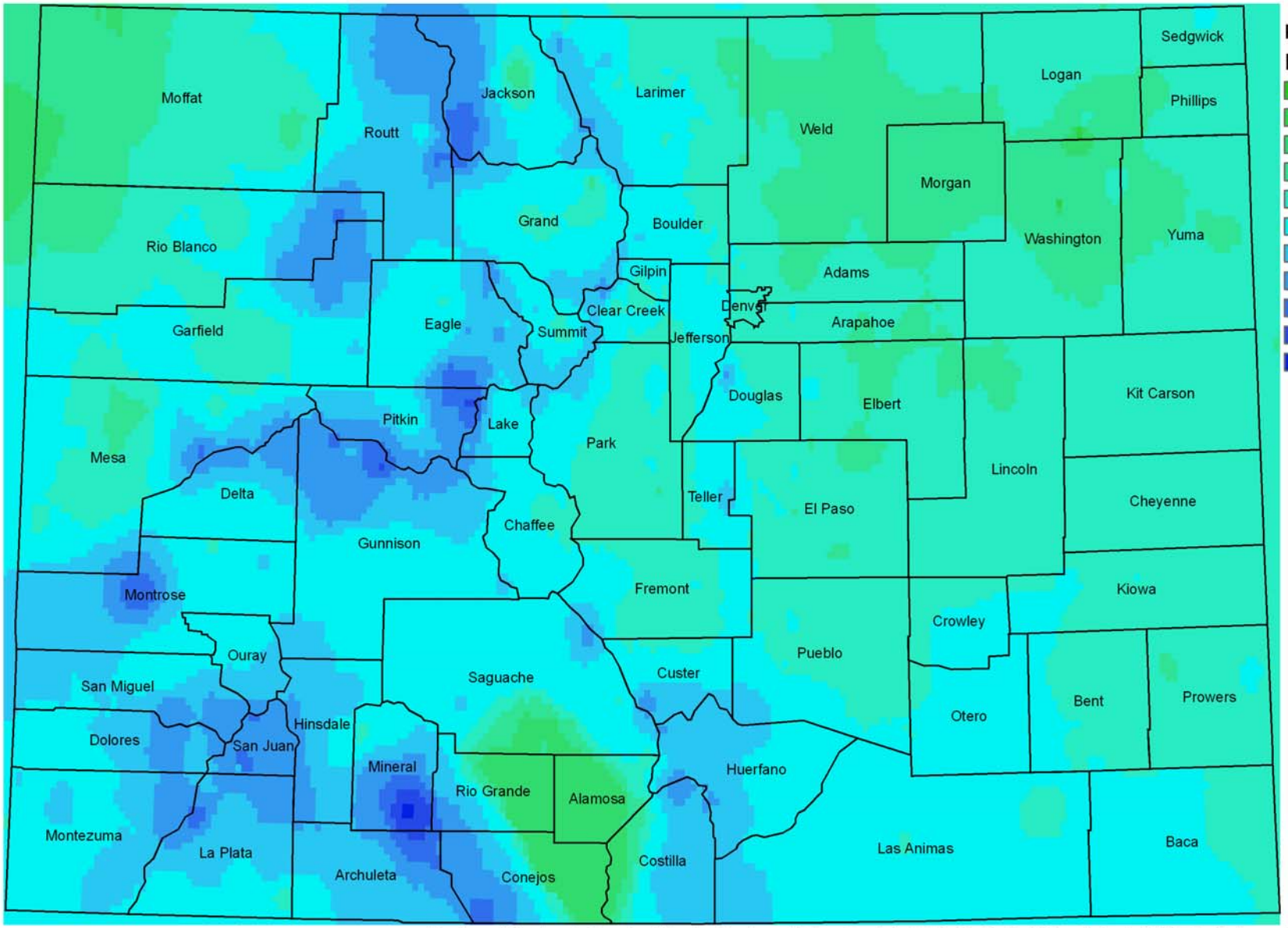
Colorado Basin River Forecast Center

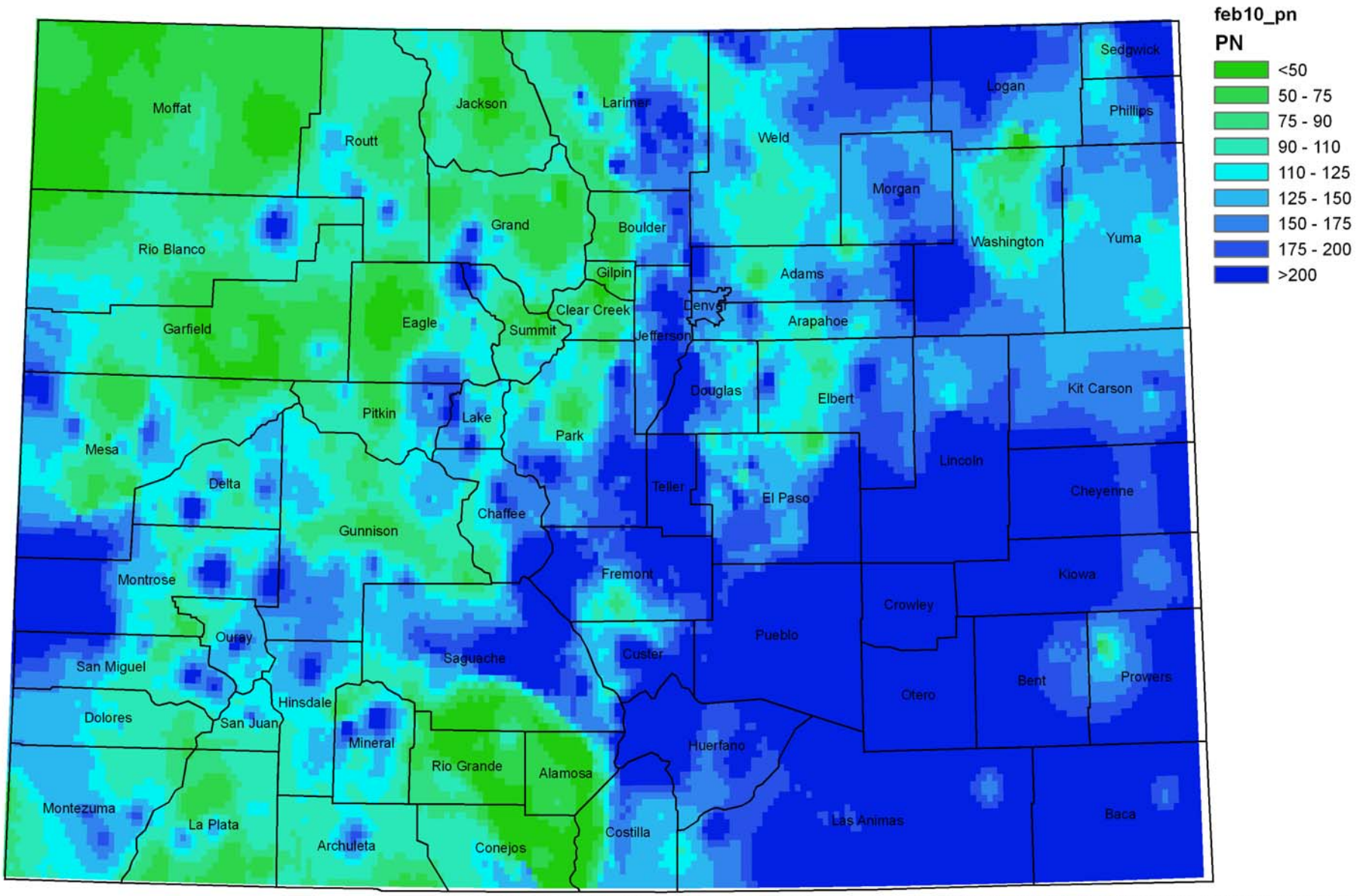
Precipitation/Snowpack Update

Colorado Precipitation (in) February 2010



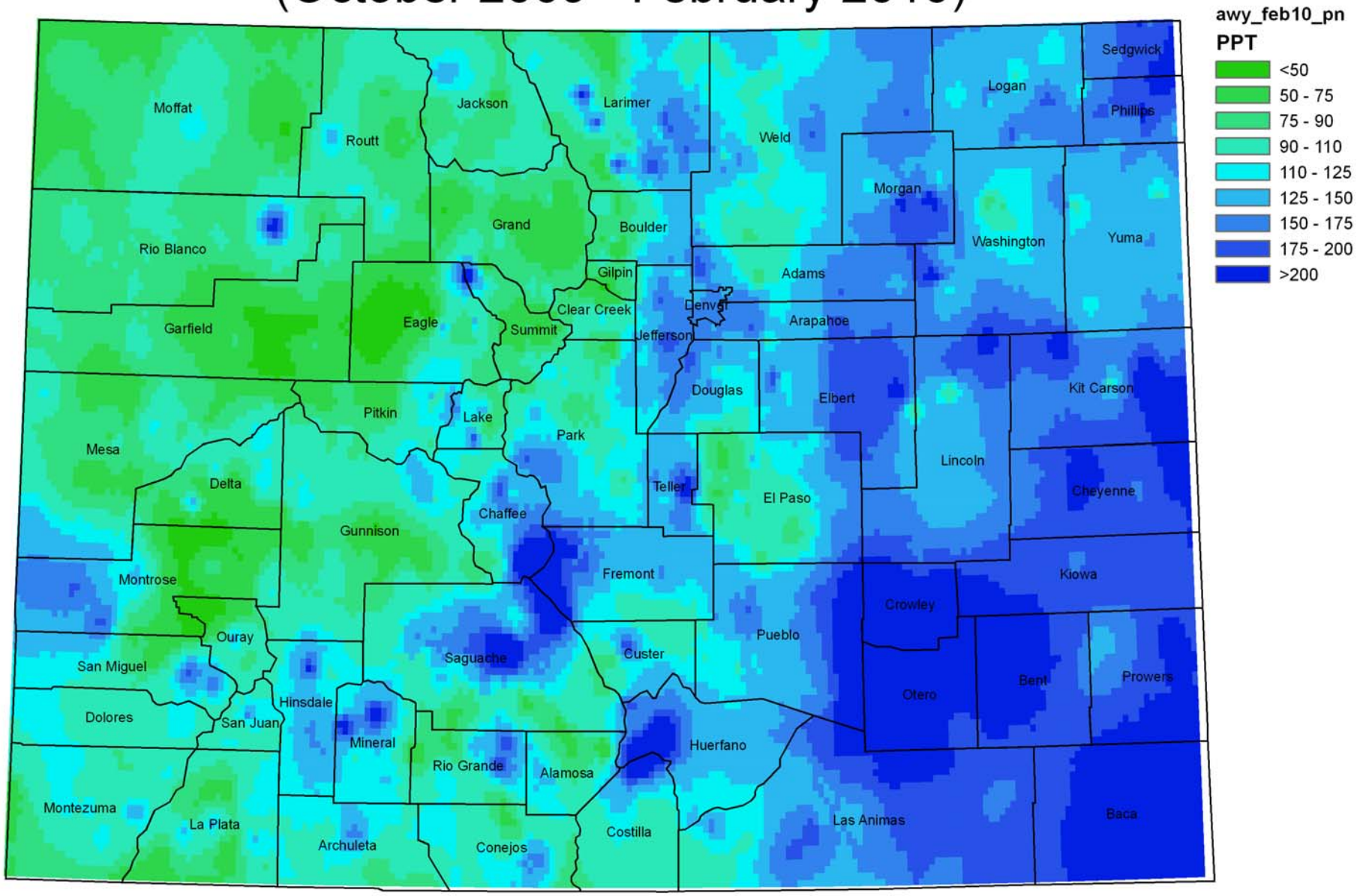
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

February 2010 Precipitation as Percent of Normal



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

Water Year 2010 Precipitation as Percent of Normal
(October 2009 - February 2010)



Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
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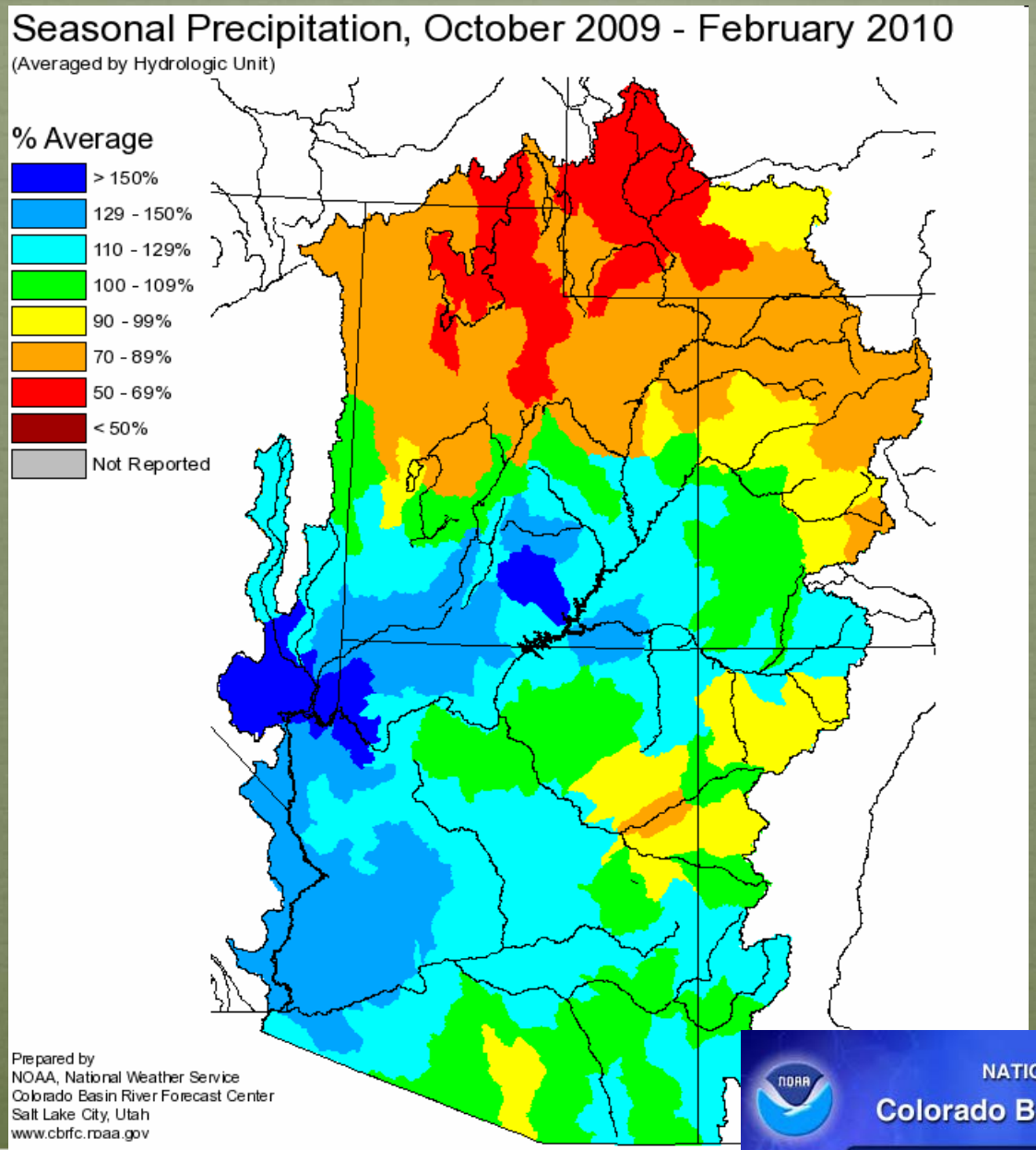
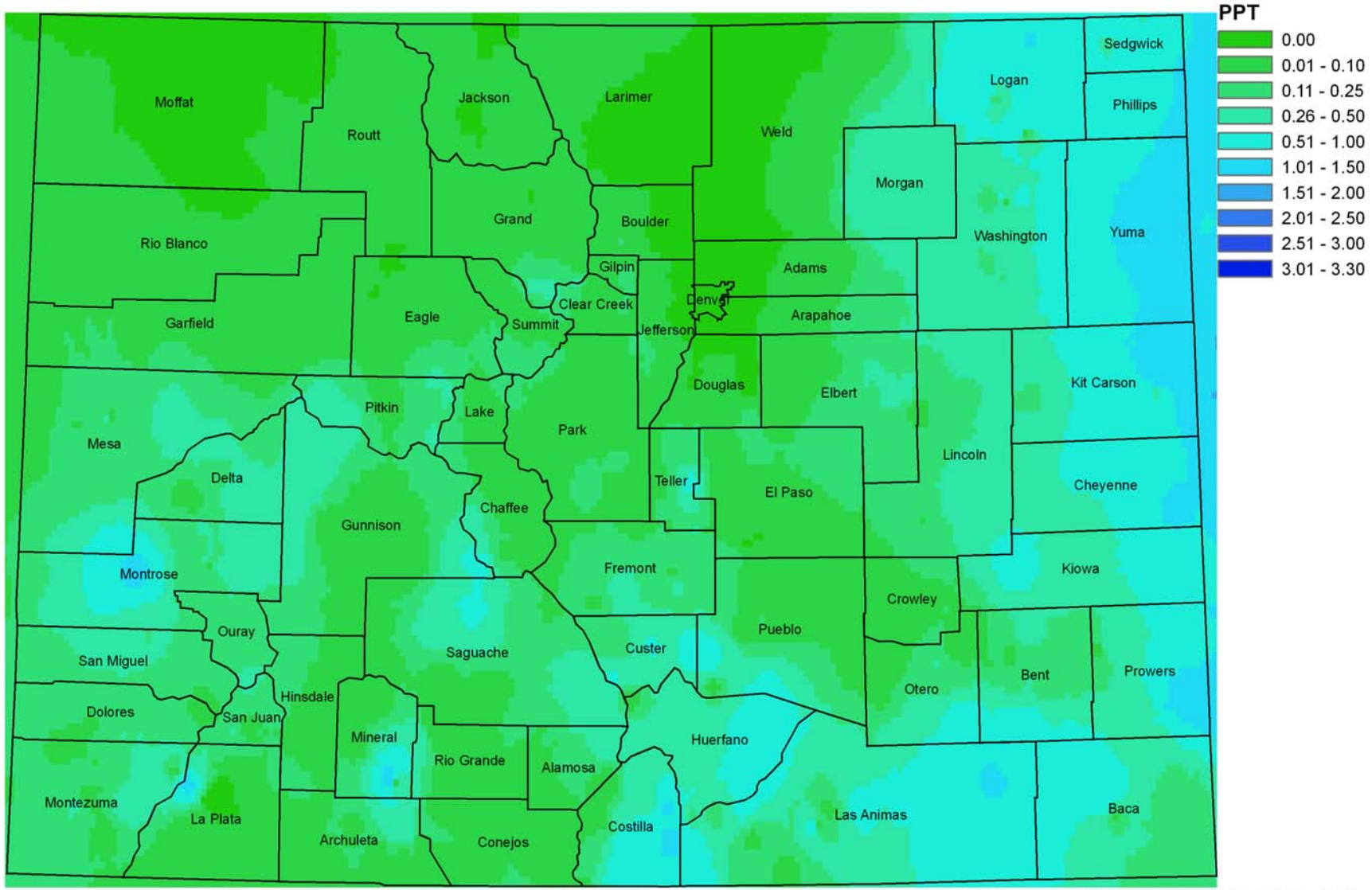
WY 2010 Precipitation

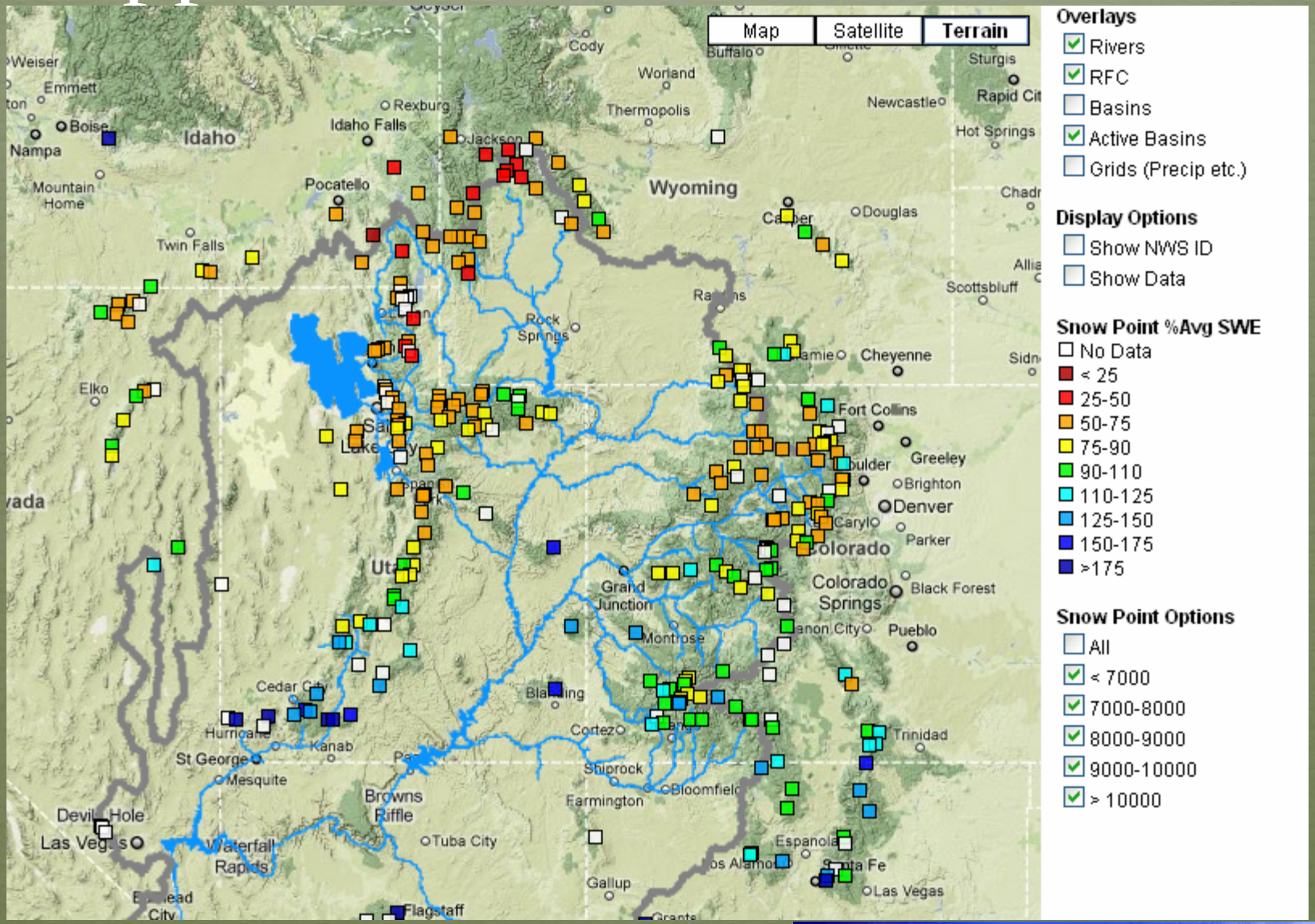


7 Day Precipitation Animation 8-14 March 2010



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



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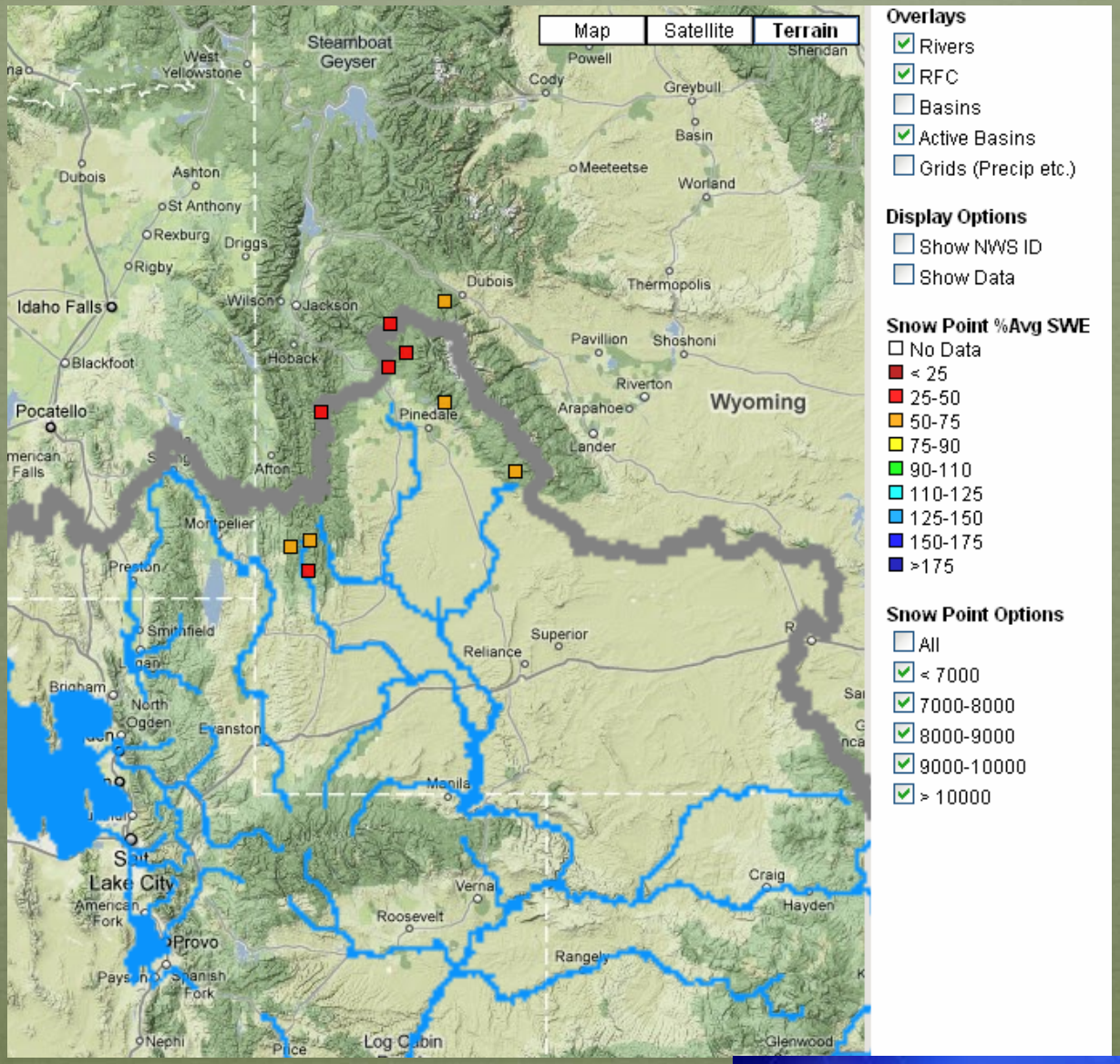
Green River Basin above Flaming Gorge



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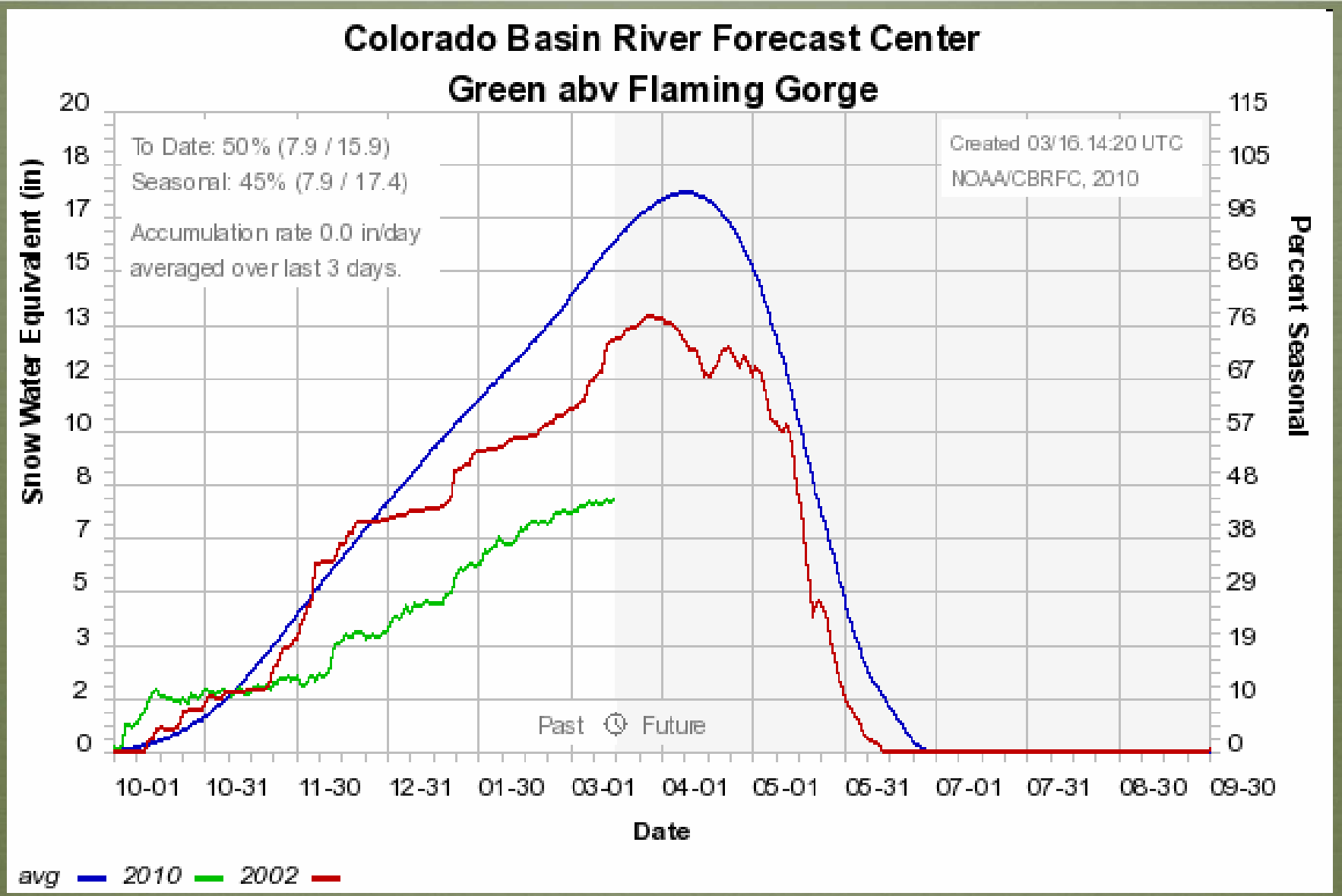

Basin Snowpack: 50%

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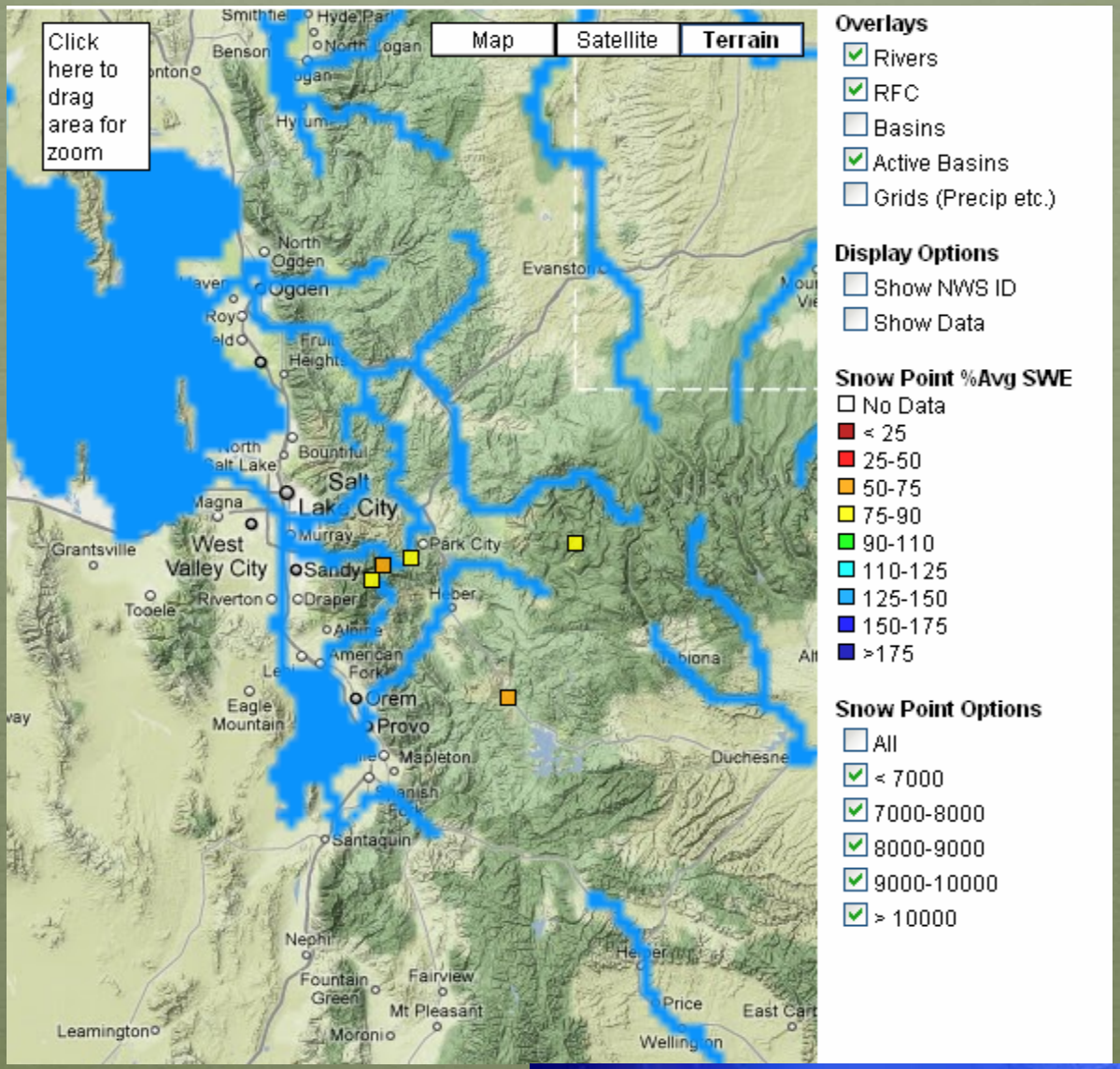
Provo River Basin



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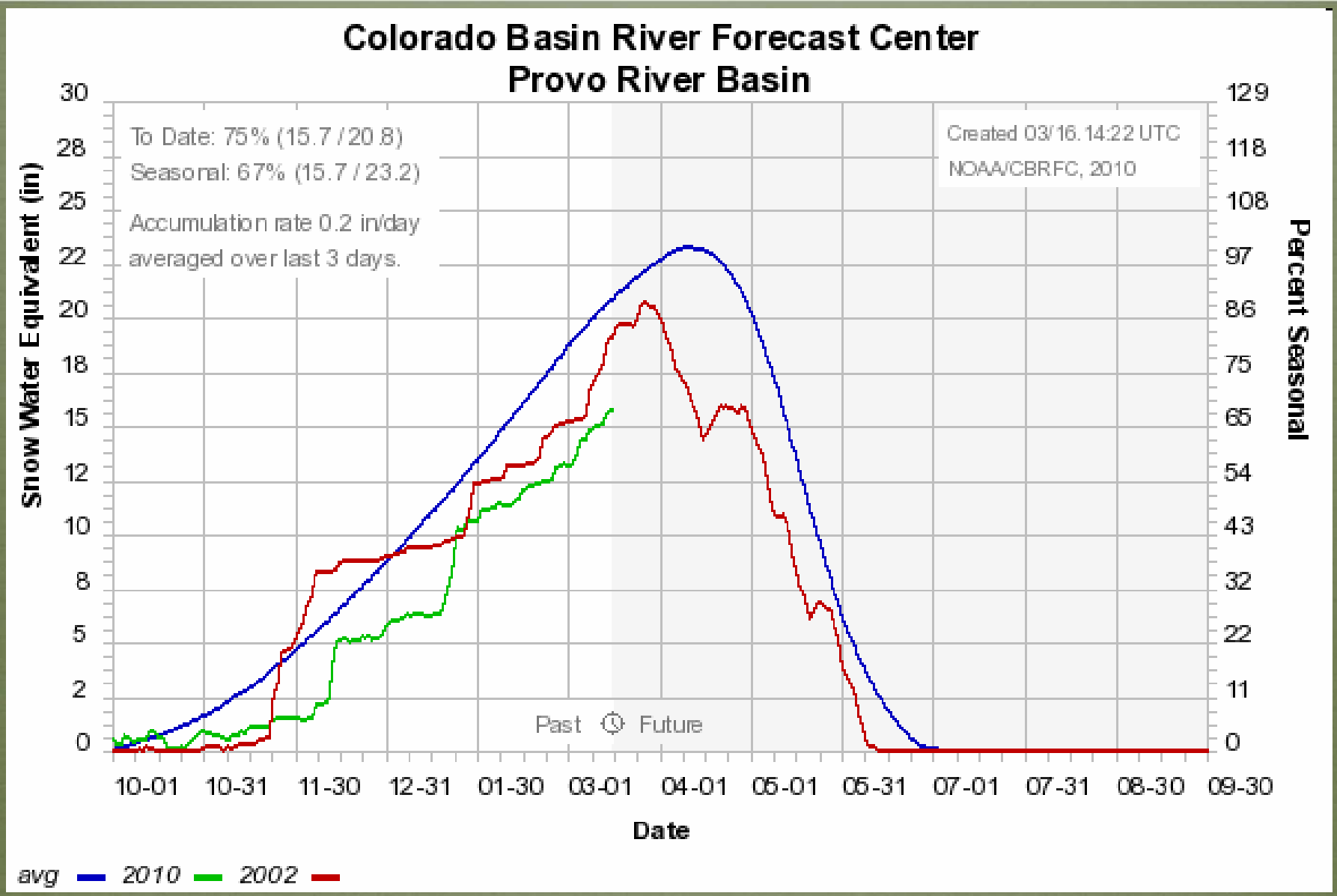

Basin snowpack: 75%

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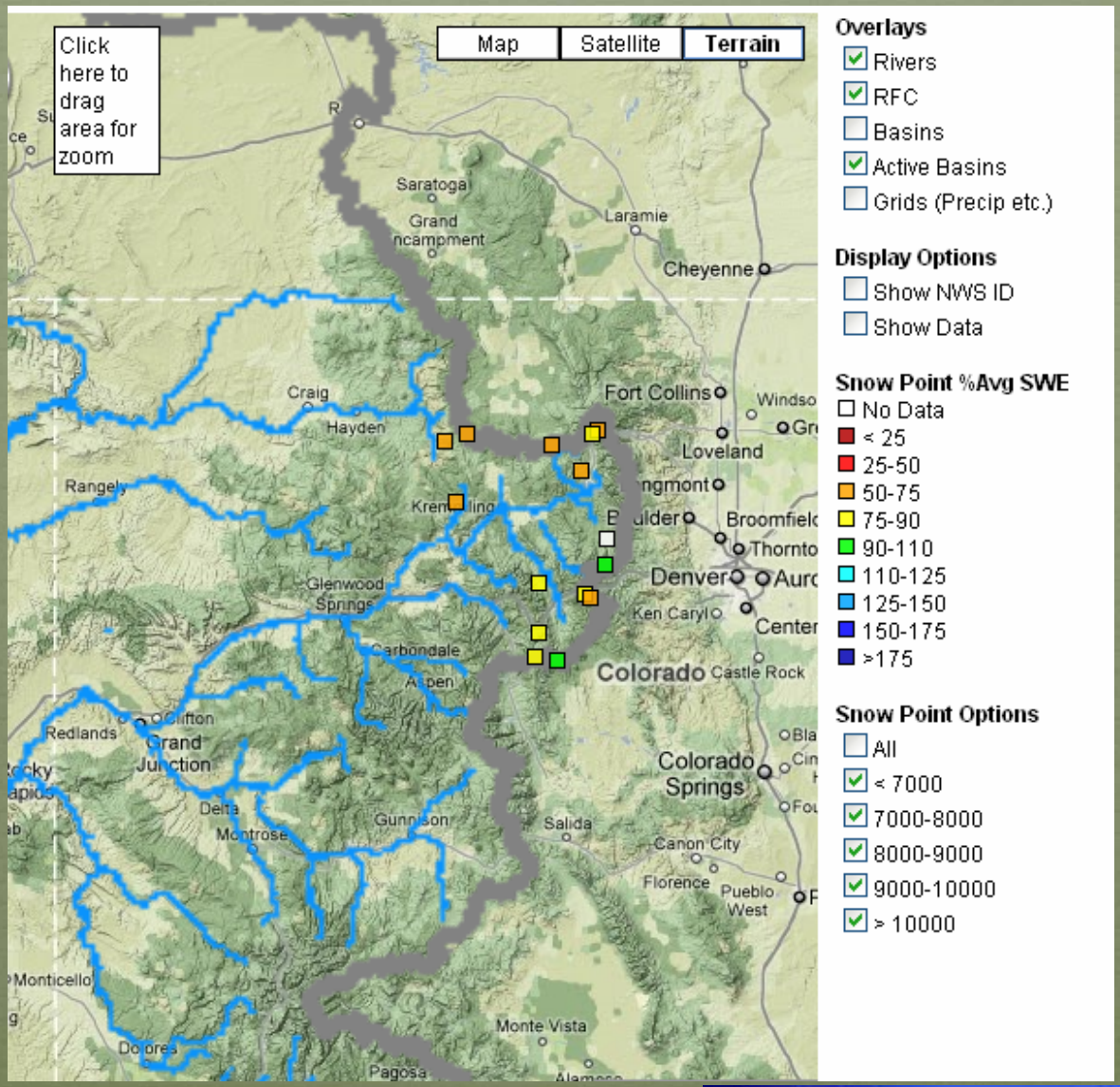
Upper Colorado above Kremmling



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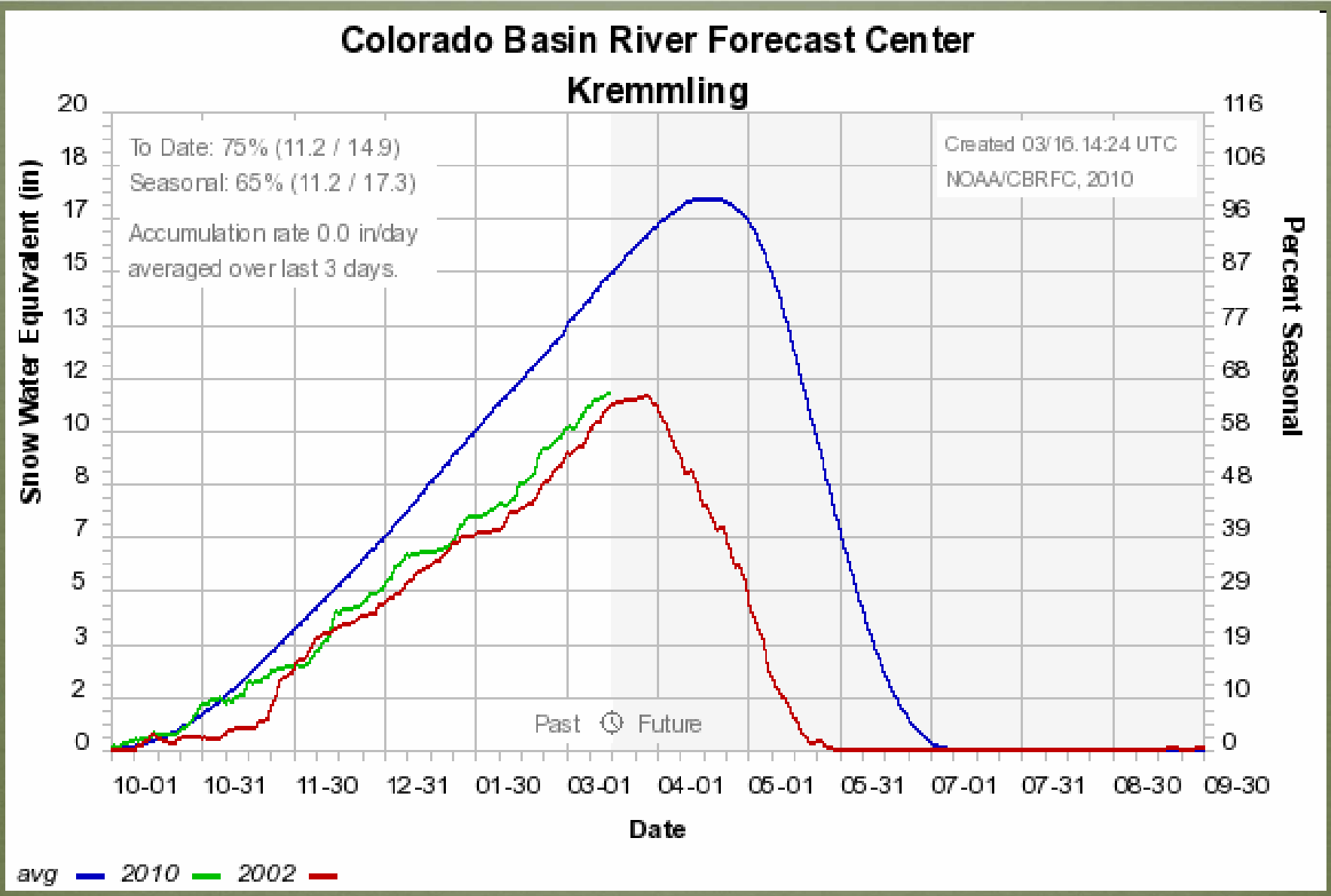
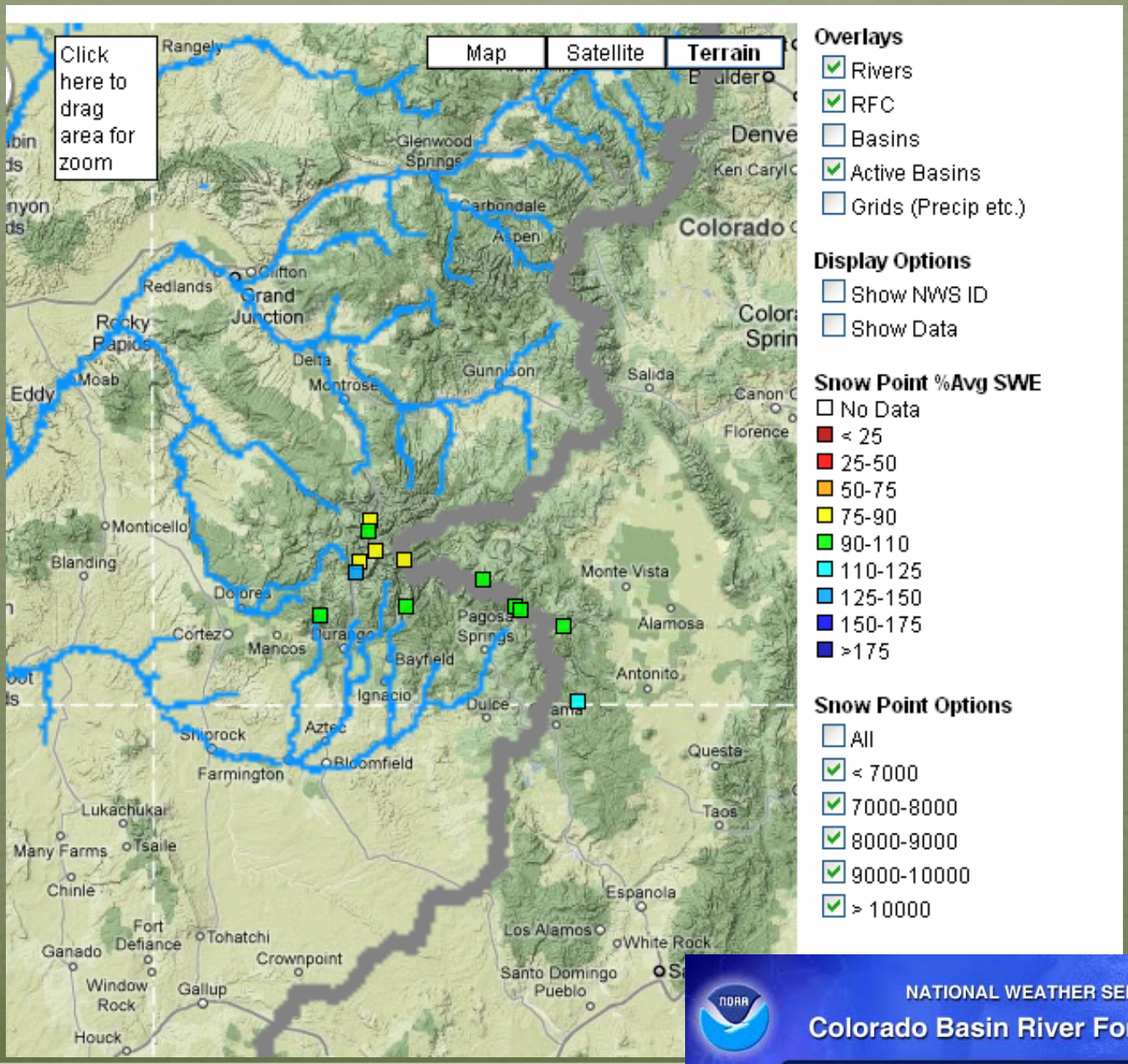
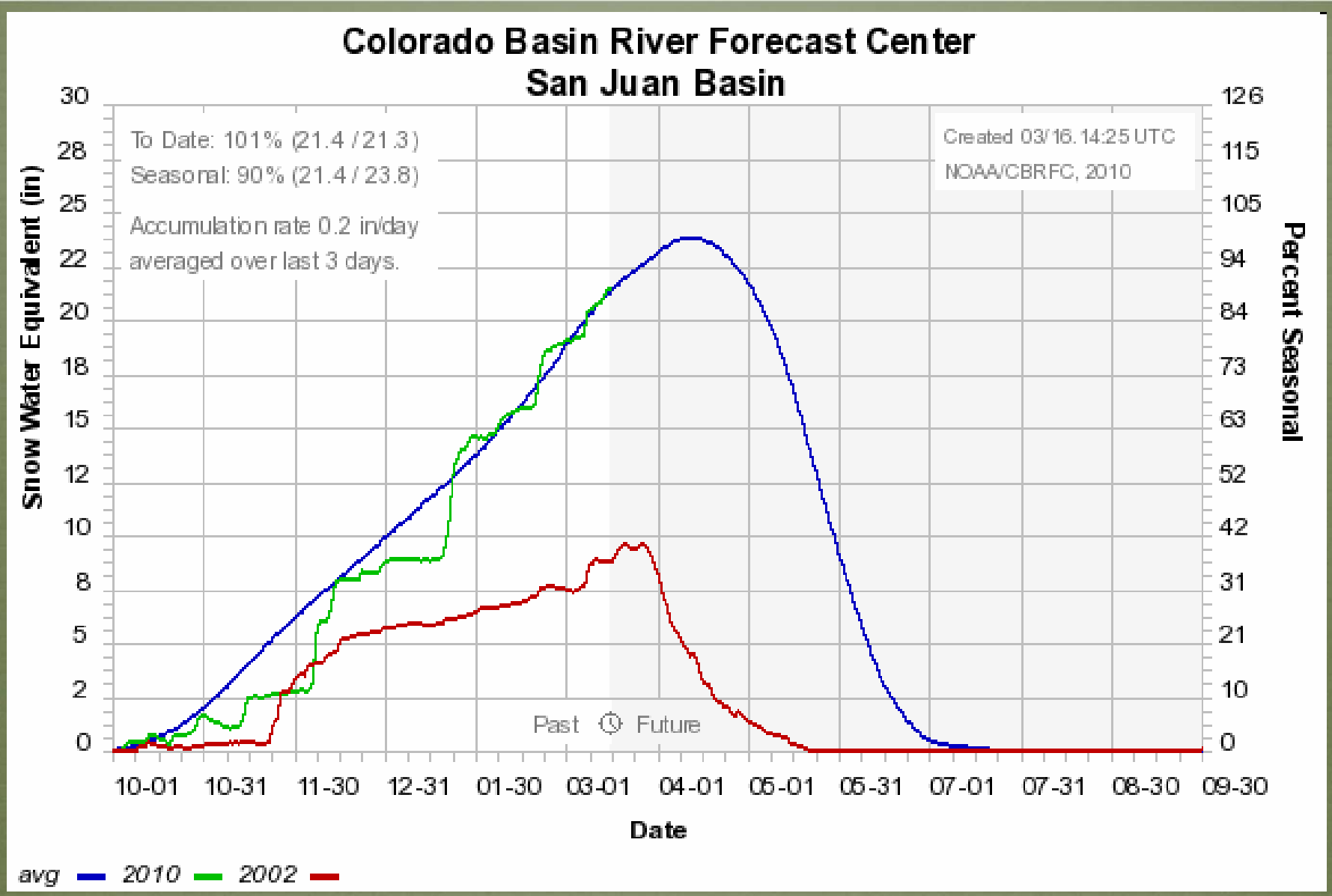


Basin Snowpack: 75%

San Juan Basin





Basin Snowpack: 101%

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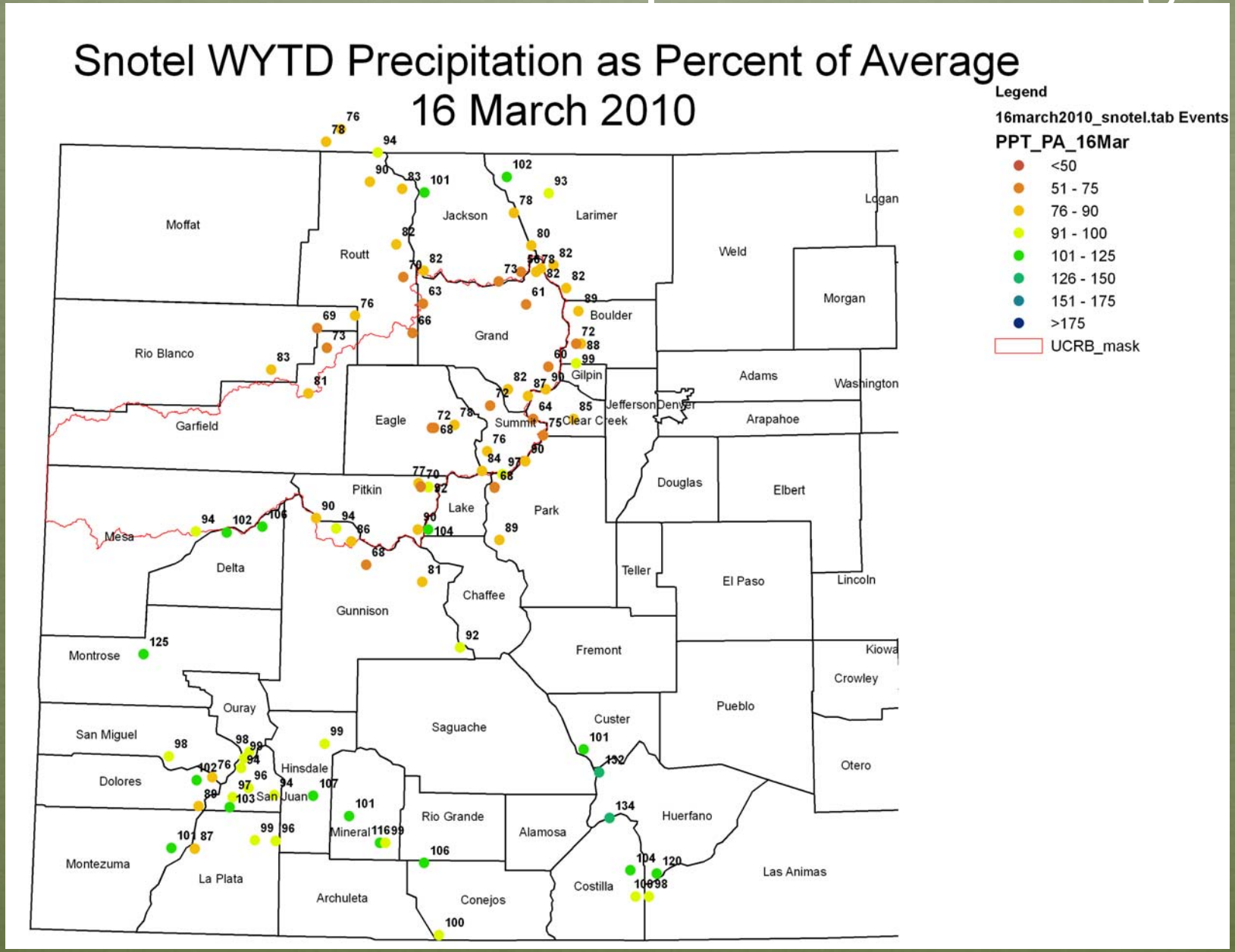
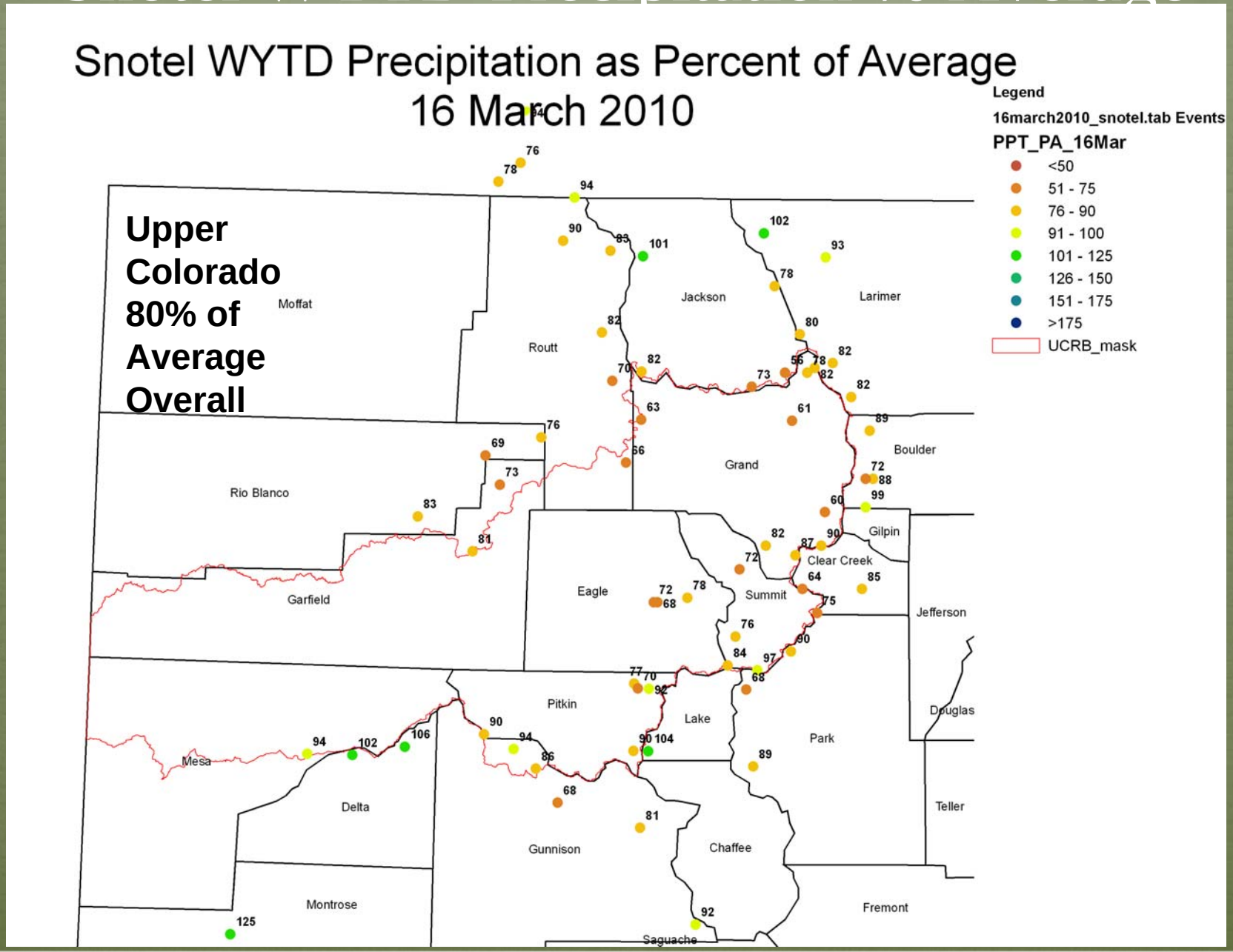
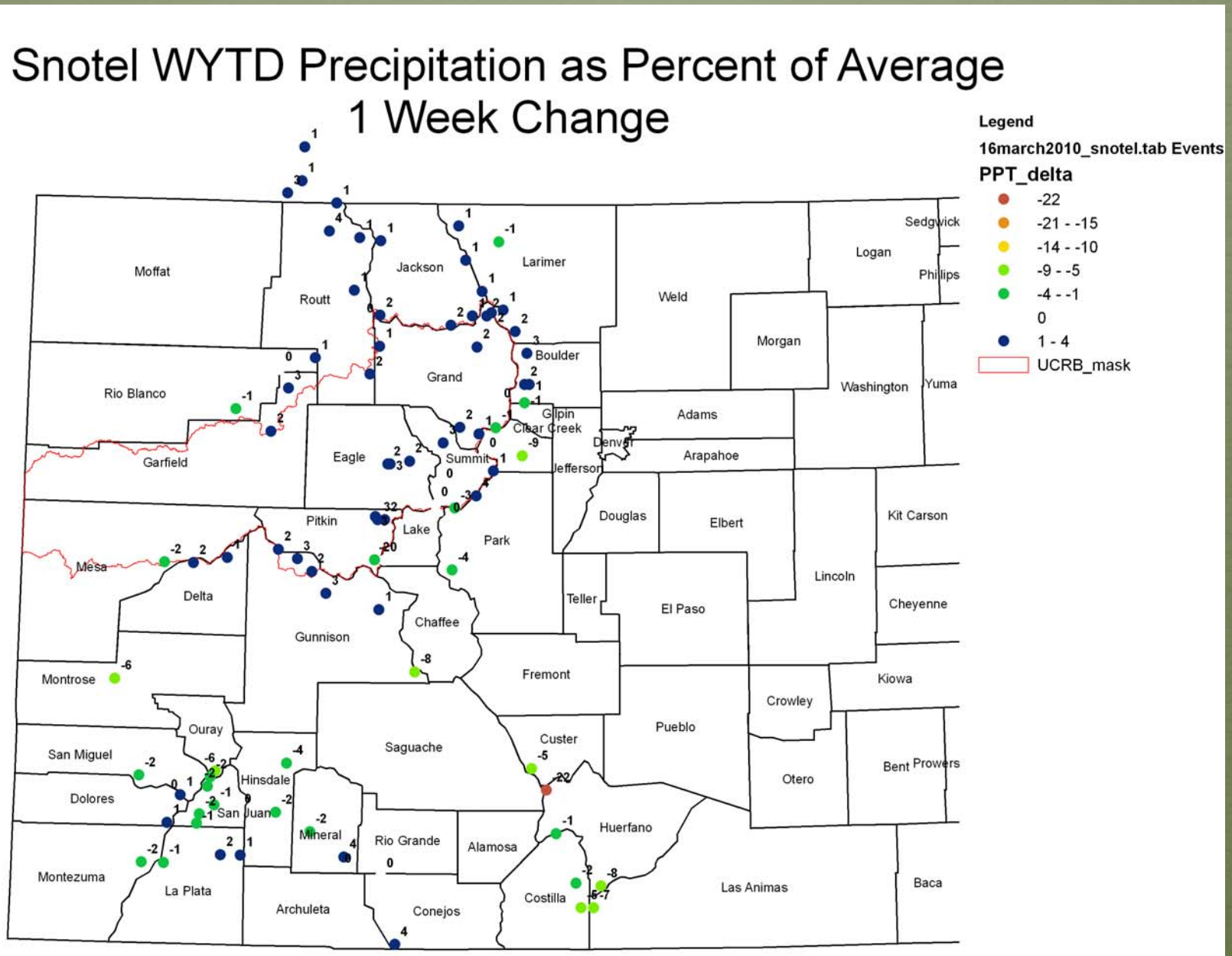
Snotel WYTD Precipitation % Average



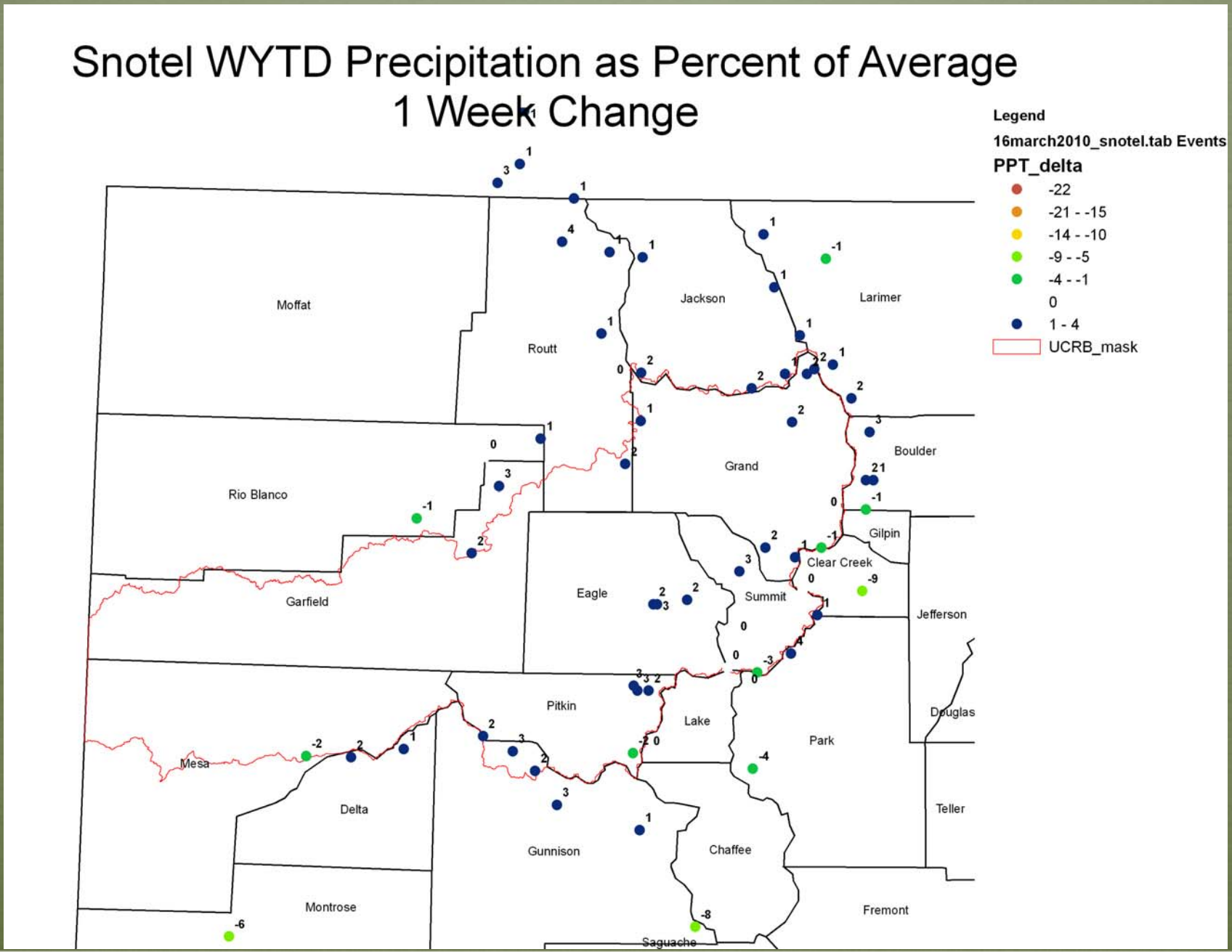
Snotel WYTD Precipitation % Average



Snotel WYTD Precipitation % Average 1 Week Change

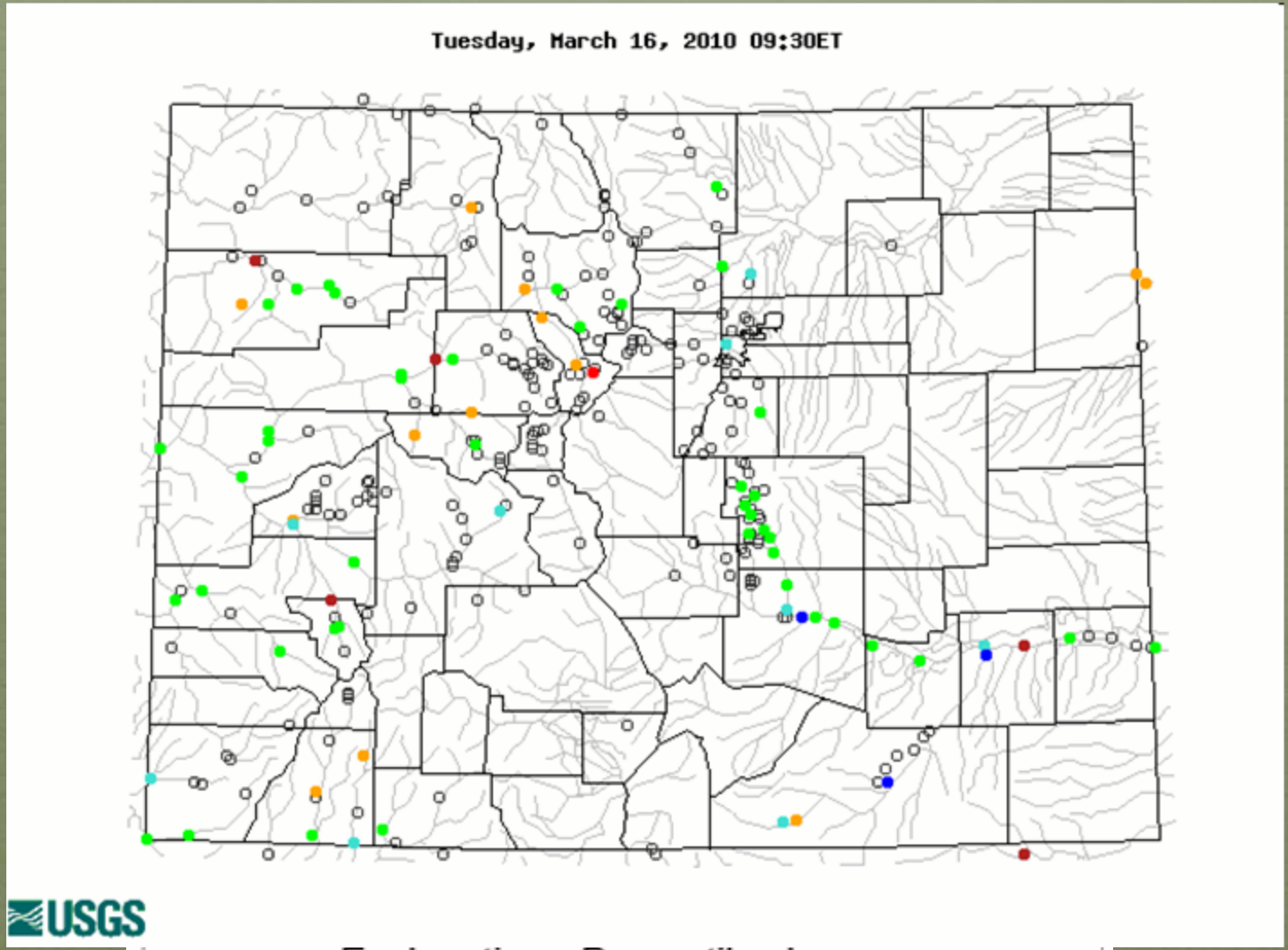


Snotel WYTD Precipitation % Average 1 Week Change



Streamflow Update

Streamflow 16 March 2010

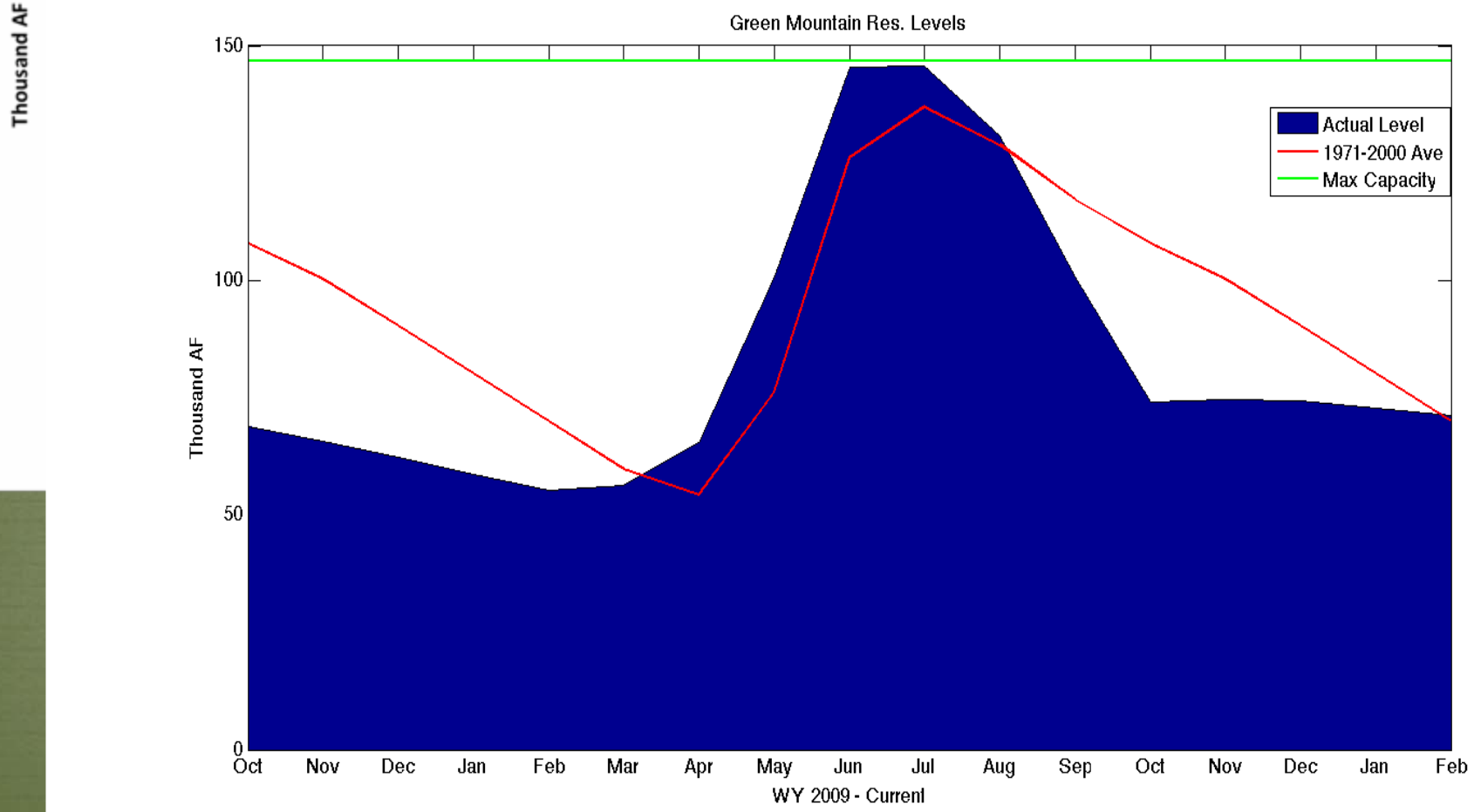


USGS science for a changing world

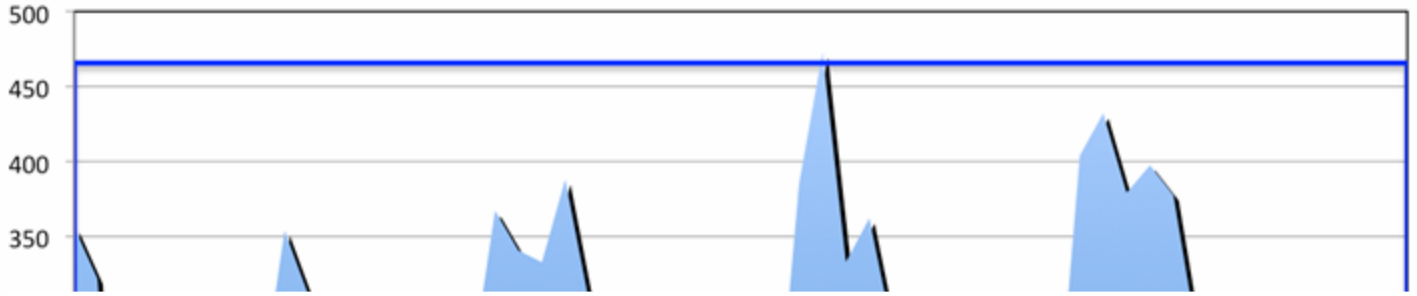
Reservoir Update

Green Mountain February Reservoir Storage

Max Capacity

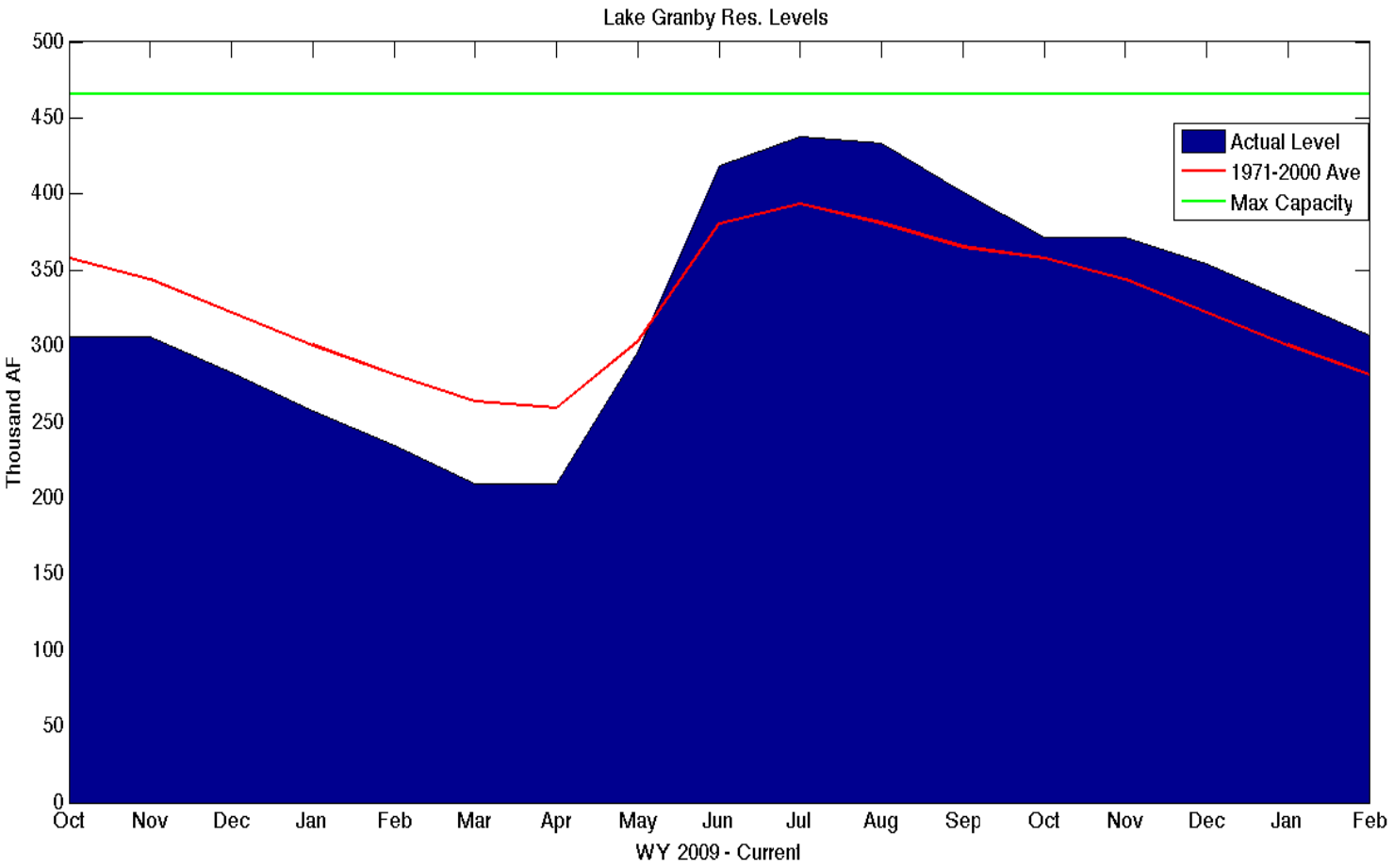


Lake Granby February Reservoir Storage

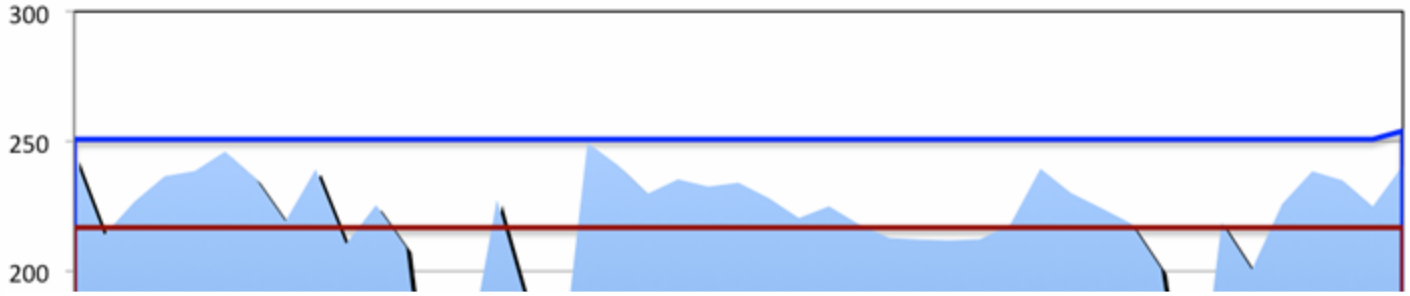


Max Capacity

Thousand AF

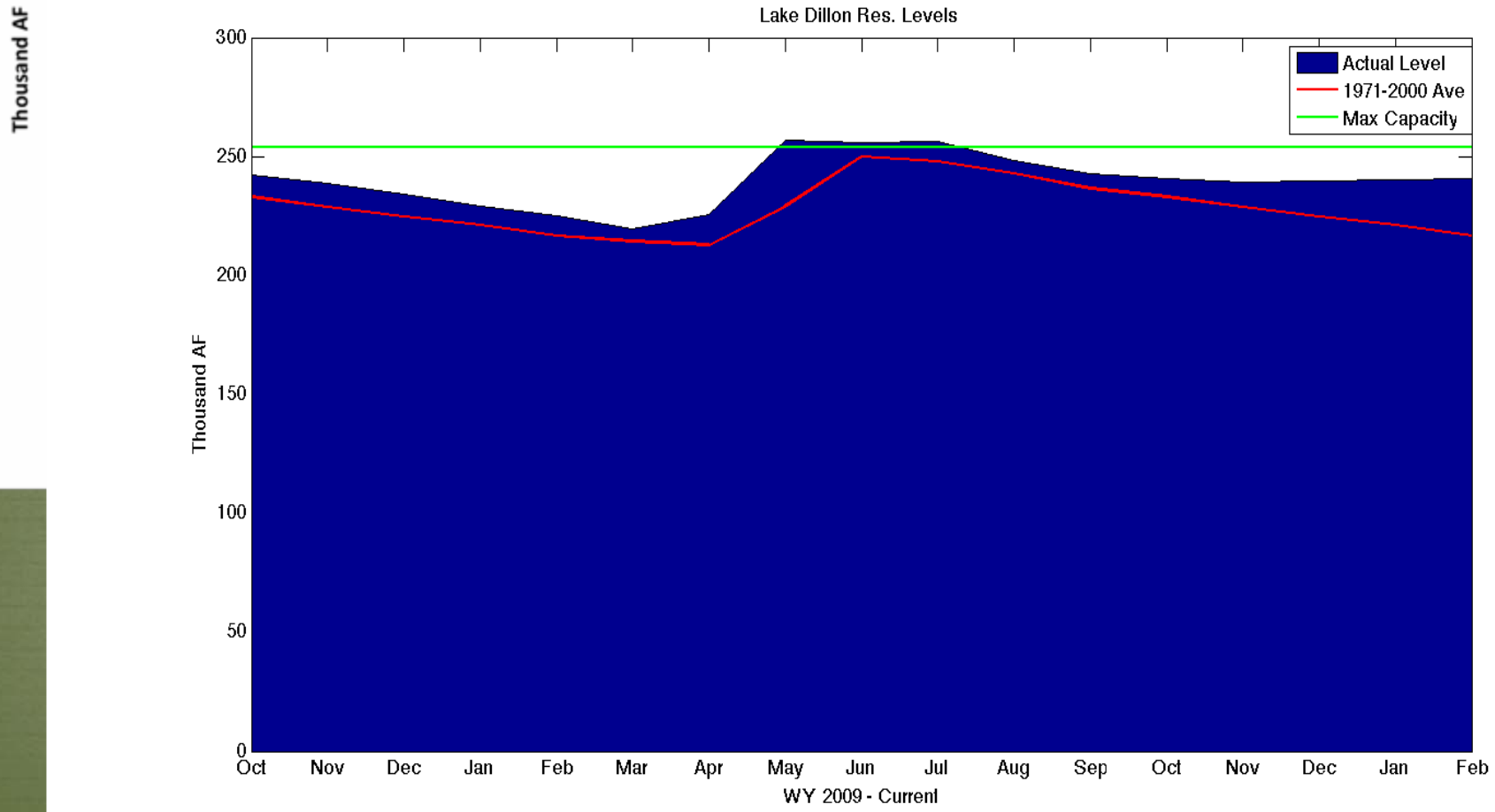


Lake Dillon February Reservoir Storage

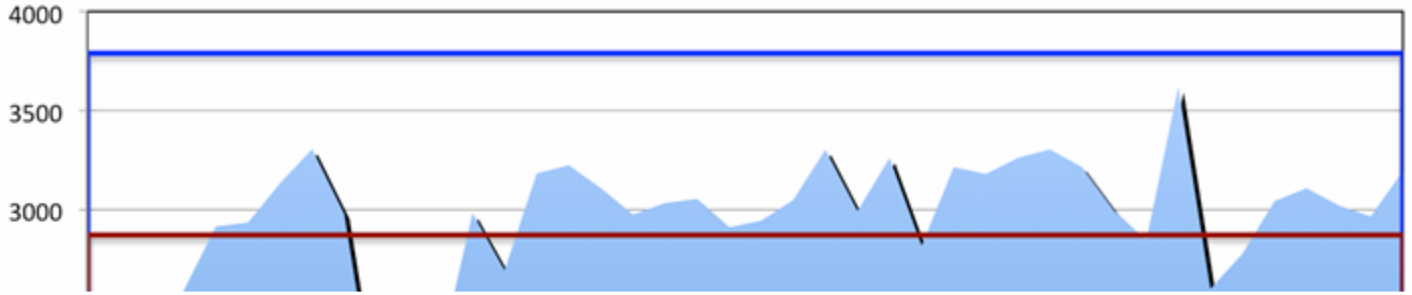


Max Capacity

1971-2000 Average



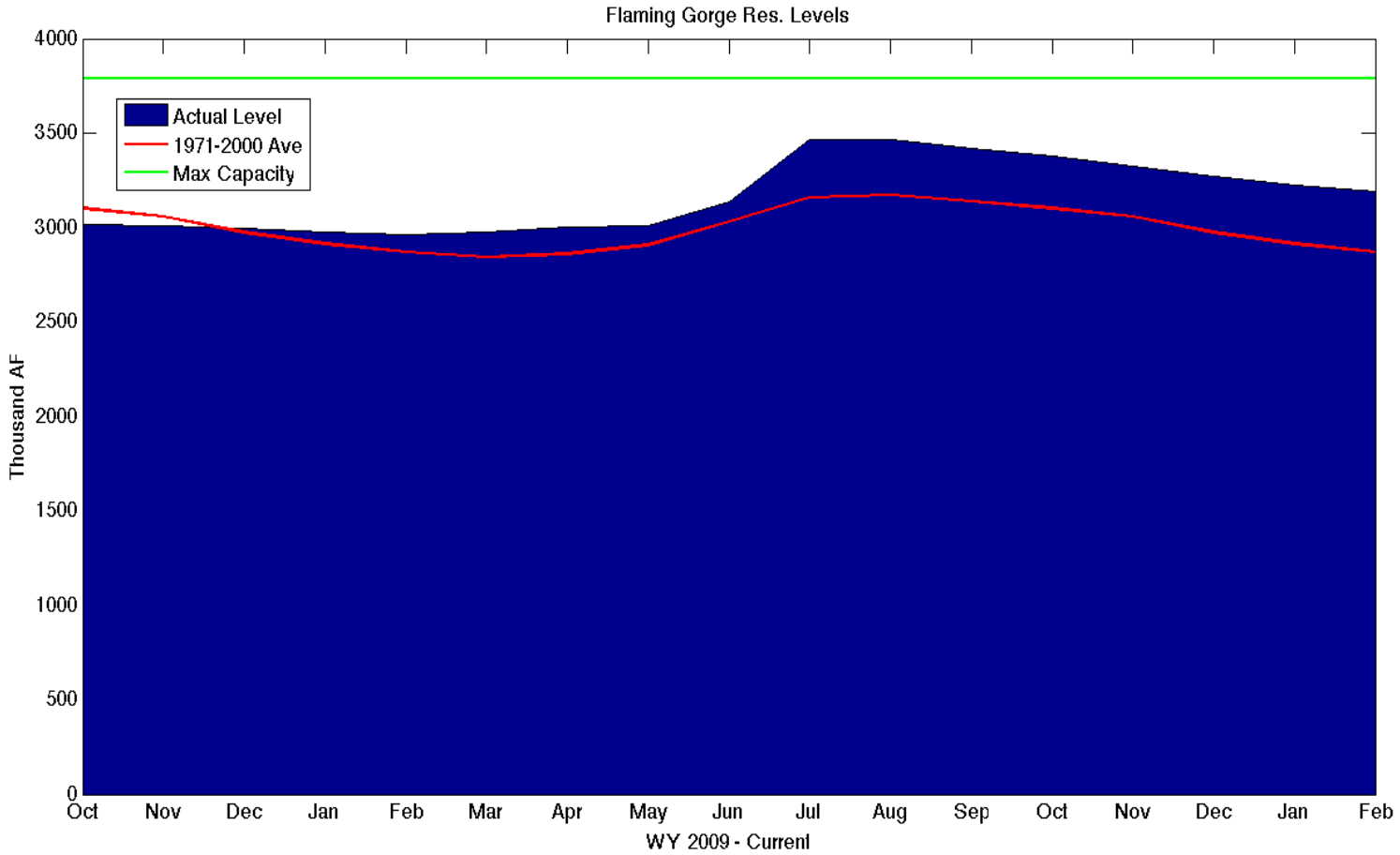
Flaming Gorge February Reservoir Storage



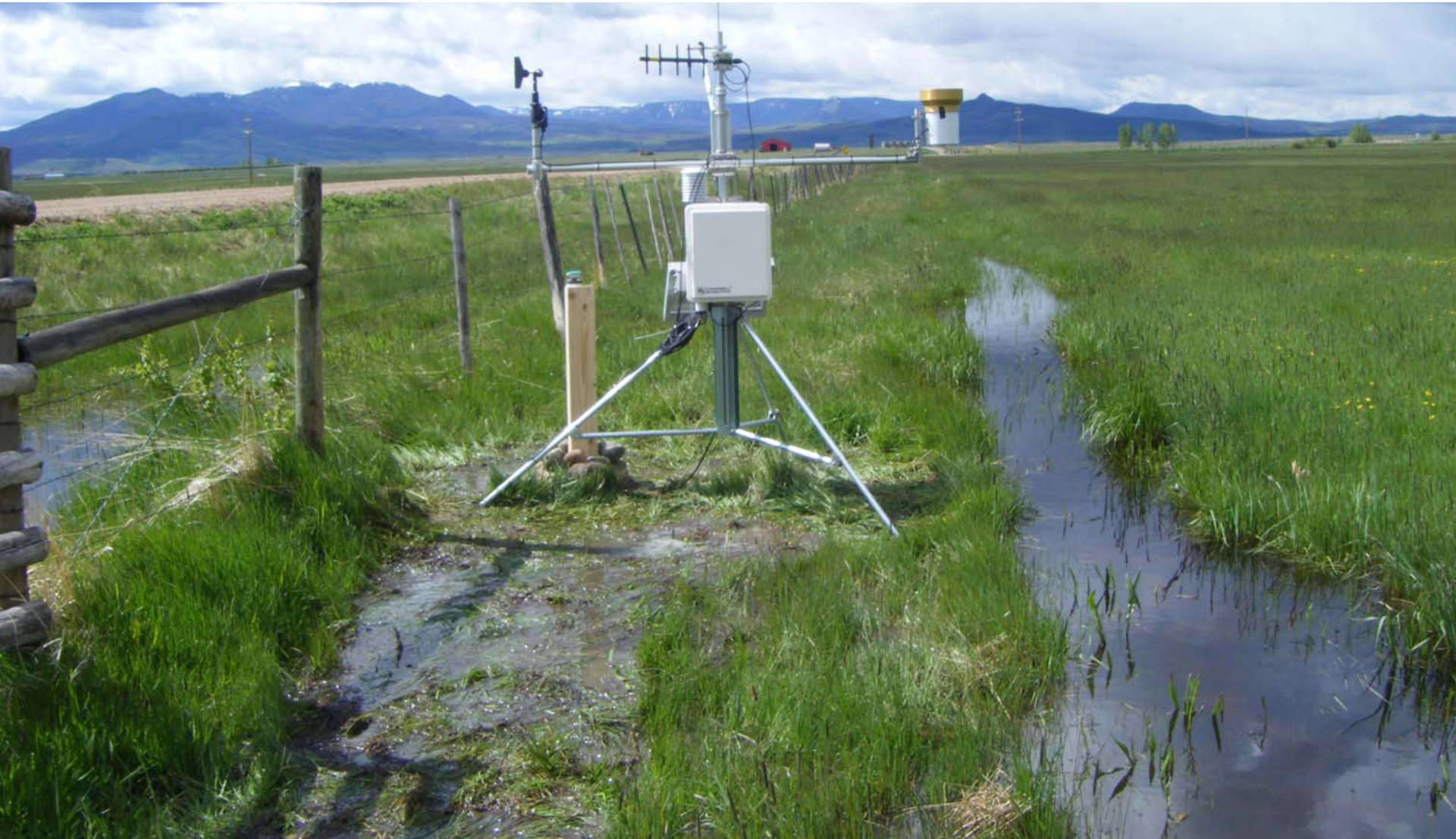
Max Capacity

1971-2000 Average

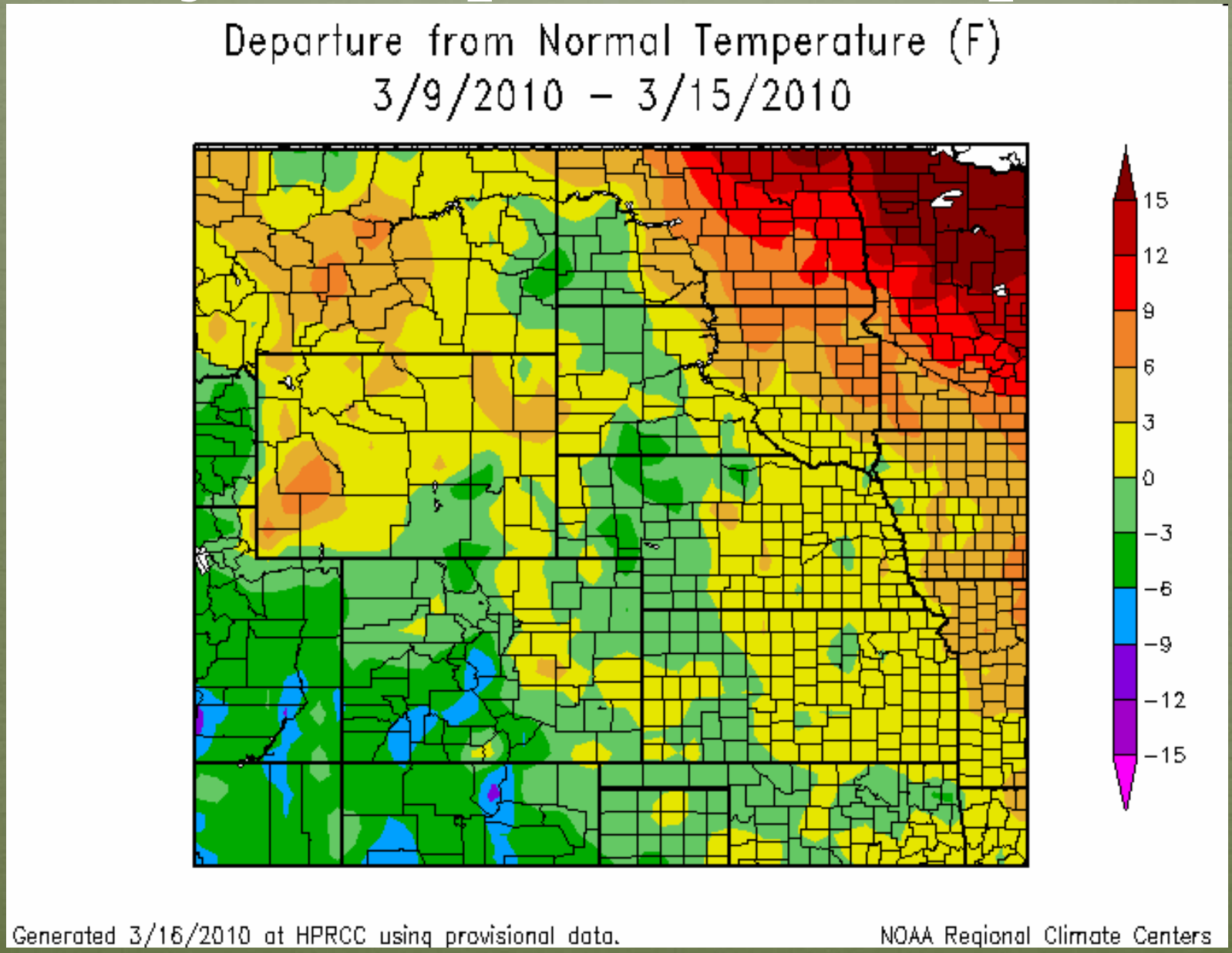
Thousand AF



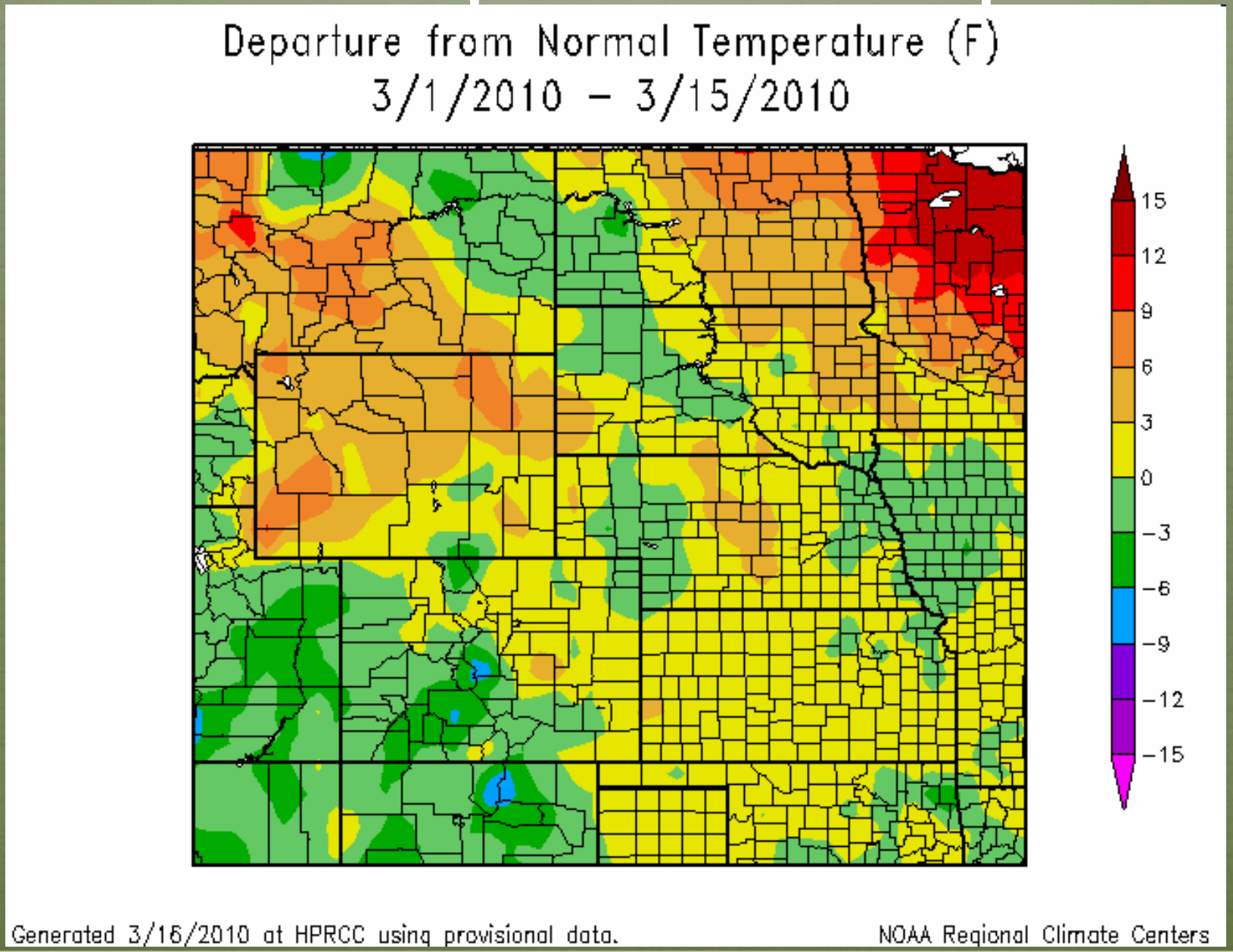
Water Demand

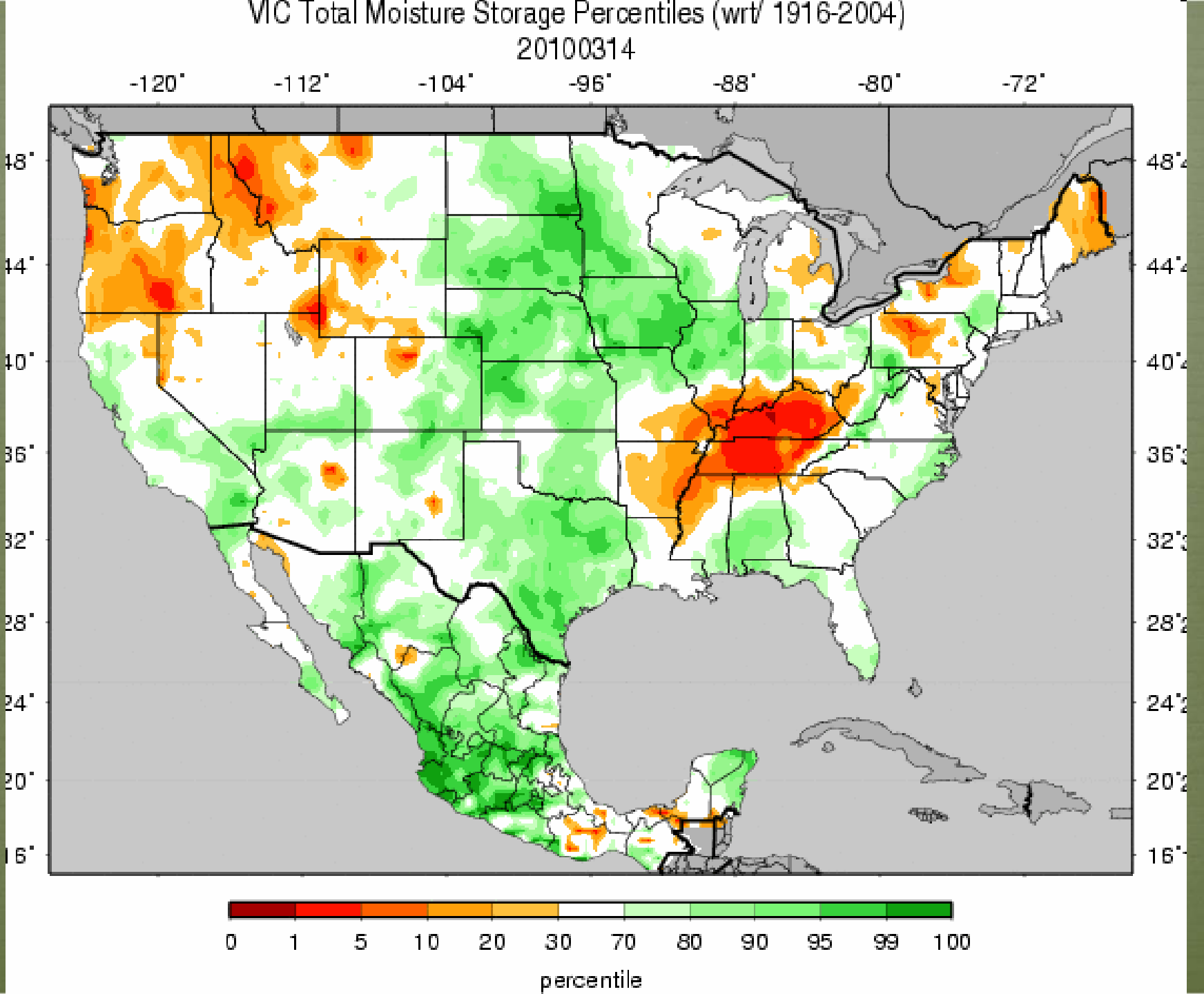


7 Day Temperature Departure



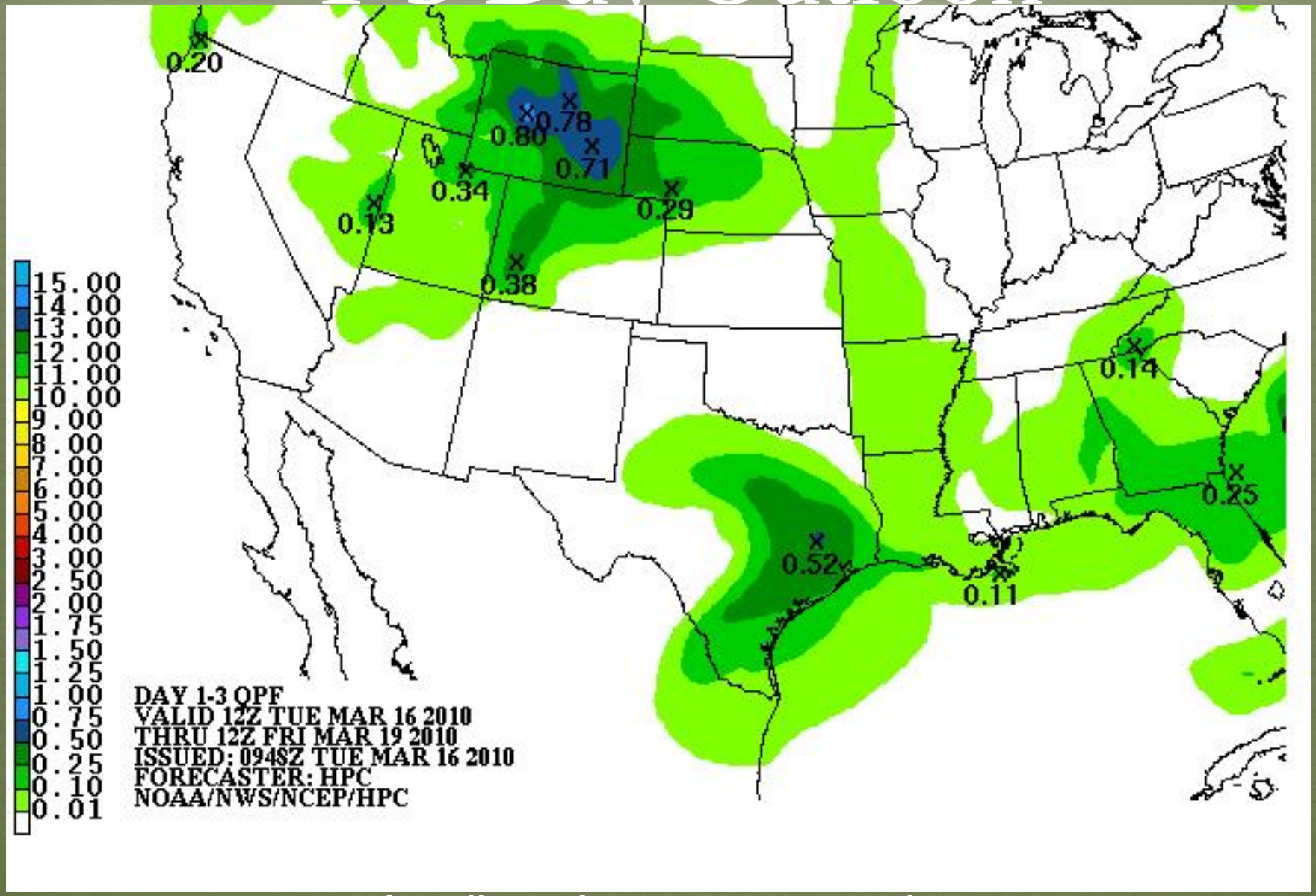
March Temperature Departure




VIC Total Moisture Storage Percentiles (wrt/ 1916-2004)
20100314
-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

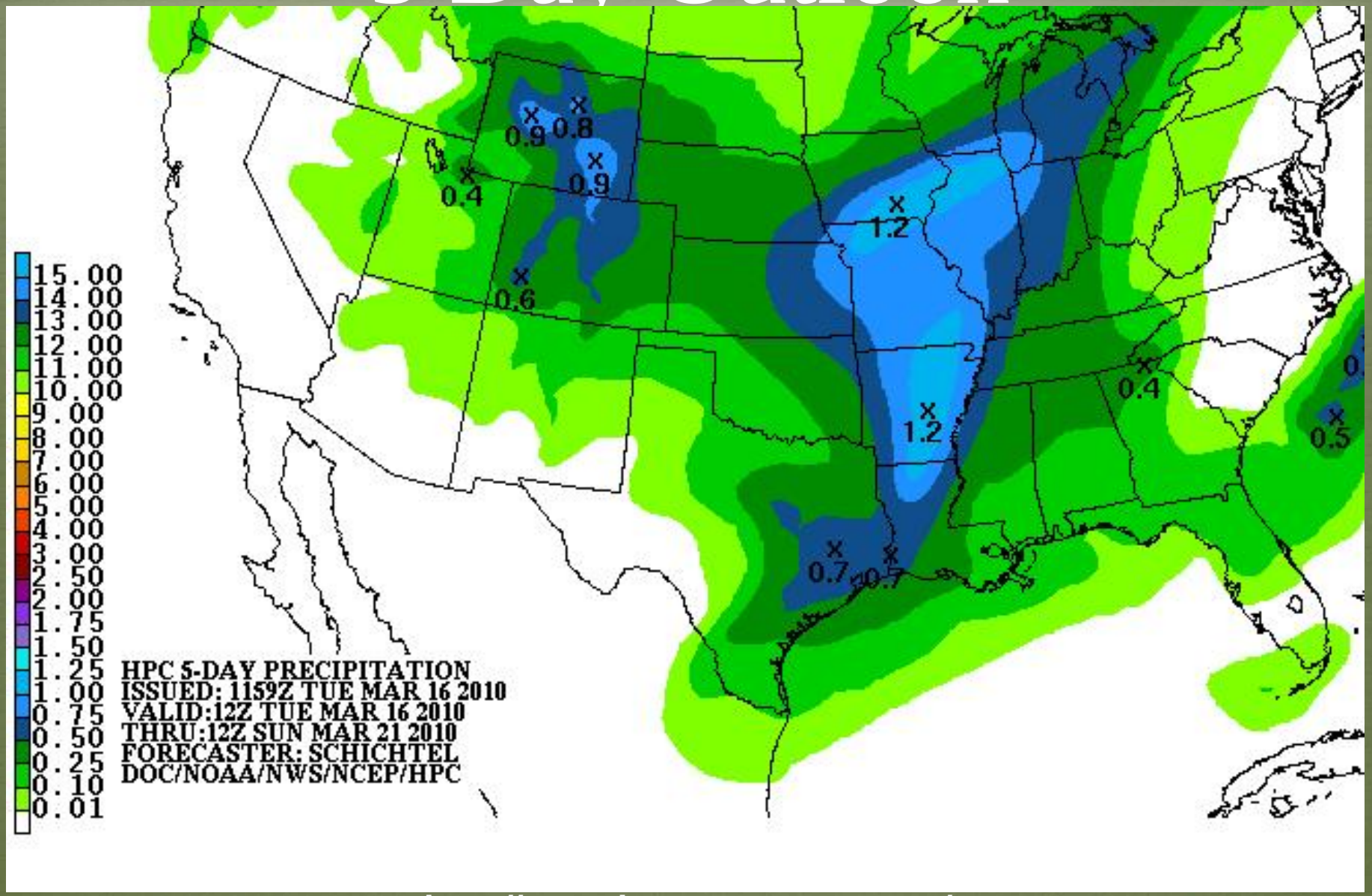
Precipitation Forecast

1-3 Day Outlook



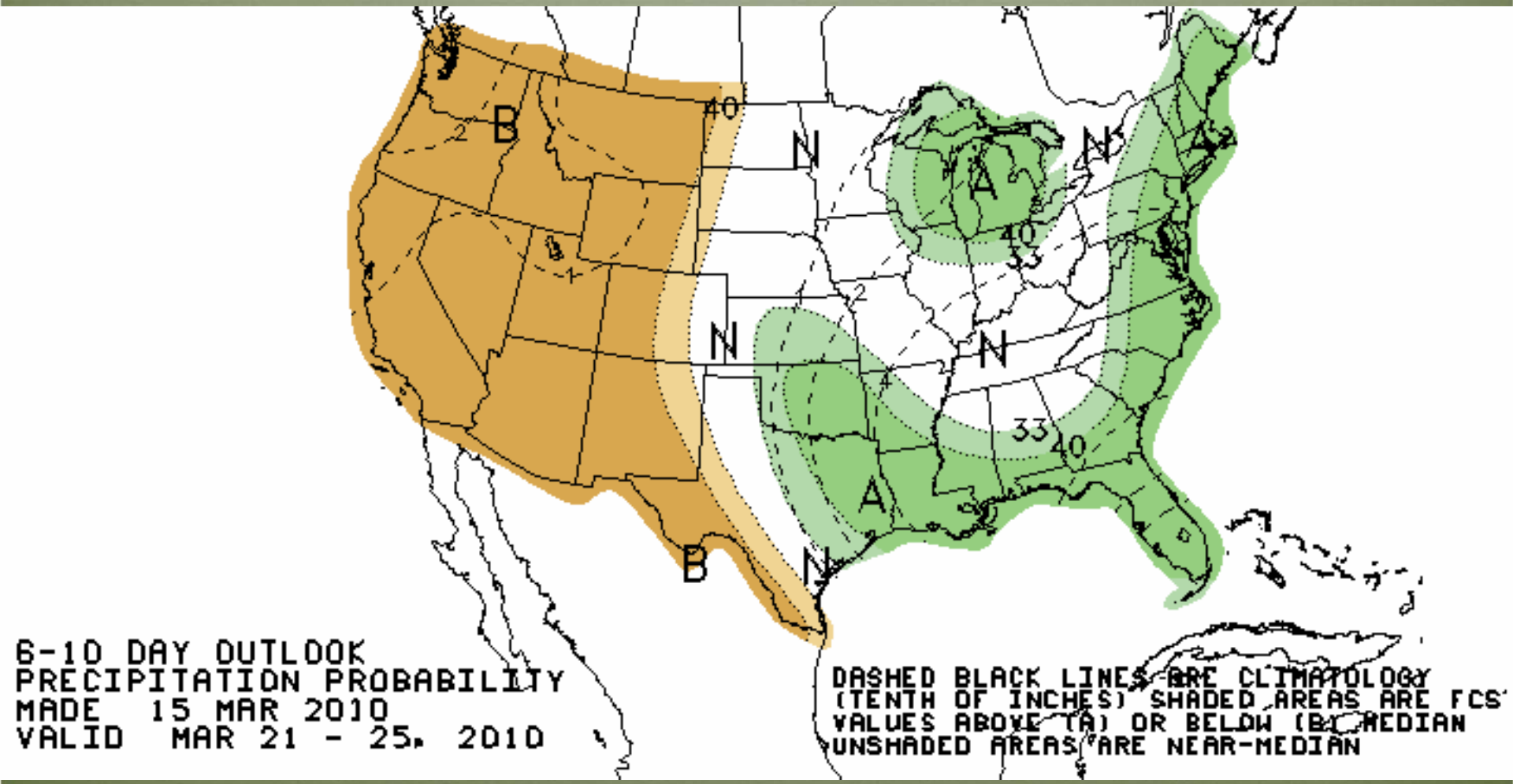
http://www.hpc.ncep.noaa.gov/

5 Day Outlook



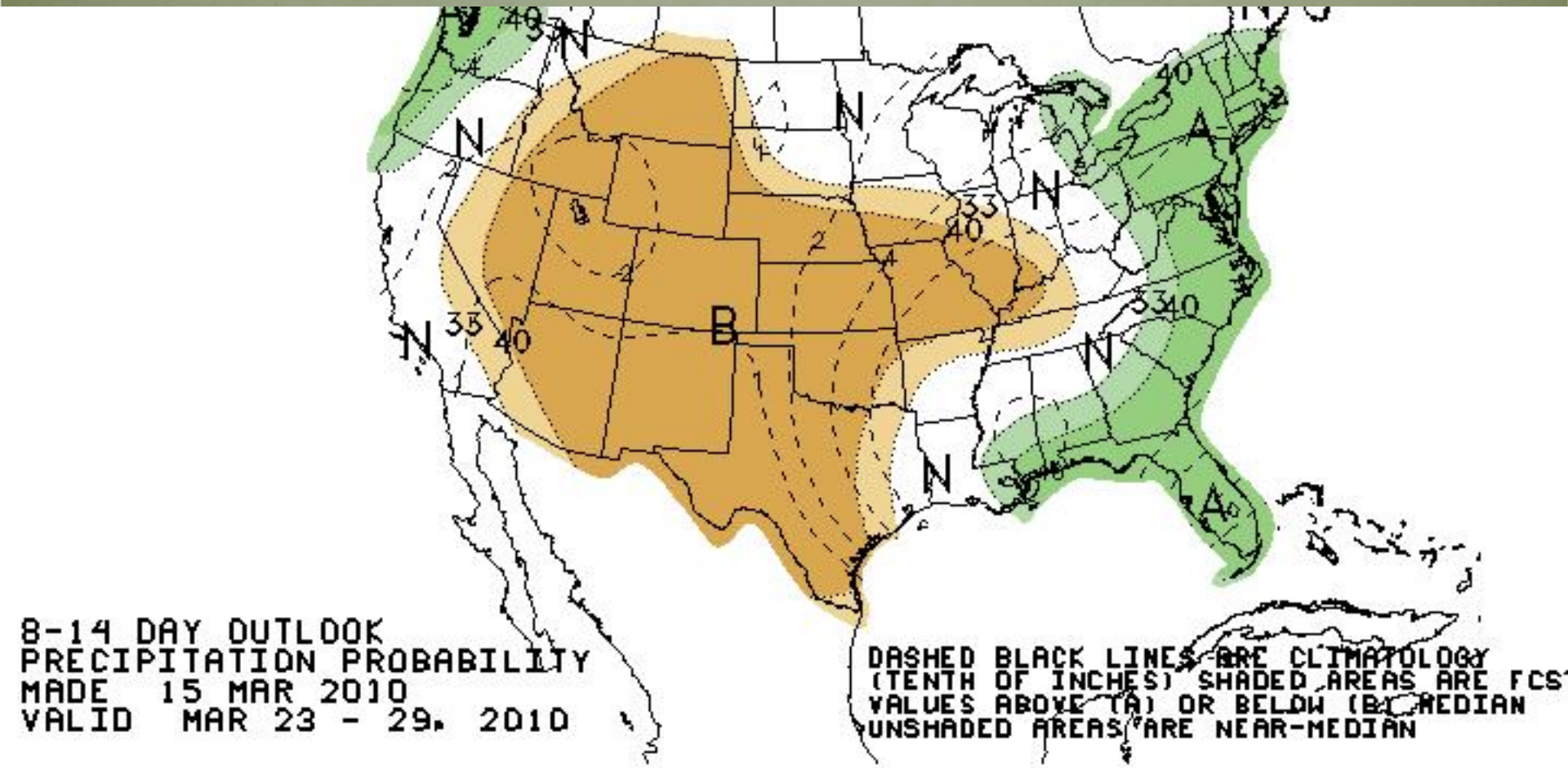
http://www.hpc.ncep.noaa.gov/

6-14 Day Outlook Colorado 21-25 March 2010



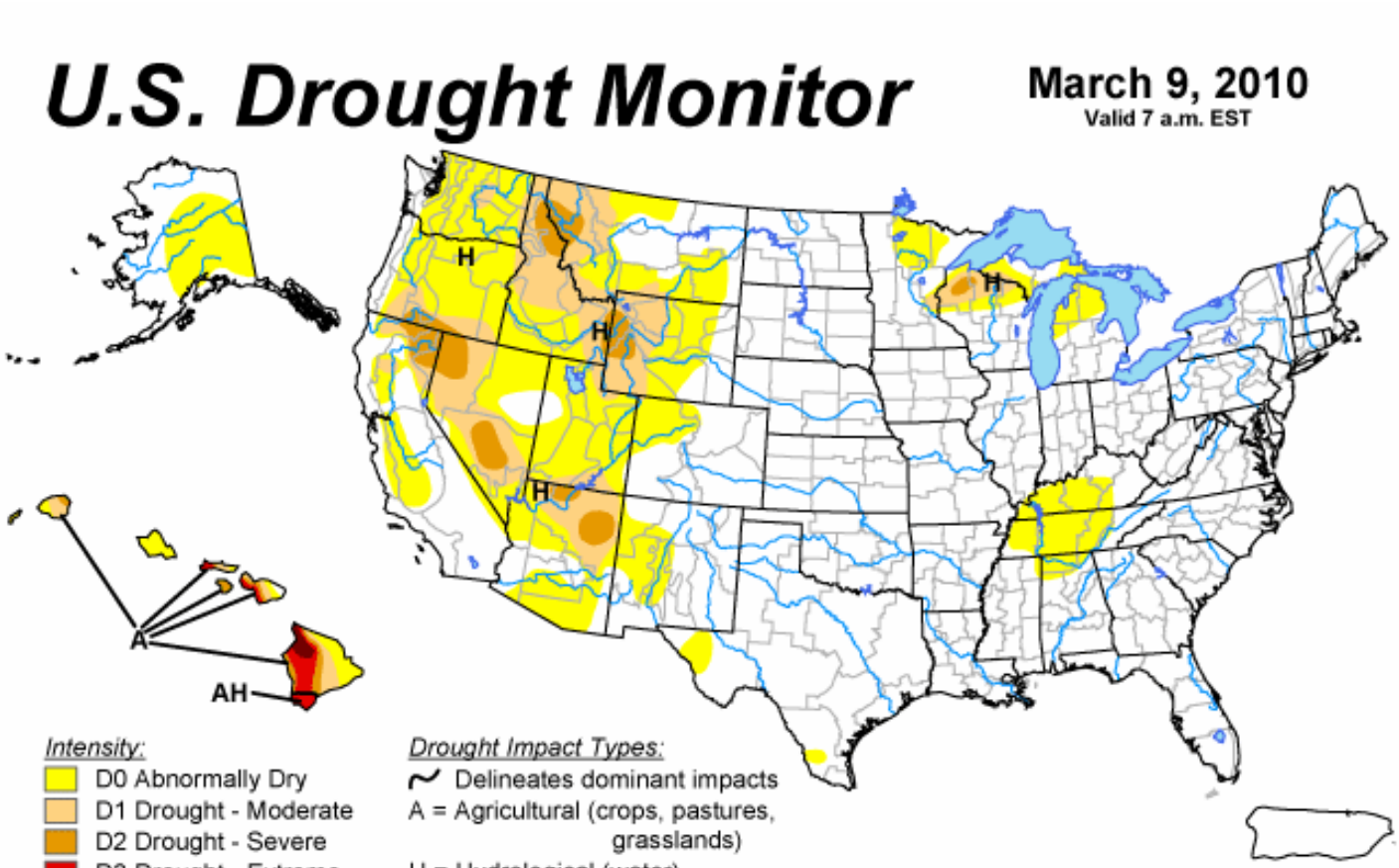
http://www.cpc.ncep.noaa.gov/

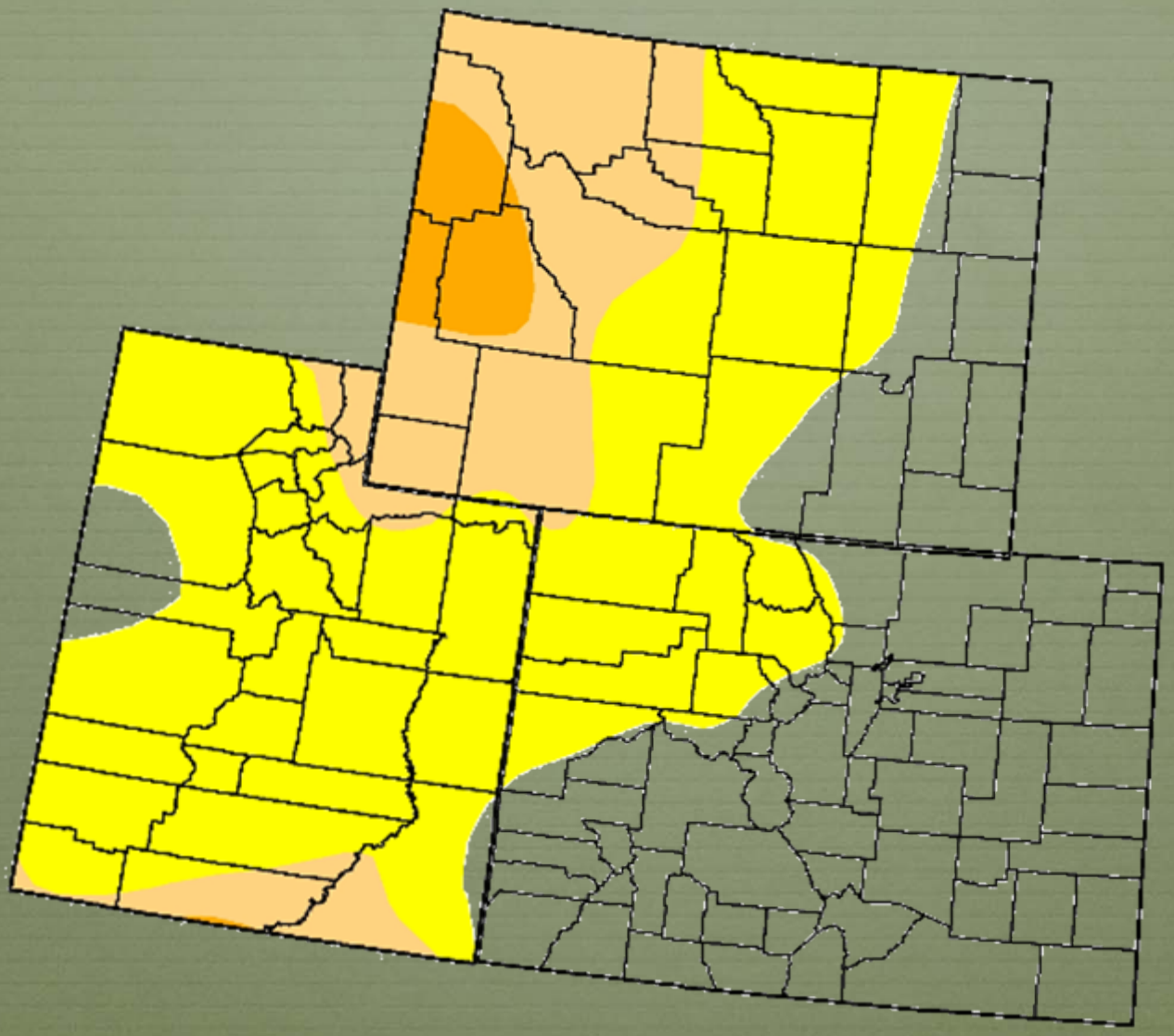
6-14 Day Outlook Colorado 23-29 March 2010



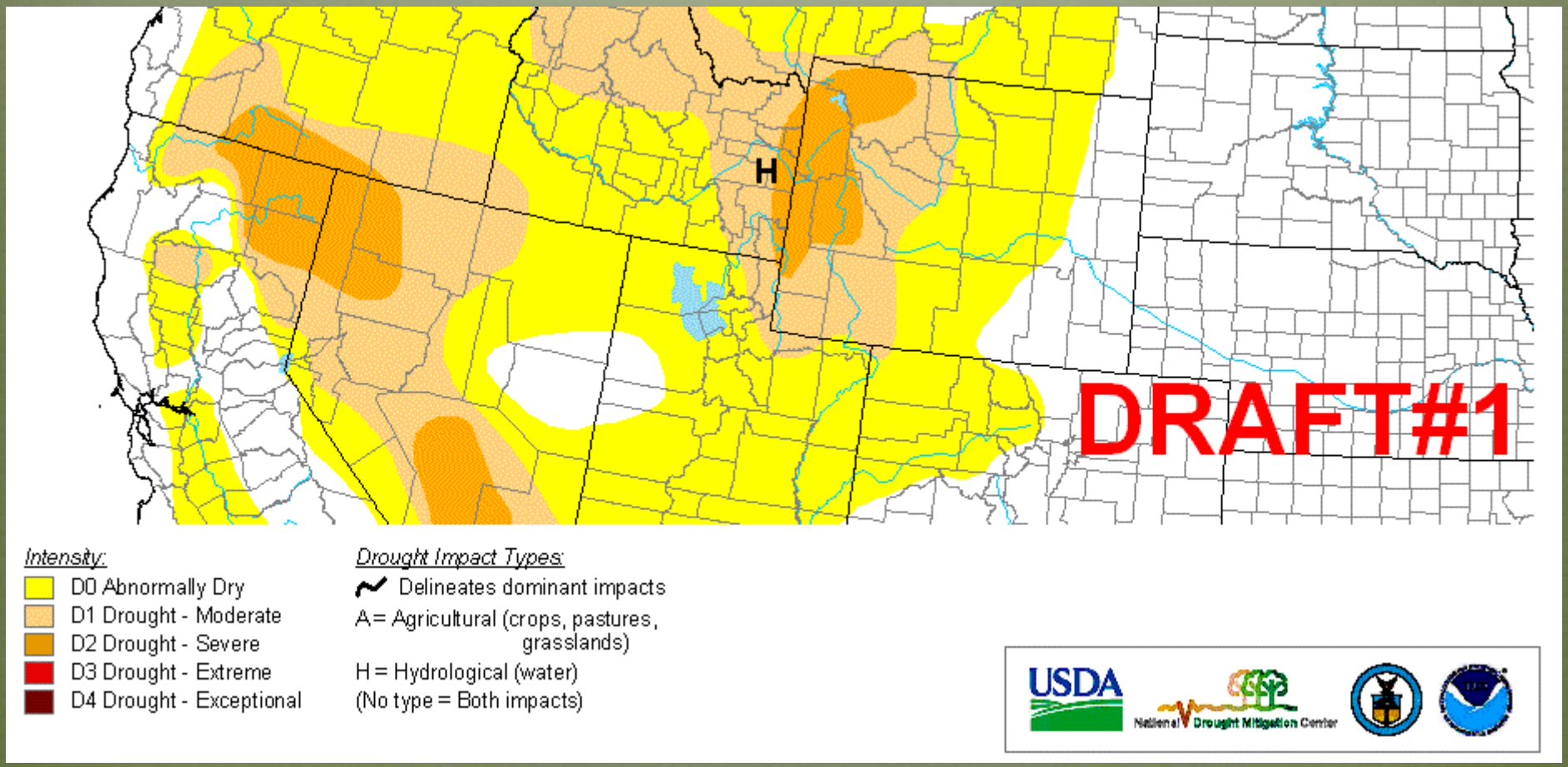
http://www.cpc.ncep.noaa.gov/

Recommendations





Current DM Draft



INFO

For more information

Summary

- The largest amounts of precipitation for the last week were concentrated over southern and far eastern Colorado. Dry conditions persisted over the Colorado and Yampa-White basins. Snowpack continues to lag far below average in the Green River Basin in Wyoming. Snowpack near the headwaters of the Colorado mainstem is also well below average but has stayed fairly consistent (as a percent of average) over the past week with slight improvements in the percent of average water-year precipitation. Reservoir levels remain steady, with good amounts of storage. With below average temperatures across the state and good soil moisture on the plains, there is still not yet any early season demand for irrigation water (usually doesn't start until April) so reservoir levels should stay in good condition.

  Forecasts suggest a significant storm moving down from the NW across Wyoming and into Colorado on Friday. This system could bring modest precipitation amounts primarily from central Colorado northward. This is a different storm track than previous storms but may favor eastern slopes After this, there is some discrepancy between the CPC long term forecasts (which show drier than normal conditions out to 14 days) and the other forecast models (which show the possibility of more storms moving through the area next week).

Summary (cont.)

- Discussion among webinar participants suggested that we maintain status quo on the U.S. drought monitor map this week for Colorado. Expansion of D1 and D2 have already been suggested for western Wyoming. which includes much of western Colorado. However, it was discussed that for the Colorado mainstem headwaters that current snowpack is only slightly better than at this time in 2002 and D1 could possibly be introduced in a Grand County. There was agreement that perhaps more of Summit County should be in the D0 category (after most of the county was taken out of D0 last week), but that we should not introduce D1 quite yet. Mike Gillespie with the NRCS Snow Survey program provided March 1 updated Surface Water Supply Index values and the Yampa-White was at -3.2 also suggesting D1 may be justified for parts of the Yampa and perhaps White River Basin. This is a very important time for the Upper Colorado--March into May is normally a wet time of year in this area with relatively frequent and sometimes large storms. There are only a few more weeks for the basin to build up more snow before the snow melt begins. If substantial moisture does not fall in the area in the next few weeks, degradation will need to be introduced on the drought monitor map.

Nolan Doesken, Becky Smith, Wendy Ryan and the rest of the Colorado Climate Center staff and students