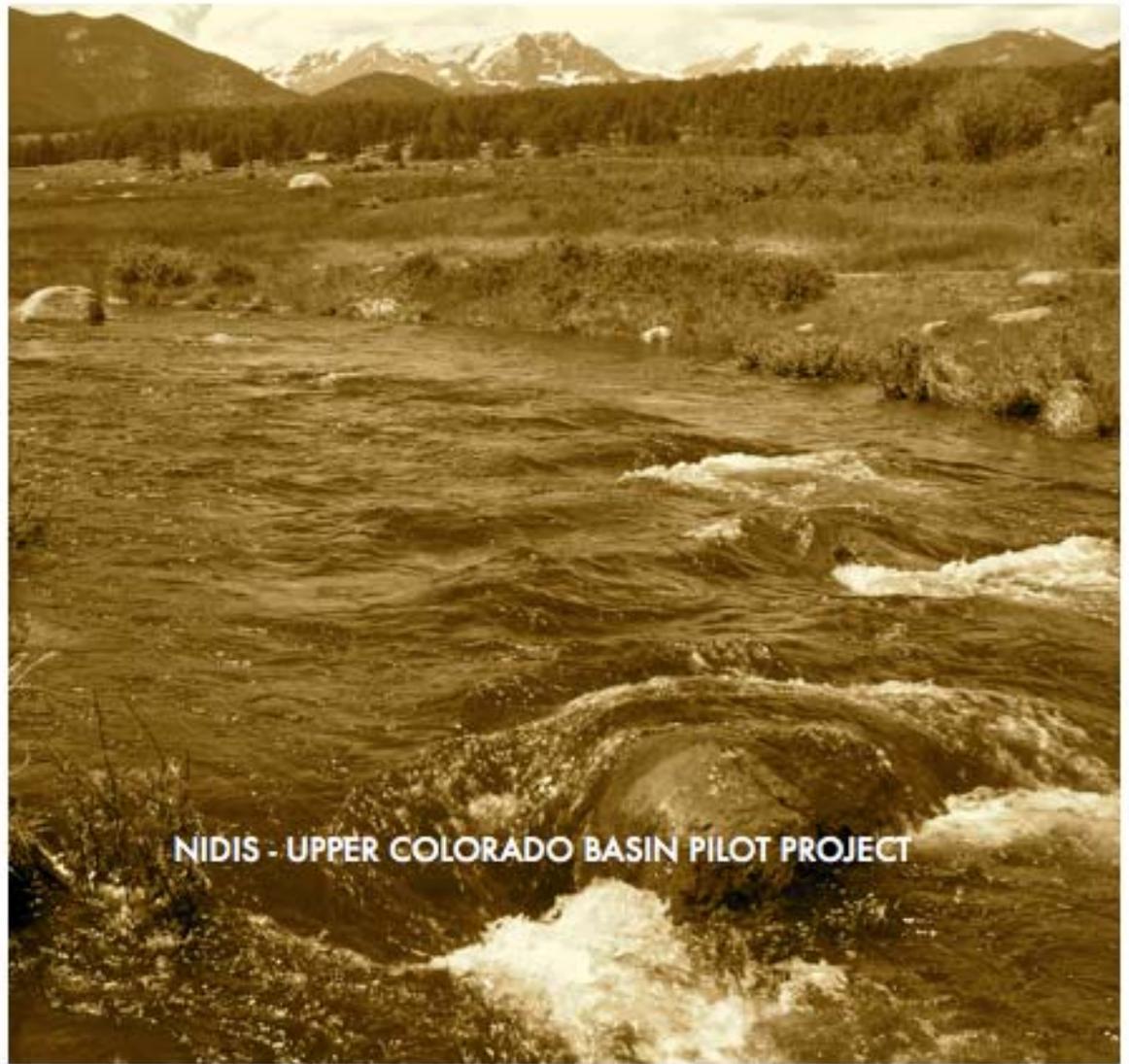


# Spring 2010



NIDIS - UPPER COLORADO BASIN PILOT PROJECT

**Weekly Climate, Water & Drought Assessment**

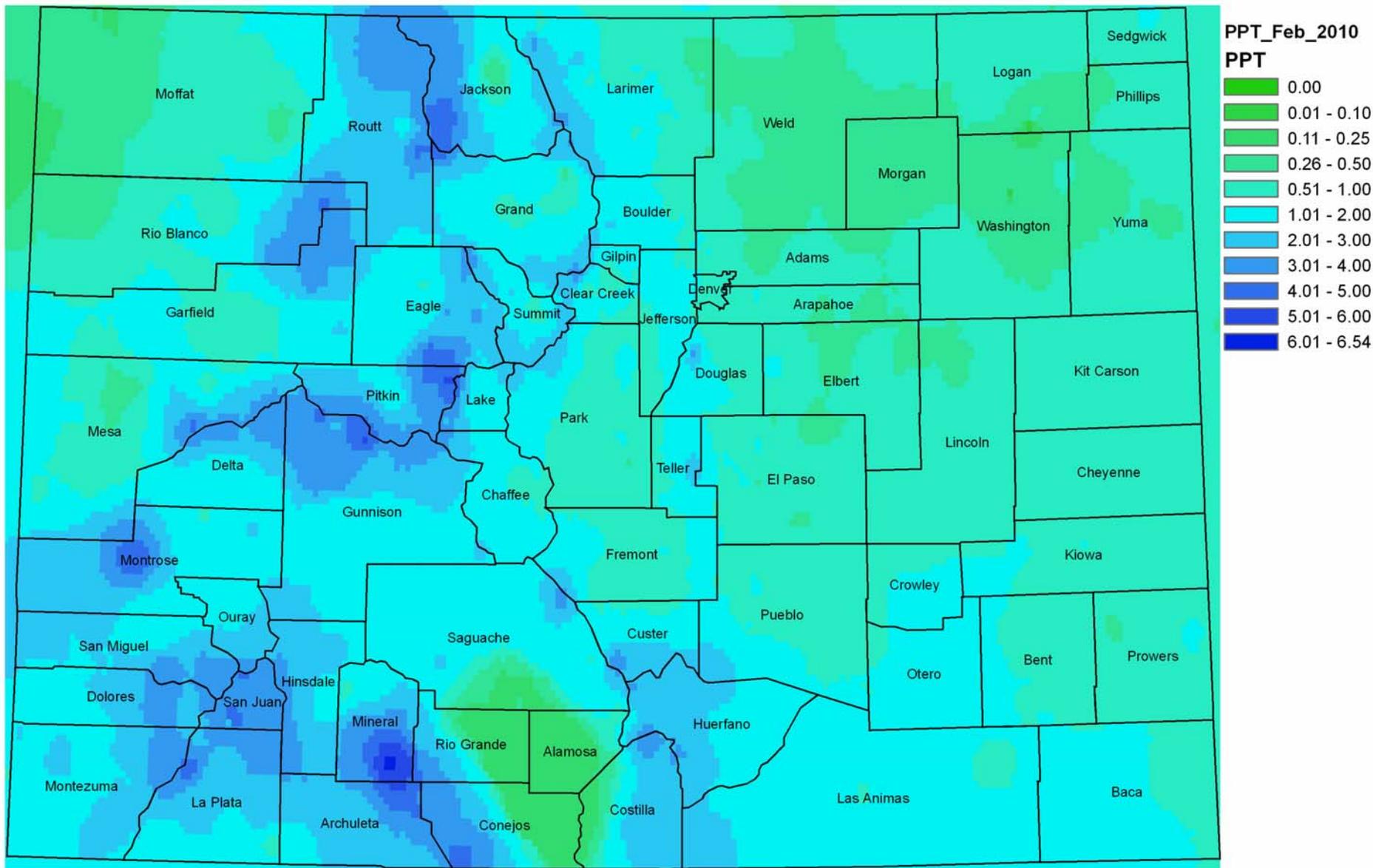
# Today's Agenda

- Assessment of current water conditions
- Precipitation Forecast
- Recommendations for Drought Monitor

# Precipitation/Snowpack Update



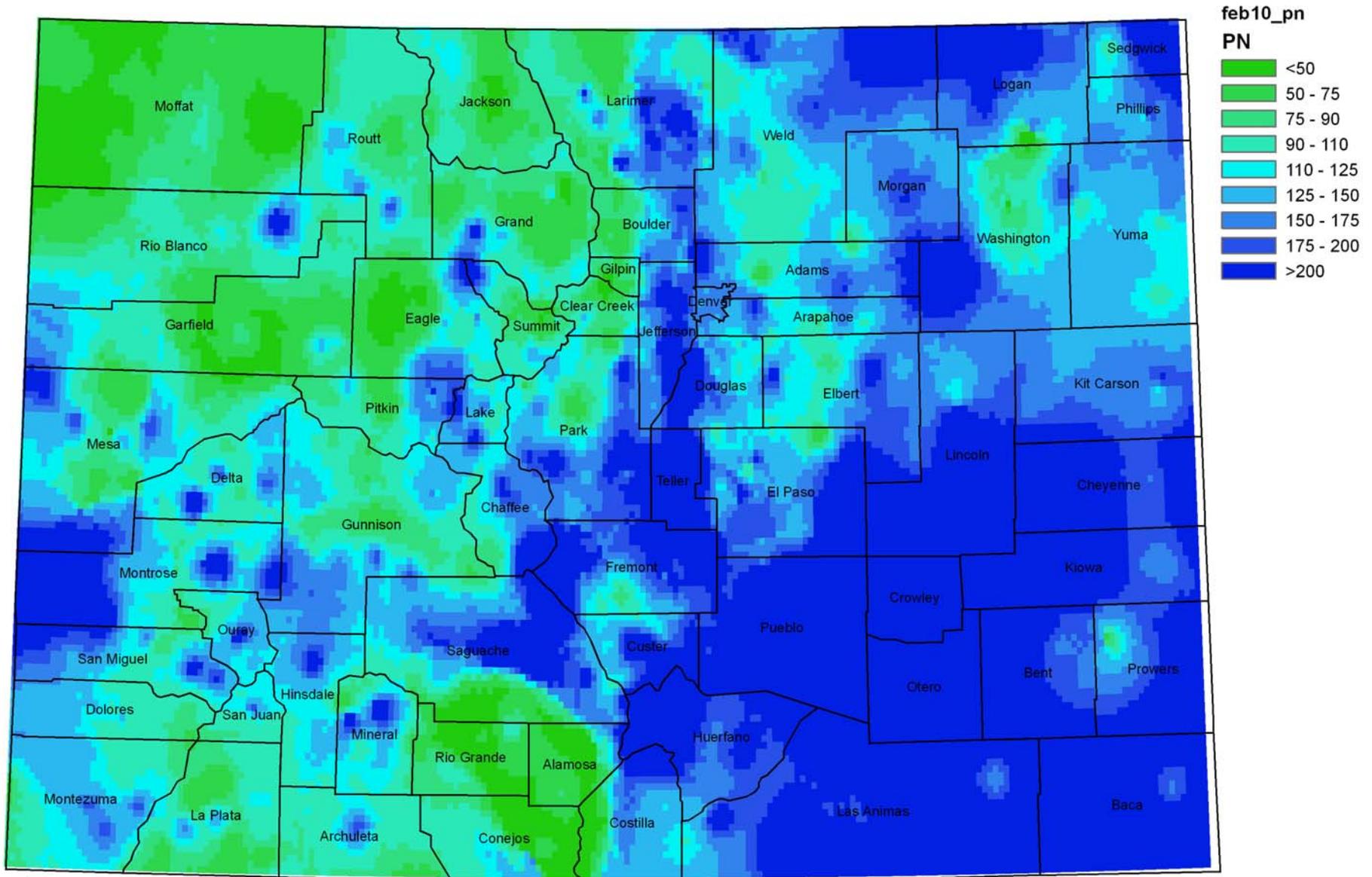
# Colorado Precipitation (in) February 2010



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

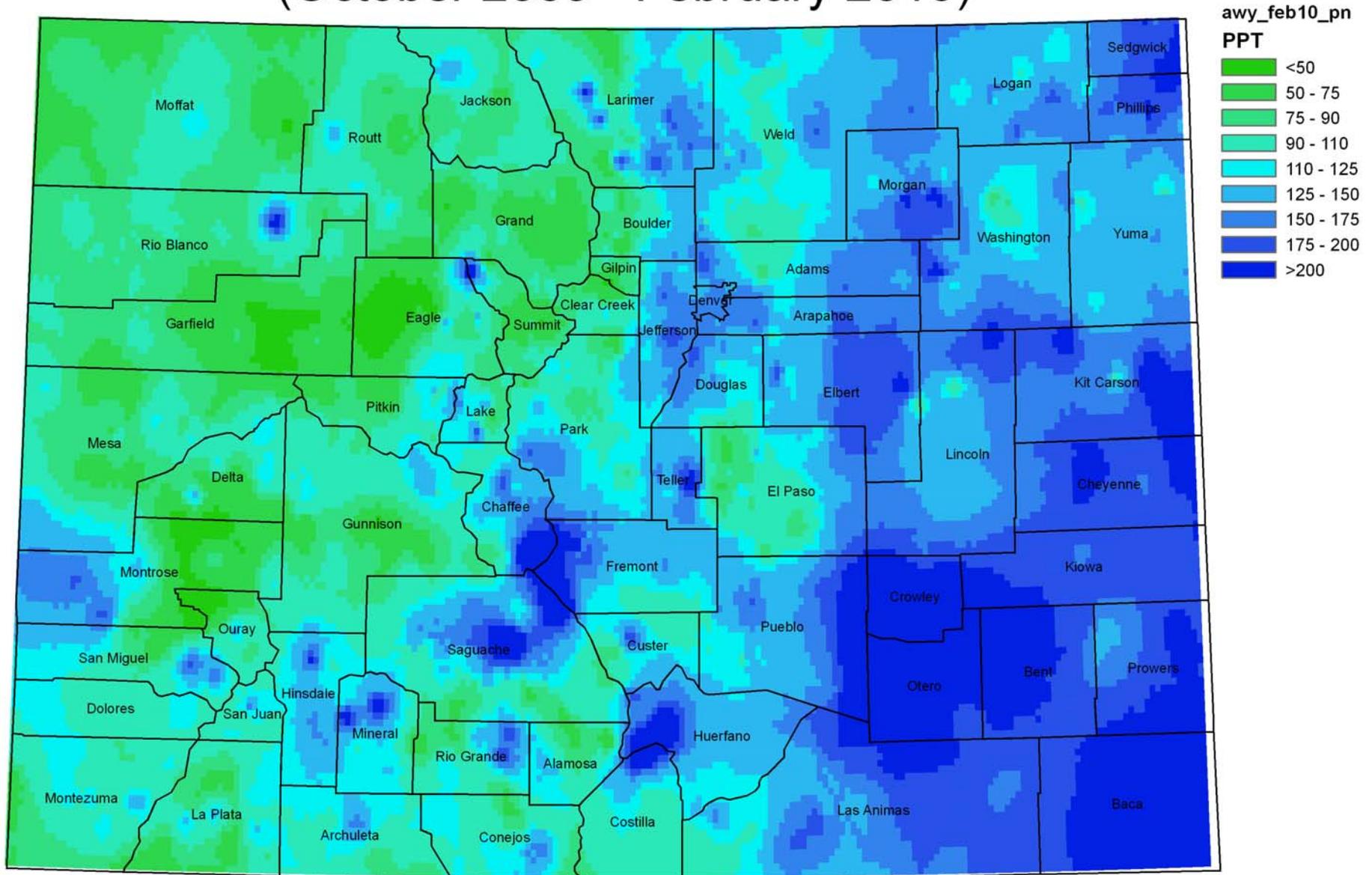
\*Summer only

# 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)



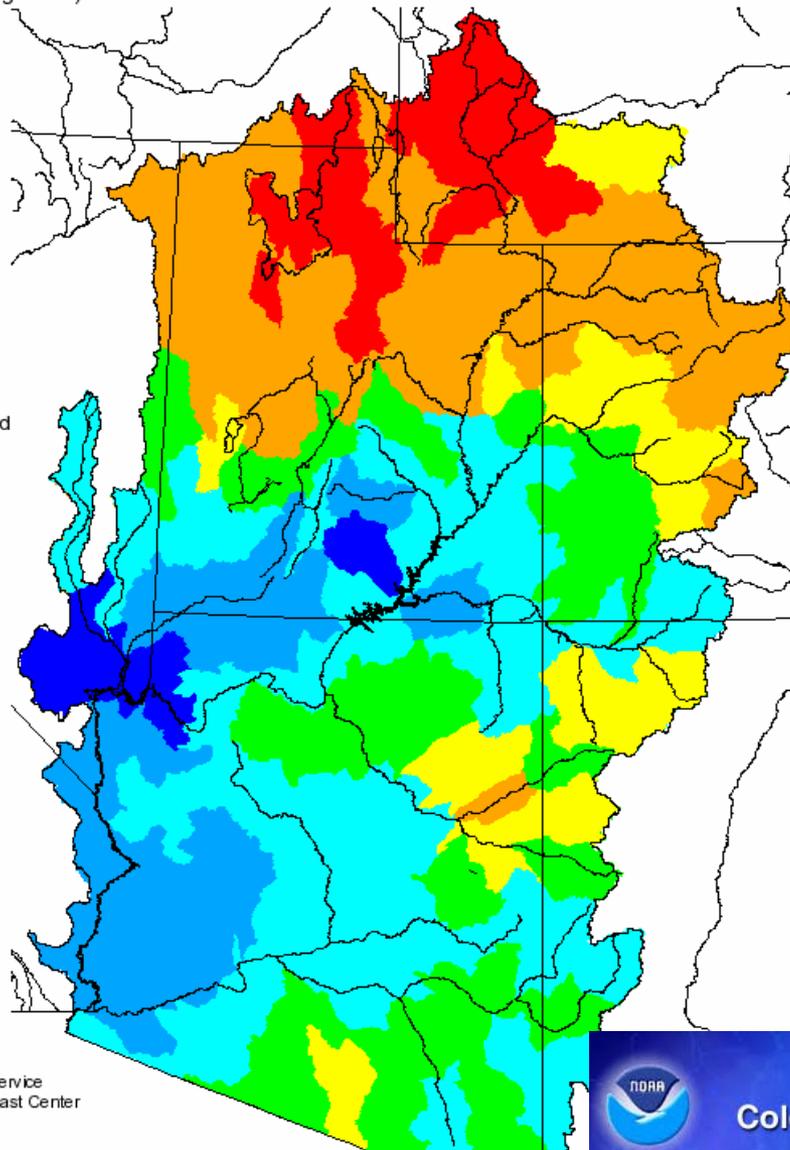
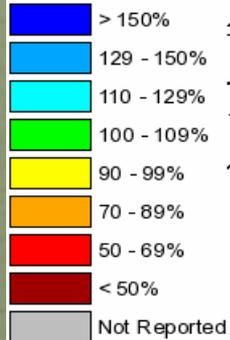
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet\* Preliminary Precipitation Data  
Analysis: Inverse Distance Weighting  
\*Summer only

# WY 2010 Precipitation

## Seasonal Precipitation, October 2009 - February 2010

(Averaged by Hydrologic Unit)

### % Average



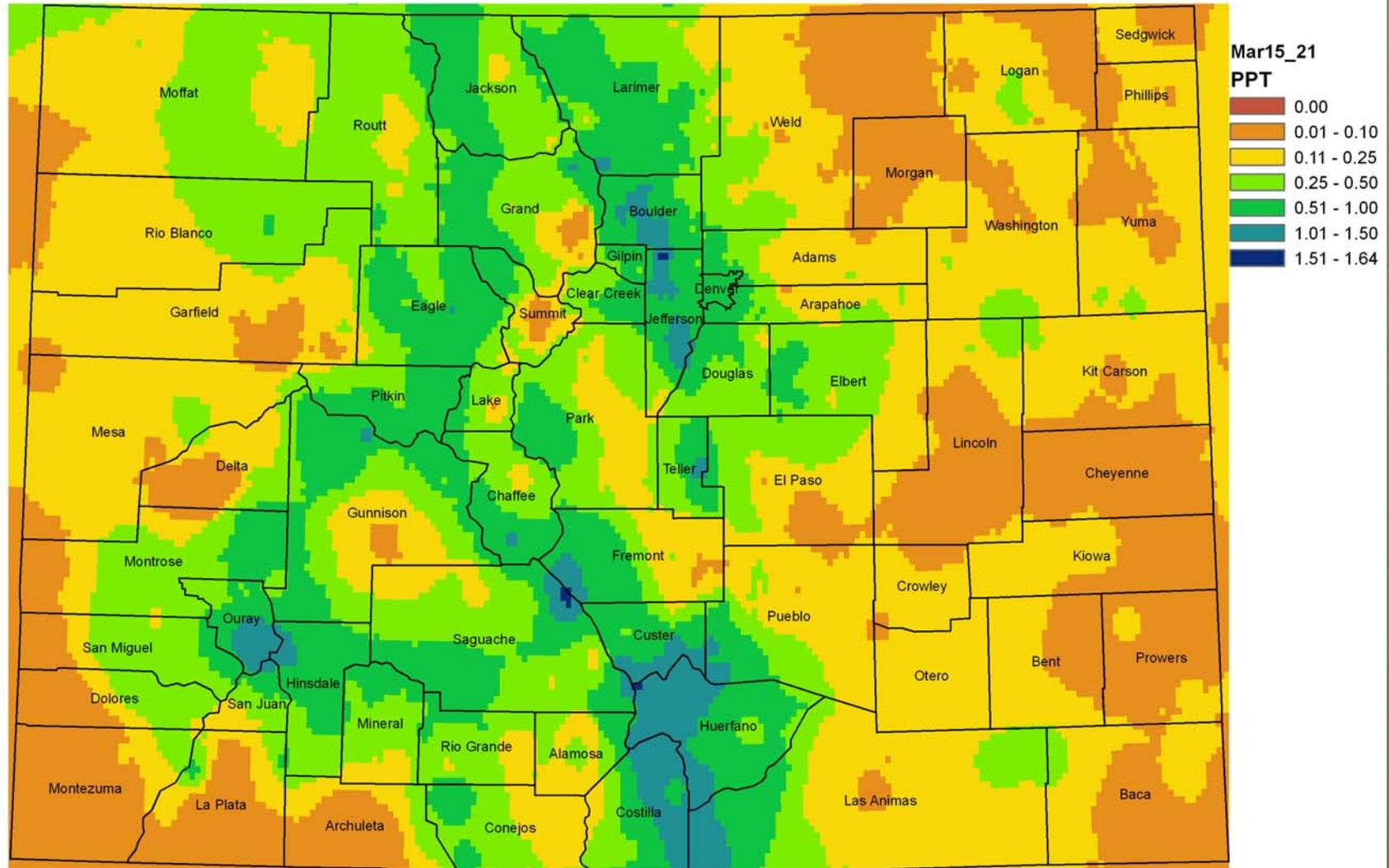
Prepared by  
NOAA, National Weather Service  
Colorado Basin River Forecast Center  
Salt Lake City, Utah  
[www.cbifc.noaa.gov](http://www.cbifc.noaa.gov)



NATIONAL WEATHER SERVICE  
Colorado Basin River Forecast Center

# 7 Day Precipitation 15-21 March 2010

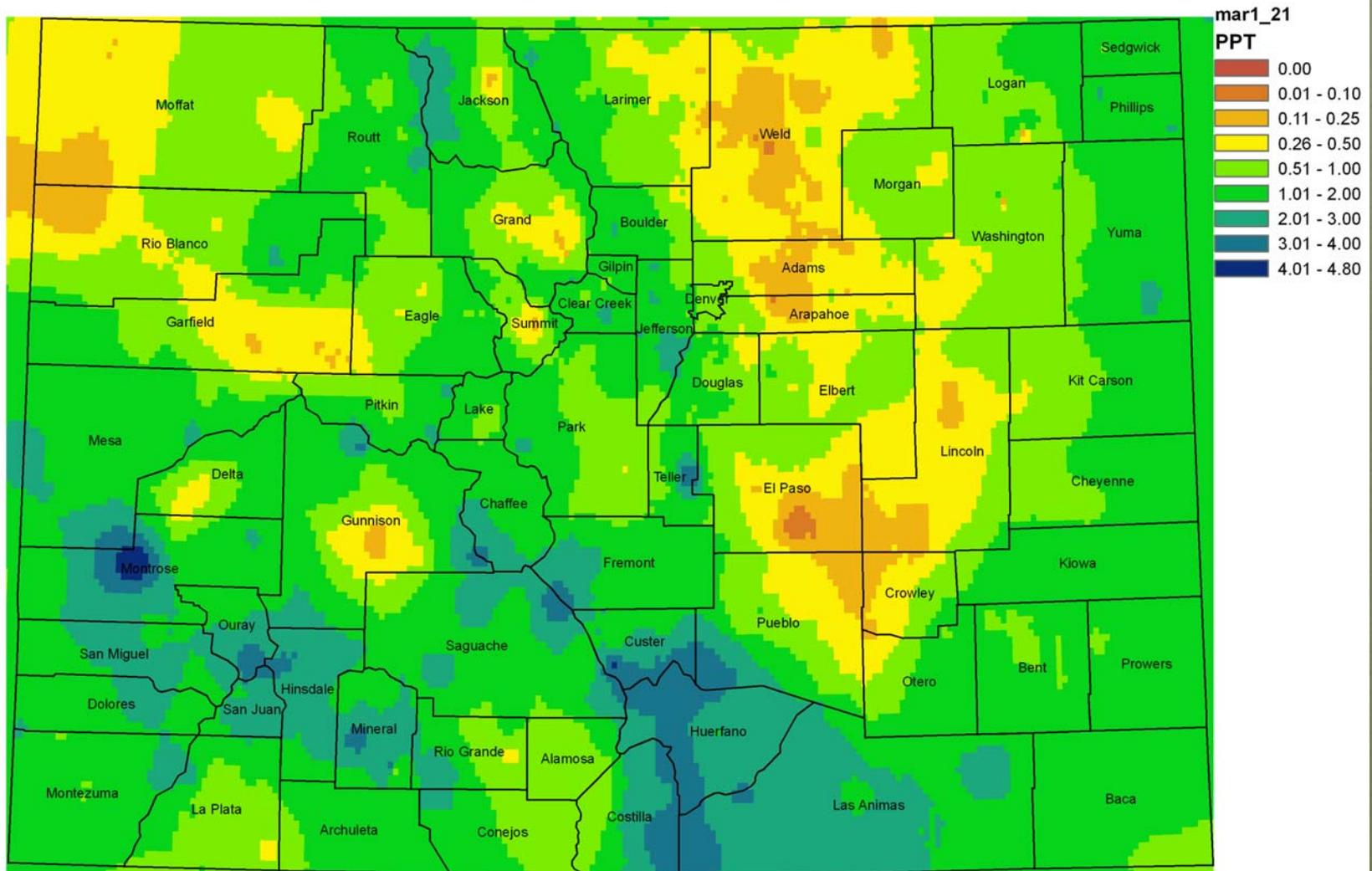
## Colorado Precipitation (in) 15 - 21 March 2010



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

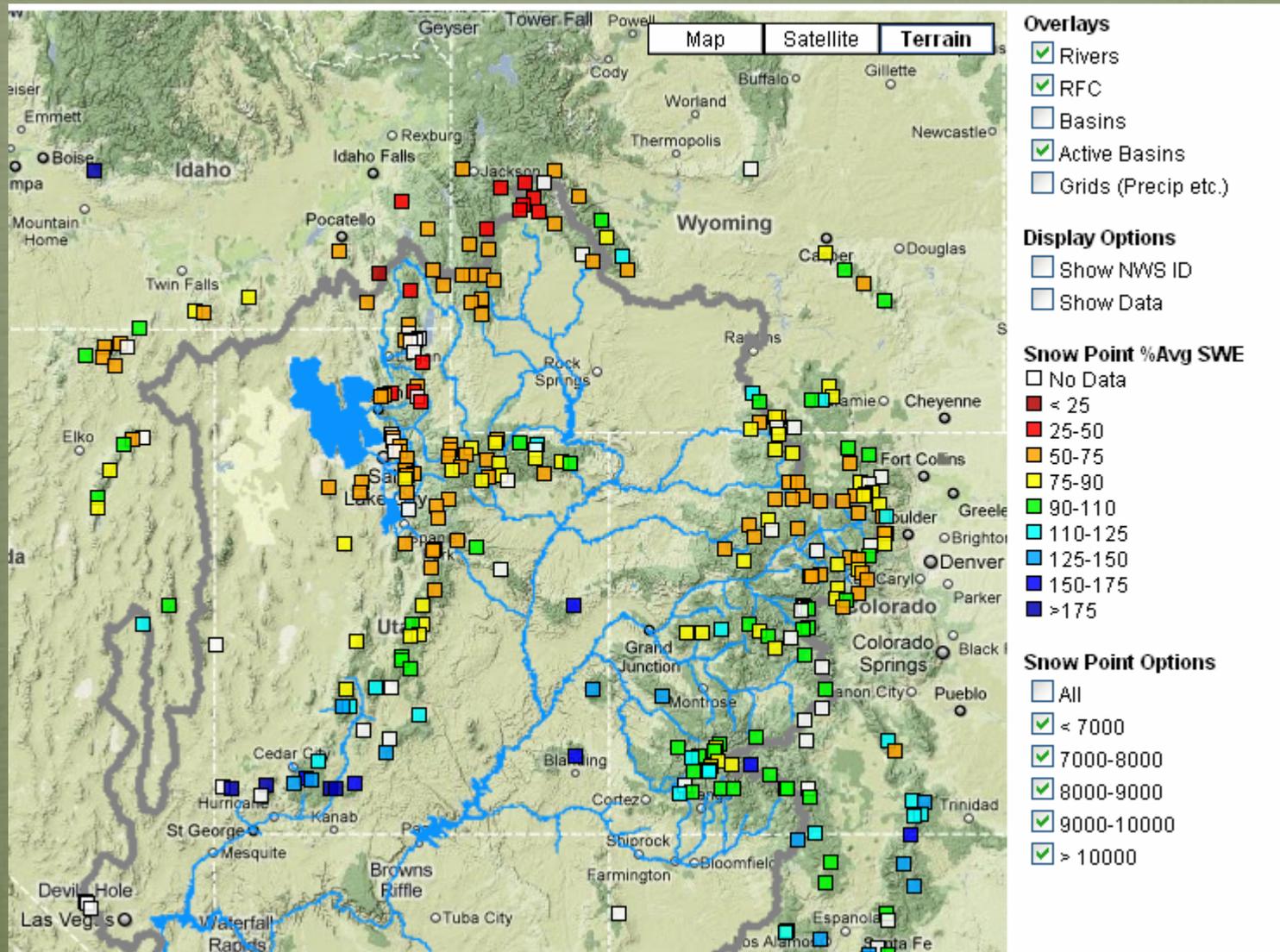
# Month-to-Date Precipitation 1-21 March 2010

## Colorado Precipitation (in) 1 - 21 March 2010

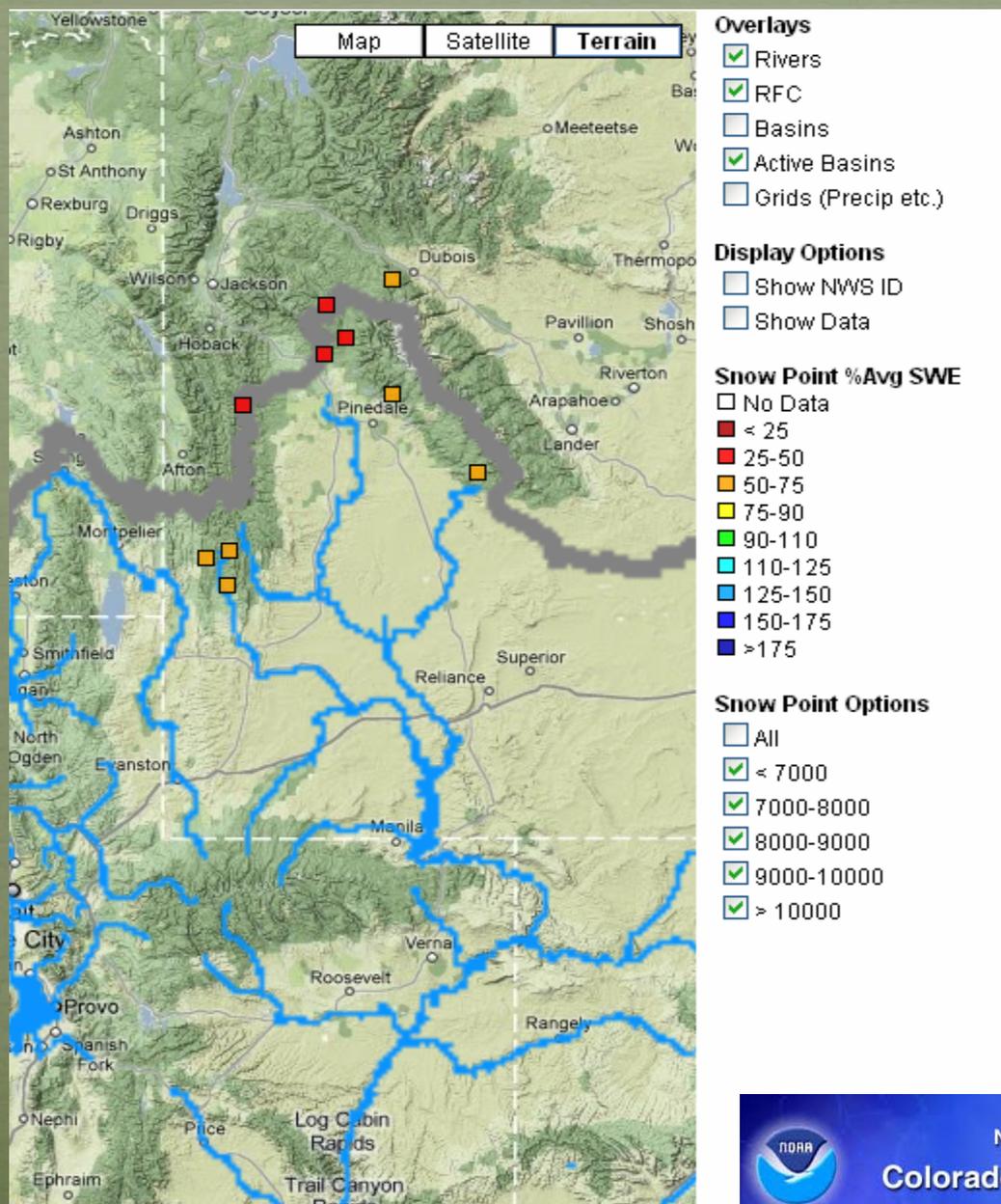


Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet\* Preliminary Precipitation Data  
Analysis: Inverse Distance Weighting  
\*Summer only

# Upper Colorado River Basin

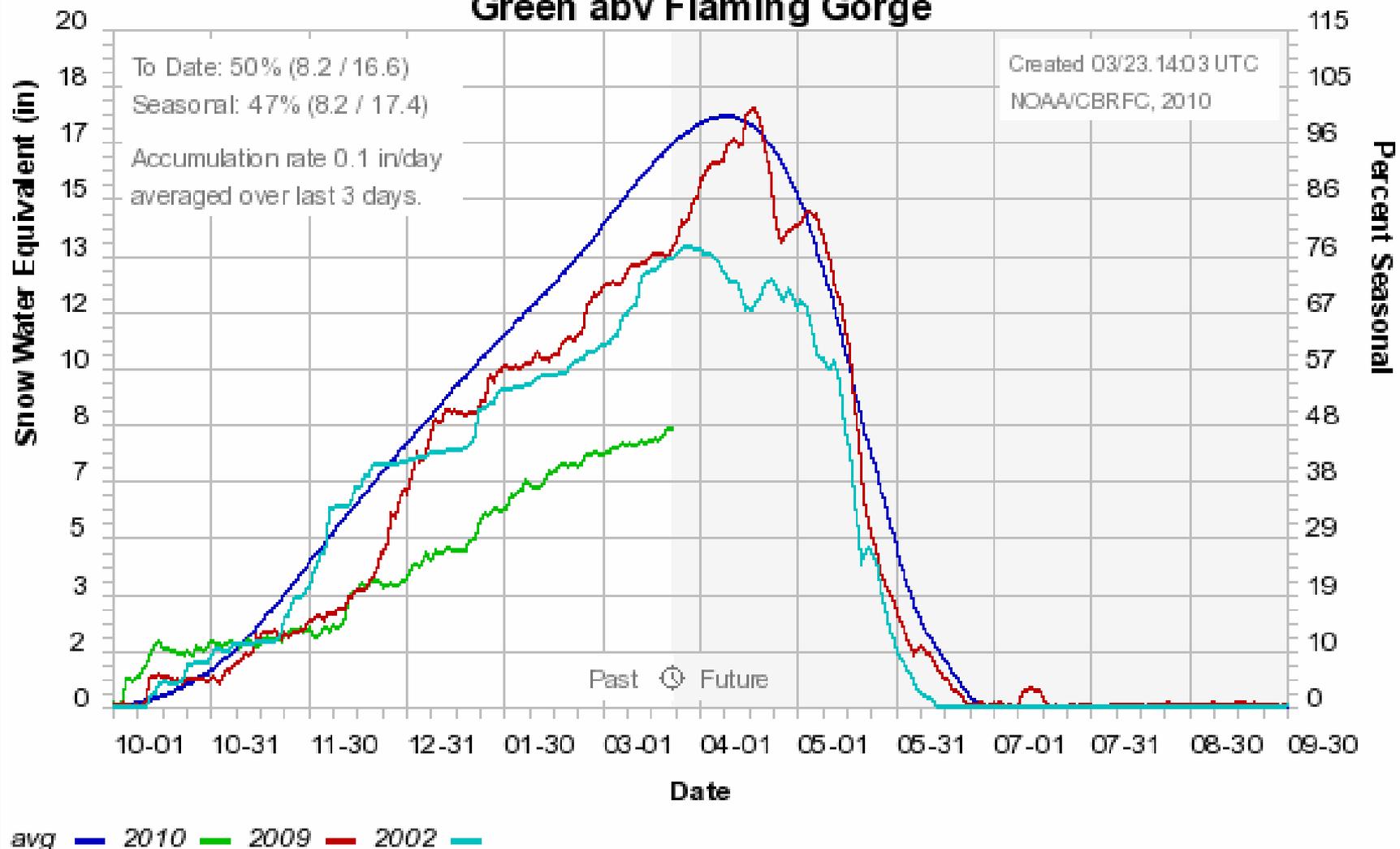


# Green River Basin above Flaming Gorge



# Colorado Basin River Forecast Center

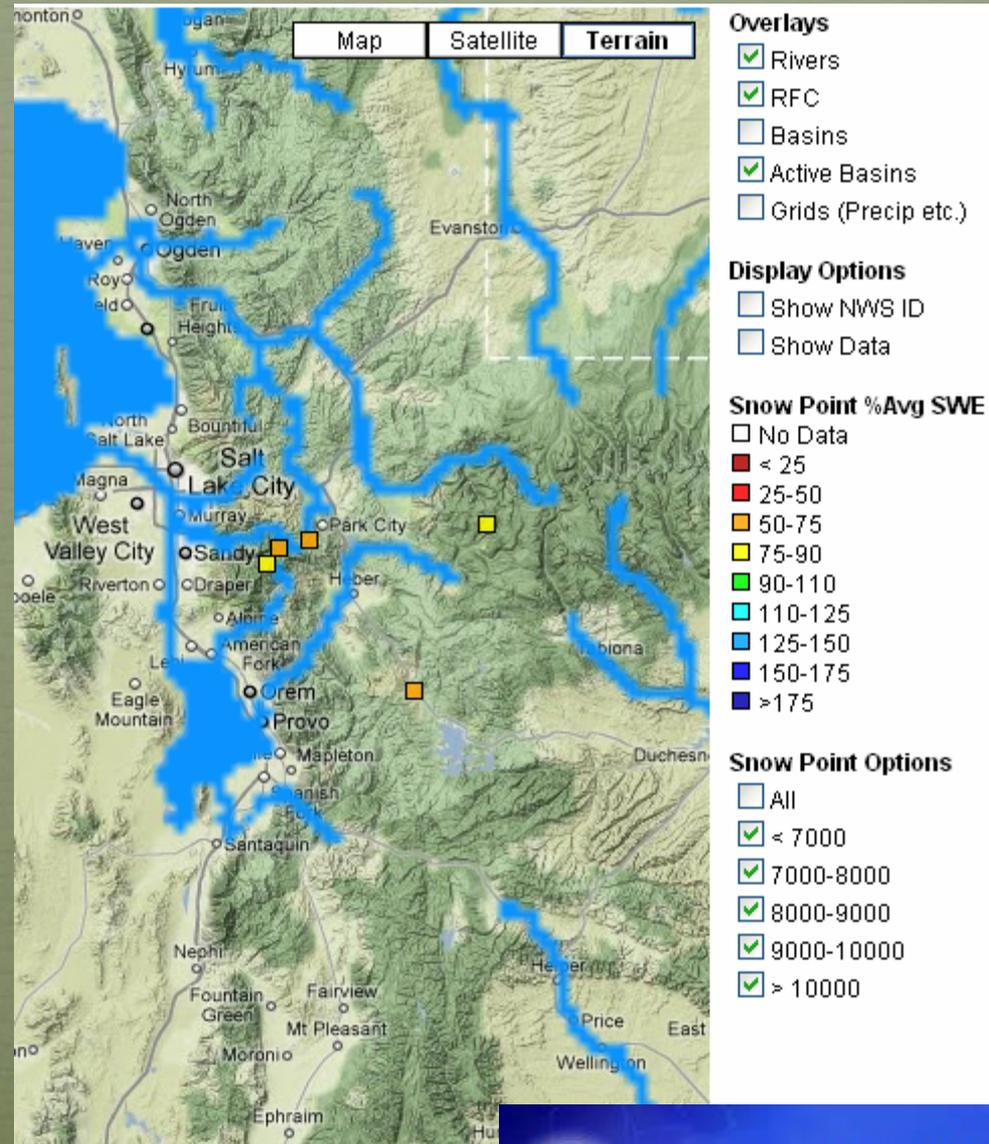
## Green abv Flaming Gorge



Basin Snowpack: 50%



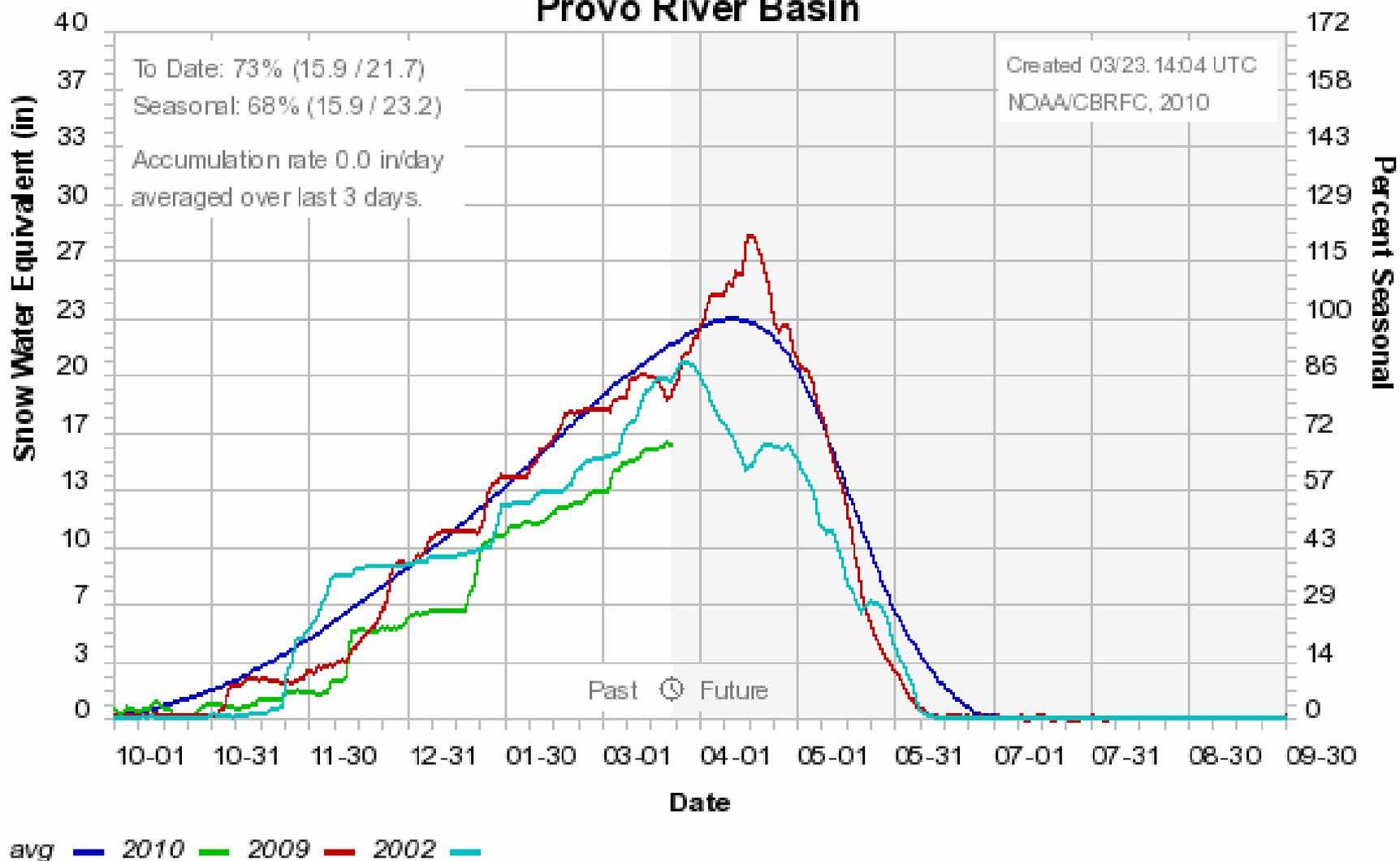
# Provo River Basin



NATIONAL WEATHER SERVICE

Colorado Basin River Forecast Center

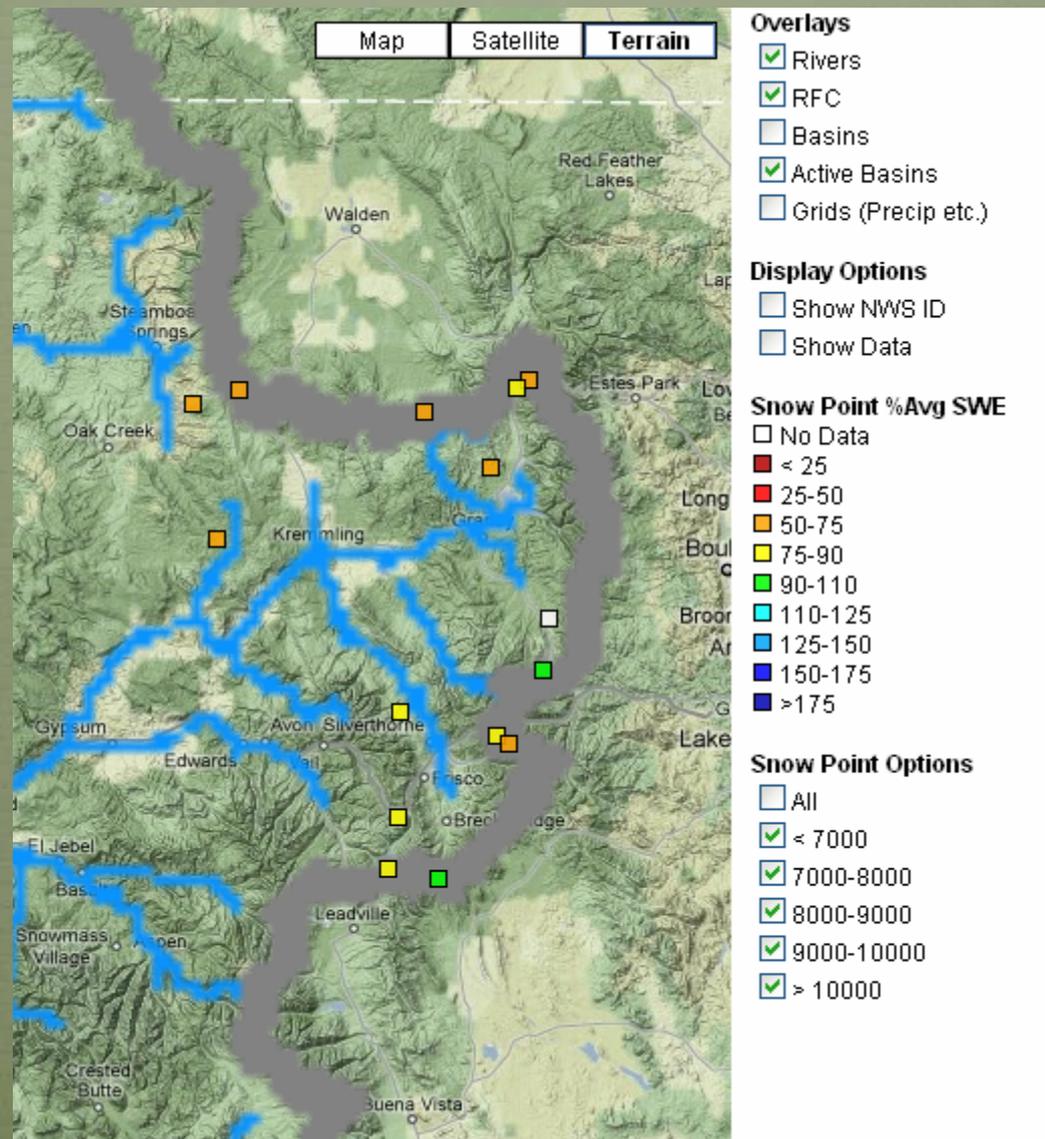
# Colorado Basin River Forecast Center Provo River Basin



Basin snowpack: 73%

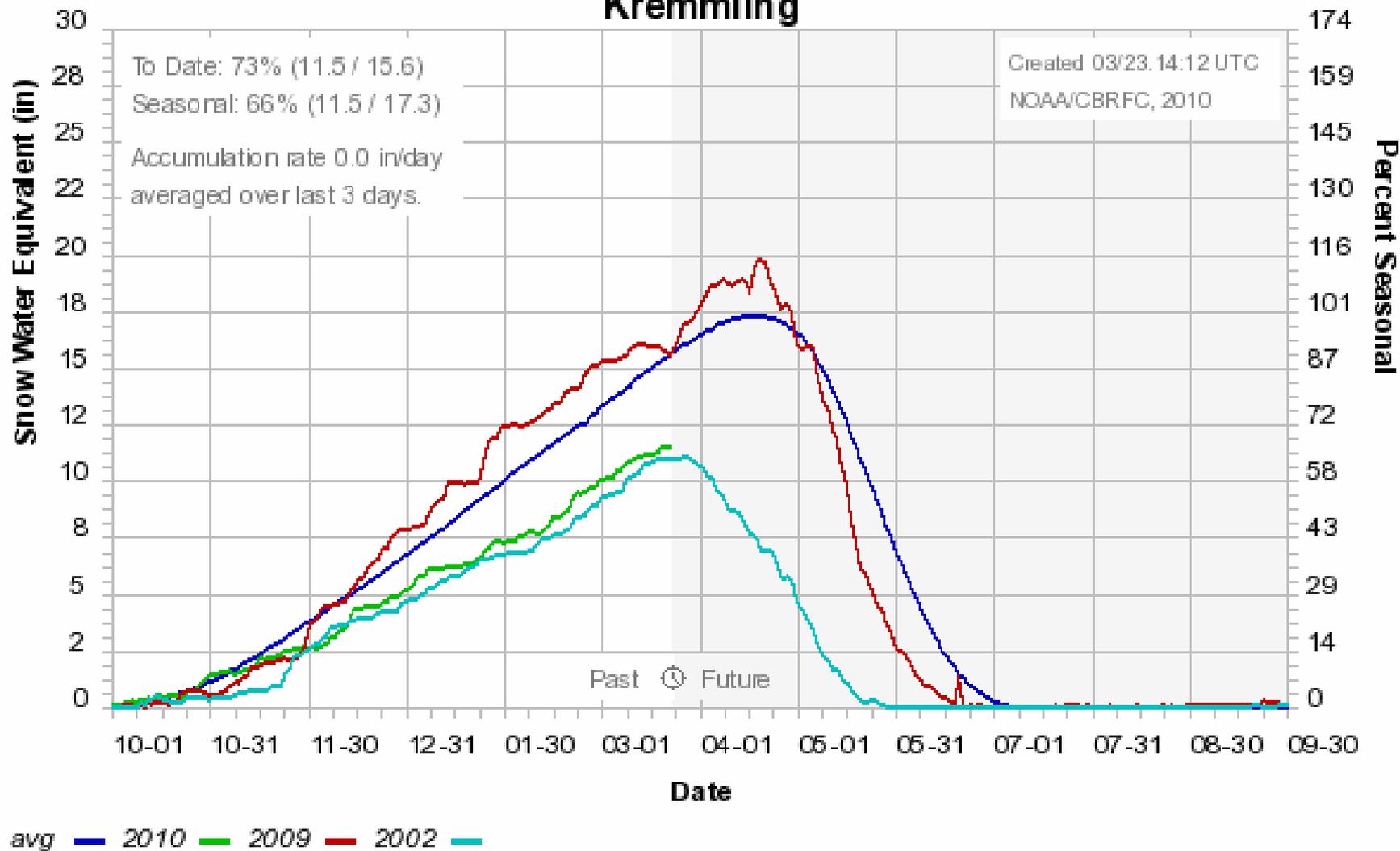


# Upper Colorado above Kremmling



# Colorado Basin River Forecast Center

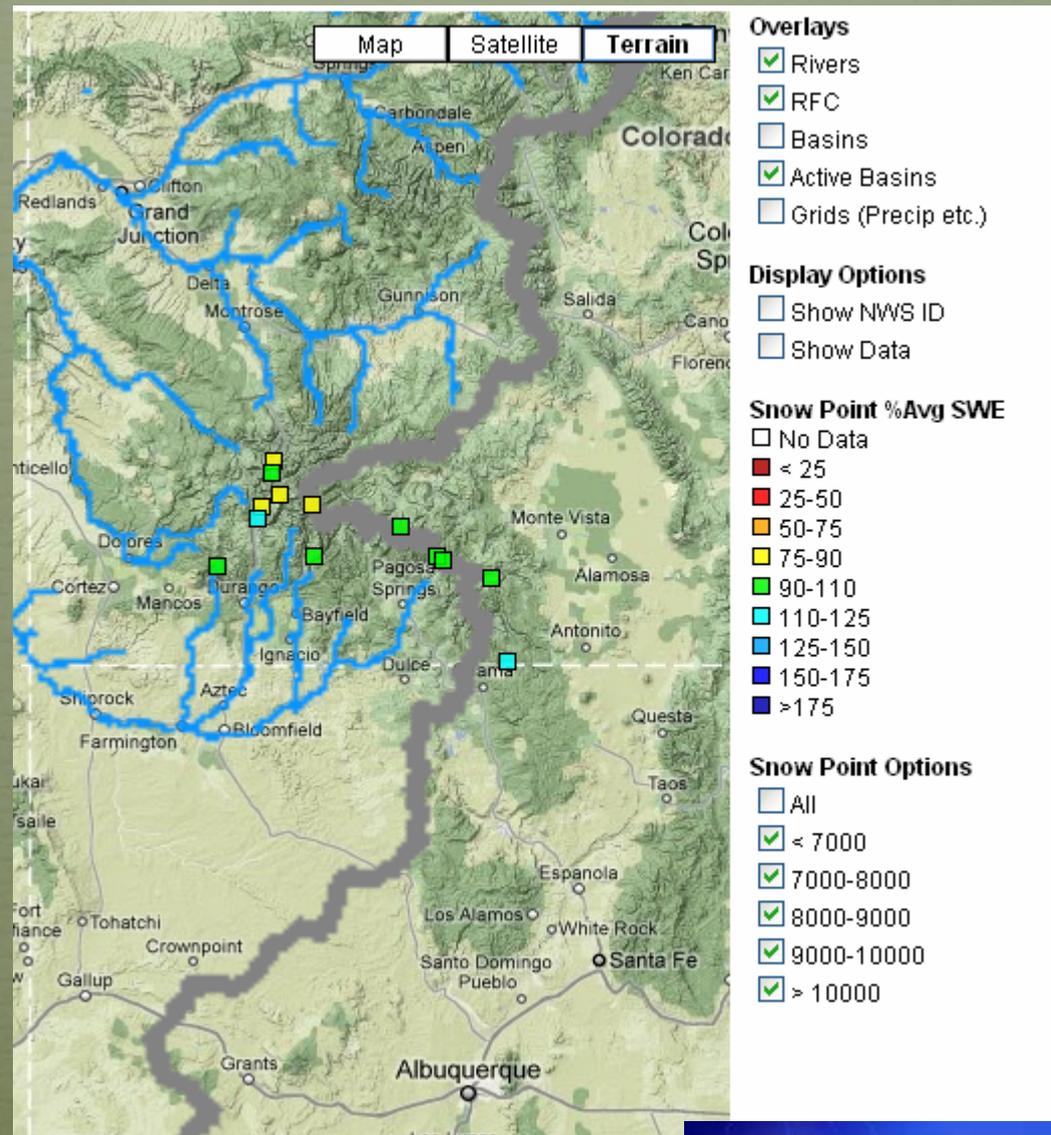
## Kremmling



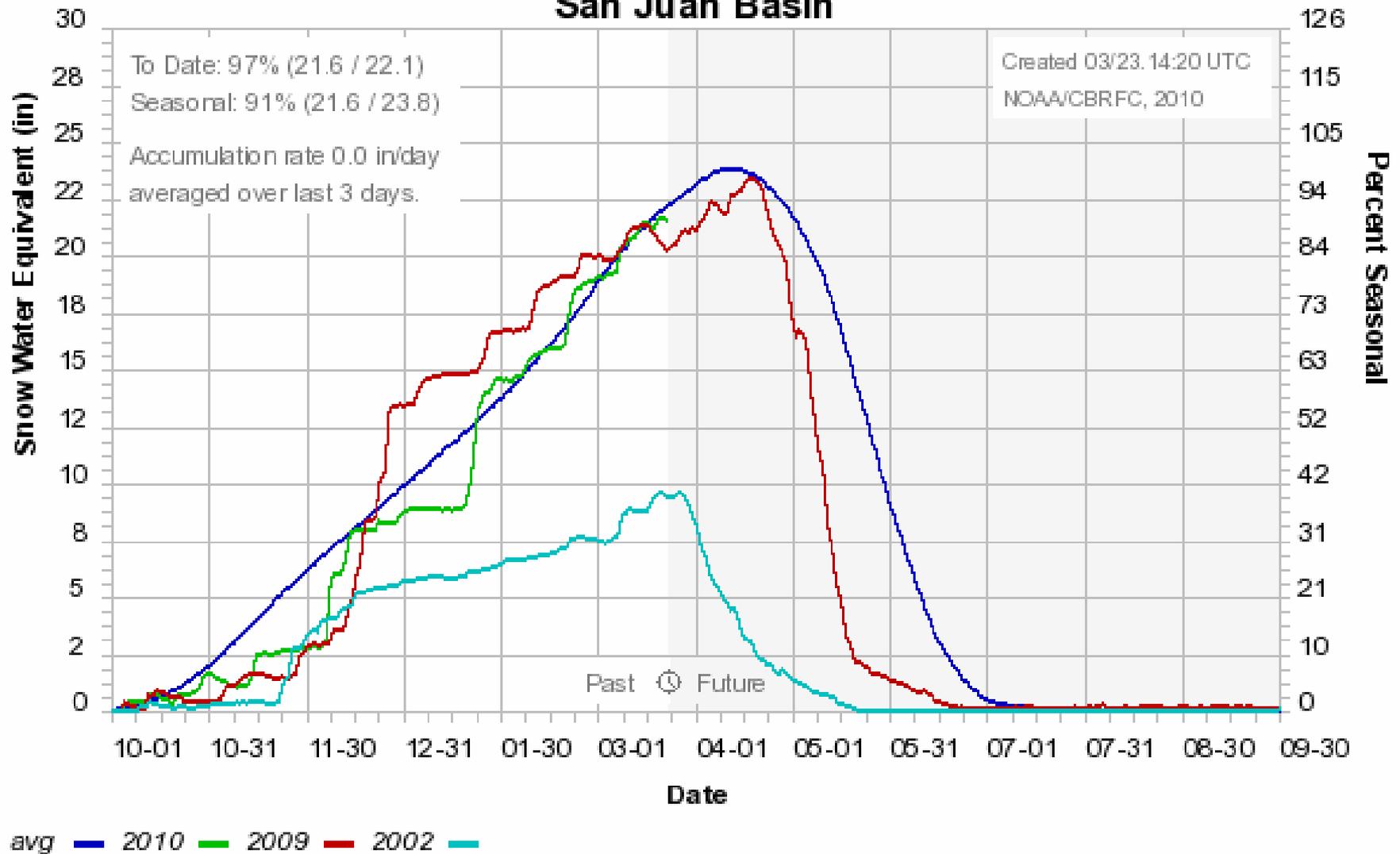
Basin Snowpack: 73%



# San Juan Basin



# Colorado Basin River Forecast Center San Juan Basin



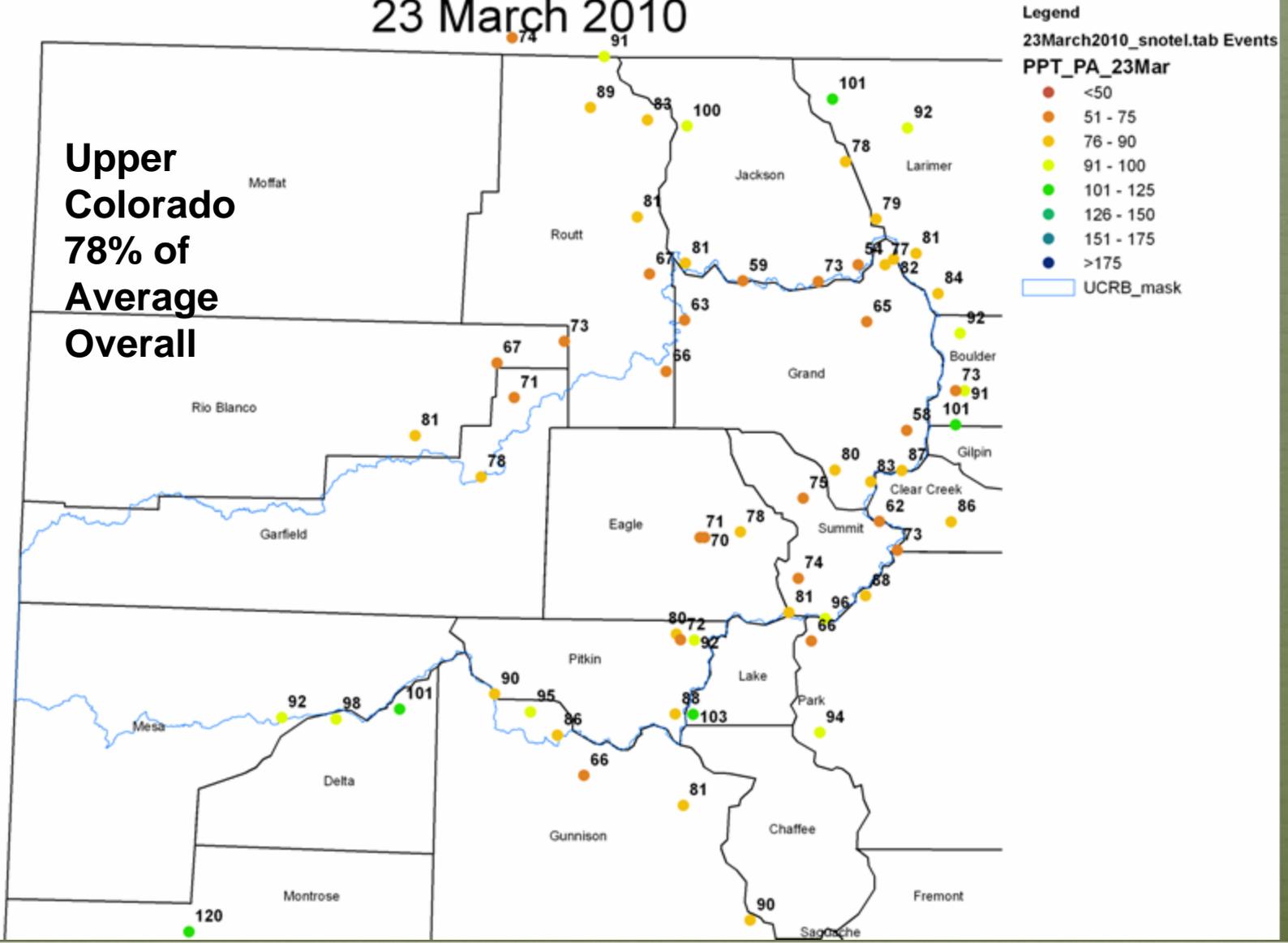
Basin Snowpack: 97%





# Snotel WYTD Precipitation % Average

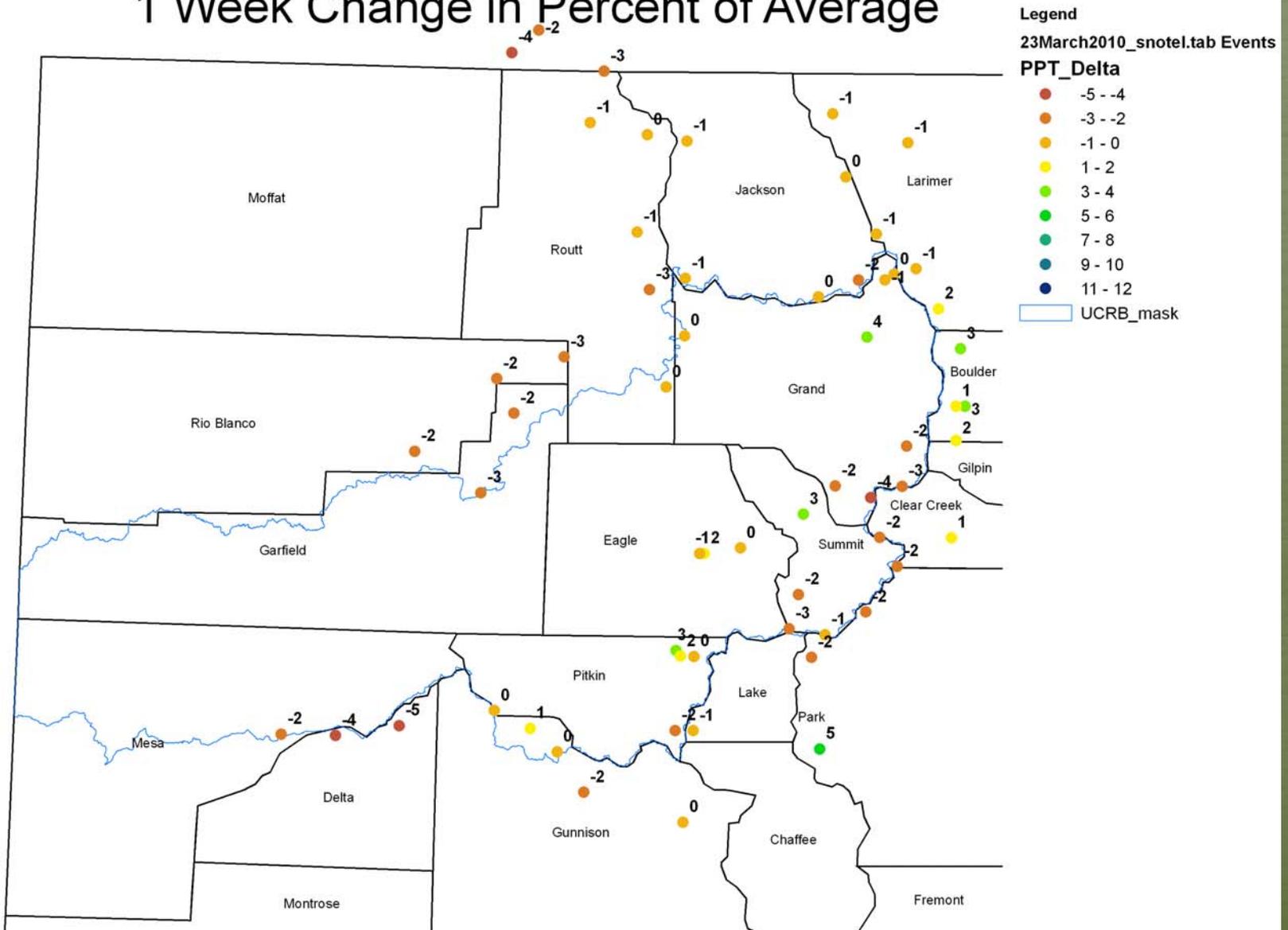
## Snotel WYTD Precipitation as Percent of Average 23 March 2010





# Snotel WYTD Precipitation % Average 1 Week Change

## Snotel WYTD Precipitation as Percent of Average 1 Week Change in Percent of Average

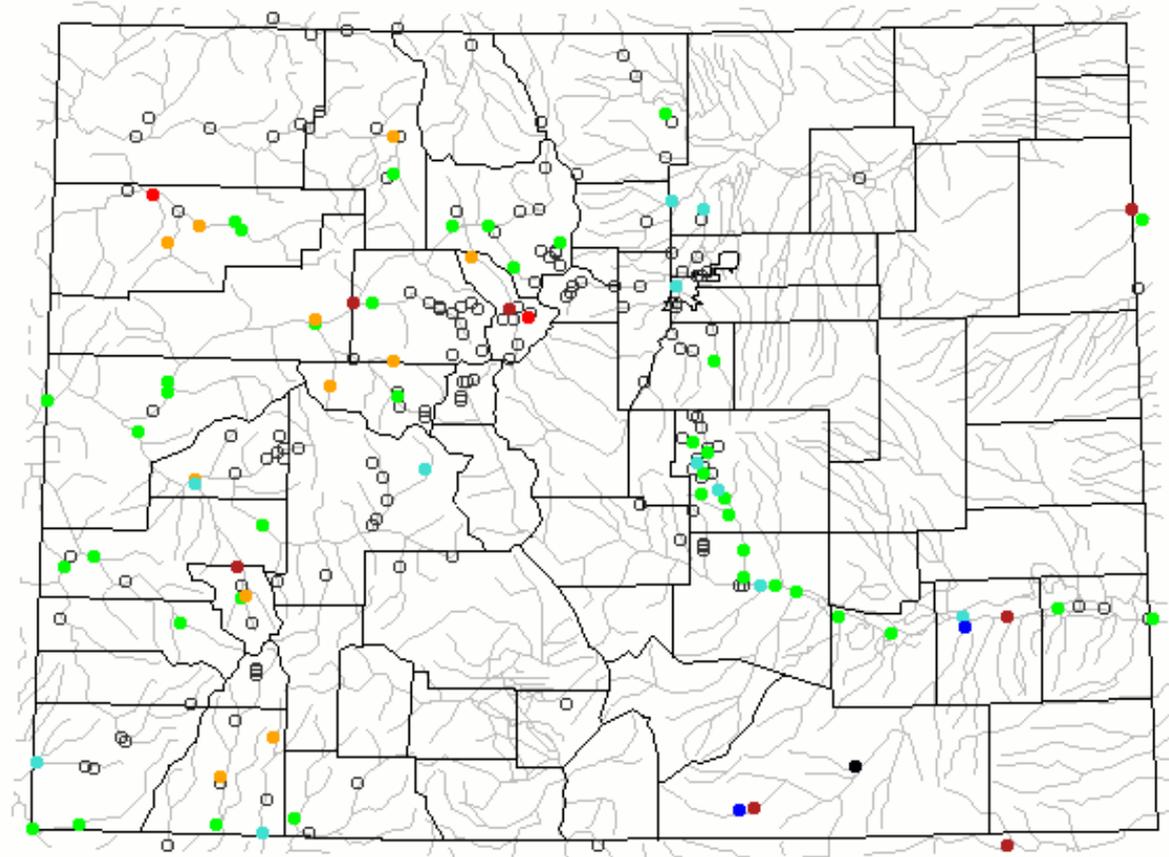


# Streamflow Update



# 28 Day Average Streamflow Compared to Historical Average for the Day

Monday, March 22, 2010



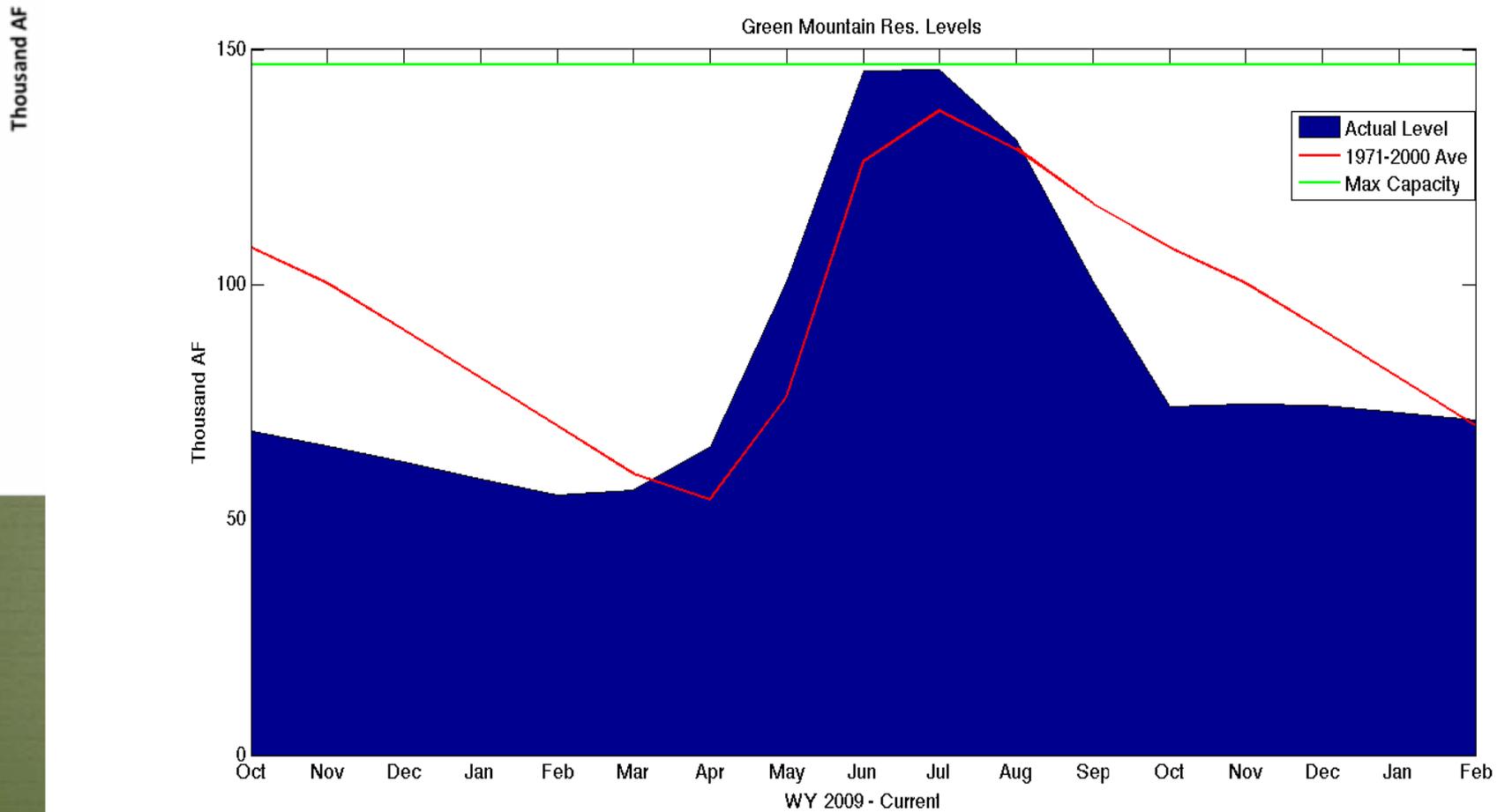
Explanation - Percentile classes						
●	●	●	●	●	●	●
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



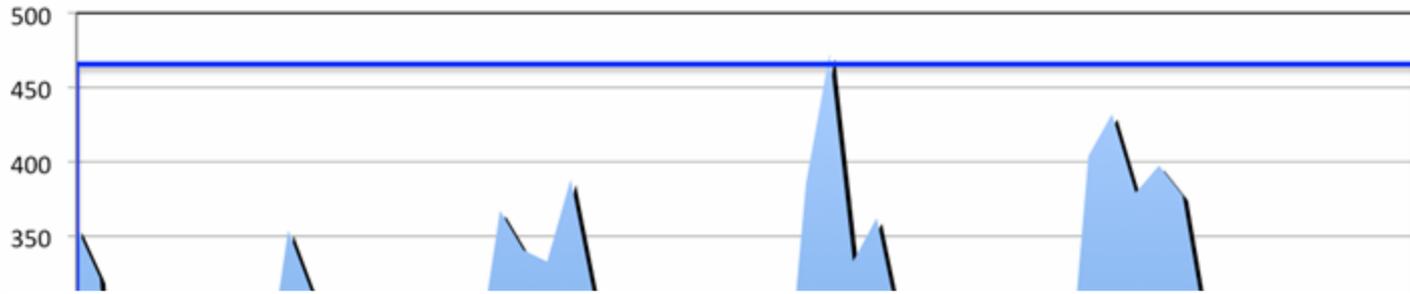
# Reservoir Update



# Green Mountain February Reservoir Storage



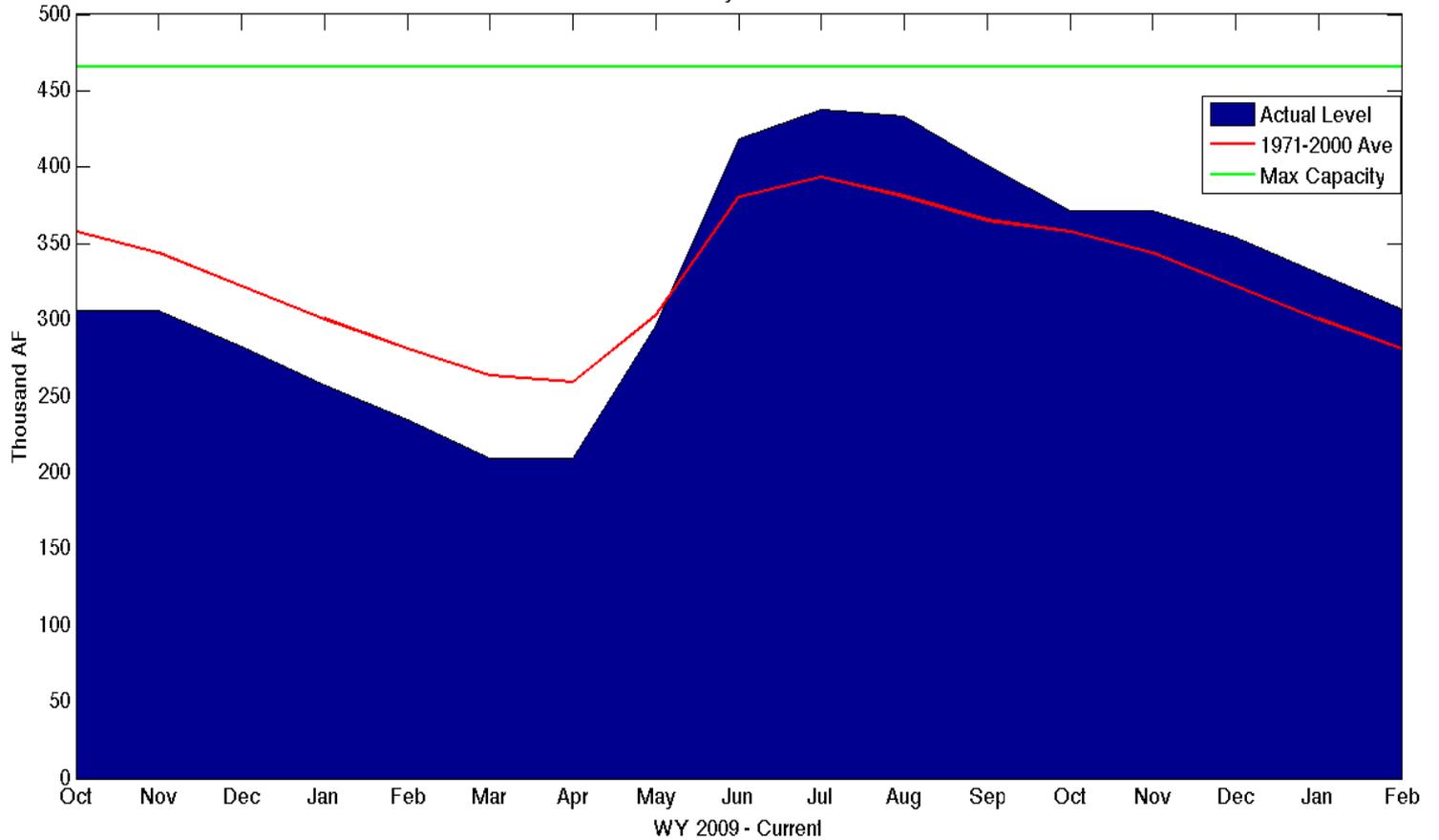
# Lake Granby February Reservoir Storage



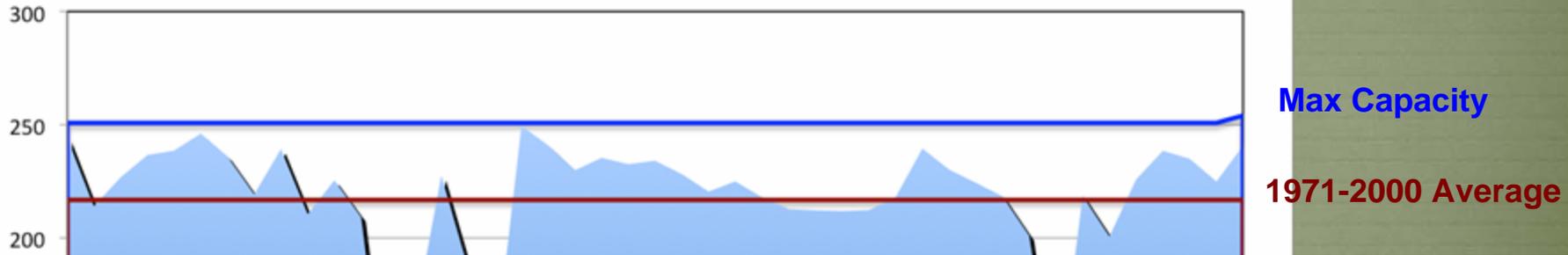
Max Capacity

Thousand AF

Lake Granby Res. Levels

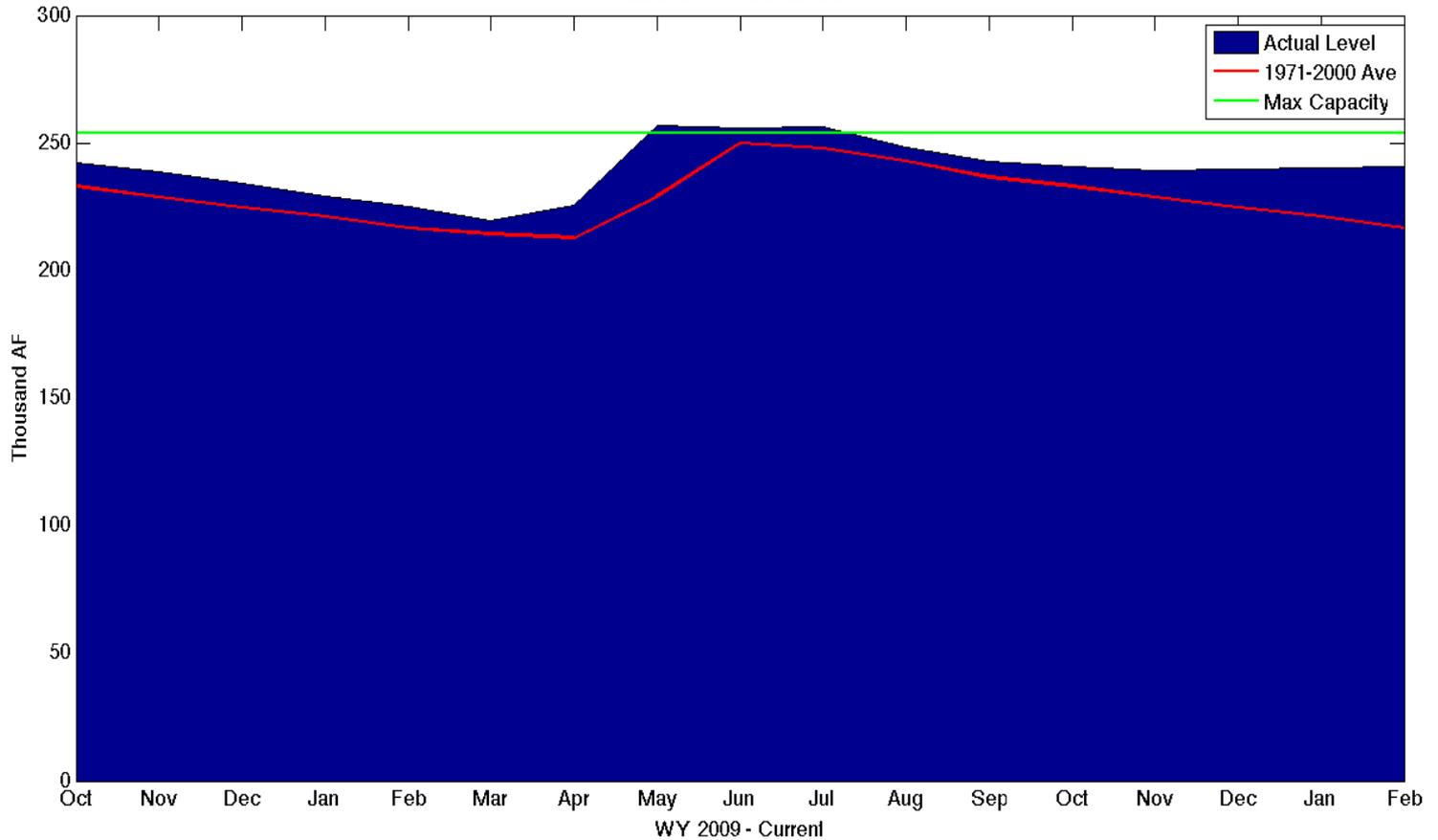


# Lake Dillon February Reservoir Storage

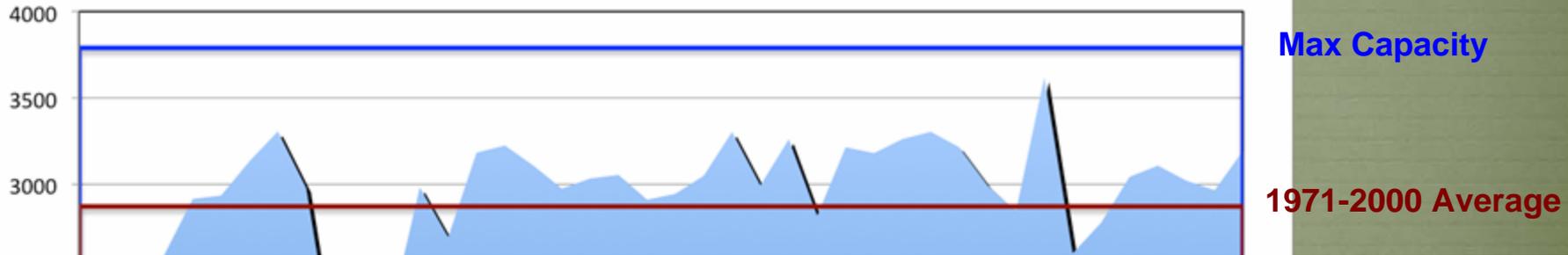


Thousand AF

Lake Dillon Res. Levels

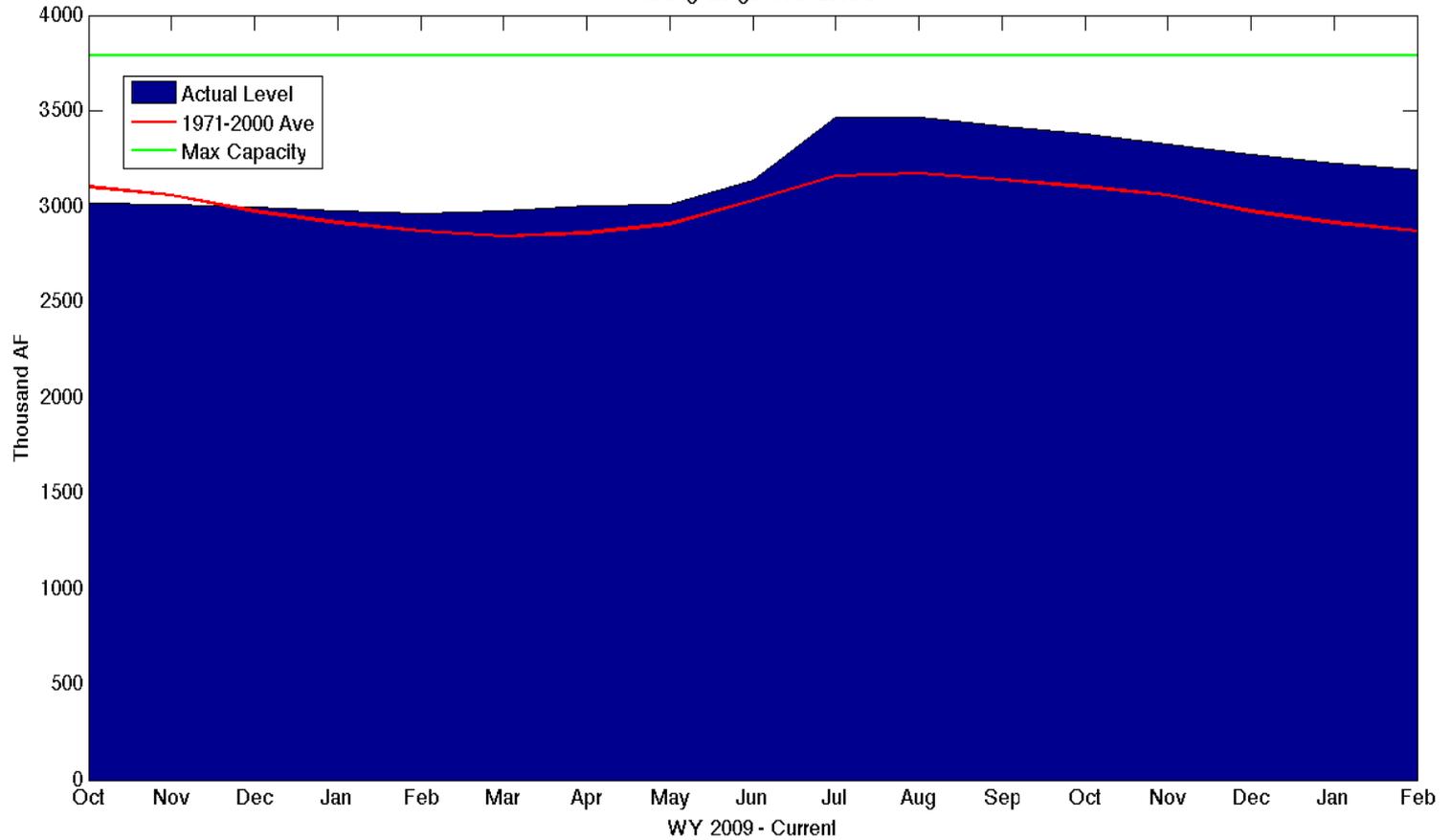


# Flaming Gorge February Reservoir Storage

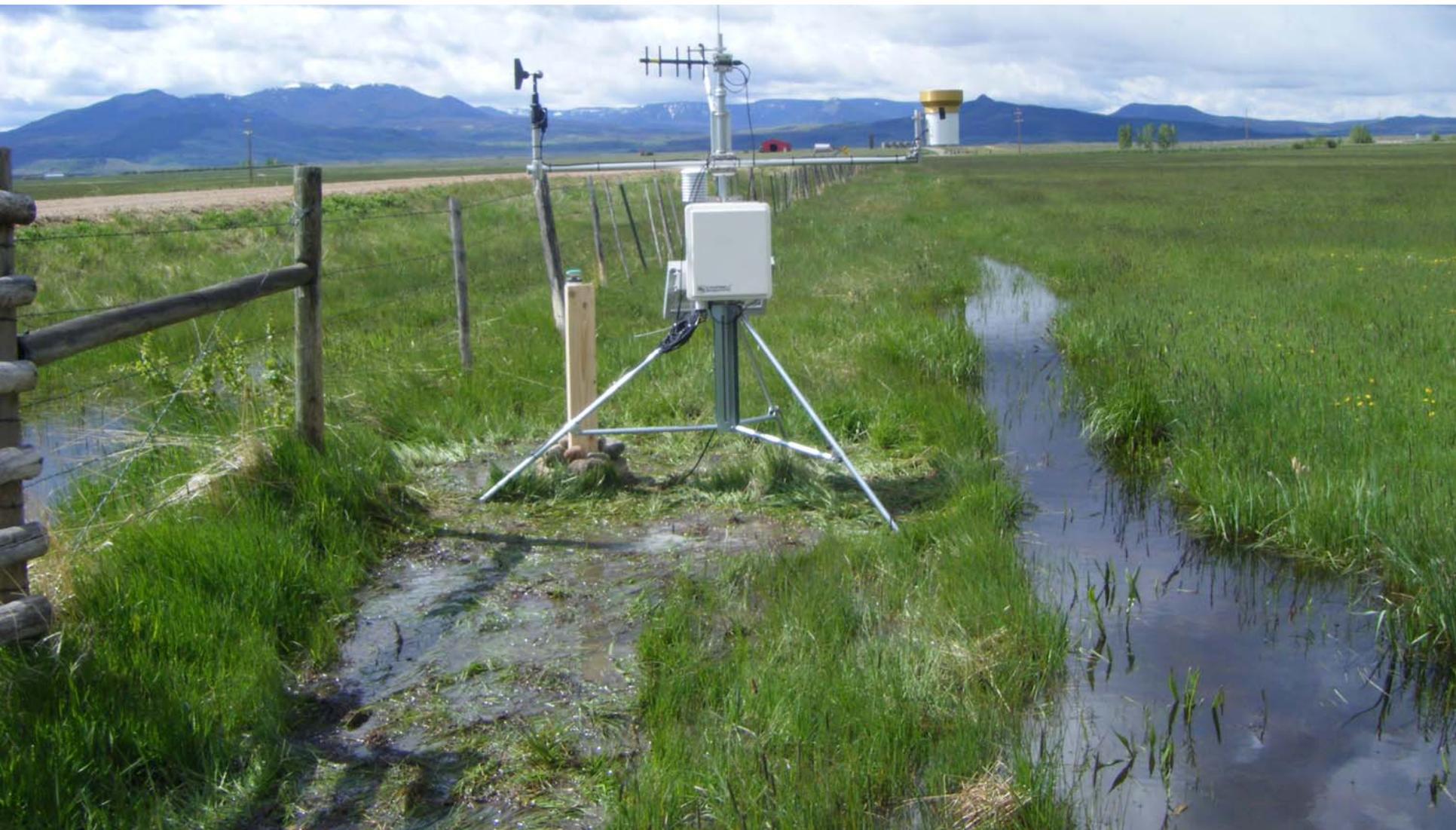


Thousand AF

## Flaming Gorge Res. Levels

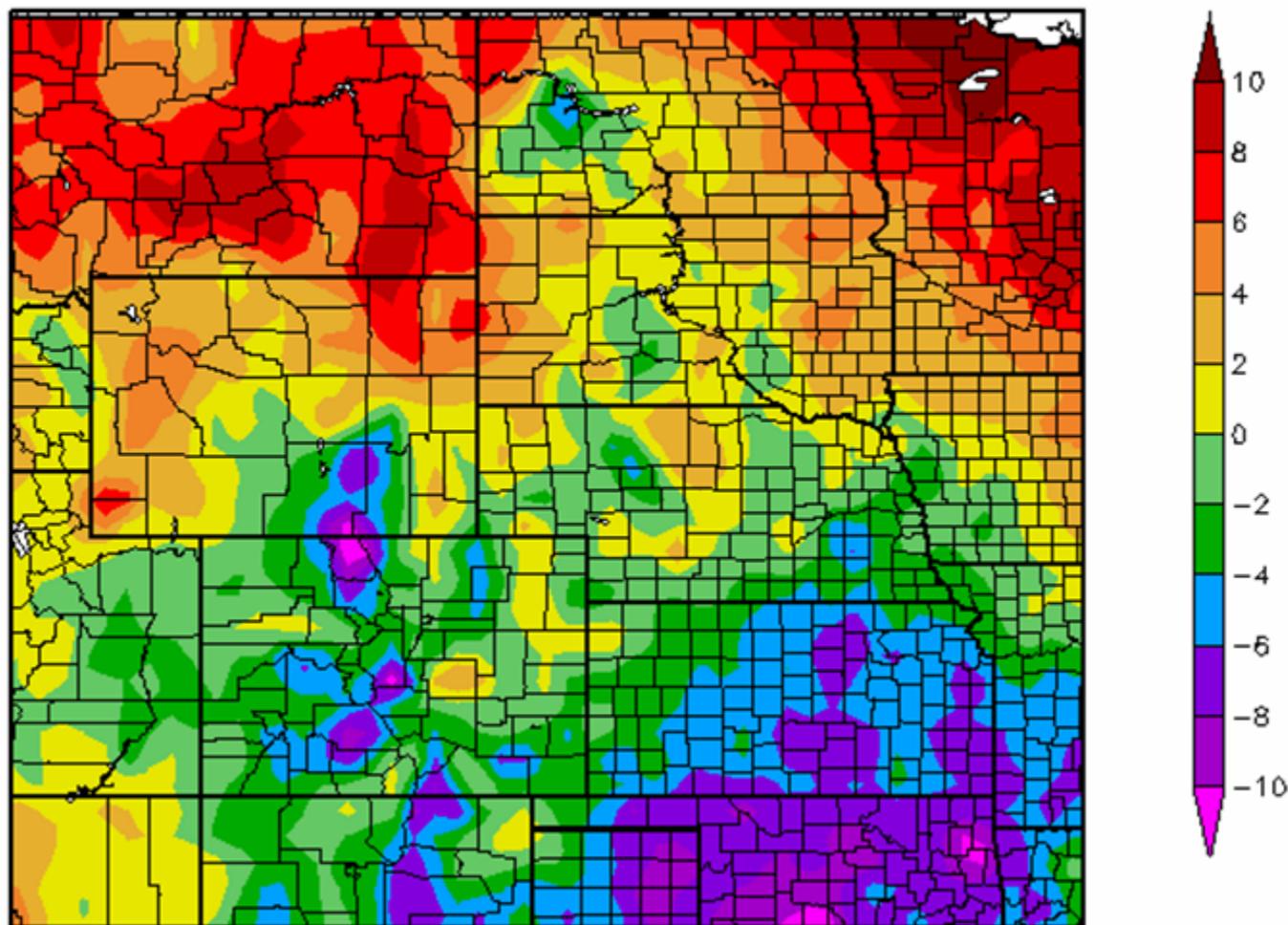


# Water Demand



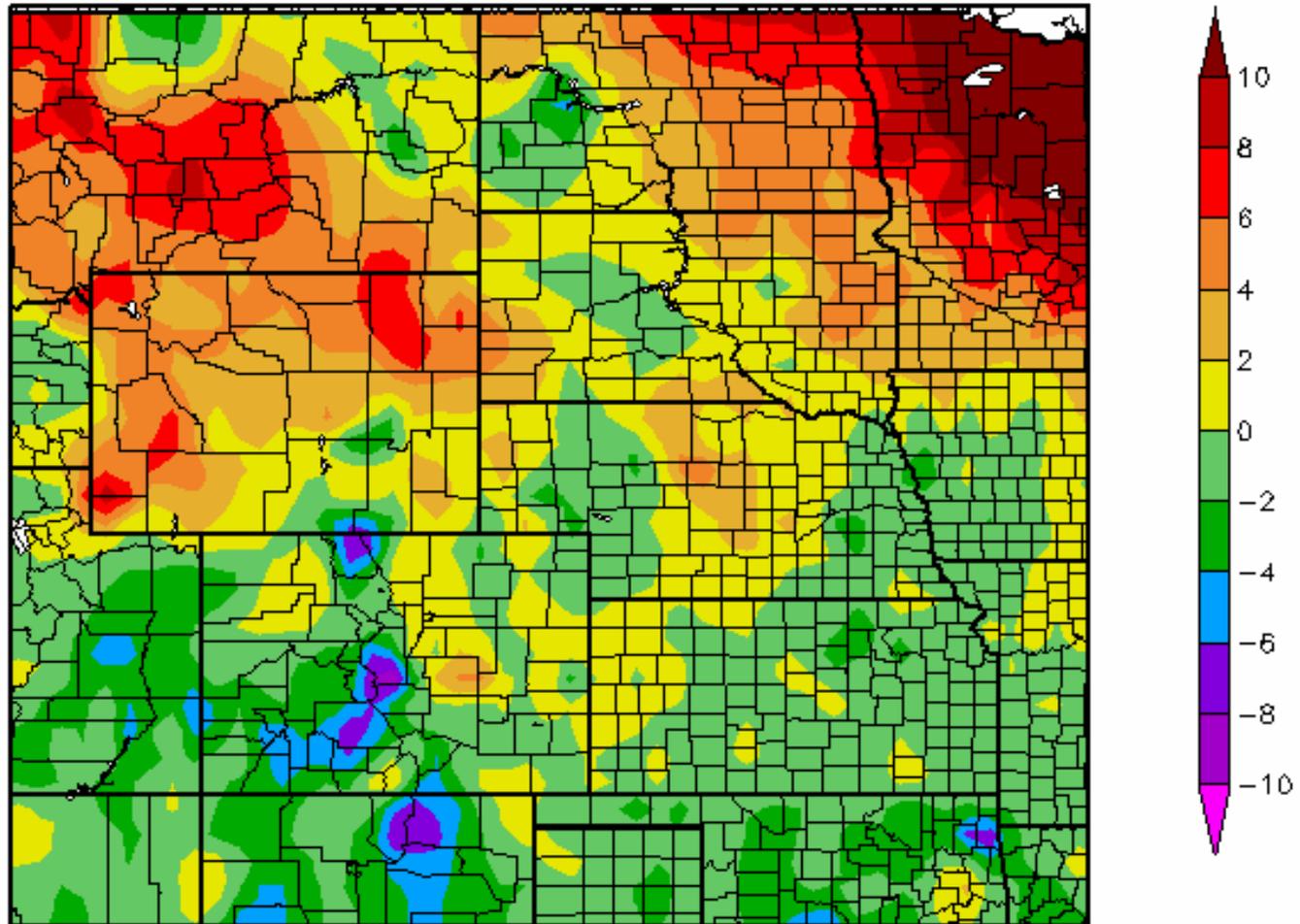
# 7 Day Temperature Departure

Departure from Normal Temperature (F)  
3/16/2010 - 3/22/2010



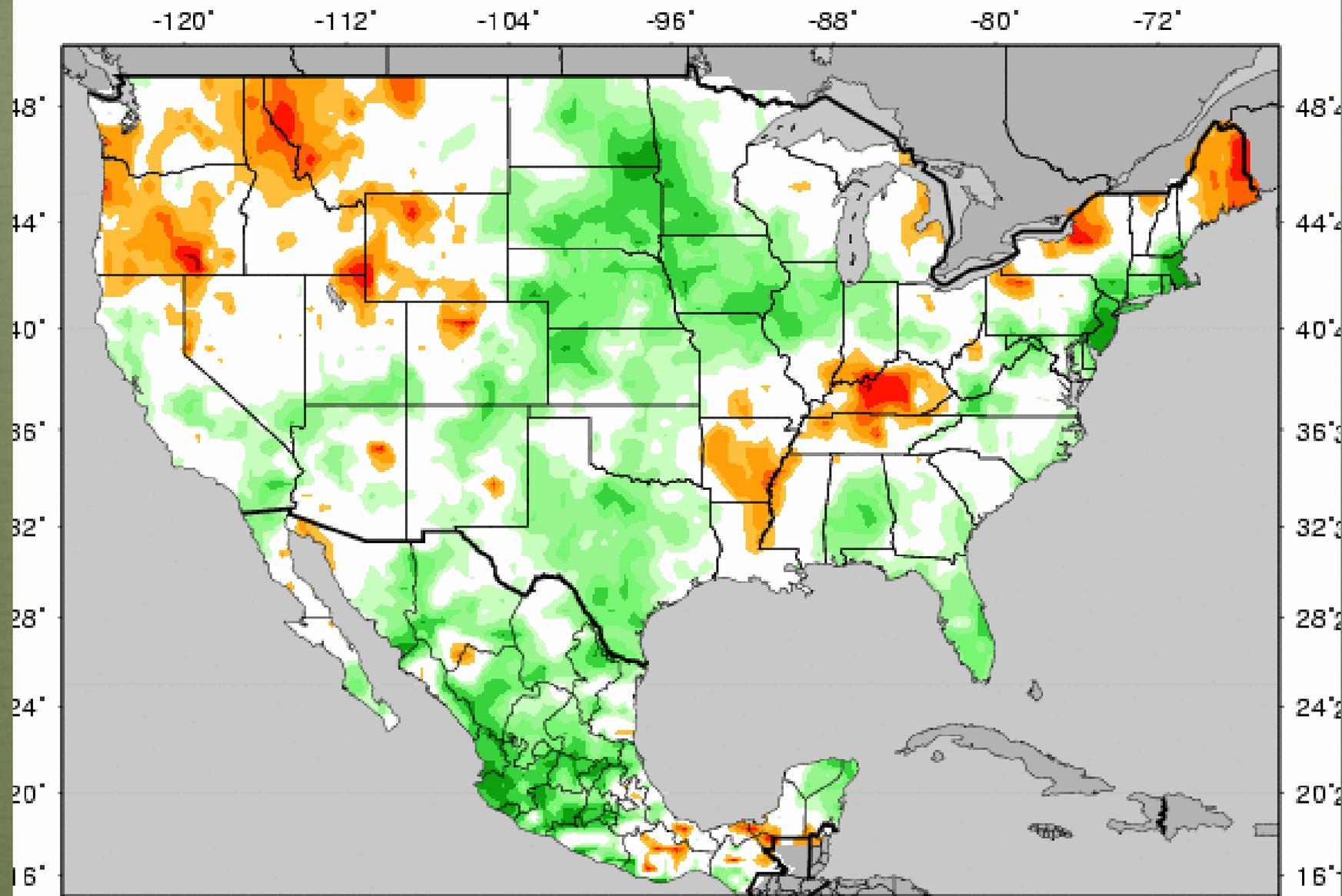
# March Temperature Departure

Departure from Normal Temperature (F)  
3/1/2010 - 3/22/2010



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

20100321



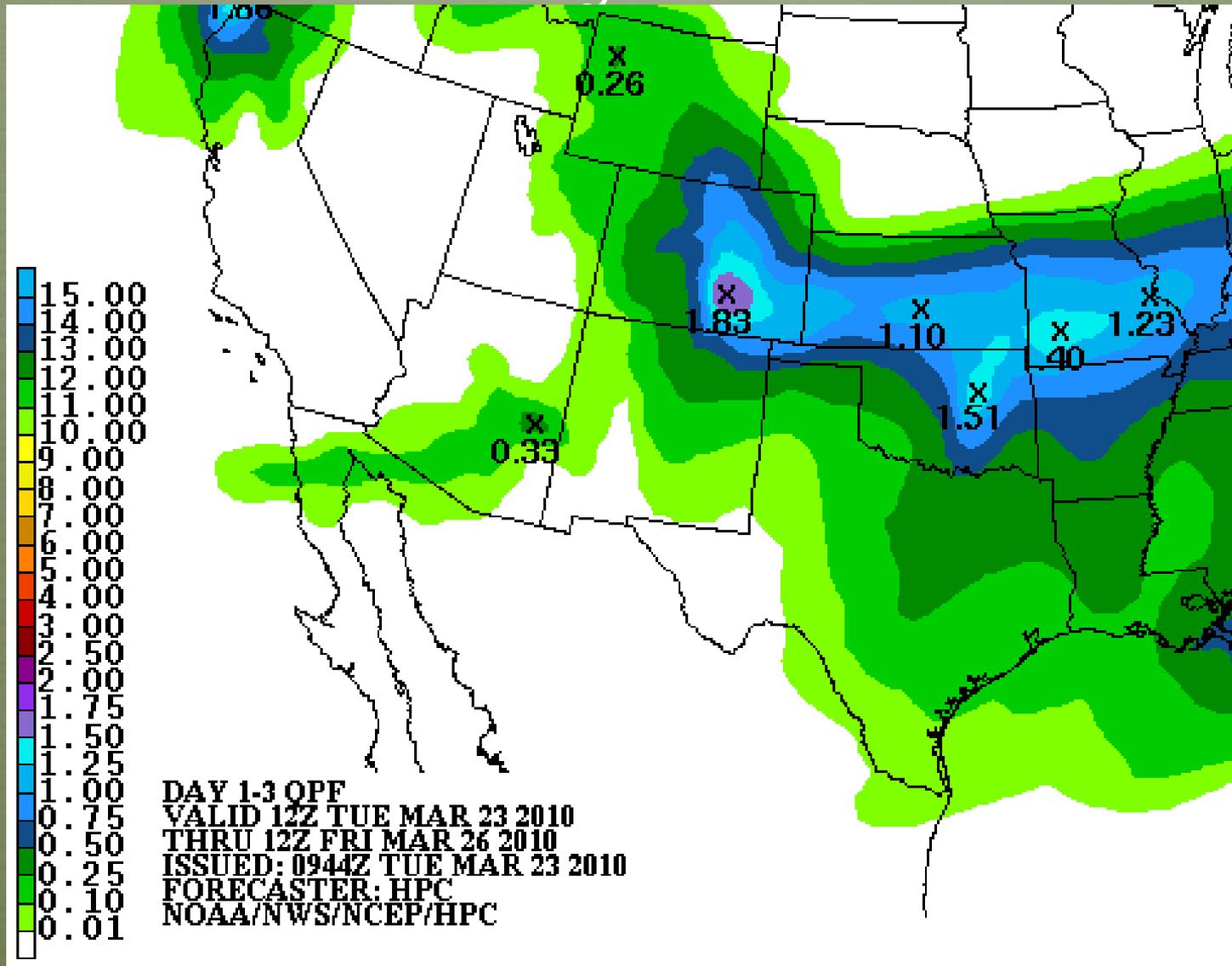
0 1 5 10 20 30 70 80 90 95 99 100

percentile

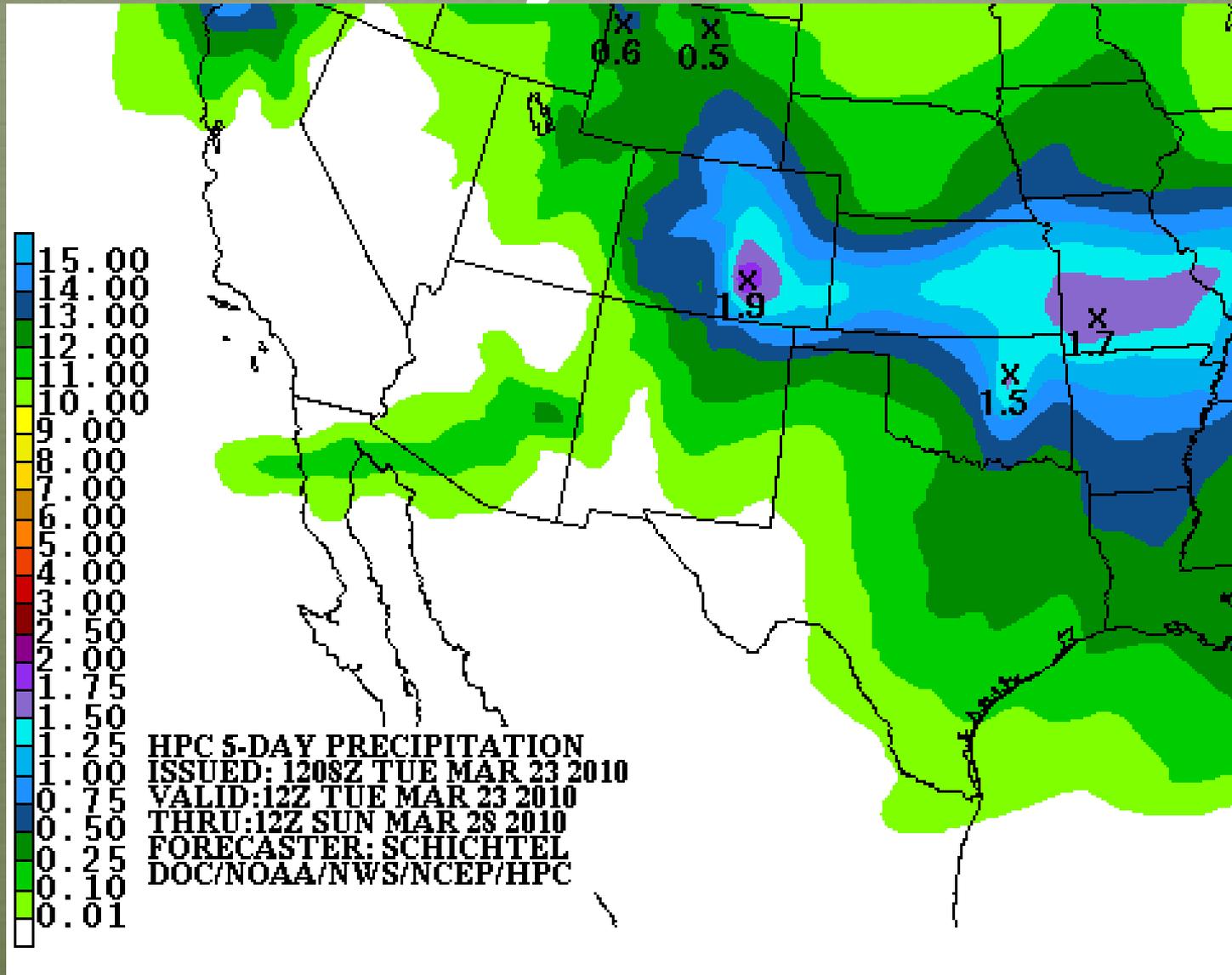
# Precipitation Forecast



# 1-3 Day Outlook

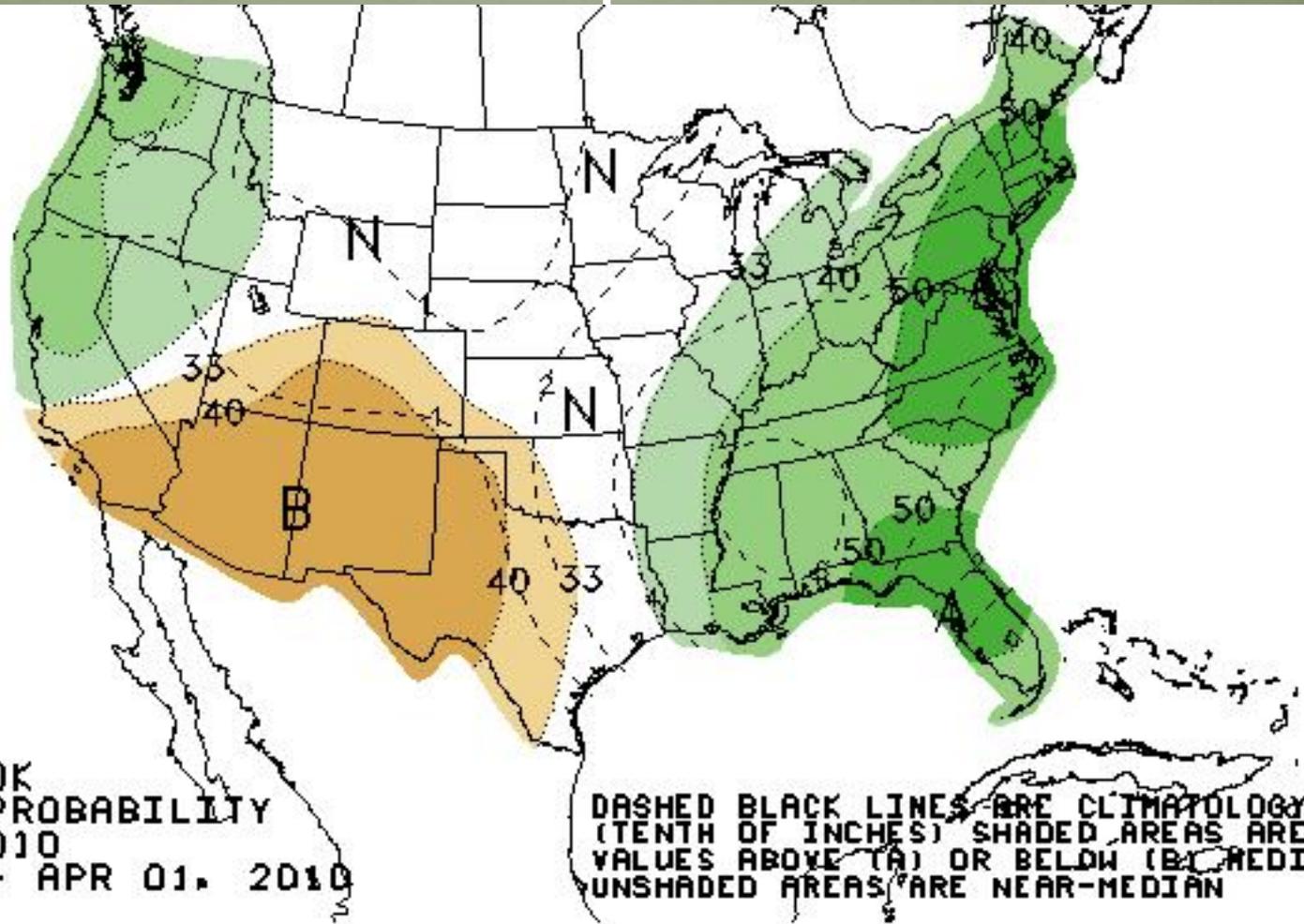


# 5 Day Outlook



# 6-10 Day Outlook

## 28 March- 1 April 2010

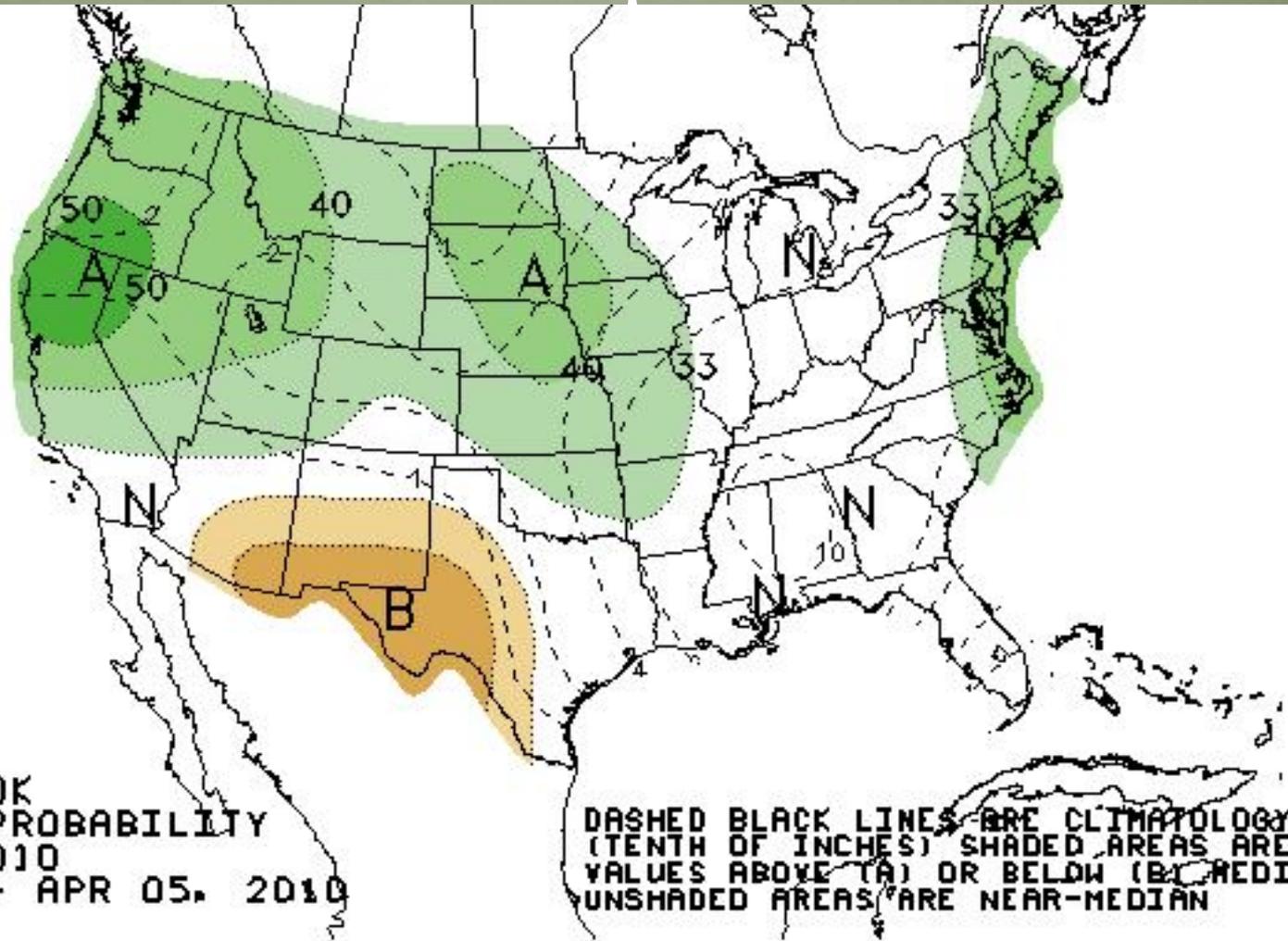


6-10 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 22 MAR 2010  
VALID MAR 28 - APR 01, 2010

DASHED BLACK LINES ARE CLIMATOLOGY  
(TENTH OF INCHES) SHADED AREAS ARE FCS  
VALUES ABOVE (A) OR BELOW (B) MEDIAN  
UNSHADED AREAS ARE NEAR-MEDIAN

# 8-14 Day Outlook

30 March – 5 April 2010



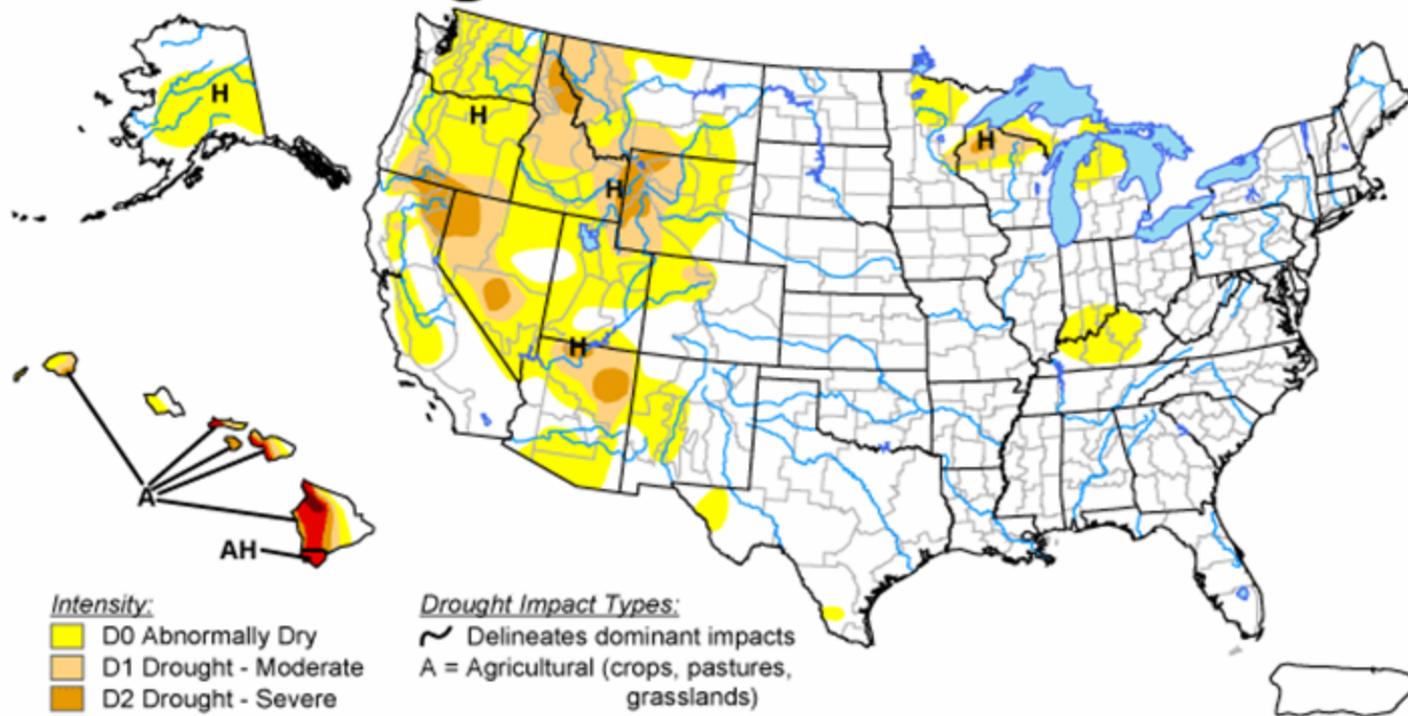
8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 22 MAR 2010  
VALID MAR 30 - APR 05, 2010

DASHED BLACK LINES ARE CLIMATOLOGY  
(TENTH OF INCHES) SHADED AREAS ARE FCS  
VALUES ABOVE (A) OR BELOW (B) MEDIAN  
UNSHADED AREAS ARE NEAR-MEDIAN

# Recommendations

## U.S. Drought Monitor

March 16, 2010  
Valid 7 a.m. EST



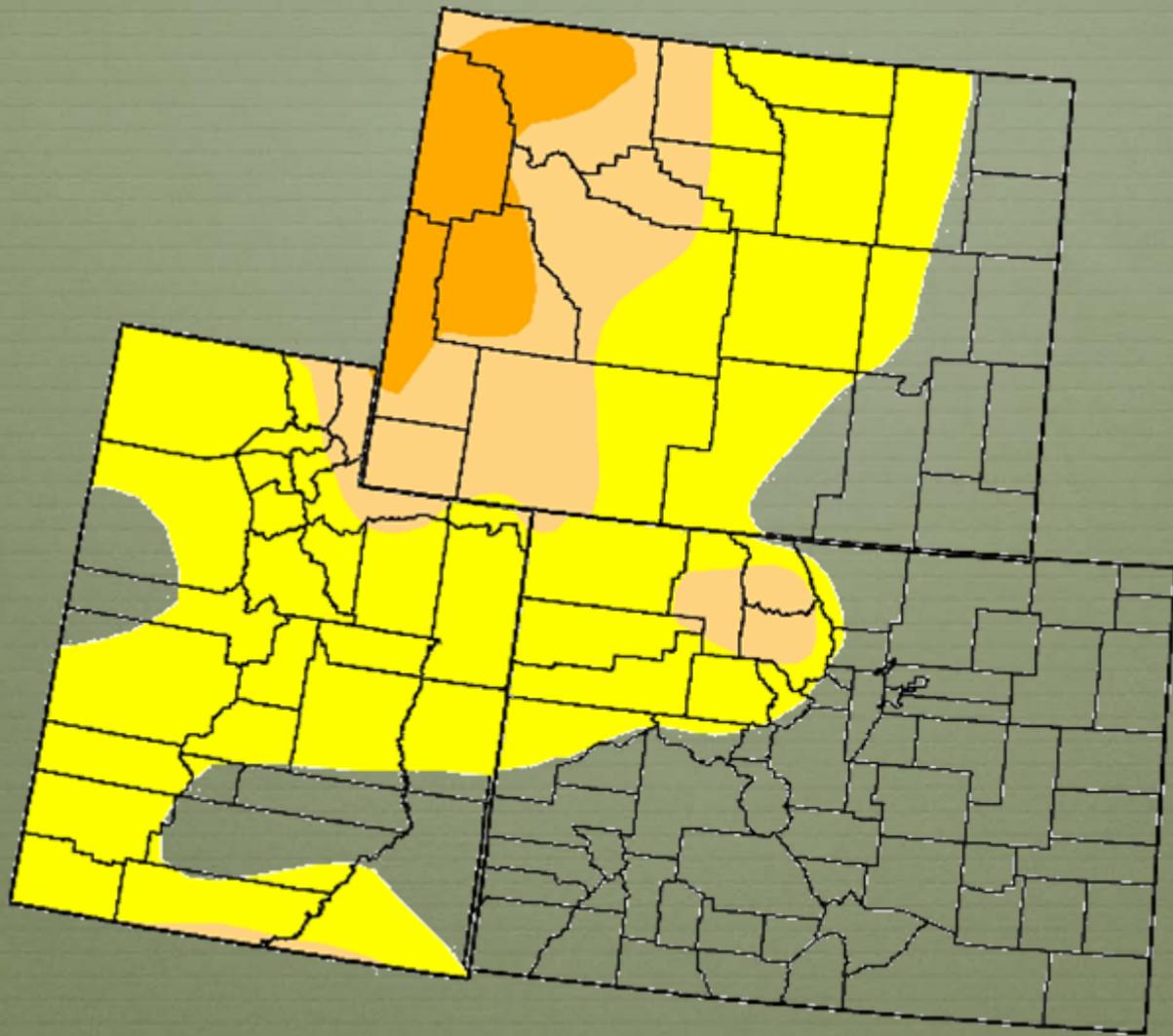
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>



Released Thursday, March 18, 2010

Author: Matthew Rosencrans, NOAA/NWS/NCEP/CPC



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**FORT COLLINS, CO 80523**

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**NIDIS - UPPER COLORADO BASIN PILOT PROJECT**

**F o r m o r e i n f o r m a t i o n**

# Summary

- ❖ One large storm moved through Colorado last week, bringing the heaviest precipitation to the Front Range and the Sangre de Cristo mountains. Though beneficial snow accumulated in the Colorado's northern mountains, it had relatively little impact on the seasonal snow water equivalent observed at NRCS SNOTEL station in the Upper Colorado basin. The northern mountains continue to see decreases in their water-year-to-date percent of average precipitation, with 1-2% decreases from last week. Temperatures remain near or below average for most of Colorado thanks to a very cold weekend. Soil moisture conditions remain good east of the mountains, so early demand for irrigation water should be minimal as we officially move into spring. Western Wyoming is a different story, where temperatures were above normal last week and Green River basin snowpack continues to track about 50% of average as we rapidly approach the timing of normal peak snow water equivalent.. Fortunately, reservoir storage continues to be at or above average for this time of year with good prospects of filling reservoirs in the upper Colorado even with below average snowpack.

Looking ahead, the next storm system is moving into the area right now. Similar to last week's storm, it is forecast to bring wet snow to the eastern slope of the Rockies, with less accumulations west of the divide. The models show another system that could bring more moisture to the tri-state area on Friday. There is the possibility for the remainder of March and first week of April to be warm and dry. As we move further into April, longer range forecast suggest we could see a shift to a more classic late El Nino winter pattern with more favorable conditions for heavy, wet snows from the mountains of central and northern Colorado northward into western Wyoming.

Last week, after much consideration following the webinar call, the Drought Monitor author chose to introduce D1 into the Upper Colorado River basin in Grand, Routt, and Jackson Counties. This week, reports from the lower elevations of the Upper Colorado River mainstem indicate that the recent storm brought only light precipitation and the thin snowpack is melting with grass showing. There was agreement that the D1 over that area is a good representation of current conditions. Status quo is recommended for the next week over the area. D1 and D2 conditions over western Wyoming will also remain -- status quo.