

CBRFC Forecast Update: Fontenelle Reservoir

April 25, 2013

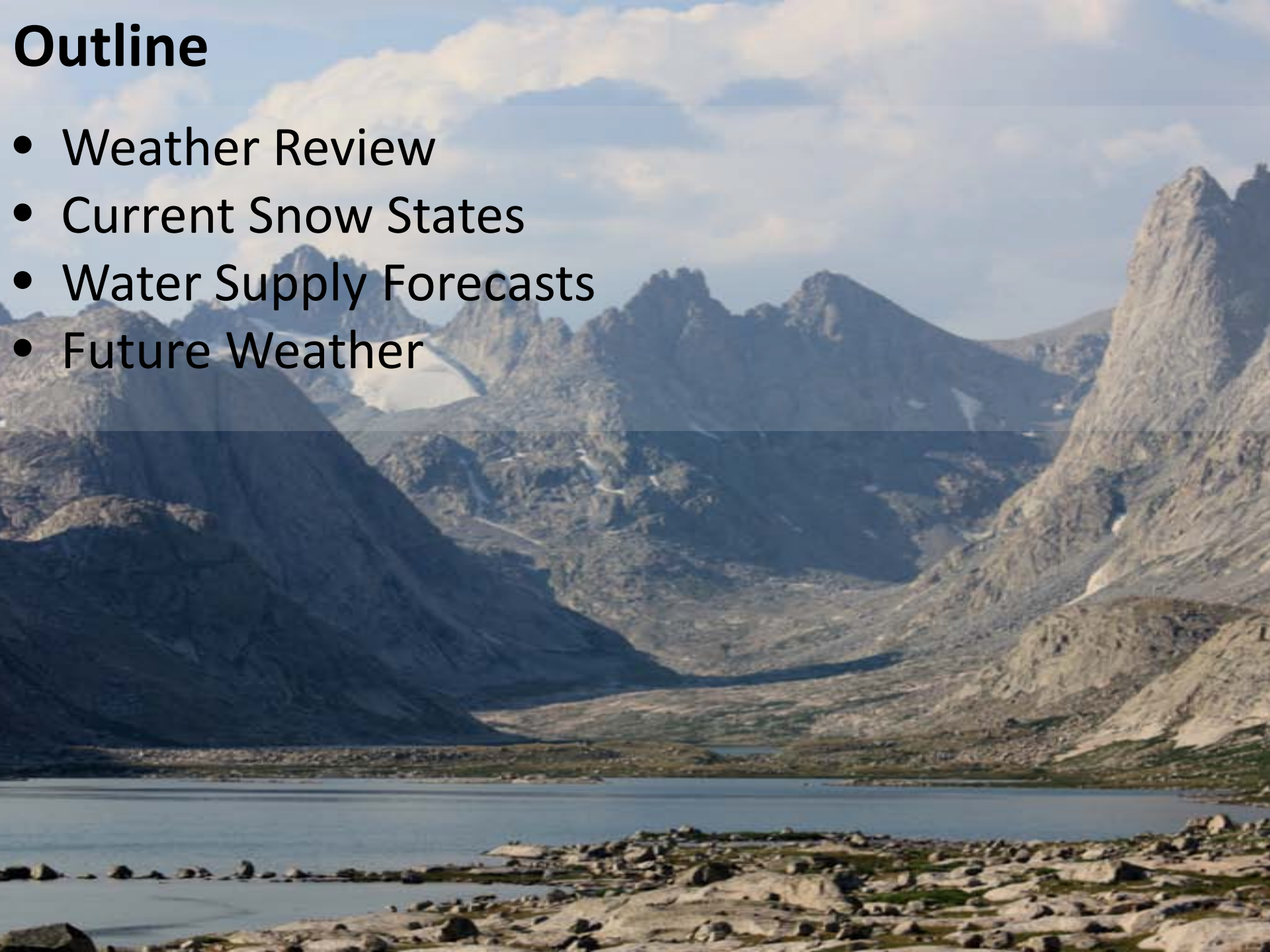
Ashley Nielson

NWS Colorado Basin River Forecast Center



Outline

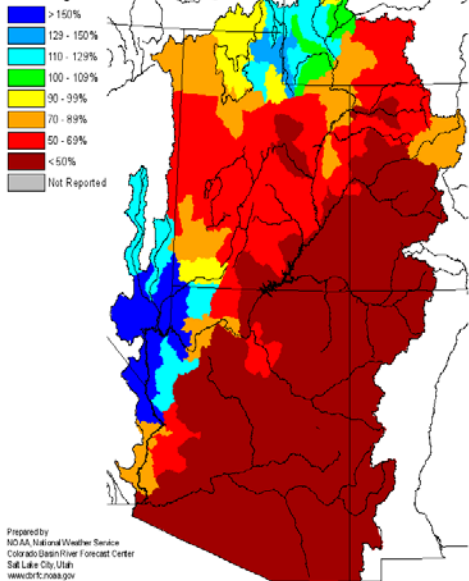
- Weather Review
- Current Snow States
- Water Supply Forecasts
- Future Weather



Monthly Precipitation for October 2012

(Averaged by Hydrologic Unit)

% Average



Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Monthly Precipitation for November 2012

(Averaged by Hydrologic Unit)

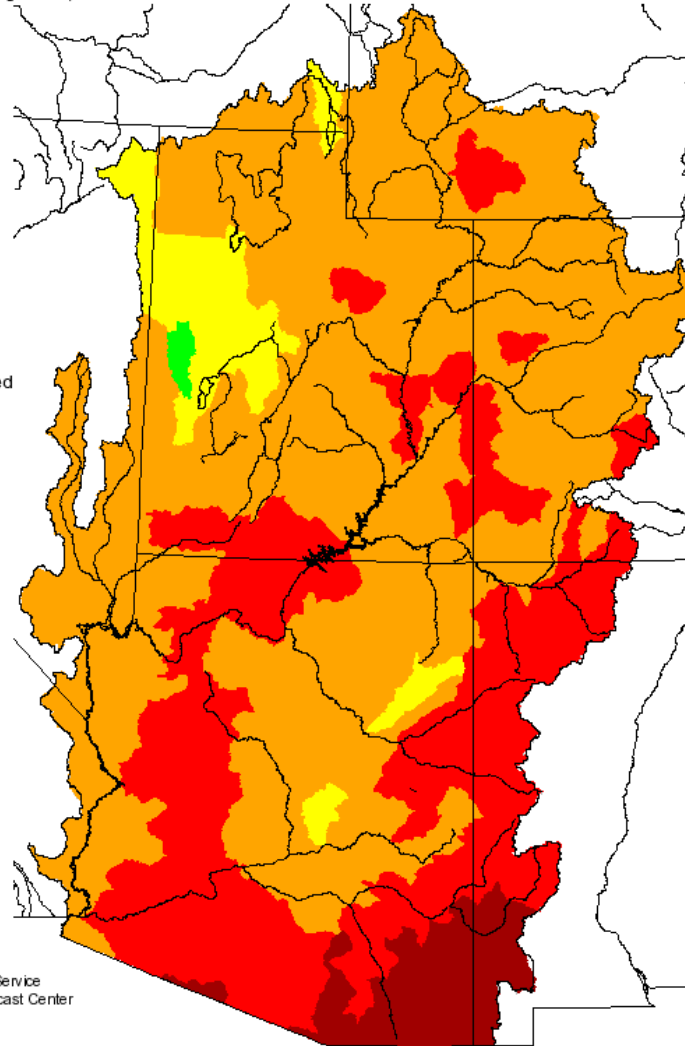
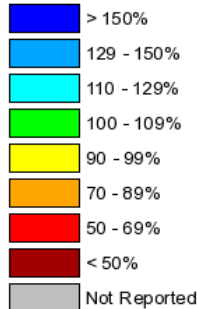
% Average



Seasonal Precipitation, October 2012 - March 2013

(Averaged by Hydrologic Unit)

% Average

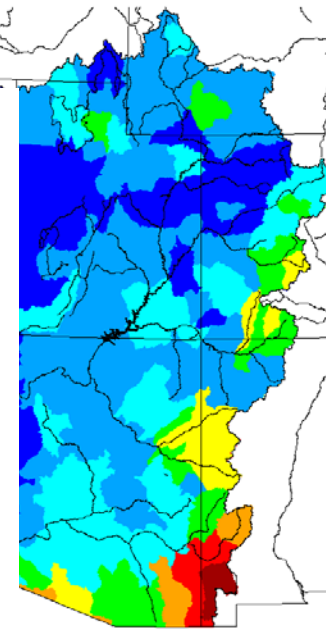


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Monthly Precipitation for December 2012

(Averaged by Hydrologic Unit)

% Average

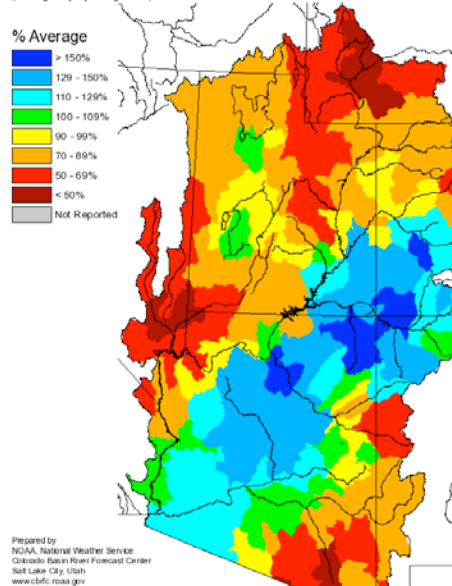
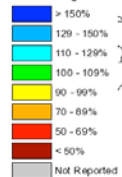


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Monthly Precipitation for January 2013

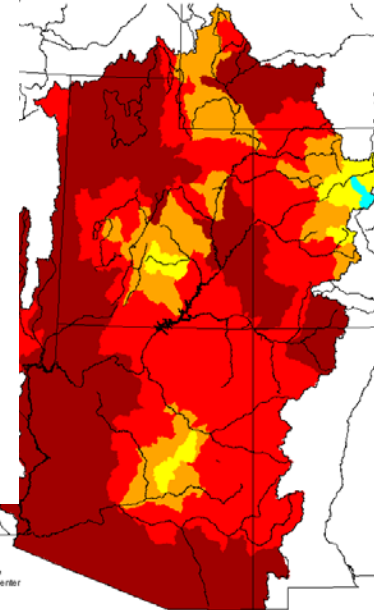
(Averaged by Hydrologic Unit)

% Average



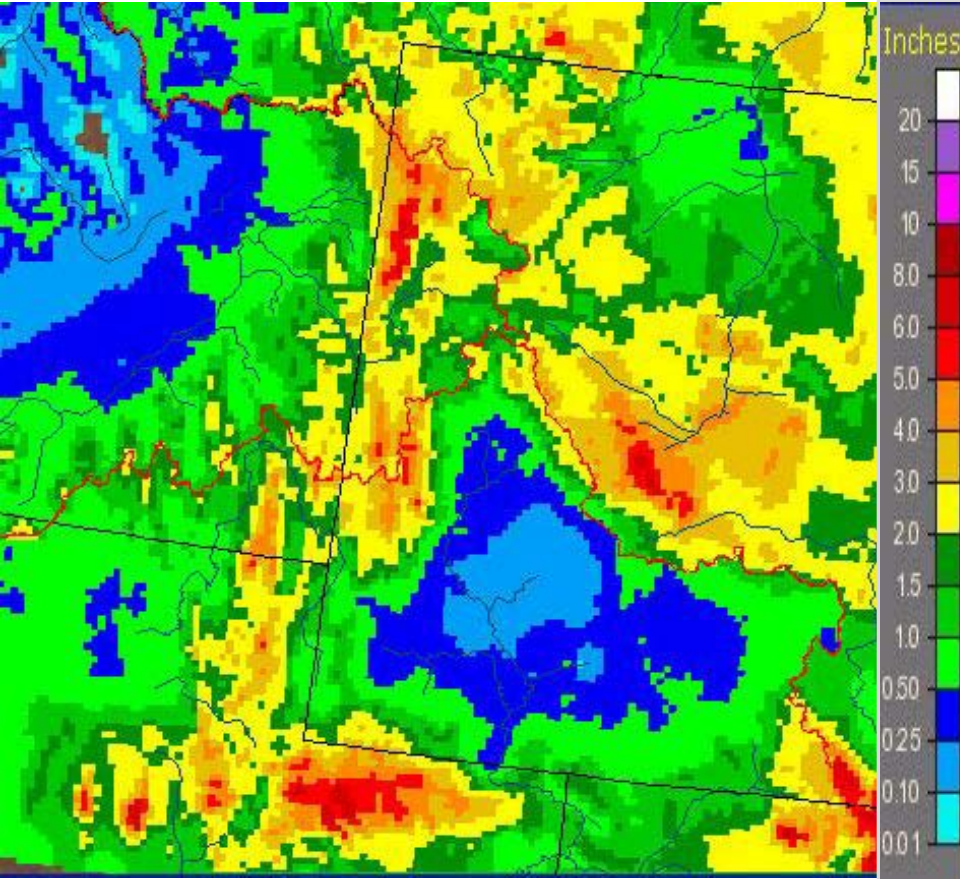
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Monthly Precipitation for March 2013

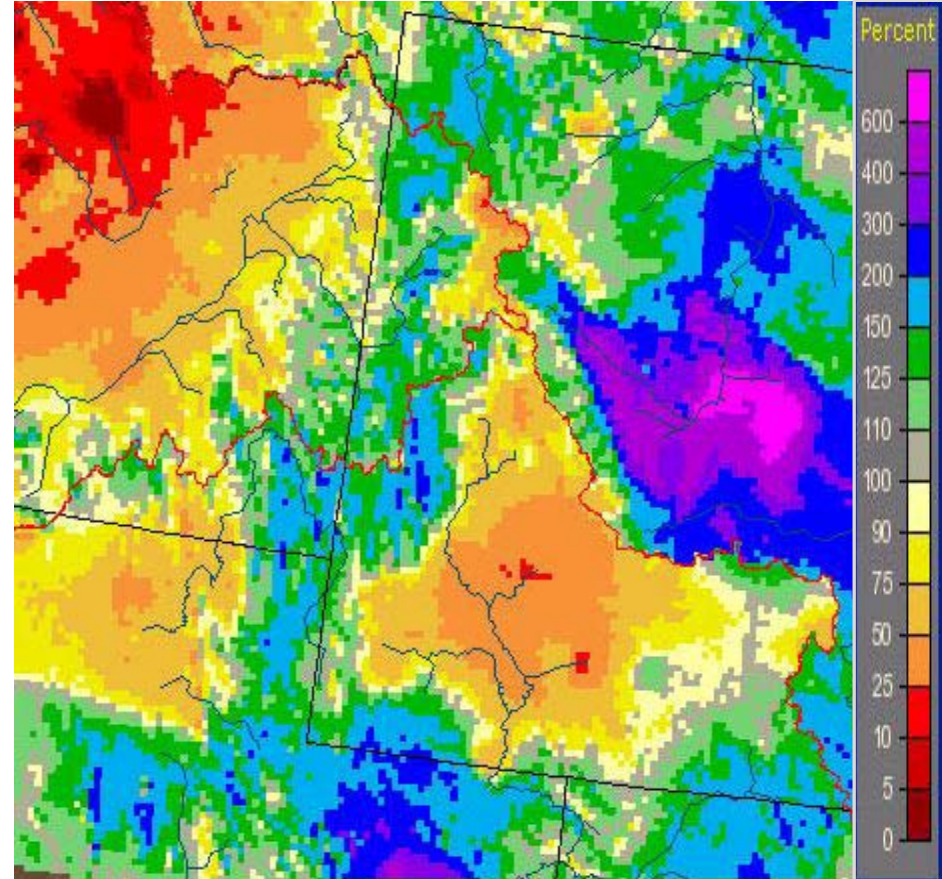


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April Precipitation: Month to Date



OBSERVED



% OF NORMAL

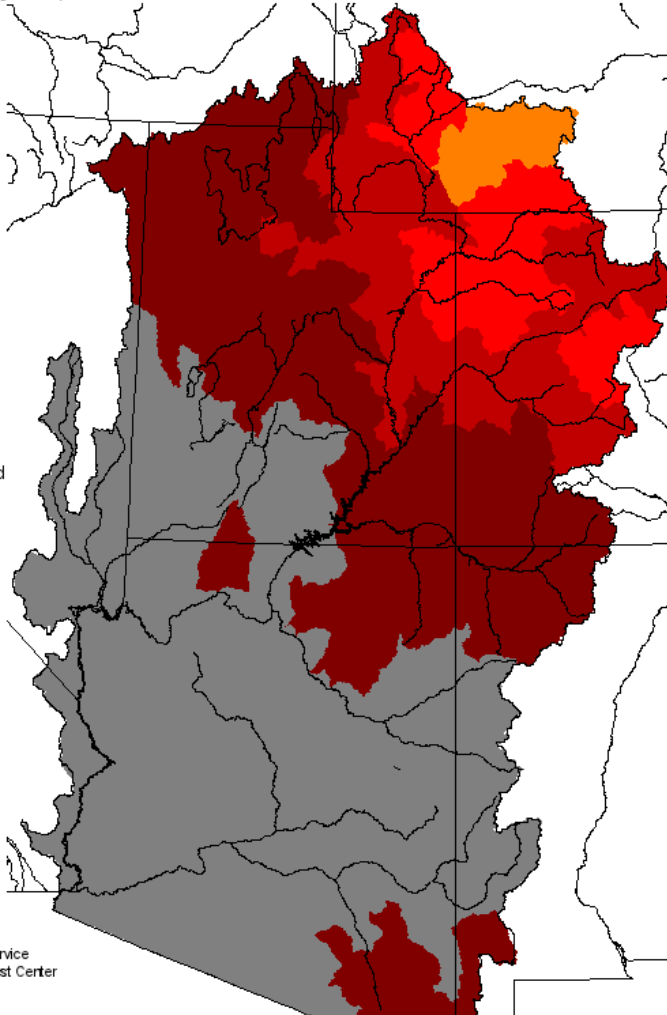
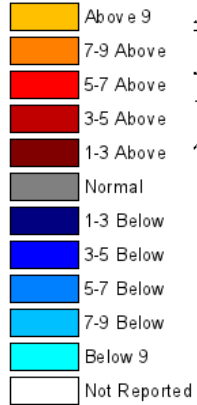
Temperatures:

Significant difference between March/April 2012 and March/April 2013

Monthly Max Temp Deviation for March 2012

(Averaged by Hydrologic Unit)

Degrees (F)

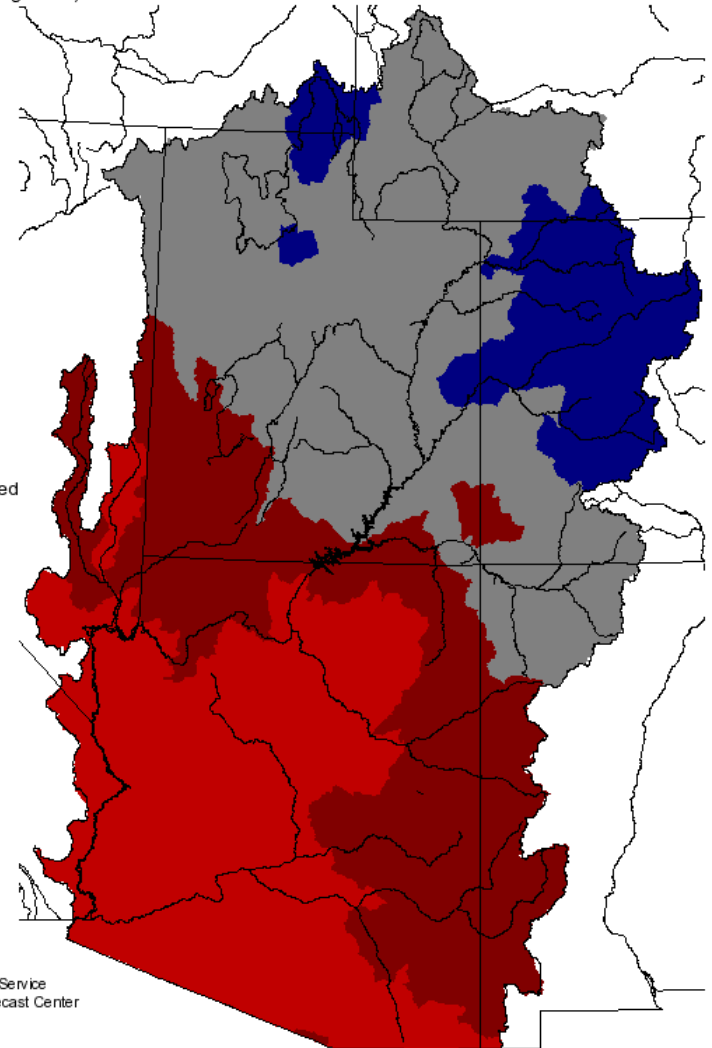
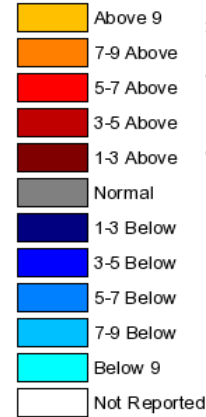


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Monthly Max Temp Deviation for March 2013

(Averaged by Hydrologic Unit)

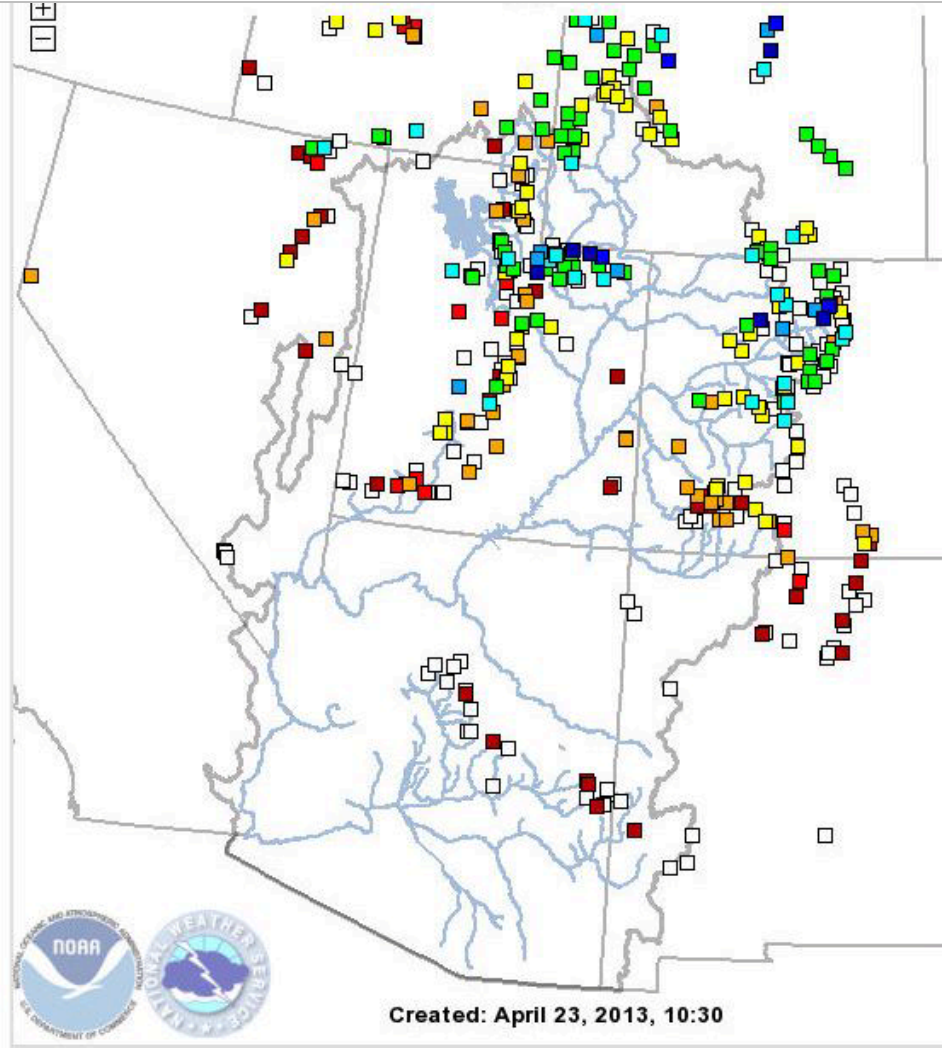
Degrees (F)



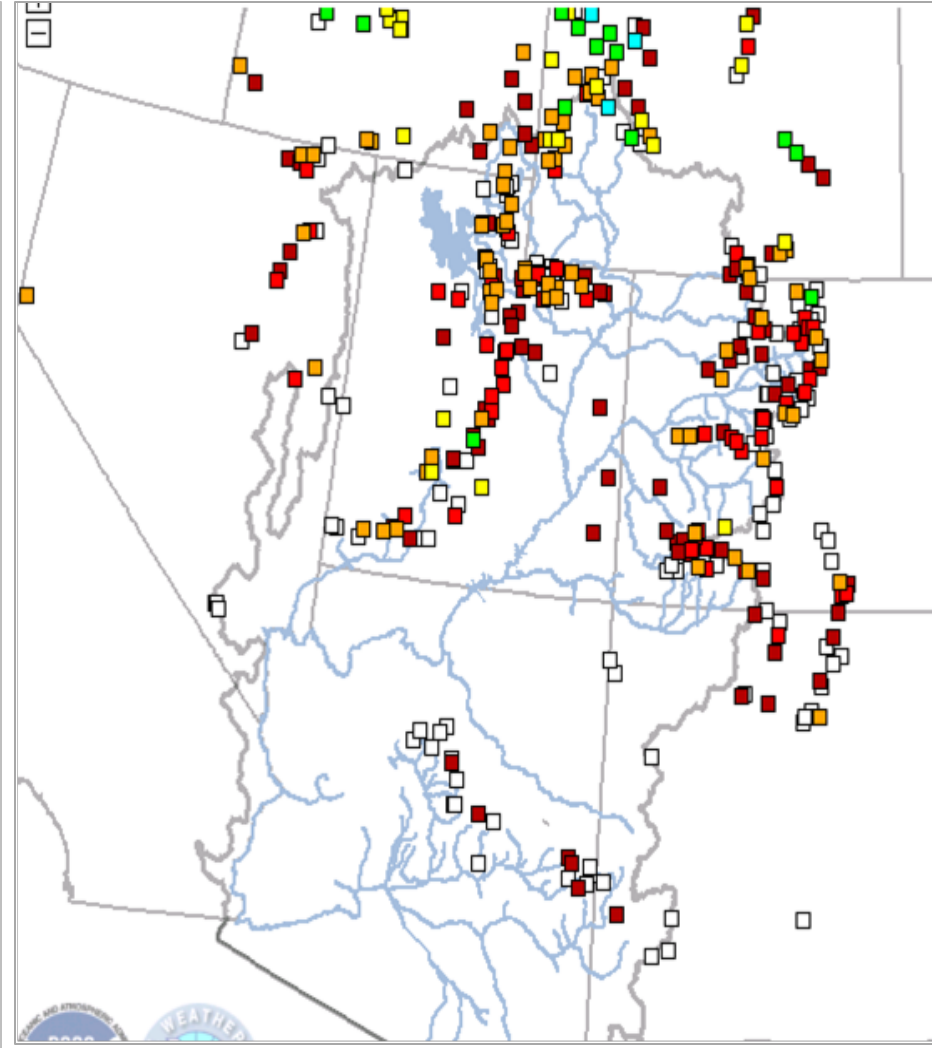
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Snow

Snow Point Classification: ○ Percentiles ● Percent Average ○ Percent Median
□ NA ■ < 25% ■ 25-50% ■ 50-75% ■ 75-90% ■ 90-110% ■ 110-125% ■ 125-150% ■ 150-175% ■ >175%



April 23, 2013



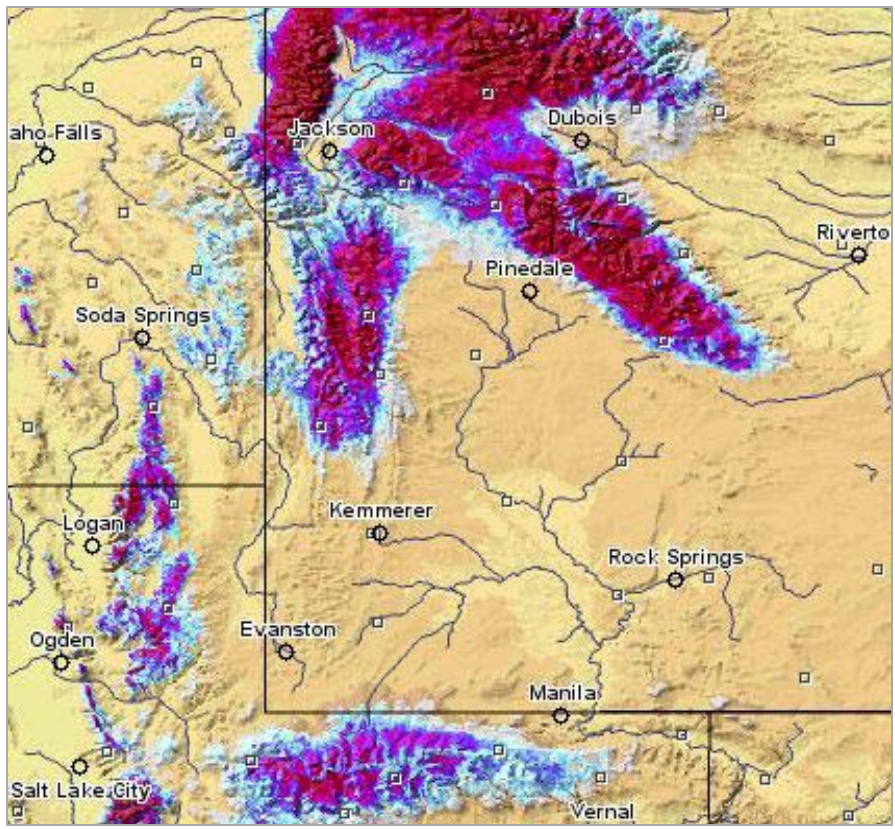
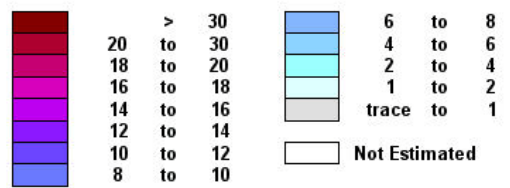
April 17, 2012

Web Reference: <http://www.cbrfc.noaa.gov/gmap/gmapm.php?scon=checked>

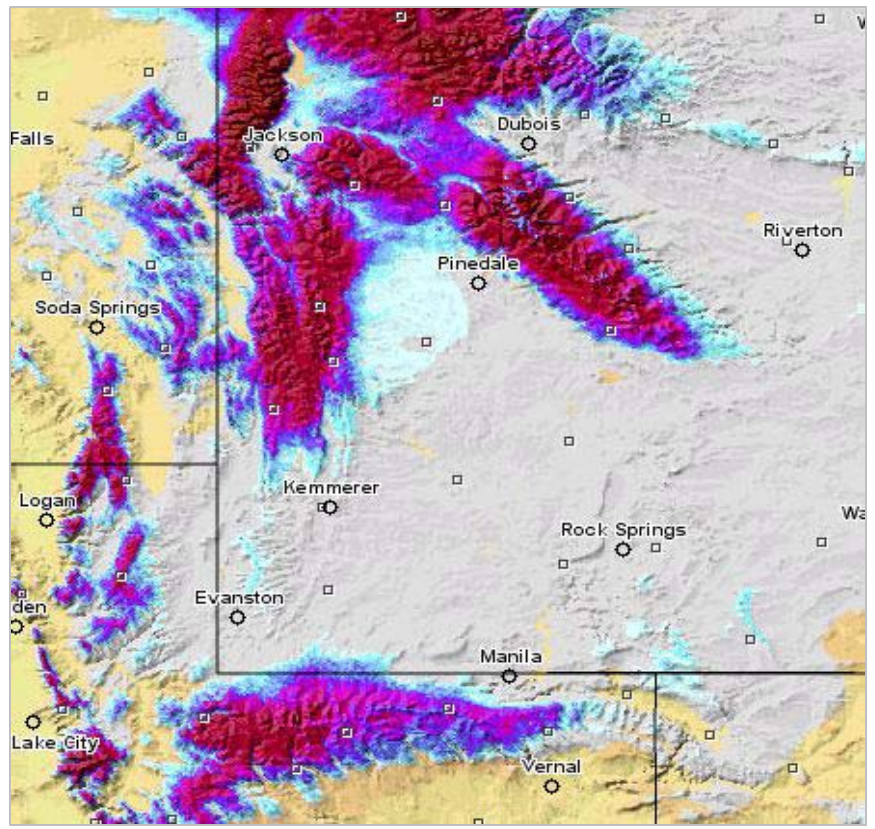
Snow: Upper Green

Retained and accumulated the snowpack longer compared to 2012

Inches of water equivalent

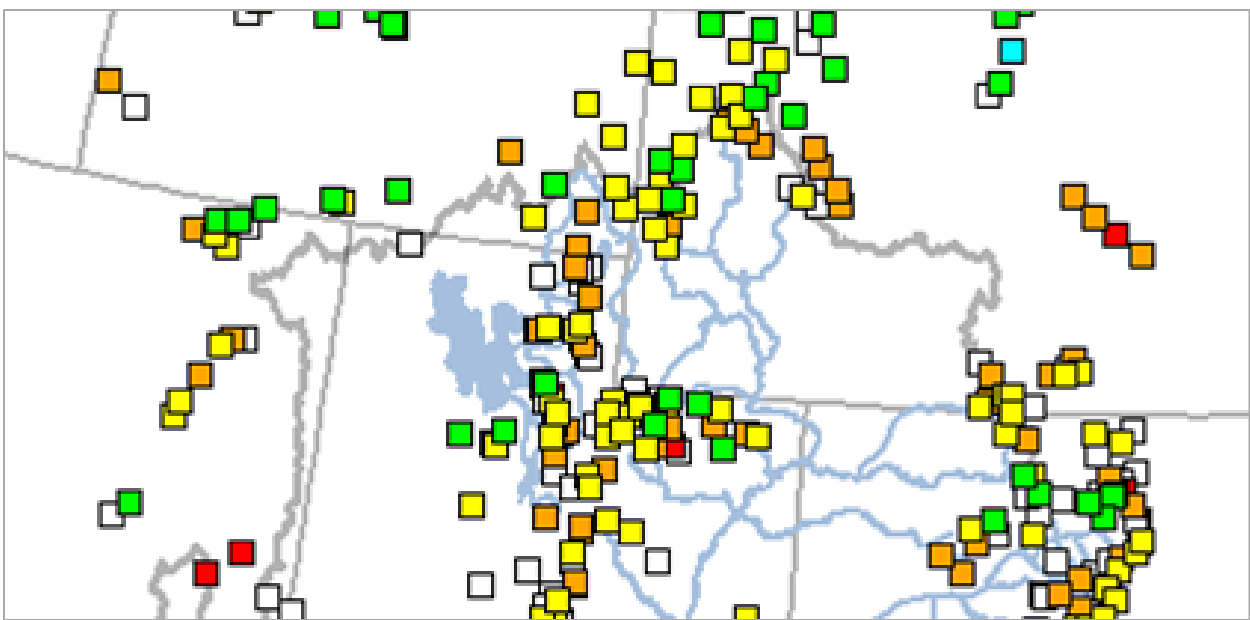


April 18 2012

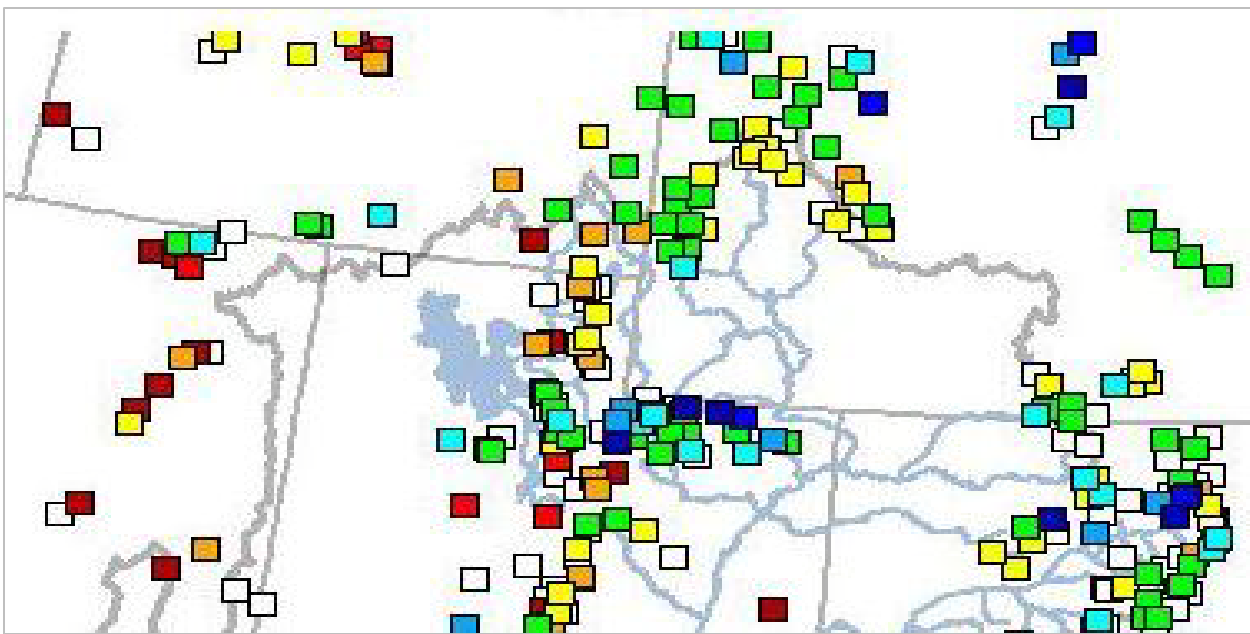


April 23 2013

Snow: April Retention and Building of Snowpack

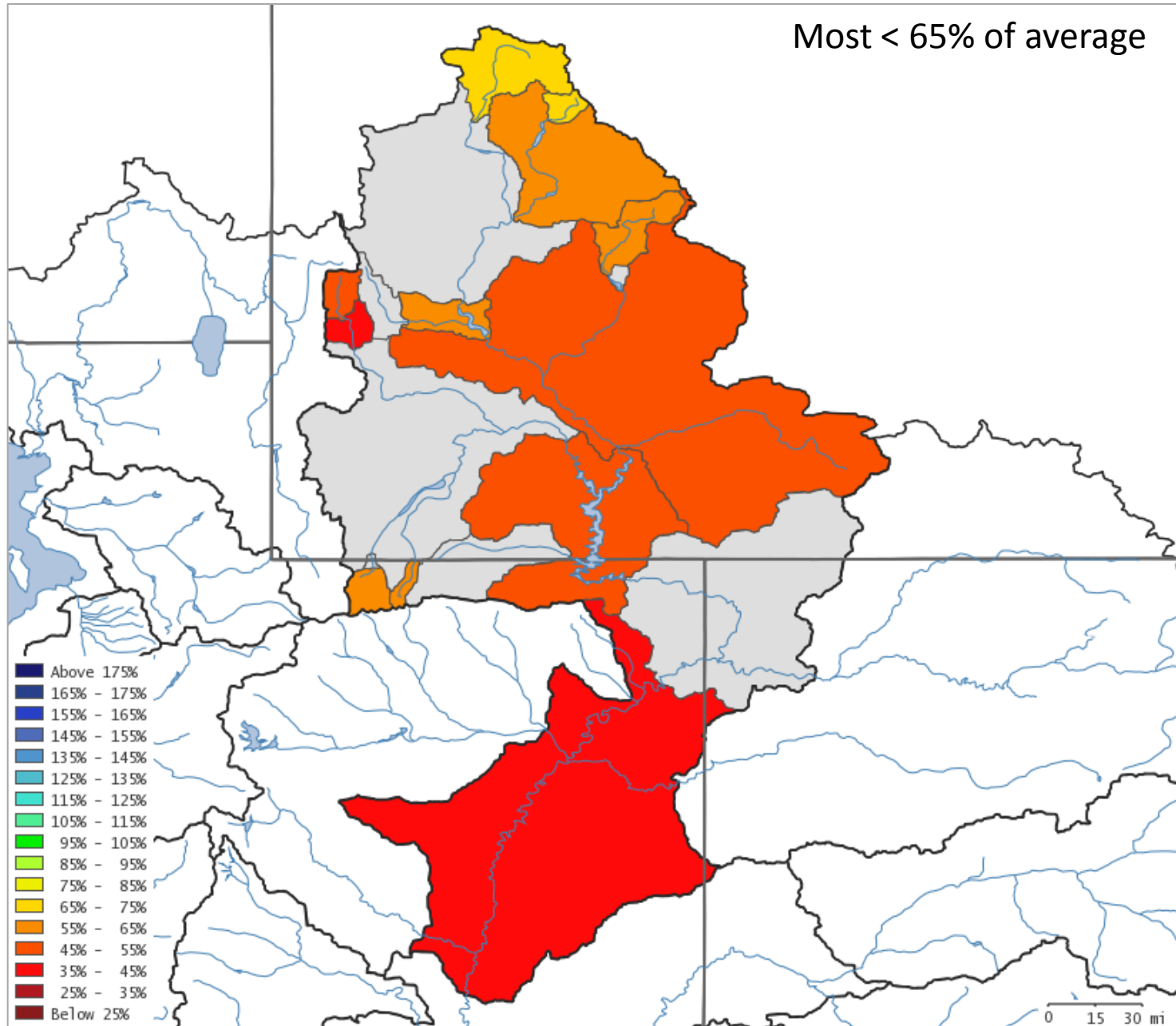


April 1, 2013:
Above Fontenelle = 75%

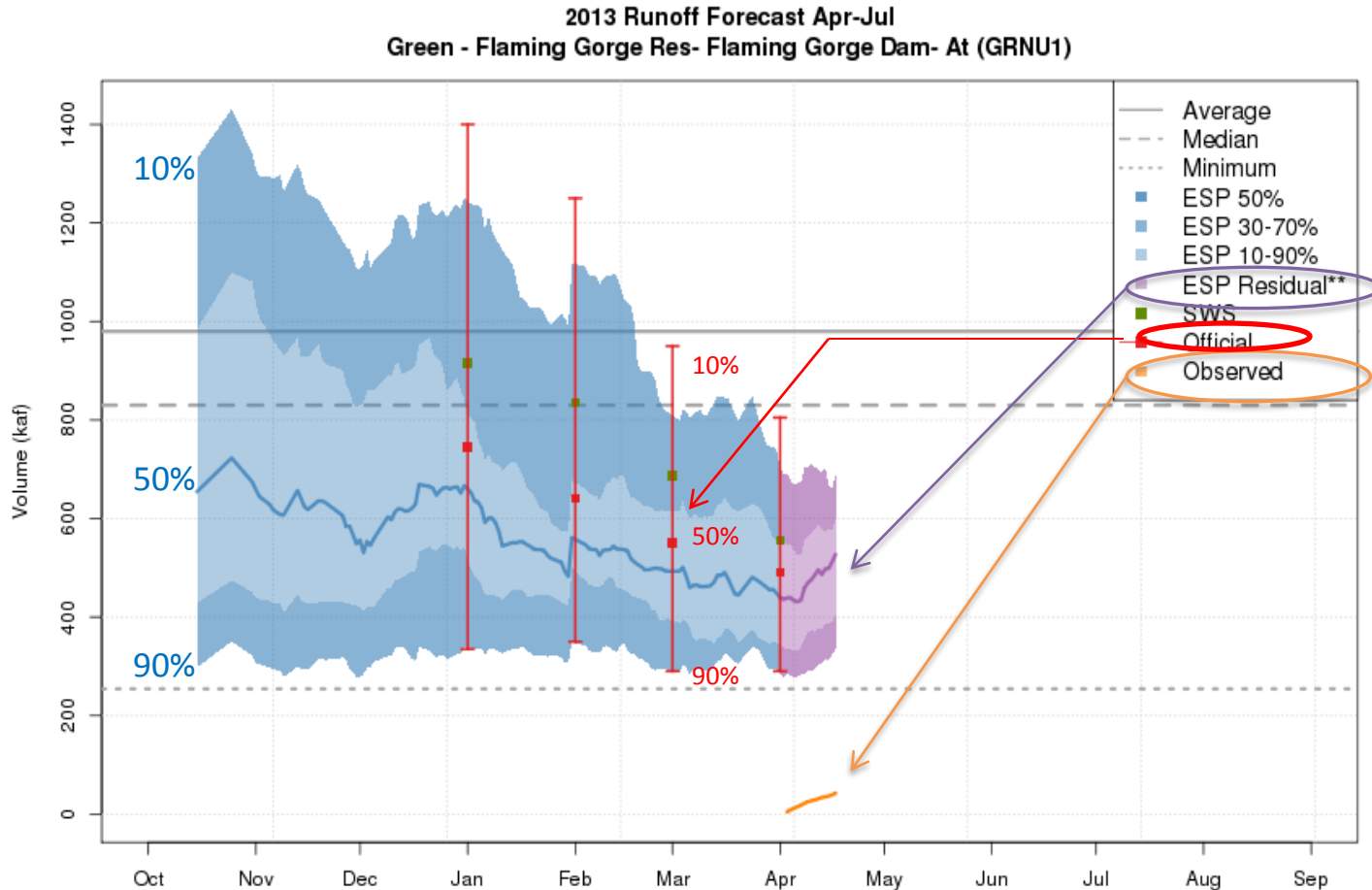


April 23, 2013
Above Fontenelle = 90%

April 1st Most Probable Water Supply Forecasts



Daily Model Guidance (ESP) and Official Forecast Evolution Plot



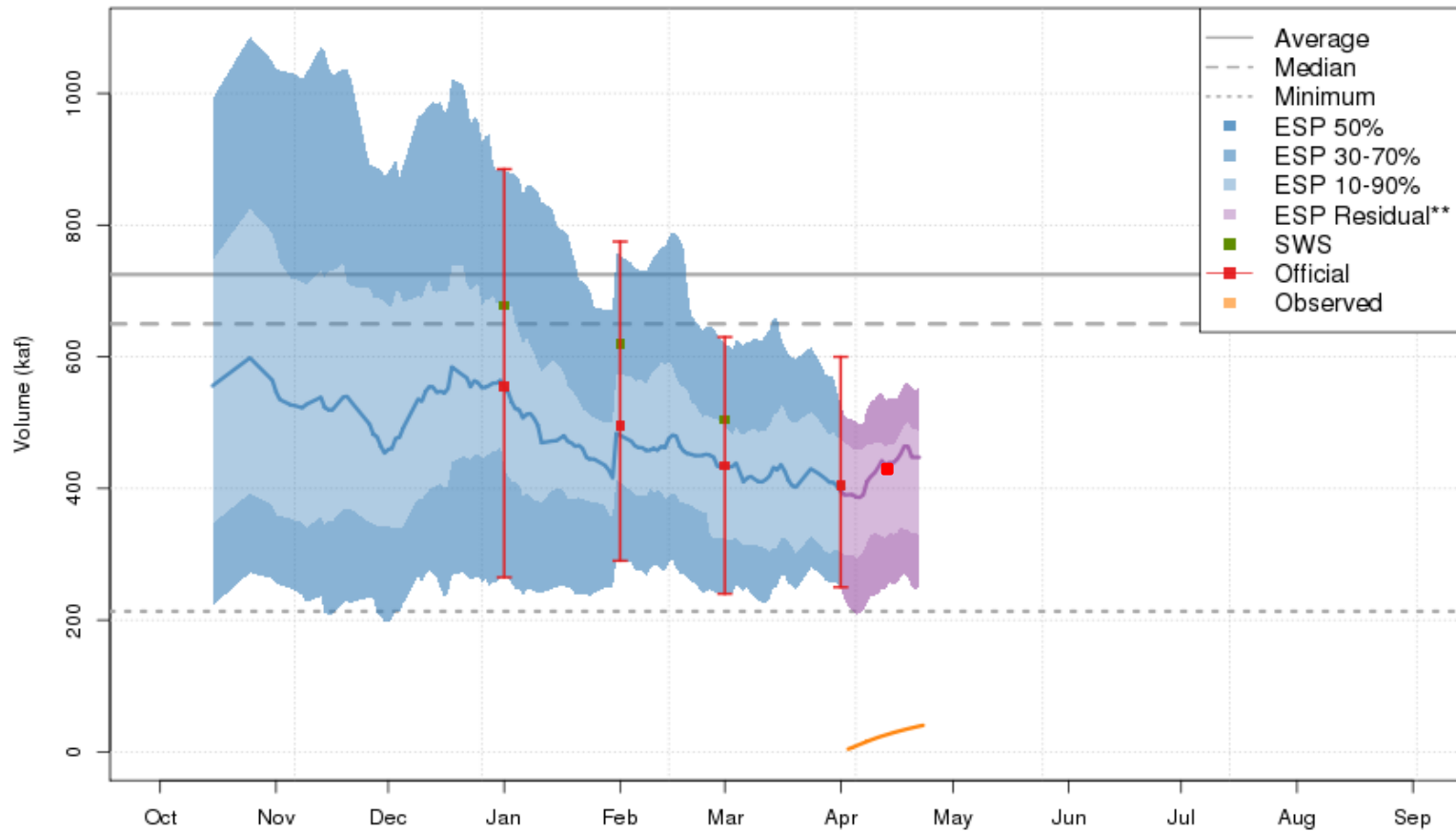
Plot Created 2013-04-17 14:40:39, Latest ESP Run from 2013-04-01, CBRFC / NWS / NOAA
Maximum of 2224.3 in 1986, Minimum of 254.3 in 1977, Average/Median for 1981-2010.

**Residual forecasts include observed

Residual= April observed volume + model guidance to July 31

FORECASTS: Fontenelle Inflow

2013 Runoff Forecast Apr-Jul
Green - Fontenelle Res- Fontenelle Nr (GBRW4)



Plot Created 2013-04-23 12:36:53, Lastest ESP Run from 2013-04-01, CBRFC / NWS / NOAA
Maximum of 1682.9 in 1986, Minimum of 213.3 in 1977, Average/Median for 1981-2010.
**Residual forecasts include observed

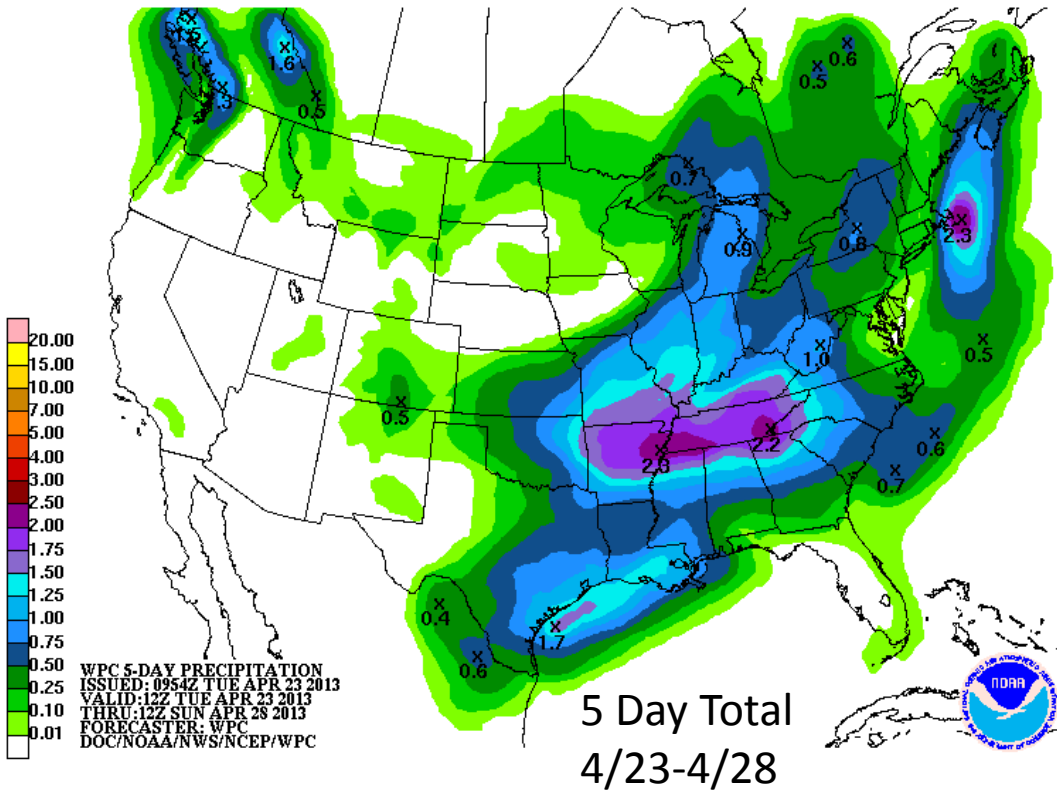
April 1st:

MAX (10%): 600 kaf
MP (50%): 405 kaf 56% avg
MIN (90%): 250 kaf

April 16 Update:

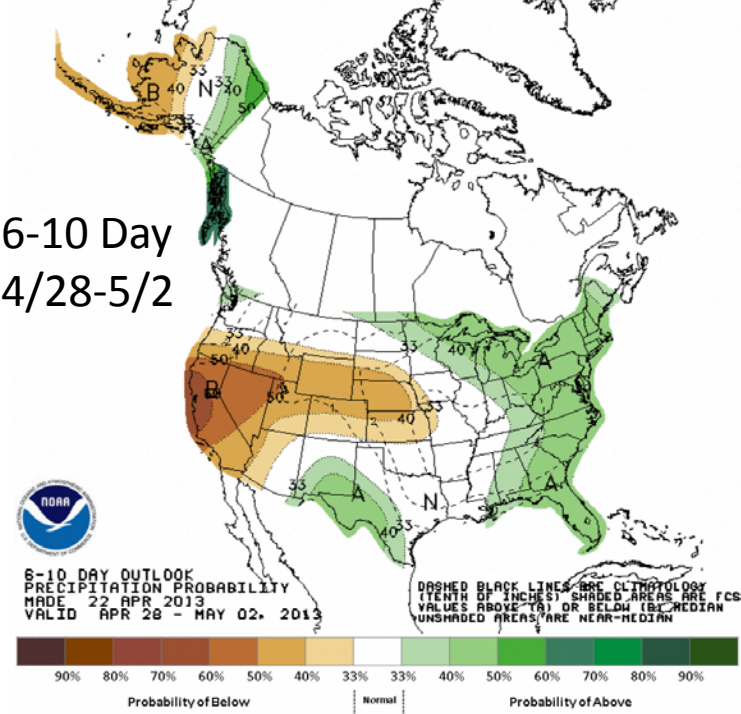
MP (50%): 435 kaf 60% avg

Forecast Precipitation

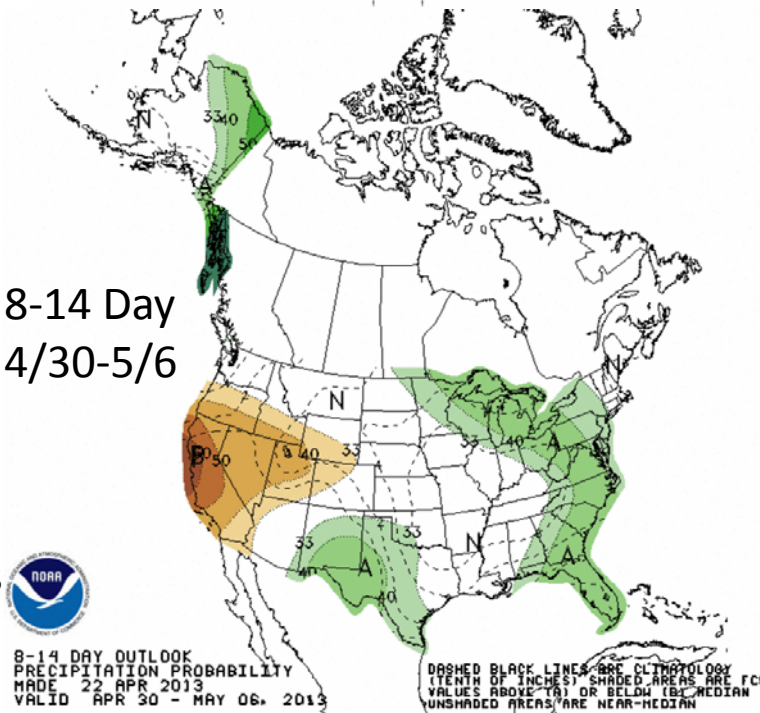


- Ridge of high pressure building
- Warming and drying trend through the weekend
- Two dry weak cold fronts Sunday and Tuesday
 - Limited precip but periods of cooler temperatures

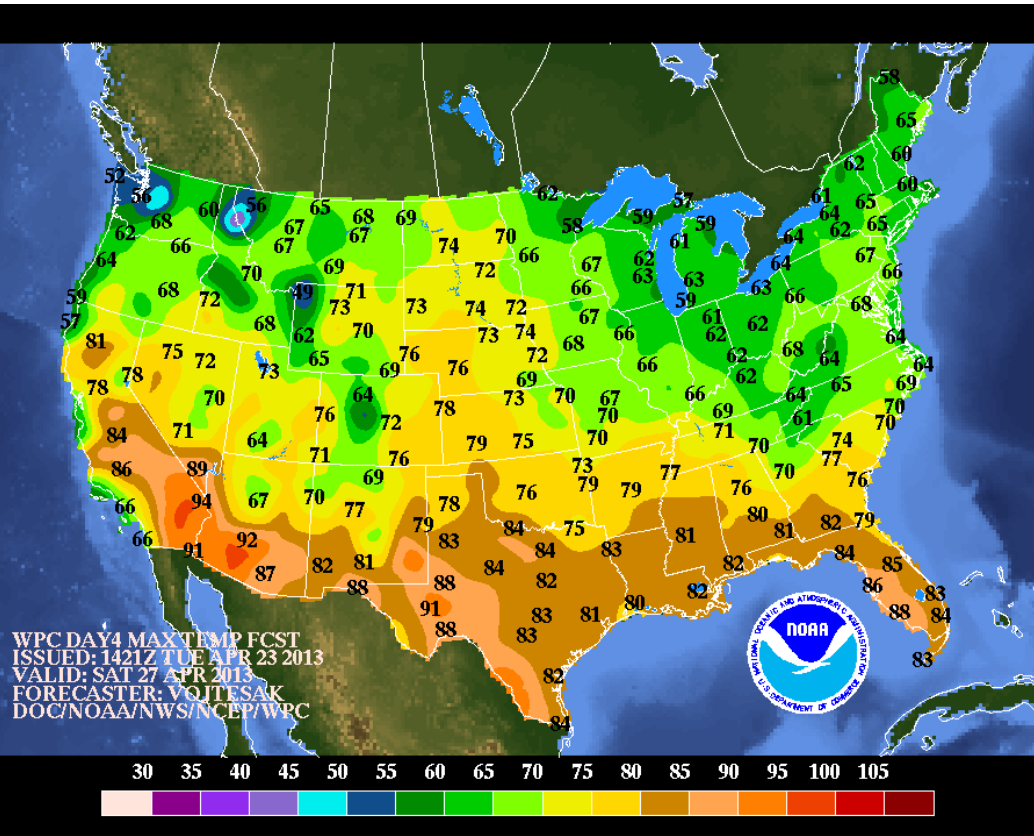
6-10 Day
 4/28-5/2



8-14 Day
 4/30-5/6

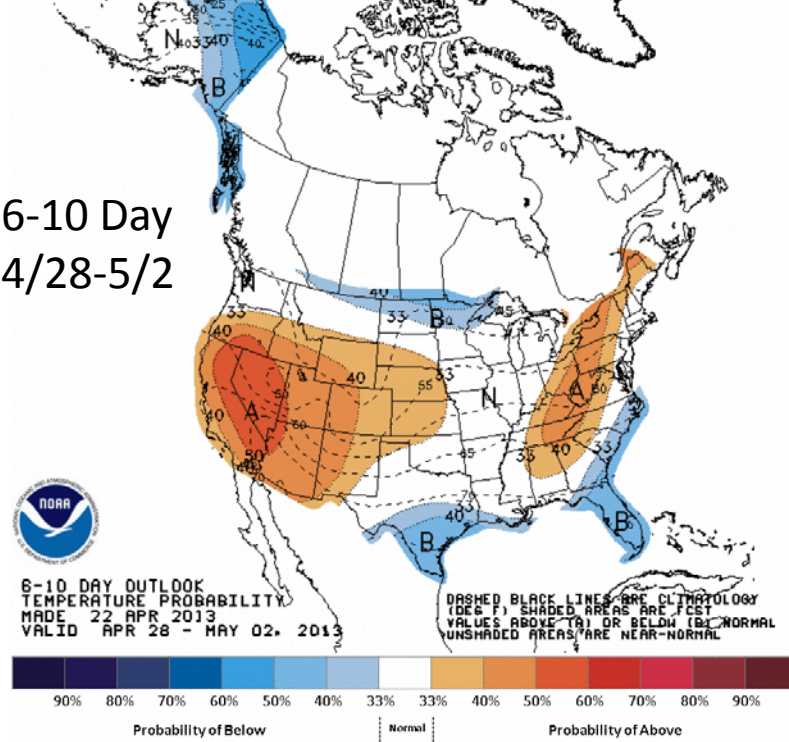


Forecast Temperature

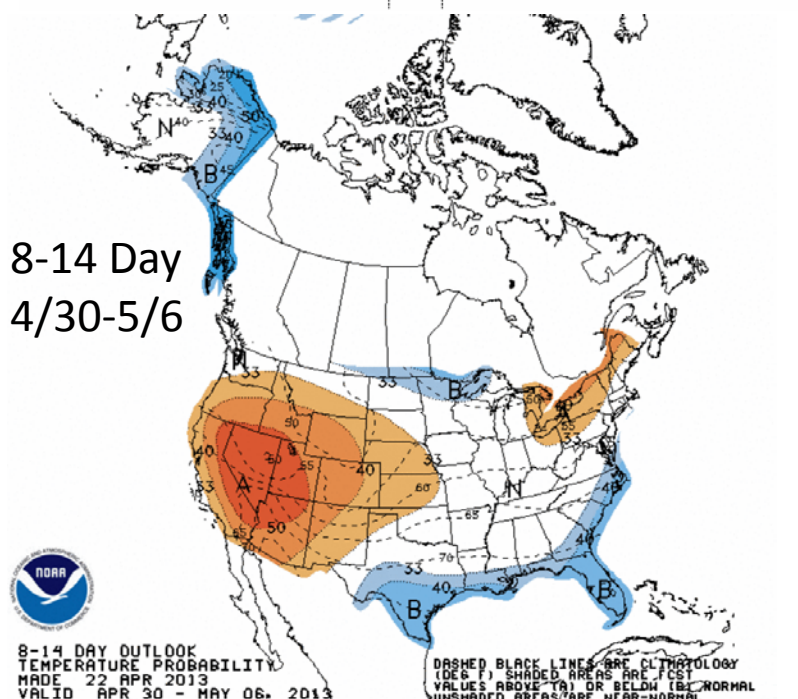


April 27-Saturday

6-10 Day
4/28-5/2

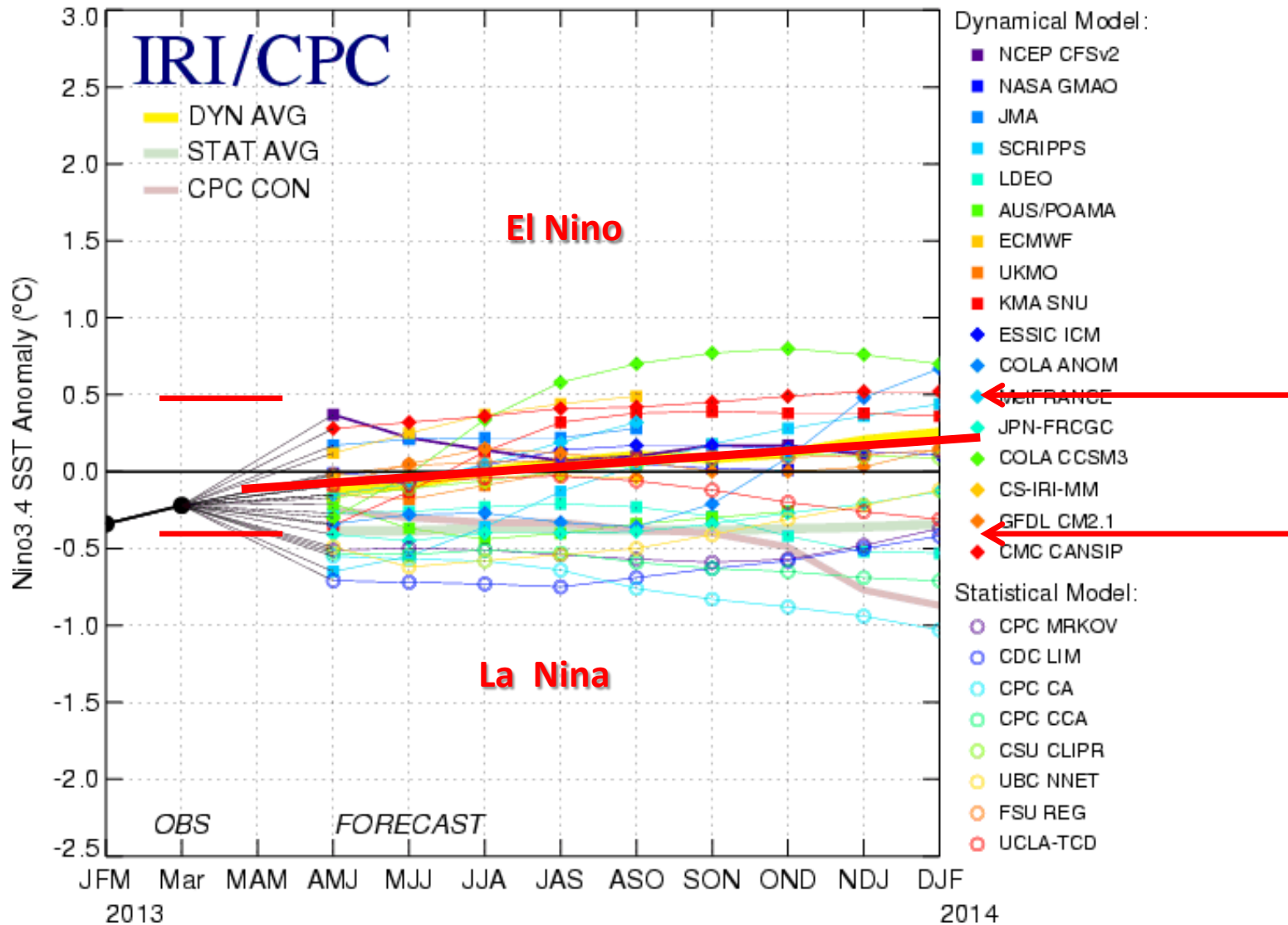


8-14 Day
4/30-5/6



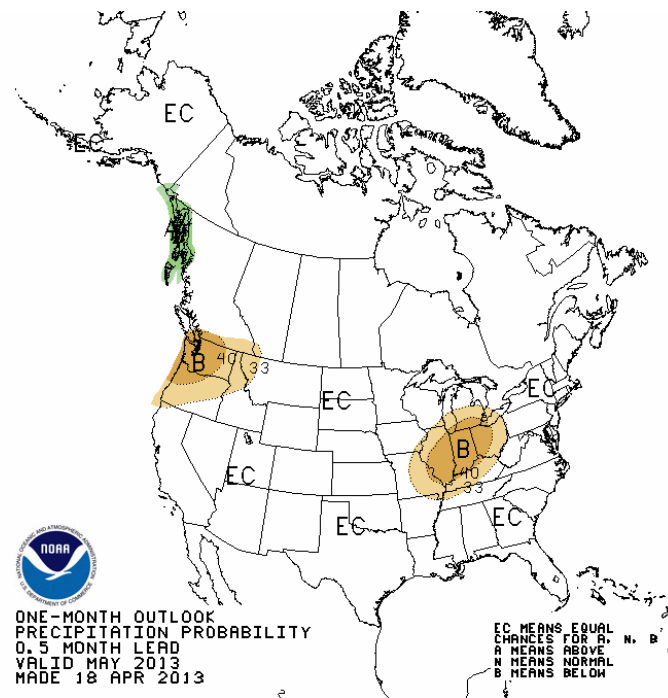
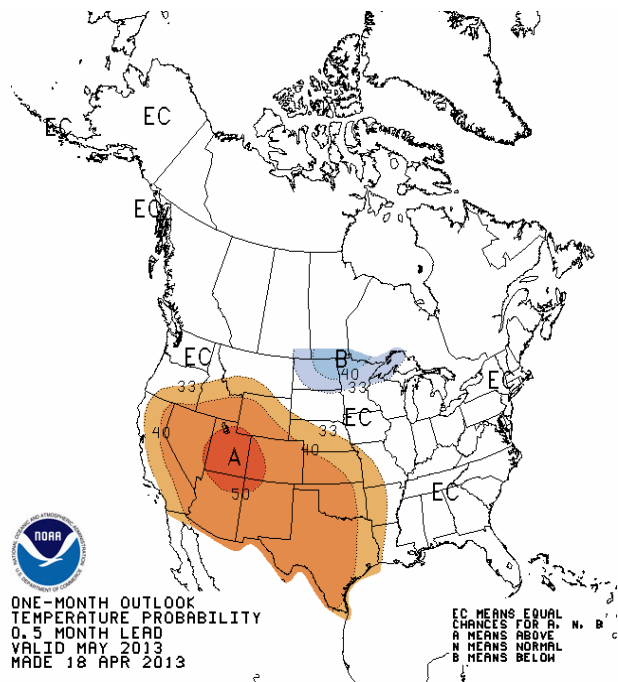
ENSO UPDATE

Mid-Apr 2013 Plume of Model ENSO Predictions

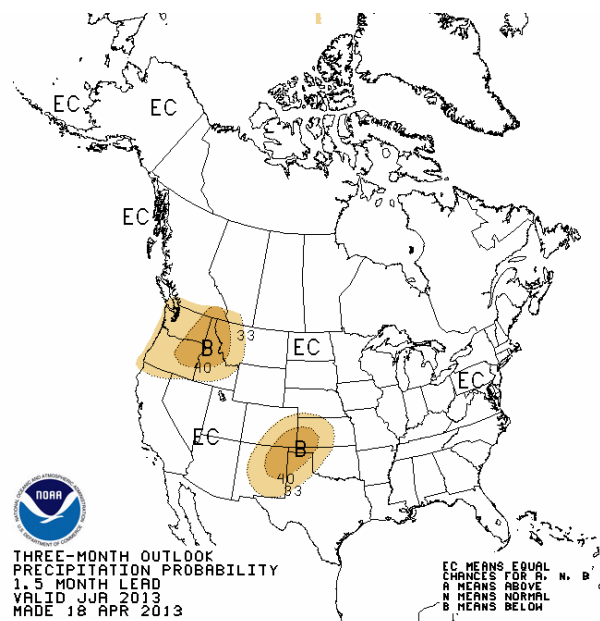
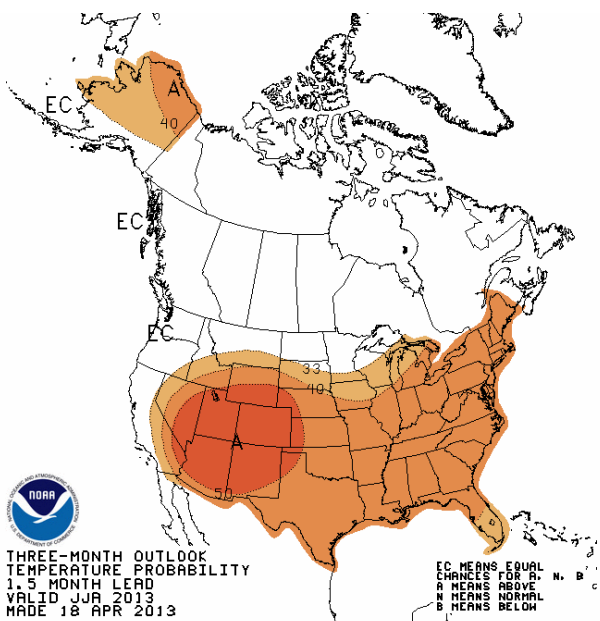


Long Range Climate Forecasts

MAY



JJA



Feedback, Questions, Concerns always welcome....



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