

CBRFC Forecast Update: Upper Green and Yampa

April 24, 2013

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NWS Colorado Basin River Forecast Center

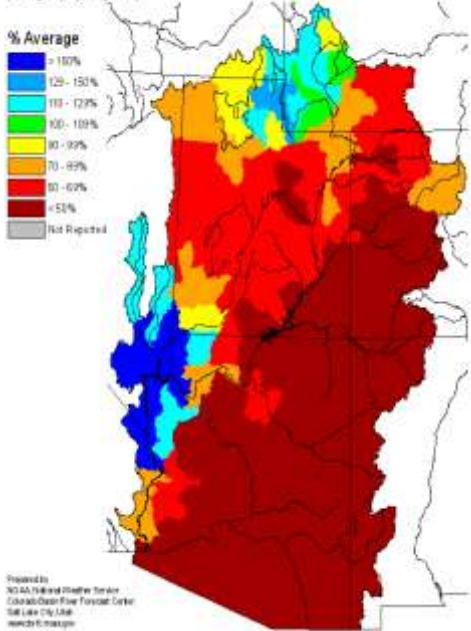


Outline

- Weather Review
- Current Snow States
- Water Supply Forecasts
- Yampa Peak
- Future Weather (Aldis)



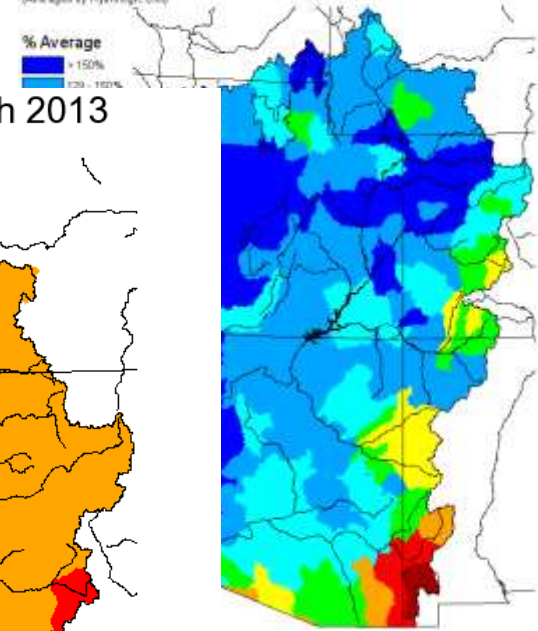
Monthly Precipitation for October 2012
(Averaged by Hydrologic Unit)



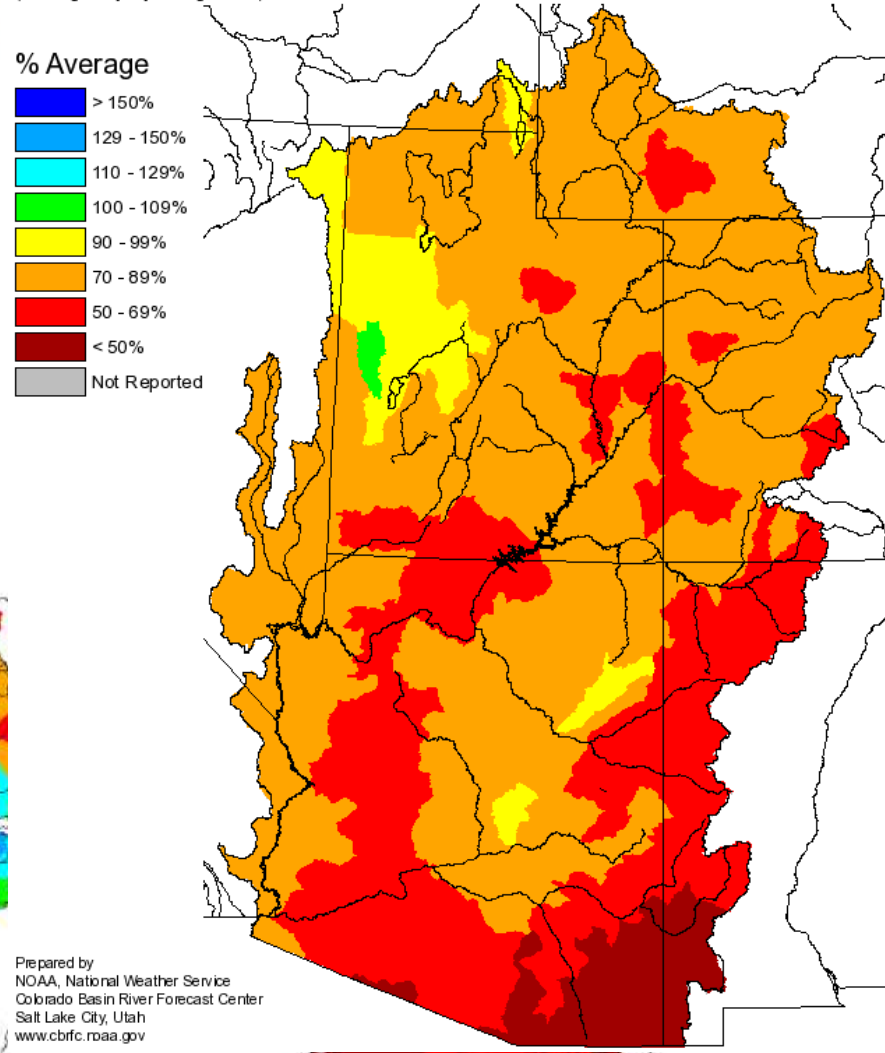
Monthly Precipitation for November 2012
(Averaged by Hydrologic Unit)



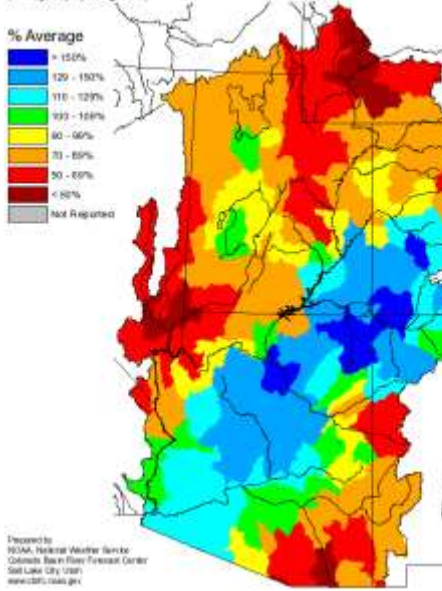
Monthly Precipitation for December 2012
(Averaged by Hydrologic Unit)



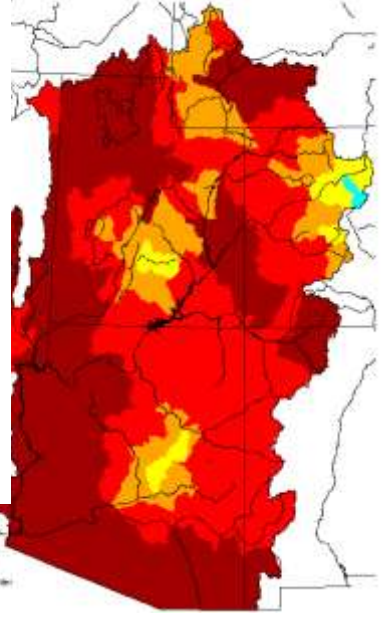
Seasonal Precipitation, October 2012 - March 2013 (Averaged by Hydrologic Unit)



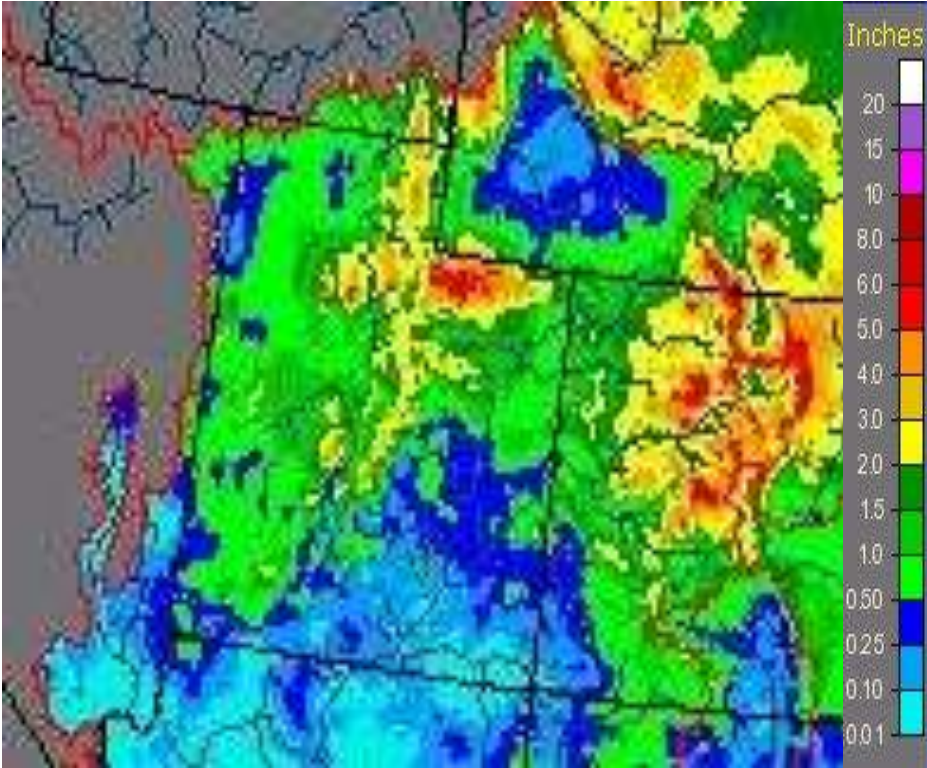
Monthly Precipitation for January 2013
(Averaged by Hydrologic Unit)



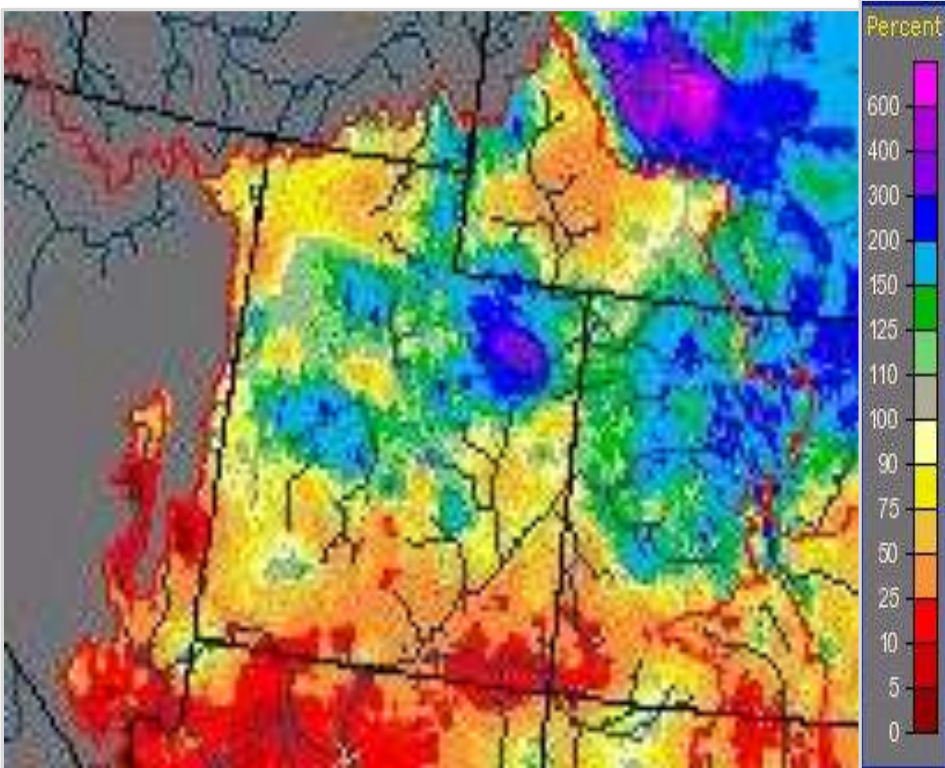
Monthly Precipitation for March 2013
(Averaged by Hydrologic Unit)



April Precipitation: Month to Date



OBSERVED



% OF NORMAL

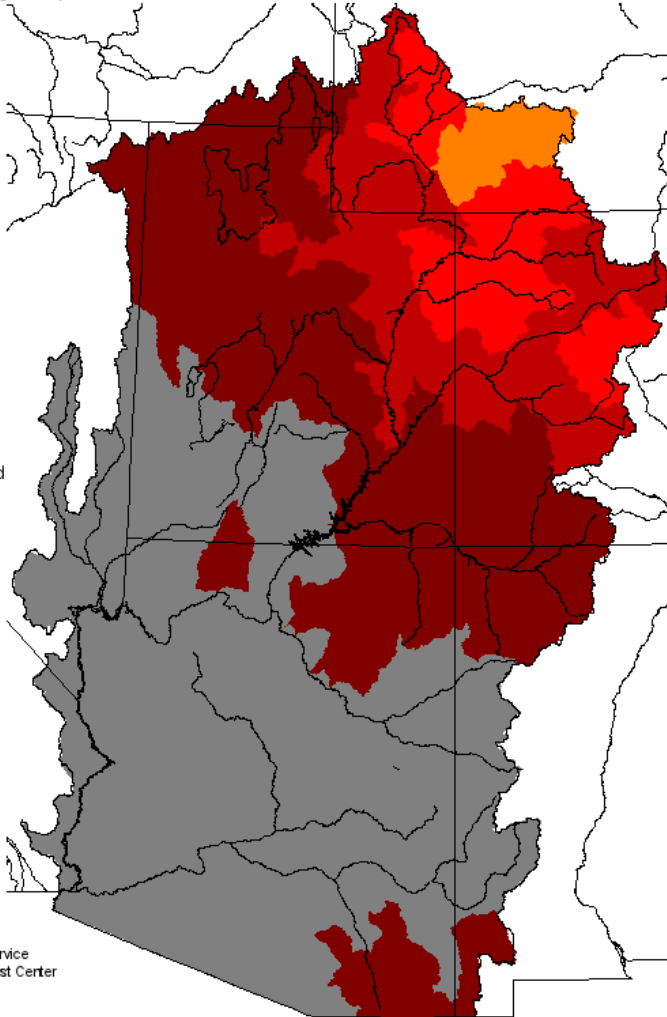
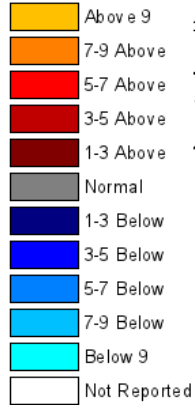
Temperatures:

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

Monthly Max Temp Deviation for March 2012

(Averaged by Hydrologic Unit)

Degrees (F)

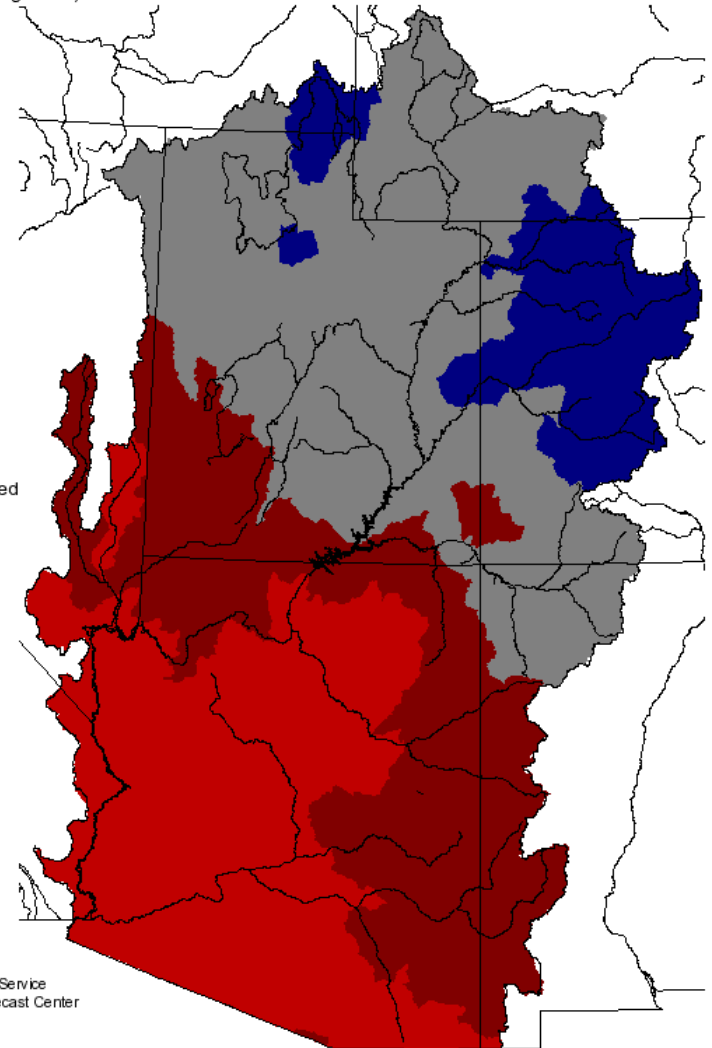
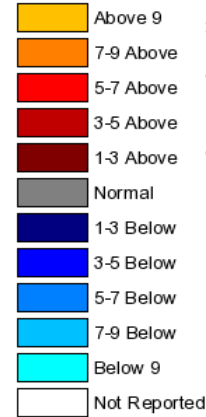


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Monthly Max Temp Deviation for March 2013

(Averaged by Hydrologic Unit)

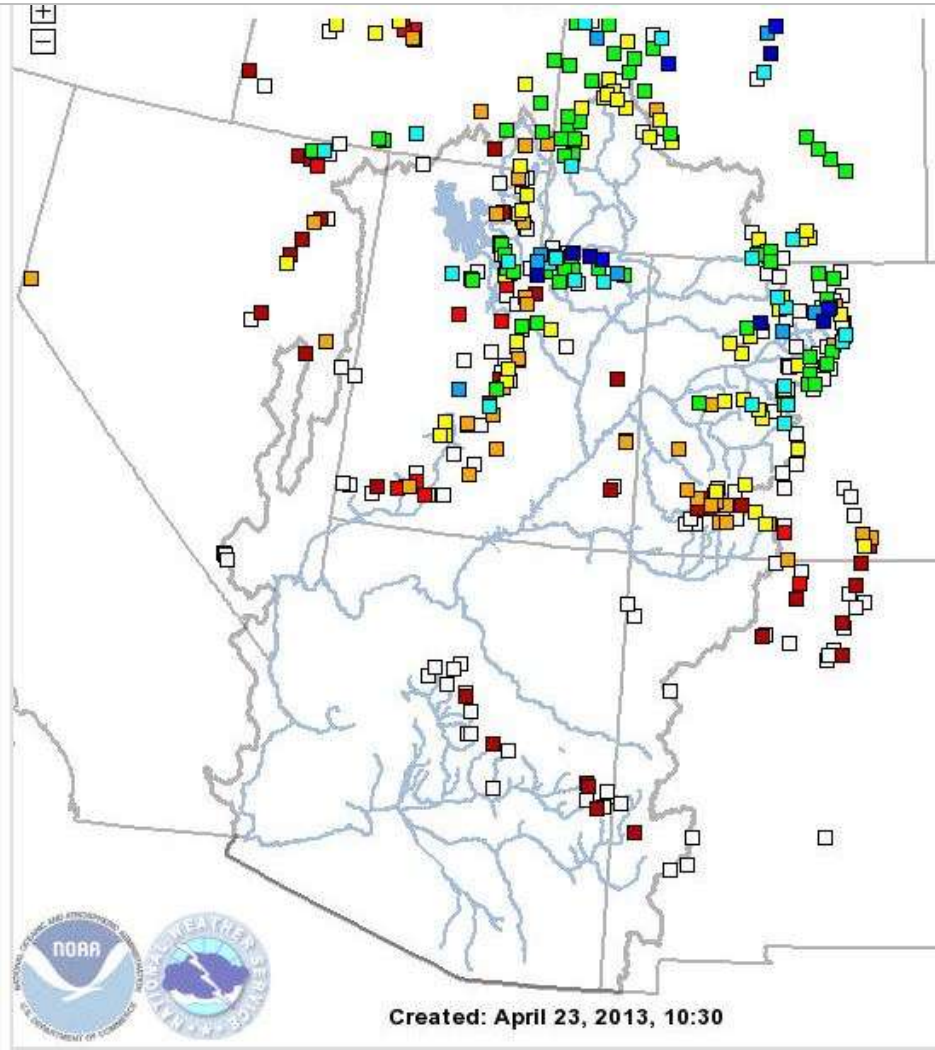
Degrees (F)



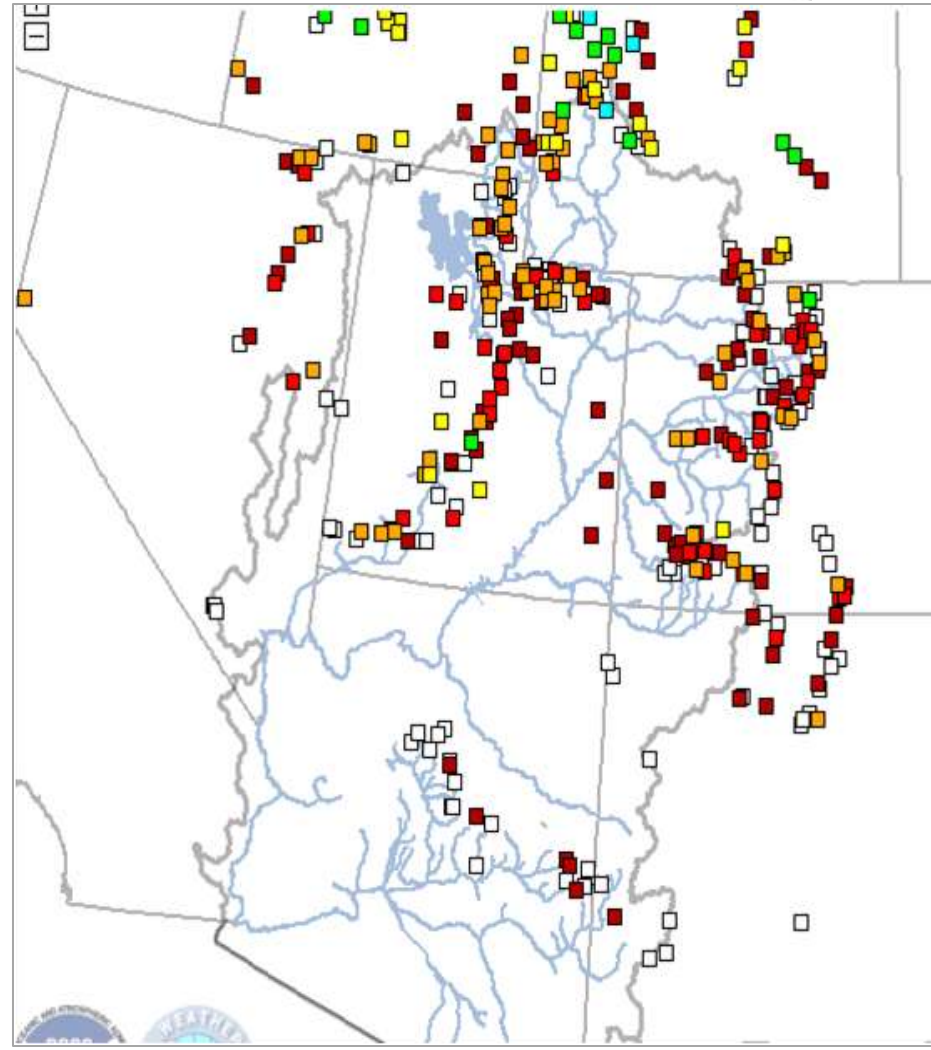
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Snow

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



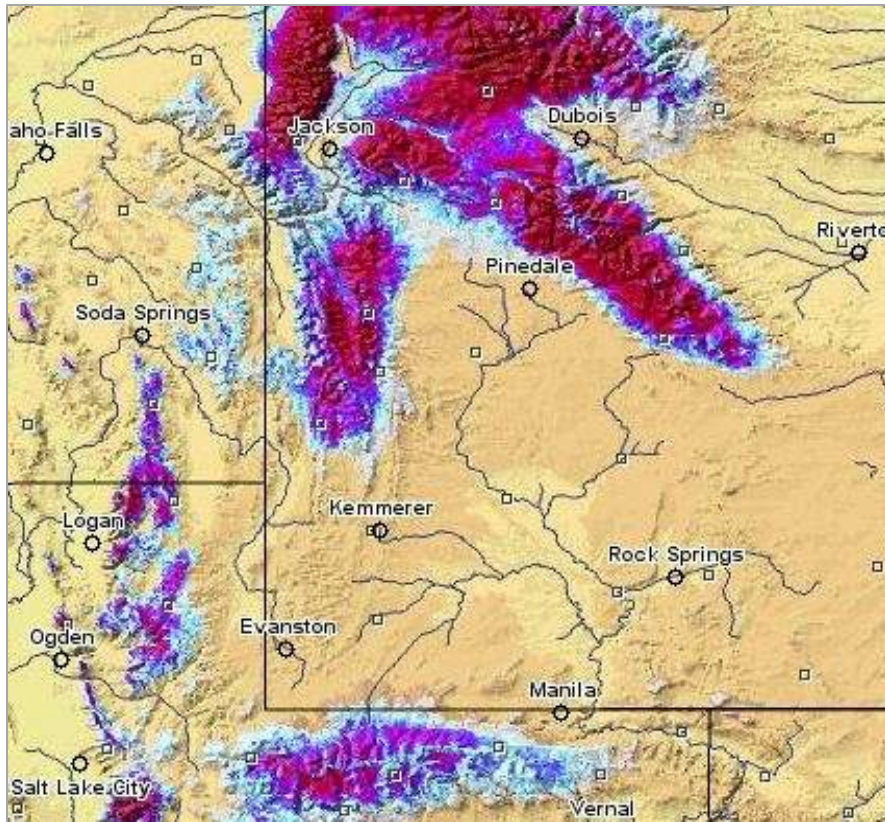
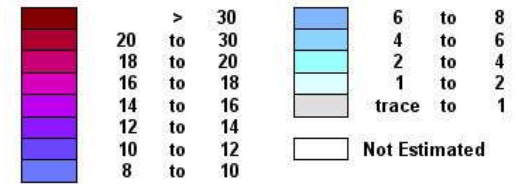
April 17, 2012

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

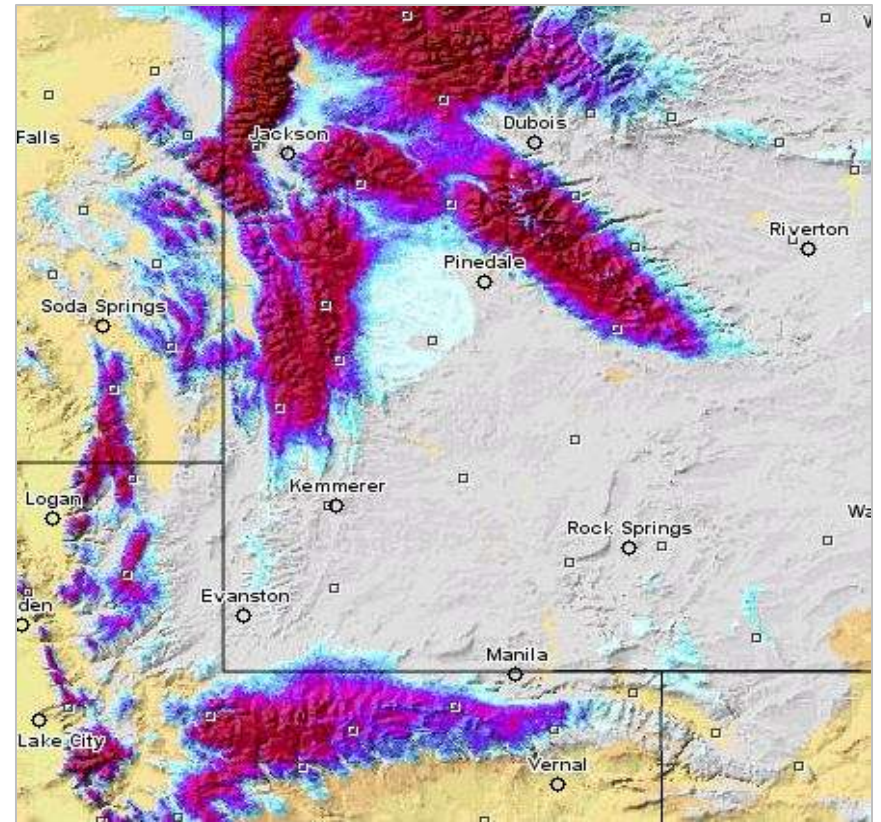
Snow: Upper Green

Retained and accumulated the snowpack longer compared to 2012

Inches of water equivalent



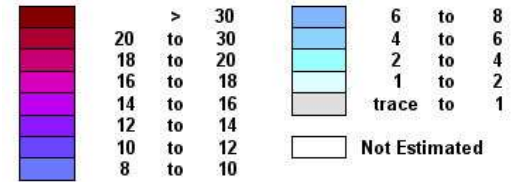
April 18 2012



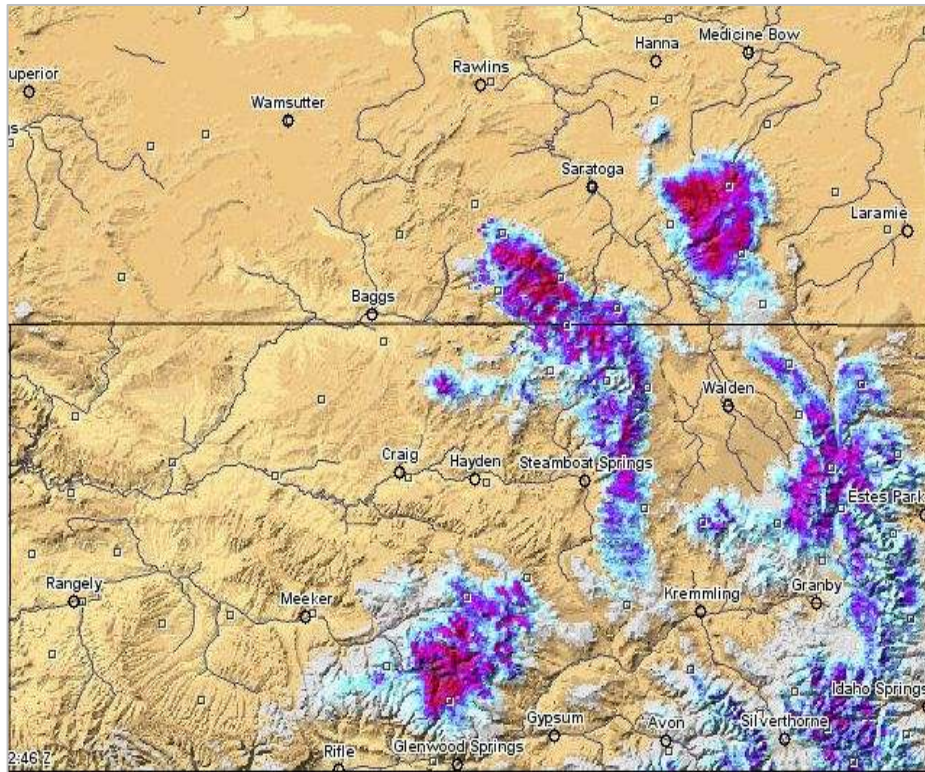
April 23 2013

Snow: Yampa

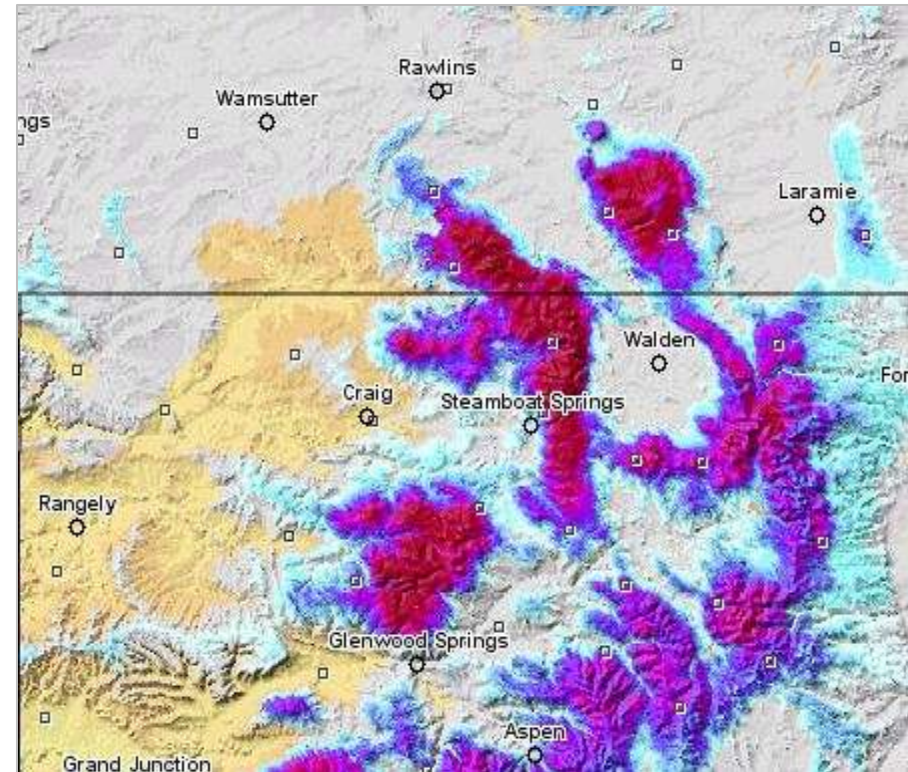
Inches of water equivalent



Retained and accumulated the snowpack longer compared to 2012

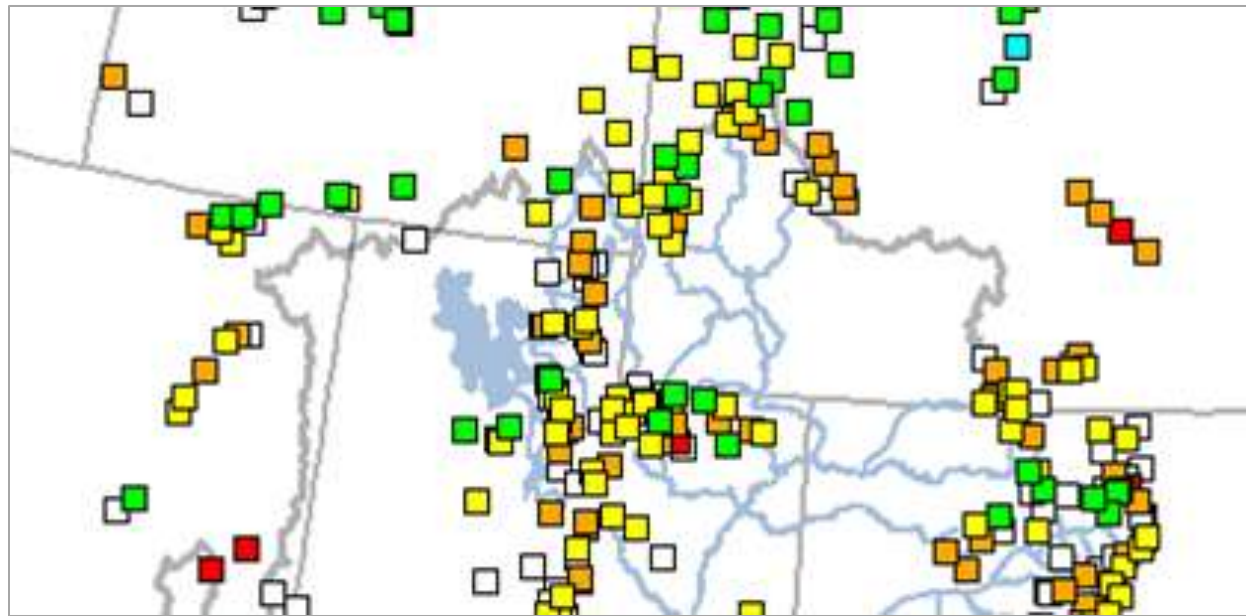


April 18 2012



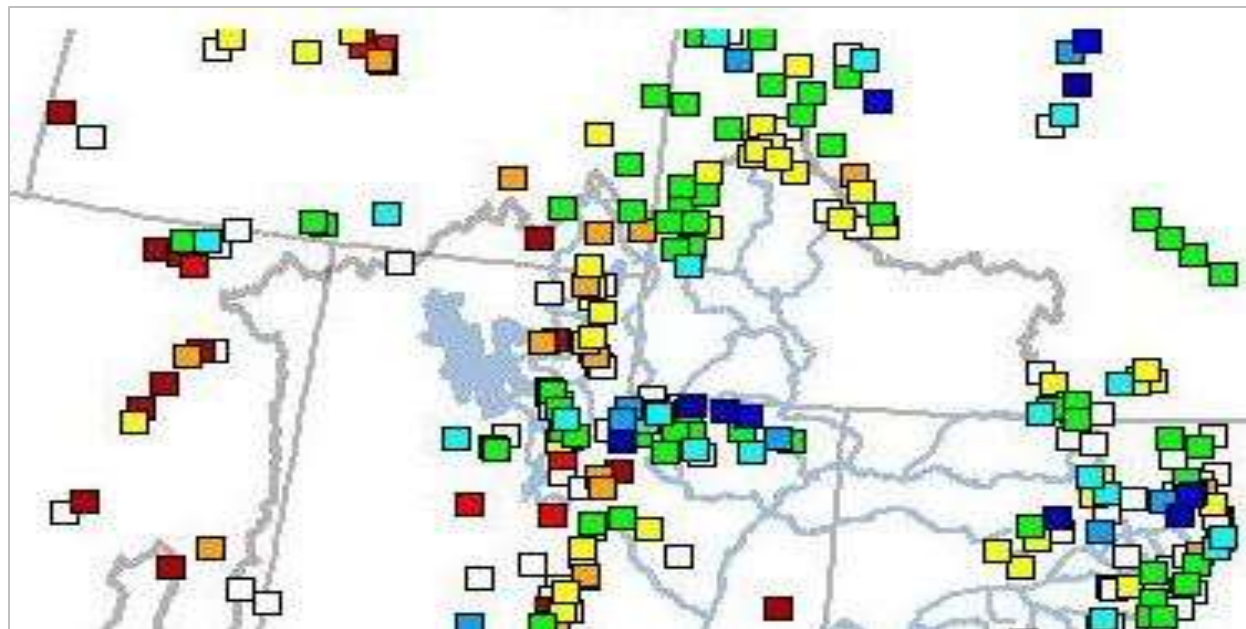
April 23 2013

Snow: April Retention and Building of Snowpack



April 1, 2013:

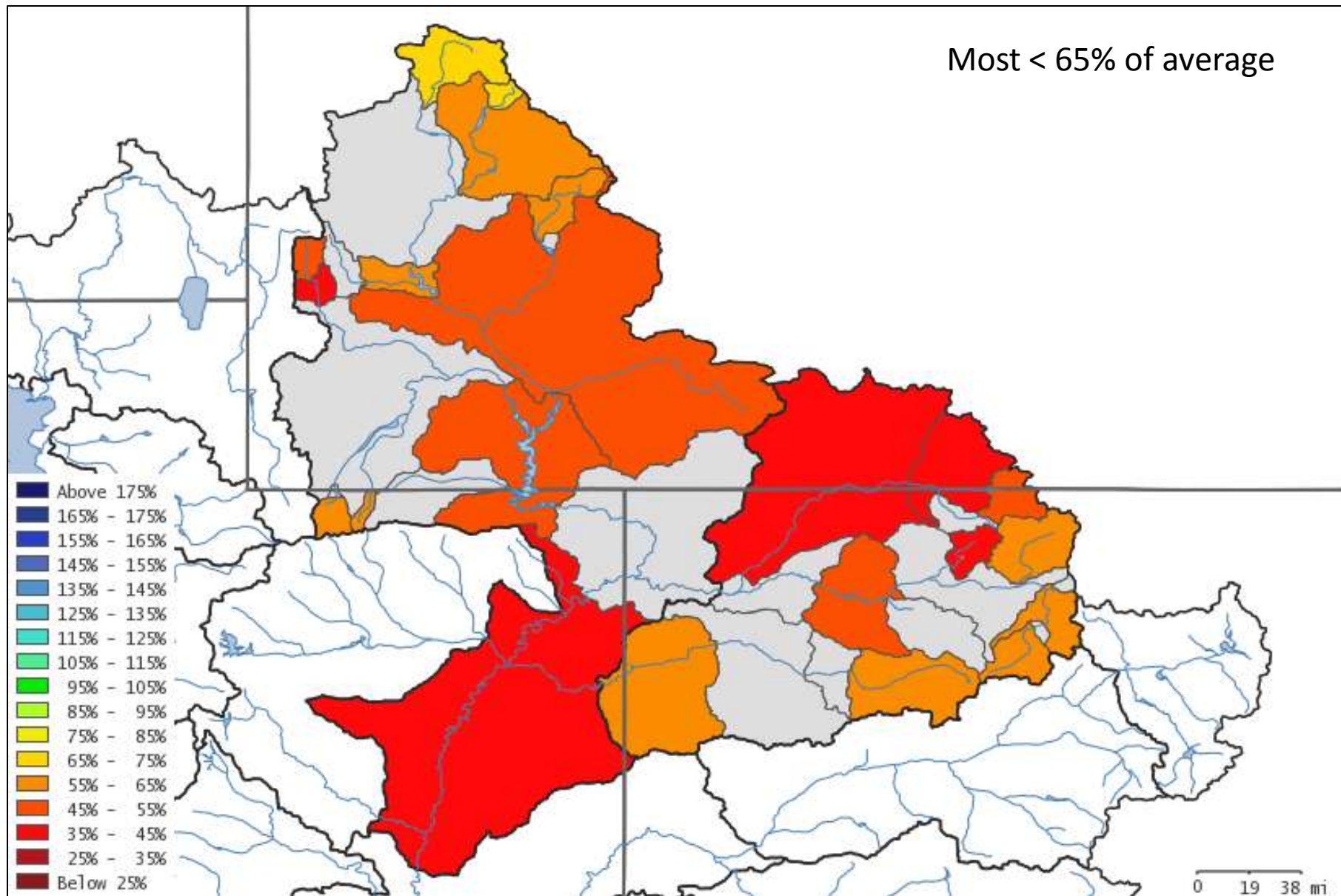
Upper Green = 75%
Yampa = 72%



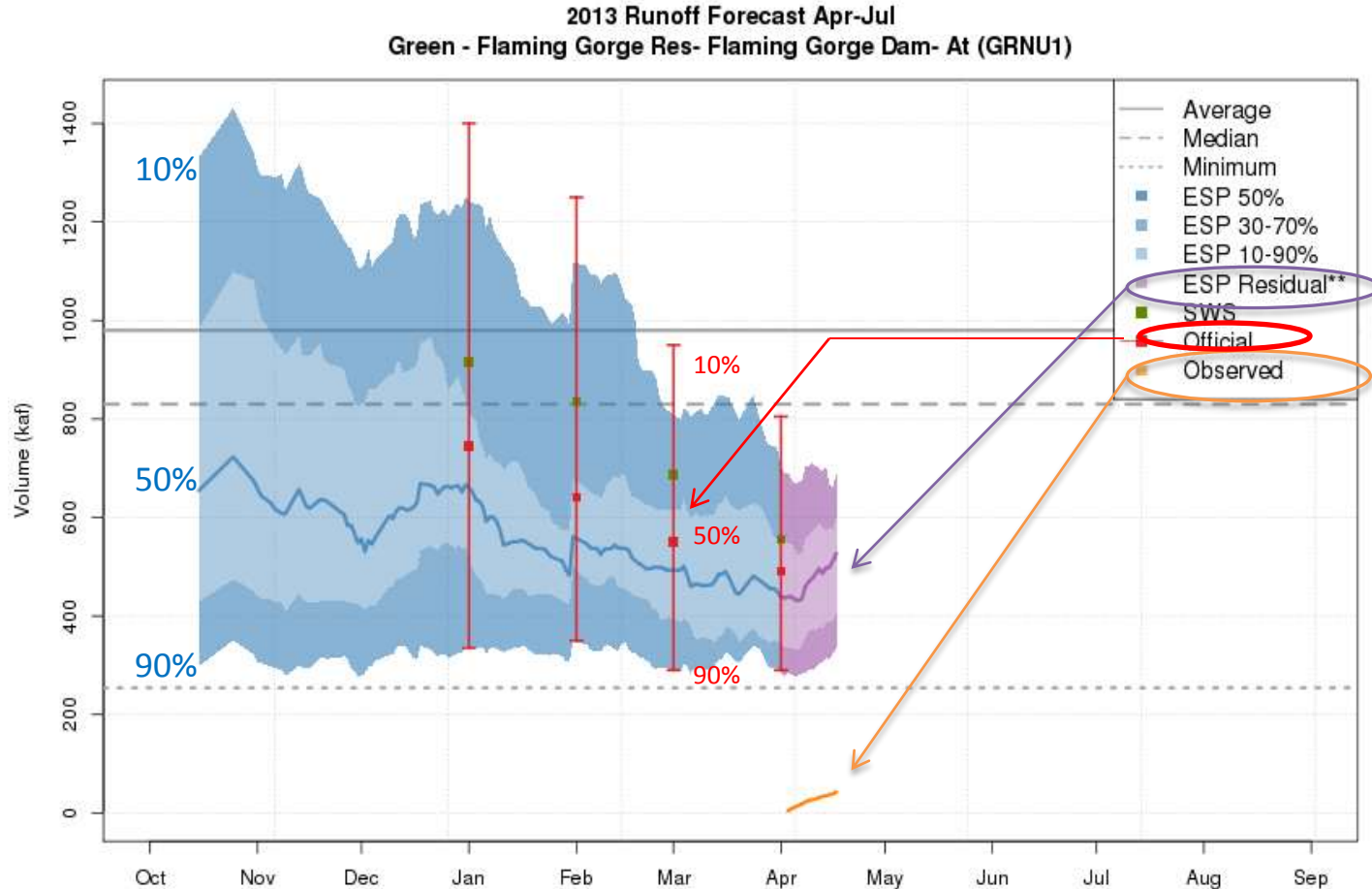
April 23, 2013

Upper Green = 100%
Yampa = 99%

April 1st Most Probable Water Supply Forecasts



Daily Model Guidance (ESP) and Official Forecast Evolution Plot

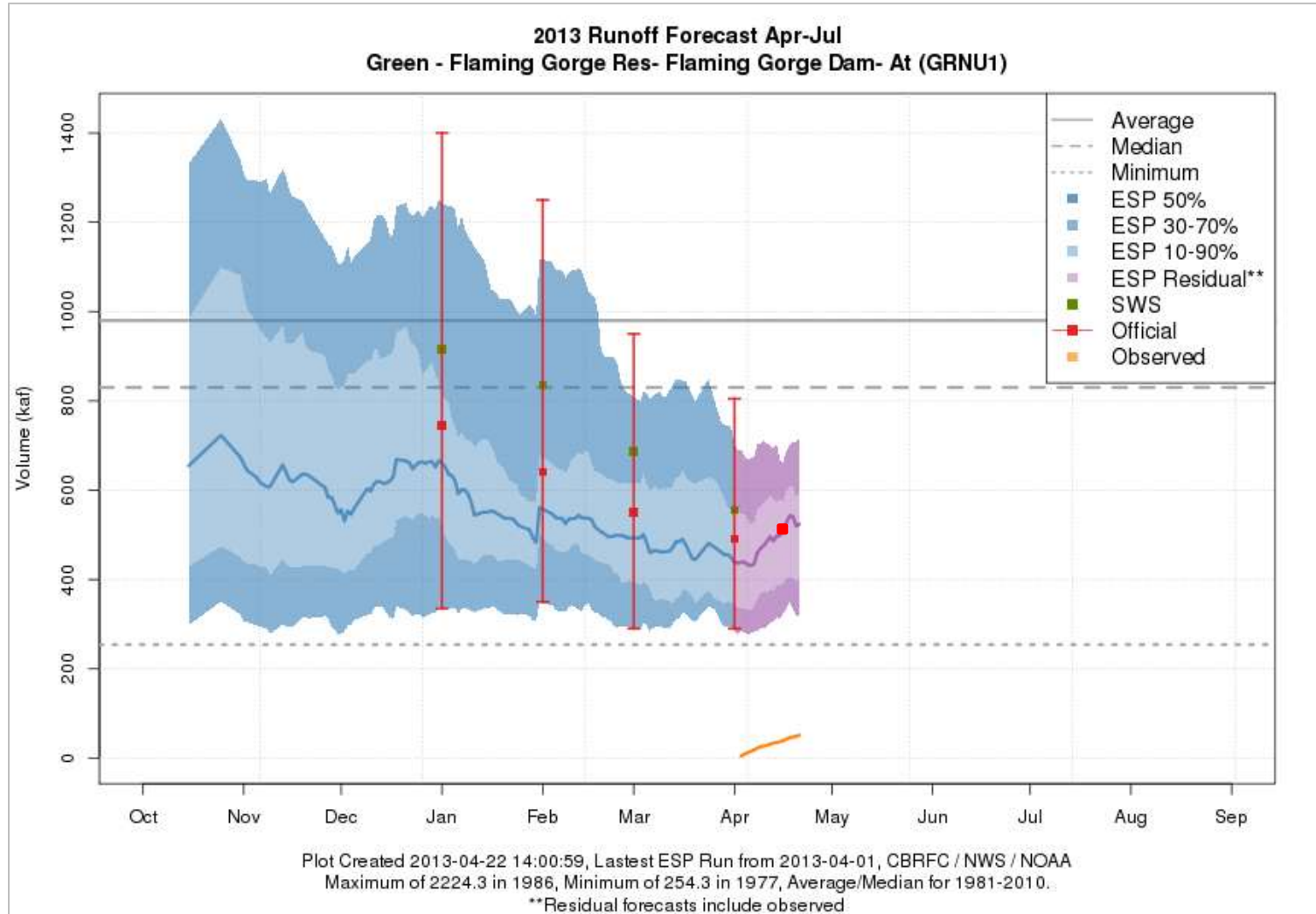


Plot Created 2013-04-17 14:40:39, Latest ESP Run from 2013-04-01, CBRFC / NWS / NOAA
Maximum of 2224.3 in 1986, Minimum of 254.3 in 1977, Average/Median for 1981-2010.

**Residual forecasts include observed

Residual= April observed volume + model guidance to July 31

FORECASTS: Upper Green



April 1st:

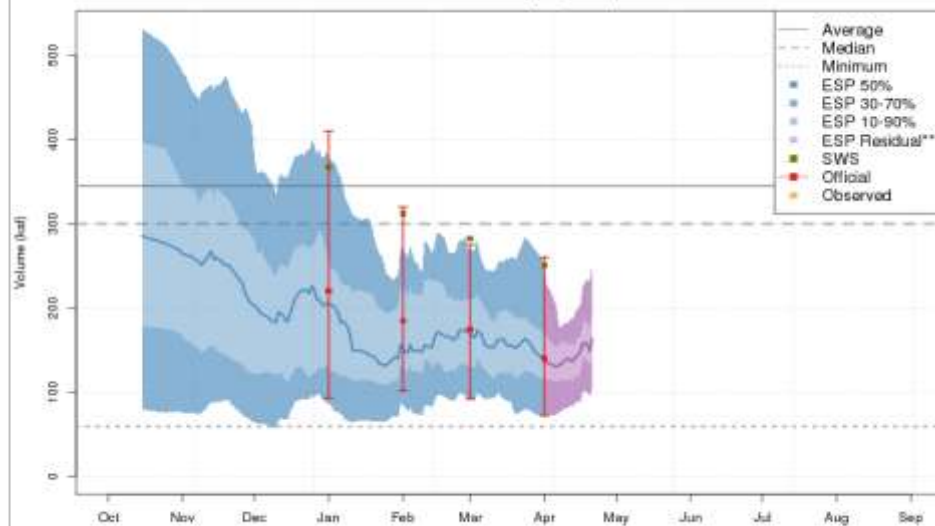
MAX (10%): 805 kaf
MP (50%): 490 kaf 50% avg
MIN (90%): 290 kaf

April 16 Update:

MP (50%): 530 kaf 54% avg

FORECASTS: Yampa

2013 Runoff Forecast Apr-Jul
Little Snake - Lily- Nr (LILC2)



April 1st:

MAX (10%): 260 kaf

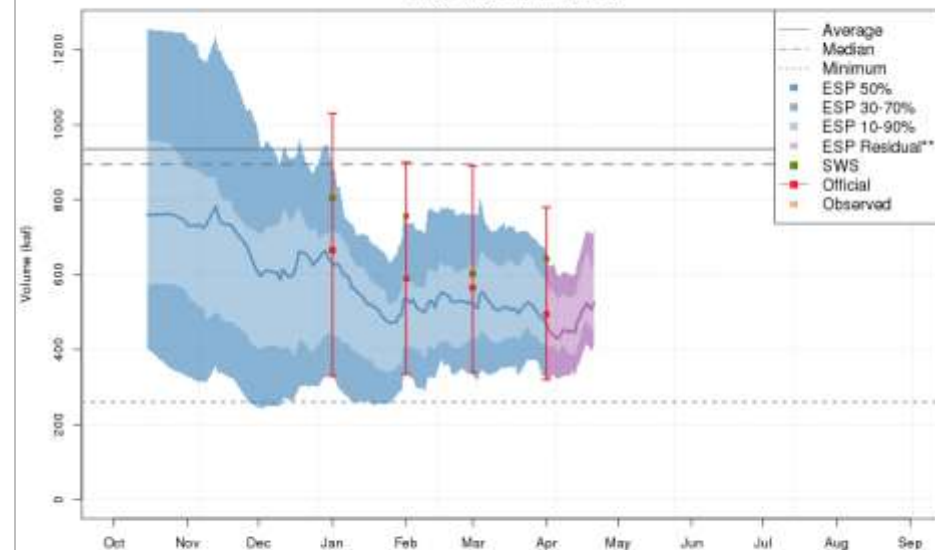
MP (50%): 140 kaf 41% avg

MIN (90%): 72 kaf

April 16 Update:

MP (50%): 166 kaf 48% avg

2013 Runoff Forecast Apr-Jul
Yampa - Maybell- Nr (MBLC2)



April 1st:

MAX (10%): 780 kaf

MP (50%): 495 kaf 53% avg

MIN (90%): 320 kaf

April 16 Update:

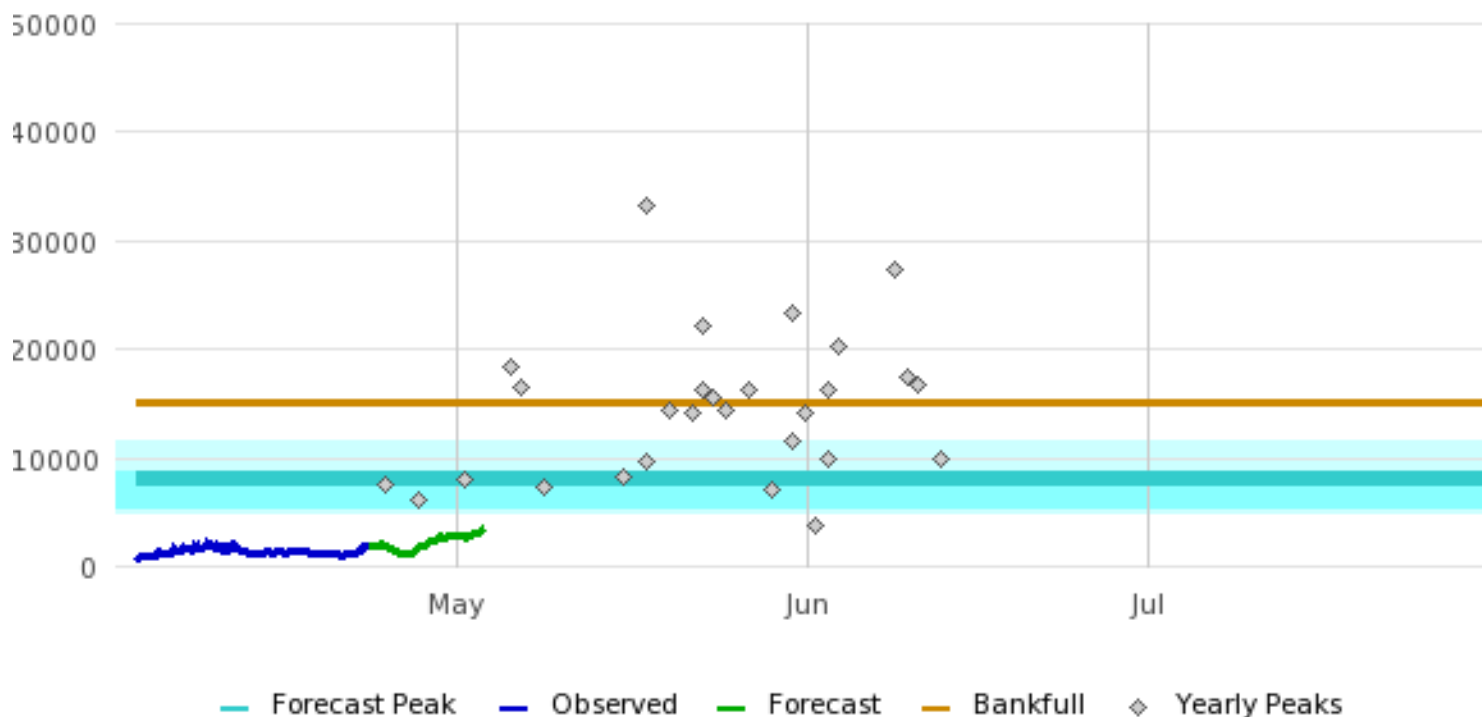
MP (50%): 565 kaf 60% avg

PEAKFLOW FORECASTS

YAMPA - DEERLODGE PARK (yd1c2)

Flow (cfs) for April-July, Forecast run 2013-04-23 14:00 GMT

Plot Created April 23, 11:45 MDT by the Colorado Basin River Forecast Center (NWS/NOAA)



Exceedance
Probability
(cfs)

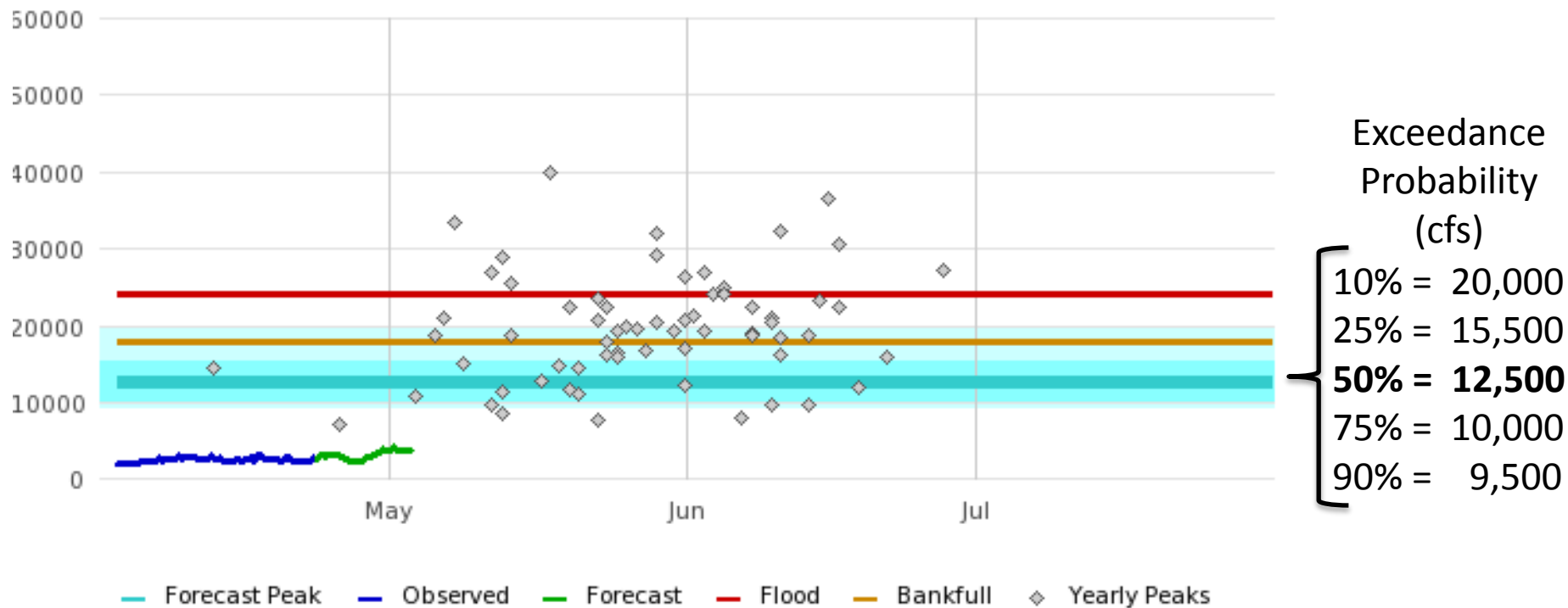
10% = 11,500
25% = 9,000
50% = **8,000**
75% = 5,500
90% = 5,000

PEAKFLOW FORECASTS

GREEN - JENSEN, NR (jesu1)

Flow (cfs) for April-July, Forecast run 2013-04-23 14:00 GMT

Plot Created April 23, 11:46 MDT by the Colorado Basin River Forecast Center (NWS/NOAA)



Spring Weather Really Matters

- **Runoff characteristics are largely determined by the day-to-day spring weather.**
 - While large snow pack years increase chances for flooding, it is not an inevitability (dodged a bullet at many sites in 2011)
 - Small snow pack years can flood with the right sequence of spring temperatures and with flows enhanced by precipitation.
 - Rain events may play a larger role in the magnitude of the peak flow during very low snow years.
 - Keep an eye on our web page / daily forecasts
(Daily Forecasts: <http://www.cbrfc.noaa.gov/gmap/cmap2.php>)

Feedback, Questions, Concerns always welcome....



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