CBRFC 2014 Runoff Recap: Flaming Gorge Reservoir

August 21, 2014

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NWS Colorado Basin River Forecast Center

Outline

- 2014 Conditions Recap

  -Precipitation/Temperature

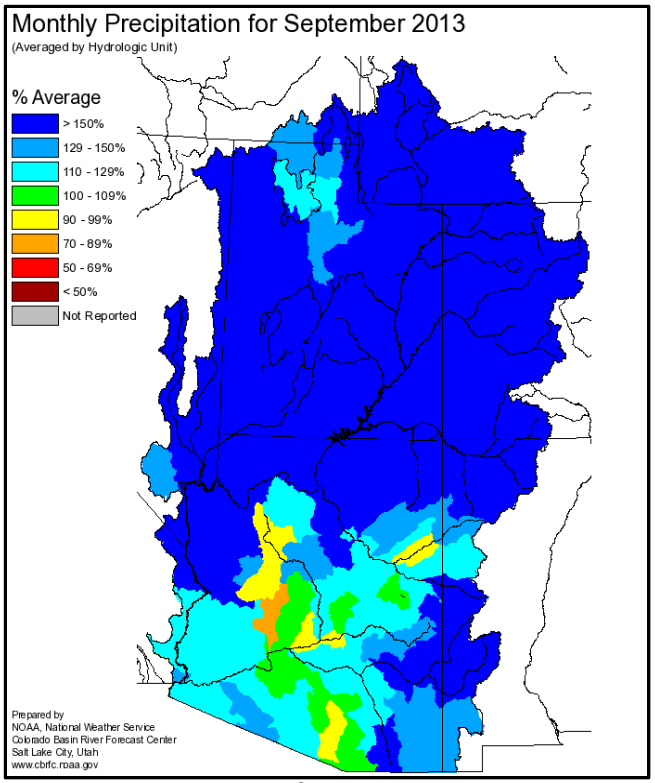
  -Snow

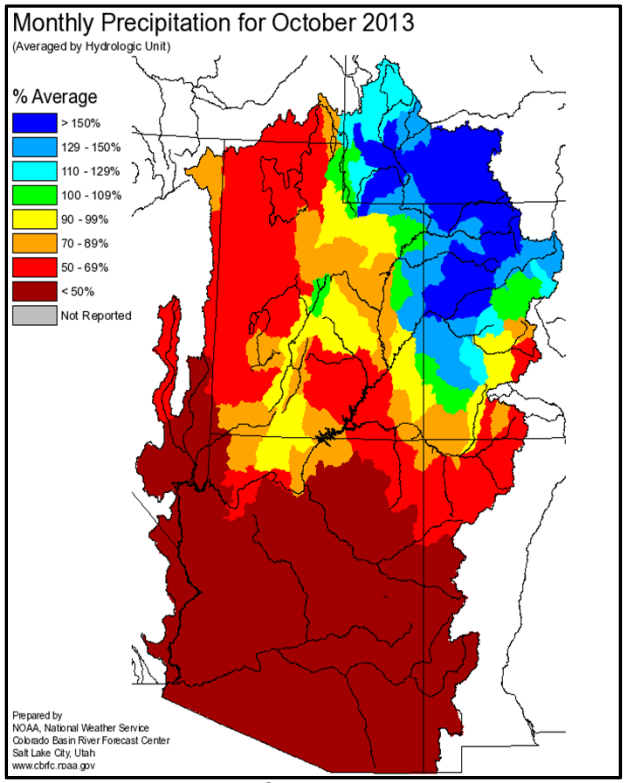
  -Streamflow

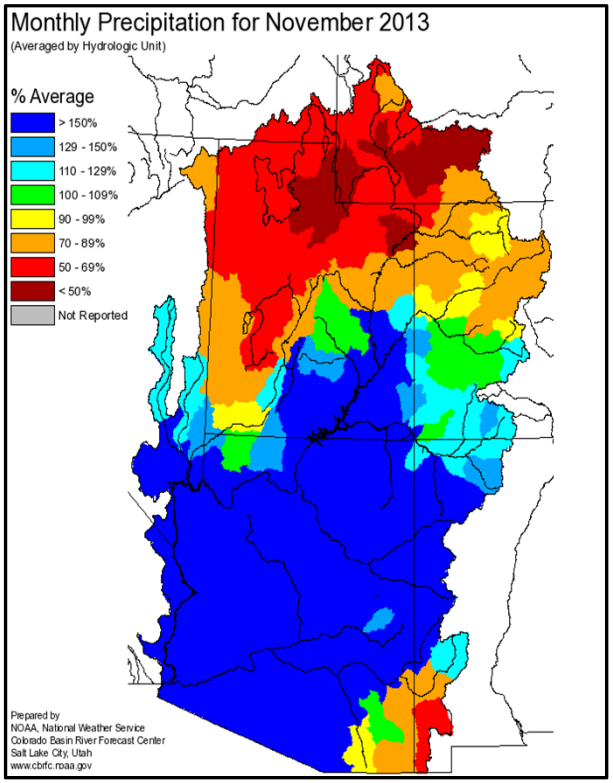
- April-July Forecast Performance

- Future forecasts (climate and water supply)

Fall Precipitation







September:

Green: 220%

Yampa: 200%

October:

Green: 145%

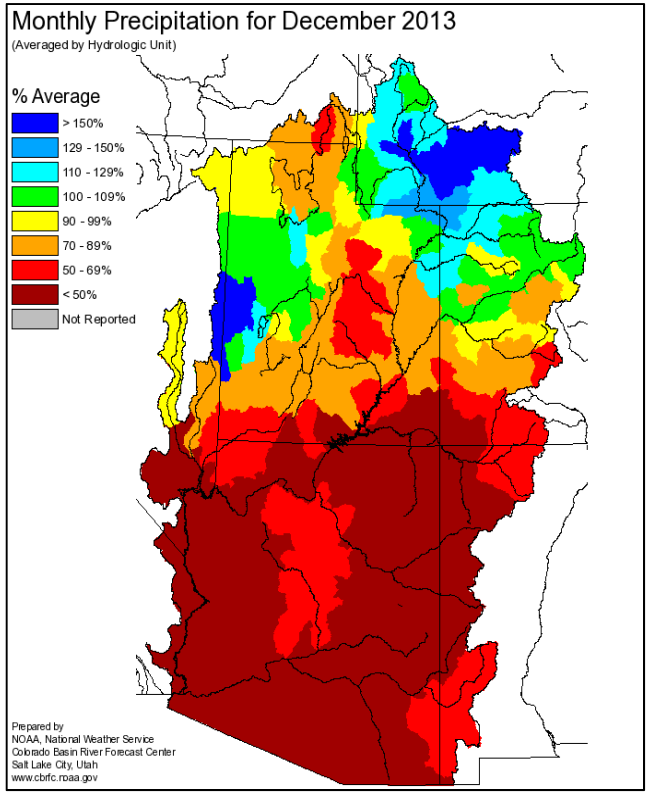
Yampa: 153%

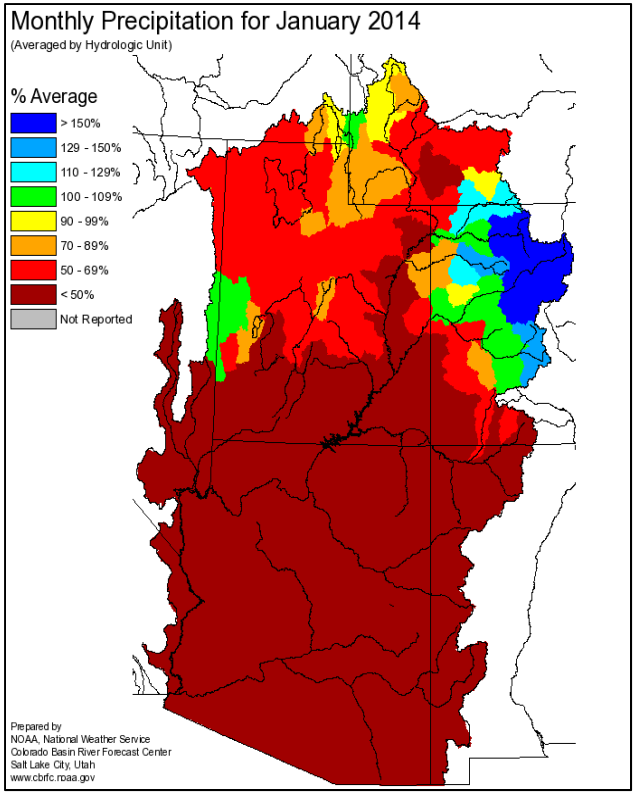
November:

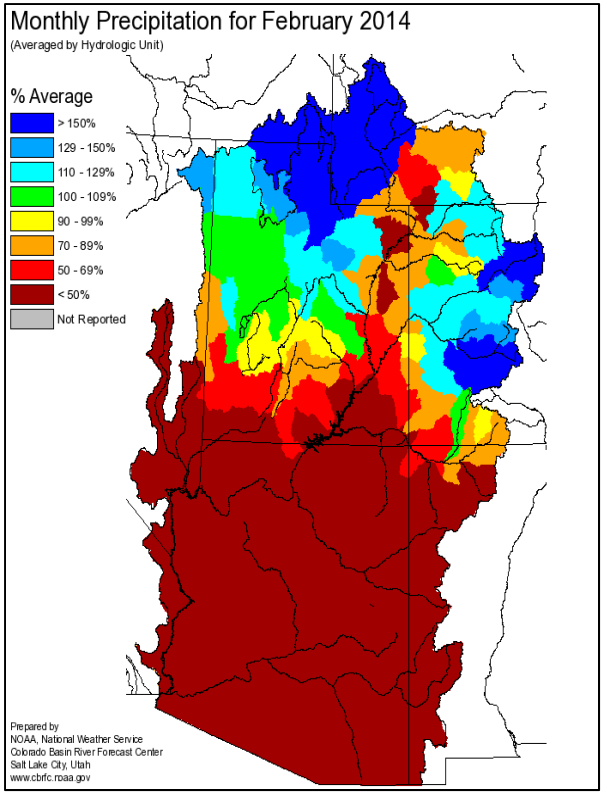
Green: 55%

Yampa: 85%

Winter Precipitation







December:
Green: 130%
Yampa: 108%

January:
Green: 80%
Yampa: 125%

February:
Green: 220%
Yampa: 96%

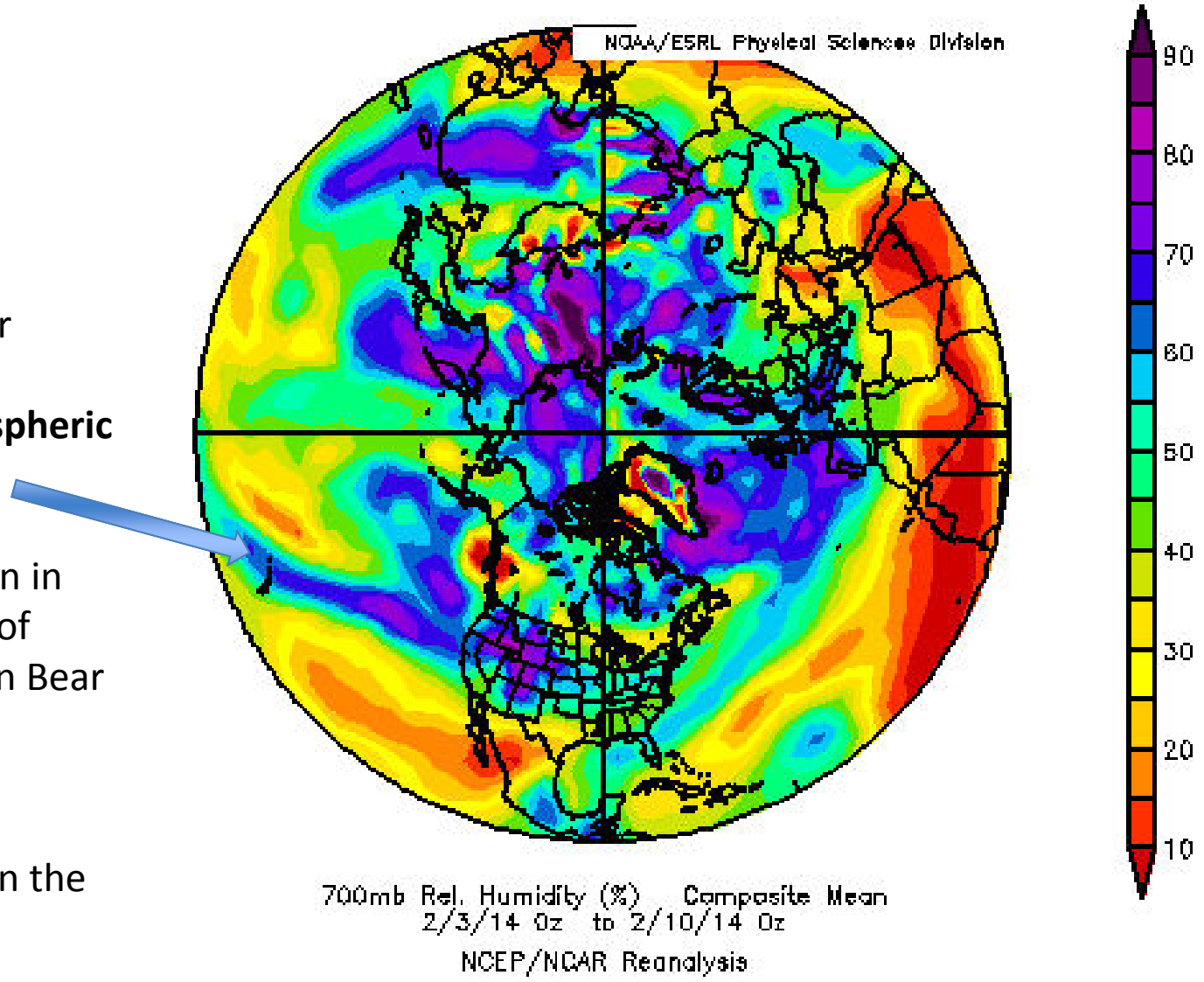
February Precipitation: 2nd Highest of many Snotel in Green!

February 2014 Upper Air Pattern

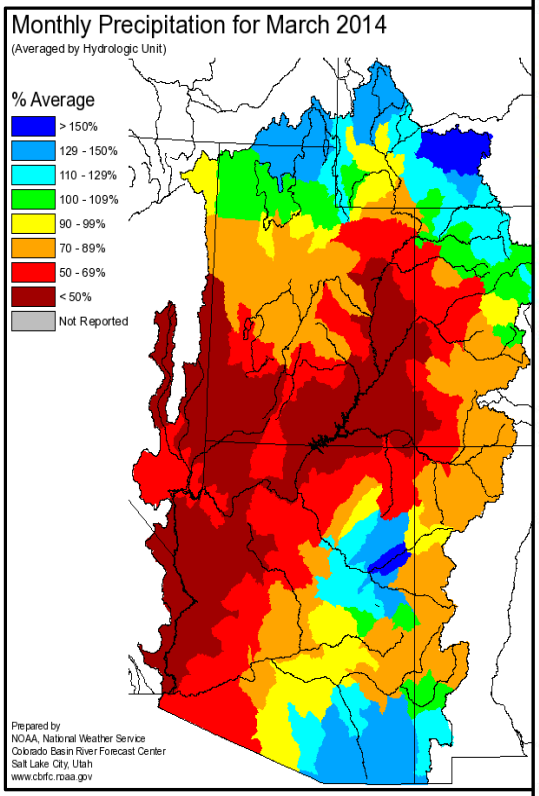
Very moist and mild air transported into the Western U.S. – "**atmospheric river**"

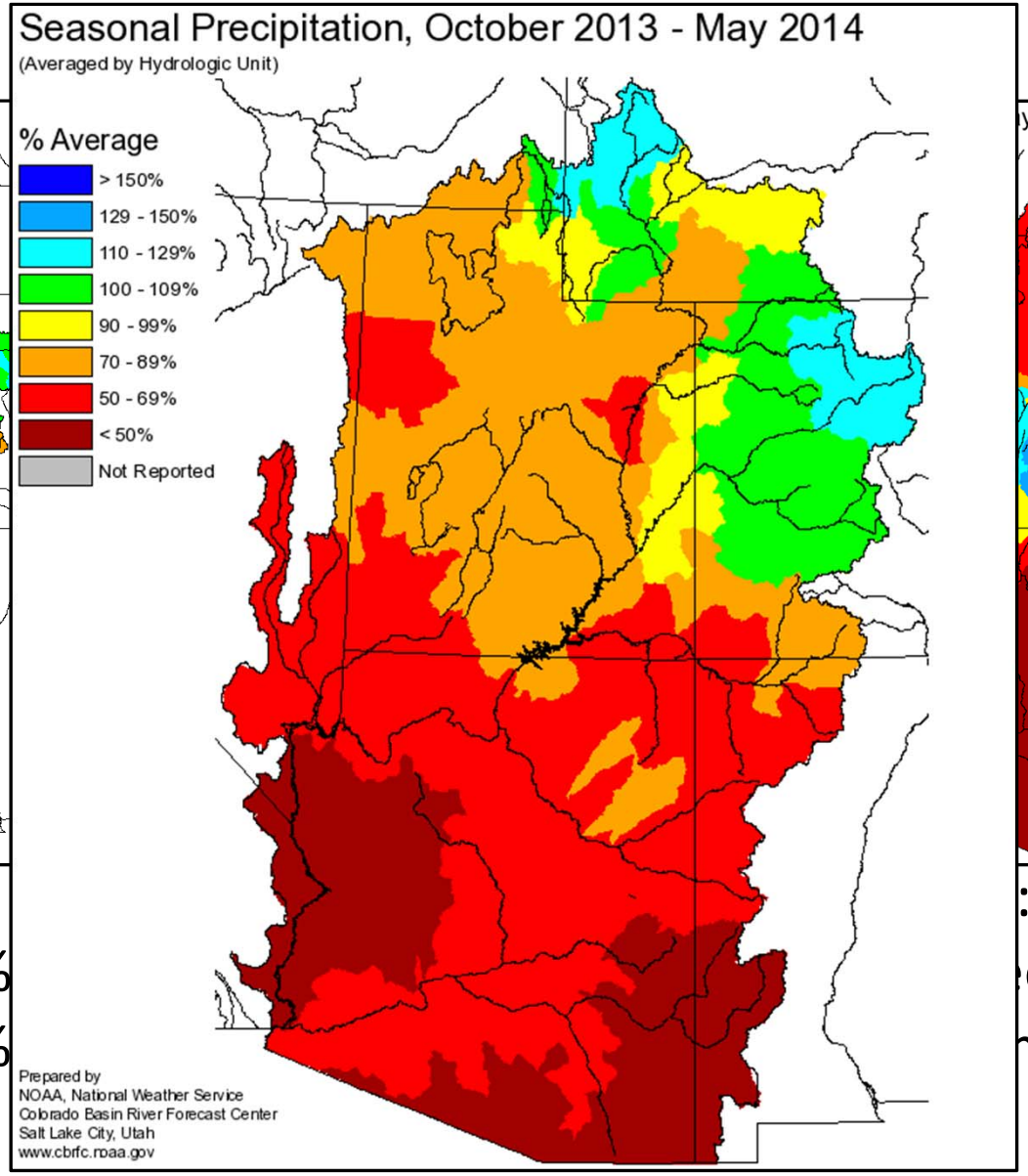
Significant precipitation in the Green River Basin of Wyoming and northern Bear River Basin

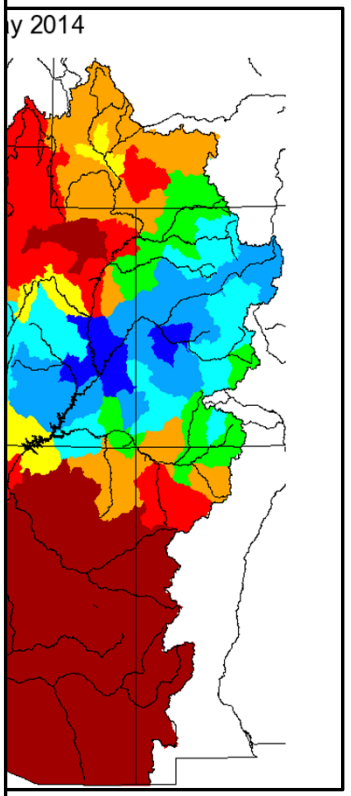
Above or much above average precipitation in the Yampa, Colorado Headwaters, upper Gunnison



Spring Precipitation







March:

Green: 115%

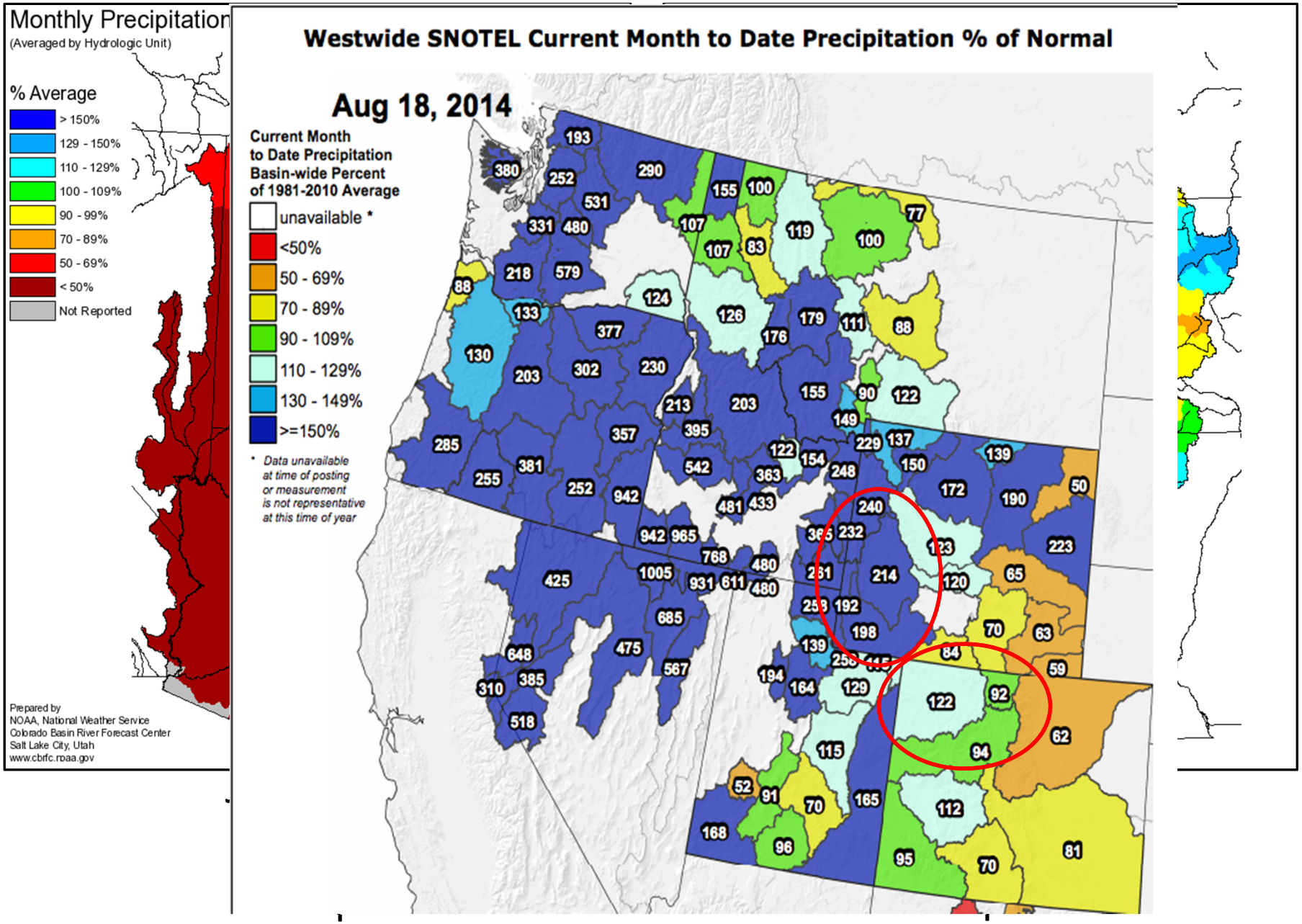
Yampa: 110%

:

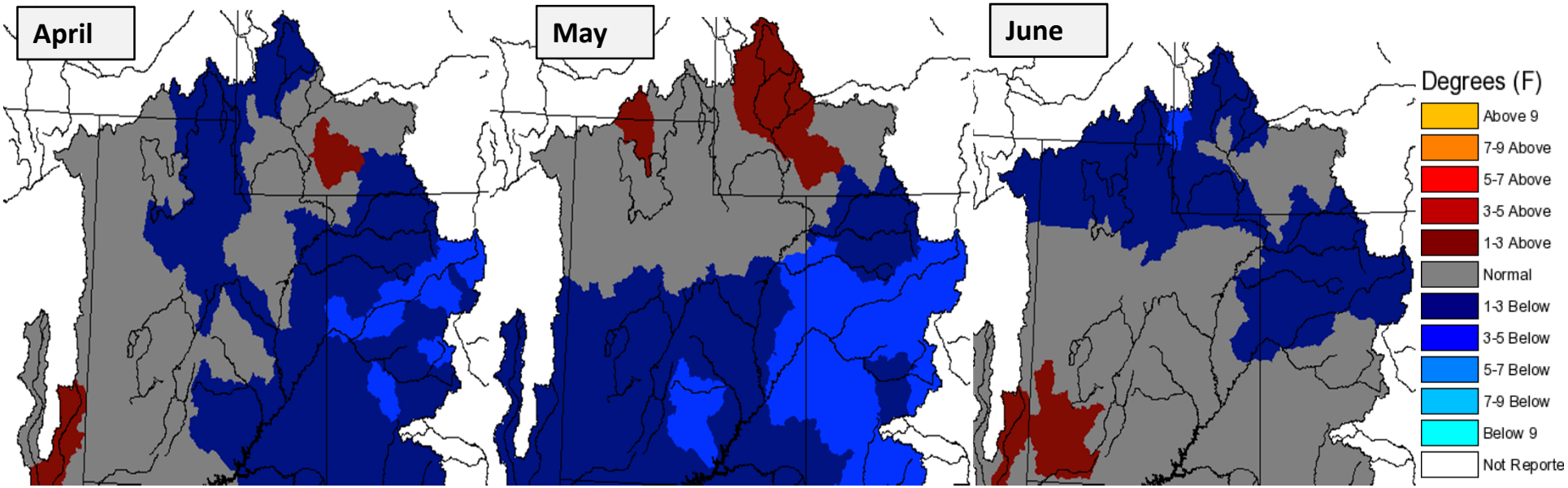
en: 80%

npa: 112%

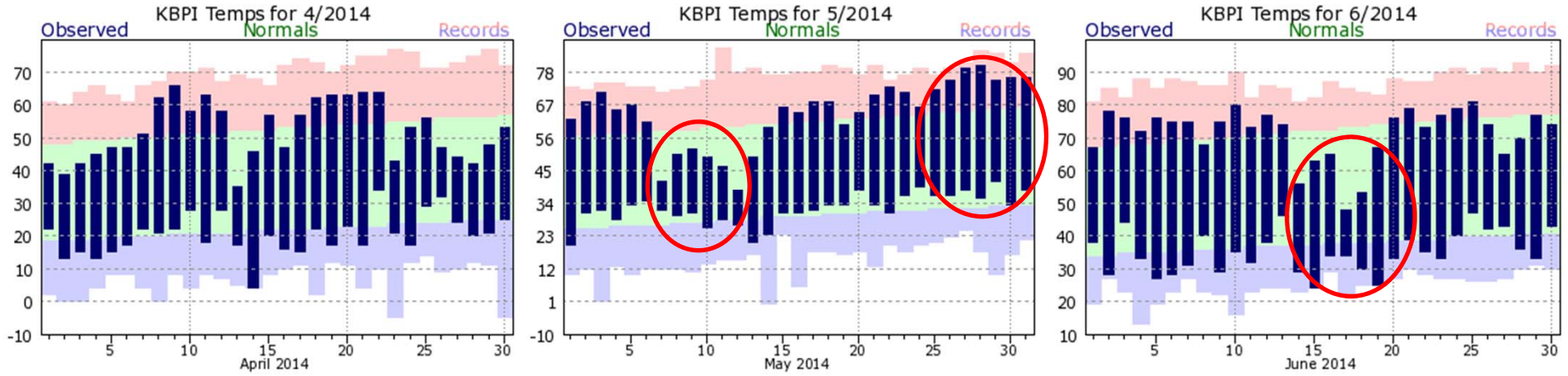
Summer Precipitation



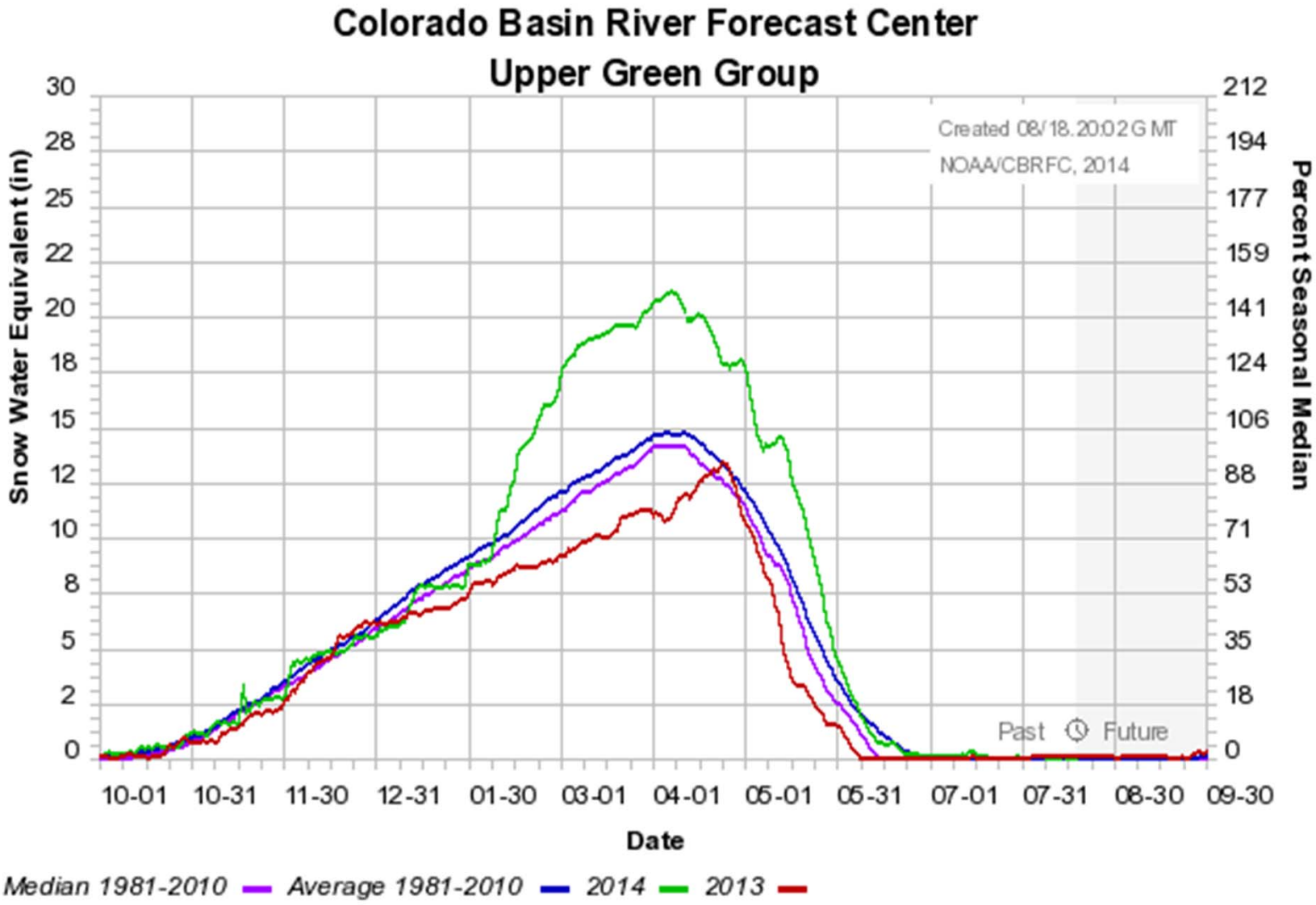
Monthly Max Temperature Deviation



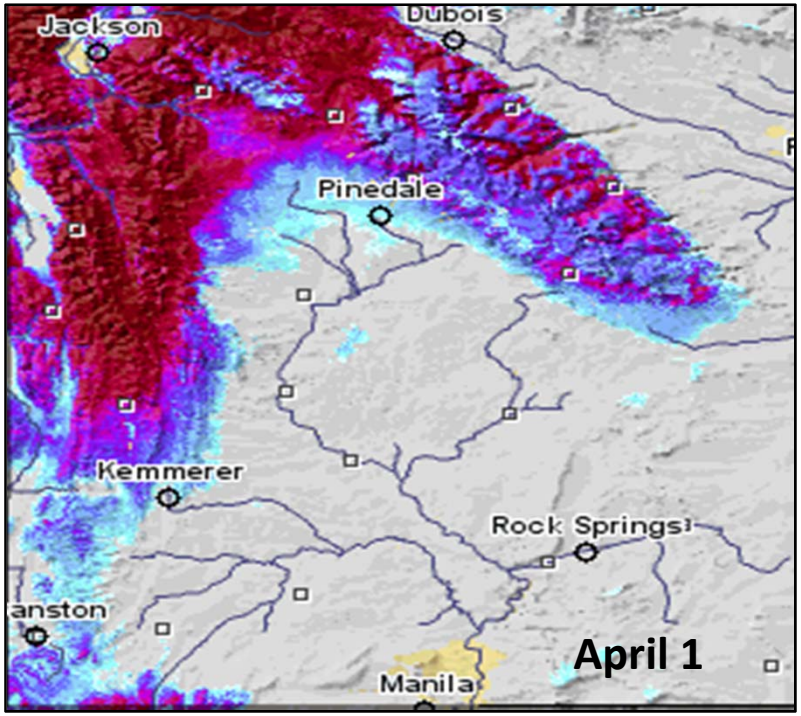
Big Piney Daily Temperatures

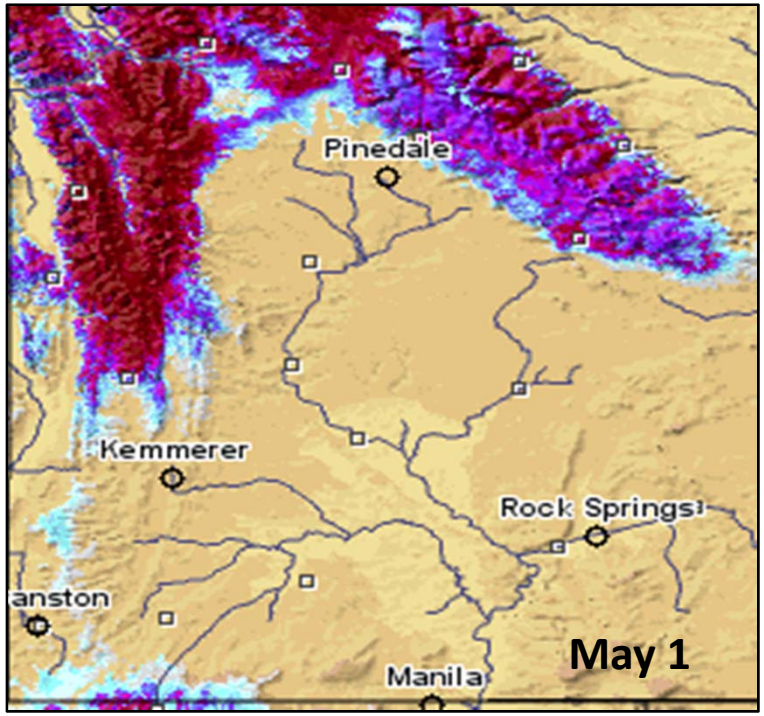


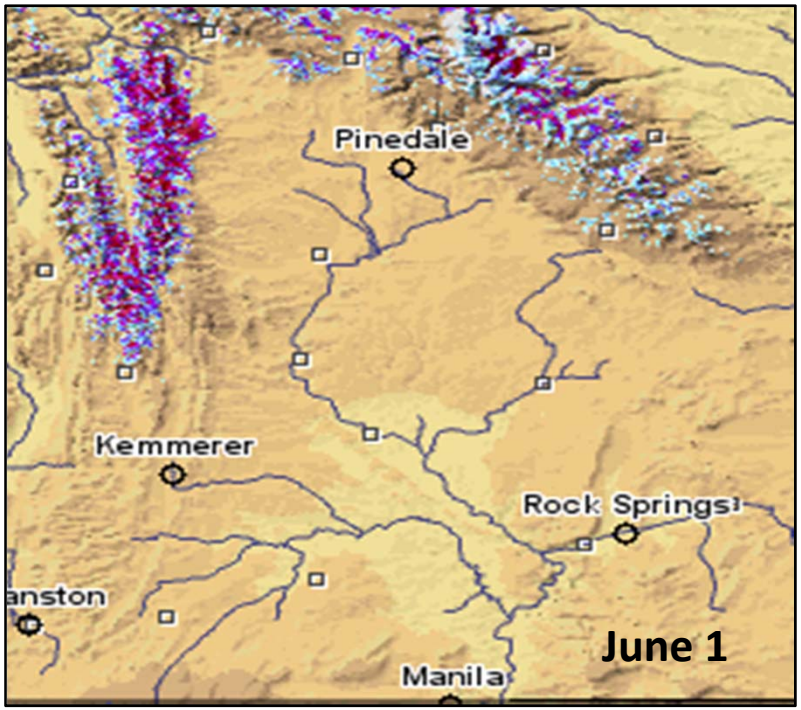
Snow: Upper Green

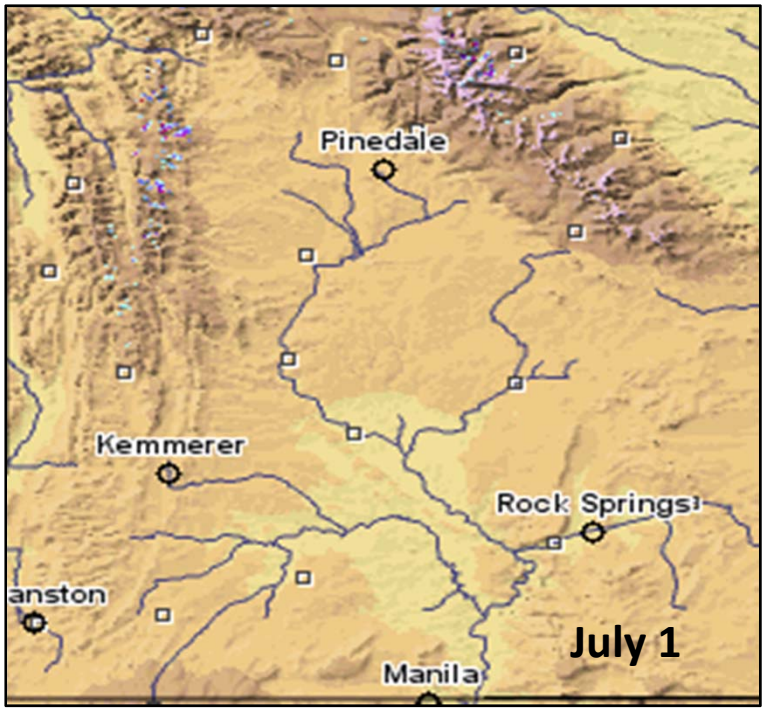


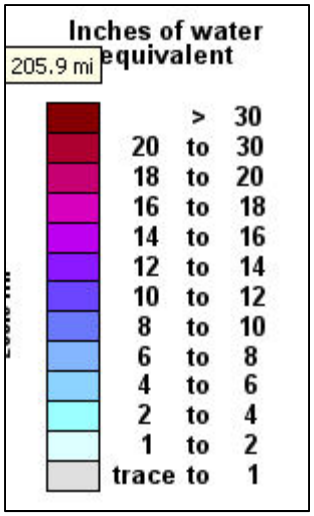
SNOW:
Melt Progression Upper Green



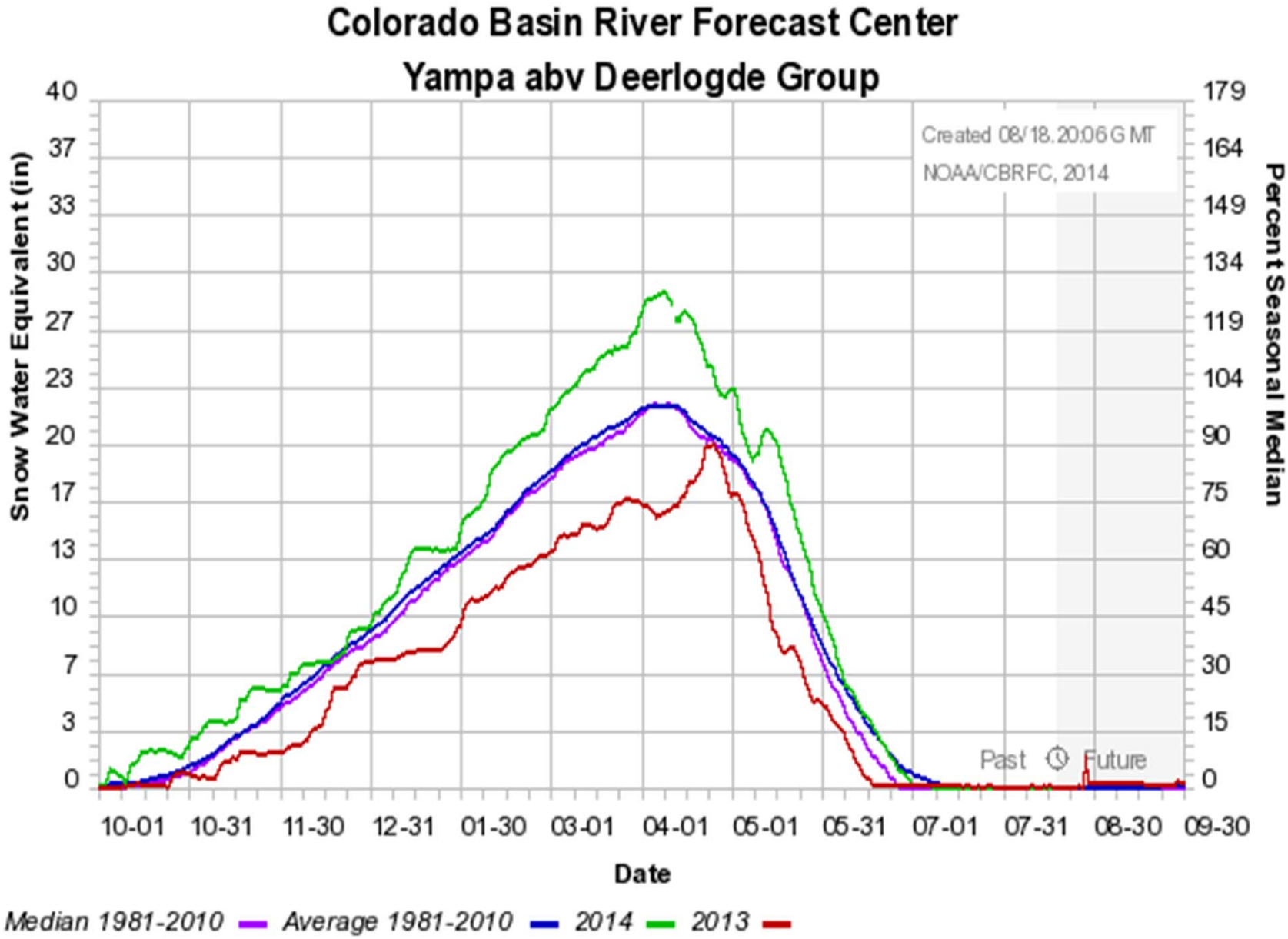




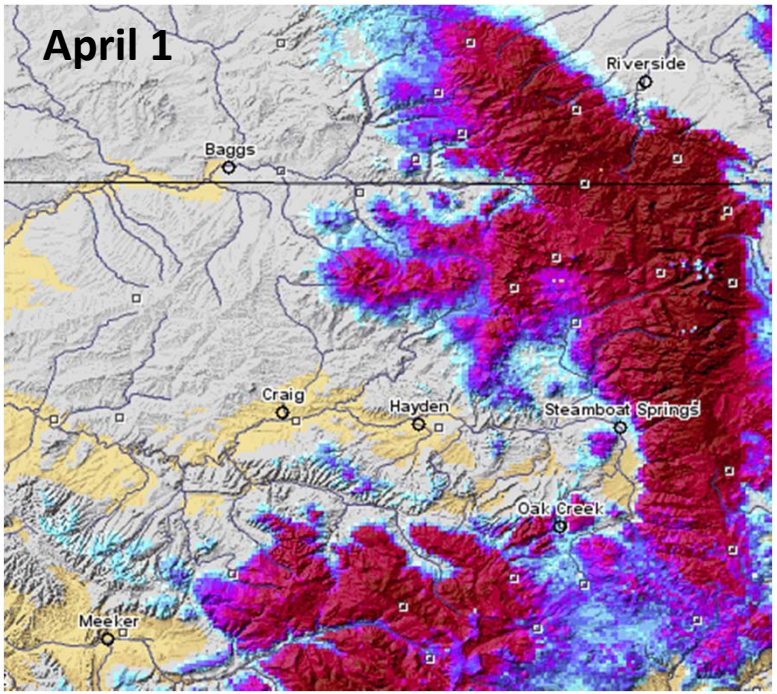


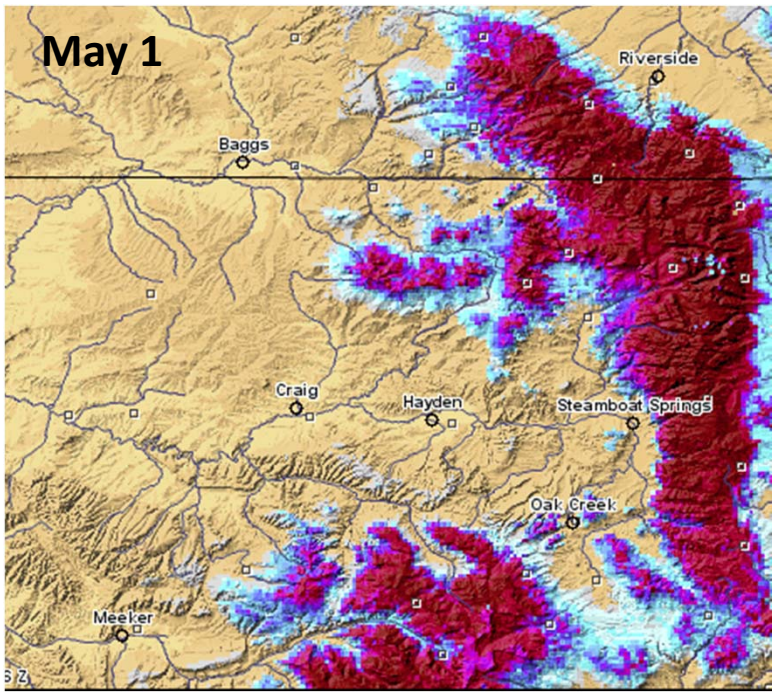


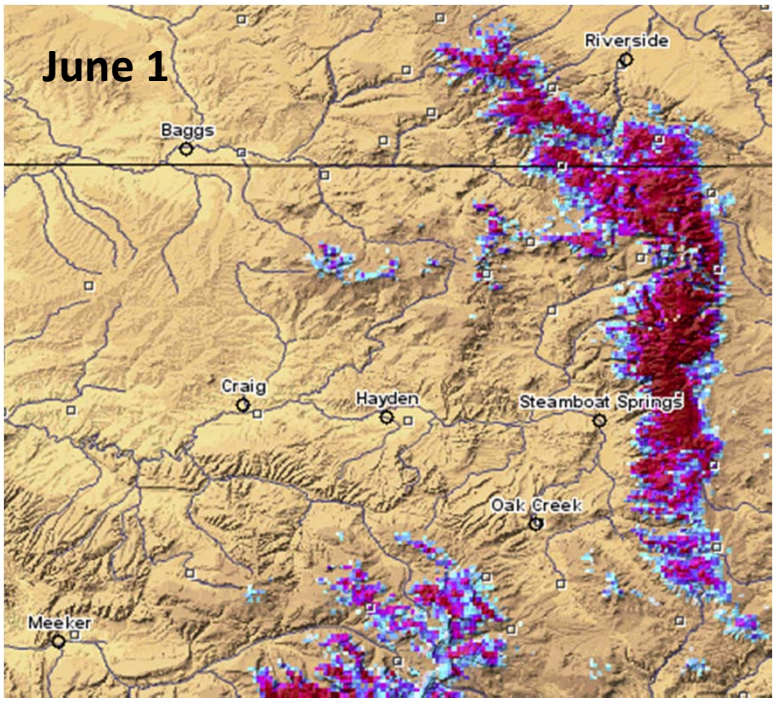
Snow: Yampa

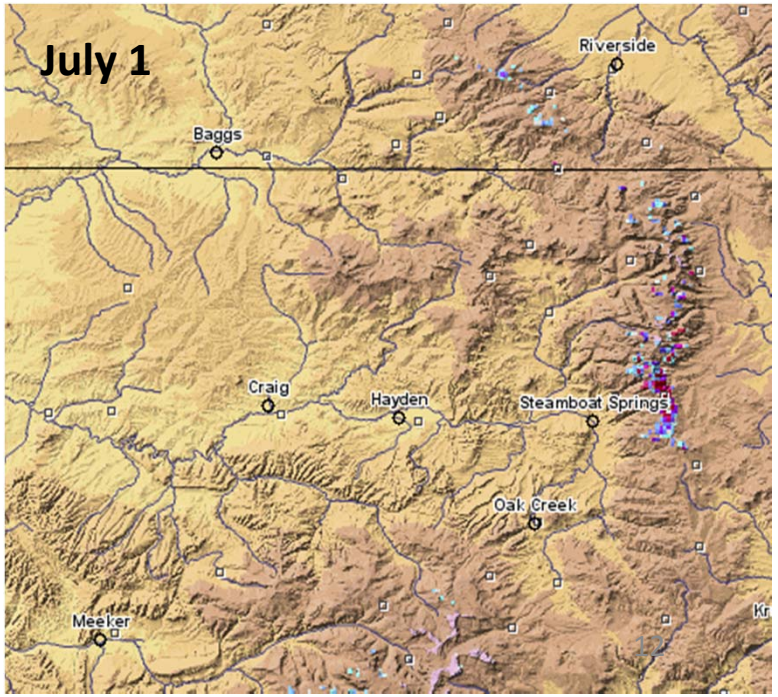

Colorado Basin River Forecast Center
Yampa abv Deerlogde Group
Created 08/18.20:06 G MT
NOAA/CBRFC, 2014
Past
Future
Snow Water Equivalent (in)
Percent Seasonal Median
40
37
33
30
27
23
20
17
13
10
7
3
0
179
164
149
134
119
104
90
75
60
45
30
15
0
10-01
10-31
11-30
12-31
01-30
03-01
04-01
05-01
05-31
07-01
07-31
08-30
09-30
Date
Median 1981-2010
Average 1981-2010
2014
2013

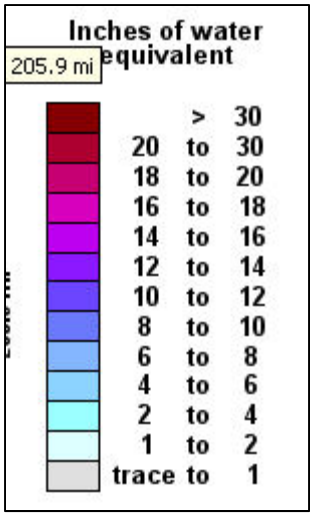
SNOW:
Melt Progression
Yampa



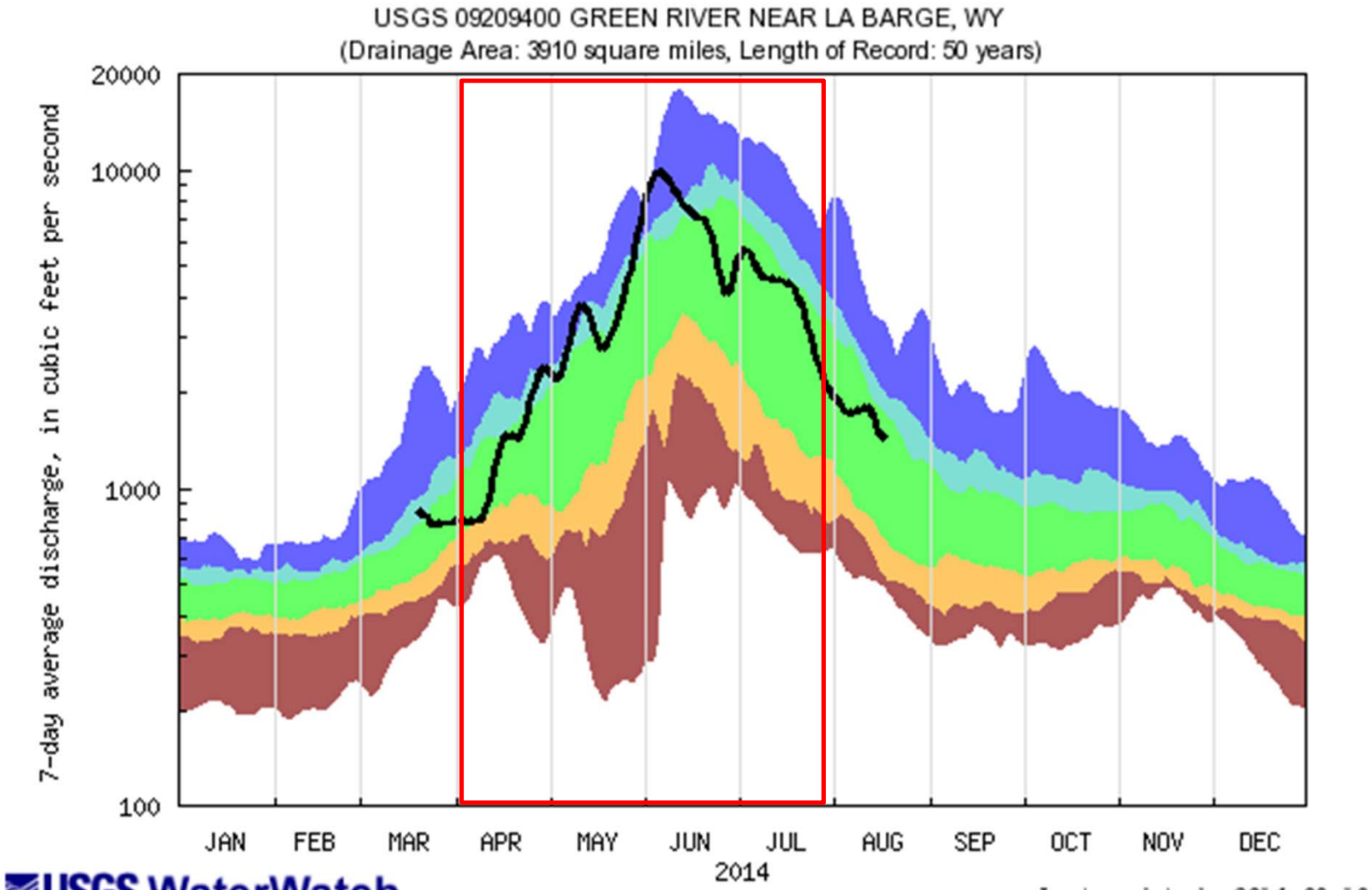




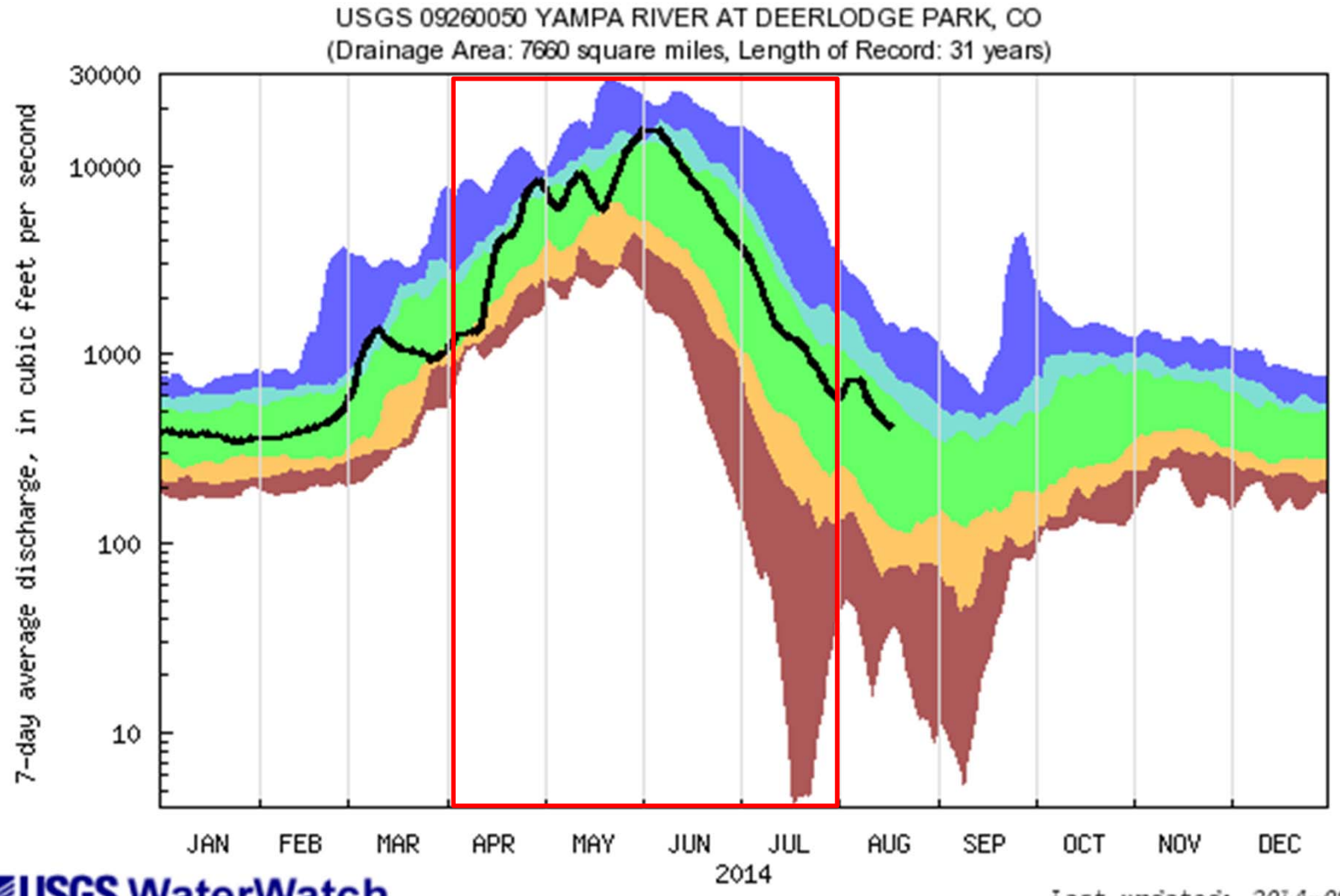




Streamflow: Green River at LaBarge

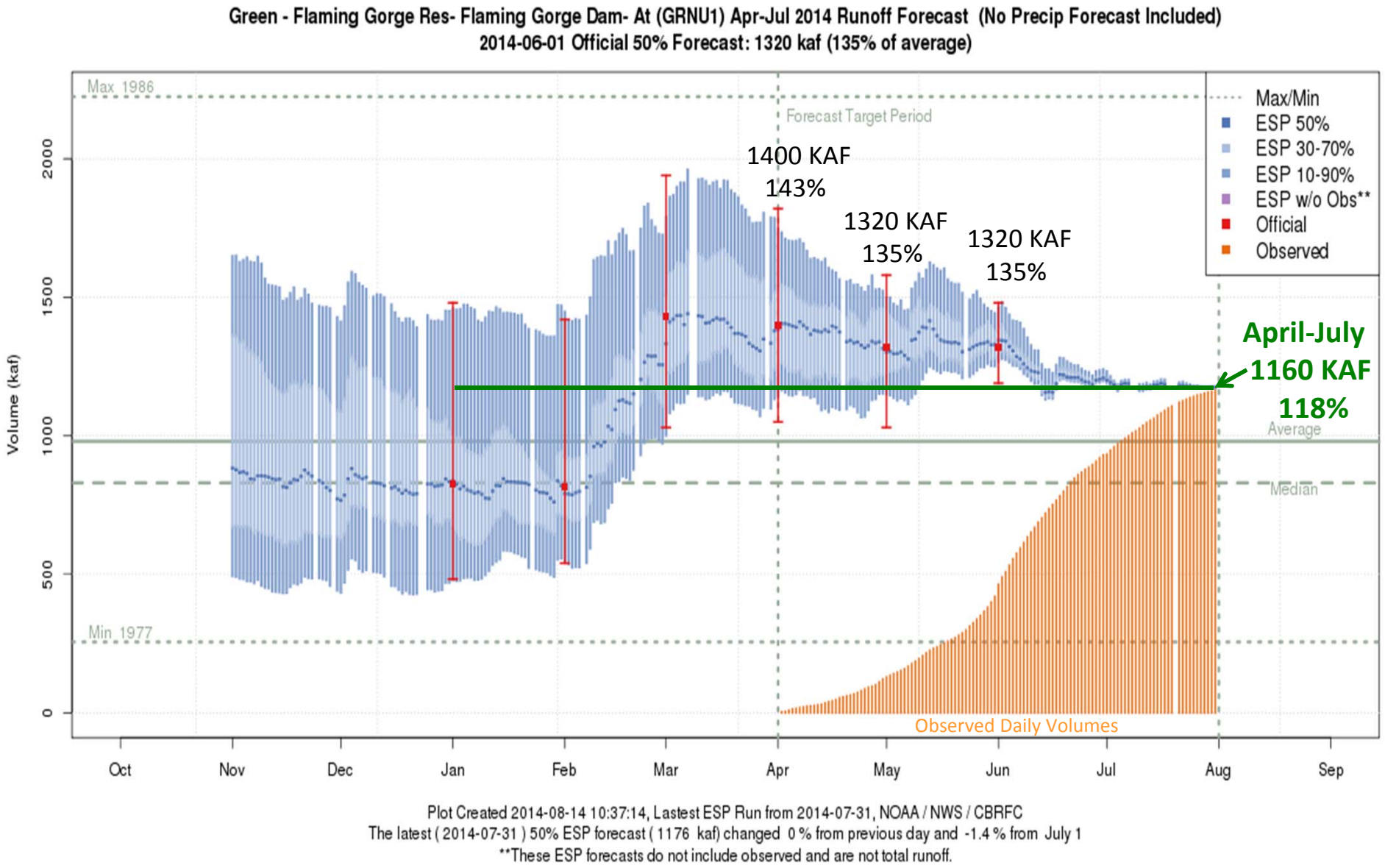


Streamflow: Yampa near Deerlodge

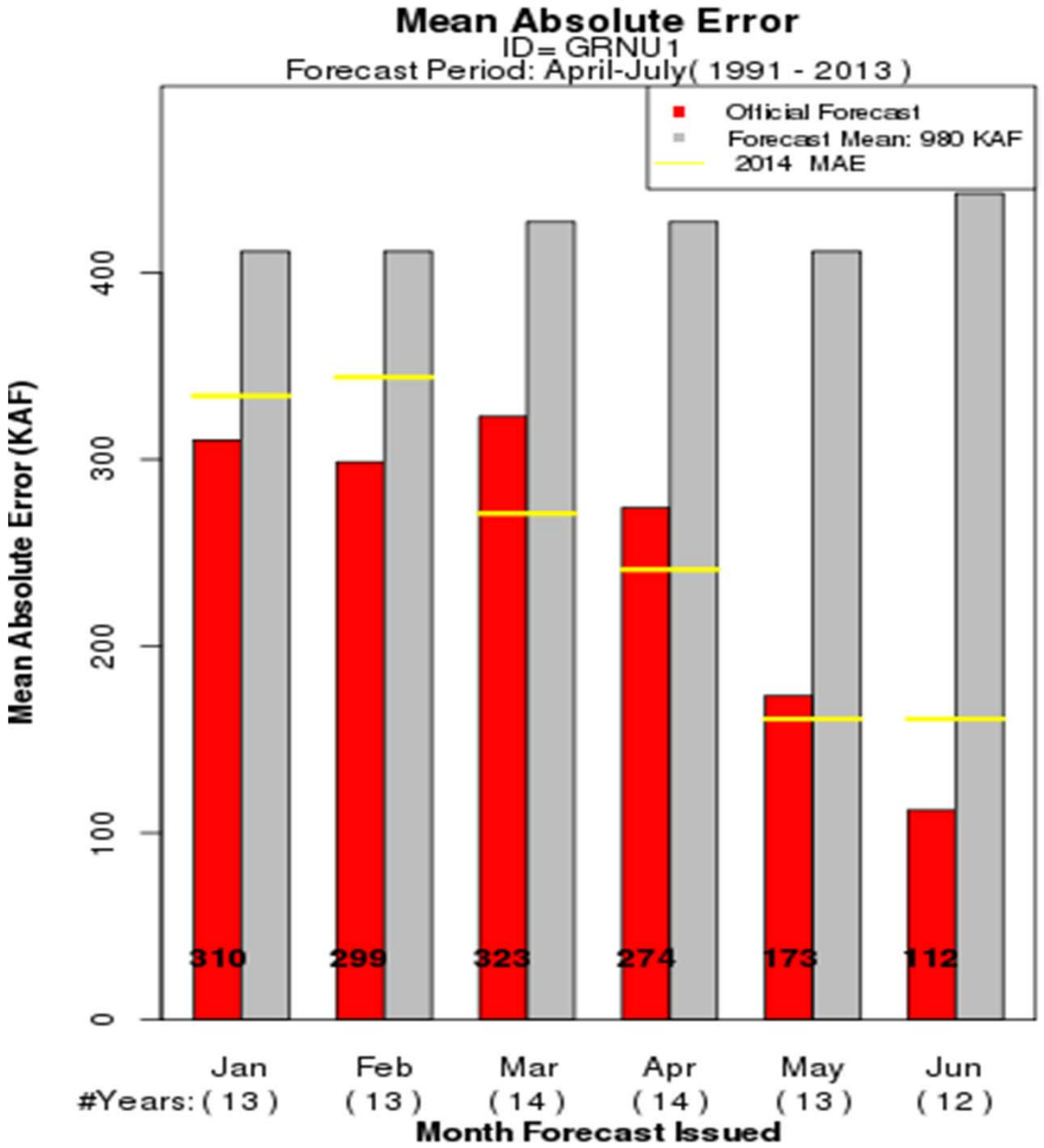


Forecast: Flaming Gorge Inflow

Seasonal Forecast Progression + Observations

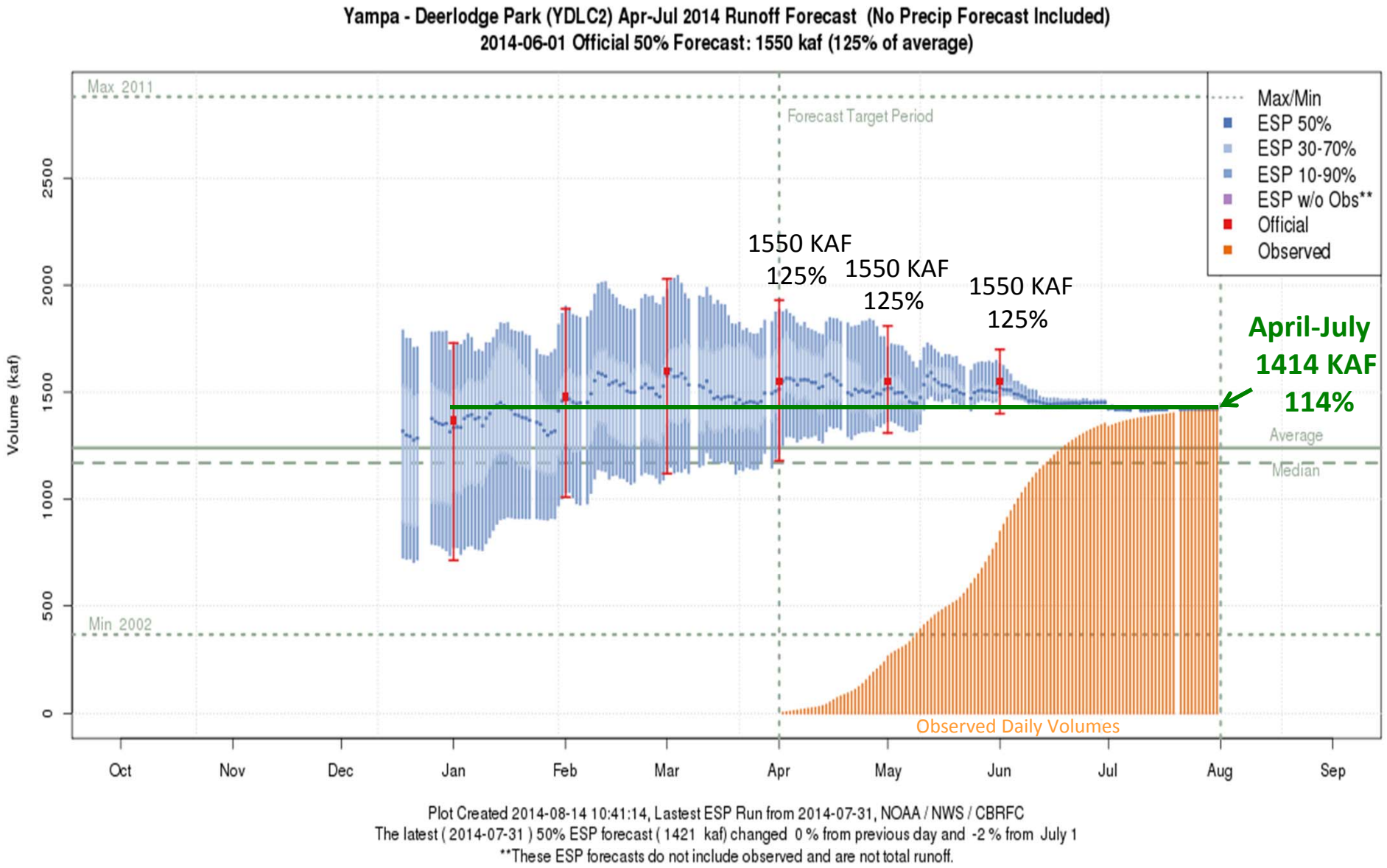


Flaming Gorge Forecast Error

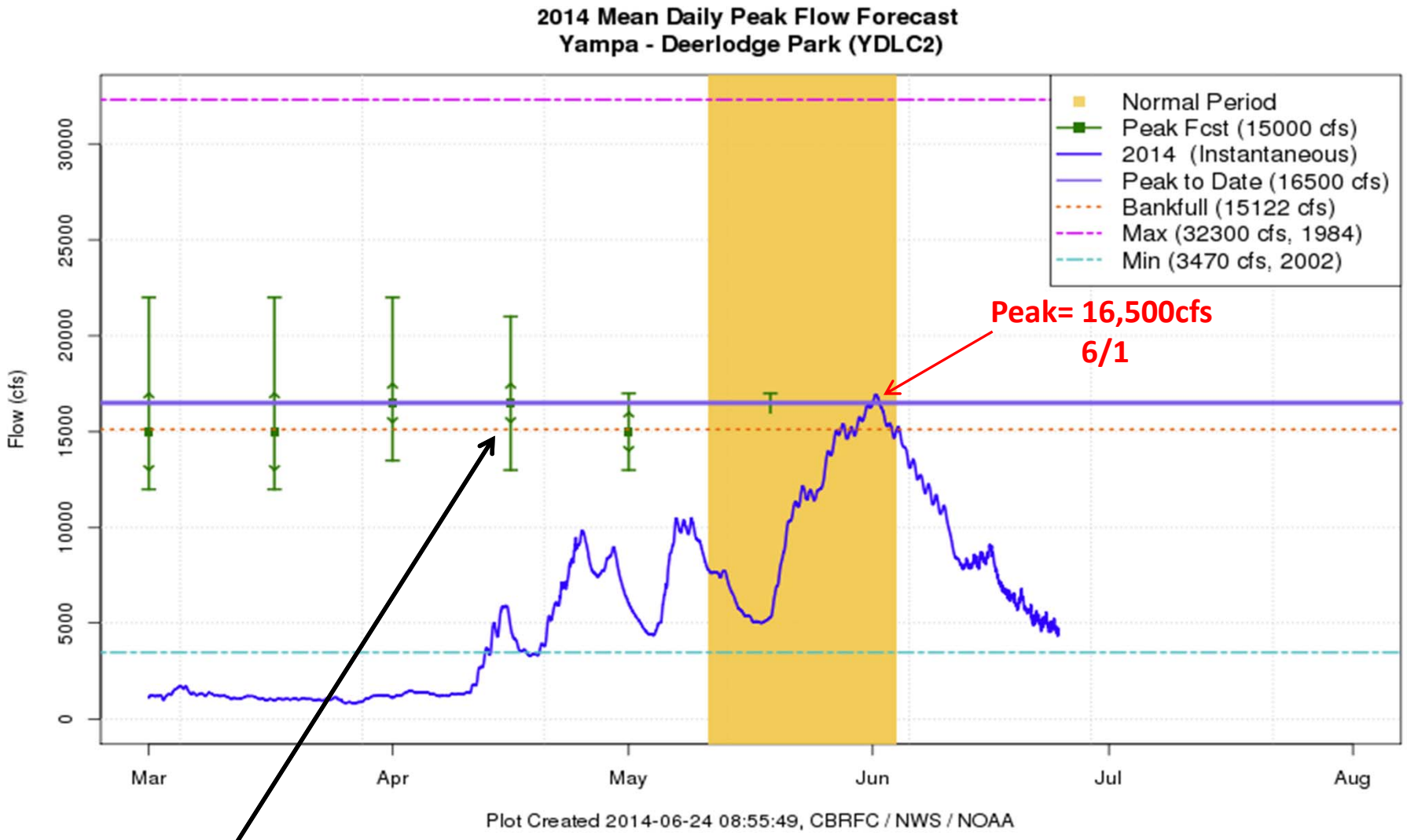


Forecast: Yampa River nr Deerlodge

Seasonal Forecast Progression + Observations



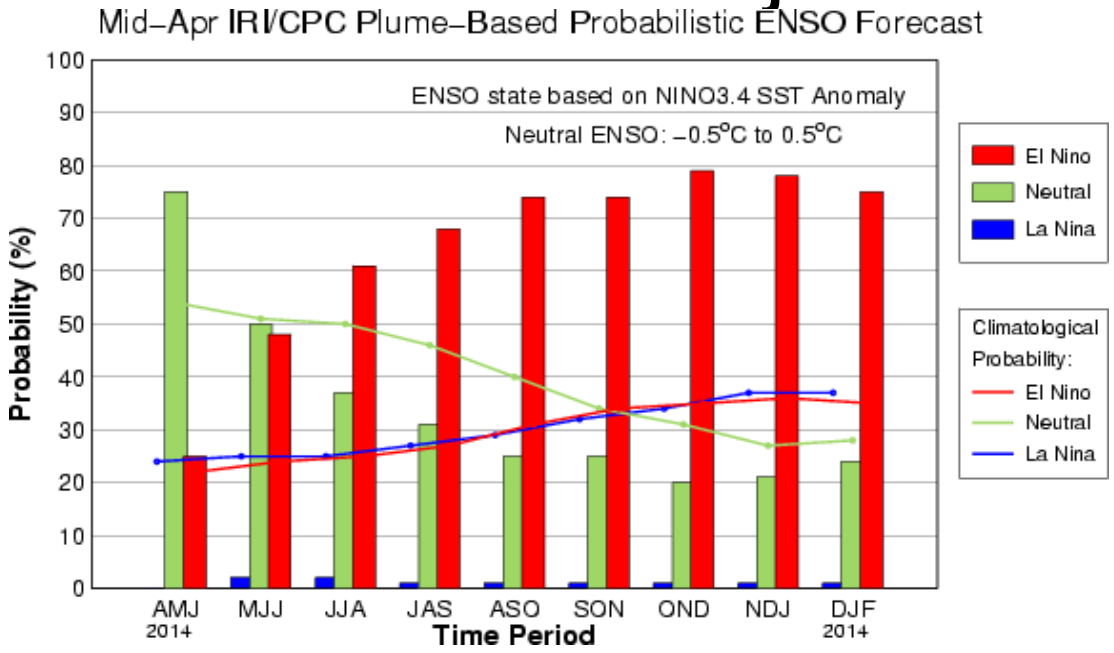
Peak Flow Forecast



Mid April Forecast →

90%	75%	50%	25%	10%
13,000 cfs	15,500 cfs	16,500 cfs	17,500 cfs	21,000 cfs

Latest ENSO Projections

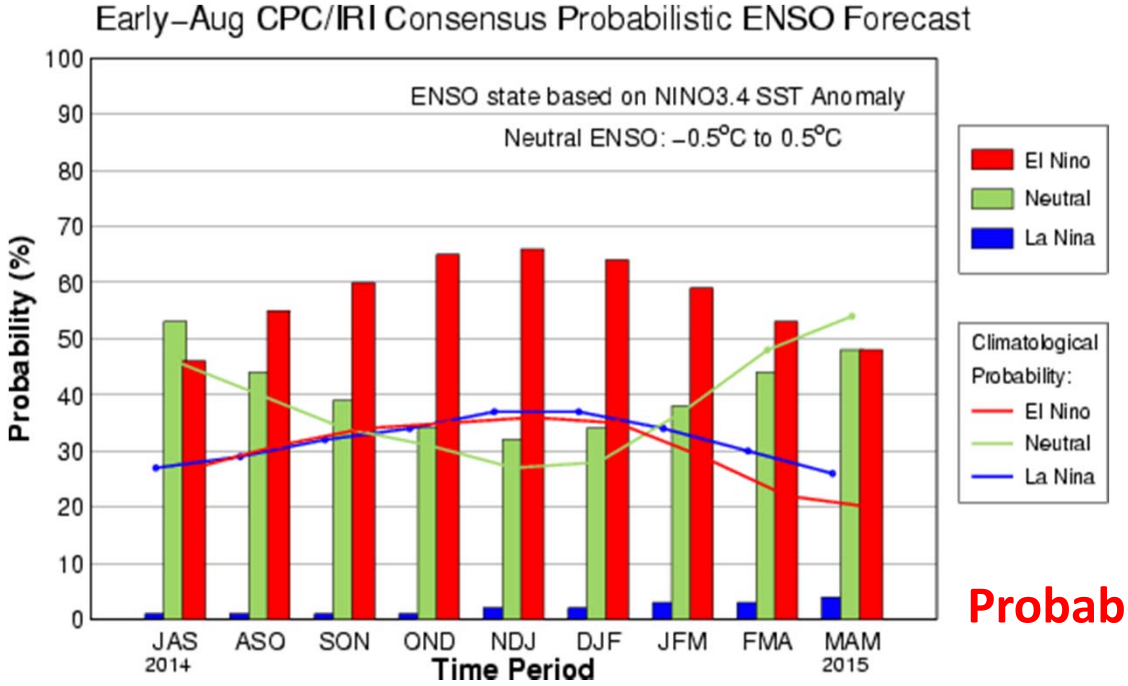


Chance of El Nino (April):

SON: 74%

OND: 79%

NDJ: 78%



Chance of El Nino (August):

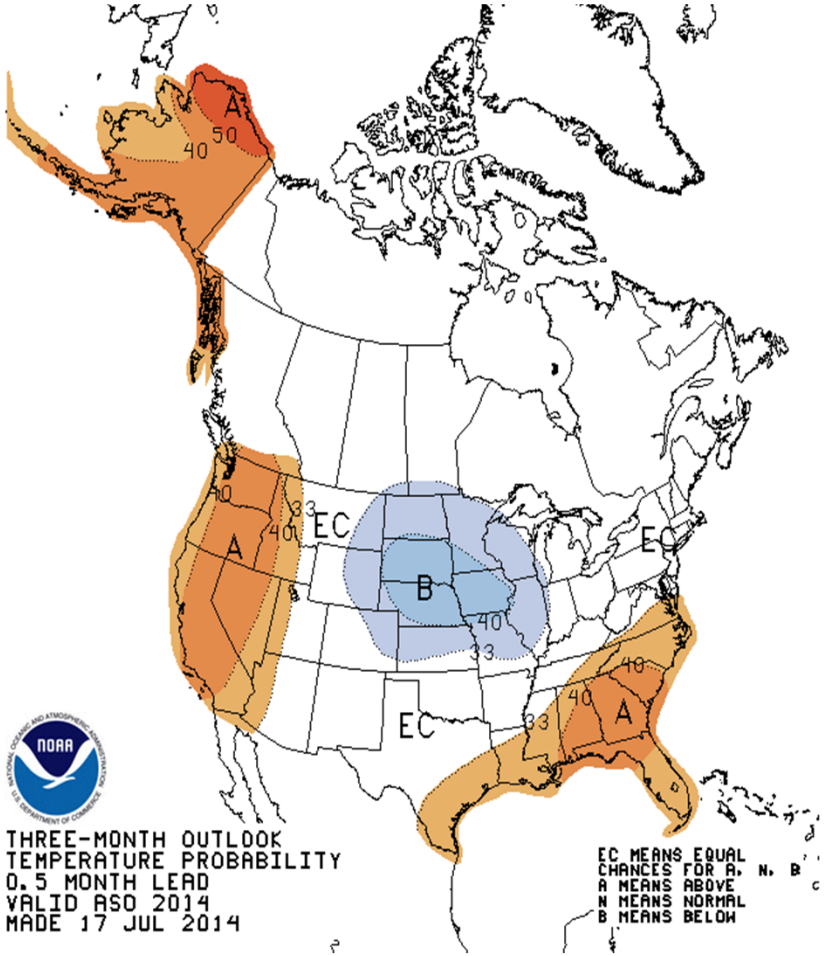
SON: 60%

OND: 65%

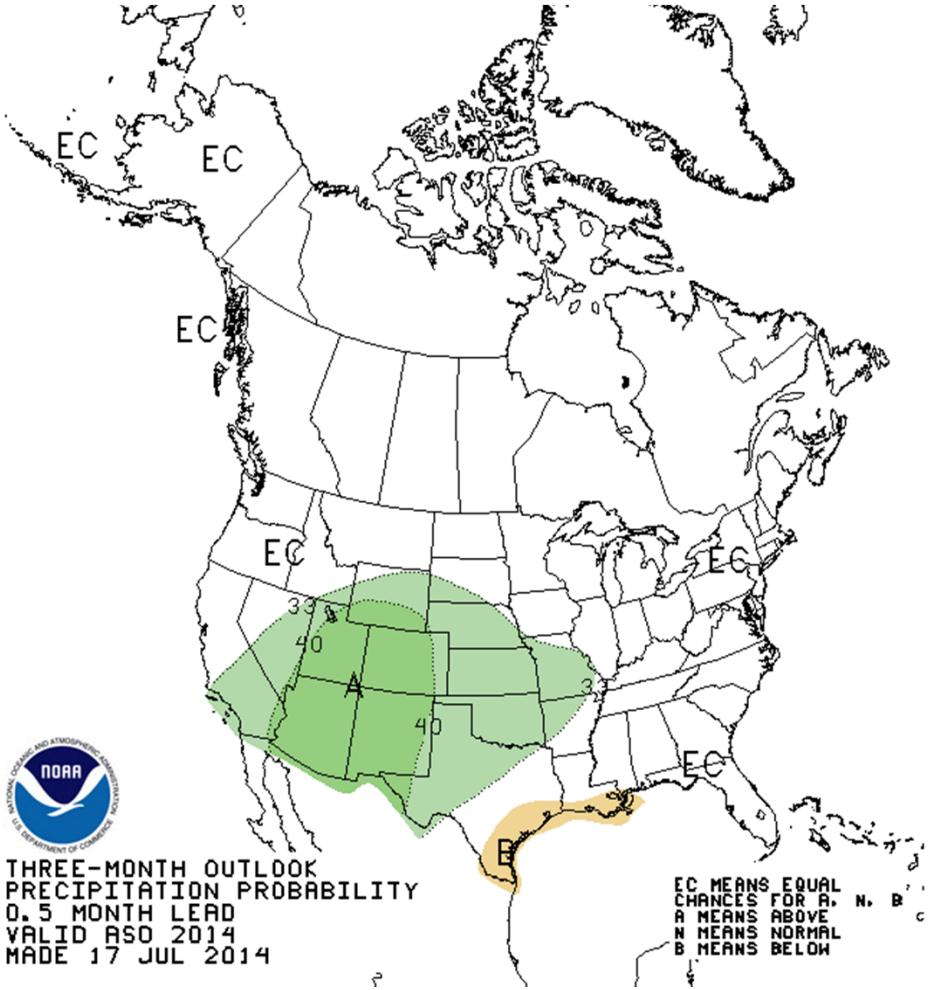
NDJ: 66%

Probability of strong El Nino is decreasing.

3-Month Climate Outlooks



Temperature



Precipitation

Water Supply Forecasts

Flaming Gorge Inflow: 8/18

August	September	October
105 KAF 118%	60 KAF 109%	61 KAF 104%

Yampa River-Deerlodge: 8/1

August	September	October
28 KAF 110%	13 KAF 65%	24 KAF 70%

Feedback, Questions, Concerns always welcome….

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