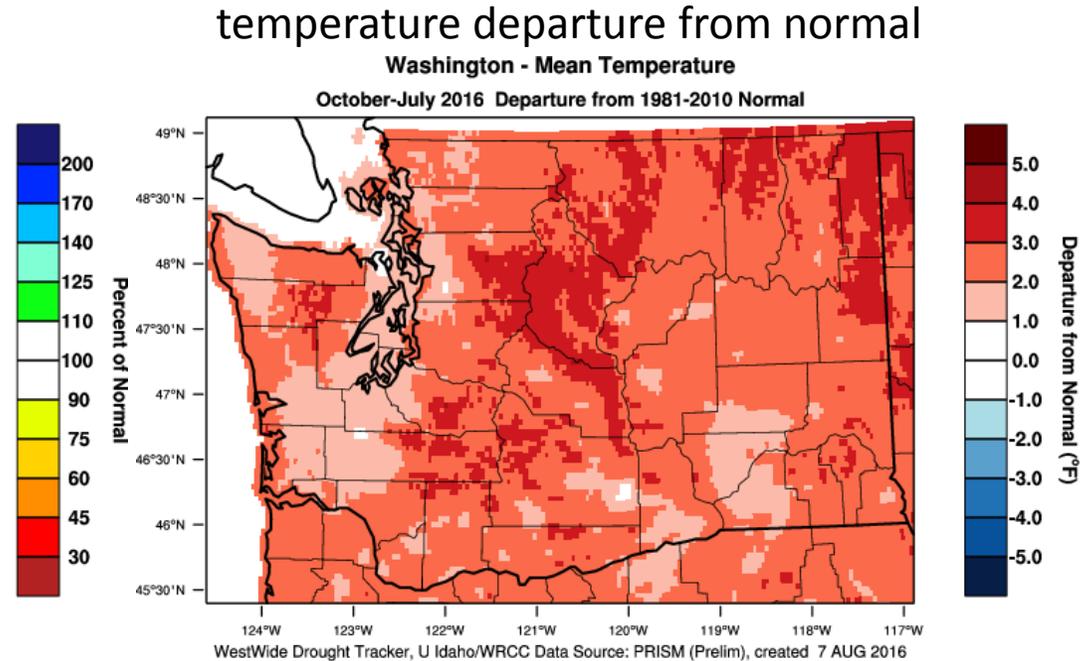
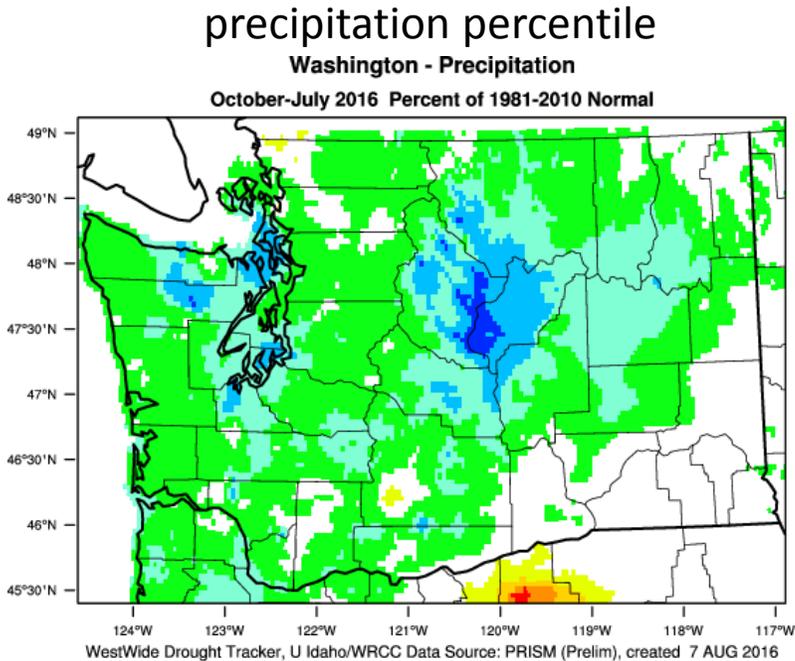


Water Supply Update

Jeff Marti

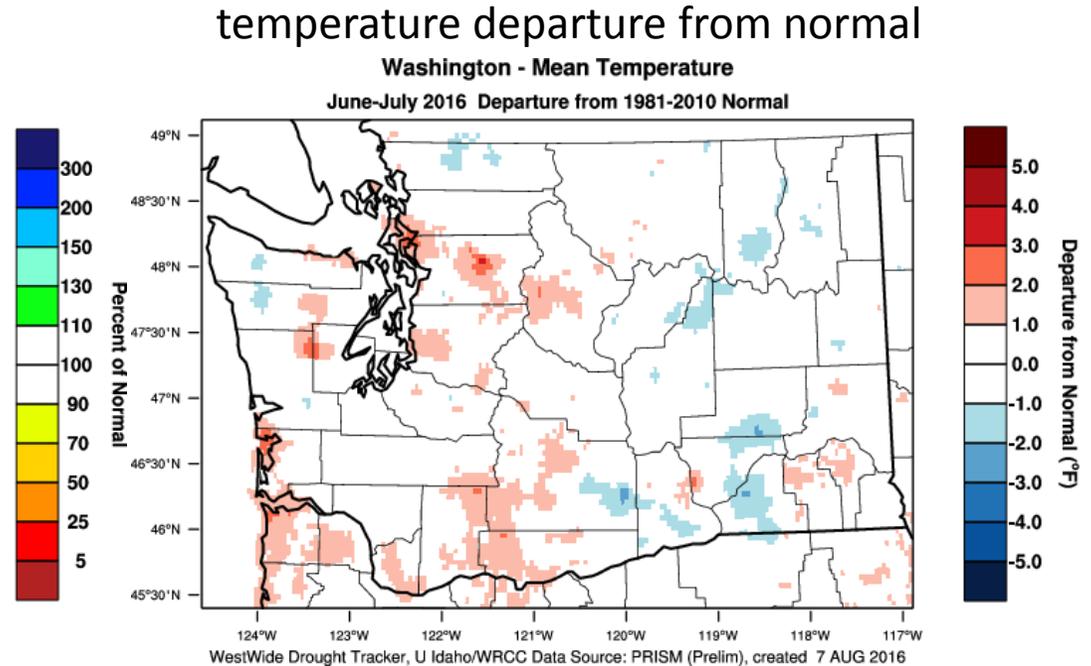
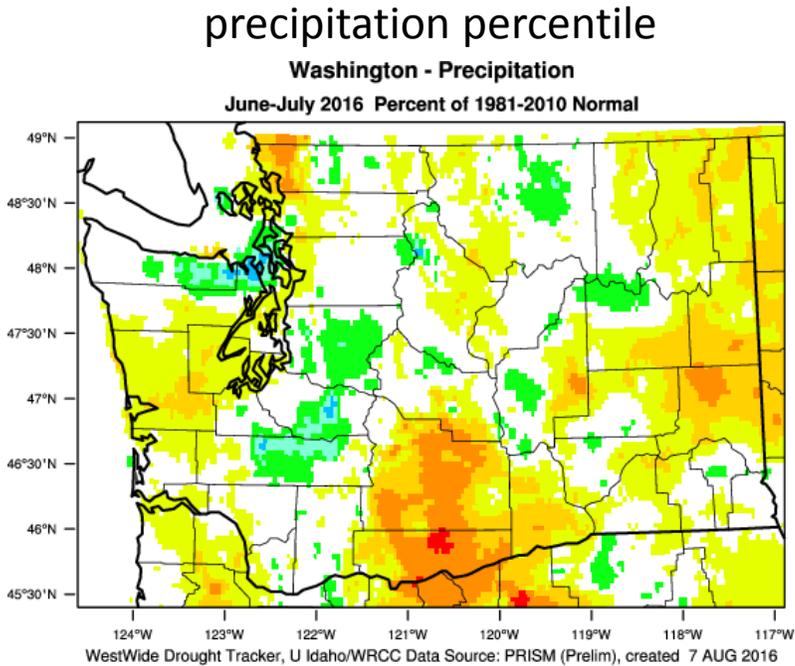
Water Resources Program

Oct 1-Jul 31 Precipitation & Temperature



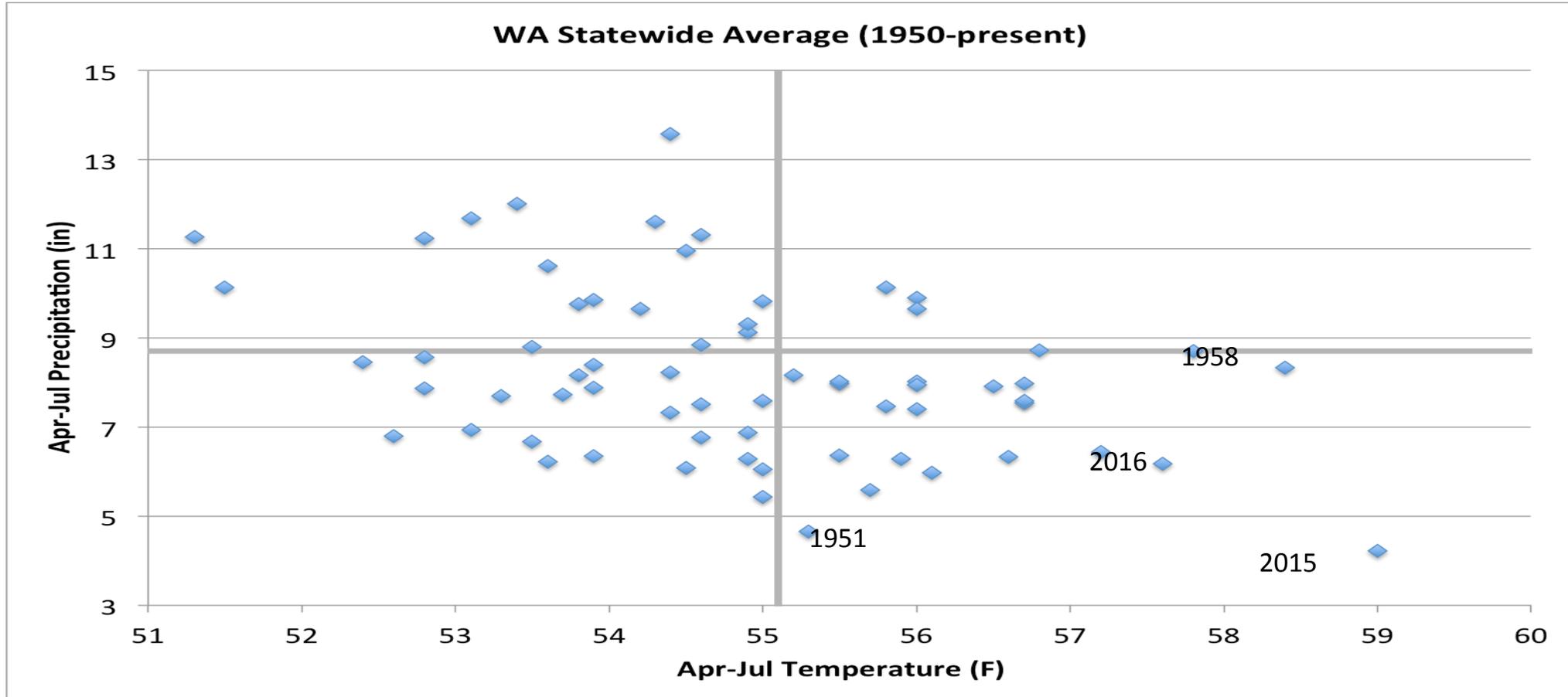
- Wet for the water year thus far, ranking as 9th wettest
- 4th warmest water year through July (behind 2015, 1934, 1992)

Jun 1-Jul 31 Precipitation & Temperature



- Mixed precipitation but averaged statewide, Jun-Jul precipitation is normal
 - Dry since April
- Near-normal Jun-Jul temperatures; much different from 2015

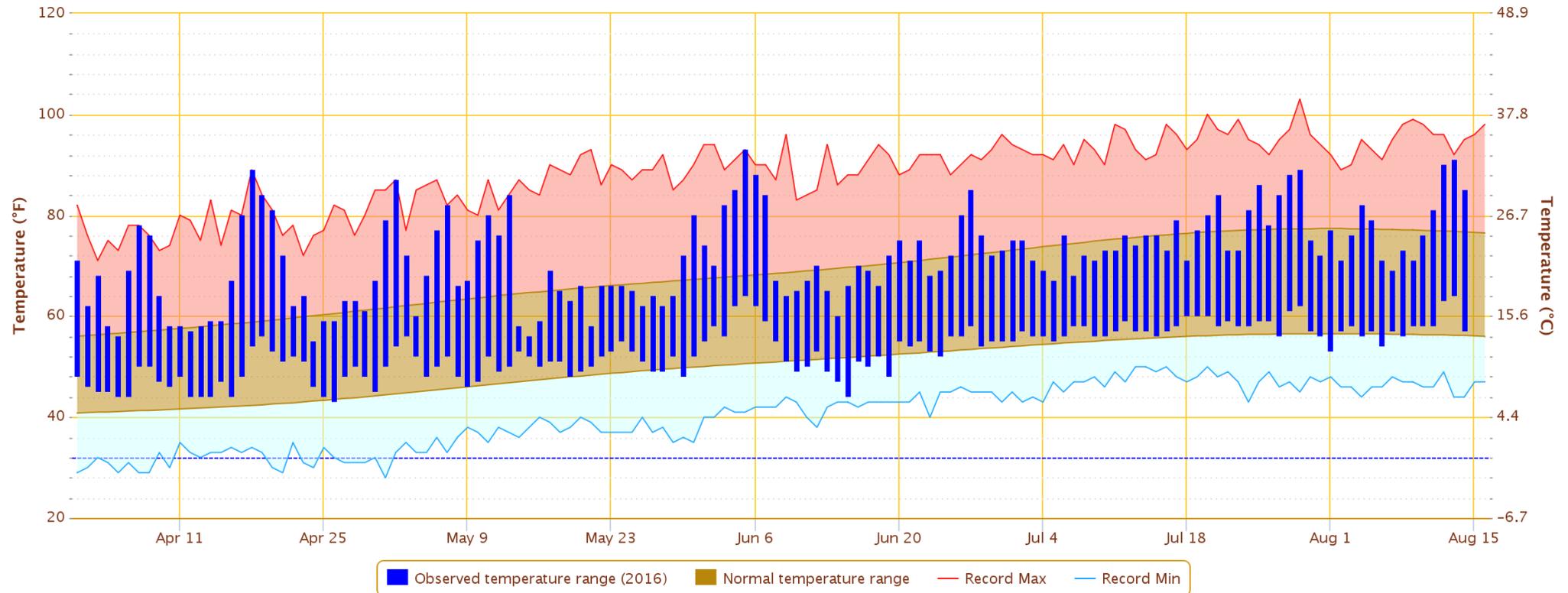
Statewide: April-July T and p



April-present Daily Temperatures at SeaTac AP

Daily Temperature Data – SEATTLE TACOMA INTL AP, WA

Period of Record – 1945-01-01 to 2016-08-14. Normals period: 1981-2010. Click and drag to zoom chart.



Seattle High Tempertures	Days 80+	Days 85+	Days 90+
2016*	24 28	9 12	1 3
2015**	51	25	12
2014	45	22	5
2013	40	15	2
2012	20	8	5
2011	21	5	0
2010	21	11	6
2009	36	21	7
Long Term Average (1945)	26	10	3

* Through Aug. 10 — 15

** 2015's totals are all current records in each category



Scott Sistik @ScottSKOMO · Aug 11

Here's the current "Summer Scoreboard" Nicest summer in 4 years but heading to a touch warmer than usual:



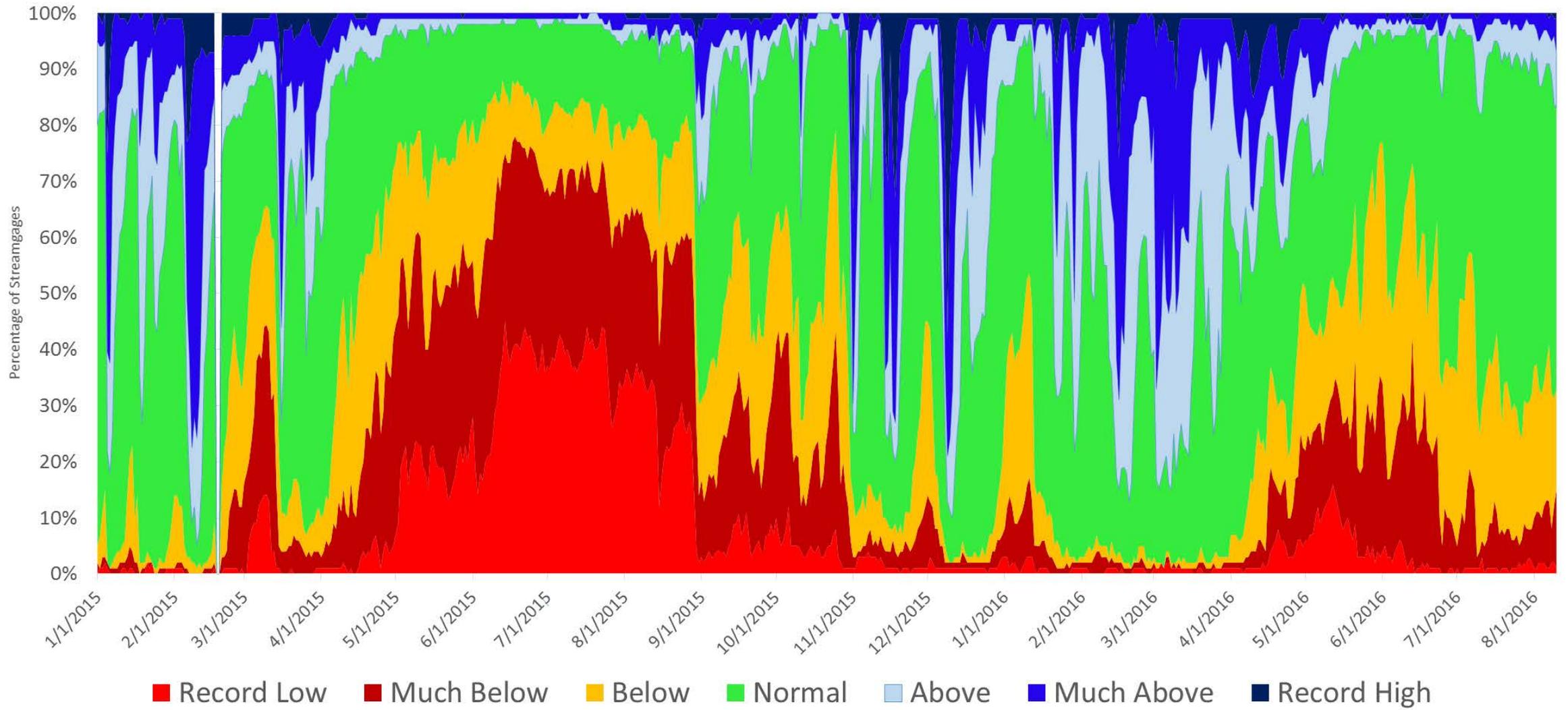
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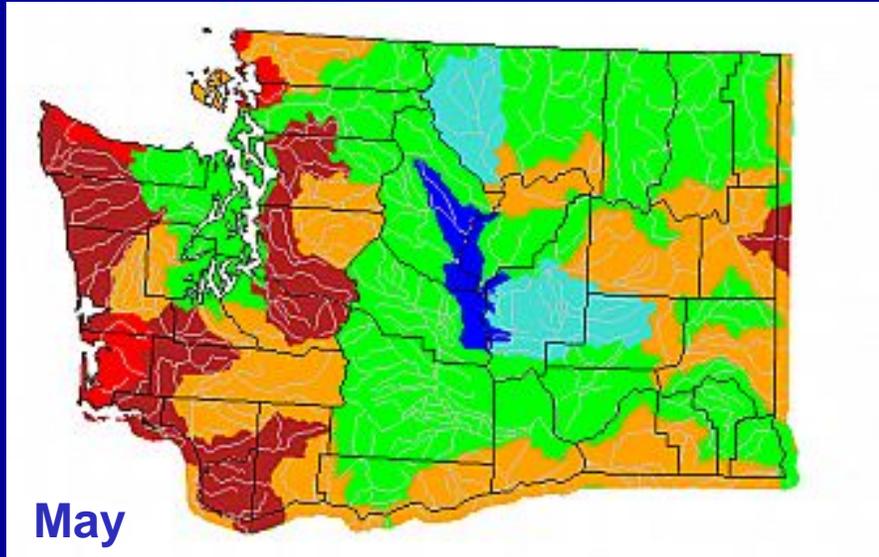
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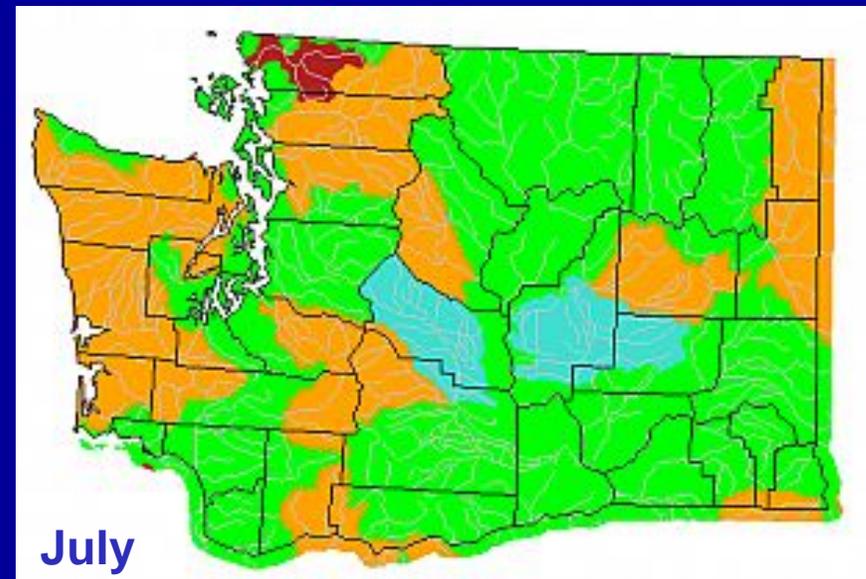
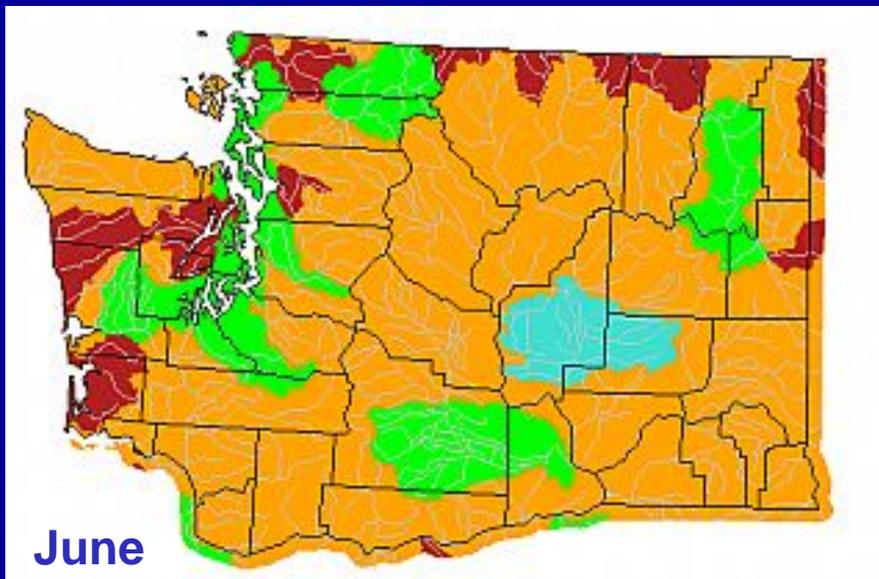
Time Series Plot Realtime Streamflow Compared to Historical Streamflow for the day of year
(Jan 2015 to current)



Average May, June, and July 2016 Streamflow

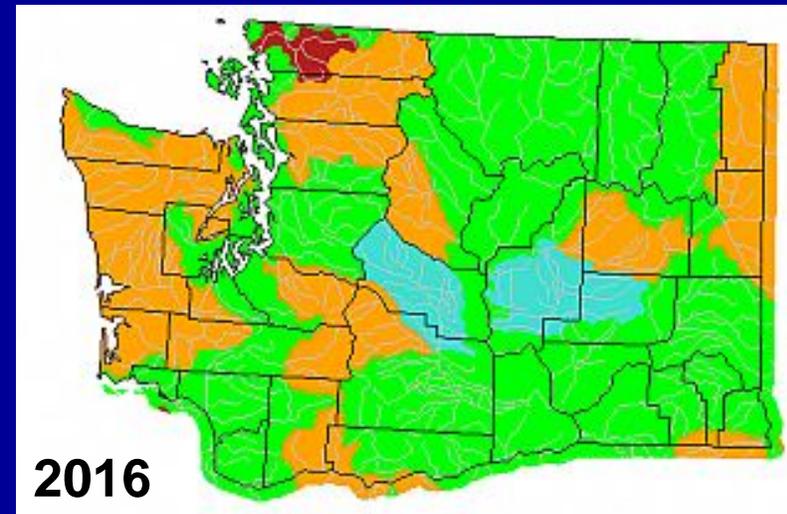
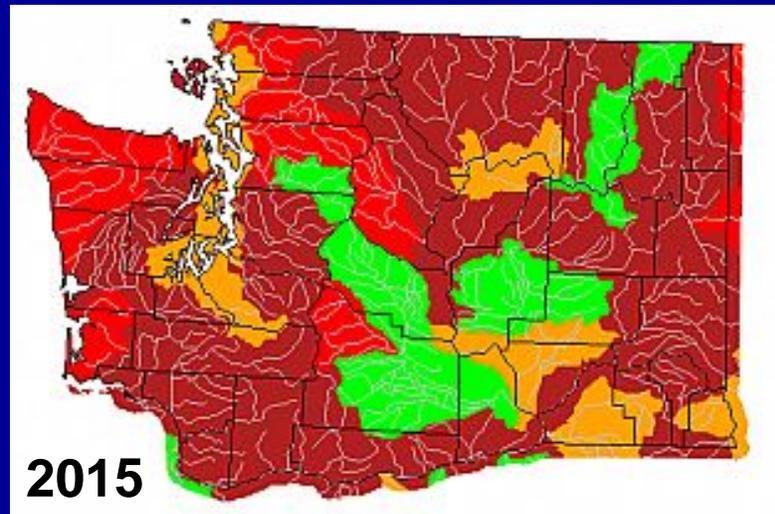
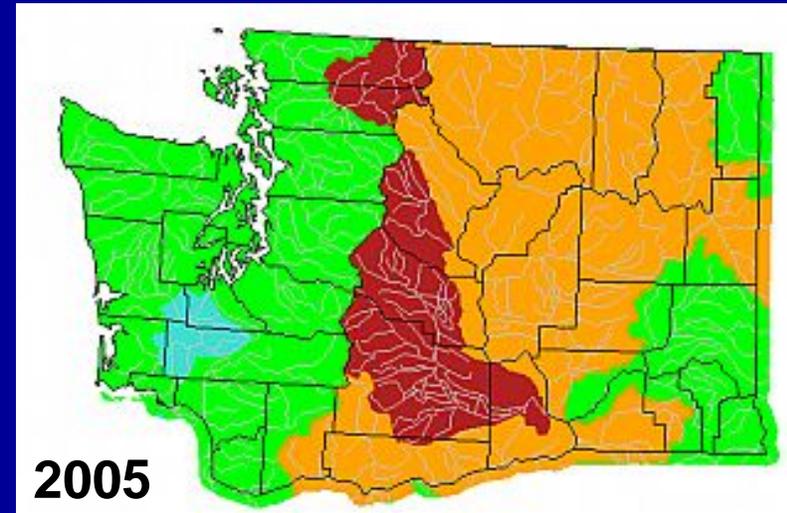
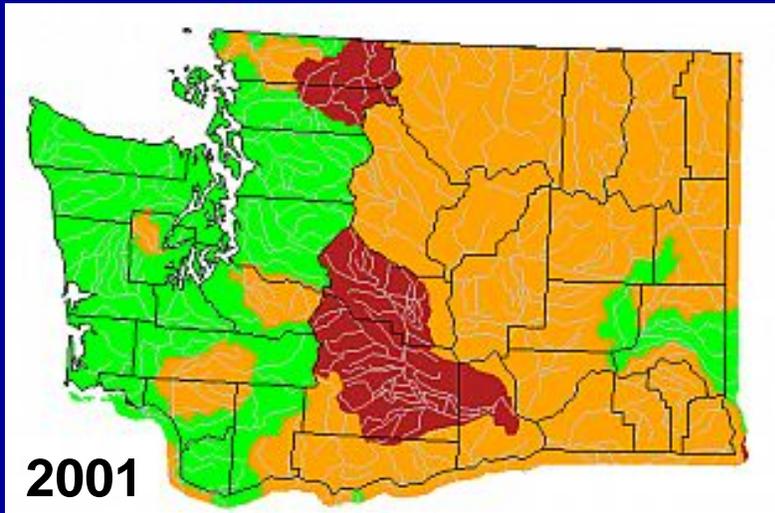


Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	
	Much below normal	Below normal	Normal	Above normal	Much above normal		



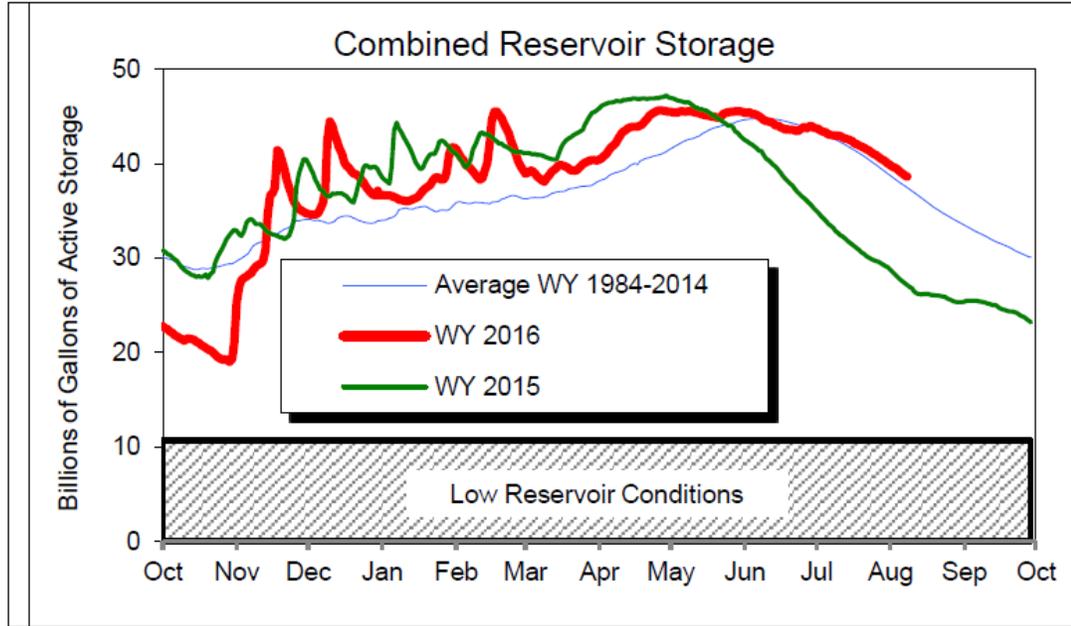
Average July 2001, 05, 15 & 16 Streamflow

(2001, 05 & 15 were years of statewide drought in Washington)

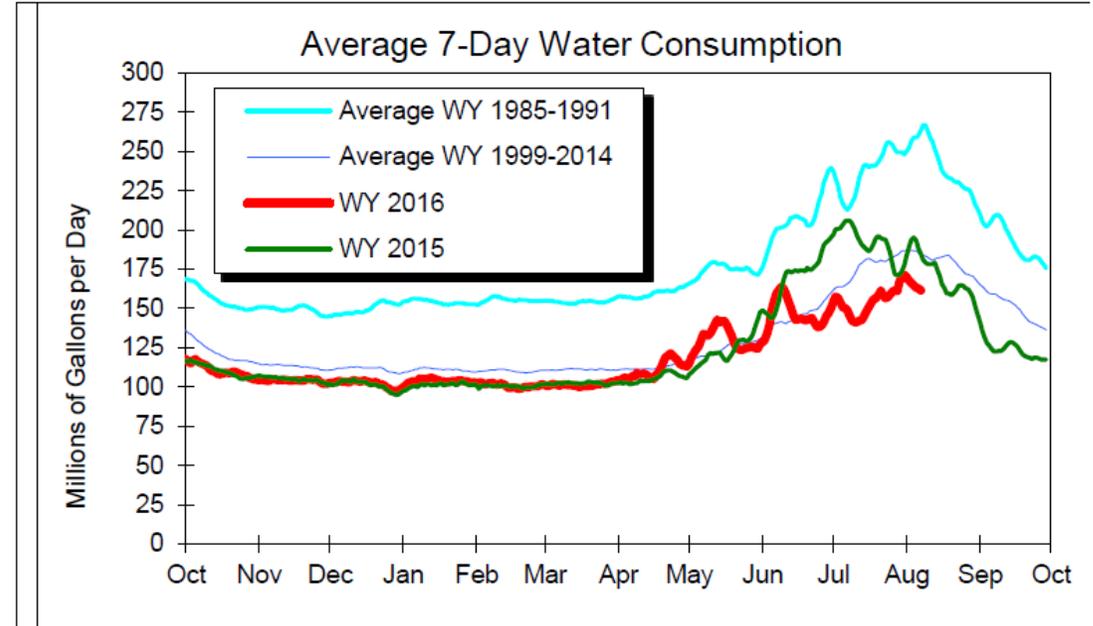


Explanation - Percentile classes

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



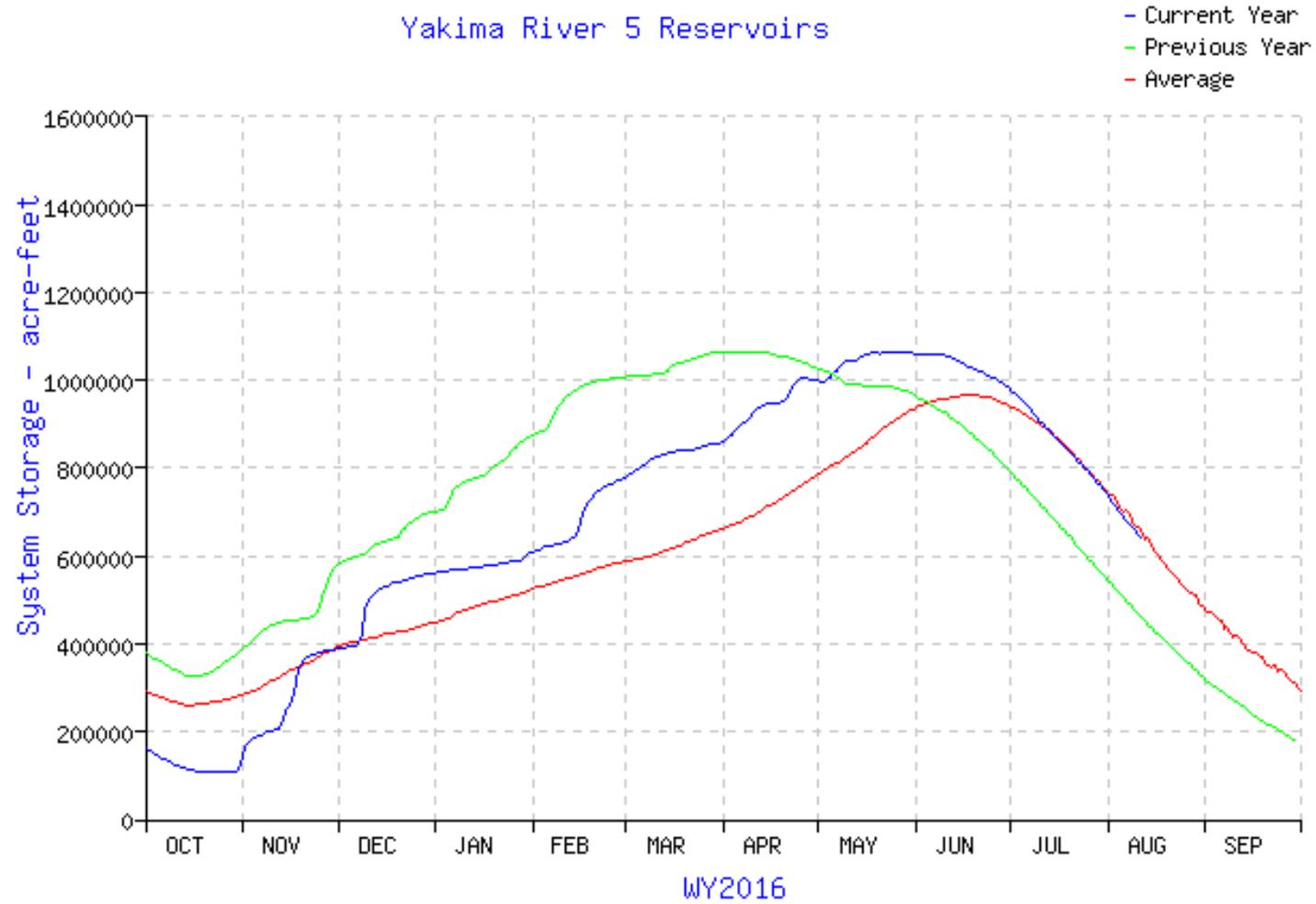
The combined reservoir storage of Chester Morse Lake, Masonry Pool, Lake Youngs and South Fork Tolt Reservoir is above the long term average for this time of the year.



Water use over the past week averaged about 161 million gallons per day (mgd), which is less than the 185 mgd used during the same period over the years 1999-2014.

All data is provisional and subject to revision.

Yakima River 5 Reservoirs



08/11/2016 05:46

Proration Level moved up to 94 percent from 90 percent last week

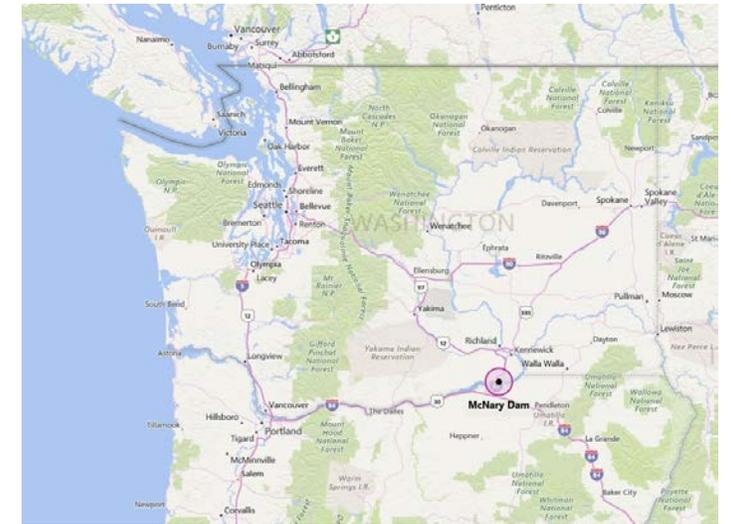
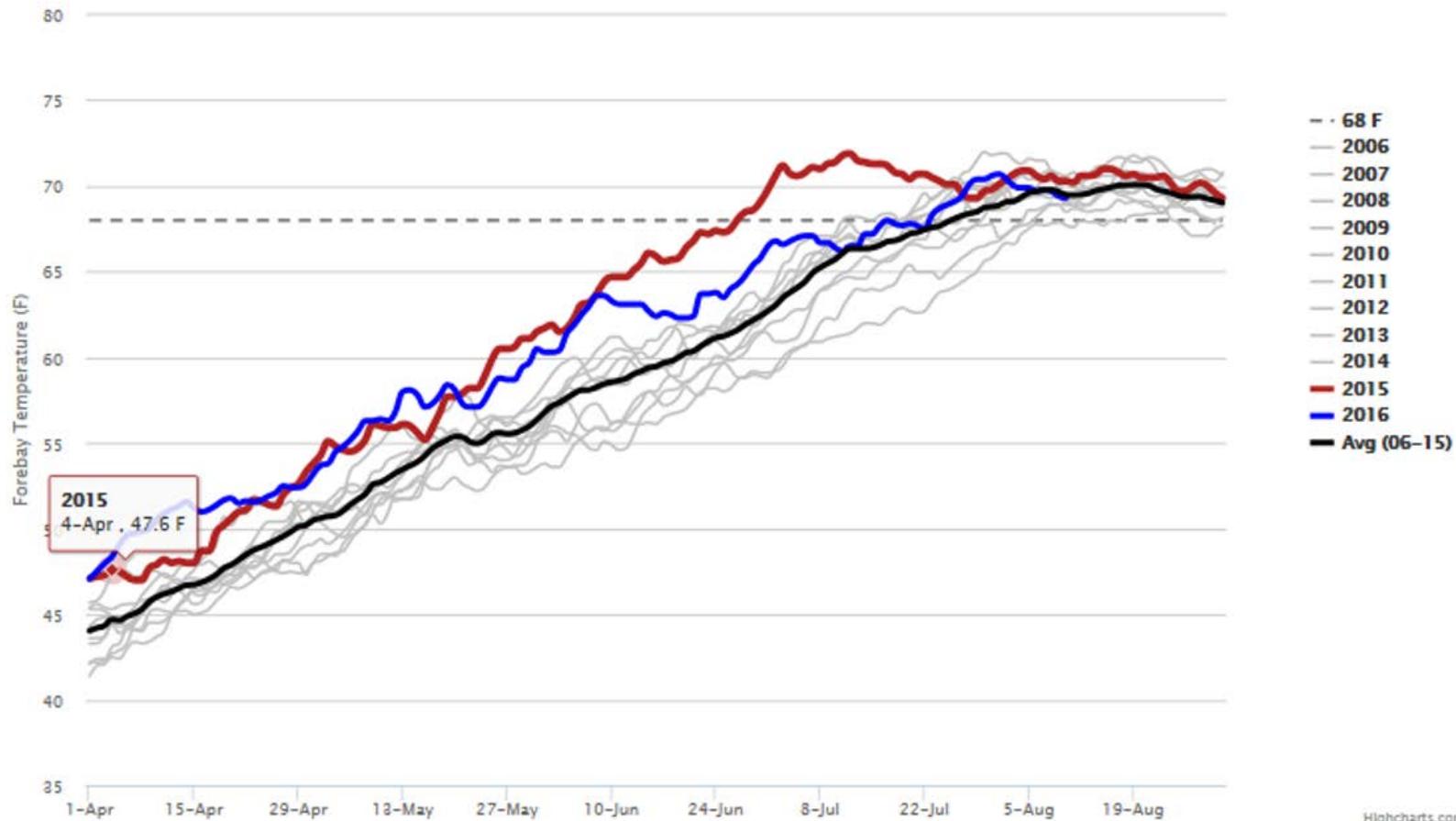


Fish Passage Center

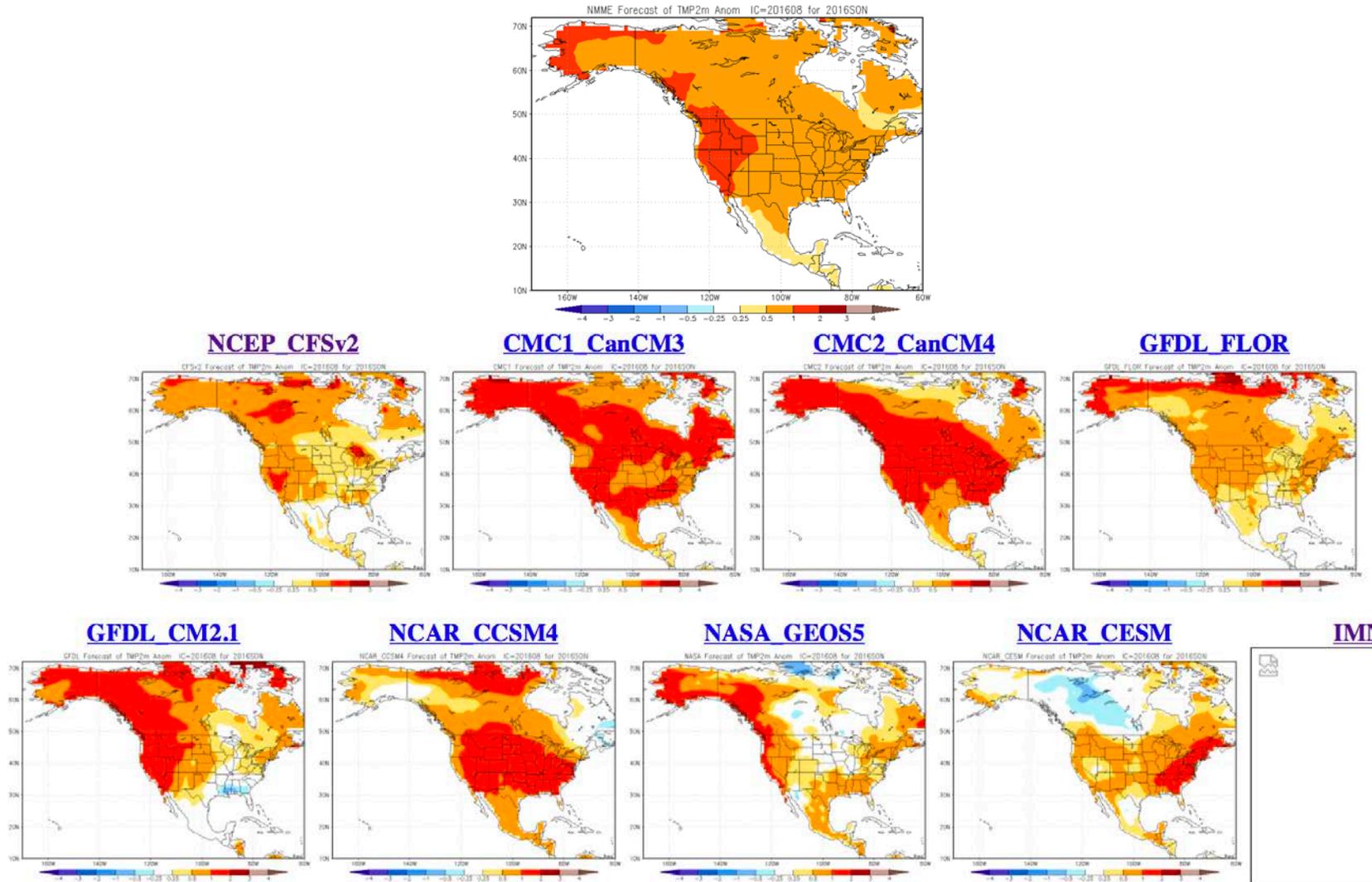


Daily Average Forebay Water Temperature

McNary Dam Forebay

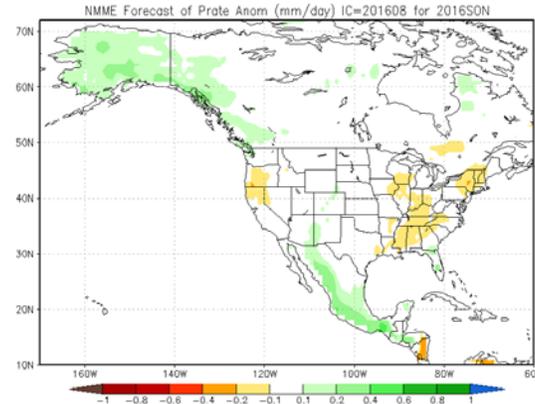


Ensemble and Individual SON Temperature Forecast

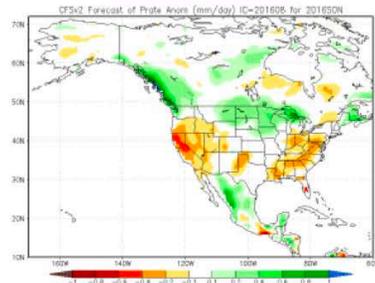


Warm from fall through winter (JFM), contrary to “typical” La Niña signal

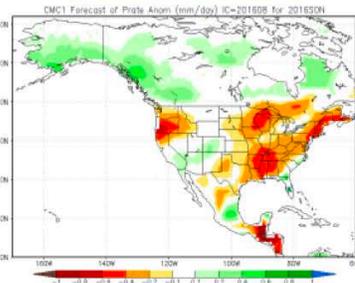
Ensemble and Individual SON Precipitation Forecast



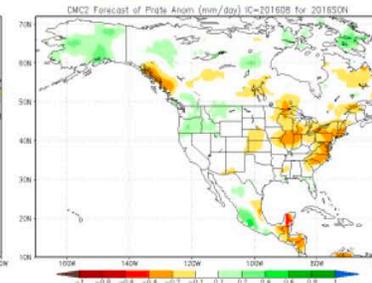
NCEP CFSv2



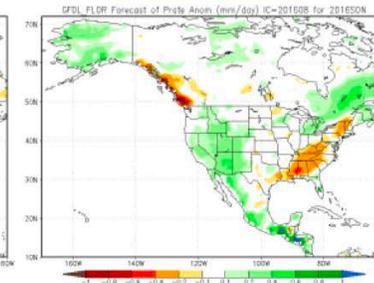
CMC1 CanCM3



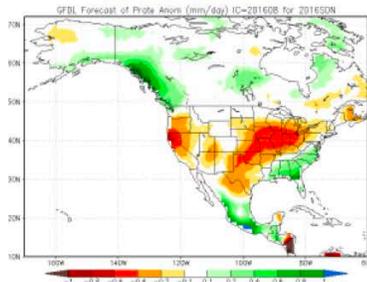
CMC2 CanCM4



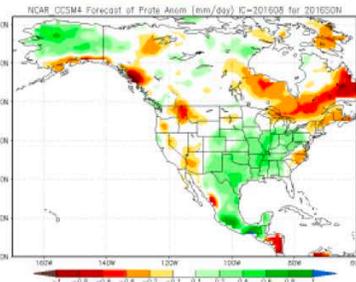
GFDL FLOR



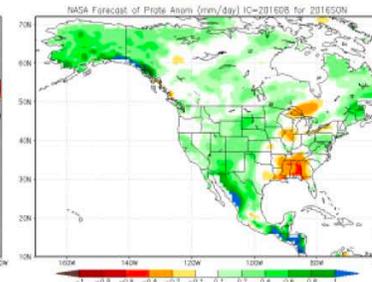
GFDL CM2.1



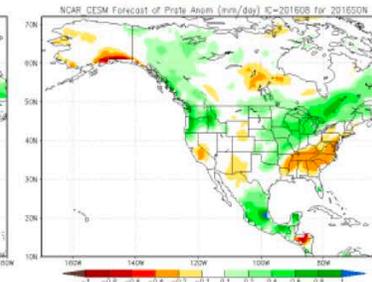
NCAR CCSM4



NASA GEOS5



NCAR CESM



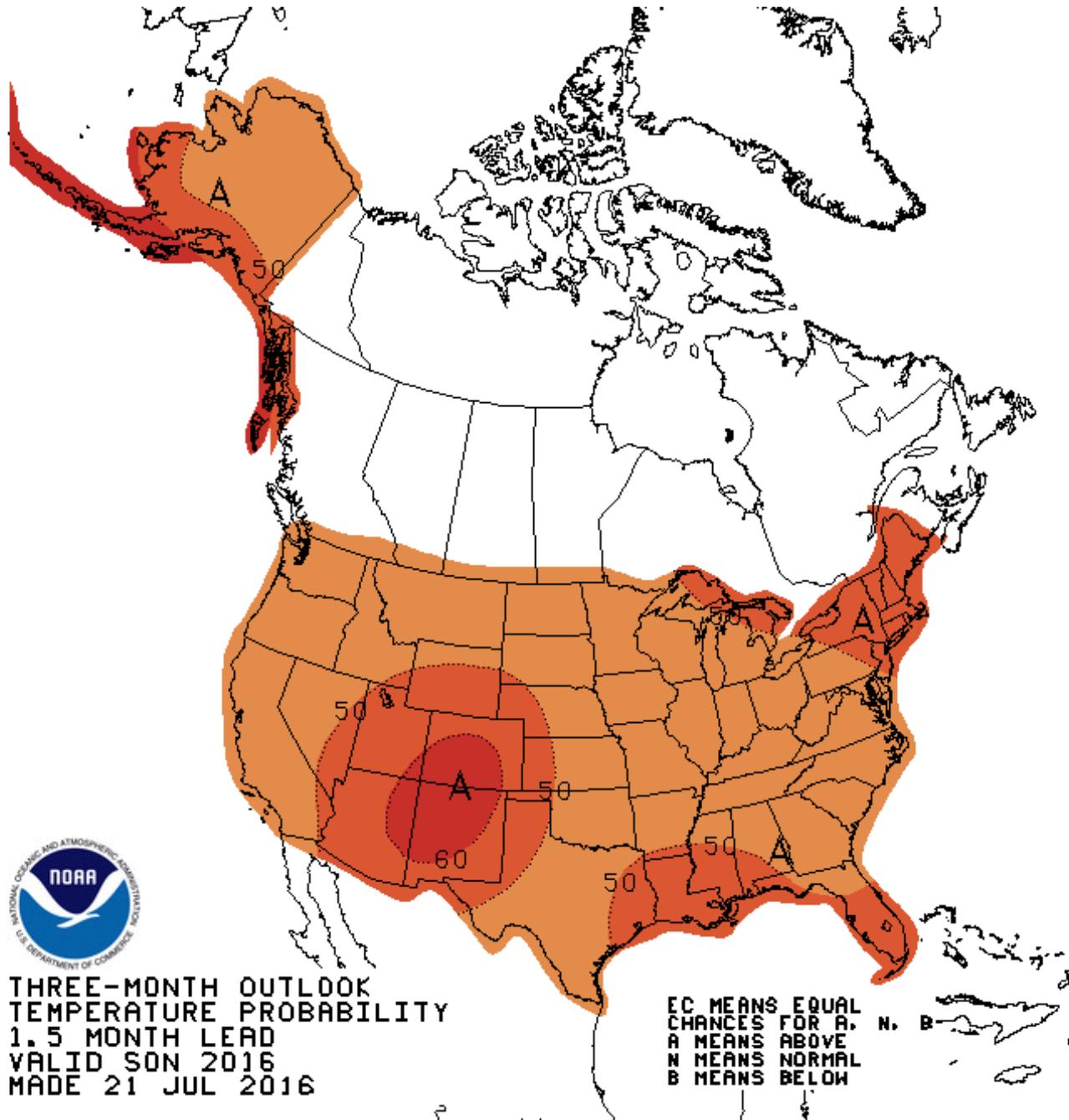
IMV



More wet than dry through winter (JFM)



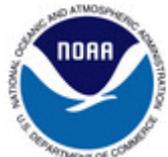
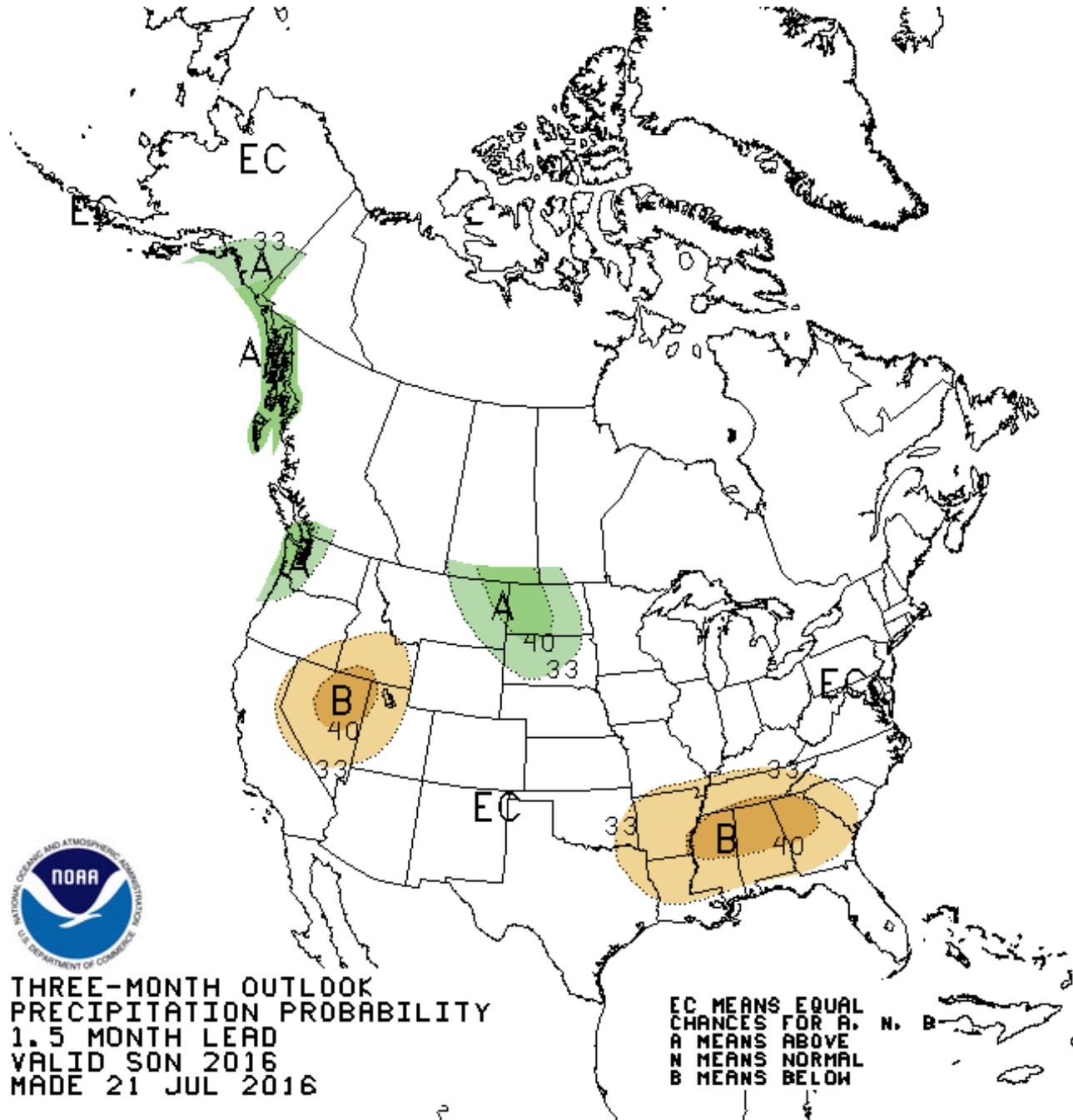
Official CPC Temperature Forecast (SON)



THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
1.5 MONTH LEAD
VALID SON 2016
MADE 21 JUL 2016

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

Official CPC Precipitation Forecast (SON)

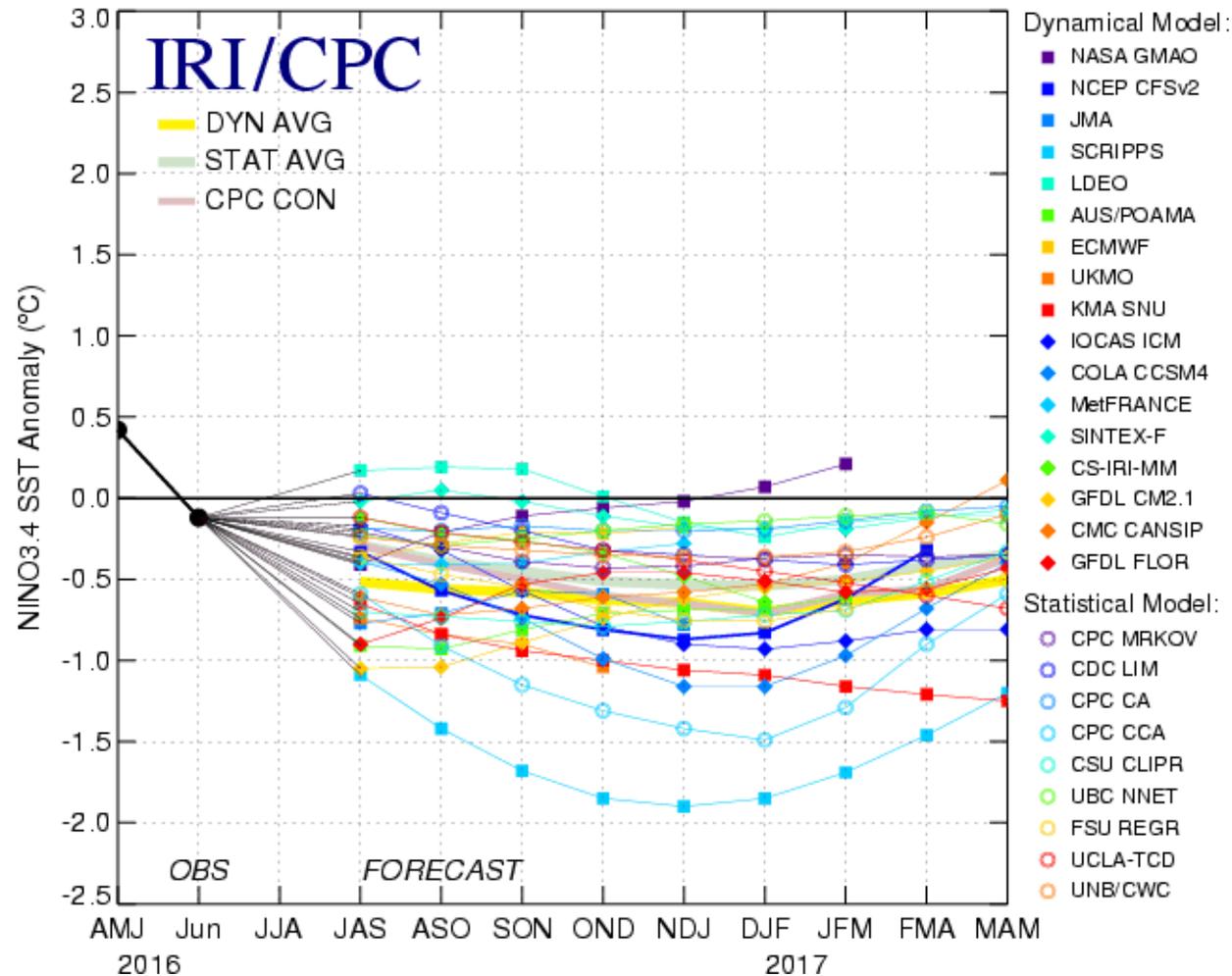


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
1.5 MONTH LEAD
VALID SON 2016
MADE 21 JUL 2016

EC MEANS EQUAL
CHANCES FOR A. N. B.
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

ENSO Forecast

Mid-Jul 2016 Plume of Model ENSO Predictions



- Consensus forecast: weak La Niña

What is happening with respect to ENSO?

