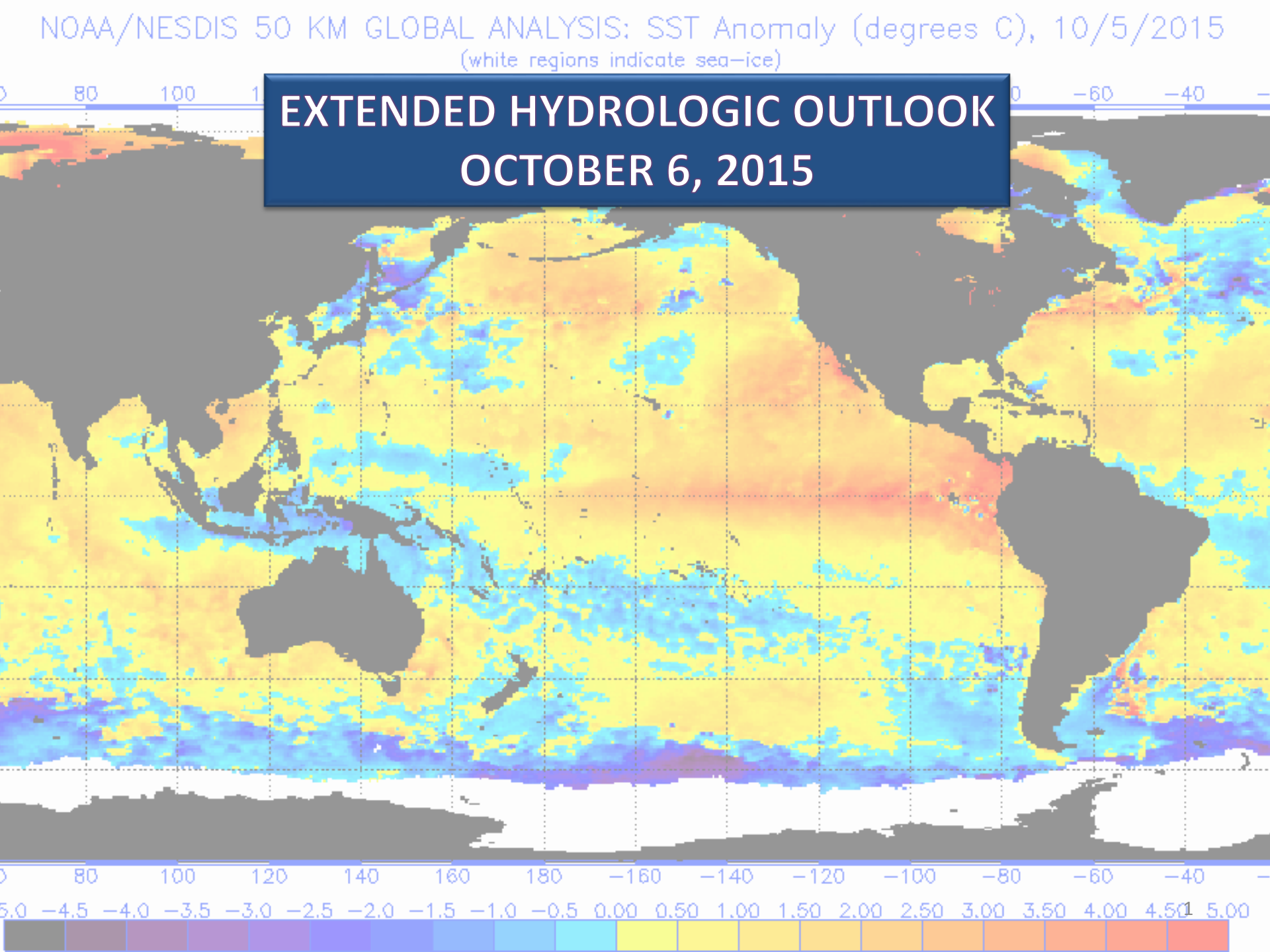

NOAA/NESDIS 50 KM GLOBAL ANALYSIS: SST Anomaly (degrees C), 10/5/2015
(white regions indicate sea-ice)
EXTENDED HYDROLOGIC OUTLOOK
OCTOBER 6, 2015
80 100 120 140 160 180 −160 −140 −120 −100 −80 −60 −40
−5.0 −4.5 −4.0 −3.5 −3.0 −2.5 −2.0 −1.5 −1.0 −0.5 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00

Summary

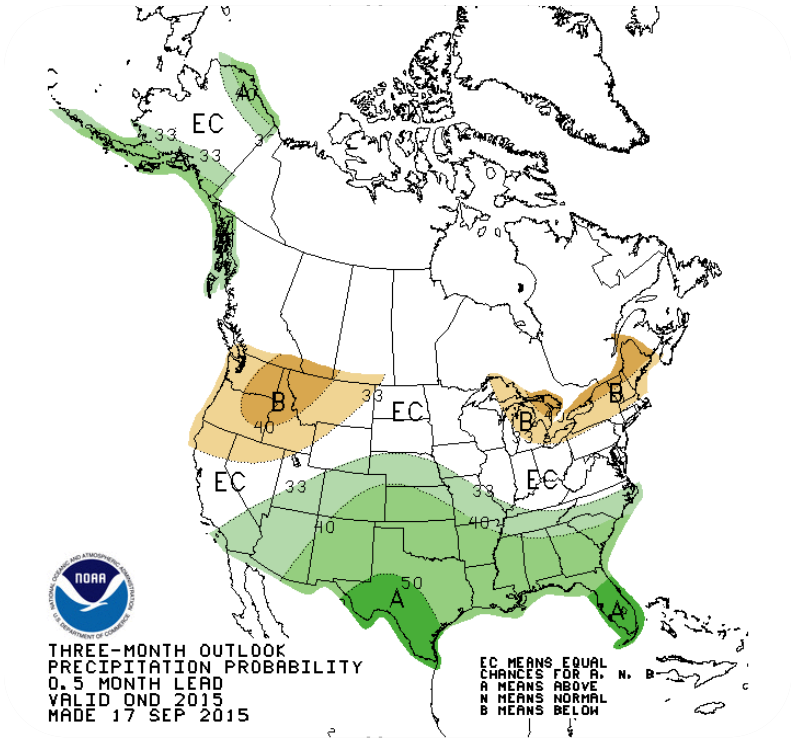
- The Climate Prediction Center (CPC) is forecasting above-normal rainfall for October through December. Historically, October has been a dry month during strong El Niño years.
- El Niño conditions are present. A moderate to strong El Niño is likely to persist into early 2016 and to weaken through spring 2016. There are increased chances of above normal rainfall for the 2015-2016 dry season.
- The Atlantic Multidecadal Oscillation (AMO) may be entering the cold (negative) phase, which creates the potential for drier conditions (~10% less rainfall) in south Florida for the 2016 wet season.
- The current switch from the negative phase to a strong positive phase of the Pacific Decadal Oscillation increases the potential for above normal rainfall in the winter and a greater number of El Niño events for multi-year periods.

U. S. Seasonal Outlooks

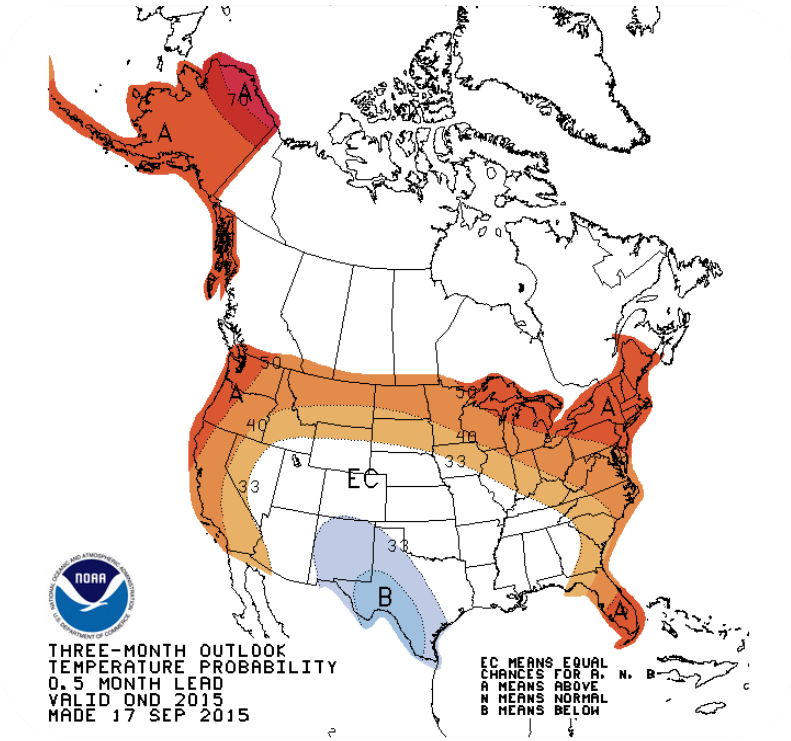
October - December 2015

The seasonal outlooks combine the effects of long-term trends, soil moisture, and, when appropriate, ENSO.

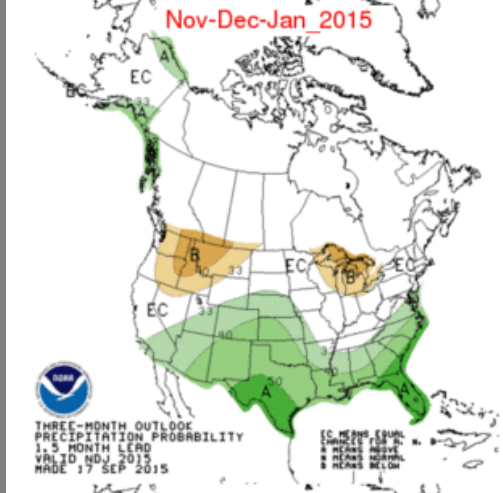
Precipitation

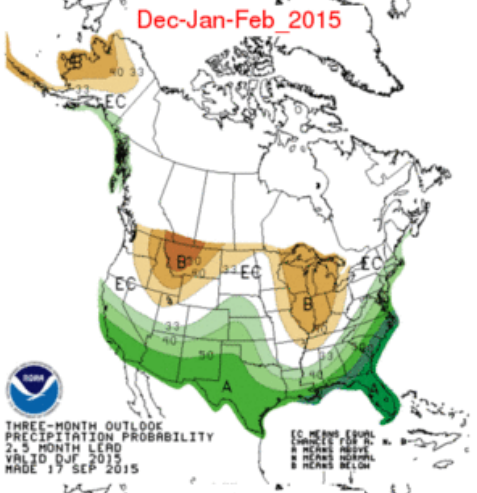


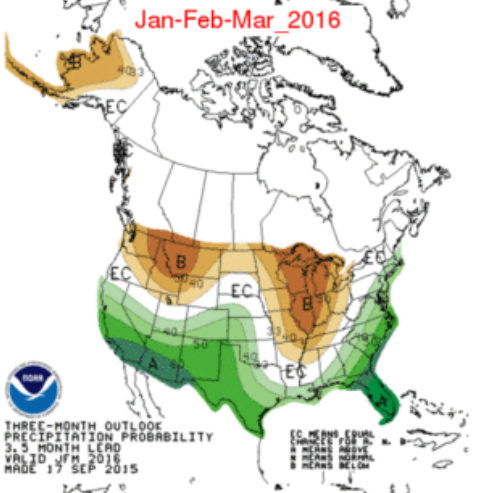
Temperature

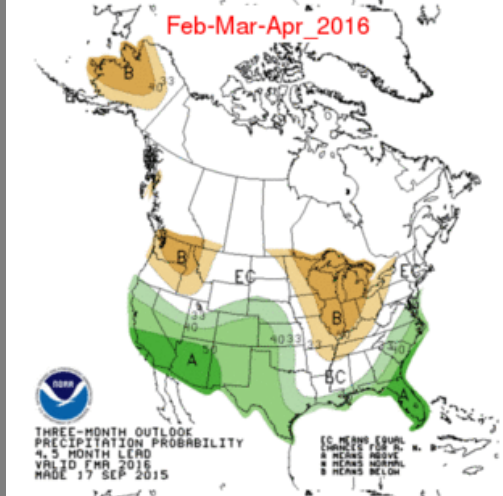


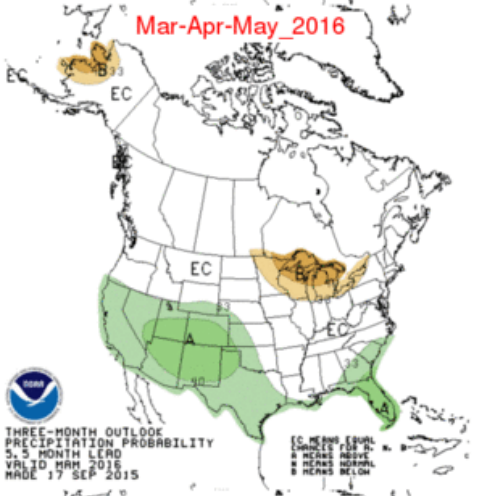
Prepared by: Climate Prediction Center / NCEP

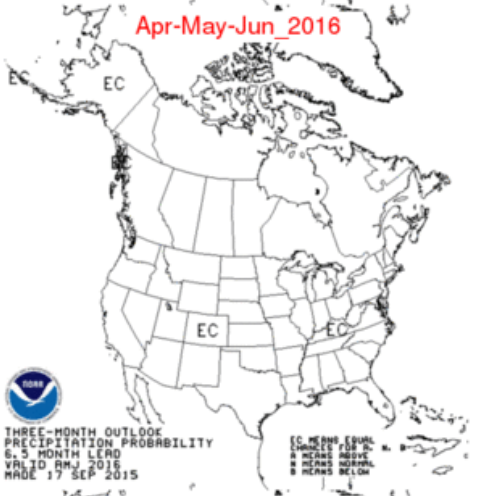


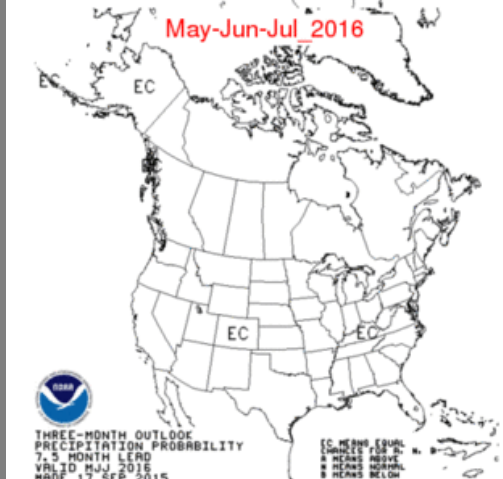


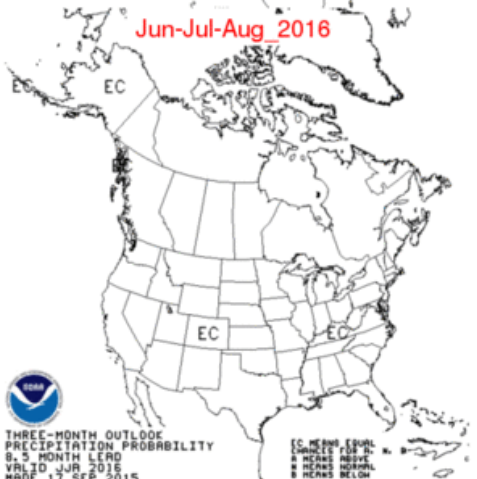


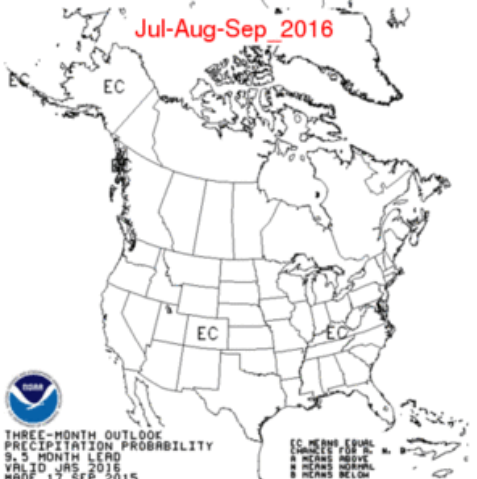






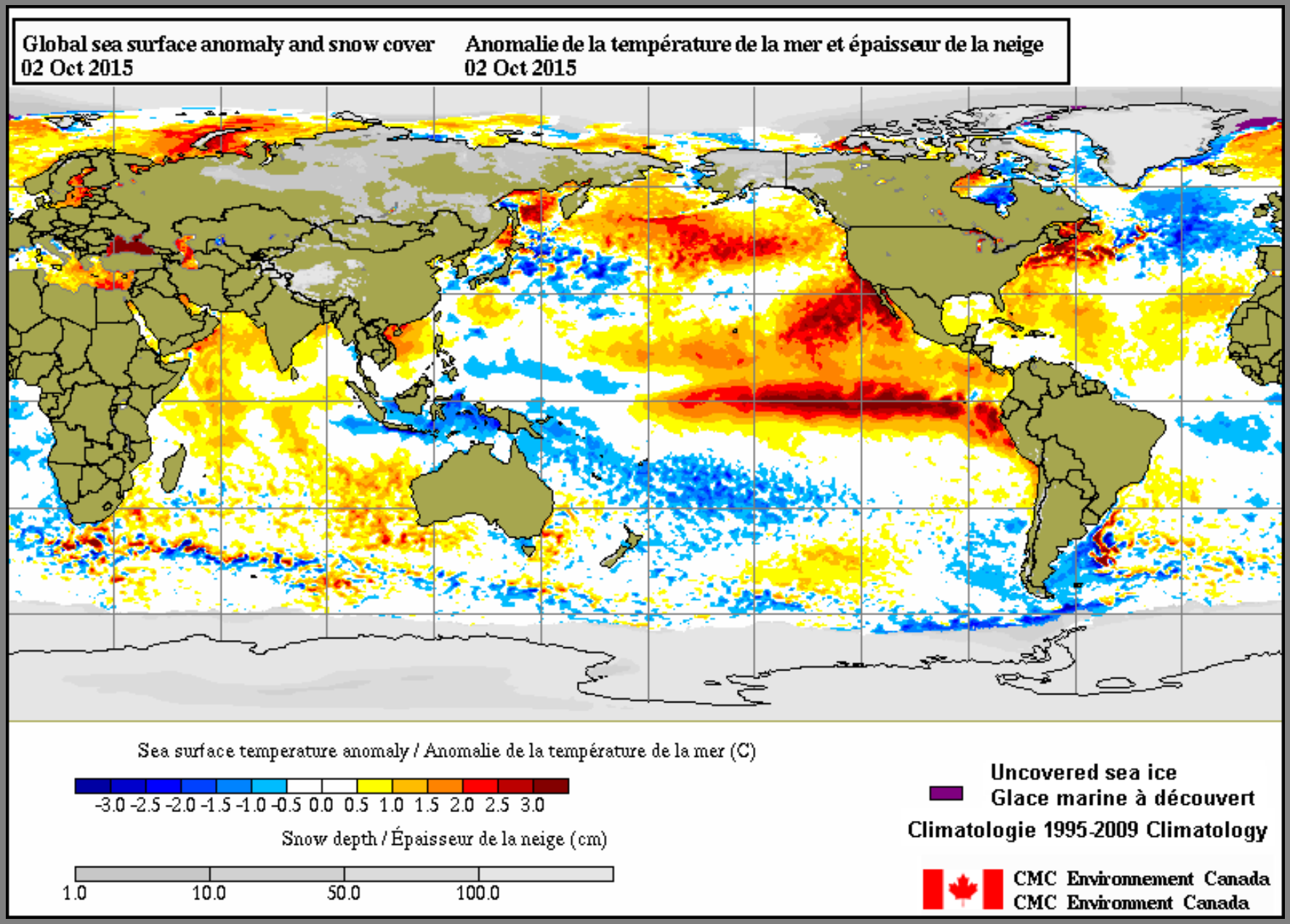






Prepared by: Climate Prediction Center / NCEP

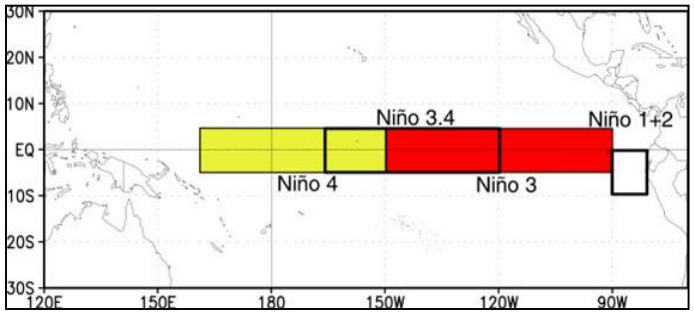
Current Global Sea Surface Temperature Anomalies

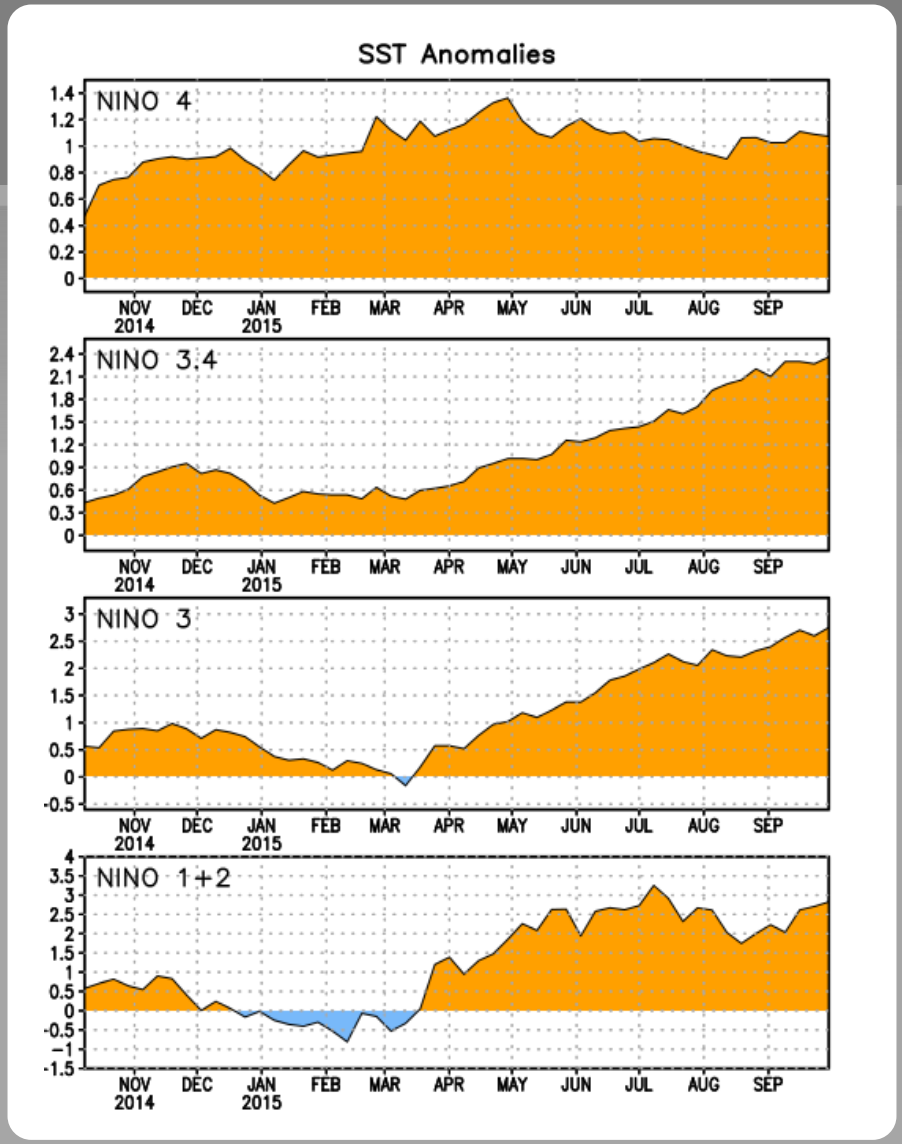


Niño Region SST Departures (ºC) Recent Evolution

The latest weekly SST departures are:

Niño 4	1.1ºC
Niño 3.4	2.4ºC
Niño 3	2.8ºC
Niño 1+2	2.8ºC



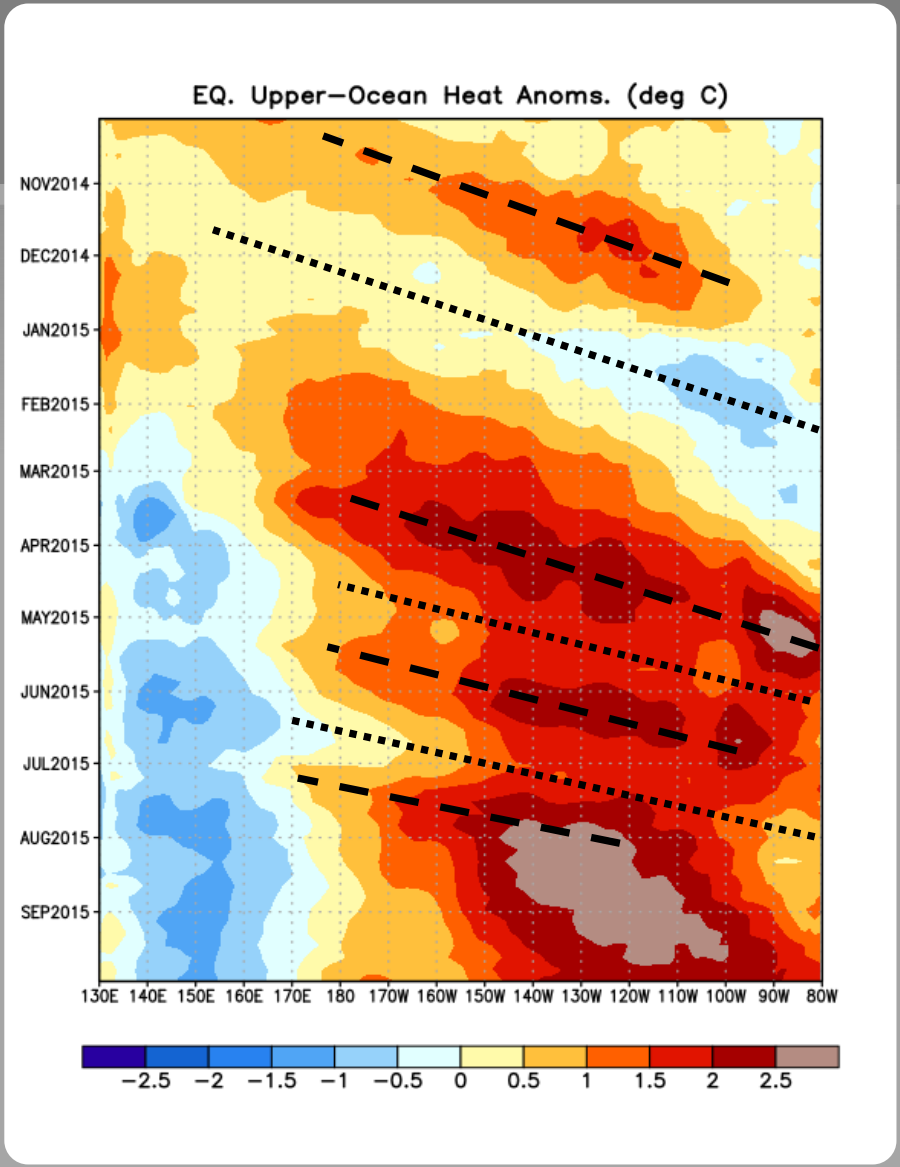


Prepared by: Climate Prediction Center / NCEP

Weekly Heat Content Evolution in the Equatorial Pacific

Downwelling phases of a Kelvin wave were observed in March-April, mid-May to late June, and July to August.

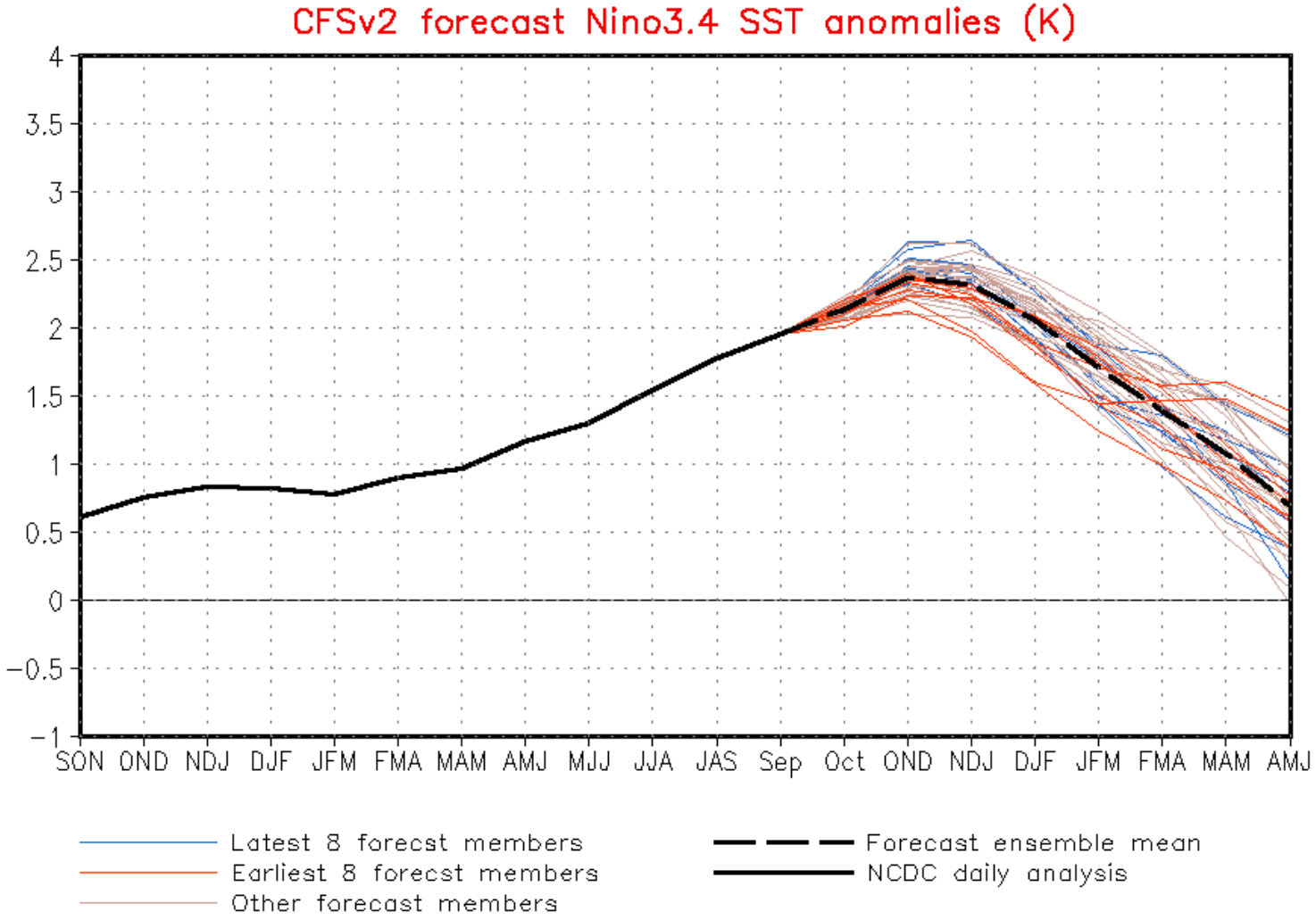
Recently, positive subsurface temperature anomalies have slowly shifted eastward.



Oceanic Kelvin waves have alternating warm and cold phases. The warm phase is indicated by dashed lines. Down-welling and warming occur in the leading portion of a Kelvin wave, and up-welling and cooling occur in the trailing portion.

NWS/NCEP/CPC

Last update: Mon Oct 5 2015
Initial conditions: 24Sep2015–30Oct2015



IRI/CPC Pacific Niño 3.4 SST Model Outlook

Most models indicate that Niño 3.4 will be above +1.5°C (a "strong" El Niño) during late 2015 into early 2016.

Positive anomalies are predicted to weaken through the Northern Hemisphere Spring 2016.

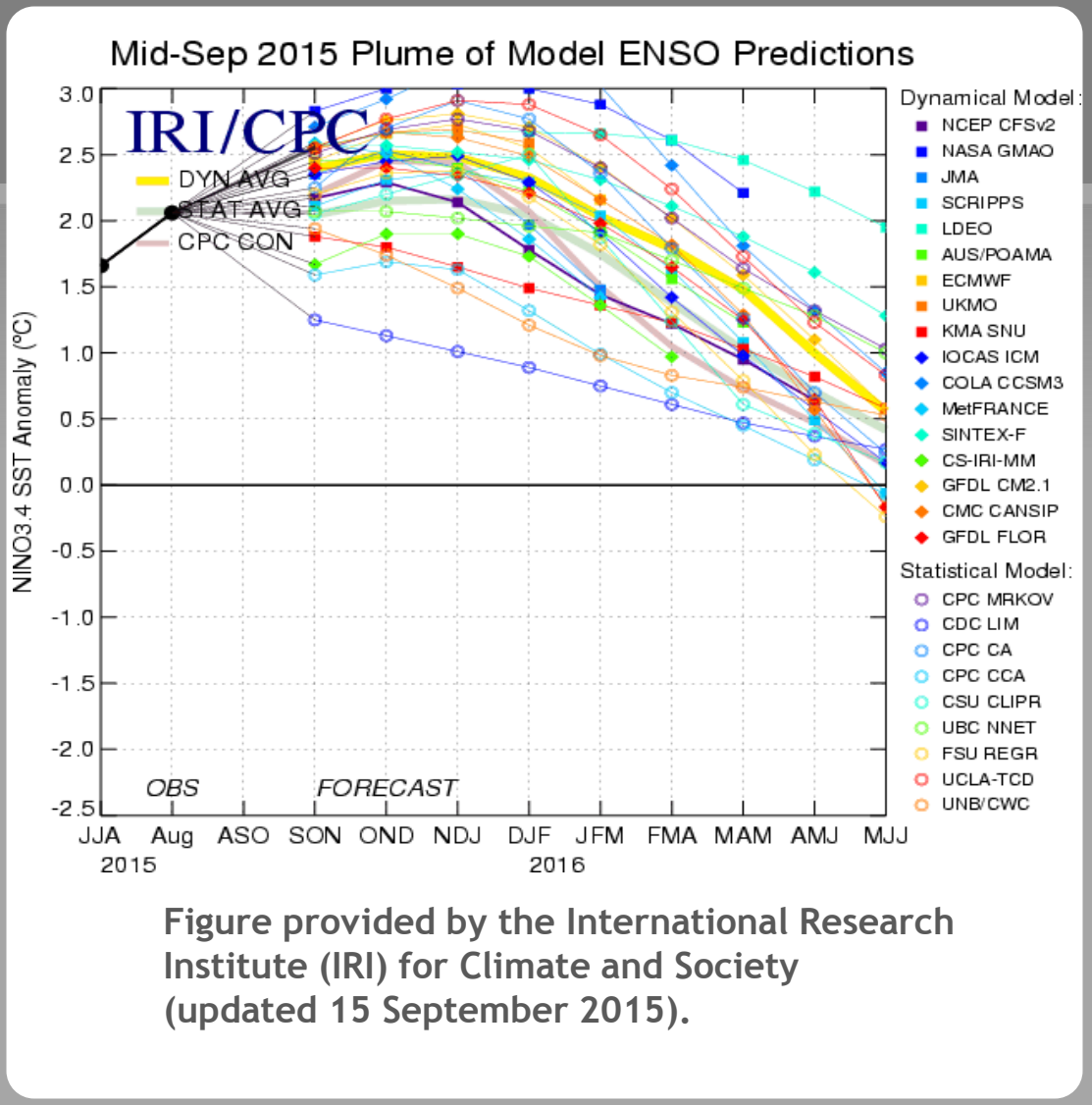


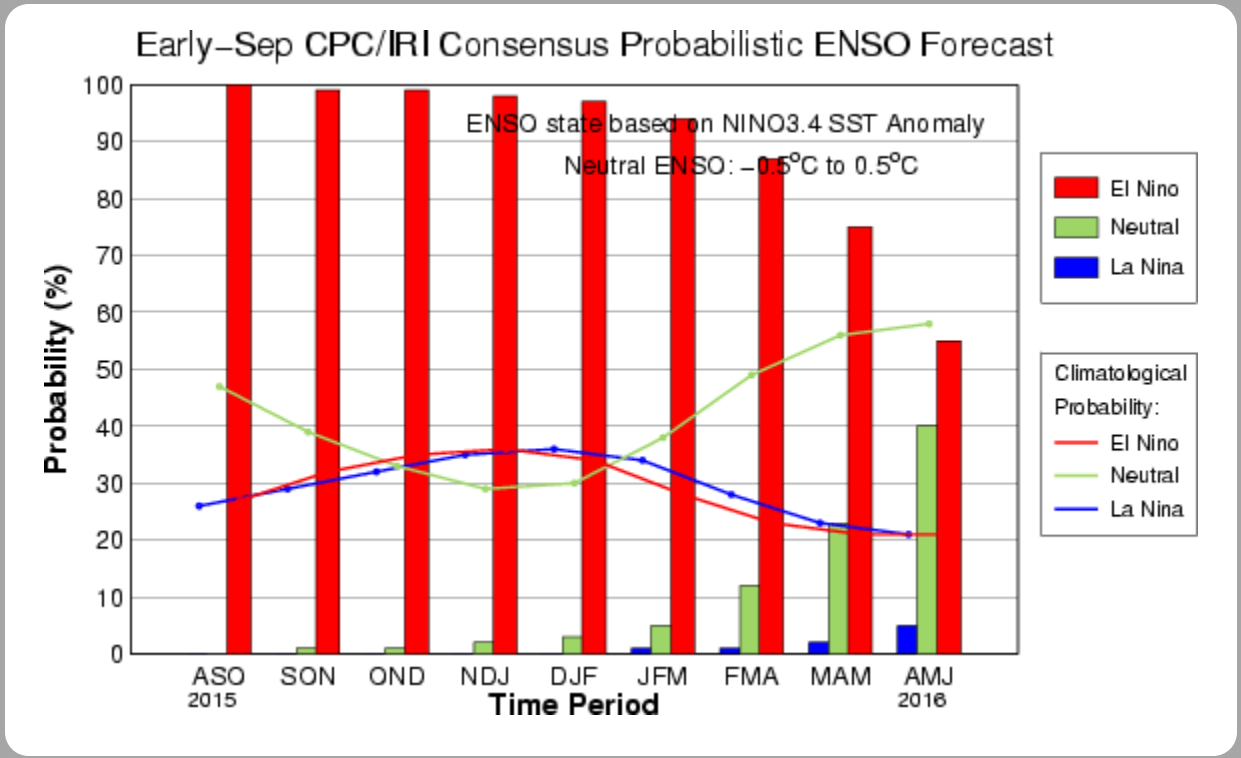
Figure provided by the International Research Institute (IRI) for Climate and Society (updated 15 September 2015).

Prepared by: Climate Prediction Center / NCEP

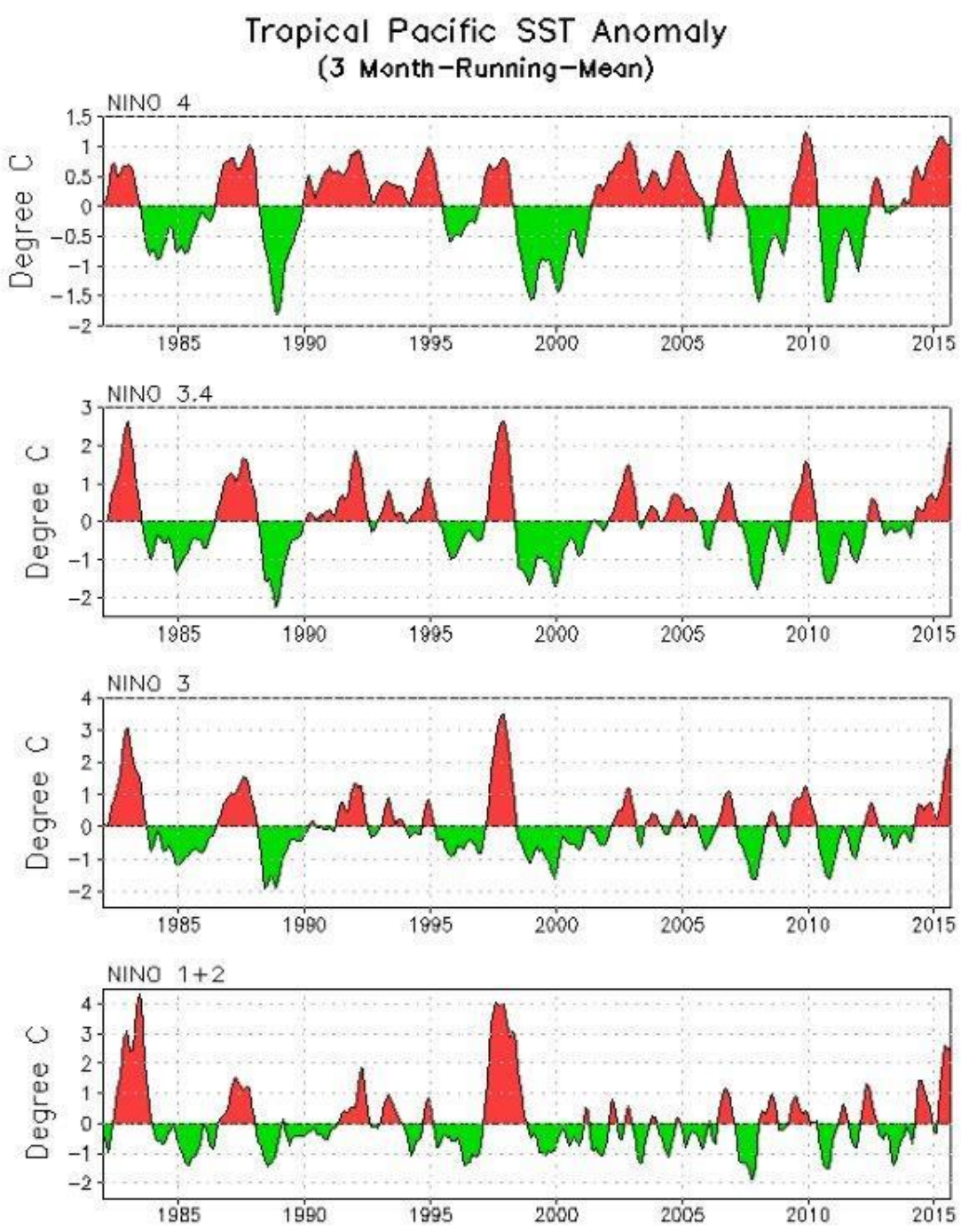
CPC/IRI Probabilistic ENSO Outlook

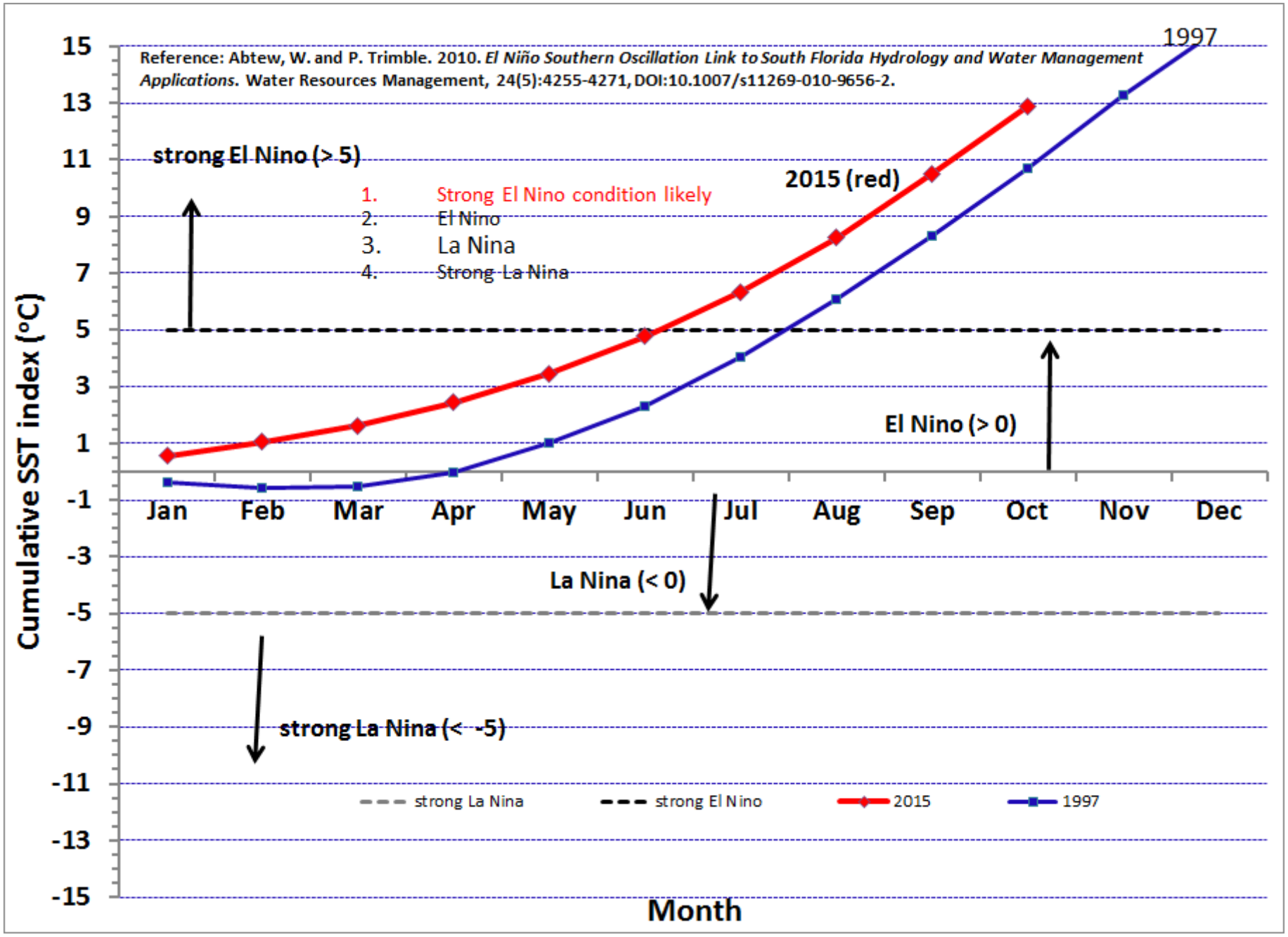
Updated: 10 September 2015

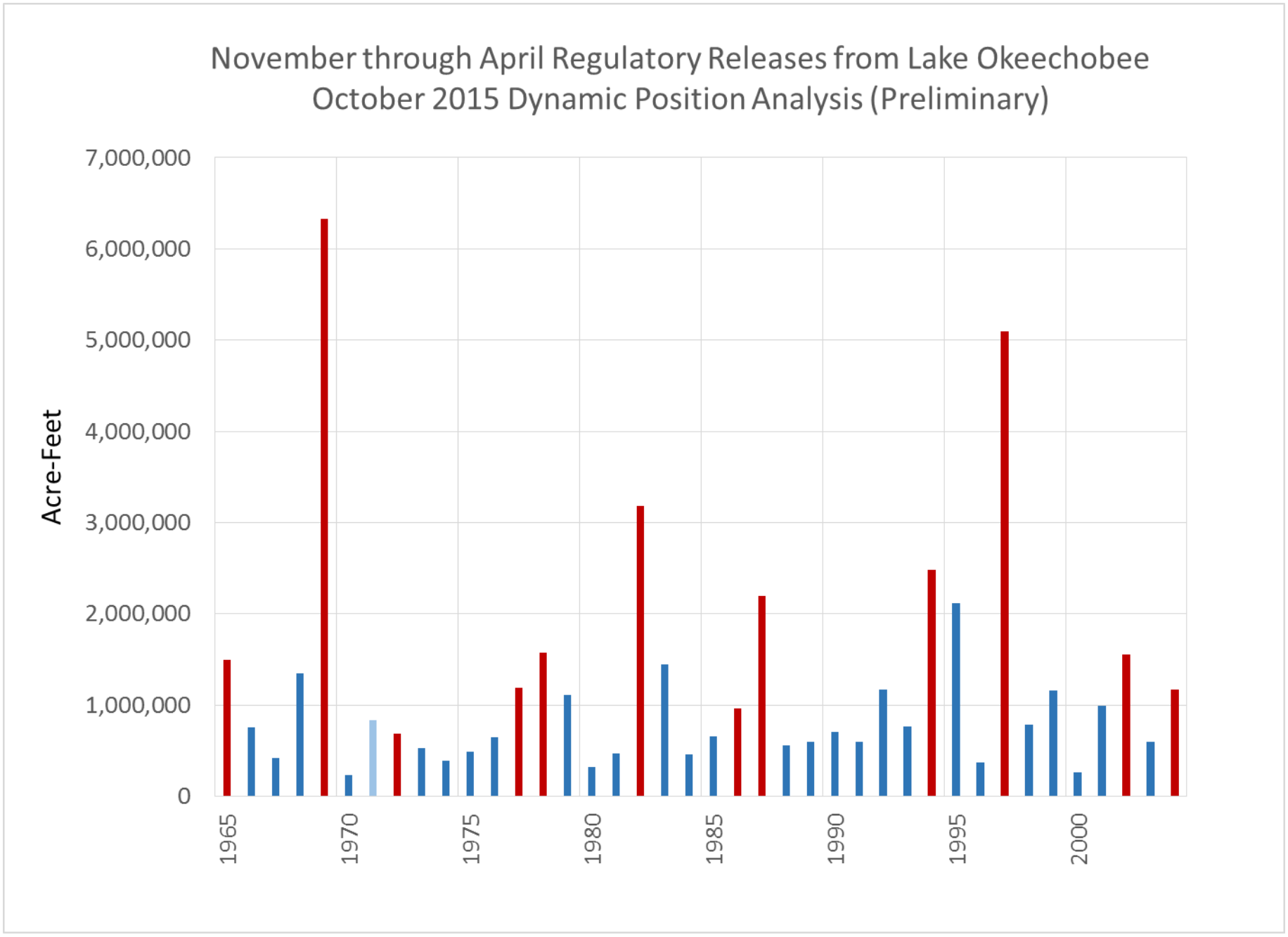
The chance of El Niño is approximately 95% through Northern Hemisphere winter and is near 55% by the late spring (AMJ) 2016.

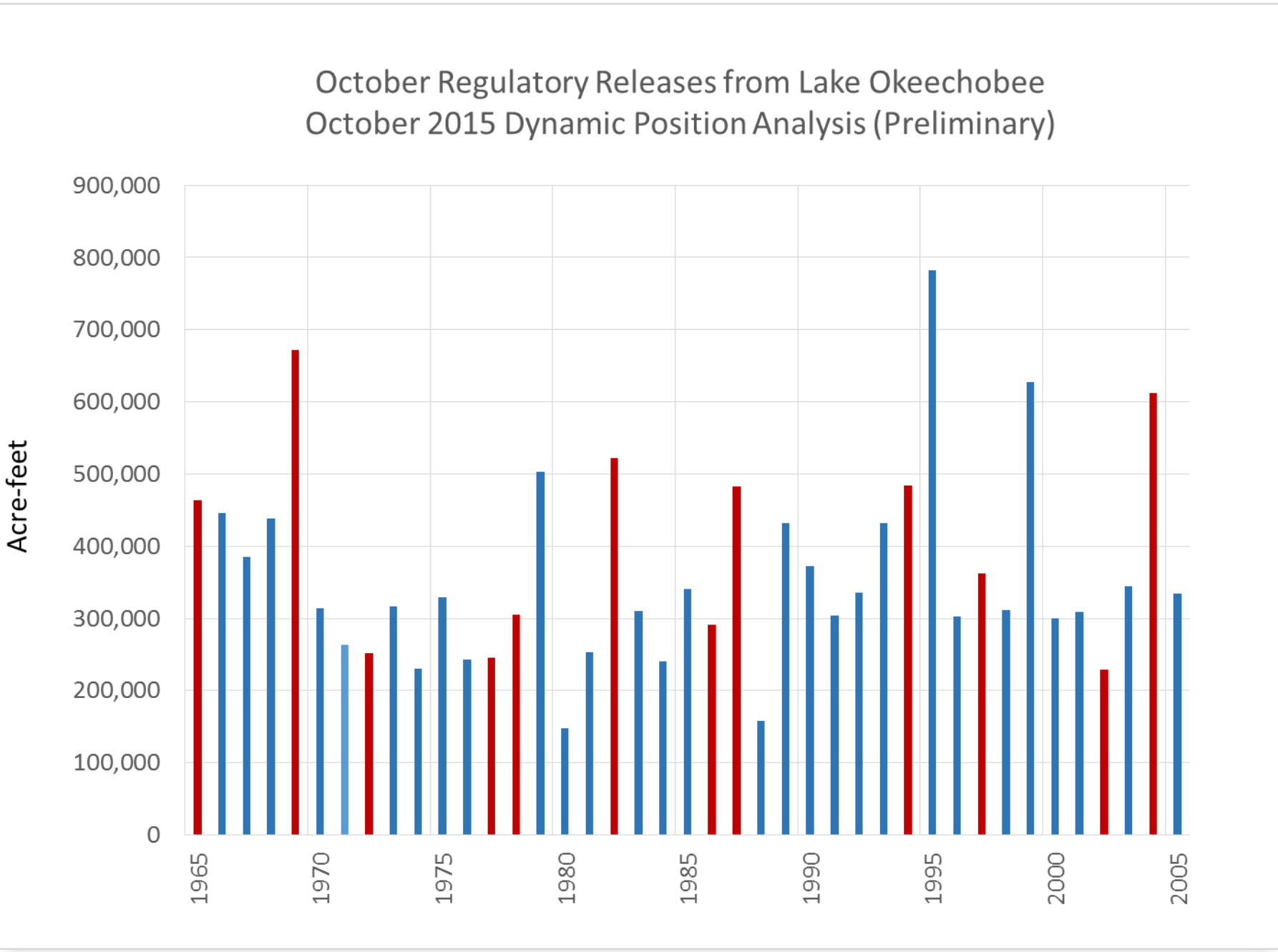


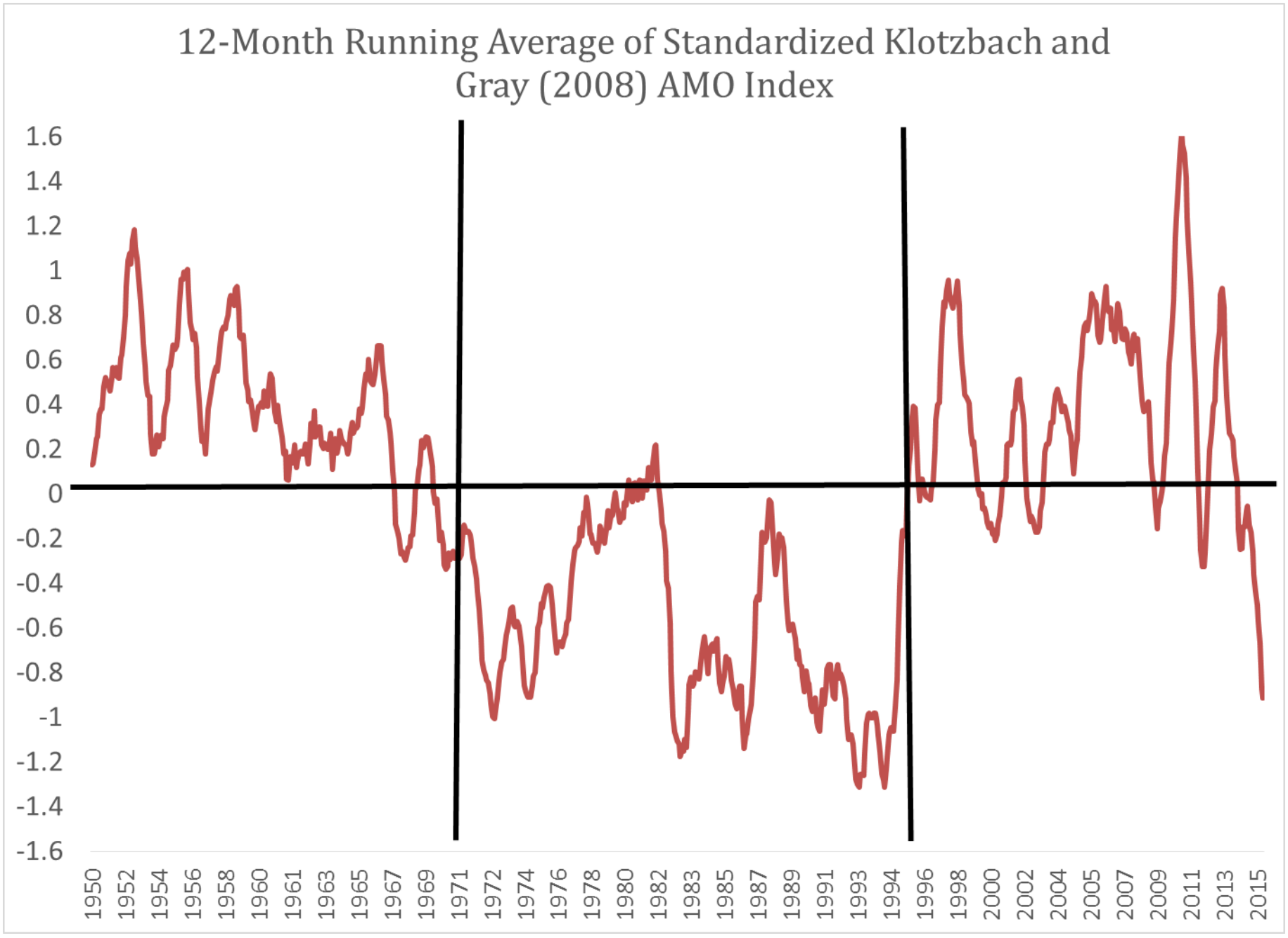
Prepared by: Climate Prediction Center / IRI

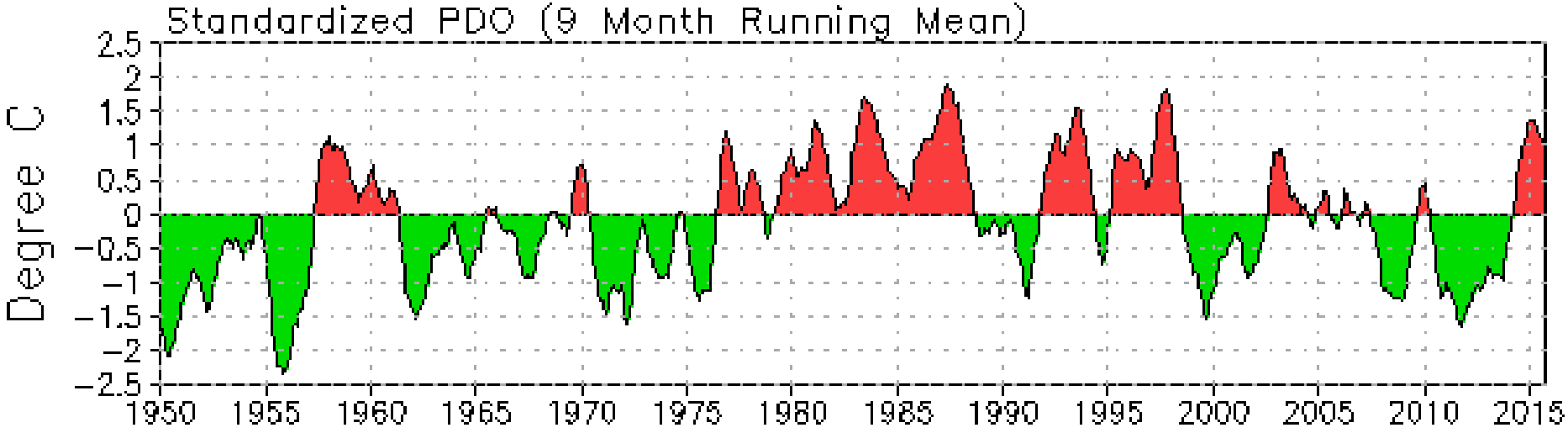

Tropical Pacific SST Anomaly
(3 Month-Running-Mean)
NINO 4
NINO 3.4
NINO 3
NINO 1+2
Degree C
1985
1990
1995
2000
2005
2010
2015


Reference: Abtew, W. and P. Trimble. 2010. El Niño Southern Oscillation Link to South Florida Hydrology and Water Management Applications. Water Resources Management, 24(5):4255-4271, DOI:10.1007/s11269-010-9656-2.
1997
strong El Nino (> 5)
2015 (red)
1. Strong El Nino condition likely
2. El Nino
3. La Nina
4. Strong La Nina
El Nino (> 0)
La Nina (< 0)
strong La Nina (< -5)
Cumulative SST index (°C)
15
13
11
9
7
5
3
1
-1
-3
-5
-7
-9
-11
-13
-15
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
strong La Nina
strong El Nino
2015
1997


November through April Regulatory Releases from Lake Okeechobee
October 2015 Dynamic Position Analysis (Preliminary)
Acre-Feet
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
1965
1970
1975
1980
1985
1990
1995
2000

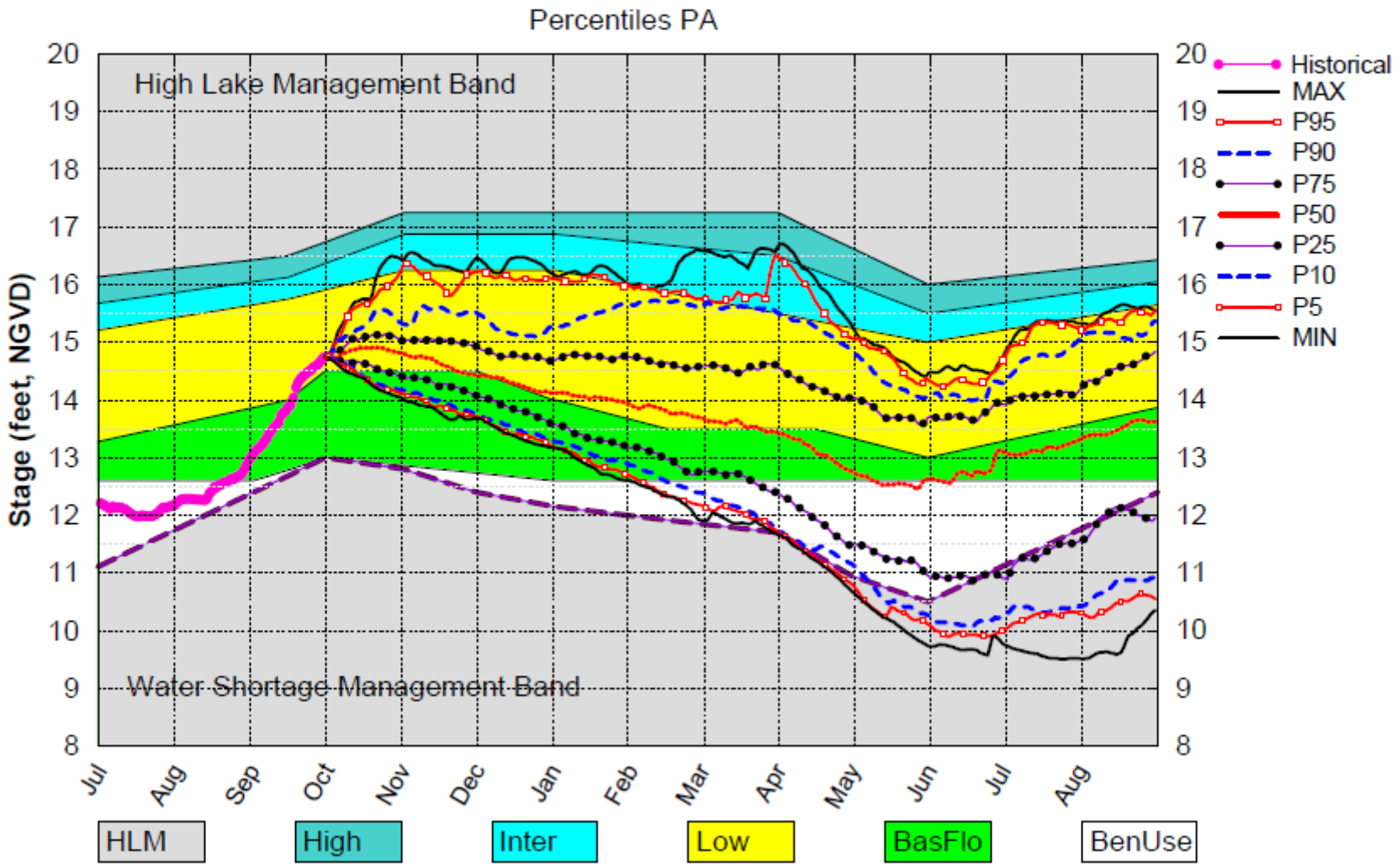

October Regulatory Releases from Lake Okeechobee
October 2015 Dynamic Position Analysis (Preliminary)
Acre-feet
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
1965
1970
1975
1980
1985
1990
1995
2000
2005


12-Month Running Average of Standardized Klotzbach and Gray (2008) AMO Index
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
-1.6
1950
1952
1954
1956
1958
1960
1961
1963
1965
1967
1969
1971
1972
1974
1976
1978
1980
1982
1983
1985
1987
1989
1991
1993
1994
1996
1998
2000
2002
2004
2005
2007
2009
2011
2013
2015


Standardized PDO (9 Month Running Mean)
Degree C
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015

Preliminary Results

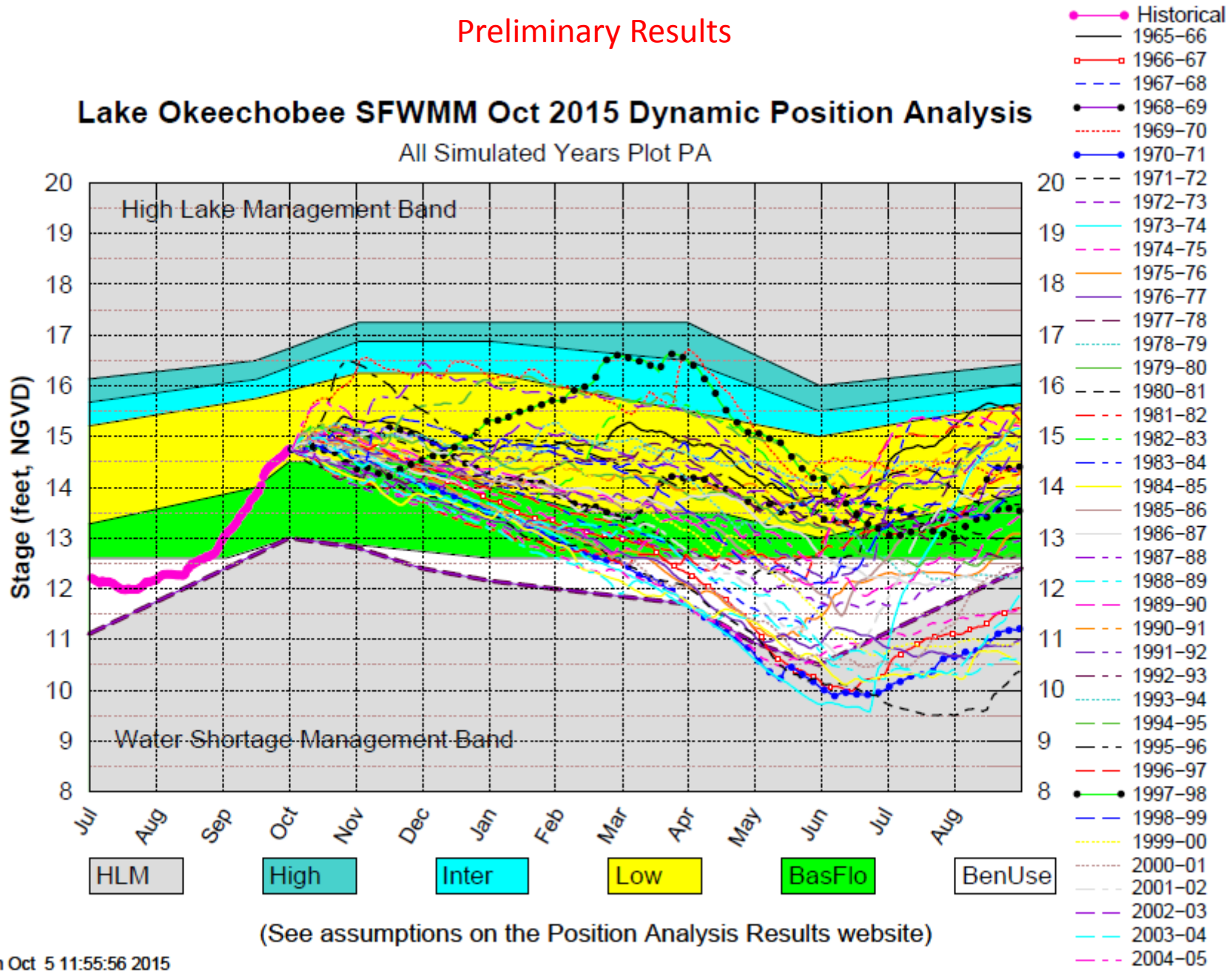
Lake Okeechobee SFWMM Oct 2015 Dynamic Position Analysis



(See assumptions on the Position Analysis Results website)

Mon Oct 5 11:52:42 2015

Preliminary Results

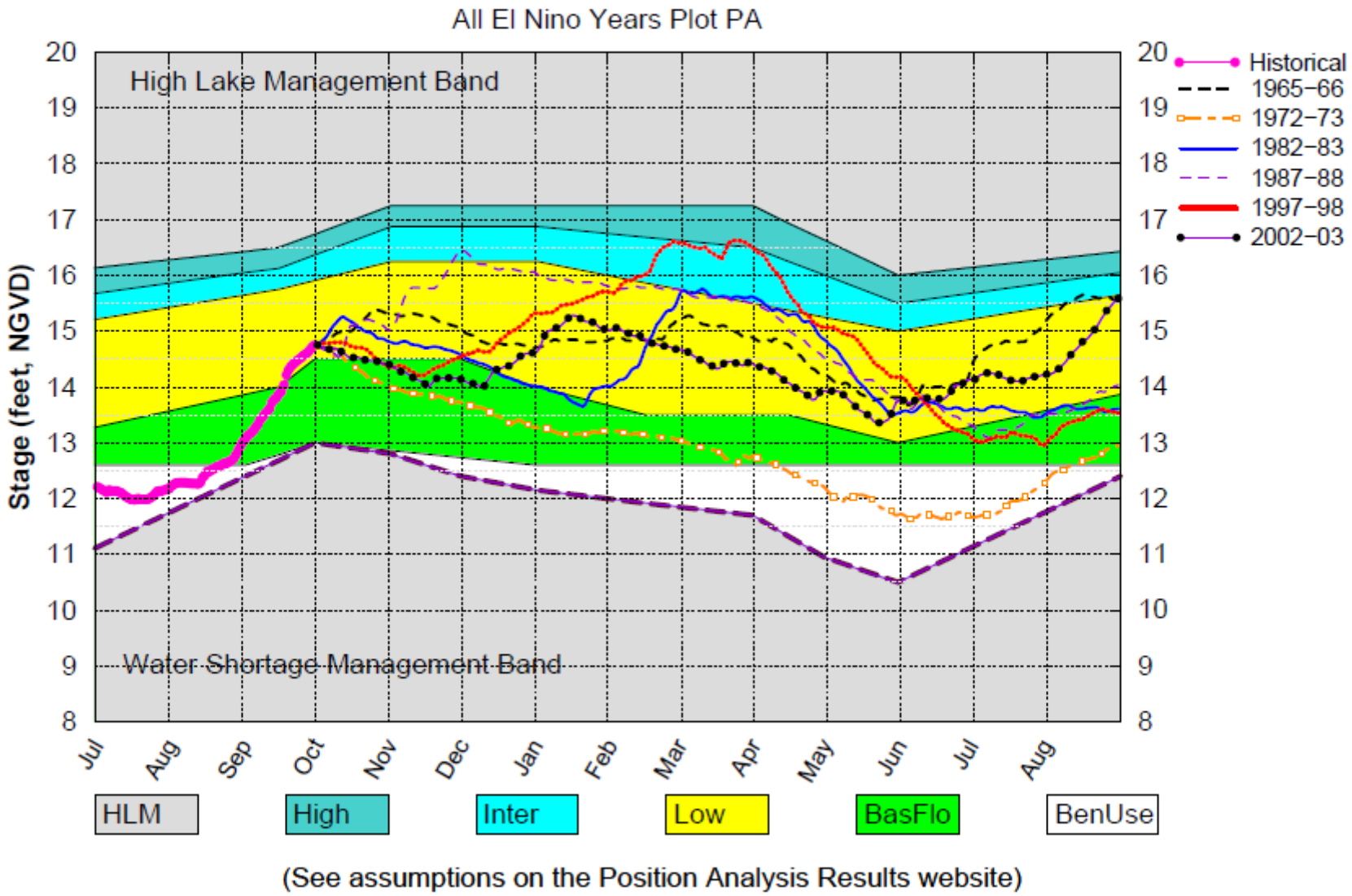


(See assumptions on the Position Analysis Results website)

Mon Oct 5 11:55:56 2015

Preliminary Results

Lake Okeechobee SFWMM Oct 2015 Dynamic Position Analysis

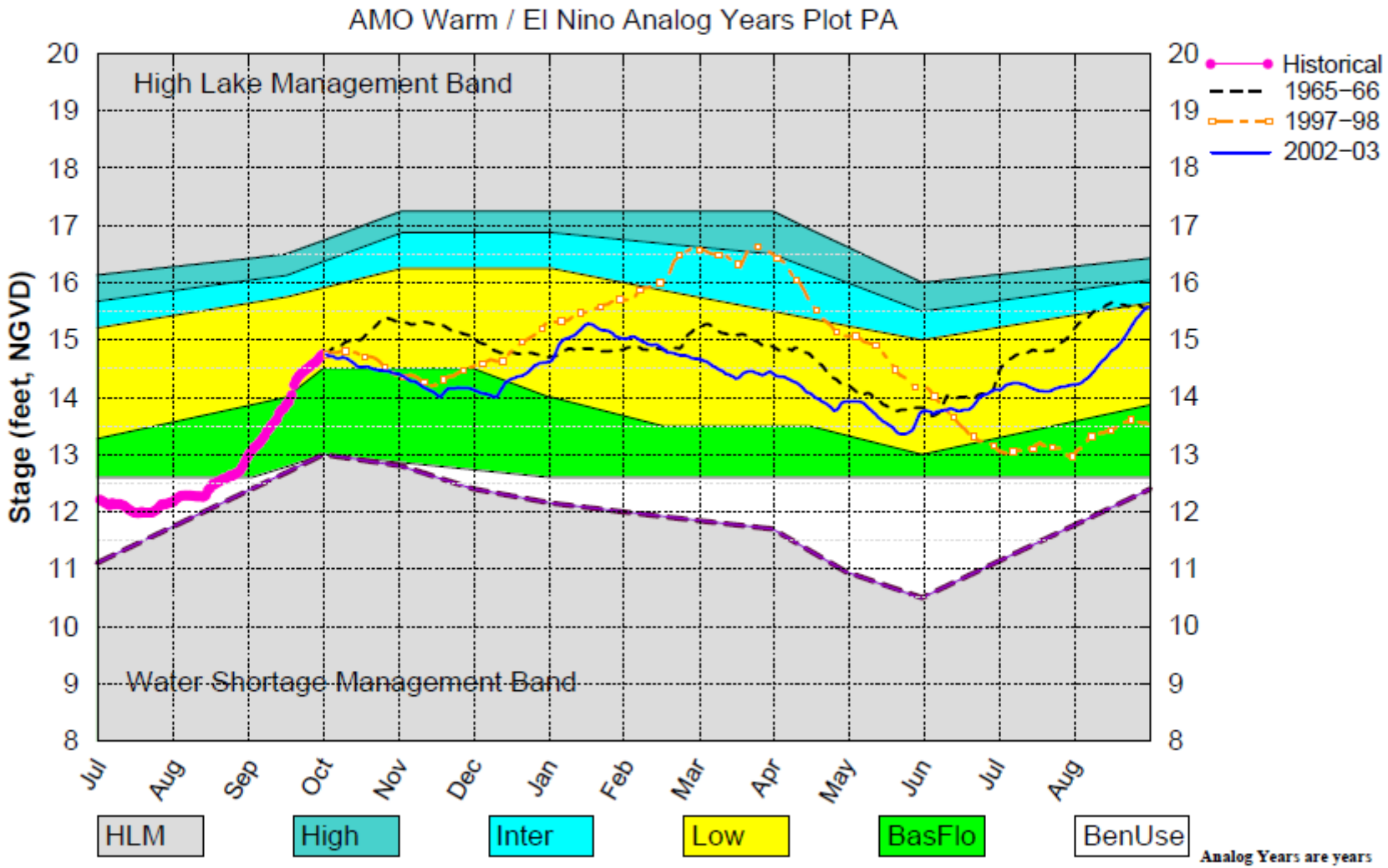


(See assumptions on the Position Analysis Results website)

Mon Oct 5 11:53:33 2015

Preliminary Results

Lake Okeechobee SFWMM Oct 2015 Dynamic Position Analysis



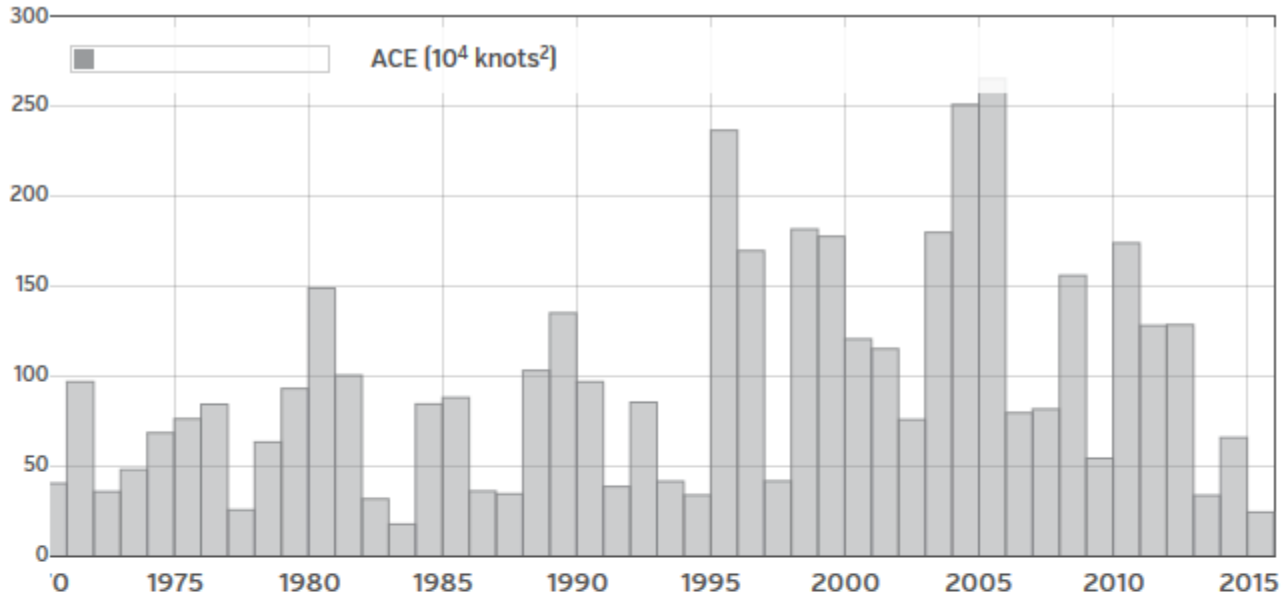
(See assumptions on the Position Analysis Results website)

Analog Years are years with similar climatological conditions to the current year.

Mon Oct 5 11:53:38 2015

Tropical Season Outlook

Updated: September 08, 2015



Average year: 110
2015 year-to-date: 24

Atlantic Tropical Cyclones of 2015

Tropical Cyclone Name	Start Date	Max Wind Speed (kt)	ACE (10^4 kt^2)
ANA	May 08, 2015	50	2.28
BILL	June 16, 2015	50	1.0275
CLAUDETTE	July 13, 2015	45	1.13
DANNY	August 18, 2015	100	9.1975
ERIKA	August 25, 2015	45	2.9425
FRED	August 30, 2015	75	5.65
GRACE	September 05, 2015	45	1.86

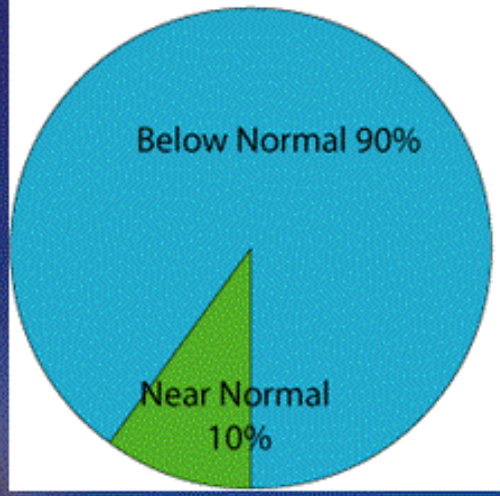
Source: Weather Underground

NOAA's Updated 2015 Atlantic Hurricane Season Outlook

NOAA's Updated 2015 Atlantic Hurricane Season Outlook

90% Chance of Below-Normal Season

Probability of Season Type



Predicted Activity

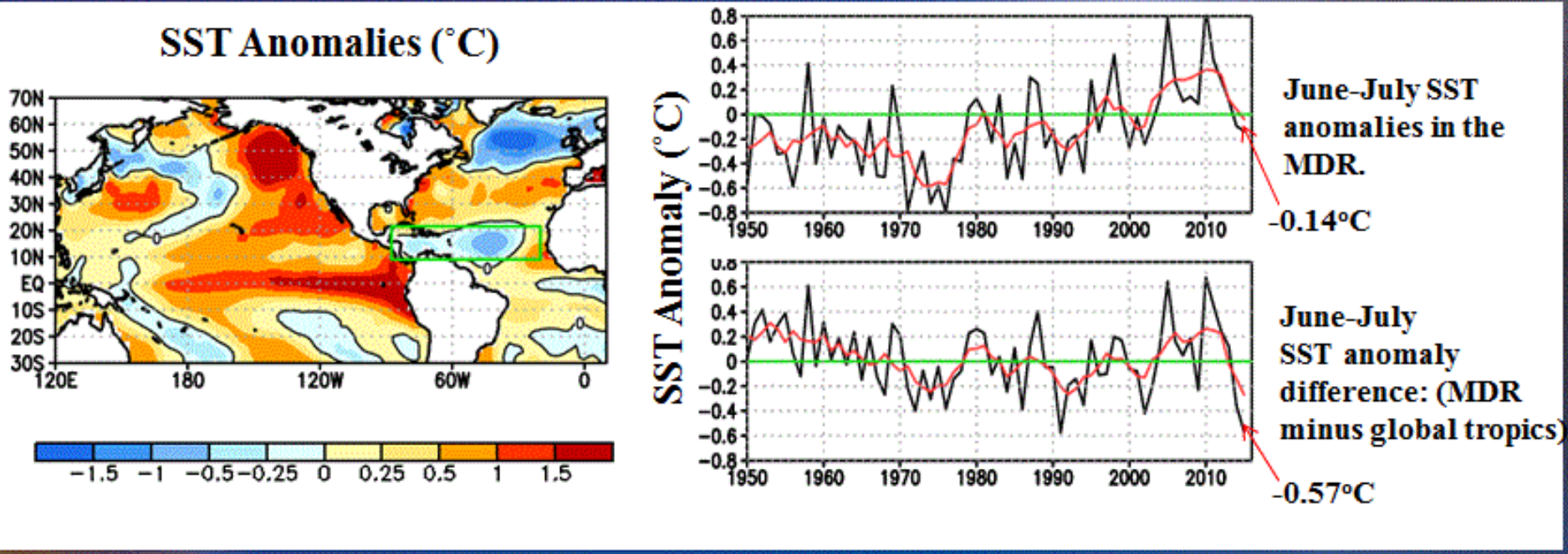
70% Probability For Each Range

Named Storms	6-10
Hurricanes	1-4
Major Hurricanes	0-1

Season Averages (1981-2010)
12
6
3

http://www.cpc.ncep.noaa.gov/products/outlooks/hurricane.shtml

June-July 2015: Atlantic SST Anomalies



Caption: (Left) June-July 2015 SST anomalies (˚C) with green box denoting the MDR. (Right) June-July area-averaged SST anomalies since 1950: (Top) in the MDR, and (Bottom) difference between MDR and the global tropics (20˚N-20˚S). Anomalies are departures from the 1981-2010 ERSST.V3b monthly means.

Tropical Atlantic SSTs were below average during June-July 2015. Area-averaged SST anomalies in the MDR were -0.17˚C during this period, which is much cooler (0.57˚C cooler) than the remainder of the global tropics.

http://www.cpc.ncep.noaa.gov/products/outlooks/hurricane.shtml