



Climate and Weather Roundup



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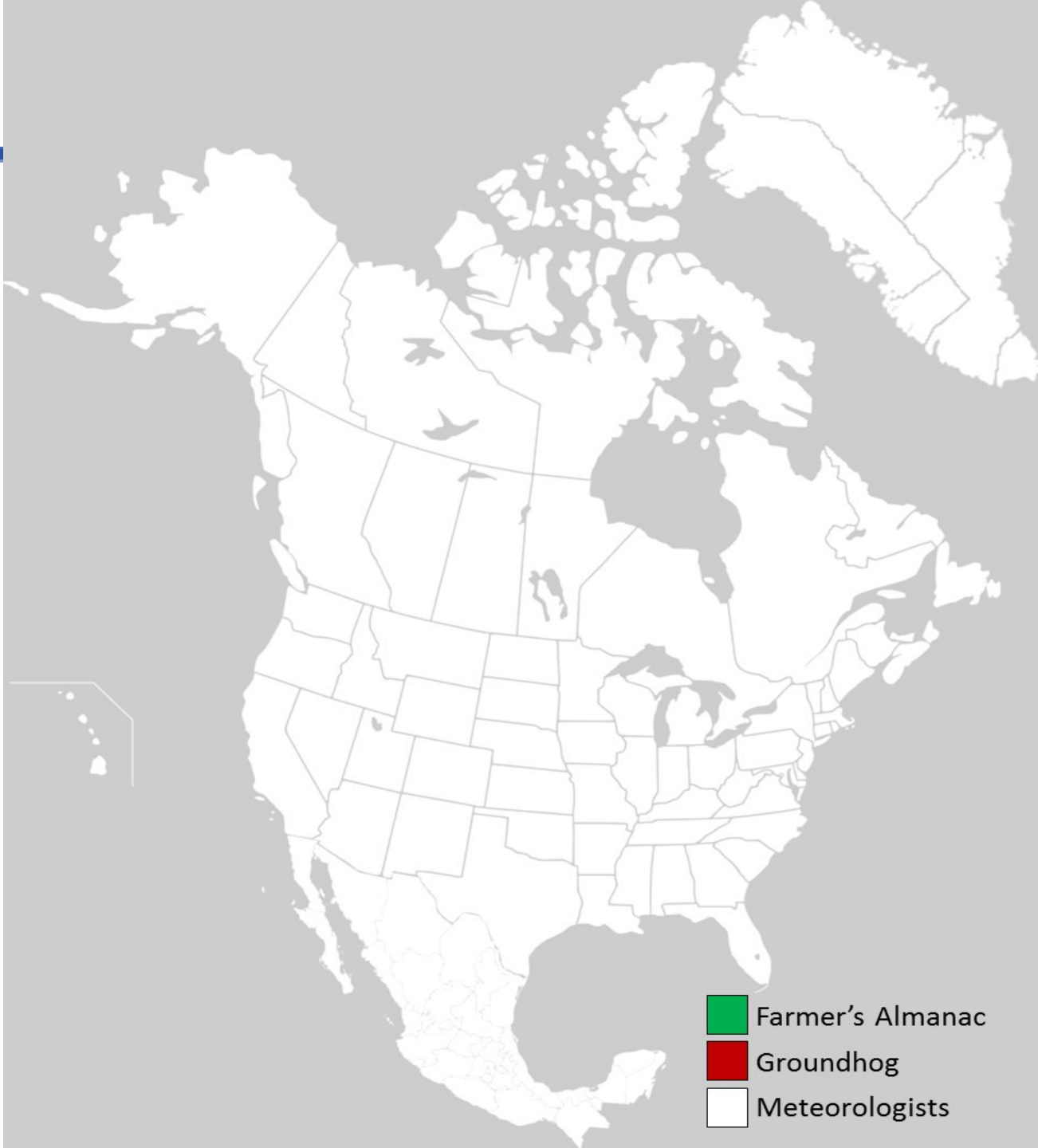
850 644-3417

April 5, 2018

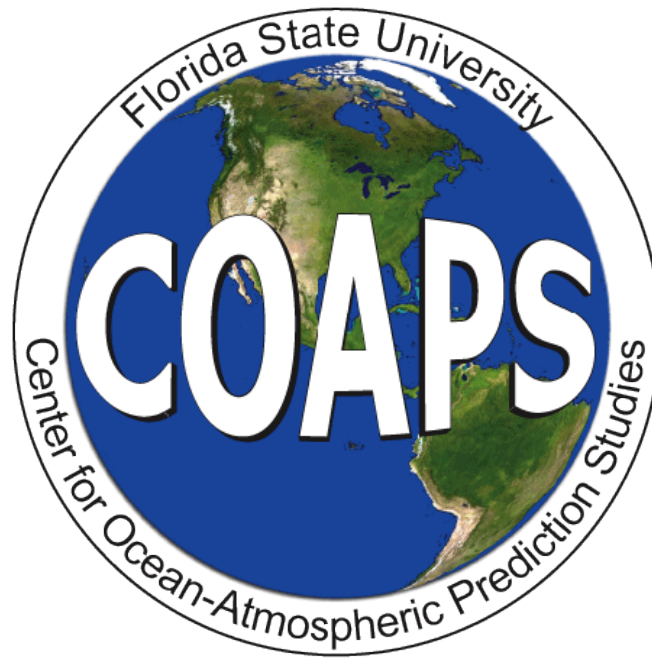
Tallahassee, FL







Farmer's Almanac
Groundhog
Meteorologists



Prevailing Trends

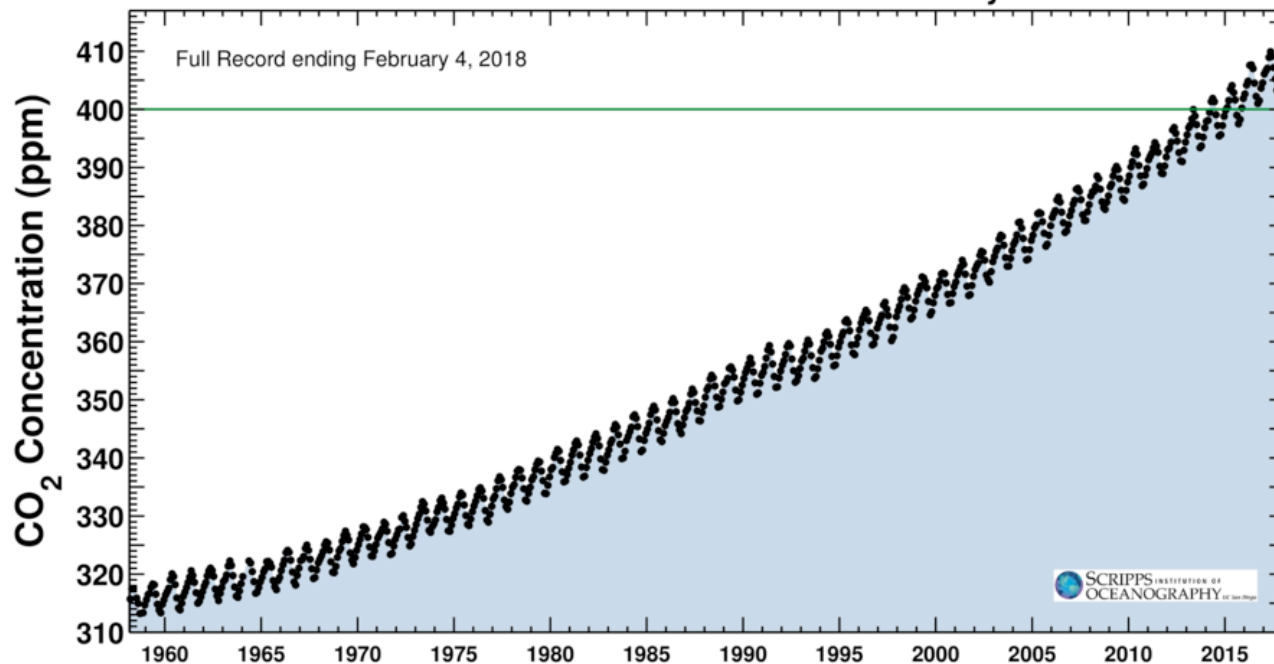
Carbon Dioxide Concentrations



Latest CO₂ reading
February 04, 2018

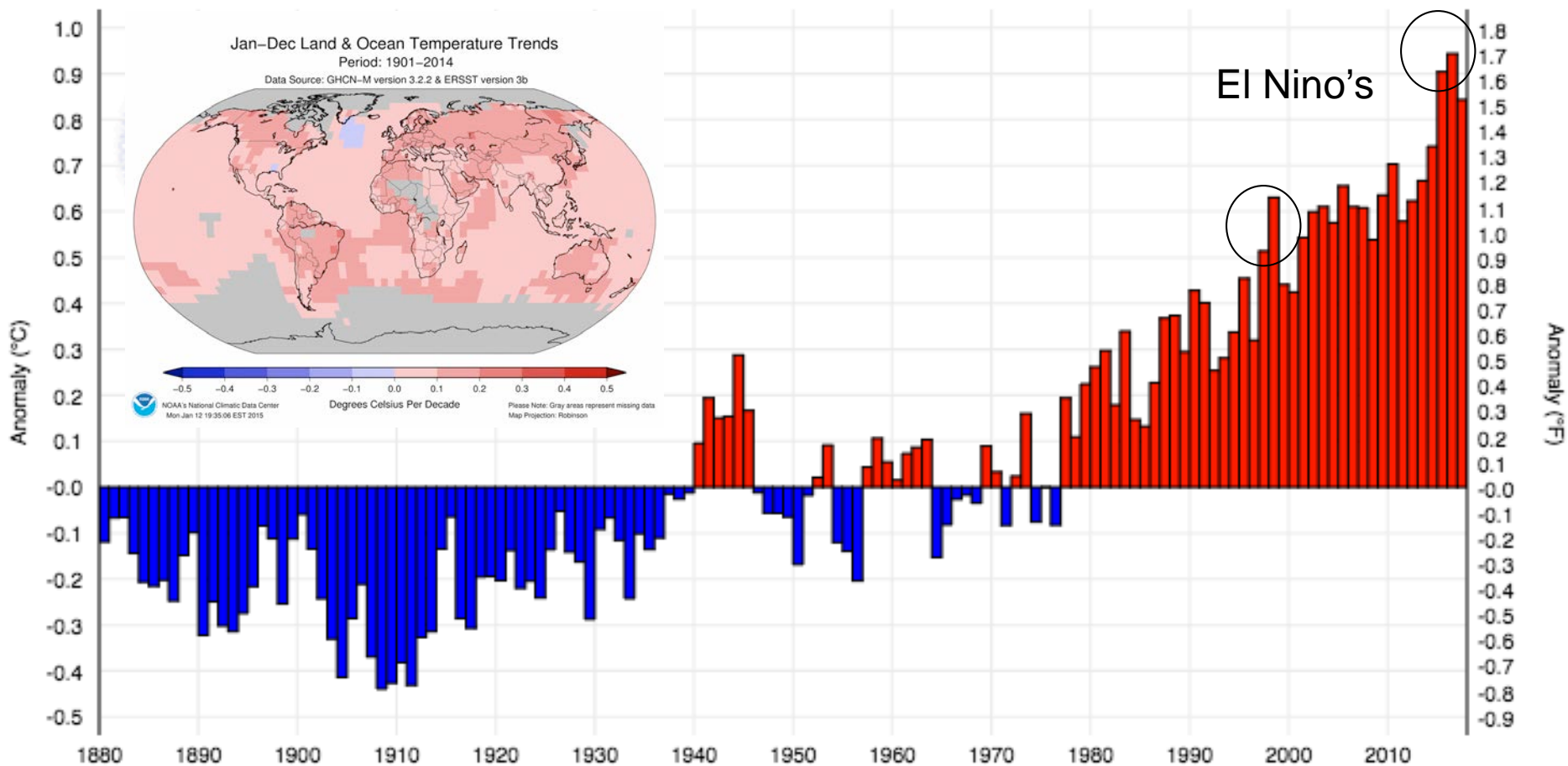
407.51 ppm

Carbon dioxide concentration at Mauna Loa Observatory



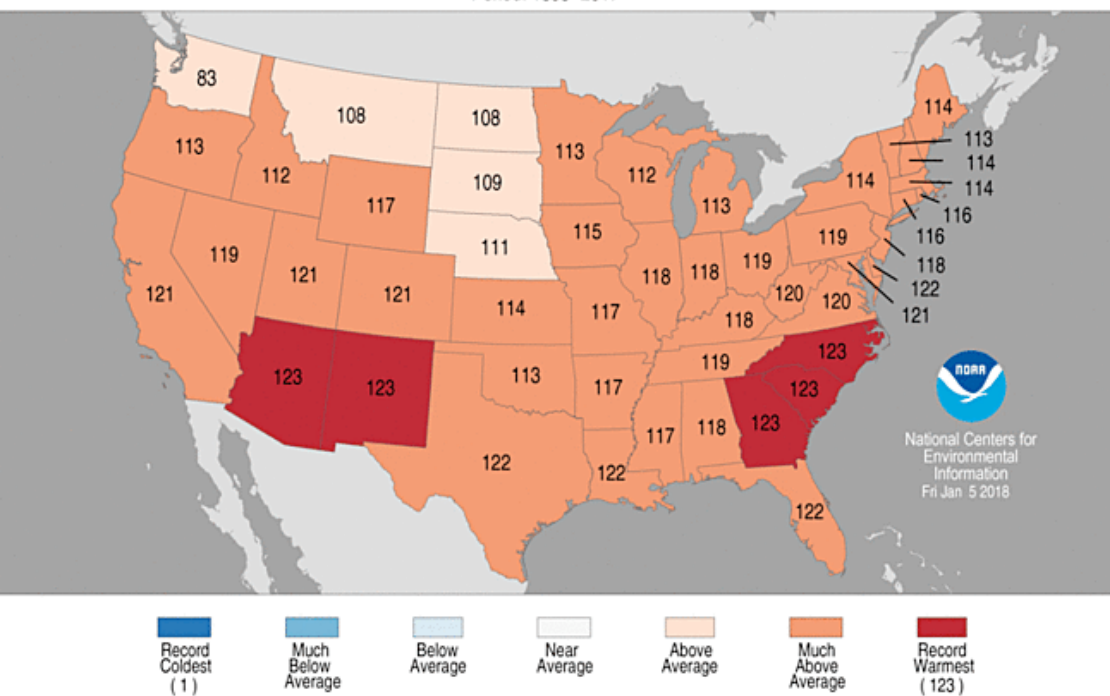
Global Average Temperatures

Global Land and Ocean Temperature Anomalies, January-December



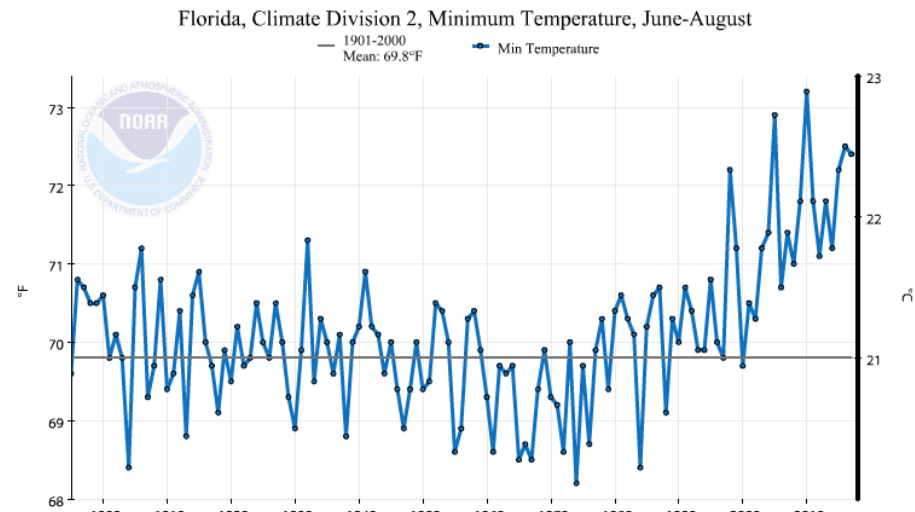
U.S. and Florida Temperatures

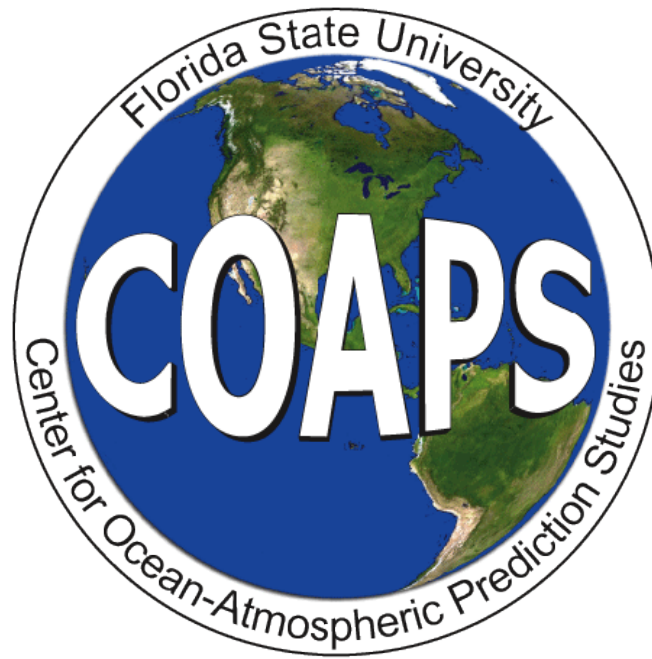
Statewide Average Temperature Ranks
January–December 2017
Period: 1895–2017



- 2017 U.S. temperature ranked 3rd warmest
- Florida 2017 ranked second warmest, 22 months in a row of above normal temperature, 33 out of the last 34
- Overnight temperatures affected most

North Florida Summer Nighttime Temperature



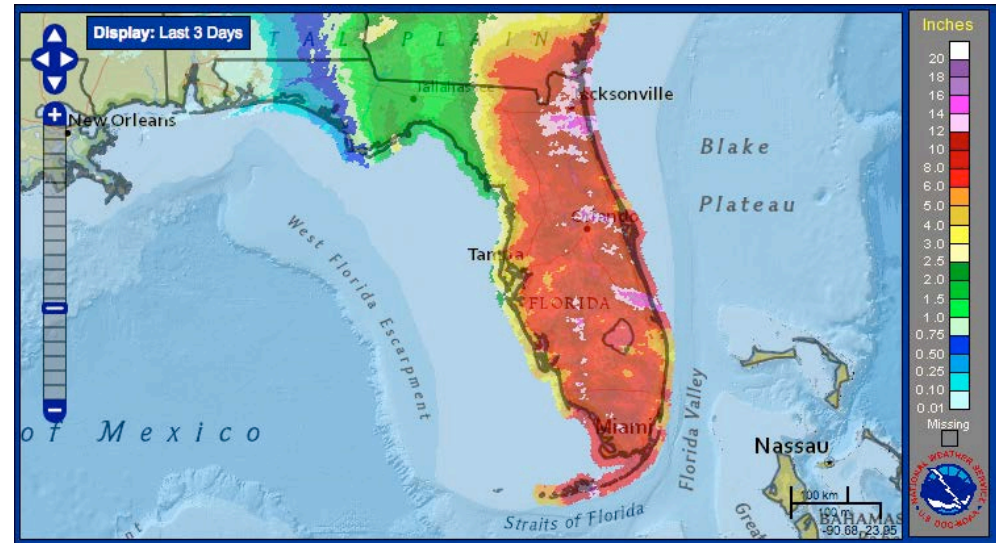
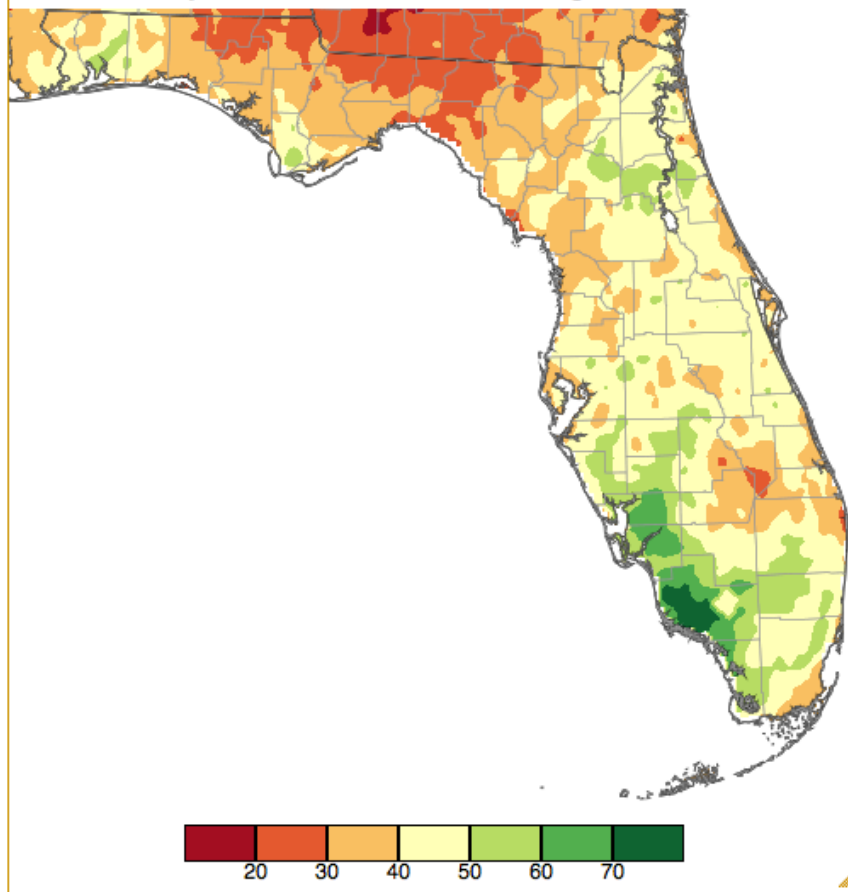


Recent Events

Robust Rainy Season

Hurricane Irma

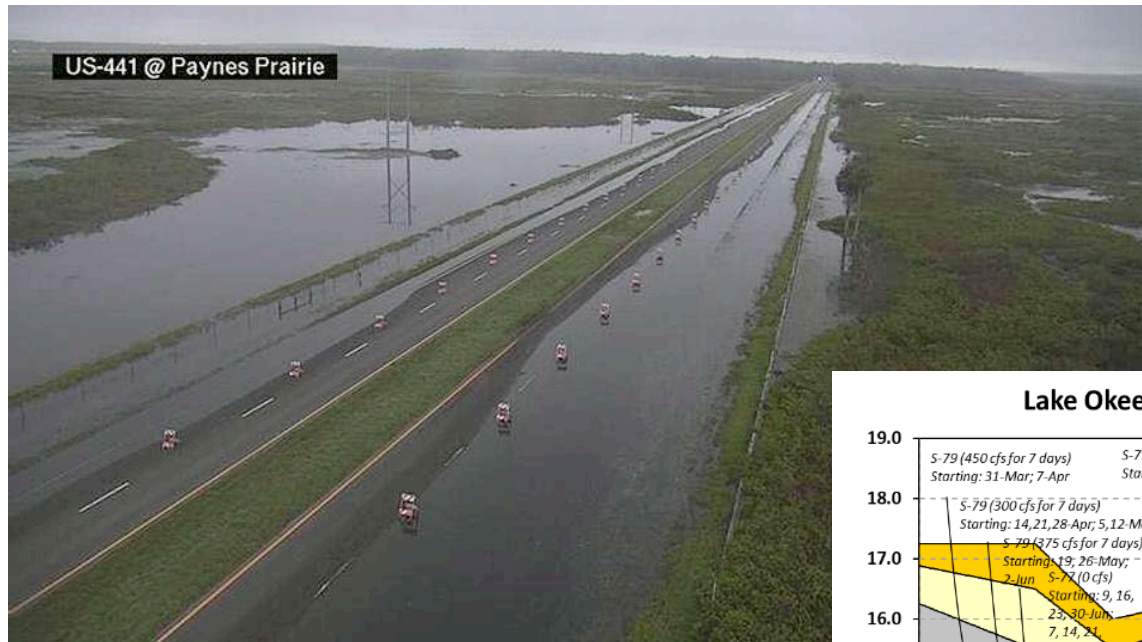
Total Precipitation - June 1, 2017 through October 1, 2017



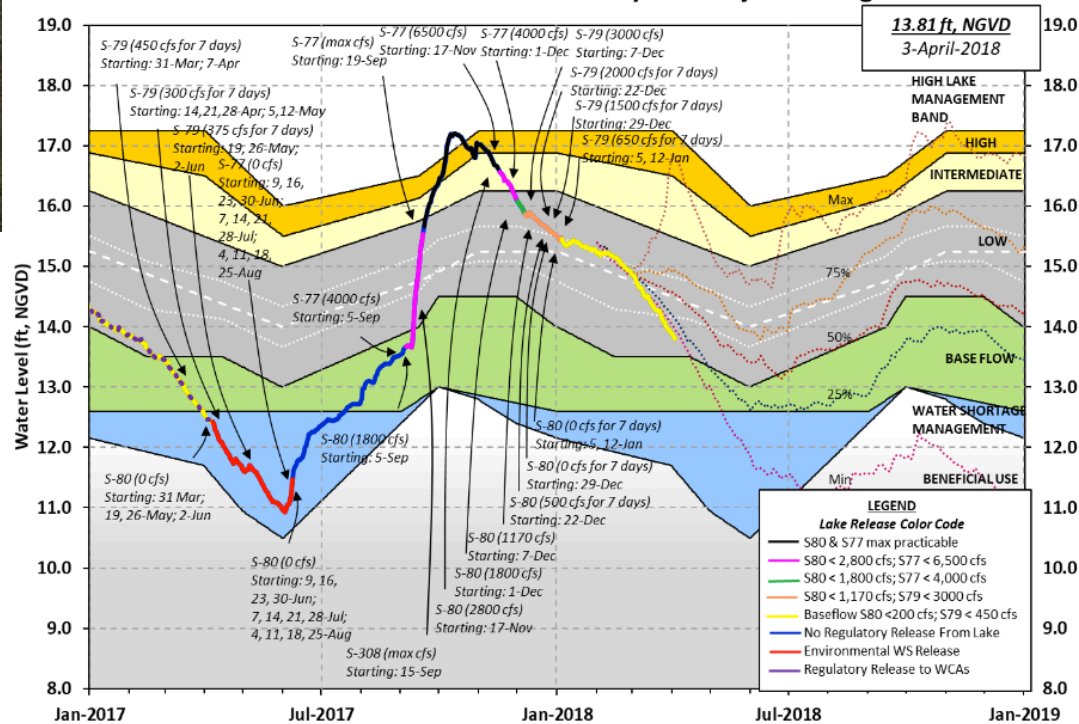
Third wettest June-
September on record
statewide

Surface Water Levels

US-441 @ Paynes Prairie



Lake Okeechobee Water Level History and Projected Stages

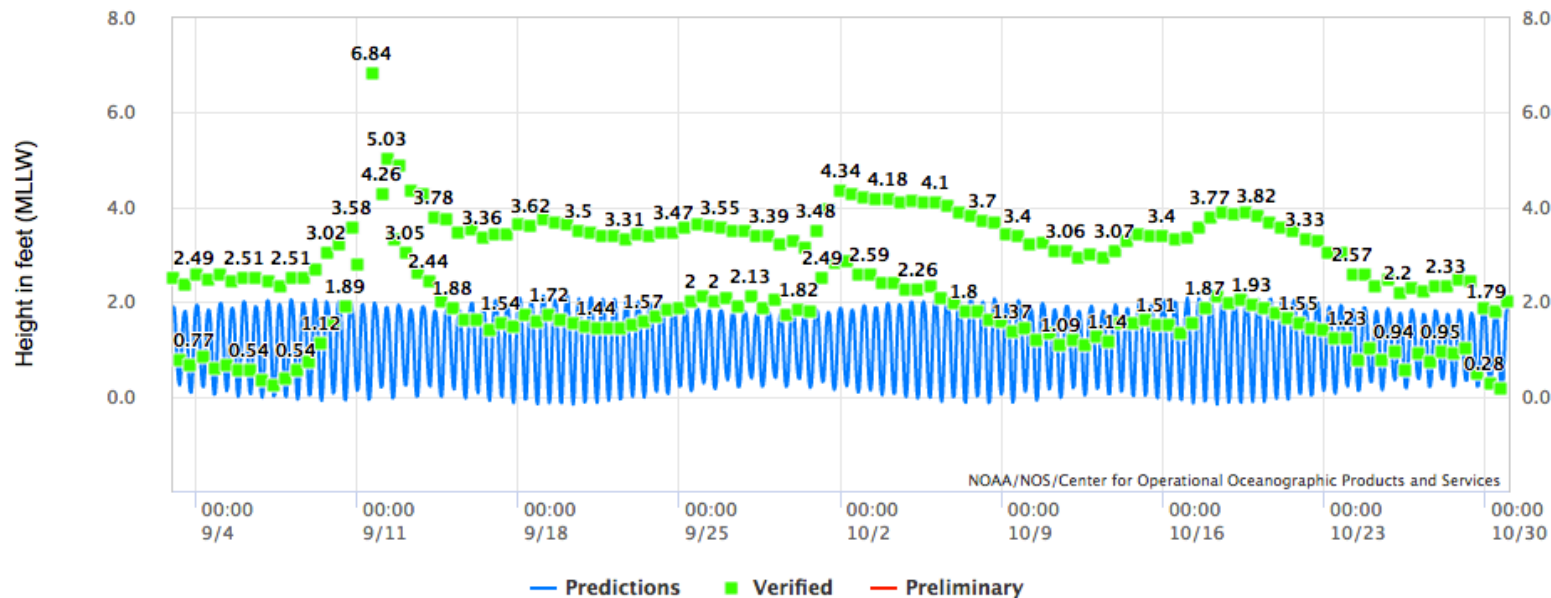




St. John's River

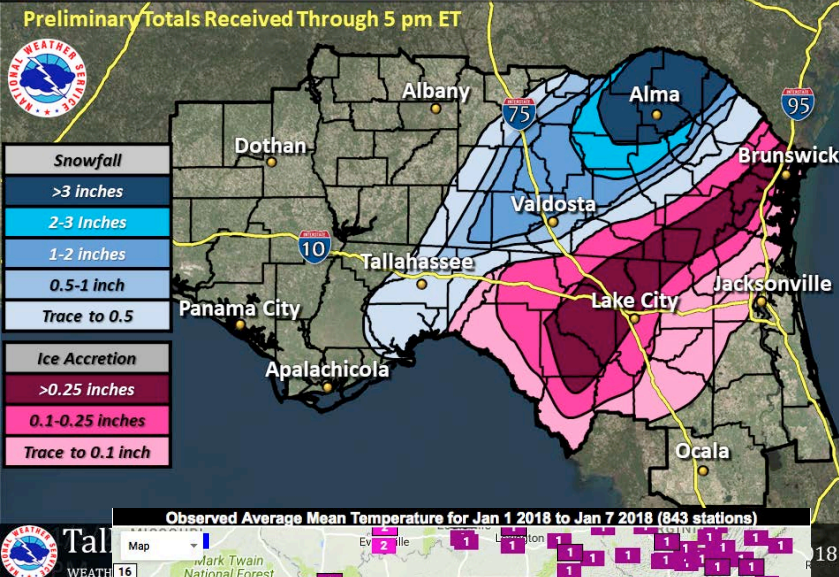


NOAA/NOS/CO-OPS
Verified High/Low at 8720226, Southbank Riverwalk, St Johns River FL
From 2017/09/03 00:00 GMT to 2017/10/30 23:59 GMT

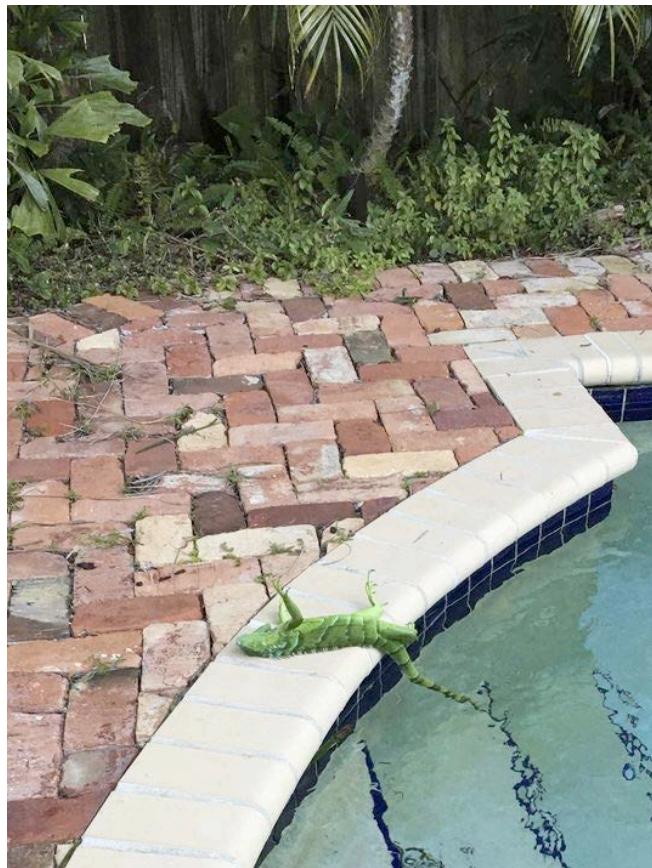


Winter Weather

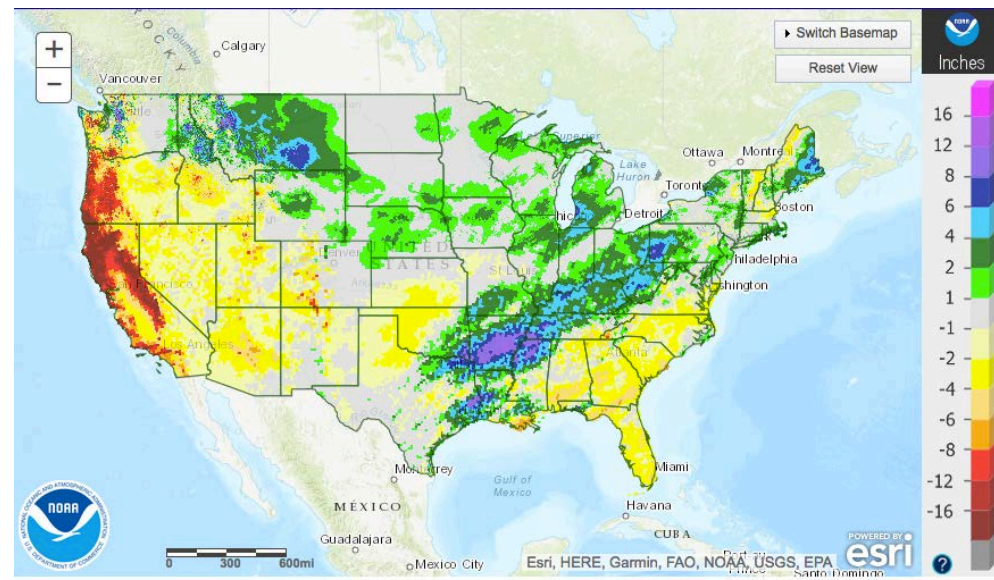
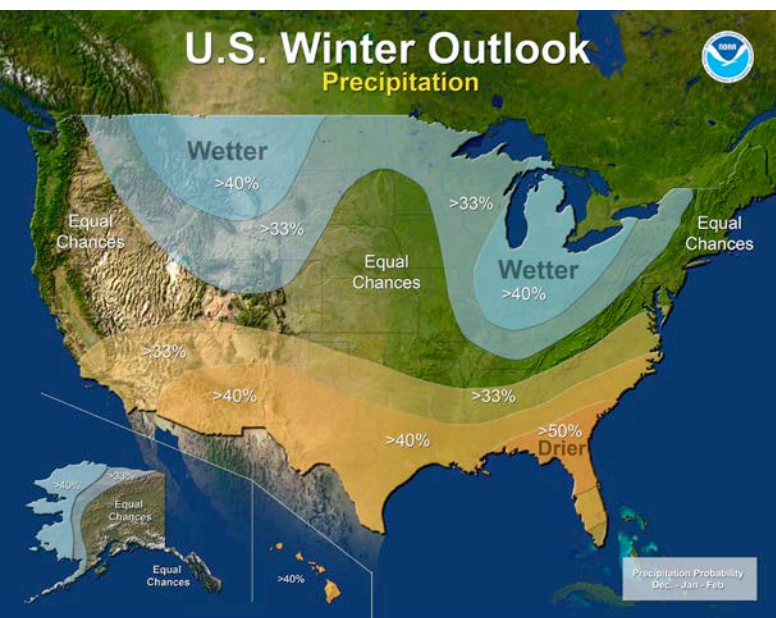
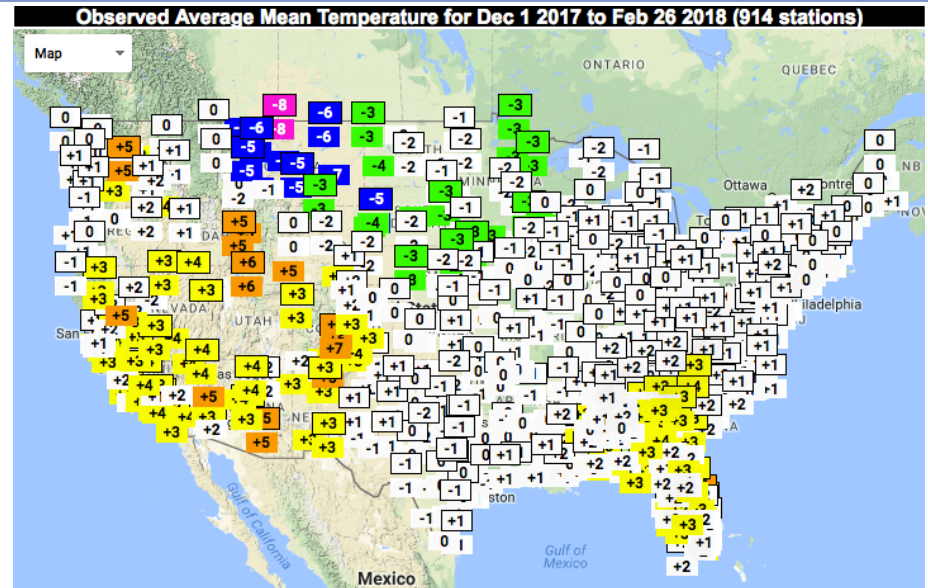
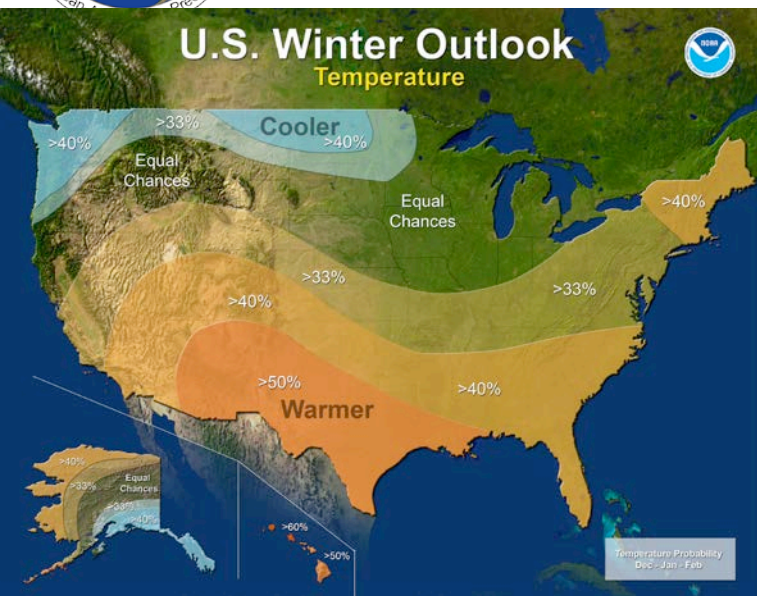
Snowfall and Ice Accumulation - Jan 3, 2018



Cold Weather Impacts



Was Winter Forecast a “Fail”?





What do Above Normal Temps Mean for the Winter?

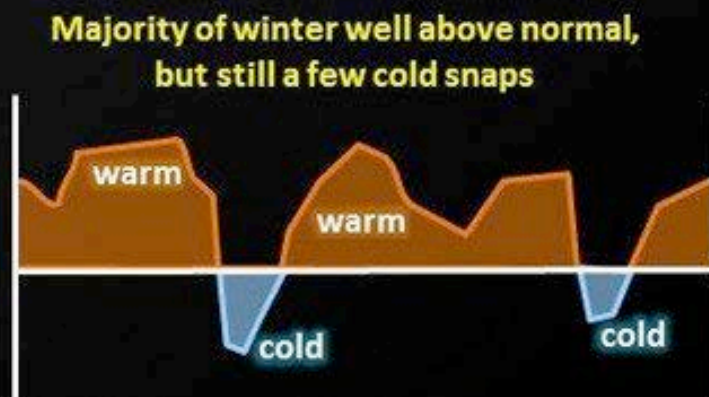
National Weather Service Fort Worth

The winter outlook calls for “above normal temperatures” so that means...



CONCLUSION: no snow or extreme cold

WRONG 



CONCLUSION: bitter cold and wintry weather
still possible

Right! 



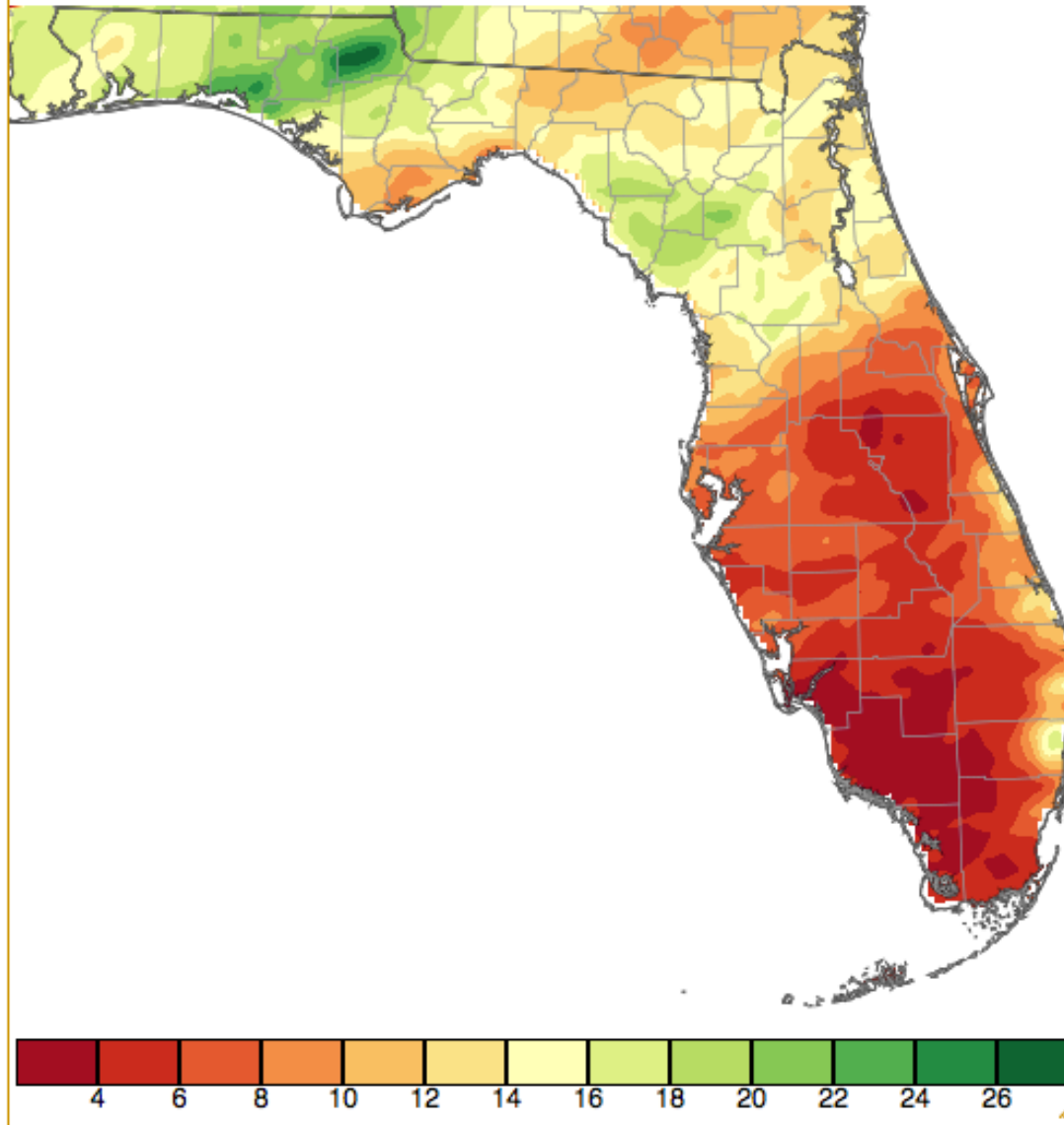
@NWSFortWorth
weather.gov/FortWorth



1043 AM CDT
Fri Oct 28 2016
National Weather Service
Fort Worth, TX

Dry Season Rainfall (To Date)

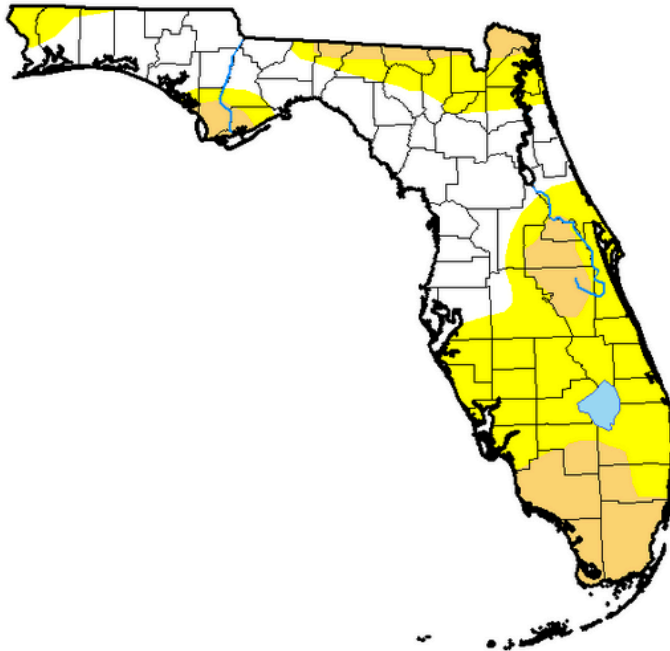
Total Precipitation - November 1, 2017 through April 1, 2018



Current drought status

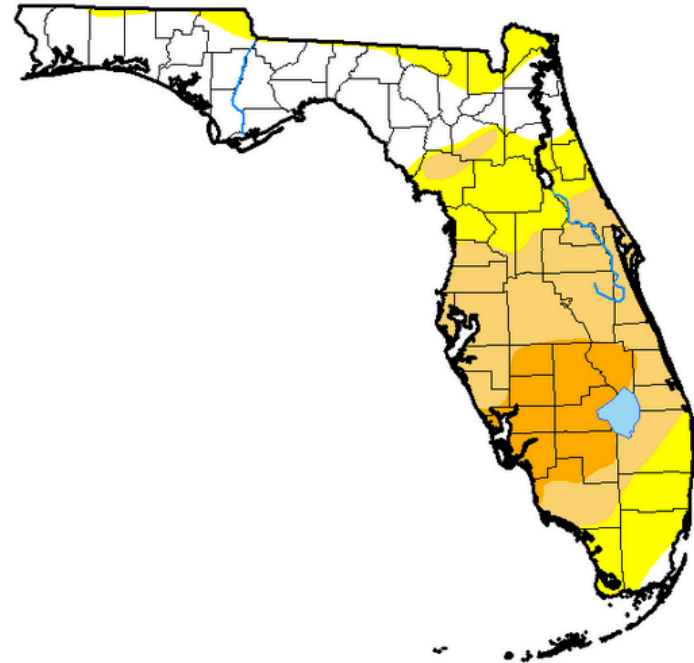
Current

U.S. Drought Monitor
Florida



Last Year

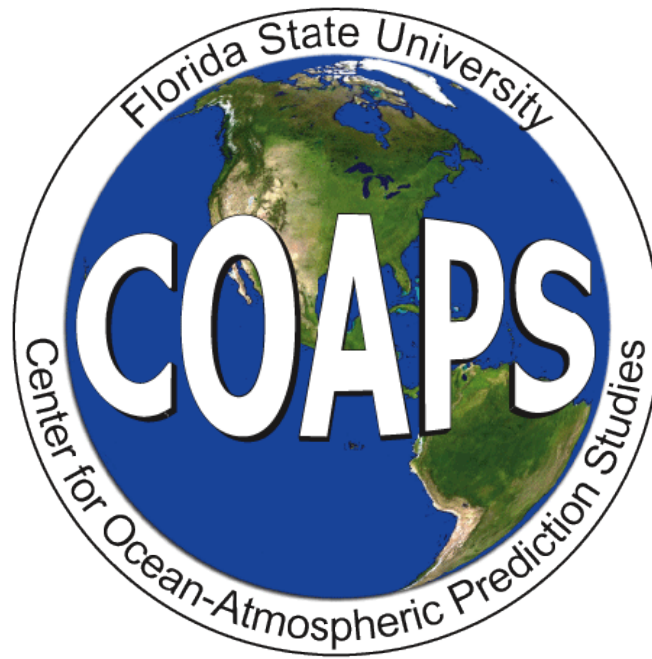
U.S. Drought Monitor
Florida



Intensity:

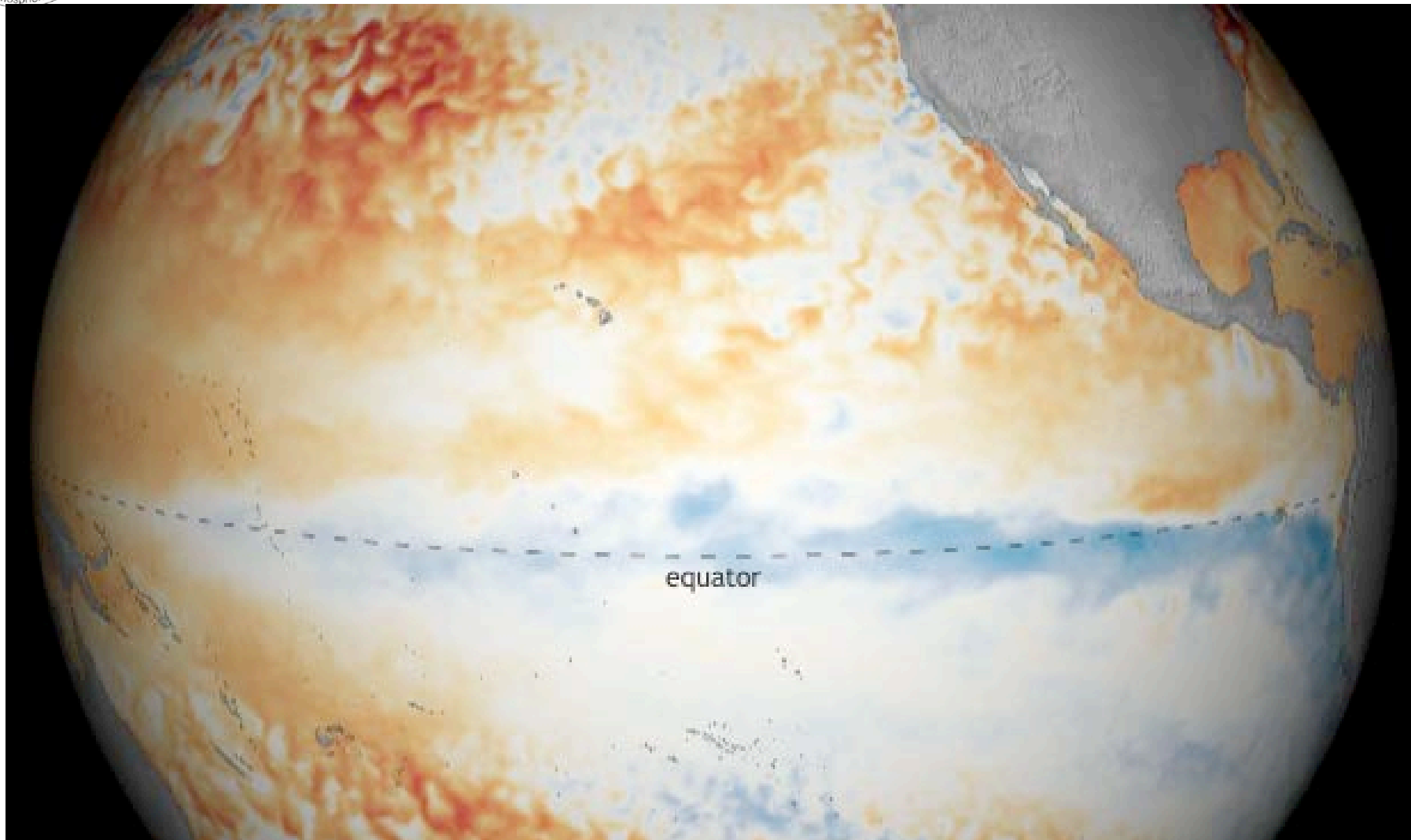


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying [text summary](#) for forecast statements.



Spring/Summer Forecast

Another Winter of La Nina



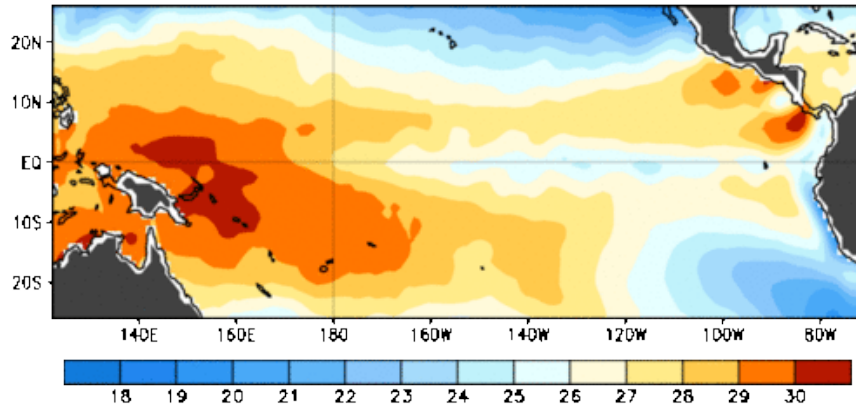
October 2017
compared to 1981-2010



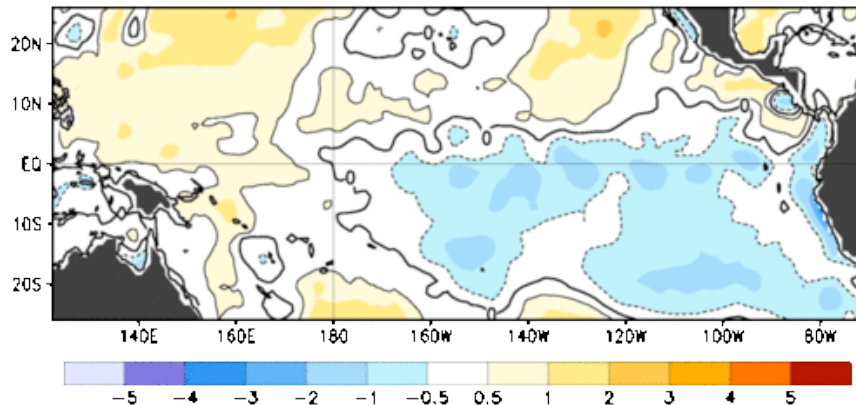
Climate.gov/NNVL
Data: Geo-Polar SST

Current Sea Surface Temperatures

Observed Sea Surface Temperature ($^{\circ}\text{C}$)

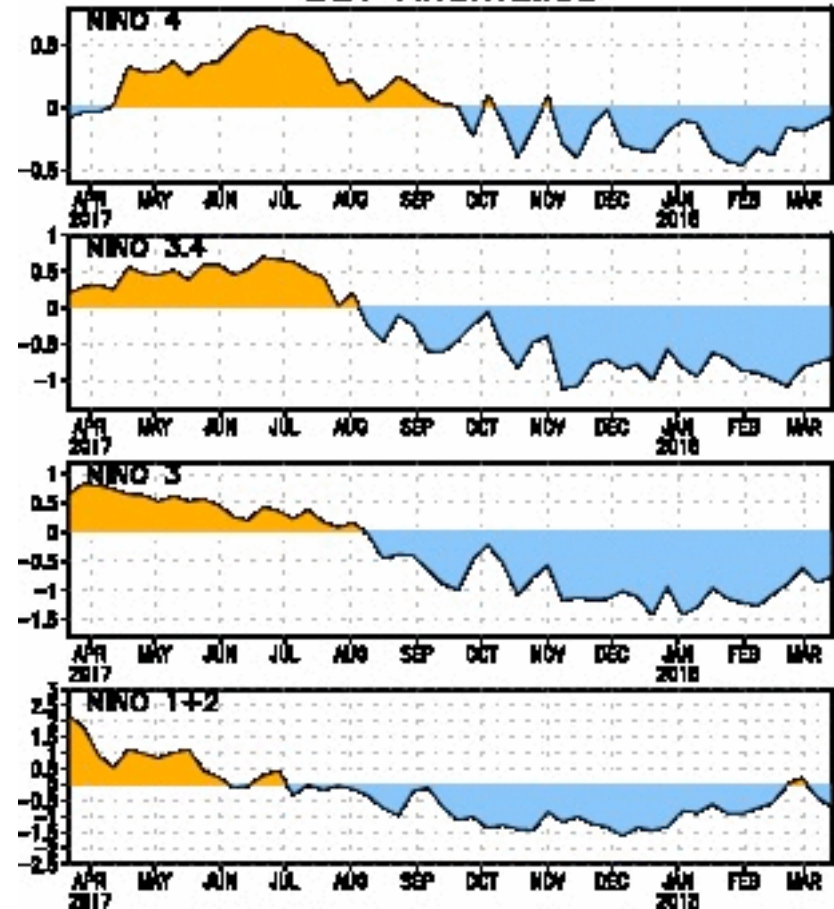


Observed Sea Surface Temperature Anomalies ($^{\circ}\text{C}$)



7-day Average Centered on 14 March 2018

SST Anomalies

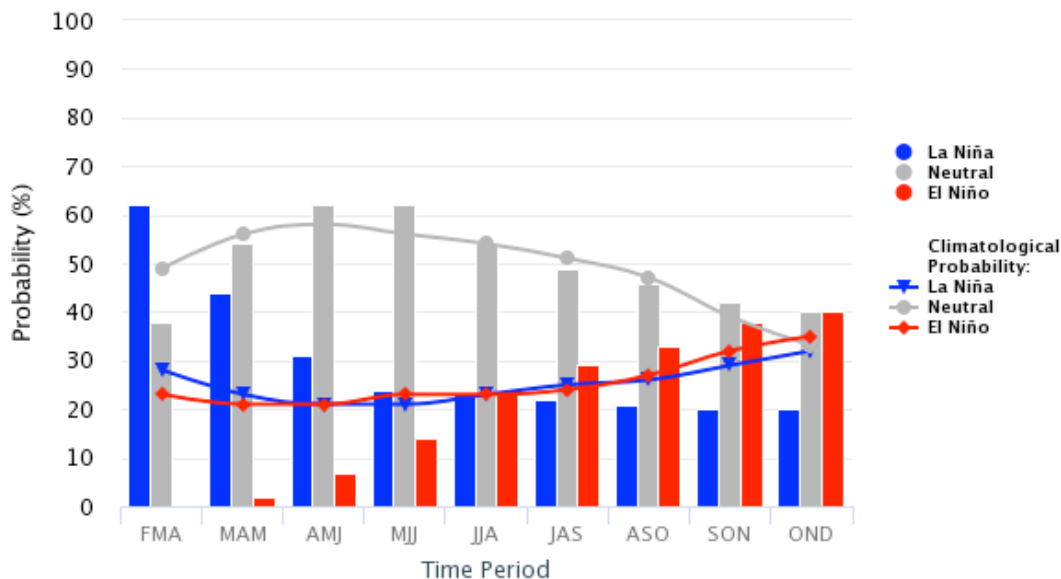


- Nino 3.4 Index below -0.5°C since mid-October

Beware the Ides of March

Early-Mar CPC/IRI Official Probabilistic ENSO Forecasts

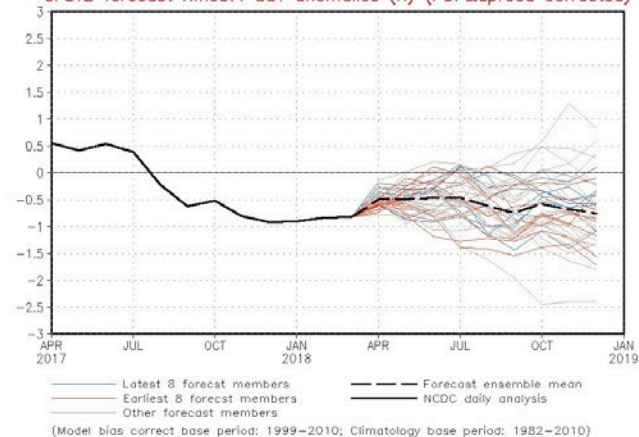
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5°C to 0.5°C



NWS/NCEP/CPC

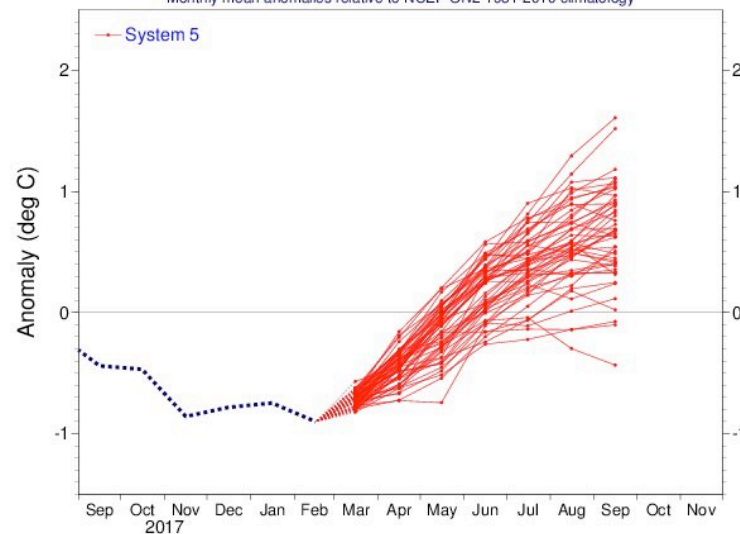
Last update: Fri Mar 16 2018
Initial condition: EMar2018-15Mar2018

CFSv2 forecast Nino3.4 SST anomalies (K) (PDF&spread corrected)



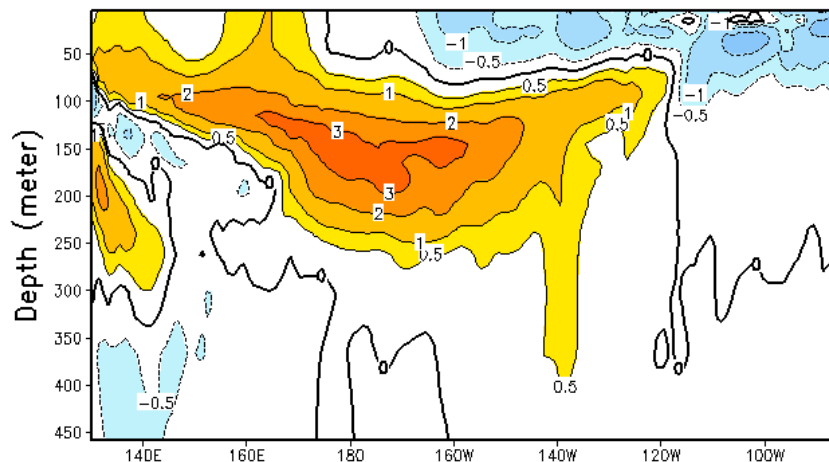
NINO3.4 SST anomaly plume ECMWF forecast from 1 Mar 2018

Monthly mean anomalies relative to NCEP OIv2 1981-2010 climatology

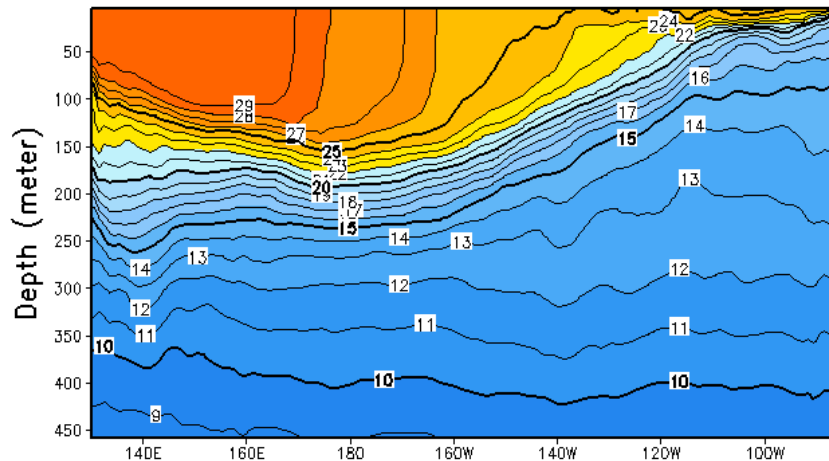


Subsurface Temperatures

Equatorial Temperature Anom ($^{\circ}\text{C}$), Mar 14 2018

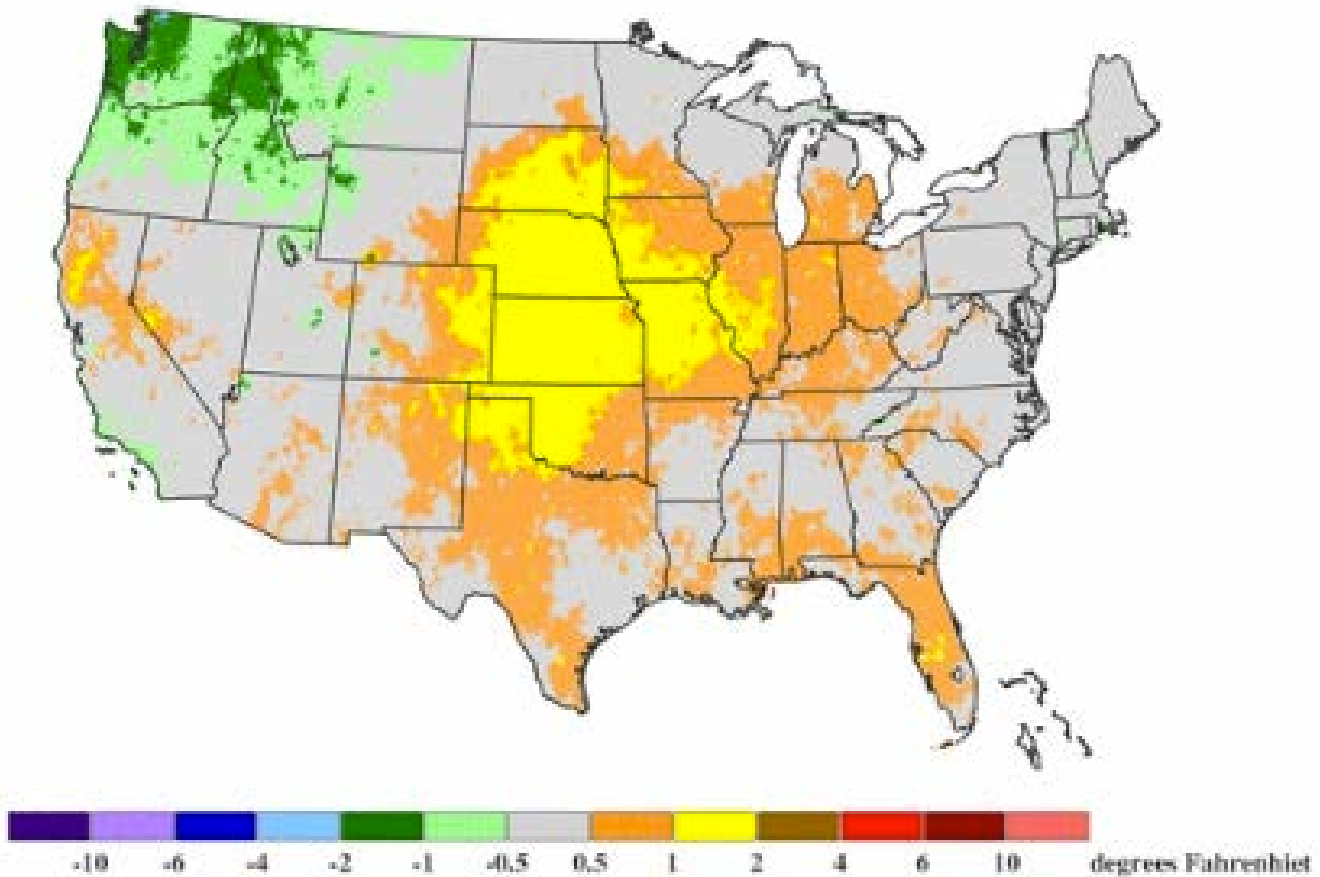


Equatorial Temperature ($^{\circ}\text{C}$), Mar 14 2018



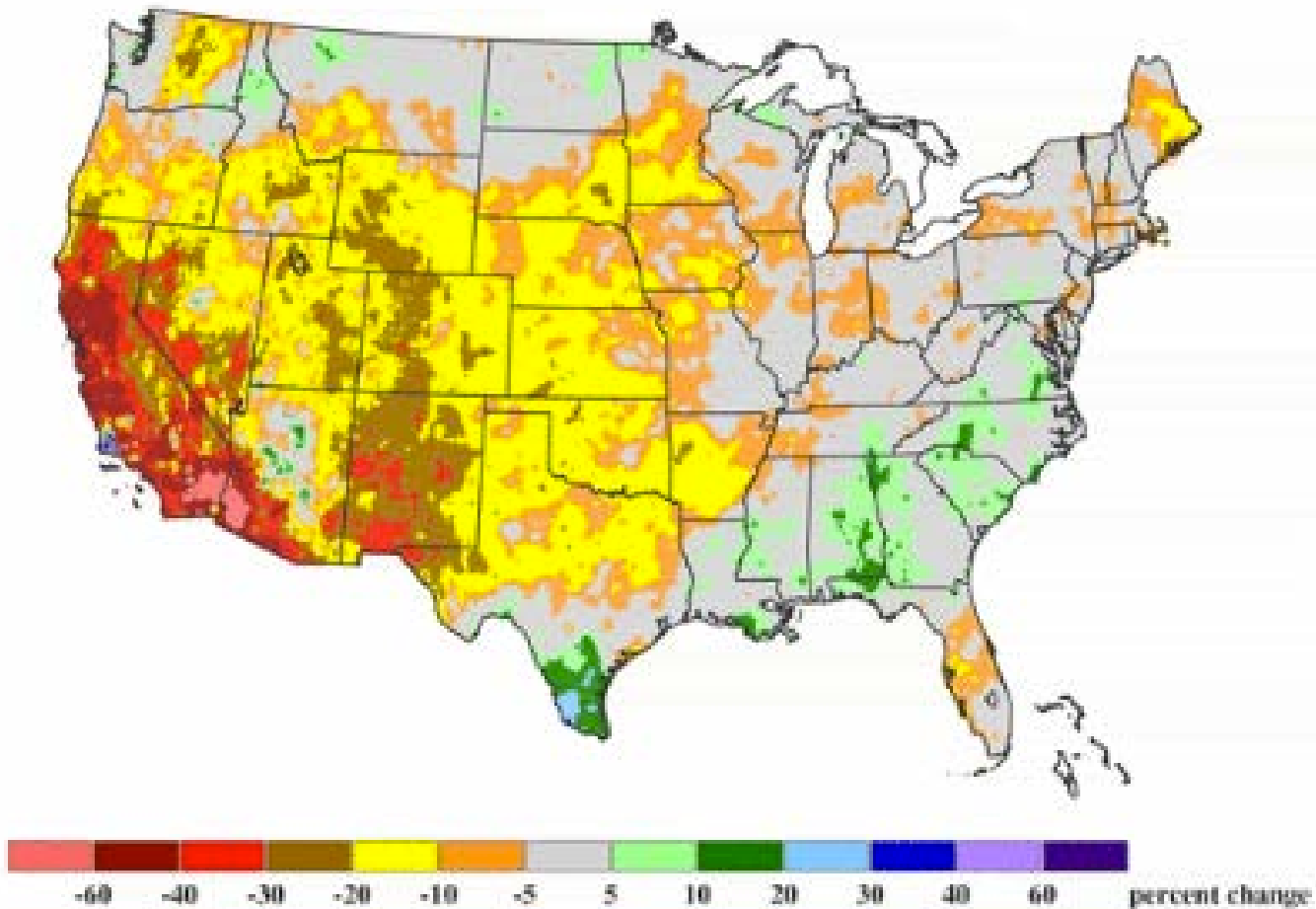
La Nina Temperature Patterns

APRIL
LA NINA vs. NEUTRAL
MAXIMUM TEMPERATURE SHIFT



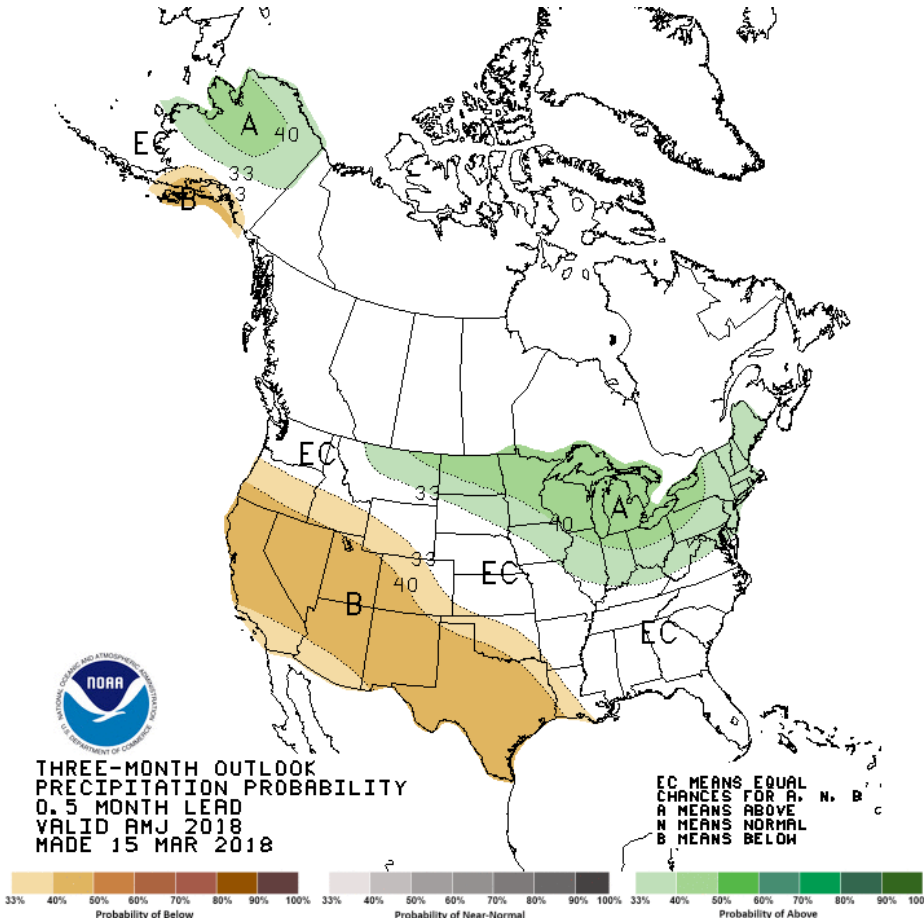
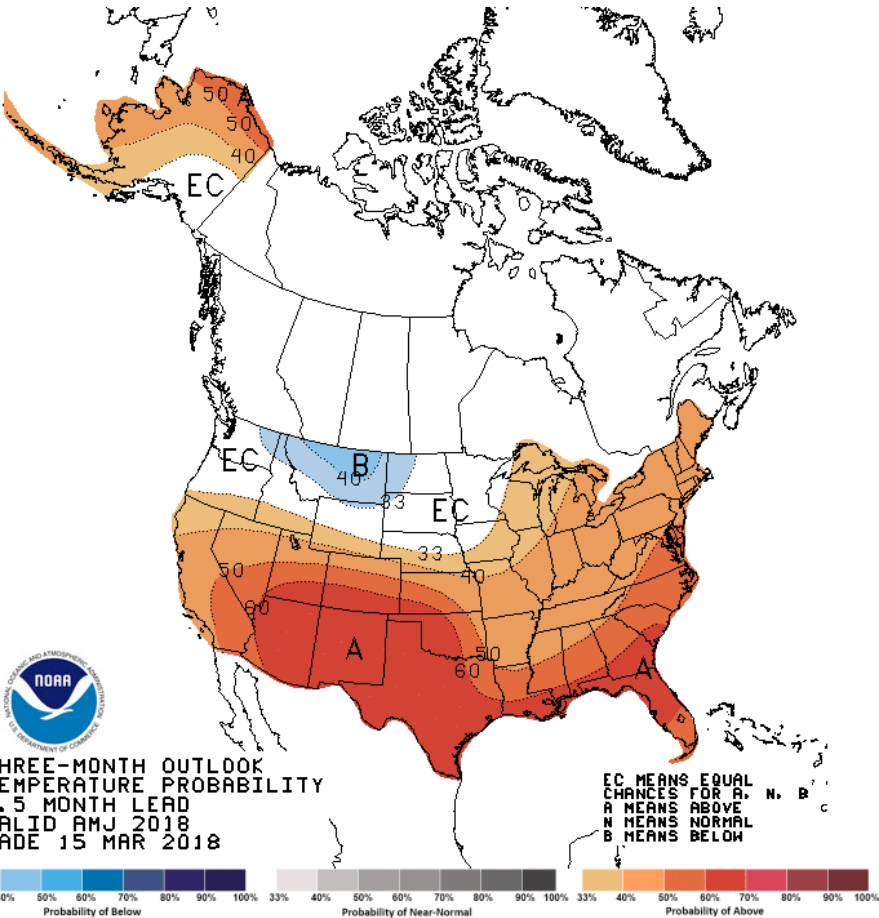
La Nina Precipitation Patterns

MAY
LA NINA vs. NEUTRAL
PRECIPITATION





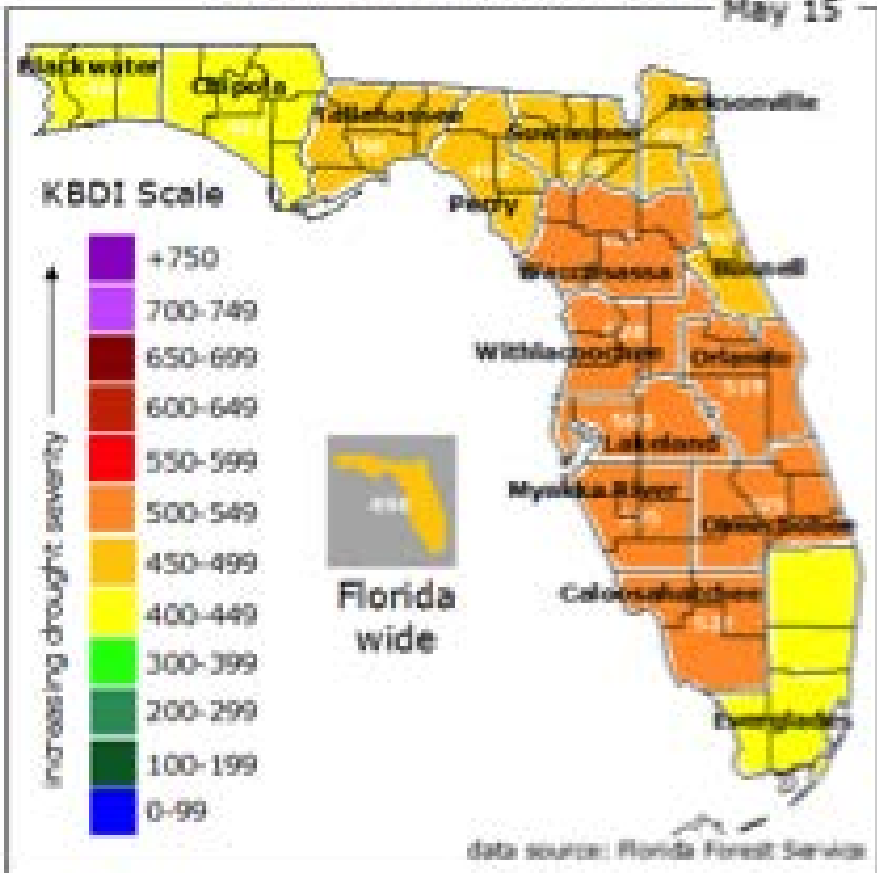
NOAA Seasonal Outlook (April - June)



Onset of the Rainy Season

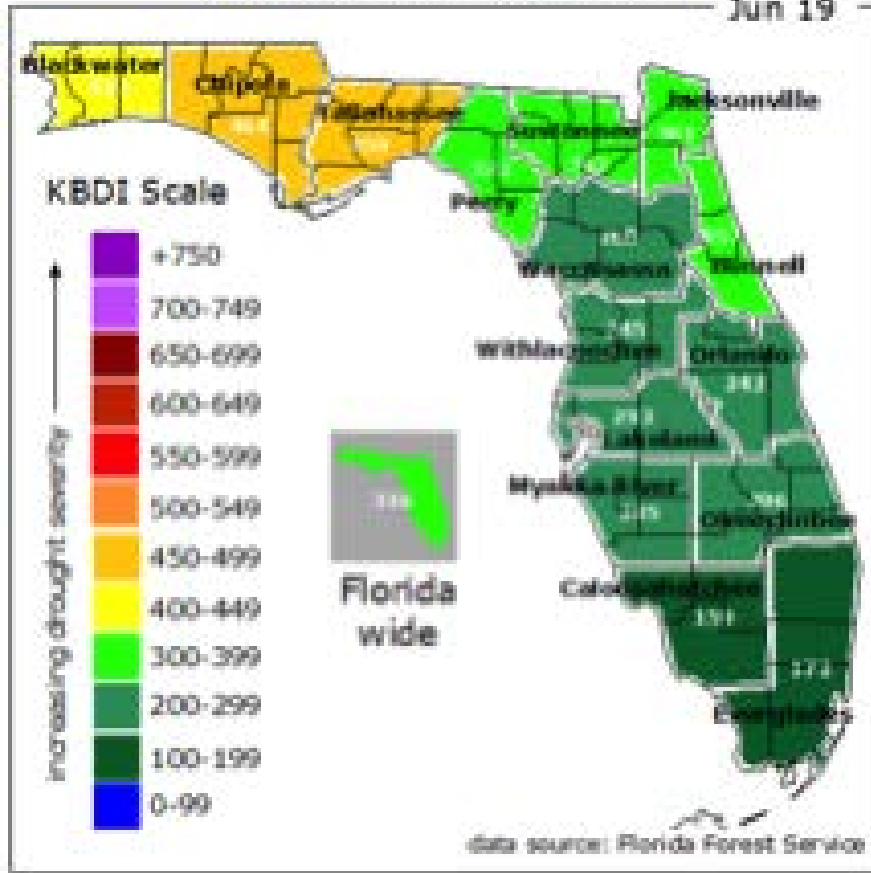
Florida's Median Annual Atmospheric Drought Cycle
as based on Keetch Byram Drought Index (KBDI),
by Wildland Fire District, 2000-2011

May 15



Florida's Median Annual Atmospheric Drought Cycle
as based on Keetch Byram Drought Index (KBDI),
by Wildland Fire District, 2000-2011

Jun 19





Take Home Messages

- Long-term trends show a distinct warming in Florida over the last 3+ years
- Robust rainy season in 2017 buffered the state against dry season drought
- Cold weather episodes in winter of 2018
- La Nina impacting winter and spring patterns again in 2018 for the second year in a row
- Forecast for the Pacific highly uncertain this time of year
- Late spring/summer forecast uncertain, no identifiable cause for unusual start to the rainy season, warmer temperatures likely

