Climate Summary for Florida – July 2015
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Online at: http://climatecenter.fsu.edu/products-services/summaries

Average temperatures were above normal across most of the state in July. The departures from average temperatures in July 2015 were near normal to above normal across the entire state, ranging from -0.9˚F in Fort Myers to 3.4˚F in Tallahassee (Table 1 and Appendix 1). Areas with more rainfall saw temperatures slightly below normal. Tallahassee recorded 4 days with maximum temperatures at or above 100˚F. July 2015 was the 2nd warmest in Tallahassee, 4th warmest in Pensacola and Vero Beach, 9th warmest in Miami, and the 10th warmest in Key West and West Palm Beach. Multiple maximum and minimum temperature records were tied or broken across the state in July (Appendix 2).

Table 1. July average temperatures and departures from normal (˚F) for selected cities.

Station	Average Temperature	Departure from Normal
Pensacola	84.5	2.3
Tallahassee	85.4	3.4
Jacksonville	82.7	0.4
Orlando	83.6	0.9
Tampa	83.2	0.2
Miami	84.6	0.5
Key West	85.8	1.3

Rainfall totals were varied across the state in July. Portions of the western coast of Florida had well above normal rainfall, while the Panhandle and southern Florida recorded below normal (Figure 1). Departures from normal roughly ranged from -2.95" to 6.98" (Table 2 and Appendix 1), though localized parts of the state saw rainfall totals that were as much as 8.00" below normal to 8.00" above normal (Figure 1). July 2015 was the 7th driest on records in Key West and the 8th wettest for St. Petersburg. There were multiple 24-hour precipitation records broken for the month (Table 3).

Table 2. July precipitation totals and departures from normal (inches) for selected cities.

| Station	Total Rainfall	Departure from Normal
Pensacola	7.00	-0.41
Tallahassee	6.15	-1.02
Jacksonville	3.79	-2.76
Orlando	7.42	0.15
Tampa	11.84	4.77
Miami	5.91	-0.59
Key West	0.67	-2.88

Table 3. Select daily rainfall records (inches) broken during July. (Compiled from NOAA, NWS)

Date	Location	Record	Last
6	Kissimmee	2.90	1.28 in 1978
6	Naples	2.90	1.56 in 1996
7	Fernandina Beach	2.50	1.52 in 2004
17	Cross City	4.71	2.68 in 2012
17	St. Petersburg	3.72	2.74 in 1926
17	Melbourne	1.93	1.73 in 2008
17	Vero Beach	2.08	1.54 in 1987
19	Sanford	2.50	1.96 in 1958
26	Gainesville	1.85	1.65 in 1899
26	Fort Myers	2.27	1.90 in 1903
31	Miami	1.94	1.26 in 1974

Figure 1. A graphical depiction of the monthly rainfall departure from normal (inches) for July is given in the figure below (courtesy of NOAA, NWS).

Florida: July, 2015 Monthly Departure from Normal Precipitation
Valid at 8/1/2015 1200 UTC– Created 8/1/15 20:27 UTC
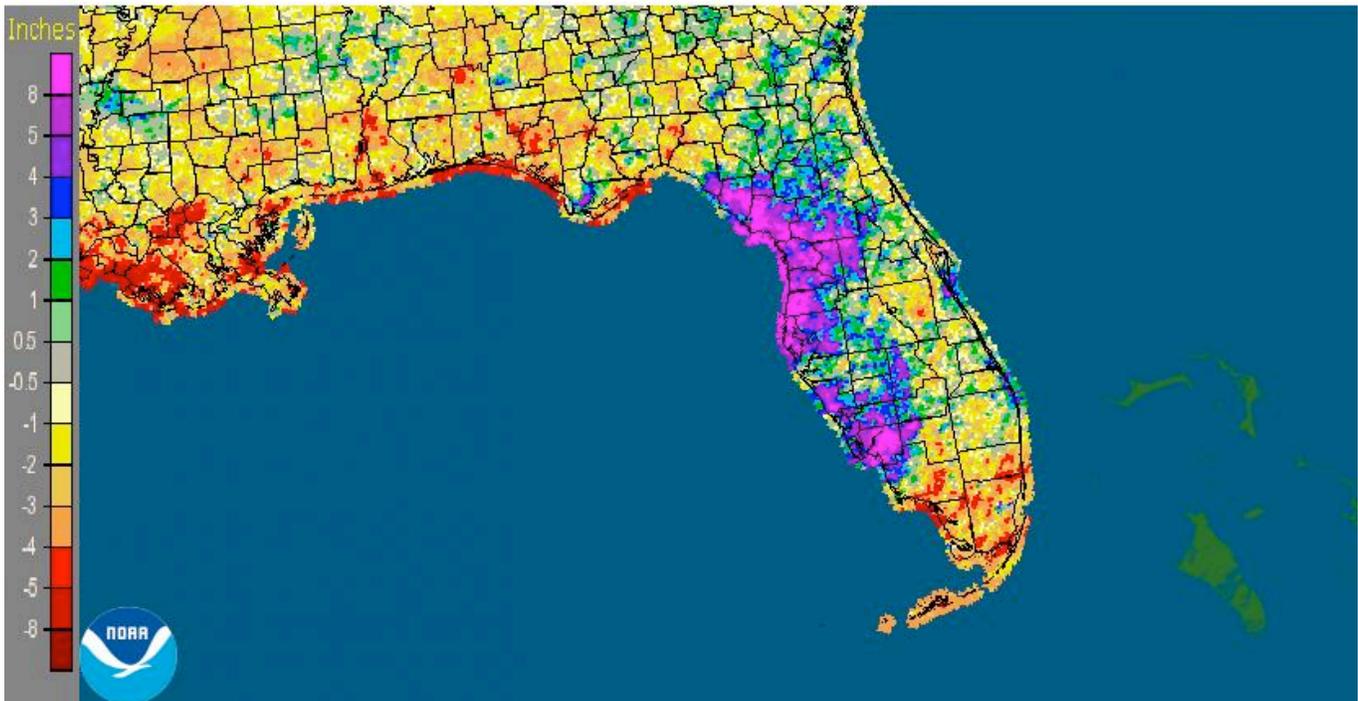
El Niño Conditions are Present in the Pacific.
Based on current data and forecast models, the Climate Prediction Center (CPC) decided to continue the El Niño Advisory. El Niño conditions are present, and positive equatorial sea surface temperatures (SST) anomalies continue across most of the Pacific Ocean. There is approximately a 90% chance that El Niño conditions will continue through the Northern Hemisphere winter 2015-2016, and a greater than 80% chance it will last through early spring 2016. CPC predicts above normal temperatures and normal precipitation across the state through October 2015.

Hazardous Weather Events in July.
There were a total of 470 severe weather reports made in Florida during July. Multiple reports of funnel clouds were made along the area in Flagler Beach and lightning struck a seven-story building in Marineland, FL. On the 3rd of July, a house fire was started by a lightning strike in Clearwater, FL. Many news media outlets showed pictures of a large waterspout off the coast of Miramar Beach, FL on the 5th. A brush fire near Durbin, FL (St. Johns County) started from lightning on the 6th, but was quickly extinguished by firefighters. On the 12th, a well-defined waterspout was reported about 3 miles southwest of Marathon, FL. Lightning caused house

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fires in Palm Coast, FL and Bunnell, FL on the 13th. Lightning associated with an intense thunderstorm on the 16th injured one person in Baldwin, FL and another in Normandy, FL. Heavy rains on the 17th caused flooding in downtown St. Petersburg, FL. Lightning was the cause of house fires in Navarre, FL on the 19th and Jacksonville Beach on the 21st. Two people were indirectly injured from a lightning strike near a restaurant in Jacksonville Beach, FL on the 21st. The following day, three people were injured at Haulover Beach, FL from a lightning strike. A stalled stationary front caused heavy rains and flooding in areas of Hillsborough, Pasco and Pinellas counties on the 25th and 26th. Two women were injured in Orlando on the 29th when lightning struck near where they had been standing. Various convective and sea breeze thunderstorms caused hail, high winds, storm damage and heavy rains across the state during the entire month of July.

Table 4. Breakdown of storm reports submitted in Florida during the month of July. (Compiled from Southeast Regional Climate Center.)

Report Type	Number of Reports
Heavy Rain and Flooding	25
High Winds	220
Storm Damage	141
Hail	38
Thunderstorm/Lightning	20
Tornadoes/Funnel Clouds/Waterspouts	26
Coastal Hazards	0
Dense Fog	0
Fire	0

**Agriculture Related Impacts.**
At the beginning of July, topsoil moisture levels were at mainly short to adequate across the state. The late June rains improved pasture quality in the Panhandle and southwest Florida. Corn harvesting and silage was in full swing across multiple counties in the state. Late planting of soybeans took place in the Panhandle by mid-month. Wet conditions delayed haying in some northeast Florida counties. Due to the lack of rain in southeast Florida, all crops in Dade counties were being irrigated. The dry and hot conditions across much of the southern part of the state impacted pasture conditions and livestock. Growers in the Peninsula began preparing land for fall crops. Portions of the western Big Bed dealt with heavy rainfall and pastures in the area showed signs of mildew from the wet conditions. Drought conditions took a toll on soil moisture values with 22% of the topsoil reported being short of moisture. Heavy rains flooded fields across portions of the western Peninsula, and army worms were reported in Pasco County. The peanut progress was on par with the 5-year average with 81% of the pegging condition between good and excellent. At month's end, several counties in the center of the citrus growing region were showing some abnormally dry conditions and irrigation was being used in most locations.

Drought Related Impacts.
At the end of June, nearly 41% of the state was experiencing abnormally dry (D0) or drought conditions. The main concentration was seen along the east coast of the state, and in portions of northeastern and southern Florida. By July 7th, area of D0 was added into Escambia, Santa Rosa and Walton counties. As the month progressed, limited rainfall lead to continued drought conditions in North Florida and the Big Bend, where moderate (D1) and severe (D2) droughts were reported. In South Florida, the area of D2 conditions was expanded in Broward, Dade and Palm Beach counties. Severe drought (D3) conditions were introduced along the Gold Coast.
Rains toward the end of the month helped ease D2 in the northeastern part of the state and along Volusia and Brevard counties. Based on census data, roughly 6 million Florida citizens are currently being impacted by drought conditions reported in nearly 40% of the state. At the end of the month, the water level in Lake Okeechobee had dropped to under 12 ft., mainly due to lack of rainfall across the basin. This pushes the lake into water shortage management stages.
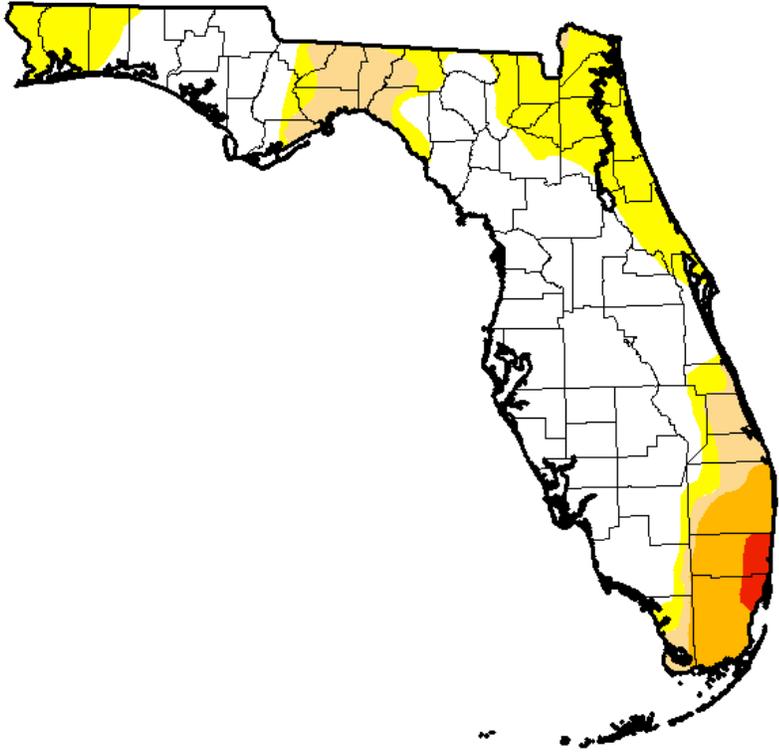
Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	60.11	39.89	17.19	8.19	1.21	0.00
Last Week 7/21/2015	54.74	45.26	22.98	8.90	1.84	0.00
3 Months Ago 4/28/2015	90.49	9.51	5.14	0.00	0.00	0.00
Start of Calendar Year 12/30/2014	94.33	5.67	0.99	0.00	0.00	0.00
Start of Water Year 9/30/2014	77.22	22.78	6.61	0.00	0.00	0.00
One Year Ago 7/29/2014	81.98	18.02	0.00	0.00	0.00	0.00

Intensity:

D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

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

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USDA National Drought Mitigation Center

http://droughtmonitor.unl.edu/

Appendix 1
Additional July Departures from Normal Data for Florida Locations

Station	Total rainfall (in.)	Departure from Normal (in.)	Average Temperature (°F)	Departure from Normal (°F)
Gainesville	8.09	2.02	82.1	0.9
Melbourne	10.66	4.70	81.5	-0.2
St Petersburg	14.32	6.98	83.0	-0.9
Fort Lauderdale	3.03	-2.95	84.9	0.6
Fort Myers	13.07	4.03	82.6	-0.6

Appendix 2
Select daily maximum and minimum temperature records (^{o}F) tied or broken during July.
(Compiled from NOAA, NWS)

Date	Station	Type	Value	Broken/Tied	Last
1	Fort Myers	Max	96	Tied	96 in 1987
1	Key West	High Min	83	Tied	83 in 2011
2	Fort Lauderdale	High Min	83	Broken	80 in 2004
2	Key West	High Min	84	Tied	84 in 2014
3	Fort Lauderdale	High Min	82	Tied	82 in 2006
4	Key West	High Min	84	Broken	83 in 2005
5	Miami	High Min	82	Tied	82 in 2011
5	Key West	High Min	84	Tied	84 in 2014
6	Cross City	Min	61	Broken	64 in 1968
7	Miami	High Min	82	Tied	82 in 1969
8	Fort Lauderdale	High Min	82	Tied	82 in 2010
9	West Palm Beach	High Min	81	Tied	81 in 2008
11	Apalachicola	Max	98	Broken	97 in 1998
11	Sarasota	Max	97	Tied	97 in 1981
11	Fort Lauderdale	High Min	81	Tied	81 in 2007
12	Apalachicola	Max	99	Broken	98 in 1987
12	Tallahassee	Max	100	Tied	100 in 1980
14	West Palm Beach	Max	96	Tied	96 in 1989
15	Federal Point	High Min	79	Tied	79 in 1939
17	Apalachicola	Max	97	Tied	97 in 2002
18	Inverness	High Min	76	Tied	76 in 1899
22	Apalachicola	Max	96	Tied	96 in 1942
22	Gainesville	High Min	77	Broken	76 in 1995
22	Niceville	High Min	77	Tied	77 in 1948
22	Live Oak	High Min	79	Broken	78 in 1960
24	Apalachicola	Max	96	Tied	96 in 1990
25	Fort Pierce	Low Max	81	Broken	84 in 1902
25	Gainesville	Low Max	82	Broken	83 in 1998
27	Naples	Low Max	85	Broken	86 in 1954
28	Vero Beach	High Min	96	Tied	96 in 1950