FloridaClimateCenter
Office of the State Climatologist

Climate Summary for Florida - July 2013
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Online at: http://climatecenter.fsu.edu/products-services/summaries

Below average temperatures across the state in July. Average temperatures were below normal during July across the entire state (Table 1 and Appendix 1). Departures from normal ranged from -0.1˚F in St. Petersburg to -2.6˚F in Fort Lauderdale. These below normal average temperatures are a bit deceiving without looking at both the maximum and minimum temperatures for the month. Most stations across the state reported lower than normal maximum temperatures and higher than normal minimum temperatures. For example, maximum temperatures for July 2013 were the coolest on record in Federal Point, the 3rd coolest at Pensacola, 4th coolest in Miami, and 8th coolest in Key West; while the minimum temperatures were the 3rd warmest at Moore Have Lock, 4th warmest in St. Petersburg, 10th warmest at Daytona Beach. There were a number of low maximum and high minimum temperatures tied and broken during July (Appendix 2).

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

Station	Average Temperature	Departure from Normal
Pensacola	80.9	-1.3
Tallahassee	81.0	-1.0
Jacksonville	80.6	-1.7
Orlando	81.8	-0.9
Tampa	82.4	-0.6
Miami	82.4	-1.7
Key West	82.8	-1.7

Rainfall totals varied across the state in July. Rainfall totals across the state varied in July, though most of the state reported above normal precipitation for the month (Table 2). Portions of the Big Bend, Panhandle and southern Florida recorded up to 8 inches above normal precipitation while portions along the east coast from Jacksonville to Titusville and inland from the Orlando to the west coast between 1 to 3 inches below normal rainfall (Figure 1). The unusual rainfall pattern during the month has impacted agricultural producers with diseases, standing water and decaying crops to causing a forced release of the high water in Lake Okeechobee to keep the lake at a level that can be managed in the event of any tropical storm/hurricane impacts later in the season. July 2013 was the wettest on record in Gainesville, 3rd wettest in Pensacola, 5th wettest in Miami and 9th wettest in Tallahassee. Numerous 24-hour precipitation records were broken for the month, with one record that dated back to 1890 (Table 3).

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

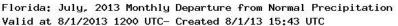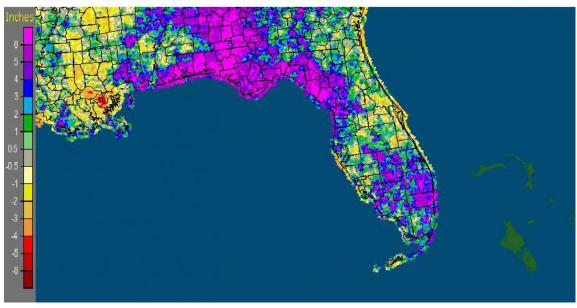| Station	Total Rainfall	Departure from Normal
Pensacola	16.05	8.64
Tallahassee	14.96	7.79
Jacksonville	8.65	2.10
Orlando	8.57	1.30
Tampa	10.19	3.12
Miami	12.70	6.20
Key West	7.80	4.25

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

Date	Location	Record	Last
1	Usher Tower	3.91	2.60 in 1976
1	Venice	3.44	1.74 in 1991
1	High Springs	2.10	1.45 in 1988
2	Cross City	4.60	3.36 in 2010
4	Chipley	5.16	2.04 in 1970
4	Tallahassee	2.53	2.23 in 1994
4	Sarasota	3.02	3.02 in 1921
14	Fort Lauderdale Beach	4.09	3.66 in 1954
14	Naples	3.41	2.10 in 1967
17	Key West	3.06	2.21 in 2002
18	Miami Beach	6.78	1.42 in 1985
19	Daytona Beach	2.38	1.37 in 1960
20	Tallahassee	2.50	1.80 in 1923
23	Apalachicola	3.16	2.51 in 1963
23	Gainesville	1.81	1.74 in 1890
30	Tampa	2.16	2.00 in 1948

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, 2013 Monthly Departure from Normal Precipitation
Valid at 8/1/2013 1200 UTC– Created 8/1/13 15:43 UTC

ENSO-Neutral Conditions Continue in the Pacific.
As of July 29th, neutral ENSO conditions continue to be reported for the equatorial Pacific. Equatorial sea surface temperatures (SST) are near average across the western and central Pacific Ocean and below average in the eastern Pacific. ENSO-neutral conditions are favored to continue through the summer and into the fall of 2013. The Climate Prediction Center (CPC) predicts above normal temperatures for the state and they are also predicting above normal precipitation for the entire state and normal temperatures through October.

Hazardous Weather Events in July

Over 450 storm reports were submitted during the month of July, with the majority of those reports categorized with heavy rain, flooding or high winds. The month started off with nearly 199 of the total 450 reports coming from July 1st – July 5th; 77 of the severe weather reports were on the 4th of July. Heavy rains and related flooding were seen in many portions of the Panhandle, Big Bend and southern Florida and numerous reports of high winds were scattered across the state. Tornadoes touched down in Oldsmar and Bradenton on the 9th and 10th, causing damage to homes, and 3 people were injured when a waterspout moved onshore near Sea Ranch Lakes on the 19th. Over the course of the month, 4 people were injured from lightning strikes in Pace, Cooper City and Fort Lauderdale; 6 people died and more than 50 people were rescued along Florida beaches due to dangerous rip currents.

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	177
High Winds	142
Storm Damage	83
Hail	1
Thunderstorm/Lightning	13
Tornadoes/Funnel Clouds/Waterspouts	41
Coastal Hazards	9
Dense Fog	0
Fire	0

Agricultural and other climate related impacts.

Topsoil and subsoil levels were adequate at the beginning of the month, with reports from some portions of the state having a surplus at both levels. Farmers in the Panhandle finished up planting soybeans, while others replanted cotton and peanut fields. Heavy rains kept growers in Dixie County from having a second hay cutting. In south Florida, grapefruits and late oranges seasons came to a close and producers began preparing fields for fall/winter vegetables. All areas reported heavy spraying and Psyllid control. The heavy rains brought soil (top and sub) moisture levels up, with over 20% reporting a surplus. The threat of disease to crops had increased due to standing water across the state. Okaloosa County reported peanut acreage lost due to the heavy rains. Rain caused watermelons to burst in Gulf County. Growers began concentrating on next year's citrus crop. Toward the end of the month, soil moisture surplus levels were at 40%. Haying was delayed due to the heavy rains, and white mold was present in peanuts in a few Panhandle counties. Preparing for the fall planting season continued but was hindered in some locations because of standing water. Peanuts also showed signs of yellowing in Washington County, while Bradford and Seminole counties reported loss of hay sitting in wet fields waiting to be baled. Cattle conditions across the state during the state were good to excellent, though forage was limited due to flooding and disease.

The dry conditions that had lingered in the Panhandle at the beginning of July were completely removed after an unusual atmospheric weather pattern allowed for an extremely moist flow over the state. Rainfall totals for the month (Table 2 and Figure 1) were well above normal across Florida, wiping out all the remaining traces of drought conditions in the state. With all of the rain, interests have shifted from a drought focus, to inland flooding as many rivers in the state are near flood stage. The current wet pattern is forecasted to hold through October, which should keep any drought conditions that appear localized and not severe.

U.S. Drought Monitor
Florida

July 30, 2013
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week (07/23/2013 map)	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago (04/30/2013 map)	49.80	50.20	29.41	9.11	0.00	0.00
Start of Calendar Year (01/01/2013 map)	56.86	43.14	3.13	0.00	0.00	0.00
Start of Water Year (09/25/2012 map)	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago (07/24/2012 map)	78.18	21.82	6.92	0.00	0.00	0.00

Intensity:

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

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

http://droughtmonitor.unl.edu

USDA National Drought Mitigation Center

Released Thursday, August 1, 2013
Brian Fuchs, National Drought Mitigation Center

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	16.65	10.58	81.0	-0.2
St Petersburg	8.86	1.52	83.8	-0.1
Fort Lauderdale	15.49	9.51	81.7	-2.6
Fort Myers	10.05	1.01	81.6	-1.6

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	Vero Beach	High Min	76	Tied	76 in 2003
1	Key West	Low Max	84	Tied	84 in 1966
3	Plant City	Min	64	Broken	65 in 1938
5	Whiting Field NAS	Low Max	77	Broken	82 in 1991
5	Key West NAS	Min	74	Broken	75 in 2008
6	Whiting Field NAS	Low Max	78	Broken	81 in 1991
7	Daytona Beach	High Min	80	Broken	78 in 2011
8	Daytona Beach	High Min	81	Broken	79 in 2010
8	Melbourne	High Min	80	Broken	77 in 2005
10	Inverness	Min	68	Tied	68 in 1918
14	Cross City	Low Max	79	Broken	84 in 2003
17	Key West	Low Max	72	Tied	72 in 1888
17	Miami	Low Max	78	Broken	84 in 1926
17	Fort Lauderdale	Low Max	80	Broken	86 in 1990
17	West Palm Beach	Low Max	84	Broken	85 in 1975
18	Naples	Low Max	81	Broken	86 in 1961
19	Dry Tortugas	Low Max	80	Broken	85 in 1959
19	Hialeah	Low Max	83	Broken	86 in 1975
22	Oasis Ranger Station	Max	96	Tied	96 in 2010
24	Clermont	Low Max	82	Broken	85 in 2012
25	Avon Park	High Min	76	Tied	76 in 2010
26	Kissimmee	Low Max	85	Broken	89 in 1994
27	Vero Beach	Low Max	83	Broken	87 in 1966