



## Climate Summary for Florida – October 2017

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**Average temperatures in October were above normal across most of the state.** The departures from average temperatures in October 2017 were above normal across most of the state, ranging from -1.0°F in Fort Lauderdale to 3.9°F in Pensacola (Table 1 and Appendix 1). Despite the above-normal average temperatures, a strong cold front on the 28<sup>th</sup> and 29<sup>th</sup> of the month brought significantly lower temperatures, with overnight lows in some locations in the panhandle as well as some interior locations in the northern part of the peninsula dipping into the mid-30s. October 2017 was the 5<sup>th</sup> warmest on record in Miami, and 8<sup>th</sup> warmest in Tampa. A number of temperature records were tied or broken across the state (Appendix 2).

Table 1. October average temperatures and departures from normal (°F) for selected cities.

Station	Average Temperature	Departure from Normal
Pensacola	73.5	+3.9
Tallahassee	72.8	+3.4
Jacksonville	74.0	+3.6
Orlando	75.7	+0.0
Tampa	78.2	+2.0
Miami	80.8	+0.9
Key West	80.8	+0.6

**Rainfall totals in October were mixed.** Rainfall totals in October 2017 were above normal in the eastern part of the Florida Peninsula and in the extreme western part of the Panhandle, and below normal in the remainder of the state (Figure 1). Departures from normal roughly ranged from -1.31” in Gainesville to 8.38” in Melbourne (Table 2 and Appendix 1), though localized parts of the state saw rainfall totals that were as much as 3.00” below normal to more than 8.00” above normal (Figure 1). Significant rainfall amounts in South Florida were associated with tropical storm Philippe near the end of the month, with localized daily totals exceeding 8 inches reported in a several locations in Palm Beach County. A small number of 24-hour precipitation records broken for the month (Table 3).

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

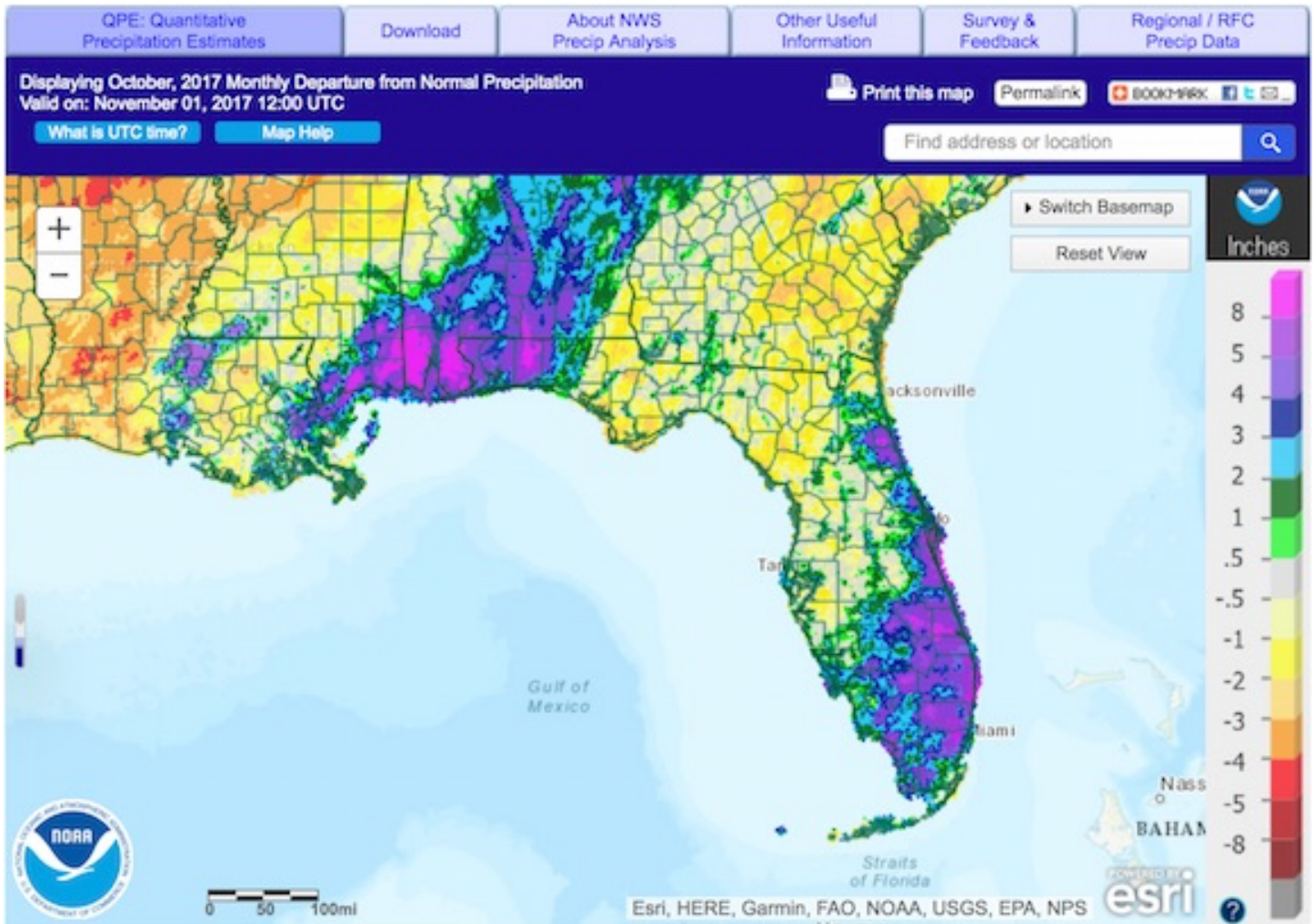
Station	Total Rainfall	Departure from Normal
Pensacola	10.30	+5.06
Tallahassee	3.97	+0.74
Jacksonville	4.01	+0.08
Orlando	3.59	+0.28
Tampa	3.07	+0.81
Miami	12.61	+6.28
Key West	5.81	+0.88

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

Date	Location	Record	Last
1	Melbourne	5.23	1.01 in 1966
28	Fort Lauderdale	2.18	1.32 in 1922



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



### **ENSO-Neutral Conditions are Present in the Pacific.**

Based on current data and forecast models, the Climate Prediction Center (CPC) the ENSO alert system status is set to La Niña Watch. ENSO-neutral conditions are currently present, with sea surface temperatures (SST) near- to below-average across the central and eastern Pacific Ocean. Forecast models favor the development of La Niña conditions during the fall and winter of 2017-2018. Taking into account the ENSO forecast and long-term trends, the CPC seasonal outlook favors above-normal temperatures and below-normal precipitation for Florida through January 2018.

### **Hazardous Weather Events in October.**

There were a total of 256 hazardous weather reports issued in Florida in October 2017. Most of these were reports of high winds, mainly in South Florida between the 3<sup>rd</sup> and 5<sup>th</sup> of the month, and between the 28<sup>th</sup> and 29<sup>th</sup>. High tides and coastal flooding were observed between the 1<sup>st</sup> and 7<sup>th</sup> of the month in Brevard, Broward, Collier, Duval, Flagler, Miami-Dade, Monroe, Palm Beach, Pinellas, and St. Johns Counties. On October 8, as tropical storm Nate made landfall near Biloxi, MS, tropical storm winds and damage to trees and powerlines were reported in Bay, Escambia, Holmes, Okaloosa, Santa Rosa, Walton, and Washington Counties. Storm surge and coastal flooding on that day were seen in Escambia, Gulf, Santa Rosa, and Walton Counties. Tropical storm winds were also reported on October 29<sup>th</sup> From Key Largo and Miami-Dade. There were four tornadoes observed on that day, one in Miami-Dade and three in Palm Beach County, with some reports of damage to roofs, awnings, and mobile homes.

Table 4. Breakdown of storm reports submitted in Florida during the month of October. (Compiled from Iowa State University/Iowa Environmental Mesonet.)

<b>Report Type</b>	<b>Number of Reports</b>
High Winds	109
Coastal Flooding	47
Heavy Rain	31
Tropical Storm	27
Flooding	21
Tornadoes/Funnel Clouds/Waterspouts	5/1/12
Storm Damage	2
Lightning	1

**Drought-Related Impacts.**

The state has remained drought-free since the previous month. At the end of the month, Lake Okeechobee water levels were very high, at 17.01 ft., requiring continuing heavy discharges. As the end of October typically marks the beginning of the dry season, it is expected that water levels in the lake will not peak further.

**Agriculture-Related Impacts.**

Throughout the month topsoil moisture levels were at mainly adequate to surplus, although a few short values were also reported.

The citrus growing area started the month with continued hurricane cleanup and repairs, and was gradually resuming normal grove operations. Early harvest of oranges, tangerines, and grapefruit for the fresh market has begun. Canals and ditches have sufficient water for irrigation, and irrigation was being run in areas with below-average rainfall. Cattle and started the month in mostly good to fair condition, and have improved as the month went on. Excess moisture has been a problem for fields in the southern portion of the state. With some pastures underwater for a prolonged duration, some producers in Okeechobee County have begun feeding supplements early. Winter pastures are being planted in Jackson County. Hay cutting was reported in Dixie, Jackson, Osceola and Walton Counties. Heavy rains temporarily delayed sugarcane harvest in Glades, Hendry, and Palm Beach Counties, but the harvest was resumed in the drier parts. Wet conditions have prevented hay cutting in Volusia County, raising concern of potential shortages if conditions fail to improve. Peanut yield and quality has been negatively impacted in Lafayette County by low moisture conditions, and in Dixie, Jackson, Gilchrist, Holmes, Suwannee and Washington Counties by excess moisture Jackson County is reporting low cotton yields and cotton damage from heavy wind and rain was reported in Washington County.

Appendix 1  
Additional October Departures from Normal Data for Florida Locations

<b>Station</b>	<b>Total rainfall (in.)</b>	<b>Departure from Normal (in.)</b>	<b>Average Temperature (°F)</b>	<b>Departure from Normal (°F)</b>
Gainesville	1.57	-1.31	72.0	+1.1
Melbourne	13.44	+8.38	77.9	+1.9
St Petersburg	2.11	-0.67	77.9	+0.7
Fort Lauderdale	7.00	+0.18	79.6	-1.0
Fort Myers	4.19	+1.31	77.0	-0.9

Appendix 2

Select daily maximum and minimum temperature records (°F) tied or broken during October 2017.  
(Compiled from NOAA, NWS)

<b>Date</b>	<b>Station</b>	<b>Type</b>	<b>Value</b>	<b>Broken/Tied</b>	<b>Last</b>
1	Fort Lauderdale	High Min	82	Tied	82 in 2007
1	Tampa	Max	94	Broken	92 in 2015
2	Melbourne	High Min	79	Tied	79 in 2002
6	Fort Lauderdale	High Min	82	Broken	81 in 2008
6	Miami	High Min	81	Tied	81 in 1915
6	Tampa	Max	93	Tied	93 in 1966
7	Gainesville	High Min	75	Broken	74 in 1941
7	Melbourne	High Min	80	Broken	77 in 2007
7	Miami	High Min	83	Broken	80 in 2016
7	Orlando	High Min	77	Broken	76 in 2016
8	Fort Lauderdale	Max	91	Tied	91 in 1989
8	Fort Lauderdale	High Min	82	Tied	82 in 2007
8	Gainesville	High Min	76	Broken	75 in 2009
8	Jacksonville	High Min	76	Tied	76 in 1941
8	Key West	High Min	83	Tied	83 in 2007
8	Miami	High Min	81	Broken	80 in 2016
8	Orlando	High Min	75	Tied	75 in 2013
8	Tallahassee	High Min	77	Broken	74 in 2009
9	Orlando	High Min	76	Broken	75 in 2009
9	Tallahassee	High Min	77	Broken	73 in 1999
10	Melbourne	High Min	80	Broken	79 in 2014
10	Orlando	High Min	75	Tied	75 in 2005
10	Tallahassee	High Min	76	Broken	74 in 1911
10	Tampa	Max	94	Tied	94 in 1941
11	Melbourne	High Min	79	Broken	76 in 1990
11	Tallahassee	High Min	74	Broken	73 in 1999
11	Tampa	Max	93	Broken	92 in 2009
12	Melbourne	High Min	78	Tied	78 in 2009
12	Pensacola	Max	92	Broken	90 in 1991
13	Jacksonville	Max	89	Tied	89 in 1986
13	Pensacola	Max	90	Broken	89 in 1884
13	Tallahassee	Max	90	Broken	89 in 1968
14	Fort Lauderdale	High Min	80	Broken	79 in 2012
14	Jacksonville	High Min	76	Tied	76 in 1912
15	Melbourne	High Min	80	Broken	78 in 2007
15	Tampa	Max	91	Broken	90 in 1986
16	Jacksonville	Max	92	Broken	90 in 1925
19	Melbourne	High Min	78	Broken	76 in 2016
20	Melbourne	High Min	79	Broken	77 in 1979
21	Melbourne	High Min	78	Broken	76 in 2007
21	Miami	High Min	78	Tied	78 in 2013
22	Melbourne	High Min	79	Tied	79 in 2007
22	Miami	High Min	80	Tied	90 in 2007
22	Tampa	Max	91	Tied	91 in 1990
23	Miami	High Min	80	Tied	80 in 2005
24	Key West	High Min	80	Tied	80 in 1959
30	Fort Lauderdale	Low Max	71	Broken	72 in 1953
30	Miami	Low Max	71	Tied	71 in 1953
30	Orlando	Low Max	67	Tied	67 in 1953
31	Key West	Min	60	Broken	62 in 1953