

# Climate Summary for Florida – December 2014

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Average temperatures were above normal across the state in December. The departures for average temperatures in December 2014 for the Peninsula were above normal, though most of the reporting stations in the northern part of the state saw average temperatures well above normal. The departures ranged from  $0.8^{\circ}$ F in Miami to  $3.9^{\circ}$ F at Tallahassee. (Table 1 and Appendix 1). Despite the warm month, some stations in the Panhandle, Big Bend and North Florida recorded at least one day with a minimum temperature below freezing ( $32^{\circ}$ F) during the month; and no stations reported a maximum temperature over  $90^{\circ}$ F. Multiple temperature records were tied or broken across the state in December (Appendix 2).

Station	Average Temperature	Departure from Normal
Pensacola	56.4	2.9
Tallahassee	57.1	3.9
Jacksonville	58.2	3.0
Orlando	63.7	3.2
Tampa	64.9	1.8
Miami	71.3	0.8
Key West	72.8	1.4

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

**Rainfall totals varied across the state in December.** A very localized portion of the Big Bend reported monthly rainfall totals well above normal, while the rest of Florida saw average rainfall during December near to below normal (Figure 1). Departures from normal roughly ranged from -2.16" to 4.88" (Table 2 and Appendix 1), though localized parts of Florida saw rainfall totals that were as much as 4.00" below normal to over 8.00" above normal (Figure 1). Tallahassee reported its wettest day in December since records started in 1892 on the 23<sup>rd</sup> when 7.44" of rainfall was recorded. 2014 was the 9<sup>th</sup> wettest year in Pensacola (83.17") and the 10<sup>th</sup> wettest year in Daytona Beach (63.77"). There were multiple 24-hour precipitation records broken for the month (Table 3).

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

Station	Total Rainfall	Departure from Normal
Pensacola	3.50	-1.50
Tallahassee	8.78	4.88
Jacksonville	3.74	0.94
Orlando	2.83	0.20
Tampa	1.57	-0.90
Miami	1.32	-0.72
Key West	2.25	0.03



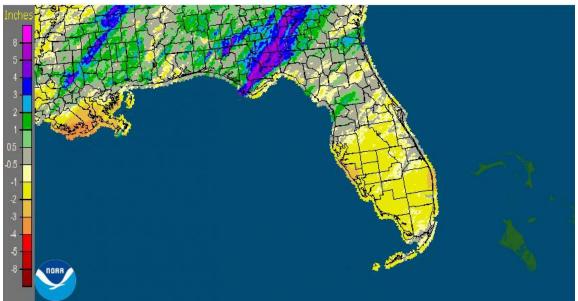


Date	Location	Record	Last
22	Daytona Beach	2.15	2.04 in 1930
23	Apalachicola	2.04	2.00 in 2001
23	Tallahassee	7.44	1.43 in 1986
24	Wewahitchka	4.00	3.28 in 1978
24	Quincy	7.40	2.94 in 1978
25	Miami Beach	1.20	0.71 in 1959

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

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

Florida: December, 2014 Monthly Departure from Normal Precipitation Valid at 1/1/2015 1200 UTC- Created 1/1/15 14:26 UTC



## ENSO-Neutral Conditions Continue in the Pacific.

Based on current data and forecast models, the Climate Prediction Center (CPC) continue to have an El Niño Watch in place. Though Neutral ENSO conditions continue to be reported, positive sea surface temperatures (SST) anomalies have been recorded across most of the Pacific Ocean. An El Niño event is favored to develop during the Northern Hemisphere winter. CPC predicts below normal temperatures and above normal precipitation across the state through March 2015.

#### Hazardous Weather Events in December.

There were only 40 hazardous weather reports across the state in December. On December 8<sup>th</sup>, high winds (up to 50 mph) were reported along the eastern coast of Florida. High surf, up to 8 feet was reported around the area of St. Augustine and Vilano Beach. Waterspouts were reported offshore of Miami Beach, FL on the 13<sup>th</sup>. A lightning strike injured 11 people near Raymond James Stadium (Tampa, FL) on Dec 21<sup>st</sup> prior to a NFL Football game. Seven people were transported to the hospital, one of which was reported in critical condition, while four additional people went to the hospital on their own. A severe thunderstorm produced hail (pea to golf ball sized) in the Gainesville and Middleburg areas on the 22<sup>nd</sup>. On December 23<sup>rd</sup>, torrential heavy rains caused flooding in Tallahassee and Quincy, FL. Many roads in both locations were impassable due to standing water. In Defuniak Springs, a 10' swath of water covered the southbound lanes of Highway 83, and floodwaters had closed roads in Walton County. After the front passed through, the combination of soggy ground and high winds caused trees to be knocked down in multiple Panhandle locations.

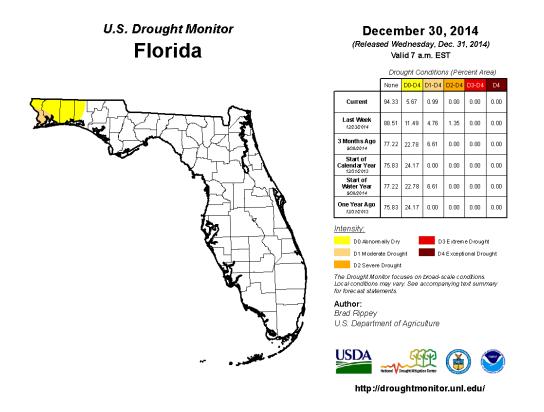
# Table 4. Breakdown of storm reports submitted in Florida during the month of December (Compiled from Southeast Regional Climate Center.)

<u>Report Type</u>	Number of Reports	
Heavy Rain and Flooding	18	
High Winds	6	
Storm Damage	3	
Hail	7	
Thunderstorm/Lightning	1	
Tornadoes/Funnel Clouds/Waterspouts	3	
Coastal Hazards	2	
Dense Fog	0	
Fire	0	

## Agricultural and other climate related impacts.

At the beginning of December, cotton and soybean harvesting wrapped up in the Panhandle and north Florida. Farmers in the area began planting winter forage, oats and wheat for grain. The sugarcane harvest in Glades and Hendry counties continued, while vegetables harvesting in southwest Florida ramped up. Small amounts of rain and warmer weather improved pasture conditions and reduced cattle stress across portions of the state. Early orange harvest picked up significantly in the first part of the month, and the grapefruit harvest for both white and colored headed to plants for processing or to the fresh market. By mid-month, some U-pick strawberry fields had opened in Orange County, and spring vegetable planting began in Flagler and Putnam counties. Cattle and horse owners in southwest Florida were feeding hay to livestock, though pasture conditions were reported fair to good across Florida. Most of the early orange harvest was being used for juice and 13 out of 15 processing plants had opened and were beginning to run fruit. Heavy rains at the end of the month caused the fieldwork to be halted in the Panhandle, and the coldest temperature reported during that time was 34°F in Walton County (Defuniak Springs). Sugarcane, strawberries, citrus, and vegetable harvests continued across the state. Harvesting totals for early oranges were down due to small sized fruits and the holidays. Citrus grove activity for the month included irrigation, mowing, aerial spraying, and fertilizing.

At the end of November, heavy rains across portions of the Panhandle and Big Bend reduced the moderate drought (D1) conditions to abnormally dry (D0) in Gadsden, Leon, Jefferson and Wakulla counties. Dry conditions over the first part of the month of December kept drought conditions consistent across the state. When the Drought Monitor was released on the  $16^{th}$  of the month, the D0 conditions were removed from Gadsden, Jefferson, Leon and Wakulla counties. Unfortunately, the rains that helped ease the drought conditions that had plagued that portion of the Big Bend for months did not help the northwestern Panhandle. The D0 conditions were seen in Bay, Holmes, Jackson and Washington counties, and D1 conditions expanded from the coastal area to interior portions of Escambia, Okaloosa and Santa Rosa counties. Severe drought (D2) was introduced in Escambia and Santa Rosa counties at midmonth. On December  $23^{rd} - 24^{th}$ , a strong storm system moved through the northern part of the state, dumping 3.00" to 10.00" in the Panhandle and Big Bend. The rainfall caused localized flooding in some urbanized areas and some rivers and streams to rise. In addition, the rainfall reduced some of the drought impacts in the northwestern Panhandle counties. The remainder of the state saw monthly rainfall totals slightly below normal, though no drought conditions were posted during December.



Appendix 1
Additional December Departures from Normal Data for Florida Locations

Station	Total rainfall (in.)	Departure from	Average	Departure from
		Normal (in.)	Temperature (°F)	Normal (°F)
Gainesville	3.38	0.90	59.0	2.9
Melbourne	1.62	-0.95	66.3	3.3
St Petersburg	0.59	-2.16	65.6	1.5
Fort Lauderdale	0.05	-1.66	67.7	1.2
Fort Myers	2.19	-0.27	71.1	0.1

Date	Station Type		Value Broken/Tied		Last	
3	Tallahassee	Max	81	Tied	81 in 1982	
6	Pensacola	Max	81	Broken	80 in 2013	
6	Moore Haven	High Min	70	Tied	70 in 1941	
9	Quincy	Low Max	50	Tied	50 in 1968	
10	Key West	Low Max	65	Broken	66 in 1962	
11	Fort Lauderdale	Low Max	66	Broken	68 in 1962	
12	Fort Lauderdale	Low Max	68	Tied	69 in 2003	
13	Vero Beach	Low Max	60	Broken	64 in 2004	
23	Key West	High Min	76	Tied	76 in 2013	
23	Ocala	High Min	68	Tied	68 in 1905	
23	Apalachicola	High Min	67	Tied	67 in 1956	
24	Orlando	Max	85	Broken	84 in 1970	
24	Melbourne	Max	85	Tied	85 in 1978	
24	Vero Beach	Max	87	Broken	84 in 2002	
24	Vero Beach	High Min	72	Broken	71 in 1987	
24	Miami	High Min	75	Broken	74 in 1931	
24	Fort Lauderdale	High Min	75	Broken	74 in 2006	
24	West Palm Beach	High Min	76	Broken	74 in 1997	
28	Apalachicola	Max	76	Tied	76 in 1987	
29	Orlando	Max	84	Tied	84 in 2007	
29	Melbourne	Max	84	Tied	84 in 1973	
29	Vero Beach	Max	85	Tied	85 in 2012	
29	Daytona Beach	Max	84	Broken	81 in 1959	
30	Miami	Max	83	Tied	83 in 1945	

Appendix 2 Select daily maximum and minimum temperature records (°F) tied or broken during December. (Compiled from NOAA, NWS)