



Climate Summary for Florida - December 2010

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Online at: http://coaps.fsu.edu/climate_center/summaries/flmonthly2010_12.shtml

Average temperatures much below normal in December. Average temperatures in December were much below normal (Table 1). At Tallahassee, Melbourne, Orlando, Tampa, Miami, and Key West, as well as numerous other sites across the state, this was the coldest December on record. Many long-standing daily minimum records were tied or broken (Appendix). A minimum temperature of 40° F at Fort Lauderdale on the 7th broke a record for that date set in 1841. On the 15th, minimum temperatures of 46° F at Key West and 31° F at Sarasota broke records in existence since 1885 and 1915, respectively. Later in the month, minima at Tallahassee (18° F), Jacksonville (20° F), and Gainesville (21° F) broke records in existence since 1925. Further, many record-low maximum temperatures were observed during the month.

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

Station	Average Temperature	Departure from Normal
Pensacola	47.4	-6.7
Tallahassee	44.6	-9.1
Jacksonville	46.1	-8.9
Orlando	52.0	-11.0
Tampa	53.2	-10.1
Miami	61.4	-8.5
Key West	63.1	-8.9

December rainfall totals below normal. Rainfall totals for December were below normal in all areas of the state (Table 2). An aerial perspective is given by Figure 1. Jacksonville, Orlando, Tampa, and Key West all received less than one inch of rain during December. In contrast, a daily total of 1.87 inches at Melbourne on the 18th broke the previous record of 1.68 inches observed in 2009. A trace of snow was observed at several places in the north on the 25-26th, including Pensacola, Apalachicola, Tallahassee, and Jacksonville.

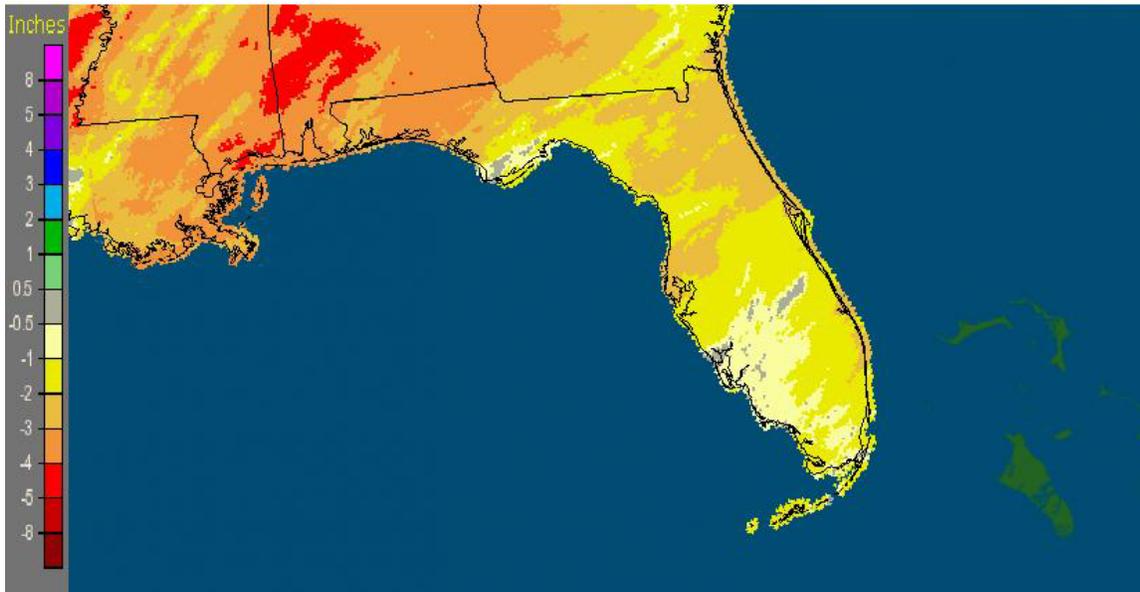
Table 2. December precipitation totals and departures from normal (inches) for selected cities.

Station	Total rainfall	Departure from Normal
Pensacola	1.48	-2.49
Tallahassee	1.48	-2.62
Jacksonville	0.34	-2.30
Orlando	0.78	-1.53
Tampa	0.55	-1.75
Miami	1.21	-0.97
Key West	0.58	-1.56



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, 2010 Monthly Departure from Normal Precipitation
Valid at 1/1/2011 1200 UTC- Created 1/3/11 21:43 UTC



La Nina continues during December. Sea surface temperatures in the equatorial Pacific Ocean continued below normal during December, denoting a continued cold phase of ENSO, or La Nina. Winter dryness is associated with a cold phase of ENSO. In addition, cold phases of the large-scale North Atlantic Oscillation (NAO) and the Arctic Oscillation (AO) aided the advances of frigid air into the state.

Hazardous weather. No tornadoes occurred during December. On the 11th, thunderstorm wind gusts to 70-80 mph damaged houses, mobile homes, trees and roofs near Milton. Severe drought conditions persisted from the east-central coast into the northeastern portion of the state.

Agricultural and other impacts. The majority of field crops were finished for the season and did not suffer damage from the record cold of December. However, in the south tomatoes, peppers, and sweet corn suffered some freeze damage. An extended period of freezes in mid-month near Lake Okeechobee severely damaged sugarcane. Pastures in the north were heavily damaged by freezing temperatures. Although damage assessment is incomplete, some fruit damage and defoliation were evident after two major freezes in citrus areas. Continued drought conditions provided favorable conditions for the onset of several wildfires around the state.

Appendix

Temperature Records (° F) Tied or Broken during December (compiled from NWS)

Date	Station	Record	Broken/tied	Type	Last
2	Apalachicola	31	t	min	31 in 1960
6	Daytona Beach	53	b	low max	54 in 1962
6	Orlando	54	b	low max	56 in 1962
6	Fort Myers	67	t	low max	67 in 1954
6	Miami	63	b	low max	65 in 1897
6	Fort Lauderdale	61	b	low max	68 in 2003
6	West Palm Beach	63	b	low max	64 in 1945
6	Naples	58	b	low max	70 in 1997
7	Vero Beach	31	b	min	38 in 1977
7	Fort Lauderdale	40	b	min	42 in 1841
7	Fort Lauderdale	58	b	low max	64 in 1997
7	Miami beach	43	b	min	49 in 2003
7	West Palm Beach	36	t	min	36 in 1937
7	West Palm Beach	59	b	low max	63 in 1984
7	Naples	39	b	min	41 in 1984
7	Naples	59	b	low max	63 in 1962
7	Key West	62	t	low max	62 in 1937
8	Apalachicola	28	t	min	28 in 1984
8	Orlando	31	b	min	33 in 1959
8	Melbourne	31	t	min	31 in 1937
8	Vero Beach	32	b	min	39 in 1962
8	Miami beach	43	b	min	52 in 1984
8	Fort Lauderdale	39	b	min	43 in 1959
8	Fort Lauderdale	67	b	low max	69 in 1959
8	West Palm Beach	37	b	min	43 in 1937
8	Naples	39	b	min	42 in 1984
8	Jacksonville	24	b	min	28 in 1984
8	Gainesville	23	b	min	24 in 1959
8	Lakeland	28	b	min	34 in 1984
8	Key West	61	b	low max	66 in 1903
8	Tallahassee	21	b	min	22 in 1984
8	Apalachicola	28	t	min	28 in 1984
9	Apalachicola	29	b	min	30 in 2006
9	Vero Beach	59	t	low max	59 in 1973
9	Miami	59	b	low max	64 in 1930
9	Fort Lauderdale	60	b	low max	63 in 1934
9	West Palm Beach	56	b	low max	62 in 1928
9	Naples	56	b	low max	68 in 1990
9	Key West	61	b	low max	63 in 1928
14	Jacksonville	20	b	min	24 in 1960
14	Daytona Beach	24	b	min	26 in 1962
14	Orlando	28	t	min	28 in 1962
14	Vero Beach	26	b	min	28 in 1962
14	Fort Lauderdale	34	t	min	34 in 1962
14	West Palm Beach	32	b	min	33 in 1962
14	Key West	50	t	min	50 in 1962
14	Pensacola	25	t	min	25 in 1962

14	Apalachicola	26	b	min	27 in 1996
15	Jacksonville	21	b	min	25 in 1962
15	Gainesville	22	b	min	26 in 1989
15	Daytona Beach	26	b	min	29 in 1962
15	Orlando	31	b	min	33 in 1968
15	Melbourne	28	b	min	33 in 1968
15	Vero Beach	29	b	min	35 in 1962
15	Fort Myers	33	t	min	33 in 1944
15	Miami beach	36	b	min	42 in 1942
15	West Palm Beach	35	b	min	36 in 1962
15	Key West	46	b	min	52 in 1885
15	Sarasota	31	t	min	31 in 1915
16	Key West	51	b	min	52 in 1968
22	Vero Beach	29	b	min	35 in 1962
27	Orlando	50	b	low max	56 in 2005
27	Melbourne	52	b	low max	54 in 1977
27	St Petersburg	50	b	low max	52 in 1935
27	Miami	57	b	low max	60 in 1902
27	Fort Lauderdale	56	b	low max	62 in 1995
27	West Palm Beach	55	b	low max	58 in 1935
27	Naples	54	b	low max	62 in 1995
28	Tallahassee	18	b	min	20 in 1925
28	Apalachicola	24	b	min	29 in 1977
28	Jacksonville	20	b	min	24 in 1925
28	Gainesville	21	b	min	24 in 1925
28	Daytona Beach	24	b	min	26 in 1935
28	Orlando	26	b	min	31 in 1977
28	Melbourne	28	b	min	32 in 1972
28	Vero Beach	29	b	min	34 in 1977
28	Sarasota	27	b	min	32 in 1977
28	Fort Myers	34	b	min	36 in 1977
28	Miami	40	b	min	44 in 1980
28	Fort Lauderdale	36	b	min	38 in 1956
28	West Palm Beach	34	b	min	38 in 1928
28	Key West	49	b	min	51 in 1977
28	Key West	56	b	low max	59 in 1980
29	Gainesville	23	t	min	23 in 1961
29	Daytona Beach	26	b	min	27 in 1961
29	Orlando	24	b	min	34 in 1961
29	Melbourne	30	b	min	36 in 2002
29	Vero Beach	28	b	min	34 in 2002
29	Sarasota	31	t	min	31 in 1928
29	Fort Myers	37	t	min	37 in 1928
29	Naples	38	t	min	38 in 1977