



Climate Summary for Florida - June 2012

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Online at: <http://climatecenter.fsu.edu>

Average temperatures varied across the state in June. Average temperatures were below normal to slightly above normal for June across the entire state (Table 1 and Appendix 1). Departures from normal ranged from -1.6°F at Key West to 0.2°F at Miami. June 2012 was rather cool for Florida, especially toward the end of the month, when record heat affected most of the nation. Sea breeze rainfall, along with Tropical Storm Debby, helped keep temperatures from reaching record highs (only 3 record highs were broken in June). The month saw numerous records tied or broken (Appendix 2), with the majority of those being from low maximum or minimum temperatures.

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

Station	Average Temperature	Departure from Normal
Pensacola	80.6	0.0
Tallahassee	79.9	-0.3
Jacksonville	77.9	-1.2
Orlando	79.7	-1.5
Tampa	80.7	-0.8
Miami	82.6	0.2
Key West	81.8	-1.6

Rainfall totals well above normal for the majority of the state in June. Rainfall totals at most locations in the state were well above normal in May (Table 2). Portions of the Big Bend, North and Central Florida, and along the west coast recorded rainfall totals that were in excess of 8.00" above normal, while parts of South Florida and the Panhandle saw below normal rainfall. June 2012 was the wettest on record in Tampa (the previous record June rainfall was 18.52" in 1945), the 2nd wettest at Pensacola, 3rd wettest at Jacksonville, and 7th at Tallahassee. Rainfall was also above normal at Fort Lauderdale and Gainesville (Appendix 1). On the 9th, Pensacola reported a record rain event of 13.31" in a 24-hour period (Table 3). Parts of southern Escambia and Santa Rosa counties experienced extensive flooding on the 9th (see Hazardous Weather section for storm pictures). A CoCoRaHS observer along Perdido Key reported a 24-hr rainfall total of 21.70" from the event (Figure 1). From June 23-29th, Tropical Storm Debby impacted the state, dumping an estimated 2.00" to 20.00" (Figure 2). Unofficial reports of over 30.00" were reported in Wakulla County. Areas that experienced the heaviest rains saw significant flooding. Some area rivers surpassed their record flood stage heights (see Hazardous Weather section for pictures). Areal patterns of monthly rainfall relative to normal are depicted in Figure 3.

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

Station	Total rainfall	Departure from Normal
Pensacola	18.23	11.84
Tallahassee	13.12	6.00
Jacksonville	16.58	11.21
Orlando	9.64	2.29
Tampa	18.66	13.16
Miami	12.56	4.02
Key West	8.53	3.96



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

Date	Location	Record	Last
1	Sarasota	2.60	1.80 in 2005
1	Tampa	2.20	2.0 in 1938
6	Sarasota	1.10	0.20 in 2001
7	Sarasota	2.10	0.80 in 2009
8	St Petersburg	2.00	0.70 in 1993
9	Pensacola	13.10	1.30 in 1949
14	Crestview	2.20	0.80 in 1987
14	Gainesville	2.00	1.00 in 1969
15	Miami	1.70	0.80 in 2003
19	Key West	3.20	1.40 in 1982
23	Sarasota	1.20	0.60 in 2001
25	Jacksonville	7.40	2.90 in 2008
25	Tallahassee	6.90	3.10 in 2008
25	Sarasota	2.40	1.30 in 2010
25	St. Petersburg	1.90	1.00 in 1997
26	Jacksonville	5.20	3.40 in 1996

Figure 1. A graphical depiction of radar estimated rainfall amounts from June 8-10th (courtesy of NWS Mobile).

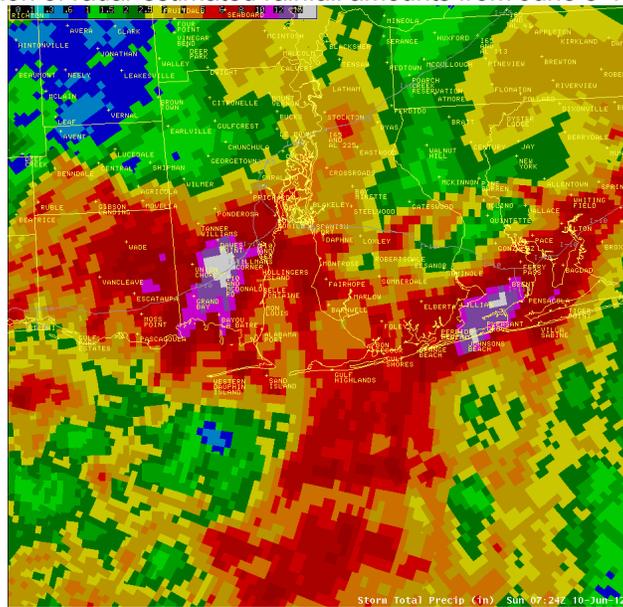


Figure 2. A graphical depiction of radar estimated rainfall amounts from June 23th-29th, during the time that Tropical Storm Debby passed through the state (courtesy of NOAA, NWS).

Florida: Current 7-Day Observed Precipitation
Valid at 6/29/2012 1200 UTC- Created 6/29/12 15:55 UTC

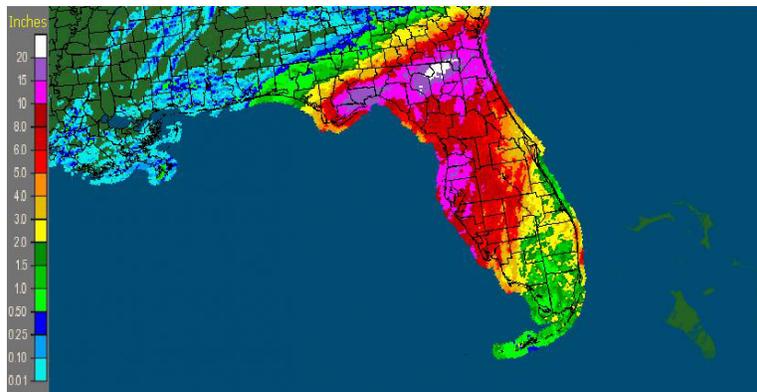
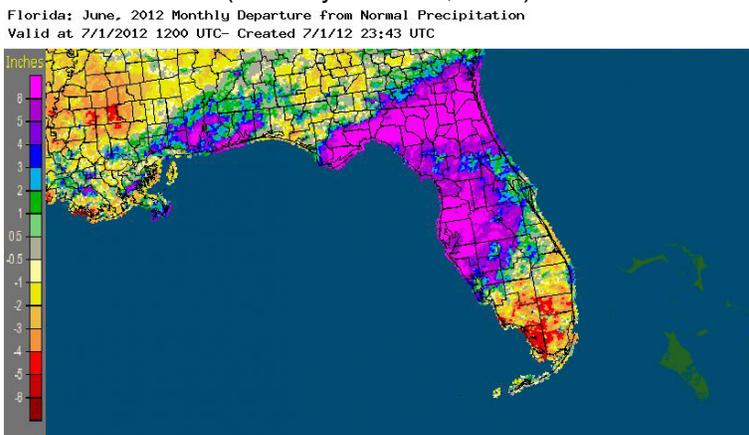


Figure 3. A graphical depiction of the monthly rainfall departure from normal (inches) for June is given in the figure below (courtesy of NOAA, NWS).



ENSO-Neutral Conditions Continue in the Pacific. Neutral ENSO conditions continue to be reported for the equatorial Pacific. Equatorial sea surface temperatures (SST) are near average in the central Pacific but above average in the eastern Pacific Ocean. ENSO-Neutral conditions are expected to continue in the Northern Hemisphere through summer 2012. The Climate Prediction Center (CPC) continues to predict warmer than normal temperatures and is now predicting above normal precipitation through September. There is a 50% chance that the equatorial Pacific will warm enough that an El Niño could set up by the fall or winter of 2012.

Hazardous weather events in May. June was a very active month for severe weather in Florida. In total, there were 619 storm reports made last month.

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

Report Type	Number of Reports
Heavy Rain and Flooding	220
High Winds	175
Storm Damage	83
Hail	55
Thunderstorm/Lightning	39
Tornadoes/Funnel Clouds/Waterspouts	44
Other Hazards (Coastal)	3

- Pensacola Flood** - On June 9, tropical moisture streamed northward from the Gulf of Mexico over a small portion of the central Gulf Coast (from Jackson County, Mississippi, to Santa Rosa County, Florida), causing significant rainfall in a short period of time. Radar estimates from the event show two areas of rainfall in excess of 15": Tillman's Corner in Baldwin County, Alabama, and Southern Escambia County in Florida (Figure 1). The daily record rainfall for Pensacola was 13.13" in a 24-hour period. It's the second highest single day rainfall total on record at the station. Pensacola's only wetter day took place on October 5, 1934, when a tropical storm produced 15.29" of rain. Flooding was reported in numerous areas, while flash floods were reported in some of the hardest hit areas. Many local roads were covered by rising water; retention ponds overflowed; and many home and business, including a prison, were flooded.



Rain damage to a road in the Woodridge Subdivision on June 9. (Courtesy L. Taylor)



Retention pond overflowing onto Gulf Beach Highway. (Courtesy L. Taylor)

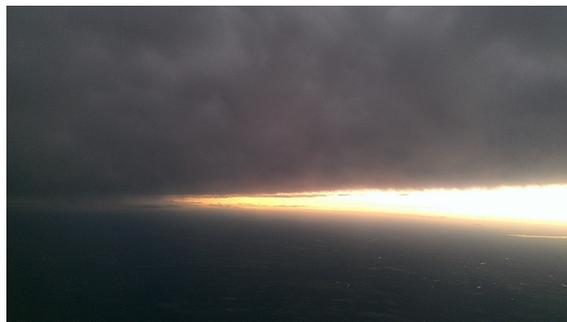


Flooded road seen from the Cervantes Street Bridge.
(Courtesy S. Grobstig)



Flood waters seen around Escambia High School.
(Courtesy S. Grobstig)

- Tropical Storm Debby** - On June 24th, a broad area of low pressure that had been persisting in the northwest Caribbean Sea and Gulf of Mexico became better organized and formed into Tropical Storm Debby in the Eastern Gulf. The storm moved slowly northeast, becoming nearly stationary south of Apalachicola on June 25. While Debby never strengthened significantly, the slow-moving storm brought a wide coverage of heavy rainfall to Central and North Florida on the 24th and 25th. The heaviest rains on June 25 occurred along the coastal areas of the eastern Panhandle, where portions of Franklin and Jefferson Counties and nearly all of Wakulla County received from 10 to over 15 inches of rainfall. Another strip of 10 to 15 inches fell later that evening over portions of Baker, Columbia, Suwannee, and Hamilton Counties. Debby finally made landfall on the morning of June 26 near Cedar Key, Florida, before traversing the state and moving off into the Atlantic Ocean. The rains from Tropical Storm Debby were a double-edged sword, bringing relief from over two years of drought to a majority of the state but also causing flooding where the heaviest rain fell. In Wakulla County, the Sopchoppy River had record flooding which damaged or destroyed many homes along the river bank. Many other parts of the county were also flooded due to the heavy nature of the rainfall and very little topography or drainage on the flat coastal plain. Flooding also occurred on the Suwannee and Santa Fe Rivers, and there was record flooding on the St. Mary's River in northeast Florida. Homes and businesses were damaged from standing water in Live Oak and the surrounding area. A storm surge up to 6 feet caused moderate damage to coastal communities, including East Point, St. George Island, St. Marks, and Cedar Key.



Aerial view of Tropical Storm Debby west of Tallahassee on June 25. (Courtesy R. Weihs)



View of coastal surge along US 98 on June 24.
(Courtesy H. Holbach)



View of coastal surge from a bridge on US 98 in Apalachicola on June 24. (Courtesy H. Holbach)



Picture of White Springs and springhouse in early 2012. The spring dried up in the 1990s. (Courtesy J. Moran)

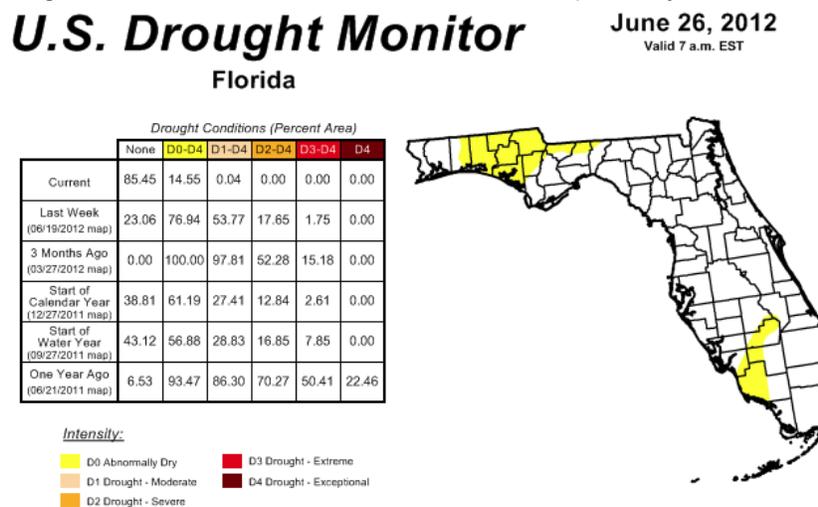


Picture of White Springs springhouse on June 27 with the Suwannee River at flood stage. (Courtesy C. Barnett)

Agricultural and other climate related impacts. At the beginning of the month, soil conditions were dry in most of the state, though some portions reported wet fields that delayed the harvest of some vegetables. Improvements of the drought conditions were seen over some of the citrus regions. Pastures still had not recovered from the ongoing drought, and some livestock managers were rotating their stock to prevent from overgrazing in fields. As the month progressed, rains in Escambia and Santa Rosa counties improved peanut and corn conditions. Rain across the state brought improvements to pastures and cattle conditions. By the 20th, early season planted corn showed signs of damage due to the dry weather, and cotton was being replanted in dry fields. Pastures benefited from the warm weather, and forage growth was seen due to the recent rains. Water levels in ponds were still low despite the rains. Prior to rains from Tropical Storm Debby, irrigated and non-irrigated fields were in good conditions across Florida.

Drought conditions dramatically improved during the month of June. There were multiple rain events that impacted the state throughout the month that lead to an almost complete reduction of all drought classifications in Florida. Since May 29, the state has gone from 85% of the state categorized as in some type of drought to only 15%. The beginning of June saw improvement of the drought along Florida's west coast. During the weekend of June 8-10, torrential rains in Escambia, Santa Rosa and portions of Okaloosa Counties alleviated the drought conditions. Other portions of the western Panhandle and Big Bend region saw a 1- to 2-category improvement in their drought designations. Sea breeze thunderstorms during the middle of the month helped ease the drought along portions of the east coast. However, it was Tropical Storm Debby that proved to be a drought buster for most of the state. Radar estimates and rain gauge data indicate that parts of north Florida had as much as 20" of rain from the slow moving tropical system. Numerous streams and rivers in the state are reported at or above flood stage. The only part of the state that did not see beneficial rainfall from Debby were the counties west of the Apalachicola River. Abnormally dry conditions are still being reported in Collier, Glades and Hendry Counties in South Florida and in Walton, Holmes, Washington, Bay, Jackson, and Calhoun Counties, along with northern portions of Gadsden, Leon and Jefferson Counties.

Figure 4. Drought conditions in Florida as of June 26, 2012 (courtesy of U.S. Drought Monitor).



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

<http://droughtmonitor.unl.edu>



Released Thursday, June 28, 2012
Richard Heim, National Climatic Data Center, NOAA

Appendix 1: Additional June Departures from Normal Data for Florida Locations

Station	Total rainfall (in.)	Departure from Normal (in.)	Average Temperature (°F)	Departure from Normal (°F)
Gainesville	16.34	9.22	79.1	-0.6
St Petersburg	12.95	6.57	81.2	-1.5
Fort Lauderdale	6.97	-3.19	82.4	-0.7
Fort Myers	7.75	-2.34	82.2	-0.3

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

Date	Station	Type	Value	Broken/Tied	Last
1	St. Petersburg	Low Max	82	Tied	82 in 2007
4	Vero Beach	Max	93	Tied	93 in 2010
5	Ft. Myers	High Min	80	Broken	79 in 1982
5	Gainesville	High Min	74	Tied	74 in 1998
7	Miami	High Min	81	Tied	81 in 1998
7	West Palm Beach	High Min	80	Tied	80 in 1981
8	Gainesville	Low Max	79	Broken	82 in 1997
8	St. Petersburg	Low Max	84	Tied	84 in 1975
8	Ft. Lauderdale	Max	93	Tied	93 in 1981
9	Crestview	Low Max	75	Broken	83 in 1975
9	Pensacola	Low Max	78	Broken	80 in 1959
10	Crestview	Low Max	82	Broken	83 in 2001
10	Miami	High Min	80	Tied	80 in 1998
11	West Palm Beach	High Min	79	Tied	79 in 2010
14	Miami	Min	71	Tied	71 in 2007
17	Key West	Min	73	Broken	74 in 2001
18	Jacksonville	Min	59	Broken	60 in 1961
18	Orlando	Min	68	Tied	68 in 2007
19	Key West	Low Max	81	Broken	83 in 1999
19	West Palm Beach	High Min	78	Tied	78 in 1993
20	Miami	Low Max	80	Broken	82 in 2005
21	Key West	Low Max	82	Broken	83 in 1976
22	Key West	Min	79	Tied	73 in 1995
22	Key West	Low Max	80	Broken	82 in 1976
22	Ft. Lauderdale	Low Max	82	Tied	82 in 1989
22	Miami	Low Max	83	Tied	83 in 2002
23	Sarasota	Low Max	79	Broken	81 in 2001
25	Tallahassee	Low Max	76	Broken	79 in 1963
25	Orlando	Low Max	83	Broken	84 in 1995
25	West Palm Beach	High Min	81	Tied	81 in 2004
25	Daytona Beach	High Min	76	Tied	76 in 1994
26	Key West	Low Max	85	Tied	85 in 1976
26	Daytona Beach	High Min	78	Broken	77 in 1972
27	Daytona Beach	Min	66	Broken	68 in 1971
27	Jacksonville	Min	66	Broken	67 in 1990
28	Miami	Max	93	Tied	93 in 2004
28	Gainesville	Min	62	Broken	66 in 1979
28	Daytona Beach	Min	63	Broken	67 in 1950
28	Jacksonville	Min	63	Broken	66 in 1974
28	Orlando	Min	64	Broken	69 in 1966
28	Vero Beach	Min	68	Tied	68 in 1990
28	St. Petersburg	Min	72	Broken	73 in 2010
29	Vero Beach	Min	65	Broken	69 in 1998
29	Orlando	Min	69	Tied	96 in 1981