



NOAA, NATIONAL WEATHER SERVICE, WEATHER FORECAST OFFICE

Miami, Florida 33165

<http://weather.gov/southflorida>

Hot Weather Continued in June

Warmest June on Record for Many South Florida Locations

July 1, 2010: June 2010 went down as the warmest June on record for three of the 4 primary climate sites in south Florida. This came on the heels of a very warm May which set an all-time warmest on record in Miami. Following are the average June 2010 temperatures and departure from normal for the 4 sites:

- **Miami International Airport** had an average June temperature of 85.6 degrees Fahrenheit. This is 3.2 degrees above the normal for June, and sets the all-time warmest June on record for the Miami area, breaking the previous record of 85.3 set in 1998. This also breaks the record for the warmest average temperature observed for any calendar month in Miami. The previous warmest month was August 2009 with an average temperature of 85.4 degrees. The minimum temperature did not drop below 80 on 13 days in June, breaking the previous record of 12 days set in 1998.
- **Palm Beach International Airport** had an average June temperature of 84.4 degrees Fahrenheit. This is 3.2 degrees above the normal for June, and was the 2nd warmest June on record for the West Palm Beach area, barely falling short of the record of 84.5 set in 1998. The minimum temperature did not drop below 80 on 10 days in June, breaking the previous record of 8 days set in 1981.
- **Fort Lauderdale/Hollywood International Airport** had an average temperature of 84.9 degrees Fahrenheit. This is 3.7 degrees above the normal for June, and sets the all-time warmest June on record for the Fort Lauderdale area, breaking the previous record of 84.8 set in 1998. The minimum temperature did not drop below 80 on 15 days in June, breaking the previous record of 12 days set in 2008.
- **Naples Municipal Airport** had an average temperature of 84.6 degrees Fahrenheit. This is 3.8 degrees above the normal for June, and sets the all-time warmest June on record for the Naples area, breaking the previous record of 84.1 set in 1944.

Why was it so warm? The primary culprit was a stronger than normal high pressure over a deep layer of the atmosphere over the southeastern United States, including Florida (Figure 1). The stronger high pressure resulted in less overall cloud cover across the area, despite the typical scattered afternoon and evening showers and thunderstorms. This is the same weather system that was responsible for the above normal temperatures over most of the eastern United States in June. Another possible factor was slightly warmer than normal sea surface temperatures off the Florida coasts (Figure 2).

Highest June temperature readings for the main reporting stations were as follows:

- Miami: 95 on June 7, 10 and 17
- Fort Lauderdale: 94 on June 4 and 7
- West Palm Beach: 95 on June 4
- Naples: 97 on June 12

Over interior sections, the warmest days of the month occurred on June 14 and 16, when several locations approached or exceeded the 100 degree mark: Brighton Reservation (101), Clewiston (100), Oasis Ranger Station (100), Big Cypress Reservation (99) and Immokalee (98).

Rainfall/Severe Weather

Precipitation in June varied from above normal in an area stretching across the peninsula from western Collier County to Palm Beach County, to near or below normal over the rest of south Florida (Figure 3). The relatively high variance in precipitation amounts across south Florida can also be related to the dominant high pressure pattern over the southeast U.S. which limits the overall coverage and duration of showers and thunderstorms.

Over eastern sections of south Florida, a large part of the rain in June fell in the first week of the month when the area was under the influence of unstable westerly flow from a mid and upper atmospheric trough over the Gulf of Mexico. This pattern eventually transitioned to the high pressure regime which took hold for the rest of the month. The predominant easterly flow during the mid and latter part of June meant that the heaviest rains shifted from the east coast to the interior and Gulf coast sections. Naples, for example, received most of its rainfall in the second half of the month.

Most of the severe weather in June occurred between June 1 and June 6, primarily over the east coast metro areas, as unstable westerly flow led to periods of flooding, hail and high winds. Localized flooding occurred in the city of Naples on June 26.

Below are June rainfall totals and departure from normal in inches for select south Florida locations:

Location	June 2010 Rainfall	June Departure From Normal
Miami Int'l	7.20	-1.34
Fort Lauderdale Int'l	4.48	-5.53

Palm Beach Int'l	6.07	-1.51
Naples Regional	9.68	+1.50
Miami Beach	6.95	+0.05
Moore Haven	7.18	+0.20
Canal Point (Palm Beach)	11.96	+4.32
NWS Miami (FIU Main)	10.02	
South Bay (Palm Beach)	8.66	
Hialeah	8.44	
Palm Beach Gardens	7.75	
Big Cypress	7.48	
Ortona (Glades County)	6.47	
The Redland (Miami-Dade)	6.42	-4.95
Hollywood	6.00	-3.75
Marco Island	5.38	
LaBelle	5.24	-3.64
Cooper City (Broward)	4.72	
Cape Florida (Miami-Dade)	2.30	

Outlook for July

The [Climate Prediction Center's outlook for July](#) calls for a continued likelihood of warmer than normal temperatures across south Florida. CPC's precipitation outlook for July calls for equal chances of above or below normal rainfall. However, historical analogs of years in which winter El Niño conditions eventually transitioned to La Niña by late summer and fall suggest a possible slight tendency for above normal July precipitation. The current state of ENSO is neutral, but [long-range models indicate a transition to La Niña conditions by August](#).

Lightning is a common occurrence in July as scattered showers and thunderstorms happen almost daily somewhere in South Florida. Therefore, it is important to follow basic safety guidelines in order to not become the victim of a lightning strike. If you hear thunder, head indoors!

For the latest weather conditions, forecasts, warnings, advisories and statements, please visit the National Weather Service Miami-South Florida Forecast Office's web site at <http://www.weather.gov/southflorida>.

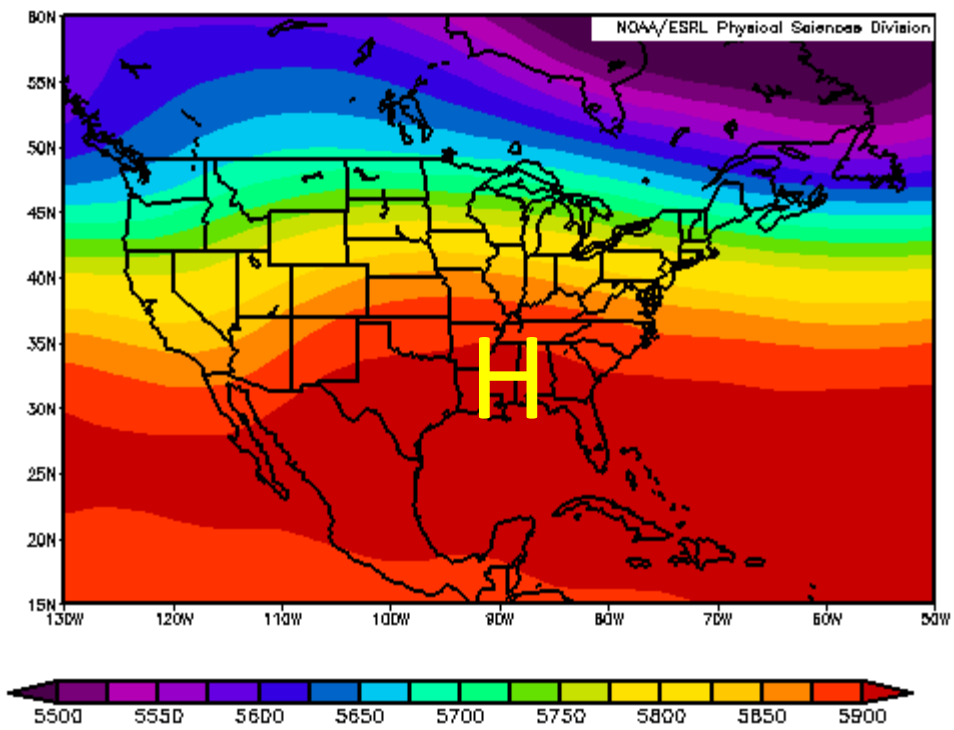


Figure 1: Mean 500 MB Heights – June 1 through June 28 2010.

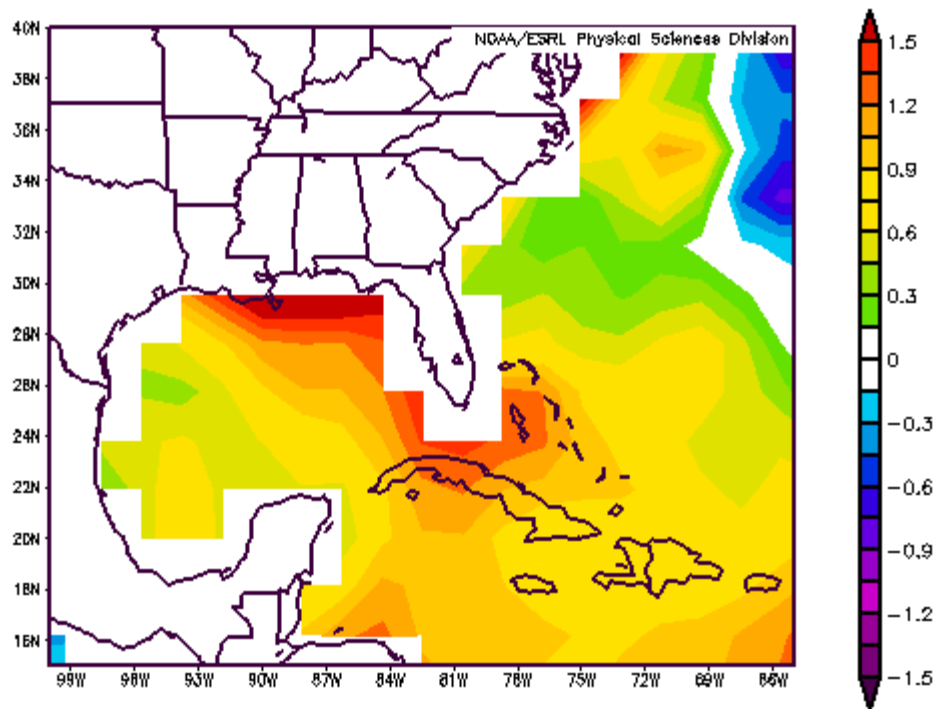


Figure 2: Sea Surface Temperature Departure from Normal – June 1 through June 28 2010. Orange and red colors off Florida coasts indicate sea surface temperatures of 1.2 to 1.5 degrees C above normal.

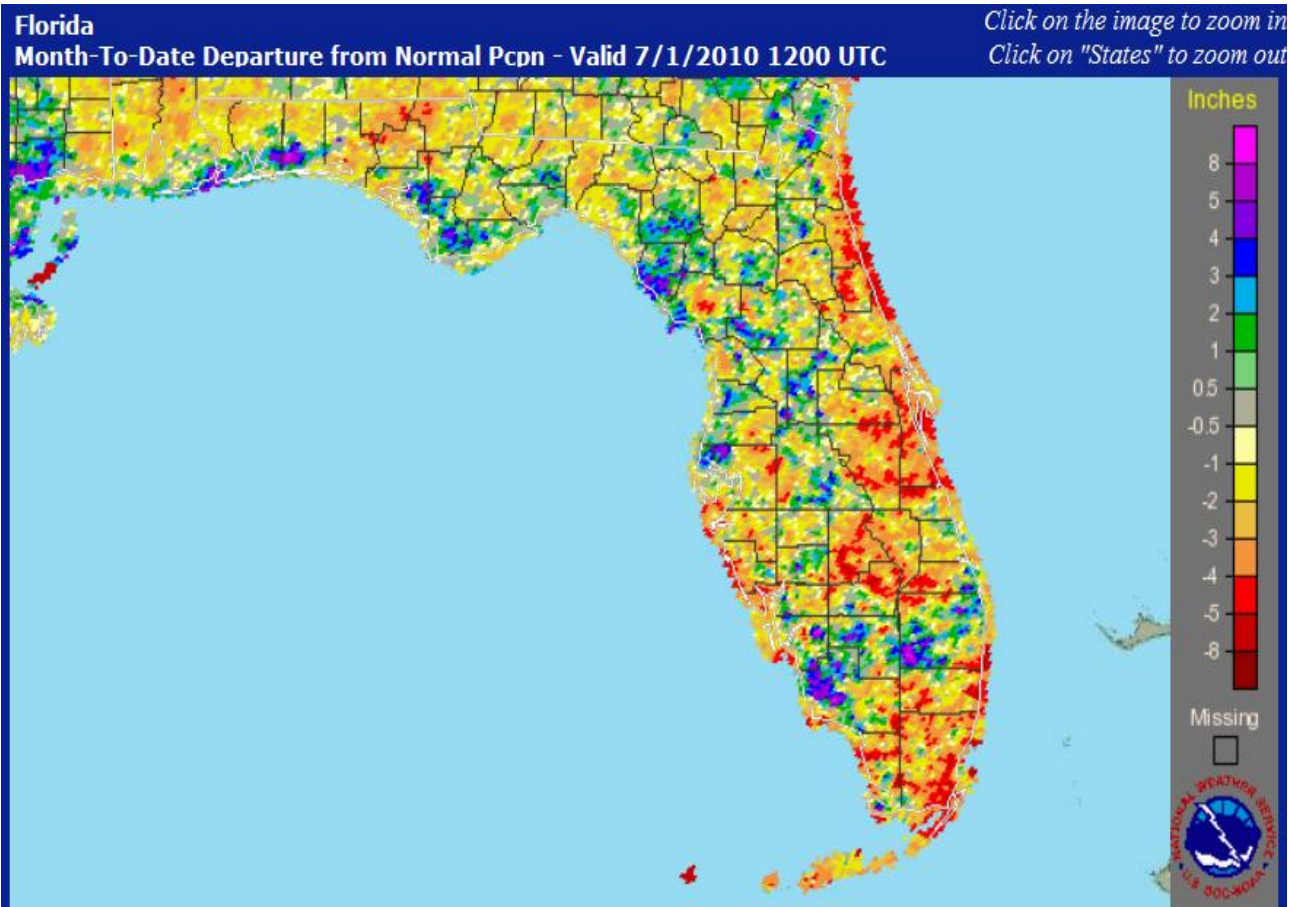


Figure 3: June 2010 Precipitation. Green, blue and purple denote areas of above normal precipitation. Yellow, orange and red denote areas of below normal precipitation.