



MIAMI-SOUTH FLORIDA National Weather Service Forecast Office <http://www.weather.gov/miami>

SOUTH FLORIDA WINTER 2012-2013 RECAP

Warm and Mostly Dry

For the second straight winter, south Florida experienced warmer and drier than normal conditions. During the meteorologically-defined winter season of December 2012 through February 2013, average temperatures across south Florida were around three degrees above normal and ranked among the warmest winters on record at the four main climate sites (see table below). At the same time, this winter was dry over most locations with rainfall totals averaging around three to four inches below normal.

A stronger-than-normal winter high pressure area in the middle-levels of the troposphere (Figure 1) over Florida and the southeast United States along with a jet stream oriented from Texas to the northeast U.S. (Figure 2) contributed to the warm and dry conditions by reducing the number of cold fronts passing through south Florida. This pattern also allowed for the Atlantic subtropical high to position itself near or over the southeastern United States. This usually causes east and southeast winds from the warm Atlantic waters to blow across south Florida, with the subtropical high blocking the southward movement of any arctic or polar air masses and stabilizing the local atmosphere.

Temperatures

Here are average December 2012-February 2013 temperatures and departures from normal in degrees F and ranking for select locations:

Location (beginning of period of historical record)	Dec 2012-Feb 2013 Avg Temp	Departure From Normal (F)	Rank
Miami (1895)	72.3	+2.7	3rd warmest
Fort Lauderdale (1912)	72.1	+1.8	5 th warmest
West Palm Beach (1888)	70.6	+3.4	T-9 th warmest
Naples (1942)	69.2	+3.1	T-5 th warmest

Cold weather impacts this winter were minimal compared to the past few winters. Less than a handful of mornings had temperatures near or right at freezing in the typically colder areas west and south of Lake Okeechobee. In fact, none of the four main climate sites indicated in the table above registered

temperatures below 40 degrees, a not-too-common occurrence. Each of the four main sites recorded less than half of the normal number of sub-50 degree low temperature days.

On the flip side, the number of 80+ degree high temperature days was well above the normal for the December-February period.

Probably the most interesting aspect of the warm winter of 2012-2013 was that in Miami and Fort Lauderdale, November 2012 was cooler than any of the three winter months. The last time this happened was the 1949-1950 winter season, and only the second time of this rare occurrence since 1910.

The coldest and warmest temperatures of the winter season at the main climate sites were:

Miami International Airport: The lowest temperature recorded was 47 degrees on February 17th. The highest temperature was 87 degrees on February 14th. A total of three days below 50 degrees were observed, along with 55 days of 80 degrees or greater.

- **Palm Beach International Airport:** The lowest temperature recorded was 43 degrees on December 22nd. The highest temperature recorded was 88 degrees on February 24th and 26th. A total of seven days below 50 degrees were observed, along with 44 days of 80 degrees or greater.

- **Fort Lauderdale/Hollywood International Airport:** The lowest temperature recorded was 46 degrees on December 22nd and February 17th. The highest temperature was 86 degrees on December 11th and February 13th. A total of three days below 50 degrees were observed, along with 44 days of 80 degrees or greater.

- **Naples Municipal Airport:** The lowest temperature recorded was 40 degrees on February 18th. The highest temperature was 86 degrees on January 9th. A total of eight days below 50 degrees were observed, along with 46 days of 80 degrees or greater.

Precipitation

Near-normal rainfall in February put a temporary hold in what was a drier-than-normal winter over most of the region. Broward, Miami-Dade and Mainland Monroe counties were the driest with less than four inches of rain. Areas from Collier County to western and northern Palm Beach County had the most rain with upwards of 6 inches in these areas. An isolated area of 10+ inches of rain in far northeastern Palm Beach County in the Juno Beach and Jupiter areas mostly came from one heavy rain event during the afternoon and evening of December 11th.

Following are December 2012-February 2013 rainfall totals, departure from normal in inches and ranking for selected locations:

Station – Beginning of Records	Dec 2012 – Feb 2013	Departure and Rank
MIAMI - 1911	2.90	-3.01 (16 th driest)
NAPLES - 1942	3.60	-1.80 (28 th driest)
FORT LAUDERDALE- 1913	3.85	-5.20 (18 th driest)
WEST PALM BEACH – 1888	4.33	-5.00 (27 th driest)
JUNO BEACH	18.71	
PALM BEACH GARDENS	8.26	
BIG CYPRESS RES. (HENDRY)	7.90	
CANAL POINT - 1942	7.81	+1.37
FORT LAUDERDALE BEACH	7.21	
MARCO ISLAND	6.88	
MOORE HAVEN – 1918	6.31	+0.77
BRIGHTON RESERVATION	5.56	
SOUTH BAY/OKEELANTA	5.55	
IMMOKALEE	4.99	-1.49
NORTH MIAMI BEACH	4.90	
FT LAUD EXECUTIVE	4.75	
MIAMI BEACH - 1927	4.63	-1.76
HIALEAH - 1941	4.56	
HOLLYWOOD - 1963	4.16	-3.67
ORTONA	3.87	
MUSE	3.85	
NWS MIAMI/SWEETWATER	3.67	
NORTH PERRY AIRPORT	3.42	
CAPE FLORIDA	3.35	
LABELLE - 1929	2.96	-3.19 (14 th driest)
OPA LOCKA	2.90	

THE REDLAND - 1942	2.86	-3.26 (9 TH driest)
TAMIAMI AIRPORT	2.74	
HOMESTEAD GENERAL	2.67	

The dry December and January coupled with near-normal February precipitation led to the development of [moderate drought conditions over far southern Florida](#) (south Miami-Dade County and Mainland Monroe County). Abnormally dry conditions are in place for the rest of southern Florida.

Outlook for March-May

[The outlook by the NOAA Climate Prediction Center](#) calls for a continuation of the warm and dry pattern through May (Figure 4), although March will start off on the cool side.

The drier than normal pattern expected through the end of our dry season, in combination with gradually increasing temperatures through the spring, means that the threat of wildfires increases substantially during the months of March, April and May. All persons are urged to take measures to reduce the chance of wildfires. Visit the [Florida Forest Service web site](#) for more information on how to help prevent wildfires.

March and April typically bring an increase in easterly winds to the area, which significantly increases the risk of rip currents along the east coast beaches. A sharp increase in drowning deaths and rescues caused by rip currents occurs during the spring months due in part to this shift in the wind patterns. All residents and visitors visiting area beaches are strongly urged to heed the advice of Ocean Rescue lifeguards and swim near a lifeguard. [Visit the National Weather Service Rip Current Awareness page](#) for more information.

For the latest south Florida weather information, including the latest watches, advisories and warnings, please visit the National Weather Service Miami Forecast Office's web site at weather.gov/southflorida.

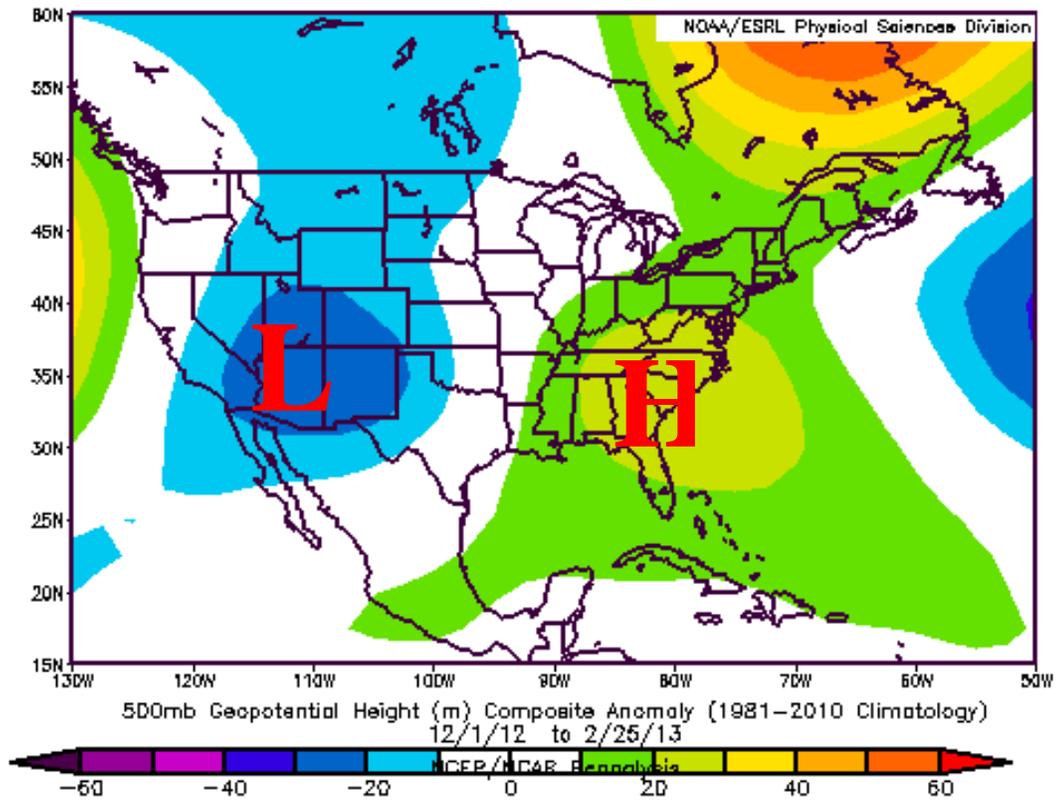


Figure 1: 500 mb (middle-tropospheric) height anomalies for period December 2011 to February 2013. Stronger-than-normal high pressure (H) prevailed across Florida and the southeast U.S. during the winter of 2012-2013, which also resulted as the dominant winter pattern. This pattern contributed to the warmer and drier-than-normal conditions.

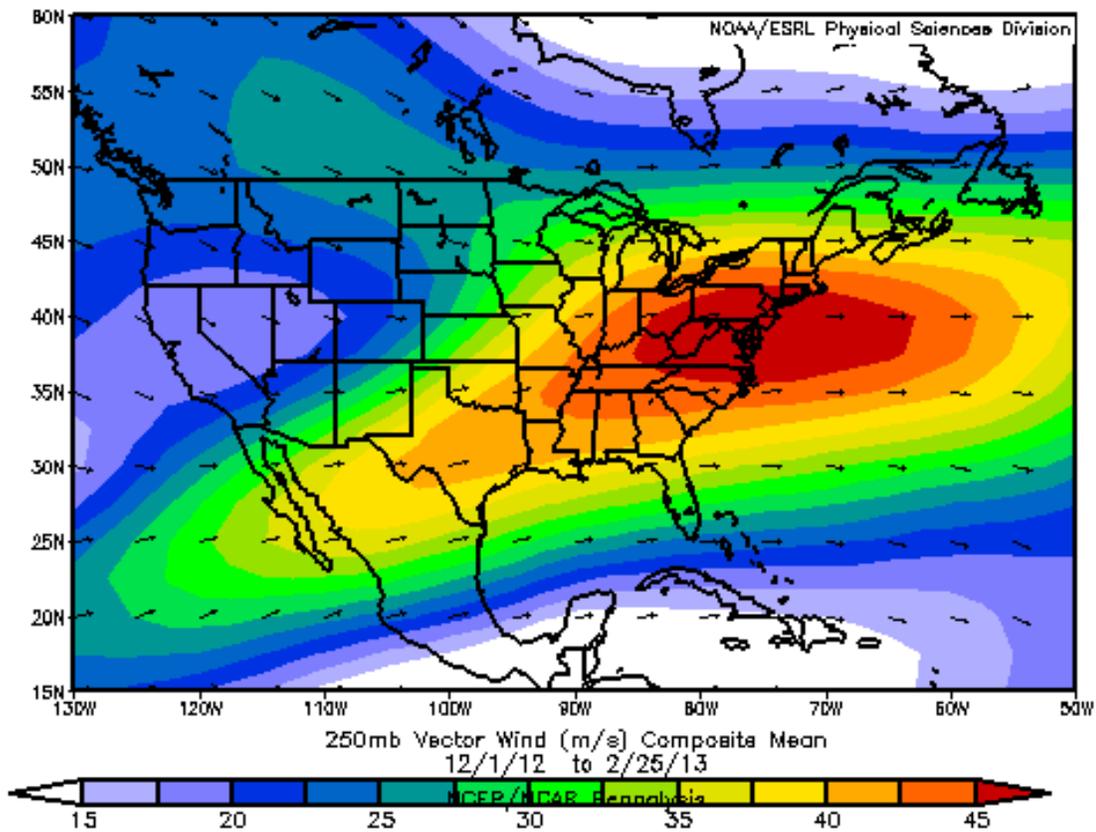


Figure 2: 250 mb (upper-tropospheric) mean winds for the period from December 2011 to February 2013. Orange and red colors from Texas to the mid-Atlantic and northeast U.S. reflects the mean position of the jet stream this winter. Winter storm tracks tend to follow the jet stream rather closely, with colder air north and west of the storm track and warmer air to the south. A storm track well north of Florida typically means fewer and weaker frontal systems affecting the state, also contributing to warmer and drier conditions.

Florida: Current 90-Day Departure from Normal Precipitation
Valid at 2/28/2013 1200 UTC- Created 2/28/13 18:16 UTC

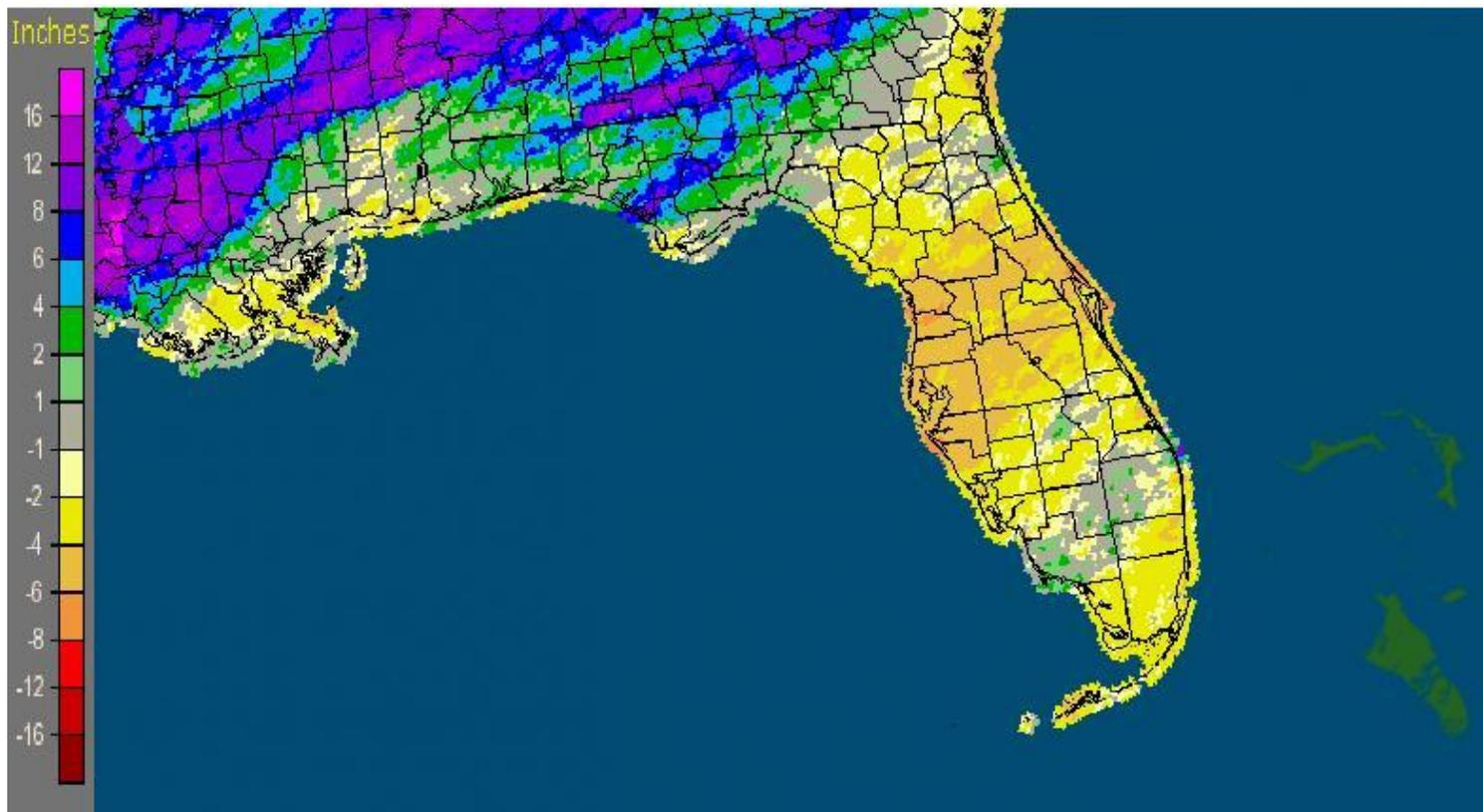


Figure 3: Rainfall departure from normal from Dec 2012 through Feb 2013. Most of the area was about 3 to 4 inches below normal for the time period, with the exception of a strip extending from Collier County to western and northern Palm Beach County where rainfall was near to slightly above normal.

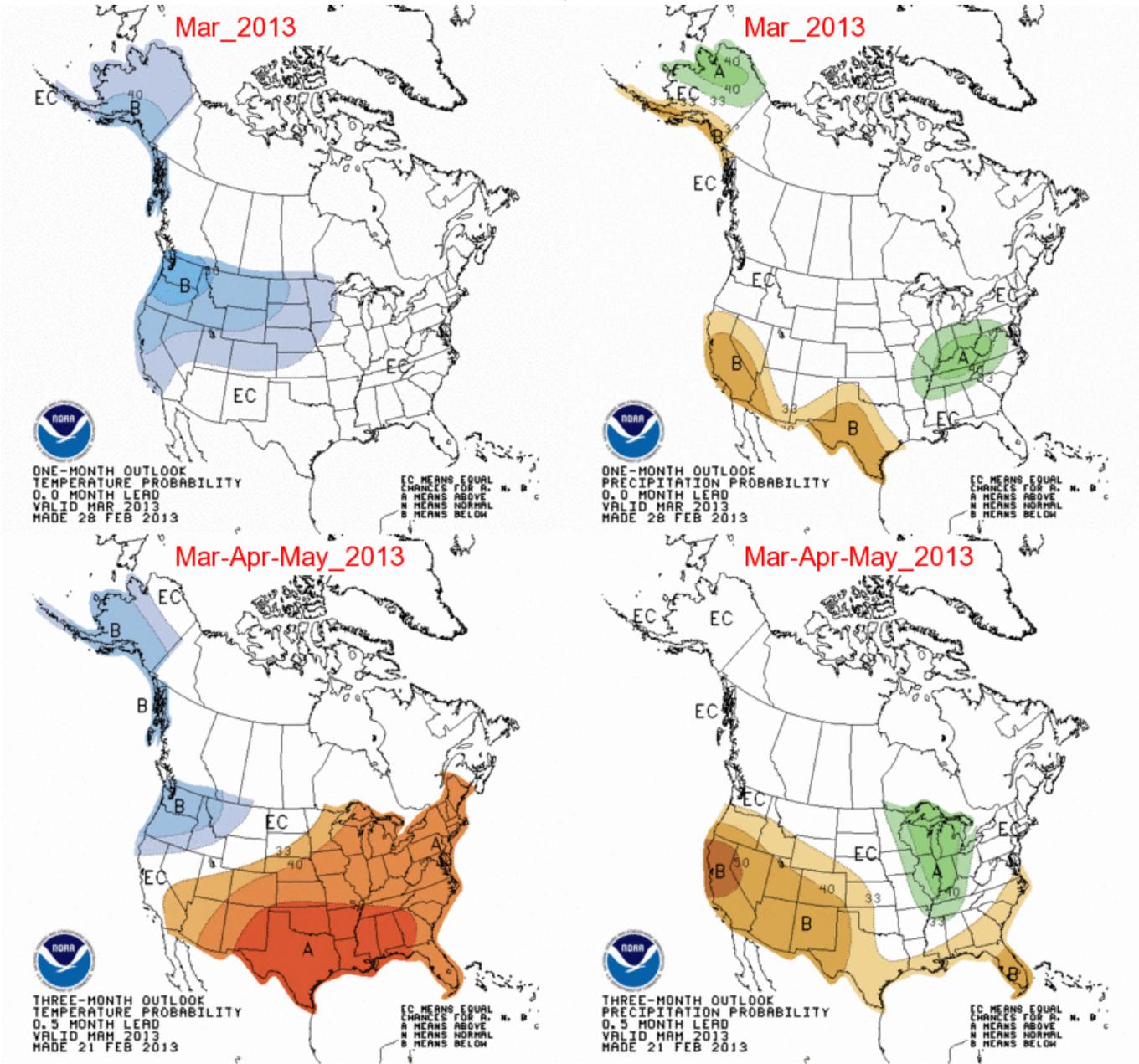


Figure 4: NOAA Climate Prediction Center outlook for March-May.