



MIAMI-SOUTH FLORIDA

National Weather Service Forecast Office

<http://www.weather.gov/miami>

SOUTH FLORIDA WINTER 2017-2018 SUMMARY

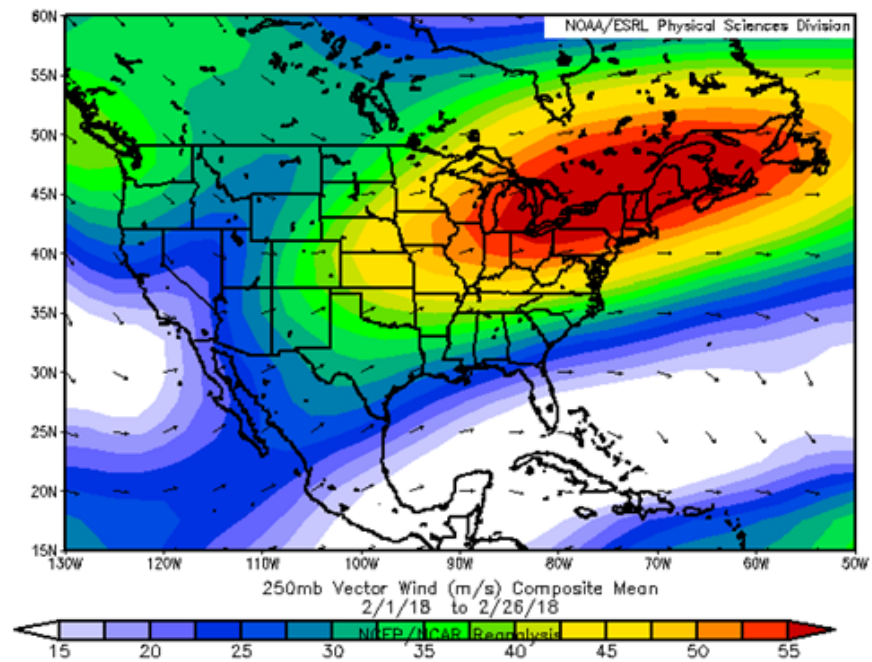
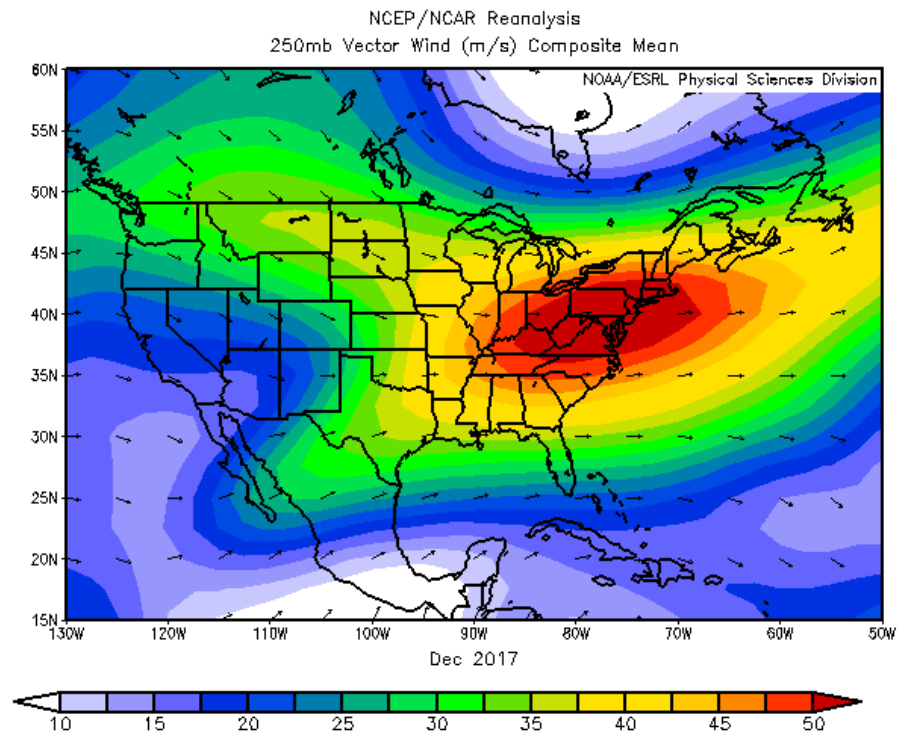
Warmest February on Record Caps Warmer than Normal Winter

Drier Than Normal

The lack of cold fronts affecting South Florida in February led to the warmest February on record for all South Florida climate locations, easily breaking the previous warmest February back in 1959 and resembling temperatures more typical of April or even early May!

Therefore, despite a mainly cooler than normal January and a slightly warmer than normal December, the 2017-2018 meteorological winter season (December – February) ended up among the top 20 warmest on record. See temperature table and graphics below for specific values.

The well-advertised [La Niña](#) episode which began last fall was a main factor in setting the stage for the prevailing warm and dry winter conditions across South Florida. La Niña winters in the southern United States, including Florida, are typically characterized by warmer and drier than normal conditions due mainly to a northward displacement of the jet stream which reduces both the number and strength of cold fronts moving through Florida. The upper-tropospheric winds observed in most of December and February (Figures 1 and 2) matched this pattern closely, with the February mean jet stream location from the Great Lakes to near the Canadian border. The notable exception was most of January when the mean jet stream position shifted south over the southeastern United States (Figure 3), allowing for more cold fronts and associated intrusions of cold air into South Florida.



Figures 1 and 2: 250 mb (upper tropospheric) mean winds for December 2017 (top) and February 2018 (bottom). Dark orange and red swaths represent the mean position of the jet stream during this time period.

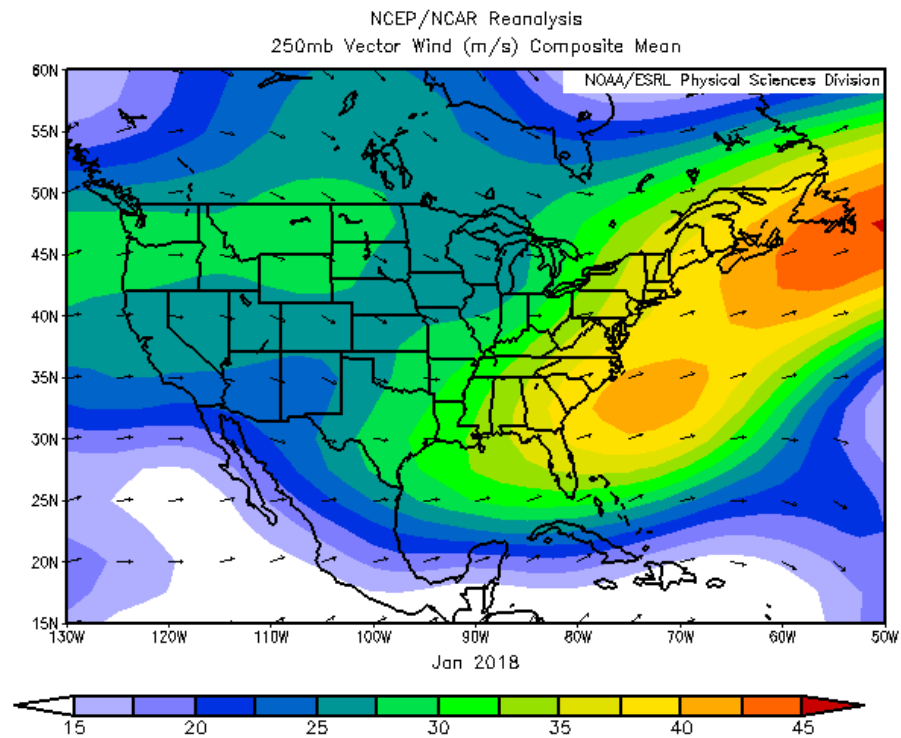


Figure 3: 250 mb (upper tropospheric) mean winds for January 2018. Dark orange and red swaths represent the mean position of the jet stream during this time period.

Temperatures

RECORD WARM FEBRUARY

Miami/South Florida
 WEATHER FORECAST OFFICE
 Thursday, March 1, 2018

2018: Warmest February average temperature for Miami, Ft. Lauderdale, West Palm Beach, Naples

Miami		Ft. Lauderdale	
1. 2018	76.4	1. 2018	75.4
2. 1959	74.9	2. 1959	75.1
3. 2008	74.3	3. 1939	75.0
Records go back to <u>1896</u>		Records go back to <u>1913</u>	

West Palm Beach		Naples	
1. 2018	75.3	1. 2018	74.8
2. 1959	74.4	2. 1959	72.9
3. 1949	73.9	3. 1949	72.6
Records go back to <u>1890</u>		Records go back to <u>1943</u>	

NWS Miami
weather.gov/miami

Driven by the remarkably warm and record-breaking February, average winter temperatures ended up about 2 to 3 degrees above normal across South Florida. The 2017-2018 winter was the 7th consecutive warmer-than-normal winter, with the last cooler-than-normal winter being 2010-2011.

The coldest temperatures of the winter occurred on January 4th and January 18th when a series of strong cold fronts brought cold, continental air deep into Florida. On those two days, low temperatures dropped to the upper 20s over portions of inland Southwest Florida, including 28 degrees in Ortona on January 18th, leading to minor crop damage. Lows elsewhere dropped into the 30s, even into portions of the Southeast Florida metro region, with lower to mid-40s to the Atlantic beaches of Miami. The more southern jet stream track in January led to more variability in week to week weather, with interspersed cool, warm, wet and dry periods more typical of a South Florida winter. Otherwise, most of the winter featured the classic La Niña jet pattern displaced well north of Florida, with high pressure aloft over the southern U.S. and Florida tending to block frontal systems from moving deep into the state and causing wind flow to be more out of the east and southeast. High temperatures on a few days in February hit 90 degrees, including 91 at Ortona on February 27th.

Below are graphics with additional temperature data for the four main climate sites in South Florida:

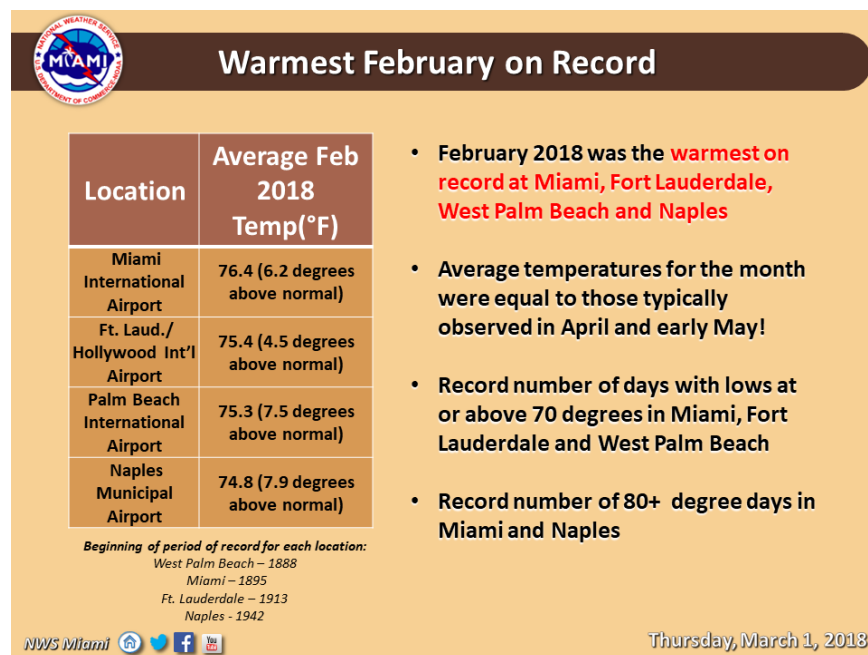


Figure 4: February record temperatures

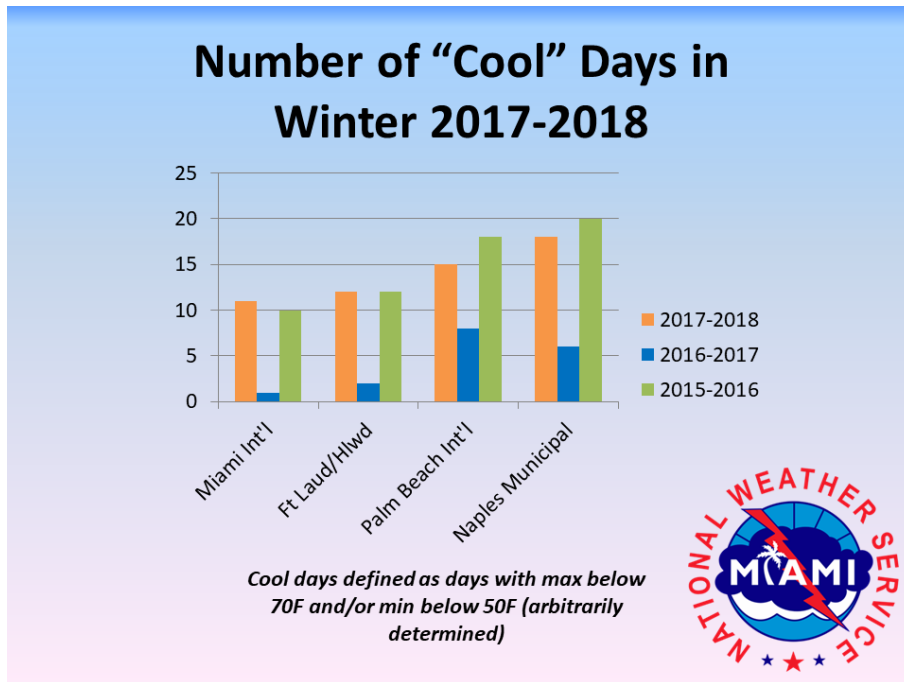


Figure 5: Number of days of sub-70F degree highs and/or sub-50F degree lows.

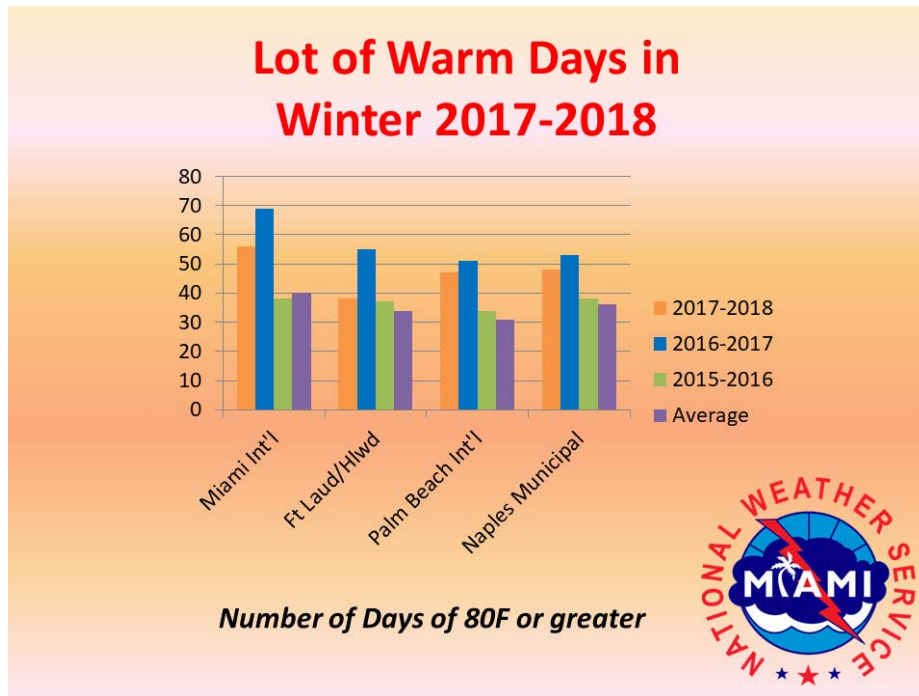


Figure 6: Number of days greater than or equal to 80 degrees

Additional February Temperature Statistics

Here are average December 2017-February 2018 temperatures, departure from normal in degrees F and ranking for the four main South Florida climate sites:

Location (beginning of period of historical record)	Dec 2017-Feb 2018 Avg Temp	Departure From Normal (F)	Rank
Miami (1911)	71.9	+2.3	T-9 th warmest
Fort Lauderdale (1912)	70.4	+0.1	17 th warmest
West Palm Beach (1888)	69.7	+2.5	19 th warmest
Naples (1942)	68.6	+2.5	14 th warmest

Other noteworthy statistics and data:

- **Miami International Airport:** The highest temperature recorded was 87 degrees set on December 8th and the lowest temperature recorded was 44 degrees on January 4th and 18th. The temperature reached or exceeded 80 degrees on 56 days, well above the average of 40 days. The number of days below 50 degrees was six (6) which is slightly below the 30-year mean of 8.

- **Palm Beach International Airport:** The highest temperature recorded was 86 degrees on December 8th and the lowest temperature recorded was 38 degrees on January 4th. The temperature reached or exceeded 80 degrees on 47 days, well above the average of 31 days. The number of days below 50 degrees was 12 which is below the 30-year mean of 16.

- **Fort Lauderdale/Hollywood International Airport:** The highest temperature recorded was 85 degrees on December 8th and the lowest temperature recorded was 39 degrees on January 4th. The temperature reached or exceeded 80 degrees on 38 days, slightly above the average of 34 days. The number of days below 50 degrees was nine (9) which is slightly below the 30-year mean of 11.

- **Naples Municipal Airport:** The highest temperature recorded was 89 degrees on February 12th and 21st and the lowest temperature recorded was 36 degrees on January 18th. The temperature reached or exceeded 80 degrees on 48 days, well above the average of 36 days. The number of days below 50 degrees was 15 which is below the 30-year mean of 21.

Precipitation

The northward position of the jet stream throughout most of the winter led to fewer frontal passages associated with significant precipitation. This resulted in drier than normal conditions for virtually all of South Florida (Figures 7 and 8). Most areas recorded 2 to 4 inches of rain this winter, about 25 to 50 percent of normal, and ranked among the 20 driest winters on record at some of these locations. Areas in the Everglades of Miami-Dade County likely received less than an inch, with about 1 to 2 inches across much of interior Collier County. The wetter areas this winter were along coastal areas of Broward and Palm Beach counties which recorded between 5 and 7 inches, still below normal.

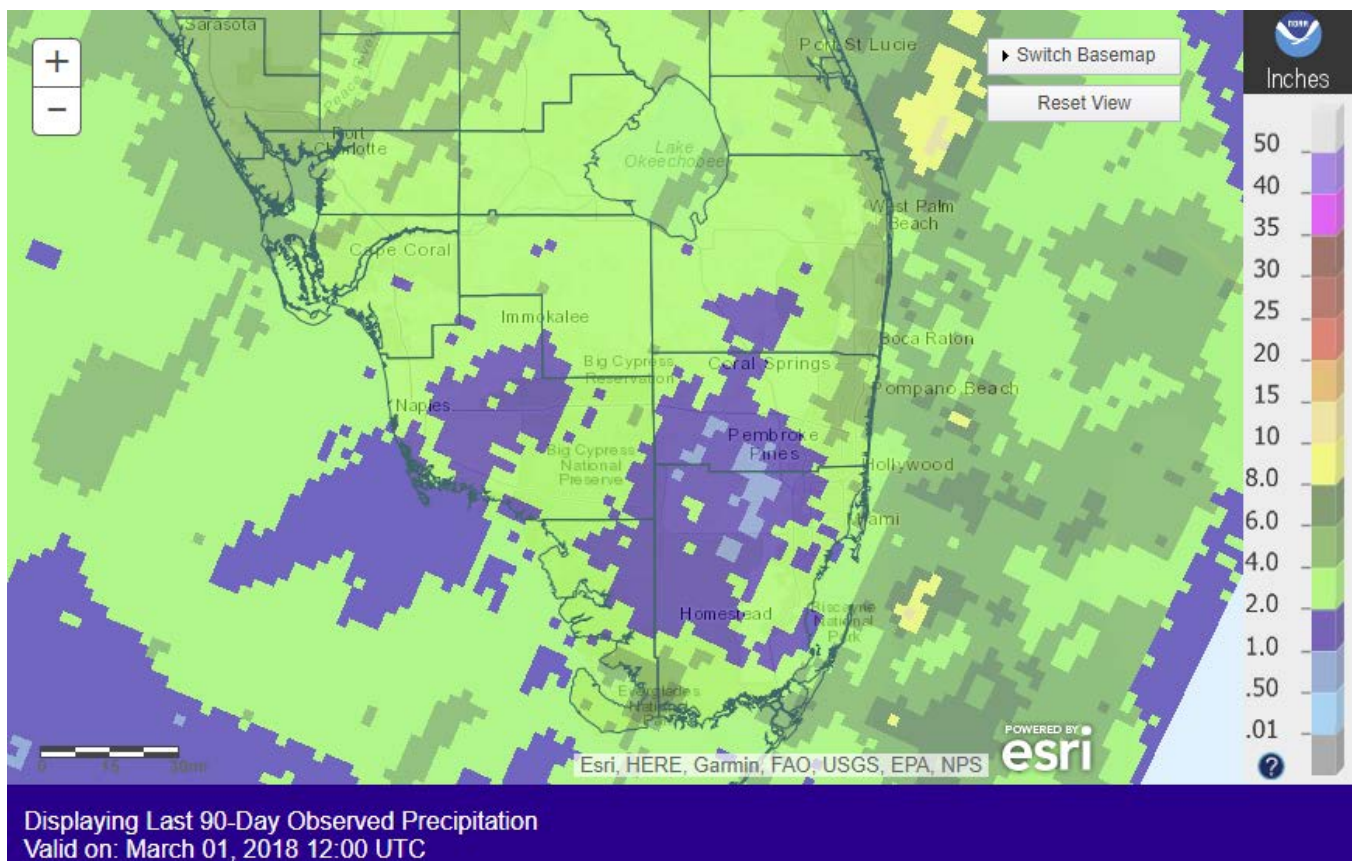


Figure 7: Observed precipitation December through February 2018

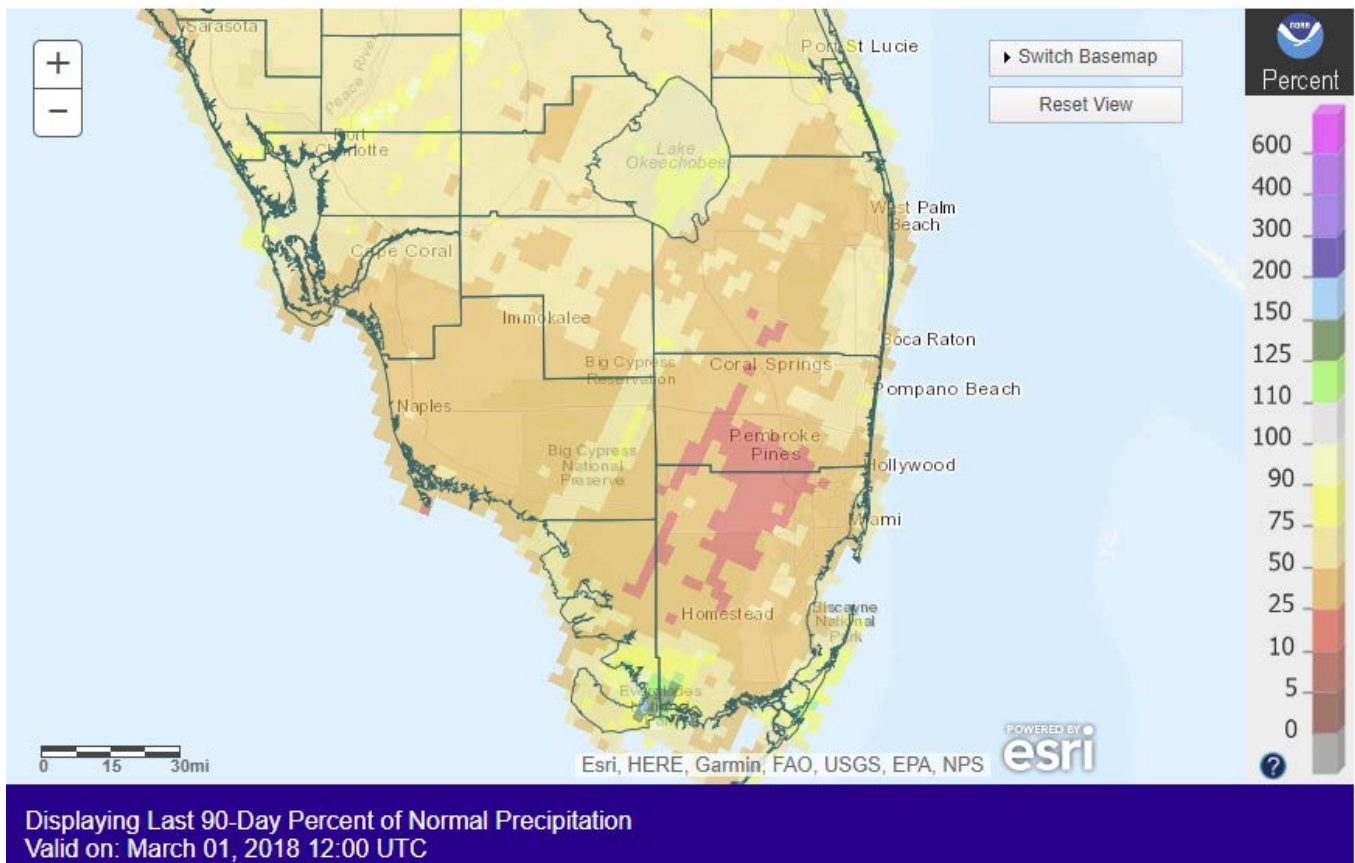


Figure 8: Percent of normal precipitation December through February 2018

Following are December 2017-February 2018 rainfall totals, departure from normal in inches and ranking for selected locations:

Location (Beginning of Period of Record)	Dec 2017-Feb 2018 Rainfall (inches)	Departure from Normal	Rank
Brighton Reservation (Glades Co.)	3.49		
Canal Point (1941)	4.95	-1.49	
Fort Lauderdale/Hollywood Int'l (1912)	3.74	-5.31	17th driest
Fort Lauderdale Executive Airport	5.34		
Fort Lauderdale Dixie Water Plant	4.80		
Fort Lauderdale Beach	7.06		
Hialeah (1940)	2.77	-4.14	9th driest
Hollywood (1963)	4.77	-4.28	
Homestead General Airport (1990)	2.25	-2.92	4th driest

Immokalee (1970)	3.30	-3.15	14th driest
Juno Beach	7.20		
LaBelle (1929)	3.99	-2.16	
Marco Island	2.06		
Miami Beach (1928)	5.81	-0.66	
Miami International Airport (1895)	2.04	-3.87	13th driest
Moore Haven (1918)	2.64	-2.90	
North Miami Beach	2.24		
Naples East/Golden Gate	3.53		
Naples Municipal Airport (1942)	1.69	-3.71	7th driest
NWS Miami	3.94		
Oasis Ranger Station (1978)	2.11	-3.07	6th driest
Opa-Locka Airport	1.18		
Ortona (1940)	2.89	-3.45	6th driest
Palm Beach International Airport (1888)	5.35	-3.98	
Pembroke Pines – North Perry Airport	3.08		
Pompano Beach Airpark	3.68		
Miami Executive Airport – W. Kendall	3.06		
The Redland (1942)	4.08	-2.04	20th driest
South Bay (15S)	2.62		

Outlook for March-May

[The outlook by the NOAA Climate Prediction Center](#) for the period from March through May (Figures 9 and 10) calls for an increased likelihood of above normal temperatures and below normal precipitation, essentially a continuation of the winter pattern.

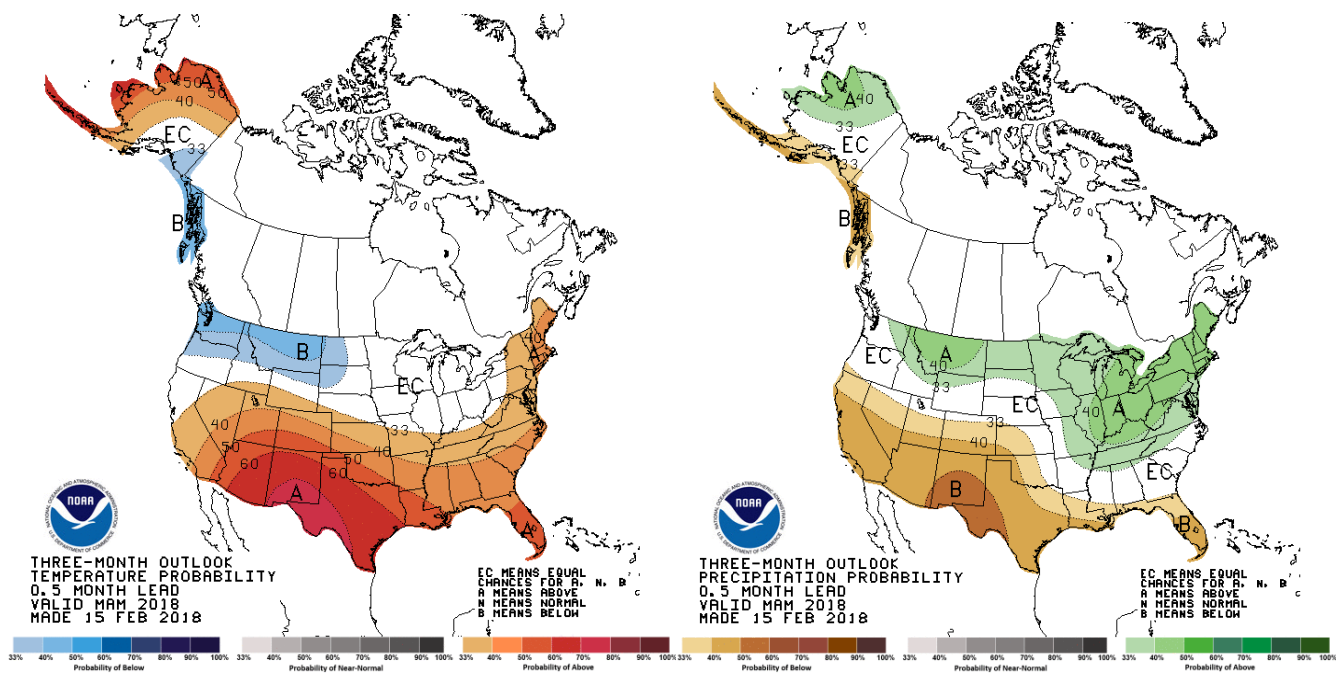
Current indications are that the first half of March will be near normal to slightly cooler than normal and wetter than normal, before possibly transitioning back to the warmer and drier pattern in the long term through May.

Due to the dry winter and outlook of below normal precipitation through May, it is likely that drought conditions will develop over at least parts of South Florida this spring. This also means that the risk of wildfires will increase significantly, especially during the peak

months of 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 also bring an increase in easterly winds to the area along with an increase in beach-goers. This significantly increases the risk of rip currents along the east coast beaches. A sharp increase in rip current-related drowning deaths and rescues occurs during the spring months due in part to this shift in the wind patterns and more people in the water. 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.



Figures 9 and 10: NOAA Climate Prediction Center outlook for March-May.