



MIAMI-SOUTH FLORIDA

National Weather Service

Forecast Office

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

Summer 2022 Weather Summary

Warmer Than Normal

Near to Above Normal Precipitation West

Below Normal Precipitation East

September 2nd, 2022: Now that meteorological summer (June-August) has concluded, here's a look back at the observed temperatures and precipitation across South Florida.

South Florida's summer weather pattern was dominated by high pressure over western North America (Figure 1) which extended well into the Southeast United States, resulting in a prevailing and stronger than normal wind flow from the east and northeast across Florida (Figure 2). In the absence of large-scale weather systems, this prevailing east and northeast wind flow typically focuses the heavier daily afternoon showers and thunderstorms over the interior and western portions of South Florida, while in turn keeping the east coast areas drier.

The summer started out with impacts from Potential Tropical Cyclone One (later T.S. Alex) as the disturbance moved from the western Caribbean across South Florida on June 3rd and 4th. Bands of torrential rainfall accompanied the disturbance on its path across Florida. Areas over the east coast metro from Homestead north to southern Palm Beach County received between 8 and 14 inches of rain, with the higher values observed from Miami to Hollywood. Central and northern metro Palm Beach County received amounts in the 5-7" range. Collier County averaged between 5-8 inches, with peak values of 9-10". Areas around Lake Okeechobee, including Glades, Hendry, and western Palm Beach County, received mostly 3-6". Severe flooding occurred in many parts of metro Miami-Dade and Broward counties, as well as in isolated areas of Collier

County in the South Naples/Lely area. Lingering moisture and a trough left behind by T.S. Alex from June 6-9 caused additional heavy rainfall in South Miami-Dade County, with the Cutler Bay area being hardest hit by severe flooding. A total of 18-20" of rain fell in the Cutler Bay area during a 4-day period.

The first half June proved to be the time when most of the summer rainfall occurred over most of SE Florida. Anywhere from 60% to as much as 78% of the summer rainfall occurred in June, with most of that falling in the first 2 weeks of the month. From mid-June onward, high pressure dominated the weather pattern with the prevailing east wind flow described above shifting the heaviest rainfall to western portions of the peninsula. East coast metro areas noted a sharp decrease in rainfall which led to the development of [abnormally dry conditions by the U.S. Drought Monitor](#), while interior and western areas received fairly consistent rainfall throughout the summer. Rainfall totals and graphics are below.

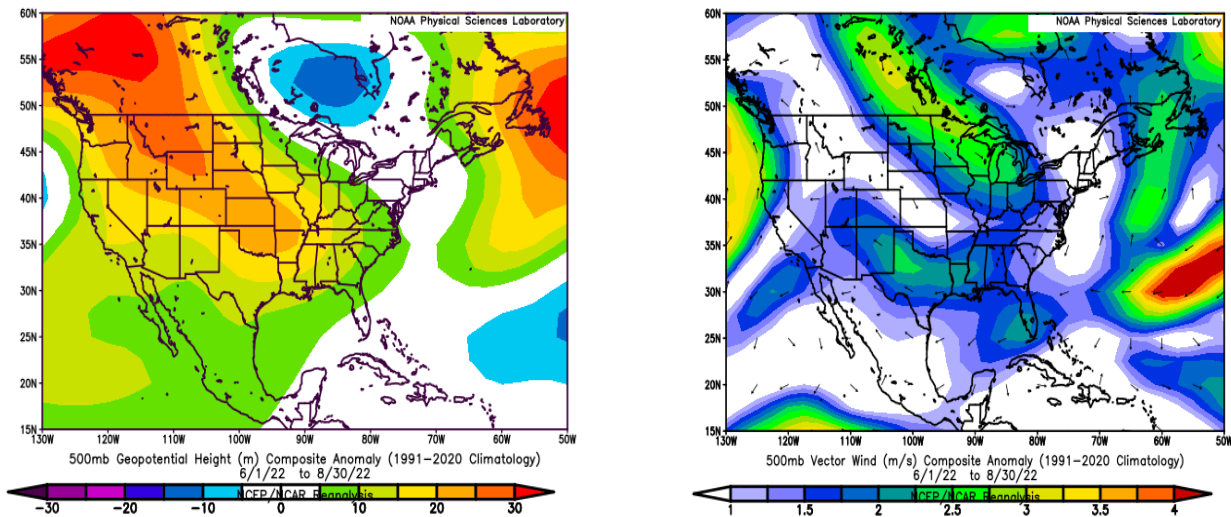
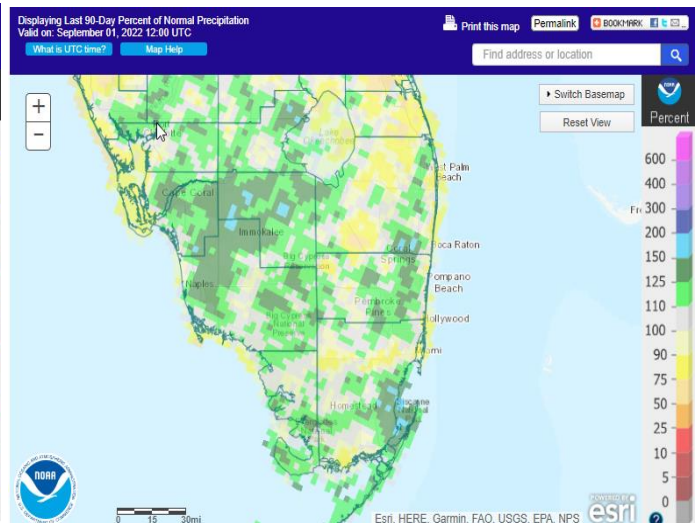
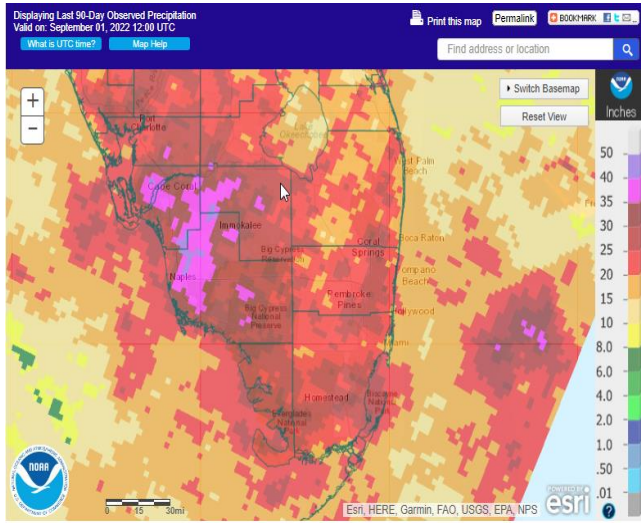
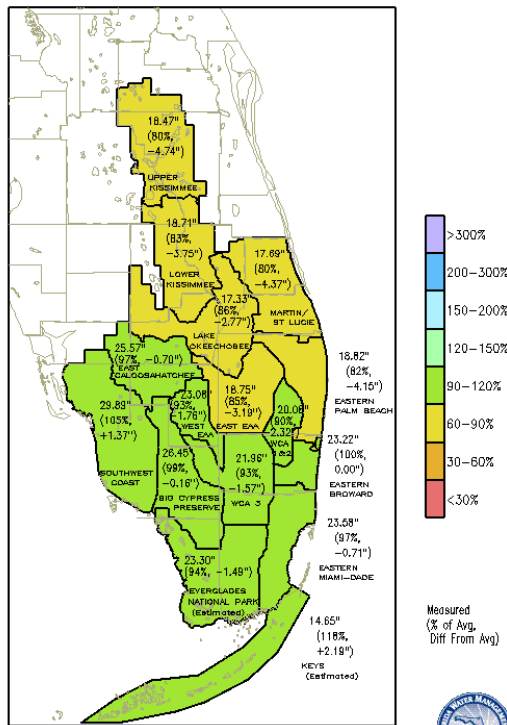


Figure 1: Mid-tropospheric (500 mb) height departure from normal from June 1 through August 30. Higher than normal pressure over most of North America, centered over western Canada, and NW and Central U.S. as depicted by the orange and red colors.

Figure 2: Mid-tropospheric (500 mb) wind departure from normal from June 1 through August 30. Stronger than normal E-NE wind flow across Florida (blue and green colors) resulted from the higher pressures over western North America.



**SFWMD Rainfall
02-JUN-2022 to 01-SEP-2022**



GWDs: COLA/OCES

2022-09-01-15:42

Figure 3-5: Summer 2022 rainfall and departure from normal courtesy of NWS AHPS and South Florida Water Management District

Below are images of summer 2022 rainfall and departure from normal, as well as a table and corresponding images of summer rainfall and departure from normal for official reporting sites across South Florida:

Location	Summer 2022 Rainfall (inches)	Departure from Normal	Top 20 Rank
Hollywood Waste Water Plant	31.69	+8.65	2 nd wettest since 2000
Marco Island	30.66	+6.54	6 th wettest since 2002
Muse	30.48	+2.46	
The Redland	29.46	+1.43	
Miami-Tamiami Executive Airport	28.72	+4.43	
Homestead General Airport	28.12	+1.47	
Palm Beach Gardens	27.70	+2.97	
Miami International Airport	25.59	-1.86	
Opa Locka Airport	25.10	-0.03	
NWS Miami – FIU	24.21	-5.67	
Naples Municipal Airport	23.58	-0.49	
Fort Lauderdale Executive Airport	23.51	+3.28	
Pembroke Pines – North Perry Apt	21.65	-2.38	
Pompano Beach Airpark	18.47	-1.14	
Cape Florida	17.71	-2.35	8 th driest since 1998
Fort Lauderdale/Hollywood Int'l Airport	17.39	-5.46	driest since 2018
Moore Haven	17.29	-6.46	20 th driest since 1918
Okeelanta	16.51	n/a	
Palm Beach International Airport	14.14	-8.65	driest since 2016

A result of the drier than normal conditions for most of the summer across eastern areas was higher than normal temperatures. This was most noticeable with the daily minimum temperatures which failed to drop below 80F on many days, due largely to the lack of rainfall and thunderstorms which act to drop temperatures. The more frequent

rainfall and higher amounts over western areas led to temperatures there which were close to normal summer values.

Summer 2022 temperature summaries for the 4 main climate sites are below:

- ***Miami International Airport*** had an average summer temperature of 84.3 degrees Fahrenheit. This is 0.6 degrees above the 30-year normal and ties the 10th warmest summer on record. Miami observed 75 days of temperatures at or above 90 degrees this summer, which is above the normal total of 64 days. The highest temperature was 96 degrees on August 17th and 18th, and the lowest was 68 degrees on June 1st. A total of 5 daily high minimum temperature records were tied or broken, and 2 daily high temperature records were broken.

- ***Palm Beach International Airport*** had an average summer temperature of 84.4 degrees Fahrenheit. This is 1.7 degrees above the 30-year normal and is the 4th warmest summer on record. West Palm Beach observed 76 days of temperatures at or above 90 degrees, which is well above the normal total of 55 days and includes a streak of 61 days from July 3rd through at least September 1st. The highest temperature was 96 degrees on August 18th. The lowest temperature was 72 degrees on June 5th, 10th, and 23rd. A total of 11 daily high minimum temperature records were tied or broken, and 1 daily high temperature records was broken.

- ***Fort Lauderdale/Hollywood International Airport*** had an average summer temperature of 84.2 degrees Fahrenheit. This is 0.8 degrees above the 30-year normal, and ties the 5th warmest summer on record. Fort Lauderdale observed 56 days of temperatures at or above 90 degrees, which is above the normal total of 49 days. The highest temperature was 94 degrees on August 17th, and the lowest was 71 degrees on June 17th. A total of 13 daily high minimum temperature records were tied or broken.

- ***Naples Municipal Airport*** had an average summer temperature of 83.0 degrees Fahrenheit. This is 0.2 degrees above the 30-year normal and ties the 16th warmest summer on record. Naples observed 61 days of temperatures at or above 90 degrees, which is slightly below the normal total of 64 days. The highest temperature was 96 degrees on June 15th and August 20th, and the lowest was 72 degrees on June 4th, 10th, and 11th, and July 14th. One daily high minimum temperature record was tied, and another high temperature record was tied.

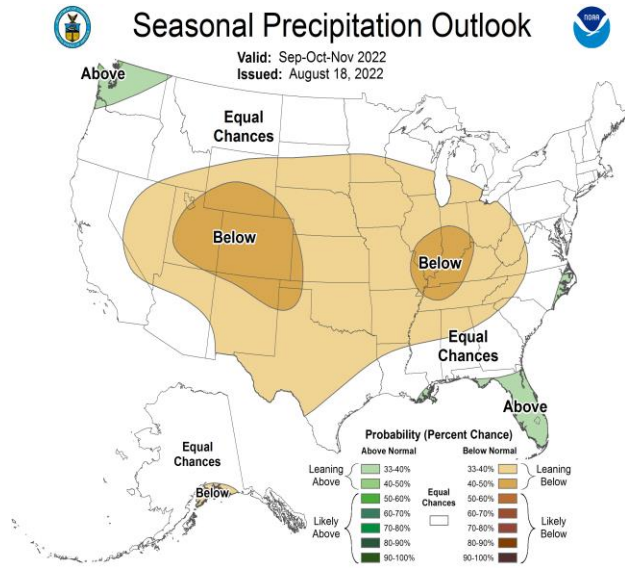
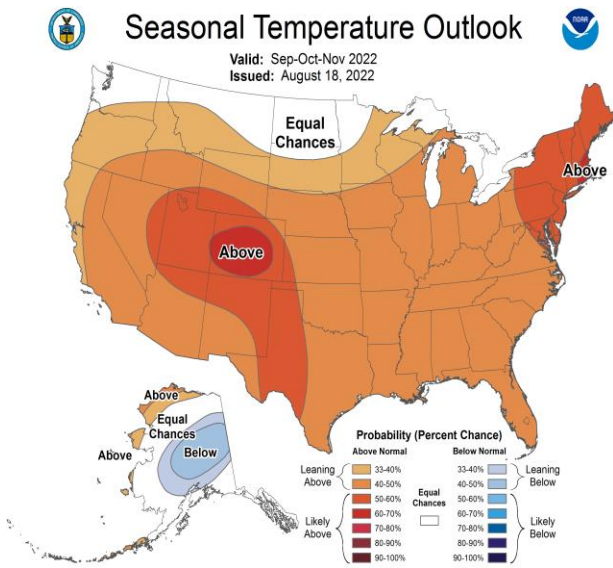
Fall 2022 Outlook (September to November)

Latest outlooks by the [NOAA Climate Prediction Center](#) (CPC, Figures 6 and 7) are leaning towards above normal temperature and precipitation for the September to November period. This is the period in which South Florida transitions from the wet season to the dry season, with the rainy season ending on October 15th. Predicting this transition period well in advance is quite difficult, with some years experiencing a quick transition of only a few days while others going through a gradual transition spanning a few weeks. This transition period can be largely influenced by tropical systems during what is typically the most active part of hurricane season.

Those looking for relief from the summer-long heat and humidity typically have to wait until early or mid-October for the first noticeable cold front to bring cooler and less humid air into the region, with more substantial lowering of temperatures into the 50s not normally observed until late October or early November. This means that summer-like heat and humidity often linger well into October. Those taking part in outdoor activities should stay hydrated and avoid prolonged exposure especially during the late morning through mid-afternoon time frame.

September and October represent the two most hurricane prone months for South Florida. Therefore, it is important that we continue to keep a close eye on the tropics and make sure that our personal hurricane plans are in place for this season.

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](https://www.weather.gov/southflorida).



Figures 6 and 6: September-November temperature probability (left) and precipitation probability (right) from NOAA's Climate Prediction Center (CPC).