

Climate Summary for Florida – July 2022

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Online at: <http://climatecenter.fsu.edu/products-services/summaries>

Key Points

- Average temperatures in July were near or above normal for the month.
- Drought conditions improved in July across Florida; however, small areas of northern Florida continued to experience abnormally dry conditions throughout the month.
- La Niña conditions are favored to continue into early fall, with a 68% chance August-October 2022; the chances of La Niña increase in fall and early winter to a 63-70% likelihood.
- The tropics were quiet in July, but we are entering the peak of the Atlantic Basin hurricane season over the next couple of months.

Average temperatures in July were about normal or above normal across Florida. Average temperature departures from normal ranged from -0.3°F in Key West to +2.5°F in Tampa for the month (see Table 1 and Appendix 1 for select cities). **Jacksonville Beach, Tampa, and Plant City** had their hottest Julys on record, and **Orlando** and **Fort Lauderdale** recorded their 2nd-hottest Julys on record. While **Key West** was near normal, it broke many daily high maximum and minimum temperature records throughout the month (see appendices 2 and 3 for select daily high maximum and minimum records).

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

Station	Mean Temperature	Departure from Normal
Pensacola	83.5	0.0
Tallahassee	82.3	-0.2
Jacksonville	82.6	+0.1
Orlando	84.8	+2.2
Tampa	86.3	+2.5
Miami	84.7	+0.6
Key West	85.1	-0.3

Rainfall totals in July were variable but generally above normal across the Panhandle and north Florida, and below normal in much of south Florida. The monthly precipitation departures from normal ranged from -4.53 inches in Melbourne to +5.86 inches in Tallahassee (Table 2 and Appendix 1). Ample rain fell across portions of northern Florida due to unsettled weather, with roughly 65% and 74% of the month with measurable

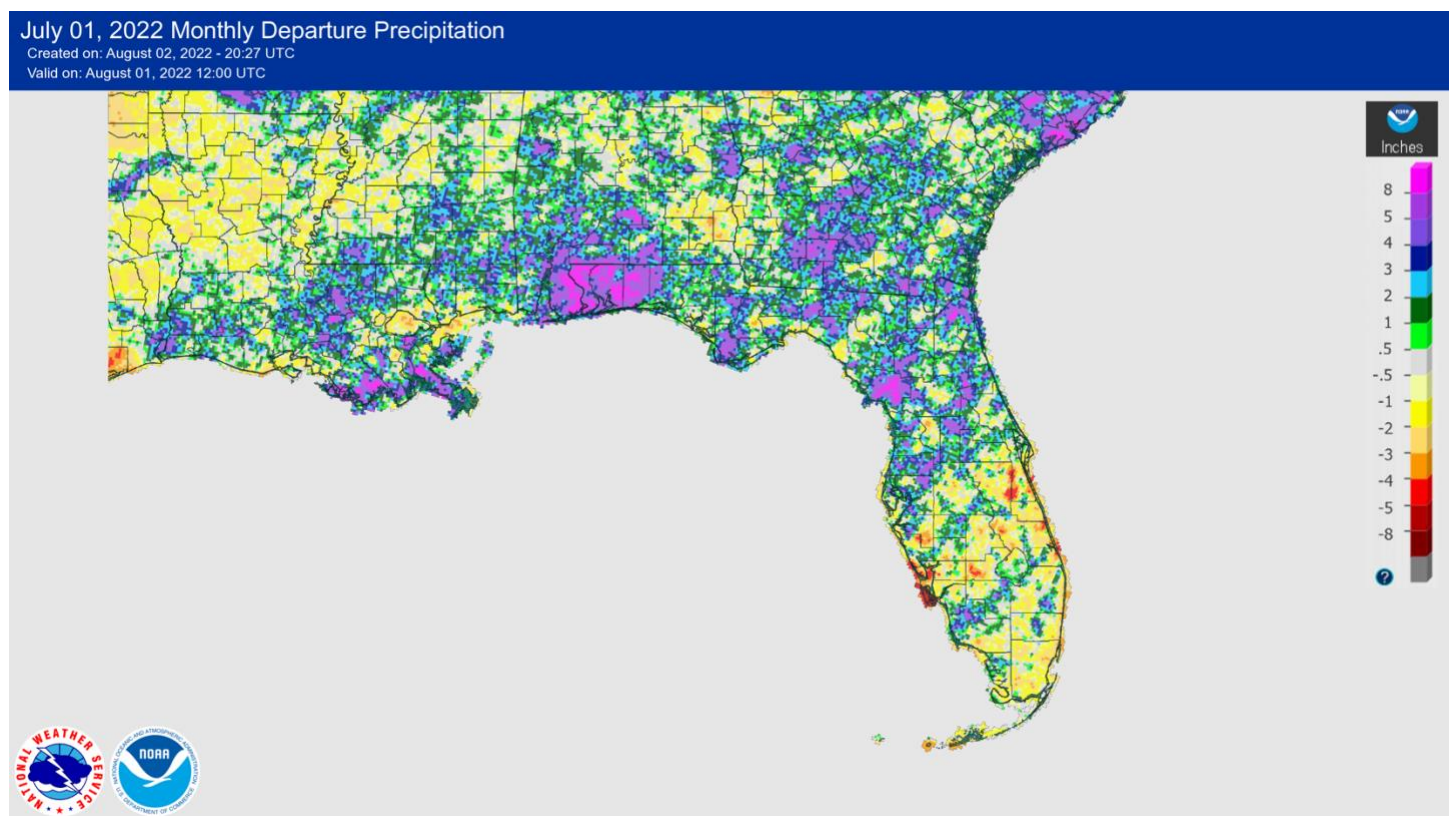


rain in **Pensacola** and **Tallahassee**, respectively. **Jacksonville** had its 7th-wettest July on record. Conversely, a deficit of rain fell across southeastern and central Florida. This was the 3rd-driest July on record at **Fort Pierce** and **Fort Lauderdale**.

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

Station	Total Rainfall	Departure from Normal
Pensacola	11.17	+3.28
Tallahassee	13.00	+5.86
Jacksonville	9.95	+3.18
Orlando	4.91	-2.55
Tampa	11.99	+4.24
Miami	4.81	-2.55
Key West	2.37	-1.26

Figure 1. A graphical depiction of the monthly rainfall departure from normal (in inches) for July (courtesy of NOAA).



La Niña Advisory.

La Niña is still favored to continue through 2022. By mid-July, sea surface temperatures in the central-eastern equatorial Pacific remained below average. La Niña conditions are expected to persist into the late Northern Hemisphere summer and early fall (68% chance August-October 2022). The chances for La Niña to continue

into the Northern Hemisphere fall and early winter increase to a 63-70% likelihood. This will likely be the third year in a row with La Niña, which has only happened twice in the past ~70 years.

Hazardous Weather Events in July.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 297 individual local reports of hazardous weather events recorded across the state during the month of July (see Table 4 for a breakdown by event type). Thunderstorms and ample rainfall affected much of northern Florida throughout the month, with monthly rainfall totals over 10 inches in many places. A lightning strike resulted in a fatality in New Smyrna Beach on the 19th. While several waterspouts were reported, there were no tornado reports this month and there was no tropical activity in the Atlantic Basin. There are on average 7 tornadoes reported in Florida during July, based on climatology (1991-2010). While the tropics were quiet, we are on pace with the climatological average for hurricane season and are now entering the peak Atlantic Hurricane Season over the next couple of months.

Table 4. Breakdown of storm reports submitted in Florida during the month of July (compiled from Iowa State University/Iowa Environmental Mesonet).

Report Type	Number of Reports
Flash Flood	5
Heavy Rain	21
Flood	19
Hail	18
Lightning	10
Dense Fog	0
Marine Thunderstorm Wind	60
Non-Thunderstorm Wind Gust	2
Non-Thunderstorm Wind Damage	0
Tornado/Waterspout/Funnel Cloud	0 / 18 / 4
Thunderstorm Wind Damage	28
Thunderstorm Wind Gust	105
Rip Currents	4
Wildfire	3
Tropical Storm	0

Daily Record Events in July.

Table 5. Summary of daily records broken or set in Florida in July (source: NCEI Daily Weather Records).

Category	Number of Records
Highest daily max. temp.	34
Highest daily min. temp.	45
Lowest daily max. temp.	9
Lowest daily min. temp.	11
Highest daily precipitation	28
Total	127

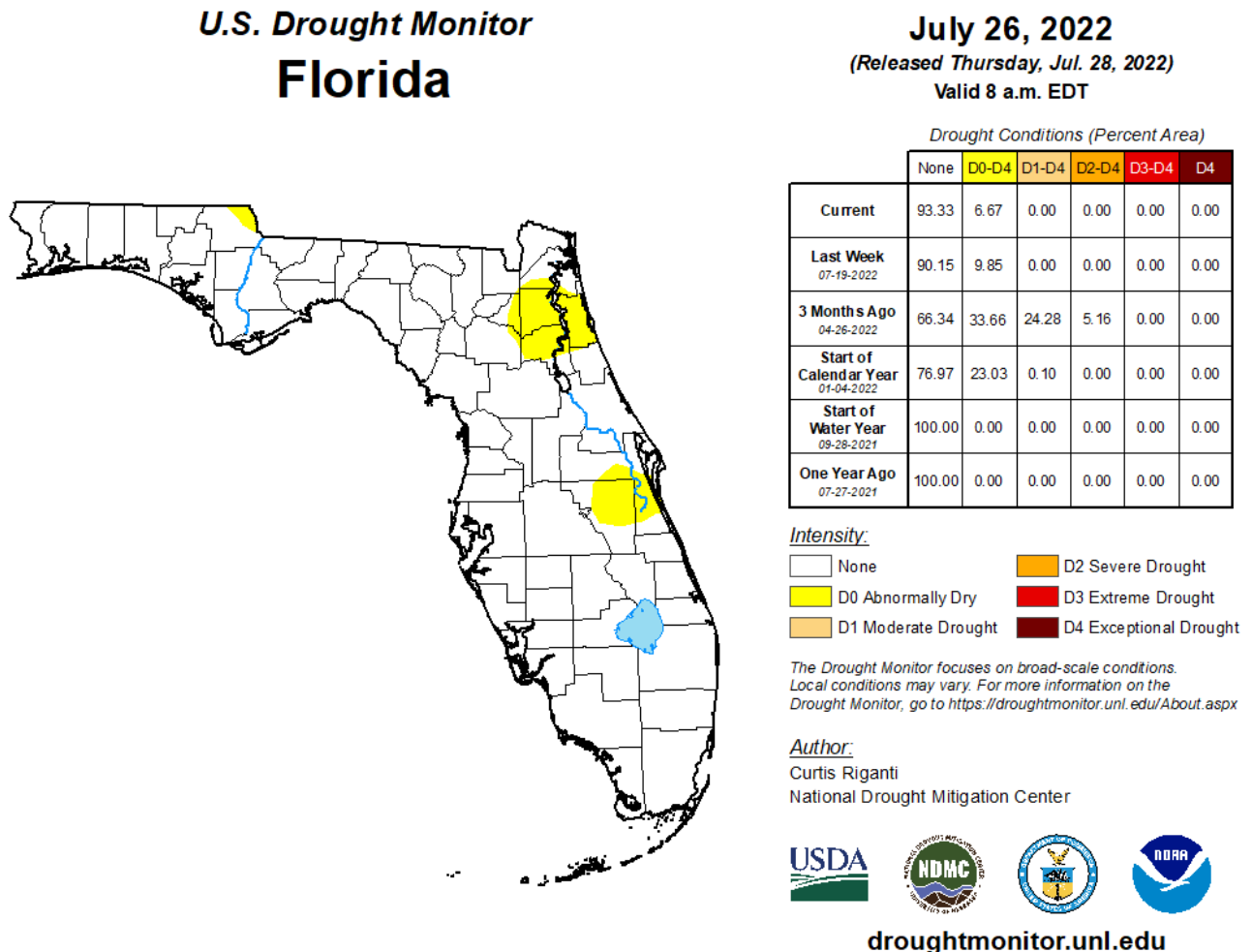
Weather/Climate Highlight of the Month: Tropical Storm Colin was the only tropical system that formed in July (July 2-3) in the Atlantic Basin, which impacted the coastal Carolinas before moving out into the open ocean. It was a small, surprise storm that did not produce much rain. Maximum winds were around 40 mph. This was the third named storm of the season and occurred ahead of the climatological average for the Atlantic hurricane season.

Drought-Related Impacts.

At the beginning of July, 23.5% of the state was experiencing abnormally dry conditions (D0), according to the U.S. Drought Monitor. Abnormally dry conditions steadily improved throughout the month, and as of July 26, only 6.7% of the state was in abnormally dry conditions (Figure 2 below).

As of July 31, the Lake Okeechobee water level was 12.96 ft. above sea level (Feet-NGVD29), which is below average for this time of the year. The water level remained below average throughout the month. At the first of the month, the water level was 12.90 ft. above sea level.

Figure 2. A graphical depiction of the current drought conditions in Florida according to the U.S. Drought Monitor (courtesy of the National Drought Mitigation Center, University of Nebraska-Lincoln).



Agriculture-Related Impacts.

During mid-July, topsoil moisture conditions were adequate in 84% of the state, short in 6%, and very short in 1% of the state, while 9% of the state had surplus moisture conditions. Near the end of July, topsoil moisture had declined somewhat with levels adequate in 79% of the state, short in 13%, and very short in 1% of the state; 7% of the state was in surplus. For more information, consult the [Crop Progress and Conditions report](#), which is published by the USDA's National Agricultural Statistics Service.

Appendix 1. Additional July departures from normal data for select Florida locations (source: NWS).

Station	Average Temperature (°F)	Departure from Normal (°F)	Total Rainfall (in.)	Departure from Normal (in.)
Gainesville	82.4	+1.0	10.09	+3.41
Sarasota	83.5	+0.4	5.80	-1.59
Melbourne	83.5	+0.4	1.97	-4.53
Fort Myers	85.3	+2.1	9.52	+0.14
West Palm Beach	85.4	+2.3	2.00	-3.63

Appendix 2. Select daily record high maximum temperatures broken or tied during July (compiled from NOAA).

Location	Date	Record (°F)	Broken/Tied	Last
Key West	1	96	Broken	95 in 2019
Key West	3	95	Broken	93 in 2020
Jacksonville Beach	4	97	Tied	97 in 1978
Key West	4	96	Broken	95 in 2020
Key West	5	96	Broken	94 in 2020
Clermont	6	99	Broken	98 in 2019
Plant City	8	98	Tied	98 in 1969
Key West	8	96	Broken	95 in 2020
Orlando	9	97	Tied	97 in 1992
Daytona Beach	9	97	Tied	97 in 2010
Vero Beach	10	97	Broken	96 in 1995
Key West	11	96	Broken	94 in 2020
Kissimmee	13	99	Broken	98 in 1981
Orlando	13	99	Broken	98 in 1937
Plant City	14	99	Tied	99 in 1916
Key West	14	95	Broken	94 in 2020
Key West	17	95	Broken	94 in 2019
Orlando	18	97	Tied	97 in 1983
Key West	18	98	Broken	93 in 2021
Key West	19	97	Broken	93 in 2019
Key West	20	96	Broken	93 in 2021
Orlando	21	96	Broken	95 in 2012
Clermont	22	98	Broken	97 in 2021
Key West	22	95	Broken	94 in 2011
Key West	24	97	Broken	94 in 2011

Key West	25	96	Broken	94 in 2011
Tampa	29	97	Tied	97 in 1993
Canal Point	30	96	Broken	95 in 2017
Tampa	30	97	Broken	96 in 1961
Plant City	31	99	Tied	99 in 2019
Tampa	31	97	Broken	96 in 1958

Appendix 3. Select daily record high minimum temperatures broken or tied during July (compiled from NOAA).

Location	Date	Record (°F)	Broken/Tied	Last
Key West	1	87	Broken	84 in 2019
Perrine	2	78	Broken	77 in 2006
Key West	2	87	Broken	86 in 2019
Key West	4	86	Broken	85 in 2019
Fort Lauderdale	5	80	Tied	80 in 2017
Mayport	5	78	Tied	78 in 2007
Tampa	5	81	Tied	81 in 2016
Lakeland	5	77	Broken	76 in 1995
Fort Pierce	6	80	Broken	79 in 1934
Hastings	6	77	Broken	76 in 2017
Melbourne	6	79	Tied	79 in 2011
Stuart	6	80	Tied	80 in 1967
Marianna	7	76	Broken	75 in 2017
Key West	8	87	Broken	84 in 2007
Tallahassee	8	78	Broken	76 in 2016
Chipley	9	77	Broken	76 in 2016
Melbourne	9	79	Broken	77 in 1990
Tampa	9	81	Tied	81 in 2020
West Palm Beach	9	81	Tied	81 in 2015
Key West	9	87	Broken	84 in 2021
Plant City	10	80	Broken	79 in 2020
Ochopee	10	82	Broken	79 in 2005
Key West	10	87	Broken	83 in 2016
Fort Myers	11	81	Tied	81 in 2020
Lakeland	11	77	Broken	76 in 1969
Orlando	12	80	Broken	79 in 2007
Key West	12	86	Broken	83 in 2020
Clermont	13	78	Broken	77 in 2011
Miami	13	82	Tied	82 in 2019
Key West	13	88	Broken	85 in 2020
Key West	17	87	Broken	85 in 2019
Usher Tower	18	78	Broken	76 in 1998
Key West	18	89	Broken	84 in 2021
Tampa	19	83	Broken	81 in 2018
Pensacola	19	82	Broken	79 in 2002
Tampa	20	83	Broken	81 in 1942
Key West	20	86	Broken	84 in 1962
Key West	21	88	Broken	84 in 2021

Orlando	22	80	Broken	79 in 2021
Key West	24	86	Broken	85 in 2011
Hialeah	25	82	Tied	82 in 1998
Stuart	25	82	Broken	81 in 1993
West Palm Beach	25	83	Broken	82 in 2011
Key West	25	87	Broken	85 in 2011
Daytona Beach	26	81	Broken	80 in 2020
Perrine	30	79	Broken	77 in 1995
Lakeland	30	77	Broken	76 in 1970
Key West	31	87	Broken	85 in 2021