

Climate Summary for Florida – July 2021

Prepared by the Florida Climate Center, The Florida State University, Tallahassee, Florida

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

July Key Points

- Average temperatures were mixed but near normal for the month.
- Rainfall totals in July were mixed, but most places received above-normal rainfall.
- Drought is not currently impacting the state.
- Hurricane Elsa impacted Florida July 5-7; it was the first hurricane of the 2021 season and became the earliest forming fifth named storm on record in the Atlantic Basin.

Average temperature departures in July were mixed but temperatures were near normal across the state. Average temperature departures ranged from -1.4 °F in Key West to +0.8 °F in Fort Myers for the month (see Table 1 and Appendix 1 for select cities). There were some daily high maximum temperature records set during July, but many more daily high minimum temperature records were set during the month (see Appendix 2).

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

Station	Mean Temperature	Departure from Normal
Pensacola	83.3	-0.2
Tallahassee	82.1	-0.4
Jacksonville	81.1	-1.4
Orlando	83.3	+0.7
Tampa	85.0	+1.2
Miami	83.7	-0.4
Key West	84.0	-1.4

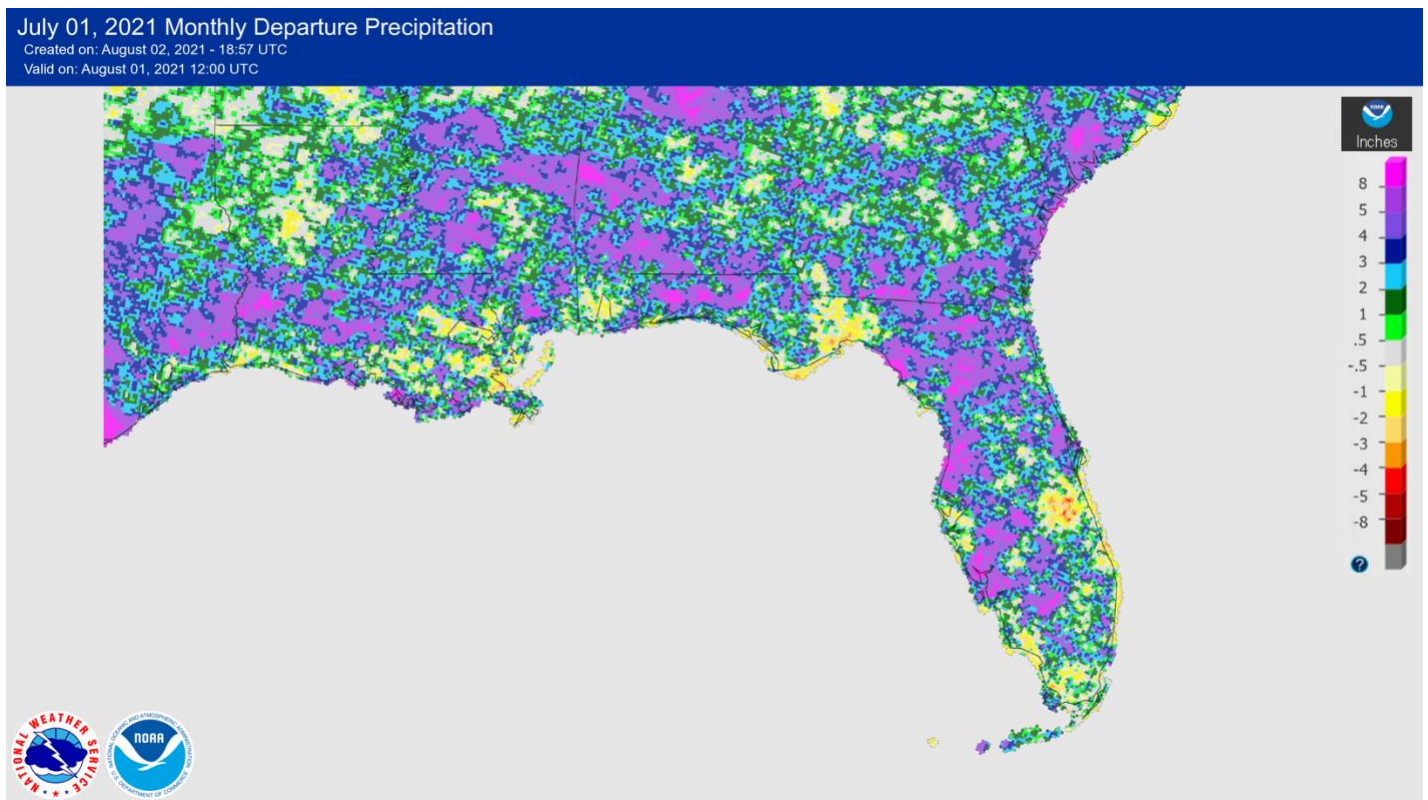
Rainfall totals in July varied, with many areas receiving well above normal rainfall but some areas were below normal. Much of Florida received above normal rainfall, including the western Panhandle, northern and central Florida, and south-central parts of the state (Figure 1). Hurricane Elsa impacted many parts of the state from July 5-7, which brought heavy rain particularly across north central Florida as it made landfall in Taylor County. Monthly departures from normal ranged from +4.02 inches in Key West to -2.61 inches in Tallahassee (Table 2 and Figure 1). Several daily rainfall records were set during the month of June; the highest recorded daily rainfall during the month occurred on the 6th with 9.01 inches of rain at Mountain Lake.



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

Station	Total Rainfall	Departure from Normal
Pensacola	8.78	+0.89
Tallahassee	4.53	-2.61
Jacksonville	8.87	+2.10
Orlando	6.44	-1.02
Tampa	7.30	-0.45
Miami	8.18	+0.82
Key West	7.65	+4.02

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



ENSO-Neutral Conditions.

ENSO-neutral conditions currently exist and are likely to remain through the summer and early fall (51% chance August-October). There is a higher chance that La Niña conditions will redevelop during the fall (September-November) and last through the winter season (66% chance during November-January).

Hazardous Weather Events in July.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 433 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). Hurricane Elsa impacted parts of south, central and northern areas of the state from July 5-7 with heavy rainfall, localized flooding, riverine flooding in north and central Florida, and storm surge. There was one fatality reported in Jacksonville due to a fallen tree. Elsa made landfall in Cuba as a tropical storm and then briefly regained hurricane status over the Gulf of Mexico before making another landfall as a tropical storm in the eastern Florida Panhandle in Taylor County.

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
Flood	21
Flash Flood	4
Hail	9
Heavy Rain	36
Marine Thunderstorm Wind	68
Non-Thunderstorm Wind Gust	0
Tornado/Waterspout/Funnel Cloud	3 / 16 / 1
Thunderstorm Wind Damage	24
Thunderstorm Wind Gust	105
Lightning	6
Rip Currents	1
Storm Surge	2
Tropical Storm	137

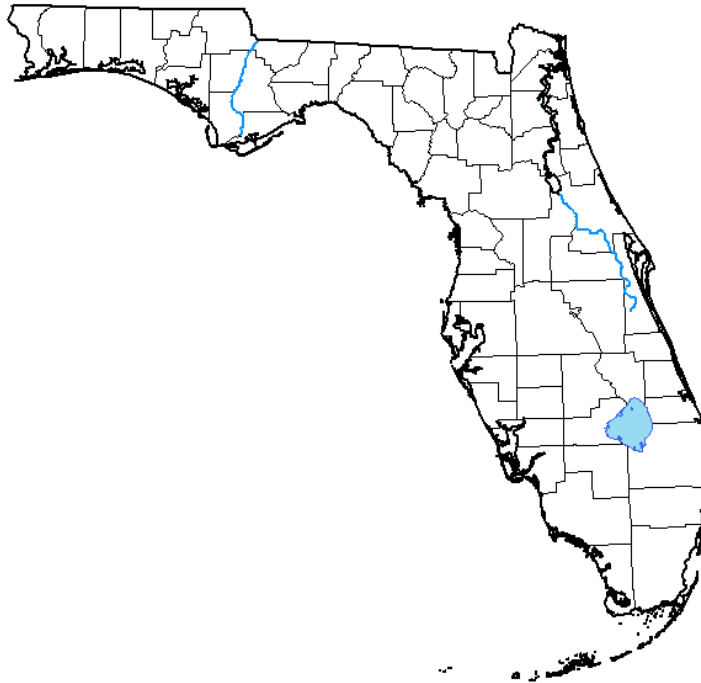
Drought-Related Impacts.

As of the end of July, drought was not impacting any part of the state. From early to mid-July, a small pocket of abnormally dry conditions persisted in the southern tip of the Peninsula, but by end of July this had dissipated. According to the U.S. Drought Monitor, just 1.13% of the southern part of the state was experiencing abnormally dry conditions (D0) but with continued rainfall during the wet season this has been alleviated.

As of July 31, the Lake Okeechobee water level was at 13.70 ft. above sea level (Feet-NGVD29), which is near the average for this time of the year. At the first of the month, the water level was 12.82 ft. above sea level.

U.S. Drought Monitor
Florida

July 27, 2021
(Released Thursday, Jul. 29, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week <i>07-20-2021</i>	98.87	1.13	0.00	0.00	0.00	0.00
3 Months Ago <i>04-27-2021</i>	82.01	17.99	3.59	0.00	0.00	0.00
Start of Calendar Year <i>12-29-2020</i>	89.27	10.73	0.00	0.00	0.00	0.00
Start of Water Year <i>09-29-2020</i>	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago <i>07-28-2020</i>	92.35	7.65	0.00	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu

Agriculture-Related Impacts.

In mid-July, topsoil moisture levels were adequate for 67% of the state, short in 4%, and 29% of the state was in surplus. By the end of July, topsoil moisture levels were adequate in 80% of the state, short in 7%, and 13% of the state was in surplus. Much of the state had either good (51%) or excellent (35%) pasture and range conditions by the end of the month. For more information, consult the weekly [Crop Progress and Condition reports](#) 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	81.0	-0.4	13.99	+7.31
Sarasota	82.9	-0.2	10.38	+2.99
Melbourne	82.9	-0.2	5.13	-1.37
Fort Myers	84.0	+0.8	8.86	-0.52
West Palm Beach	83.3	+0.2	5.66	+0.03

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

Location	Date	Record (°F)	Broken/Tied	Last
Melbourne	7	79	Broken	78 in 2010
Perrine	7	78	Broken	76 in 2017
Stuart	7	80	Tied	80 in 1973
Vero Beach	7	80	Broken	77 in 2016
Plant City	8	78	Broken	77 in 2000
Tampa	8	81	Tied	81 in 2020
Lakeland	8	77	Broken	76 in 1963
Key West	9	84	Tied	84 in 1965
Daytona Beach	15	80	Tied	80 in 2012
Key West	18	84	Tied	84 in 2019
Jacksonville Beach	22	80	Broken	79 in 2020
Punta Gorda	22	79	Broken	78 in 2015
Orlando	22	79	Broken	78 in 2015
Key West	22	84	Broken	83 in 2011
Lakeland	22	78	Broken	76 in 1995
Perry	23	77	Broken	76 in 1932
Plant City	23	79	Broken	77 in 2015
Punta Gorda	23	81	Broken	80 in 2005
Fort Myers	23	81	Broken	80 in 2005
Lakeland	23	79	Broken	76 in 1995
Jacksonville Beach	24	83	Broken	82 in 1987
Wewahitchka	27	76	Broken	75 in 1998
Lakeland	27	78	Broken	77 in 1962
Plant City	28	79	Broken	78 in 1916
Lakeland	28	77	Broken	76 in 1968
Key West	30	85	Tied	85 in 2009
Panama City	31	81	Tied	81 in 2020
Usher Tower	31	77	Broken	76 in 2010
Ochopee	31	80	Broken	79 in 1999
Key West	31	85	Tied	85 in 2019
Lakeland	31	77	Broken	76 in 1986
Tallahassee	31	77	Tied	77 in 2015