

Climate Summary for Florida – August 2025

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

Summary

- Monthly average temperatures in August were mixed, with below to near normal temperatures in the Panhandle and near to above normal temperatures in the Peninsula.
- Monthly precipitation totals in August were near to above normal in the Panhandle and western Florida, above normal in northeastern Florida, and below normal in central to southeastern areas.
- Drought conditions improved during August, but moderate (D1) to extreme drought (D3) persisted in southeastern Florida where large year-to-date rainfall deficits exist.
- A brief period of La Niña is favored to develop in the equatorial Pacific Ocean during fall and early winter 2025-26 (a ~ 58% chance during October-December), followed by a return to ENSO-neutral conditions.

Monthly average temperatures in August were below to near normal in the Panhandle and near to above normal in the Peninsula. Average monthly temperature departures from normal ranged from -1.0 °F in Pensacola to +2.6 °F in Leesburg for the month (see Table 1 and Appendix 1 for select cities). Following record-setting heat during the last week of July, August started off closer to average in northern Florida but still very warm in southern Florida. Much cooler weather to our north did not quite make it as far south as Florida. However, a cold front during the latter part of the month pushed into northern Florida and was enough to bring drier air and lower dew points to the region, though it had little effect on maximum temperatures. Seasonal mean temperatures (JJA) were well above average; Fort Pierce and Gainesville each recorded their warmest summer on record (117 years and 52 years, respectively). Most stations across the Florida Peninsula recorded one of their top 10 warmest summers on record. Select daily high maximum temperature records tied or broken during the month are provided in Appendix 2.

Table 1. August average temperatures and departures from normal (°F) for select cities.

Station	Mean Temperature	Departure from Normal
Pensacola	82.0	-1.0
Tallahassee	81.8	-0.6
Jacksonville	83.2	+1.1
Orlando	83.8	+1.2
Tampa	85.3	+1.3
Miami	85.3	+1.1
Key West	85.5	0.0

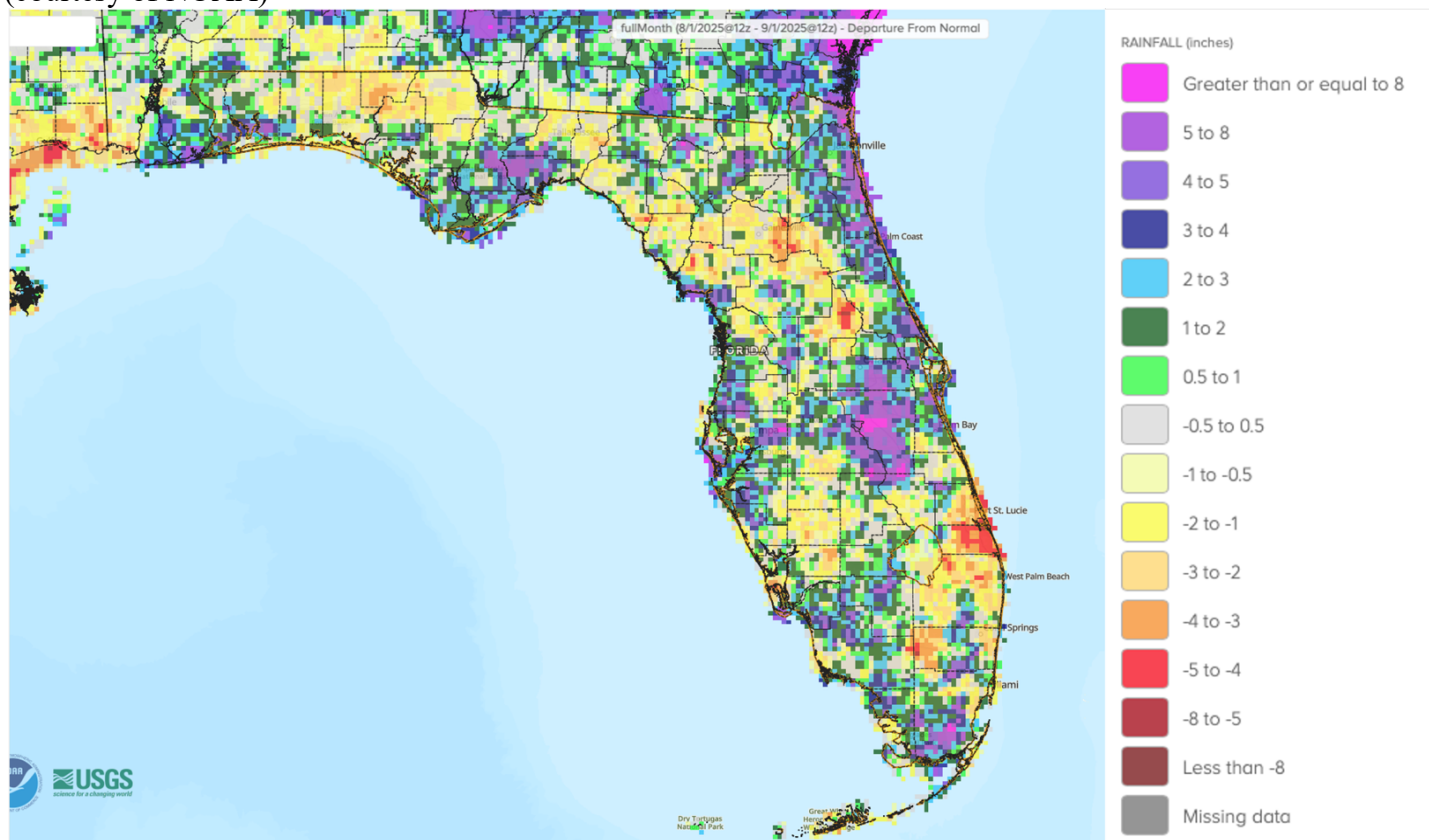


Monthly precipitation totals in August were near to above normal in the Panhandle and western Florida, above normal in northeastern Florida, and below normal in central and southeastern areas. The monthly precipitation departures from normal ranged from -3.70 inches in Miami to +4.73 inches in Melbourne (see Table 2 and Appendix 1 for select locations). With spotty convection and thunderstorms in August, rainfall has been mixed across the state with some areas seeing plentiful rainfall and good stream flows while others were below average. Melbourne recorded its 4th-wettest August on record with 11.40 inches of rainfall (84 years) and Jacksonville Beach had its 9th-wettest August on record with a total of 11.98 inches for the month (80 years). The Tampa Weather Service Office reported [11.62 inches of rain in Sanibel in 13 hours](#), from August 9-10. Meanwhile, precipitation in southeast Florida continues to be below normal where moderate to extreme drought continued to affect Palm Beach to Miami-Dade Counties (see Figure 2). Summer 2025 (JJA) ranked as the 8th-driest summer on record in Stuart (71 years) and Vero Beach (118 years) and 7th-driest on record in Fort Lauderdale (106 years).

Table 2. August precipitation totals and departures from normal (inches) for select cities.

Station	Total Rainfall	Departure from Normal
Pensacola	12.00	+4.50
Tallahassee	7.18	-0.42
Jacksonville	6.51	-0.37
Orlando	7.31	-0.38
Tampa	11.20	+2.17
Miami	5.88	-3.70
Key West	4.59	-0.78

Figure 1. A graphical depiction of the monthly rainfall departure from normal (in inches) for August 2025 (courtesy of NOAA)



La Niña Watch.

ENSO-neutral conditions are currently present in the tropical equatorial Pacific Ocean and are likely to persist through the late Northern Hemisphere summer and early fall (56% chance during August-October). During the past month, near-average sea surface temperatures (SSTs) continued across most of the equatorial Pacific Ocean. The latest weekly Niño SST index values ranged from -0.3 °C to 0.0 °C. Subsurface temperature anomalies became weakly negative in the eastern Pacific Ocean during the past month. A brief period of La Niña is favored to develop during the fall and early winter 2025-26 (with a roughly 58% chance during October-December) before returning to ENSO-neutral conditions.

Hazardous Weather Events in August.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 287 individual local reports of hazardous weather events recorded across the state during the month of August (see Table 3 for a breakdown by event type). The Palm Beach County wildfire in the early part of the month burned a total of 11,400 acres and was reported as 100% contained by August 4th. Later in the month, a [wildfire burned in rural Broward County and impacted visibility and air quality](#) in metro areas of southeastern Florida. Thunderstorms throughout the month led to flash flooding and strong wind gusts. Lightning led to two injuries and caused a structure fire in Marion County mid-month.

Table 3. Breakdown of storm reports submitted in Florida during the month of August (compiled from Iowa State University/Iowa Environmental Mesonet).

Report Type	Number of Reports
Heavy Rain	62
Flash Flood	9
Flood	17
Hail	5
Marine Thunderstorm Wind	41
Non-Thunderstorm Wind Gust	3
Thunderstorm Wind Damage	15
Thunderstorm Wind Gust	96
Non-Thunderstorm Wind Damage	0
Tornado/Waterspout/Funnel Cloud	2 / 21 / 4
Lightning	6
Wildfire	4

Daily Record Events in August.

Table 4. Summary of daily records broken in Florida in August (source: NCEI Daily Weather Records).

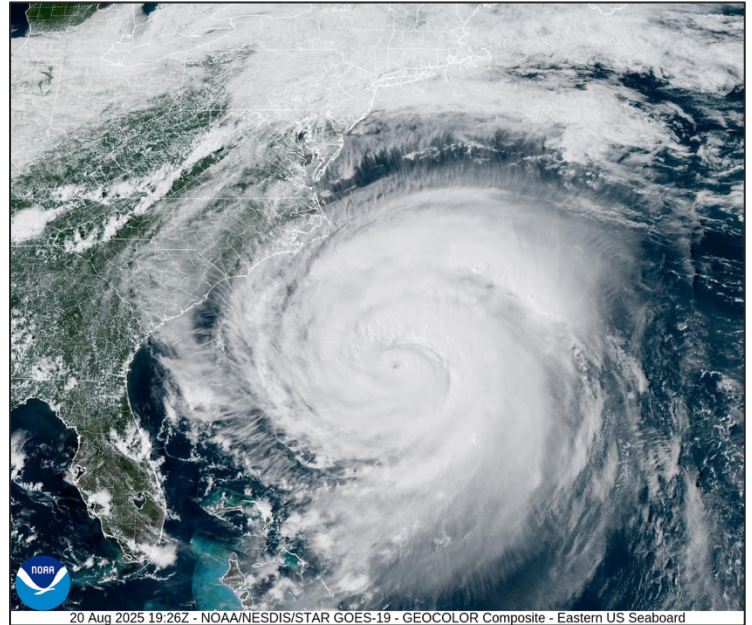
Category	Number of Records
Highest daily max. temp.	44
Highest daily min. temp.	40
Lowest daily max. temp.	11
Lowest daily min. temp.	6
Highest daily precipitation	23
Total	124

Weather/Climate Highlights of the Month: Hurricane Erin

Hurricane Erin became the first hurricane and first major hurricane of the 2025 Atlantic Hurricane Season. Tropical Storm Erin developed into a hurricane on August 15, just a few days behind climatology, and Erin quickly strengthened from a Category 1 to a Category 5 hurricane between the evening hours of Friday, August 15, and Saturday morning, August 16, as it moved through warm water in the Atlantic. As a category 5 hurricane, Erin passed just north of Puerto Rico and turned northward.

Erin experienced extreme rapid intensification as maximum sustained winds increased by 85 mph in under 24 hours, which far surpasses the threshold for rapid intensification (35 mph in 24 hours). The storm then experienced weakening to a Category 2 storm as it underwent an eyewall replacement cycle, but it maintained Category-2 strength for several days as it moved northward and grew in size.

While Erin did not make landfall in the U.S., the storm's large size and wind field led to major impacts along the U.S. East Coast. A mandatory evacuation was issued for parts of the North Carolina coast, as high wind gusts and large waves of 15-20 feet led to overwashing and major erosion along portions of the Outer Banks. The storm was a timely reminder that hurricanes can still impact land without making a direct hit.

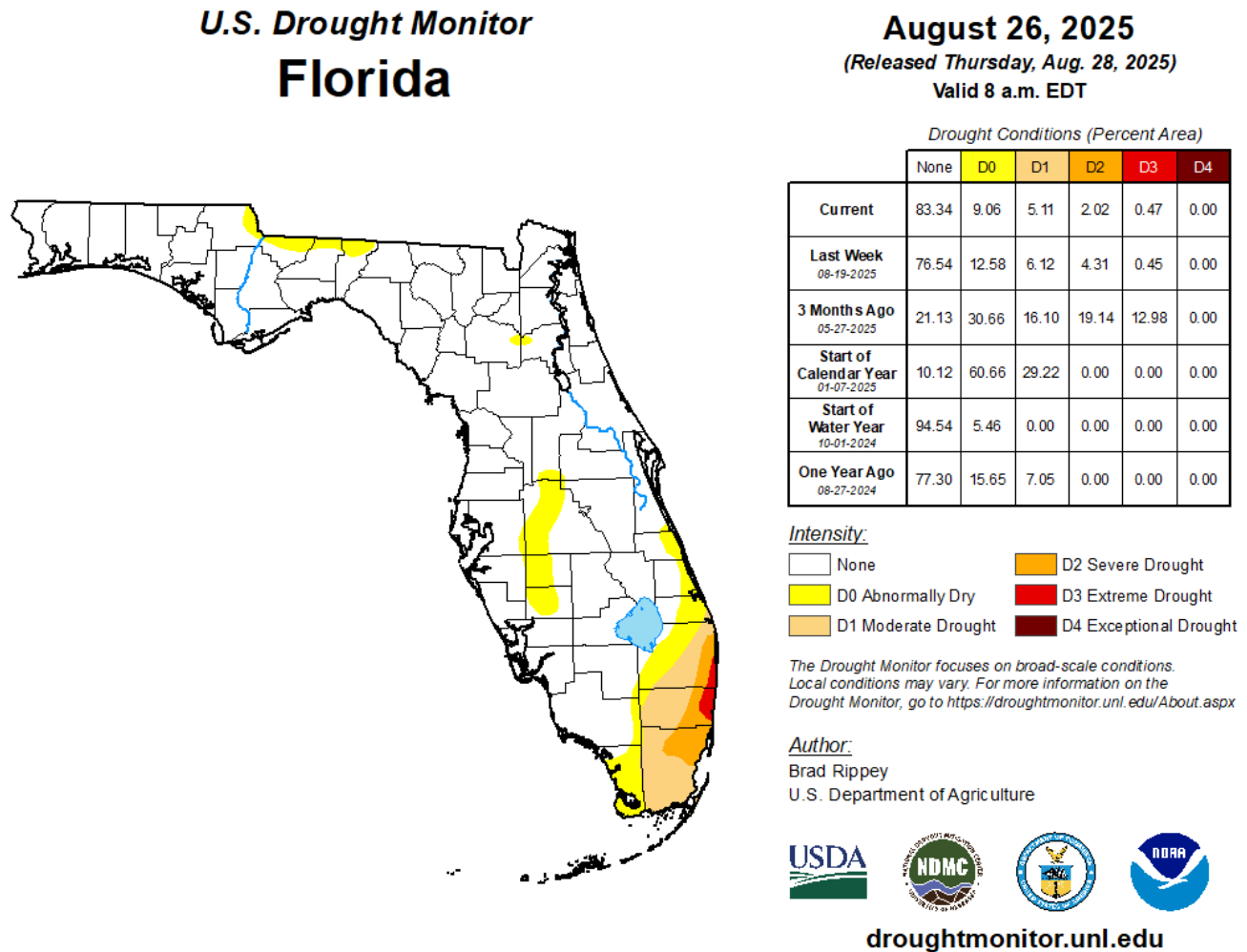


Drought-Related Impacts.

Drought improved across Peninsular Florida during August, but long-term drought continued to impact southeastern Florida as of late August, with extreme drought (D3) along the coastal portions of Palm Beach and Broward Counties. In mid-August, 0.17% of the state was in extreme drought (D3), about 5% was in severe drought (D2), 7% of the state was in moderate drought (D1), and 18% was abnormally dry (D0), according to the U.S. Drought Monitor. By the end of the month, approximately 0.5% of the state was in extreme drought (D3), 2% was in severe drought (D2), 5% was in moderate drought (D1), and 9% of the state was abnormally dry (D0) (Figure 2 below).

As of August 31, the Lake Okeechobee water level was 12.53 ft. above sea level (Feet-NGVD29), which is below average for this time of year. At the first of the month, the water level was 12.06 ft. above sea level.

Figure 3. A graphical depiction of the latest 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.

In mid-August, topsoil moisture conditions were adequate in 82% of the state, short in 12%, and very short in 1% of the state, while 5% of the state had surplus topsoil moisture conditions. By the end of August, topsoil moisture conditions were adequate in 76% of the state, were short in 10% of the state, and very short in 0% of the state, while 14% of the state had surplus topsoil moisture conditions. For more information, consult the [Crop Progress and Conditions report](#), which is published by the USDA's National Agricultural Statistics Service.

Appendix 1. Additional August 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	83.5	+2.2	7.96	+1.56
Sarasota	83.0	-0.4	12.78	+3.67
Melbourne	83.3	+1.3	11.40	+4.73
Fort Myers	84.8	+1.4	9.11	-1.32
West Palm Beach	85.6	+2.4	6.86	-1.82

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

Location	Date	Record (°F)	Broken/Tied	Last
Bradenton	1	97	Broken	96 in 2022
Fort Lauderdale Beach	2	96	Broken	95 in 2015
Fernandina Beach	3	98	Tied	98 in 2023
Fort Lauderdale Beach	4	96	Broken	93 in 2015
Homestead	4	97	Broken	96 in 1990
Bradenton	5	98	Broken	96 in 1993
Clermont	5	99	Broken	98 in 2022
Fort Lauderdale Beach	5	98	Broken	94 in 1962
Clermont	6	100	Broken	96 in 2023
Deland	6	100	Tied	100 in 1918
Ochopee	6	98	Broken	97 in 2011
Clermont	7	100	Broken	97 in 2021
Tampa	7	98	Broken	97 in 1993
Sanford	13	104	Broken	99 in 2023
Ocala	15	99	Tied	99 in 1902
Clermont	16	102	Broken	99 in 2023
Fort Myers	16	98	Broken	97 in 1990
Miles City	17	100	Tied	100 in 2005
Clermont	18	99	Broken	98 in 1954
Fort Lauderdale Beach	18	95	Broken	94 in 1958
Key West	18	100	Broken	99 in 2021
Homestead	20	98	Broken	95 in 2022
West Palm Beach	20	96	Broken	95 in 1958
Fort Lauderdale Beach	23	99	Broken	94 in 1962
Homestead	26	98	Broken	96 in 1990
Stuart	27	96	Broken	94 in 1998
Fort Lauderdale Beach	31	95	Broken	94 in 2023