

## Climate Summary for Florida – August 2024

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

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

### Summary

- Average monthly temperatures in August were above normal.
- Monthly precipitation totals were above normal in areas impacted by Hurricane Debby along the west coast and north-central Florida, but below normal in the Panhandle and east coast of Florida.
- Drought development occurred toward the end of the month in the western Panhandle; 7% of the state was in moderate drought (D1) and 16% was abnormally dry (D0) at the end of the month.
- ENSO-neutral conditions are currently present in the tropical equatorial Pacific Ocean. A transition to La Niña conditions is expected during September-November (66% chance).
- Hurricane Debby made landfall in Florida’s Big Bend (Taylor County) as a Category 1 hurricane on August 5, which brought torrential rainfall and storm surge flooding, damaging winds, and tornadoes.

**Average monthly temperatures in August were above normal.** Average monthly temperature departures from normal ranged from +0.3 °F in Sarasota to +2.9 °F in Tallahassee for the month (see Table 1 and Appendix 1 for select cities). Several stations recorded one of their warmest Augusts on record; it was the 2nd-warmest August on record for Niceville, Tallahassee, Tampa, and Punta Gorda, and 3rd-warmest August on record for Daytona Beach, Fort Myers, and Naples. Pensacola saw several 100°F+ days during the first half of the month, smashing previous daily records by several degrees. Key West smashed their daily record high on the 10<sup>th</sup> and 13<sup>th</sup>, with 101 °F and 102 °F, respectively. For the summer as a whole (JJA), rankings show that several stations recorded their warmest summer on record, including Tallahassee (127 years), Orlando (70 years), Plant City (118 years), Punta Gorda (99 years), and Ft. Lauderdale (104 years). 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 selected cities.

Station	Mean Temperature	Departure from Normal
Pensacola	83.5	+0.5
Tallahassee	85.3	+2.9
Jacksonville	83.1	+1.0
Orlando	84.3	+1.7
Tampa	84.7	+0.7
Miami	85.0	+0.8
Key West	86.1	+0.6

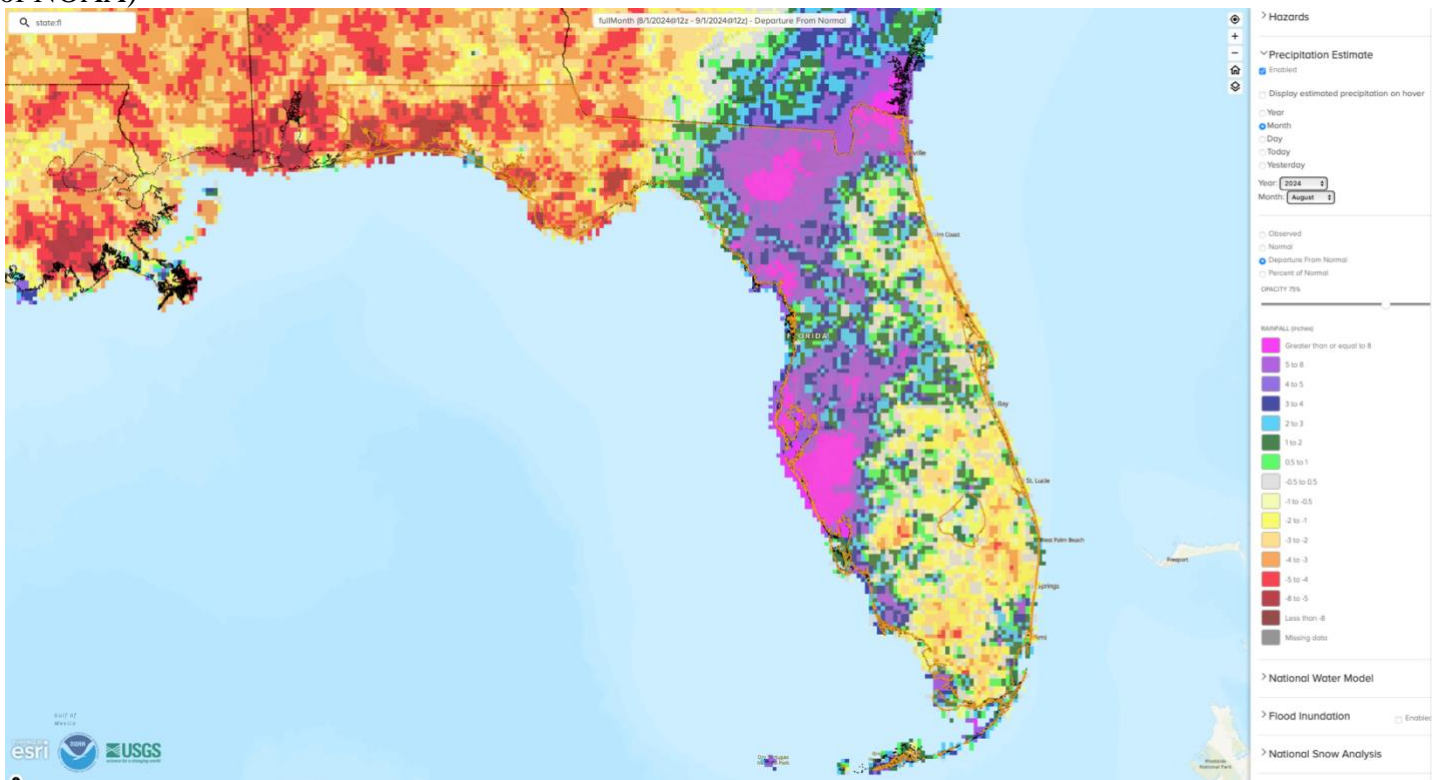


**Monthly rainfall totals in August were above normal along the west coast and north-central Florida and below normal in the Panhandle and east coast of Florida.** The monthly precipitation departures from normal ranged from -6.54 inches in Pensacola to +14.44 inches in Sarasota (see Table 2 and Appendix 1 for select locations). Hurricane Debby's rainfall shows clearly in the monthly departures from normal map with much wetter than normal conditions (Figure 1). Southwest Florida had a surplus of 8 inches or more in August, and this region was wetter than normal for the summer as a whole (JJA). Locations that recorded their wettest summer on record include Fort Myers (124 years) and Sarasota (110 years), while Tampa and Naples observed their 2nd-wettest summer on record. These locations recorded a surplus of 14 inches or more in summer rainfall. Hurricane Debby left other parts of the state with below normal rainfall for the month. With less than one inch of rain for the entire month, Pensacola saw their 3rd-driest August on record. Below-normal rainfall combined with high temperatures led to drought development in the western Panhandle (see Figure 2).

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

Station	Total Rainfall	Departure from Normal
Pensacola	0.96	-6.54
Tallahassee	4.11	-3.49
Jacksonville	12.44	+5.56
Orlando	7.79	+0.10
Tampa	17.78	+8.75
Miami	12.83	+3.25
Key West	9.04	+3.67

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



## ENSO Neutral / La Niña Watch.

ENSO-neutral conditions continue to linger in the tropical equatorial Pacific Ocean and are expected to persist for the next few months. La Niña conditions are still expected to emerge during September-November 2024 (66% chance) and persist through the Northern Hemisphere winter (74% chance during November-January). The cooling of SSTs has been slow, but below-average ocean temperatures and low-level easterly wind anomalies point to La Niña developing in the coming months.

## Hazardous Weather Events in August.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 619 individual local reports of hazardous weather events recorded across the state during the month of August (see Table 4 for a breakdown by event type). Hurricane Debby made landfall as a Category 1 storm near Steinhatchee, FL on the morning of August 5th, bringing heavy rain, high winds, and storm surge along Florida's west coast and Big Bend regions. A wind gust of 70 mph was reported in Mayo in Lafayette County, and 60+ wind gusts were observed in Madison and Suwannee Counties. Debby led to flooded roadways and homes. Major flooding and water rescues were reported in Columbia County, in Live Oak in Suwannee County, and Sarasota County. Multiple injuries were reported as well, mostly from fallen trees, and Debby led to several fatalities in the state. See our [Hurricane Debby Post-Storm Summary Report](#) for more information on the storm and its impacts. August 2024 also brought extreme heat to parts of the state. A heat index of 116°F was reported in Bay County, and a heat index of 115°F was observed in Franklin County, both observed on the 8th.

**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	54
Flood	21
Coastal Flood	3
Flash Flood	25
Hail	1
Marine Thunderstorm Wind	55
Non-Thunderstorm Wind Gust	47
Non-Thunderstorm Wind Damage	4
Tornado/Waterspout/Funnel Cloud	8 / 26 / 5
Thunderstorm Wind Damage	25
Thunderstorm Wind Gust	175
Rip Currents	1
Lightning	7
Extreme Heat	4
Tropical Cyclone	141
Storm Surge	17

## Daily Record Events in August.

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

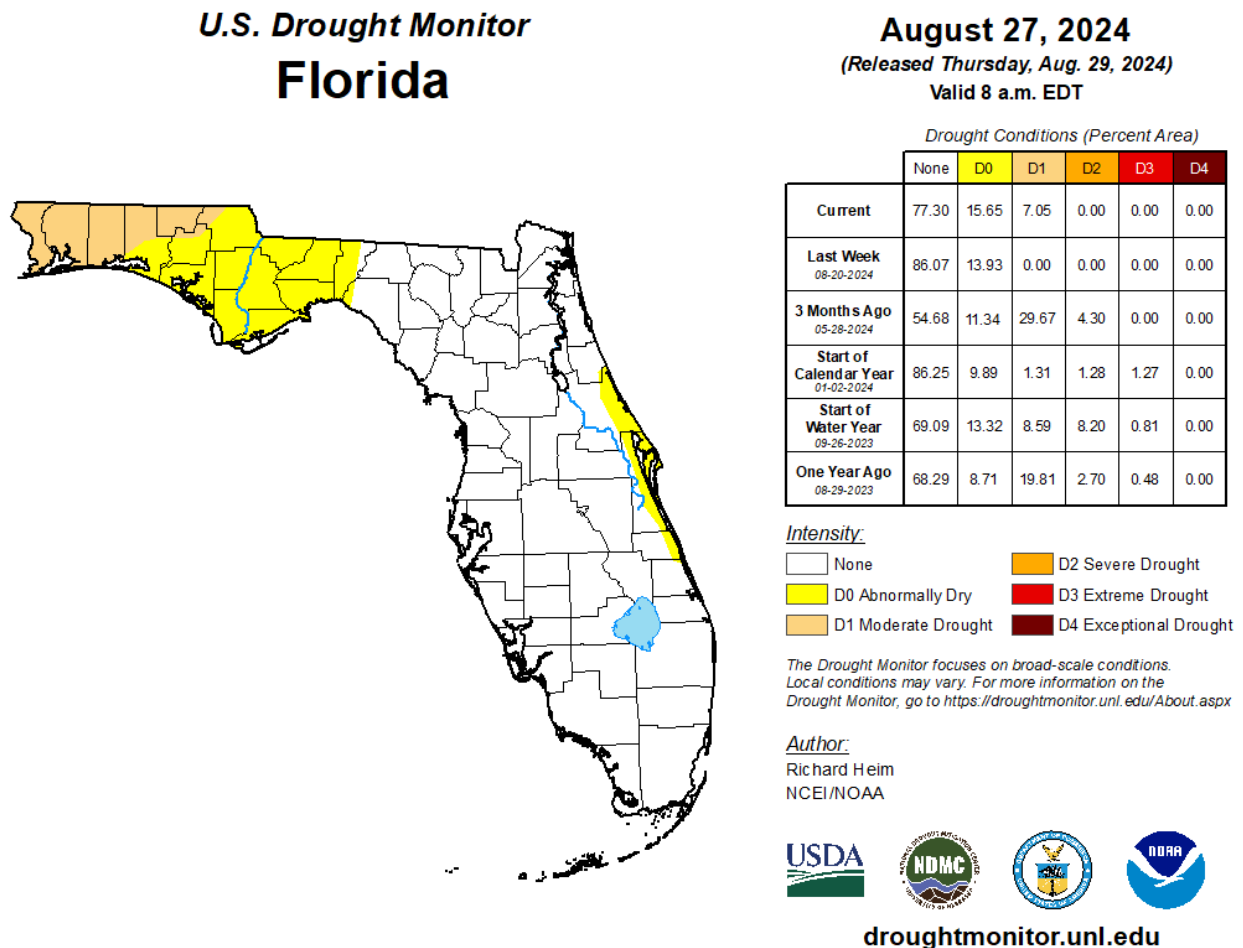
Category	Number of Records
Highest daily max. temp.	41
Highest daily min. temp.	105
Lowest daily max. temp.	14
Lowest daily min. temp.	3
Highest daily precipitation	43
<b>Total</b>	<b>206</b>

## Drought-Related Impacts.

By mid-August, the state was drought free and 1.6% of the state was abnormally dry (D0), according to the U.S. Drought Monitor. By the end of the month, drought developed in the western Panhandle. About 7% of the state was in moderate drought (D1) and 15.7% was abnormally dry (D0) (Figure 2 below).

As of August 31, the Lake Okeechobee water level was 14.27 ft. above sea level (Feet-NGVD29), which is average for this time of year. At the first of the month, the water level was 13.56 ft. above sea level.

**Figure 2.** 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.

Hurricane Debby was a major rainmaker in Florida and up through the Carolinas. The storm drowned or otherwise damaged many crops. In mid-August, topsoil moisture conditions were adequate in 62% of the state, short in 17%, and very short in 3% of the state, while 18% of the state had surplus topsoil moisture conditions. By the end of August, topsoil moisture conditions were adequate in 66% of the state, short in 17%, and very short in 2% of the state; 15% of the state was in surplus 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).

<b>Station</b>	<b>Average Temperature (°F)</b>	<b>Departure from Normal (°F)</b>	<b>Total Rainfall (in.)</b>	<b>Departure from Normal (in.)</b>
Gainesville	82.3	+1.0	10.82	+4.42
Sarasota	83.7	+0.3	23.55	+14.44
Naples	83.8	+2.0	7.43	-3.40
Fort Myers	84.8	+1.4	12.20	+1.77
West Palm Beach	84.8	+1.6	8.72	+0.04

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

<b>Location</b>	<b>Date</b>	<b>Record (°F)</b>	<b>Tied/Broken</b>	<b>Last</b>
Key West	1	98	Broken	96 in 2022
Canal Point	2	98	Broken	97 in 1992
Fort Myers	2	97	Broken	96 in 2022
Clermont	4	98	Tied	98 in 1972
Pensacola	4	99	Broken	98 in 2023
Pensacola	5	100	Broken	97 in 1972
Pensacola	6	101	Broken	97 in 1989
Apalachicola	7	98	Tied	98 in 1999
Hialeah	8	96	Broken	95 in 1999
Homestead	8	97	Broken	96 in 2023
Pensacola	8	100	Broken	96 in 2023
Pensacola	10	97	Broken	95 in 2023
Key West	10	101	Broken	96 in 2023
Fort Lauderdale	11	95	Tied	95 in 2023
Key West	11	99	Broken	95 in 2023
Naples	12	98	Broken	96 in 1990
Apalachicola	13	98	Broken	96 in 1999
Key West	13	102	Broken	95 in 2011
Apalachicola	14	99	Broken	96 in 2011
Pensacola	14	100	Broken	96 in 1993
Crestview	14	101	Broken	99 in 2023
Clermont	15	99	Broken	98 in 2023
Miami	15	98	Broken	97 in 1995
Homestead	16	99	Broken	96 in 2023
Pensacola	18	101	Broken	97 in 1993
Niceville	19	99	Broken	97 in 1952
Plant City	19	100	Broken	98 in 2023
Daytona Beach	21	97	Broken	96 in 2014
Fort Lauderdale	21	97	Broken	93 in 2015
Key West	22	95	Broken	93 in 1995
Tampa	27	97	Broken	96 in 2023
Tallahassee	31	97	Tied	97 in 2014