

Climate Summary for Florida – November 2023

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

Summary

- Average monthly temperatures in November were above normal.
- Monthly precipitation totals in November were below normal in the western Panhandle and west central Florida where it was most needed; eastern and southern parts of the state received above normal precipitation for the month.
- With a shift to a wetter pattern, drought improvement or removal is expected over the coming weeks.
- El Niño is expected to persist for the next several months, with a 62% chance of continuing in spring (April-June 2024); chances of a strong event are greater than 55%, and there is about a 1-in-3 chance for a “historically strong” event for the November-January season.

Average monthly temperatures in November were near to above average. Average temperature departures from normal ranged from -0.7 °F in Jacksonville to +3.0 °F in Miami for the month (see Table 1 and Appendix 1 for select cities). Miami experienced its 4th-warmest November on record. Tallahassee reached a low of 27 °F and 28 °F on the 29th and 30th, respectively, at the airport, which was between 10 °F to 14 °F degrees below normal. The Jacksonville airport also reached a freezing temperature of 32 °F on the 30th. The probability of the first freeze of the season happening at this time of year in North Florida is 50% according to climatology. Select daily high maximum temperature records tied or broken during the month are provided in Appendix 2.

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

Station	Mean Temperature	Departure from Normal
Pensacola	61.7	+0.3
Tallahassee	61.4	+1.2
Jacksonville	61.6	-0.7
Orlando	70.0	+1.8
Tampa	70.4	+0.6
Miami	77.8	+3.0
Key West	78.1	+1.5

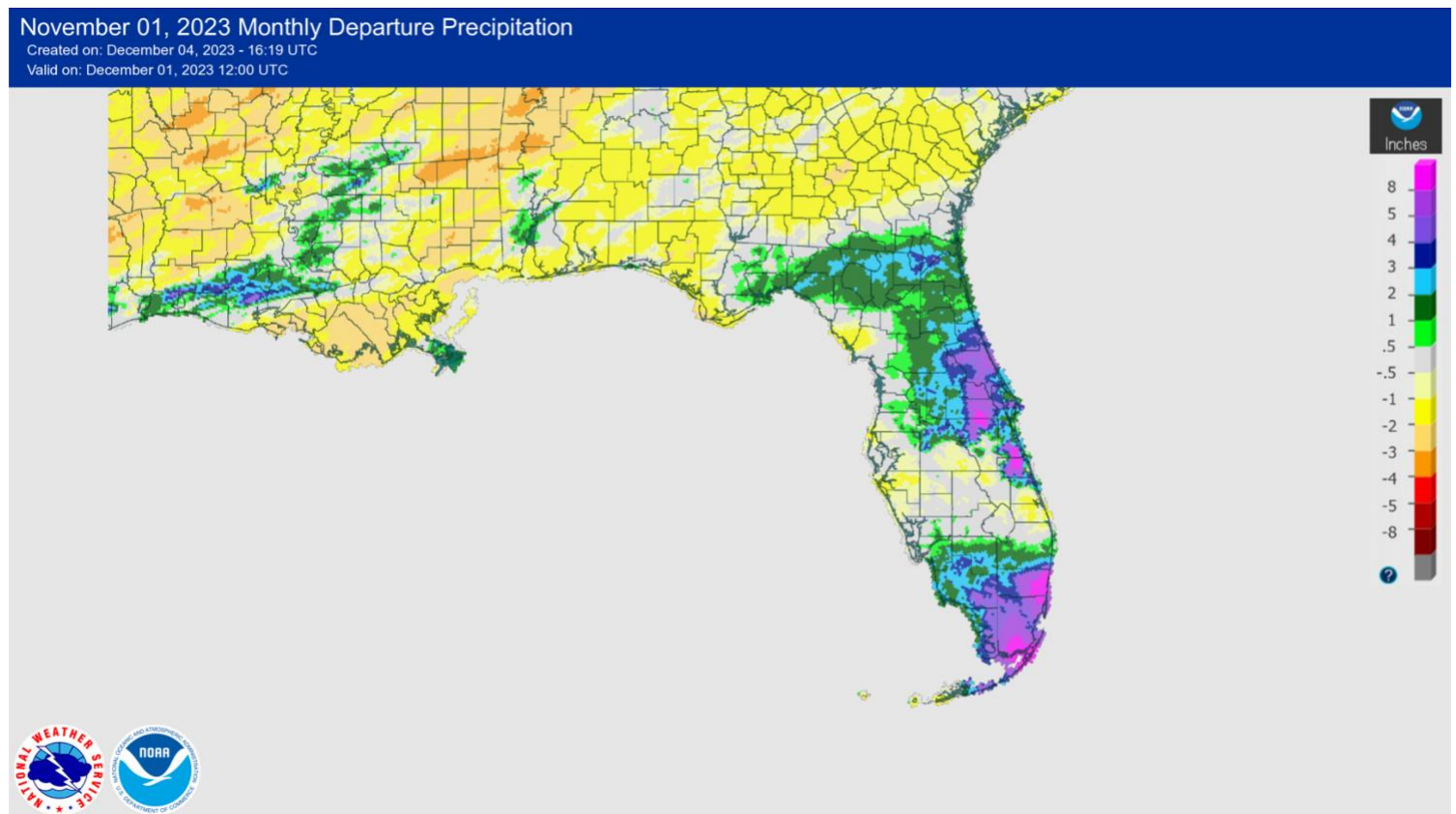


Monthly rainfall totals in November were below normal in the western Panhandle and west central Florida and above average elsewhere. The monthly precipitation departures from normal ranged from -1.95 inches in Jacksonville to +5.83 inches in Miami (see Table 2 and Appendix 1 for select locations). Naples saw its 2nd-wettest November on record (based on a 22-year period), with 3.70 inches of rain. Fort Lauderdale collected 11.23 inches of rainfall in November, ranking as the wettest November on record there. However, coastal southwest Florida continues to see its driest year-to-date on record, including at the Naples, Sarasota, and Venice stations. In addition, many locations across north Florida went 30 consecutive days without measurable rainfall between mid-October and mid-November.

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

Station	Total Rainfall	Departure from Normal
Pensacola	4.12	-0.30
Tallahassee	3.34	+0.24
Jacksonville	3.95	-1.95
Orlando	5.21	+3.42
Tampa	1.85	+0.45
Miami	9.36	+5.83
Key West	1.56	-0.49

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



El Niño Advisory.

El Niño conditions, the warm phase of the El Niño Southern Oscillation climate pattern in the tropical equatorial Pacific Ocean, continue to strengthen. El Niño is likely to persist through the Northern Hemisphere winter and into spring, with a 62% chance during April-June 2024. Above-average sea surface temperature anomalies across the equatorial Pacific Ocean have been indicative of a strong El Niño. As a result, there is a greater than 55% chance of at least a strong El Niño event ($\geq 1.5^{\circ}\text{C}$ in Niño-3.4 for a seasonal average). There is a 35% chance that this El Niño could become “historically strong” ($\geq 2.0^{\circ}\text{C}$) for the November-January season.

Hazardous Weather Events in November.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 122 individual local reports of hazardous weather events recorded across the state during the month of November (see Table 4 for a breakdown by event type).

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

Report Type	Number of Reports
Heavy Rain	31
Flood	2
Coastal Flood	1
Flash Flood	6
Hail	0
Non-Thunderstorm Wind Gust	52
Non-Thunderstorm Wind Damage	6
Tornado/Waterspout/Funnel Cloud	0 / 2 / 0
Thunderstorm Wind Damage	0
Thunderstorm Wind Gust	22

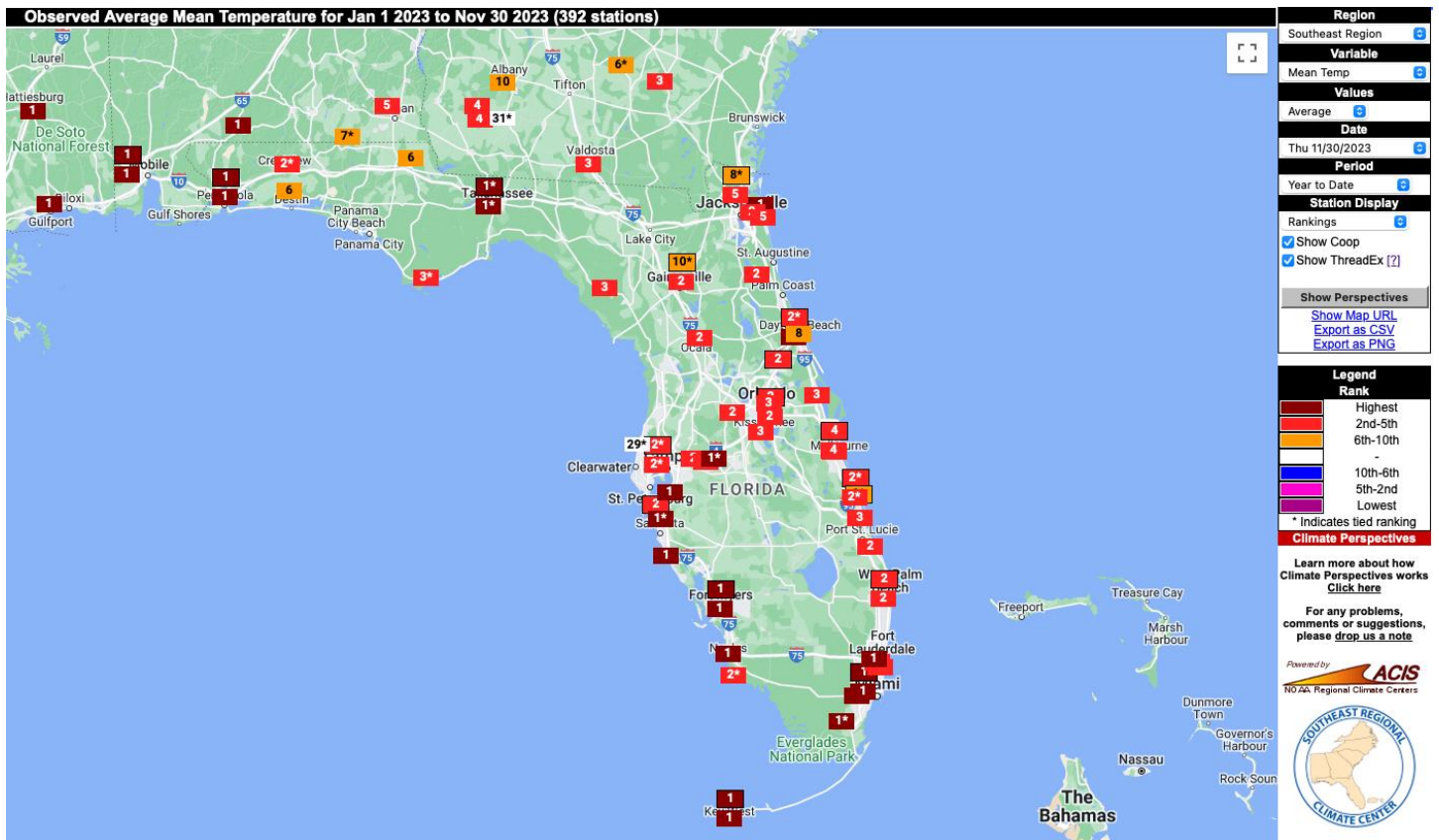
Daily Record Events in November.

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

Category	Number of Records
Highest daily max. temp.	22
Highest daily min. temp.	8
Lowest daily max. temp.	6
Lowest daily min. temp.	4
Highest daily precipitation	35
Total	75

Weather/Climate Highlights of the Month.

2023 is on pace to become the hottest year in recorded history globally, according to the World Meteorological Organization. In Florida, many locations are also very likely to see their hottest year on record based on year-to-date average mean temperatures, including Pensacola, Tallahassee, Fort Myers, Miami, and Key West. The departures from normal for the 11-month period are running close to 3°F above normal.



Year to date temperature rankings through November 30, 2023, based on average mean temperatures (source: Southeast Regional Climate Center's Climate Perspectives Tool).

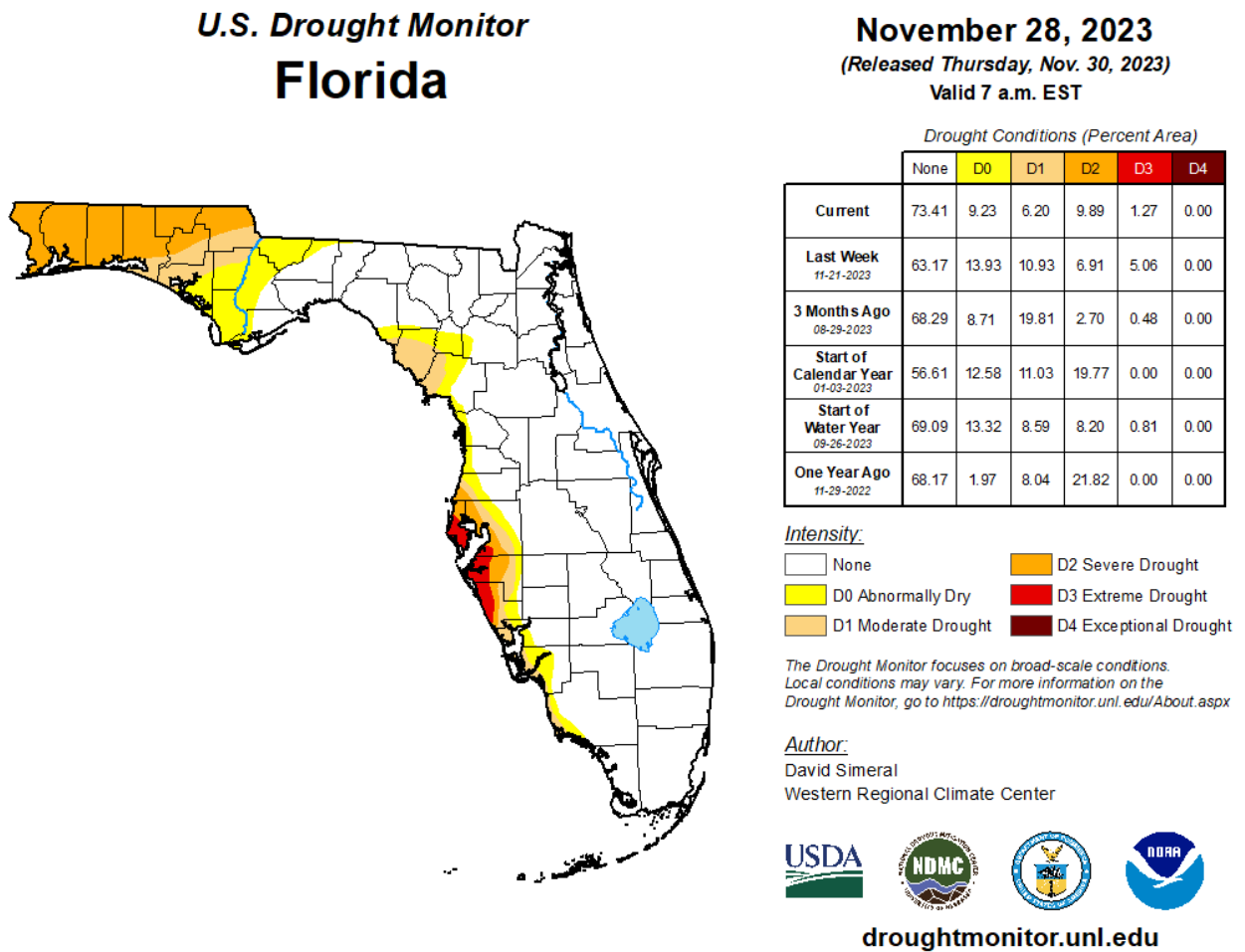
Drought-Related Impacts.

Drought conditions persisted across the western Panhandle through much of the month, where flash drought had developed. Many locations across northern Florida went one month, or close to, without measurable rainfall. The lack of rain caused problems for forage and livestock producers and small grain farmers. Declines in the pecan harvest which is down about 30% this year can be attributed to these recent dry conditions, as well as to Hurricane Idalia. Wet fields elsewhere in the state are starting to cause issues with citrus crops.

Throughout November, drought persisted but gradually improved across the Panhandle and west coast of Florida. By the 14th, roughly 8% of the state was in extreme drought (D3), 4% was in severe drought (D2), 9% was experiencing moderate drought (D1), and 30% was abnormally dry (D0), according to the U.S. Drought Monitor. By the end of the month, only about 1% of the state was in extreme drought (D3), 10% was in severe drought (D2), 6% was in moderate drought (D1), and 9% remained abnormally dry (D0) (see Figure 2 below). Drought improvement or removal is expected everywhere during December.

As of November 30, the Lake Okeechobee water level was 15.98 ft. above sea level (Feet-NGVD29), which is above average for this time of year. At the first of the month, the water level was 16.16 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.

In mid-November, topsoil moisture conditions were adequate in 51% of the state, short in 31%, and very short in 18% of the state, while 0% of the state was experiencing surplus topsoil moisture conditions. By November 26, conditions improved with topsoil moisture conditions adequate in 73% of the state, short in 15%, and very short in only 1% of the state; 11% 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 November 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	63.7	+1.0	2.39	+0.60
Sarasota	71.1	+1.0	0.67	-1.14
Naples	73.4	+1.0	3.70	+2.31
Fort Myers	73.0	+1.5	2.97	+1.19
West Palm Beach	75.2	+2.2	4.46	+0.84

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

Location	Date	Record (°F)	Broken/Tied	Last
Homestead	1	90	Tied	90 in 2020
Perrine	1	90	Tied	90 in 2019
Plant City	10	91	Broken	90 in 2018
Tampa	10	89	Broken	87 in 2002
Orlando	10	89	Broken	87 in 2015
Gainesville	10	87	Broken	84 in 2020
Miami	10	89	Tied	89 in 2015
Lakeland	10	90	Broken	89 in 1986
Jacksonville	10	86	Broken	84 in 2002
Tallahassee	10	87	Tied	87 in 2020
Bradenton	11	89	Broken	87 in 1994
Clermont	11	90	Broken	88 in 2015
Deland	11	87	Tied	87 in 2002
Plant City	11	94	Broken	90 in 1972
Wauchula	11	91	Broken	89 in 1972
Orlando	11	89	Broken	87 in 2002
Gainesville	11	89	Broken	85 in 2002
Cross City	11	88	Broken	86 in 2002
Fort Myers	11	91	Tied	91 in 1979
Miami	11	89	Tied	89 in 2002
Tampa	11	88	Tied	88 in 1986
Clermont	12	89	Broken	88 in 2002
Plant City	12	92	Broken	90 in 2018
Wauchula	12	90	Broken	89 in 1986
Vero Beach	26	86	Broken	85 in 2018