

Climate Summary for Florida – October 2023

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

Summary

- Average monthly temperatures in October ended up near normal, though there were periods of much above and much below normal temperatures during the month.
- Monthly precipitation totals in October were below normal across the state.
- Drought rapidly worsened by the end of the month in the western Panhandle following about two weeks of no rainfall, while extreme drought persisted and expanded in west-central coastal areas.
- El Niño is expected to persist through winter, with an 80% chance of continuing in spring (March-May 2024); chances of a strong event have increased to 75%-85%.

Average monthly temperatures in October were near average despite temperature swings throughout the month. Average temperature departures from normal ranged from -0.8 °F in Jacksonville to +1.9 °F in Miami for the month (see Table 1 and Appendix 1 for select cities). October saw wide temperature swings throughout the month, beginning and ending with above normal temperatures. However, mid-month saw below normal temperatures across the state by as much as 12 °F or 13 °F below normal. No monthly average temperature records were tied or broken in October. More daily high minimum temperature records were broken than high maximum temperatures during the month. Select daily high minimum temperature records tied or broken during the month are provided in Appendix 2.

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

Station	Mean Temperature	Departure from Normal
Pensacola	71.0	-0.3
Tallahassee	70.5	+0.2
Jacksonville	70.4	-0.8
Orlando	76.0	+0.5
Tampa	77.5	+0.1
Miami	82.0	+1.9
Key West	82.3	+1.0

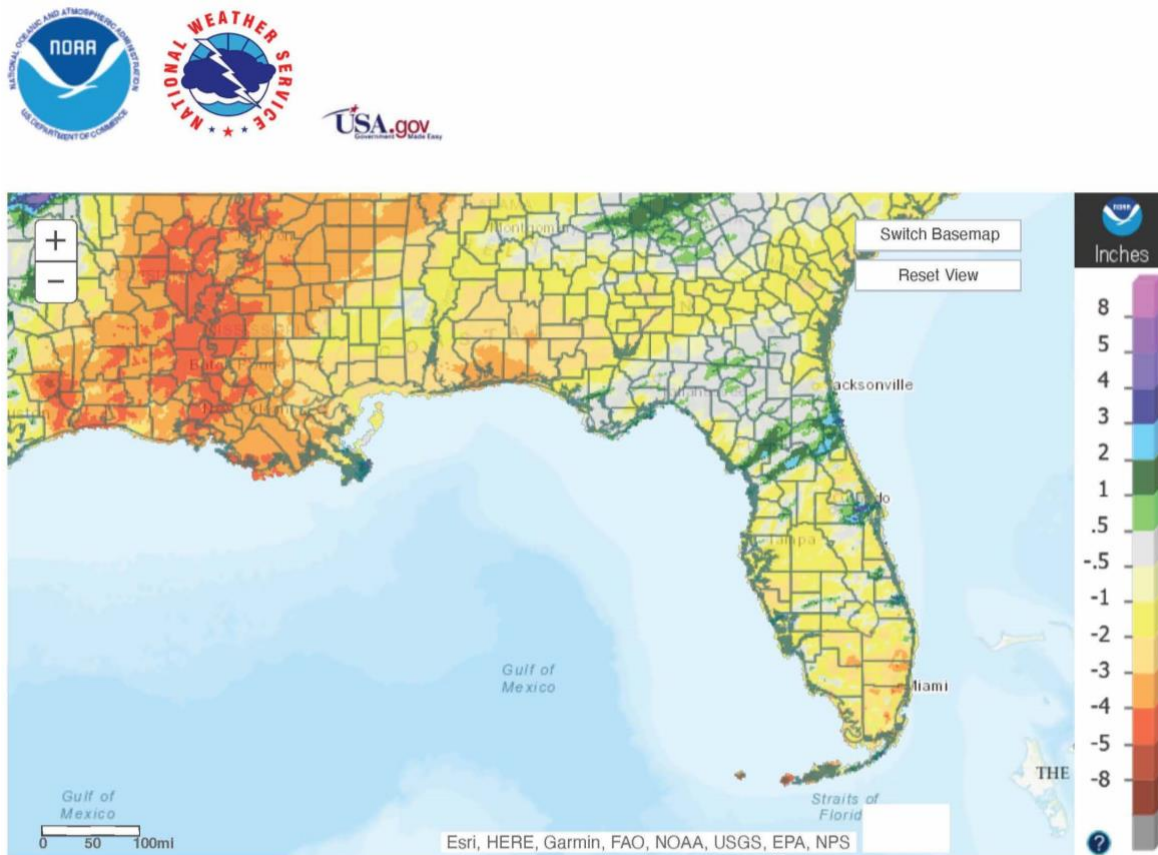


Monthly rainfall totals in October were generally below normal across the state. The monthly precipitation departures from normal ranged from -3.26 inches in Pensacola to +1.05 inches in Gainesville (see Table 2 and Appendix 1 for select locations). All of north Florida and the Panhandle have not recorded any rainfall since mid-October and drought conditions deteriorated by month's end across the western Panhandle and Tampa Bay regions (see below). Locations along coastal southwest Florida continue to see their driest year-to-date on record, including Naples, Sarasota, Venice, and Tarpon Springs. A pattern shift toward wetter conditions is expected around mid-November, but a dry pattern set in by late October without any tropical activity.

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

Station	Total Rainfall	Departure from Normal
Pensacola	1.44	-3.26
Tallahassee	2.99	-0.25
Jacksonville	2.65	-1.38
Orlando	2.07	-1.39
Tampa	0.38	-1.96
Miami	5.78	-1.87
Key West	4.19	-1.48

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



Displaying October, 2023 Monthly Departure from Normal Precipitation
 Valid on: November 01, 2023 12:00 UTC
 What is UTC time? Map Help

El Niño Advisory.

El Niño conditions, the warm phase of the El Niño Southern Oscillation climate pattern in the tropical equatorial Pacific Ocean, continued in October. El Niño is expected to persist through the Northern Hemisphere winter 2023-24, with an 80% chance of continuing in spring (March-May 2024). Chances of a strong El Niño event have increased to a 75-85% chance. El Niño events favor wetter and cooler than normal winters in Florida. However, El Niño rainfall is late this year with drying conditions observed in recent weeks across much of the state.

Hazardous Weather Events in October.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 138 individual local reports of hazardous weather events recorded across the state during the month of October (see Table 4 for a breakdown by event type). At the beginning of the month, heavy rainfall led to flooding of roadways in Brevard County, and high tide flooding was reported in Duval, Broward, and Nassau Counties on the 1st. An EF2 tornado was reported in Flagler County on the 12th, which caused substantial damage to several houses but no injuries or fatalities were reported.

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

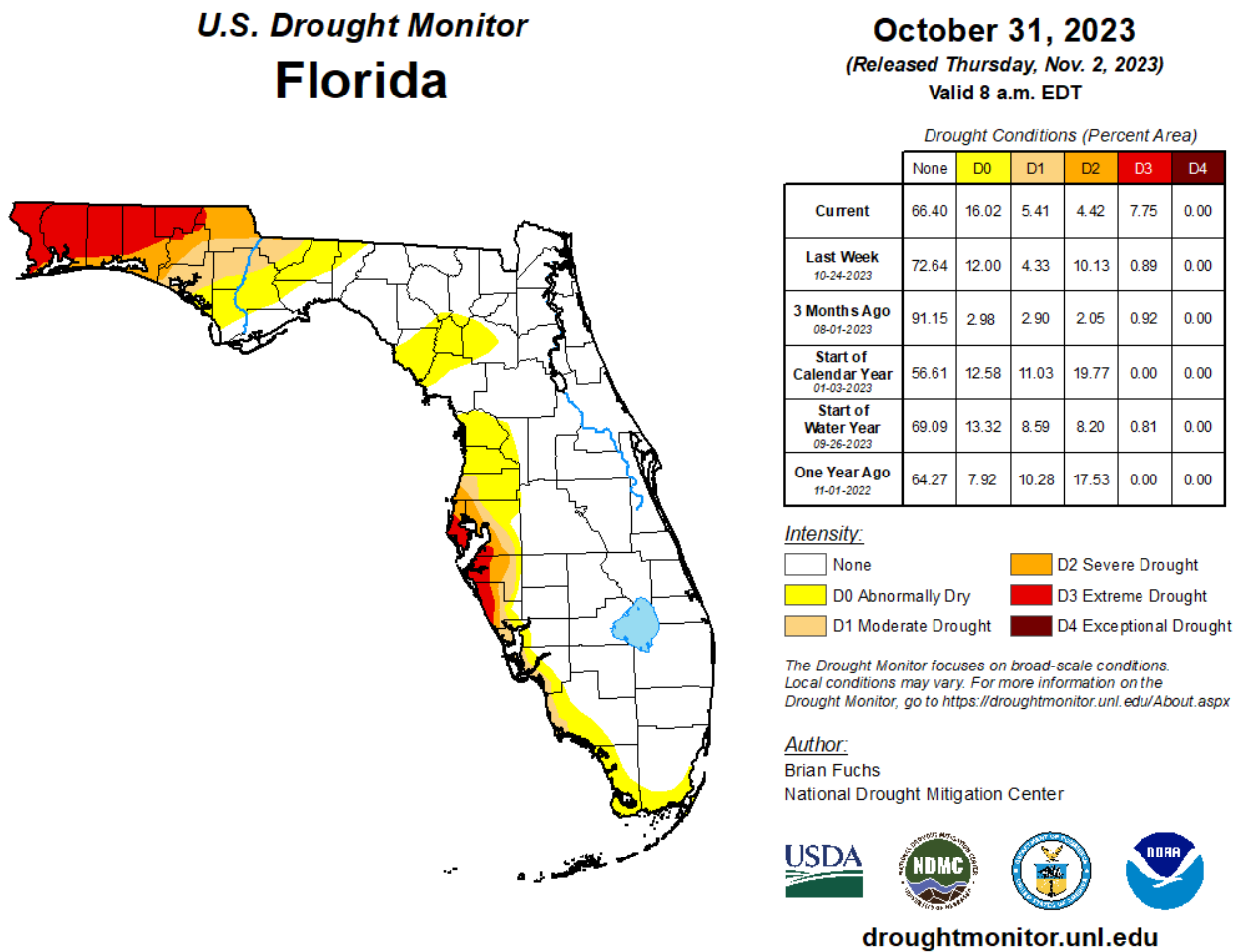
Report Type	Number of Reports
Heavy Rain	36
Flood	6
Coastal Flood	7
Flash Flood	0
Hail	0
Non-Thunderstorm Wind Gust	25
Non-Thunderstorm Wind Damage	0
Tornado/Waterspout/Funnel Cloud	7 / 12 / 6
Thunderstorm Wind Damage	12
Thunderstorm Wind Gust	26
Dense Fog	1

Daily Record Events in October.

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

Category	Number of Records
Highest daily max. temp.	13
Highest daily min. temp.	51
Lowest daily max. temp.	31
Lowest daily min. temp.	11
Highest daily precipitation	23
Total	129

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-October, topsoil moisture conditions were adequate in 72% of the state, short in 16%, and very short in 3% of the state, while 9% of the state was experiencing surplus topsoil moisture conditions. By October 29, topsoil moisture conditions were adequate in 60% of the state, short in 23%, and very short in 16% of the state; 1% 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 October 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	71.5	+0.1	3.73	+1.05
Sarasota	77.8	+0.5	0.70	-2.06
Naples	79.4	+0.9	2.50	-1.43
Fort Myers	78.5	+0.5	1.90	-1.18
West Palm Beach	79.6	+0.9	4.56	-1.34

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

Location	Date	Record (°F)	Broken/Tied	Last
Bradenton	1	77	Broken	76 in 2019
Hastings	1	75	Broken	74 in 2017
Stuart	5	80	Tied	80 in 2018
Key West	11	81	Tied	81 in 2022
Tarpon Springs	12	79	Broken	77 in 1994
Miles City	12	80	Broken	76 in 2018
Ochopee	12	82	Broken	78 in 1995
Orlando	12	77	Broken	75 in 2005
Fort Myers	12	80	Broken	77 in 1934
Key West	12	85	Broken	82 in 2002
Miami	12	84	Broken	82 in 2009
Tampa	12	81	Broken	77 in 2009
Vero Beach	12	79	Broken	76 in 2018
Lakeland	12	78	Broken	75 in 2018
Bradenton	13	79	Broken	76 in 2005
Clermont	13	78	Broken	77 in 1994
Fort Lauderdale	13	82	Broken	78 in 2019
Fort Pierce	13	79	Broken	78 in 2008
Hialeah	13	81	Broken	80 in 2022
Homestead	13	80	Broken	75 in 2019
Kissimmee	13	78	Broken	76 in 1995
Melbourne	13	79	Broken	77 in 1954
Plant City	13	79	Broken	74 in 1912
Stuart	13	80	Broken	78 in 1986
Titusville	13	79	Broken	78 in 1999
Ochopee	13	80	Broken	76 in 2017
Fort Myers	13	80	Broken	77 in 2005
Miami	13	83	Broken	80 in 2009
Key West	13	84	Broken	82 in 2009
Lakeland	13	78	Broken	74 in 2017
Fort Lauderdale	14	81	Broken	78 in 2001
Hialeah	14	80	Broken	79 in 2009
Homestead	14	79	Broken	76 in 2014
Miami	14	80	Tied	80 in 2009
Fort Lauderdale	15	79	Broken	78 in 1983
Usher Tower	24	79	Broken	72 in 1959