

Climate Summary for Florida – February 2023

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

Key Points

- Monthly average temperatures were well above normal in February, and it was among the warmest months of February on record for many locations.
- Monthly precipitation totals were generally below normal for the month, with exceptions along the southeastern coast and Big Bend regions.
- Severe drought improved in north-central Florida by mid-month, but moderate drought expanded across the Peninsula during the month.
- La Niña conditions in the equatorial Pacific Ocean weakened, and a transition to ENSO-neutral is expected during the spring to early summer timeframe.

Average monthly temperatures in February were well above normal across the state. Average temperature departures from normal ranged from +4.3 °F in Key West to +8.2 °F in Tallahassee for the month (see Table 1 and Appendix 1 for select cities). Many stations recorded one of their warmest months of February on record. **Fort Lauderdale** had its warmest February on record this year, based on the monthly mean average temperature. **Pensacola, Tallahassee, Jacksonville, Daytona Beach, Miami, and Fort Myers** all had their 2nd-warmest February on record, based on monthly mean average temperatures. In addition, many stations across the state had one of their top three warmest months of February on record based on monthly average maximum temperatures. Select daily high maximum temperature records tied or broken during the month are provided in Appendix 2.

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

Station	Mean Temperature	Departure from Normal
Pensacola	64.6	+7.8
Tallahassee	63.8	+8.2
Jacksonville	65.5	+8.0
Orlando	70.0	+6.4
Tampa	70.3	+5.6
Miami	75.9	+5.2
Key West	76.6	+4.3

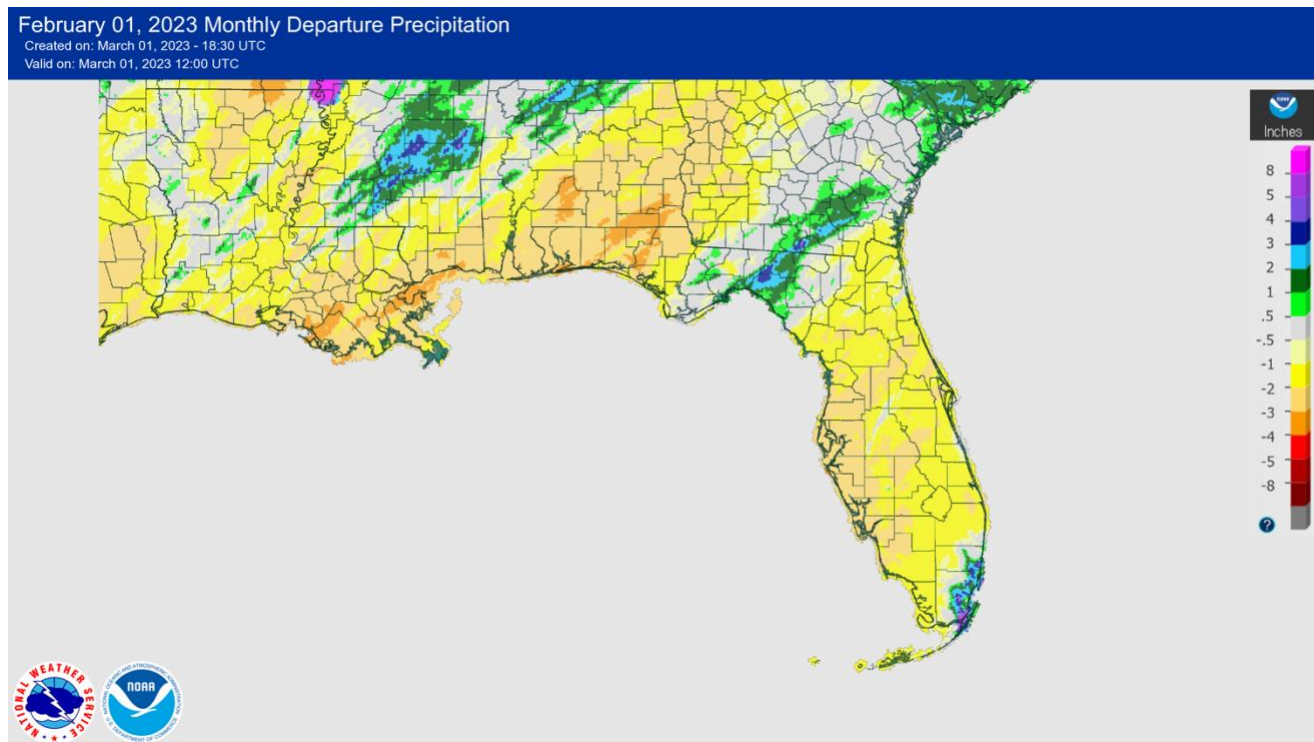


February was dry overall across the state, with monthly rainfall totals below normal except along the southeast coast and a portion of the Big Bend region. The monthly precipitation departures from normal ranged from -2.44 inches in Pensacola to +3.57 inches in Miami (see Table 2 and Appendix 1 for additional locations). While we are in the dry season, most places are running drier than normal. **Naples** recorded no precipitation during February, and **Key West** received less than a tenth of rainfall during the month, making it the driest February on record in both locations. Only portions of the Big Bend and southeast Florida received above-average monthly rainfall totals. **Miami** and **Ft. Lauderdale** both observed their 4th-wettest February on record. As a result of drier than normal conditions and above-average temperatures, moderate drought expanded across the Peninsula during the month (see below).

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

Station	Total Rainfall	Departure from Normal
Pensacola	2.33	-2.44
Tallahassee	3.89	-0.39
Jacksonville	1.42	-1.44
Orlando	0.55	-1.49
Tampa	0.46	-2.16
Miami	5.72	+3.57
Key West	0.01	-1.53

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



La Niña Weakens with a Transition to ENSO-Neutral Expected.

A weak La Niña was still in place throughout the month with signs of weakening. Sea surface temperatures in the eastern equatorial Pacific Ocean were not as cold as they have been, with the latest Niño index values generally near -0.5°C ; sub-surface temperatures warmed too. There is forecaster consensus that La Niña is expected to continue to weaken and transition to ENSO-neutral conditions during spring to early summer, during the March through May period. Models suggest a transition to El Niño conditions during summer, but large uncertainty remains beyond spring.

Hazardous Weather Events in February.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 64 individual local reports of hazardous weather events recorded across the state during the month of February (see Table 4 for a breakdown by event type). Unfortunately four fatalities were reported during the month, each as a result of rip currents.

Table 4. Breakdown of storm reports submitted in Florida during the month of February (compiled from Iowa State University/Iowa Environmental Mesonet).

Report Type	Number of Reports
Heavy Rain	10
Flood	0
Coastal Flood	0
Hail	0
Marine Thunderstorm Wind	3
Non-Thunderstorm Wind Gust	30
Non-Thunderstorm Wind Damage	3
Tornado/Waterspout/Funnel Cloud	1 / 2 / 0
Thunderstorm Wind Damage	0
Thunderstorm Wind Gust	11
Rip Currents	4

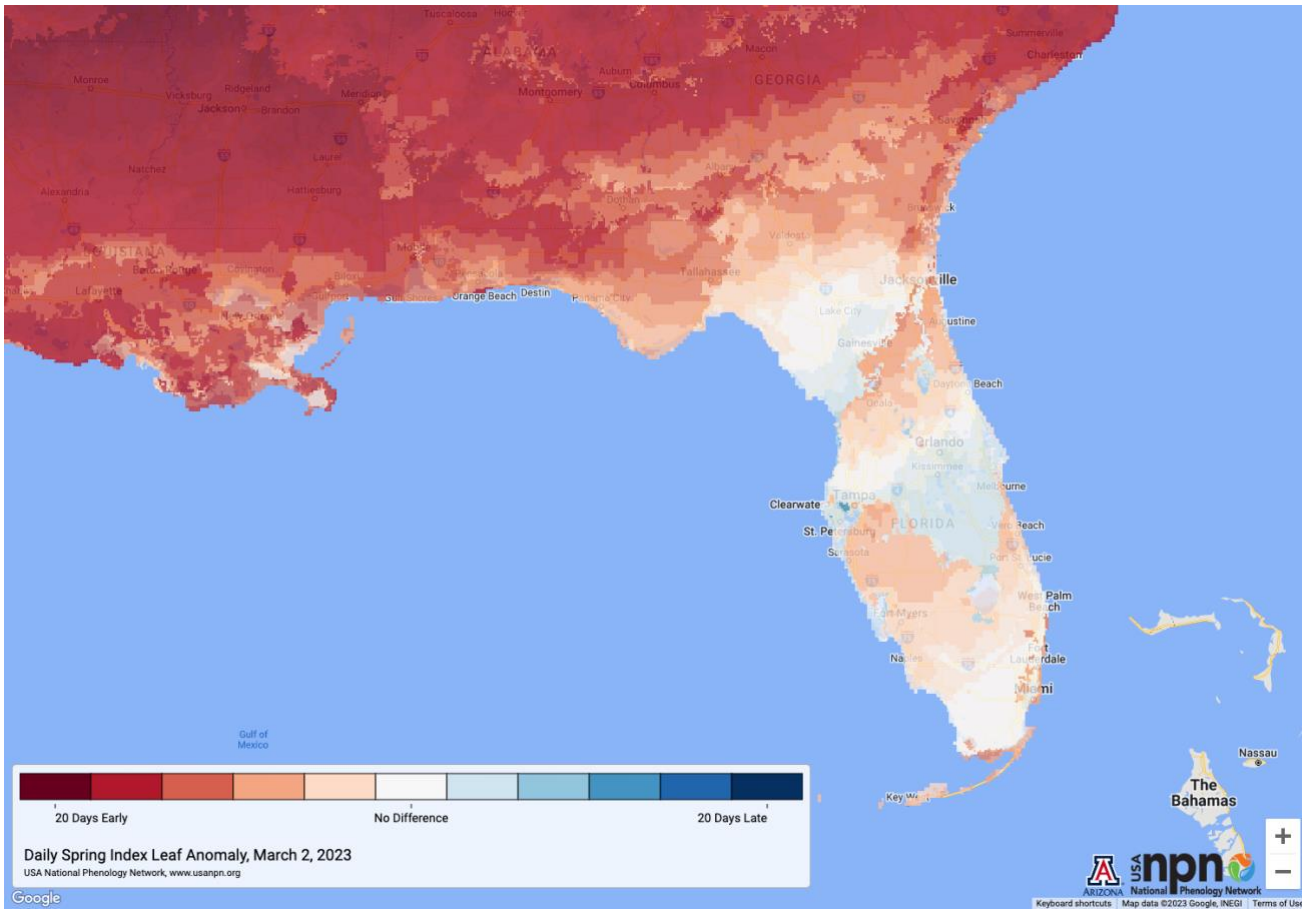
Daily Record Events in February.

Table 5. Summary of daily records broken in Florida in February (source: NCEI Daily Weather Records).

Category	Number of Records
Highest daily max. temp.	100
Highest daily min. temp.	58
Lowest daily max. temp.	0
Lowest daily min. temp.	0
Highest daily precipitation	10
Total	168

Weather/Climate Highlight of the Month: February temperatures were well above average, especially during the second half of the month. As a result of unseasonably warm temperatures, spring leaf out came anomalously early by several weeks in parts of the Southeast U.S., including about a week early in the Florida Panhandle; the Florida Peninsula was close to normal (Figure 2).

Figure 2. Daily spring index leaf anomaly, which shows the difference in days between the current daily spring index and the 30-year average spring index for first leaf, based on data from the National Centers for Environmental Prediction (Source: USA National Phenology Network).

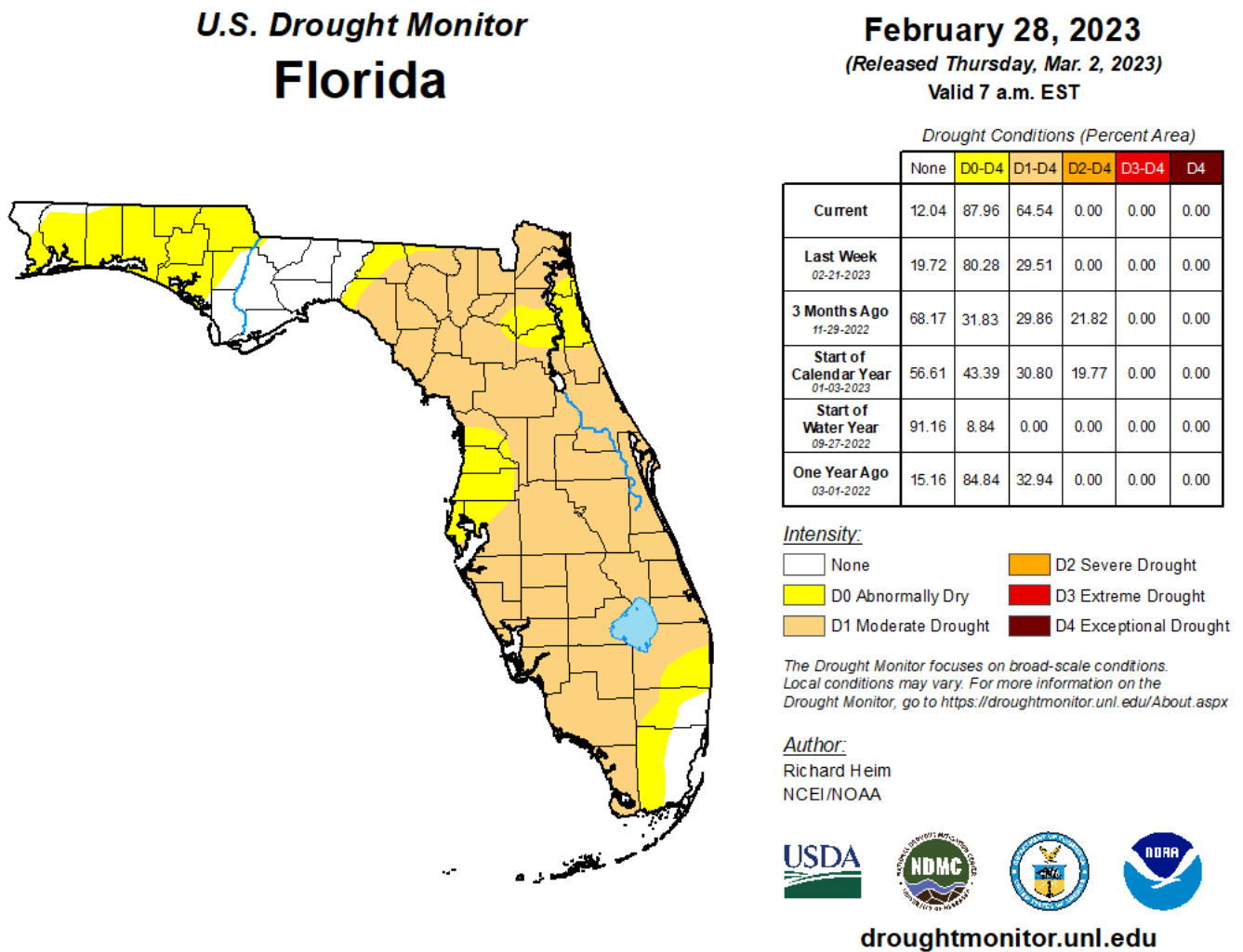


Drought-Related Impacts.

By the middle of February, severe drought (D2) conditions were removed from the Big Bend region, but moderate drought (D1) spread across north-central Florida. About 30% of the state was in moderate drought (D1) and 38% was abnormally dry, according to the U.S. Drought Monitor. By the end of the month, degradation occurred across the Peninsula with the continuation of above-average warmth and drier than normal conditions. As of February 28th, 65% of the state was in moderate drought (D1) and 23% was abnormally dry (Figure 3 below).

As of February 28, the Lake Okeechobee water level was 15.54 ft. above sea level (Feet-NGVD29), which is above average for this time of the year. At the first of the month, the water level was 16.01 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.

During February, the lack of precipitation and worsening drought conditions across the Peninsula negatively impacted pastures. Pasture conditions were reported as mostly poor to fair. However, the dry weather helped the progress of sugarcane harvesting. Preparations for spring planting of row crops began during the second half of the month. Citrus grove activities continued and included general maintenance and removal of dead trees; dry weather also resulted in increased irrigation for citrus. With unseasonably warm temperatures during February, chill hours for northern Florida and nearby areas are below last year’s accumulation and much less than historical averages. North Florida experienced only 1-2 days with temperatures at or below 32F during the month. The recent warm weather has resulted in early leaf out and the blooming of many fruits across the region. Several fruits and vegetables were planted and harvested during the month, such as green beans, yellow squash, potatoes, strawberries, sweet corn, pepper, and avocados, and rice planting began. For more information, consult the [Crop Progress - State Stories](#) reports, which are produced monthly December through March by the USDA’s National Agricultural Statistics Service.

Appendix 1. Additional February 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	65.6	+7.2	2.46	-0.21
Sarasota	69.4	+4.6	0.15	-1.77
Melbourne	69.9	+4.5	1.61	-0.37
Fort Myers	73.6	+6.3	0.07	-1.71
West Palm Beach	74.1	+5.7	1.14	-1.49

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

Location	Date	Record (°F)	Broken/Tied	Last
Hastings	1	85	Tied	85 in 2002
Miami	1	85	Broken	84 in 1990
Key West	1	89	Broken	83 in 2007
Fort Lauderdale	2	84	Broken	83 in 2014
Jacksonville Beach	2	84	Broken	83 in 1985
Key West	2	89	Broken	85 in 2007
Miami	3	88	Broken	85 in 1985
Vero Beach	3	87	Broken	83 in 2019
West Palm Beach	3	87	Broken	86 in 1985
Key West	3	90	Broken	85 in 2022
Fort Lauderdale	4	89	Broken	87 in 2007
Key West	6	89	Broken	85 in 1997
Key West	7	89	Broken	83 in 2019
Pensacola	8	77	Broken	75 in 1994
Key West	8	90	Broken	86 in 2022
Gainesville	9	85	Broken	83 in 1990
Key West	9	91	Broken	84 in 1994
Usher Tower	10	85	Broken	82 in 2018
Key West	11	90	Broken	85 in 2020
Crestview	15	80	Broken	78 in 2018
Clermont	17	88	Broken	86 in 2001
Jacksonville Beach	17	87	Broken	83 in 1945
Orlando	17	88	Broken	87 in 1990
Daytona Beach	17	87	Tied	87 in 1975
Lakeland	17	88	Broken	87 in 1990
Jacksonville	17	86	Broken	83 in 2022
Melbourne	18	88	Broken	86 in 2001
Vero Beach	20	88	Broken	86 in 1988
Clermont	23	89	Broken	88 in 2018
Jacksonville Beach	23	88	Broken	83 in 2012
Naples	23	89	Tied	89 in 2019
Miles City	23	92	Broken	90 in 2006
Pensacola	23	80	Broken	78 in 1975

Key West	23	92	Broken	88 in 1997
Pensacola	23	83	Broken	79 in 2017
Tallahassee	23	84	Broken	83 in 2022
Jacksonville	23	89	Broken	84 in 2019
Hastings	24	87	Broken	84 in 2022
Tampa	24	88	Broken	87 in 2022
Fort Myers	24	90	Broken	89 in 2022
Tallahassee	24	86	Broken	84 in 1944
Clermont	25	89	Tied	89 in 2019
Miles City	25	90	Broken	88 in 2022
Pensacola	25	83	Broken	82 in 2011
Jacksonville Beach	26	90	Broken	84 in 1972
Pensacola	26	79	Broken	77 in 2001
Miami	26	87	Tied	87 in 2015
Key West	26	88	Broken	86 in 2022
Crestview	26	84	Broken	82 in 2021
Tallahassee	26	85	Broken	83 in 2022
Jacksonville	26	87	Tied	87 in 1962
Jacksonville Beach	27	85	Broken	84 in 1945
Key West	27	89	Broken	86 in 1997
Pensacola	27	81	Broken	80 in 1981
Pensacola	28	84	Broken	79 in 2021