

Climate Summary for Florida – December 2022

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

Key Points

- With wide temperature swings throughout the month of December, monthly average temperature departures ended up near normal across the state.
- Monthly precipitation for December was generally below normal, with exceptions in the western Panhandle and southern Peninsula.
- Drought conditions persisted across the Panhandle throughout the month, and about 32% of the state remains in severe (D2) or moderate (D1) drought as of the end of December.
- We are in the third winter in a row with La Niña conditions in the equatorial Pacific Ocean, though chances for a transition to ENSO-neutral increase to 71% during February-April 2023.

December brought large swings in temperature but, overall, the average monthly temperatures in December were near to above normal across the state. Average temperature departures from normal ranged from -1.3 °F in Melbourne to +2.7 °F in Pensacola for the month (see Table 1 and Appendix 1 for select cities). The month started out warmer than normal, with record warm temperatures across the Panhandle during the first half of the month. The A shift in the weather pattern brought a return to more seasonal temperatures mid-month, while the last week of December was much colder than normal. Many locations experienced frigid temperatures on the order of 20 °F or more below normal during the last week of December and over Christmas. Many places in the Panhandle saw minimum temperatures in the teens, with wind chills in the single digits, including Tallahassee, which reached a low of 19 °F and 18 °F on the 25th and 26th, respectively; Crestview recorded a low of 18 °F on the 24th; and Niceville got down to 17 °F on the 24th and 25th. Select daily high maximum and low minimum temperature records tied or broken during the month are provided in Appendices 2 and 3, respectively.

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

Station	Mean Temperature	Departure from Normal
Pensacola	58.2	+2.7
Tallahassee	55.9	+1.5
Jacksonville	56.3	-0.4
Orlando	64.2	+0.9
Tampa	64.7	-0.2
Miami	72.3	+1.1
Key West	73.5	+0.5

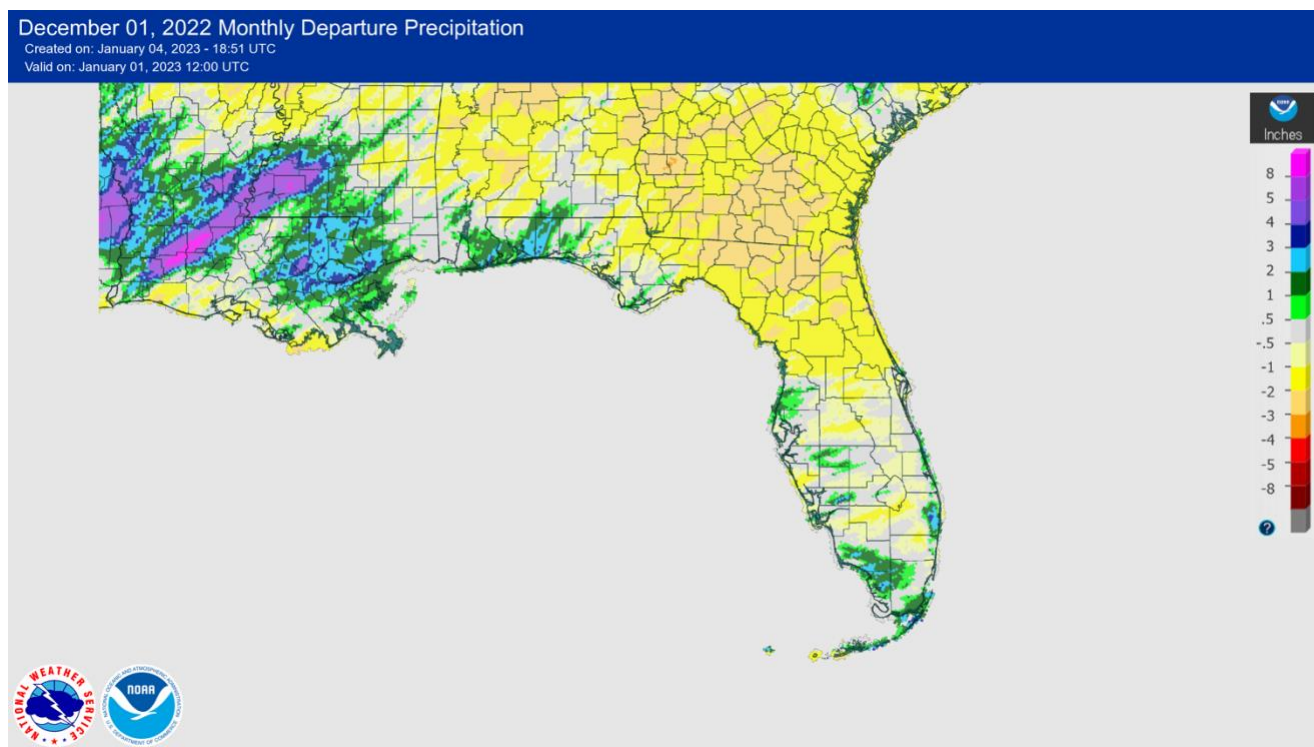


Monthly rainfall totals in December were below to near normal for much of the state. The monthly precipitation departures from normal ranged from -2.53 inches in Jacksonville to +2.02 inches in Key West (see Table 2 and Appendix 1 for additional locations). Over the past three months, below normal rainfall has led to precipitation deficits across the Panhandle and north Florida and the expansion of drought.

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

Station	Total Rainfall	Departure from Normal
Pensacola	5.61	+0.21
Tallahassee	2.09	-2.15
Jacksonville	0.25	-2.53
Orlando	0.95	-1.53
Tampa	2.35	-0.21
Miami	1.73	-0.71
Key West	4.18	+2.02

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



La Niña Advisory.

La Niña is expected to continue into the winter, but there are equal chances of La Niña and ENSO-neutral conditions during January-March 2023. In February-April 2023, the chance for ENSO-neutral conditions increases to 71%, reflecting higher confidence that ENSO-neutral will emerge during Spring 2023. Below-average sea surface temperatures persisted in the central and eastern Pacific Ocean over the past month, but negative subsurface temperature anomalies weakened in November 2022.

Hazardous Weather Events in December.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 111 individual local reports of hazardous weather events recorded across the state during the month of December (see Table 4 for a breakdown by event type). There were several reports of damage from strong wind gusts during the middle and end of the month, along with waterspouts and tornados reported in the central Panhandle area on the 14-15th.

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

Report Type	Number of Reports
Heavy Rain	9
Flood	0
Coastal Flood	1
Hail	1
Marine Thunderstorm Wind	21
Non-Thunderstorm Wind Gust	32
Non-Thunderstorm Wind Damage	3
Tornado/Waterspout/Funnel Cloud	9 / 5 / 2
Thunderstorm Wind Damage	11
Thunderstorm Wind Gust	13
Rip Currents	3
Sleet	1

Daily Record Events in December.

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

Category	Number of Records
Highest daily max. temp.	20
Highest daily min. temp.	15
Lowest daily max. temp.	38
Lowest daily min. temp.	13
Highest daily precipitation	5
Total	91

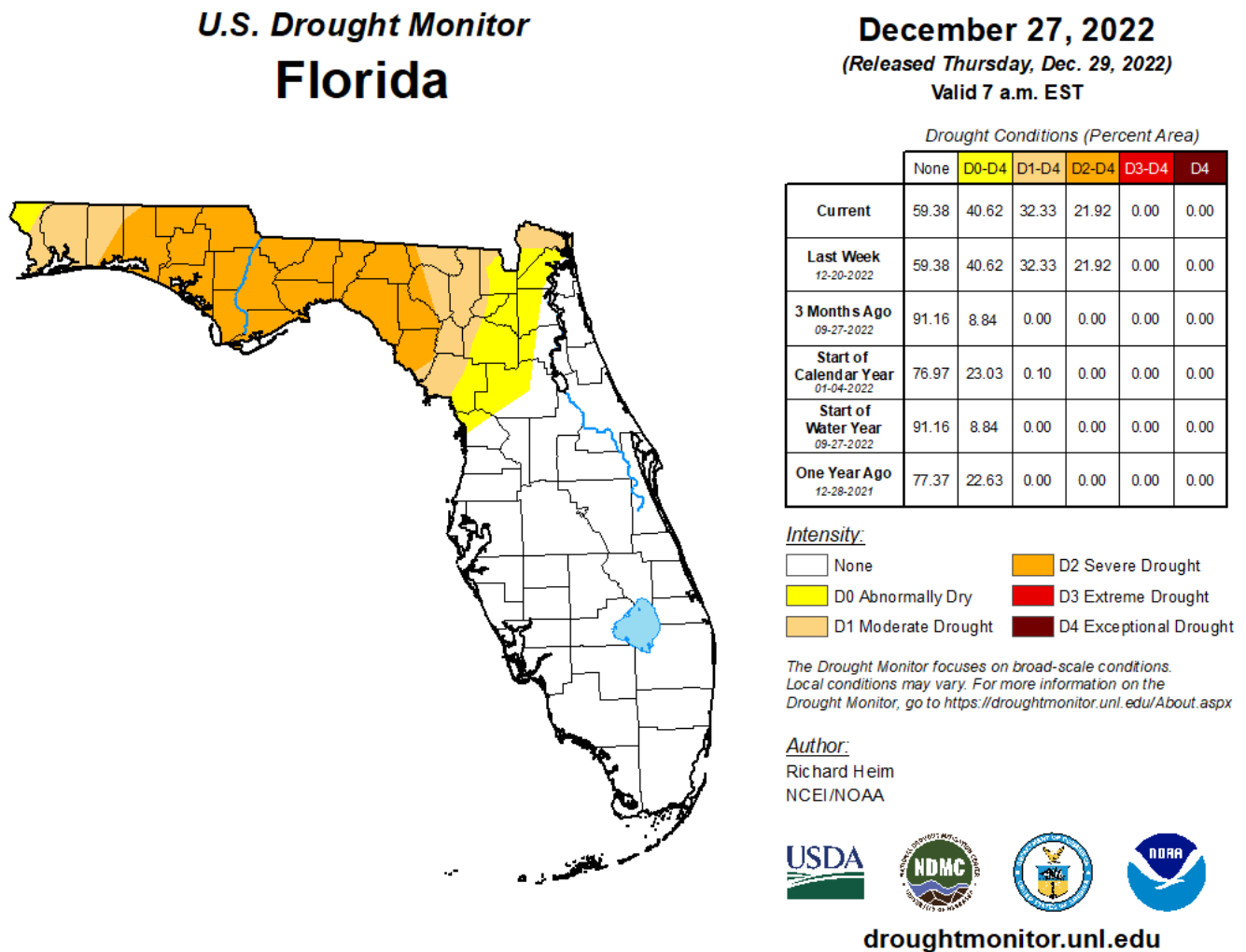
Weather/Climate Highlight of the Month: It was a very cold but dry Christmas across Florida – nearly every station in the state recorded one of their top 5 coldest Christmases on record, based on daily average temperatures.

Drought-Related Impacts.

By the middle of December, severe drought had expanded across the Panhandle and extended east to parts of Hamilton, Suwannee, and Dixie counties. About 26% of the state was in severe drought (D2) and 6% was in moderate drought (D1), according to the U.S. Drought Monitor. By the end of the month, 22% of the state was in severe drought (D2), 10% was in moderate drought (D1), and 8% was abnormally dry (D0) (Figure 2 below).

As of December 31, the Lake Okeechobee water level was 16.36 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 16.48 ft. above sea level.

Figure 2. A graphical depiction of the current 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 the month of December, Florida pasture conditions were mostly fair to good but the cold spell at the end of the month led to damage to pastures across the state. There were some reports of cattle deaths due to the cold spell. Little precipitation fell during the month, which worsened drought conditions in the northern part of the state. Sugarcane planting and harvest progressed well during the month, and citrus crops not damaged by the hurricanes in the fall were shipped out. Several vegetable crops were planted and harvested. 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 December 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	57.7	+0.4	1.64	-1.24
Sarasota	65.1	-0.1	2.63	+0.30
Melbourne	64.9	-1.3	2.30	-0.06
Fort Myers	68.8	+1.5	1.10	-0.80
West Palm Beach	70.2	+1.8	3.51	+0.03

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

Location	Date	Record (°F)	Broken/Tied	Last
Fort Lauderdale Beach	1	85	Tied	85 in 2020
Key West	1	89	Broken	85 in 2019
Key West	3	88	Broken	87 in 1994
Key West	6	89	Broken	86 in 1994
Marianna	7	82	Broken	80 in 2004
Crestview	7	84	Broken	83 in 1951
Pensacola	7	81	Broken	80 in 1951
Niceville	8	81	Broken	79 in 1951
Pensacola	8	81	Broken	80 in 1998
Tallahassee	8	82	Broken	81 in 2013
Cross City	10	85	Broken	82 in 2013
Key West	11	88	Broken	87 in 2021
Key West	30	89	Broken	86 in 2021
Vero Beach	31	87	Broken	85 in 2021

Appendix 3. Select daily record low minimum temperatures broken or tied during December (compiled from NOAA).

Location	Date	Record (°F)	Broken/Tied	Last
Marianna	23	21	Broken	23 in 2000
Fort Lauderdale	24	45	Broken	50 in 2012
Niceville	24	17	Broken	20 in 1960
Tarpon Springs	24	24	Broken	25 in 1906
Marianna	24	17	Broken	29 in 2005
Cross City	24	22	Broken	24 in 2010
Orlando	24	30	Broken	36 in 1963
Daytona Beach	25	28	Broken	31 in 1961
Marianna	25	19	Broken	28 in 2020
Cross City	25	19	Broken	27 in 2020
Orlando	25	28	Broken	31 in 1963
Daytona Beach	26	29	Tied	29 in 1963
Wewahitchka	26	17	Tied	17 in 1985
Marianna	26	18	Broken	25 in 2020
Cross City	26	20	Broken	22 in 2020