![FloridaClimateCenter – Office of the State Climatologist]

Climate Summary for Florida – March 2021

Prepared by the Florida Climate Center, The Florida State University, Tallahassee, Florida
Online at: http://climatecenter.fsu.edu/products-services/summaries

March Key Points

- Temperatures were above normal, while rainfall was below normal across Florida.
- Abnormally dry conditions developed over peninsular Florida, and moderate drought developed in parts of the southern Peninsula by the end of the month.
- La Niña Advisory continues but appears to be weakening.
- CPC seasonal forecast favors above normal temperatures and equal chances of rainfall for spring.
- Drought development continues to be a risk as temperatures warm during spring with seasonal reduction in rainfall, especially over peninsular Florida.

Average temperatures in March were above normal across the state. Average temperatures ranged from +1.7 ℉ to +4.8 ℉ above normal for the month (see Table 1 and Appendix 1 for select cities). Temperatures were especially warm during the middle and latter parts of the month, with summer-like temperatures observed in many locations. For instance, in Pensacola daily high temperatures averaged 8.8 ℉ above normal and daily low temperatures averaged 12.2 ℉ above normal from March 12-17. Jacksonville Beach observed its fifth warmest March on record, and Pensacola observed its seventh warmest March on record. Many daily high maximum and high minimum temperature records were set during the month (see Appendices 2 and 3).

Table 1. March average temperatures and departures from normal (℉) for selected cities.

Station	Mean Temperature	Departure from Normal
Pensacola	65.2	+4.8
Tallahassee	63.9	+3.5
Jacksonville	63.6	+1.9
Orlando	69.4	+2.5
Tampa	70.9	+3.6
Miami	74.5	+1.9
Key West	76.0	+2.8

Rainfall totals in March were below normal across the state. Most of the Panhandle and peninsular Florida had below normal rainfall, with the exception of a few isolated locations in the western Panhandle and north central Florida (Figure 1). Monthly departures from normal ranged from -1.13 inches in Miami to -4.11 inches in Tallahassee (Table 2 and Appendix 1). Homestead observed its driest March on record, with a recorded 0.07
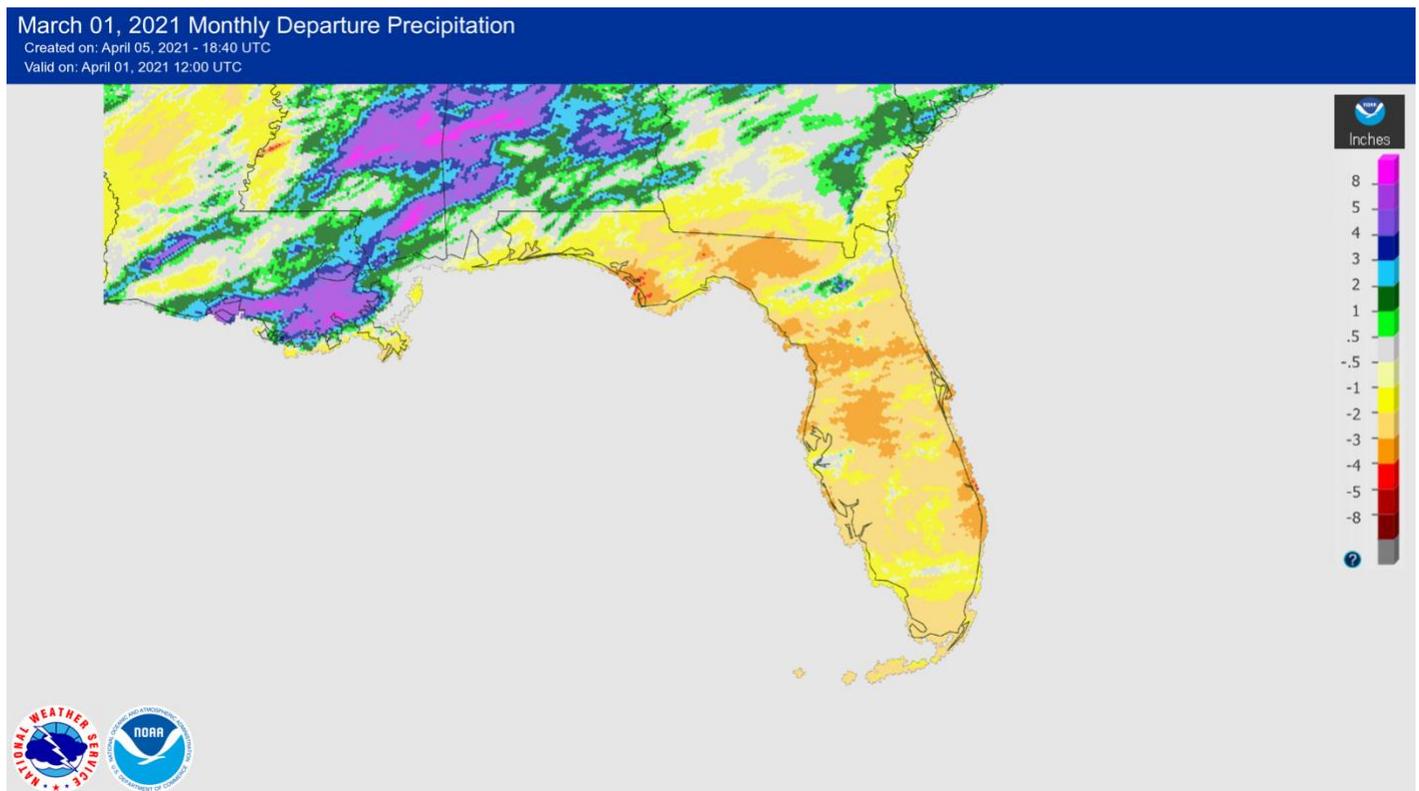
inches of rainfall during the month. Lakeland had its second driest March on record, and Key West had its third driest March on record.

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

Station	Total Rainfall	Departure from Normal
Pensacola	4.55	-1.26
Tallahassee	1.83	-4.11
Jacksonville	2.82	-1.13
Orlando	2.03	-1.74
Tampa	1.07	-1.96
Miami	1.87	-1.13
Key West	0.05	-2.0

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

March 01, 2021 Monthly Departure Precipitation
Created on: April 05, 2021 - 18:40 UTC
Valid on: April 01, 2021 12:00 UTC

La Niña Conditions in the Pacific Continue but Weaken.

La Niña conditions continued during March but it has weakened recently, and forecasters estimate a shift to ENSO-neutral conditions this spring (~60% chance for April-June). ENSO-neutral conditions are then expected to continue at least through the Northern Hemisphere summer. La Niña conditions have returned with above-average temperatures and drier than average conditions across much of the southern tier of the U.S.

Hazardous Weather Events in March.

According to the Local Storm Reports issued by the local National Weather Service offices serving Florida, there were 127 individual local reports of hazardous weather events recorded across the state during the month of March (see Table 4 for a breakdown by event type). A wildfire was reported on March 16th in Big Cypress National Preserve, with portions of the preserve closed to the public and smoke possibly causing issues on HWY 41 and SR 29. Strong rip currents at Miramar Beach and Miami Beach resulted in multiple rescues and three fatalities during the month.

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

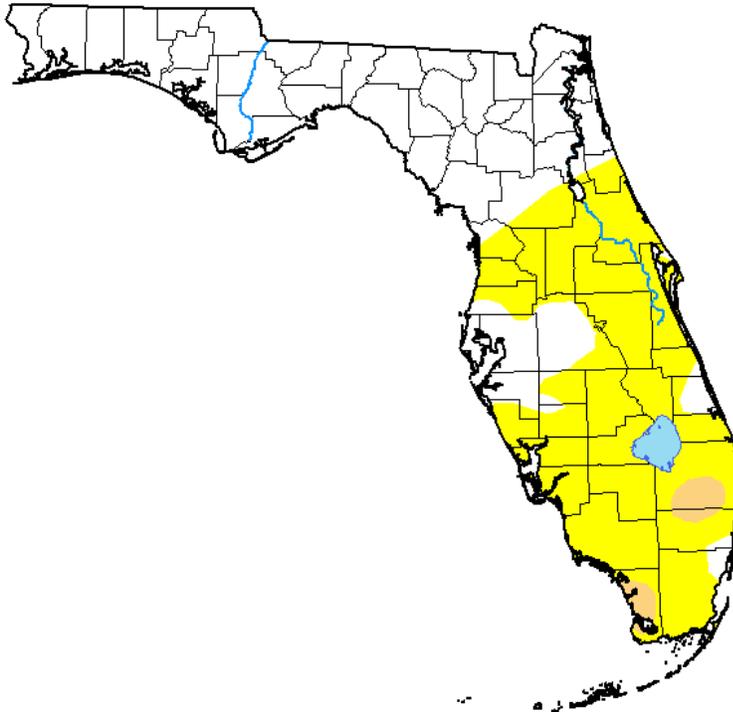| Report Type	Number of Reports
Marine Thunderstorm Wind	6
Non-Thunderstorm Wind Damage	2
Non-Thunderstorm Wind Gust	42
Tornado/Waterspout/Funnel Cloud	6/4/0
Thunderstorm Wind Damage	14
Thunderstorm Wind Gust	17
Hail	15
Flood/Flash Flood	1/0
Heavy Rain	17
Rip Currents	2
Wildfire	1

Drought-Related Impacts.

By the end of March 2021, abnormally dry conditions were widespread across the Florida Peninsula and parts of the southern Peninsula were in moderate drought. In early to mid-March, abnormally dry conditions existed across much of the Florida Peninsula and the western Panhandle regions. By the end of the month, pockets of moderate drought had formed in extreme southwestern Florida and southeast Florida. According to the U.S. Drought Monitor, 46 percent of the state was in abnormally dry conditions (D0) and 2 percent in moderate drought (D1) by the end of the month. Dry conditions are expected to continue, and the seasonal drought outlook indicates that drought development is likely through the spring across the Peninsula.

As of March 31, the Lake Okeechobee water level was at 14.44 ft. above sea level (Feet-NGVD29), which is right about average for this time of the year. At the first of the month, the water level was 15.32 ft. above sea level.

U.S. Drought Monitor
Florida

March 30, 2021
(Released Thursday, Apr. 1, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	52.04	47.96	2.12	0.00	0.00	0.00
Last Week 03-23-2021	50.92	49.08	0.76	0.00	0.00	0.00
3 Months Ago 12-29-2020	89.27	10.73	0.00	0.00	0.00	0.00
Start of Calendar Year 12-29-2020	89.27	10.73	0.00	0.00	0.00	0.00
Start of Water Year 09-29-2020	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago 03-31-2020	0.19	99.81	66.71	1.07	0.00	0.00

Intensity:

☐ None	☐ D2 Severe Drought
☐ D0 Abnormally Dry	☐ D3 Extreme Drought
☐ D1 Moderate Drought	☐ D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions.
Local conditions may vary. For more information on the
Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

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droughtmonitor.unl.edu

Agriculture-Related Impacts.

For the month of March, the Crop Progress – State Stories, produced monthly December through March, for Florida indicates that some pastures dried out by the end of the month due to warmer temperatures and a lack of rainfall. Cattle conditions remained mostly good during the month, and sugarcane harvesting continued. As temperatures rose during the month, Whiteflies and pest pressure were noted on vegetable crops in the southern part of the state. Many citrus fruits were harvested, including white and red grapefruit, Valencia oranges, and Honey, Tango and Royal tangerines. Field corn was planted and land was prepared for peanut and cotton crops in the Panhandle and northern parts of the state.

Appendix 1. Additional March departures from normal data for select Florida locations (source: NWS).

Station	Average Temperature (ºF)	Departure from Normal (ºF)	Total Rainfall (in.)	Departure from Normal (in.)
Gainesville	64.9	+2.6	3.24	-1.09
Sarasota	69.1	+2.5	1.84	-2.02
Melbourne	69.7	+3.8	0.87	-2.41
Fort Myers	71.6	+1.7	0.40	-2.48
West Palm Beach	74.4	+3.9	0.96	-3.63

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

Location	Date	Record (ºF)	Broken/Tied	Last
Clermont	1	91	Broken	89 in 2017
Sanford	1	89	Broken	87 in 1997
Lakeland	1	88	Broken	86 in 1991
Plant City	2	89	Tied	89 in 2019
Vero Beach	17	89	Broken	87 in 1990
Orlando	17	89	Broken	88 in 2016
Punta Gorda	18	89	Tied	89 in 2015
Fort Pierce	19	90	Tied	90 in 1965
Clermont	26	94	Broken	90 in 1954
Hastings	26	87	Broken	86 in 2002
Lisbon	26	88	Broken	87 in 1965
Plant City	26	94	Broken	91 in 1974
Sanford	26	92	Broken	89 in 1974
Gainesville	26	89	Broken	87 in 2020
Jacksonville	26	90	Broken	88 in 1965
Marianna	27	88	Tied	88 in 2020
Tampa	27	90	Broken	89 in 2020
Clermont	28	94	Broken	91 in 2016
West Palm Beach	28	88	Tied	88 in 2016
Pensacola	28	86	Broken	84 in 2020
Daytona Beach	29	89	Broken	87 in 1961
Stuart	29	90	Broken	89 in 1996
Tarpon Springs	30	90	Broken	89 in 1997
Tampa	30	88	Broken	87 in 2020
Naples	31	90	Broken	88 in 2008
Punta Gorda	31	92	Broken	90 in 1981

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

Location	Date	Record (ºF)	Broken/Tied	Last
Daytona Beach	1	71	Broken	68 in 2003
Hastings	1	64	Broken	62 in 1998
Melbourne	1	69	Tied	69 in 1997
Mountain Lake	1	81	Broken	69 in 2003
Daytona Beach	1	69	Broken	66 in 2017
Orlando	1	72	Broken	68 in 2018
Tampa	1	71	Broken	70 in 2017
Punta Gorda	2	76	Broken	71 in 2007
Lakeland	2	69	Tied	69 in 1991
Pensacola	16	70	Broken	67 in 2016
Marianna	17	67	Broken	65 in 2002
Pensacola	17	72	Broken	69 in 1982
Tallahassee	17	67	Broken	66 in 2016

Chipley	18	71	Broken	67 in 1982
Fort Lauderdale Beach	18	74	Tied	74 in 2014
Key West	18	77	Tied	77 in 1986
Orlando	18	69	Broken	68 in 1943
West Palm Beach	18	74	Broken	73 in 2020
Mountain Lake	26	79	Broken	73 in 2015
Perrine	26	72	Broken	70 in 2016
Marianna	26	73	Broken	64 in 2017
Daytona Beach	26	70	Broken	67 in 1949
West Palm Beach	26	76	Broken	74 in 2005
Orlando	26	71	Broken	69 in 2020
Pensacola	26	72	Broken	68 in 2020
Tallahassee	26	69	Broken	66 in 2005
Chipley	27	72	Broken	67 in 1959
Fort Lauderdale Beach	27	75	Tied	75 in 2005
Jasper	27	66	Broken	64 in 2005
Perry	27	71	Broken	67 in 2011
Wewahitchka	27	69	Broken	67 in 1984
Jacksonville Beach	28	69	Broken	67 in 2020
Hastings	29	67	Broken	65 in 2009
Sanford	29	70	Broken	69 in 2016
Tampa	29	73	Broken	72 in 2020
Key West	30	77	Tied	77 in 2020
Vero Beach	30	73	Tied	73 in 1990
Fort Pierce	31	75	Broken	73 in 1929
Perrine	31	73	Broken	71 in 2011
Vero Beach	31	74	Broken	72 in 1980
Lakeland	31	71	Broken	70 in 1975