

Climate Summary for Florida – May 2021

Prepared by the Florida Climate Center, The Florida State University, Tallahassee, Florida

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

May Key Points

- May was near normal and dry for much of Florida.
- Moderate drought conditions (D1) expanded across southwestern Florida during the month but this is likely to be ameliorated with the onset of the summer rainy season.
- Wildfire risk increased across the state, particularly over central and south Florida.
- Above-normal tropical cyclone activity is likely (60%) for the 2021 Atlantic Hurricane Season.
- Monthly climate data are now compared to the new normals (1991-2020), which were made official in early May.

Average temperatures in May were generally within +/- 2 F of normal across the state. Average temperature departures ranged from -2.6 F in Jacksonville to +2.7 F in West Palm Beach for the month (see Table 1 and Appendix 1 for select cities). West Palm Beach had its warmest May on record. Many daily high maximum and daily high minimum temperature records were set during the month (see Appendices 2 and 3).

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

Station	Mean Temperature	Departure from Normal
Pensacola	74.8	-1.2
Tallahassee	74.0	-1.2
Jacksonville	72.3	-2.6
Orlando	78.5	+1.2
Tampa	81.1	+1.6
Miami	81.2	+1.1
Key West	81.1	0

Rainfall totals in May were below normal across the state, especially in parts of south Florida, while the western Panhandle saw a surplus of rainfall. Much of Florida has been drier than normal over the past 90 days, and this trend continued in May (Figure 1). During mid to late May, a blocking pattern emerged over the eastern U.S. with a strong upper-level high pressure system commonly associated with slow-moving and persistent weather patterns. This led to heavy rainfall and wetter-than-normal conditions across the western and central Gulf Coast regions, but dry and hot conditions over Florida and much of the Southeast. The western Panhandle region

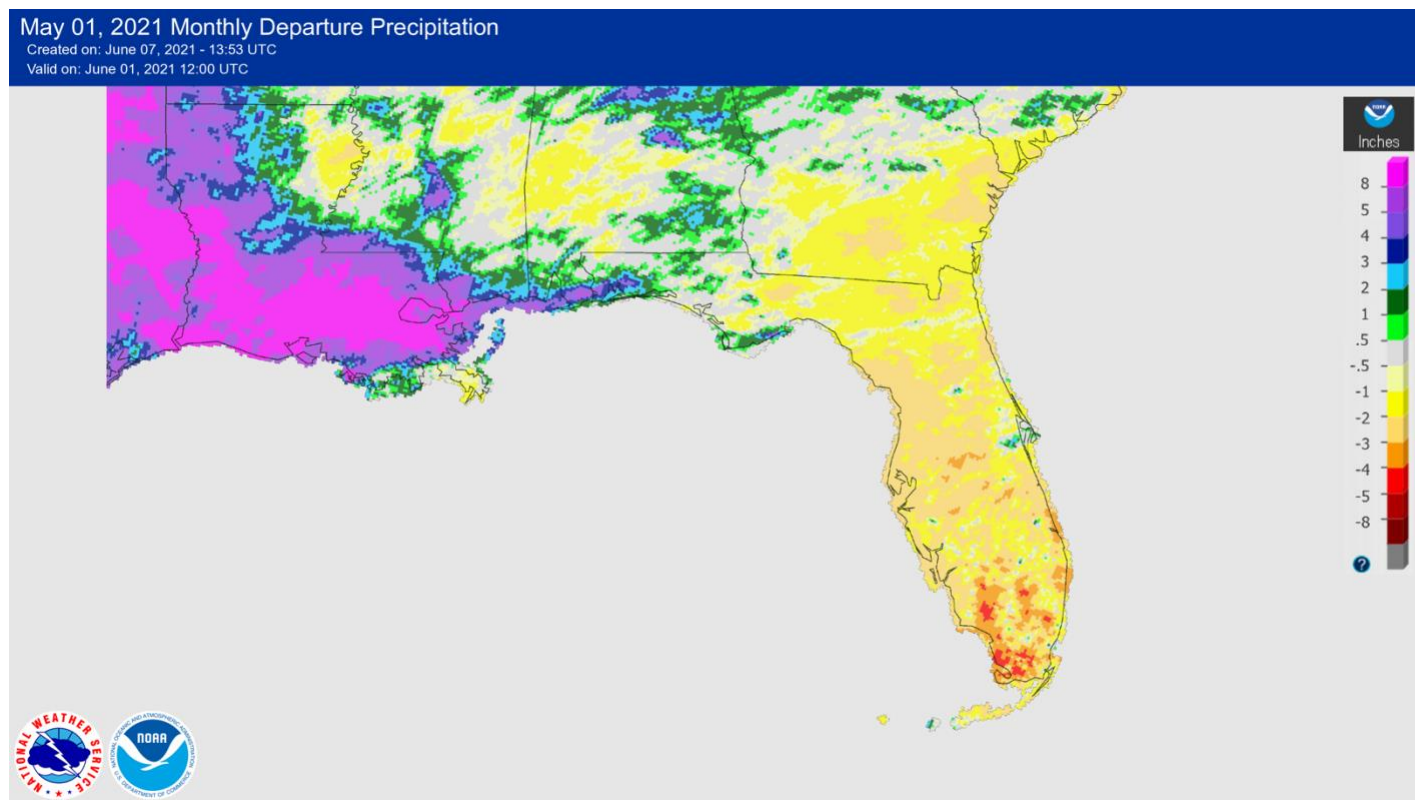


was the only area with above normal rainfall during May. By the end of the month, south Florida had gone over 3 weeks without any measurable rainfall. Monthly departures from normal ranged from +4.59 inches in Pensacola to -4.30 inches in West Palm Beach (Table 2 and Appendix 1). Orlando and Ft. Myers had their driest May on record with 0.17 and 0.04 inches of rainfall, respectively. Several other cities ranked among the driest on record for May as well, including Lakeland (2nd driest), Homestead (4th driest), West Palm Beach (5th driest), and Ft. Pierce (3rd driest).

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

Station	Total Rainfall	Departure from Normal
Pensacola	8.49	+4.59
Tallahassee	1.46	-1.90
Jacksonville	0.48	-2.94
Orlando	0.17	-3.85
Tampa	0.16	-2.44
Miami	2.68	-3.64
Key West	3.09	-0.03

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



ENSO-Neutral Conditions.

The La Niña advisory ended in early May, shifting to ENSO-neutral conditions. Neutral conditions are expected to persist through summer (67% chance June-August), with more uncertainty in the models after summer based

on the latest IRI/CPC models. There is a chance for La Niña conditions to redevelop during late fall or winter (50-55% chance), but given large uncertainty confidence in ENSO-neutral for the coming seasons is highest.

Hazardous Weather Events in May.

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 May (see Table 4 for a breakdown by event type). Severe storms swept through the Panhandle on May 10th, and lightning struck I-10 causing an accident and two injuries. Wildfires were active throughout the month. As of May 25, there were 61 active wildfires across the state with most of those contained, according to the Florida Forest Service. The Indian River County fire, known as the Tree Frog Fire, has burned roughly 800 acres and shut down I-95 for part of a day. In addition, wildfires have destroyed or damaged homes in multiple counties including St. Lucie, Marion and Collier Counties.

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

Report Type	Number of Reports
Flood	5
Hail	11
Marine Thunderstorm Wind	13
Non-Thunderstorm Wind Gust	3
Tornado/Waterspout/Funnel Cloud	0/18/1
Thunderstorm Wind Damage	9
Thunderstorm Wind Gust	38
Lightning	2
Rip Currents	7
Wildfire	20

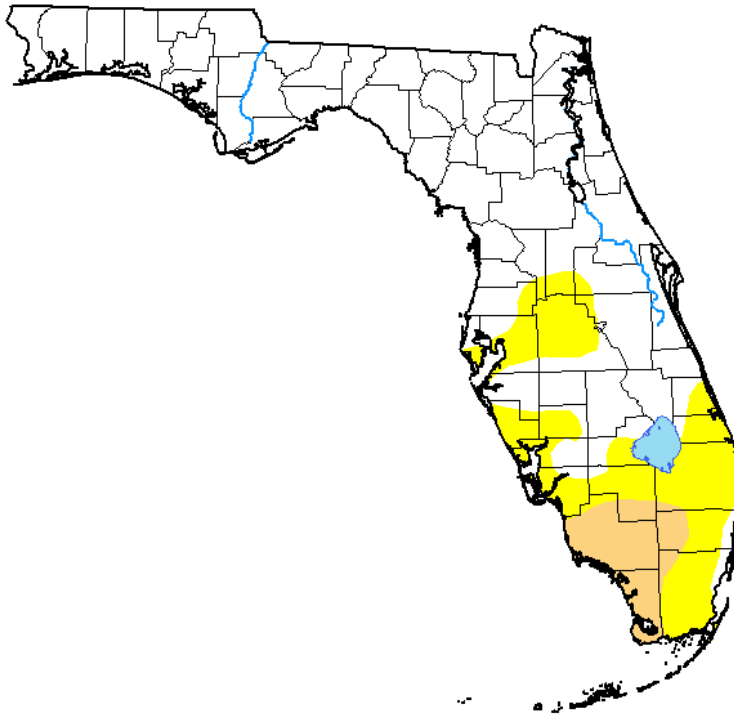
Drought-Related Impacts.

By the end of May, abnormally dry conditions existed across southern Florida and southwestern Florida was in moderate drought (D1). From early to mid-May, abnormally dry conditions existed across parts of the southern Peninsula, and pockets of moderate drought expanded across extreme southwestern Florida. According to the U.S. Drought Monitor, about 21% of the state was experiencing abnormally dry conditions (D0) and roughly 7% was experiencing moderate drought (D1) by the end of the month.

As of May 31, the Lake Okeechobee water level was at 12.82 ft. above sea level (Feet-NGVD29), which is just below the average for this time of the year. At the first of the month, the water level was 13.99 ft. above sea level.

U.S. Drought Monitor Florida

May 25, 2021
(Released Thursday, May 27, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	72.25	27.52	6.77	0.00	0.00	0.00
Last Week 05-18-2021	83.14	16.63	3.33	0.00	0.00	0.00
3 Months Ago 02-23-2021	79.87	19.90	0.00	0.00	0.00	0.00
Start of Calendar Year 12-29-2020	89.07	10.70	0.00	0.00	0.00	0.00
Start of Water Year 09-29-2020	99.77	0.00	0.00	0.00	0.00	0.00
One Year Ago 05-26-2020	27.08	72.68	27.01	1.16	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme 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.

During mid-May, topsoil moisture levels were adequate for 57% of the state, short in 31%, and very short in 3%, while 9% of the state was in surplus. By the end of May, topsoil moisture levels were adequate in 30% of the state, short in 46%, and very short in 24% of the state; no part of the state was in surplus. Much of the state had either fair (34%), good (18%) or excellent (5%) pasture and range conditions by the end of the month. For more information, consult the weekly [Crop Progress and Condition reports](#) published by the USDA's National Agricultural Statistics Service.

Appendix 1. Additional May 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	73.4	-1.6	1.10	-1.98
Sarasota	78.6	+0.8	0.29	-2.29
Melbourne	78.3	+0.2	1.34	-2.19
Fort Myers	80.7	+1.4	0.04	-3.42
West Palm Beach	81.4	+2.7	0.61	-4.30

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

Location	Date	Record (°F)	Broken/Tied	Last
Punta Gorda	1	93	Tied	93 in 2017
West Palm Beach	2	92	Broken	91 in 1962
Plant City	3	98	Broken	96 in 2002
Orlando	3	95	Tied	95 in 2002
Clermont	4	98	Tied	98 in 2002
Punta Gorda	4	96	Broken	94 in 1986
Tampa	4	94	Broken	92 in 2002
Mayport	4	93	Broken	91 in 2010
Bradenton	5	92	Broken	91 in 2003
Clermont	5	99	Broken	96 in 2002
Fort Lauderdale Beach	5	90	Broken	89 in 2017
Wauchula	5	96	Broken	95 in 2017
Lakeland	5	96	Broken	95 in 1995
Jacksonville	5	97	Broken	95 in 1995
Daytona Beach	6	95	Broken	93 in 2003
Lisbon	6	95	Broken	92 in 1991
Fort Lauderdale	7	92	Tied	92 in 2020
Perrine	7	91	Broken	90 in 2020
Hialeah	8	99	Broken	93 in 1994
Bradenton	9	93	Broken	92 in 2003
Fort Lauderdale Beach	9	91	Broken	87 in 2019
Hialeah	9	98	Broken	96 in 1987
Clermont	11	97	Tied	97 in 2009
Lakeland	11	95	Broken	94 in 1995
Miami	13	94	Tied	94 in 2019
Perrine	14	94	Broken	92 in 2017

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

Location	Date	Record (°F)	Broken/Tied	Last
Orlando	1	73	Broken	72 in 2017
West Palm Beach	2	77	Tied	77 in 2016
Usher Tower	3	73	Broken	70 in 2010
Vero Beach	3	74	Broken	73 in 2019
Key West	3	81	Broken	80 in 2019
Tampa	3	76	Tied	76 in 2016
West Palm Beach	3	78	Broken	76 in 2011
Pensacola	3	74	Tied	74 in 2002
Cross City	4	72	Broken	69 in 1956
Wewahitchka	4	74	Broken	72 in 2010
Miami	4	79	Broken	78 in 2010
West Palm Beach	4	78	Tied	78 in 1978
Plant City	5	74	Broken	73 in 2010
Orlando	5	76	Broken	74 in 2010

Bradenton	6	77	Broken	74 in 2003
Clermont	6	74	Broken	72 in 1956
Lisbon	6	73	Broken	72 in 2010
Plant City	6	76	Broken	72 in 2018
Sanford	6	75	Broken	74 in 2002
Lakeland	6	75	Broken	72 in 1991
Punta Gorda	7	75	Broken	74 in 1978
Key West	10	81	Broken	80 in 2014
West Palm Beach	10	78	Broken	77 in 2019
Venice	12	75	Tied	75 in 1974
Key West	12	81	Broken	80 in 2003
Tampa	12	77	Tied	77 in 2019
Canal Point	14	75	Tied	75 in 2015
Sanford	29	76	Broken	74 in 2000
Tampa	30	78	Broken	76 in 2017