

Climate Summary for Florida – September 2020

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

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

Average temperatures in September 2020 were above average across most of the state. Departures from normal ranged from +0.3 °F in Tallahassee to +1.6°F in Key West (Table 1). Stuart observed its warmest September on record and Plant City tied for its warmest September on record. Key West observed its second warmest September while Sarasota observed its third warmest September on record (additional departures are provided in the appendix). In addition, two record low high temperatures occurred in the Pensacola area, including a record low high of 77 °F on the 15th, which tied the previous record on this date set back in 1945, and a record low high of 69 °F on the 20th, which was well below the previous record of 76 °F set on this date back in 1929, according to the National Weather Service. Much of Florida experienced above average minimum temperatures throughout the month, with record high average minimum temperatures set in Miami, Perrine, and Plant City.

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

| Station | Mean Temperature | Departure from Normal |
|--------------|------------------|-----------------------|
| Pensacola | 78.8 | +0.4 |
| Tallahassee | 79.0 | +0.3 |
| Jacksonville | 78.8 | +0.6 |
| Orlando | 82.0 | +1.3 |
| Tampa | 82.9 | +0.9 |
| Miami | 83.9 | +1.2 |
| Key West | 85.6 | +1.6 |

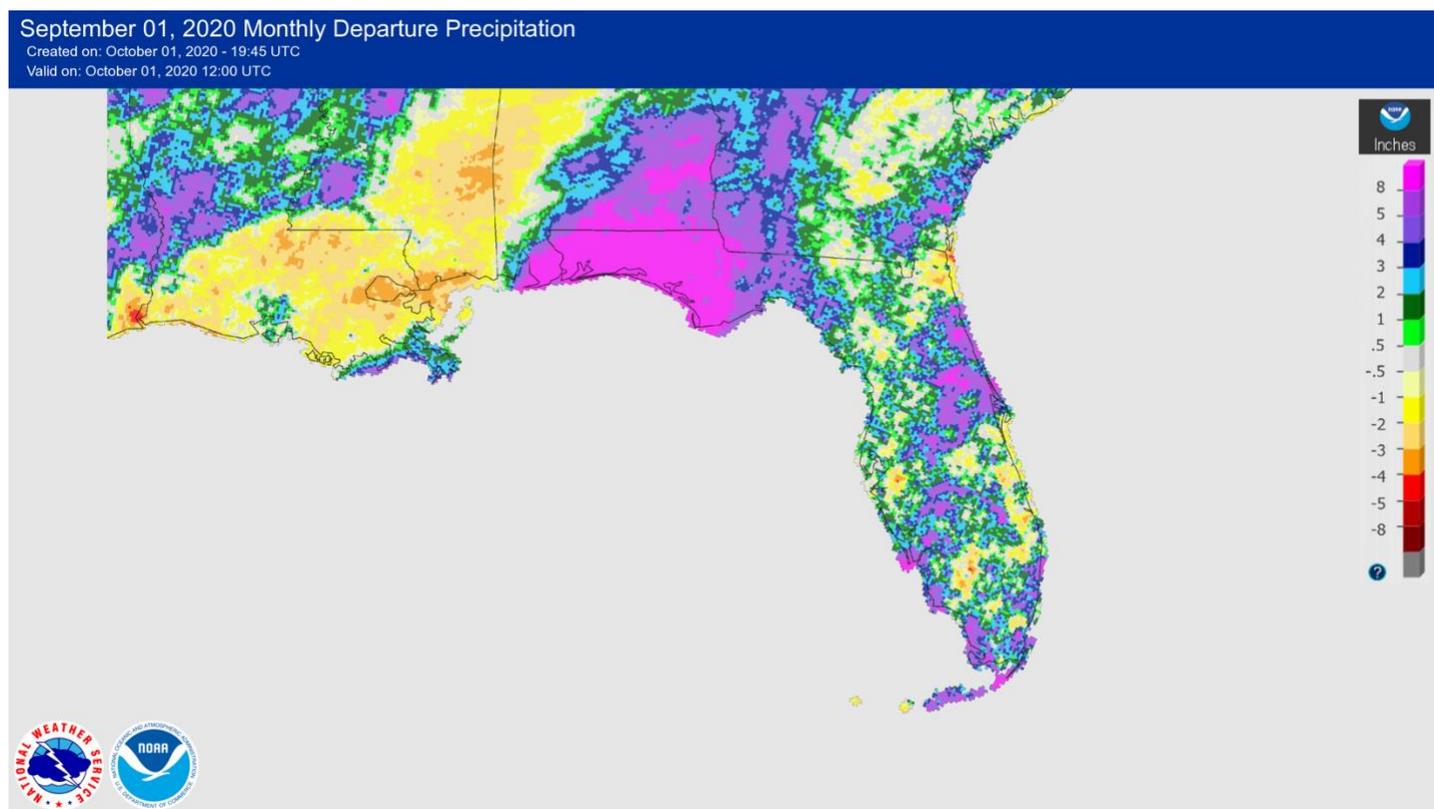
Rainfall totals in September were mostly above normal across the state, especially in the western panhandle. Pensacola had its wettest September on record with 18.51 inches of rain due to Hurricane Sally, which made landfall as a category 2 storm on September 16 in Gulf Shores, Alabama. Figure 1 below shows Sally’s impact across the western Panhandle. The majority of Pensacola’s rain (11.85 inches) fell on the 16th, which became a new 1-day record and the top monthly 1-day record rainfall. Key West observed its 9th wettest September on record. Departures from normal for the month ranged from +12.53” in Pensacola to -0.82” in Tampa (Table 2 and Figure 1).



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

| Station | Total Rainfall | Departure from Normal |
|--------------|----------------|-----------------------|
| Pensacola | 18.51 | +12.53 |
| Tallahassee | 9.56 | +4.87 |
| Jacksonville | 8.81 | +0.62 |
| Orlando | 10.74 | +4.68 |
| Tampa | 5.48 | -0.82 |
| Miami | 10.93 | +1.07 |
| Key West | 12.21 | +5.78 |

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



La Niña Conditions Continue in the Pacific.

During August, the Climate Prediction Center issued a La Niña Advisory, as La Niña conditions emerged in August with sea surface temperatures (SST) dipping below average across the central and eastern equatorial Pacific Ocean. La Niña conditions persisted through the month of September and are expected to continue through the Northern Hemisphere 2020-21 winter season (approximately 85% chance). La Niña winters tend to favor warm and dry conditions in the southern tier of the U.S. Expect a drying pattern following the end of the 2020 hurricane season.

Hazardous Weather Events in September.

There were 402 reports of hazardous weather events recorded in Florida during the month of September (see table 4 for a breakdown by event type). Hurricane Sally, which made landfall on September 16 in Gulf Shores, Alabama, impacted much of the state with continuous thunderstorms from September 12-16. Sally caused heavy rainfall in South Florida and the Florida Keys, with over 10 inches recorded in Key West. However, the Panhandle area received the brunt of the impacts. Tiger Point received 36 inches of rain; Pensacola received nearly 17 inches of rain from the storm with catastrophic flooding. Storm surge heights reached 5.6 feet. The storm damaged a section of the Pensacola Bay Bridge and a water main break occurred in Pensacola Beach.

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

| Report Type | Number of Reports |
|---------------------------------|--------------------------|
| Coastal Flood | 36 |
| Flash Flood | 86 |
| Flood | 26 |
| Heavy Rain | 65 |
| Marine Thunderstorm Wind | 49 |
| Non-Thunderstorm Wind Damage | 2 |
| Non-Thunderstorm Wind Gust | 44 |
| Tornado/Waterspout/Funnel Cloud | 3/23/2 |
| Thunderstorm Wind Damage | 19 |
| Thunderstorm Wind Gust | 42 |
| Lightning | 1 |
| High Tide | 2 |
| Storm Surge | 2 |

Drought-Related Impacts.

During the month of September, drought did not impact any part of the state, according to the U.S. Drought Monitor. In August, abnormally dry conditions affected west-central Florida, but by early September these abnormally dry conditions dissipated. Drought-free conditions are expected to remain in the short term, but La Niña conditions are expected to lead to the onset of a winter dry pattern.

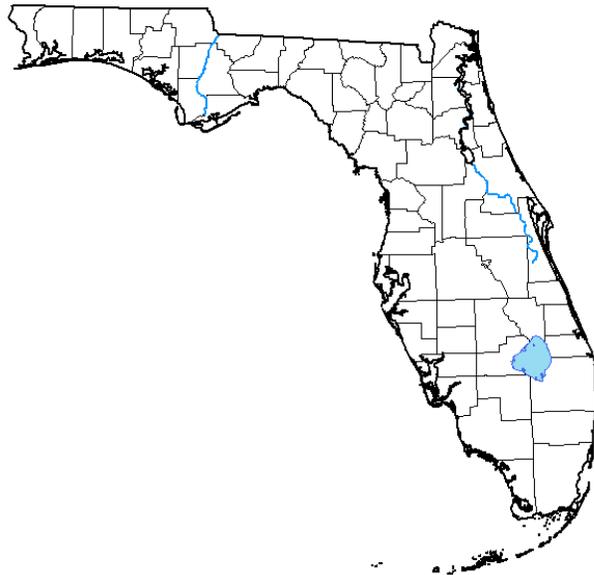
As of October 1, the Lake Okeechobee water level was at 15.56 ft. above sea level (Feet-NGVD29), which is slightly above average for this time of the year. At the beginning of September, the water level was at 14.37 ft. above sea level.

**U.S. Drought Monitor
Florida**

September 29, 2020

(Released Thursday, Oct. 1, 2020)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|--------|-------|-------|-------|-------|------|
| Current | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Last Week 09-22-2020 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 Months Ago 06-30-2020 | 98.69 | 1.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year 12-31-2019 | 75.86 | 24.14 | 8.59 | 0.00 | 0.00 | 0.00 |
| Start of Water Year 10-01-2019 | 56.91 | 43.09 | 23.58 | 6.18 | 0.61 | 0.00 |
| One Year Ago 10-01-2019 | 56.91 | 43.09 | 23.58 | 6.18 | 0.61 | 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.

By mid-September, topsoil moisture levels were adequate in 68% of the state, short in 3%, very short in 1%, and 28% of the state was in surplus. By the end of the month, after passage of Hurricane Sally, topsoil moisture levels were adequate in most (77%) of the state, short in 2%, and 21% of the state had a surplus. For more information, consult the weekly [Crop Progress and Condition reports](#) published by the USDA's National Agricultural Statistics Service.

Appendix 1. Additional September 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 | 79.1 | +0.9 | 7.60 | +3.18 |
| Sarasota | 83.2 | +1.8 | 7.83 | +0.73 |
| Melbourne | 81.8 | +1.2 | 7.10 | -0.54 |
| Fort Myers | 82.8 | +0.7 | 14.10 | +5.55 |