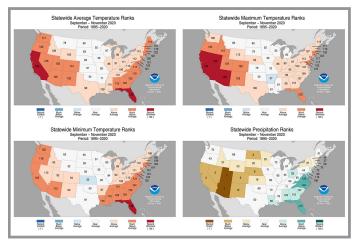
# Quarterly Climate Impacts and Outlook

# Southeast Region

December 2020

# **Regional Weather Highlights for Autumn 2020**



Well-above-average temperatures were recorded across the Southeast during autumn. Florida observed its warmest autumn on record, while Georgia and South Carolina observed their fourth warmest autumn on record. Well-above-normal precipitation was recorded across the Southeast during autumn, as four tropical cyclones produced heavy rainfall and flooding over parts of the region. Virginia observed its fourth wettest autumn on record. For more information, see: <u>https://www. ncdc.noaa.gov/sotc/national</u>.

# **Regional Weather Overview for Autumn 2020**

**Temperature and Precipitation Anomalies** 

#### **Highlights for the Southeast**

There were numerous extremes in average autumn temperatures across the region, particularly in Florida. Fifteen long-term stations (i.e., period of record equaling or exceeding 50 years) observed or tied their **warmest autumn on record**, including West Palm Beach, FL, Tampa, FL, and Savannah, GA.

Precipitation was above average across much of the region during autumn. Several long-term stations observed their **wettest autumn on record**, including Fort Lauderdale, FL (50.80 inches), Hickory, NC (22.65 inches), and Lynchburg, VA (21.42 inches).

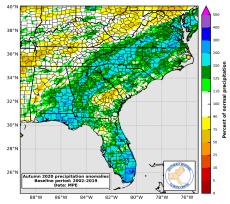
**Four tropical cyclones** (Hurricane Sally, Hurricane Delta, Hurricane Zeta, and Tropical Storm Eta) produced significant impacts across the region. At least 26 fatalities were associated with these storms.

There were **37 confirmed tornadoes** (2 unrated, 26 EF-0s, 9 EF-1s) across the region during autumn, and all but five were spawned by Hurricanes Sally and Delta.

The entire Southeast region, including Puerto Rico, remained completely drought free during autumn for the **first time since 2004**.

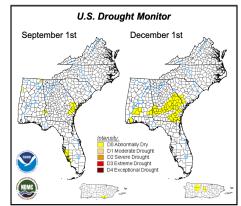
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Well-above-average temperatures were observed across the Southeast, driven primarily by excessively warm daily minimum temperatures. In Florida, Daytona Beach and West Palm Beach observed their highest count of 60 and 63 autumn days with a minimum temperature at or above 70°F and 75°F, respectively. From November 11th–12th, a total of 56 long-term stations observed their highest daily minimum temperature on record for November.



Well-above-normal precipitation, with departures of 150% to 300% of normal, was recorded over much of Florida, as well as portions of southeastern Alabama, Georgia, the Carolinas, and southern Virginia. Several long-term stations in Florida and coastal Georgia observed or tied their highest number of autumn days with measurable precipitation, including Melbourne, FL (47 days), Brunswick, GA (41 days), and Venice, FL (38 days).

## Drought



The entire Southeast region remained **completely drought free** during autumn for the first time since 2004. This can be attributed largely to an abundance of tropical cyclone-related rainfall during the driest season of the year, climatologically. In early September, a few small pockets of abnormally dry (D0) conditions were found across the region. By the end of November, abnormally dry conditions expanded across portions of Georgia and southern Alabama.



# **Regional Climate Impacts for Autumn 2020**

### **Tropical Cyclones**



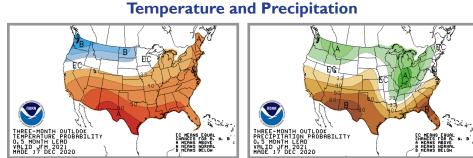
Flooding from Hurricane Sally in Gulf Shores, AL (image credit: <u>ABC 33/40 News</u>)

Hurricane Sally made landfall near Gulf Shores, AL on September 16th, with peak sustained winds of 105 mph and a maximum wind gust of **121 mph** reported at Fort Morgan, AL. Pensacola, FL observed its **fourth wettest day for any month on record**, with 11.85 inches of rainfall. In addition, storm surge flooding reached 5.6 feet in Pensacola, which is the **third highest storm surge ever recorded in the city**. There were 8 fatalities attributed to Hurricane Sally, including a 45-year-old female kayaker who had gone missing at the height of the storm. After making landfall near Creole, LA on October 9th, the remnants of Hurricane Delta impacted parts of the Southeast with heavy rain and flooding. Atlanta, GA received 4.55 inches of rainfall from Delta in a single day, making it the **second wettest October day**  on record. Hurricane Zeta made landfall near Cocodrie, LA on October 28th, with a wind gust of **91 mph** reported in Mobile, AL. Farther inland, winds gusted over 50 mph in northern Georgia, Upstate South Carolina, and North Carolina, resulting in widespread downed trees and power outages. From November 8th through the 12th, Tropical Storm Eta produced 5 to more than 10 inches of rainfall across portions of west-central and southern Florida. In Pinellas County, FL, sheriff deputies rescued 33 people from flooded homes and stalled vehicles. The interaction of moisture surging northward from Eta and an approaching cold front produced **3 to more than** 8 inches of rainfall across much of the Carolinas and Virginia. Dozens of swift water rescues were performed by emergency personnel, with 5 flood-related fatalities reported at a campground in Alexander County, NC.

### Agriculture and Livestock

In September, many farmers in the Florida Panhandle and southern Alabama reported a **loss of cotton, peanuts, and pecans** due to the passage of Hurricane Sally. In October, Hurricane Zeta caused additional cotton losses in Georgia and the Florida Panhandle, as heavy rainfall led to an increase in **boll rot**. In Alabama, greenhouses and plastic bedding on vegetables were significantly damaged by Zeta's high winds. Periods of drier weather in November allowed farmers across the Southeast to harvest their row crops and plant cover crops. Tropical Storm Eta **severely damaged vegetable crops** in southern Florida, with estimated costs ranging as high as **\$320 million**. Livestock and pastures remained in good condition during autumn due to above-average temperatures and timely rainfall.

# Regional Climate Outlook for Winter 2020–2021



NOAA's Climate Prediction Center (CPC) forecasted an increased probability of warmer-than-normal winter temperatures for all of the Southeast, particularly in the southwestern portion of the region. Increased chances of **below-normal precipitation** are predicted for much of the region, notably in parts of Florida and southeastern Georgia. Drought is **expected to develop** in these areas, as La Niña conditions will likely suppress precipitation during winter.

#### La Niña

On December 10th, the CPC maintained a **La Niña Advisory** that was issued in early September, as La Niña conditions (i.e., below-average sea surface temperatures) persisted in the equatorial Pacific Ocean. There is a **95% chance** that La Niña will persist through winter 2020–2021, with a gradual weakening and a potential transition to ENSO neutral conditions during spring 2021. CPC forecasters predict a **moderate strength La Niña** during the peak of the winter season.

#### **Southeast Region Partners**

National Oceanic and Atmospheric Administration

National Centers for Environmental Information

National Weather Service Eastern Region

National Weather Service Southern Region

- **Climate Prediction Center**
- National Hurricane Center

<u>National Integrated Drought Information</u> <u>System</u>

Carolinas Integrated Sciences and Assessments

National Sea Grant Office

Southeast and Caribbean Regional Collaboration Team

State Climatologists

Southeast Regional Climate Hub

Southeast Climate Science Center

South Atlantic Landscape Conservation Cooperative

