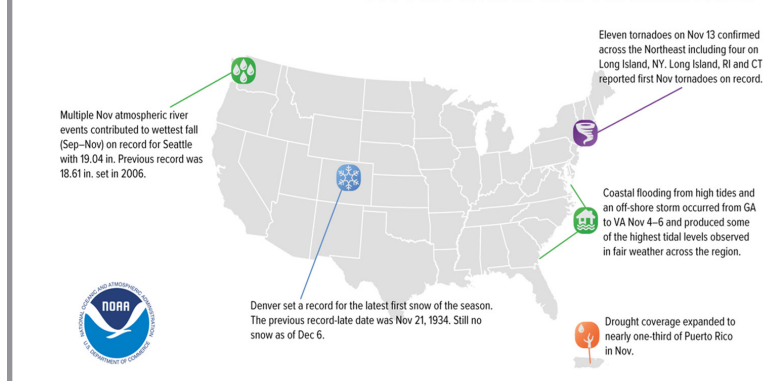


National and Regional Weather Highlights for Autumn 2021

U.S. Selected Significant Climate Anomalies and Events for November and Autumn 2021



Near-average temperatures were observed across the Southeast this autumn. Virginia had its **4th warmest October** on record, and North Carolina observed its **6th warmest October**. Precipitation varied across the region, with drought developing in parts of Virginia and the Carolinas by the end of November, as well as expanding to nearly one-third of Puerto Rico. North Carolina and Alabama both experienced their **5th driest November** on record. For more information, see: <https://www.ncdc.noaa.gov/sotc/national>

Highlights for the Southeast

There were **few extremes in autumn temperatures** across the region. However, San Juan, PR observed its **warmest autumn** (SON) on record. West Palm Beach, FL, Fort Myers, FL and San Juan, PR all reported minimum temperatures equal to or above 70 degrees F for the entire month of September.

Precipitation **varied greatly** across much of the Southeast for the autumn. On September 7th a line of thunderstorms produced 8.17 inches of rain in Cobb County, GA, with rainfall rates of over **3 inches per hour**, prompting many alerts for flash flooding.

Two tropical systems, Mindy (Florida) and Peter (Puerto Rico), impacted our region this autumn, producing areas of **localized flooding**.

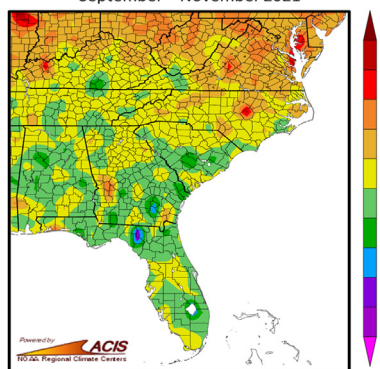
The **active 2021 Atlantic hurricane season** officially ended on November 30th having produced **21 named storms** (winds of 39 mph or greater), including seven hurricanes (winds of 74 mph or greater) of which four were major hurricanes (winds of 111 mph or greater).

La Niña conditions developed for the **second consecutive** autumn.

Regional Weather Overview for Autumn 2021

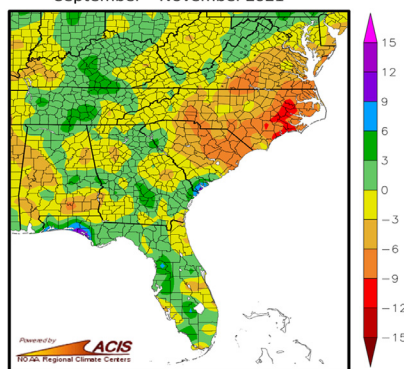
Temperature and Precipitation Anomalies

Mean Temperature: Departure from Average (°F)
September – November 2021



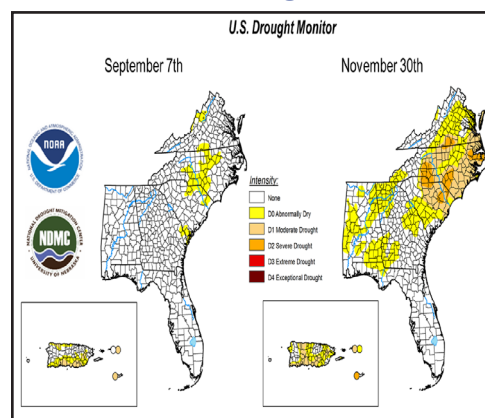
Above-average temperatures were recorded over Virginia, North Carolina, and Puerto Rico, with near-average temperatures reported over the rest of the Southeast. October had the highest departures from normal due to the westward placement of the Bermuda High. Fort Myers, FL (17 days) and Plant City, FL (17 days) both had a record number of days with a daily maximum temperature at 90 degrees F or above, whereas San Juan, PR (25 days) tied the record.

Precipitation: Departure from Normal (in)
September – November 2021



Below average precipitation was reported across much of Virginia, the Carolinas and Puerto Rico. A few stations observed their **top 5 driest** autumns on record, including Danville, VA (4th driest; 3.31 inches) and Gastonia, NC (3rd driest; 3.04 inches). October was the wettest month of the season. Columbus, GA observed its wettest October on record with 8.58 inches of rain and its wettest October day on record with 5.24 inches on the 4th.

Drought



In early September, there were a few areas of abnormally dry conditions (D0) in Virginia and the Carolinas, with moderate drought (D1) along the southern half of Puerto Rico. As the autumn progressed, sparse rainfall resulted in the production of pockets of severe drought (D2), ringed by moderate drought (D1), while abnormally dry conditions (D0) developed and expanded throughout the region. Moderate drought (D1) expanded in Puerto Rico.

Regional Climate Impacts for Autumn 2021

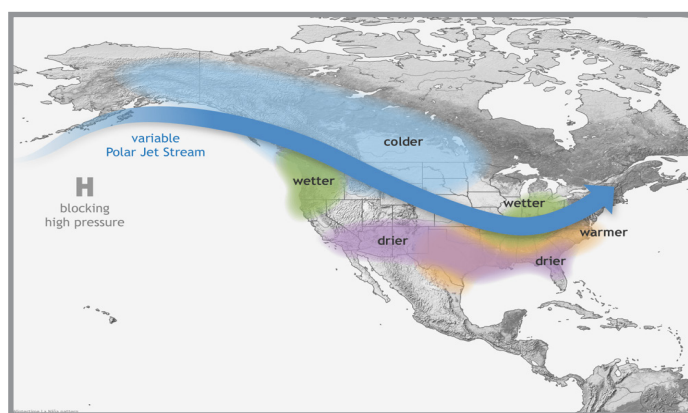
Severe Weather

There were **99 reports of severe weather** this autumn, which is 50% of the median autumn count observed during 2000-2019. **One tornado** (1 EF-0) was confirmed from September - November, which is 2.8% of the average count of 36 tornadoes observed during 2000-2019. This tornado occurred in Elmore County, AL on November 11th and had winds of 70 mph. There were 90 wind reports this season, 61% of the median. Thunderstorms produced **wind gusts** of 58 mph in Brevard County, FL at the NASA shuttle landing facility on September 2nd. No damage was reported. There were four people **struck by lightning** this autumn, including one fatality.

Agriculture and Livestock

The **rainfall in the Florida Panhandle** increased disease pressure on field crops during September and October. The drier conditions elsewhere allowed farmers and producers to focus on fieldwork. In Georgia, producers made significant progress with cotton and soybean harvests, as well as seasonal fruits and vegetables. Winter wheat was planted, with many farmers irrigating fields to help with growth. Multiple counties across the region experienced freezing conditions in November and their first frost of the season. Farmers in South Carolina noted that strawberries were slightly behind due to the drier weather, but that pastures remained in good condition.

La Niña Pattern

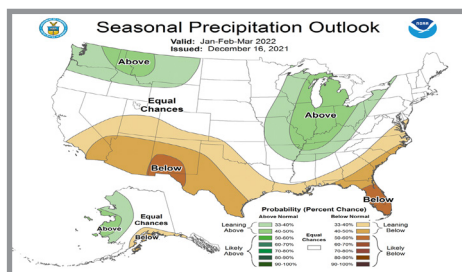
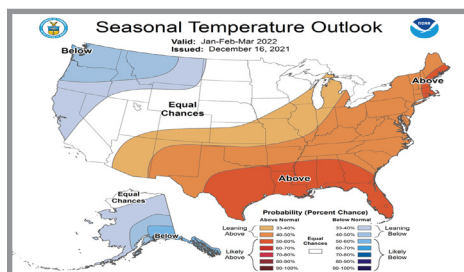


La Niña Pattern (image from [NWS](#))

La Niña conditions have developed for the second consecutive year. A La Niña develops when sea surface temperatures are cooler than average in the equatorial Pacific. La Niña has an **impact on our weather patterns across the Southeast**, most predominately in winter. Although each La Niña is different, there are some general patterns that are predictable. The jet stream flow brings increased storminess and above normal precipitation to the Ohio Valley (see figure), while **below-normal precipitation** and **warmer-than-normal temperatures** tend to occur in the Southeast. Other factors that can affect weather conditions during the winter months (DJF) include the [Arctic Oscillation](#) and the [North Atlantic Oscillation](#). A [moderate strength](#) La Niña is currently forecasted, with a transition to ENSO-neutral conditions in the spring.

Regional Climate Outlook for Winter 2021

Temperature and Precipitation



NOAA's Climate Prediction Center (CPC), forecasted that above-normal temperatures are likely for all of the Southeastern region, during the months of January, February, and March. Precipitation is expected to have equal chances of wetter or drier than normal across the northwestern parts of the region, with drier than normal chances for the rest of the Southeast. Drought is likely to persist and expand across the entire region and Puerto Rico/VI.

La Niña Forecast

Updated by NOAA's Climate Prediction Center on [December 9th](#), a La Niña advisory is in place. La Niña is favored to continue through the Northern Hemisphere winter 2021-22 (~95% chance) and transition to ENSO-neutral during the spring 2022 (~60% chance during April-June). There is a 59% chance of a moderate-strength La Niña, based on current indices. La Niña is anticipated to affect temperature and precipitation across the United States during the upcoming months.

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](#)

[National Integrated Drought Information System](#)

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[Southeast Regional Climate Hub](#)

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[South Atlantic Landscape Conservation Cooperative](#)