# **Quarterly Climate Impacts** and Outlook

# **Southeast Region**

June 2025

# National and Regional Weather Highlights for Spring 2025



Spring 2025 was unusually warm across the Southeast, marking the 4th warmest on record regionally. North Carolina and Virginia recorded their 2nd warmest April, while Florida recorded its 2nd warmest May. **Precipitation was above average overall** but varied by month; March was dry, while May was the 2nd wettest on record regionally, with Alabama recording its wettest May. Temperatures in the Caribbean were near average, with above-average precipitation. Most of the region was drought-free, though extreme drought developed in the Florida Peninsula. For more information, see NOAA's National Climate Report.

# **Highlights for the Southeast**

Raleigh-Durham, NC recorded its warmest spring on record (since 1887), breaking the previous record set just last year.

Muscle Shoals. AL recorded 6.01 inches of precipitation on March 15th, making it the wettest day on record (since 1893).

Pollen counts in Atlanta. GA were 14.801 on March 29th and 11,159 on March 30th, marking the highest and second highest daily counts, respectively, since 1992.

Nearly two dozen tornadoes, along with 90 mph wind gusts and hail over 3 inches, were reported across northern AL and GA on May 20th and 21st. including a tornado emergency for the city of Huntsville, AL.

There were 15 surf zone fatalities and one lightning fatality in the Southeast this spring.

La Niña has ended and ENSO-neutral conditions are present. These conditions are expected to continue this summer (82% chance) and into the winter, though confidence is lower (48% chance).

# **Regional Weather Overview for Spring 2025**

#### **Temperature and Precipitation Anomalies**



Mean Temperature Departure from Average (°F) March – May 2025



Temperatures were **above average** across the Southeast, particularly across parts of NC and VA, where many locations were **3 to 5 degrees F above average** for the season. Several long-term stations, including Washington's Reagan Airport, Norfolk, VA, Asheville, NC, Charlotte, NC, Cape Hatteras, NC, Charleston, SC, and Tampa, FL recorded one of their top 3 warmest springs on record. Temperatures were closer to average across parts of totals.

Precipitation was above average across much of the Southeast, particularly across AL and portions of GA and SC, where seasonal totals were more than 10 inches above average in places. In contrast, precipitation was **below average** across interior and southern portions of the region, where seasonal deficits of over 5 inches were observed. Some parts of South FL, including the Keys, recorded less than half of their expected seasonal

## Drought



Drought conditions improved across much of the Southeast this spring. During the first half of the season, the region experienced a mix of improvements and degradations, with about two-thirds classified as abnormally dry (D0) and more than one-third in at least moderate (D1) drought. AL, GA, and parts of the Carolinas saw notable improvements, while drought expanded in portions of VA, NC, and FL. Widespread rainfall in the latter half of the season brought significant relief, eliminating most drought and dryness across the Carolinas, GA, and the FL Panhandle. However, severe (D2) to extreme (D3) drought persisted in parts of the FL Peninsula.

South FL.



# Regional Climate Impacts for Spring 2025

#### Major Wildfires Impact the Southeast



The Table Rock Fire in Upstate SC on March 24th (source: SCFC)

Dry conditions in March fueled a surge in **wildfire activity** across parts of the Carolinas and South FL. The largest, the **Table Rock Fire**, ignited on March 21st in Table Rock State Park in Pickens County, SC (see image above). It burned over 13,000 acres, making it the **largest fire on record in the Upstate region**. An additional 500 acres burned in NC. Crews faced steep terrain and low containment, with **thousands placed under evacuation orders**. In Polk County, NC, the **Deep Woods and Fish Hook fires** burned nearly 4,200 acres combined, destroying several structures and prompting additional evacuations. Near Myrtle Beach, SC over 1,200 acres burned in the **Carolina Forest** area, forcing residents to evacuate before containment improved later in the month. Meanwhile, a massive **brush fire in Miami-Dade County** scorched more than 25,000 acres and shut down U.S. Highway 1, significantly **disrupting travel** to the FL Keys during peak spring break. **Air quality alerts** were issued due to smoke-related health risks.

#### **Severe Weather**

There were **1,761 reports of severe weather** this past spring, which is over 1.5 times the median frequency observed between 2000 and 2024. There were **116 confirmed tornadoes** (2 EF-Us, 44 EF-0s, 58 EF-1s, 10 EF-2s, 2 EF-3s), which is nearly twice the median spring frequency. A **severe weather outbreak from March 14th to 17th** produced 28 tornadoes across the region, including an EF-3 that killed two people in Plantersville, AL, and multiple EF-2 tornadoes that caused fatalities, injuries, and significant damage near Talladega, AL. For the season, there were **1,387 reports of high winds**, which is more than twice the median spring frequency and ranks as the **6th most reports for the spring season** since 1955. There were also **261 hail reports**, which is below the median spring frequency. The largest hailstones were **3.75 inches (softball-sized)** near the town of Rogersville in northern AL on May 20th.

#### Agriculture and Livestock

Mostly above average temperatures supported **early crop development and planting** of key spring crops like corn, peanuts, and cotton. Peaches, blueberries, and strawberries generally fared well, though some peach blooms sustained **frost damage** in March. **Soil temperatures rose quickly** later in the season, accelerating early crop growth, especially in GA and SC. Dry conditions early in the season **hindered pasture growth and delayed fieldwork** in parts of GA, NC, and AL, prompting **supplemental feeding for livestock**. Above average rainfall later in the season **improved pastures and supported planting**, though excessive moisture in some areas caused delays and **raised disease concerns**. Corn planting progressed well, and fruit yields were strong overall, though pests and disease pressures increased with warmer temperatures and greater soil moisture.

# **Regional Climate Outlook for Summer 2025**



Temperature and Precipitation

NOAA's Climate Prediction Center (CPC) is forecasting above average temperatures and above average precipitation across the Southeast from July to September. Probabilities are generally 40-50% across most of the region, with lower values (33-40%) in AL and parts of GA and FL, and higher temperature probabilities in South FL and northern VA.

#### **Atlantic Hurricane Season**

On May 22nd, the CPC issued its <u>outlook</u> for the Atlantic Hurricane Season, which calls for **above-normal activity** this year. The forecast is for 13 to 19 total named storms, of which 6 to 10 could become hurricanes, with 3 to 5 becoming major hurricanes (Category 3+). The outlook reflects a **combination of favorable conditions**, including warmer than average ocean temperatures, continued ENSO-neutral conditions, less wind shear, weaker trade winds, and an above-average west African monsoon.

#### Drought



Given a favorable precipitation outlook and arrival of the wet season, **drought removal is likely** across the FL Peninsula. While no new development is expected across the region, the **risk of rapid onset drought will be monitored** over the coming months.





## **Caribbean Climate Overview and Impacts for Spring 2025**

#### **Temperature and Precipitation Anomalies**



Following several seasons of above average and in some cases record warmth, **temperatures** were closer to average this past spring across much of PR and the USVIs. In fact, in April, San Juan, PR recorded its first month with a below average mean temperature in two years. It was a wet spring across the region, with most locations running between 150-200% of normal. A few CoCoRaHS stations on the USVIs recorded over 20 inches for the season, which is typically the driest time of the year. Aibonito, PR (1906-2025) and Saint Thomas (1953-2025) both recorded their 3rd wettest spring on record with 30.24 inches and 13.95 inches, respectively. For the season, San Juan, PR (1898-2025) recorded 70 days with measurable precipitation, breaking the previous spring record of 68 days set back in 2022.

#### **Agriculture and Water Resources**

The early onset of the wet season led to **soil saturation**, which delayed planting and fertilization, increased pest and weed pressures, and elevated erosion risks. In western, southern, and interior regions of PR, farmers reported fungal outbreaks, limited access to fields, and disruptions to agrotourism. However, **some non-irrigated farms benefited** from the additional moisture. **Reservoirs and groundwater supplies were replenished**, except along the southeast coast, where slightly drier conditions led to localized crop stress. Similarly, in the USVIs, above-average rainfall helped **restore water sources** and supported **early crop development**, especially for cacao, coffee, and fruit crops. **Vegetation health** also improved in Saint Thomas and Saint Croix, benefiting livestock and poultry operations. On the other hand, **compacted soils** from the 2023 drought contributed to erosion, ponding, and infrastructure damage in some areas.

# **Caribbean Climate Outlook for Summer 2025**

#### **Temperature and Precipitation**





According to the <u>North American Multi-Model Ensemble (NMME</u>), **aboveaverage temperatures** and **below average precipitation** are expected across the Caribbean during the July-September period.

Drought



According to the CPC and <u>Caribbean</u> <u>Climate Outlook Forum</u>, PR and the USVIs are expected to **remain droughtfree through the summer and into early autumn**. Factors include above average precipitation this past spring combined with the start of the wet season and potential for above-normal tropical activity.

# Drought



An early start to the wet season helped prevent drought conditions from developing across the region this spring. In PR, the island has remained drought-free since April 2024, the longest such stretch in over six years. The USVIs have been drought-free since February 2024, marking their longest drought-free period since the U.S. Drought Monitor was introduced on the islands in 2019. Abnormal dryness (D0) returned to Saint Thomas and Saint John in March, ending streaks that began in April 2024 and February 2024, respectively. However, these conditions were eliminated by the end of April.

#### **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 **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 Community Collaborative Rain Hail and Snow Network



Southeast Region Quarterly Climate Impacts and Outlook | June 2025

Southeast Regionalclimateoutlooks

### Perspectiva General del Clima e Impactos en el Caribe durante la Primavera de 2025

#### Anomalías de temperatura y precipitación







Tras varias temporadas de calor por encima de lo normal y hasta en ocasiones calor récord, las temperaturas esta pasada primavera estuvieron cerca de lo normal en la mayor parte de Puerto Rico (PR) y las Islas Vírgenes Americanas (USVI). De hecho, en abril, San Juan, PR registró su primer mes con temperaturas medias por debajo del promedio en dos años. Fue una primavera lluviosa a través de la región, con la mayoría de las localidades fluctuando entre 150-200% por encima de lo normal. Algunas estaciones de la Red de Colaboración Comunitaria de Lluvia, Granizo y Nieve (CoCoRaHS, por sus siglas en inglés) en las USVI registraron sobre 20 pulgadas de lluvia en la temporada, siendo típicamente la temporada más seca del año. Ambos, Aibonito, PR (1906-2025) y St. Thomas, registraron su tercera primavera más lluviosa en récord (1953-2025) registrando 30.24 y 13.95 pulgadas de lluvia, respectivamente. Para esta temporada, San Juan, PR registró 70 días de precipitación cuantificable, rompiendo el récord (1898-2025) de la temporada pasada del 2022 cuando se registraron 68 días de precipitación.

#### Agricultura y Recursos de Agua

El comienzo temprano de la temporada de lluvia condujo a la saturación de los suelos, lo cual retrasó la siembra y fertilización, incrementó las presiones por hierbajos y plagas, y elevó los riesgos de erosión. En las regiones del oeste, sur e interior de PR, los agricultores reportaron brotes de hongos, con un acceso limitado a los campos e interrupciones del agroturismo. Sin embargo, algunas fincas que no fueron irrigadas se beneficiaron de la humedad adicional. Los embalses y los suministros de agua subterránea se abastecieron, excepto a lo largo de la costa sureste, donde condiciones ligeramente más secas resultaron en estrés en los cultivos. De manera similar, en las USVI, la lluvia por encima de lo normal ayudó a abastecer los suministros de agua y apoyó el desarrollo temprano de cultivos, especialmente del cacao, café y las cosechas de frutas. La salud de la vegetación también mejoró en St. Thomas y St. Croix, lo cual benefició las operaciones de la ganadería y avícolas. Por otra parte, los suelos compactados por la sequía del 2023 contribuyeron a la erosión, el empozamiento y a daños en la infraestructura de algunas áreas.

# Perspectiva del Clima en el Caribe para el Verano de 2025

# **S**equía



Un comienzo temprano de la temporada de lluvia ayudó a la prevención del desarrollo de condiciones de seguía a través de la región esta primavera. En Puerto Rico, la isla ha permanecido libre de sequía desde abril de 2024, el periodo más largo en más de seis años. Las USVI han estado libres de seguía desde febrero de 2024, lo cual marca su periodo más largo sin sequía desde que se introdujo en las islas el Monitor de Seguía de los Estados Unidos en 2019. La sequedad anómala (D0) regresó a St. Thomas y St. John en marzo, poniendo fin al periodo que comenzó en abril y febrero de 2024, respectivamente. Sin embargo, estas condiciones quedaron eliminadas para finales de abril.



#### Temperatura y precipitación



Según el Conjunto Multi-Modelo Norteamericano (NMME, por sus siglas en inglés), se esperan temperaturas por encima del promedio y precipitación por debajo del promedio a través del Caribe durante el periodo de julio a septiembre.



**S**equía

Según el Centro de Predicciones Climáticas (CPC, por sus siglas en inglés) y el Foro de Perspectiva del Clima en el Caribe, se espera que PR y las USVI se mantengan libres de seguía durante el verano y hasta comienzos del otoño. Los factores incluyen precipitación por encima del promedio durante la pasada primavera en combinación con el comienzo de la temporada de lluvia y el potencial de actividad ciclónica por encima de lo normal.

#### **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

**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

Community Collaborative Rain Hail and Snow Network

