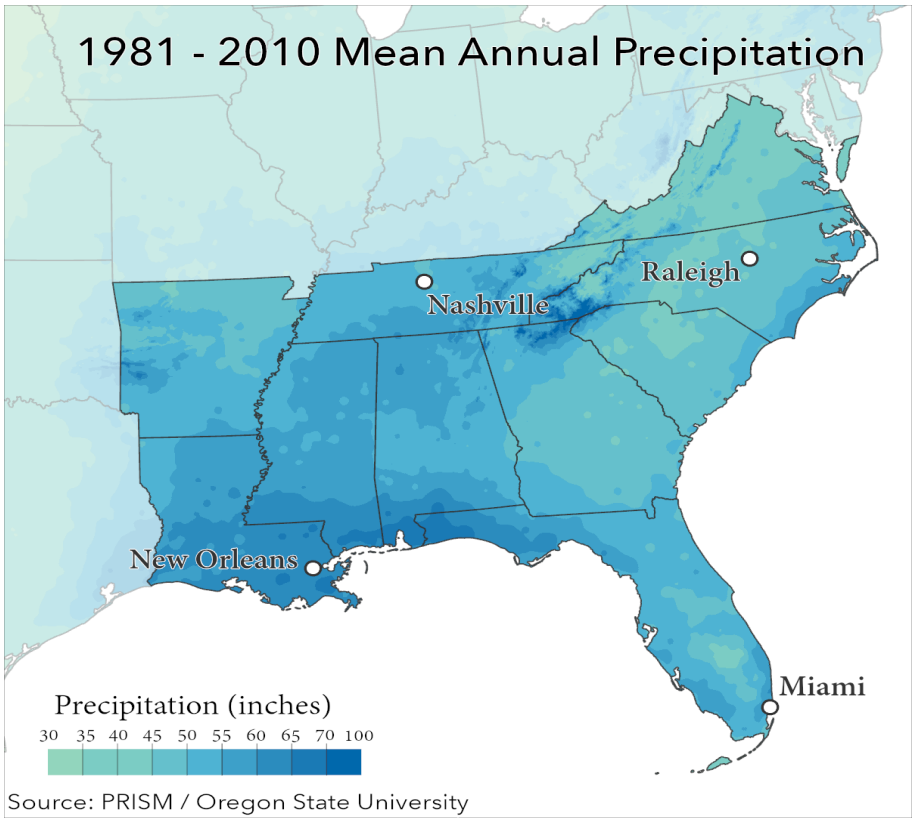
Condition Monitoring Reporting Guide: Southeast

Regional Background

The Southeast is host to a wide range of weather patterns and events. With a humid subtropical climate across most of the region, relatively warm and wet conditions are typical year-round. Despite this, droughts are common in the Southeast. Precipitation is frequent for most of the year, but CoCoRaHS observers can expect the driest time of year to be mid-to-late fall. Summer and early fall can be quite variable due to the hurricane season. Proximity to the coasts has a moderating effect on temperatures and will usually mean more precipitation. The driest parts of the region can be found in the Piedmont, between the Appalachian Mountains and the Atlantic. The high Appalachians may see frequent precipitation year-round.

Reporting Reminders

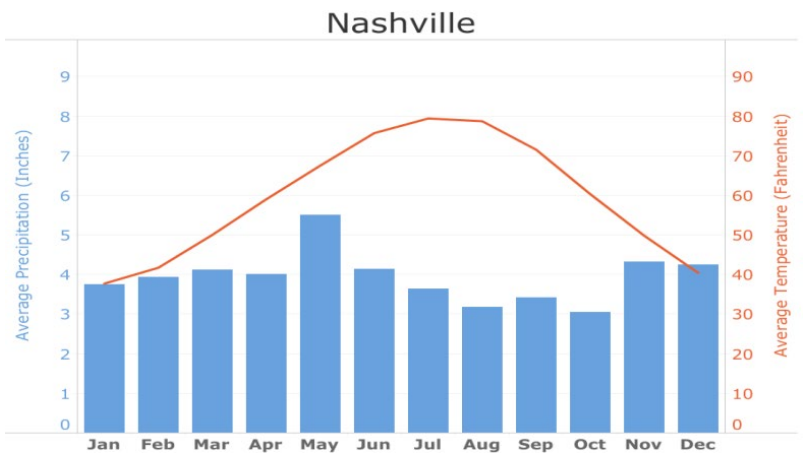
- Use "Severe" categories sparingly: overuse of these labels can make it hard for researchers to identify the hardest hit areas.
- Sometimes, minor events may still have major human impacts, or vice versa. Don't worry if your precipitation measurements seem to conflict with the severity reflected in your reports: differentiating between magnitude and human impact is valuable to researchers and decision makers!
- While heat and drought often go together, be careful to note that impacts of heat (e.g., wilting plants) are not necessarily indicative of drought conditions.
- Droughts don't end instantly. Rain after long droughts may mean *less dry* conditions, but not necessarily a reset to "Near Normal" conditions. Think *long term*.
- In addition to rain measurements, notes on a storm's duration, power outages, road closures, and other such impacts are helpful to include.

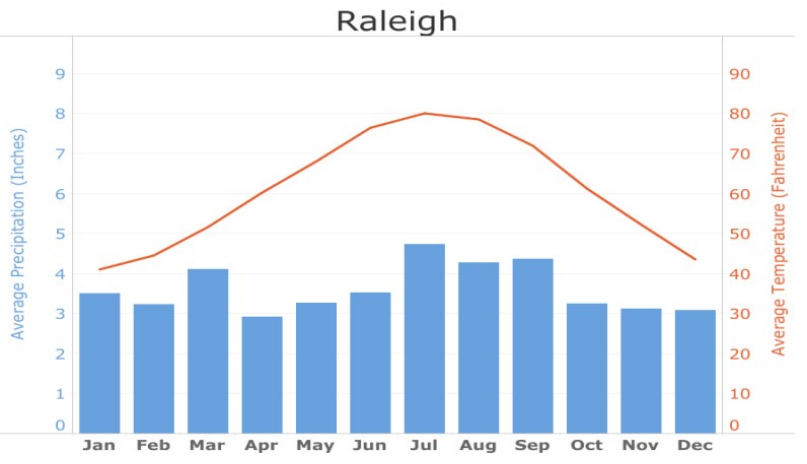


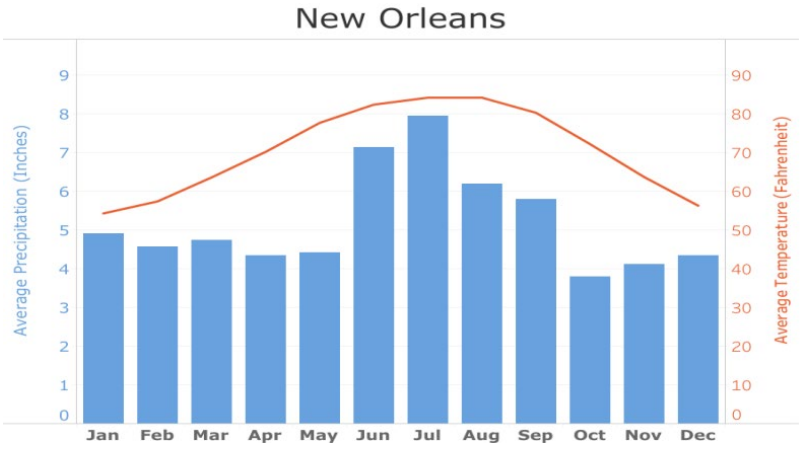
Average Monthly Climate Data

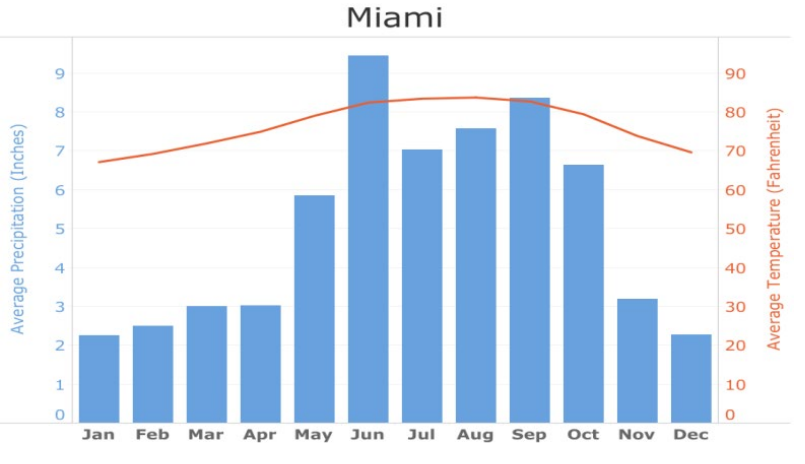
The climate charts shown here represent normal monthly precipitation and temperature in your region. Pick a city near you and use the data as a baseline for your "near normal" conditions. Explore these resources for climate data in other locations:

- National Drought Mitigation Center
- NOAA National Centers for Environmental Information
- NOAA Regional Climate Centers
- American Association of State Climatologists









Data Source: NOAA National Centers for Environmental Information

What to Look For

The following tables provide examples of the types of conditions you might observe during different wet or dry periods. **These lists are designed as an aid.** The first table shows the condition monitoring scale bar categories and the types of conditions that correspond to those categories. The second table organizes different types of conditions and impacts by sectors and areas of interest. Be sure to note any other observations that you think may relate to dry or wet conditions.

SEVERELY WET	MODERATELY WET	MILDLY WET	NEAR NORMAL	MILDLY DRY	MODERATELY DRY	SEVERELY DRY
• **Use this category sparingly** • Wet conditions have persisted for several weeks • Major flooding • Soil is saturated	• Wet conditions have persisted for a few weeks, or there has been a major rainfall event • Standing water and minor flooding • Soil is very damp	• Frequent precipitation for several days • Standing water is common • Soil moisture is above normal	• Observed conditions normal for this time of year • **This should be your default entry**	• Dry conditions have persisted for a few weeks • Soil is somewhat dry	• Dry conditions have persisted for several weeks • Lakes and rivers are low • Water use restrictions start • Soil is very dry	• **Use this category sparingly** • Dy conditions have persisted for months • Soil is completely dry • Water is scarce • State of Emergency

	WET	DRY
Agriculture	Though crops may perform well in mildly or moderately wet conditions, flooding may damage crops under more severe conditions. Wet conditions may delay planting or harvesting, and mud may impede farm machinery.	Without enough water, crops may develop late, show stunted growth, or yield smaller harvests. Plantings and harvests may be delayed as a result. Fruits and vegetables may be smaller in size. Impacts include corn leaves curling and soybean pods aborting. Livestock may be smaller or require supplemental water and feed. If conditions worsen, farmers may decrease herd sizes.
Business	Construction and infrastructure projects may be delayed. Decreased revenue from outdoor tourism is likely. Business may be adversely impacted if flooding or precipitation make commuting difficult.	Decreased demand may adversely affect sectors such as agriculture, tourism, and landscaping. Increased consumer prices, particularly for food and water, may result in economic stress during prolonged droughts. Some sectors, such as well-drilling and foundation repair, may see benefits.
Energy	Extended periods of high precipitation may boost hydropower output and decrease solar energy production. Severe weather or flooding may result in power outages.	Utility bills may increase, especially in areas reliant on hydroelectric, coal, or nuclear plants. Dying tree limbs, heat, and subsiding soil are threats to electrical infrastructure and may increase the likelihood of power outages. Solar power output may benefit from prolonged dry conditions.
Fire	The number, size, and intensity of wildfires is likely to decrease as weather becomes wetter. Fire Danger ratings from the U.S. Forest Service are likely to be minimal. Prescribed burns may become more common during mildly wet conditions.	Wildfires will be larger and more common, as reflected in increases in Fire Danger ratings from the U.S. Forest Service. Fire season may begin earlier in the year (mid- to early Spring).
Plant &Wildlife	Vegetation becomes lush and green, with larger leaves than normal. Frogs, earthworms, and insects may become more active. Stocked fish populations may be harmed by increased turbidity or washed downstream. In severe cases, heavy precipitation and saturated soil may cause trees to be easily uprooted.	Scarcity of water and food may push animals (such as bears or racoons) to scavenge in residential areas. Changes in water level, temperature, and salinity may result in fish kills, algal blooms, and the presence of saltwater species farther upstream. Sharp fluctuations in mosquito presence are common as water bodies become warmer and shallower. Mature, native trees will likely show signs of browning and drying if conditions are severe.
Relief & Response	Warnings may be in effect for storms, flooding, winter weather, or fog. School closures will be more likely due to some heavy precipitation or flooding events. Emergency declarations are indicative of severely wet conditions.	Regulations on outdoor burning and the use of fireworks are common, even at low levels of drought. Governments and other agencies may issue statements encouraging voluntary conservation of water and energy. These will often become mandatory if drought worsens. Emergency declarations indicate more severe conditions.
Safety & Health	Road safety impacts of wet conditions include fog, hydroplaning, flooding, and ice. Increased time spent indoors may lend itself to faster spread of infectious disease. An increase in standing water can result in higher mosquito counts following wet periods.	Irritation of the eyes, sinuses, throat, lungs, and skin may result as smoke and dry conditions exacerbate air pollution and pollen. Especially when high heat is present, conditions may become particularly dangerous for homeless persons, the elderly, and those who work outdoors. Prevalence of mosquito-borne illness may increase during prolonged drought. Economic anxiety and mental health are also a concern as conditions worsen.
Tourism & Recreation	Mildly wet conditions may work in favor of freshwater recreation, but tourism in general is likely to see decreased revenue in the Southeast during more severely wet periods. Outdoor events are more likely to be cancelled due to rain.	Freshwater recreation is likely to decrease as lower water levels close boat ramps and uncover submerged boating hazards. Beaches may also experience closures due to decreased water quality. Burn bans and wildlife impacts may influence outdoor activities like hunting and camping.
Water	Lakes, rivers, and wells will be at higher levels. Periods of flash flooding may cause abrupt changes in the courses of small streams. Very wet conditions can threaten water quality by causing overflows of sewer and septic systems.	Water bodies and wells will be lower. Ponds, small streams, and wells dry completely in severe conditions. Water quality will typically decrease due to increased temperature and decreased volume. Abrupt changes in home water pressure or quality may be symptomatic of severe drought. Severe conditions will also often result in municipal water shortages.