

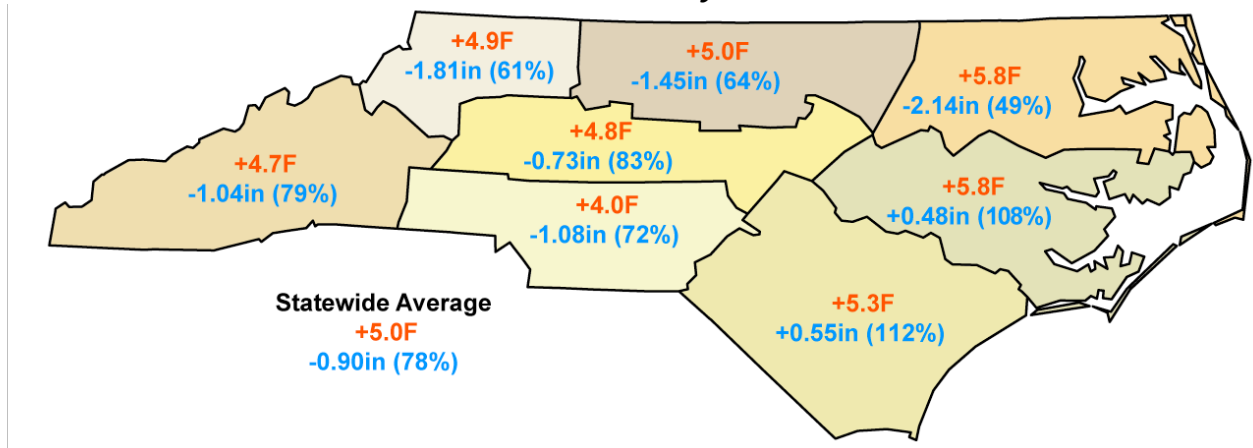
# Monthly Climate Summary: North Carolina

## June 2010: ¡Muy Caliente!

Ryan Boyles, State Climate Office of North Carolina  
July 1, 2010

### Climate Summary

#### Temperature and Precipitation by Climate Division Departures from Normal for June 2010 Based on Preliminary Data



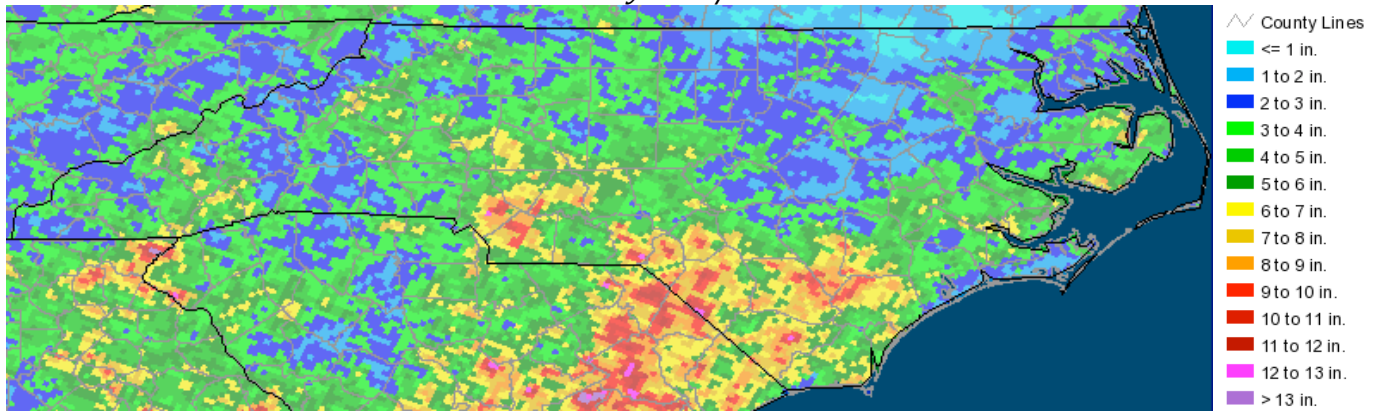
June 2010 in North Carolina was hot - record-breaking hot. June 2010 was the warmest June on record for many locations all across the state, including

- Murphy
- Banner Elk
- Wilkesboro
- Lenoir
- Salisbury
- Raleigh
- Elizabethtown
- New Bern
- Kinston
- Plymouth
- Williamston
- Lewiston
- Edenton
- Roanoke Rapids

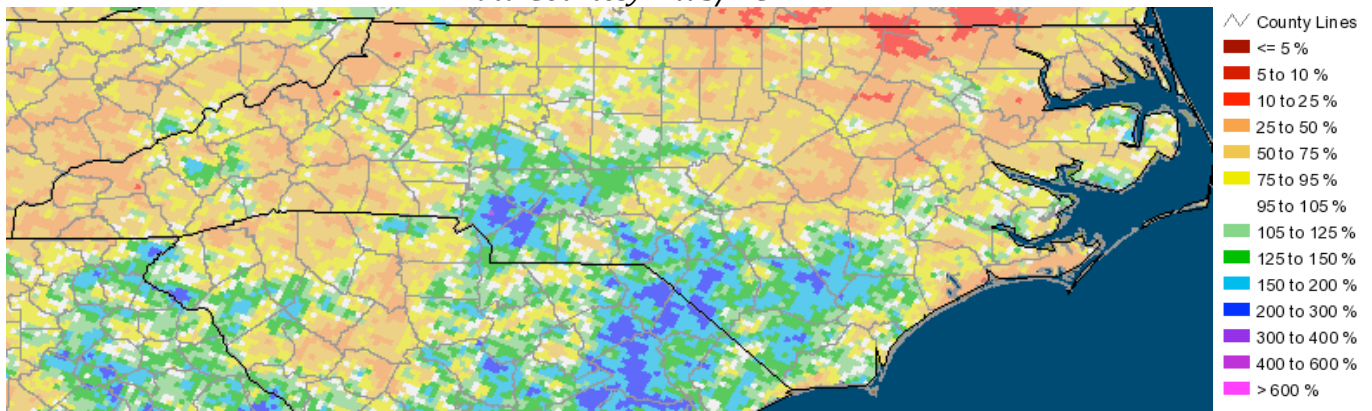
For most other monitoring stations, June 2010 ranked as one of the top 5 warmest on record. Statewide, June 2010 ranked as the 2<sup>nd</sup> warmest June on record (since 1895). Only June 1952 was warmer.

Precipitation in June was more mixed. Some regions experienced above normal rainfall (southern coastal plain) while others received less than half of normal rainfall (northern coastal plain). Most of the state was relatively dry – although almost everywhere experience locally heavy precipitation at one time or another. Such is summertime in North Carolina – thunderstorms bring heavy rain to some with others left dry. Statewide average precipitation in June 2010 ranked as the 28<sup>th</sup> driest since 1895.

**Precipitation for June 2010**  
Based on estimates from NWS Radar  
*Data Courtesy NWS/NCEP*



**Precipitation for June 2010: Percent of Normal**  
Based on estimates from NWS Radar  
*Data Courtesy NWS/NCEP*



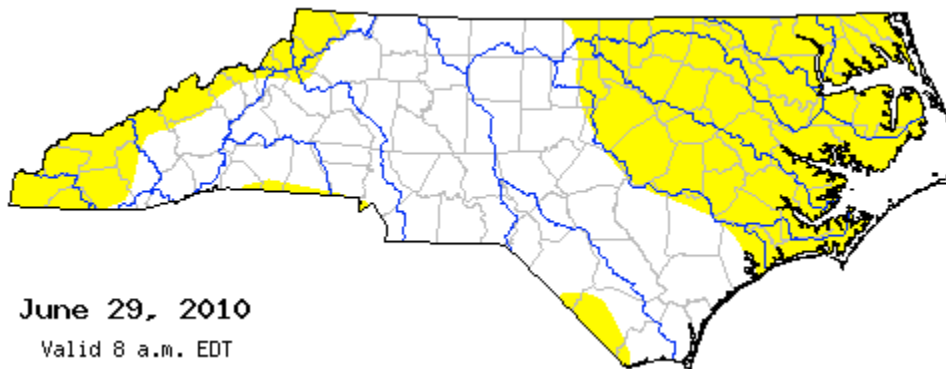
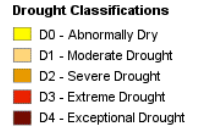
**Impacts to Agriculture**

Crops are starting to feel the heat, and the dry conditions. By the end of June, the NC Department of Agriculture was reporting that much of the state is experiencing inadequate soil moisture. If warm, dry conditions continue, crops will become stressed, which would likely include lower yields and increased pest risks for those that don't irrigate.

**Impacts to Water Resources**

Wetter conditions in the spring and timely rains have helped to maintain many reservoirs across the state. However, by the end of June many stream and groundwater reporting stations were showing low levels – the kind that keeps the NC Drought Management Advisory Council on alert. DO (abnormally dry) conditions have expanded as a result of the warm, drier conditions in June.

**US Drought Monitor for North Carolina**  
*Courtesy NC DENR Division of Water Resources*



**El Niño is Dead! Long live El Niño!**

The El Niño event that contributed to our cold, wet winter is officially gone. El Niño is associated with warm ocean temperatures in the eastern tropical Pacific, and is generally associated with cool, wet winters in North Carolina. Conditions are currently neutral, but forecasted to move toward La Niña by the late summer or early autumn. La Niña is the opposite phase, and is associated with colder ocean temperatures in the eastern tropical Pacific Ocean. La Niña tends to contribute to drier, warmer winters in NC. But there are other factors that can interact and influence our seasonal patterns, like the Arctic Oscillation (AO), PNA pattern, and Pacific Decadal Oscillation.

**Arctic Oscillation? PNA? PDO? I thought there was just El Niño!**

While El Niño and La Niña (collectively called the El Niño / Southern Oscillation, or ENSO) are some of the dominant patterns that influence our seasonal climate, there are others that influence and interact with each other. ENSO is critical because we can actually forecast the ENSO phase several months in advance, but it's not the only ingredient. To help explain some of these influences on our seasonal and longer-term climate, we've introduced a new "Global Patterns" section on our web site (under Aspects of NC Climate). Visit and learn more about how these impact our climate in North Carolina.

