CLIMATE QUICK REFERENCE GUIDE | North Carolina

Historic Changes 1900-2020

• Average temperatures have risen 1.2°F since 1970. Summer average temperatures have been the warmest on record for the last 16 years (2005–2020).

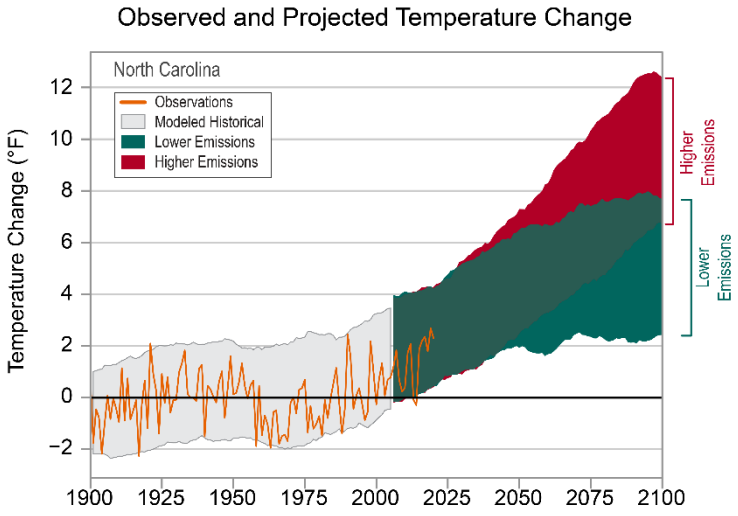
• From 1950 - 2021, average rainfall has increased 12% and the number of 2-inch extreme precipitation events in a 24-hour period has increased 74%.

Projected Changes 2042-2070

• Temperatures, precipitation, and occurrences of large storms, including hurricanes, are projected to rise. Droughts are projected to be more intense because higher temperatures increase the rate of soil moisture loss during dry periods.

• Sea level is projected to rise 1.3 - 2.5 ft in the next 40 years. A large portion of North Carolina's coastline is extremely vulnerable to sea level rise due to its low elevation and to geological factors that are causing the land to sink in the northern Coastal Plain.

Observed and Projected Temperature Change



Source: statesummaries.ncics.org

State Summary

State Max Temperature (Fahrenheit)

Season	Current	2040-2070	Change
Spring	70.4	75	+4.65
Summer	86.1	91.7	+5.58
Fall	71.6	77	+5.37
Winter	52.5	56.7	+4.2
Annual	70.2	75.1	+4.95

State Max Precipitation (Inches)

Season	Current	2040-2070	Change
Spring	12.7	13.4	+0.64
Summer	14.2	15.2	+0.95
Fall	11.8	12.8	+1
Winter	11.9	13	+1.08
Annual	50.7	54.4	+3.67

Current data comes from PRISM Climate Group 30-year normal data for the 1971-2000 time period. Future is derived from the CMIP5 data using the mid-century time period and higher emissions scenario (RCP 8.5).
Source: swclimatehub.info/data/interactive-maps

State Top Causes of Crop Loss

Cause of Loss	Indemnity($)	Acres
Excess Moisture	10,981,020	63,933
Drought	10,966,140	68,099
Tropical Storm	5,233,648	14,920
Area Plan Crops	1,883,933	7,351
Heat	1,478,688	5,752

Source: RMA crop loss data by state 1989-2020.
swclimatehub.info/rma/rma-data-viewer.html
"Area plan crops only" refers to damaged crops covered by a specific type of insurance policy that provides coverage based on county yields instead of policyholders' individual yields. Therefore, losses are not necessarily tied to specific weather-related cause of loss.

Climate Resources

Climate change adaptation and information:
climatehubs.usda.gov

Current and predicted drought conditions:
drought.gov

Climate Mapping for Resilience and Application:
resilience.climate.gov/#assessment-tool

USDA Climate Resources:
usda.gov/climate-solutions

Climate changes and projections by location:
climatetoolbox.org/tool/Future-Climate-Dashboard

NOAA Sea Level Rise Viewer:
coast.noaa.gov/digitalcoast/tools/slr.html