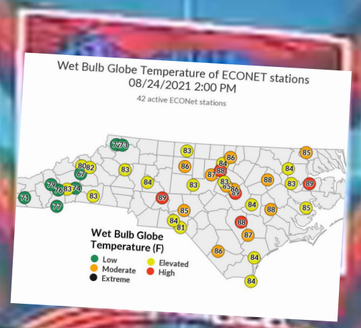
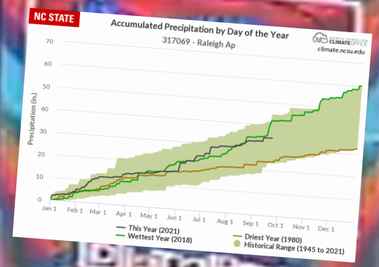
NC STATE UNIVERSITY





North Carolina Climate Resilience DataPalooza

Historical and future climate data

NORTH CAROLINA CLIMATEOFFICE

Kathie Dello, PhD State Climate Office of North Carolina

The Classics

FRIDAY

Historical Observations · NC ECONet · Community Science

SATURDAY

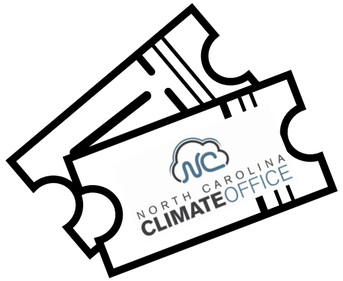
The Remixes

Calculated Variables · Gridded Data · US Drought Monitor

The Future

SUNDAY

Downscaled Data · Climate Model Outputs



ALL-ACCESS PASS

available at climate.ncsu.edu

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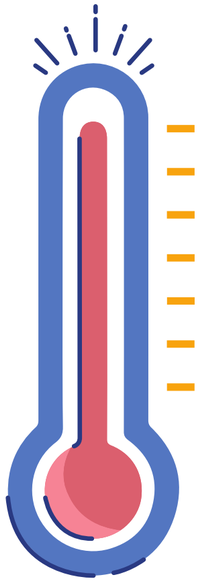
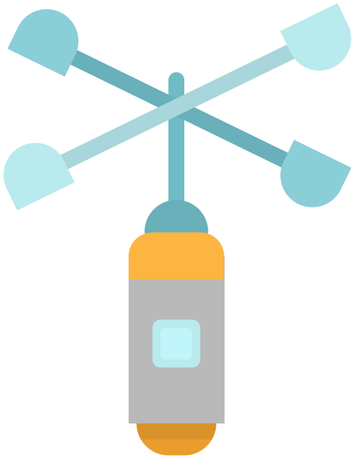
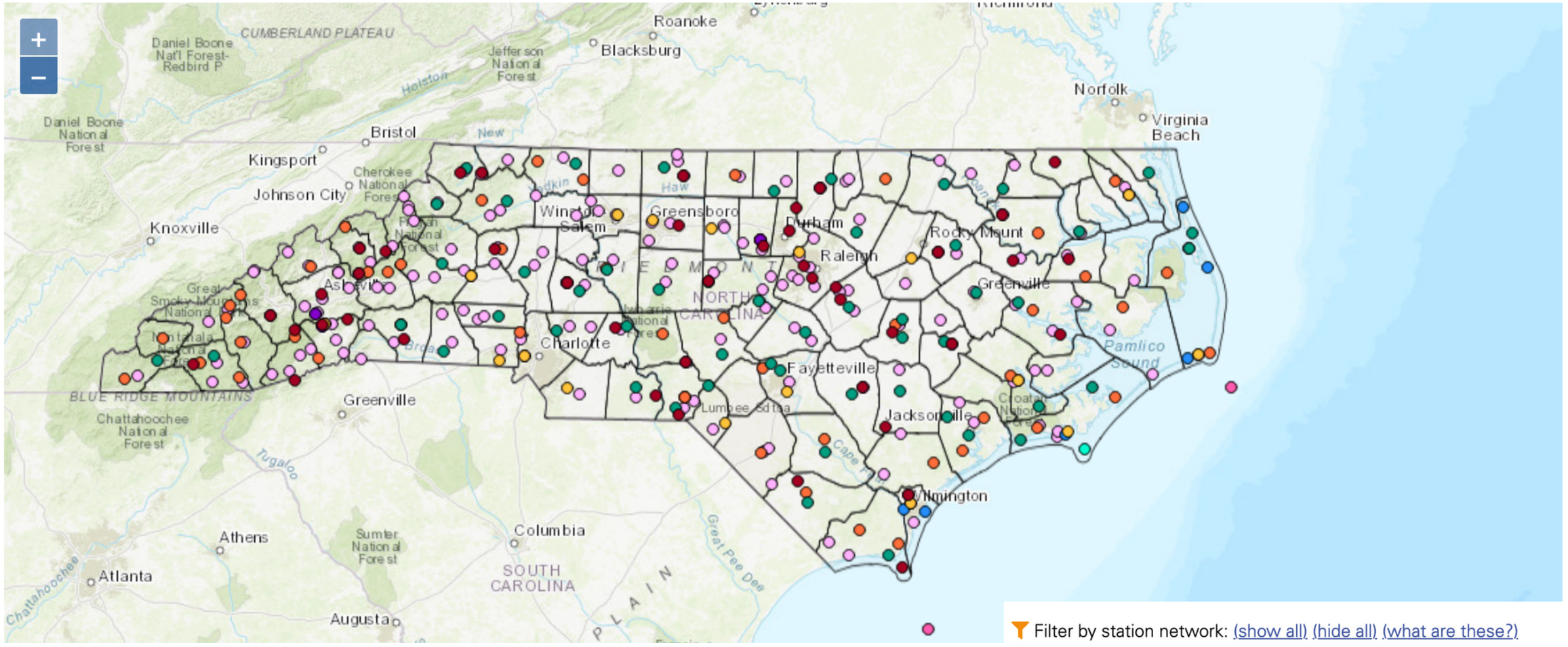
historical observations: the classics





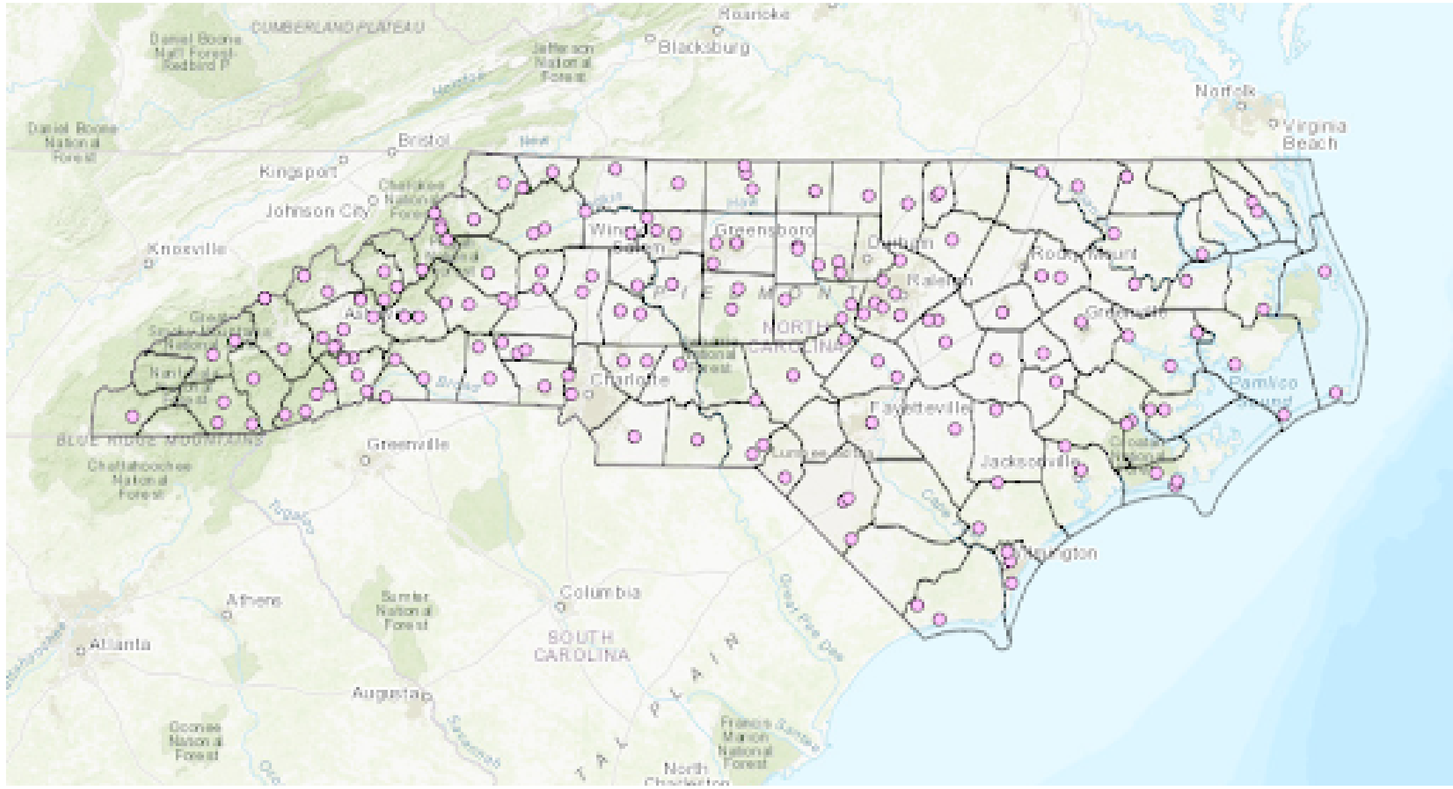
these are the meteorological data that we **measure**
usually **repeatedly**
in a representative **location**

Station Map


CUMBERLAND PLATEAU
Daniel Boone Nat'l Forest-Redbird P
Roanoke
Blacksburg
Jefferson National Forest
Norfolk
Virginia Beach
Daniel Boone National Forest
Bristol
Kingsport
Johnson City
Cherokee National Forest
Knoxville
Winston-Salem
Greensboro
Durham
Raleigh
Rocky Mount
Greenville
Asheville
Great Smoky Mountains National Park
Charlotte
Fayetteville
Pamlico Sound
BLUE RIDGE MOUNTAINS
Chattahoochee National Forest
Greenville
Jacksonville
Wilmington
Athens
Atlanta
Columbia
Sumter National Forest
SOUTH CAROLINA
Augusta
Filter by station network: (show all) (hide all) (what are these?)
ASOS
AWOS
BUOY
CMAN
COOP
ECONET
NOS
RAWS
USCRN

National Weather Service Cooperative Observer Network (COOP)

- **measurements:** min&max temperature, 24-h precipitation, snowfall & snow depth
- **time interval:** daily
- **location:** changes infrequently



ca

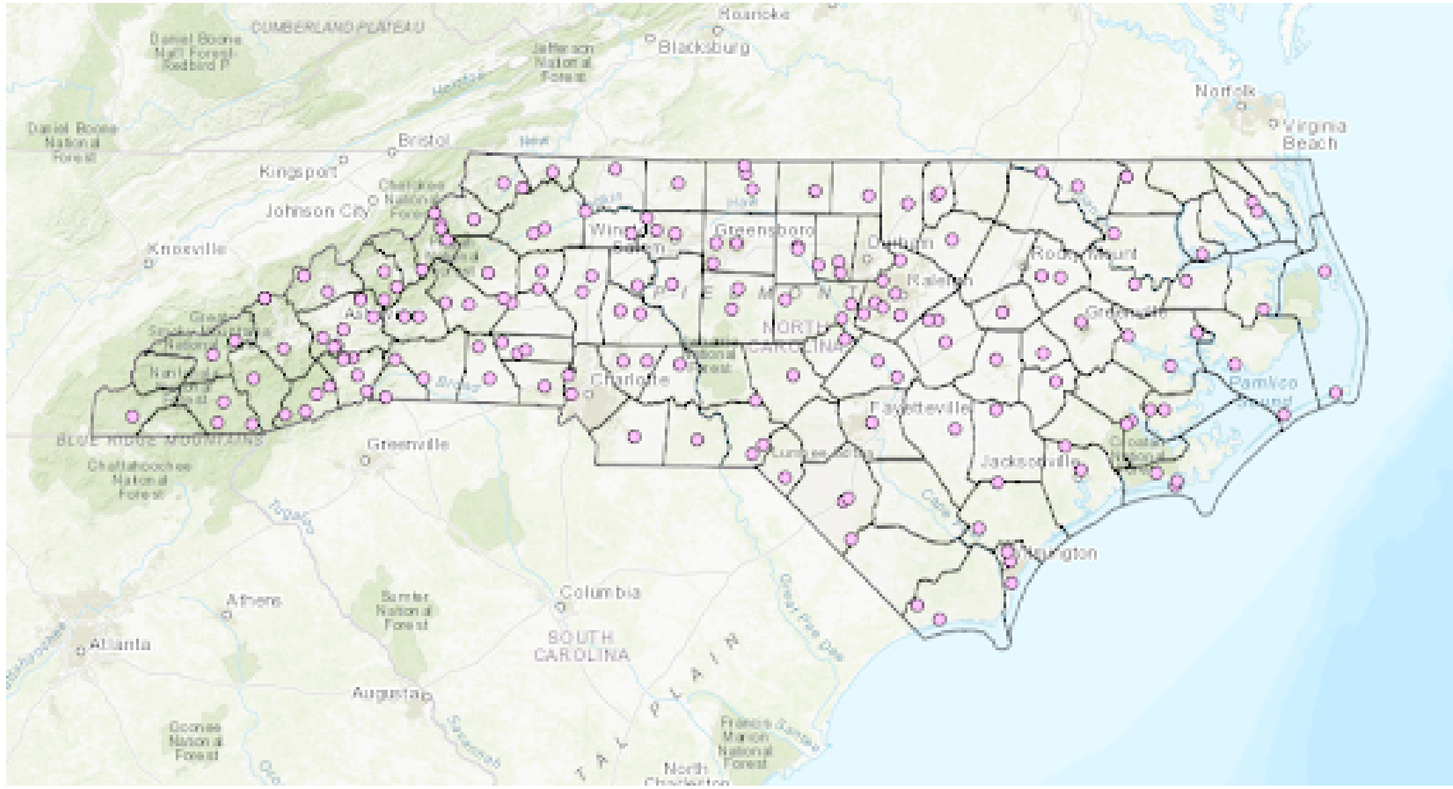
National Weather Service Cooperative Observer Network (COOP)

PROS: great for climate

- long-term records
- high-quality
- decent spatial coverage

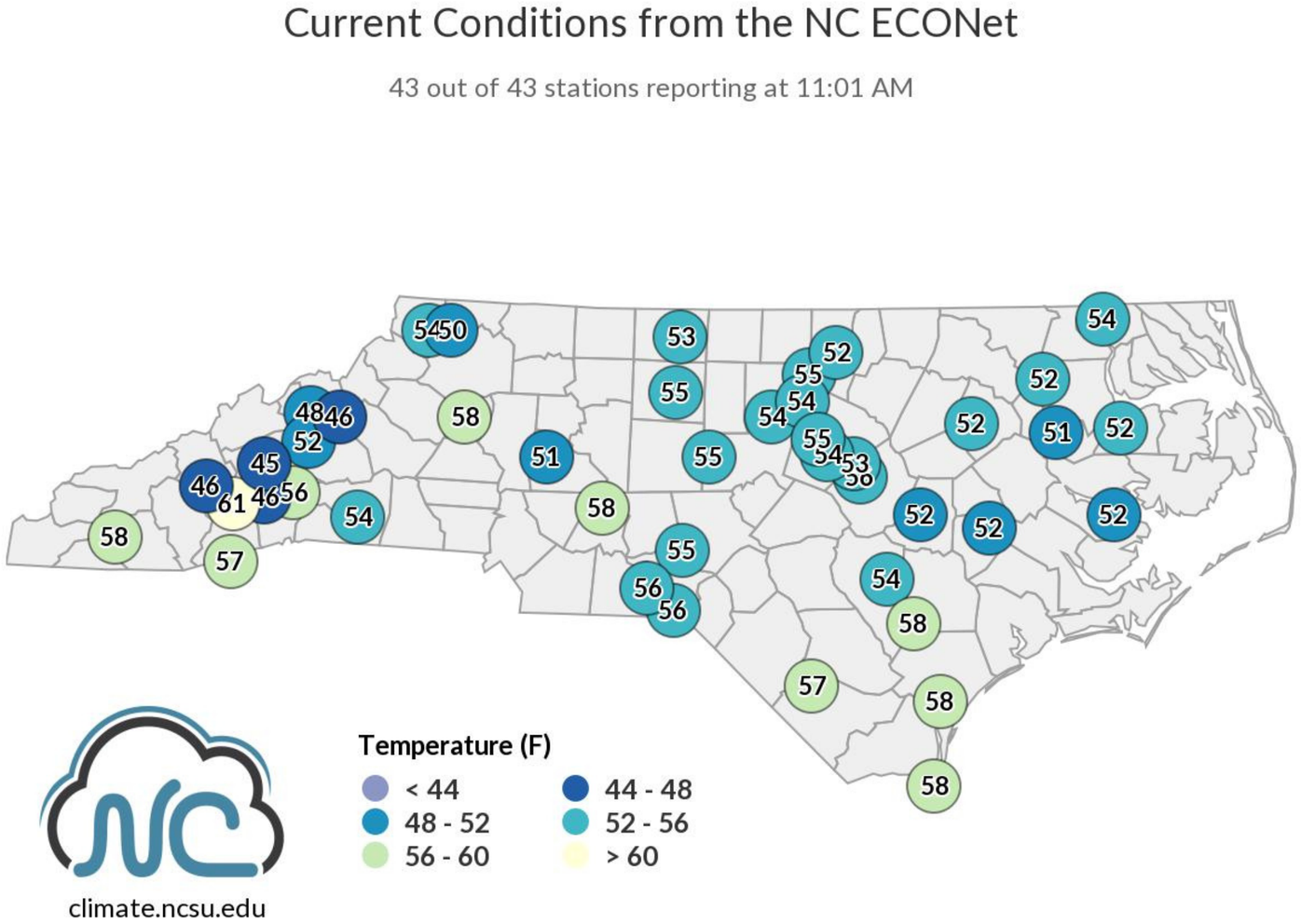
CONS:

- no-sub daily data
- decent spatial coverage



North Carolina ECONet

- **measurements:** 16 environmental parameters
- **time interval:** 1-min
- **location:** changes infrequently



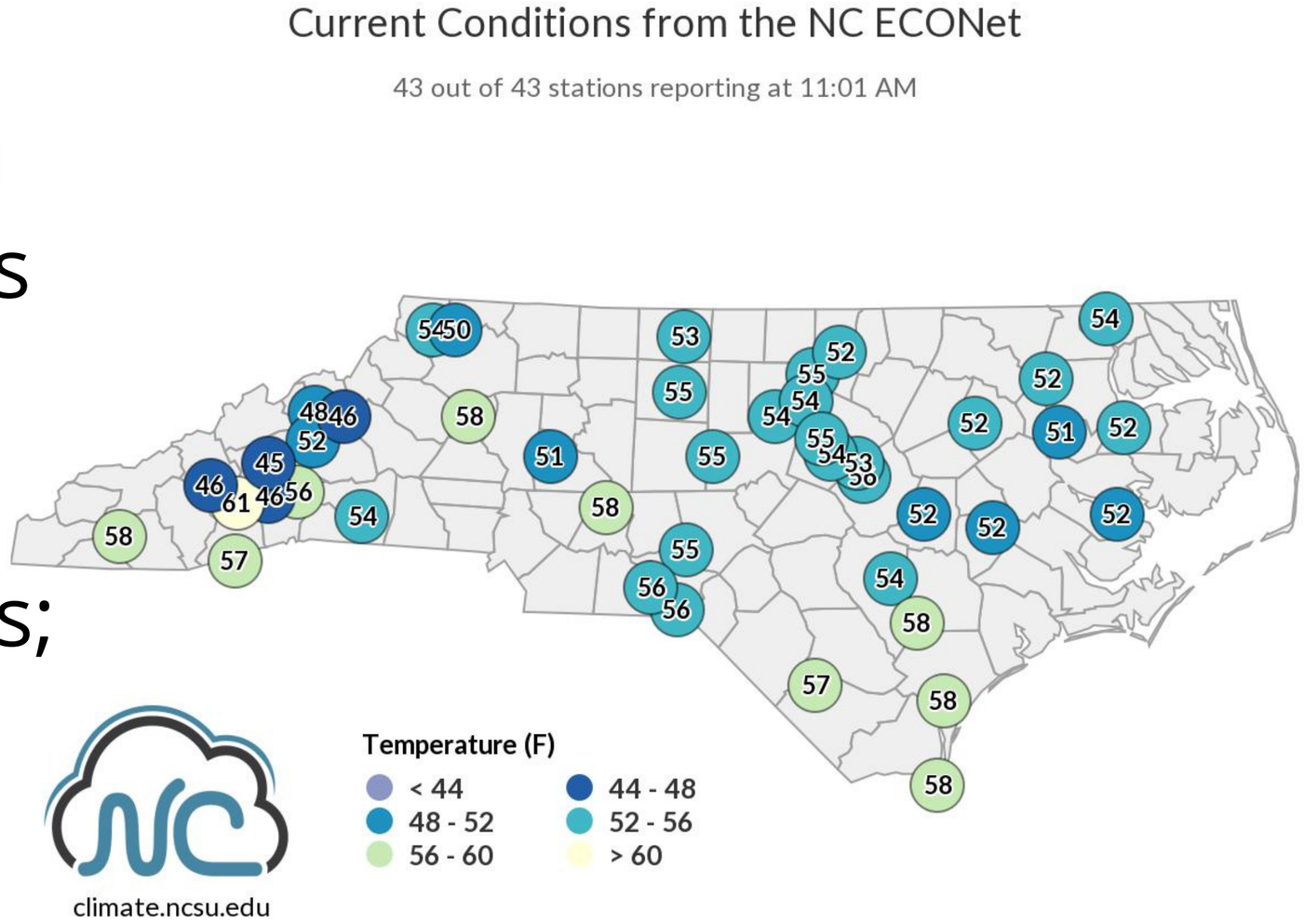
North Carolina ECONet

Pros:

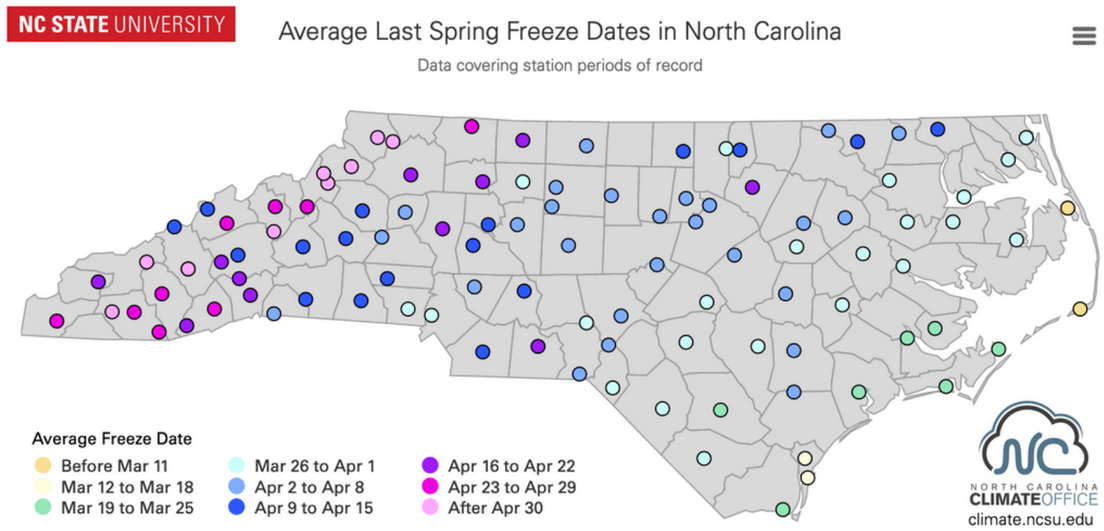
- large amounts of data
- unique measurements
- sited well/fills gaps

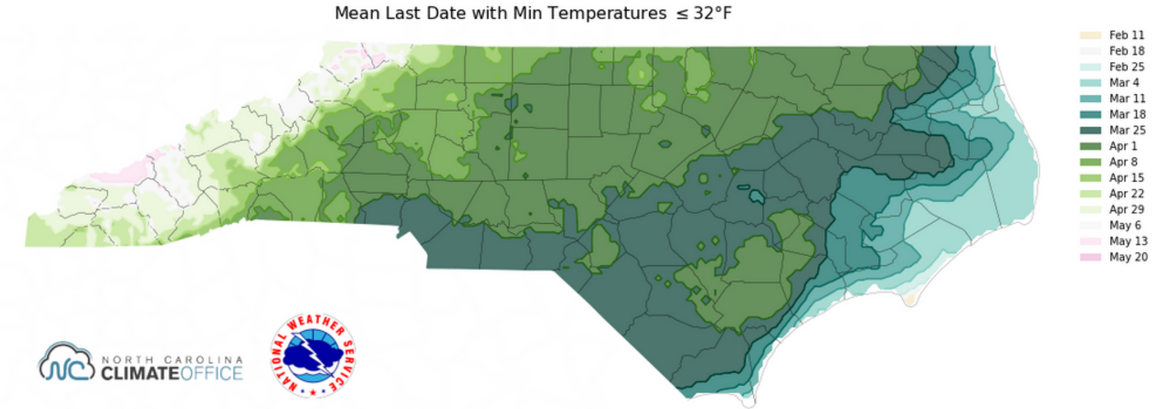
Cons:

- period of record varies; some gaps
- not good for trends analysis

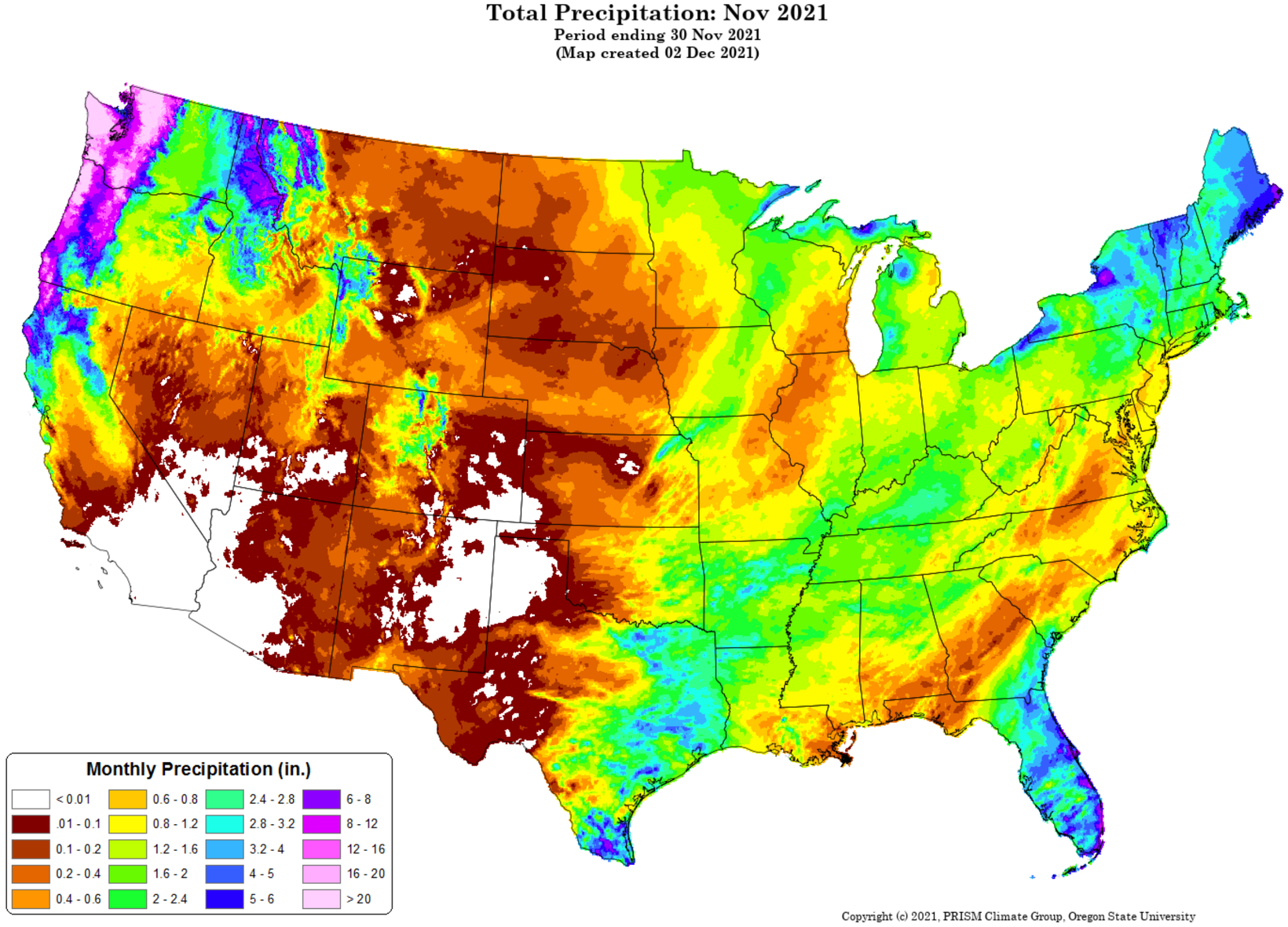


the remixes: gridded and calculated data

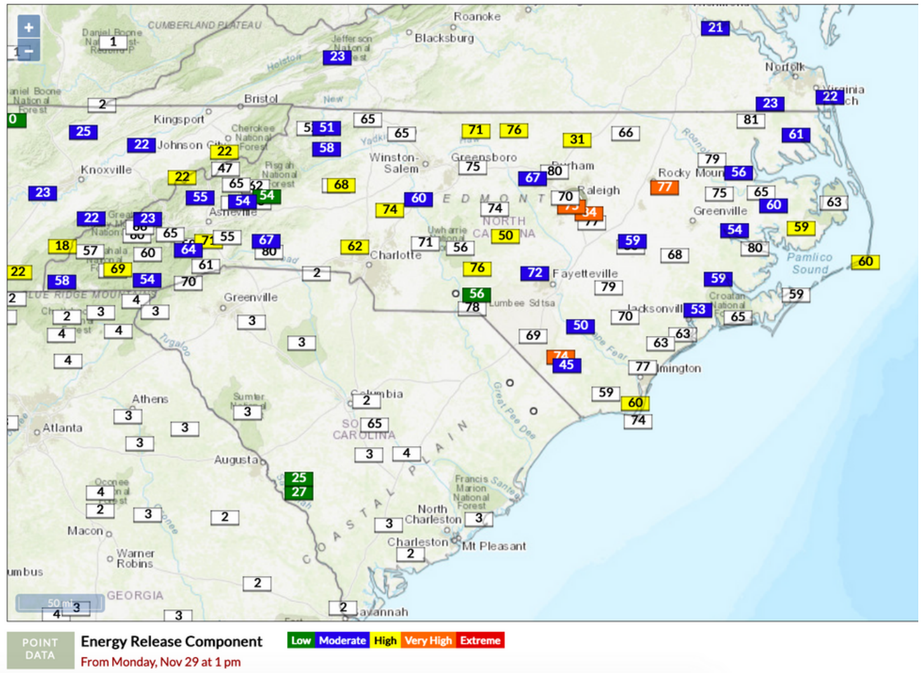




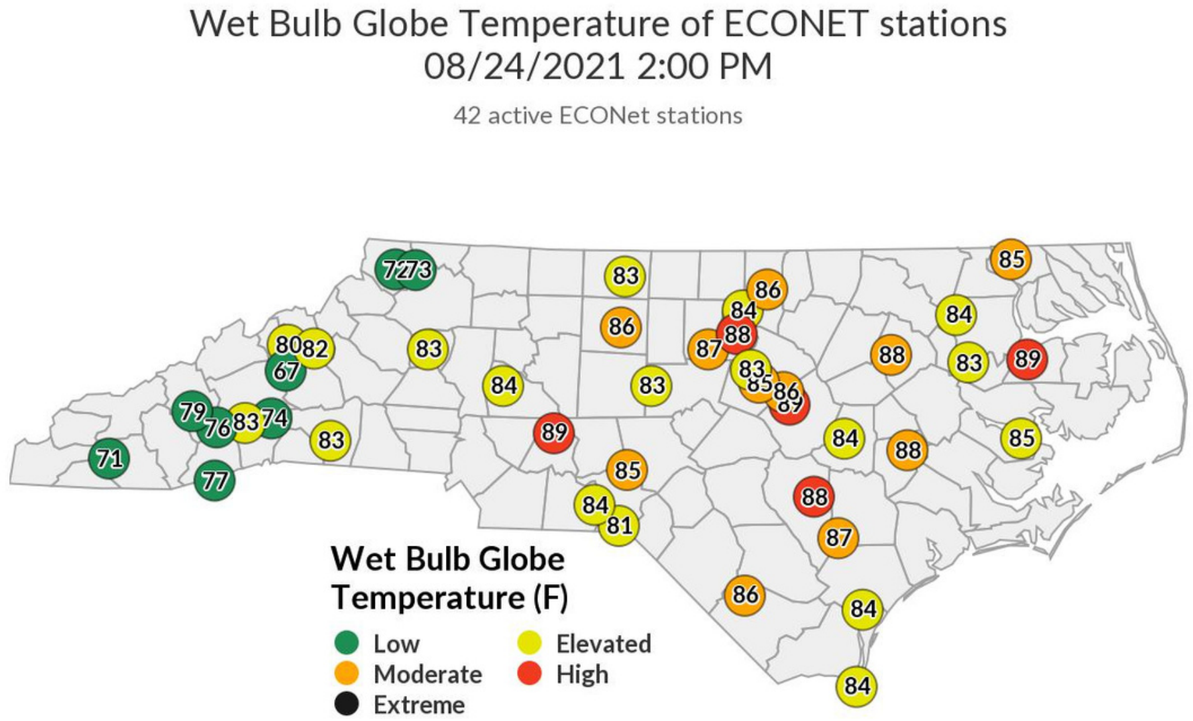
PRISM gridded climate data



calculated data: things we can't measure



fire danger



heat stress

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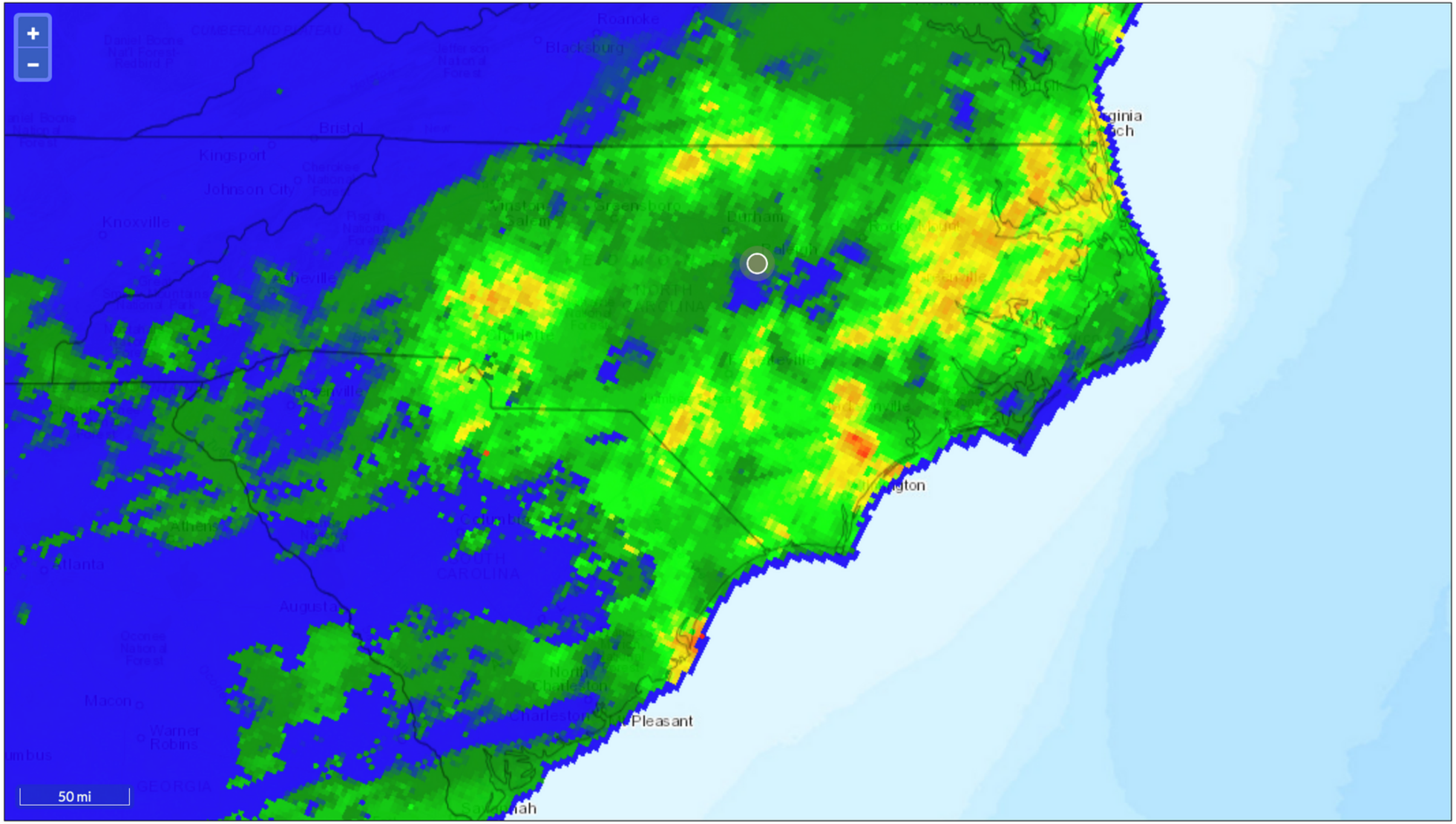
calculated & gridded data

NC STATE UNIVERSITY



Fire Weather Intelligence Portal

objective + subjective data: a little bit of science & art

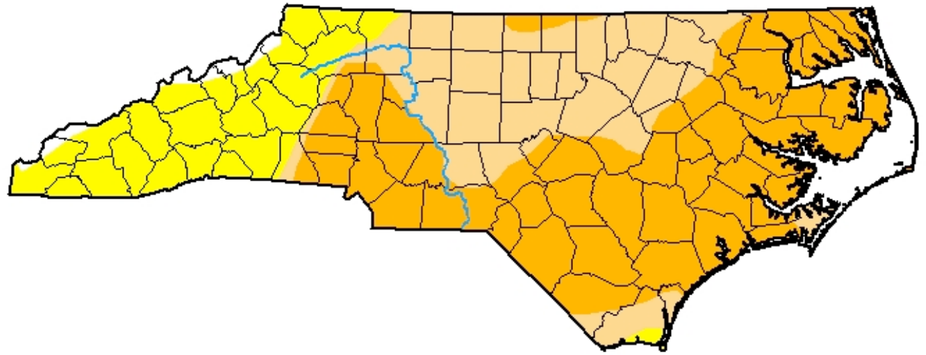
U.S. Drought Monitor

North Carolina

December 7, 2021

(Released Thursday, Dec. 9, 2021)

Valid 7 a.m. EST



Intensity:

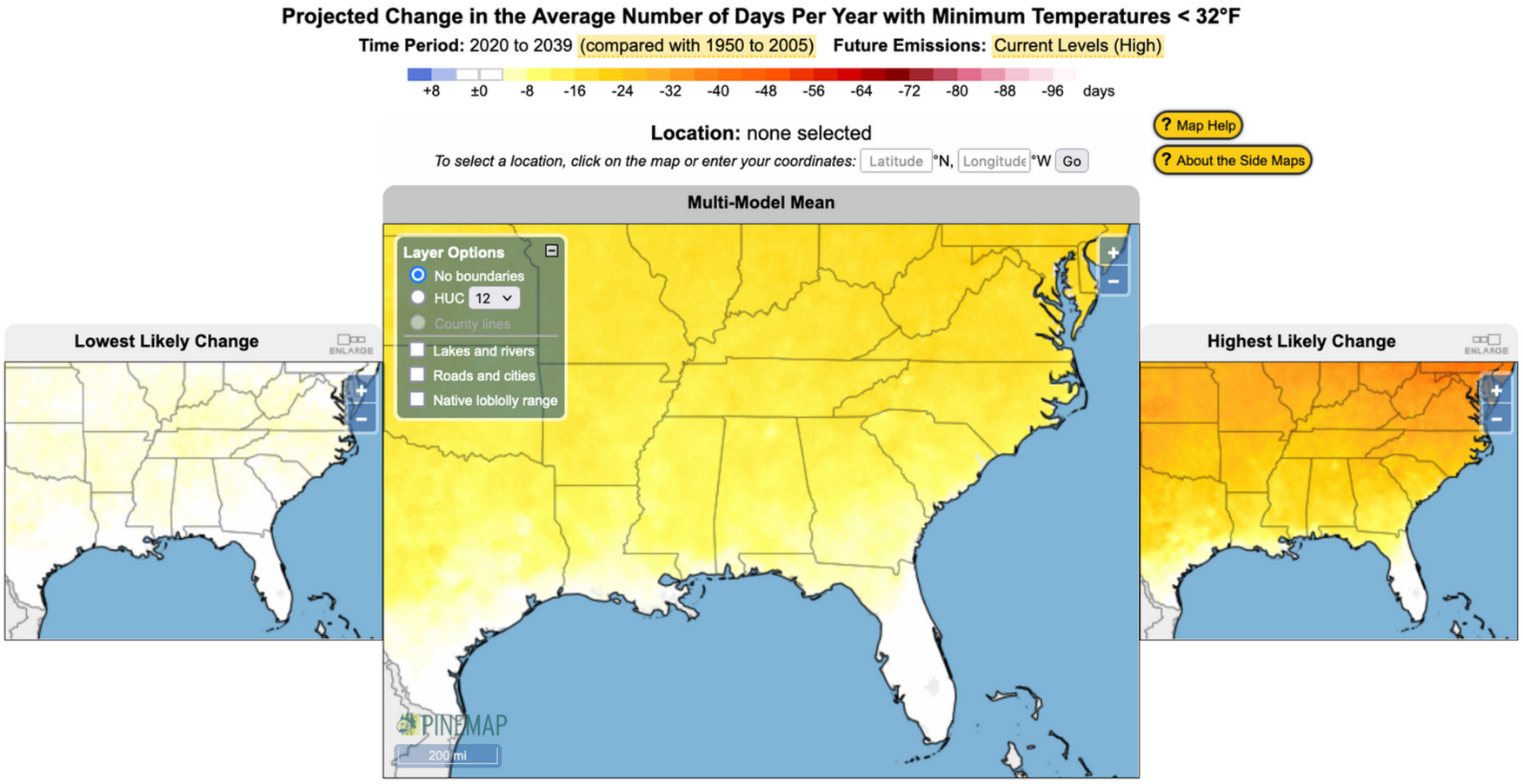
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

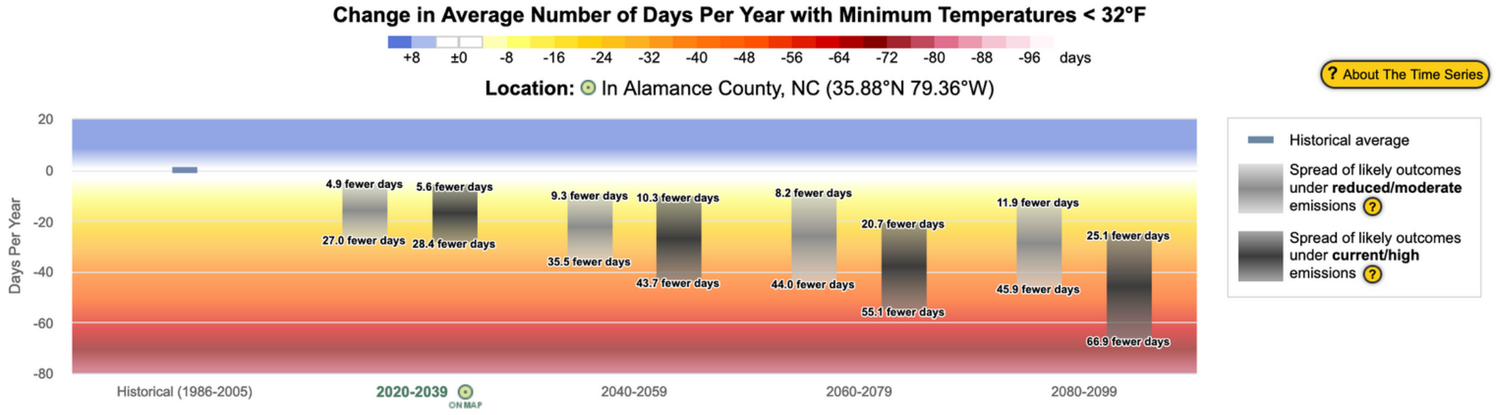
Author:

David Simeral
Western Regional Climate Center

droughtmonitor.unl.edu

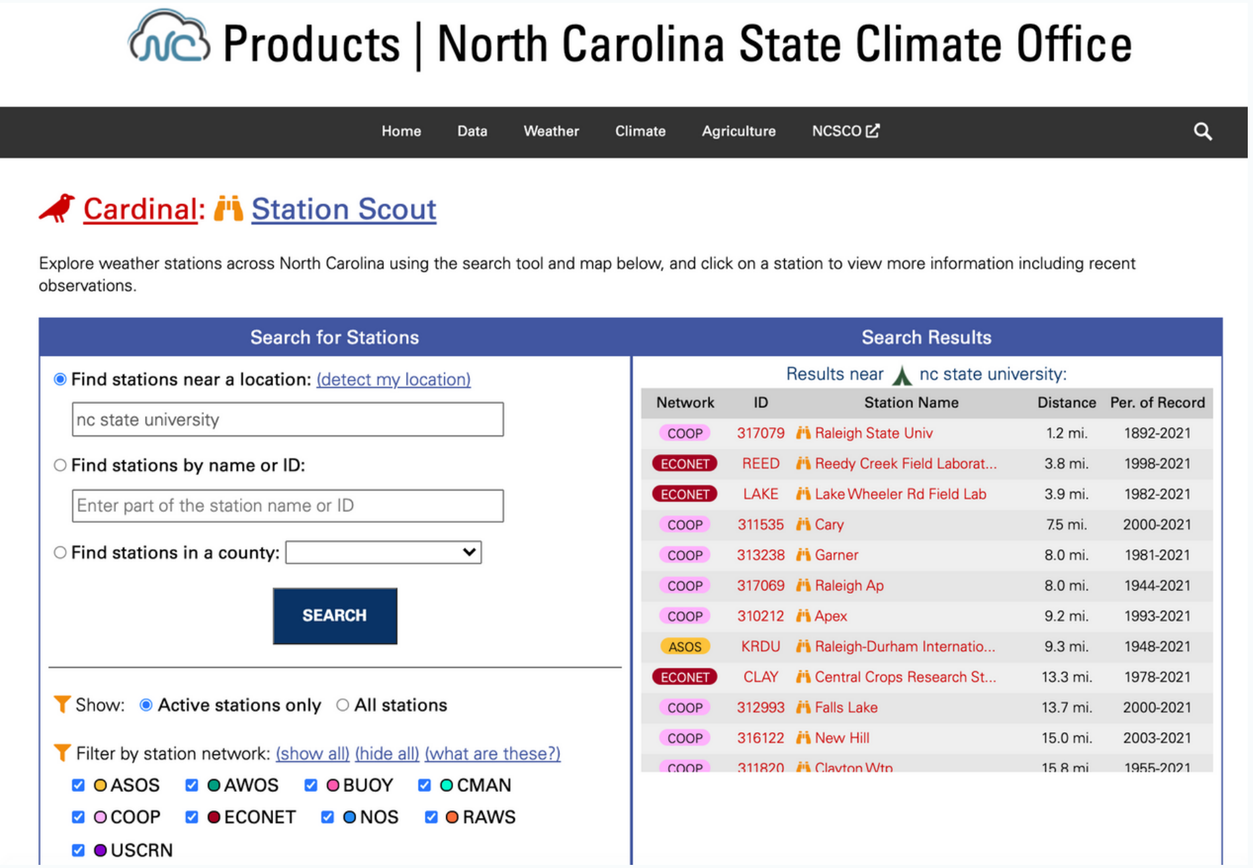


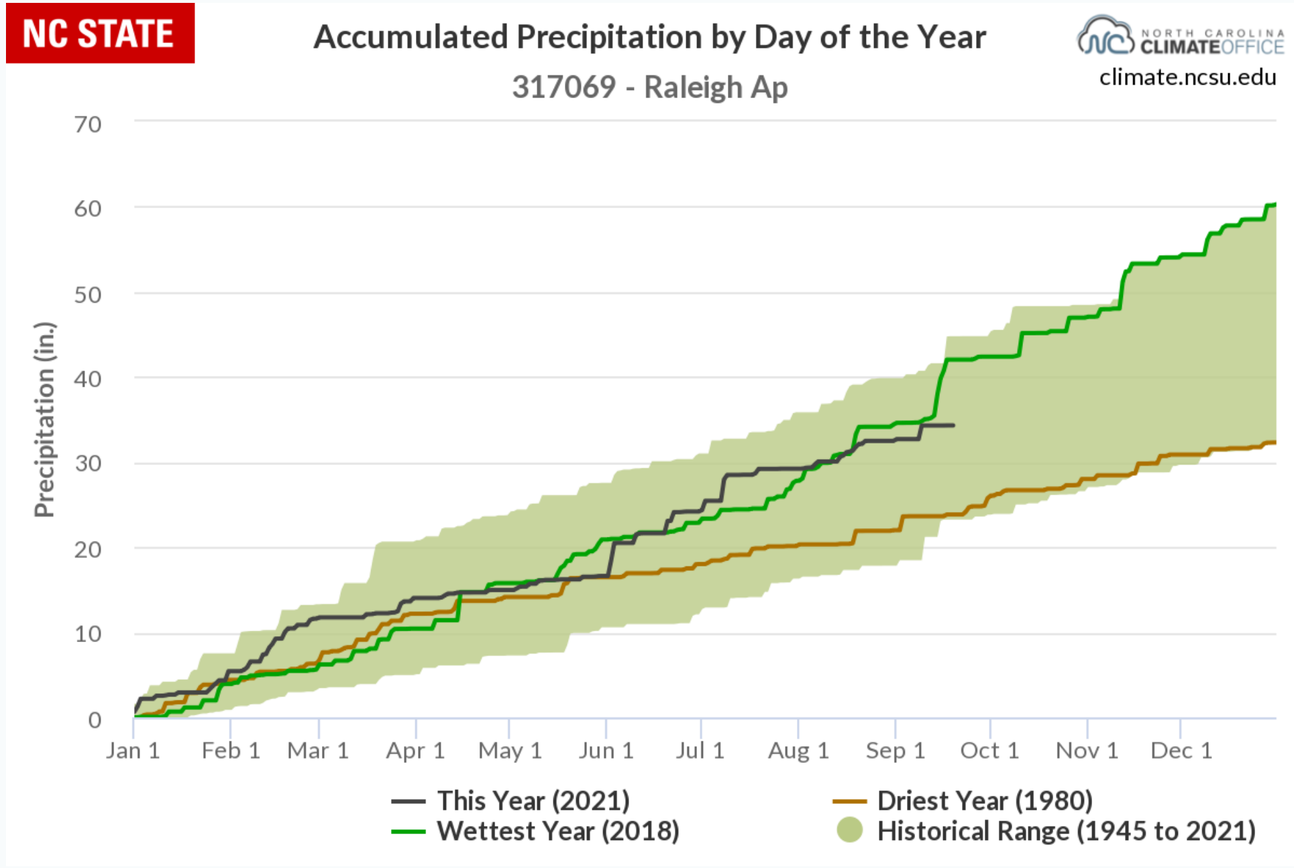
downscaled data from climate models



Cardinal & Station Scout

one-stop shop for (most of) your North Carolina climate data needs





products.climate.ncsu.edu

Trends plotter

Year Range

1940 2020

Variable Selection

Average Temperature

Time Frame

Annual

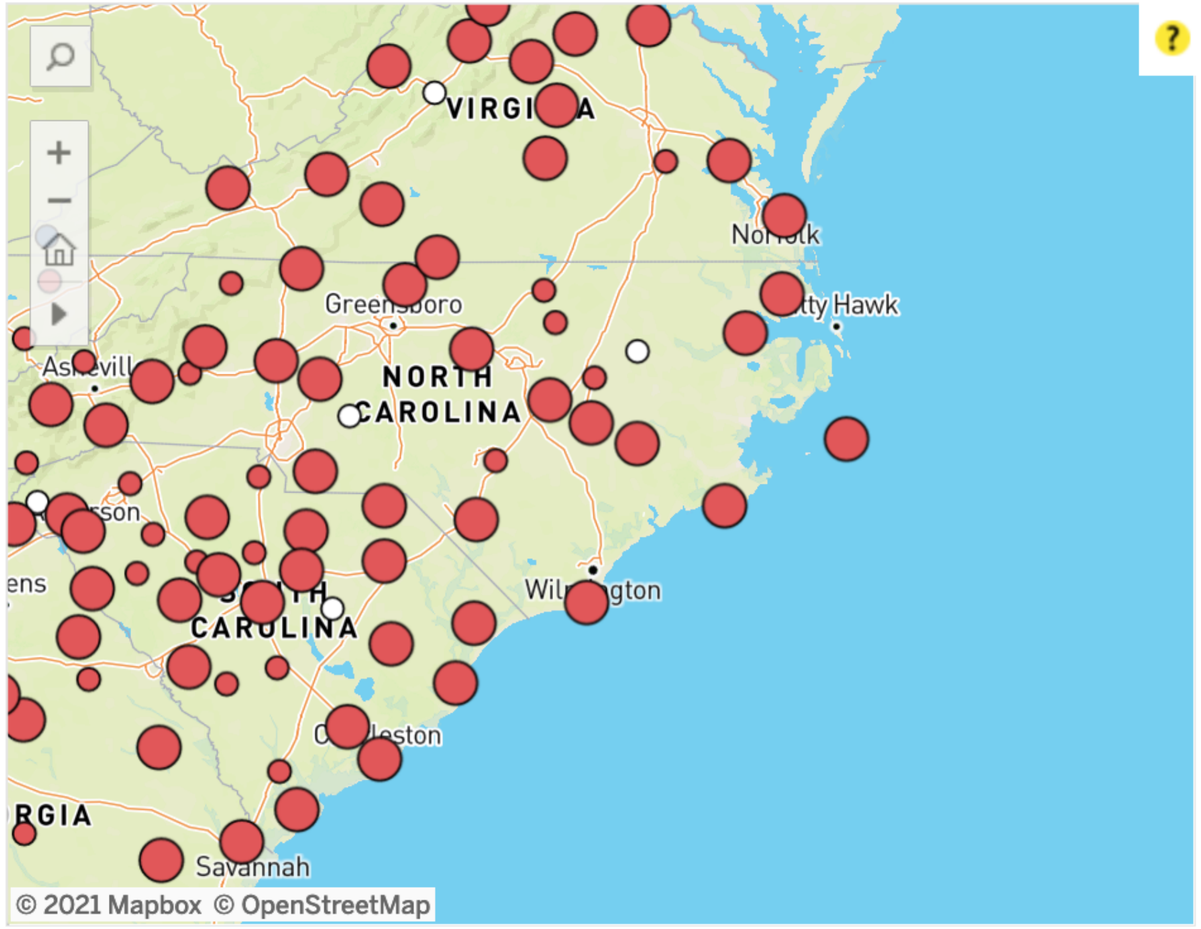
Trend Range

Per Decade

Trend	-	0	+
Significant (S)			
Not Significant (NS)			
Insufficient Data (I)			

Add to Graph

- None
- Average
- Statewide Average
- Trend Line



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HOW DO I ACCESS THESE DATA?

look at historical point data	→	Station Scout
download point data	→	Cardinal
access gridded historical/ future climate data	→	e-mail us (sco@climate.ncsu.edu)
I'm a super user	→	Clouds API
read about data	→	climate blog

upcoming!

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- 1/31(pm) and 2/1 (am): SE Chapter of the National Climate Assessment public workshop
- 2/3: Raleigh and Durham Urban Heat Island data release
- March 2022: virtual open climate data workshop (email ssaia@ncsu.edu)

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Kathie Dello, PhD
State Climatologist
Co-Lead PI, New Carolinas RISA
Carolinas Collaborative
on Climate, Health, and Equity

- @ us on twitter @ncsco