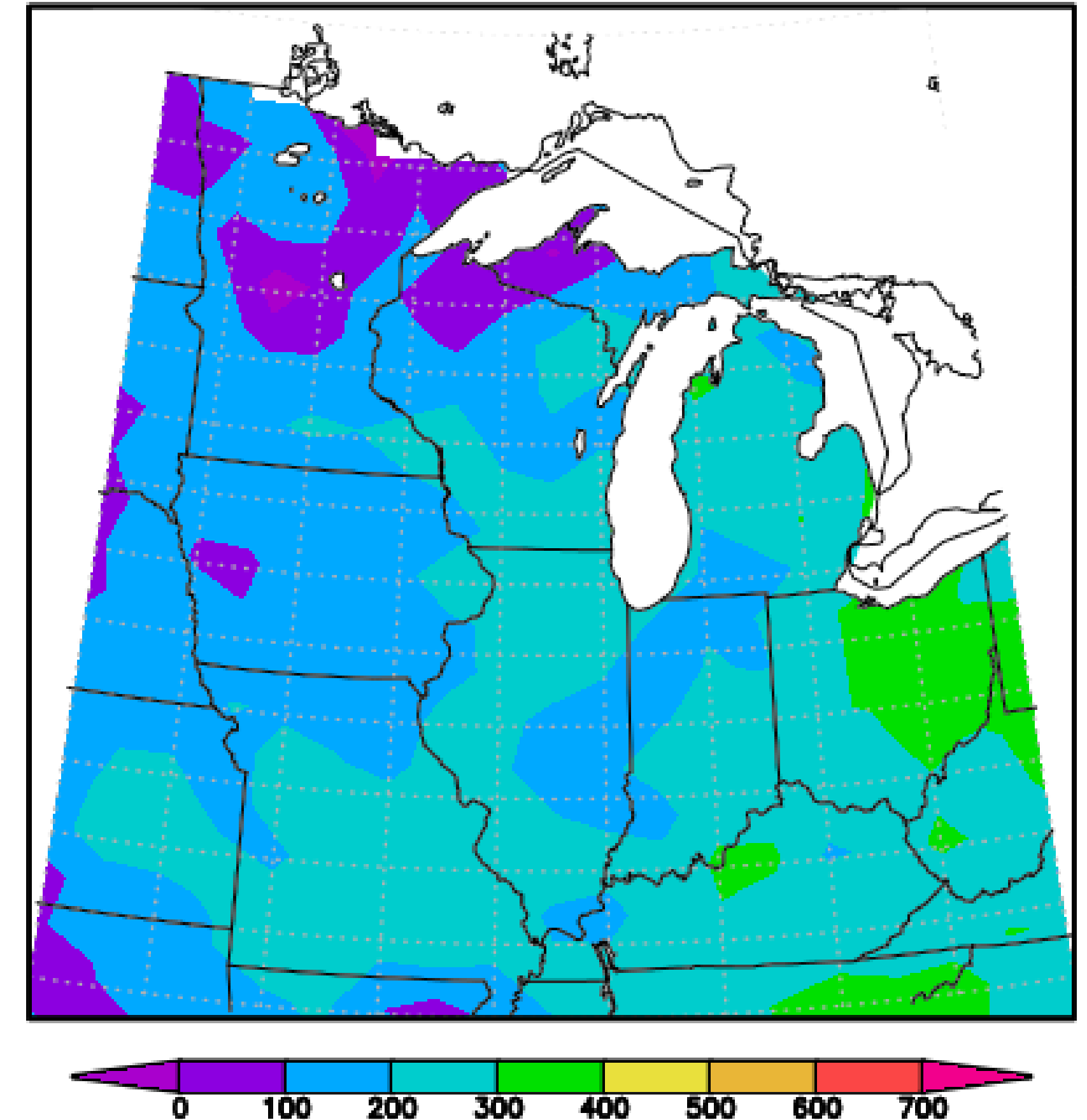


A Look at Ohio's Climate

Current Impacts on Ohio

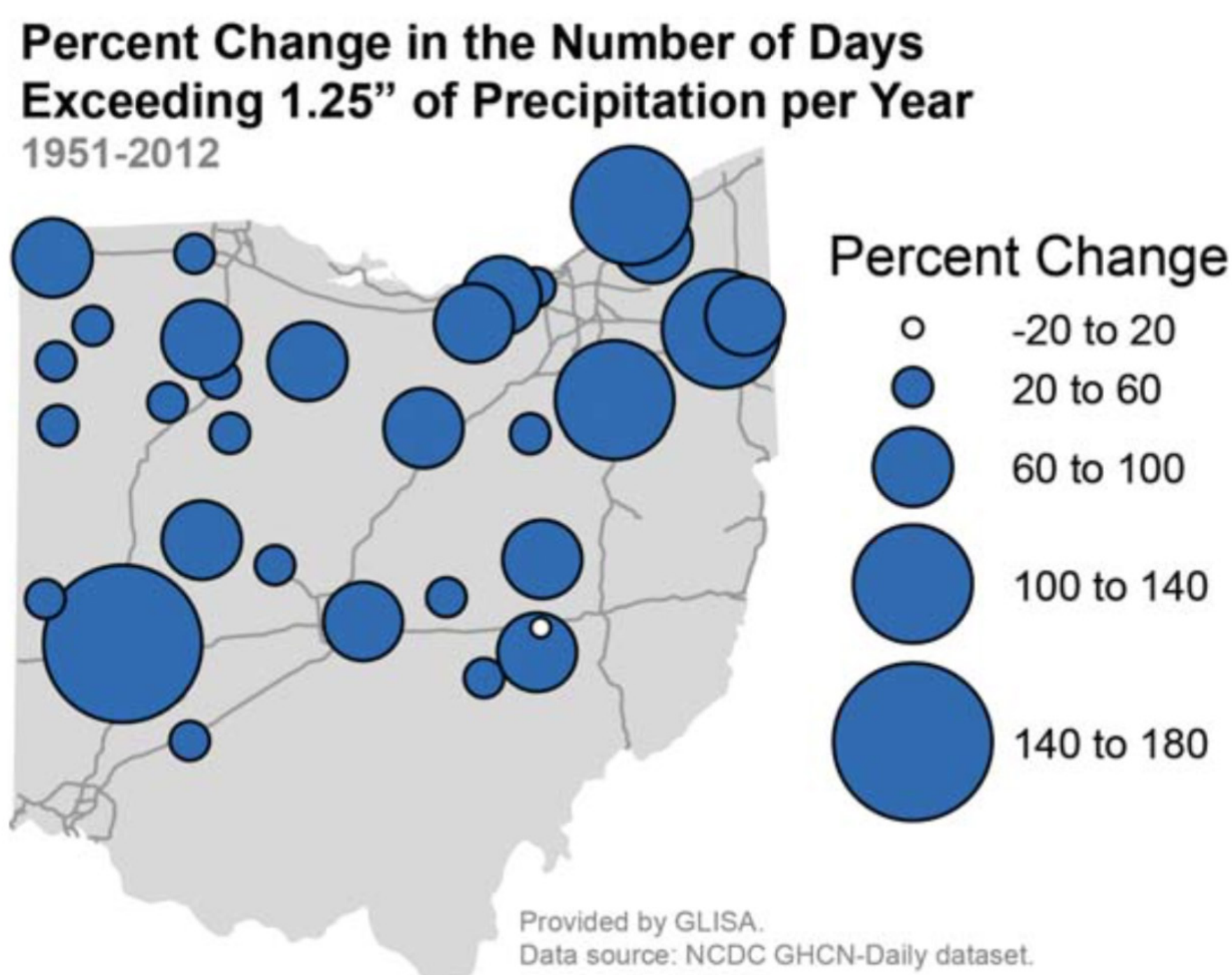
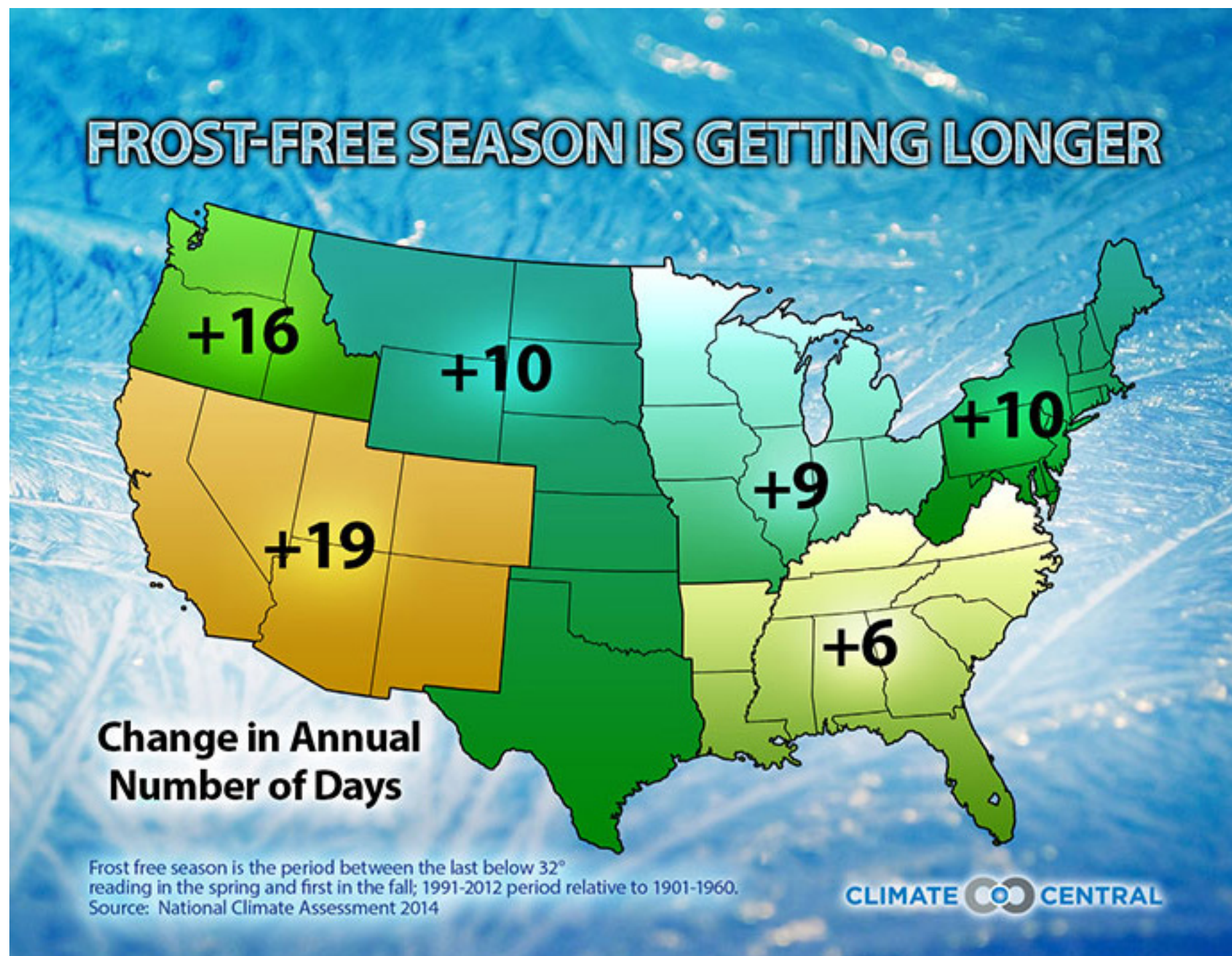
- Longer growing seasons.
- More frequent and intense severe weather, higher risks of both flooding and drought.
- Pests and pathogens moving in from the lower latitudes.
- Water availability issues. Even though precipitation may be somewhat higher year-round, higher temperatures will induce greater evaporation. Similar groundwater problems.

MGDD Departure, 4/1/2016 to 9/22/2016



Midwestern Regional Climate Center
Map above shows the difference between the current seasonal accumulation of modified growing degree days and the 1981-2010 average growing degree days. The start of season is defined as April 1.

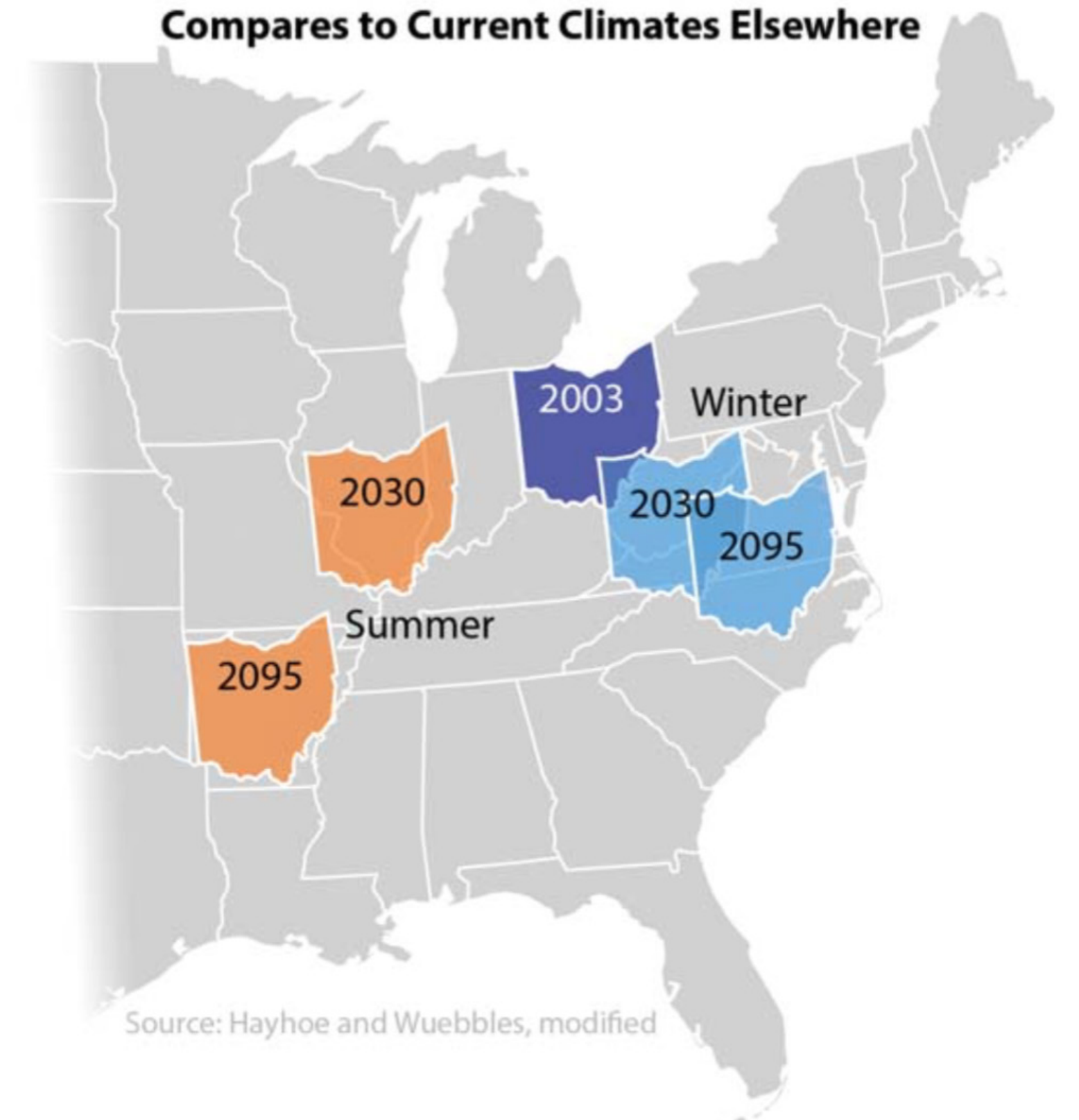
Shown on left is the percent change in the number of days per year exceeding 1.25" of precipitation recorded at high-quality weather observation stations from 1951-2012. All but two stations have observed a change greater than 20%. Nuisance flooding and other impacts begin to occur more frequently with daily precipitation totals over 1.25 inches. Long-term, contiguous climate records are limited in much of southern Ohio.



Potential Future Impacts on Ohio

- Rising nighttime temperatures throughout the year, including summer (higher summer humidity).
- Wetter summers and autumns.
- More high rainfall events, tending to occur in summer after longer than usual dry spells.
- More humid and wet summers suppress daytime high temperatures. Only droughts produce record high temperatures.
- Winters are not as cold as they used to be.
- False springs are more common (early spring ended by cold waves).

How the Future Climate of Ohio Compares to Current Climates Elsewhere



Based on temperature, humidity, and precipitation, future summers in Ohio might resemble those in Arkansas, and winters may become similar to those in Virginia.

Maps on left show projected increases in annual average temperatures by mid-century (2041-2070) as compared to the 1971-2000 period and annual projected increases in the number of the hottest days (days over 95°F). Projections are from global climate models that assume emissions of heat-trapping gases continue to rise (A2 scenario). (Figure source: NOAA NCDC / CICS-NC).

