



The National Drought Mitigation Center Drought Atlas

**Brian Fuchs, Climatologist
National Drought Mitigation Center
School of Natural Resources
University of Nebraska-Lincoln**

September 14-17 2009

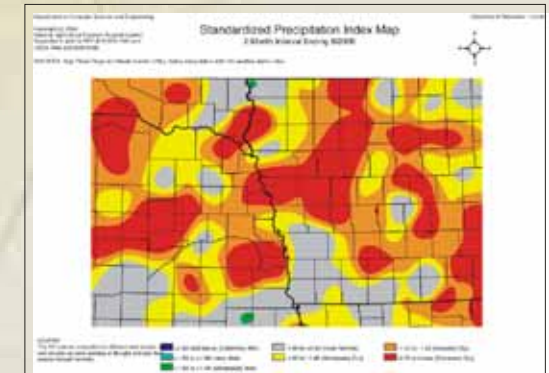
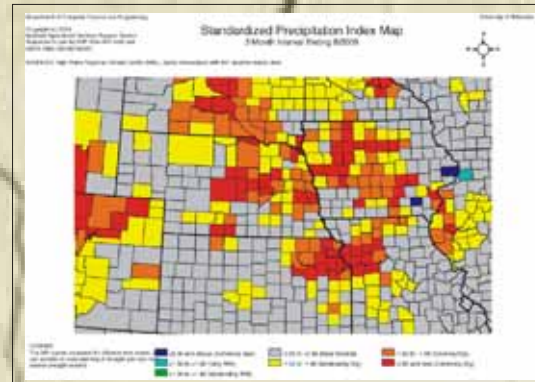
Bamako, Mali



Drought Atlas:

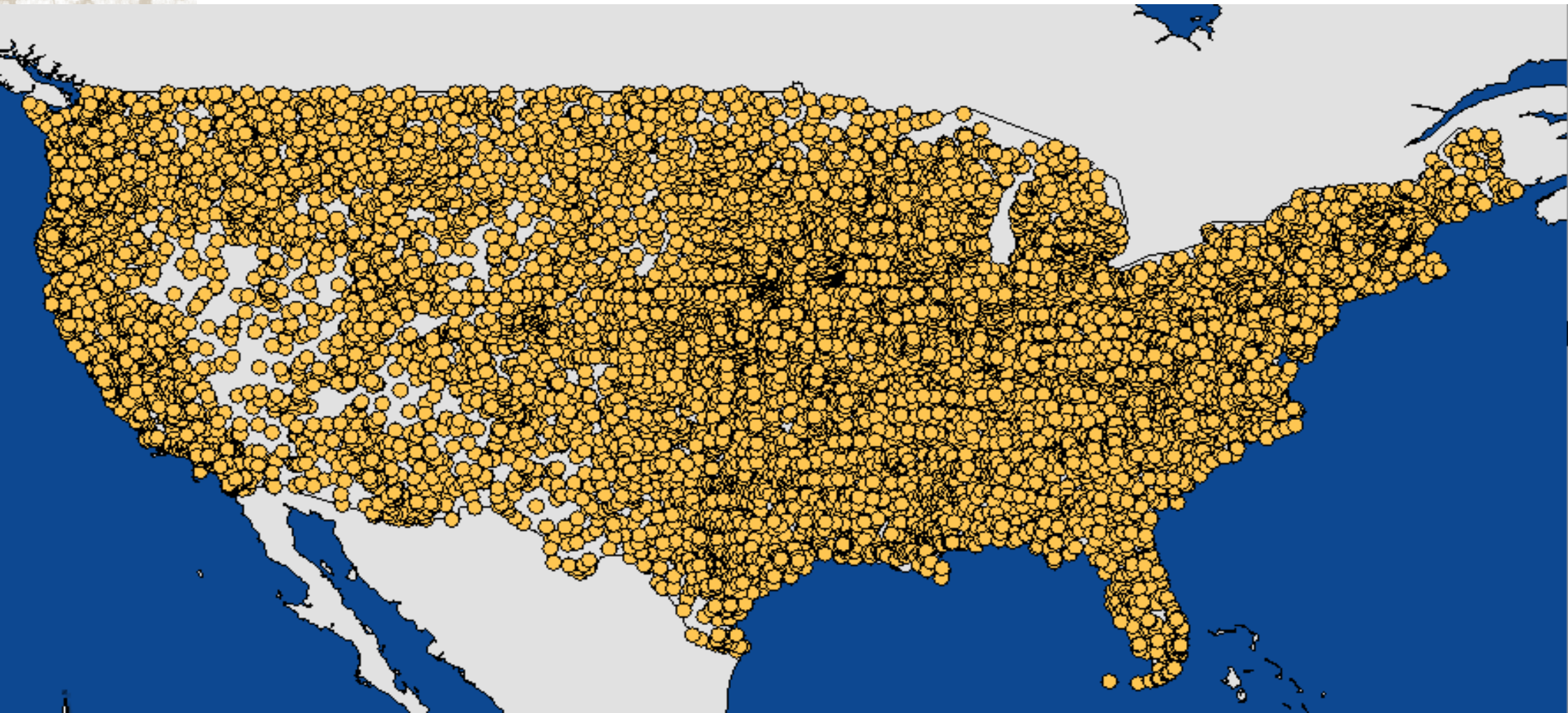
Understanding Past and Present Droughts and Future Risk

Mark Svoboda, Brian Fuchs, Dr. Michael Hayes, Dr. Jae Ryu, Soren Scott, and Jun Li, NDMC/UNL; Ned Guttman, NOAA/NCDC; Bill Sorenson and Jinsheng You, HPRCC/UNL; Ian Cottingham, CSE/UNL; Sandra Jones and Jeff Nothwehr, NDMC/UNL



The goal of the atlas is to provide usable tools and products for users at all levels by giving them the ability to visualize and assess their drought risk through a variety of web-based options. The example above shows how producers and other decision makers can assess drought at a variety of time scales and at user-defined spatial levels.

Over 12,000 Cooperative Observing Network (COOP Stations)



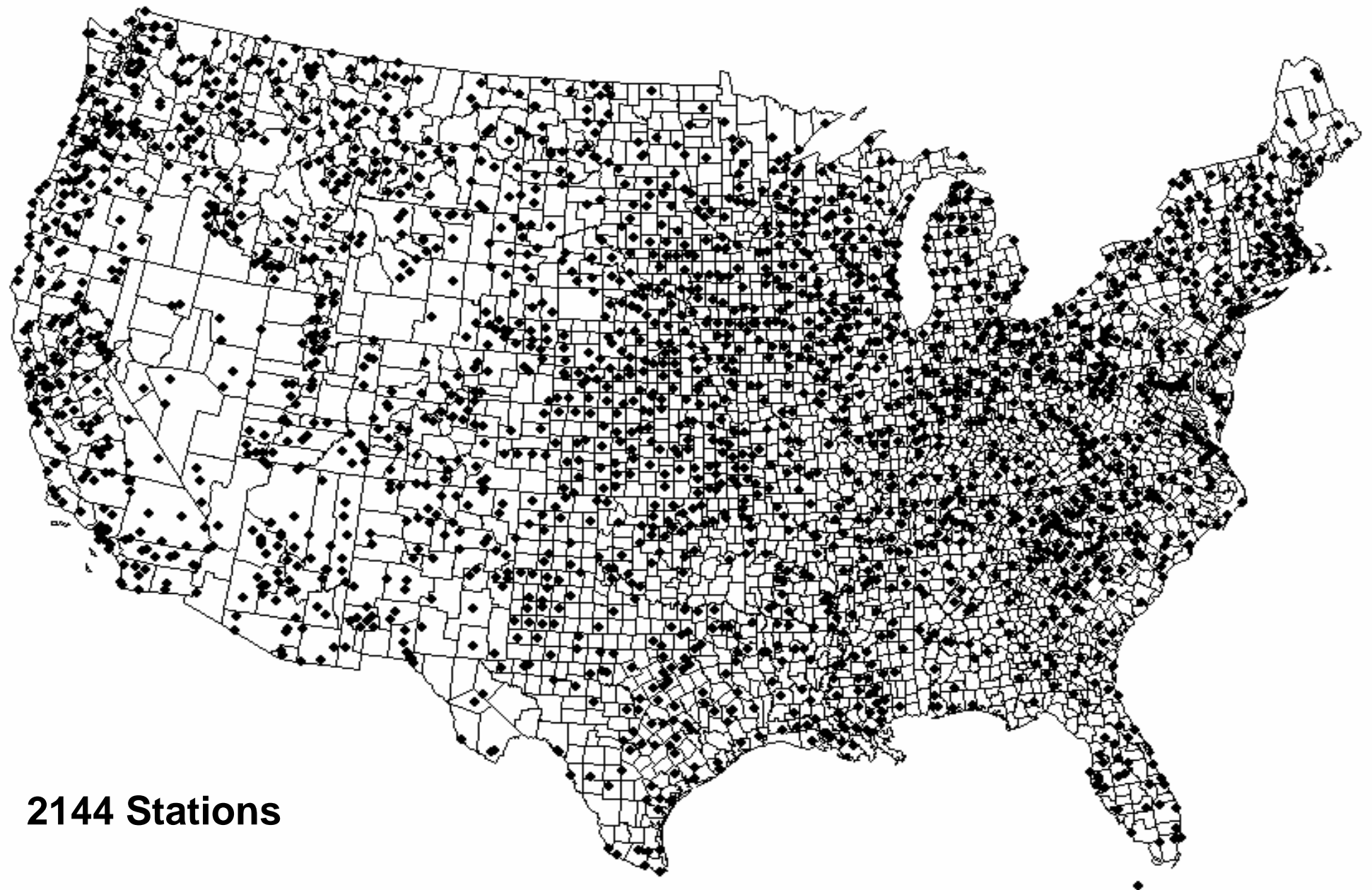
Data Criteria for the Drought Atlas

- Minimum of 40 years of Data (original drought atlas, 40 years was the maximum used)
- No more than 2 consecutive months missing at any time in the POR
- Established unique start dates for each station

Stations being used for the Drought Atlas

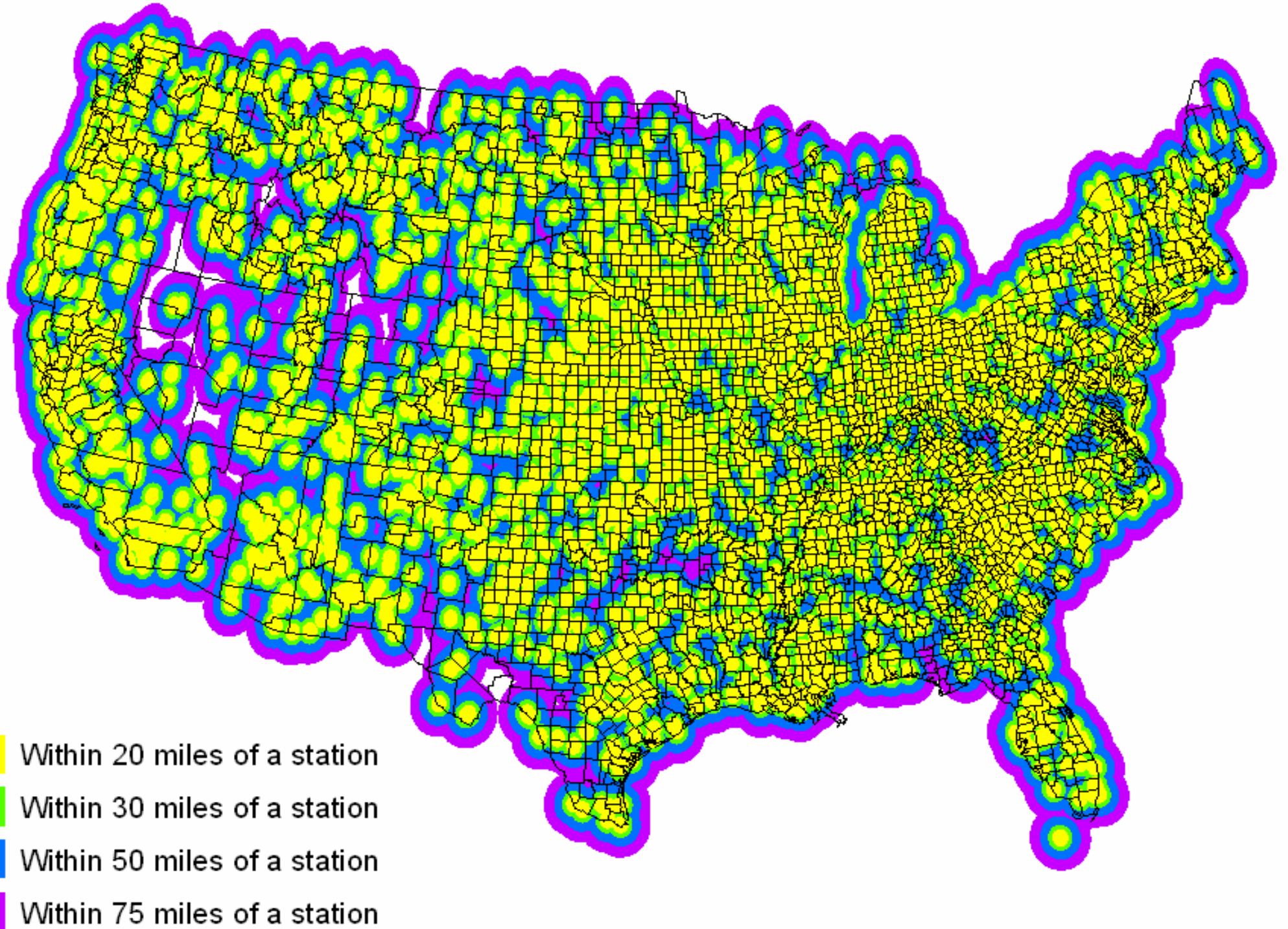
- **2,144** stations with 40 or more years of precipitation data meeting all criteria
- **1,964** stations with 40 or more years of temperature and precipitation data meeting all criteria
- Just over 1,000 stations were used in the original Drought Atlas

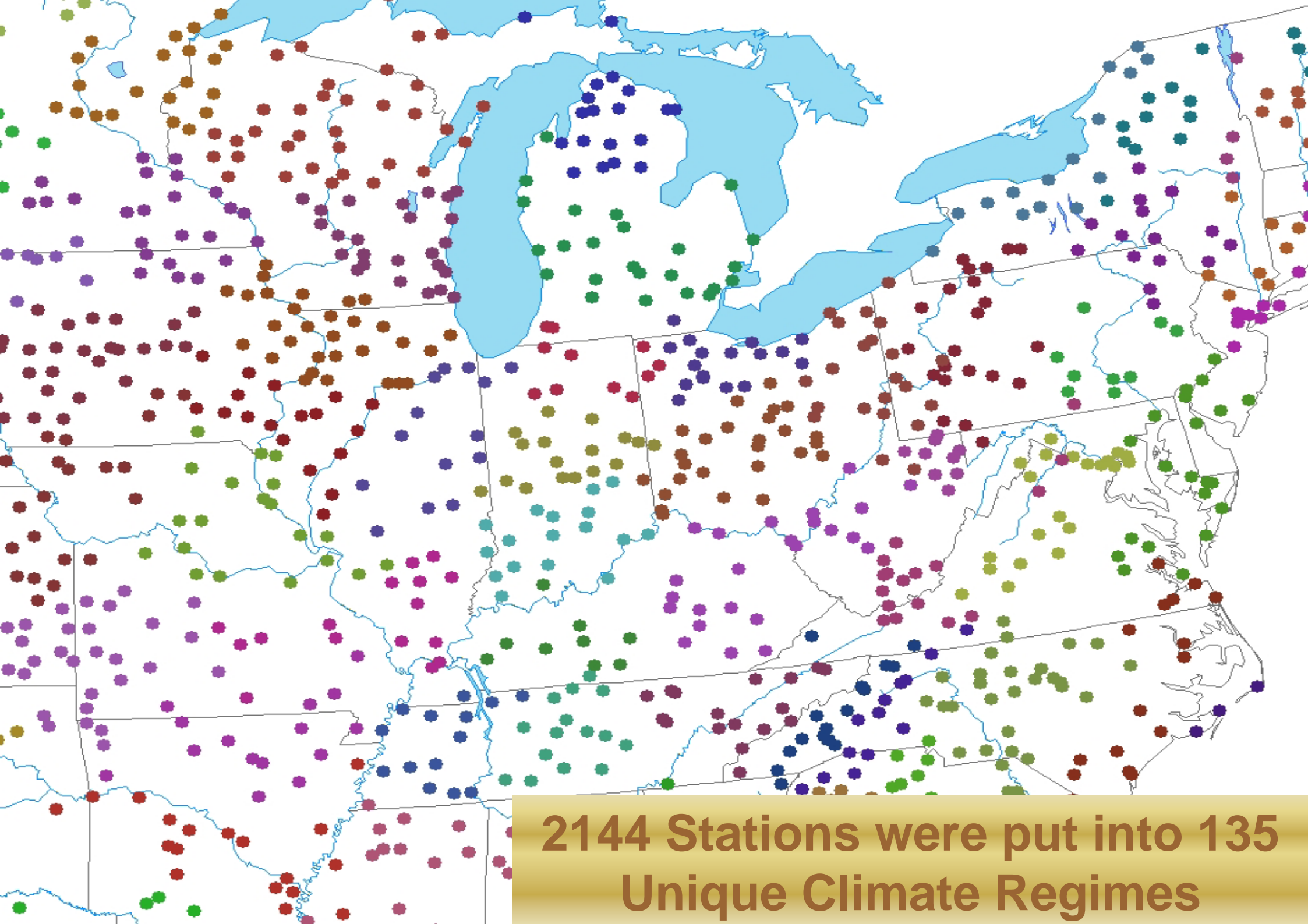
Stations with 40 Plus Years of Data



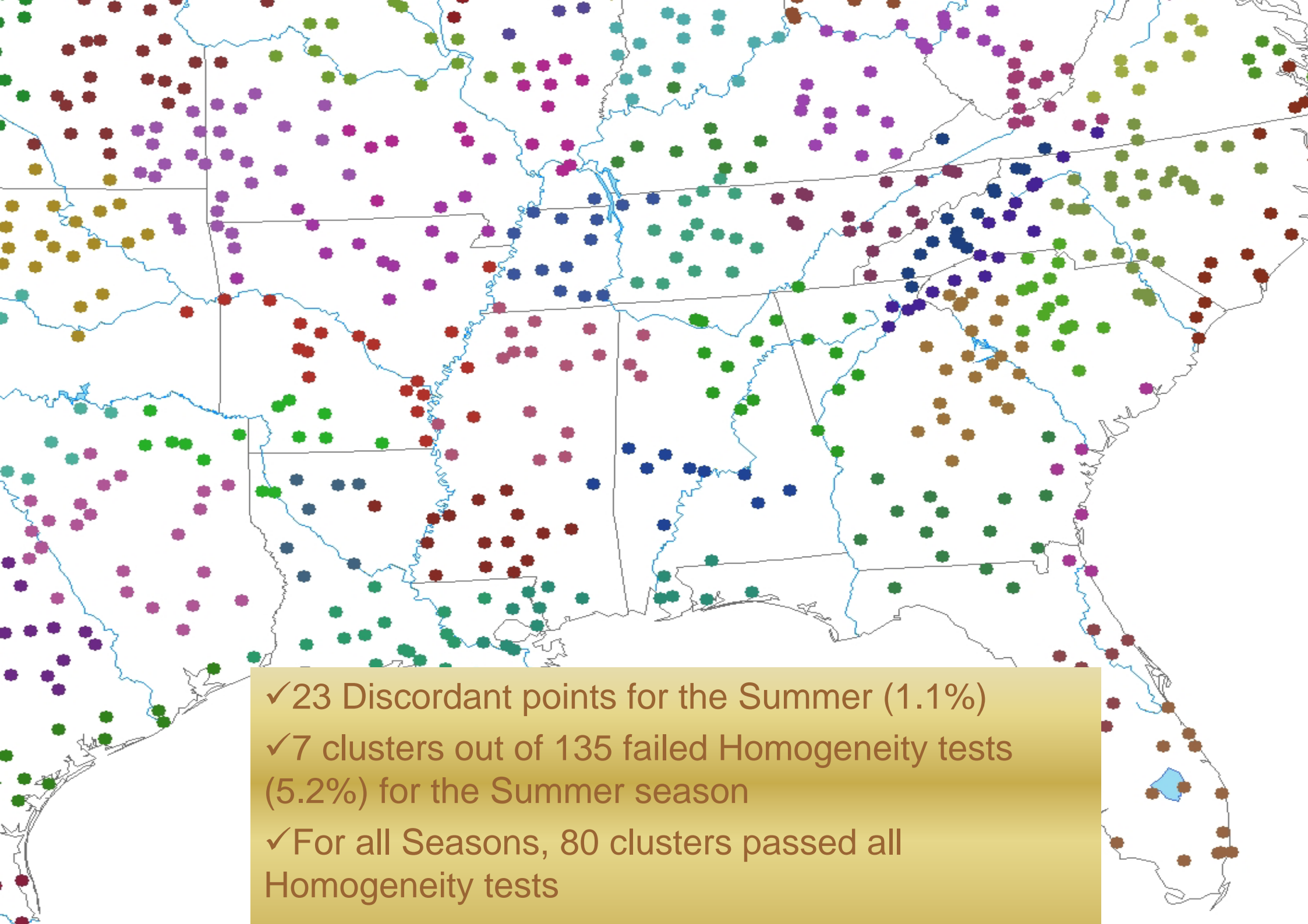
2144 Stations

Stations with 40 Plus Years of Data Buffers





**2144 Stations were put into 135
Unique Climate Regimes**



✓ 23 Discordant points for the Summer (1.1%)
✓ 7 clusters out of 135 failed Homogeneity tests (5.2%) for the Summer season
✓ For all Seasons, 80 clusters passed all Homogeneity tests

➤ **For all Seasons, 46 out of 135 Clusters had no discordant points**

➤ **Homogeneity Failures by Season**

- Winter 15
- Spring 18
- Summer 7
- Autumn 33

➤ **Discordant points by Season**

- Winter 45
- Spring 50
- Summer 23
- Autumn 48

Thank You

Any Questions ?

Please contact me at:

Brian Fuchs

National Drought Mitigation Center

402-472-6775

bfuchs2@unl.edu