



The National Drought Mitigation Center Drought Atlas

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United States Drought Monitor Forum

October 7-8 2009

Austin, Texas

What is Drought?

Planning for Drought

Monitoring Drought

Drought Risk and Impacts

Mitigating Drought

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Quick Links:

NDMC's Drought Impact Reporter
U.S. Drought Monitor
Drought for Kids
For Media
Other Drought-related Sites

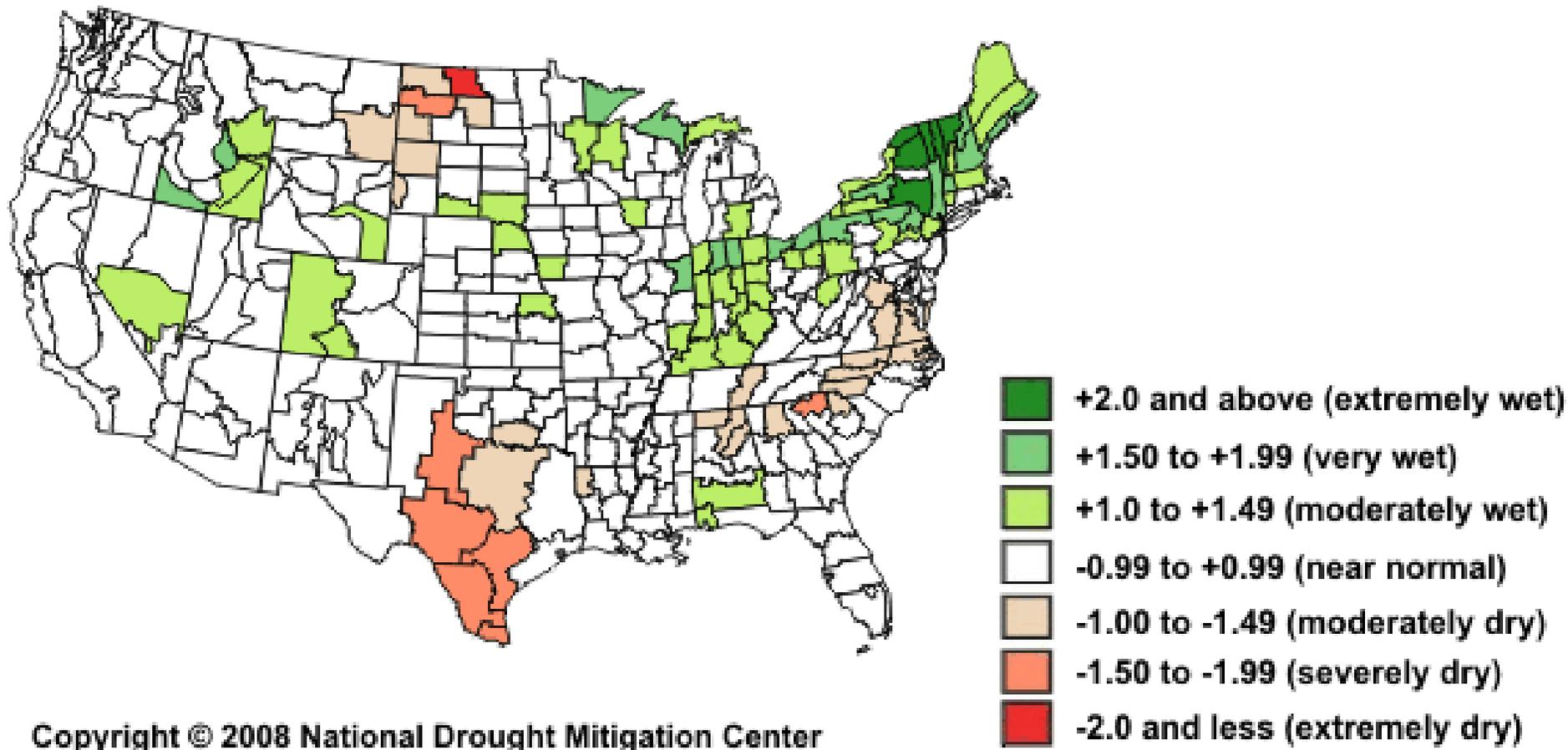
■ **Monitoring Drought**

■ **The Standardized Precipitation Index**

■ **Archived SPI Maps**

- [2009 SPI map archive](#)
- [2008 SPI map archive](#)
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6-month SPI through the end of February 2008



[DOC](#) > [NOAA](#) > [NESDIS](#) > [NCDC](#)

[Land-Based Data](#) / [NNDC CDO](#) / [Product Search](#) / [Help](#)

Retrieve data for:

Select Nation:

* Divisional data is only available for the U.S.

Select Period Start:

Select Period End:

Text Output:

Interactive Graphs

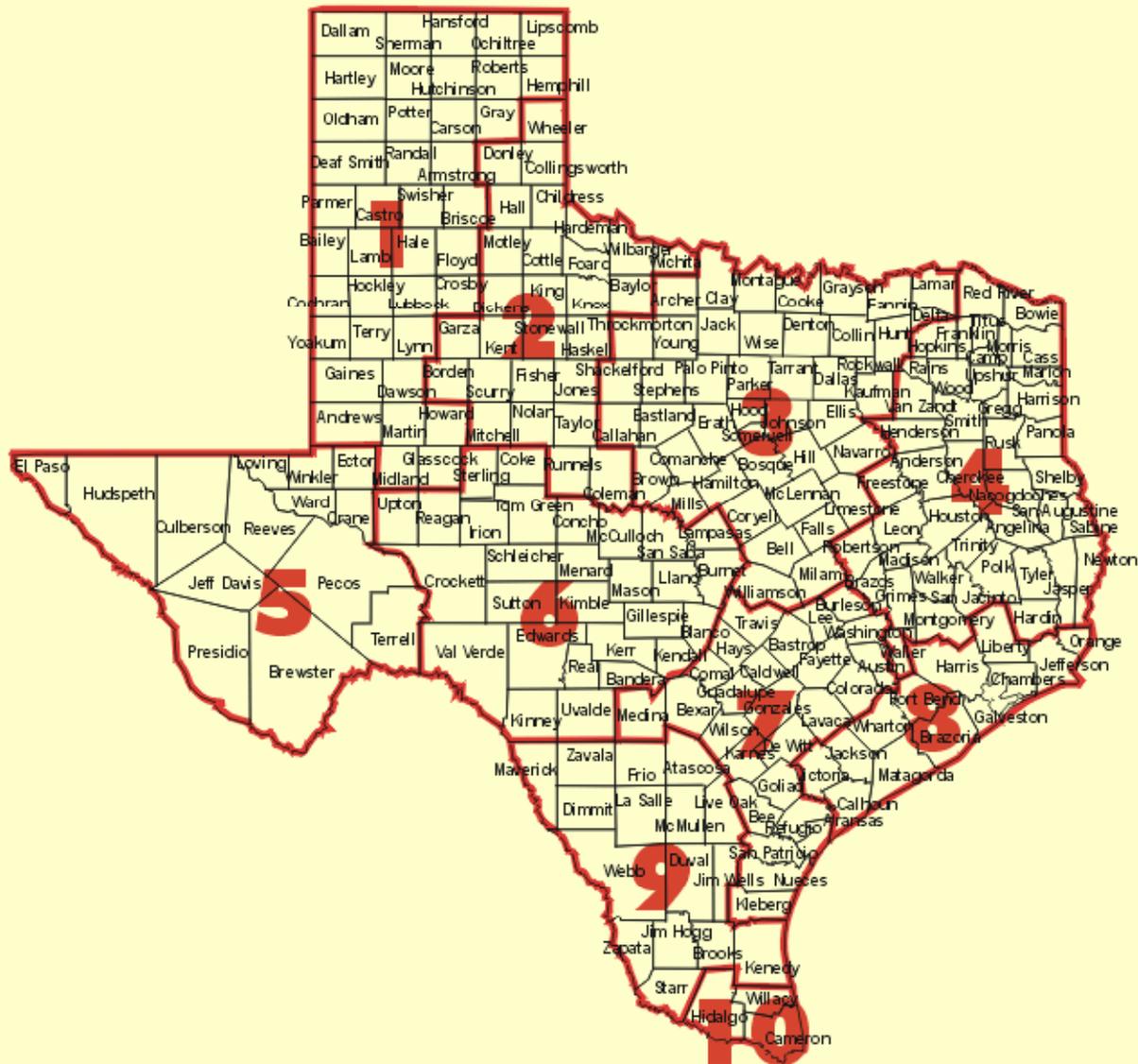
Static Graphs

Show

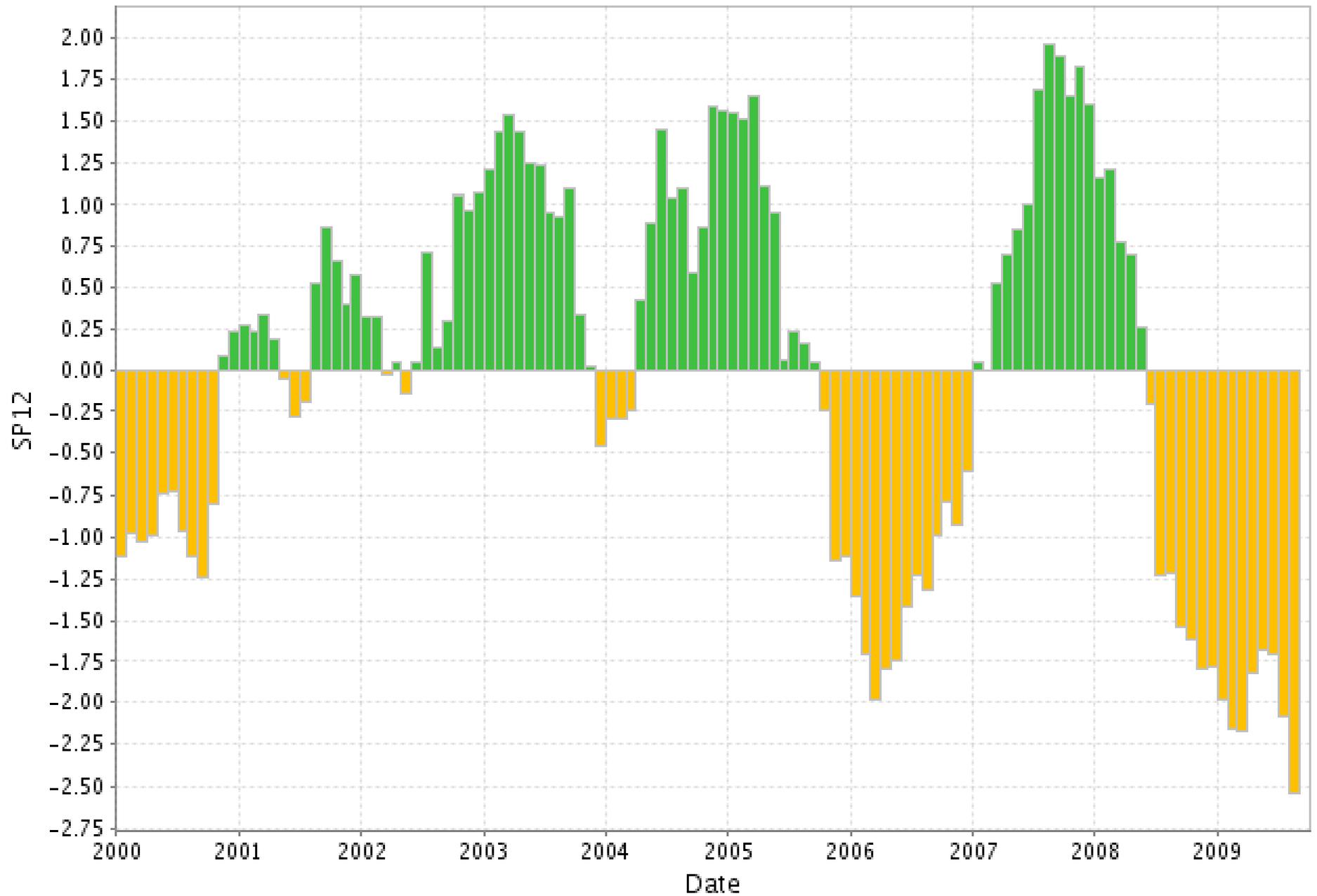
[Divisional Data Description](#)
[Space Delimited Sample](#)

[Graph Output Sample](#)
[Comma Delimited Sample](#)

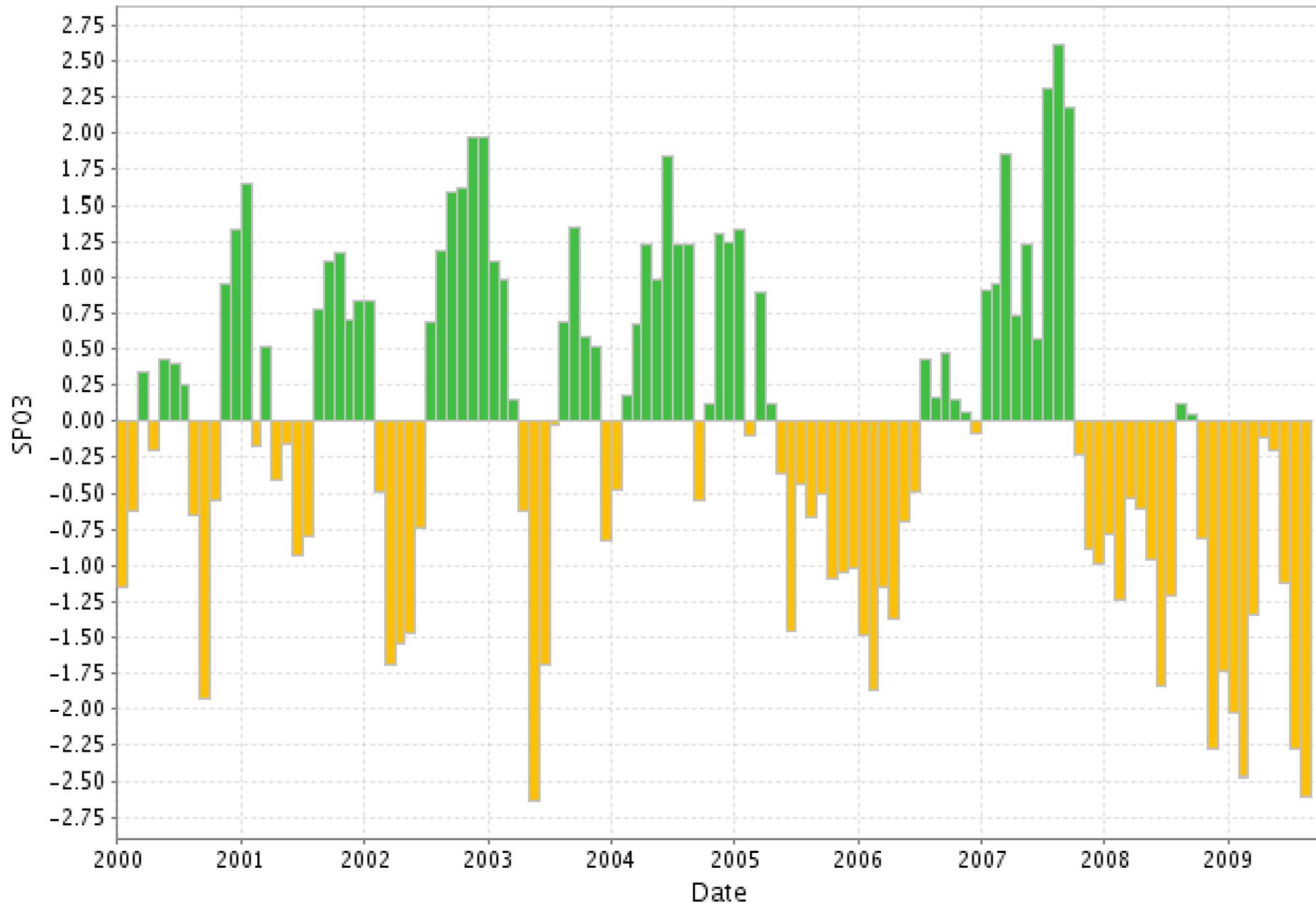
Texas



TX South Central - SP12 200001 - 200910



TX South Central - SP03 200001 - 200910



What is Drought?

Planning for Drought

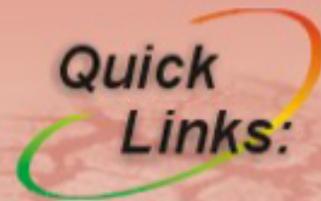
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■ Monitoring Drought

■ Daily Gridded Standard Precipitation Index

Select a map from one of the following lists:		
Updated Daily --- Select a map --- --- Select a map --- 30-Day SPI 60-Day SPI 90-Day SPI 6-Month SPI 12-Month SPI Year-to-date (since Jan. 1) SPI Water Year (since Oct. 1) SPI	Last Month / Season / Year --- Select a map ---	Previous Month / Season / Year --- Select a map --- -Month- -Year-

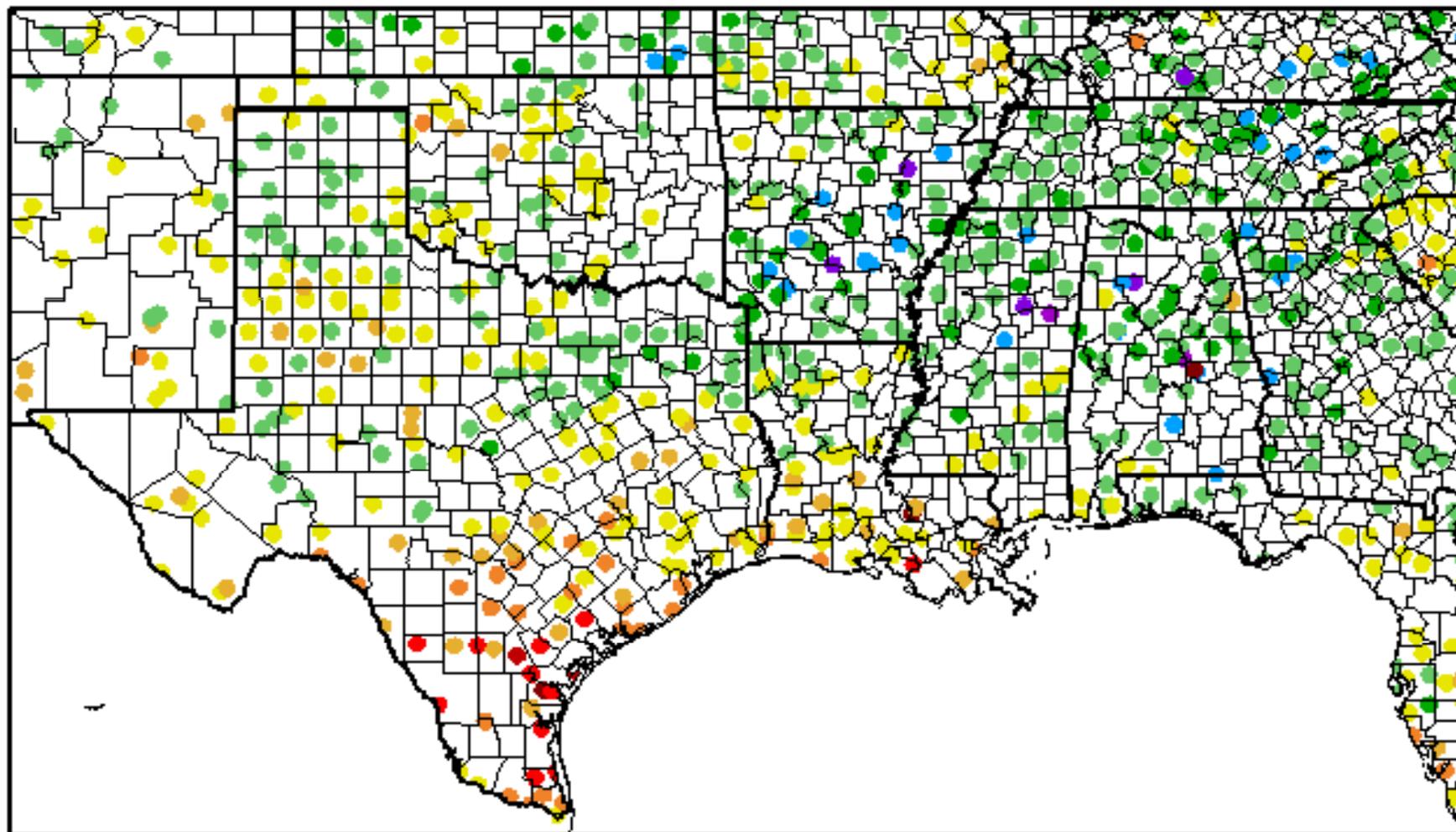
Powered by 
NOAA Regional Climate Centers

This is an **Experimental Climate Product!** These maps include provisional, preliminary and final data. Very limited quality control is performed on provisional data, and these products should be used with caution. The best available data is incorporated as it becomes available. For more information, please click here (Coming Soon)

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12 Month SPI

10/2/2008 - 10/1/2009



Generated 10/2/2009 at HPRCC using provisional data.

National Drought Mitigation Center

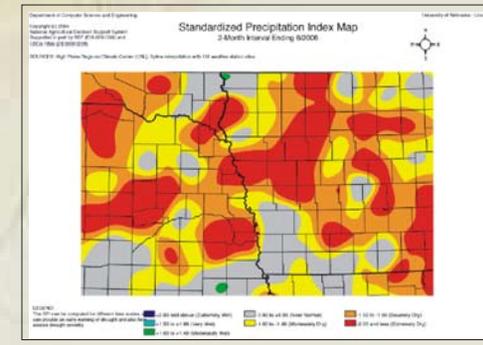
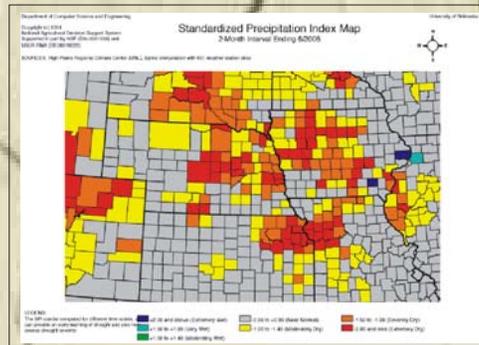
National Drought Mitigation Center–RMA Partnership Agreement Projects



Drought Atlas:

Understanding Past and Present Droughts and Future Risk

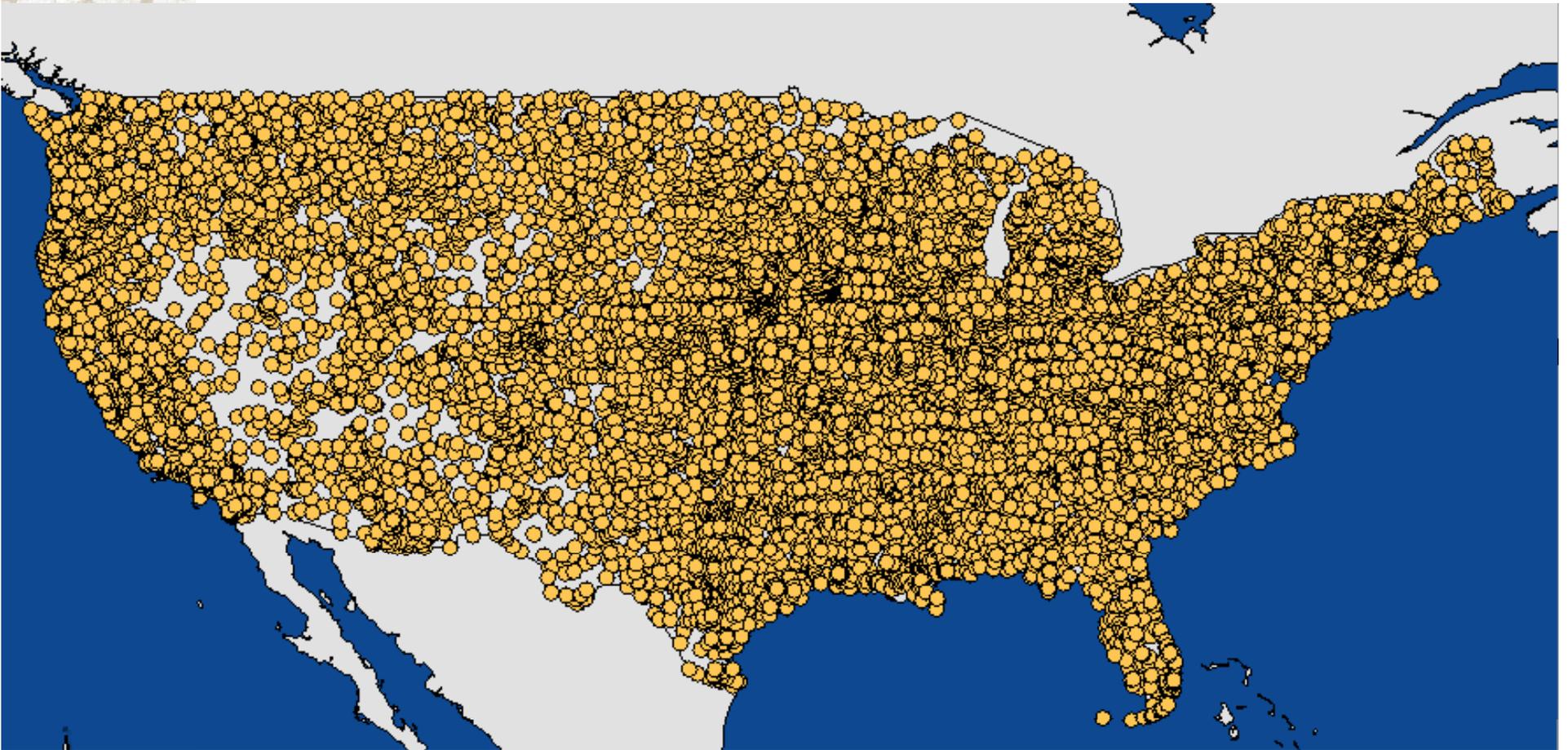
Mark Svoboda, Brian Fuchs, Dr. Michael Hayes, Dr. Jae Ryu, Soren Scott, and Jun Li, NDMC/UNL; Ned Guttman, NOAA/NCDC; Bill Sorenson and Jinsheng You, HPRCC/UNL; Ian Cottingham, CSE/UNL; Sandra Jones and Jeff Nothwehr, NDMC/UNL



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

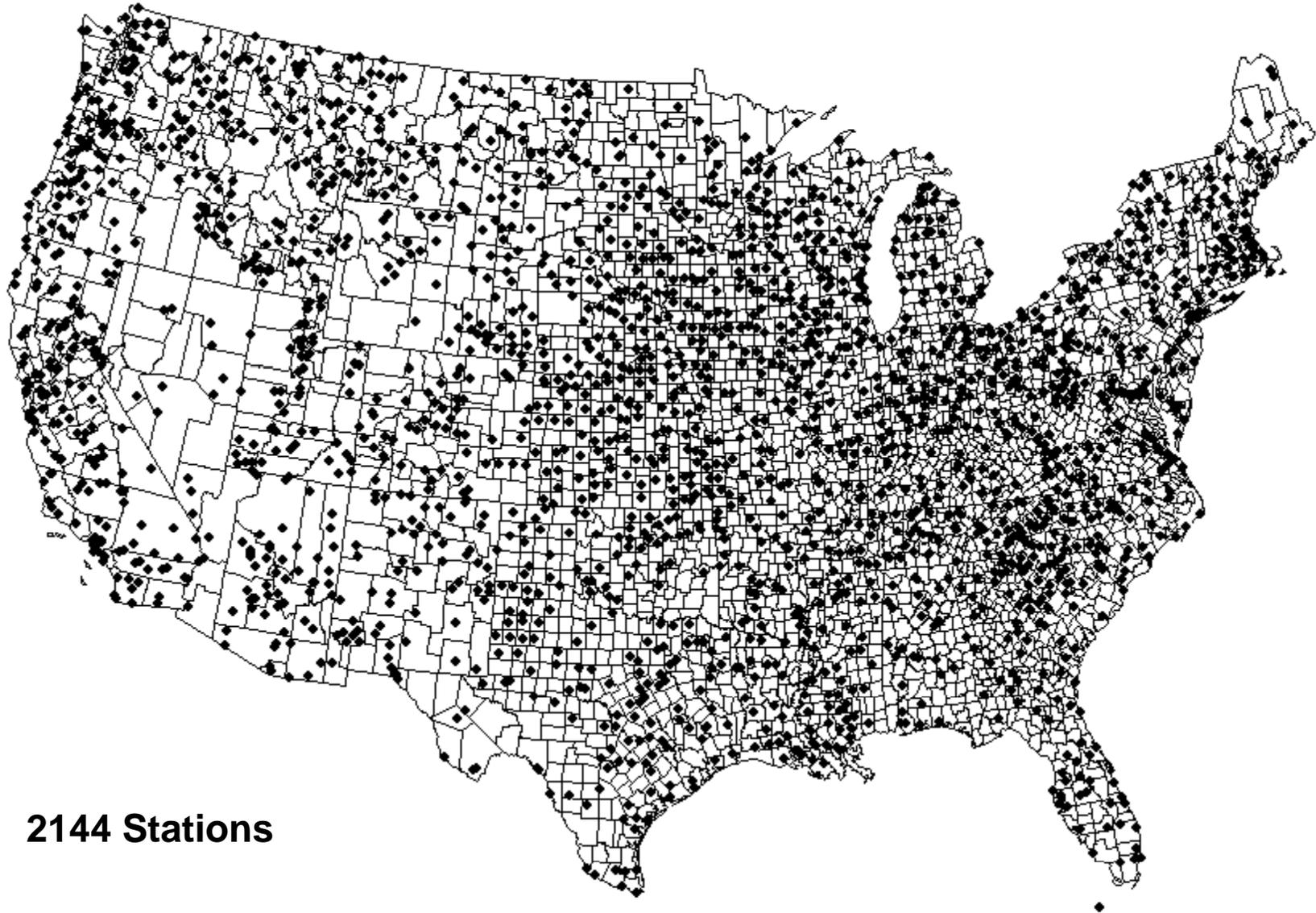
- Minimum of 40 years of Data (original drought atlas, 40 years was the maximum used)
- No more than 2 consecutive months missing at any time in the POR
- Established unique start dates for each station



Stations being used for the Drought Atlas

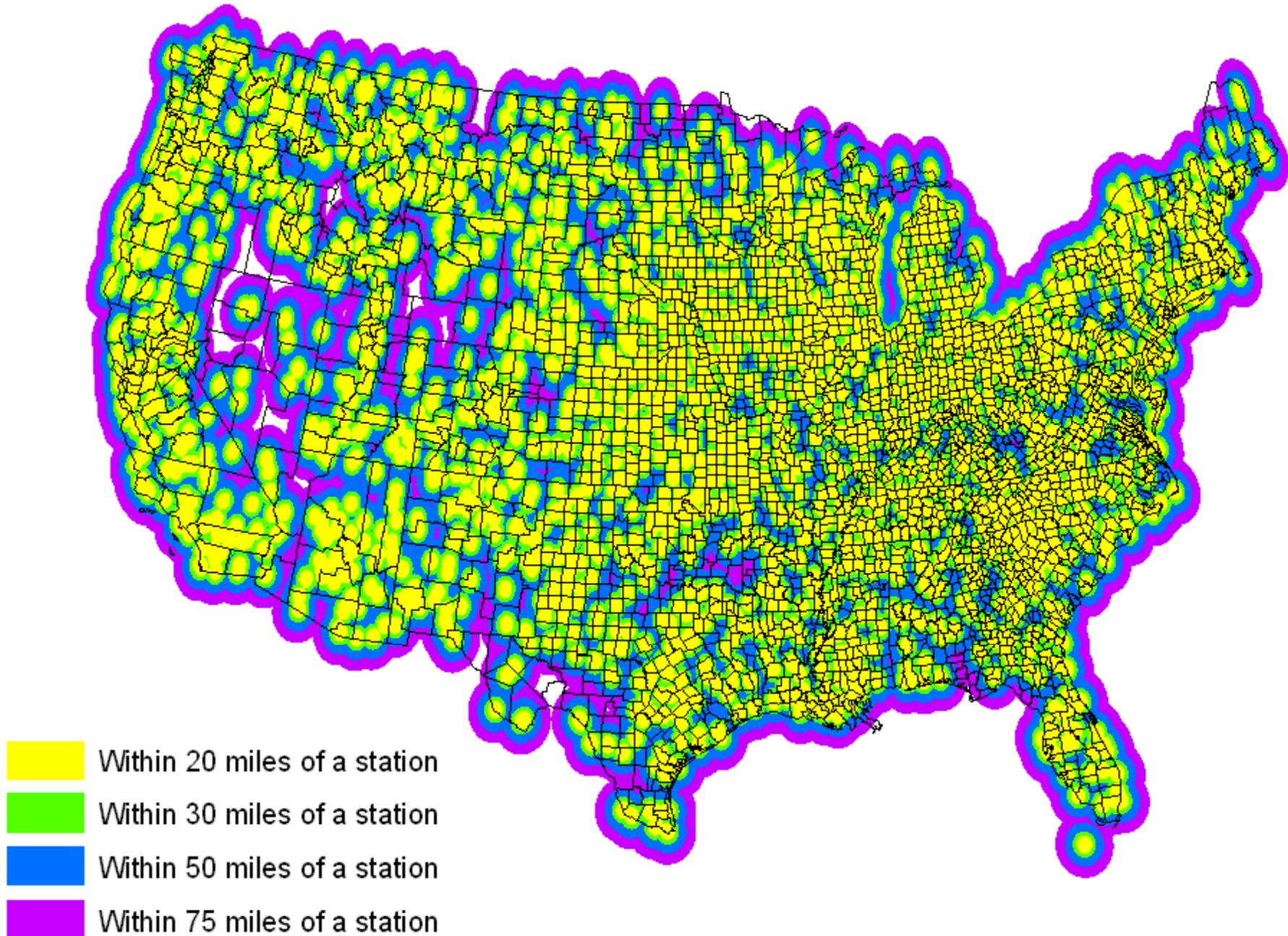
- **2,144** stations with 40 or more years of precipitation data meeting all criteria
- **1,964** stations with 40 or more years of temperature and precipitation data meeting all criteria
- Just over 1,000 stations were used in the original Drought Atlas

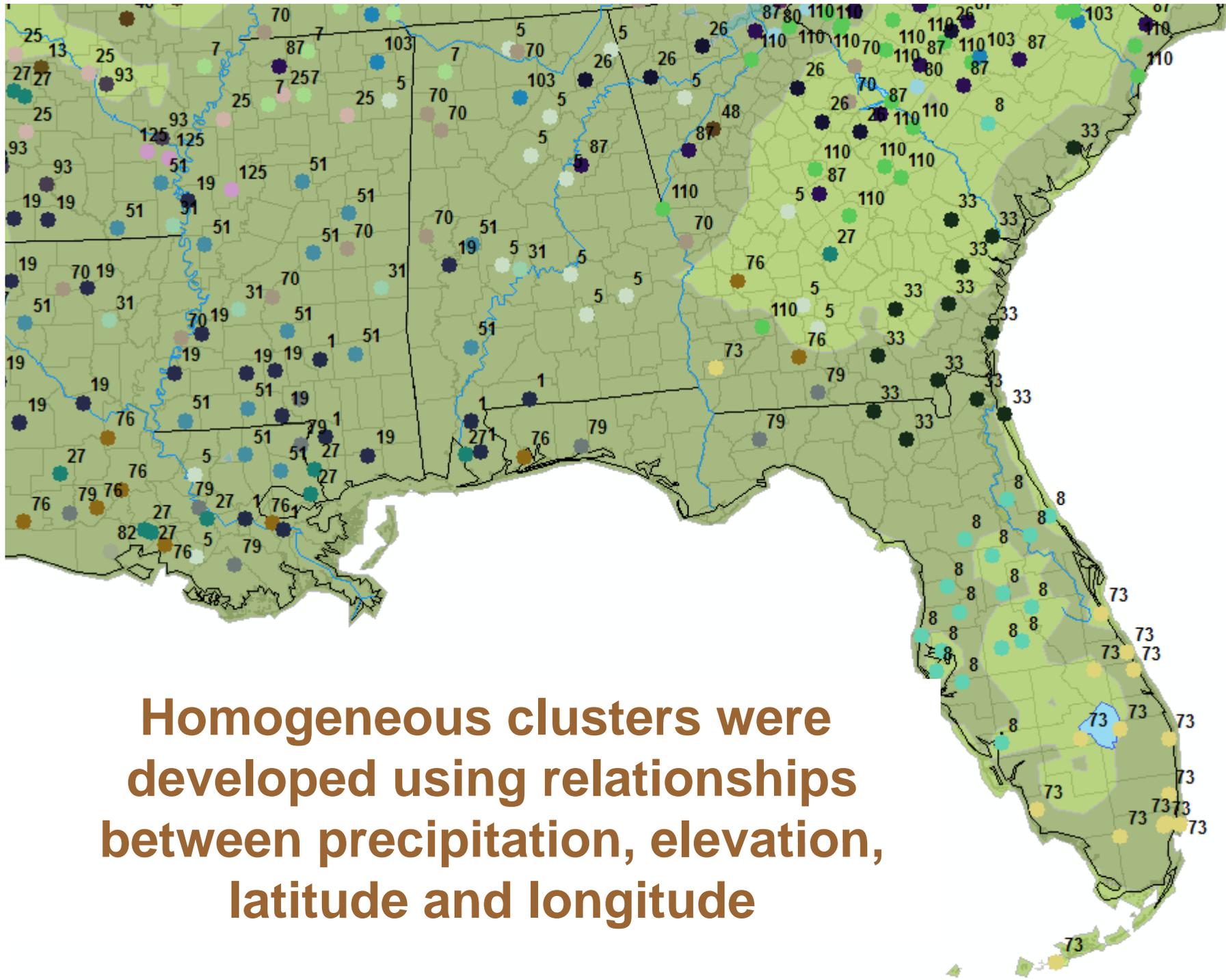
Stations with 40 Plus Years of Data



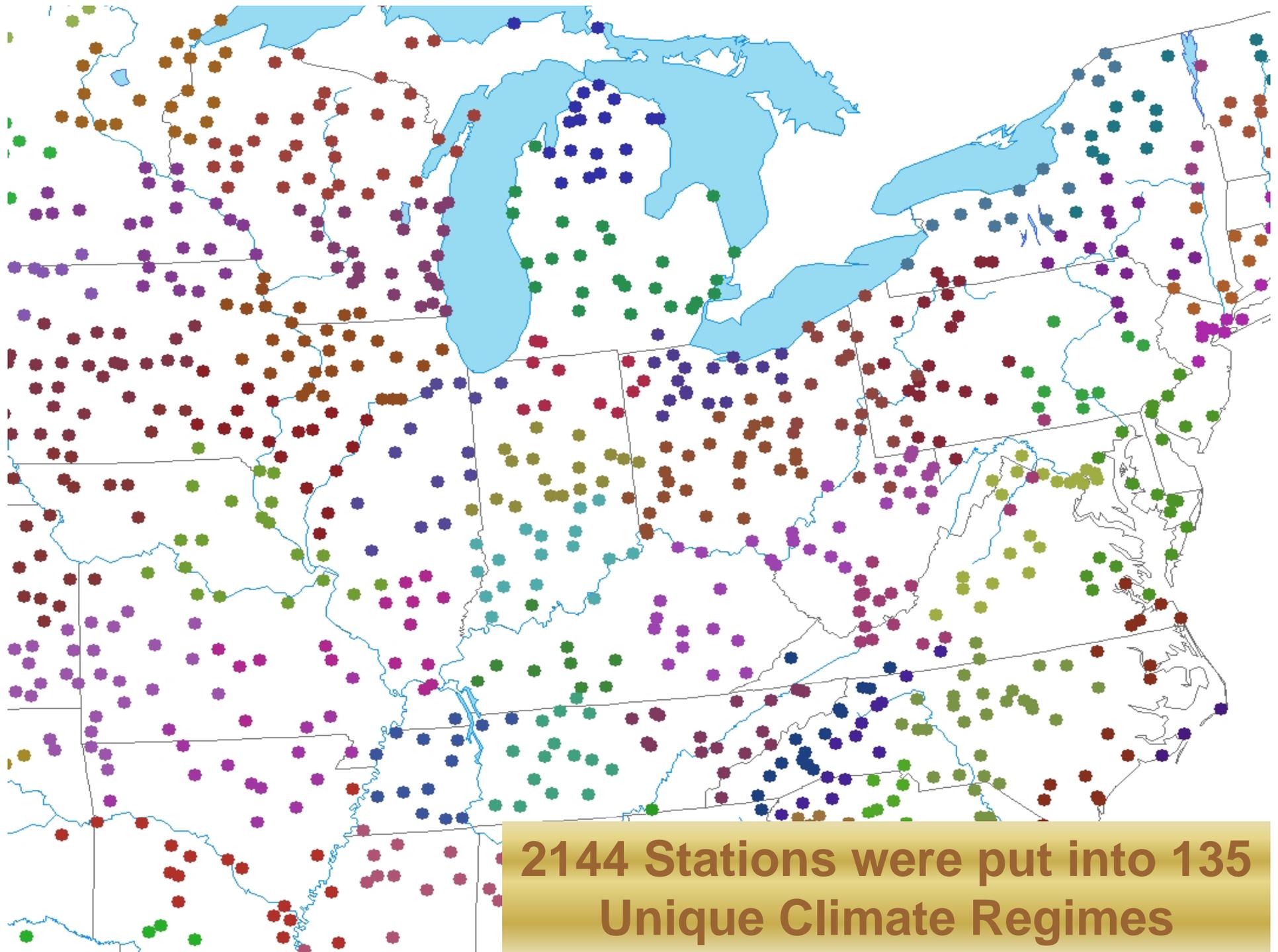
2144 Stations

Stations with 40 Plus Years of Data Buffers

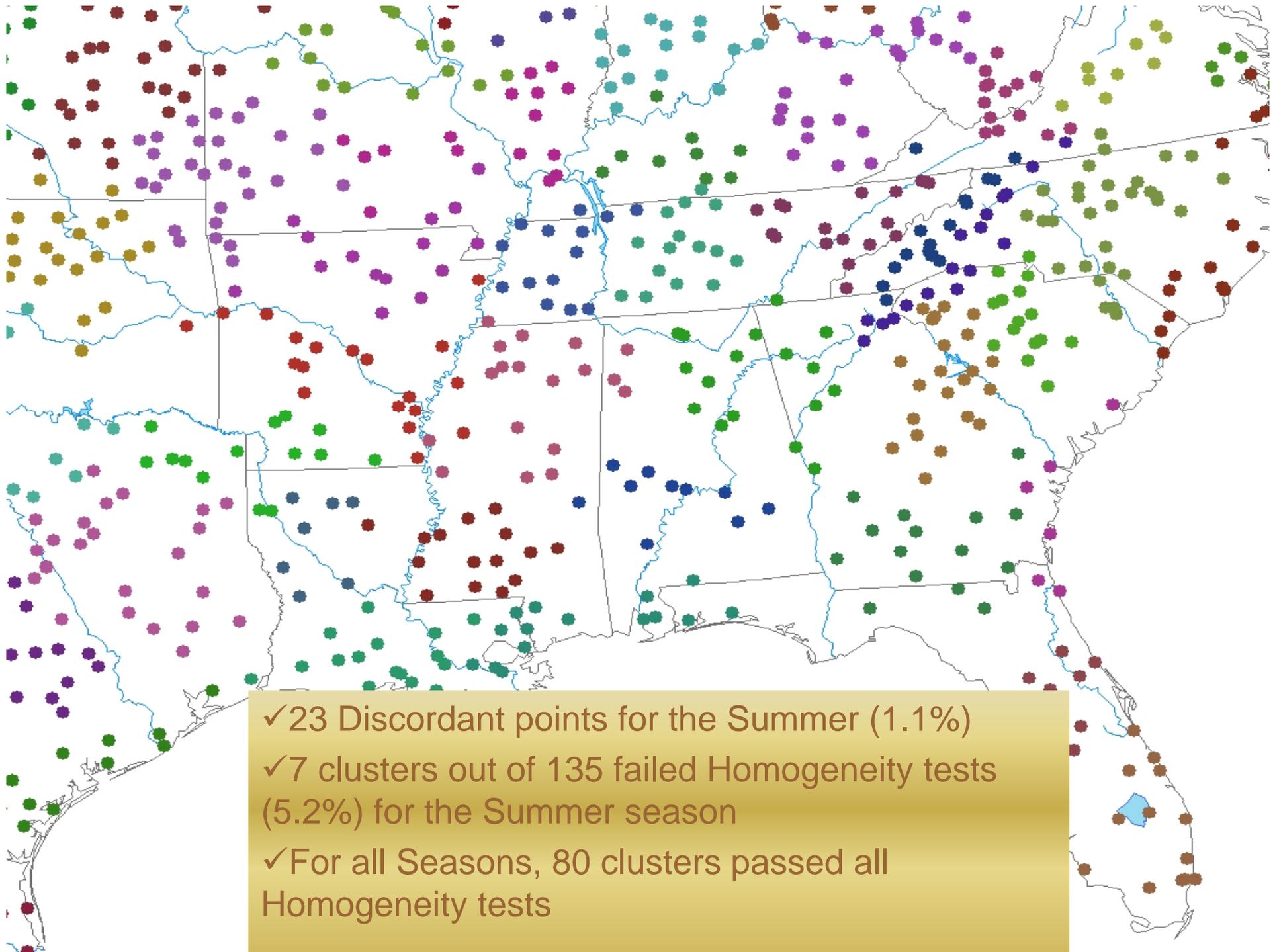




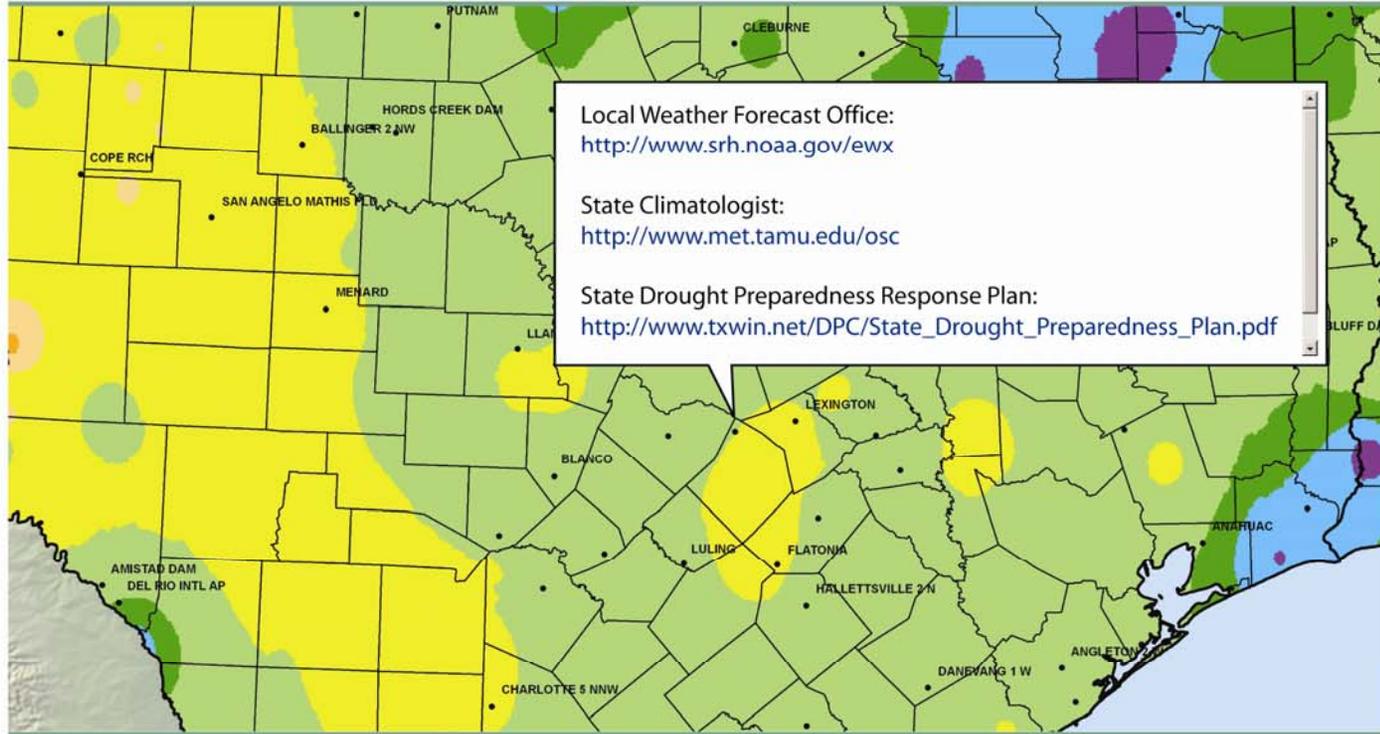
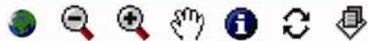
Homogeneous clusters were developed using relationships between precipitation, elevation, latitude and longitude



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



Continental United States
 Alaska
 Hawaii
 Puerto Rico

Legend

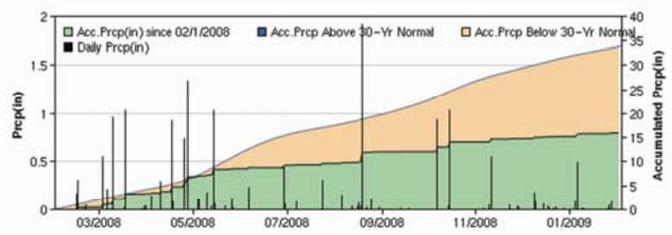
Visible

- Drought Monitor
- ACIS Stations
 - Station Name
- Climate Layers
 - Standardized Precipitation Index
 - < -3
 - 3 to -2.5
 - 2.5 to -2
 - 2 to -1.5
 - 1.5 to -1
 - 1 to 0
 - 0 to 1
 - 1 to 1.5
 - 1.5 to 2
 - 2 to 2.5
 - 2.5 to 3
 - > 3
 - Palmer Drought Severity Index

Select

- Boundaries
 - Rivers
 - Hydrologic Units (HUCs)
 - Congressional Districts
 - Climate Divisions
 - Counties
 - Cities
 - Roads
 - County Warning Areas

Precipitation: January 2008-January 2009



Drought Impacts for Austin ,TX

Water Impact 12/11/2008
 Austin, Texas—The Barton Springs/Edwards Aquifer Conservation District is in a critical stage drought. Those who pump groundwater in the district must reduce...



➤ **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



Stakeholder Involvement

- High Plains Regional Climate Center
- State Climatologists
- Agricultural Producers and Ranchers providing feedback



Questions for Discussion

- Are there any questions on this product?
- As a Stakeholder, What would you want or like to see in a Drought Atlas?



Thank You

Any Questions ?

Please contact me at:

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