

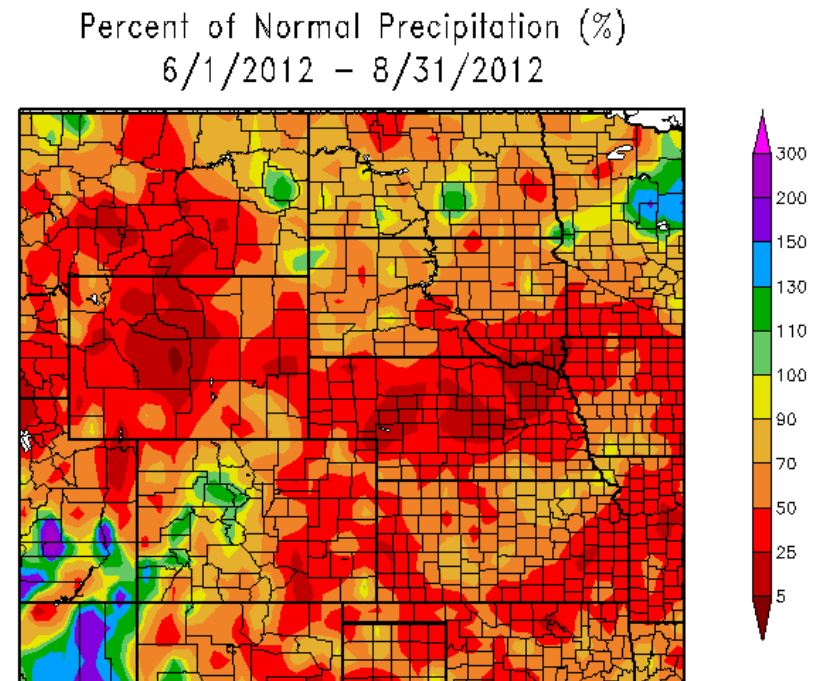
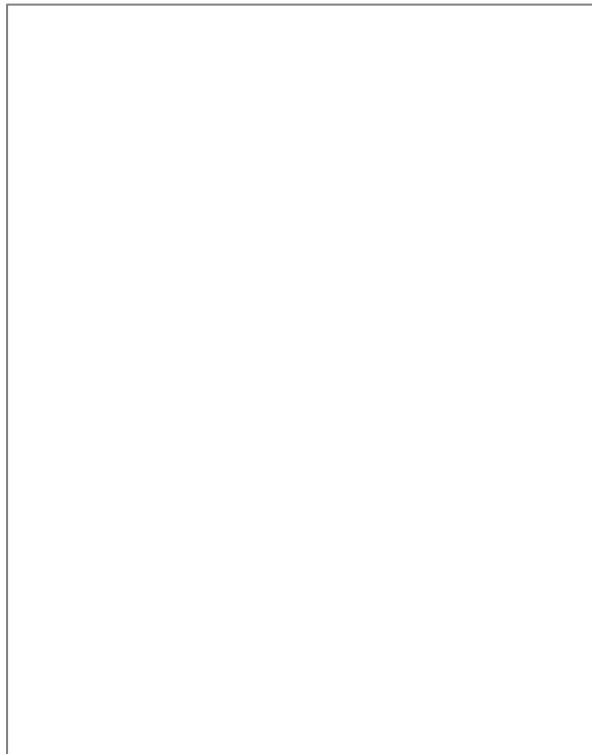
The High Plains Regional Climate Center

Dr. Martha Shulski

Director, High Plains Regional Climate Center
Associate Professor, School of Natural Resources
University of Nebraska Lincoln

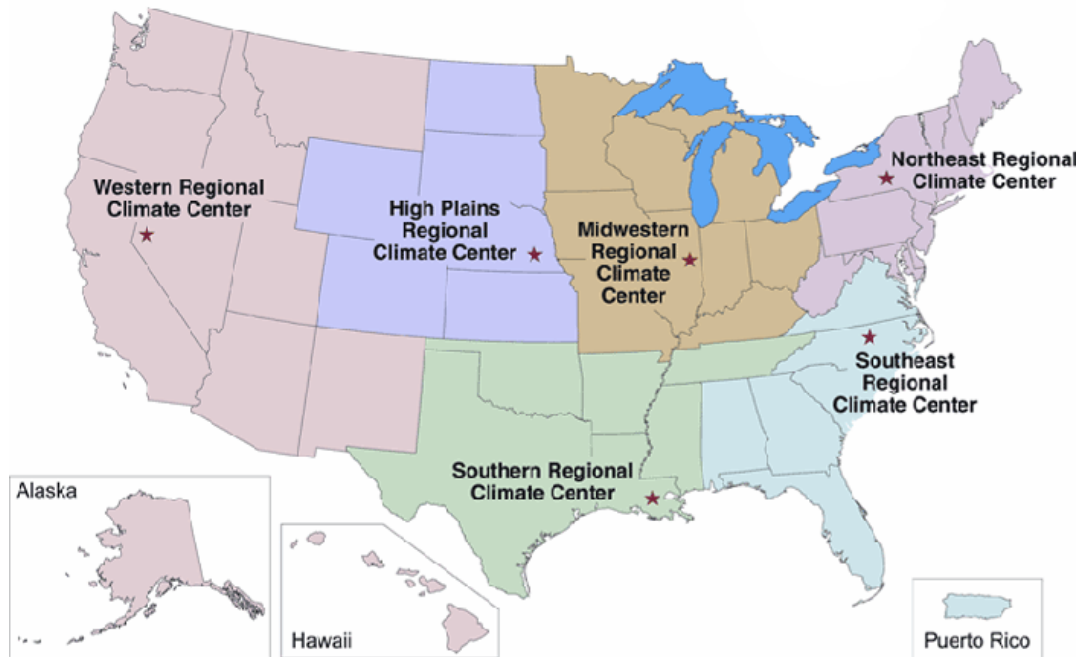
NOAA's Regional Climate Centers

Monitoring the climate and turning data into information



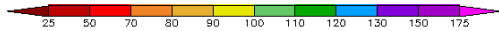
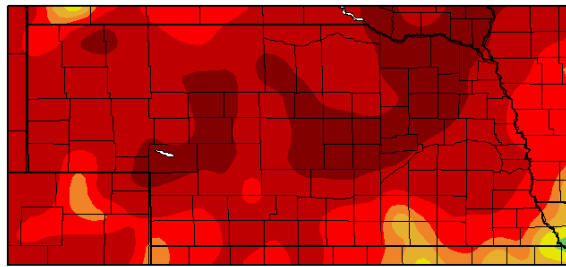
NOAA's Regional Climate Centers

- 6 Centers cover entire U.S.
- Each has a regional focus
- Began out of National Climate Program Act (1978)



Tiered System of Climate Services

Percent of Normal Precipitation (%)
6/1/2012 – 8/31/2012

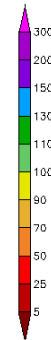
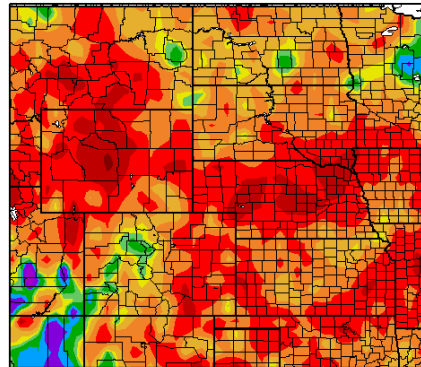


Generated 9/18/2012 at HPRCC using provisional data.

Regional Climate Centers

State Climatologist

Percent of Normal Precipitation (%)
6/1/2012 – 8/31/2012

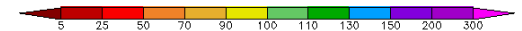
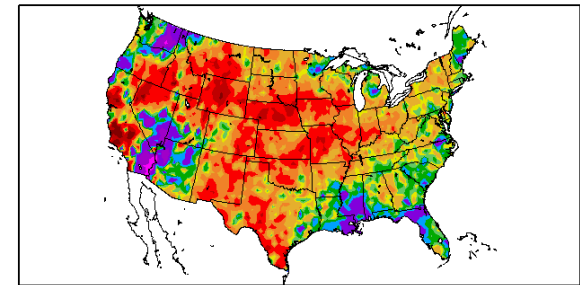


Generated 9/5/2012 at HPRCC using provisional data.

Regional Climate Centers

Regional Climate Centers

Percent of Normal Precipitation (%)
6/1/2012 – 8/31/2012



Generated 9/5/2012 at HPRCC using provisional data.

Regional Climate Centers

National Climatic Data Center

The High Plains Regional Climate Center

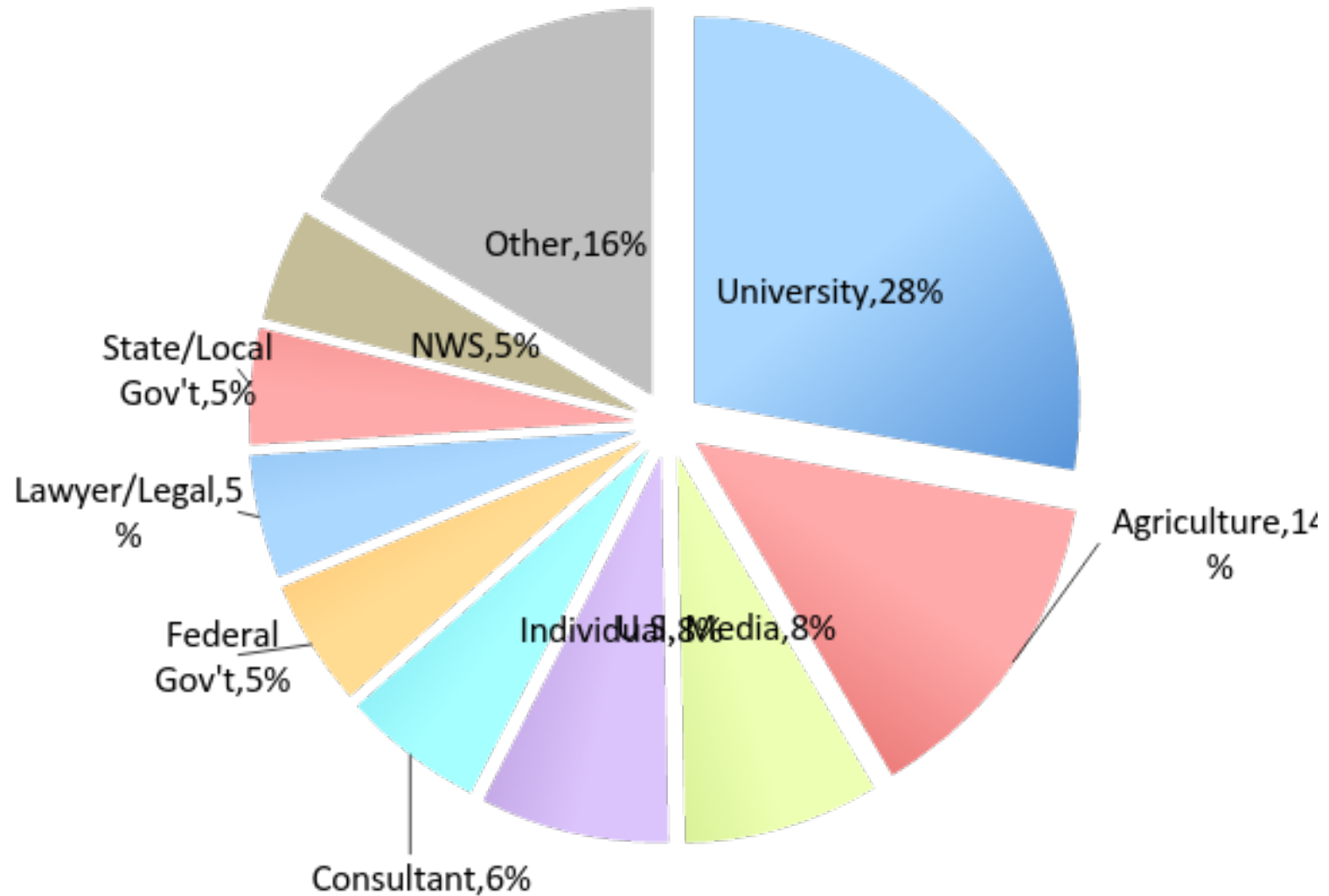
Established in 1987 at the University of Nebraska

Our primary activities:

- **Archival, quality control, and distribution** of climate data
- Development of **products and decision support tools**
- Enhancing services through **applied research**
- Supporting a regional **mesonet**
- **Education** on emerging issues in the region

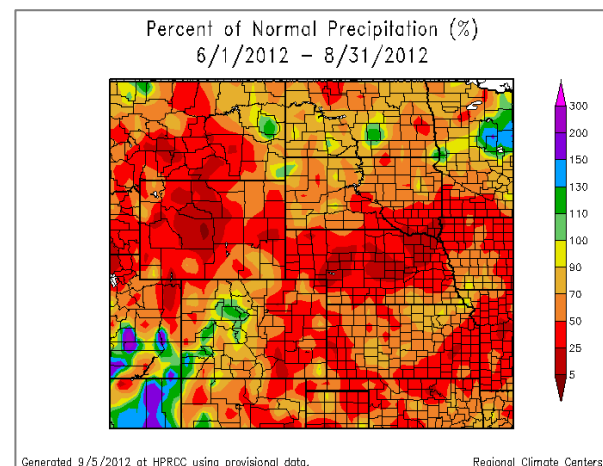
Stakeholder engagement

Our Stakeholders



Data and Product Delivery Varies by Need

- Web interface
- Web services
- Direct data feeds

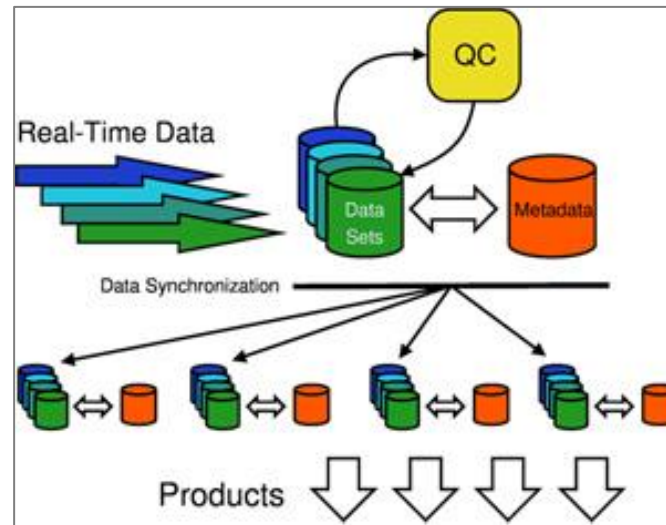


We Rely on A Sophisticated Data Architecture

- Applied Climate Information System

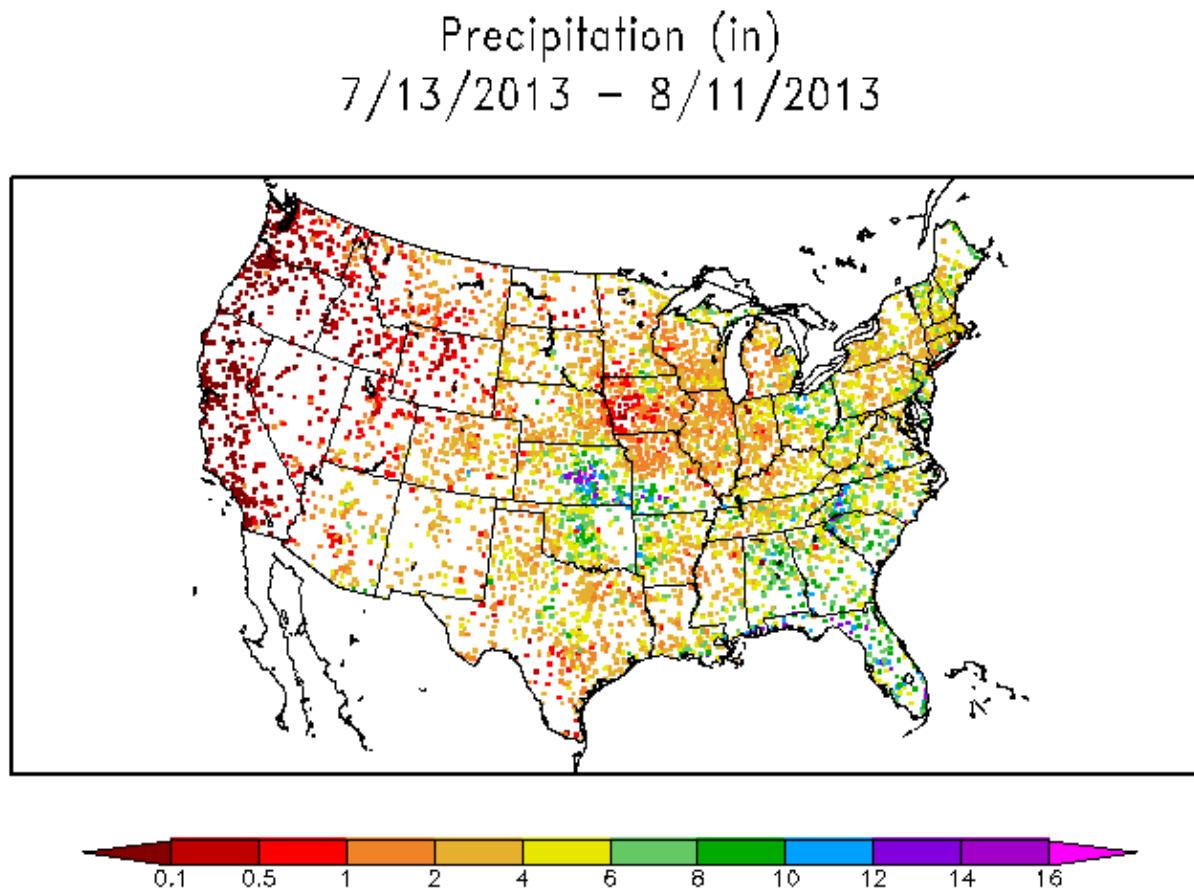


manages the complex flow of information from climate ***data collectors*** to ***end users*** of climate information



We Rely on A Sophisticated Data Architecture

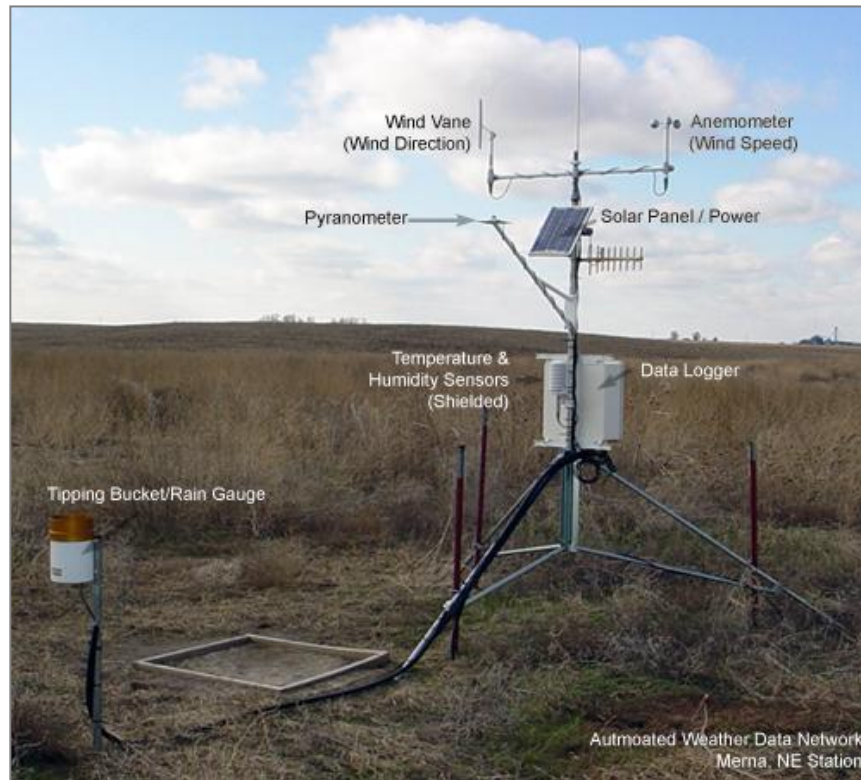
- Example product illustrating number of stations



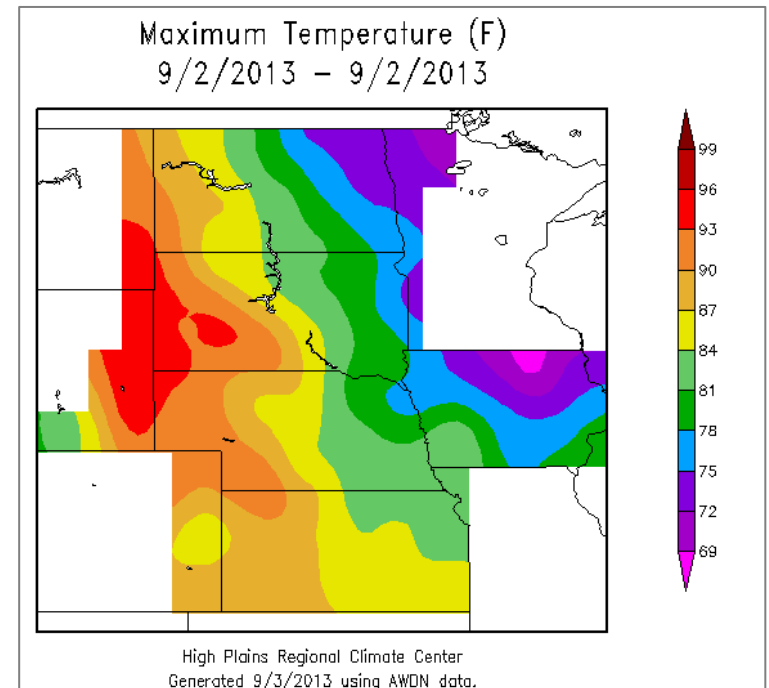
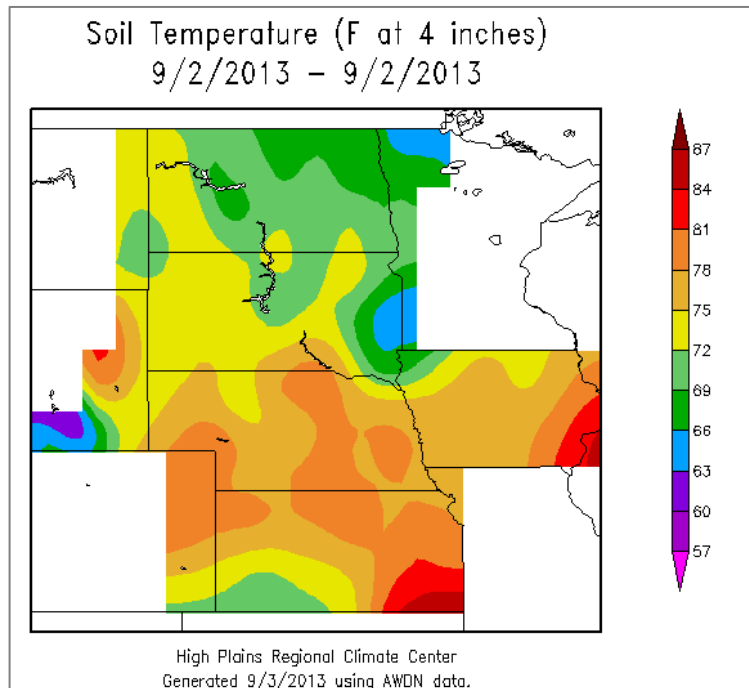
We Manage a Regional Mesonet

- Automated Weather Data Network www.hprcc.unl.edu/awdn/

through state partners, gathers ***valuable data*** in the region and provides ***information to stakeholders*** in agriculture and related fields



We Manage a Regional Mesonet



- Hourly data for entire region
- Raw or Summarized data
- Subscription account for automated and customized daily reports
- Quality control is run on all data (automated and manual)

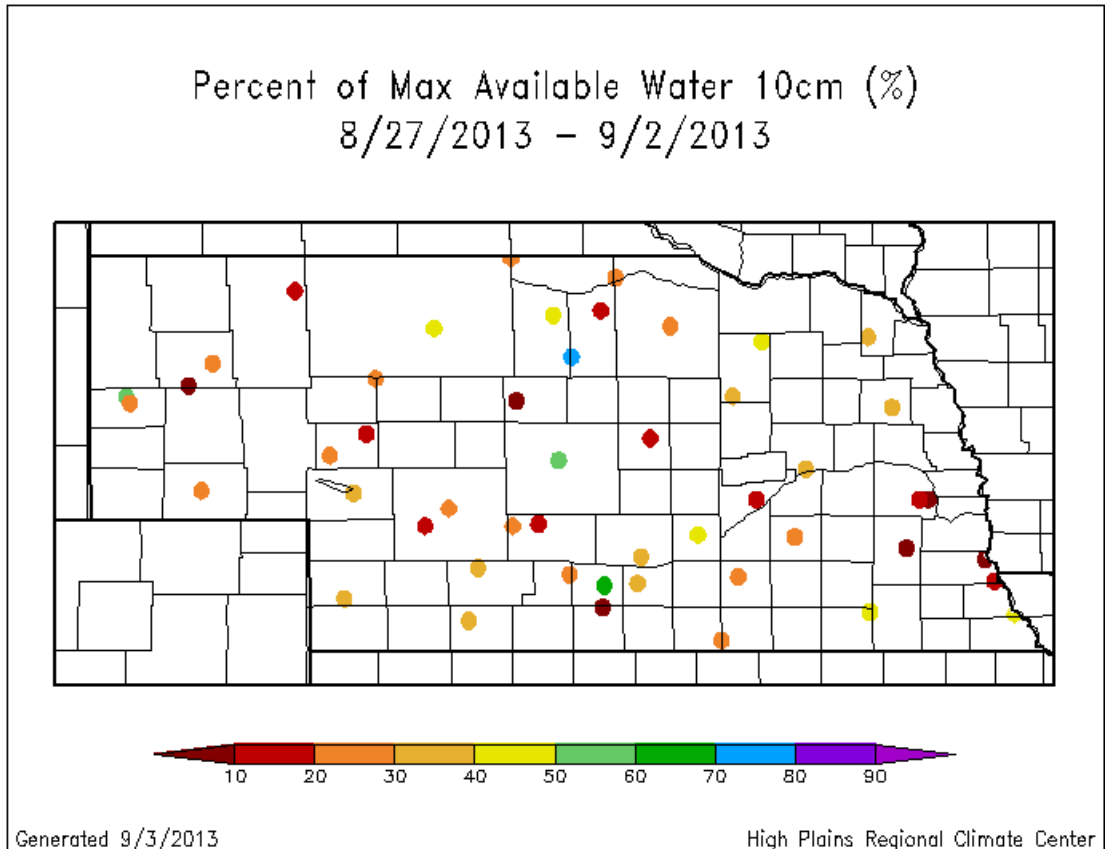
We Observe Soil Moisture

- Established in 1998
- Currently, observations at 51 sites across state
- Few states have soil moisture sensors
- Both operational and research applications

Development and evaluation of a soil moisture index

Hunt et al., 2008.

International Journal of Climatology



Formulation of a Serially Complete Dataset

Developing a continuous dataset by missing data estimations

- Certain applications require a continuous record 3059 stations
- Missing data were filled in by:
 1. Looking back at original paper records
 2. Calculating estimates based on surrounding stations
- Resulting dataset is 3059 stations with at least 40 years of data

We engage in educational outreach

- Tribal college faculty training at NCAR in Boulder, CO
- Training for ITEP in Missoula, MT
- Outreach for Dr. Bennet's NASA project in Lawrence, KS
- Youth outreach in weather and climate in Macy, NE

Contact Us

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