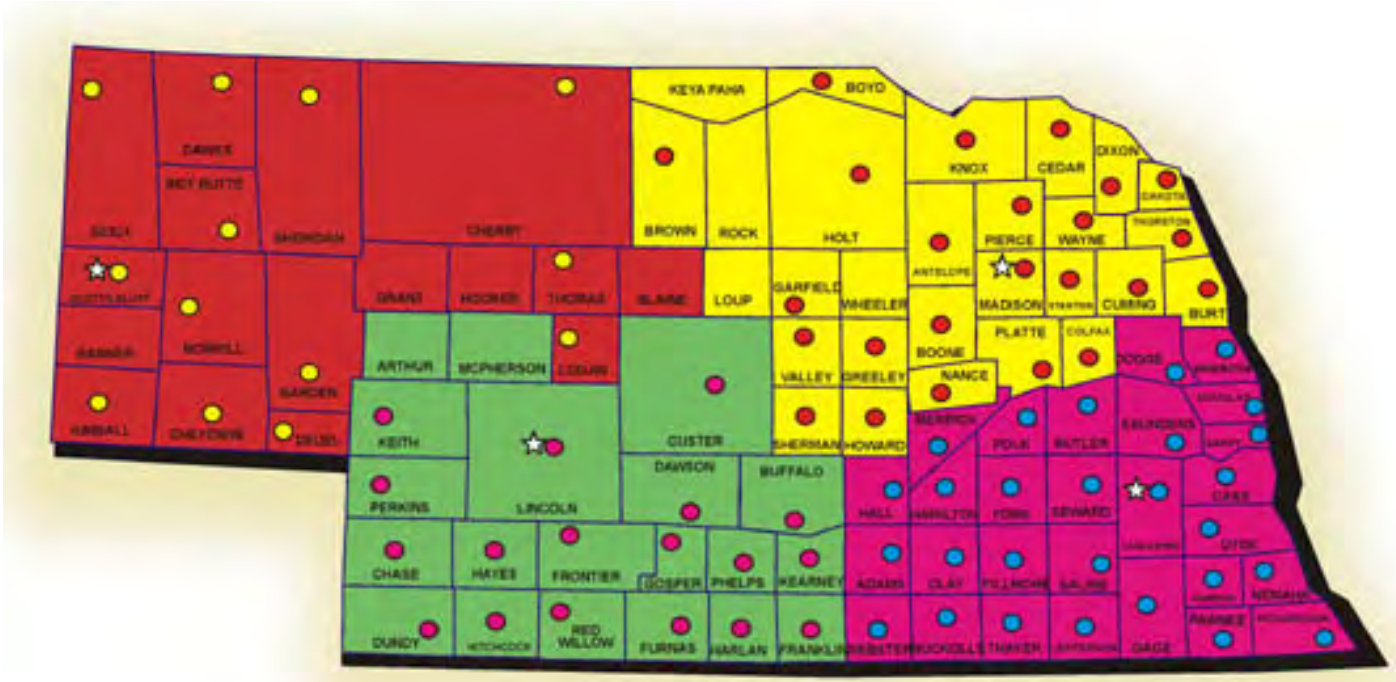
Country Presentation
USA - Nebraska



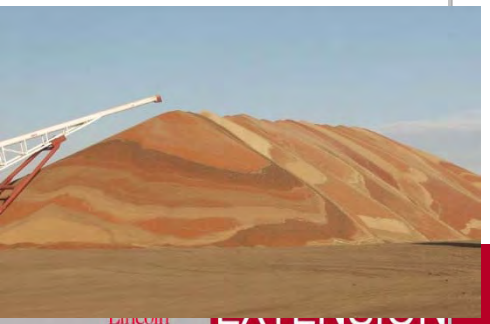
Paul Burgener
University of Nebraska-Lincoln
Panhandle Research and Extension Center
Scottsbluff, Nebraska

Who we are

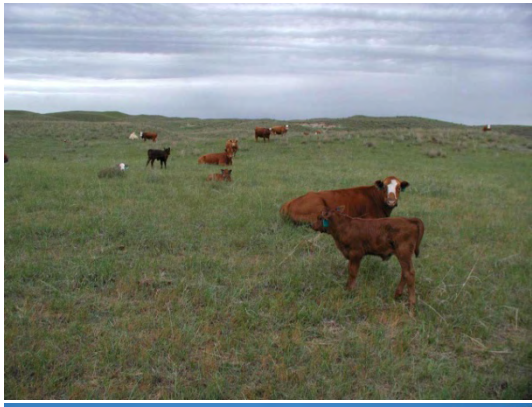
- Nebraska's Land Grant University
  - 140 years in Lincoln
  - 23,500 students
- Panhandle Research and Extension Center
  - 640 km from campus
  - 16 faculty – from human nutrition to entomology
  - 60+ staff at the center
- Agriculture economics
  - Presently without faculty position
  - M.S. from the University of Wyoming
  - At the center since October 1998
    - Focus on farm management, ag policy, grain markets
    - Work closely with several faculty

Nebraska at a Glance

- **1.78 million people – Rank 38th in U.S.**
  - **931,000 people in Lincoln/Omaha**
  - **0.58 % of U.S. population**
  - **47,712 farms**
- **93 counties**
- **19.91 million hectares**
  - **18.41 million hectares in farms**
  - **386 hectares per farm (average)**



The High Plains

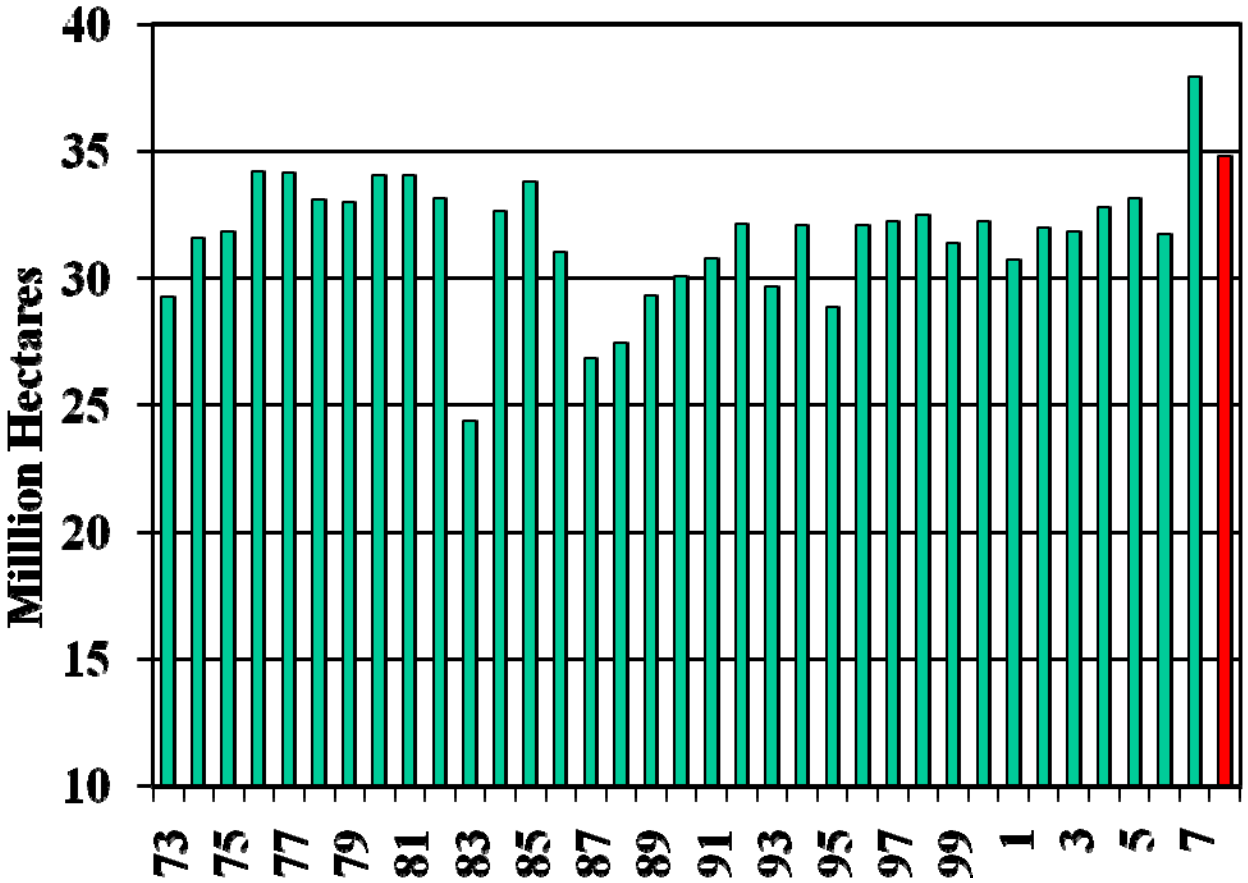


High Plains Crop Production

- **With irrigation - anything that fits growing season**
  - **Corn is the dominant crop**
- **Without irrigation**
  - **Water most limiting factor (30-40 cm precip/year)**
  - **Large seasonal and annual variability**
- **+: low humidity = less crop diseases**
- **Shorter growing season than rest of NE**
  - **May 10 – Sept 20 (spring crops)**
  - **1,200 + meters elevation**
  - **Fall seeded crops have an advantage if winter hardy**

Corn: Planted Hectares

- Recent increases are ethanol driven
  - 2007 Highest seedings since 1934
  - Price and fear driven in 2007
  - Reduced in 2008
  - Further reduced in 2009
  - 2009 seedings may increase price
  - Oil prices are driving corn prices
  - Nearly 1/3 of U.S. crop is used in ethanol
- Nebraska seedings reflect U.S.



Production Systems

- As varied as the farmers
- 3.46 million hectares of irrigated land in Nebraska
  - Western Nebraska
    - Irrigate to produce a crop
    - Cattle driven
    - Corn – dry beans – sugarbeets
      - Wheat – alfalfa – sunflower – potato
      - New crops – canola, camelina, grass seed
  - Eastern Nebraska
    - > 2/3 of the state
    - Irrigate to stabilize yields
    - Corn – soybeans

Typical Irrigated Farm

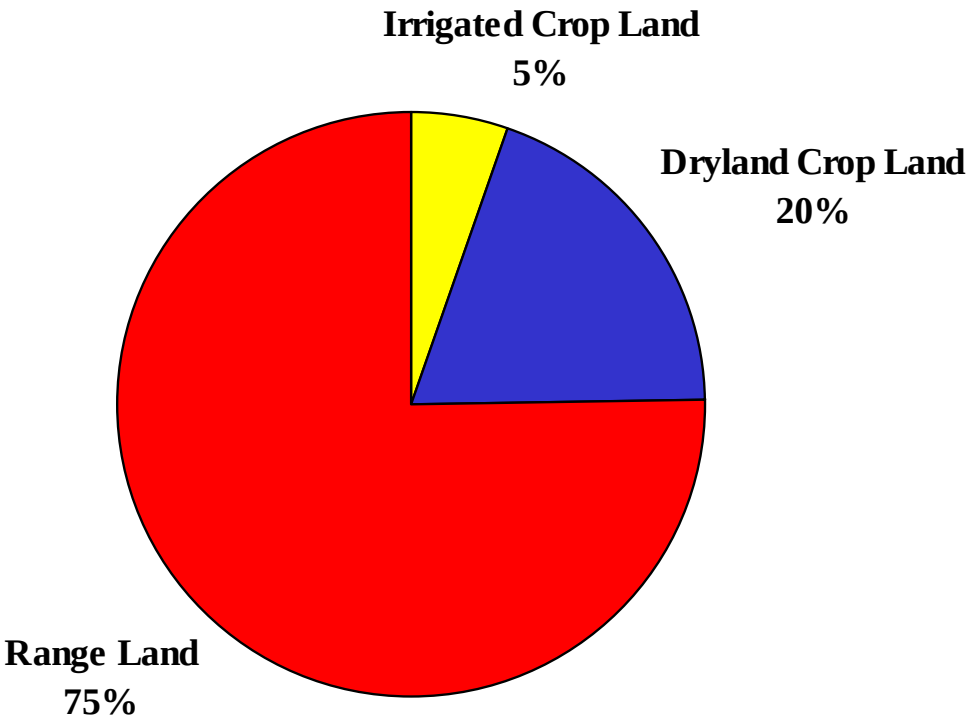
- 800+ hectares
- Sugarbeet driven
  - 150 – 175 hectares
  - 4+ year rotation
- Corn is a key crop
  - Follows sugarbeets and dry beans
  - Just over half the hectares
- Dry beans
  - Great Northerns predominant
  - Similar hectares to sugarbeets
- Winter Wheat as a small acre catch crop

Cost Comparison

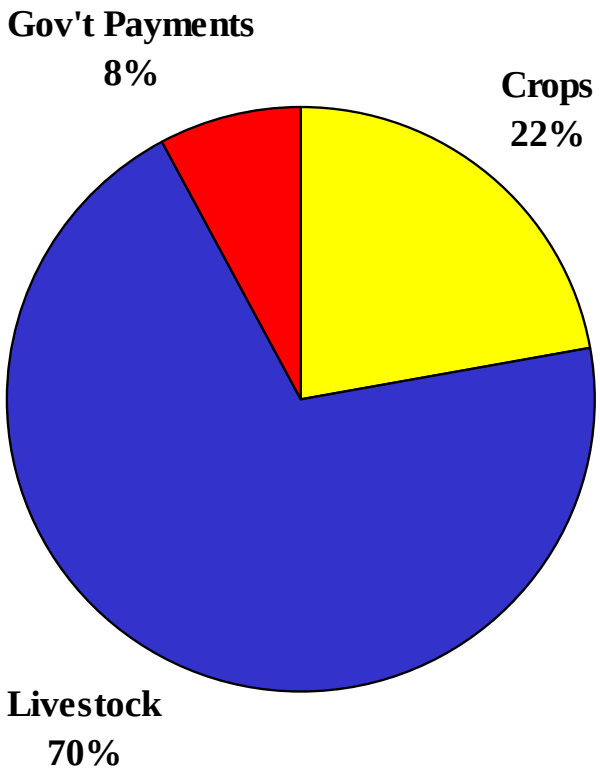
Area Irrigated Crops

	Dry Bean	Wheat	Corn	Sugarbeet
Expected Yield	2.58	6.07	12.80	51.67
Total Cost	$ 1,118.30	$ 1,271.95	$ 1,766.12	$ 2,140.33
Break Even	$ 432.89	$ 209.71	$ 137.93	$ 41.43
Price Today	$ 616.00	$ 217.07	$ 152.43	$ 52.80
Harvest Price	$ 616.00	$ 217.07	$ 161.07	$ 55.00

Agriculture Land Use: Panhandle District

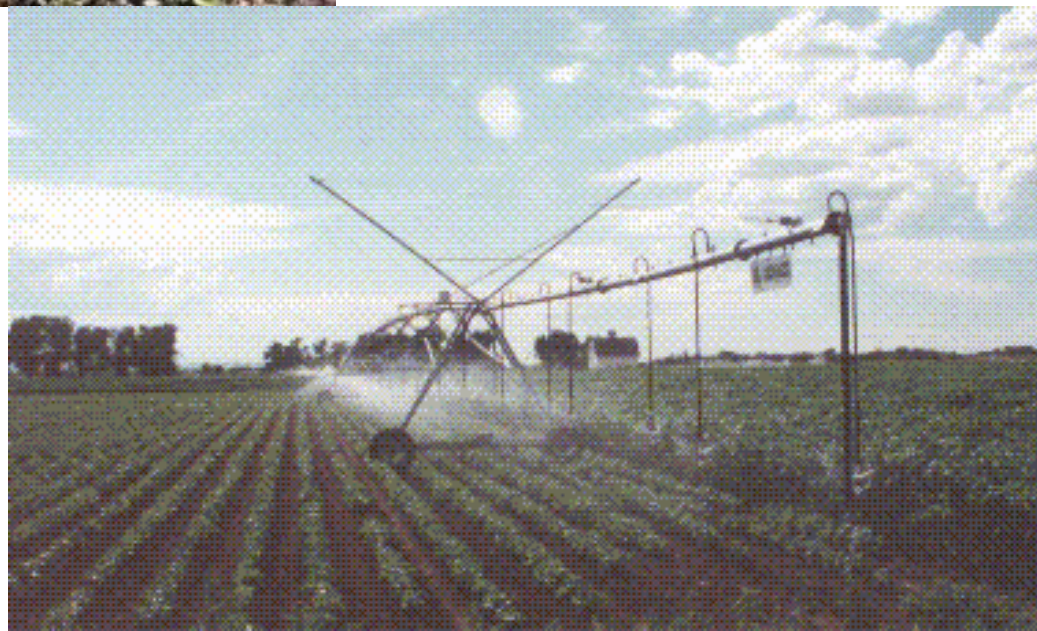


Agriculture Cash Receipts: Panhandle District

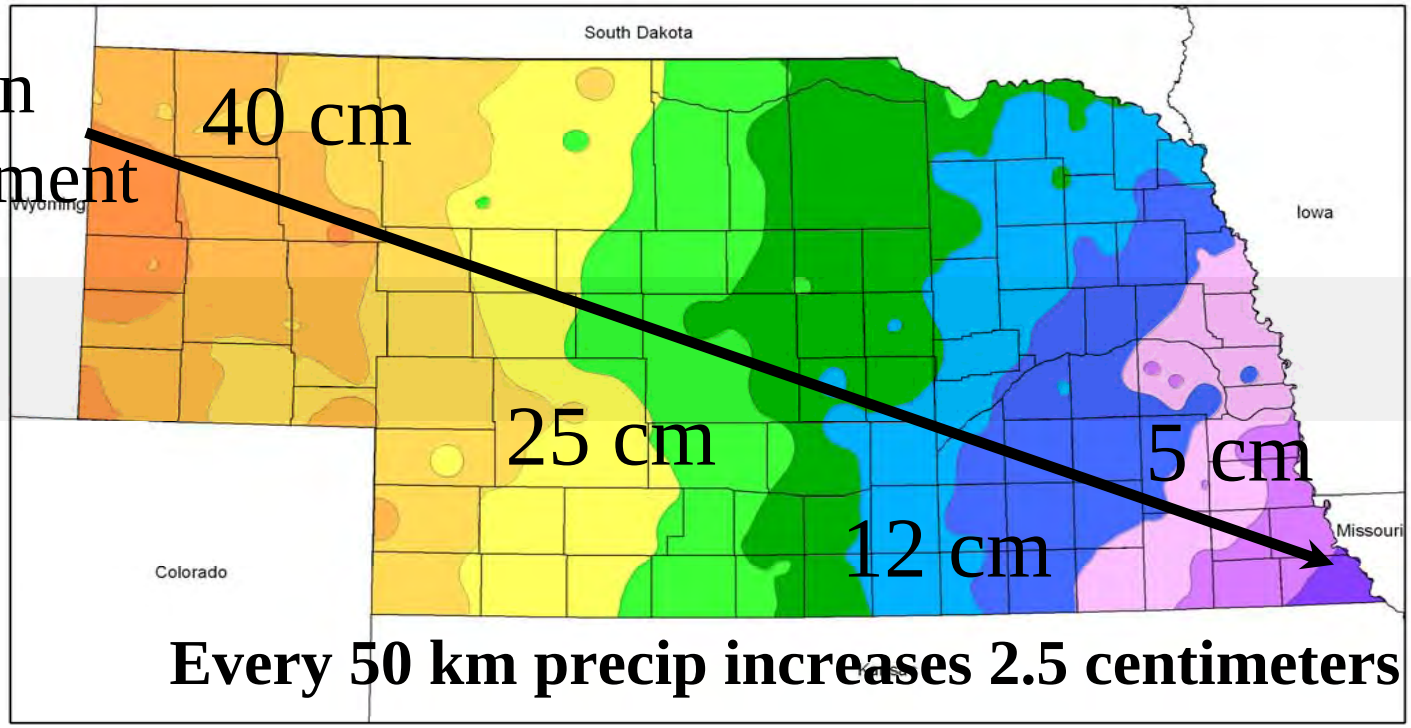


Irrigation water delivery systems vary.

Irrigation water sources vary as well.



Corn Irrigation Requirement



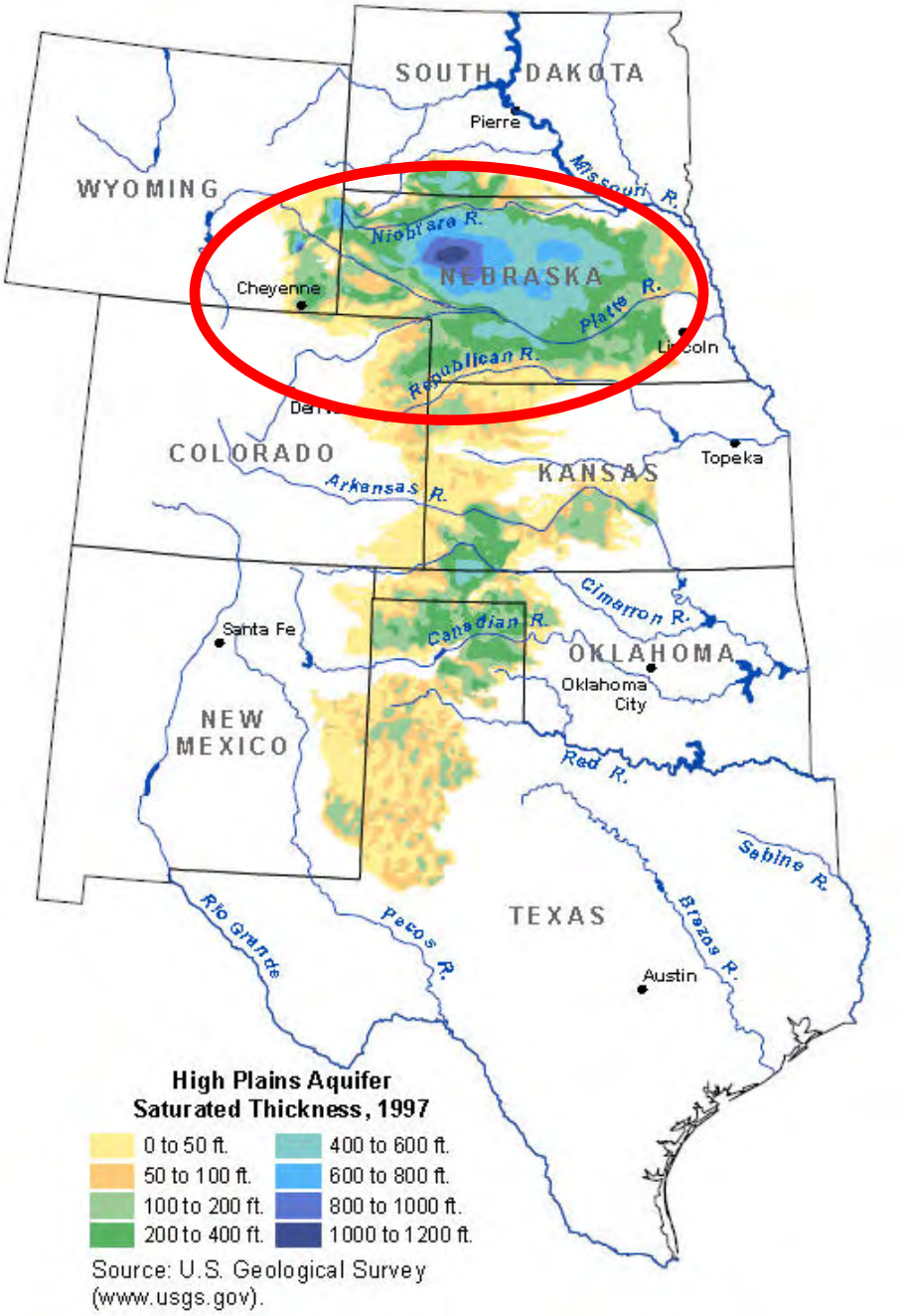
Registered Irrigation Wells

95,000+

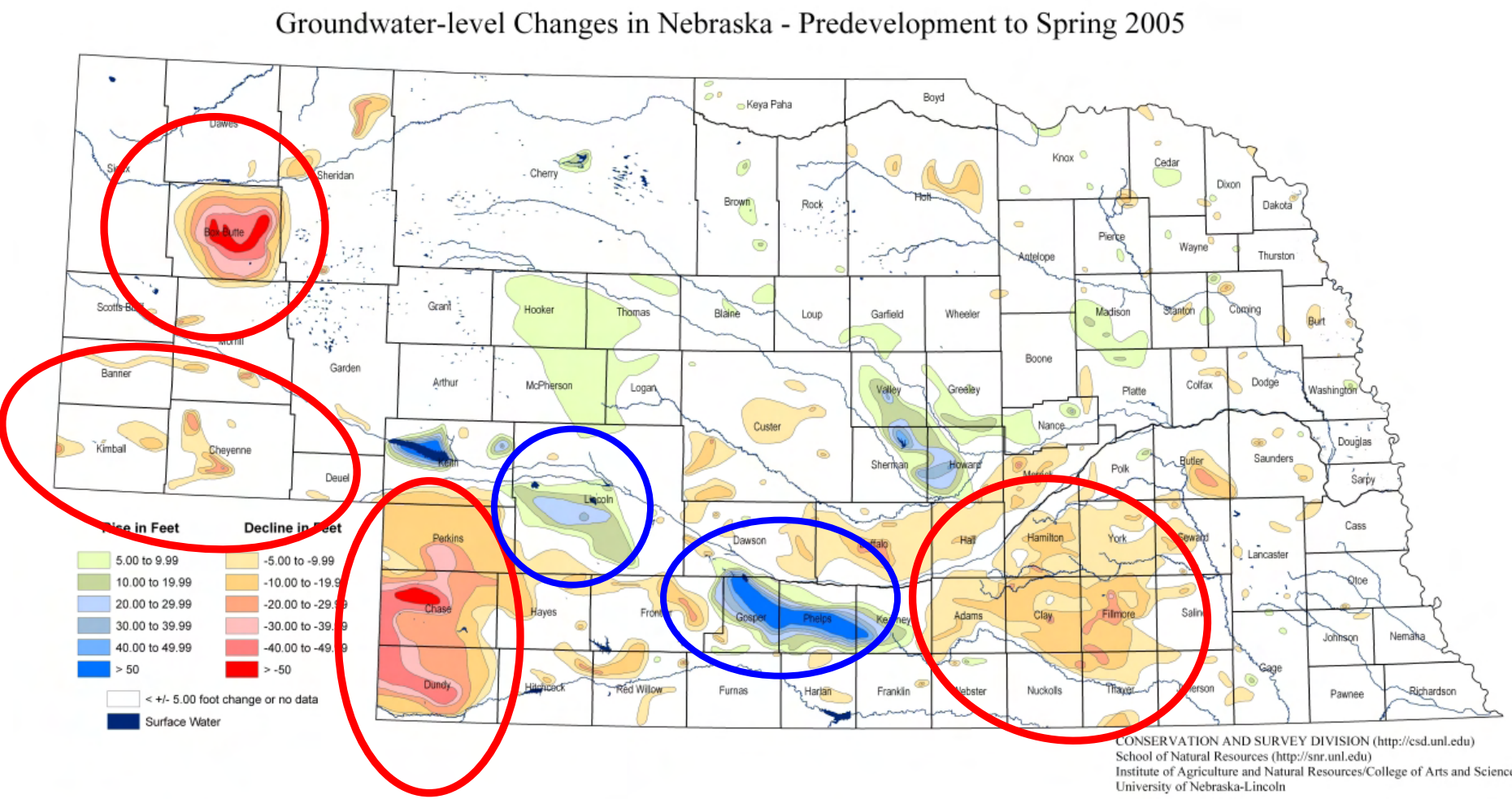
High Plains Aquifer Saturated Thickness

NE & the 7 Dwarfs

NE has 70% of the exploitable water in the HPA



Changing Ground Water Levels



CONSERVATION AND SURVEY DIVISION (http://csd.unl.edu)
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University of Nebraska-Lincoln

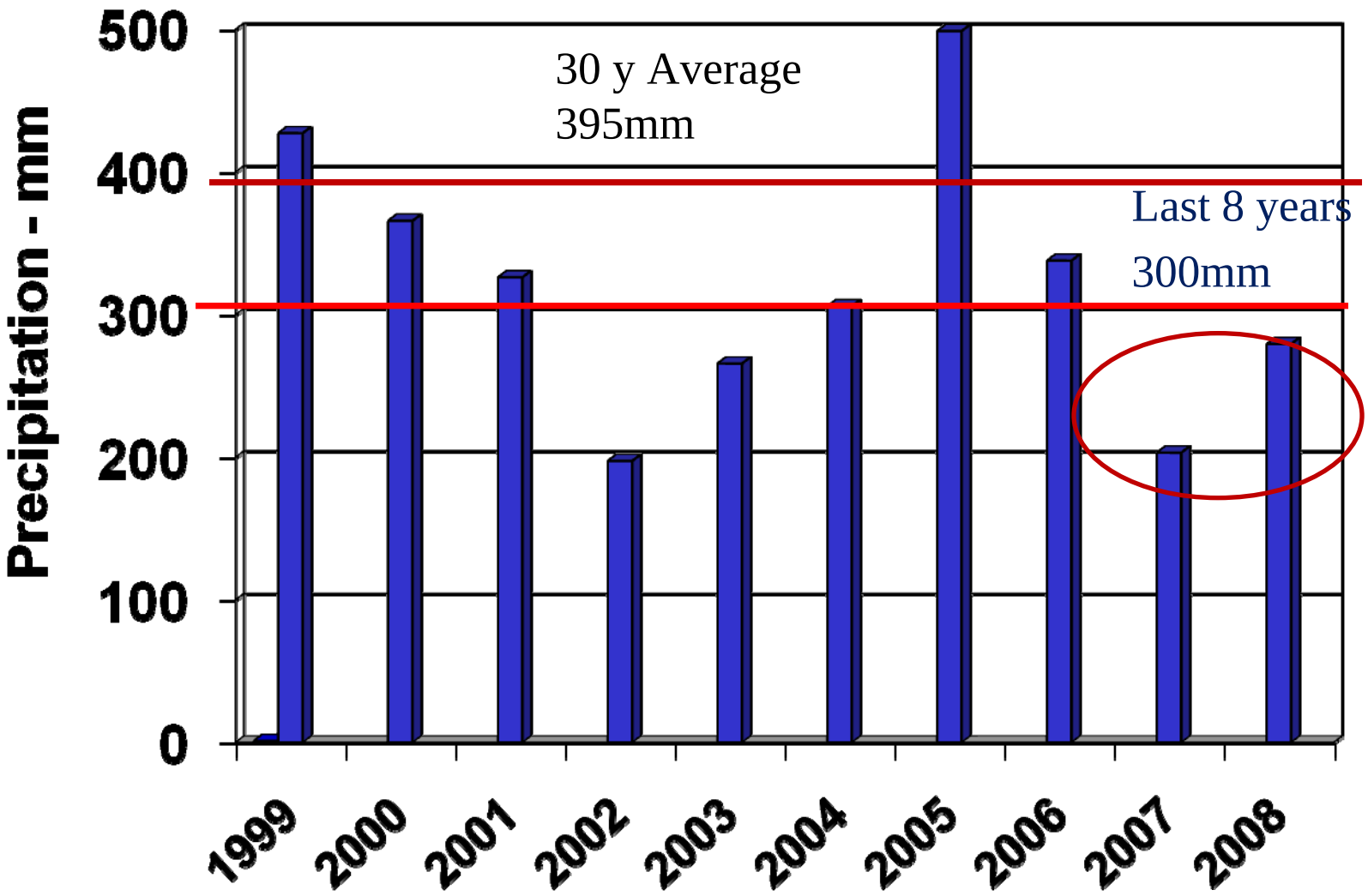
U.S. Geological Survey
Water Resources Division - Nebraska District

Nebraska Natural Resources Districts

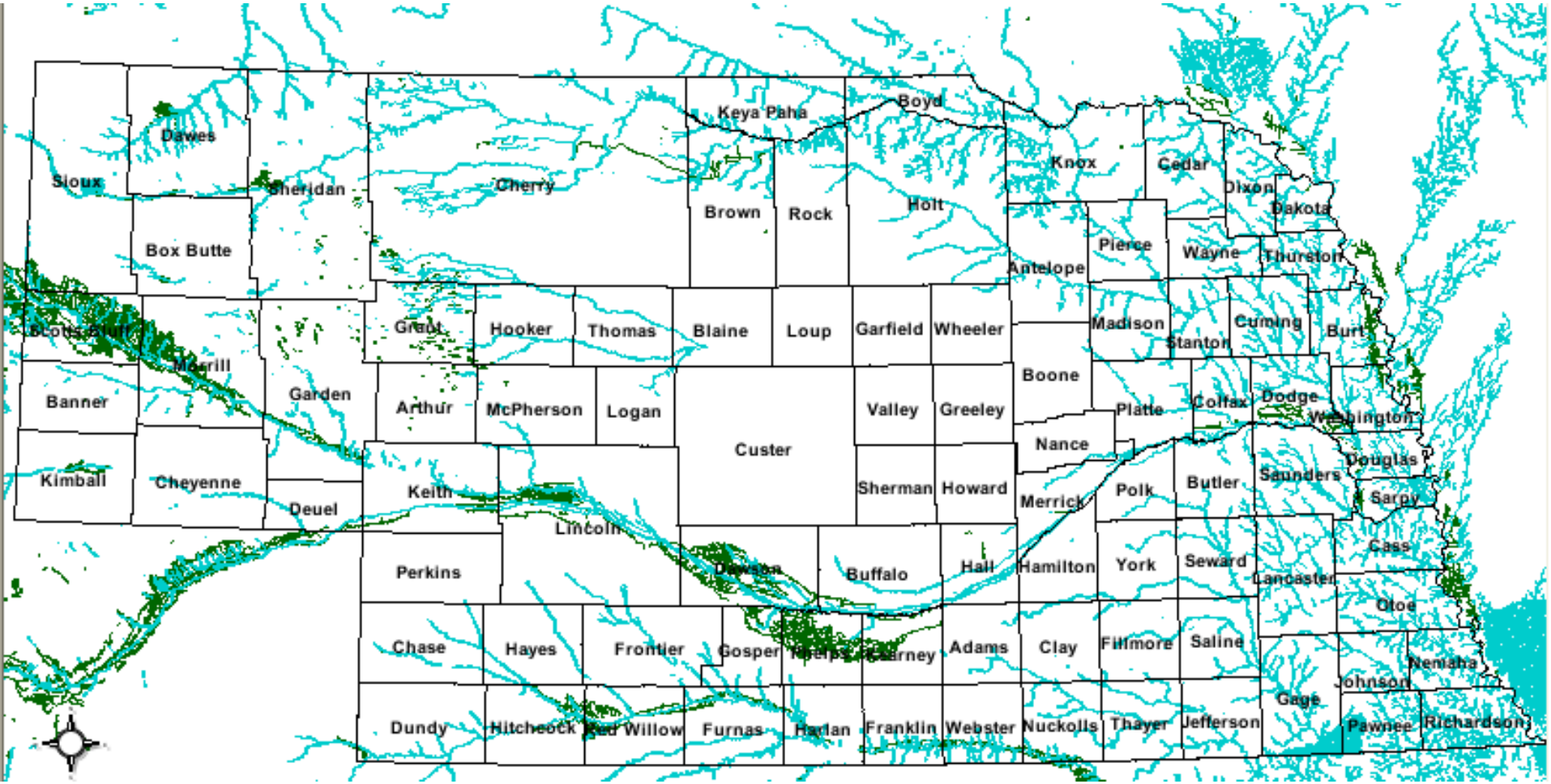
Central Nebraska Public Power and Irrigation District

Mark Burbach, Water Levels Coordinator, CSD

Scottsbluff 10 year precipitation



Surface water in Nebraska



Summary

- **Irrigated agriculture in the High Plains**
  - **High yields – high costs**
  - **Marginal profit levels in most years**
  - **Dependent on decreasing water resources**
- **Changing practices**
  - **Limited irrigation driven**
  - **No till interest**
  - **New crops under consideration**