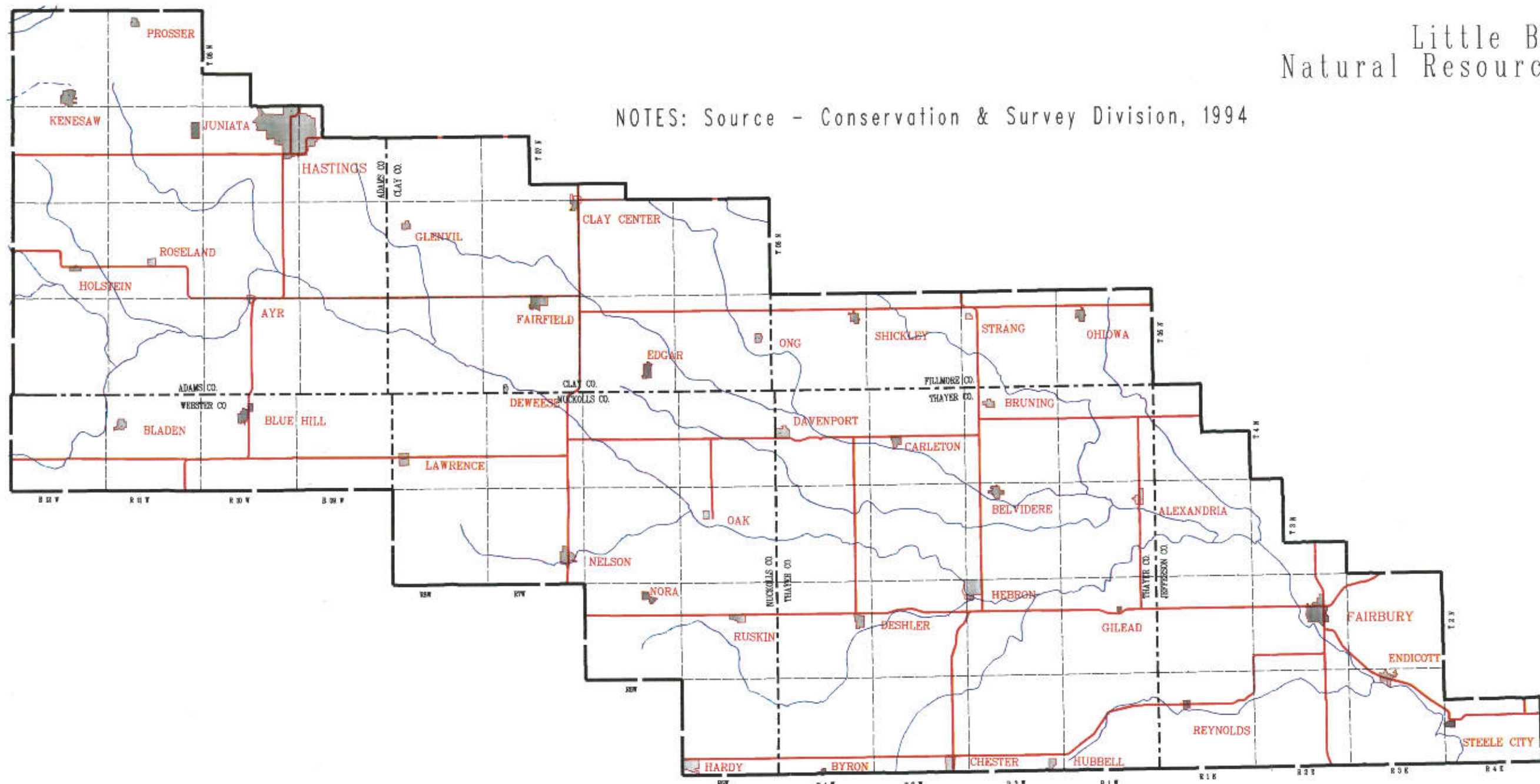


Figure 13-1

Little Blue Natural Resources District

NOTES: Source - Conservation & Survey Division, 1994



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



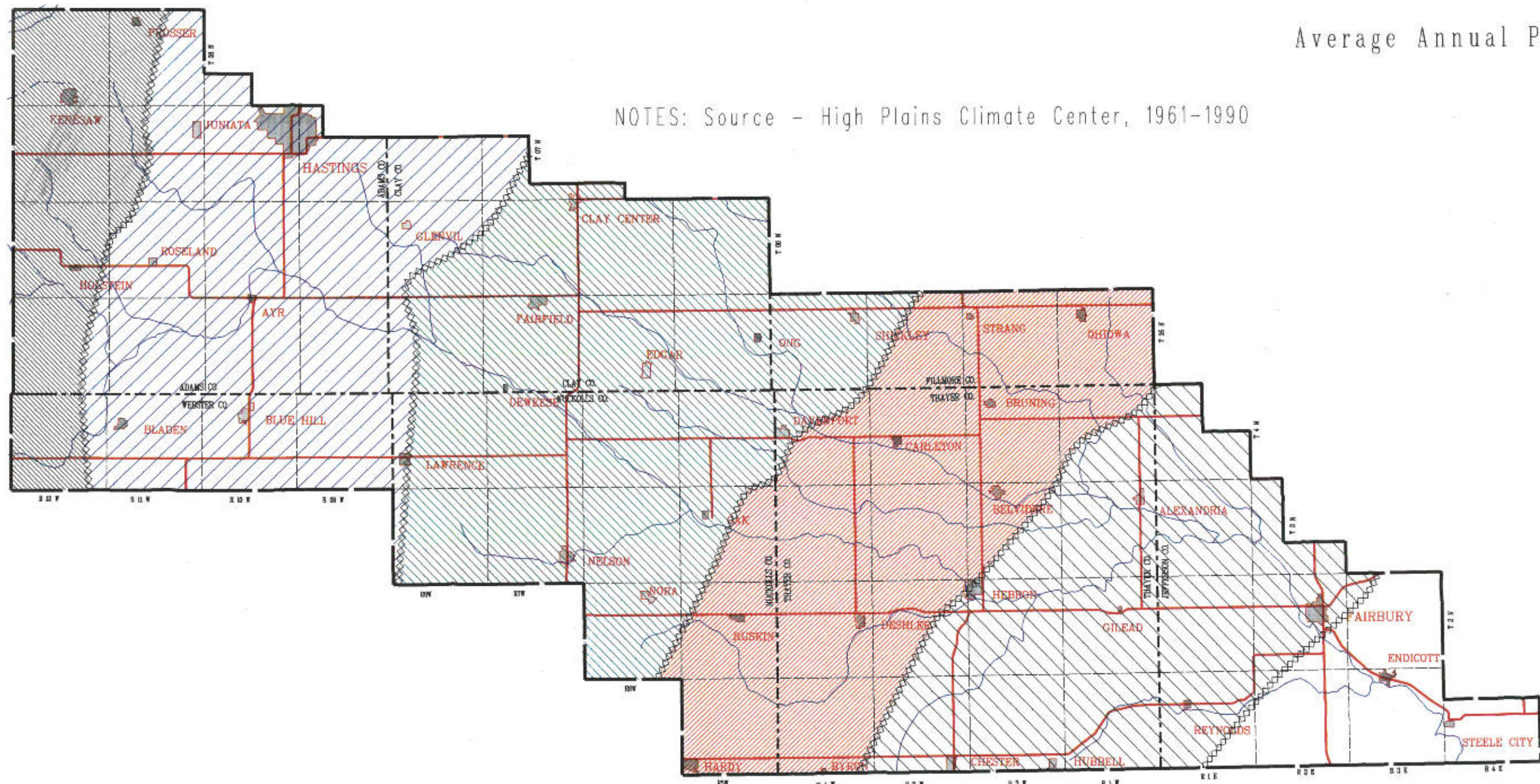
LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

Figure 13-2

Average Annual Precipitation

NOTES: Source - High Plains Climate Center, 1961-1990



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



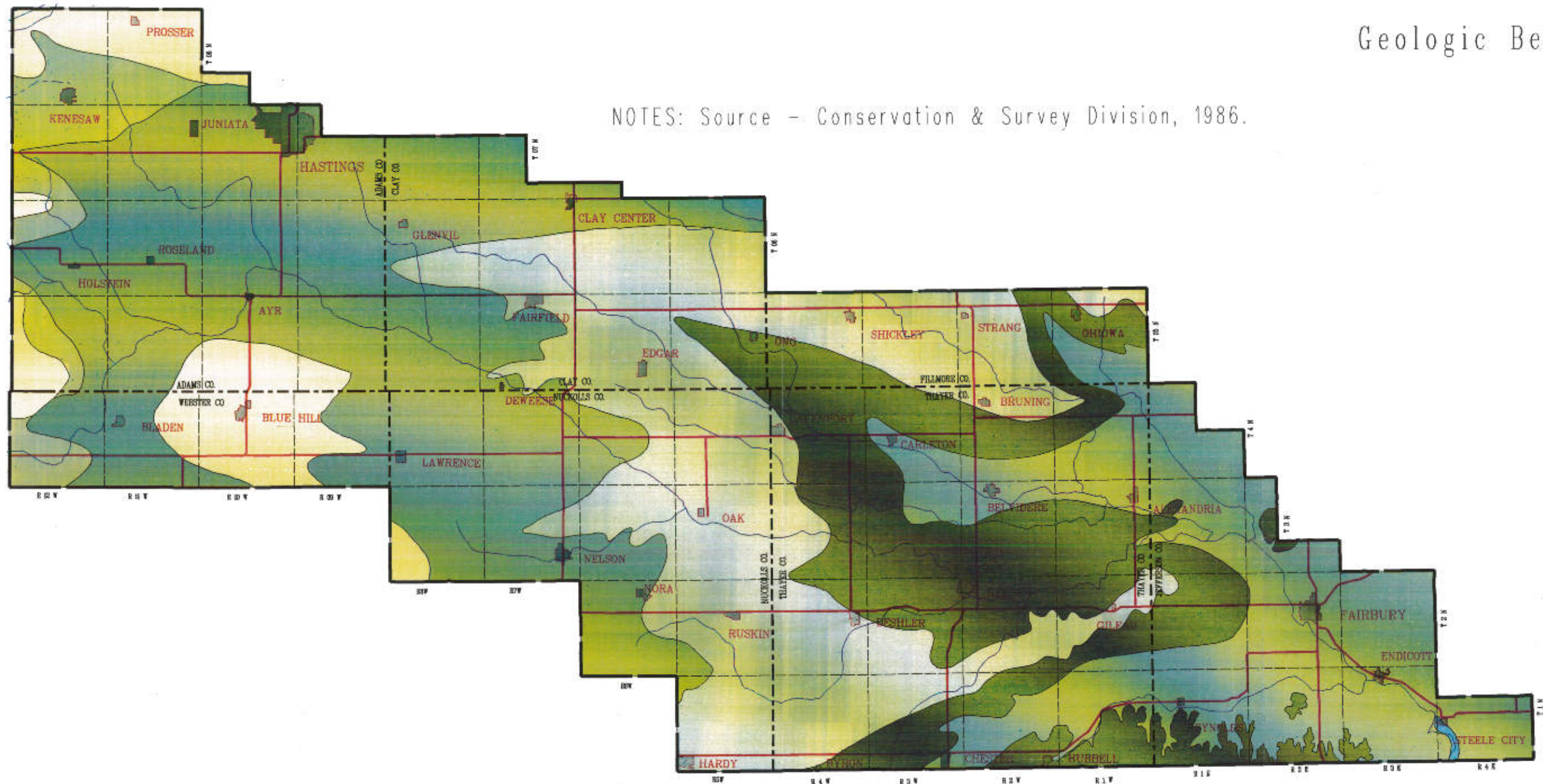
LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

- Between 25 and 26 inches.
- Between 26 and 27 inches.
- Between 27 and 28 inches.
- Between 28 and 29 inches.
- Between 29 and 30 inches.
- Between 30 and 31 inches.

Figure 13-3
Geologic Bedrock

NOTES: Source - Conservation & Survey Division, 1986.



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

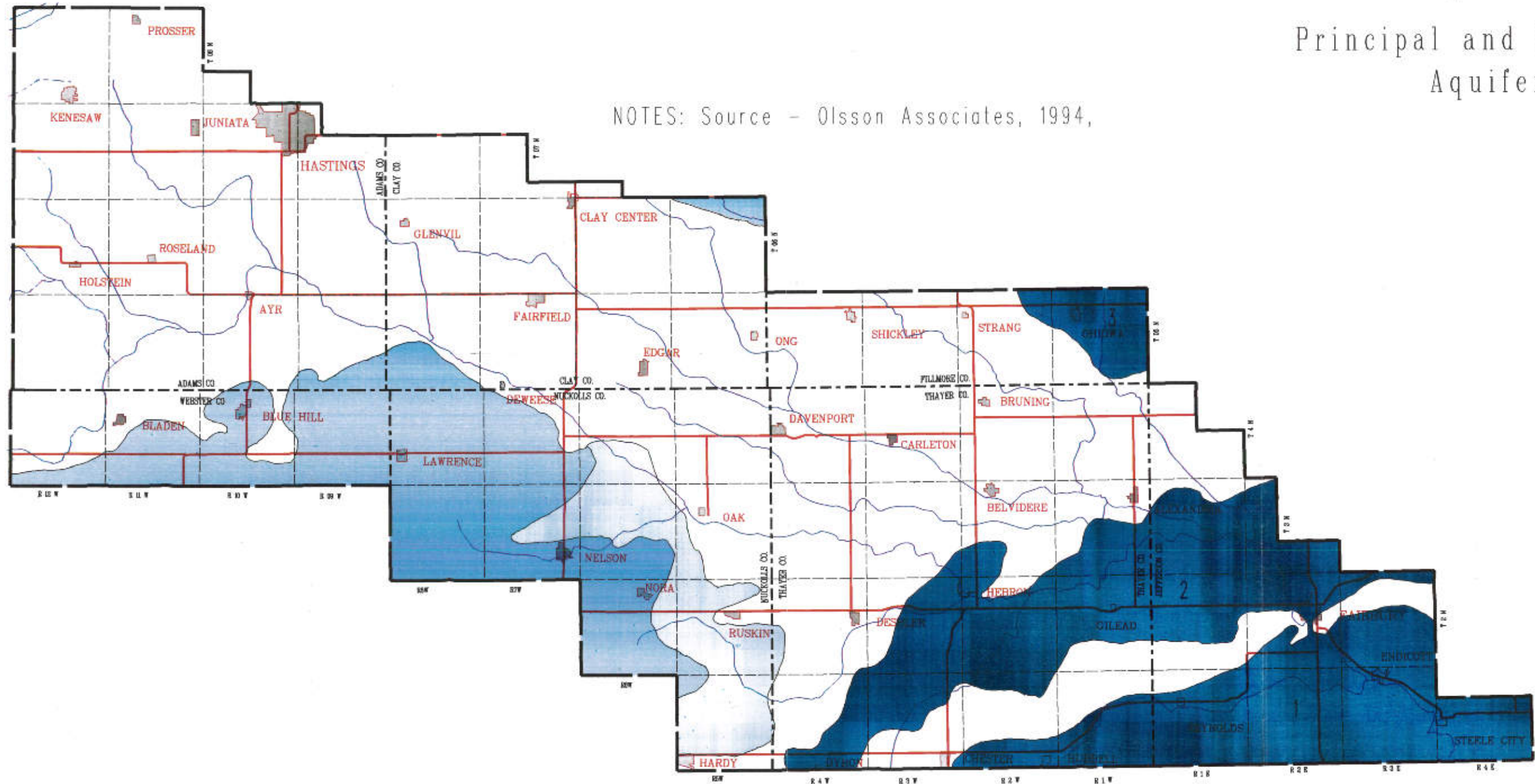
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

- To - Ogallala
- Kp - Pierre
- Kn - Niobrara
- Kc - Carlile
- Kgg - Greenhorn-Graneros
- Kd - Dakota
- Pc - Chase

Figure 13-4

Principal and Secondary Aquifers

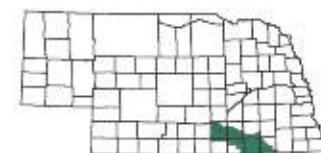
NOTES: Source - Olsson Associates, 1994,



- Principal Aquifer
- Plio-Pleistocene sands and gravels.
- Principal Aquifer thin or absent.
- Principal Aquifer thin or absent. Niobrara Chalk Formation and/or Tertiary sands and siltstones may be secondary aquifers.
- Principal Aquifer thin or absent. Dakota Sandstone Formation underlies area and may be a secondary aquifer. Salinity hazard with depth. Upper sandstone may be saline in western portion of Area 1 and west of Fairbury in Area 2.

5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



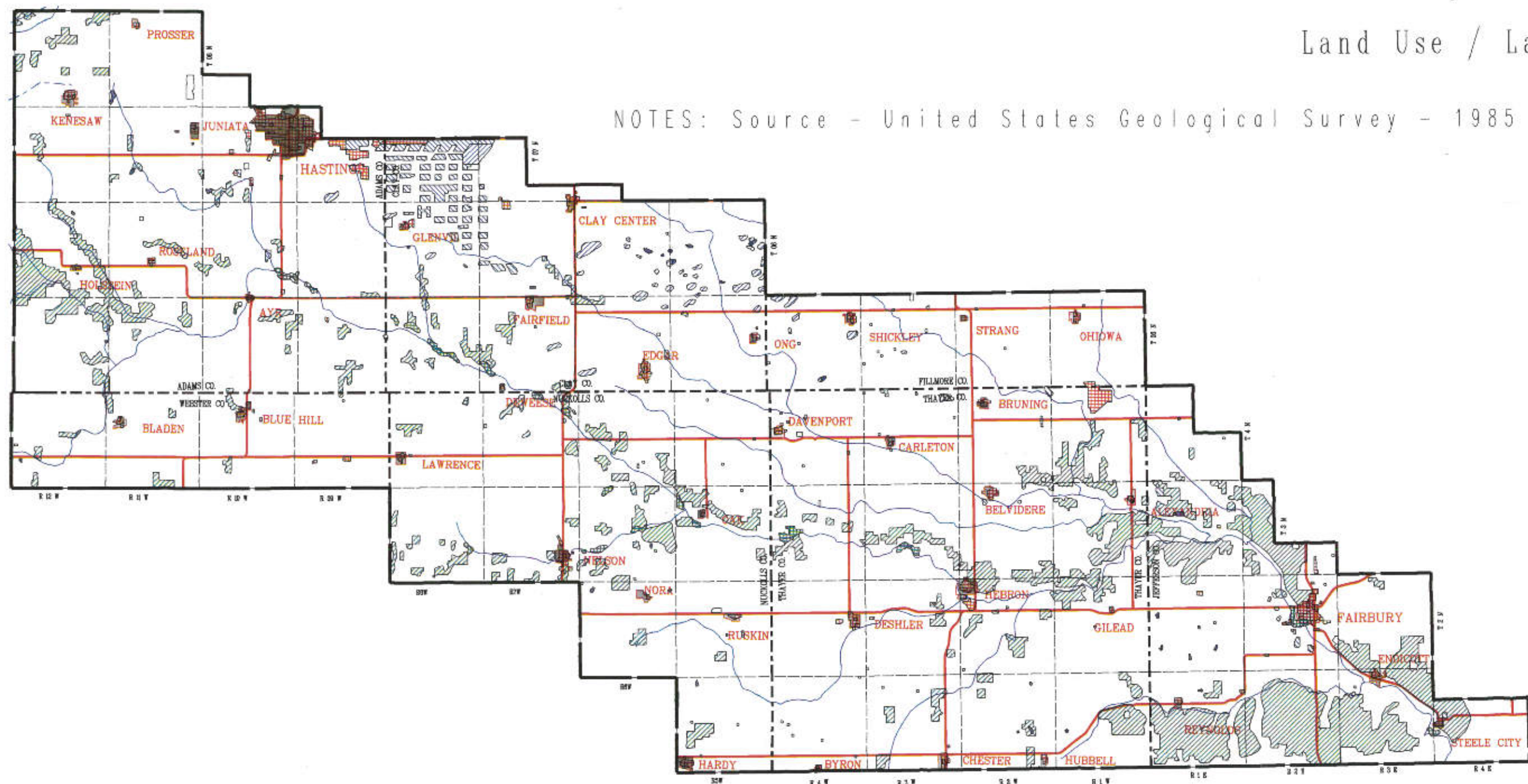
LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

Figure 13-5

Land Use / Land Cover

NOTES: Source - United States Geological Survey - 1985



- Agricultural Areas, Cropland and Pasture
- Herbaceous & Mixed Rangeland
- Urban, Industrial, or Built-up Land
- Nonforested Wetland
- Deciduous Forest Land
- Sand & Gravel Operations, Transitional Areas
- Reservoirs & Lakes

5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



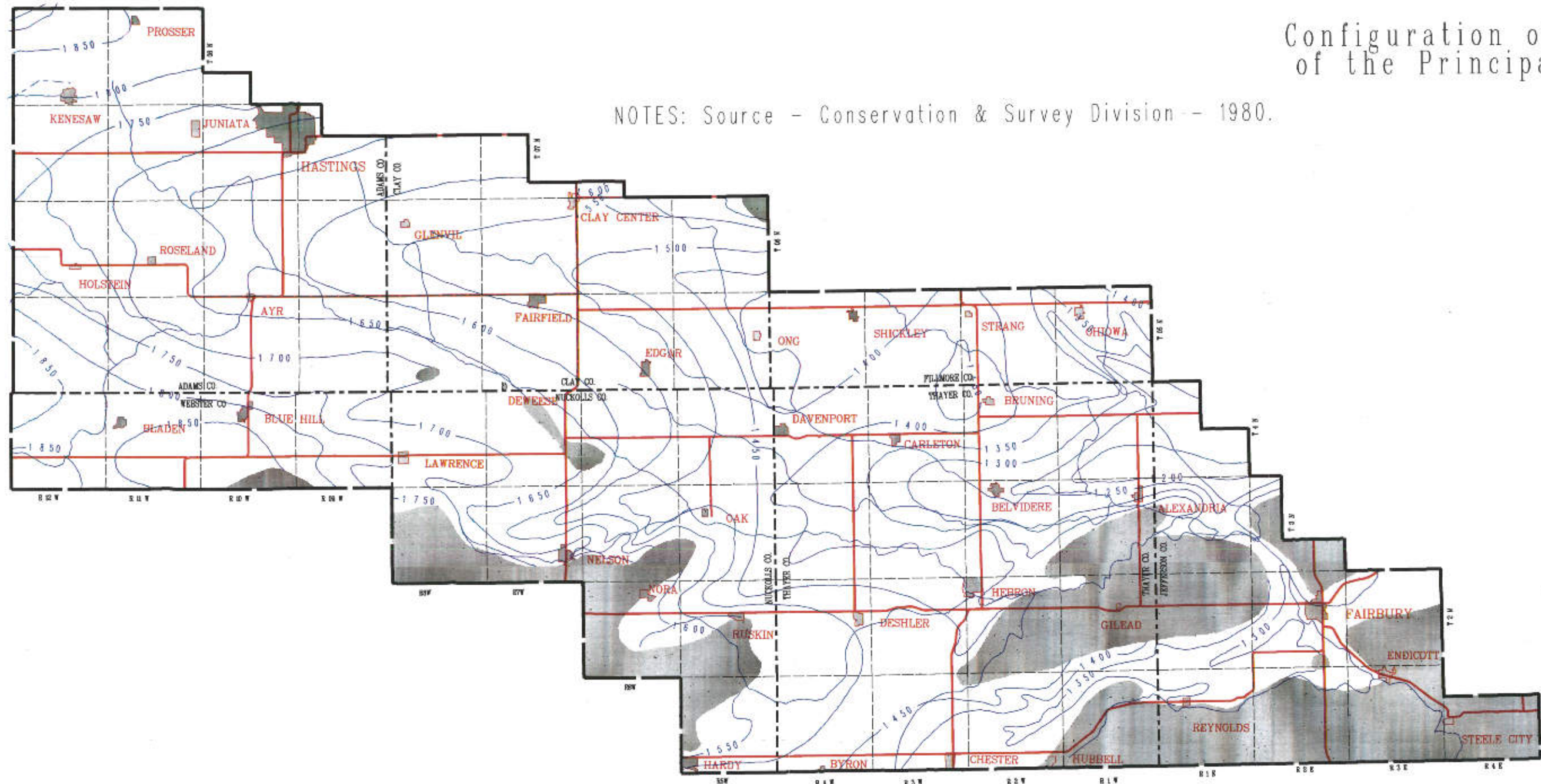
LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

Figure 13-6

Configuration of the Base of the Principal Aquifer

NOTES: Source - Conservation & Survey Division -- 1980.



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

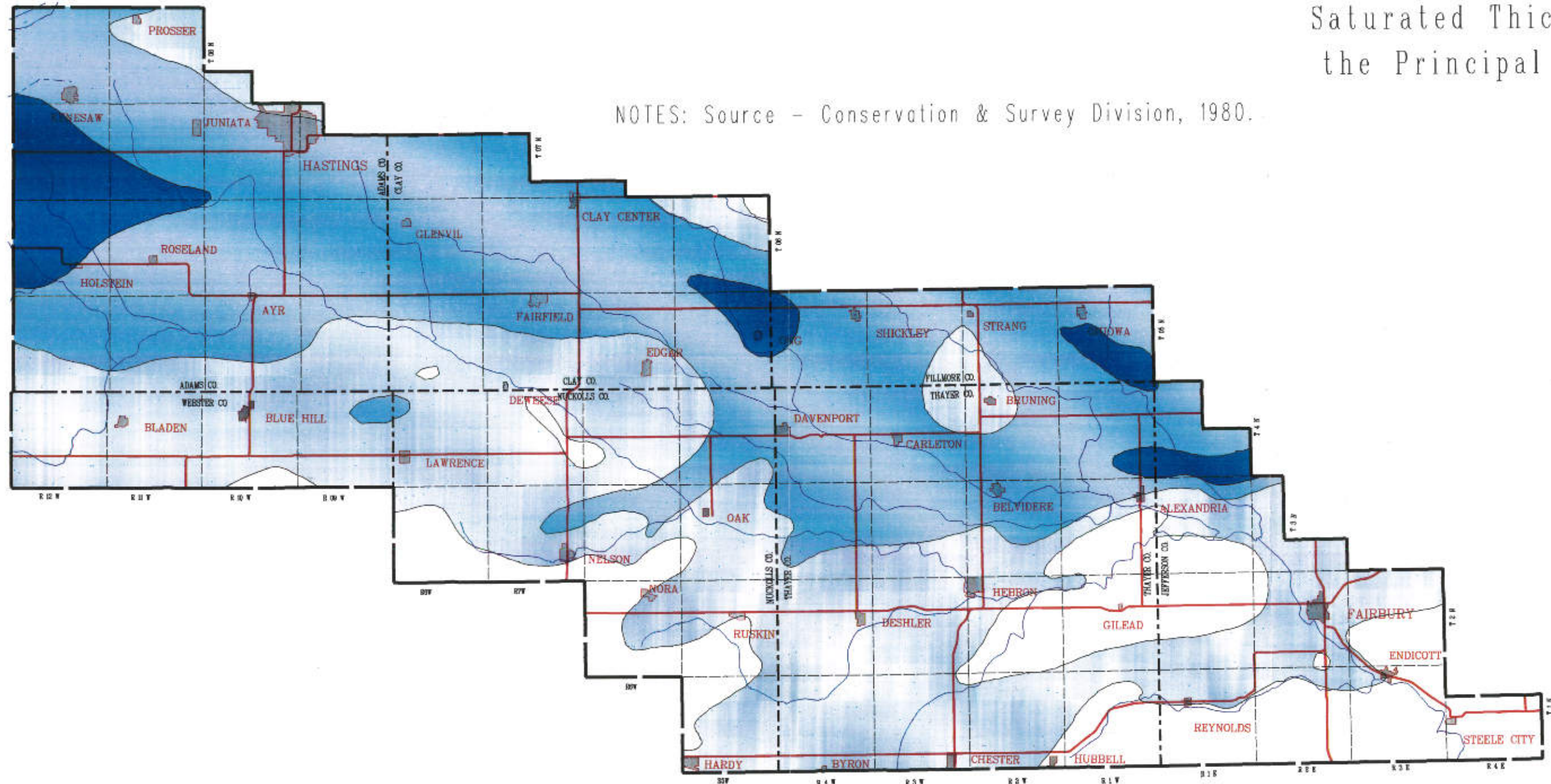
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

— 50 ft. Contour interval.

Principal Aquifer Very Thin or Absent

Figure 13-7
Saturated Thickness of
the Principal Aquifer

NOTES: Source - Conservation & Survey Division, 1980.



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

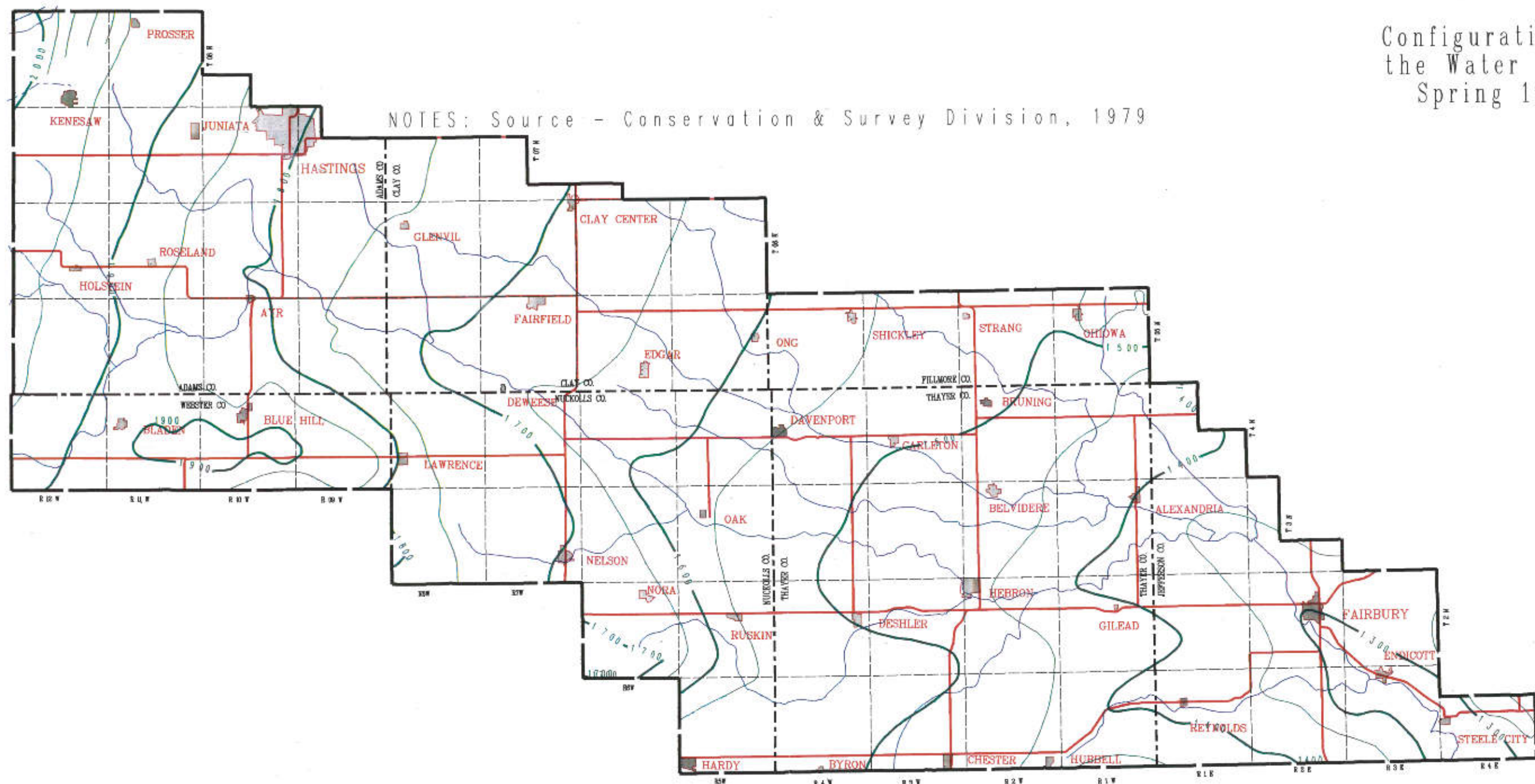
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

- Aquifer Thin or Absent
- Less Than 100 Feet
- Between 100 and 200 Feet
- Over 200 feet

Figure 13-8

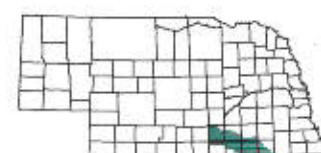
Configuration of the Water Table Spring 1979

NOTES: Source - Conservation & Survey Division, 1979



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

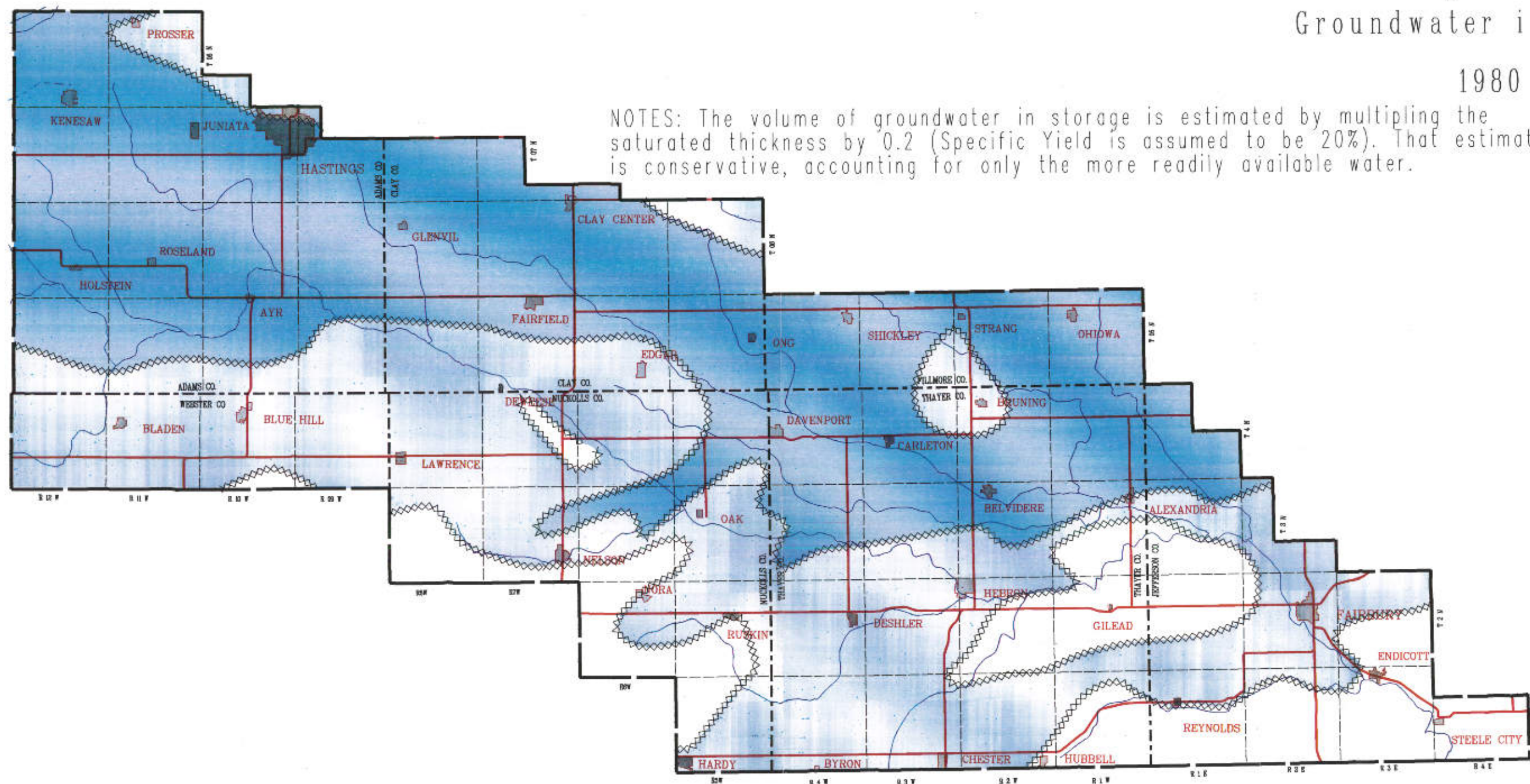
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

— Configuration Contour
Interval = 100 Feet
— Supplemental Contour
Interval = 50 Feet

Figure 13-9
Groundwater in Storage

1980

NOTES: The volume of groundwater in storage is estimated by multiplying the saturated thickness by 0.2 (Specific Yield is assumed to be 20%). That estimate is conservative, accounting for only the more readily available water.



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

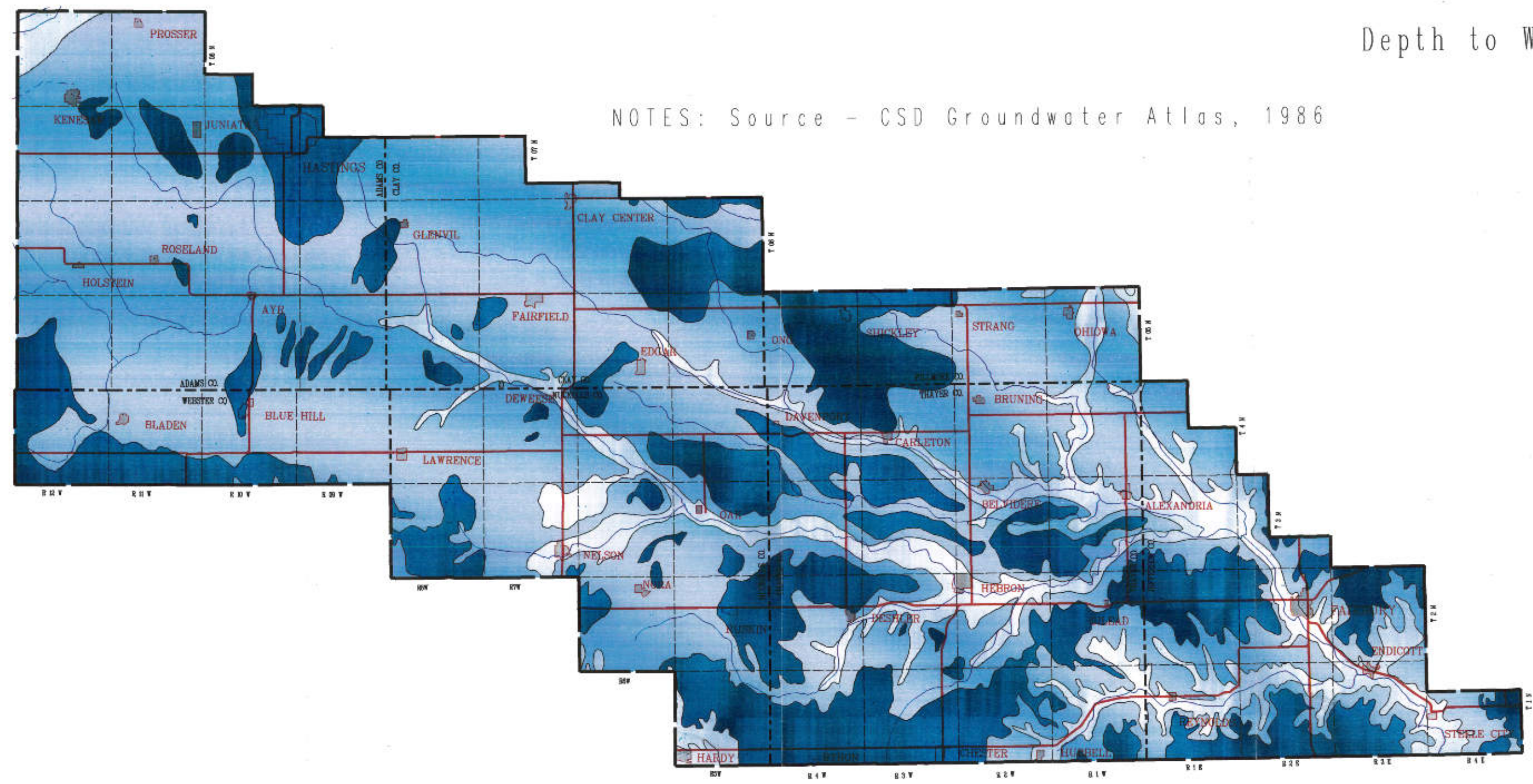
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

Equivalent Depth of Water the Aquifer Will Yield.

- Aquifer Very Thin or Absent
- Less Than 20 Feet
- Between 20 and 60 Feet

Figure 13-10
Depth to Water

NOTES: Source - CSD Groundwater Atlas, 1986



- Depth less than 50 feet.
- Depth between 50 and 100 feet.
- Depth greater than 100 feet.

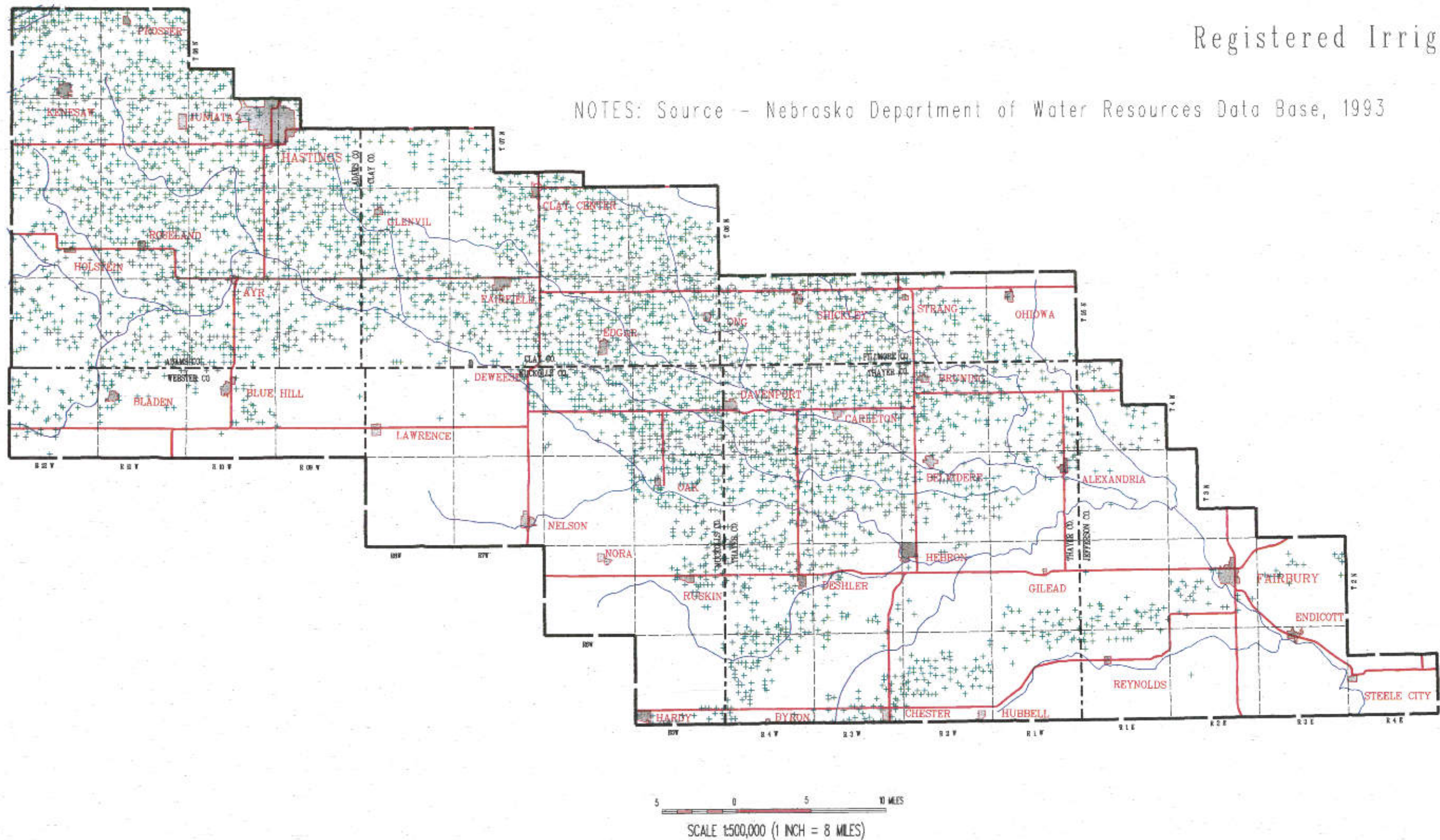


- LITTLE BLUE NRD
- COUNTY BOUNDARY
 - TOWNSHIP BOUNDARY
 - RIVERS & STREAMS
 - IRRIGATION CANALS
 - MAJOR ROADS

Figure 13-11

Registered Irrigation Wells

NOTES: Source - Nebraska Department of Water Resources Data Base, 1993



+ Registered Irrigation Well



LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

Figure 13-12
Transmissivity of the
Principal Aquifer

NOTES: Source - Olsson Associates, 1994.

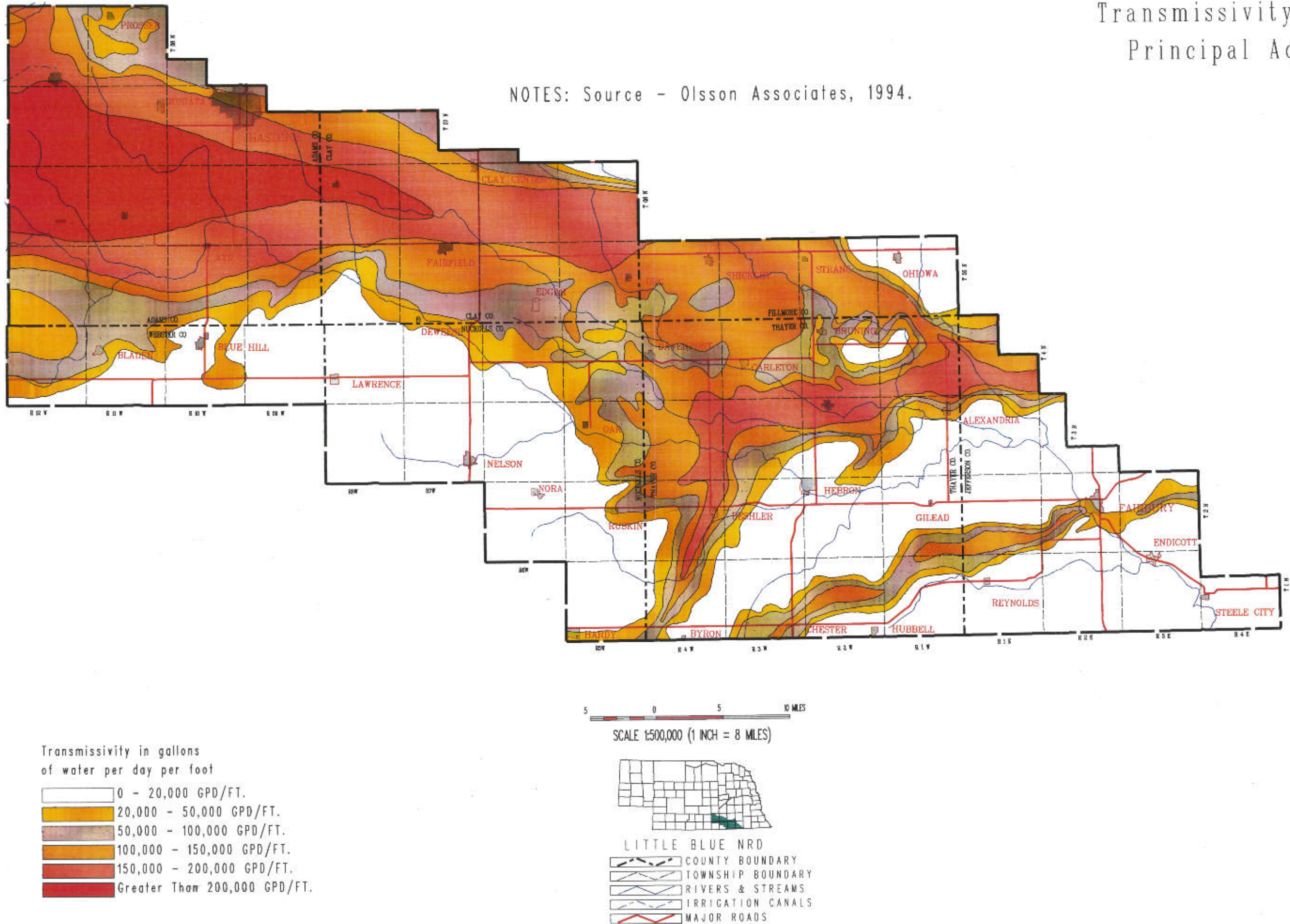
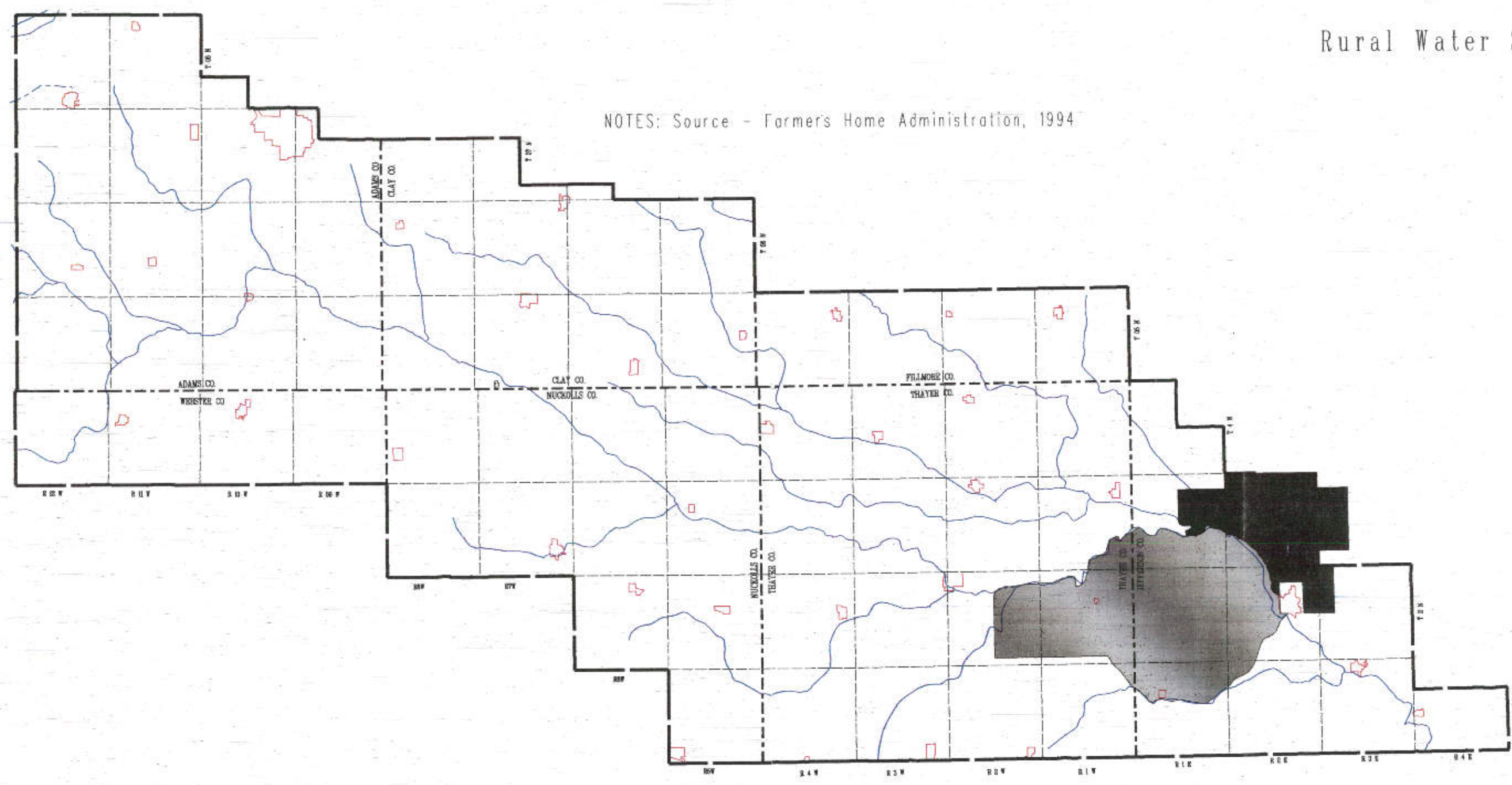


Figure 13-13

Rural Water Systems

NOTES: Source - Farmer's Home Administration, 1994



- PHASE 1 - 1979
- PHASE 2 - 1980
- PHASE 3 - 1980

5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

Figure 13-14

Static Water Level Changes

NOTES: Modified from Groundwater Levels in Nebraska - 1992

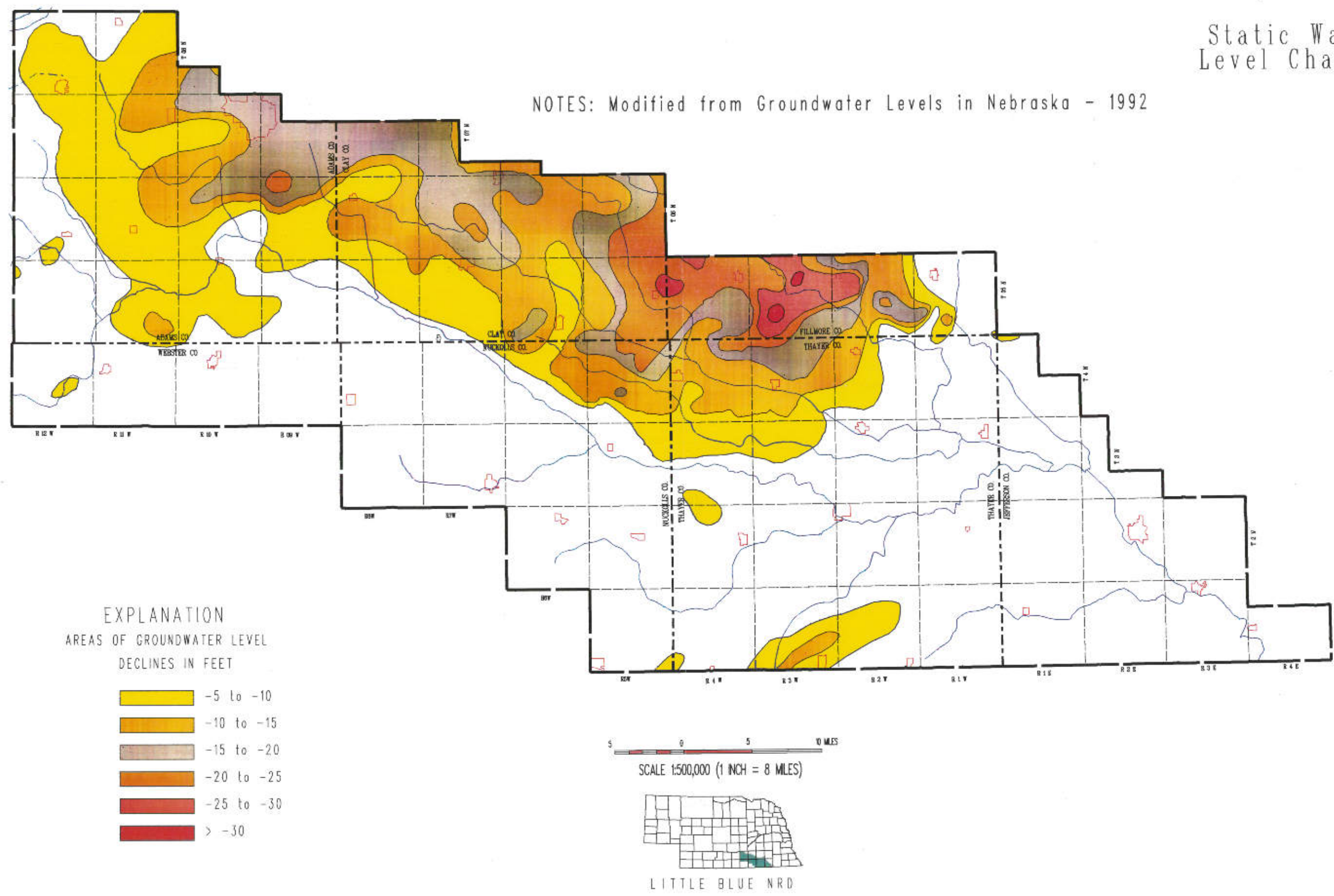
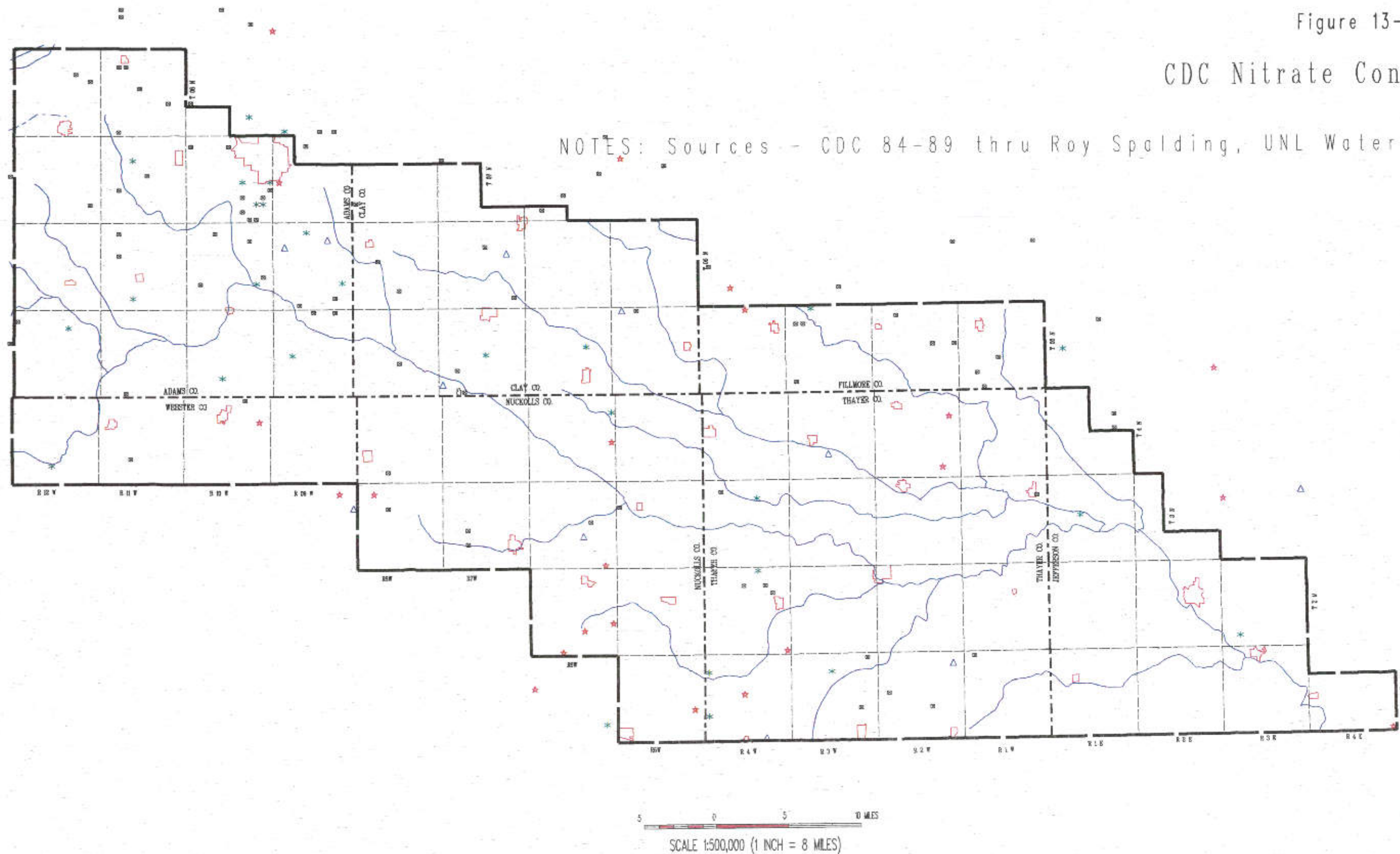


Figure 13-15

CDC Nitrate Concentration

NOTES: Sources - CDC 84-89 thru Roy Spalding, UNL Water Center



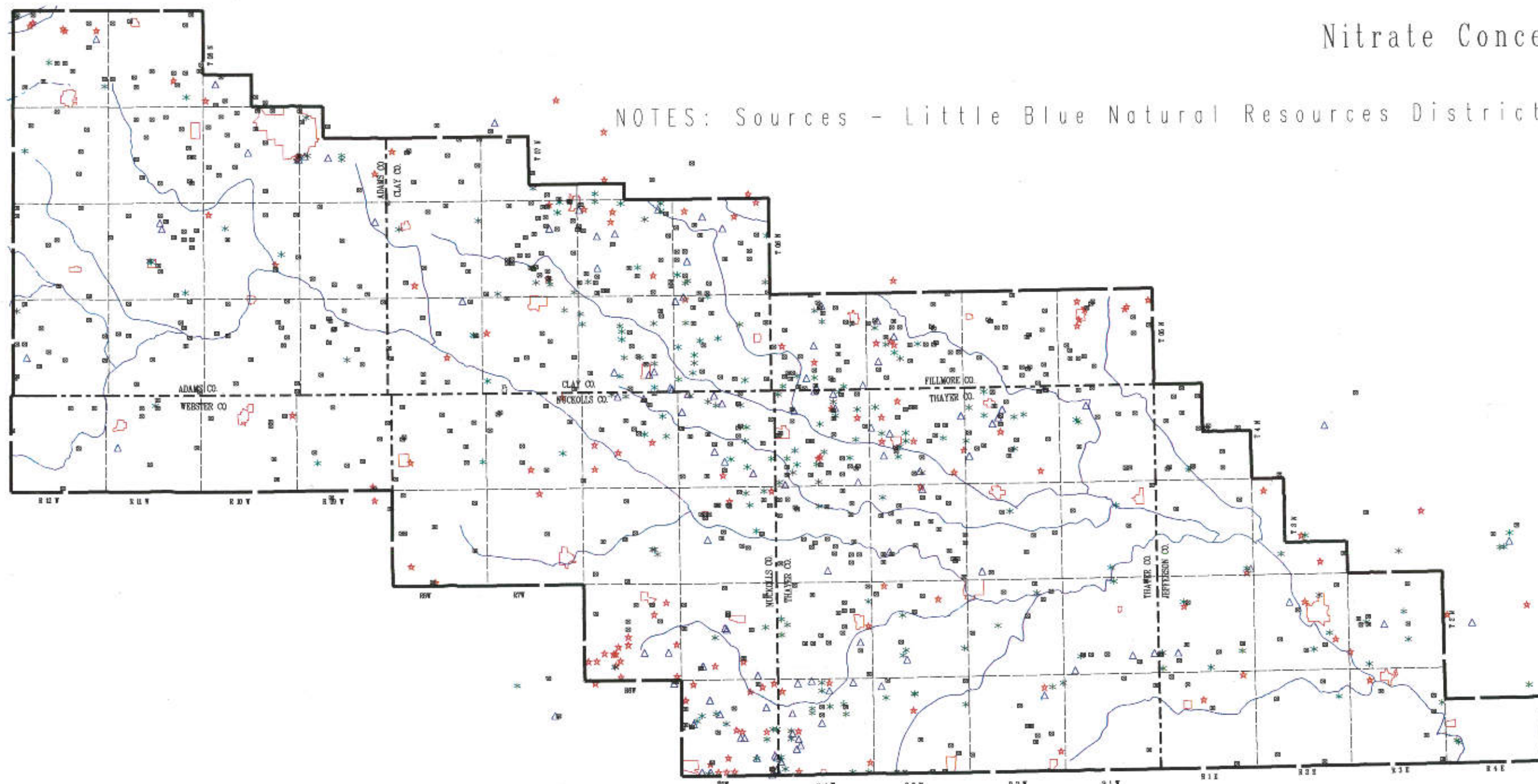
- Less Than 5.0 mg/l.
- * Between 5.0 mg/l - 7.5 mg/l.
- △ Between 7.5 mg/l - 10.0 mg/l.
- ★ Greater than 10.0 mg/l.



Figure 13-16

Nitrate Concentration

NOTES: Sources - Little Blue Natural Resources District, 1985-1994



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



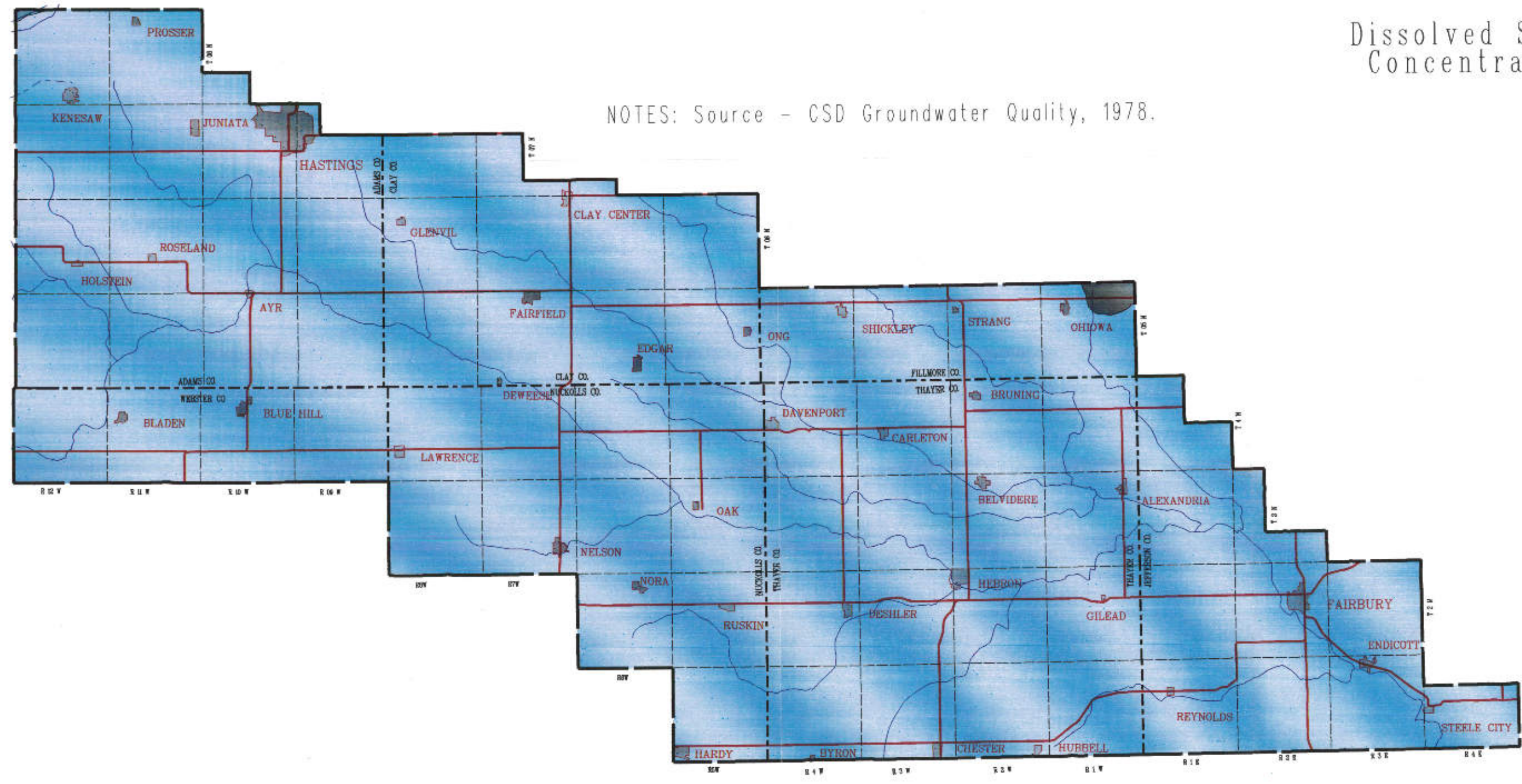
LITTLE BLUE NRD

- Less Than 5.0 mg/l.
- * Between 5.0 mg/l - 7.5 mg/l.
- △ Between 7.5 mg/l - 10.0 mg/l.
- ★ Greater than 10.0 mg/l.

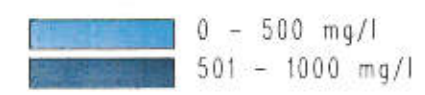
Figure 13-17

Dissolved Solids Concentration

NOTES: Source - CSD Groundwater Quality, 1978.



Range of Concentration



SCALE 1:500,000 (1 INCH = 8 MILES)



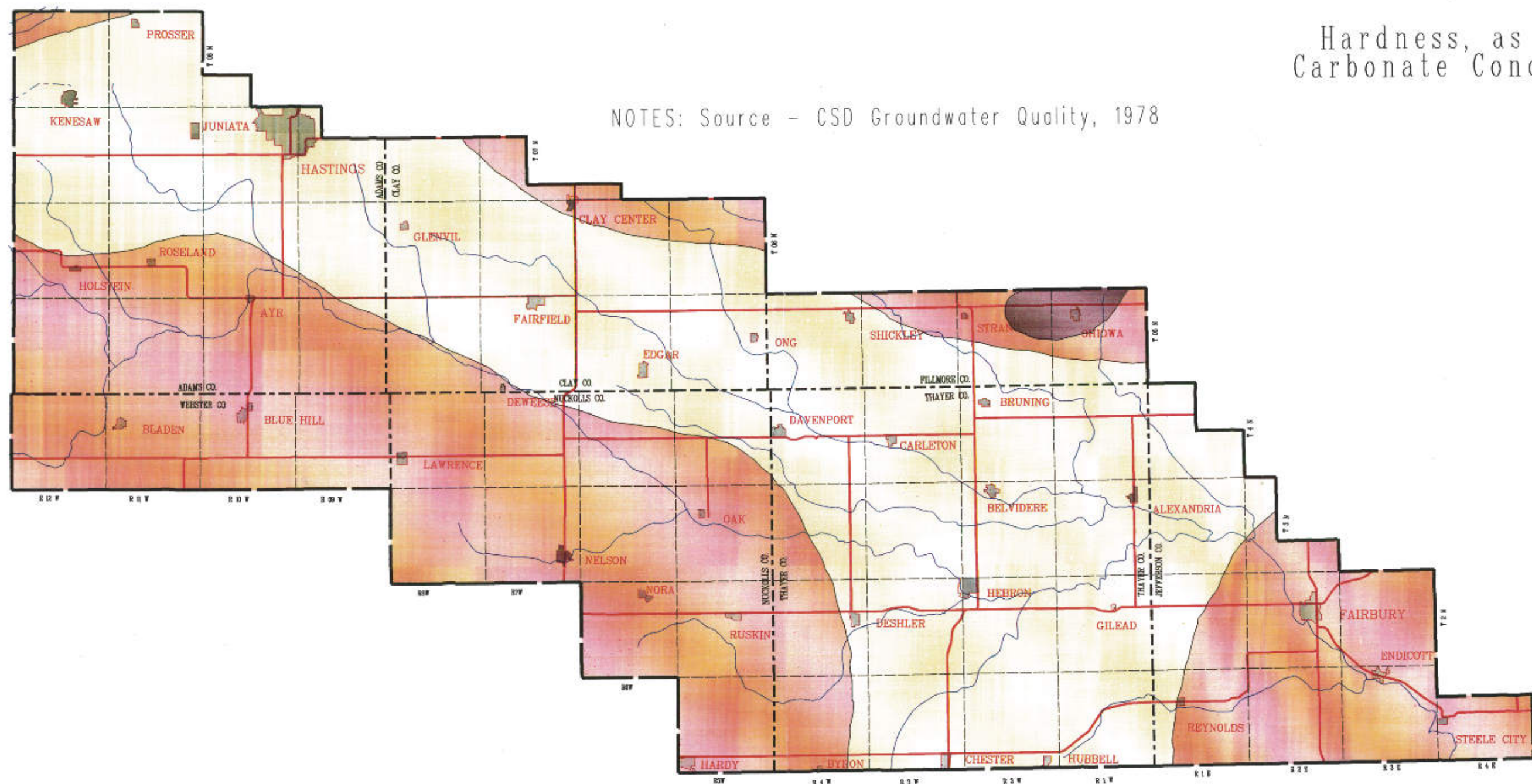
LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

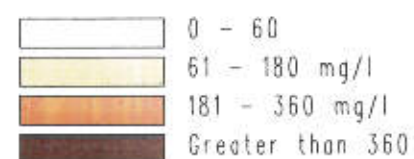
Figure 13-18

Hardness, as Calcium Carbonate Concentration

NOTES: Source - CSD Groundwater Quality, 1978



Range of Concentration
as Calcium Carbonate



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



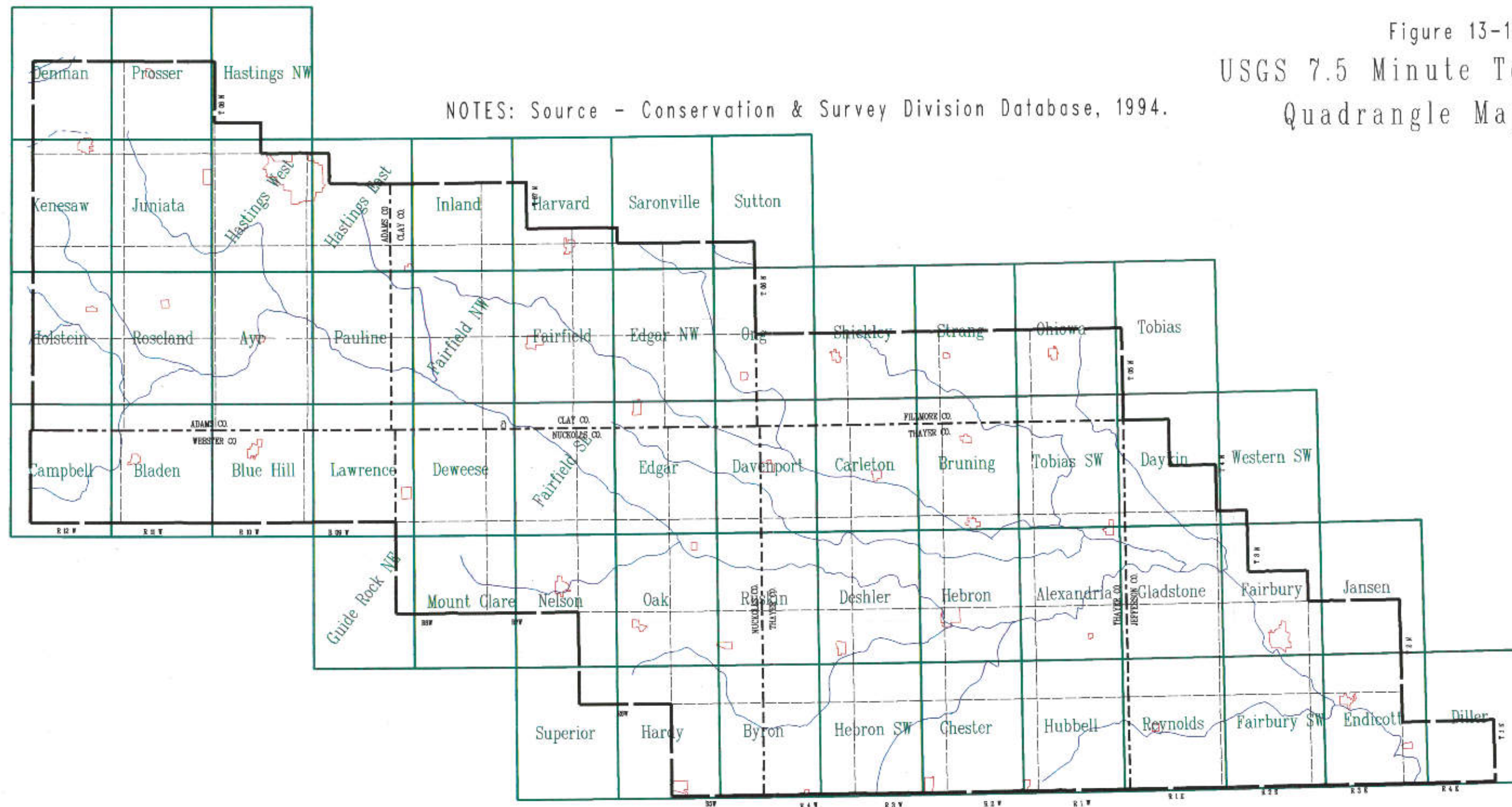
LITTLE BLUE NRD



Figure 13-19

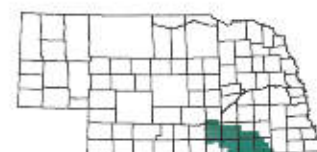
USGS 7.5 Minute Topographic Quadrangle Map Index

NOTES: Source - Conservation & Survey Division Database, 1994.



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

Figure 13-20

Generalized Soils Map
SCS STATSGO Associations

NOTES: Source - Soil Conservation Service, US Department of Agriculture.

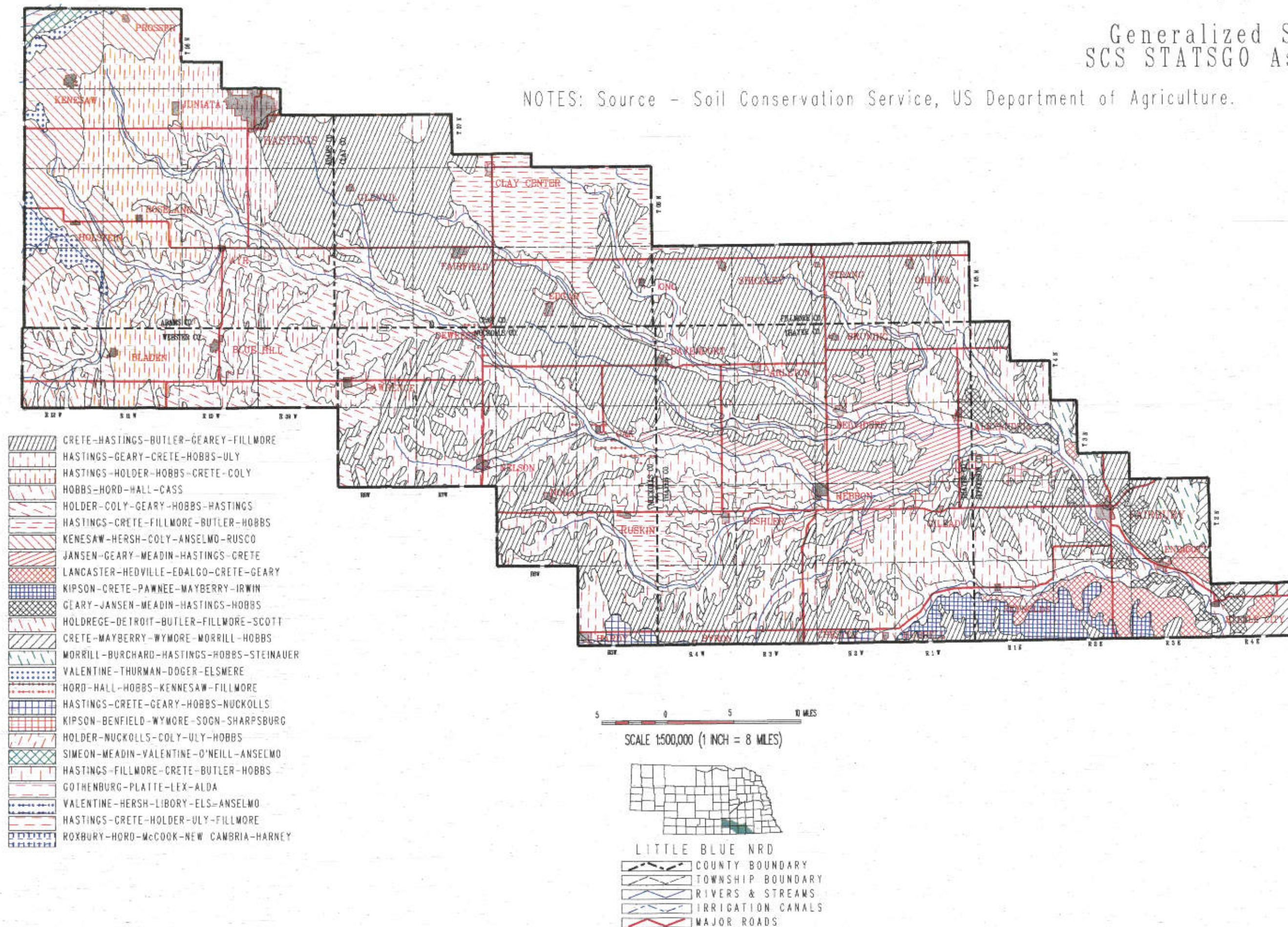
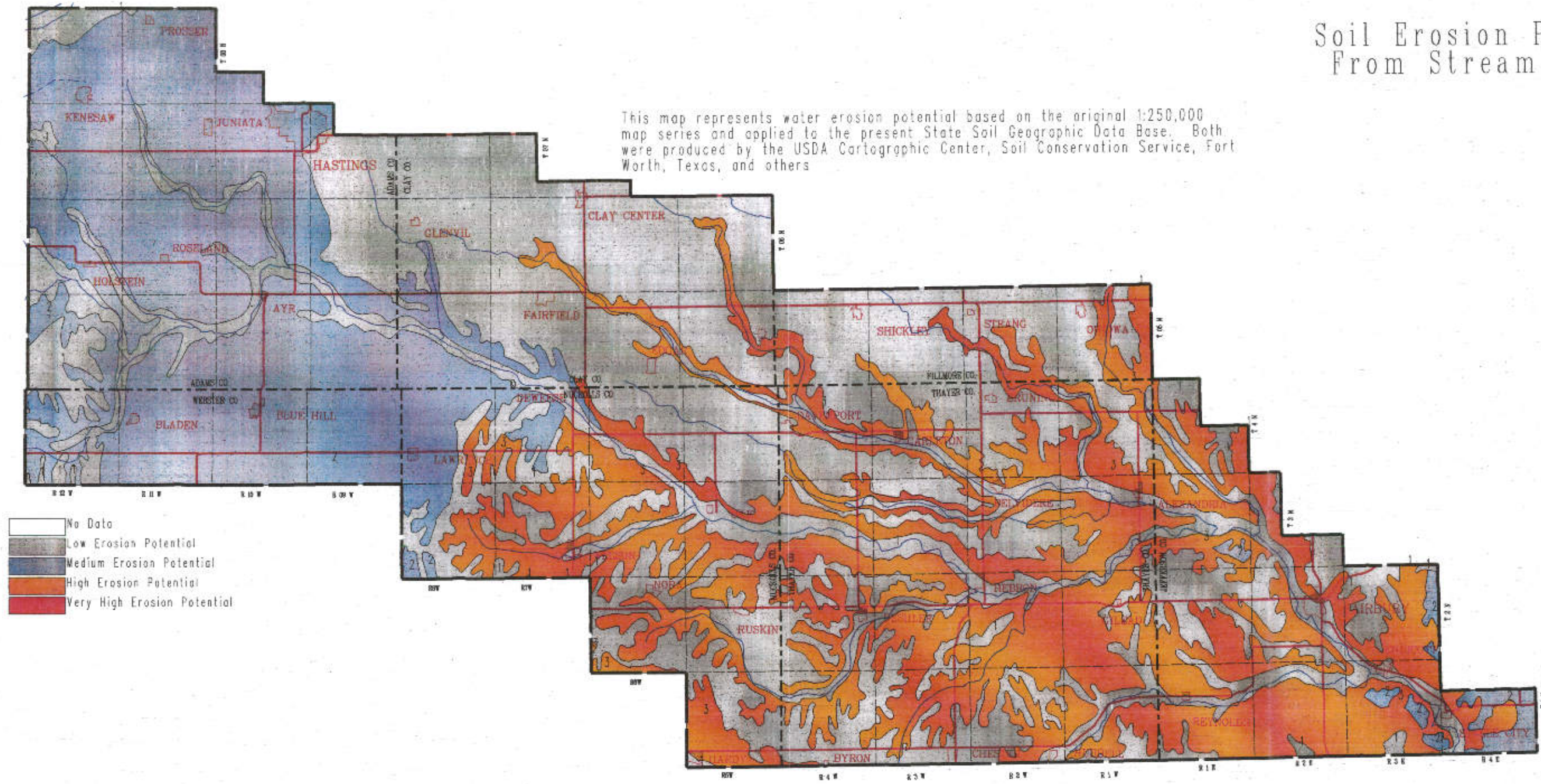


Figure 13-21

Soil Erosion Potential From Stream Runoff

This map represents water erosion potential based on the original 1:250,000 map series and applied to the present State Soil Geographic Data Base. Both were produced by the USDA Cartographic Center, Soil Conservation Service, Fort Worth, Texas, and others



- No Data
- Low Erosion Potential
- Medium Erosion Potential
- High Erosion Potential
- Very High Erosion Potential

5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



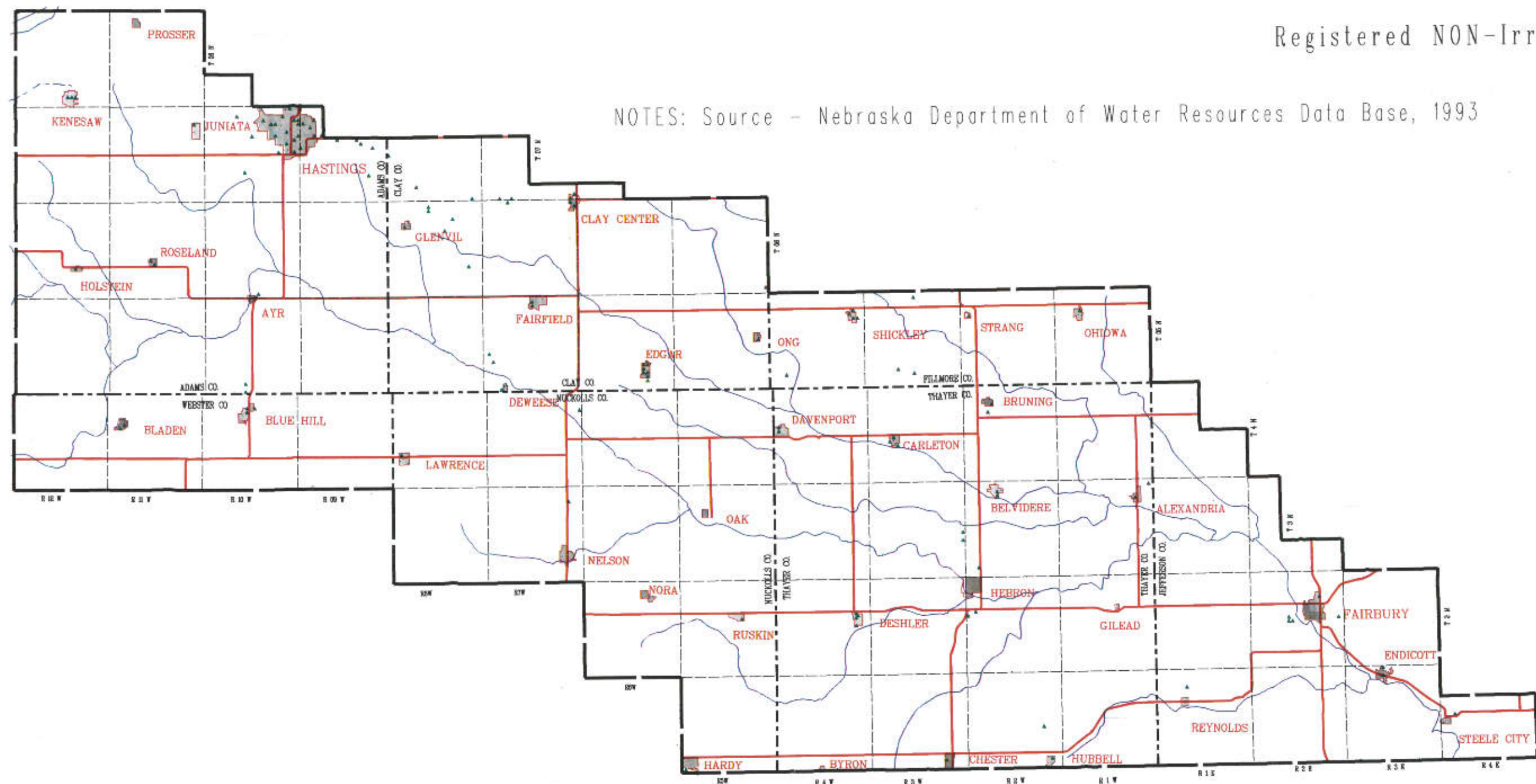
LITTLE BLUE NRD

- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

Figure 13-22

Registered NON-Irrigation Wells

NOTES: Source - Nebraska Department of Water Resources Data Base, 1993



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

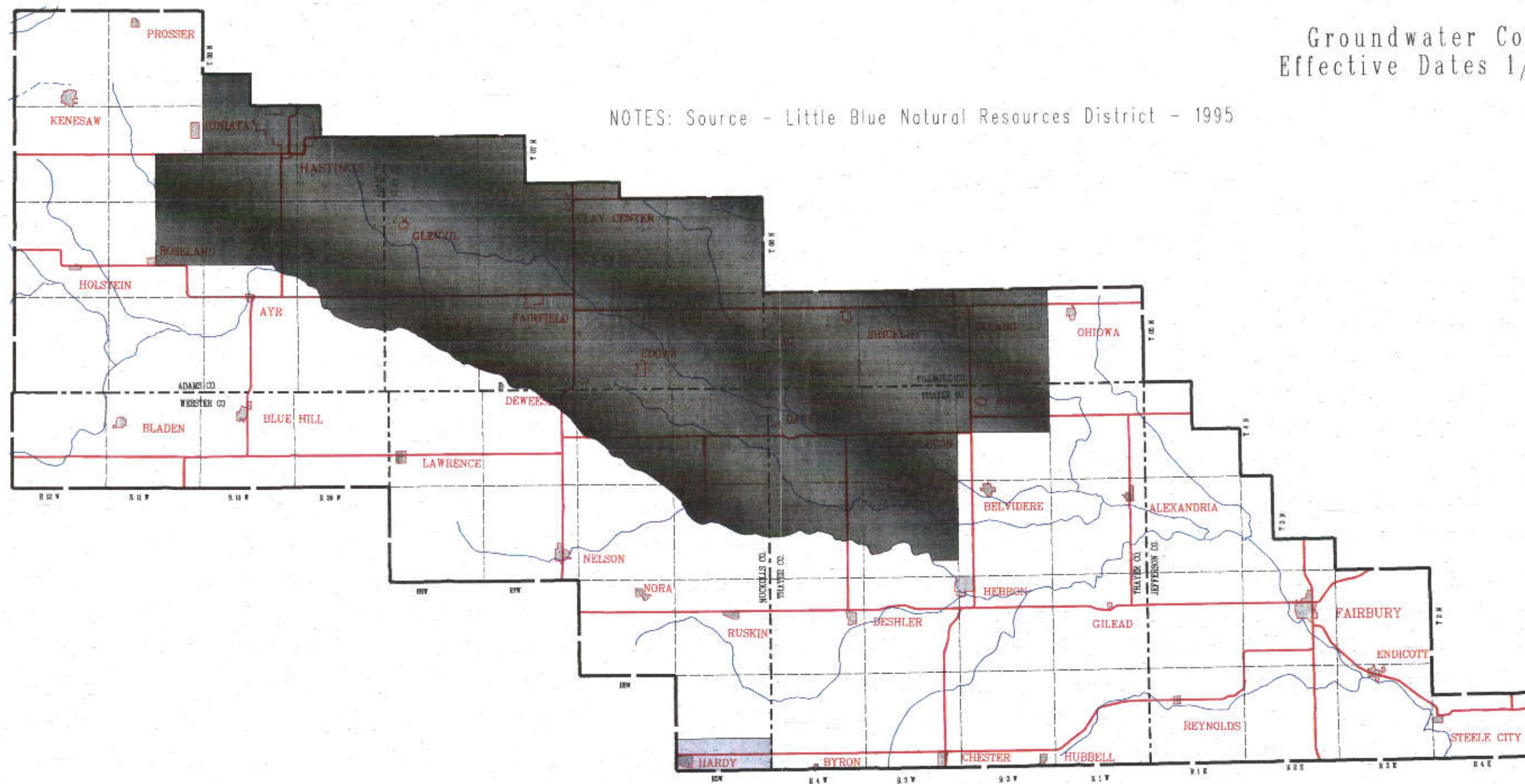
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

▲ Registered NON - Irrigation Well

Figure 13-23

Groundwater Control Area Effective Dates 1/2/79-1/1/94

NOTES: Source - Little Blue Natural Resources District - 1995



Groundwater Control Area
Special Protection Area

SCALE 1:500,000 (1 INCH = 8 MILES)



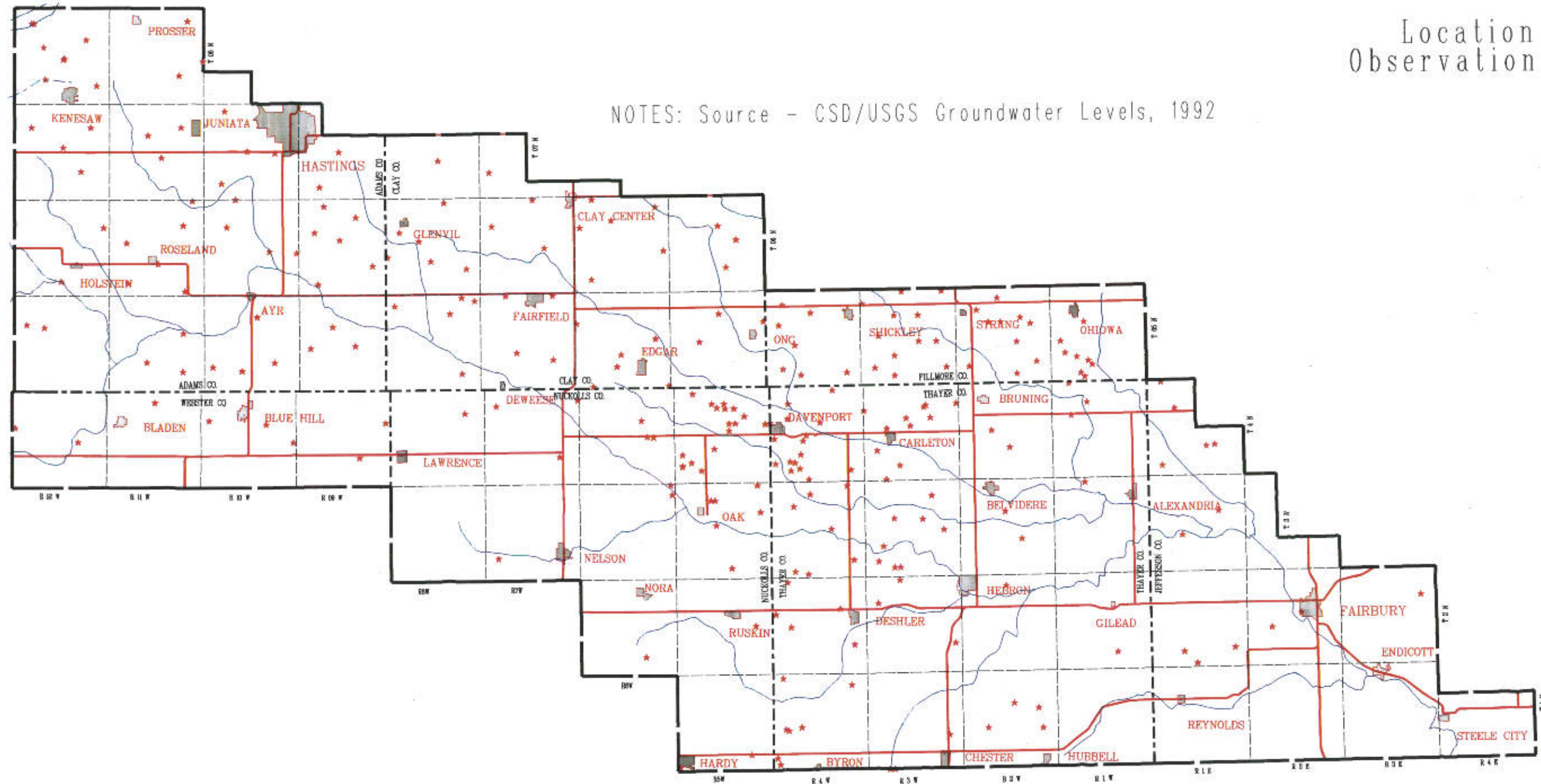
LITTLE BLUE NRD

COUNTY BOUNDARY
TOWNSHIP BOUNDARY
RIVERS & STREAMS
IRRIGATION CANALS
MAJOR ROADS

Figure 13-24

Location of Observation Wells

NOTES: Source - CSD/USGS Groundwater Levels, 1992



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

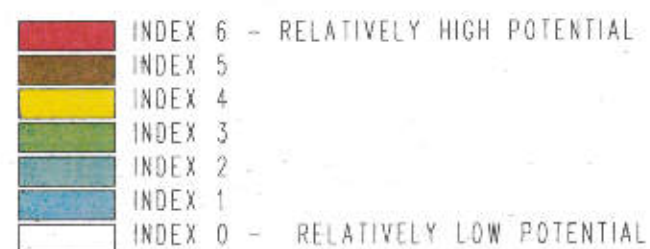
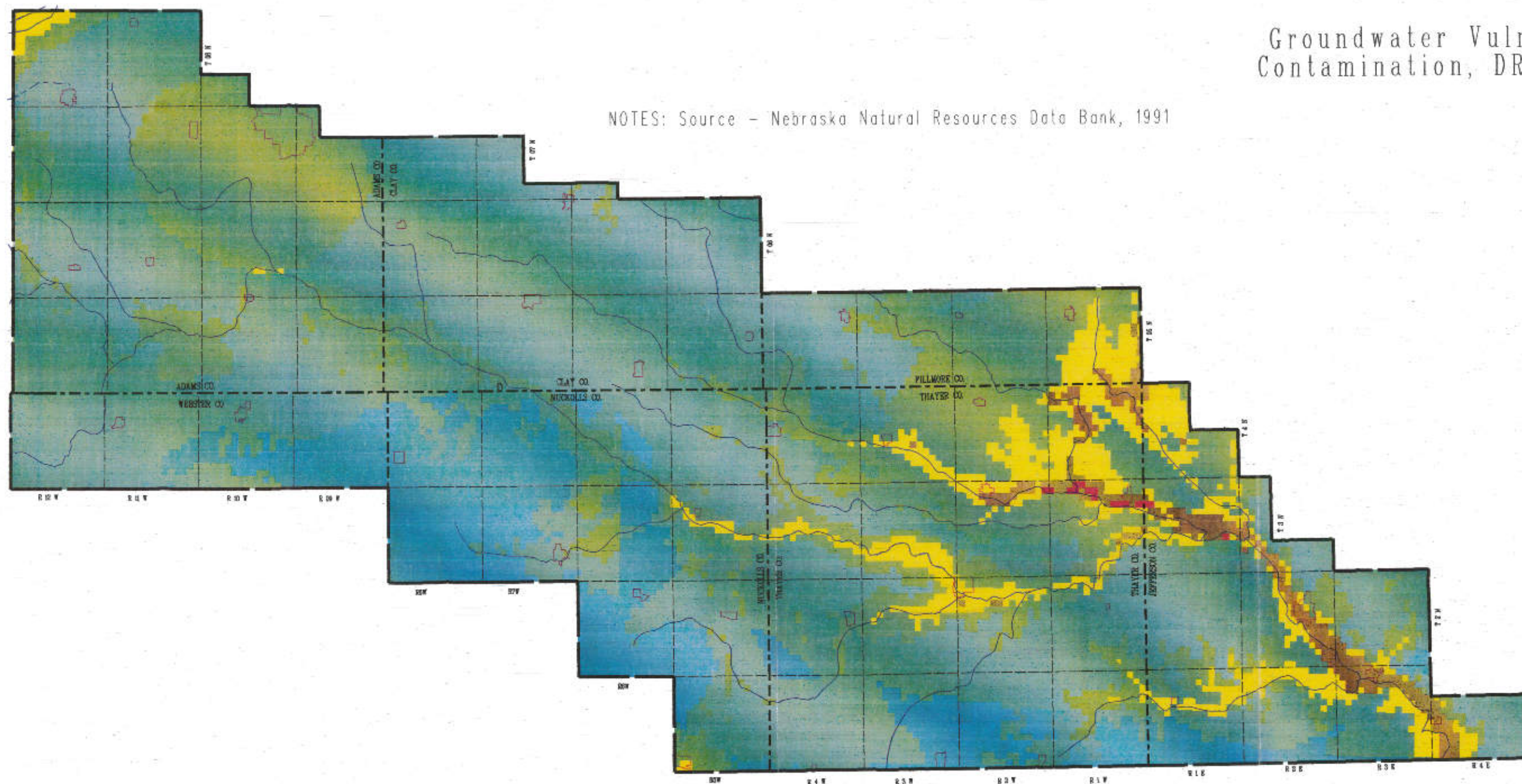
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- RIVERS & STREAMS
- IRRIGATION CANALS
- MAJOR ROADS

* Observation Well Location

Figure 13-25

Groundwater Vulnerability to Contamination, DRASTIC Method

NOTES: Source - Nebraska Natural Resources Data Bank, 1991



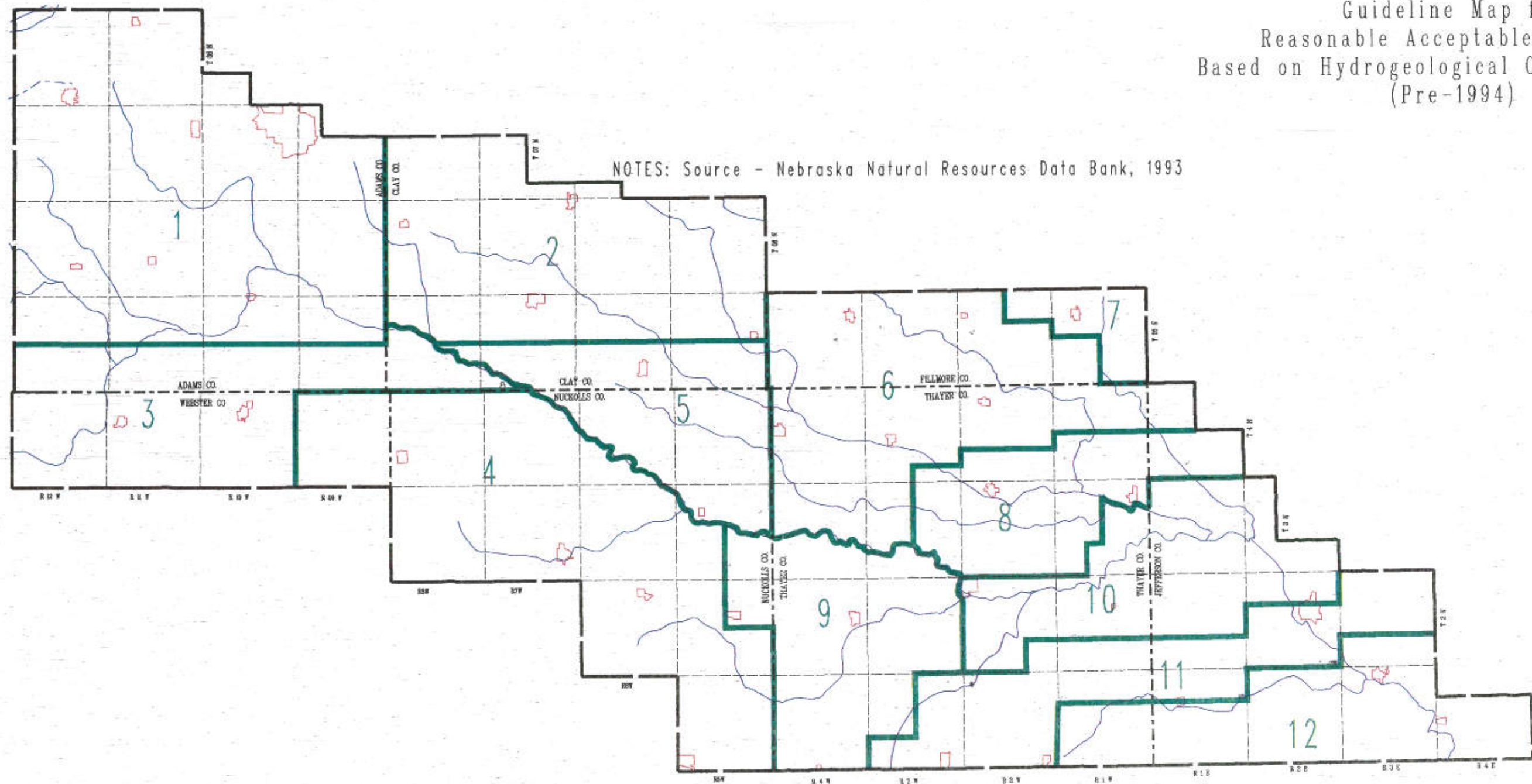
5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD

Guideline Map for
Reasonable Acceptable Declines
Based on Hydrogeological Characteristics
(Pre-1994)



5 0 5 10 MILES

SCALE 1:500,000 (1 INCH = 8 MILES)



LITTLE BLUE NRD