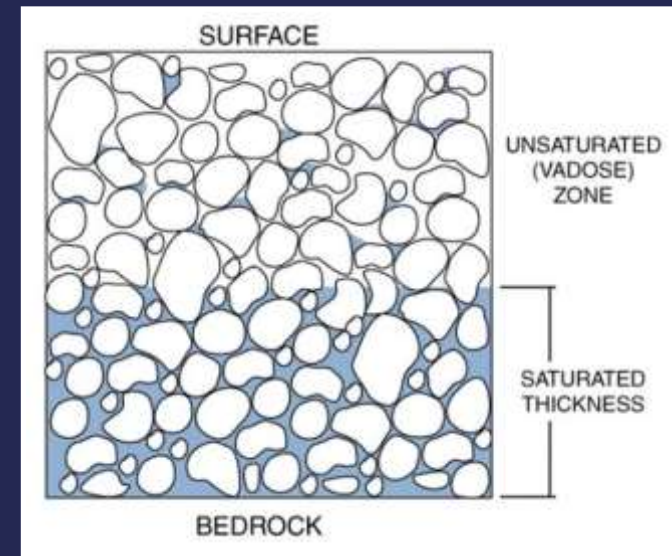
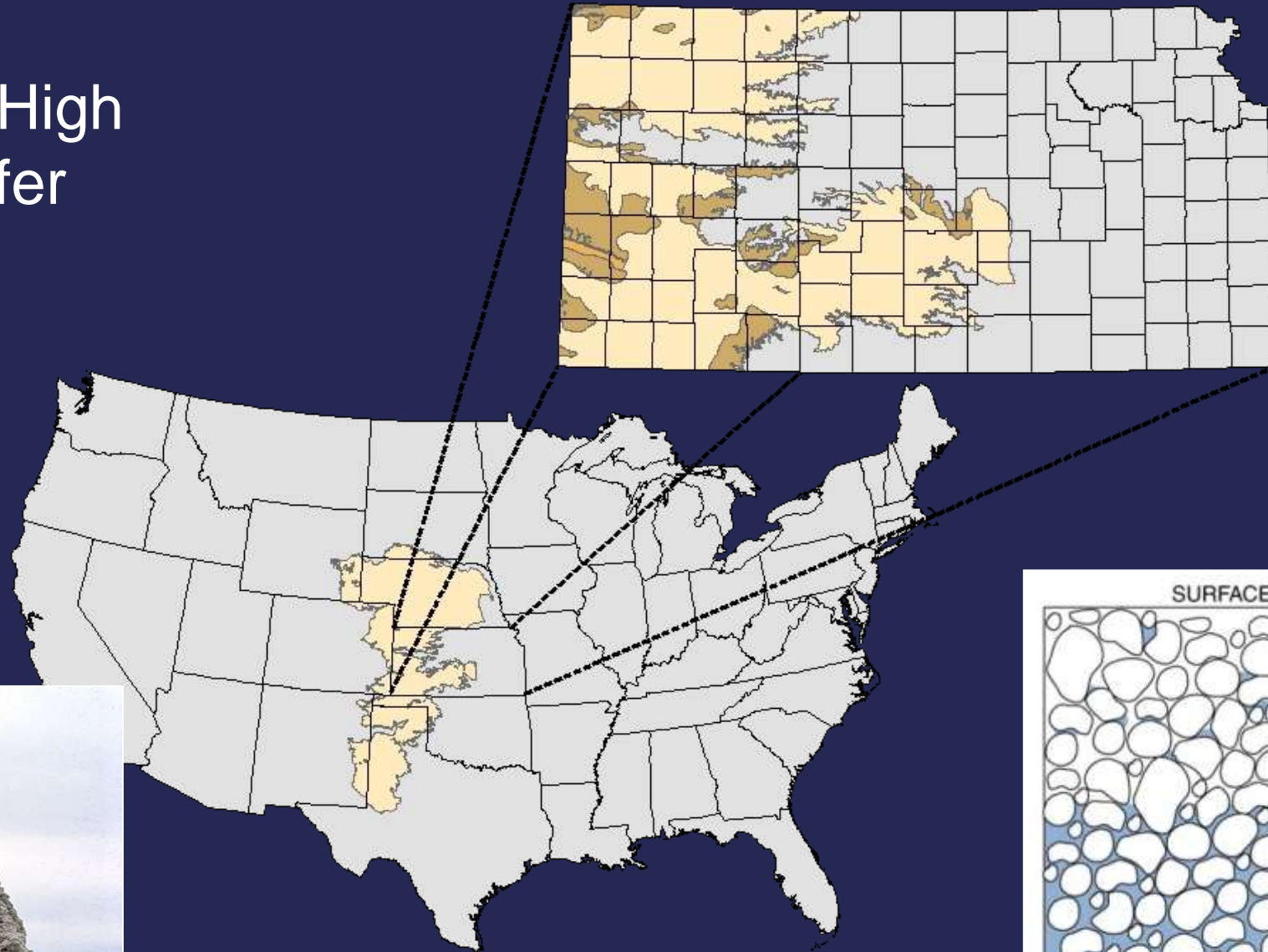


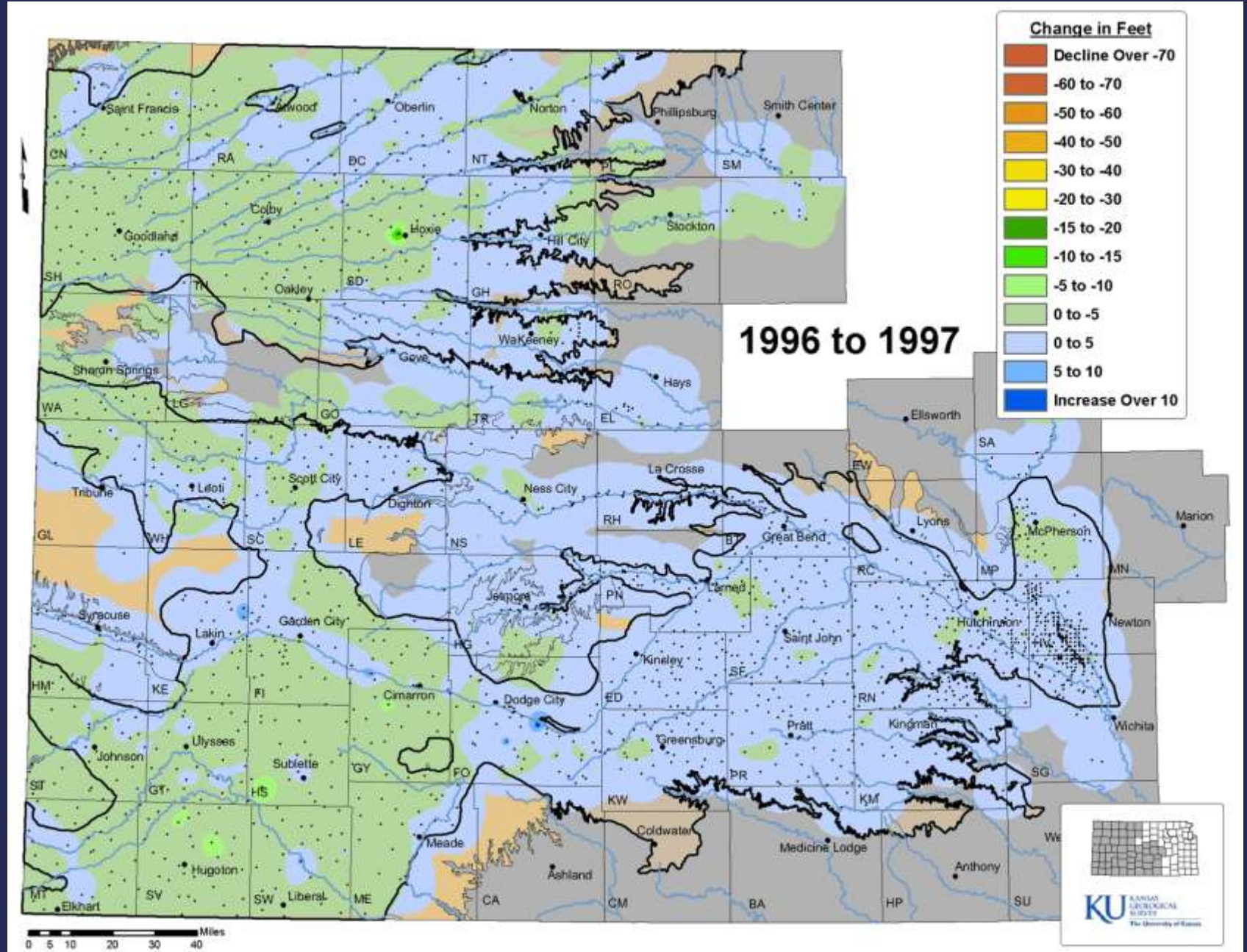
# CONDITIONS OF THE OGALLALA AQUIFER IN NORTHER KEARNY AND FINNEY COUNTIES

*Brownie Wilson, Kansas Geological Survey*

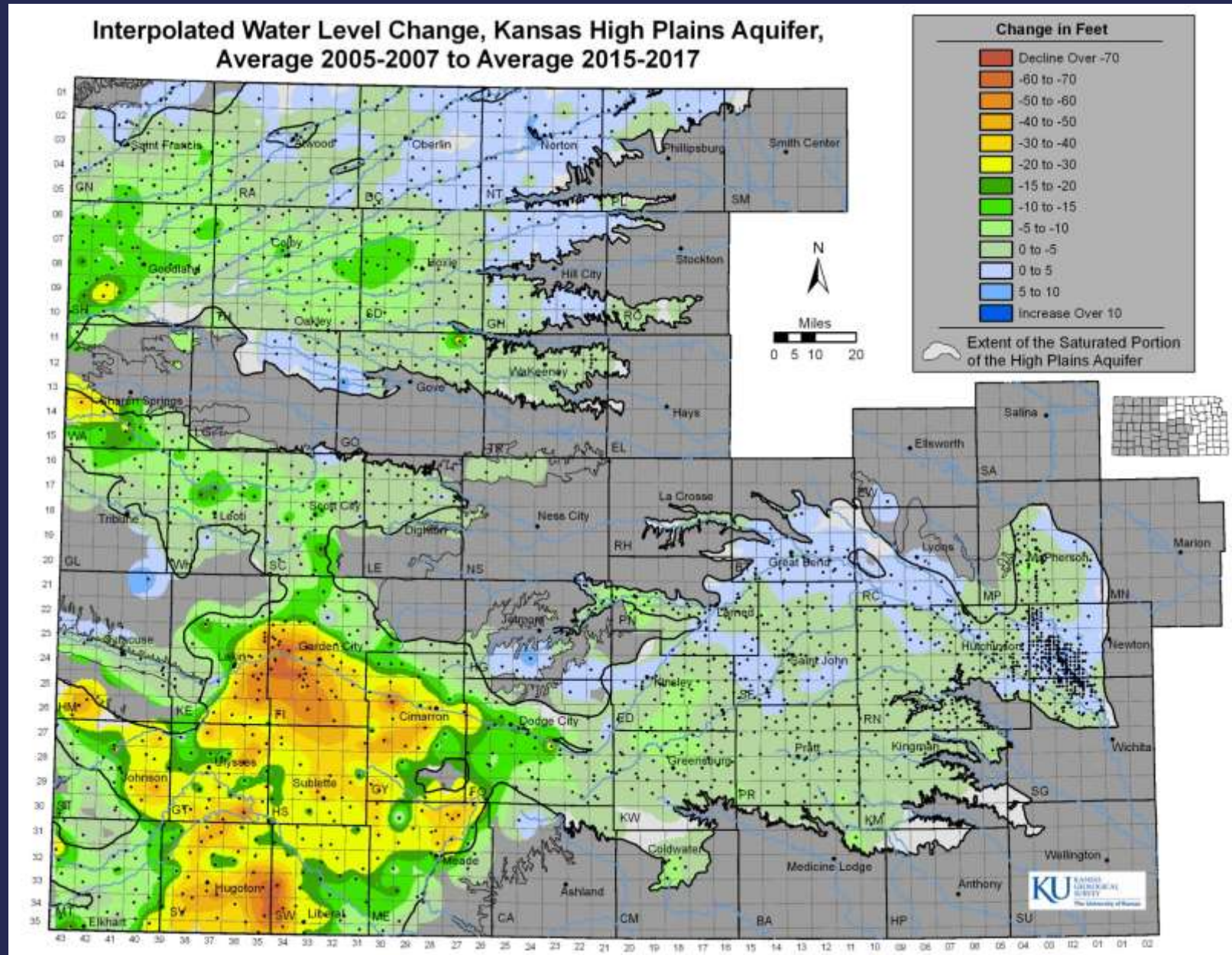
# Extent of the High Plains Aquifer



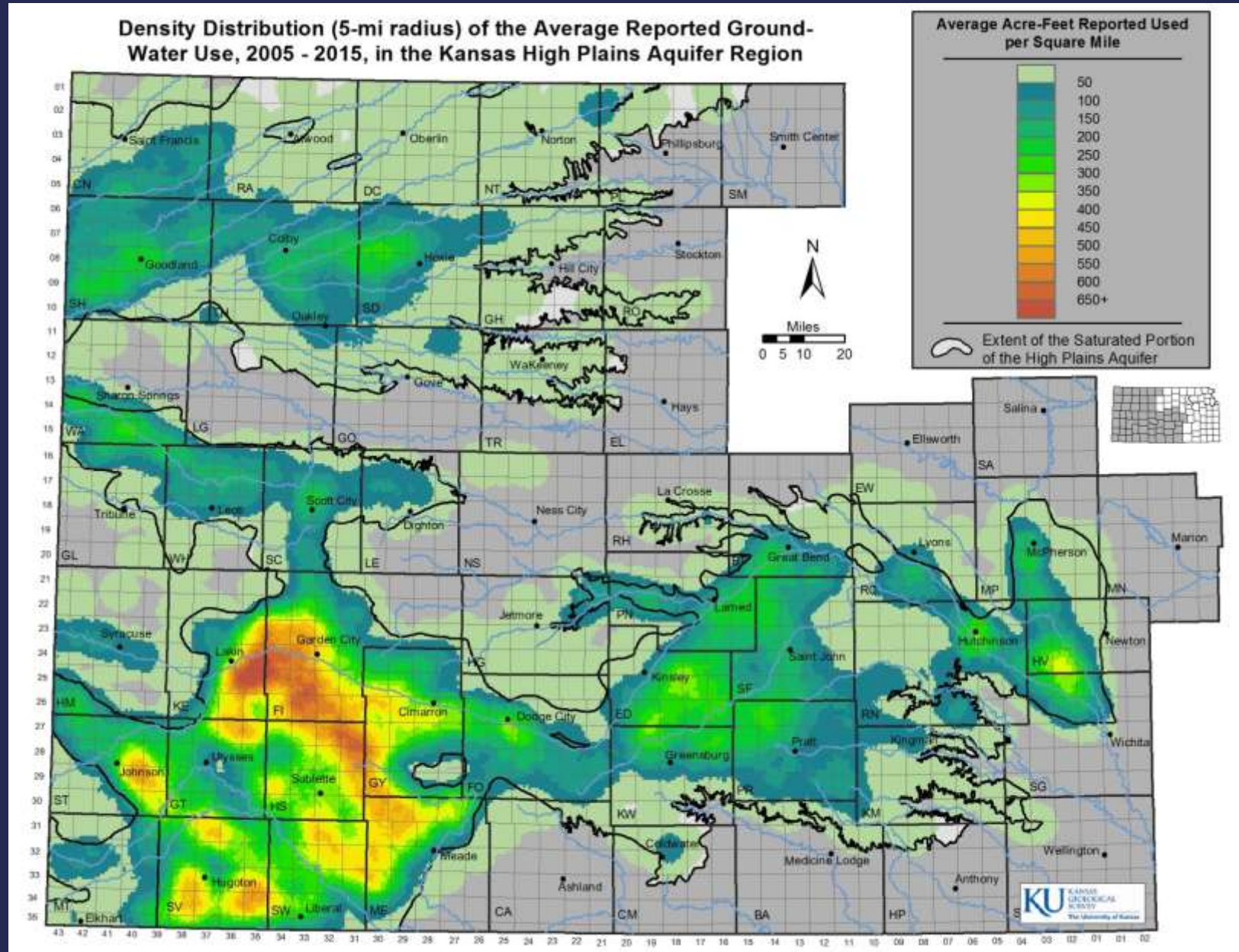
# Accumulated water-level change, 1996 to 2014



Water levels have dropped in some areas of the KFL area by 60 feet over the last 10 years

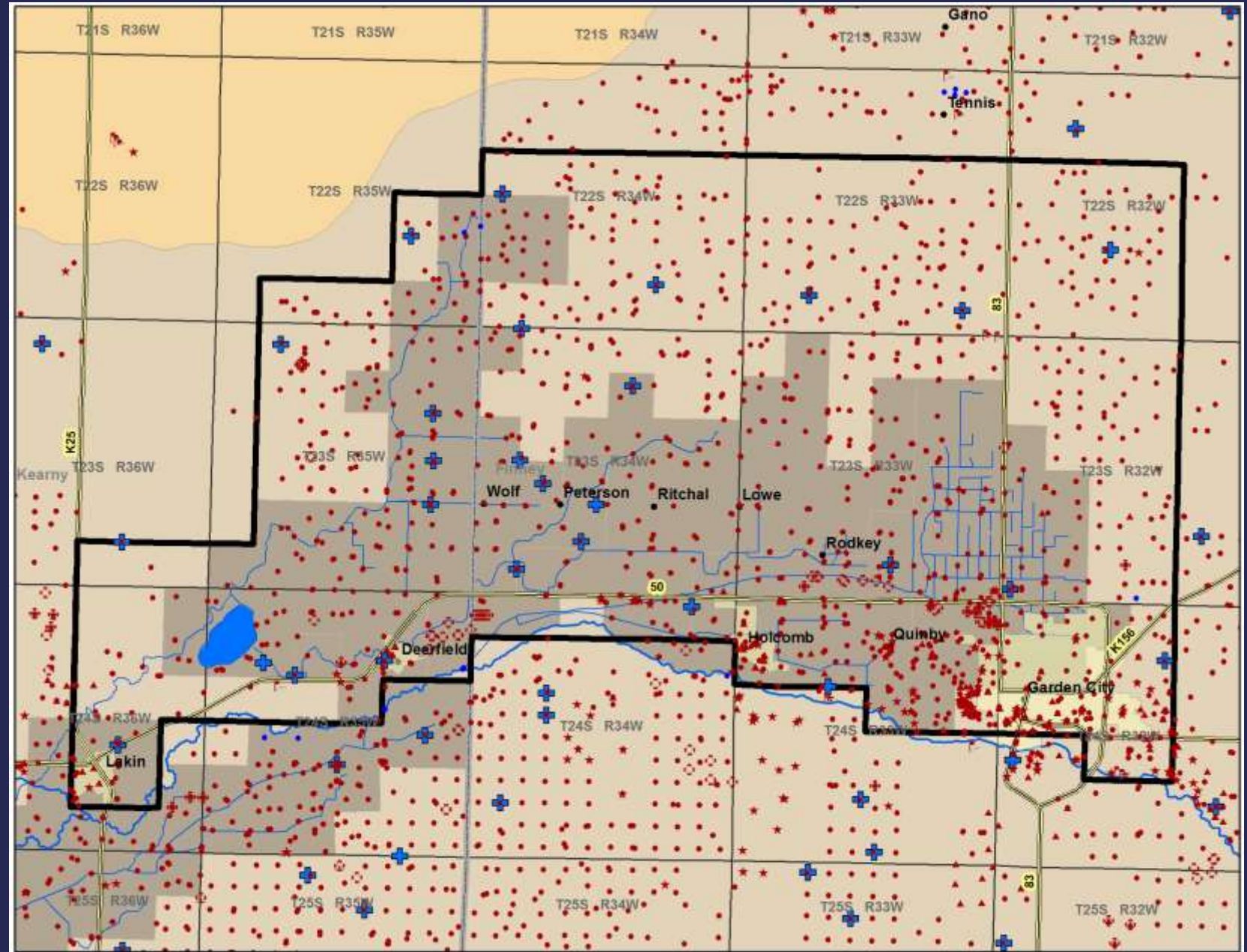


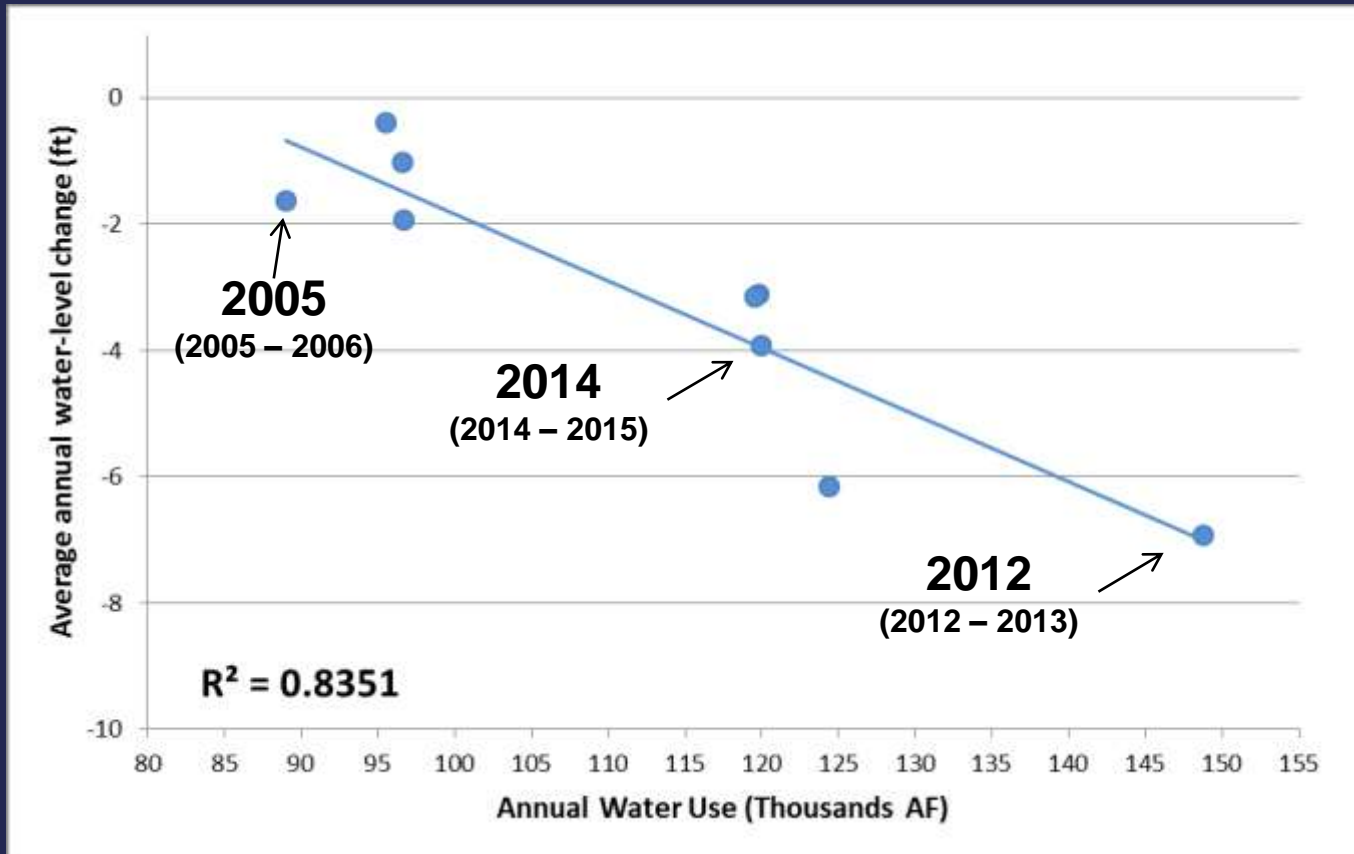
# Density Distribution of Reported Groundwater Use



# KFL Boundary and Water Right Development

- ^ Industrial
- ! Irrigation
- # Municipal
- h Recreation
- x Stockwater
- d Thermal Exchange





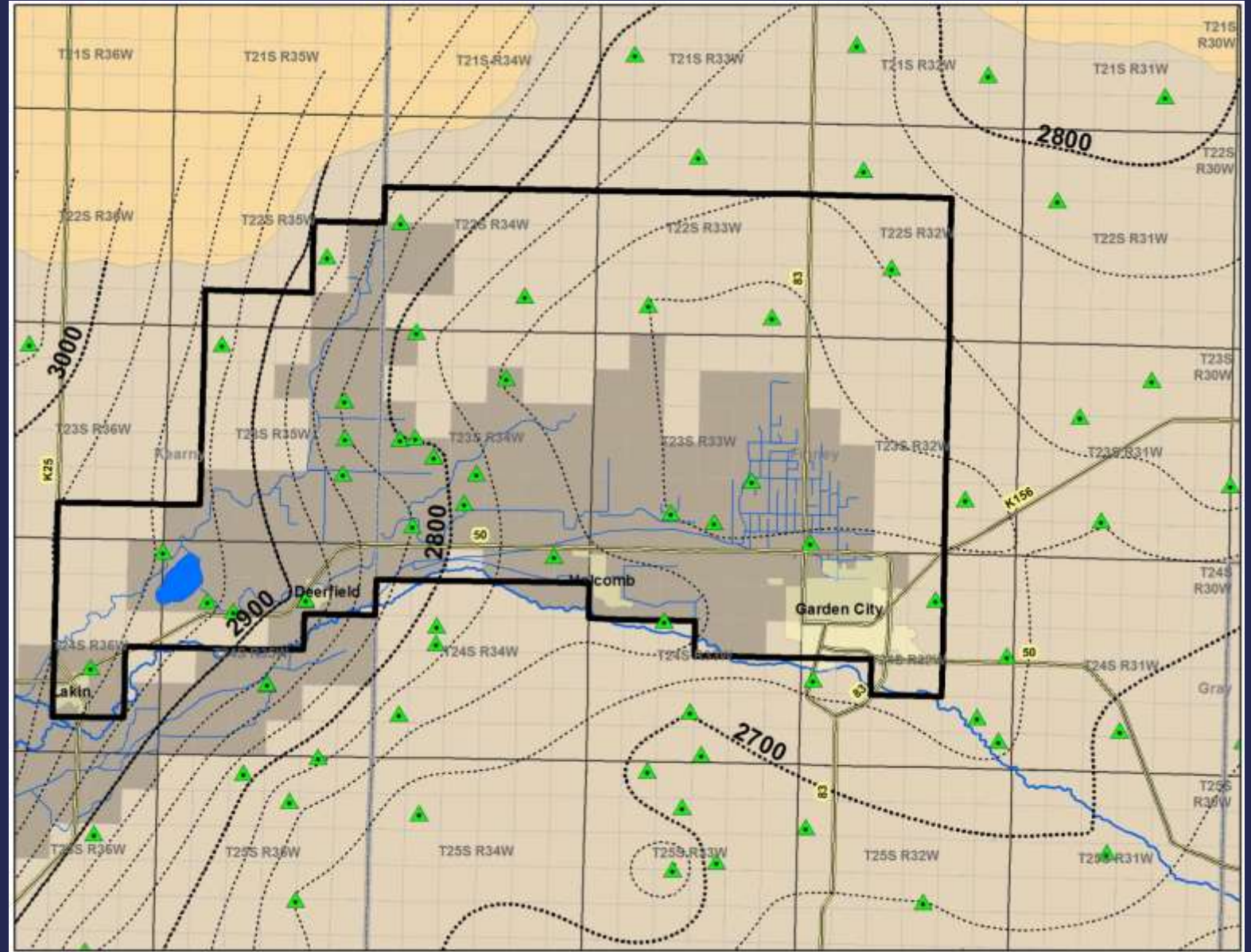
**Average Groundwater Use =  
112,249 AF**

**Average Water Level Decline =  
3.13 feet**

Based on this relationship, using averages, on the short term:

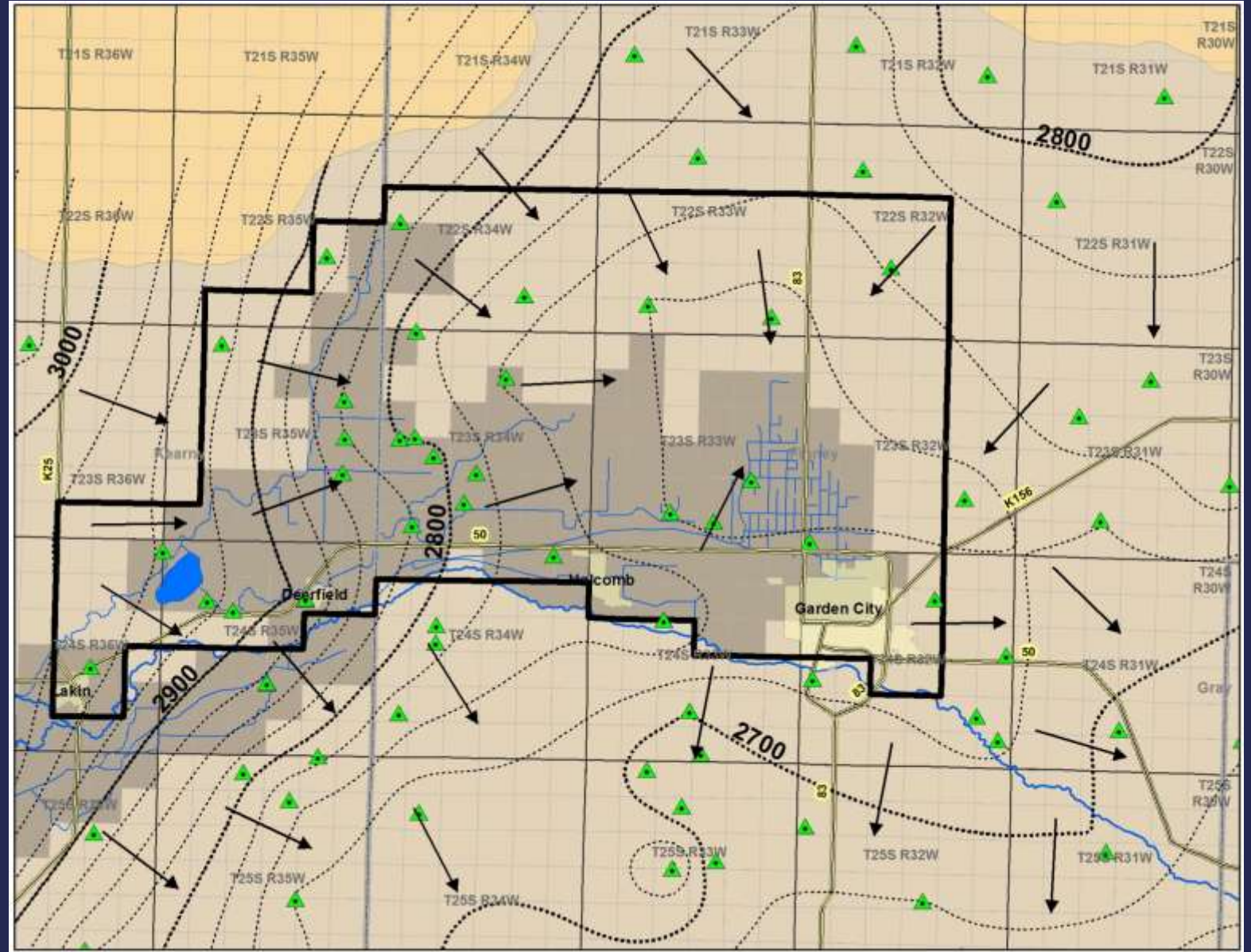
- 26.3% reduction in average use = **Stable Water Levels = Sustainable**
- 20% reduction in average use = **0.76 feet annual decline = decline reduced by 76%**
- 10% reduction in average use = **1.95 feet annual decline = decline reduced by 38%**

# Average 2015-2017 Water Table Elevations

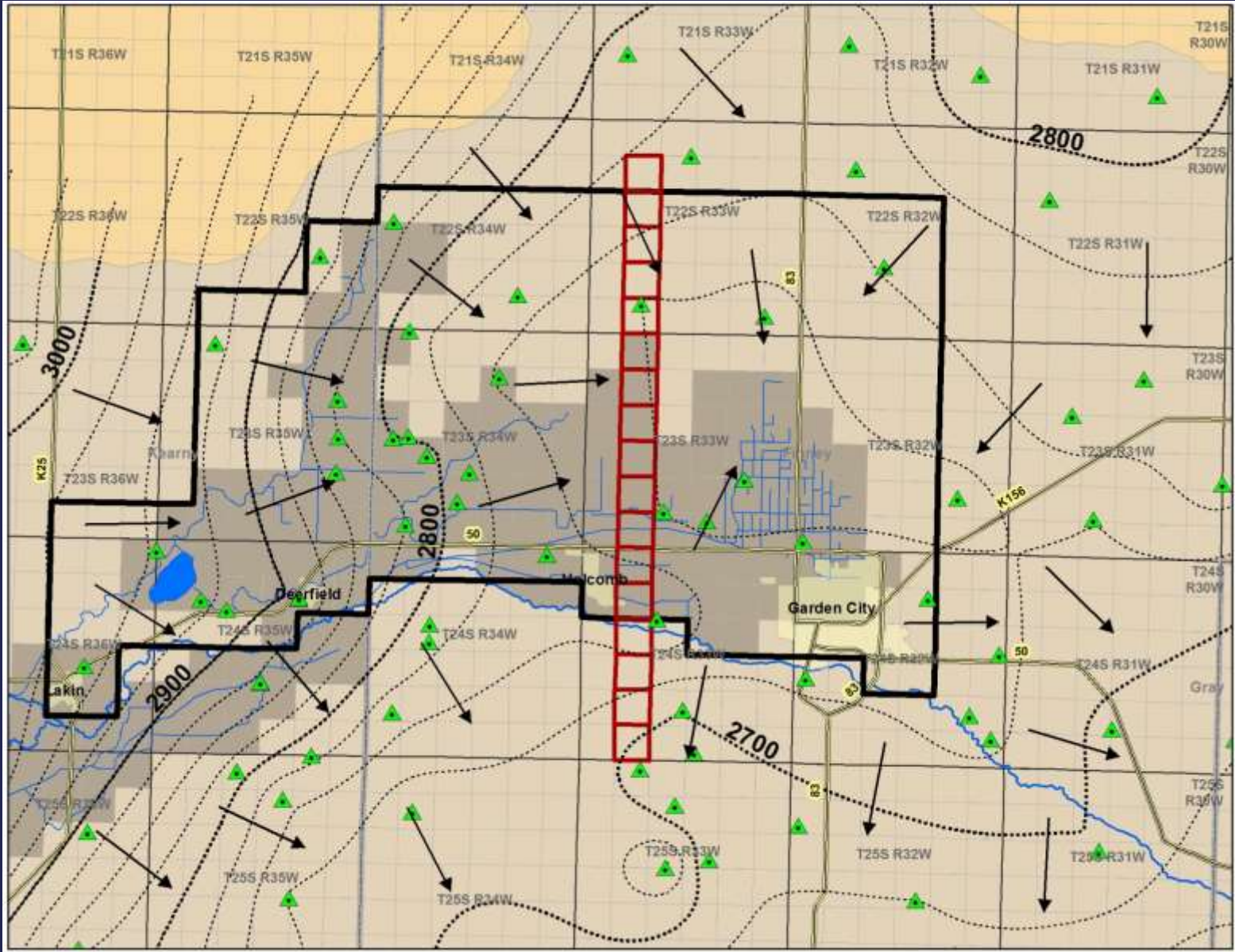




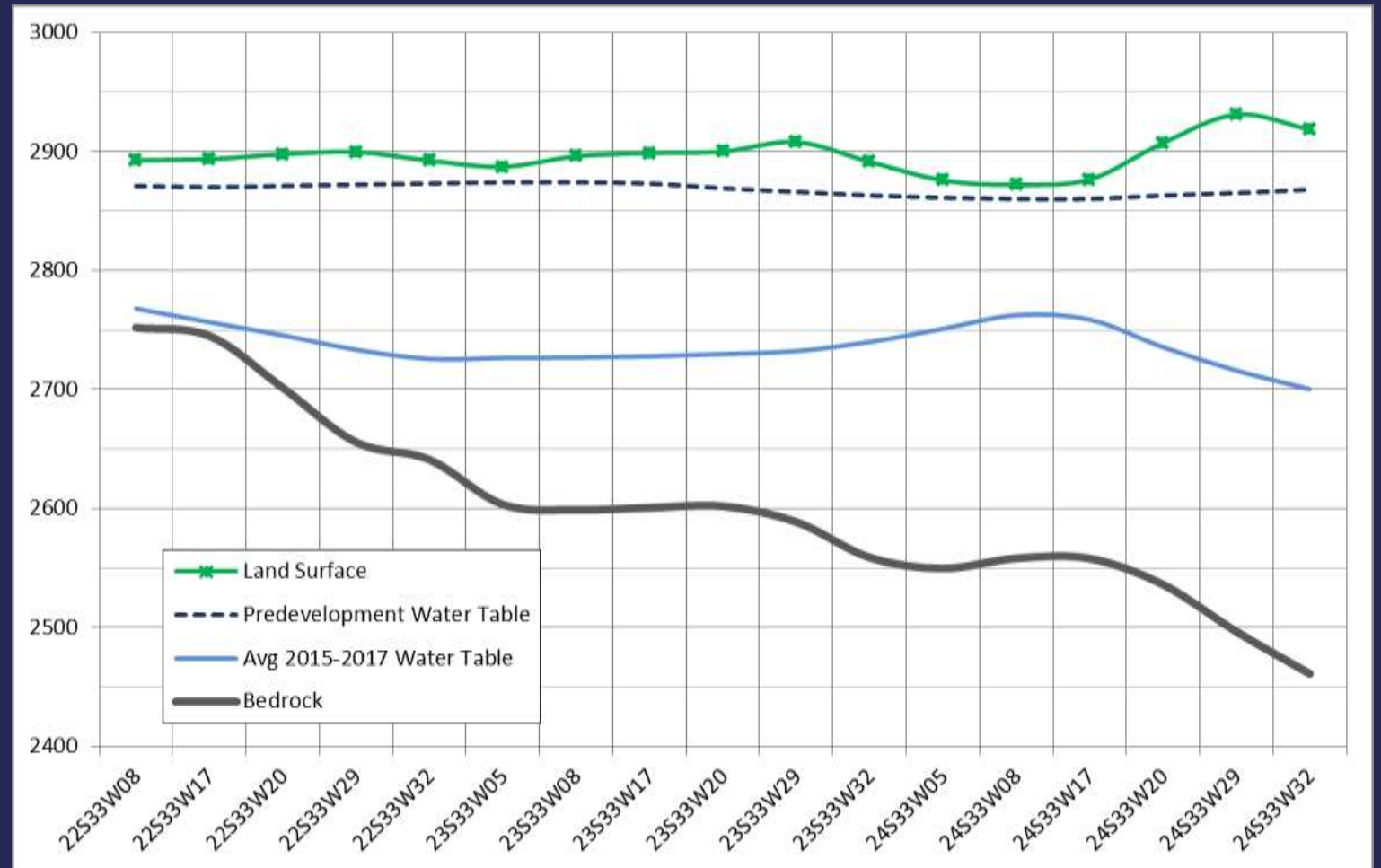
# Average 2015-2017 Water Table Elevations and Flow Directions



# North to South Elevation Profile Example



# North to South Land Surface, Water Table and Bedrock Profiles



# Upper Arkansas River Corridor Study

## KGS OFR 2000-73

Sulfate Concentration for the Quaternary Alluvial Aquifer in the Upper Arkansas River Corridor in Southwest Kansas

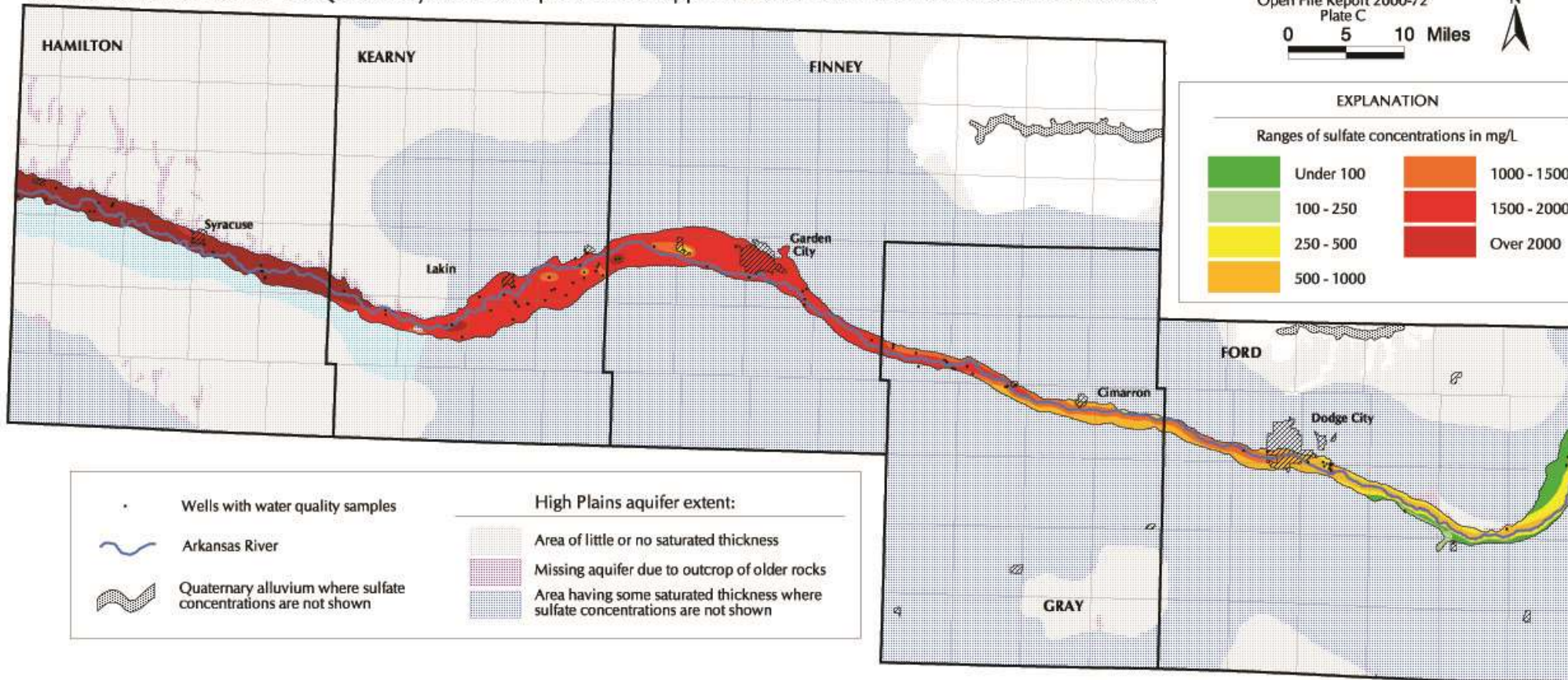
Kansas Geological Survey  
Open File Report 2000-72  
Plate C

0 5 10 Miles



### EXPLANATION

Ranges of sulfate concentrations in mg/L



	Wells with water quality samples		Area of little or no saturated thickness
	Arkansas River		Missing aquifer due to outcrop of older rocks
	Quaternary alluvium where sulfate concentrations are not shown		Area having some saturated thickness where sulfate concentrations are not shown

# Upper Arkansas River Corridor Study

## KGS OFR 2000-73

Sulfate Concentration for the High Plains Aquifer in the Upper Arkansas River Corridor in Southwest Kansas

