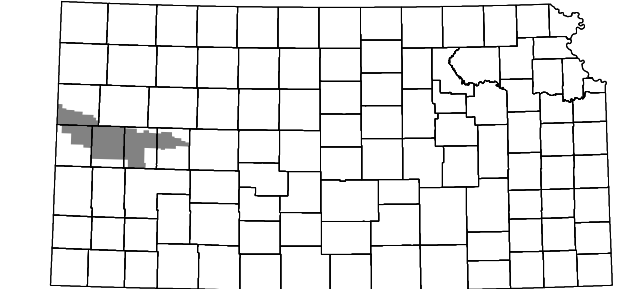


**Estimated Percent Change in Saturated Thickness, Predevelopment to Average 2020-2022, of the High Plains Aquifer in Western Kansas GMD No. 1 (KGS Open-File Report 2022-8)**



- No Data
- Zero predevelopment saturated thickness
- Increase
- 0 - 20% decrease
- 21 - 40% decrease
- 41 - 60% decrease
- 61 - 80% decrease
- > 80% decrease
- 50 Percent change in saturated thickness for section
- City
- Stream
- Highway (S = State, F = Federal)
- Township boundary
- County boundary
- Western Kansas Groundwater Management District No. 1 boundary
- 2020-2022 well location

Projection: Lambert Conformal Conic  
 Standard Parallels: 33 0 0 and 45 0 0 degrees North  
 Central Meridian: -98 15 0 degrees West  
 Latitude of Origin: 36 0 0 degrees North

Western Kansas Groundwater Management District No. 1

Prepared at the Kansas Geological Survey by John J. Woods and Brownie Wilson

Estimates of percent change in saturated thickness within sections were calculated as follows:

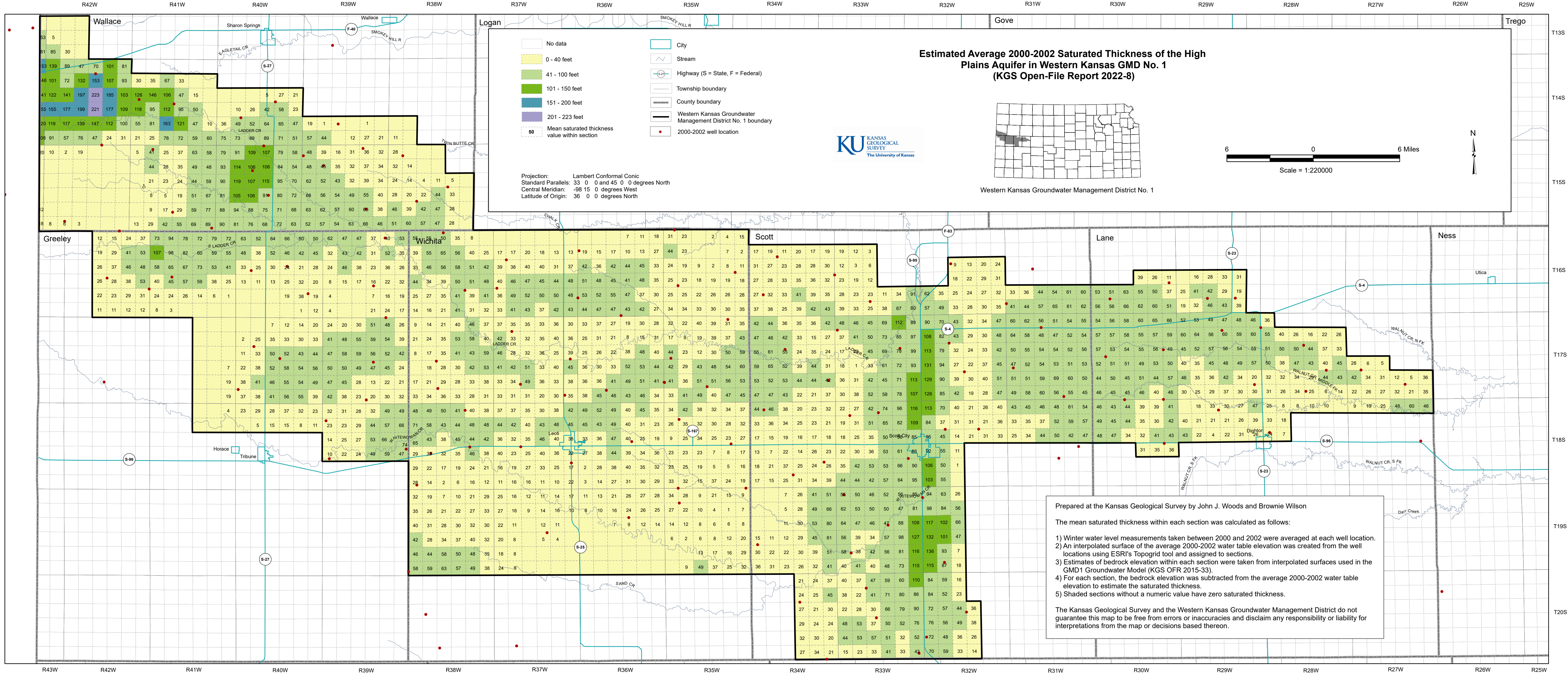
- 1) Winter water level measurements taken between 2020 and 2022 were averaged at each well location.
- 2) An interpolated surface of the average 2020-2022 water table elevation was created from the well locations using ESRI's Topogrid tool and assigned to sections.
- 3) Estimates of the mean predevelopment and bedrock elevations within each section were taken from interpolated surfaces used in the GMD1 Groundwater Model (KGS OFR 2015-33).
- 4) For each section, the mean bedrock elevation was subtracted from the average 2020-2022 and predevelopment water table elevations to estimate the saturated thicknesses (ST).
- 5) The predevelopment ST was then subtracted from the average 2020-2022 ST to estimate the actual change. The percent change was computed by dividing the actual change by the predevelopment ST.
- 6) Green sections without a numeric value have zero computed percent change in saturated thickness.

The Kansas Geological Survey and the Western Kansas Groundwater Management District do not guarantee this map to be free from errors or inaccuracies and disclaim any responsibility or liability for interpretations from the map or decisions based thereon.







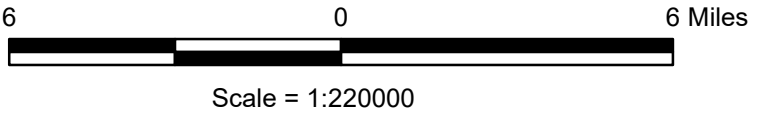
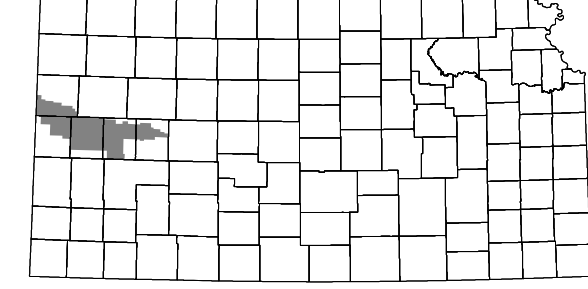


**Estimated Average 2000-2022 Saturated Thickness of the High Plains Aquifer in Western Kansas GMD No. 1 (KGS Open-File Report 2022-8)**

**Legend**

- No data
- 0 - 40 feet
- 41 - 100 feet
- 101 - 150 feet
- 151 - 200 feet
- 201 - 223 feet
- Mean saturated thickness value within section
- City
- Stream
- Highway (S = State, F = Federal)
- Township boundary
- County boundary
- Western Kansas Groundwater Management District No. 1 boundary
- 2000-2002 well location

Projection: Lambert Conformal Conic  
 Standard Parallels: 33 0 0 and 45 0 0 degrees North  
 Central Meridian: -98 15 0 degrees West  
 Latitude of Origin: 36 0 0 degrees North



Western Kansas Groundwater Management District No. 1

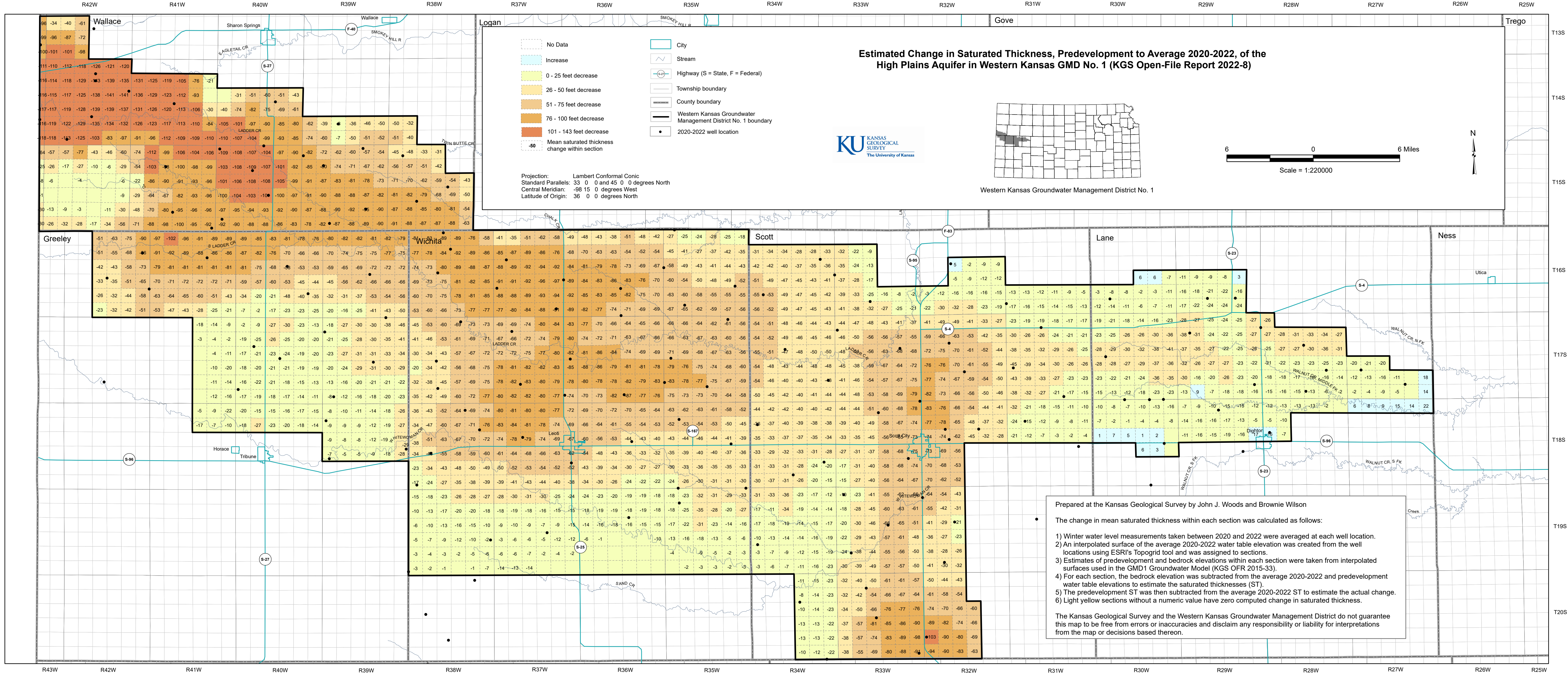
Prepared at the Kansas Geological Survey by John J. Woods and Brownie Wilson

The mean saturated thickness within each section was calculated as follows:

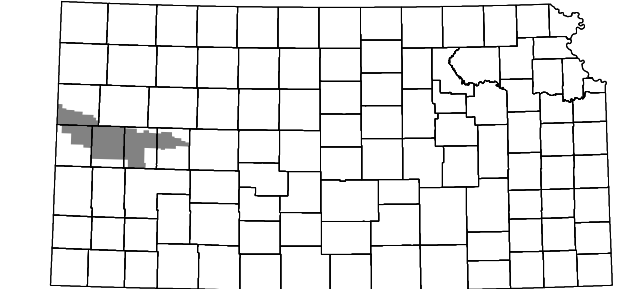
- 1) Winter water level measurements taken between 2000 and 2002 were averaged at each well location.
- 2) An interpolated surface of the average 2000-2002 water table elevation was created from the well locations using ESRI's Topogrid tool and assigned to sections.
- 3) Estimates of bedrock elevation within each section were taken from interpolated surfaces used in the GMD1 Groundwater Model (KGS OFR 2015-33).
- 4) For each section, the bedrock elevation was subtracted from the average 2000-2002 water table elevation to estimate the saturated thickness.
- 5) Shaded sections without a numeric value have zero saturated thickness.

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**Estimated Change in Saturated Thickness, Predevelopment to Average 2020-2022, of the High Plains Aquifer in Western Kansas GMD No. 1 (KGS Open-File Report 2022-8)**



Projection: Lambert Conformal Conic  
 Standard Parallels: 33 0 0 and 45 0 0 degrees North  
 Central Meridian: -98 15 0 degrees West  
 Latitude of Origin: 36 0 0 degrees North

Western Kansas Groundwater Management District No. 1

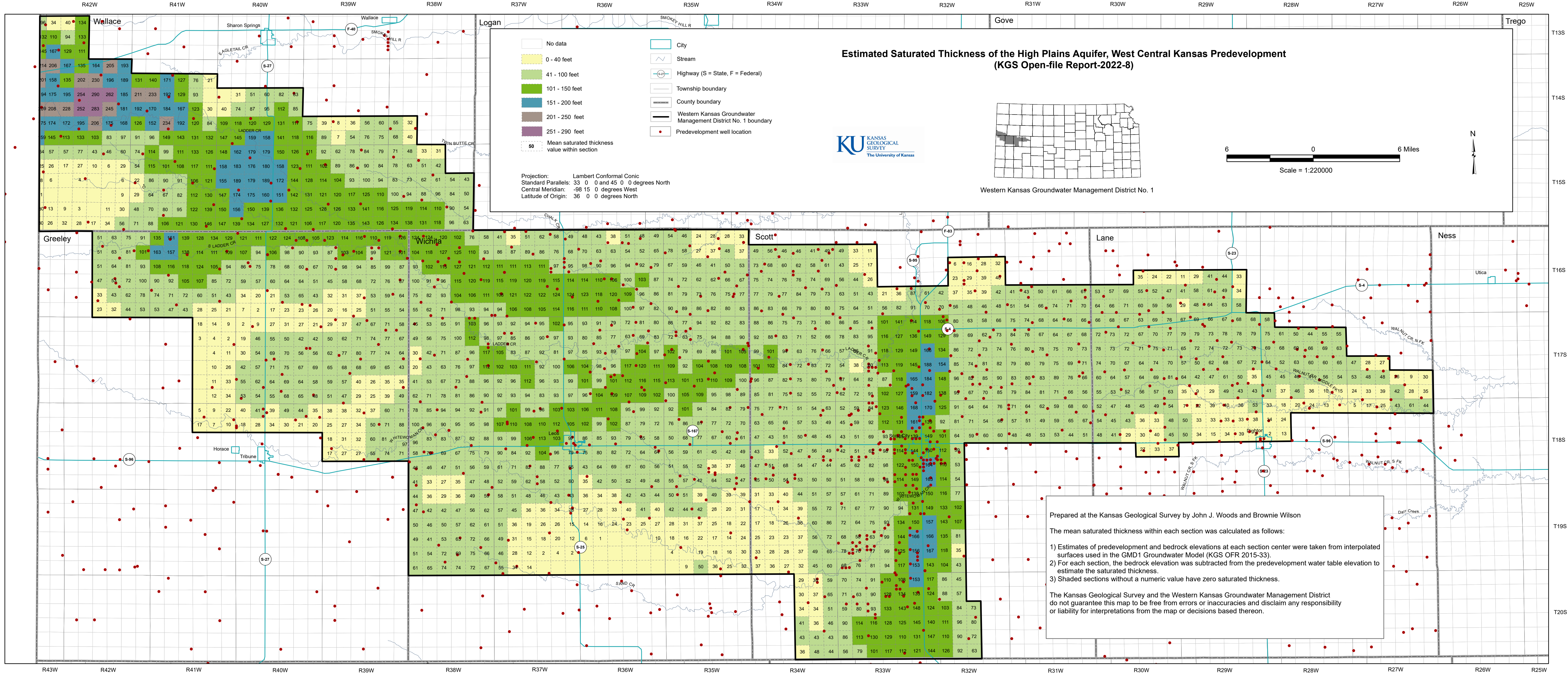
Prepared at the Kansas Geological Survey by John J. Woods and Brownie Wilson

The change in mean saturated thickness within each section was calculated as follows:

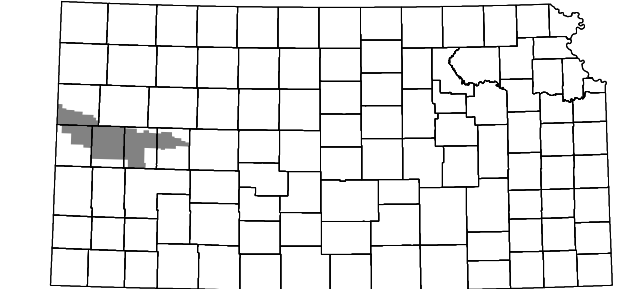
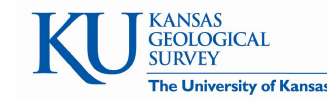
- 1) Winter water level measurements taken between 2020 and 2022 were averaged at each well location.
- 2) An interpolated surface of the average 2020-2022 water table elevation was created from the well locations using ESRI's Topogrid tool and was assigned to sections.
- 3) Estimates of predevelopment and bedrock elevations within each section were taken from interpolated surfaces used in the GMD1 Groundwater Model (KGS OFR 2015-33).
- 4) For each section, the bedrock elevation was subtracted from the average 2020-2022 and predevelopment water table elevations to estimate the saturated thicknesses (ST).
- 5) The predevelopment ST was then subtracted from the average 2020-2022 ST to estimate the actual change.
- 6) Light yellow sections without a numeric value have zero computed change in saturated thickness.

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**Estimated Saturated Thickness of the High Plains Aquifer, West Central Kansas Predevelopment**  
(KGS Open-file Report-2022-8)



Projection: Lambert Conformal Conic  
 Standard Parallels: 33 0 0 and 45 0 0 degrees North  
 Central Meridian: -98 15 0 degrees West  
 Latitude of Origin: 36 0 0 degrees North

Western Kansas Groundwater Management District No. 1

Prepared at the Kansas Geological Survey by John J. Woods and Brownie Wilson

The mean saturated thickness within each section was calculated as follows:

- 1) Estimates of predevelopment and bedrock elevations at each section center were taken from interpolated surfaces used in the GMD1 Groundwater Model (KGS OFR 2015-33).
- 2) For each section, the bedrock elevation was subtracted from the predevelopment water table elevation to estimate the saturated thickness.
- 3) Shaded sections without a numeric value have zero saturated thickness.

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