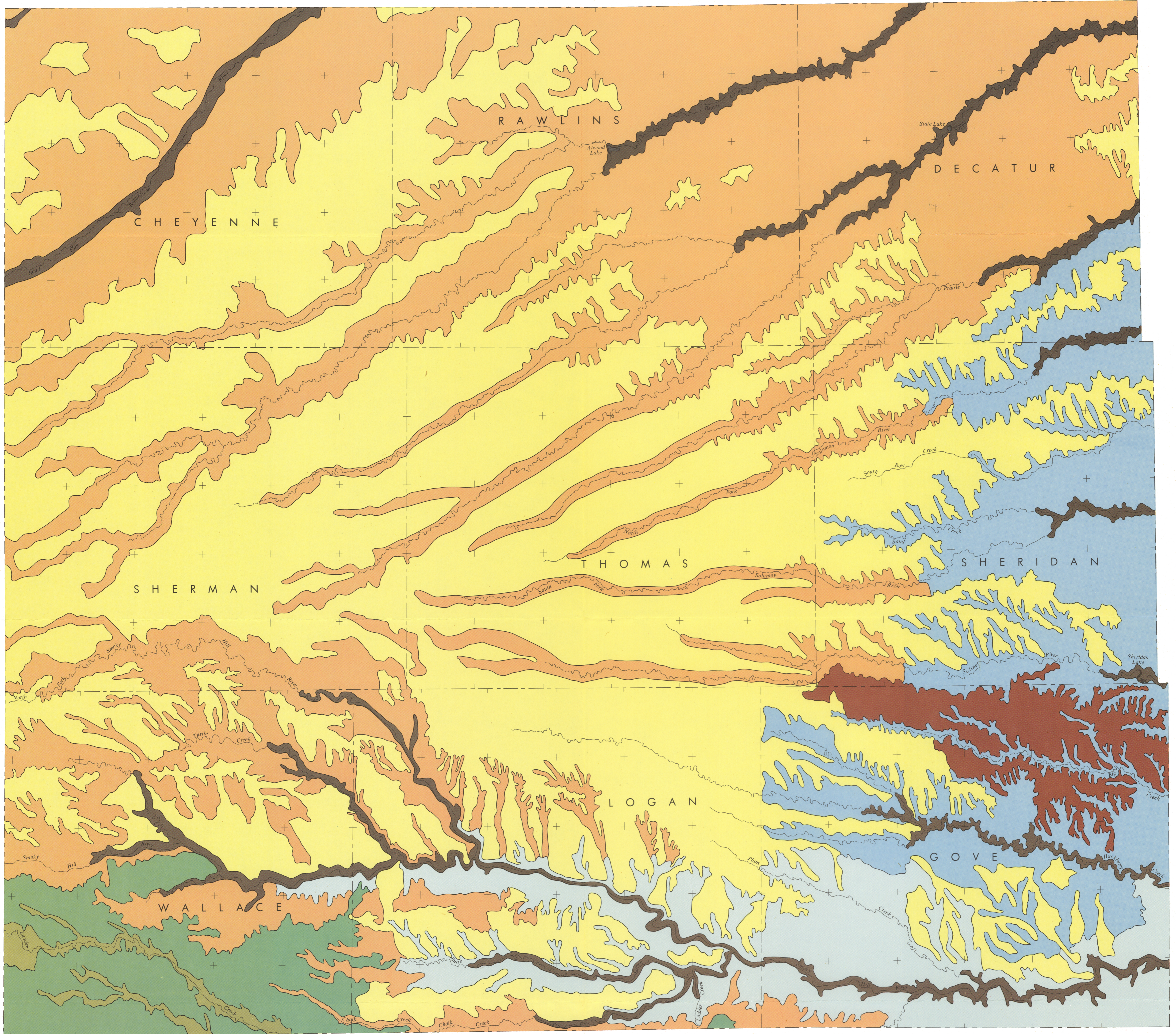


SOIL ASSOCIATIONS OF NORTHWESTERN KANSAS

Lawrence R. Hathaway and Harold P. Dickey



EXPLANATION

BRIDGEPORT-ROXBURY-MUNJOR

These silty, loamy, and sandy soils are on nearly level and gently undulating landscapes. They occupy the valleys of the streams in the mapped area. There are a few small areas of saline and sodic soils in the valleys of the major streams. Groundwaters from unconsolidated sediments in areas containing this soil association generally contain elevated amounts of dissolved salts and increased sulfate levels relative to groundwaters from upland regions. The most notable example is the progressive deterioration in chemical quality of groundwater in the Smoky Hill River Valley eastward in the mapped area.

ULYSSES-ELKRADER-MANVEL

Silty soils occurring on nearly level to steep landscapes. These soils are along the Smoky Hill River in the southeastern part of the mapped area. Outcrops of the Niobrara Chalk occur in this association. This association is similar to the Ulysses-Penden-Minnequa association in the northeastern corner of Map M-8A. The unconsolidated sediments in regions of this soil association are relatively poor sources for groundwater.

KEITH-ULYSSES-KUMA

These silty soils are on nearly level to sloping landscapes. The amount of stream dissection increases from west to east. Low amounts of runoff occur from these areas to stream systems. This is the dominant upland soil association in the mapped area and overlies much of the area in which the Ogallala Formation occurs, and is similar to the situation of the Richfield-Ulysses-Spearville-Keith association in southwestern Kansas (Map M-8A).

RICHFIELD-ULYSSES-KEITH

These soils are on broad, nearly level landscapes. The principal location for this soil association is southern Wallace County in the southwestern part of the mapped area. This association merges with the Richfield-Ulysses-Spearville-Keith association of Map M-8A along the common juncture of the two mapped areas. Little or no runoff occurs from these areas to stream systems.

ULYSSES-COLBY-CAMPUS-ROXBURY

This association consists of silty and loamy soils on nearly level to steep landscapes. These soils occur in conjunction with drainage ways, and outcrops of the Ogallala Formation are found in this association. This association is comparable to the Colby-Canton-Potter-Lisman association that occurs along the northern boundary of Map M-8A.

ULYSSES-COLBY-BRIDGEPORT-GOSHEN

Most of this association consists of silty and loamy soils on nearly level to strongly sloping landscapes. These soils are associated with upland drainageways in the southwestern portion of the mapped area, and represent a northwestern extension of the association from Map M-8A into the present mapped area.

HARNEY-ULYSSES

These silty soils are on nearly level to gently sloping landscapes that contain a few small drainageways and undrained depressions. This soil association is located primarily in northern Gove County in the southeastern portion of the mapped area.

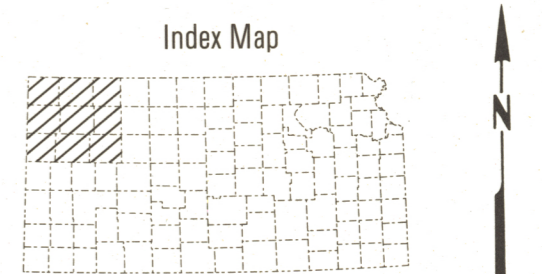
ULYSSES-KIM-PENDEN

Loamy and silty soils occurring on early level to strongly sloping landscapes. Soils in this association are along drainageways in the eastern fourth of the mapped area.

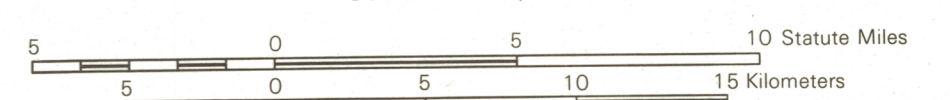
OPEN WATER

ACKNOWLEDGMENTS

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- Water-quality information is based upon data from Kansas Geological Survey. Studies of chemical quality of irrigation waters in western Kansas by L.R. Hathaway, L.M. Magnuson, B.L. Carr, O.K. Galie, T.C. Waugh, and H.P. Dickey.
- This map was prepared by Renate Hensiek of the Graphic Arts Section of the Kansas Geological Survey.



Scale 1:250,000



Colored areas represent soil associations named for major soils. There are other soils of lesser extent within these associations.