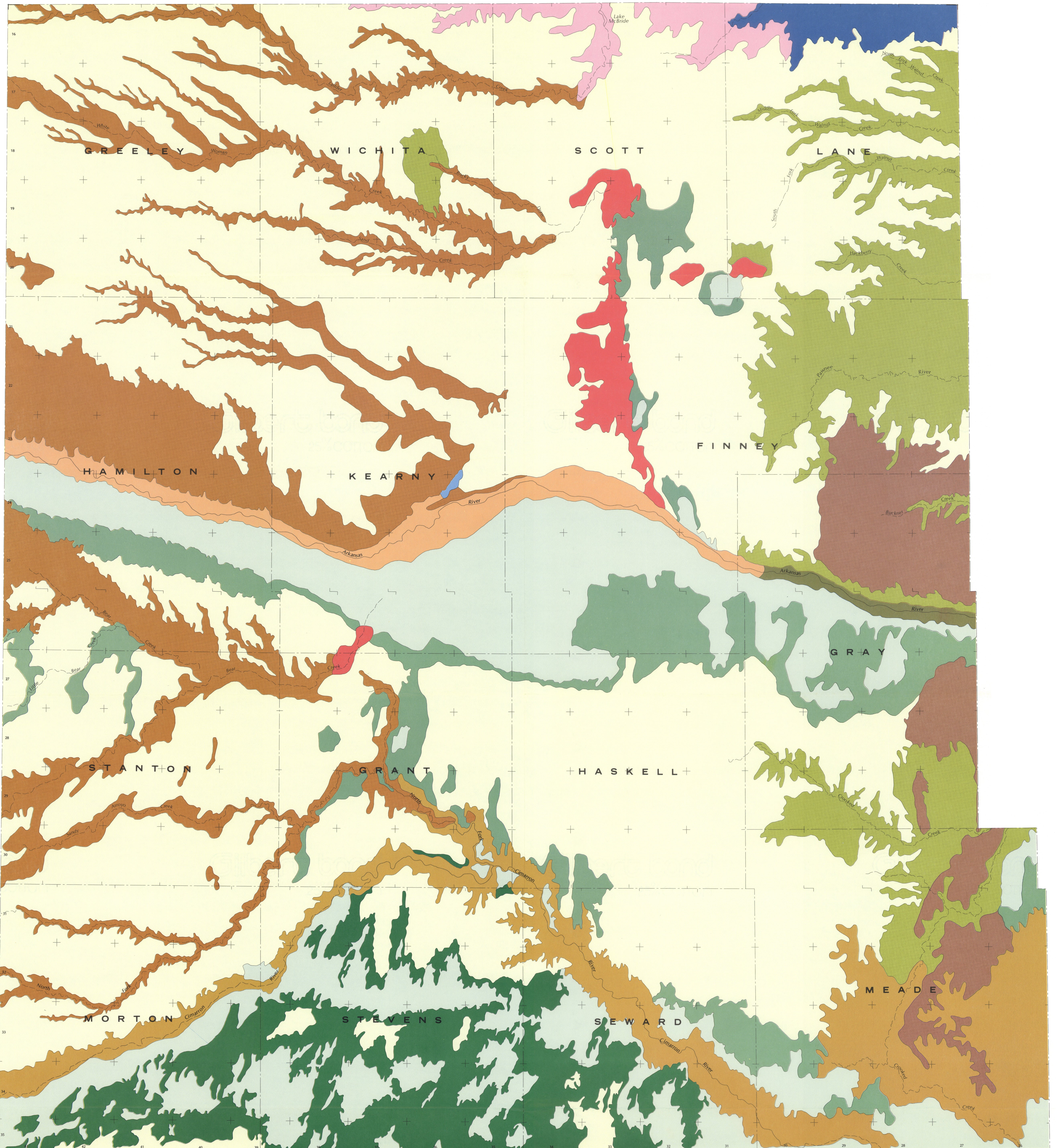


SOIL ASSOCIATIONS OF SOUTHWESTERN KANSAS

Lawrence R. Hathaway and Harold P. Dickey



EXPLANATION

ULYSSES (Saline)-CHURCH-DRUMMOND

Silty and clayey soils found on nearly level landscapes. These soils are slightly to highly saline and are found in the Scott-Finney depression in Finney County, at the terminal portion of Bear Creek in Grant County, and in other large depressions in Scott and Lane counties. Groundwaters from areas bearing these soils are generally mixed bicarbonate-sulfate to sulfate-type waters which are often enriched in sodium and show increased total dissolved solids levels that are usually intermediate between those for groundwaters from the upland areas and groundwaters from the saline portions of the Arkansas River valley.

LAS-LAS ANIMAS-BRIDGEPORT

Loamy, sandy, and silty soils occurring on nearly level and gently undulating landscapes. These soils occupy the western three-fourths of the Arkansas River valley in the mapped area. In about the Gray County line. Soils in the lower valley positions are lightly to moderately saline. Groundwaters from unconsolidated sediments in regions occupied by soils of this association are usually sulfate-type waters and exhibit higher dissolved solids content and an enrichment in sodium relative to groundwaters from upland or sand-hill regions in the mapped area.

OTERO-MANSIC-LINCOLN-LIKES

Loamy and sandy soils occurring on nearly level to rolling landscapes. These soils occupy the floodplains and sloping-to-steep areas along the Cimarron River. Some local occurrence of saline spots may exist in the floodplain. A marked increase in the total dissolved solids level and sodium and chloride content is noted for surface water in the Cimarron River in Meade County and surface and groundwaters from lower portions of the Crooked Creek region of the mapped area.

LAS ANIMAS-LESHO-BRIDGEPORT

Loamy, sandy, and silty soils found on nearly level and gently undulating landscapes. Soils of this association occur in the Arkansas River valley through most of Gray County and may be slightly to moderately saline in the lower valley positions. Presently, groundwaters from these areas tend to be of a calcium-bicarbonate type and are relatively low in total dissolved solids content.

SPEARVILLE-HARNEY

Clayey and silty soils located on broad, nearly level landscapes. Soils of this association occupy settings similar to the Richfield-Ulysses association, but occur in the eastern portion of the mapped area where a higher annual rainfall has led to a more deeply developed soil profile. Little or no runoff occurs from these areas to stream systems.

ULYSSES-PENDEN-MINNEQUA

Silty and loamy soils occurring on nearly level to steep landscapes. Soils in this association are found along upland drainageways in the extreme northeast part of the mapped area. Outcrops of the Niobrara Chalk occur in this association.

COLBY-CANLON-POTTER-LISMAS

Silty and loamy soils occurring on gently sloping to steep landscapes. Soils in this association are found along upland drainageways in the northern part of the mapped area.

OPEN WATER

MANTER-ULYSSES-SATANTA

Loamy soils occurring on nearly level and gently undulating landscapes. These soils generally occur in transitional zones between sandy soils and silty soils of the uplands, with the dominant region of occurrence being between the sand hills and the silty soil areas south of the Arkansas River valley. Little or no runoff occurs from these areas to stream systems.

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 western half of the mapped area.

MANSIC-PENDEN-RICHFIELD-ULYSSES

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

TIVOLI-VONA-PRATT

Sandy soils found on undulating and hilly landscapes. Dominant areas of occurrence for these soils are south of the Arkansas River valley and south of the Cimarron River. Little or no runoff occurs from these areas to stream systems.

RICHFIELD-ULYSSES-SPEARVILLE-KEITH

Silty soils found on broad, nearly level landscapes. This is the dominant soil association of the uplands. Little or no runoff occurs from these areas to stream systems.

DALHART-RICHFIELD

Loamy and silty soils occurring on nearly level to gently undulating landscapes. They occur south of the Cimarron River and there is little to no runoff from these areas to stream systems.

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2. 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. Galle, T. C. Waugh, H. P. Dickey, and M. A. Flanagan.
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Colored areas represent soil associations named for the major soils. There are other soils of lesser extent within these associations.

