Prepared in cooperation with the
Kansas Geological Survey

Classification of suitability of water for irrigation

The map showing the chemical suitability for irrigation of ground water from unconsolidated deposits was prepared from water analyses furnished by landowners and well-drilling contractors, and from analyses obtained in connection with test-hole drilling. The chemical characteristics of water that are most important in determining its suitability for irrigation in the Great Bend Prairie are the total concentration of soluble salts (electrical conductivity) and the relative proportion of sodium to other principal cations (sodium-adsorption ratio). U.S. Department of Agriculture Handbook 60 classifies the suitability of water for irrigation by a comparison of these values. In this map, water with a low-sodium hazard and a low-to-high-salinity hazard was considered to be suitable for irrigation.

Reference

U.S. Salinity Laboratory Staff, 1954, Diagnosis and improvement of saline and alkali soils: U.S. Dept. Agriculture Handb. 60, 160 p.

EXPLANATION

Chemical suitability of ground water for irrigation (suitable water has low sodium hazard and low to high salinity hazard)

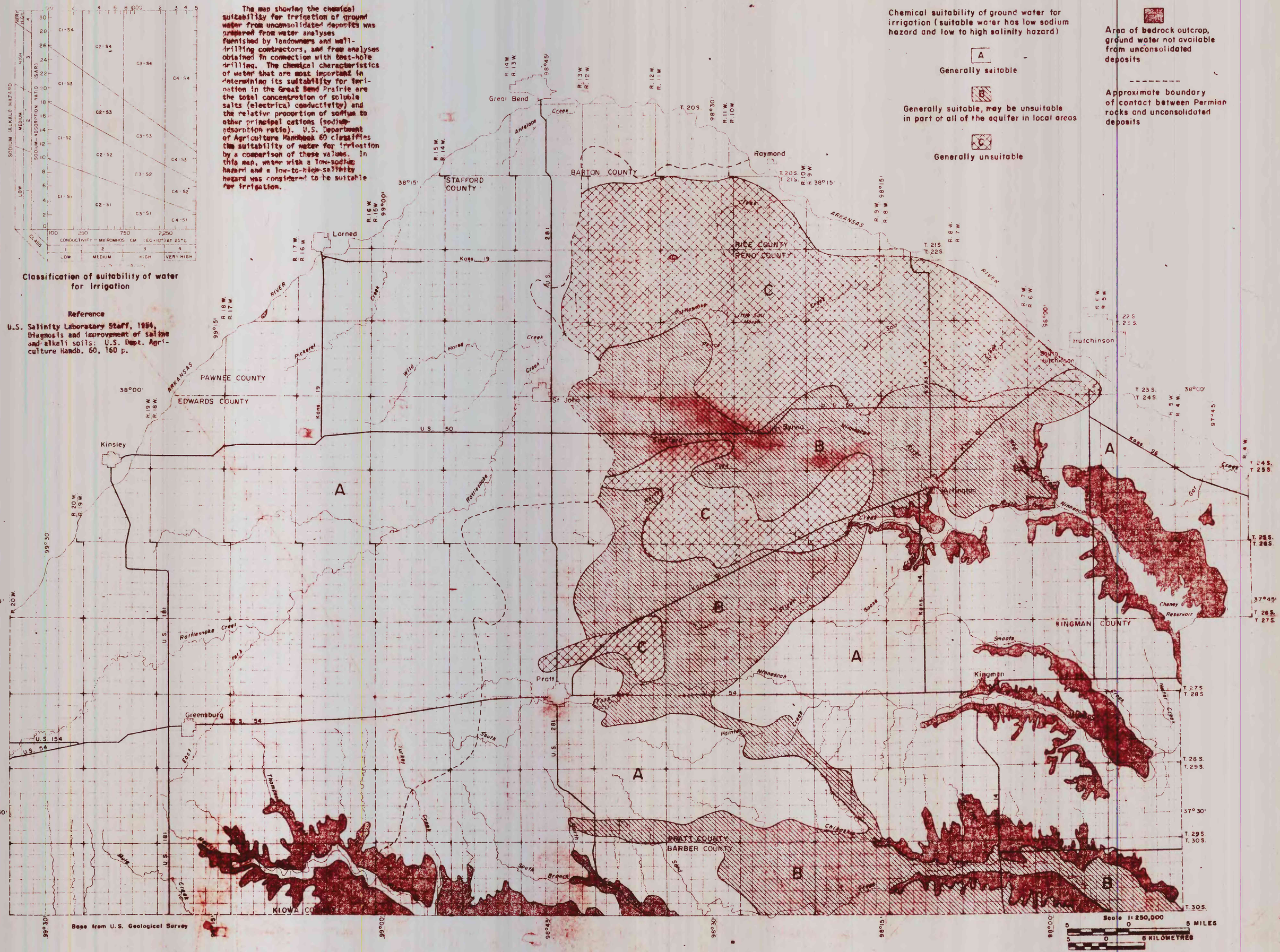
A — Generally suitable

B — Generally suitable, may be unsuitable in part of all of the aquifer in local areas

C — Generally unsuitable

Area of bedrock outcrop, ground water not available from unconsolidated deposits

Approximate boundary of contact between Permian rocks and unconsolidated deposits



MAP SHOWING CHEMICAL SUITABILITY FOR IRRIGATION OF GROUND WATER FROM UNCONSOLIDATED DEPOSITS, GREAT BEND PRAIRIE, SOUTH-CENTRAL KANSAS

BY

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