Prepared in cooperation with the
U.S. ARMY-ROCKY MOUNTAIN ARSENAL, U.S. DEPARTMENT OF ENERGY-ROCKY FLATS FIELD OFFICE, COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, COLORADO DEPARTMENT OF NATURAL RESOURCES-STATE ENGINEERS OFFICE, DENVER WATER DEPARTMENT, LITTLETON-ENGLEWOOD WASTEWATER TREATMENT PLANT, EAST CHERRY CREEK VALLEY WATER AND SANITATION DISTRICT, METRO WASTEWATER RECLAMATION DISTRICT, WILLOWS WATER DISTRICT, AND CITIES OF AURORA, LAKEWOOD, AND THORNTON

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Saturated Thickness of the Aquifers

The map of the saturated thickness of the aquifers (fig. 6) was calculated as the difference between the water-table and bedrock-surface altitudes. Digital coverages of the bedrock surface and the water table were subtracted using the geographic information system, and the resulting saturated-thickness coverage was plotted for use in figure 6. Because the saturated-thickness map is a third-order map and was calculated as the difference between two interpretative maps, it is generalized and shows the trends in saturated thickness, but not local variations in thickness. Saturated thickness is not shown in the upland areas beyond the area of 20-foot interval water-table contours because the aquifers in this area tend to be thin, discontinuous, and transient.

Saturated thickness is less than 20 feet along most of the valleys of Bear Creek and Clear Creek. In the valley of the South Platte River, saturated thickness generally ranges from 20 to 40 feet, but in the reach from Englewood to Thornton, thickness is less than 20 feet in parts of the valley. In Cherry Creek Valley, saturated thickness generally ranges from 20 to 60 feet.

Saturated thickness generally ranges from 20 to 40 feet along Cherry Creek paleovalley and ranges from 20 to 60 feet along the First-Sand and South Platte paleovalleys. The paleovalleys have a larger saturated thickness than surrounding areas east of the South Platte River. Saturated thickness of the areas beyond principal stream valleys or paleovalleys generally is less than 20 feet and may be zero in some areas or at some times of the year.

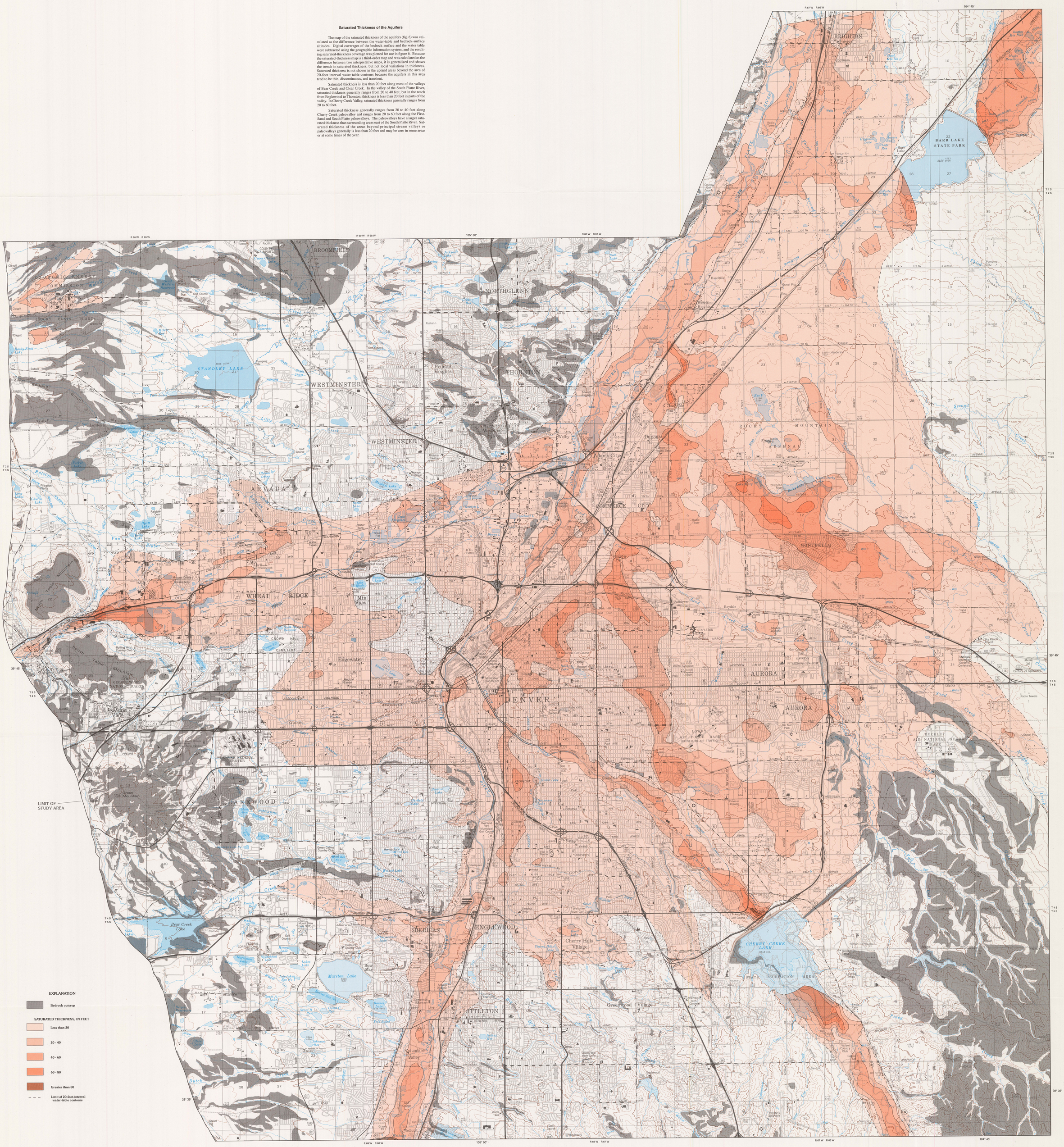

FIGURE 6 — Saturated thickness of the shallow aquifers

Base from U.S. Geological Survey 1:50,000 County Maps for Adams, Arapahoe, Denver and Jefferson Counties

SCALE 1:50,000
CONTOUR INTERVAL 20 AND 80 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1996

OCT 9 1996
LIBRARY
USGS LIBRARY - RESTON
3 1818 00218259 8
M(200)
HX
no. 736
sheet 4
c. 1

GEOHYDROLOGY OF THE SHALLOW AQUIFERS IN THE DENVER METROPOLITAN AREA, COLORADO

By
S.G. Robson

1996