

EXPLANATION

Bedrock outcrop

Saturated thickness, in feet

- Less than 20
- 20 to 40
- 40 to 60
- 60 to 80
- 80 to 100
- 100 to 120

Limit of well-defined, 20-foot-interval water-table contours

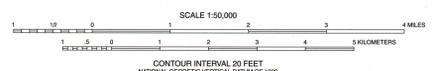
Saturated Thickness of the Aquifers

The map of the saturated thickness of the aquifers (fig. 8) was computed by the geographic information system as the difference between the maps of the altitude of the water table (a first-order map) and the altitude of the bedrock surface (a second-order map). Because the saturated thickness map is a third-order map and was calculated as the difference between two interpretive 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 well-defined, 20-foot-interval water-table contours in figure 7 because shallow aquifers in these areas tend to be thin, discontinuous, and transient. Saturated thickness is considered to be zero where the water table is in bedrock.

Saturated thickness is as much as 110 feet in the lower valley of the Cache La Poudre River near the County Municipal Airport east of Greeley. In other parts of the Cache La Poudre valley, saturated thickness ranges from 20 to 80 feet, generally decreasing west (upstream) of Greeley. Saturated thickness in the South Platte River valley ranges from 20 to 90 feet, but thickness commonly is less than 50 feet under the river.

In the paleovalleys north of the Cache La Poudre valley, saturated thickness commonly ranges from 20 to 40 feet. However, saturated thickness exceeds 60 feet in the southern part of Easton paleovalley. Outside the principal valleys and paleovalleys, saturated thickness generally is less than 20 feet and may be zero in some areas or at some times of the year.

FIGURE 8—Saturated thickness of the shallow aquifers.



GEOHYDROLOGY OF THE SHALLOW AQUIFERS IN THE GREELEY-NUNN AREA, COLORADO

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2000