

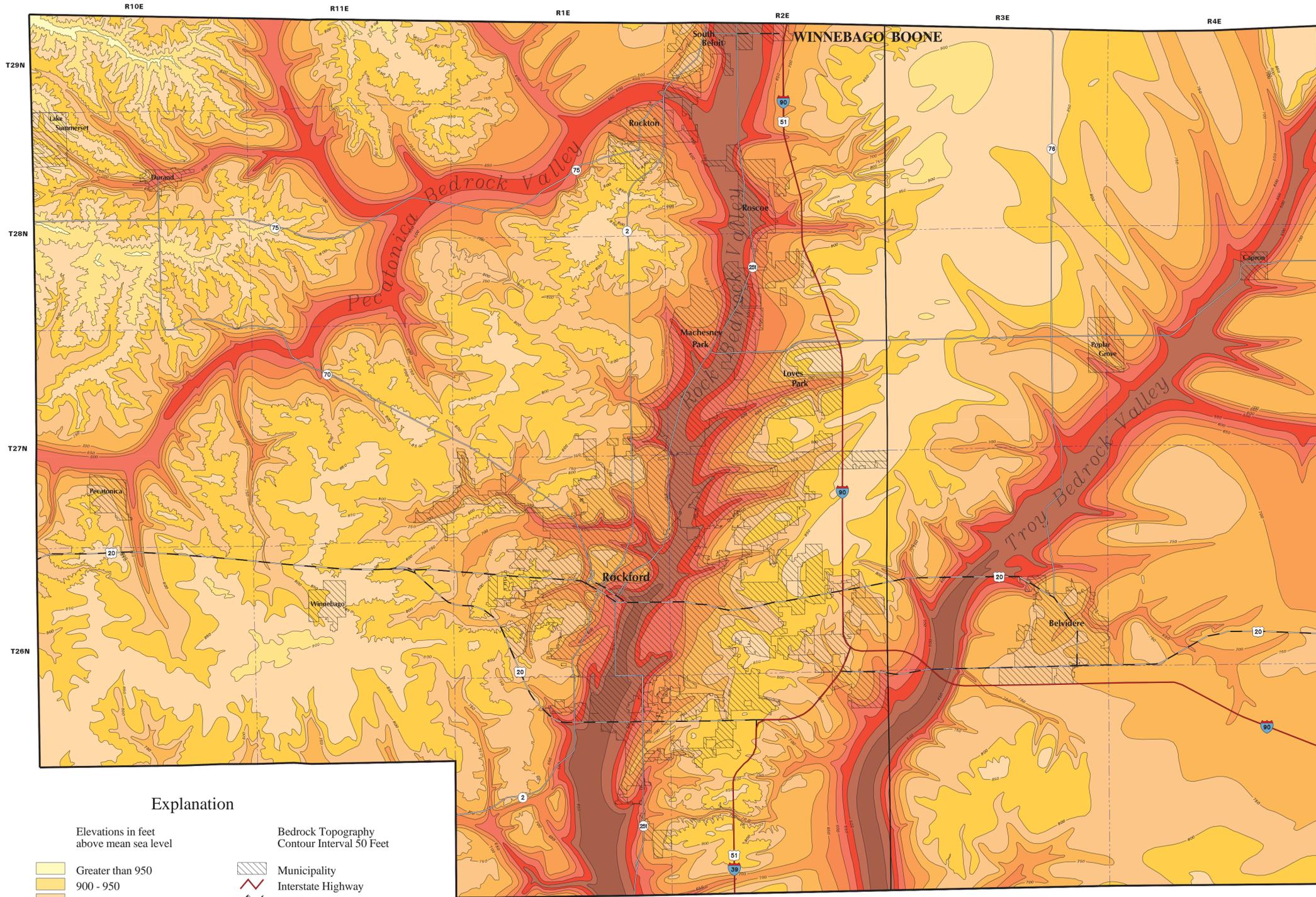


State of Illinois
Department of Natural Resources

Bedrock Topography of Boone and Winnebago Counties, Illinois

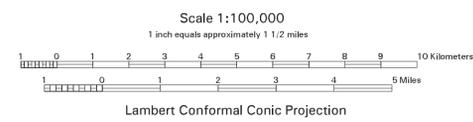
Christopher S. McGarry
(modified from A.N. Stecyk, 1984)
2000

Illinois State Geological Survey
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Explanation

Elevations in feet above mean sea level	Bedrock Topography Contour Interval 50 Feet
Greater than 950	Municipality
900 - 950	Interstate Highway
850 - 900	US Highway
800 - 850	State Highway
750 - 800	
700 - 750	
650 - 700	
600 - 650	
550 - 600	
500 - 550	
450 - 500	
Less than 450	



T46N
The map of bedrock topography shows the elevation of the top surface of the consolidated rocks that lie at or beneath the land surface. Bedrock topography illustrates pre-glacial topographic features of the two-county study area. In northwest Winnebago County, there is little difference between the land surface and bedrock surface in the uplands; a 0 to 5 m (16 ft.) thick veneer of glacial till and/or loess overlying near-surface bedrock generally characterizes these areas. In contrast, the bedrock surface is more than 100 m (328 ft.) below the land surface in deep bedrock valleys. The Rock, Troy, and Pecatonica bedrock valleys are clearly discernable on the bedrock topography map. These valleys were incised prior to glaciation in the region and are now filled with glaciofluvial sediments, primarily sand and gravel. Although the Rock and Pecatonica bedrock valleys presently contain rivers bearing the same names, the Troy bedrock valley has no expression at the land surface today. Unconsolidated Quaternary deposits are generally thicker toward the east, resulting in very few bedrock exposures in Boone County.

T45N
This map was created to assist in determining the subcropping pattern of bedrock units (McGarry, 2000). Stecyk's (1983) map of the bedrock topography was edited to more accurately reflect the variations in topography in the northwest portion of Winnebago County, based on field mapping, and to account for well data that were not available in 1983. Bedrock is very near the land surface in the northwest portion of the study area, but Stecyk's (1983) map showed areas where the bedrock surface was more than 15 m (50 ft.) below the land surface. Land surface elevations from USGS topographic quadrangles were used to modify the bedrock topography map to reflect shallow bedrock. In areas where new well data indicated a difference in bedrock elevation from that mapped by Stecyk, the map was altered to reflect the new data. Overall, about 60% of the original map was altered.

Data used to create this map were compiled from ISGS well logs, Illinois Department of Transportation borings, United States Department of Agriculture soil survey maps, United States Geological Survey 7.5-minute topographic quadrangle maps, and field observations.

- T44N
References:
- McGarry, C.S. (2000) Bedrock Geology of Boone and Winnebago Counties, Illinois: Illinois State Geological Survey, Open File Series 2000- 3, scale 1:100,000.
 - Stecyk, A.N. (1983) Topography of the Bedrock Surface of Boone and Winnebago Counties: Illinois State Geological Survey, 1:62,500.



T43N
Preparation of this map by the Illinois State Geological Survey was supported, in part, by the Illinois Department of Natural Resources Environmental Protection Trust Fund. The map is part of a study to characterize the stratigraphy and structural geology of the Galena-Platteville Aquifer in Boone and Winnebago Counties. Maps produced for this study are intended for regional aquifer protection and land use planning purposes. More detailed mapping is needed for site specific considerations. This map has been reviewed for scientific accuracy and has been edited to meet the quality standards of maps in the ISGS Map Series.