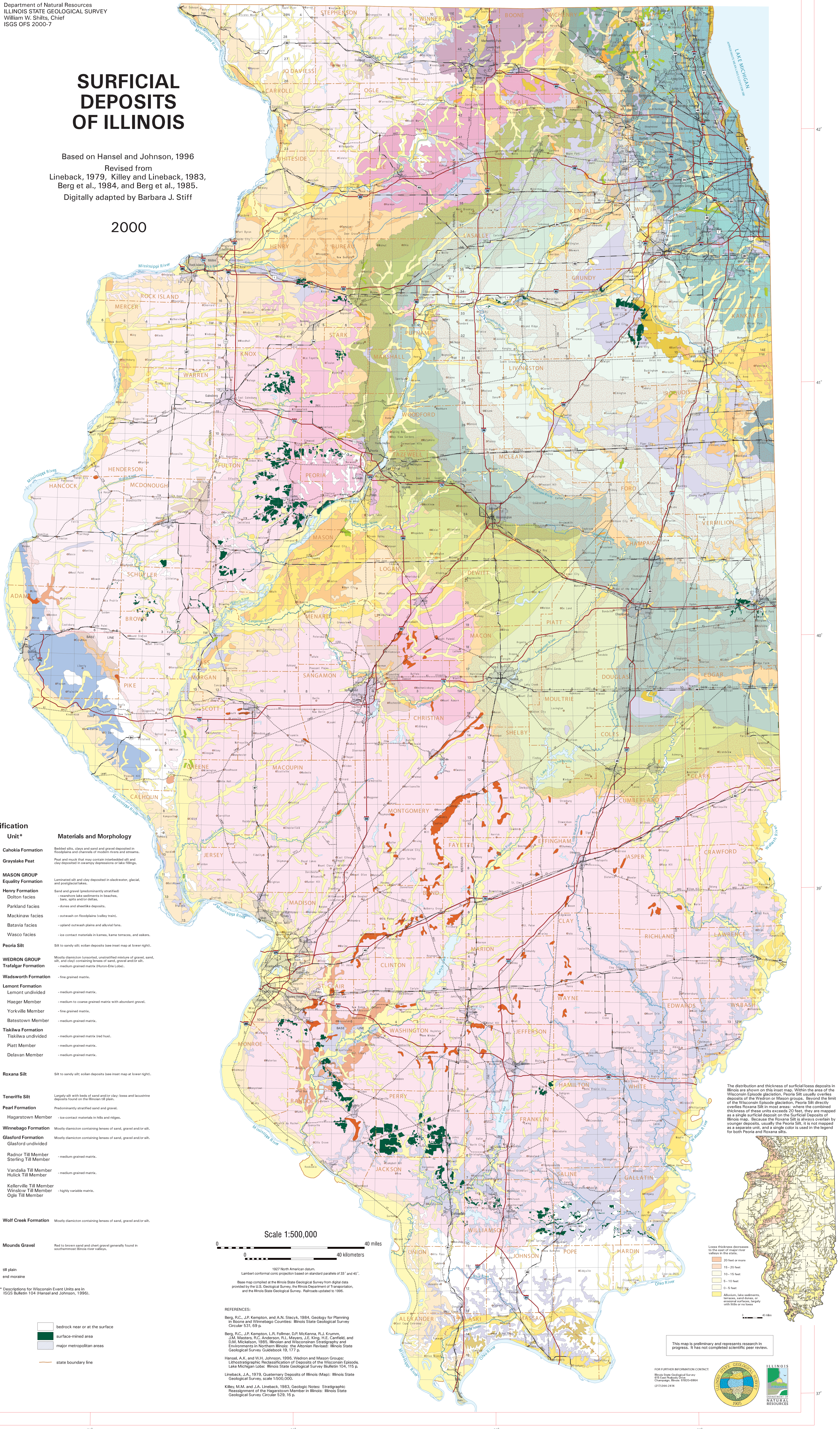


# SURFICIAL DEPOSITS OF ILLINOIS

Based on Hansel and Johnson, 1996  
Revised from  
Lineback, 1979, Killey and Lineback, 1983,  
Berg et al., 1984, and Berg et al., 1985.  
Digitally adapted by Barbara J. Stiff

2000



### Stratigraphic Classification

Time Years Before Present (YBP)	Event	Unit*	Materials and Morphology		
Holocene	Hudson	Cahokia Formation	Bedded silt, clay and sand and gravel deposited in floodplains and channels of modern rivers and streams. Most and much that may contain interbedded silt and clay deposited in swampy depressions or lake fillings.		
		Graylake Peat			
		MASON GROUP			
		Equality Formation	Laminated silt and clay deposited in slackwater, glacial, and periglacial lakes.		
		Henry Formation	Sand and gravel (predominantly stratified)		
		Dolton facies	-nonpoint lake sediments in beaches, bays, and/or deltas.		
		Parkland facies	-dunes and dune-like deposits.		
		Mackinaw facies	-outwash on floodplains (valley floor).		
		Batavia facies	-outwash on floodplains and alluvial fans.		
		Wasco facies	-ice contact materials in kames, kame terraces, and eskers.		
Pleistocene Epoch	Wisconsin	Peoria Silt	Silt to sandy silt; silt deposits (see inset map at lower right).		
		WEDRON GROUP			
		Trafalgar Formation	Mostly diamictic (unsorted, unstratified mixture of gravel, sand, silt, and clay) containing lenses of sand, gravel and/or silt.		
		Wadsworth Formation	-fine grained matrix.		
		Lemont Formation	-medium grained matrix.		
		Lemont undivided			
		Haeger Member	-medium to coarse grained matrix with abundant gravel.		
		Yorkville Member	-fine grained matrix.		
		Batestown Member	-medium grained matrix.		
		Tiskilwa Formation	-medium grained matrix (red hue).		
Pleistocene Epoch	Farmdale	Tiskilwa undivided	-medium grained matrix.		
		Platt Member	-medium grained matrix.		
		Delavan Member	-medium grained matrix.		
		Sangamon	Roxana Silt	Silt to sandy silt; silt deposits (see inset map at lower right).	
			Illinois	Teneriffe Silt	Thinly silt with beds of sand and/or clay; loess and lacustrine deposits found on the Illinois 18 plain.
				Pearl Formation	Predominantly stratified sand and gravel.
				Hagarstown Member	-ice-contact materials in hills and ridges.
				Winnebago Formation	Mostly diamictic containing lenses of sand, gravel and/or silt.
				Glasford Formation	Mostly diamictic containing lenses of sand, gravel and/or silt.
				Glasford undivided	
Radnor Till Member	-medium grained matrix.				
Sterling Till Member	-medium grained matrix.				
Vandalia Till Member	-medium grained matrix.				
Hullick Till Member	-highly variable matrix.				
Pre-Illinoian	Yarmouth	Kellerville Till Member	-highly variable matrix.		
		Windsor Till Member			
		Ogle Till Member			
		Pre-Illinoian	Alton	Wolf Creek Formation	Mostly diamictic containing lenses of sand, gravel and/or silt.
				Mounds Gravel	Red to brown sand and chert gravel generally found in southernmost Illinois river valleys.

Events colored in blue are glacial while those left white are interglacial. The darker blue indicates surficial materials that were deposited by glacial melt. The lighter blue indicates surficial materials deposited by wind and/or water during a glacial event.

The long edge of the blue areas indicates the direction from which the ice flowed into Illinois. In the right indicates a northwestern source; in the left, a northeastern source.

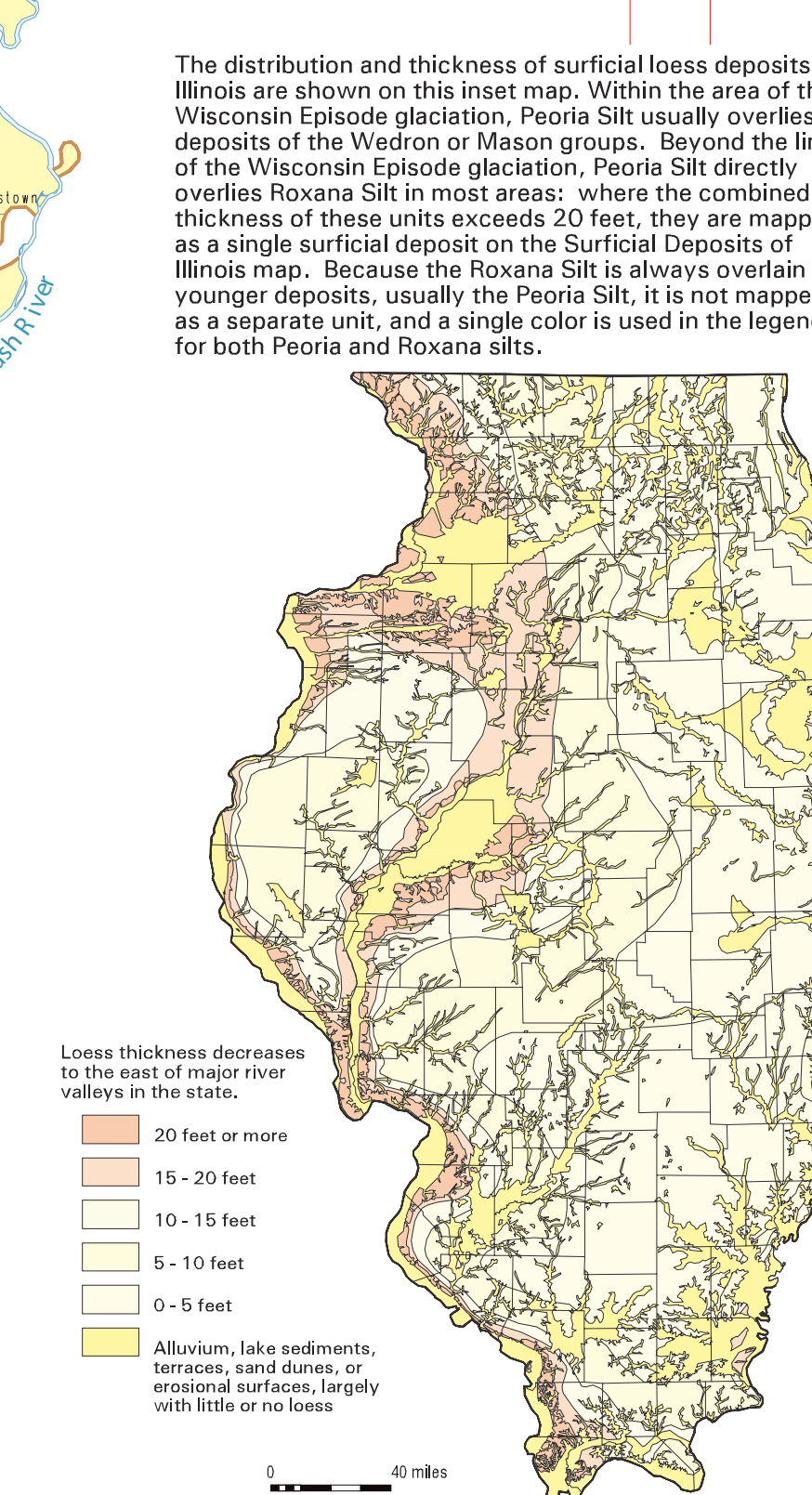
\* Descriptions for Wisconsin Event Units are in IGSS Bulletin 104 (Hansel and Johnson, 1996).

backrock near or at the surface  
surface-mined area  
major metropolitan areas  
state boundary line

Scale 1:500,000  
0 40 miles  
0 40 kilometers

1927 North American datum.  
Lambert conformal conic projection based on standard parallels of 33° and 45°.  
Base map compiled at the Illinois State Geological Survey from digital data provided by the U.S. Geological Survey, the Illinois Department of Transportation, and the Illinois State Geological Survey. Railroads updated to 1996.

REFERENCES:  
Berg, R.C., J.P. Kampton, and A.N. Stecyk, 1984. Geology for Planning in Boone and Winnebago Counties. Illinois State Geological Survey Circular 531, 69 p.  
Berg, R.C., J.P. Kampton, L.R. Follmer, D.P. McKenna, R.J. Krump, J.M. Masten, R.C. Anderson, R.L. Myers, J.E. King, H.G. Cantrell, and D.M. Mickelson, 1985. Illinoian and Wisconsinan Stratigraphy and Environment in Northern Illinois: the Altonian Revised. Illinois State Geological Survey Guidebook 19, 177 p.  
Hansel, A.K. and W.H. Johnson, 1996. Wedron and Mason Groups: Lithostratigraphic Reclassification of Deposits of the Wisconsinan Epoch, Lake Michigan Lobe. Illinois State Geological Survey Bulletin 104, 115 p.  
Lineback, J.A., 1979. Quaternary Deposits of Illinois (Map). Illinois State Geological Survey, scale 1:500,000.  
Killey, M.M. and J.A. Lineback, 1983. Geologic Notes: Stratigraphic Reassignment of the Hagarstown Member in Illinois. Illinois State Geological Survey Circular 529, 16 p.



The distribution and thickness of surficial deposits in Illinois are shown on this inset map. Within the area of the Wisconsinan glacial, Peoria Silt usually overlies deposits of the Wedron or Mason groups. Beyond the limit of the Wisconsinan glacial, Peoria Silt directly overlies Roxana Silt in most areas; where the combined thickness of these units exceeds 30 feet, they are mapped as a single surficial deposit on the Surficial Deposits of Illinois map. Because the Roxana Silt is always overlain by younger deposits, usually the Peoria Silt, it is not mapped as a separate unit, and a single color is used in the legend for both Peoria and Roxana silts.

Lower thickness decreases to the east of major river valleys in the state.

- 20 feet or more
- 15-20 feet
- 10-15 feet
- 5-10 feet
- 0-5 feet

Alluvium, lake sediments, terraces, and dunes, or residual surficial deposits, largely with little or no base.

This map is preliminary and represents research in progress. It has not completed scientific peer review.