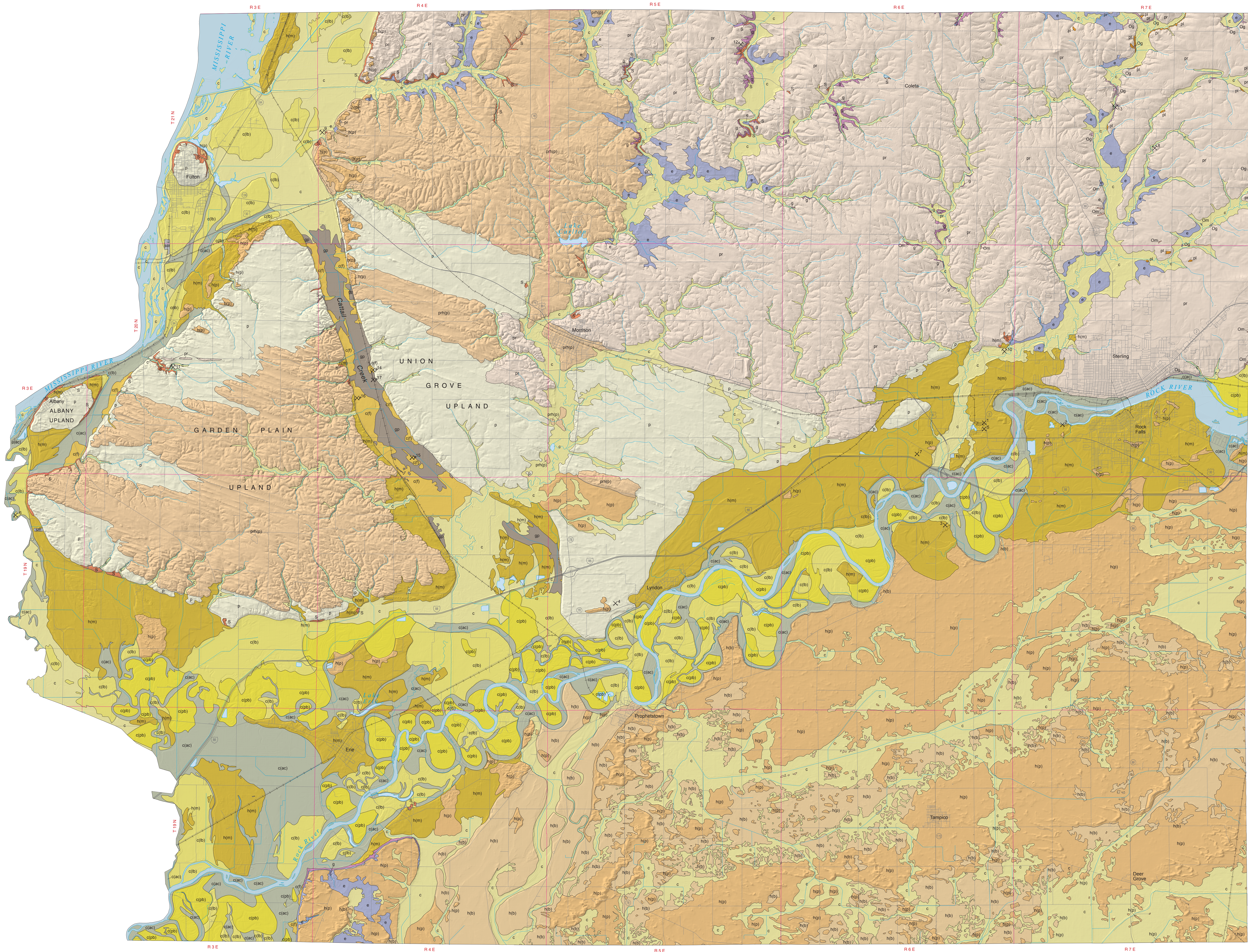


SURFICIAL GEOLOGY OF WHITESIDE COUNTY, ILLINOIS

Richard C. Anderson and Xiaodong Miao
2013

Illinois County Geologic Map
ICGM Whiteside-SG



QUATERNARY DEPOSITS

Description	Unit	Interpretation
HUDSON EPISODE (~12,000 years before present [B.P.] to today)		
Fill or removed earth; various sediment types	Surface mine sm	Surface mine, areas highly disturbed by human activity
Silt, sand, minor clay and gravel; yellowish brown to dark gray or black; abundant organic matter in the upper few meters; leached; generally less than 6 meters (20 feet) thick	Cahokia Formation c	Holocene alluvium and flood deposits in modern stream channels and floodplains
Clay, silt, and fine sand; generally less than 6 meters (20 feet) thick	Cahokia Formation (abandoned channels) c(ac)	Alluvium and flood deposits in oxbows and abandoned channels
Fine sand and silt; generally less than 6 meters (20 feet) thick	Cahokia Formation (alluvial fans) c(f)	Alluvium deposits in alluvial fans
Silt and fine sand; generally less than 6 meters (20 feet) thick	Cahokia Formation (levees and backswamps) c(lb)	Alluvium and flood deposits in natural levees and backswamps with crowsnest springs
Fine sand with silt; generally less than 6 meters (20 feet) thick	Cahokia Formation (point bars) c(p)	Alluvium and flood deposits on point bars
Peat, muck, and organic-rich sediment; may contain interbeds of silt, clay, and some fine sand; black to dark brown; generally 0.6 to 4.5 meters (2 to 15 feet)	Grayslake peat gp	Organic deposits in low-lying depressions, in drainageways, and on floodplains; commonly found around lakes and marshes and in channels connecting bodies of water

WISCONSIN EPISODE (~60,000 to ~12,000 years B.P.)		
Silt; yellowish brown; calcareous; upper few meters leached; generally less than 6 meters (20 feet) thick	Peoria Silt p	Windblown loess
Silt; yellowish brown to gray; calcareous except for the upper 1 to 2 meters (3 to 6 feet) in modern soil; may exceed 6 meters (20 feet) in thickness; flat interfluves	Peoria and Roxana Silts pr	Windblown loess; Peoria Silt overlying the Roxana Silt
Silt; medium to very fine sand; yellowish brown; calcareous; upper few meters leached; generally less than 6 meters (20 feet) thick	Peoria Silt, Roxana Silt, and Henry Formation-Parkland Sand p(hm)	Peoria and Roxana Silts intermixed with Parkland Sand; elongated loessic dunes, as galea landforms; eolian in origin on the uplands
Silt; clayey; yellowish brown to gray; leached; massive; fairly laminated in places	Equality Formation e	Lacustrine deposits from glacial Lake Milan
Sand and gravel; may exceed 30 meters (100 feet) in thickness	Batavia facies, Henry Formation h(b)	Glaciofluvial outwash deposits associated with the Wisconsin Episode
Sand and fine gravel; yellowish brown; upper 3 meters (10 feet) generally leached	Mackinac facies, Henry Formation h(m)	Glaciofluvial outwash deposits associated with the Wisconsin Episode
Medium to very fine sand; light yellowish brown; leached medium to very fine sand	Parkland Sand facies, Henry Formation h(p)	Eolian sand, either dunes or sand sheets

ILLINOIS EPISODE (~200,000 to ~130,000 years B.P.)		
Sand and gravel; leached; small, discontinuous deposits	Pearl Formation pl	Glaciofluvial outwash deposits associated with the Illinois Episode
Pebbly, silty, clay; may exceed 15 meters (50 feet) in thickness	Glasford Formation undifferentiated g	Glacial diamicton and associated deposits of the Illinois Episode

PALEOZOIC BEDROCK

Description	Unit	Interpretation
Dolomite; yellowish brown to gray	Silurian s	Bedrock near the surface, with about 2 meters (5 feet) of Peoria Silt above it
Shale with dolomite; gray to black, or yellowish brown to gray	Ordovician, Maquoketa Group Om	Bedrock near the surface, with about 2 meters (5 feet) of Peoria Silt above it; may be exposed because of strip mining
Dolomite with some limestone; yellowish brown to gray	Ordovician, Galena Group Og	Bedrock near the surface, with about 2 meters (5 feet) of Peoria Silt above it; may be exposed because of strip mining

- Crushed stone quarry
Sand and gravel pit
Peat

Site number; see Table 1 in accompanying report

Geology based on fieldwork by Richard C. Anderson, 1965–2000, and Xiaodong Miao, 2007–2010.

Digital compilation of Richard C. Anderson's geology by Barbara J. Stiff and student interns.

Cartography by Jane E. Johnson-Domier. LIDAR shaded relief by Donald E. Luman.

Base map compiled by the Illinois State Geological Survey from digital data (2009 TIGER/Line Shapefiles) provided by the United States Census Bureau. Shaded relief from 2009 LIDAR bare earth elevation data provided by the Illinois Department of Transportation and the Illinois Height Modernization Program (<http://www.isgs.illinois.edu/dthome/webdocs/ihmp/>). Transverse Mercator Projection, zone 16, North American Datum of 1983, North American Vertical Datum of 1985.

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