

SURFICIAL GEOLOGY OF SAG BRIDGE QUADRANGLE
COOK, DUPAGE, AND WILL COUNTIES, ILLINOIS

Prairie Research Institute
ILLINOIS STATE GEOLOGICAL SURVEY

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STATEMAP Sag Bridge-SG



QUATERNARY DEPOSITS

Description	Unit	Interpretation
HUDSON EPISODE (~14,700 years before present (B.P.) to today)¹		
Diamicton, sand, gravel, silt, and peat; up to 10 feet thick	Disturbed ground dg	Disturbed land; includes former gravel pits and major areas of construction
Mucky sand, silt and clay (natural materials) mixed with post settlement refuse, including industrial and sanitary sewage; about 25 feet thick	Disturbed ground, dredge spoils dg	Disturbed land; dredge spoils from creation of canals
Peat, muck, organic silt and clay; interbedded with sand, silt, and clay in some places; up to about 10 feet thick	Grayscale Peat gp	Organic debris deposited in depressions; intertongues with the Equality and Cahokia Formations
Sand, silt, and clay; stratified; locally containing beds of sand; generally less than 10 feet thick	Cahokia Formation c	Alluvium in floodplains and channels of modern rivers and streams; alluvial fan deposits in some places
Clay and silt with beds of fine sand; uniform and laminated; likely no more than 10 feet thick	Equality Formation e	Lake sediment; few deposits are slackwater; intertongues with alluvium of Cahokia Formation or Henry Formation
WISCONSIN EPISODE: Michigan Subepisode (~29,000–14,700 years B.P.)		
Sand, typically with little gravel, interbedded with uncommon beds of silt or diamicton; typically less than 35 feet thick	Henry Formation, undifferentiated h	Outwash deposited in glacial meltwater channels and in alluvial fans
Diamicton, loam to silty clay loam; uniform to vaguely stratified in places, gray (fresh) to brown, yellowish brown, and light gray (weathered); with lenses of sand and gravel; as much as about 90 feet thick	Wadsworth Formation w	Till and debris flow deposits associated with the Tinley Moraine and Valparaiso Moraine System
Diamicton, loam and silt loam as much as 70 feet thick (upper facies); sandy loam as much as 25 feet thick (lower facies); attaining about 90 feet maximum thickness	Lemont Formation, Haeger Member l-h	Till and ice-marginal sediment

PRE-QUATERNARY DEPOSITS

SILURIAN SYSTEM (440-410 million years B.P.)		
Dolomite, less shale; upper 30 feet may include layers of diamicton about 1 to 3 inches thick along bedding planes, separated by at least one foot of solid dolomite	Bedrock (Silurian) (cross sections only) S (beneath 5 feet or less of Cahokia Formation) cS	Dolomitized carbonate bank deposits

¹The time periods for the Wisconsin and Hudson episodes are reported in calibrated radiocarbon years before present (where "present" is considered to be 1950). We have calibrated our radiocarbon ages with the on-line program Calib 7.1 (Stuiver et al., 2005) using the IntCal13 correction curve (Reimer et al., 2013).

References

Reimer, P. J., E. Bard, A. Bayliss, J. W. Beck, P. G. Blackwell, R. C. Bronk, C. E. Buck, H. Cheng, R. L. Edwards, M. Friedrich, P. M. Grootes, T. P. Guilderson, H. Halliday, I. Hoggins, C. Hattis, T. J. Heaton, D. L. Hoffmann, A. G. Hogg, K. A. Hughes, K. F. Kaiser, B. Kromer, S. W. Manning, M. Niu, R. W. Reimer, D. A. Richards, E. M. Scott, J. R. Southon, R. A. Staff, C. S. M. Turney, J. van der Plicht, J. J. 2013, IntCal13 and Marine13 radiocarbon age calibration curves (0-50,000 years cal BP). Radiocarbon, 55 (4), 1889–1897.

Stuiver, M., P. J. Reimer, and R. W. Reimer, 2015. CALIB radiocarbon calibration, version 7.1. <http://calib.qub.ac.uk/calib/>.

Data Type

- Stratigraphic boring
- Water-well boring
- Monitoring well
- Labels indicate samples (s) or geophysical log (c). Boring and outcrop labels indicate the county number. Dot indicates the boring or outcrop extends to bedrock.
- Contact
- Line of cross section

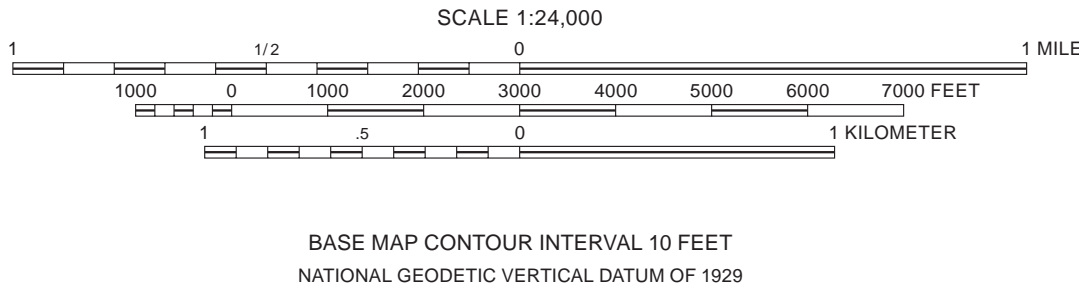
A—A'

Note: The county number is a portion of the 12-digit API number on file at the ISGS Geological Records Unit. Most well and boring records are available online from the ISGS Web site.

Base map compiled by Illinois State Geological Survey from digital data (2012 U.S. Topo) provided by the United States Geological Survey. Contours and shaded relief derived from LIDAR data provided by Will County (2004), DuPage County (2006), and Cook County (2008).

North American Datum of 1983 (NAD 83)
Projection: Transverse Mercator
10,000-foot ticks: Illinois Coordinate System of 1983, east zone
1,000-meter ticks: Universal Transverse Mercator grid system, zone 16

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Geology based on field work by B. Brandon Curry and Alison R. Bruegger, 2015.

Digital cartography by Deette M. Lund and Jennifer E. Carrell, Illinois State Geological Survey.

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1	2	3
4	5	
6	7	8

ADJOINING QUADRANGLES
1 Wheaton
2 Hinsdale
3 Berwyn
4 Romeoville
5 Palos Park
6 Joliet
7 Mokena
8 Tinley Park

39°5' N
90°55' W
APPROXIMATE MEAN DECLINATION, 2015

ROAD CLASSIFICATION

- Interstate Route
- State Route
- Local road

