SURFICIAL GEOLOGY OF HUNTLEY QUADRANGLE
MCHENRY AND KANE COUNTIES, ILLINOIS

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2012

STATEMAP Huntley-SG

QUATERNARY DEPOSITS

Description	Unit	Interpretation
HUDSON EPISODE (~14,700 years before present (B.P.) to today)		
Fill (disturbed earth material); **primarily material reworked from underlying deposits**	Disturbed ground `d`	**Disturbed land;** embankments and mounds (gray); pits and quarries (open diagonal lines with underlying unit showing through)
Peat and muck; black to brown; interbedded with sand and silty clay (gray) and marl (white to light gray); less than 10 feet thick in most places	Grayslake Peat `gp`	**Decomposed wetland vegetation and sediment** in depressions and on slopes associated with discharge of groundwater
Sand and gravel, well-sorted sand, and lenses of peat, grading laterally to organic-rich silt and clay; as much as 10 feet thick	Cahokia Formation `c`	**Floodplain alluvium**
Silt, clay, and fine sand; gray to brown; layered to massive; with fossil wood fragments, moss, gastropod shells, ostracodes, leaves, and rootlets in many places; surficial deposits are generally less than 20 feet thick	Equality Formation `e`	**Lake deposits** in ice-walled lakes, postglacial kettles, and proglacial lakes
WISCONSIN EPISODE: Michigan Subepisode (~29,000–14,700 years B.P.)		
Sand and gravel, or sand; with lenses of silt and clay, or diamicton; yellowish brown, brown to gray; generally stratified; up to 70 feet thick	Henry Formation `h`	**Proglacial outwash** along upper tributaries of Kishwaukee River valley
Silt, fine sand; gray to brown; layered to massive; with fossil wood fragments, moss; up to 50 feet thick	Equality Formation, undivided `e-u`	**Lake deposits** in ice-walled lakes, postglacial kettles, and proglacial lakes
Diamicton; silty clay, silty clay loam, and clay; gray, oxidizing to yellowish brown; includes layers of sand and gravel, silt, and silty clay; as much as 35 feet thick	Yorkville Member, Lemont Formation `l-y`	**Till, debris flow deposits, and lake sediment** associated with the Barlina and Huntley moraines
Sand and gravel with interbeds of silt and clay; gray; stratified to laminated; as much as 30 feet thick	Henry Formation (cross sections only) `h(l-y)`	**Proglacial outwash and deltaic deposits(?);** underlies deposits of the Yorkville Member
Diamicton; clay loam to loam matrix (roughly equal amounts of sand, silt, and clay) with lenses of sand and gravel, or sand; gray; as much as 30 feet thick	Batestown Member, Lemont Formation `l-b`	**Till and debris flow deposits**
Diamicton; loam to sandy loam; brown to brownish gray, oxidizing to yellowish brown; includes layers of sand and gravel and silt; as much as 160 feet thick	Tiskilwa Formation `t`	**Till, debris flow deposits, and outwash** associated with the Gilbert's Drift and Huntley moraine
Sand and gravel, and sand with thin beds of diamicton and silt; brown; stratified; as much as 80 feet thick	Ashmore Tongue, Henry Formation (cross sections only) `h-a`	**Proglacial outwash** deposited in alluvial fans and in deltas; underlies deposits of the Tiskilwa Formation
ILLINOIS EPISODE (~200,000– ~130,000 years B.P.)		
Diamicton and sorted sediment, primarily sand and gravel; the diamicton is bouldery in places, with abundant lenses, layers, and channel fills of sand and gravel; the diamicton matrix is sandy loam to loam and reddish brown, pinkish brown, or brown. The diamicton is as much as 50 feet thick, and the sand and gravel, 35 feet thick	Glasford Formation (cross sections only) `g`	**Till and debris flow deposits** (diamicton) and outwash (sand and gravel)

PALEOZOIC BEDROCK

Description	Unit	Interpretation
Dolomite (dense, brown, and argillaceous or dark gray and white, vuggy, fossiliferous packstone), **shaly dolomite** (friable, gray and brown), **shale** (soft to fissile, greenish gray, gray, or brown)	Near-surface bedrock (cross sections only)	**Dolomitized carbonate bank deposits;** subtidal to intertidal clastic deposits interbedded with dolomitized carbonate bank deposits; and dolomitized carbonate shelf deposits

Data Type

- ○ Stratigraphic boring
- ● Water well boring
- ⊙ 26211 Boring label indicates the county number. Dot indicates boring is to bedrock.

——— Contact

A —— A′ Line of cross section

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 (2011 TIGER/Line Shapefiles) provided by the United States Census Bureau. Hillshade and contours derived from 2008 USGS and IDNR LiDAR source data.

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

Recommended citation:
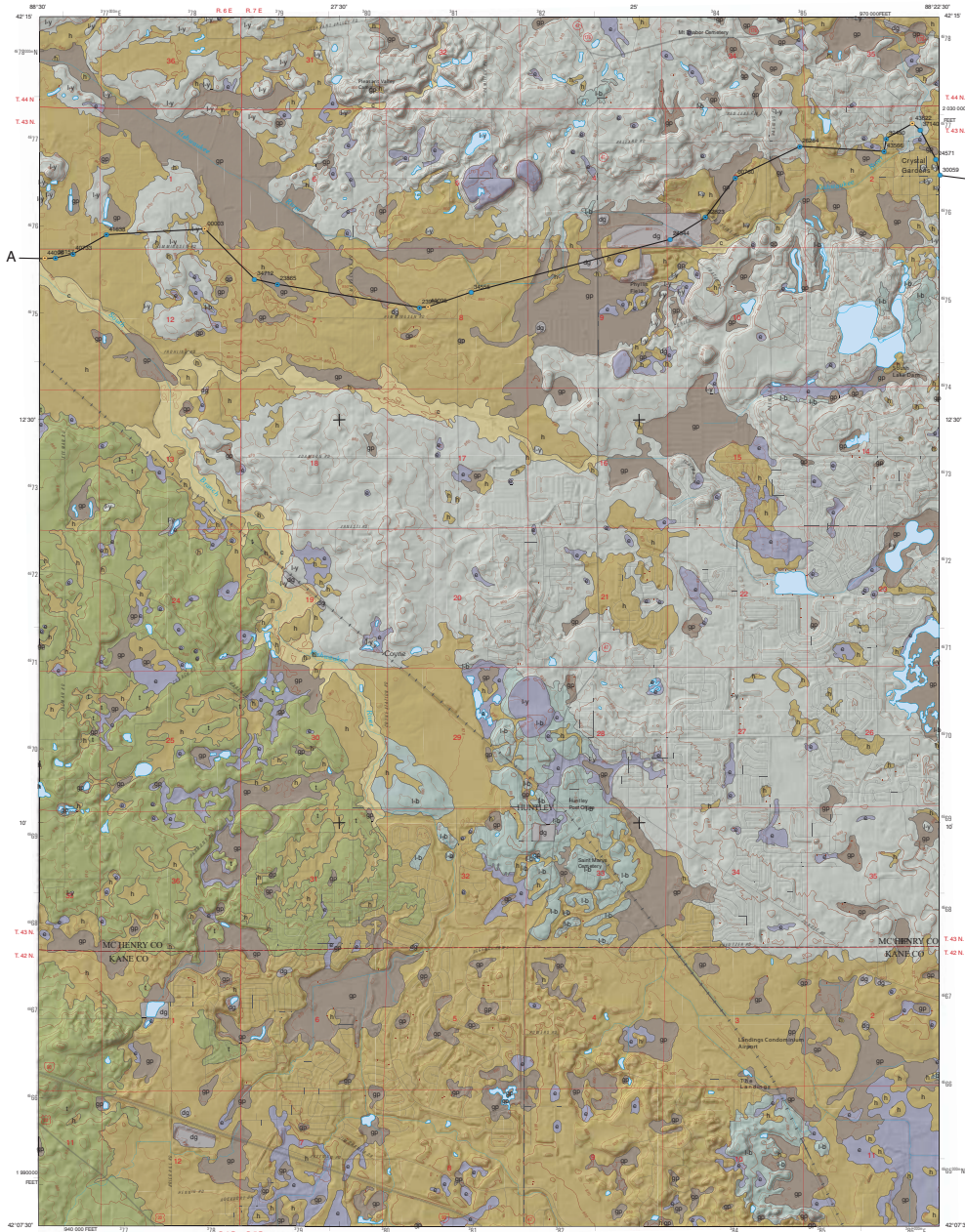Curry, B.B., and J.F. Thomason, 2012, Surficial Geology of Huntley Quadrangle, McHenry and Kane Counties, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000.

SCALE 1:24,000

BASE MAP CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Geology based on field work by Jason F. Thomason, Emily Robbins, and B. Brandon Curry, 2011–2012.

Digital cartography by Jennifer E. Carrell, Jane E. Johnshoy Domier, and Coy E. Potts, Illinois State Geological Survey. Hillshade by Donald E. Luman.

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1	2	3
4	5	
6	7	8

ADJOINING QUADRANGLES
1 Marengo North
2 Woodstock
3 McHenry
4 Marengo South
5 Crystal Lake
6 Hampshire
7 Pingree Grove
8 Elgin

APPROXIMATE MEAN DECLINATION, 2012

ROAD CLASSIFICATION
Interstate Route ⬡   State Route ◯
U.S. Route ⬢   Local road ———

West
A

East
A′

Elevation
(feet)

900

800

700

600

900

800

700

600

l-y

t

g

g

t

l-y

l-y

gp

gp

gp

gp

gp

gp

c

e

e

Pz
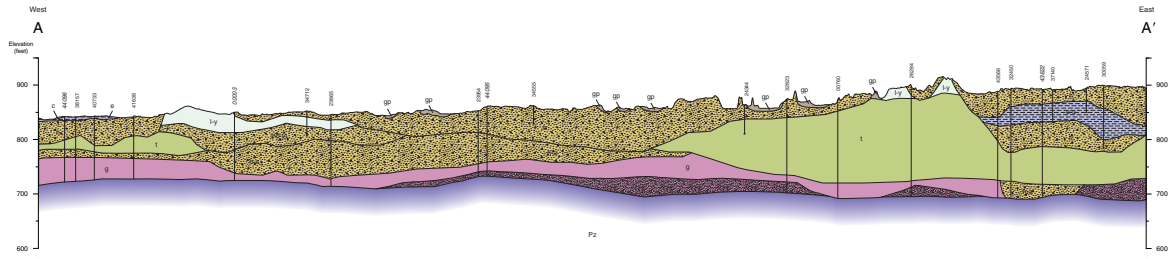
Cross Sections

Sand with Gravel

Laminated silt and clay

Diamicton, massive silt, or other fine-grained sediment

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- - - Inferred contact

c	Cahokia Formation	gp	Grayslake Peat	e-u	Equality, undivided	h(l-y)	Henry Formation	h-a	Henry Formation, Ashmore Tongue
e	Equality Formation	h	Henry Formation	l-y	Lemont - Yorkville M	t	Tiskilwa Formation	g	Glasford Formation

bedrock

Horizontal scale: 1 inch = 2,000 feet
Vertical scale: 1 inch = 200 feet
Vertical exaggeration: 10x