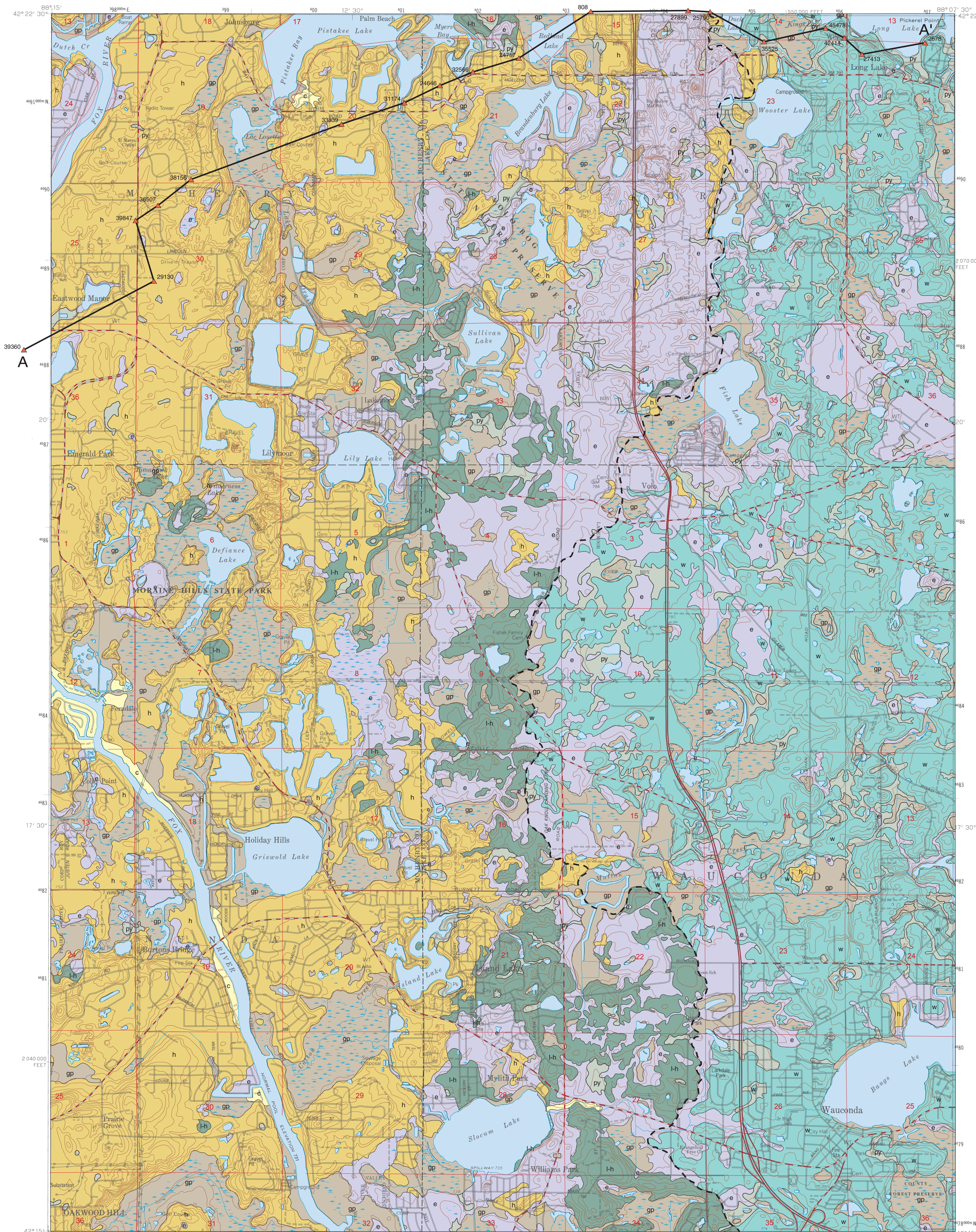


SURFICIAL GEOLOGY OF WAUCONDA QUADRANGLE
LAKE AND MCHENRY COUNTIES, ILLINOIS

Department of Natural Resources
ILLINOIS STATE GEOLOGICAL SURVEY
William W. Shiels, Chief

Andrew J. Stumpf, Michael L. Barnhardt and Ardith K. Hansel
2004

Illinois Preliminary Geologic Map
IPGM Wauconda-SG



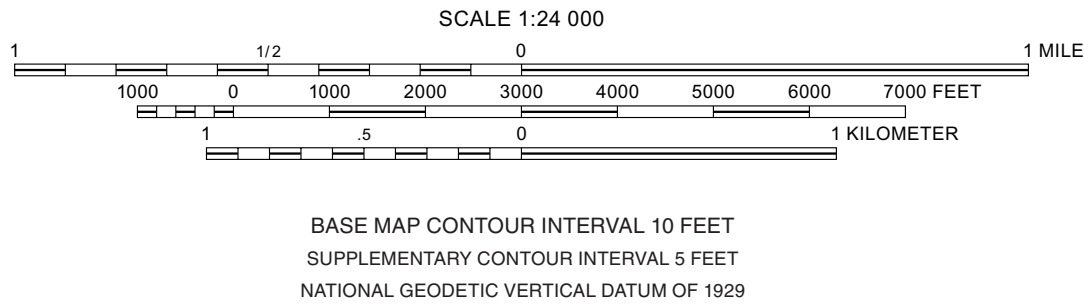
QUATERNARY DEPOSITS

Material	Unit	Interpretation
HUDSON EPISODE (postglacial)		
Silt and clay; brown to yellowish brown; loose to hard; contains occasional sand lenses; may be mottled and gleyed; locally bedded; organic rich in places; thickness up to 20 ft	Cahokia Formation	Postglacial river and stream sediment found in active floodplains; derived mainly from eroded loess and diamictons; may overlie outwash sand and gravel, lacustrine silt and clay, and/or till; may be overlain by or interfingering with silty slope wash deposits in footslope locations; (Alluvial floodplain deposits)
	Peyton Formation	Postglacial remobilized sediment deposited in footslope positions of steeper slopes and in pothole depressions on floodplains and till plains; derived mainly from eroded loess and diamictons; may overlie outwash sand and gravel, lacustrine silt and clay, and/or till; may be interfingering with alluvial deposits; (Slope wash deposits)
	Grayslake Peat	Decomposed organic-rich sediments accumulated in low-lying depressions, drainage ways, and on floodplains; may be intertongued with modern alluvium, silty slope wash, or lake sediment overlying diamicton (Organic deposits)
HUDSON AND WISCONSIN EPISODES		
Silt and clay; massive to stratified; dark gray to light gray; calcareous; soft to hard; very fine and fine sand may occur along bedding planes; contains occasional light gray and white silt inclusions and lenses; very few pebbles; generally abrupt upper and lower contacts; thickness up to 40 feet	Equality Formation	Postglacial and glacial lake deposits; found at or near land surface along major floodplains; may be overlain by silty slope wash deposits at the base of slopes or by modern alluvium; (Proglacial lake deposits)
WISCONSIN EPISODE		
Sand and/or gravel; stratified; variable color, generally pale brown to yellowish brown; calcareous; loose; very well to very poorly sorted; sand is very fine to coarse; gravel is very fine to coarse, contains some beds of minor silt and clay; thickness up to 100 feet, but thickest in the Fox River valley	Henry Formation	Glacial meltwater sediment on the surface found along the margin of major floodplains and on stream terraces and outwash aprons; deposits are much thicker along the Fox River; also includes tongues of sand and gravel lying beneath Haeger till (Beverly Tongue) and Tiskilwa till (Ashmore Tongue); (Proglacial outwash deposits)
Diamicton; silty clay loam to silty clay; gray to dark grayish brown; calcareous; hard; pebbly with occasional cobbles and boulders; commonly contains silt and sand inclusions or sand and/or gravel lenses; may contain pebble-free, silty and clayey material that is laminated; interbedded silt and very fine sand is loose and saturated; thickness to 150 feet.	Wadsworth Formation	Subglacial till that may include subglacial channel and lake deposits; also includes remobilized materials and sediment that melted out on top of the glacier or along the ice margin; lake sediment may be more than 40 feet thick; (Till)
Diamicton; cobbly sandy loam to silt loam; brown; calcareous; hard; thickness up to 30 feet	Haeger Member, Lemont Formation	Subglacial and ice marginal deposits; commonly underlain by outwash sand and gravel of the Henry Formation (Beverly Tongue); may be intermixed with finer textured diamicton of Wadsworth Formation where adjacent melting ice masses occurred; often occurs as discontinuous and irregular layers that overlie (less than 20 ft thick) layer over Henry Formation sand and gravel on western part of quadrangle (Till)

- Contact
- - - Moraine boundary
Water

Base map provided by the United States Geological Survey. Topography compiled 1988. Planimetry taken from imagery compiled 1998 and other sources. Public Land Survey System and survey control current as of 1992. Boundaries current as of 2002.
North American Datum of 1983 (NAD 83)
Projection: Transverse Mercator
10,000-foot ticks: Illinois State Plane Coordinate systems, east zone (Transverse Mercator)
1,000-meter grid ticks: Universal Transverse Mercator grid, zone 16

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Released by the authority of the State of Illinois: 2004

Geology based on fieldwork by A.J. Stumpf and M.L. Barnhardt 2001-2002.

Digital cartography by M. Barrett, Illinois State Geological Survey.

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This Illinois Preliminary Geologic Map (IPGM) is a lightly edited product, subject to less scientific and cartographic review than our Illinois Geological Quadrangle (IGQ) series. It will not necessarily correspond to the format of IGQ series maps, or to those of other IPGM series maps. Whether or when this map will be upgraded depends on the resources and priorities of the ISGS.

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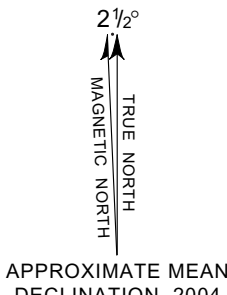


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ADJOINING QUADRANGLES
1 Richmond
2 Fox Lake
3 Antioch
4 McHenry
5 Grayslake
6 Crystal Lake
7 Barrington
8 Lake Zurich



ROAD CLASSIFICATION	
Primary highway, hard surface	Light duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U.S. Route
State Route	