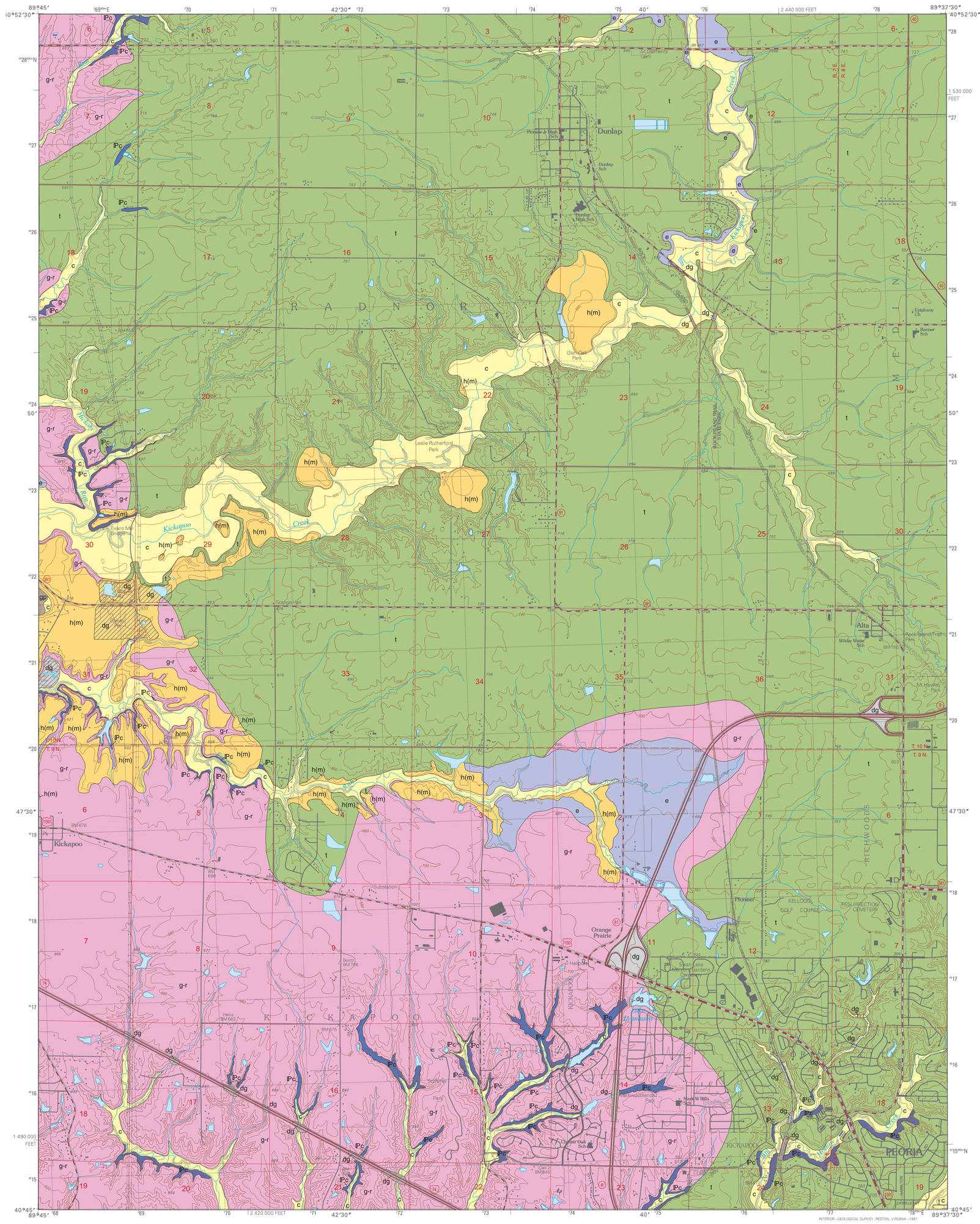
SURFICIAL GEOLOGY OF DUNLAP QUADRANGLE
PEORIA COUNTY, ILLINOIS

ILLINOIS STATE GEOLOGICAL SURVEY
E. Donald McKay III, Interim Director

Illinois Preliminary Geologic Map
IPGM Dunlap-SG

François Hardy and C. Pius Weibel
2008



QUATERNARY DEPOSITS

Description	Unit	Interpretation
HUDSON EPISODE (~12,000 years before present (B.P.) to today)		
Areas where surficial material has been covered or excavated; cover (fill) may include soil, residual material, bedrock, and anthropogenic materials; excavated areas often contain fill; many areas of fill overlie disturbed deposits; thickness 0–40 feet	Disturbed ground (covered) dg; (excavated) dg	**Areas altered by anthropogenic activities;** including construction of roads, dams, and buildings and excavations in gravel pits
Muck, organic silt, and peat; mottled, very dark gray to black; soft and compressible; usually water saturated; calcareous, contains shell fragments and plant material; stratified, interbedded with fine-grained sediments; typical thickness less than 10 feet	Grayslake Peat gp	**Organic-rich materials** deposited and preserved in slight depressions on the modern floodplain of Kickapoo Creek; may consist or formerly consist of marsh vegetation; subject to frequent flooding
Sand and sandy gravel with interbeds of clay, silt, and gravel; poor to well sorted; stratified; yellowish brown to dark gray; mottled; may includes organic (wood) material and calcareous shells; typical thickness 5–25 feet	Cahokia Formation c	**Recent (postglacial) fluvial and floodplain sediments** that have been deposited during the past 12,000 years in the Kickapoo Creek drainage system; subject to frequent flooding for brief periods
WISCONSIN AND SANGAMON EPISODES (~130,000–12,000 years B.P.)		
Silt, silt loam, and silty clay loam; dark gray to yellowish brown; massive; soft to friable; non-calcareous in uppermost part; generally calcareous in lower part; weak cemented, dark reddish brown, ferro-manganese oxide concretions are common; typical thickness 3–20 feet	Peoria and Roxana Silts (not on map; see figure 2 in accompanying report)	**Proglacial eolian (wind-deposited) silt (loess)** derived by wind erosion of clay and silt from outwash deposits as glacial floodwaters receded; blankets upland areas; generally absent or very thin on floodplains and tributaries of the Kickapoo Creek drainage system; both silts succeed Glasford Formation; Roxana Silt may occur beneath Tiskilwa Formation, and Peoria Silt succeeds and intertongues with deposits of Henry Formation
Silt and clay; laminated to thin bedded, rarely massive; gray to olive-green; in places calcareous; contains interbeds of diamicton, sand, and gravel; may contain wood fragments and shells; typical thickness 5–10 feet	Equality Formation e	**Glacial and postglacial lake deposits** infilling valleys, channels, or depressions on outwash and floodplains; interfingers and grades into alluvial and outwash deposits
Sand and interbedded gravel; stratified, thin to thick bedded, crossbedding common; medium- to very coarse-grained sand with scattered cobbles and boulders; yellow brown to grayish brown; very well to poorly sorted; clasts are mainly of carbonate, igneous, and metamorphic compositions, clasts of local bedrock less common; typical thickness 10–40 feet	Henry Formation (Mackinaw facies) h(m)	**Proglacial fluvial (outwash) sediments** deposited within and adjacent to the valley of Kickapoo Creek and Fargo Run; deposits (valley trains and terraces) formed as glacial meltwaters flowed from the melting and receding Wisconsin episode ice
Diamicton (clay loam to loam texture); massive; dark grayish brown to brown with a distinctive reddish cast; calcareous; firm; may contains thin beds of sand, silt, and clay; typical thickness 25–150 feet	Tiskilwa Formation t	**Subglacial and ice-marginal sediments (till)** deposited directly from Tiskilwa glacial ice; unconformably overlies Glasford Formation
ILLINOIS EPISODE (~200,000–130,000 years B.P.)		
Diamicton (sandy loam to silty clay loam texture); massive; yellowish brown to dark brownish gray; calcareous; firm to hard; contains thin interbeds of sand, silt, and clay; typical thickness 5–70 feet	Radnor Member, Glasford Formation g-r	**Subglacial and ice-marginal sediments (till)** deposited directly from Illinois Episode glacial ice; unconformably overlies bedrock

PRE-QUATERNARY DEPOSITS

Description	Unit	Interpretation
Shale, sandstone, limestone, coal, and clay; bedding ranges from thin to thick; often includes a weathered profile at the bedrock surface	Pennsylvanian Carbondale Formation IPc	**Strata deposited in fluvial to marine settings,** including nearshore marine, estuarine, deltaic, fluvial, and swamp environments

Base map compiled by Illinois State Geological Survey from digital (Digital Line Graph) data provided by the United States Geological Survey. Compiled by photogrammetric methods from imagery dated 1969. Field checked 1971. Revised from imagery dated 1993, 1995, and other sources. Field checked 1996. Map edited 1997.

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

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SCALE 1:24,000
1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

BASE MAP CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Released by the authority of the State of Illinois: 2008

Geology based on field work by C. Pius Weibel and François Hardy, 2000–2002.

Digital cartography by C. Pius Weibel, Jennifer E. Carrell, and Jane E.J. Domier, Illinois State Geological Survey.

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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ADJOINING QUADRANGLES
1 Princeville
2 Edelstein
3 Rome
4 Oak Hill
5 Spring Bay
6 Hanna City
7 Peoria West
8 Peoria East

1½° TRUE NORTH MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 2008

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